

# Filter Summary Report: TIA,simple,Z1,Z5,ZL

Generated by MacAnalog-Symbolix

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## Contents

<b>1</b>	<b>Examined <math>H(z)</math> for TIA simple Z1 Z5 ZL:</b>	$\frac{Z_1 Z_L (Z_5 g_m - 1)}{Z_1 Z_5 g_m + 2 Z_1 Z_L g_m + Z_1 + Z_5 + Z_L}$	<b>57</b>
<b>2</b>	<b>HP</b>		<b>57</b>
<b>3</b>	<b>BP</b>		<b>57</b>
3.1	BP-1 $Z(s) = \left( R_1, \infty, \infty, \infty, R_5, \frac{L_L s}{C_L L_L s^2 + 1} \right)$		57
3.2	BP-2 $Z(s) = \left( R_1, \infty, \infty, \infty, R_5, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$		57
3.3	BP-3 $Z(s) = \left( L_1 s, \infty, \infty, \infty, R_5, \frac{1}{C_L s} \right)$		58
3.4	BP-4 $Z(s) = \left( L_1 s, \infty, \infty, \infty, R_5, \frac{R_L}{C_L R_L s + 1} \right)$		58
3.5	BP-5 $Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, R_5, R_L \right)$		59
3.6	BP-6 $Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, R_5, R_L \right)$		59
<b>4</b>	<b>LP</b>		<b>60</b>
4.1	LP-1 $Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, R_5, \frac{1}{C_L s} \right)$		60
4.2	LP-2 $Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, R_5, \frac{R_L}{C_L R_L s + 1} \right)$		61
4.3	LP-3 $Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, R_5, \frac{1}{C_L s} \right)$		61
4.4	LP-4 $Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, R_5, \frac{R_L}{C_L R_L s + 1} \right)$		62

<b>5</b>	<b>BS</b>	<b>62</b>
5.1	BS-1 $Z(s) = \left( R_1, \infty, \infty, \infty, R_5, L_L s + \frac{1}{C_L s} \right)$	62
5.2	BS-2 $Z(s) = \left( R_1, \infty, \infty, \infty, R_5, \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$	63
5.3	BS-3 $Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \infty, \infty, \infty, R_5, R_L \right)$	63
5.4	BS-4 $Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, R_5, R_L \right)$	64
<b>6</b>	<b>GE</b>	<b>64</b>
6.1	GE-1 $Z(s) = \left( R_1, \infty, \infty, \infty, R_5, L_L s + R_L + \frac{1}{C_L s} \right)$	64
6.2	GE-2 $Z(s) = \left( R_1, \infty, \infty, \infty, R_5, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$	65
6.3	GE-3 $Z(s) = \left( R_1, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, R_L \right)$	66
6.4	GE-4 $Z(s) = \left( R_1, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, R_L \right)$	66
6.5	GE-5 $Z(s) = \left( R_1, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, R_L \right)$	67
6.6	GE-6 $Z(s) = \left( R_1, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, R_L \right)$	67
6.7	GE-7 $Z(s) = \left( R_1, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, R_L \right)$	68
6.8	GE-8 $Z(s) = \left( R_1, \infty, \infty, \infty, \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, R_L \right)$	68
6.9	GE-9 $Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, R_5, R_L \right)$	69
6.10	GE-10 $Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, R_5, R_L \right)$	69
<b>7</b>	<b>AP</b>	<b>70</b>
<b>8</b>	<b>INVALID-NUMER</b>	<b>70</b>
8.1	INVALID-NUMER-1 $Z(s) = \left( R_1, \infty, \infty, \infty, \frac{1}{C_5 s}, \frac{R_L}{C_L R_L s + 1} \right)$	70
8.2	INVALID-NUMER-2 $Z(s) = \left( R_1, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, \frac{1}{C_L s} \right)$	71
8.3	INVALID-NUMER-3 $Z(s) = \left( R_1, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, \frac{R_L}{C_L R_L s + 1} \right)$	71
8.4	INVALID-NUMER-4 $Z(s) = \left( R_1, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, \frac{R_L}{C_L R_L s + 1} \right)$	72
8.5	INVALID-NUMER-5 $Z(s) = \left( L_1 s, \infty, \infty, \infty, R_5, R_L + \frac{1}{C_L s} \right)$	72

8.6	INVALID-NUMER-6	$Z(s) = \left( L_1 s, \infty, \infty, \infty, \frac{1}{C_5 s}, R_L \right)$	73
8.7	INVALID-NUMER-7	$Z(s) = \left( L_1 s, \infty, \infty, \infty, \frac{1}{C_5 s}, \frac{1}{C_L s} \right)$	73
8.8	INVALID-NUMER-8	$Z(s) = \left( L_1 s, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, R_L \right)$	74
8.9	INVALID-NUMER-9	$Z(s) = \left( L_1 s, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, R_L \right)$	74
8.10	INVALID-NUMER-10	$Z(s) = \left( L_1 s, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, \frac{1}{C_L s} \right)$	75
8.11	INVALID-NUMER-11	$Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, R_5, R_L + \frac{1}{C_L s} \right)$	75
8.12	INVALID-NUMER-12	$Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{1}{C_5 s}, R_L \right)$	76
8.13	INVALID-NUMER-13	$Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{1}{C_5 s}, \frac{R_L}{C_L R_L s + 1} \right)$	76
8.14	INVALID-NUMER-14	$Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, R_L \right)$	77
8.15	INVALID-NUMER-15	$Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, \frac{1}{C_L s} \right)$	77
8.16	INVALID-NUMER-16	$Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, \frac{R_L}{C_L R_L s + 1} \right)$	78
8.17	INVALID-NUMER-17	$Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, R_L \right)$	78
8.18	INVALID-NUMER-18	$Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, R_5, R_L + \frac{1}{C_L s} \right)$	79
8.19	INVALID-NUMER-19	$Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, \frac{1}{C_5 s}, R_L \right)$	79
8.20	INVALID-NUMER-20	$Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, \frac{1}{C_5 s}, \frac{R_L}{C_L R_L s + 1} \right)$	80
8.21	INVALID-NUMER-21	$Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, R_L \right)$	80
8.22	INVALID-NUMER-22	$Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, \frac{1}{C_L s} \right)$	81
8.23	INVALID-NUMER-23	$Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, \frac{R_L}{C_L R_L s + 1} \right)$	81
8.24	INVALID-NUMER-24	$Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, R_L \right)$	82
8.25	INVALID-NUMER-25	$Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, R_5, \frac{1}{C_L s} \right)$	82
8.26	INVALID-NUMER-26	$Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, R_5, \frac{R_L}{C_L R_L s + 1} \right)$	83
8.27	INVALID-NUMER-27	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, \frac{1}{C_5 s}, \frac{1}{C_L s} \right)$	83
8.28	INVALID-NUMER-28	$Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, \frac{1}{C_5 s}, \frac{1}{C_L s} \right)$	84

<b>9</b>	<b>INVALID-WZ</b>	<b>84</b>
9.1	INVALID-WZ-1 $Z(s) = \left(R_1, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, R_L + \frac{1}{C_L s}\right)$	84
9.2	INVALID-WZ-2 $Z(s) = \left(L_1 s, \infty, \infty, \infty, \frac{1}{C_5 s}, R_L + \frac{1}{C_L s}\right)$	85
9.3	INVALID-WZ-3 $Z(s) = \left(L_1 s, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, R_L + \frac{1}{C_L s}\right)$	85
9.4	INVALID-WZ-4 $Z(s) = \left(R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, R_5, R_L + \frac{1}{C_L s}\right)$	86
9.5	INVALID-WZ-5 $Z(s) = \left(R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{1}{C_5 s}, R_L\right)$	86
9.6	INVALID-WZ-6 $Z(s) = \left(R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, R_L\right)$	87
9.7	INVALID-WZ-7 $Z(s) = \left(R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, R_L\right)$	88
<b>10</b>	<b>INVALID-ORDER</b>	<b>88</b>
10.1	INVALID-ORDER-1 $Z(s) = (R_1, \infty, \infty, \infty, R_5, R_L)$	88
10.2	INVALID-ORDER-2 $Z(s) = \left(R_1, \infty, \infty, \infty, R_5, \frac{1}{C_L s}\right)$	88
10.3	INVALID-ORDER-3 $Z(s) = \left(R_1, \infty, \infty, \infty, R_5, \frac{R_L}{C_L R_L s + 1}\right)$	89
10.4	INVALID-ORDER-4 $Z(s) = \left(R_1, \infty, \infty, \infty, R_5, R_L + \frac{1}{C_L s}\right)$	89
10.5	INVALID-ORDER-5 $Z(s) = \left(R_1, \infty, \infty, \infty, \frac{1}{C_5 s}, R_L\right)$	89
10.6	INVALID-ORDER-6 $Z(s) = \left(R_1, \infty, \infty, \infty, \frac{1}{C_5 s}, \frac{1}{C_L s}\right)$	89
10.7	INVALID-ORDER-7 $Z(s) = \left(R_1, \infty, \infty, \infty, \frac{1}{C_5 s}, R_L + \frac{1}{C_L s}\right)$	89
10.8	INVALID-ORDER-8 $Z(s) = \left(R_1, \infty, \infty, \infty, \frac{1}{C_5 s}, L_L s + \frac{1}{C_L s}\right)$	89
10.9	INVALID-ORDER-9 $Z(s) = \left(R_1, \infty, \infty, \infty, \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1}\right)$	90
10.10	INVALID-ORDER-10 $Z(s) = \left(R_1, \infty, \infty, \infty, \frac{1}{C_5 s}, L_L s + R_L + \frac{1}{C_L s}\right)$	90
10.11	INVALID-ORDER-11 $Z(s) = \left(R_1, \infty, \infty, \infty, \frac{1}{C_5 s}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$	90
10.12	INVALID-ORDER-12 $Z(s) = \left(R_1, \infty, \infty, \infty, \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$	90
10.13	INVALID-ORDER-13 $Z(s) = \left(R_1, \infty, \infty, \infty, \frac{1}{C_5 s}, \frac{R_L \left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$	90
10.14	INVALID-ORDER-14 $Z(s) = \left(R_1, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, R_L\right)$	91
10.15	INVALID-ORDER-15 $Z(s) = \left(R_1, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, L_L s + \frac{1}{C_L s}\right)$	91

10.16INVALID-ORDER-16	$Z(s) = \left( R_1, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, \frac{L_L s}{C_L L_L s^2 + 1} \right)$	91
10.17INVALID-ORDER-17	$Z(s) = \left( R_1, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, L_L s + R_L + \frac{1}{C_L s} \right)$	91
10.18INVALID-ORDER-18	$Z(s) = \left( R_1, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$	91
10.19INVALID-ORDER-19	$Z(s) = \left( R_1, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$	91
10.20INVALID-ORDER-20	$Z(s) = \left( R_1, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$	92
10.21INVALID-ORDER-21	$Z(s) = \left( R_1, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, R_L \right)$	92
10.22INVALID-ORDER-22	$Z(s) = \left( R_1, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, \frac{1}{C_L s} \right)$	92
10.23INVALID-ORDER-23	$Z(s) = \left( R_1, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, R_L + \frac{1}{C_L s} \right)$	92
10.24INVALID-ORDER-24	$Z(s) = \left( R_1, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, L_L s + \frac{1}{C_L s} \right)$	92
10.25INVALID-ORDER-25	$Z(s) = \left( R_1, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} \right)$	92
10.26INVALID-ORDER-26	$Z(s) = \left( R_1, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, L_L s + R_L + \frac{1}{C_L s} \right)$	93
10.27INVALID-ORDER-27	$Z(s) = \left( R_1, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$	93
10.28INVALID-ORDER-28	$Z(s) = \left( R_1, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$	93
10.29INVALID-ORDER-29	$Z(s) = \left( R_1, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$	93
10.30INVALID-ORDER-30	$Z(s) = \left( R_1, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, \frac{1}{C_L s} \right)$	93
10.31INVALID-ORDER-31	$Z(s) = \left( R_1, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, \frac{R_L}{C_L R_L s + 1} \right)$	94
10.32INVALID-ORDER-32	$Z(s) = \left( R_1, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, R_L + \frac{1}{C_L s} \right)$	94
10.33INVALID-ORDER-33	$Z(s) = \left( R_1, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, L_L s + \frac{1}{C_L s} \right)$	94
10.34INVALID-ORDER-34	$Z(s) = \left( R_1, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} \right)$	94
10.35INVALID-ORDER-35	$Z(s) = \left( R_1, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, L_L s + R_L + \frac{1}{C_L s} \right)$	94
10.36INVALID-ORDER-36	$Z(s) = \left( R_1, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$	95
10.37INVALID-ORDER-37	$Z(s) = \left( R_1, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$	95

10.38INVALID-ORDER-38	$Z(s) = \left( R_1, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$	95
10.39INVALID-ORDER-39	$Z(s) = \left( R_1, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{1}{C_L s} \right)$	95
10.40INVALID-ORDER-40	$Z(s) = \left( R_1, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{R_L}{C_L R_L s + 1} \right)$	95
10.41INVALID-ORDER-41	$Z(s) = \left( R_1, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, R_L + \frac{1}{C_L s} \right)$	96
10.42INVALID-ORDER-42	$Z(s) = \left( R_1, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, L_L s + \frac{1}{C_L s} \right)$	96
10.43INVALID-ORDER-43	$Z(s) = \left( R_1, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{L_L s}{C_L L_L s^2 + 1} \right)$	96
10.44INVALID-ORDER-44	$Z(s) = \left( R_1, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, L_L s + R_L + \frac{1}{C_L s} \right)$	96
10.45INVALID-ORDER-45	$Z(s) = \left( R_1, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$	96
10.46INVALID-ORDER-46	$Z(s) = \left( R_1, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$	97
10.47INVALID-ORDER-47	$Z(s) = \left( R_1, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$	97
10.48INVALID-ORDER-48	$Z(s) = \left( R_1, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{1}{C_L s} \right)$	97
10.49INVALID-ORDER-49	$Z(s) = \left( R_1, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{R_L}{C_L R_L s + 1} \right)$	97
10.50INVALID-ORDER-50	$Z(s) = \left( R_1, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, R_L + \frac{1}{C_L s} \right)$	97
10.51INVALID-ORDER-51	$Z(s) = \left( R_1, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, L_L s + \frac{1}{C_L s} \right)$	98
10.52INVALID-ORDER-52	$Z(s) = \left( R_1, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} \right)$	98
10.53INVALID-ORDER-53	$Z(s) = \left( R_1, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, L_L s + R_L + \frac{1}{C_L s} \right)$	98
10.54INVALID-ORDER-54	$Z(s) = \left( R_1, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$	98
10.55INVALID-ORDER-55	$Z(s) = \left( R_1, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$	98
10.56INVALID-ORDER-56	$Z(s) = \left( R_1, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$	99
10.57INVALID-ORDER-57	$Z(s) = \left( R_1, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{1}{C_L s} \right)$	99
10.58INVALID-ORDER-58	$Z(s) = \left( R_1, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{R_L}{C_L R_L s + 1} \right)$	99

10.59INVALID-ORDER-59	$Z(s) = \left( R_1, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, R_L + \frac{1}{C_L s} \right)$	99
10.60INVALID-ORDER-60	$Z(s) = \left( R_1, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, L_L s + \frac{1}{C_L s} \right)$	99
10.61INVALID-ORDER-61	$Z(s) = \left( R_1, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{L_L s}{C_L L_L s^2 + 1} \right)$	100
10.62INVALID-ORDER-62	$Z(s) = \left( R_1, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, L_L s + R_L + \frac{1}{C_L s} \right)$	100
10.63INVALID-ORDER-63	$Z(s) = \left( R_1, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$	100
10.64INVALID-ORDER-64	$Z(s) = \left( R_1, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$	100
10.65INVALID-ORDER-65	$Z(s) = \left( R_1, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{R_L (L_L s + \frac{1}{C_L s})}{L_L s + R_L + \frac{1}{C_L s}} \right)$	100
10.66INVALID-ORDER-66	$Z(s) = \left( R_1, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{1}{C_L s} \right)$	101
10.67INVALID-ORDER-67	$Z(s) = \left( R_1, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{R_L}{C_L R_L s + 1} \right)$	101
10.68INVALID-ORDER-68	$Z(s) = \left( R_1, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, R_L + \frac{1}{C_L s} \right)$	101
10.69INVALID-ORDER-69	$Z(s) = \left( R_1, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, L_L s + \frac{1}{C_L s} \right)$	101
10.70INVALID-ORDER-70	$Z(s) = \left( R_1, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{L_L s}{C_L L_L s^2 + 1} \right)$	101
10.71INVALID-ORDER-71	$Z(s) = \left( R_1, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, L_L s + R_L + \frac{1}{C_L s} \right)$	101
10.72INVALID-ORDER-72	$Z(s) = \left( R_1, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$	102
10.73INVALID-ORDER-73	$Z(s) = \left( R_1, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$	102
10.74INVALID-ORDER-74	$Z(s) = \left( R_1, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{R_L (L_L s + \frac{1}{C_L s})}{L_L s + R_L + \frac{1}{C_L s}} \right)$	102
10.75INVALID-ORDER-75	$Z(s) = \left( R_1, \infty, \infty, \infty, \frac{R_5 (L_5 s + \frac{1}{C_5 s})}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{1}{C_L s} \right)$	102
10.76INVALID-ORDER-76	$Z(s) = \left( R_1, \infty, \infty, \infty, \frac{R_5 (L_5 s + \frac{1}{C_5 s})}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{R_L}{C_L R_L s + 1} \right)$	102
10.77INVALID-ORDER-77	$Z(s) = \left( R_1, \infty, \infty, \infty, \frac{R_5 (L_5 s + \frac{1}{C_5 s})}{L_5 s + R_5 + \frac{1}{C_5 s}}, R_L + \frac{1}{C_L s} \right)$	103

10.78INVALID-ORDER-78	$Z(s) = \left( R_1, \infty, \infty, \infty, \frac{R_5(L_5s + \frac{1}{C_5s})}{L_5s + R_5 + \frac{1}{C_5s}}, L_Ls + \frac{1}{C_Ls} \right)$	103
10.79INVALID-ORDER-79	$Z(s) = \left( R_1, \infty, \infty, \infty, \frac{R_5(L_5s + \frac{1}{C_5s})}{L_5s + R_5 + \frac{1}{C_5s}}, \frac{L_Ls}{C_L L_L s^2 + 1} \right)$	103
10.80INVALID-ORDER-80	$Z(s) = \left( R_1, \infty, \infty, \infty, \frac{R_5(L_5s + \frac{1}{C_5s})}{L_5s + R_5 + \frac{1}{C_5s}}, L_Ls + R_L + \frac{1}{C_Ls} \right)$	103
10.81INVALID-ORDER-81	$Z(s) = \left( R_1, \infty, \infty, \infty, \frac{R_5(L_5s + \frac{1}{C_5s})}{L_5s + R_5 + \frac{1}{C_5s}}, \frac{1}{C_Ls + \frac{1}{R_L} + \frac{1}{L_Ls}} \right)$	103
10.82INVALID-ORDER-82	$Z(s) = \left( R_1, \infty, \infty, \infty, \frac{R_5(L_5s + \frac{1}{C_5s})}{L_5s + R_5 + \frac{1}{C_5s}}, \frac{L_Ls}{C_L L_L s^2 + 1} + R_L \right)$	104
10.83INVALID-ORDER-83	$Z(s) = \left( R_1, \infty, \infty, \infty, \frac{R_5(L_5s + \frac{1}{C_5s})}{L_5s + R_5 + \frac{1}{C_5s}}, \frac{R_L(L_Ls + \frac{1}{C_Ls})}{L_Ls + R_L + \frac{1}{C_Ls}} \right)$	104
10.84INVALID-ORDER-84	$Z(s) = (L_1s, \infty, \infty, \infty, R_5, R_L)$	104
10.85INVALID-ORDER-85	$Z(s) = \left( L_1s, \infty, \infty, \infty, R_5, L_Ls + \frac{1}{C_Ls} \right)$	104
10.86INVALID-ORDER-86	$Z(s) = \left( L_1s, \infty, \infty, \infty, R_5, \frac{L_Ls}{C_L L_L s^2 + 1} \right)$	104
10.87INVALID-ORDER-87	$Z(s) = \left( L_1s, \infty, \infty, \infty, R_5, L_Ls + R_L + \frac{1}{C_Ls} \right)$	105
10.88INVALID-ORDER-88	$Z(s) = \left( L_1s, \infty, \infty, \infty, R_5, \frac{1}{C_Ls + \frac{1}{R_L} + \frac{1}{L_Ls}} \right)$	105
10.89INVALID-ORDER-89	$Z(s) = \left( L_1s, \infty, \infty, \infty, R_5, \frac{L_Ls}{C_L L_L s^2 + 1} + R_L \right)$	105
10.90INVALID-ORDER-90	$Z(s) = \left( L_1s, \infty, \infty, \infty, R_5, \frac{R_L(L_Ls + \frac{1}{C_Ls})}{L_Ls + R_L + \frac{1}{C_Ls}} \right)$	105
10.91INVALID-ORDER-91	$Z(s) = \left( L_1s, \infty, \infty, \infty, \frac{1}{C_5s}, \frac{R_L}{C_L R_L s + 1} \right)$	105
10.92INVALID-ORDER-92	$Z(s) = \left( L_1s, \infty, \infty, \infty, \frac{1}{C_5s}, L_Ls + \frac{1}{C_Ls} \right)$	106
10.93INVALID-ORDER-93	$Z(s) = \left( L_1s, \infty, \infty, \infty, \frac{1}{C_5s}, \frac{L_Ls}{C_L L_L s^2 + 1} \right)$	106
10.94INVALID-ORDER-94	$Z(s) = \left( L_1s, \infty, \infty, \infty, \frac{1}{C_5s}, L_Ls + R_L + \frac{1}{C_Ls} \right)$	106
10.95INVALID-ORDER-95	$Z(s) = \left( L_1s, \infty, \infty, \infty, \frac{1}{C_5s}, \frac{1}{C_Ls + \frac{1}{R_L} + \frac{1}{L_Ls}} \right)$	106
10.96INVALID-ORDER-96	$Z(s) = \left( L_1s, \infty, \infty, \infty, \frac{1}{C_5s}, \frac{L_Ls}{C_L L_L s^2 + 1} + R_L \right)$	106
10.97INVALID-ORDER-97	$Z(s) = \left( L_1s, \infty, \infty, \infty, \frac{1}{C_5s}, \frac{R_L(L_Ls + \frac{1}{C_Ls})}{L_Ls + R_L + \frac{1}{C_Ls}} \right)$	107



10.98	INVALID-ORDER-98	$Z(s) = \left( L_1 s, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, \frac{1}{C_L s} \right)$	107
10.99	INVALID-ORDER-99	$Z(s) = \left( L_1 s, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, \frac{R_L}{C_L R_L s + 1} \right)$	107
10.100	INVALID-ORDER-100	$Z(s) = \left( L_1 s, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, R_L + \frac{1}{C_L s} \right)$	107
10.101	INVALID-ORDER-101	$Z(s) = \left( L_1 s, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, L_L s + \frac{1}{C_L s} \right)$	107
10.102	INVALID-ORDER-102	$Z(s) = \left( L_1 s, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, \frac{L_L s}{C_L L_L s^2 + 1} \right)$	107
10.103	INVALID-ORDER-103	$Z(s) = \left( L_1 s, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, L_L s + R_L + \frac{1}{C_L s} \right)$	108
10.104	INVALID-ORDER-104	$Z(s) = \left( L_1 s, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$	108
10.105	INVALID-ORDER-105	$Z(s) = \left( L_1 s, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$	108
10.106	INVALID-ORDER-106	$Z(s) = \left( L_1 s, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$	108
10.107	INVALID-ORDER-107	$Z(s) = \left( L_1 s, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, \frac{R_L}{C_L R_L s + 1} \right)$	108
10.108	INVALID-ORDER-108	$Z(s) = \left( L_1 s, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, L_L s + \frac{1}{C_L s} \right)$	109
10.109	INVALID-ORDER-109	$Z(s) = \left( L_1 s, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} \right)$	109
10.110	INVALID-ORDER-110	$Z(s) = \left( L_1 s, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, L_L s + R_L + \frac{1}{C_L s} \right)$	109
10.111	INVALID-ORDER-111	$Z(s) = \left( L_1 s, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$	109
10.112	INVALID-ORDER-112	$Z(s) = \left( L_1 s, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$	109
10.113	INVALID-ORDER-113	$Z(s) = \left( L_1 s, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$	110
10.114	INVALID-ORDER-114	$Z(s) = \left( L_1 s, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, R_L \right)$	110
10.115	INVALID-ORDER-115	$Z(s) = \left( L_1 s, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, \frac{1}{C_L s} \right)$	110
10.116	INVALID-ORDER-116	$Z(s) = \left( L_1 s, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, \frac{R_L}{C_L R_L s + 1} \right)$	110
10.117	INVALID-ORDER-117	$Z(s) = \left( L_1 s, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, R_L + \frac{1}{C_L s} \right)$	110
10.118	INVALID-ORDER-118	$Z(s) = \left( L_1 s, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, L_L s + \frac{1}{C_L s} \right)$	111
10.119	INVALID-ORDER-119	$Z(s) = \left( L_1 s, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} \right)$	111

10.120	INVALID-ORDER-120	$Z(s) = \left( L_1 s, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, L_L s + R_L + \frac{1}{C_L s} \right)$	111
10.121	INVALID-ORDER-121	$Z(s) = \left( L_1 s, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$	111
10.122	INVALID-ORDER-122	$Z(s) = \left( L_1 s, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$	111
10.123	INVALID-ORDER-123	$Z(s) = \left( L_1 s, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$	112
10.124	INVALID-ORDER-124	$Z(s) = \left( L_1 s, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, R_L \right)$	112
10.125	INVALID-ORDER-125	$Z(s) = \left( L_1 s, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{1}{C_L s} \right)$	112
10.126	INVALID-ORDER-126	$Z(s) = \left( L_1 s, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{R_L}{C_L R_L s + 1} \right)$	112
10.127	INVALID-ORDER-127	$Z(s) = \left( L_1 s, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, R_L + \frac{1}{C_L s} \right)$	112
10.128	INVALID-ORDER-128	$Z(s) = \left( L_1 s, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, L_L s + \frac{1}{C_L s} \right)$	113
10.129	INVALID-ORDER-129	$Z(s) = \left( L_1 s, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{L_L s}{C_L L_L s^2 + 1} \right)$	113
10.130	INVALID-ORDER-130	$Z(s) = \left( L_1 s, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, L_L s + R_L + \frac{1}{C_L s} \right)$	113
10.131	INVALID-ORDER-131	$Z(s) = \left( L_1 s, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$	113
10.132	INVALID-ORDER-132	$Z(s) = \left( L_1 s, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$	113
10.133	INVALID-ORDER-133	$Z(s) = \left( L_1 s, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$	114
10.134	INVALID-ORDER-134	$Z(s) = \left( L_1 s, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, R_L \right)$	114
10.135	INVALID-ORDER-135	$Z(s) = \left( L_1 s, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{1}{C_L s} \right)$	114
10.136	INVALID-ORDER-136	$Z(s) = \left( L_1 s, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{R_L}{C_L R_L s + 1} \right)$	114
10.137	INVALID-ORDER-137	$Z(s) = \left( L_1 s, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, R_L + \frac{1}{C_L s} \right)$	114
10.138	INVALID-ORDER-138	$Z(s) = \left( L_1 s, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, L_L s + \frac{1}{C_L s} \right)$	115
10.139	INVALID-ORDER-139	$Z(s) = \left( L_1 s, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} \right)$	115
10.140	INVALID-ORDER-140	$Z(s) = \left( L_1 s, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, L_L s + R_L + \frac{1}{C_L s} \right)$	115
10.141	INVALID-ORDER-141	$Z(s) = \left( L_1 s, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$	115

10.142INVALID-ORDER-142	$Z(s) = \left( L_1 s, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$	115
10.143INVALID-ORDER-143	$Z(s) = \left( L_1 s, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$	116
10.144INVALID-ORDER-144	$Z(s) = \left( L_1 s, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, R_L \right)$	116
10.145INVALID-ORDER-145	$Z(s) = \left( L_1 s, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{1}{C_L s} \right)$	116
10.146INVALID-ORDER-146	$Z(s) = \left( L_1 s, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{R_L}{C_L R_L s + 1} \right)$	116
10.147INVALID-ORDER-147	$Z(s) = \left( L_1 s, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, R_L + \frac{1}{C_L s} \right)$	116
10.148INVALID-ORDER-148	$Z(s) = \left( L_1 s, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, L_L s + \frac{1}{C_L s} \right)$	117
10.149INVALID-ORDER-149	$Z(s) = \left( L_1 s, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{L_L s}{C_L L_L s^2 + 1} \right)$	117
10.150INVALID-ORDER-150	$Z(s) = \left( L_1 s, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, L_L s + R_L + \frac{1}{C_L s} \right)$	117
10.151INVALID-ORDER-151	$Z(s) = \left( L_1 s, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$	117
10.152INVALID-ORDER-152	$Z(s) = \left( L_1 s, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$	117
10.153INVALID-ORDER-153	$Z(s) = \left( L_1 s, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$	118
10.154INVALID-ORDER-154	$Z(s) = \left( L_1 s, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, R_L \right)$	118
10.155INVALID-ORDER-155	$Z(s) = \left( L_1 s, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{1}{C_L s} \right)$	118
10.156INVALID-ORDER-156	$Z(s) = \left( L_1 s, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{R_L}{C_L R_L s + 1} \right)$	118
10.157INVALID-ORDER-157	$Z(s) = \left( L_1 s, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, R_L + \frac{1}{C_L s} \right)$	118
10.158INVALID-ORDER-158	$Z(s) = \left( L_1 s, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, L_L s + \frac{1}{C_L s} \right)$	119
10.159INVALID-ORDER-159	$Z(s) = \left( L_1 s, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{L_L s}{C_L L_L s^2 + 1} \right)$	119
10.160INVALID-ORDER-160	$Z(s) = \left( L_1 s, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, L_L s + R_L + \frac{1}{C_L s} \right)$	119
10.161INVALID-ORDER-161	$Z(s) = \left( L_1 s, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$	119

10.162	INVALID-ORDER-162	$Z(s) = \left( L_1 s, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$	119
10.163	INVALID-ORDER-163	$Z(s) = \left( L_1 s, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$	120
10.164	INVALID-ORDER-164	$Z(s) = \left( L_1 s, \infty, \infty, \infty, \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, R_L \right)$	120
10.165	INVALID-ORDER-165	$Z(s) = \left( L_1 s, \infty, \infty, \infty, \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{1}{C_L s} \right)$	120
10.166	INVALID-ORDER-166	$Z(s) = \left( L_1 s, \infty, \infty, \infty, \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{R_L}{C_L R_L s + 1} \right)$	120
10.167	INVALID-ORDER-167	$Z(s) = \left( L_1 s, \infty, \infty, \infty, \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, R_L + \frac{1}{C_L s} \right)$	120
10.168	INVALID-ORDER-168	$Z(s) = \left( L_1 s, \infty, \infty, \infty, \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, L_L s + \frac{1}{C_L s} \right)$	121
10.169	INVALID-ORDER-169	$Z(s) = \left( L_1 s, \infty, \infty, \infty, \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{L_L s}{C_L L_L s^2 + 1} \right)$	121
10.170	INVALID-ORDER-170	$Z(s) = \left( L_1 s, \infty, \infty, \infty, \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, L_L s + R_L + \frac{1}{C_L s} \right)$	121
10.171	INVALID-ORDER-171	$Z(s) = \left( L_1 s, \infty, \infty, \infty, \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$	121
10.172	INVALID-ORDER-172	$Z(s) = \left( L_1 s, \infty, \infty, \infty, \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$	121
10.173	INVALID-ORDER-173	$Z(s) = \left( L_1 s, \infty, \infty, \infty, \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$	122
10.174	INVALID-ORDER-174	$Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, R_5, R_L \right)$	122
10.175	INVALID-ORDER-175	$Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, R_5, L_L s + \frac{1}{C_L s} \right)$	122
10.176	INVALID-ORDER-176	$Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, R_5, \frac{L_L s}{C_L L_L s^2 + 1} \right)$	122
10.177	INVALID-ORDER-177	$Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, R_5, L_L s + R_L + \frac{1}{C_L s} \right)$	122
10.178	INVALID-ORDER-178	$Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, R_5, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$	123
10.179	INVALID-ORDER-179	$Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, R_5, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$	123
10.180	INVALID-ORDER-180	$Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, R_5, \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$	123

10.18	INVALID-ORDER-181	$Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{1}{C_5 s}, \frac{1}{C_L s} \right)$	123
10.18	INVALID-ORDER-182	$Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{1}{C_5 s}, R_L + \frac{1}{C_L s} \right)$	123
10.18	INVALID-ORDER-183	$Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{1}{C_5 s}, L_L s + \frac{1}{C_L s} \right)$	124
10.18	INVALID-ORDER-184	$Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} \right)$	124
10.18	INVALID-ORDER-185	$Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{1}{C_5 s}, L_L s + R_L + \frac{1}{C_L s} \right)$	124
10.18	INVALID-ORDER-186	$Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{1}{C_5 s}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$	124
10.18	INVALID-ORDER-187	$Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$	124
10.18	INVALID-ORDER-188	$Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{1}{C_5 s}, \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$	125
10.18	INVALID-ORDER-189	$Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, R_L + \frac{1}{C_L s} \right)$	125
10.19	INVALID-ORDER-190	$Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, L_L s + \frac{1}{C_L s} \right)$	125
10.19	INVALID-ORDER-191	$Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, \frac{L_L s}{C_L L_L s^2 + 1} \right)$	125
10.19	INVALID-ORDER-192	$Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, L_L s + R_L + \frac{1}{C_L s} \right)$	125
10.19	INVALID-ORDER-193	$Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$	126
10.19	INVALID-ORDER-194	$Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$	126
10.19	INVALID-ORDER-195	$Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$	126
10.19	INVALID-ORDER-196	$Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, \frac{1}{C_L s} \right)$	126
10.19	INVALID-ORDER-197	$Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, \frac{R_L}{C_L R_L s + 1} \right)$	126
10.19	INVALID-ORDER-198	$Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, R_L + \frac{1}{C_L s} \right)$	127
10.19	INVALID-ORDER-199	$Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, L_L s + \frac{1}{C_L s} \right)$	127
10.20	INVALID-ORDER-200	$Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} \right)$	127
10.20	INVALID-ORDER-201	$Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, L_L s + R_L + \frac{1}{C_L s} \right)$	127
10.20	INVALID-ORDER-202	$Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$	127

10.20 <del>3</del> INVALID-ORDER-203	$Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$	127
10.20 <del>4</del> INVALID-ORDER-204	$Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$	128
10.20 <del>5</del> INVALID-ORDER-205	$Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, R_L \right)$	128
10.20 <del>6</del> INVALID-ORDER-206	$Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, \frac{1}{C_L s} \right)$	128
10.20 <del>7</del> INVALID-ORDER-207	$Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, \frac{R_L}{C_L R_L s + 1} \right)$	128
10.20 <del>8</del> INVALID-ORDER-208	$Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, R_L + \frac{1}{C_L s} \right)$	128
10.20 <del>9</del> INVALID-ORDER-209	$Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, L_L s + \frac{1}{C_L s} \right)$	129
10.21 <del>0</del> INVALID-ORDER-210	$Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} \right)$	129
10.21 <del>1</del> INVALID-ORDER-211	$Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, L_L s + R_L + \frac{1}{C_L s} \right)$	129
10.21 <del>2</del> INVALID-ORDER-212	$Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$	129
10.21 <del>3</del> INVALID-ORDER-213	$Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$	129
10.21 <del>4</del> INVALID-ORDER-214	$Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$	130
10.21 <del>5</del> INVALID-ORDER-215	$Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, R_L \right)$	130
10.21 <del>6</del> INVALID-ORDER-216	$Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{1}{C_L s} \right)$	130
10.21 <del>7</del> INVALID-ORDER-217	$Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{R_L}{C_L R_L s + 1} \right)$	130
10.21 <del>8</del> INVALID-ORDER-218	$Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, R_L + \frac{1}{C_L s} \right)$	130
10.21 <del>9</del> INVALID-ORDER-219	$Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, L_L s + \frac{1}{C_L s} \right)$	131
10.22 <del>0</del> INVALID-ORDER-220	$Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{L_L s}{C_L L_L s^2 + 1} \right)$	131
10.22 <del>1</del> INVALID-ORDER-221	$Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, L_L s + R_L + \frac{1}{C_L s} \right)$	131
10.22 <del>2</del> INVALID-ORDER-222	$Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$	131
10.22 <del>3</del> INVALID-ORDER-223	$Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$	131
10.22 <del>4</del> INVALID-ORDER-224	$Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$	132

10.225INVALID-ORDER-225	$Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, R_L \right)$	132
10.226INVALID-ORDER-226	$Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{1}{C_L s} \right)$	132
10.227INVALID-ORDER-227	$Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{R_L}{C_L R_L s + 1} \right)$	132
10.228INVALID-ORDER-228	$Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, R_L + \frac{1}{C_L s} \right)$	132
10.229INVALID-ORDER-229	$Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, L_L s + \frac{1}{C_L s} \right)$	133
10.230INVALID-ORDER-230	$Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} \right)$	133
10.231INVALID-ORDER-231	$Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, L_L s + R_L + \frac{1}{C_L s} \right)$	133
10.232INVALID-ORDER-232	$Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$	133
10.233INVALID-ORDER-233	$Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$	133
10.234INVALID-ORDER-234	$Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$	134
10.235INVALID-ORDER-235	$Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, R_L \right)$	134
10.236INVALID-ORDER-236	$Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{1}{C_L s} \right)$	134
10.237INVALID-ORDER-237	$Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{R_L}{C_L R_L s + 1} \right)$	134
10.238INVALID-ORDER-238	$Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, R_L + \frac{1}{C_L s} \right)$	134
10.239INVALID-ORDER-239	$Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, L_L s + \frac{1}{C_L s} \right)$	135
10.240INVALID-ORDER-240	$Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{L_L s}{C_L L_L s^2 + 1} \right)$	135
10.241INVALID-ORDER-241	$Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, L_L s + R_L + \frac{1}{C_L s} \right)$	135
10.242INVALID-ORDER-242	$Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$	135
10.243INVALID-ORDER-243	$Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$	135
10.244INVALID-ORDER-244	$Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$	136

10.245	INVALID-ORDER-245	$Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, R_L \right)$	136
10.246	INVALID-ORDER-246	$Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{1}{C_L s} \right)$	136
10.247	INVALID-ORDER-247	$Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{R_L}{C_L R_L s + 1} \right)$	136
10.248	INVALID-ORDER-248	$Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, R_L + \frac{1}{C_L s} \right)$	136
10.249	INVALID-ORDER-249	$Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, L_L s + \frac{1}{C_L s} \right)$	137
10.250	INVALID-ORDER-250	$Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{L_L s}{C_L L_L s^2 + 1} \right)$	137
10.251	INVALID-ORDER-251	$Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, L_L s + R_L + \frac{1}{C_L s} \right)$	137
10.252	INVALID-ORDER-252	$Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$	137
10.253	INVALID-ORDER-253	$Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$	137
10.254	INVALID-ORDER-254	$Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$	138
10.255	INVALID-ORDER-255	$Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, R_L \right)$	138
10.256	INVALID-ORDER-256	$Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{1}{C_L s} \right)$	138
10.257	INVALID-ORDER-257	$Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{R_L}{C_L R_L s + 1} \right)$	138
10.258	INVALID-ORDER-258	$Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, R_L + \frac{1}{C_L s} \right)$	138
10.259	INVALID-ORDER-259	$Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, L_L s + \frac{1}{C_L s} \right)$	139
10.260	INVALID-ORDER-260	$Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{L_L s}{C_L L_L s^2 + 1} \right)$	139
10.261	INVALID-ORDER-261	$Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, L_L s + R_L + \frac{1}{C_L s} \right)$	139
10.262	INVALID-ORDER-262	$Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$	139
10.263	INVALID-ORDER-263	$Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$	139



10.264	INVALID-ORDER-264	$Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$	140
10.265	INVALID-ORDER-265	$Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, R_5, R_L \right)$	140
10.266	INVALID-ORDER-266	$Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, R_5, L_L s + \frac{1}{C_L s} \right)$	140
10.267	INVALID-ORDER-267	$Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, R_5, \frac{L_L s}{C_L L_L s^2 + 1} \right)$	140
10.268	INVALID-ORDER-268	$Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, R_5, L_L s + R_L + \frac{1}{C_L s} \right)$	140
10.269	INVALID-ORDER-269	$Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, R_5, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$	141
10.270	INVALID-ORDER-270	$Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, R_5, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$	141
10.271	INVALID-ORDER-271	$Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, R_5, \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$	141
10.272	INVALID-ORDER-272	$Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, \frac{1}{C_5 s}, \frac{1}{C_L s} \right)$	141
10.273	INVALID-ORDER-273	$Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, \frac{1}{C_5 s}, R_L + \frac{1}{C_L s} \right)$	141
10.274	INVALID-ORDER-274	$Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, \frac{1}{C_5 s}, L_L s + \frac{1}{C_L s} \right)$	142
10.275	INVALID-ORDER-275	$Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} \right)$	142
10.276	INVALID-ORDER-276	$Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, \frac{1}{C_5 s}, L_L s + R_L + \frac{1}{C_L s} \right)$	142
10.277	INVALID-ORDER-277	$Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, \frac{1}{C_5 s}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$	142
10.278	INVALID-ORDER-278	$Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$	142
10.279	INVALID-ORDER-279	$Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, \frac{1}{C_5 s}, \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$	143
10.280	INVALID-ORDER-280	$Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, R_L + \frac{1}{C_L s} \right)$	143
10.281	INVALID-ORDER-281	$Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, L_L s + \frac{1}{C_L s} \right)$	143
10.282	INVALID-ORDER-282	$Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, \frac{L_L s}{C_L L_L s^2 + 1} \right)$	143
10.283	INVALID-ORDER-283	$Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, L_L s + R_L + \frac{1}{C_L s} \right)$	143
10.284	INVALID-ORDER-284	$Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$	144
10.285	INVALID-ORDER-285	$Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$	144

10.286INVALID-ORDER-286	$Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$	144
10.287INVALID-ORDER-287	$Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, \frac{1}{C_L s} \right)$	144
10.288INVALID-ORDER-288	$Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, \frac{R_L}{C_L R_L s + 1} \right)$	144
10.289INVALID-ORDER-289	$Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, R_L + \frac{1}{C_L s} \right)$	145
10.290INVALID-ORDER-290	$Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, L_L s + \frac{1}{C_L s} \right)$	145
10.291INVALID-ORDER-291	$Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} \right)$	145
10.292INVALID-ORDER-292	$Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, L_L s + R_L + \frac{1}{C_L s} \right)$	145
10.293INVALID-ORDER-293	$Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$	145
10.294INVALID-ORDER-294	$Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$	145
10.295INVALID-ORDER-295	$Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$	146
10.296INVALID-ORDER-296	$Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, R_L \right)$	146
10.297INVALID-ORDER-297	$Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, \frac{1}{C_L s} \right)$	146
10.298INVALID-ORDER-298	$Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, \frac{R_L}{C_L R_L s + 1} \right)$	146
10.299INVALID-ORDER-299	$Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, R_L + \frac{1}{C_L s} \right)$	146
10.300INVALID-ORDER-300	$Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, L_L s + \frac{1}{C_L s} \right)$	147
10.301INVALID-ORDER-301	$Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} \right)$	147
10.302INVALID-ORDER-302	$Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, L_L s + R_L + \frac{1}{C_L s} \right)$	147
10.303INVALID-ORDER-303	$Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$	147
10.304INVALID-ORDER-304	$Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$	147
10.305INVALID-ORDER-305	$Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$	148
10.306INVALID-ORDER-306	$Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, R_L \right)$	148
10.307INVALID-ORDER-307	$Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{1}{C_L s} \right)$	148

10.30	INVALID-ORDER-308	$Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{R_L}{C_L R_L s + 1} \right)$	148
10.30	INVALID-ORDER-309	$Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, R_L + \frac{1}{C_L s} \right)$	148
10.31	INVALID-ORDER-310	$Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, L_L s + \frac{1}{C_L s} \right)$	149
10.31	INVALID-ORDER-311	$Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{L_L s}{C_L L_L s^2 + 1} \right)$	149
10.31	INVALID-ORDER-312	$Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, L_L s + R_L + \frac{1}{C_L s} \right)$	149
10.31	INVALID-ORDER-313	$Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$	149
10.31	INVALID-ORDER-314	$Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$	149
10.31	INVALID-ORDER-315	$Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{R_L (L_L s + \frac{1}{C_L s})}{L_L s + R_L + \frac{1}{C_L s}} \right)$	150
10.31	INVALID-ORDER-316	$Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, R_L \right)$	150
10.31	INVALID-ORDER-317	$Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{1}{C_L s} \right)$	150
10.31	INVALID-ORDER-318	$Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{R_L}{C_L R_L s + 1} \right)$	150
10.31	INVALID-ORDER-319	$Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, R_L + \frac{1}{C_L s} \right)$	150
10.32	INVALID-ORDER-320	$Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, L_L s + \frac{1}{C_L s} \right)$	151
10.32	INVALID-ORDER-321	$Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} \right)$	151
10.32	INVALID-ORDER-322	$Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, L_L s + R_L + \frac{1}{C_L s} \right)$	151
10.32	INVALID-ORDER-323	$Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$	151
10.32	INVALID-ORDER-324	$Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$	151
10.32	INVALID-ORDER-325	$Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{R_L (L_L s + \frac{1}{C_L s})}{L_L s + R_L + \frac{1}{C_L s}} \right)$	152
10.32	INVALID-ORDER-326	$Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, R_L \right)$	152
10.32	INVALID-ORDER-327	$Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{1}{C_L s} \right)$	152
10.32	INVALID-ORDER-328	$Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{R_L}{C_L R_L s + 1} \right)$	152

10.32	INVALID-ORDER-329	$Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, R_L + \frac{1}{C_L s} \right)$	152
10.33	INVALID-ORDER-330	$Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, L_L s + \frac{1}{C_L s} \right)$	153
10.33	INVALID-ORDER-331	$Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{L_L s}{C_L L_L s^2 + 1} \right)$	153
10.33	INVALID-ORDER-332	$Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, L_L s + R_L + \frac{1}{C_L s} \right)$	153
10.33	INVALID-ORDER-333	$Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$	153
10.33	INVALID-ORDER-334	$Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$	153
10.33	INVALID-ORDER-335	$Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{R_L (L_L s + \frac{1}{C_L s})}{L_L s + R_L + \frac{1}{C_L s}} \right)$	154
10.33	INVALID-ORDER-336	$Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, R_L \right)$	154
10.33	INVALID-ORDER-337	$Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{1}{C_L s} \right)$	154
10.33	INVALID-ORDER-338	$Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{R_L}{C_L R_L s + 1} \right)$	154
10.33	INVALID-ORDER-339	$Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, R_L + \frac{1}{C_L s} \right)$	154
10.34	INVALID-ORDER-340	$Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, L_L s + \frac{1}{C_L s} \right)$	155
10.34	INVALID-ORDER-341	$Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{L_L s}{C_L L_L s^2 + 1} \right)$	155
10.34	INVALID-ORDER-342	$Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, L_L s + R_L + \frac{1}{C_L s} \right)$	155
10.34	INVALID-ORDER-343	$Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$	155
10.34	INVALID-ORDER-344	$Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$	155
10.34	INVALID-ORDER-345	$Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{R_L (L_L s + \frac{1}{C_L s})}{L_L s + R_L + \frac{1}{C_L s}} \right)$	156
10.34	INVALID-ORDER-346	$Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, \frac{R_5 (L_5 s + \frac{1}{C_5 s})}{L_5 s + R_5 + \frac{1}{C_5 s}}, R_L \right)$	156
10.34	INVALID-ORDER-347	$Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, \frac{R_5 (L_5 s + \frac{1}{C_5 s})}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{1}{C_L s} \right)$	156
10.34	INVALID-ORDER-348	$Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, \frac{R_5 (L_5 s + \frac{1}{C_5 s})}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{R_L}{C_L R_L s + 1} \right)$	156

10.34	INVALID-ORDER-349	$Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, R_L + \frac{1}{C_L s} \right)$	156
10.35	INVALID-ORDER-350	$Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, L_L s + \frac{1}{C_L s} \right)$	157
10.35	INVALID-ORDER-351	$Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{L_L s}{C_L L_L s^2 + 1} \right)$	157
10.35	INVALID-ORDER-352	$Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, L_L s + R_L + \frac{1}{C_L s} \right)$	157
10.35	INVALID-ORDER-353	$Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$	157
10.35	INVALID-ORDER-354	$Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$	157
10.35	INVALID-ORDER-355	$Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$	158
10.35	INVALID-ORDER-356	$Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, R_5, R_L \right)$	158
10.35	INVALID-ORDER-357	$Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, R_5, L_L s + \frac{1}{C_L s} \right)$	158
10.35	INVALID-ORDER-358	$Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, R_5, \frac{L_L s}{C_L L_L s^2 + 1} \right)$	158
10.35	INVALID-ORDER-359	$Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, R_5, L_L s + R_L + \frac{1}{C_L s} \right)$	158
10.36	INVALID-ORDER-360	$Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, R_5, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$	159
10.36	INVALID-ORDER-361	$Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, R_5, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$	159
10.36	INVALID-ORDER-362	$Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, R_5, \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$	159
10.36	INVALID-ORDER-363	$Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{1}{C_5 s}, \frac{1}{C_L s} \right)$	159
10.36	INVALID-ORDER-364	$Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{1}{C_5 s}, \frac{R_L}{C_L R_L s + 1} \right)$	159
10.36	INVALID-ORDER-365	$Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{1}{C_5 s}, R_L + \frac{1}{C_L s} \right)$	160
10.36	INVALID-ORDER-366	$Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{1}{C_5 s}, L_L s + \frac{1}{C_L s} \right)$	160
10.36	INVALID-ORDER-367	$Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} \right)$	160
10.36	INVALID-ORDER-368	$Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{1}{C_5 s}, L_L s + R_L + \frac{1}{C_L s} \right)$	160

10.36	INVALID-ORDER-369	$Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{1}{C_5 s}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$	160
10.37	INVALID-ORDER-370	$Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$	160
10.37	INVALID-ORDER-371	$Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{1}{C_5 s}, \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$	161
10.37	INVALID-ORDER-372	$Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, \frac{1}{C_L s} \right)$	161
10.37	INVALID-ORDER-373	$Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, \frac{R_L}{C_L R_L s + 1} \right)$	161
10.37	INVALID-ORDER-374	$Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, R_L + \frac{1}{C_L s} \right)$	161
10.37	INVALID-ORDER-375	$Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, L_L s + \frac{1}{C_L s} \right)$	161
10.37	INVALID-ORDER-376	$Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, \frac{L_L s}{C_L L_L s^2 + 1} \right)$	161
10.37	INVALID-ORDER-377	$Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, L_L s + R_L + \frac{1}{C_L s} \right)$	162
10.37	INVALID-ORDER-378	$Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$	162
10.37	INVALID-ORDER-379	$Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$	162
10.38	INVALID-ORDER-380	$Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$	162
10.38	INVALID-ORDER-381	$Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, \frac{1}{C_L s} \right)$	162
10.38	INVALID-ORDER-382	$Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, \frac{R_L}{C_L R_L s + 1} \right)$	163
10.38	INVALID-ORDER-383	$Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, R_L + \frac{1}{C_L s} \right)$	163
10.38	INVALID-ORDER-384	$Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, L_L s + \frac{1}{C_L s} \right)$	163
10.38	INVALID-ORDER-385	$Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} \right)$	163
10.38	INVALID-ORDER-386	$Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, L_L s + R_L + \frac{1}{C_L s} \right)$	163
10.38	INVALID-ORDER-387	$Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$	163
10.38	INVALID-ORDER-388	$Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$	164
10.38	INVALID-ORDER-389	$Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$	164
10.39	INVALID-ORDER-390	$Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, R_L \right)$	164

10.39	INVALID-ORDER-391	$Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, \frac{1}{C_L s} \right)$	164
10.39	INVALID-ORDER-392	$Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, \frac{R_L}{C_L R_L s + 1} \right)$	164
10.39	INVALID-ORDER-393	$Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, R_L + \frac{1}{C_L s} \right)$	165
10.39	INVALID-ORDER-394	$Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, L_L s + \frac{1}{C_L s} \right)$	165
10.39	INVALID-ORDER-395	$Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} \right)$	165
10.39	INVALID-ORDER-396	$Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, L_L s + R_L + \frac{1}{C_L s} \right)$	165
10.39	INVALID-ORDER-397	$Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$	165
10.39	INVALID-ORDER-398	$Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$	166
10.39	INVALID-ORDER-399	$Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$	166
10.40	INVALID-ORDER-400	$Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, R_L \right)$	166
10.40	INVALID-ORDER-401	$Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{1}{C_L s} \right)$	166
10.40	INVALID-ORDER-402	$Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{R_L}{C_L R_L s + 1} \right)$	166
10.40	INVALID-ORDER-403	$Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, R_L + \frac{1}{C_L s} \right)$	167
10.40	INVALID-ORDER-404	$Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, L_L s + \frac{1}{C_L s} \right)$	167
10.40	INVALID-ORDER-405	$Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{L_L s}{C_L L_L s^2 + 1} \right)$	167
10.40	INVALID-ORDER-406	$Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, L_L s + R_L + \frac{1}{C_L s} \right)$	167
10.40	INVALID-ORDER-407	$Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$	167
10.40	INVALID-ORDER-408	$Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$	168
10.40	INVALID-ORDER-409	$Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$	168
10.41	INVALID-ORDER-410	$Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, R_L \right)$	168
10.41	INVALID-ORDER-411	$Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{1}{C_L s} \right)$	168
10.41	INVALID-ORDER-412	$Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{R_L}{C_L R_L s + 1} \right)$	168

10.413	INVALID-ORDER-413	$Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, R_L + \frac{1}{C_L s} \right)$	169
10.414	INVALID-ORDER-414	$Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, L_L s + \frac{1}{C_L s} \right)$	169
10.415	INVALID-ORDER-415	$Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} \right)$	169
10.416	INVALID-ORDER-416	$Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, L_L s + R_L + \frac{1}{C_L s} \right)$	169
10.417	INVALID-ORDER-417	$Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$	169
10.418	INVALID-ORDER-418	$Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$	170
10.419	INVALID-ORDER-419	$Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$	170
10.420	INVALID-ORDER-420	$Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, R_L \right)$	170
10.421	INVALID-ORDER-421	$Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{1}{C_L s} \right)$	170
10.422	INVALID-ORDER-422	$Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{R_L}{C_L R_L s + 1} \right)$	170
10.423	INVALID-ORDER-423	$Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, R_L + \frac{1}{C_L s} \right)$	171
10.424	INVALID-ORDER-424	$Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, L_L s + \frac{1}{C_L s} \right)$	171
10.425	INVALID-ORDER-425	$Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{L_L s}{C_L L_L s^2 + 1} \right)$	171
10.426	INVALID-ORDER-426	$Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, L_L s + R_L + \frac{1}{C_L s} \right)$	171
10.427	INVALID-ORDER-427	$Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$	171
10.428	INVALID-ORDER-428	$Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$	172
10.429	INVALID-ORDER-429	$Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$	172
10.430	INVALID-ORDER-430	$Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, R_L \right)$	172
10.431	INVALID-ORDER-431	$Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{1}{C_L s} \right)$	172
10.432	INVALID-ORDER-432	$Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{R_L}{C_L R_L s + 1} \right)$	172



10.433INVALID-ORDER-433	$Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, R_L + \frac{1}{C_L s} \right)$	173
10.434INVALID-ORDER-434	$Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, L_L s + \frac{1}{C_L s} \right)$	173
10.435INVALID-ORDER-435	$Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{L_L s}{C_L L_L s^2 + 1} \right)$	173
10.436INVALID-ORDER-436	$Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, L_L s + R_L + \frac{1}{C_L s} \right)$	173
10.437INVALID-ORDER-437	$Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$	173
10.438INVALID-ORDER-438	$Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$	174
10.439INVALID-ORDER-439	$Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{R_L (L_L s + \frac{1}{C_L s})}{L_L s + R_L + \frac{1}{C_L s}} \right)$	174
10.440INVALID-ORDER-440	$Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{R_5 (L_5 s + \frac{1}{C_5 s})}{L_5 s + R_5 + \frac{1}{C_5 s}}, R_L \right)$	174
10.441INVALID-ORDER-441	$Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{R_5 (L_5 s + \frac{1}{C_5 s})}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{1}{C_L s} \right)$	174
10.442INVALID-ORDER-442	$Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{R_5 (L_5 s + \frac{1}{C_5 s})}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{R_L}{C_L R_L s + 1} \right)$	174
10.443INVALID-ORDER-443	$Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{R_5 (L_5 s + \frac{1}{C_5 s})}{L_5 s + R_5 + \frac{1}{C_5 s}}, R_L + \frac{1}{C_L s} \right)$	175
10.444INVALID-ORDER-444	$Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{R_5 (L_5 s + \frac{1}{C_5 s})}{L_5 s + R_5 + \frac{1}{C_5 s}}, L_L s + \frac{1}{C_L s} \right)$	175
10.445INVALID-ORDER-445	$Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{R_5 (L_5 s + \frac{1}{C_5 s})}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{L_L s}{C_L L_L s^2 + 1} \right)$	175
10.446INVALID-ORDER-446	$Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{R_5 (L_5 s + \frac{1}{C_5 s})}{L_5 s + R_5 + \frac{1}{C_5 s}}, L_L s + R_L + \frac{1}{C_L s} \right)$	175
10.447INVALID-ORDER-447	$Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{R_5 (L_5 s + \frac{1}{C_5 s})}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$	175
10.448INVALID-ORDER-448	$Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{R_5 (L_5 s + \frac{1}{C_5 s})}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$	176
10.449INVALID-ORDER-449	$Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{R_5 (L_5 s + \frac{1}{C_5 s})}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{R_L (L_L s + \frac{1}{C_L s})}{L_L s + R_L + \frac{1}{C_L s}} \right)$	176
10.450INVALID-ORDER-450	$Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \infty, \infty, \infty, R_5, \frac{1}{C_L s} \right)$	176
10.451INVALID-ORDER-451	$Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \infty, \infty, \infty, R_5, \frac{R_L}{C_L R_L s + 1} \right)$	176

10.452INVALID-ORDER-452	$Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \infty, \infty, \infty, R_5, R_L + \frac{1}{C_L s} \right)$	176
10.453INVALID-ORDER-453	$Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \infty, \infty, \infty, R_5, L_L s + \frac{1}{C_L s} \right)$	177
10.454INVALID-ORDER-454	$Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \infty, \infty, \infty, R_5, \frac{L_L s}{C_L L_L s^2 + 1} \right)$	177
10.455INVALID-ORDER-455	$Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \infty, \infty, \infty, R_5, L_L s + R_L + \frac{1}{C_L s} \right)$	177
10.456INVALID-ORDER-456	$Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \infty, \infty, \infty, R_5, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$	177
10.457INVALID-ORDER-457	$Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \infty, \infty, \infty, R_5, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$	177
10.458INVALID-ORDER-458	$Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \infty, \infty, \infty, R_5, \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$	178
10.459INVALID-ORDER-459	$Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{1}{C_5 s}, R_L \right)$	178
10.460INVALID-ORDER-460	$Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{1}{C_5 s}, \frac{1}{C_L s} \right)$	178
10.461INVALID-ORDER-461	$Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{1}{C_5 s}, \frac{R_L}{C_L R_L s + 1} \right)$	178
10.462INVALID-ORDER-462	$Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{1}{C_5 s}, R_L + \frac{1}{C_L s} \right)$	178
10.463INVALID-ORDER-463	$Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{1}{C_5 s}, L_L s + \frac{1}{C_L s} \right)$	179
10.464INVALID-ORDER-464	$Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} \right)$	179
10.465INVALID-ORDER-465	$Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{1}{C_5 s}, L_L s + R_L + \frac{1}{C_L s} \right)$	179
10.466INVALID-ORDER-466	$Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{1}{C_5 s}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$	179
10.467INVALID-ORDER-467	$Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$	179
10.468INVALID-ORDER-468	$Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{1}{C_5 s}, \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$	180
10.469INVALID-ORDER-469	$Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, R_L \right)$	180
10.470INVALID-ORDER-470	$Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, \frac{1}{C_L s} \right)$	180
10.471INVALID-ORDER-471	$Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, \frac{R_L}{C_L R_L s + 1} \right)$	180
10.472INVALID-ORDER-472	$Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, R_L + \frac{1}{C_L s} \right)$	180
10.473INVALID-ORDER-473	$Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, L_L s + \frac{1}{C_L s} \right)$	181

10.47	INVALID-ORDER-474	$Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, \frac{L_L s}{C_L L_L s^2 + 1} \right)$	181
10.47	INVALID-ORDER-475	$Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, L_L s + R_L + \frac{1}{C_L s} \right)$	181
10.47	INVALID-ORDER-476	$Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$	181
10.47	INVALID-ORDER-477	$Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$	181
10.47	INVALID-ORDER-478	$Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$	182
10.47	INVALID-ORDER-479	$Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, R_L \right)$	182
10.48	INVALID-ORDER-480	$Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, \frac{1}{C_L s} \right)$	182
10.48	INVALID-ORDER-481	$Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, \frac{R_L}{C_L R_L s + 1} \right)$	182
10.48	INVALID-ORDER-482	$Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, R_L + \frac{1}{C_L s} \right)$	182
10.48	INVALID-ORDER-483	$Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, L_L s + \frac{1}{C_L s} \right)$	183
10.48	INVALID-ORDER-484	$Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} \right)$	183
10.48	INVALID-ORDER-485	$Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, L_L s + R_L + \frac{1}{C_L s} \right)$	183
10.48	INVALID-ORDER-486	$Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$	183
10.48	INVALID-ORDER-487	$Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$	183
10.48	INVALID-ORDER-488	$Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$	184
10.48	INVALID-ORDER-489	$Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, R_L \right)$	184
10.49	INVALID-ORDER-490	$Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, \frac{1}{C_L s} \right)$	184
10.49	INVALID-ORDER-491	$Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, \frac{R_L}{C_L R_L s + 1} \right)$	184
10.49	INVALID-ORDER-492	$Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, R_L + \frac{1}{C_L s} \right)$	184
10.49	INVALID-ORDER-493	$Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, L_L s + \frac{1}{C_L s} \right)$	185
10.49	INVALID-ORDER-494	$Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} \right)$	185
10.49	INVALID-ORDER-495	$Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, L_L s + R_L + \frac{1}{C_L s} \right)$	185

10.496INVALID-ORDER-496	$Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$	185
10.497INVALID-ORDER-497	$Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$	185
10.498INVALID-ORDER-498	$Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, \frac{R_L (L_L s + \frac{1}{C_L s})}{L_L s + R_L + \frac{1}{C_L s}} \right)$	186
10.499INVALID-ORDER-499	$Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, R_L \right)$	186
10.500INVALID-ORDER-500	$Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{1}{C_L s} \right)$	186
10.501INVALID-ORDER-501	$Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{R_L}{C_L R_L s + 1} \right)$	186
10.502INVALID-ORDER-502	$Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, R_L + \frac{1}{C_L s} \right)$	186
10.503INVALID-ORDER-503	$Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, L_L s + \frac{1}{C_L s} \right)$	187
10.504INVALID-ORDER-504	$Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{L_L s}{C_L L_L s^2 + 1} \right)$	187
10.505INVALID-ORDER-505	$Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, L_L s + R_L + \frac{1}{C_L s} \right)$	187
10.506INVALID-ORDER-506	$Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$	187
10.507INVALID-ORDER-507	$Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$	187
10.508INVALID-ORDER-508	$Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{R_L (L_L s + \frac{1}{C_L s})}{L_L s + R_L + \frac{1}{C_L s}} \right)$	188
10.509INVALID-ORDER-509	$Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, R_L \right)$	188
10.510INVALID-ORDER-510	$Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{1}{C_L s} \right)$	188
10.511INVALID-ORDER-511	$Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{R_L}{C_L R_L s + 1} \right)$	188
10.512INVALID-ORDER-512	$Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, R_L + \frac{1}{C_L s} \right)$	188
10.513INVALID-ORDER-513	$Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, L_L s + \frac{1}{C_L s} \right)$	189
10.514INVALID-ORDER-514	$Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} \right)$	189
10.515INVALID-ORDER-515	$Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, L_L s + R_L + \frac{1}{C_L s} \right)$	189
10.516INVALID-ORDER-516	$Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$	189
10.517INVALID-ORDER-517	$Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$	189

10.51 <del>8</del> INVALID-ORDER-518	$Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$	190
10.51 <del>9</del> INVALID-ORDER-519	$Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, R_L \right)$	190
10.52 <del>0</del> INVALID-ORDER-520	$Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{1}{C_L s} \right)$	190
10.52 <del>1</del> INVALID-ORDER-521	$Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{R_L}{C_L R_L s + 1} \right)$	190
10.52 <del>2</del> INVALID-ORDER-522	$Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, R_L + \frac{1}{C_L s} \right)$	190
10.52 <del>3</del> INVALID-ORDER-523	$Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, L_L s + \frac{1}{C_L s} \right)$	191
10.52 <del>4</del> INVALID-ORDER-524	$Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{L_L s}{C_L L_L s^2 + 1} \right)$	191
10.52 <del>5</del> INVALID-ORDER-525	$Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, L_L s + R_L + \frac{1}{C_L s} \right)$	191
10.52 <del>6</del> INVALID-ORDER-526	$Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$	191
10.52 <del>7</del> INVALID-ORDER-527	$Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$	191
10.52 <del>8</del> INVALID-ORDER-528	$Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$	192
10.52 <del>9</del> INVALID-ORDER-529	$Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, R_L \right)$	192
10.53 <del>0</del> INVALID-ORDER-530	$Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{1}{C_L s} \right)$	192
10.53 <del>1</del> INVALID-ORDER-531	$Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{R_L}{C_L R_L s + 1} \right)$	192
10.53 <del>2</del> INVALID-ORDER-532	$Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, R_L + \frac{1}{C_L s} \right)$	192
10.53 <del>3</del> INVALID-ORDER-533	$Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, L_L s + \frac{1}{C_L s} \right)$	193
10.53 <del>4</del> INVALID-ORDER-534	$Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{L_L s}{C_L L_L s^2 + 1} \right)$	193
10.53 <del>5</del> INVALID-ORDER-535	$Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, L_L s + R_L + \frac{1}{C_L s} \right)$	193
10.53 <del>6</del> INVALID-ORDER-536	$Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$	193
10.53 <del>7</del> INVALID-ORDER-537	$Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$	193

10.53	INVALID-ORDER-538	$Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{R_L (L_L s + \frac{1}{C_L s})}{L_L s + R_L + \frac{1}{C_L s}} \right)$	194
10.53	INVALID-ORDER-539	$Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{R_5 (L_5 s + \frac{1}{C_5 s})}{L_5 s + R_5 + \frac{1}{C_5 s}}, R_L \right)$	194
10.54	INVALID-ORDER-540	$Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{R_5 (L_5 s + \frac{1}{C_5 s})}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{1}{C_L s} \right)$	194
10.54	INVALID-ORDER-541	$Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{R_5 (L_5 s + \frac{1}{C_5 s})}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{R_L}{C_L R_L s + 1} \right)$	194
10.54	INVALID-ORDER-542	$Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{R_5 (L_5 s + \frac{1}{C_5 s})}{L_5 s + R_5 + \frac{1}{C_5 s}}, R_L + \frac{1}{C_L s} \right)$	194
10.54	INVALID-ORDER-543	$Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{R_5 (L_5 s + \frac{1}{C_5 s})}{L_5 s + R_5 + \frac{1}{C_5 s}}, L_L s + \frac{1}{C_L s} \right)$	195
10.54	INVALID-ORDER-544	$Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{R_5 (L_5 s + \frac{1}{C_5 s})}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{L_L s}{C_L L_L s^2 + 1} \right)$	195
10.54	INVALID-ORDER-545	$Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{R_5 (L_5 s + \frac{1}{C_5 s})}{L_5 s + R_5 + \frac{1}{C_5 s}}, L_L s + R_L + \frac{1}{C_L s} \right)$	195
10.54	INVALID-ORDER-546	$Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{R_5 (L_5 s + \frac{1}{C_5 s})}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$	195
10.54	INVALID-ORDER-547	$Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{R_5 (L_5 s + \frac{1}{C_5 s})}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$	195
10.54	INVALID-ORDER-548	$Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{R_5 (L_5 s + \frac{1}{C_5 s})}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{R_L (L_L s + \frac{1}{C_L s})}{L_L s + R_L + \frac{1}{C_L s}} \right)$	196
10.54	INVALID-ORDER-549	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, R_5, \frac{1}{C_L s} \right)$	196
10.55	INVALID-ORDER-550	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, R_5, \frac{R_L}{C_L R_L s + 1} \right)$	196
10.55	INVALID-ORDER-551	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, R_5, R_L + \frac{1}{C_L s} \right)$	196
10.55	INVALID-ORDER-552	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, R_5, L_L s + \frac{1}{C_L s} \right)$	196
10.55	INVALID-ORDER-553	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, R_5, \frac{L_L s}{C_L L_L s^2 + 1} \right)$	196
10.55	INVALID-ORDER-554	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, R_5, L_L s + R_L + \frac{1}{C_L s} \right)$	197
10.55	INVALID-ORDER-555	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, R_5, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$	197
10.55	INVALID-ORDER-556	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, R_5, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$	197

10.557	INVALID-ORDER-557	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, R_5, \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$	197
10.558	INVALID-ORDER-558	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, \frac{1}{C_5 s}, R_L \right)$	197
10.559	INVALID-ORDER-559	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, \frac{1}{C_5 s}, \frac{R_L}{C_L R_L s + 1} \right)$	198
10.560	INVALID-ORDER-560	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, \frac{1}{C_5 s}, R_L + \frac{1}{C_L s} \right)$	198
10.561	INVALID-ORDER-561	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, \frac{1}{C_5 s}, L_L s + \frac{1}{C_L s} \right)$	198
10.562	INVALID-ORDER-562	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} \right)$	198
10.563	INVALID-ORDER-563	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, \frac{1}{C_5 s}, L_L s + R_L + \frac{1}{C_L s} \right)$	198
10.564	INVALID-ORDER-564	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, \frac{1}{C_5 s}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$	198
10.565	INVALID-ORDER-565	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$	199
10.566	INVALID-ORDER-566	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, \frac{1}{C_5 s}, \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$	199
10.567	INVALID-ORDER-567	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, R_L \right)$	199
10.568	INVALID-ORDER-568	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, \frac{1}{C_L s} \right)$	199
10.569	INVALID-ORDER-569	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, \frac{R_L}{C_L R_L s + 1} \right)$	199
10.570	INVALID-ORDER-570	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, R_L + \frac{1}{C_L s} \right)$	199
10.571	INVALID-ORDER-571	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, L_L s + \frac{1}{C_L s} \right)$	200
10.572	INVALID-ORDER-572	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, \frac{L_L s}{C_L L_L s^2 + 1} \right)$	200
10.573	INVALID-ORDER-573	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, L_L s + R_L + \frac{1}{C_L s} \right)$	200
10.574	INVALID-ORDER-574	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$	200
10.575	INVALID-ORDER-575	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$	200
10.576	INVALID-ORDER-576	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$	201
10.577	INVALID-ORDER-577	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, R_L \right)$	201
10.578	INVALID-ORDER-578	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, \frac{1}{C_L s} \right)$	201

10.57	INVALID-ORDER-579	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, \frac{R_L}{C_L R_L s + 1} \right)$	201
10.58	INVALID-ORDER-580	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, R_L + \frac{1}{C_L s} \right)$	201
10.58	INVALID-ORDER-581	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, L_L s + \frac{1}{C_L s} \right)$	201
10.58	INVALID-ORDER-582	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} \right)$	202
10.58	INVALID-ORDER-583	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, L_L s + R_L + \frac{1}{C_L s} \right)$	202
10.58	INVALID-ORDER-584	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$	202
10.58	INVALID-ORDER-585	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$	202
10.58	INVALID-ORDER-586	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$	202
10.58	INVALID-ORDER-587	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, R_L \right)$	203
10.58	INVALID-ORDER-588	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, \frac{1}{C_L s} \right)$	203
10.58	INVALID-ORDER-589	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, \frac{R_L}{C_L R_L s + 1} \right)$	203
10.59	INVALID-ORDER-590	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, R_L + \frac{1}{C_L s} \right)$	203
10.59	INVALID-ORDER-591	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, L_L s + \frac{1}{C_L s} \right)$	203
10.59	INVALID-ORDER-592	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} \right)$	203
10.59	INVALID-ORDER-593	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, L_L s + R_L + \frac{1}{C_L s} \right)$	204
10.59	INVALID-ORDER-594	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$	204
10.59	INVALID-ORDER-595	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$	204
10.59	INVALID-ORDER-596	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$	204
10.59	INVALID-ORDER-597	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, R_L \right)$	204
10.59	INVALID-ORDER-598	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{1}{C_L s} \right)$	205
10.59	INVALID-ORDER-599	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{R_L}{C_L R_L s + 1} \right)$	205
10.60	INVALID-ORDER-600	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, R_L + \frac{1}{C_L s} \right)$	205



10.60	INVALID-ORDER-601	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, L_L s + \frac{1}{C_L s} \right)$	205
10.60	INVALID-ORDER-602	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{L_L s}{C_L L_L s^2 + 1} \right)$	205
10.60	INVALID-ORDER-603	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, L_L s + R_L + \frac{1}{C_L s} \right)$	205
10.60	INVALID-ORDER-604	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$	206
10.60	INVALID-ORDER-605	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$	206
10.60	INVALID-ORDER-606	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$	206
10.60	INVALID-ORDER-607	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, R_L \right)$	206
10.60	INVALID-ORDER-608	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{1}{C_L s} \right)$	206
10.60	INVALID-ORDER-609	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{R_L}{C_L R_L s + 1} \right)$	207
10.61	INVALID-ORDER-610	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, R_L + \frac{1}{C_L s} \right)$	207
10.61	INVALID-ORDER-611	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, L_L s + \frac{1}{C_L s} \right)$	207
10.61	INVALID-ORDER-612	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} \right)$	207
10.61	INVALID-ORDER-613	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, L_L s + R_L + \frac{1}{C_L s} \right)$	207
10.61	INVALID-ORDER-614	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$	208
10.61	INVALID-ORDER-615	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$	208
10.61	INVALID-ORDER-616	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$	208
10.61	INVALID-ORDER-617	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, R_L \right)$	208
10.61	INVALID-ORDER-618	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{1}{C_L s} \right)$	208
10.61	INVALID-ORDER-619	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{R_L}{C_L R_L s + 1} \right)$	209
10.62	INVALID-ORDER-620	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, R_L + \frac{1}{C_L s} \right)$	209
10.62	INVALID-ORDER-621	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, L_L s + \frac{1}{C_L s} \right)$	209

10.62	INVALID-ORDER-622	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{L_L s}{C_L L_L s^2 + 1} \right)$	209
10.62	INVALID-ORDER-623	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, L_L s + R_L + \frac{1}{C_L s} \right)$	209
10.62	INVALID-ORDER-624	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$	210
10.62	INVALID-ORDER-625	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$	210
10.62	INVALID-ORDER-626	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$	210
10.62	INVALID-ORDER-627	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, R_L \right)$	210
10.62	INVALID-ORDER-628	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{1}{C_L s} \right)$	210
10.62	INVALID-ORDER-629	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{R_L}{C_L R_L s + 1} \right)$	211
10.63	INVALID-ORDER-630	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, R_L + \frac{1}{C_L s} \right)$	211
10.63	INVALID-ORDER-631	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, L_L s + \frac{1}{C_L s} \right)$	211
10.63	INVALID-ORDER-632	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{L_L s}{C_L L_L s^2 + 1} \right)$	211
10.63	INVALID-ORDER-633	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, L_L s + R_L + \frac{1}{C_L s} \right)$	211
10.63	INVALID-ORDER-634	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$	212
10.63	INVALID-ORDER-635	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$	212
10.63	INVALID-ORDER-636	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$	212
10.63	INVALID-ORDER-637	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, R_L \right)$	212
10.63	INVALID-ORDER-638	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{1}{C_L s} \right)$	212
10.63	INVALID-ORDER-639	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{R_L}{C_L R_L s + 1} \right)$	213
10.64	INVALID-ORDER-640	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, R_L + \frac{1}{C_L s} \right)$	213

10.64	INVALID-ORDER-641	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, L_L s + \frac{1}{C_L s} \right)$	213
10.642	INVALID-ORDER-642	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{L_L s}{C_L L_L s^2 + 1} \right)$	213
10.643	INVALID-ORDER-643	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, L_L s + R_L + \frac{1}{C_L s} \right)$	213
10.644	INVALID-ORDER-644	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$	214
10.645	INVALID-ORDER-645	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$	214
10.646	INVALID-ORDER-646	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$	214
10.647	INVALID-ORDER-647	$Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, R_5, \frac{1}{C_L s} \right)$	214
10.648	INVALID-ORDER-648	$Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, R_5, \frac{R_L}{C_L R_L s + 1} \right)$	214
10.649	INVALID-ORDER-649	$Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, R_5, R_L + \frac{1}{C_L s} \right)$	215
10.650	INVALID-ORDER-650	$Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, R_5, L_L s + \frac{1}{C_L s} \right)$	215
10.651	INVALID-ORDER-651	$Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, R_5, \frac{L_L s}{C_L L_L s^2 + 1} \right)$	215
10.652	INVALID-ORDER-652	$Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, R_5, L_L s + R_L + \frac{1}{C_L s} \right)$	215
10.653	INVALID-ORDER-653	$Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, R_5, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$	215
10.654	INVALID-ORDER-654	$Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, R_5, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$	216
10.655	INVALID-ORDER-655	$Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, R_5, \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$	216
10.656	INVALID-ORDER-656	$Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{1}{C_5 s}, R_L \right)$	216
10.657	INVALID-ORDER-657	$Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{1}{C_5 s}, \frac{1}{C_L s} \right)$	216
10.658	INVALID-ORDER-658	$Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{1}{C_5 s}, \frac{R_L}{C_L R_L s + 1} \right)$	216
10.659	INVALID-ORDER-659	$Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{1}{C_5 s}, R_L + \frac{1}{C_L s} \right)$	217
10.660	INVALID-ORDER-660	$Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{1}{C_5 s}, L_L s + \frac{1}{C_L s} \right)$	217
10.661	INVALID-ORDER-661	$Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} \right)$	217

10.662INVALID-ORDER-662	$Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{1}{C_5 s}, L_L s + R_L + \frac{1}{C_L s} \right)$	217
10.663INVALID-ORDER-663	$Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{1}{C_5 s}, \frac{1}{C_L s + \frac{1}{R_L + \frac{1}{L_L s}}} \right)$	217
10.664INVALID-ORDER-664	$Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$	218
10.665INVALID-ORDER-665	$Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{1}{C_5 s}, \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$	218
10.666INVALID-ORDER-666	$Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, R_L \right)$	218
10.667INVALID-ORDER-667	$Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, \frac{1}{C_L s} \right)$	218
10.668INVALID-ORDER-668	$Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, \frac{R_L}{C_L R_L s + 1} \right)$	218
10.669INVALID-ORDER-669	$Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, R_L + \frac{1}{C_L s} \right)$	219
10.670INVALID-ORDER-670	$Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, L_L s + \frac{1}{C_L s} \right)$	219
10.671INVALID-ORDER-671	$Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, \frac{L_L s}{C_L L_L s^2 + 1} \right)$	219
10.672INVALID-ORDER-672	$Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, L_L s + R_L + \frac{1}{C_L s} \right)$	219
10.673INVALID-ORDER-673	$Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, \frac{1}{C_L s + \frac{1}{R_L + \frac{1}{L_L s}}} \right)$	219
10.674INVALID-ORDER-674	$Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$	220
10.675INVALID-ORDER-675	$Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$	220
10.676INVALID-ORDER-676	$Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, R_L \right)$	220
10.677INVALID-ORDER-677	$Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, \frac{1}{C_L s} \right)$	220
10.678INVALID-ORDER-678	$Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, \frac{R_L}{C_L R_L s + 1} \right)$	220
10.679INVALID-ORDER-679	$Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, R_L + \frac{1}{C_L s} \right)$	221
10.680INVALID-ORDER-680	$Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, L_L s + \frac{1}{C_L s} \right)$	221
10.681INVALID-ORDER-681	$Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} \right)$	221
10.682INVALID-ORDER-682	$Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, L_L s + R_L + \frac{1}{C_L s} \right)$	221
10.683INVALID-ORDER-683	$Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, \frac{1}{C_L s + \frac{1}{R_L + \frac{1}{L_L s}}} \right)$	221

10.68	INVALID-ORDER-684	$Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$	222
10.68	INVALID-ORDER-685	$Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$	222
10.68	INVALID-ORDER-686	$Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, R_L \right)$	222
10.68	INVALID-ORDER-687	$Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, \frac{1}{C_L s} \right)$	222
10.68	INVALID-ORDER-688	$Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, \frac{R_L}{C_L R_L s + 1} \right)$	222
10.68	INVALID-ORDER-689	$Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, R_L + \frac{1}{C_L s} \right)$	223
10.69	INVALID-ORDER-690	$Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, L_L s + \frac{1}{C_L s} \right)$	223
10.69	INVALID-ORDER-691	$Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} \right)$	223
10.69	INVALID-ORDER-692	$Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, L_L s + R_L + \frac{1}{C_L s} \right)$	223
10.69	INVALID-ORDER-693	$Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$	223
10.69	INVALID-ORDER-694	$Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$	224
10.69	INVALID-ORDER-695	$Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$	224
10.69	INVALID-ORDER-696	$Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, R_L \right)$	224
10.69	INVALID-ORDER-697	$Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{1}{C_L s} \right)$	224
10.69	INVALID-ORDER-698	$Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{R_L}{C_L R_L s + 1} \right)$	224
10.69	INVALID-ORDER-699	$Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, R_L + \frac{1}{C_L s} \right)$	225
10.70	INVALID-ORDER-700	$Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, L_L s + \frac{1}{C_L s} \right)$	225
10.70	INVALID-ORDER-701	$Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{L_L s}{C_L L_L s^2 + 1} \right)$	225
10.70	INVALID-ORDER-702	$Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, L_L s + R_L + \frac{1}{C_L s} \right)$	225
10.70	INVALID-ORDER-703	$Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$	225
10.70	INVALID-ORDER-704	$Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$	226
10.70	INVALID-ORDER-705	$Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$	226

10.706INVALID-ORDER-706	$Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, R_L \right)$	226
10.707INVALID-ORDER-707	$Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{1}{C_L s} \right)$	226
10.708INVALID-ORDER-708	$Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{R_L}{C_L R_L s + 1} \right)$	226
10.709INVALID-ORDER-709	$Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, R_L + \frac{1}{C_L s} \right)$	227
10.710INVALID-ORDER-710	$Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, L_L s + \frac{1}{C_L s} \right)$	227
10.711INVALID-ORDER-711	$Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} \right)$	227
10.712INVALID-ORDER-712	$Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, L_L s + R_L + \frac{1}{C_L s} \right)$	227
10.713INVALID-ORDER-713	$Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$	227
10.714INVALID-ORDER-714	$Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$	228
10.715INVALID-ORDER-715	$Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$	228
10.716INVALID-ORDER-716	$Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, R_L \right)$	228
10.717INVALID-ORDER-717	$Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{1}{C_L s} \right)$	228
10.718INVALID-ORDER-718	$Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{R_L}{C_L R_L s + 1} \right)$	228
10.719INVALID-ORDER-719	$Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, R_L + \frac{1}{C_L s} \right)$	229
10.720INVALID-ORDER-720	$Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, L_L s + \frac{1}{C_L s} \right)$	229
10.721INVALID-ORDER-721	$Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{L_L s}{C_L L_L s^2 + 1} \right)$	229
10.722INVALID-ORDER-722	$Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, L_L s + R_L + \frac{1}{C_L s} \right)$	229
10.723INVALID-ORDER-723	$Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$	229
10.724INVALID-ORDER-724	$Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$	230
10.725INVALID-ORDER-725	$Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$	230

10.726	INVALID-ORDER-726	$Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, R_L \right)$	230
10.727	INVALID-ORDER-727	$Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{1}{C_L s} \right)$	230
10.728	INVALID-ORDER-728	$Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{R_L}{C_L R_L s + 1} \right)$	230
10.729	INVALID-ORDER-729	$Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, R_L + \frac{1}{C_L s} \right)$	231
10.730	INVALID-ORDER-730	$Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, L_L s + \frac{1}{C_L s} \right)$	231
10.731	INVALID-ORDER-731	$Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{L_L s}{C_L L_L s^2 + 1} \right)$	231
10.732	INVALID-ORDER-732	$Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, L_L s + R_L + \frac{1}{C_L s} \right)$	231
10.733	INVALID-ORDER-733	$Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$	231
10.734	INVALID-ORDER-734	$Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$	232
10.735	INVALID-ORDER-735	$Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$	232
10.736	INVALID-ORDER-736	$Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, R_L \right)$	232
10.737	INVALID-ORDER-737	$Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{1}{C_L s} \right)$	232
10.738	INVALID-ORDER-738	$Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{R_L}{C_L R_L s + 1} \right)$	232
10.739	INVALID-ORDER-739	$Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, R_L + \frac{1}{C_L s} \right)$	233
10.740	INVALID-ORDER-740	$Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, L_L s + \frac{1}{C_L s} \right)$	233
10.741	INVALID-ORDER-741	$Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{L_L s}{C_L L_L s^2 + 1} \right)$	233
10.742	INVALID-ORDER-742	$Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, L_L s + R_L + \frac{1}{C_L s} \right)$	233
10.743	INVALID-ORDER-743	$Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$	233
10.744	INVALID-ORDER-744	$Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$	234

10.745	INVALID-ORDER-745	$Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{R_5(L_5 s + \frac{1}{C_5 s})}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{R_L(L_L s + \frac{1}{C_L s})}{L_L s + R_L + \frac{1}{C_L s}} \right)$	234
10.746	INVALID-ORDER-746	$Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, R_5, \frac{1}{C_L s} \right)$	234
10.747	INVALID-ORDER-747	$Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, R_5, \frac{R_L}{C_L R_L s + 1} \right)$	234
10.748	INVALID-ORDER-748	$Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, R_5, R_L + \frac{1}{C_L s} \right)$	234
10.749	INVALID-ORDER-749	$Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, R_5, L_L s + \frac{1}{C_L s} \right)$	235
10.750	INVALID-ORDER-750	$Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, R_5, \frac{L_L s}{C_L L_L s^2 + 1} \right)$	235
10.751	INVALID-ORDER-751	$Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, R_5, L_L s + R_L + \frac{1}{C_L s} \right)$	235
10.752	INVALID-ORDER-752	$Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, R_5, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$	235
10.753	INVALID-ORDER-753	$Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, R_5, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$	235
10.754	INVALID-ORDER-754	$Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, R_5, \frac{R_L(L_L s + \frac{1}{C_L s})}{L_L s + R_L + \frac{1}{C_L s}} \right)$	236
10.755	INVALID-ORDER-755	$Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, \frac{1}{C_5 s}, R_L \right)$	236
10.756	INVALID-ORDER-756	$Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, \frac{1}{C_5 s}, \frac{R_L}{C_L R_L s + 1} \right)$	236
10.757	INVALID-ORDER-757	$Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, \frac{1}{C_5 s}, R_L + \frac{1}{C_L s} \right)$	236
10.758	INVALID-ORDER-758	$Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, \frac{1}{C_5 s}, L_L s + \frac{1}{C_L s} \right)$	236
10.759	INVALID-ORDER-759	$Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} \right)$	237
10.760	INVALID-ORDER-760	$Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, \frac{1}{C_5 s}, L_L s + R_L + \frac{1}{C_L s} \right)$	237
10.761	INVALID-ORDER-761	$Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, \frac{1}{C_5 s}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$	237
10.762	INVALID-ORDER-762	$Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$	237



10.763	INVALID-ORDER-763	$Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, \frac{1}{C_5 s}, \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$	237
10.764	INVALID-ORDER-764	$Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, R_L \right)$	238
10.765	INVALID-ORDER-765	$Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, \frac{1}{C_L s} \right)$	238
10.766	INVALID-ORDER-766	$Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, \frac{R_L}{C_L R_L s + 1} \right)$	238
10.767	INVALID-ORDER-767	$Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, R_L + \frac{1}{C_L s} \right)$	238
10.768	INVALID-ORDER-768	$Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, L_L s + \frac{1}{C_L s} \right)$	238
10.769	INVALID-ORDER-769	$Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, \frac{L_L s}{C_L L_L s^2 + 1} \right)$	239
10.770	INVALID-ORDER-770	$Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, L_L s + R_L + \frac{1}{C_L s} \right)$	239
10.771	INVALID-ORDER-771	$Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$	239
10.772	INVALID-ORDER-772	$Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$	239
10.773	INVALID-ORDER-773	$Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$	239
10.774	INVALID-ORDER-774	$Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, R_L \right)$	240
10.775	INVALID-ORDER-775	$Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, \frac{1}{C_L s} \right)$	240
10.776	INVALID-ORDER-776	$Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, \frac{R_L}{C_L R_L s + 1} \right)$	240
10.777	INVALID-ORDER-777	$Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, R_L + \frac{1}{C_L s} \right)$	240
10.778	INVALID-ORDER-778	$Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, L_L s + \frac{1}{C_L s} \right)$	240
10.779	INVALID-ORDER-779	$Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} \right)$	241
10.780	INVALID-ORDER-780	$Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, L_L s + R_L + \frac{1}{C_L s} \right)$	241

10.78	INVALID-ORDER-781	$Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$	241
10.78	INVALID-ORDER-782	$Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$	241
10.78	INVALID-ORDER-783	$Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, \frac{R_L (L_L s + \frac{1}{C_L s})}{L_L s + R_L + \frac{1}{C_L s}} \right)$	241
10.78	INVALID-ORDER-784	$Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, R_L \right)$	242
10.78	INVALID-ORDER-785	$Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, \frac{1}{C_L s} \right)$	242
10.78	INVALID-ORDER-786	$Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, \frac{R_L}{C_L R_L s + 1} \right)$	242
10.78	INVALID-ORDER-787	$Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, R_L + \frac{1}{C_L s} \right)$	242
10.78	INVALID-ORDER-788	$Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, L_L s + \frac{1}{C_L s} \right)$	242
10.78	INVALID-ORDER-789	$Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} \right)$	243
10.79	INVALID-ORDER-790	$Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, L_L s + R_L + \frac{1}{C_L s} \right)$	243
10.79	INVALID-ORDER-791	$Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$	243
10.79	INVALID-ORDER-792	$Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$	243
10.79	INVALID-ORDER-793	$Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, \frac{R_L (L_L s + \frac{1}{C_L s})}{L_L s + R_L + \frac{1}{C_L s}} \right)$	243
10.79	INVALID-ORDER-794	$Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, R_L \right)$	244
10.79	INVALID-ORDER-795	$Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{1}{C_L s} \right)$	244
10.79	INVALID-ORDER-796	$Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{R_L}{C_L R_L s + 1} \right)$	244
10.79	INVALID-ORDER-797	$Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, R_L + \frac{1}{C_L s} \right)$	244
10.79	INVALID-ORDER-798	$Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, L_L s + \frac{1}{C_L s} \right)$	244

10.79	INVALID-ORDER-799	$Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{L_L s}{C_L L_L s^2 + 1} \right)$	245
10.80	INVALID-ORDER-800	$Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, L_L s + R_L + \frac{1}{C_L s} \right)$	245
10.80	INVALID-ORDER-801	$Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$	245
10.80	INVALID-ORDER-802	$Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$	245
10.80	INVALID-ORDER-803	$Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{R_L (L_L s + \frac{1}{C_L s})}{L_L s + R_L + \frac{1}{C_L s}} \right)$	245
10.80	INVALID-ORDER-804	$Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, R_L \right)$	246
10.80	INVALID-ORDER-805	$Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{1}{C_L s} \right)$	246
10.80	INVALID-ORDER-806	$Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{R_L}{C_L R_L s + 1} \right)$	246
10.80	INVALID-ORDER-807	$Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, R_L + \frac{1}{C_L s} \right)$	246
10.80	INVALID-ORDER-808	$Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, L_L s + \frac{1}{C_L s} \right)$	246
10.80	INVALID-ORDER-809	$Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} \right)$	247
10.81	INVALID-ORDER-810	$Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, L_L s + R_L + \frac{1}{C_L s} \right)$	247
10.81	INVALID-ORDER-811	$Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$	247
10.81	INVALID-ORDER-812	$Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$	247
10.81	INVALID-ORDER-813	$Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{R_L (L_L s + \frac{1}{C_L s})}{L_L s + R_L + \frac{1}{C_L s}} \right)$	247
10.81	INVALID-ORDER-814	$Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, R_L \right)$	248
10.81	INVALID-ORDER-815	$Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{1}{C_L s} \right)$	248
10.81	INVALID-ORDER-816	$Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{R_L}{C_L R_L s + 1} \right)$	248

10.817	INVALID-ORDER-817	$Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, R_L + \frac{1}{C_L s} \right)$	248
10.818	INVALID-ORDER-818	$Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, L_L s + \frac{1}{C_L s} \right)$	248
10.819	INVALID-ORDER-819	$Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{L_L s}{C_L L_L s^2 + 1} \right)$	249
10.820	INVALID-ORDER-820	$Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, L_L s + R_L + \frac{1}{C_L s} \right)$	249
10.821	INVALID-ORDER-821	$Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$	249
10.822	INVALID-ORDER-822	$Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$	249
10.823	INVALID-ORDER-823	$Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{R_L (L_L s + \frac{1}{C_L s})}{L_L s + R_L + \frac{1}{C_L s}} \right)$	249
10.824	INVALID-ORDER-824	$Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, R_L \right)$	250
10.825	INVALID-ORDER-825	$Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{1}{C_L s} \right)$	250
10.826	INVALID-ORDER-826	$Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{R_L}{C_L R_L s + 1} \right)$	250
10.827	INVALID-ORDER-827	$Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, R_L + \frac{1}{C_L s} \right)$	250
10.828	INVALID-ORDER-828	$Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, L_L s + \frac{1}{C_L s} \right)$	250
10.829	INVALID-ORDER-829	$Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{L_L s}{C_L L_L s^2 + 1} \right)$	251
10.830	INVALID-ORDER-830	$Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, L_L s + R_L + \frac{1}{C_L s} \right)$	251
10.831	INVALID-ORDER-831	$Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$	251
10.832	INVALID-ORDER-832	$Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$	251
10.833	INVALID-ORDER-833	$Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{R_L (L_L s + \frac{1}{C_L s})}{L_L s + R_L + \frac{1}{C_L s}} \right)$	251
10.834	INVALID-ORDER-834	$Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, \frac{R_5 (L_5 s + \frac{1}{C_5 s})}{L_5 s + R_5 + \frac{1}{C_5 s}}, R_L \right)$	252

10.835	INVALID-ORDER-835	$Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{1}{C_L s} \right)$	252
10.836	INVALID-ORDER-836	$Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{R_L}{C_L R_L s + 1} \right)$	252
10.837	INVALID-ORDER-837	$Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, R_L + \frac{1}{C_L s} \right)$	252
10.838	INVALID-ORDER-838	$Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, L_L s + \frac{1}{C_L s} \right)$	252
10.839	INVALID-ORDER-839	$Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{L_L s}{C_L L_L s^2 + 1} \right)$	253
10.840	INVALID-ORDER-840	$Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, L_L s + R_L + \frac{1}{C_L s} \right)$	253
10.841	INVALID-ORDER-841	$Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$	253
10.842	INVALID-ORDER-842	$Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$	253
10.843	INVALID-ORDER-843	$Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$	253
10.844	INVALID-ORDER-844	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, R_5, \frac{1}{C_L s} \right)$	254
10.845	INVALID-ORDER-845	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, R_5, \frac{R_L}{C_L R_L s + 1} \right)$	254
10.846	INVALID-ORDER-846	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, R_5, R_L + \frac{1}{C_L s} \right)$	254
10.847	INVALID-ORDER-847	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, R_5, L_L s + \frac{1}{C_L s} \right)$	254
10.848	INVALID-ORDER-848	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, R_5, \frac{L_L s}{C_L L_L s^2 + 1} \right)$	254
10.849	INVALID-ORDER-849	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, R_5, L_L s + R_L + \frac{1}{C_L s} \right)$	254
10.850	INVALID-ORDER-850	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, R_5, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$	255
10.851	INVALID-ORDER-851	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, R_5, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$	255
10.852	INVALID-ORDER-852	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, R_5, \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$	255
10.853	INVALID-ORDER-853	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, \frac{1}{C_5 s}, R_L \right)$	255
10.854	INVALID-ORDER-854	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, \frac{1}{C_5 s}, \frac{1}{C_L s} \right)$	255

10.855INVALID-ORDER-855	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, \frac{1}{C_5 s}, \frac{R_L}{C_L R_L s + 1} \right)$	256
10.856INVALID-ORDER-856	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, \frac{1}{C_5 s}, R_L + \frac{1}{C_L s} \right)$	256
10.857INVALID-ORDER-857	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, \frac{1}{C_5 s}, L_L s + \frac{1}{C_L s} \right)$	256
10.858INVALID-ORDER-858	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} \right)$	256
10.859INVALID-ORDER-859	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, \frac{1}{C_5 s}, L_L s + R_L + \frac{1}{C_L s} \right)$	256
10.860INVALID-ORDER-860	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, \frac{1}{C_5 s}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$	257
10.861INVALID-ORDER-861	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$	257
10.862INVALID-ORDER-862	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, \frac{1}{C_5 s}, \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$	257
10.863INVALID-ORDER-863	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, R_L \right)$	257
10.864INVALID-ORDER-864	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, \frac{1}{C_L s} \right)$	257
10.865INVALID-ORDER-865	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, \frac{R_L}{C_L R_L s + 1} \right)$	258
10.866INVALID-ORDER-866	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, R_L + \frac{1}{C_L s} \right)$	258
10.867INVALID-ORDER-867	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, L_L s + \frac{1}{C_L s} \right)$	258
10.868INVALID-ORDER-868	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, \frac{L_L s}{C_L L_L s^2 + 1} \right)$	258
10.869INVALID-ORDER-869	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, L_L s + R_L + \frac{1}{C_L s} \right)$	258
10.870INVALID-ORDER-870	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$	259
10.871INVALID-ORDER-871	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$	259
10.872INVALID-ORDER-872	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$	259
10.873INVALID-ORDER-873	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, R_L \right)$	259
10.874INVALID-ORDER-874	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, \frac{1}{C_L s} \right)$	259
10.875INVALID-ORDER-875	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, \frac{R_L}{C_L R_L s + 1} \right)$	260
10.876INVALID-ORDER-876	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, R_L + \frac{1}{C_L s} \right)$	260

10.87	INVALID-ORDER-877	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, L_L s + \frac{1}{C_L s} \right)$	260
10.87	INVALID-ORDER-878	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} \right)$	260
10.87	INVALID-ORDER-879	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, L_L s + R_L + \frac{1}{C_L s} \right)$	260
10.88	INVALID-ORDER-880	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$	261
10.88	INVALID-ORDER-881	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$	261
10.88	INVALID-ORDER-882	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$	261
10.88	INVALID-ORDER-883	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, R_L \right)$	261
10.88	INVALID-ORDER-884	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, \frac{1}{C_L s} \right)$	261
10.88	INVALID-ORDER-885	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, \frac{R_L}{C_L R_L s + 1} \right)$	262
10.88	INVALID-ORDER-886	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, R_L + \frac{1}{C_L s} \right)$	262
10.88	INVALID-ORDER-887	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, L_L s + \frac{1}{C_L s} \right)$	262
10.88	INVALID-ORDER-888	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} \right)$	262
10.88	INVALID-ORDER-889	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, L_L s + R_L + \frac{1}{C_L s} \right)$	262
10.89	INVALID-ORDER-890	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$	263
10.89	INVALID-ORDER-891	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$	263
10.89	INVALID-ORDER-892	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$	263
10.89	INVALID-ORDER-893	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, R_L \right)$	263
10.89	INVALID-ORDER-894	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{1}{C_L s} \right)$	263
10.89	INVALID-ORDER-895	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{R_L}{C_L R_L s + 1} \right)$	264
10.89	INVALID-ORDER-896	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, R_L + \frac{1}{C_L s} \right)$	264
10.89	INVALID-ORDER-897	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, L_L s + \frac{1}{C_L s} \right)$	264
10.89	INVALID-ORDER-898	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{L_L s}{C_L L_L s^2 + 1} \right)$	264

10.89	INVALID-ORDER-899	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, L_L s + R_L + \frac{1}{C_L s} \right)$	264
10.90	INVALID-ORDER-900	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{1}{C_L s + \frac{1}{R_L + \frac{1}{L_L s}}} \right)$	265
10.90	INVALID-ORDER-901	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$	265
10.90	INVALID-ORDER-902	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$	265
10.90	INVALID-ORDER-903	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, R_L \right)$	265
10.90	INVALID-ORDER-904	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{1}{C_L s} \right)$	265
10.90	INVALID-ORDER-905	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{R_L}{C_L R_L s + 1} \right)$	266
10.90	INVALID-ORDER-906	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, R_L + \frac{1}{C_L s} \right)$	266
10.90	INVALID-ORDER-907	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, L_L s + \frac{1}{C_L s} \right)$	266
10.90	INVALID-ORDER-908	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} \right)$	266
10.90	INVALID-ORDER-909	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, L_L s + R_L + \frac{1}{C_L s} \right)$	266
10.91	INVALID-ORDER-910	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{1}{C_L s + \frac{1}{R_L + \frac{1}{L_L s}}} \right)$	267
10.91	INVALID-ORDER-911	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$	267
10.91	INVALID-ORDER-912	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$	267
10.91	INVALID-ORDER-913	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5 + \frac{1}{L_5 s}}}, R_L \right)$	267
10.91	INVALID-ORDER-914	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5 + \frac{1}{L_5 s}}}, \frac{1}{C_L s} \right)$	267
10.91	INVALID-ORDER-915	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5 + \frac{1}{L_5 s}}}, \frac{R_L}{C_L R_L s + 1} \right)$	268
10.91	INVALID-ORDER-916	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5 + \frac{1}{L_5 s}}}, R_L + \frac{1}{C_L s} \right)$	268
10.91	INVALID-ORDER-917	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5 + \frac{1}{L_5 s}}}, L_L s + \frac{1}{C_L s} \right)$	268
10.91	INVALID-ORDER-918	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5 + \frac{1}{L_5 s}}}, \frac{L_L s}{C_L L_L s^2 + 1} \right)$	268



10.91	INVALID-ORDER-919	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, L_L s + R_L + \frac{1}{C_L s} \right)$	268
10.92	INVALID-ORDER-920	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$	269
10.92	INVALID-ORDER-921	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$	269
10.92	INVALID-ORDER-922	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{R_L (L_L s + \frac{1}{C_L s})}{L_L s + R_L + \frac{1}{C_L s}} \right)$	269
10.92	INVALID-ORDER-923	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, R_L \right)$	269
10.92	INVALID-ORDER-924	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{1}{C_L s} \right)$	269
10.92	INVALID-ORDER-925	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{R_L}{C_L R_L s + 1} \right)$	270
10.92	INVALID-ORDER-926	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, R_L + \frac{1}{C_L s} \right)$	270
10.92	INVALID-ORDER-927	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, L_L s + \frac{1}{C_L s} \right)$	270
10.92	INVALID-ORDER-928	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{L_L s}{C_L L_L s^2 + 1} \right)$	270
10.92	INVALID-ORDER-929	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, L_L s + R_L + \frac{1}{C_L s} \right)$	270
10.93	INVALID-ORDER-930	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$	271
10.93	INVALID-ORDER-931	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$	271
10.93	INVALID-ORDER-932	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{R_L (L_L s + \frac{1}{C_L s})}{L_L s + R_L + \frac{1}{C_L s}} \right)$	271
10.93	INVALID-ORDER-933	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, \frac{R_5 (L_5 s + \frac{1}{C_5 s})}{L_5 s + R_5 + \frac{1}{C_5 s}}, R_L \right)$	271
10.93	INVALID-ORDER-934	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, \frac{R_5 (L_5 s + \frac{1}{C_5 s})}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{1}{C_L s} \right)$	271
10.93	INVALID-ORDER-935	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, \frac{R_5 (L_5 s + \frac{1}{C_5 s})}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{R_L}{C_L R_L s + 1} \right)$	272
10.93	INVALID-ORDER-936	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, \frac{R_5 (L_5 s + \frac{1}{C_5 s})}{L_5 s + R_5 + \frac{1}{C_5 s}}, R_L + \frac{1}{C_L s} \right)$	272
10.93	INVALID-ORDER-937	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, \frac{R_5 (L_5 s + \frac{1}{C_5 s})}{L_5 s + R_5 + \frac{1}{C_5 s}}, L_L s + \frac{1}{C_L s} \right)$	272

10.938	INVALID-ORDER-938	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{L_L s}{C_L L_L s^2 + 1} \right)$	272
10.939	INVALID-ORDER-939	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, L_L s + R_L + \frac{1}{C_L s} \right)$	272
10.940	INVALID-ORDER-940	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$	273
10.941	INVALID-ORDER-941	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$	273
10.942	INVALID-ORDER-942	$Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$	273
10.943	INVALID-ORDER-943	$Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, R_5, \frac{1}{C_L s} \right)$	273
10.944	INVALID-ORDER-944	$Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, R_5, \frac{R_L}{C_L R_L s + 1} \right)$	273
10.945	INVALID-ORDER-945	$Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, R_5, R_L + \frac{1}{C_L s} \right)$	274
10.946	INVALID-ORDER-946	$Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, R_5, L_L s + \frac{1}{C_L s} \right)$	274
10.947	INVALID-ORDER-947	$Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, R_5, \frac{L_L s}{C_L L_L s^2 + 1} \right)$	274
10.948	INVALID-ORDER-948	$Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, R_5, L_L s + R_L + \frac{1}{C_L s} \right)$	274
10.949	INVALID-ORDER-949	$Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, R_5, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$	274
10.950	INVALID-ORDER-950	$Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, R_5, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$	275
10.951	INVALID-ORDER-951	$Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, R_5, \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$	275
10.952	INVALID-ORDER-952	$Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, \frac{1}{C_5 s}, R_L \right)$	275
10.953	INVALID-ORDER-953	$Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, \frac{1}{C_5 s}, \frac{1}{C_L s} \right)$	275
10.954	INVALID-ORDER-954	$Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, \frac{1}{C_5 s}, \frac{R_L}{C_L R_L s + 1} \right)$	275

10.955INVALID-ORDER-955	$Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, \frac{1}{C_5 s}, R_L + \frac{1}{C_L s} \right)$	276
10.956INVALID-ORDER-956	$Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, \frac{1}{C_5 s}, L_L s + \frac{1}{C_L s} \right)$	276
10.957INVALID-ORDER-957	$Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} \right)$	276
10.958INVALID-ORDER-958	$Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, \frac{1}{C_5 s}, L_L s + R_L + \frac{1}{C_L s} \right)$	276
10.959INVALID-ORDER-959	$Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, \frac{1}{C_5 s}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$	276
10.960INVALID-ORDER-960	$Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$	277
10.961INVALID-ORDER-961	$Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, \frac{1}{C_5 s}, \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$	277
10.962INVALID-ORDER-962	$Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, R_L \right)$	277
10.963INVALID-ORDER-963	$Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, \frac{1}{C_L s} \right)$	277
10.964INVALID-ORDER-964	$Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, \frac{R_L}{C_L R_L s + 1} \right)$	277
10.965INVALID-ORDER-965	$Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, R_L + \frac{1}{C_L s} \right)$	278
10.966INVALID-ORDER-966	$Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, L_L s + \frac{1}{C_L s} \right)$	278
10.967INVALID-ORDER-967	$Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, \frac{L_L s}{C_L L_L s^2 + 1} \right)$	278
10.968INVALID-ORDER-968	$Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, L_L s + R_L + \frac{1}{C_L s} \right)$	278
10.969INVALID-ORDER-969	$Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$	278
10.970INVALID-ORDER-970	$Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$	279
10.971INVALID-ORDER-971	$Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$	279

10.972INVALID-ORDER-972	$Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, R_L \right)$	279
10.973INVALID-ORDER-973	$Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, \frac{1}{C_L s} \right)$	279
10.974INVALID-ORDER-974	$Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, \frac{R_L}{C_L R_L s + 1} \right)$	279
10.975INVALID-ORDER-975	$Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, R_L + \frac{1}{C_L s} \right)$	280
10.976INVALID-ORDER-976	$Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, L_L s + \frac{1}{C_L s} \right)$	280
10.977INVALID-ORDER-977	$Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} \right)$	280
10.978INVALID-ORDER-978	$Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, L_L s + R_L + \frac{1}{C_L s} \right)$	280
10.979INVALID-ORDER-979	$Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, \frac{1}{C_L s + \frac{1}{R_L + \frac{1}{L_L s}}} \right)$	280
10.980INVALID-ORDER-980	$Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$	281
10.981INVALID-ORDER-981	$Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$	281
10.982INVALID-ORDER-982	$Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, R_L \right)$	281
10.983INVALID-ORDER-983	$Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, \frac{1}{C_L s} \right)$	281
10.984INVALID-ORDER-984	$Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, \frac{R_L}{C_L R_L s + 1} \right)$	281
10.985INVALID-ORDER-985	$Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, R_L + \frac{1}{C_L s} \right)$	282
10.986INVALID-ORDER-986	$Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, L_L s + \frac{1}{C_L s} \right)$	282
10.987INVALID-ORDER-987	$Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} \right)$	282
10.988INVALID-ORDER-988	$Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, L_L s + R_L + \frac{1}{C_L s} \right)$	282

10.98 <del>INVALID-ORDER-989</del>	$Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$	282
10.99 <del>INVALID-ORDER-990</del>	$Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$	283
10.99 <del>INVALID-ORDER-991</del>	$Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$	283
10.99 <del>INVALID-ORDER-992</del>	$Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, R_L \right)$	283
10.99 <del>INVALID-ORDER-993</del>	$Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{1}{C_L s} \right)$	283
10.99 <del>INVALID-ORDER-994</del>	$Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{R_L}{C_L R_L s + 1} \right)$	283
10.99 <del>INVALID-ORDER-995</del>	$Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, R_L + \frac{1}{C_L s} \right)$	284
10.99 <del>INVALID-ORDER-996</del>	$Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, L_L s + \frac{1}{C_L s} \right)$	284
10.99 <del>INVALID-ORDER-997</del>	$Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{L_L s}{C_L L_L s^2 + 1} \right)$	284
10.99 <del>INVALID-ORDER-998</del>	$Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, L_L s + R_L + \frac{1}{C_L s} \right)$	284
10.99 <del>INVALID-ORDER-999</del>	$Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$	284
10.100 <del>INVALID-ORDER-1000</del>	$Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$	285
10.100 <del>INVALID-ORDER-1001</del>	$Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$	285
10.100 <del>INVALID-ORDER-1002</del>	$Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, R_L \right)$	285
10.100 <del>INVALID-ORDER-1003</del>	$Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{1}{C_L s} \right)$	285
10.100 <del>INVALID-ORDER-1004</del>	$Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{R_L}{C_L R_L s + 1} \right)$	285
10.100 <del>INVALID-ORDER-1005</del>	$Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, R_L + \frac{1}{C_L s} \right)$	286

10.1006INVALID-ORDER-1006	$Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, L_L s + \frac{1}{C_L s} \right)$	286
10.1007INVALID-ORDER-1007	$Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} \right)$	286
10.1008INVALID-ORDER-1008	$Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, L_L s + R_L + \frac{1}{C_L s} \right)$	286
10.1009INVALID-ORDER-1009	$Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$	286
10.1010INVALID-ORDER-1010	$Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$	287
10.1011INVALID-ORDER-1011	$Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$	287
10.1012INVALID-ORDER-1012	$Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, R_L \right)$	287
10.1013INVALID-ORDER-1013	$Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{1}{C_L s} \right)$	287
10.1014INVALID-ORDER-1014	$Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{R_L}{C_L R_L s + 1} \right)$	287
10.1015INVALID-ORDER-1015	$Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, R_L + \frac{1}{C_L s} \right)$	288
10.1016INVALID-ORDER-1016	$Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, L_L s + \frac{1}{C_L s} \right)$	288
10.1017INVALID-ORDER-1017	$Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{L_L s}{C_L L_L s^2 + 1} \right)$	288
10.1018INVALID-ORDER-1018	$Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, L_L s + R_L + \frac{1}{C_L s} \right)$	288
10.1019INVALID-ORDER-1019	$Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$	288
10.1020INVALID-ORDER-1020	$Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$	289
10.1021INVALID-ORDER-1021	$Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$	289
10.1022INVALID-ORDER-1022	$Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, R_L \right)$	289

10.1023	INVALID-ORDER-1023	$Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{1}{C_L s} \right)$	289
10.1024	INVALID-ORDER-1024	$Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{R_L}{C_L R_L s + 1} \right)$	289
10.1025	INVALID-ORDER-1025	$Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, R_L + \frac{1}{C_L s} \right)$	290
10.1026	INVALID-ORDER-1026	$Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, L_L s + \frac{1}{C_L s} \right)$	290
10.1027	INVALID-ORDER-1027	$Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{L_L s}{C_L L_L s^2 + 1} \right)$	290
10.1028	INVALID-ORDER-1028	$Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, L_L s + R_L + \frac{1}{C_L s} \right)$	290
10.1029	INVALID-ORDER-1029	$Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$	290
10.1030	INVALID-ORDER-1030	$Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$	291
10.1031	INVALID-ORDER-1031	$Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$	291
10.1032	INVALID-ORDER-1032	$Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, R_L \right)$	291
10.1033	INVALID-ORDER-1033	$Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{1}{C_L s} \right)$	291
10.1034	INVALID-ORDER-1034	$Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{R_L}{C_L R_L s + 1} \right)$	291
10.1035	INVALID-ORDER-1035	$Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, R_L + \frac{1}{C_L s} \right)$	292
10.1036	INVALID-ORDER-1036	$Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, L_L s + \frac{1}{C_L s} \right)$	292
10.1037	INVALID-ORDER-1037	$Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{L_L s}{C_L L_L s^2 + 1} \right)$	292
10.1038	INVALID-ORDER-1038	$Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, L_L s + R_L + \frac{1}{C_L s} \right)$	292
10.1039	INVALID-ORDER-1039	$Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$	292

10.1011	INVALID-ORDER-1040	$Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$	293
10.1012	INVALID-ORDER-1041	$Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$	293



**1 Examined  $H(z)$  for TIA simple Z1 Z5 ZL:**  $\frac{Z_1 Z_L (Z_5 g_m - 1)}{Z_1 Z_5 g_m + 2Z_1 Z_L g_m + Z_1 + Z_5 + Z_L}$

$$H(z) = \frac{Z_1 Z_L (Z_5 g_m - 1)}{Z_1 Z_5 g_m + 2Z_1 Z_L g_m + Z_1 + Z_5 + Z_L}$$

**2 HP**

**3 BP**

**3.1 BP-1**  $Z(s) = \left( R_1, \infty, \infty, \infty, R_5, \frac{L_L s}{C_L L_L s^2 + 1} \right)$

$$H(s) = \frac{L_L R_1 s (R_5 g_m - 1)}{C_L L_L R_1 R_5 g_m s^2 + C_L L_L R_1 s^2 + C_L L_L R_5 s^2 + 2L_L R_1 g_m s + L_L s + R_1 R_5 g_m + R_1 + R_5}$$

**Parameters:**

Q:  $\frac{C_L \sqrt{\frac{1}{C_L L_L}} (R_1 R_5 g_m + R_1 + R_5)}{2R_1 g_m + 1}$

wo:  $\sqrt{\frac{1}{C_L L_L}}$

bandwidth:  $\frac{2R_1 g_m + 1}{C_L (R_1 R_5 g_m + R_1 + R_5)}$

K-LP: 0

K-HP: 0

K-BP:  $\frac{R_1 (R_5 g_m - 1)}{2R_1 g_m + 1}$

Qz: 0

Wz: None

**3.2 BP-2**  $Z(s) = \left( R_1, \infty, \infty, \infty, R_5, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$

$$H(s) = \frac{L_L R_1 R_L s (R_5 g_m - 1)}{C_L L_L R_1 R_5 R_L g_m s^2 + C_L L_L R_1 R_L s^2 + C_L L_L R_5 R_L s^2 + L_L R_1 R_5 g_m s + 2L_L R_1 R_L g_m s + L_L R_1 s + L_L R_5 s + L_L R_L s + R_1 R_5 R_L g_m + R_1 R_L + R_5 R_L}$$

**Parameters:**

$$\begin{aligned}
\text{Q: } & \frac{C_L R_L \sqrt{\frac{1}{C_L L_L}} (R_1 R_5 g_m + R_1 + R_5)}{R_1 R_5 g_m + 2R_1 R_L g_m + R_1 + R_5 + R_L} \\
\text{wo: } & \sqrt{\frac{1}{C_L L_L}} \\
\text{bandwidth: } & \frac{R_1 R_5 g_m + 2R_1 R_L g_m + R_1 + R_5 + R_L}{C_L R_L (R_1 R_5 g_m + R_1 + R_5)} \\
\text{K-LP: } & 0 \\
\text{K-HP: } & 0 \\
\text{K-BP: } & \frac{R_1 R_L (R_5 g_m - 1)}{R_1 R_5 g_m + 2R_1 R_L g_m + R_1 + R_5 + R_L} \\
\text{QZ: } & 0 \\
\text{Wz: } & \text{None}
\end{aligned}$$

**3.3 BP-3**  $Z(s) = \left( L_1 s, \infty, \infty, \infty, R_5, \frac{1}{C_L s} \right)$

$$H(s) = \frac{L_1 s (R_5 g_m - 1)}{C_L L_1 R_5 g_m s^2 + C_L L_1 s^2 + C_L R_5 s + 2L_1 g_m s + 1}$$

**Parameters:**

$$\begin{aligned}
\text{Q: } & \frac{C_L L_1 \sqrt{\frac{1}{C_L L_1 (R_5 g_m + 1)}} (R_5 g_m + 1)}{C_L R_5 + 2L_1 g_m} \\
\text{wo: } & \sqrt{\frac{1}{C_L L_1 (R_5 g_m + 1)}} \\
\text{bandwidth: } & \frac{C_L R_5 + 2L_1 g_m}{C_L L_1 (R_5 g_m + 1)} \\
\text{K-LP: } & 0 \\
\text{K-HP: } & 0 \\
\text{K-BP: } & \frac{L_1 (R_5 g_m - 1)}{C_L R_5 + 2L_1 g_m} \\
\text{QZ: } & 0 \\
\text{Wz: } & \text{None}
\end{aligned}$$

**3.4 BP-4**  $Z(s) = \left( L_1 s, \infty, \infty, \infty, R_5, \frac{R_L}{C_L R_L s + 1} \right)$

$$H(s) = \frac{L_1 R_L s (R_5 g_m - 1)}{C_L L_1 R_5 R_L g_m s^2 + C_L L_1 R_L s^2 + C_L R_5 R_L s + L_1 R_5 g_m s + 2L_1 R_L g_m s + L_1 s + R_5 + R_L}$$

**Parameters:**

$$\begin{aligned}
\text{Q: } & \frac{C_L L_1 R_L \sqrt{\frac{R_5 + R_L}{C_L L_1 R_L (R_5 g_m + 1)}} (R_5 g_m + 1)}{C_L R_5 R_L + L_1 R_5 g_m + 2L_1 R_L g_m + L_1} \\
\text{wo: } & \sqrt{\frac{R_5 + R_L}{C_L L_1 R_L (R_5 g_m + 1)}} \\
\text{bandwidth: } & \frac{C_L R_5 R_L + L_1 R_5 g_m + 2L_1 R_L g_m + L_1}{C_L L_1 R_L (R_5 g_m + 1)} \\
\text{K-LP: } & 0 \\
\text{K-HP: } & 0 \\
\text{K-BP: } & \frac{L_1 R_L (R_5 g_m - 1)}{C_L R_5 R_L + L_1 R_5 g_m + 2L_1 R_L g_m + L_1} \\
\text{Qz: } & 0 \\
\text{Wz: } & \text{None}
\end{aligned}$$

$$\mathbf{3.5 \quad BP-5} \quad Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, R_5, R_L \right)$$

$$H(s) = \frac{L_1 R_L s (R_5 g_m - 1)}{C_1 L_1 R_5 s^2 + C_1 L_1 R_L s^2 + L_1 R_5 g_m s + 2L_1 R_L g_m s + L_1 s + R_5 + R_L}$$

**Parameters:**

$$\begin{aligned}
\text{Q: } & \frac{C_1 \sqrt{\frac{1}{C_1 L_1}} (R_5 + R_L)}{R_5 g_m + 2R_L g_m + 1} \\
\text{wo: } & \sqrt{\frac{1}{C_1 L_1}} \\
\text{bandwidth: } & \frac{R_5 g_m + 2R_L g_m + 1}{C_1 (R_5 + R_L)} \\
\text{K-LP: } & 0 \\
\text{K-HP: } & 0 \\
\text{K-BP: } & \frac{R_L (R_5 g_m - 1)}{R_5 g_m + 2R_L g_m + 1} \\
\text{Qz: } & 0 \\
\text{Wz: } & \text{None}
\end{aligned}$$

$$\mathbf{3.6 \quad BP-6} \quad Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, R_5, R_L \right)$$

$$H(s) = \frac{L_1 R_1 R_L s (R_5 g_m - 1)}{C_1 L_1 R_1 R_5 s^2 + C_1 L_1 R_1 R_L s^2 + L_1 R_1 R_5 g_m s + 2L_1 R_1 R_L g_m s + L_1 R_1 s + L_1 R_5 s + L_1 R_L s + R_1 R_5 + R_1 R_L}$$

**Parameters:**

$$\begin{aligned} \text{Q: } & \frac{C_1 R_1 \sqrt{\frac{1}{C_1 L_1}} (R_5 + R_L)}{R_1 R_5 g_m + 2 R_1 R_L g_m + R_1 + R_5 + R_L} \\ \text{wo: } & \sqrt{\frac{1}{C_1 L_1}} \\ \text{bandwidth: } & \frac{R_1 R_5 g_m + 2 R_1 R_L g_m + R_1 + R_5 + R_L}{C_1 R_1 (R_5 + R_L)} \\ \text{K-LP: } & 0 \\ \text{K-HP: } & 0 \\ \text{K-BP: } & \frac{R_1 R_L (R_5 g_m - 1)}{R_1 R_5 g_m + 2 R_1 R_L g_m + R_1 + R_5 + R_L} \\ \text{QZ: } & 0 \\ \text{Wz: } & \text{None} \end{aligned}$$

## 4 LP

**4.1 LP-1**  $Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, R_5, \frac{1}{C_L s} \right)$

$$H(s) = \frac{R_5 g_m - 1}{C_1 C_L R_5 s^2 + C_1 s + C_L R_5 g_m s + C_L s + 2 g_m}$$

**Parameters:**

$$\begin{aligned} \text{Q: } & \frac{\sqrt{2} C_1 C_L R_5 \sqrt{\frac{g_m}{C_1 C_L R_5}}}{C_1 + C_L R_5 g_m + C_L} \\ \text{wo: } & \sqrt{2} \sqrt{\frac{g_m}{C_1 C_L R_5}} \\ \text{bandwidth: } & \frac{C_1 + C_L R_5 g_m + C_L}{C_1 C_L R_5} \\ \text{K-LP: } & \frac{R_5 g_m - 1}{2 g_m} \\ \text{K-HP: } & 0 \\ \text{K-BP: } & 0 \\ \text{QZ: } & \text{None} \\ \text{Wz: } & \text{None} \end{aligned}$$

**4.2 LP-2**  $Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, R_5, \frac{R_L}{C_L R_L s + 1} \right)$

$$H(s) = \frac{R_L (R_5 g_m - 1)}{C_1 C_L R_5 R_L s^2 + C_1 R_5 s + C_1 R_L s + C_L R_5 R_L g_m s + C_L R_L s + R_5 g_m + 2 R_L g_m + 1}$$

**Parameters:**

Q:  $\frac{C_1 C_L R_5 R_L \sqrt{\frac{R_5 g_m + 2 R_L g_m + 1}{C_1 C_L R_5 R_L}}}{C_1 R_5 + C_1 R_L + C_L R_5 R_L g_m + C_L R_L}$

wo:  $\sqrt{\frac{R_5 g_m + 2 R_L g_m + 1}{C_1 C_L R_5 R_L}}$

bandwidth:  $\frac{C_1 R_5 + C_1 R_L + C_L R_5 R_L g_m + C_L R_L}{C_1 C_L R_5 R_L}$

K-LP:  $\frac{R_L (R_5 g_m - 1)}{R_5 g_m + 2 R_L g_m + 1}$

K-HP: 0

K-BP: 0

QZ: None

Wz: None

**4.3 LP-3**  $Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, R_5, \frac{1}{C_L s} \right)$

$$H(s) = \frac{R_1 (R_5 g_m - 1)}{C_1 C_L R_1 R_5 s^2 + C_1 R_1 s + C_L R_1 R_5 g_m s + C_L R_1 s + C_L R_5 s + 2 R_1 g_m + 1}$$

**Parameters:**

Q:  $\frac{C_1 C_L R_1 R_5 \sqrt{\frac{2 R_1 g_m + 1}{C_1 C_L R_1 R_5}}}{C_1 R_1 + C_L R_1 R_5 g_m + C_L R_1 + C_L R_5}$

wo:  $\sqrt{\frac{2 R_1 g_m + 1}{C_1 C_L R_1 R_5}}$

bandwidth:  $\frac{C_1 R_1 + C_L R_1 R_5 g_m + C_L R_1 + C_L R_5}{C_1 C_L R_1 R_5}$

K-LP:  $\frac{R_1 (R_5 g_m - 1)}{2 R_1 g_m + 1}$

K-HP: 0

K-BP: 0

QZ: None

Wz: None

**4.4 LP-4**  $Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, R_5, \frac{R_L}{C_L R_L s + 1} \right)$

$$H(s) = \frac{R_1 R_L (R_5 g_m - 1)}{C_1 C_L R_1 R_5 R_L s^2 + C_1 R_1 R_5 s + C_1 R_1 R_L s + C_L R_1 R_5 R_L g_m s + C_L R_1 R_L s + C_L R_5 R_L s + R_1 R_5 g_m + 2 R_1 R_L g_m + R_1 + R_5 + R_L}$$

**Parameters:**

Q:  $\frac{C_1 C_L R_1 R_5 R_L \sqrt{\frac{R_1 R_5 g_m + 2 R_1 R_L g_m + R_1 + R_5 + R_L}{C_1 C_L R_1 R_5 R_L}}}{C_1 R_1 R_5 + C_1 R_1 R_L + C_L R_1 R_5 R_L g_m + C_L R_1 R_L + C_L R_5 R_L}$   
 wo:  $\sqrt{\frac{R_1 R_5 g_m + 2 R_1 R_L g_m + R_1 + R_5 + R_L}{C_1 C_L R_1 R_5 R_L}}$   
 bandwidth:  $\frac{C_1 R_1 R_5 + C_1 R_1 R_L + C_L R_1 R_5 R_L g_m + C_L R_1 R_L + C_L R_5 R_L}{C_1 C_L R_1 R_5 R_L}$   
 K-LP:  $\frac{R_1 R_L (R_5 g_m - 1)}{R_1 R_5 g_m + 2 R_1 R_L g_m + R_1 + R_5 + R_L}$   
 K-HP: 0  
 K-BP: 0  
 QZ: None  
 Wz: None

## 5 BS

**5.1 BS-1**  $Z(s) = \left( R_1, \infty, \infty, \infty, R_5, L_L s + \frac{1}{C_L s} \right)$

$$H(s) = \frac{R_1 (R_5 g_m - 1) (C_L L_L s^2 + 1)}{2 C_L L_L R_1 g_m s^2 + C_L L_L s^2 + C_L R_1 R_5 g_m s + C_L R_1 s + C_L R_5 s + 2 R_1 g_m + 1}$$

**Parameters:**

Q:  $\frac{L_L \sqrt{\frac{1}{C_L L_L}} (2 R_1 g_m + 1)}{R_1 R_5 g_m + R_1 + R_5}$   
 wo:  $\sqrt{\frac{1}{C_L L_L}}$   
 bandwidth:  $\frac{R_1 R_5 g_m + R_1 + R_5}{L_L (2 R_1 g_m + 1)}$   
 K-LP:  $\frac{R_1 (R_5 g_m - 1)}{2 R_1 g_m + 1}$   
 K-HP:  $\frac{R_1 (R_5 g_m - 1)}{2 R_1 g_m + 1}$   
 K-BP: 0

Qz: None  
Wz:  $\sqrt{\frac{1}{C_L L_L}}$

**5.2 BS-2**  $Z(s) = \left( R_1, \infty, \infty, \infty, R_5, \frac{R_L(L_L s + \frac{1}{C_L s})}{L_L s + R_L + \frac{1}{C_L s}} \right)$

$$H(s) = \frac{R_1 R_L (R_5 g_m - 1) (C_L L_L s^2 + 1)}{C_L L_L R_1 R_5 g_m s^2 + 2 C_L L_L R_1 R_L g_m s^2 + C_L L_L R_1 s^2 + C_L L_L R_5 s^2 + C_L L_L R_L s^2 + C_L R_1 R_5 R_L g_m s + C_L R_1 R_L s + C_L R_5 R_L s + R_1 R_5 g_m + 2 R_1 R_L g_m + R_1 + R_5 + R_L}$$

**Parameters:**

Q:  $\frac{L_L \sqrt{\frac{1}{C_L L_L}} (R_1 R_5 g_m + 2 R_1 R_L g_m + R_1 + R_5 + R_L)}{R_L (R_1 R_5 g_m + R_1 + R_5)}$   
wo:  $\sqrt{\frac{1}{C_L L_L}}$   
bandwidth:  $\frac{R_L (R_1 R_5 g_m + R_1 + R_5)}{L_L (R_1 R_5 g_m + 2 R_1 R_L g_m + R_1 + R_5 + R_L)}$   
K-LP:  $\frac{R_1 R_L (R_5 g_m - 1)}{R_1 R_5 g_m + 2 R_1 R_L g_m + R_1 + R_5 + R_L}$   
K-HP:  $\frac{R_1 R_L (R_5 g_m - 1)}{R_1 R_5 g_m + 2 R_1 R_L g_m + R_1 + R_5 + R_L}$   
K-BP: 0  
Qz: None  
Wz:  $\sqrt{\frac{1}{C_L L_L}}$

**5.3 BS-3**  $Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \infty, \infty, \infty, R_5, R_L \right)$

$$H(s) = \frac{R_L (R_5 g_m - 1) (C_1 L_1 s^2 + 1)}{C_1 L_1 R_5 g_m s^2 + 2 C_1 L_1 R_L g_m s^2 + C_1 L_1 s^2 + C_1 R_5 s + C_1 R_L s + R_5 g_m + 2 R_L g_m + 1}$$

**Parameters:**

Q:  $\frac{L_1 \sqrt{\frac{1}{C_1 L_1}} (R_5 g_m + 2 R_L g_m + 1)}{R_5 + R_L}$   
wo:  $\sqrt{\frac{1}{C_1 L_1}}$   
bandwidth:  $\frac{R_5 + R_L}{L_1 (R_5 g_m + 2 R_L g_m + 1)}$   
K-LP:  $\frac{R_L (R_5 g_m - 1)}{R_5 g_m + 2 R_L g_m + 1}$

$$\begin{aligned}
\text{K-HP: } & \frac{R_L(R_5g_m-1)}{R_5g_m+2R_Lg_m+1} \\
\text{K-BP: } & 0 \\
\text{Qz: } & \text{None} \\
\text{Wz: } & \sqrt{\frac{1}{C_1L_1}}
\end{aligned}$$

$$5.4 \quad \text{BS-4} \quad Z(s) = \left( \frac{R_1(L_1s + \frac{1}{C_1s})}{L_1s + R_1 + \frac{1}{C_1s}}, \infty, \infty, \infty, R_5, R_L \right)$$

$$H(s) = \frac{R_1R_L(R_5g_m-1)(C_1L_1s^2+1)}{C_1L_1R_1R_5g_ms^2 + 2C_1L_1R_1R_Lg_ms^2 + C_1L_1R_1s^2 + C_1L_1R_5s^2 + C_1L_1R_Ls^2 + C_1R_1R_5s + C_1R_1R_Ls + R_1R_5g_m + 2R_1R_Lg_m + R_1 + R_5 + R_L}$$

**Parameters:**

$$\begin{aligned}
\text{Q: } & \frac{L_1\sqrt{\frac{1}{C_1L_1}}(R_1R_5g_m+2R_1R_Lg_m+R_1+R_5+R_L)}{R_1(R_5+R_L)} \\
\text{wo: } & \sqrt{\frac{1}{C_1L_1}} \\
\text{bandwidth: } & \frac{R_1(R_5+R_L)}{L_1(R_1R_5g_m+2R_1R_Lg_m+R_1+R_5+R_L)} \\
\text{K-LP: } & \frac{R_1R_L(R_5g_m-1)}{R_1R_5g_m+2R_1R_Lg_m+R_1+R_5+R_L} \\
\text{K-HP: } & \frac{R_1R_L(R_5g_m-1)}{R_1R_5g_m+2R_1R_Lg_m+R_1+R_5+R_L} \\
\text{K-BP: } & 0 \\
\text{Qz: } & \text{None} \\
\text{Wz: } & \sqrt{\frac{1}{C_1L_1}}
\end{aligned}$$

## 6 GE

$$6.1 \quad \text{GE-1} \quad Z(s) = \left( R_1, \infty, \infty, \infty, R_5, L_Ls + R_L + \frac{1}{C_Ls} \right)$$

$$H(s) = \frac{R_1(R_5g_m-1)(C_LL_Ls^2+C_LR_Ls+1)}{2C_LL_LR_1g_ms^2 + C_LL_Ls^2 + C_LR_1R_5g_ms + 2C_LR_1R_Lg_ms + C_LR_1s + C_LR_5s + C_LR_Ls + 2R_1g_m + 1}$$

**Parameters:**



$$\begin{aligned}
Q: & \frac{L_L \sqrt{\frac{1}{C_L L_L}} (2R_1 g_m + 1)}{R_1 R_5 g_m + 2R_1 R_L g_m + R_1 + R_5 + R_L} \\
wo: & \sqrt{\frac{1}{C_L L_L}} \\
bandwidth: & \frac{R_1 R_5 g_m + 2R_1 R_L g_m + R_1 + R_5 + R_L}{L_L (2R_1 g_m + 1)} \\
K-LP: & \frac{R_1 (R_5 g_m - 1)}{2R_1 g_m + 1} \\
K-HP: & \frac{R_1 (R_5 g_m - 1)}{2R_1 g_m + 1} \\
K-BP: & \frac{R_1 R_L (R_5 g_m - 1)}{R_1 R_5 g_m + 2R_1 R_L g_m + R_1 + R_5 + R_L} \\
Qz: & \frac{L_L \sqrt{\frac{1}{C_L L_L}}}{R_L} \\
Wz: & \sqrt{\frac{1}{C_L L_L}}
\end{aligned}$$

**6.2 GE-2**  $Z(s) = \left( R_1, \infty, \infty, \infty, R_5, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$

$$H(s) = \frac{R_1 (R_5 g_m - 1) (C_L L_L R_L s^2 + L_L s + R_L)}{C_L L_L R_1 R_5 g_m s^2 + 2C_L L_L R_1 R_L g_m s^2 + C_L L_L R_1 s^2 + C_L L_L R_5 s^2 + C_L L_L R_L s^2 + 2L_L R_1 g_m s + L_L s + R_1 R_5 g_m + 2R_1 R_L g_m + R_1 + R_5 + R_L}$$

**Parameters:**

$$\begin{aligned}
Q: & \frac{C_L \sqrt{\frac{1}{C_L L_L}} (R_1 R_5 g_m + 2R_1 R_L g_m + R_1 + R_5 + R_L)}{2R_1 g_m + 1} \\
wo: & \sqrt{\frac{1}{C_L L_L}} \\
bandwidth: & \frac{2R_1 g_m + 1}{C_L (R_1 R_5 g_m + 2R_1 R_L g_m + R_1 + R_5 + R_L)} \\
K-LP: & \frac{R_1 R_L (R_5 g_m - 1)}{R_1 R_5 g_m + 2R_1 R_L g_m + R_1 + R_5 + R_L} \\
K-HP: & \frac{R_1 R_L (R_5 g_m - 1)}{R_1 R_5 g_m + 2R_1 R_L g_m + R_1 + R_5 + R_L} \\
K-BP: & \frac{R_1 (R_5 g_m - 1)}{2R_1 g_m + 1} \\
Qz: & C_L R_L \sqrt{\frac{1}{C_L L_L}} \\
Wz: & \sqrt{\frac{1}{C_L L_L}}
\end{aligned}$$

**6.3 GE-3**  $Z(s) = \left( R_1, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, R_L \right)$

$$H(s) = \frac{R_1 R_L (C_5 L_5 g_m s^2 - C_5 s + g_m)}{C_5 L_5 R_1 g_m s^2 + C_5 L_5 s^2 + 2C_5 R_1 R_L g_m s + C_5 R_1 s + C_5 R_L s + R_1 g_m + 1}$$

**Parameters:**

$$\begin{aligned} \text{Q: } & \frac{L_5 \sqrt{\frac{1}{C_5 L_5}} (R_1 g_m + 1)}{2R_1 R_L g_m + R_1 + R_L} \\ \text{wo: } & \sqrt{\frac{1}{C_5 L_5}} \\ \text{bandwidth: } & \frac{2R_1 R_L g_m + R_1 + R_L}{L_5 (R_1 g_m + 1)} \\ \text{K-LP: } & \frac{R_1 R_L g_m}{R_1 g_m + 1} \\ \text{K-HP: } & \frac{R_1 R_L g_m}{R_1 g_m + 1} \\ \text{K-BP: } & -\frac{R_1 R_L}{2R_1 R_L g_m + R_1 + R_L} \\ \text{QZ: } & -L_5 g_m \sqrt{\frac{1}{C_5 L_5}} \\ \text{WZ: } & \sqrt{\frac{1}{C_5 L_5}} \end{aligned}$$

**6.4 GE-4**  $Z(s) = \left( R_1, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, R_L \right)$

$$H(s) = \frac{R_1 R_L (-C_5 L_5 s^2 + L_5 g_m s - 1)}{2C_5 L_5 R_1 R_L g_m s^2 + C_5 L_5 R_1 s^2 + C_5 L_5 R_L s^2 + L_5 R_1 g_m s + L_5 s + 2R_1 R_L g_m + R_1 + R_L}$$

**Parameters:**

$$\begin{aligned} \text{Q: } & \frac{C_5 \sqrt{\frac{1}{C_5 L_5}} (2R_1 R_L g_m + R_1 + R_L)}{R_1 g_m + 1} \\ \text{wo: } & \sqrt{\frac{1}{C_5 L_5}} \\ \text{bandwidth: } & \frac{R_1 g_m + 1}{C_5 (2R_1 R_L g_m + R_1 + R_L)} \\ \text{K-LP: } & -\frac{R_1 R_L}{2R_1 R_L g_m + R_1 + R_L} \\ \text{K-HP: } & -\frac{R_1 R_L}{2R_1 R_L g_m + R_1 + R_L} \\ \text{K-BP: } & \frac{R_1 R_L g_m}{R_1 g_m + 1} \\ \text{QZ: } & -\frac{C_5 \sqrt{\frac{1}{C_5 L_5}}}{g_m} \end{aligned}$$

$$\text{WZ: } \sqrt{\frac{1}{C_5 L_5}}$$

$$\mathbf{6.5 \quad GE-5} \quad Z(s) = \left( R_1, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, R_L \right)$$

$$H(s) = \frac{R_1 R_L (C_5 L_5 g_m s^2 + C_5 R_5 g_m s - C_5 s + g_m)}{C_5 L_5 R_1 g_m s^2 + C_5 L_5 s^2 + C_5 R_1 R_5 g_m s + 2C_5 R_1 R_L g_m s + C_5 R_1 s + C_5 R_5 s + C_5 R_L s + R_1 g_m + 1}$$

**Parameters:**

$$\begin{aligned} \text{Q: } & \frac{L_5 \sqrt{\frac{1}{C_5 L_5}} (R_1 g_m + 1)}{R_1 R_5 g_m + 2R_1 R_L g_m + R_1 + R_5 + R_L} \\ \text{wo: } & \sqrt{\frac{1}{C_5 L_5}} \\ \text{bandwidth: } & \frac{R_1 R_5 g_m + 2R_1 R_L g_m + R_1 + R_5 + R_L}{L_5 (R_1 g_m + 1)} \\ \text{K-LP: } & \frac{R_1 R_L g_m}{R_1 g_m + 1} \\ \text{K-HP: } & \frac{R_1 R_L g_m}{R_1 g_m + 1} \\ \text{K-BP: } & \frac{R_1 R_L (R_5 g_m - 1)}{R_1 R_5 g_m + 2R_1 R_L g_m + R_1 + R_5 + R_L} \\ \text{QZ: } & \frac{L_5 g_m \sqrt{\frac{1}{C_5 L_5}}}{R_5 g_m - 1} \\ \text{WZ: } & \sqrt{\frac{1}{C_5 L_5}} \end{aligned}$$

$$\mathbf{6.6 \quad GE-6} \quad Z(s) = \left( R_1, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, R_L \right)$$

$$H(s) = \frac{R_1 R_L (-C_5 L_5 R_5 s^2 + L_5 R_5 g_m s - L_5 s - R_5)}{2C_5 L_5 R_1 R_5 R_L g_m s^2 + C_5 L_5 R_1 R_5 s^2 + C_5 L_5 R_5 R_L s^2 + L_5 R_1 R_5 g_m s + 2L_5 R_1 R_L g_m s + L_5 R_1 s + L_5 R_5 s + L_5 R_L s + 2R_1 R_5 R_L g_m + R_1 R_5 + R_5 R_L}$$

**Parameters:**

$$\begin{aligned} \text{Q: } & \frac{C_5 R_5 \sqrt{\frac{1}{C_5 L_5}} (2R_1 R_L g_m + R_1 + R_L)}{R_1 R_5 g_m + 2R_1 R_L g_m + R_1 + R_5 + R_L} \\ \text{wo: } & \sqrt{\frac{1}{C_5 L_5}} \\ \text{bandwidth: } & \frac{R_1 R_5 g_m + 2R_1 R_L g_m + R_1 + R_5 + R_L}{C_5 R_5 (2R_1 R_L g_m + R_1 + R_L)} \\ \text{K-LP: } & -\frac{R_1 R_L}{2R_1 R_L g_m + R_1 + R_L} \\ \text{K-HP: } & -\frac{R_1 R_L}{2R_1 R_L g_m + R_1 + R_L} \end{aligned}$$

$$\text{K-BP: } \frac{R_1 R_L (R_5 g_m - 1)}{R_1 R_5 g_m + 2R_1 R_L g_m + R_1 + R_5 + R_L}$$

$$\text{QZ: } -\frac{C_5 R_5 \sqrt{\frac{1}{C_5 L_5}}}{R_5 g_m - 1}$$

$$\text{WZ: } \sqrt{\frac{1}{C_5 L_5}}$$

$$\mathbf{6.7 \quad GE-7} \quad Z(s) = \left( R_1, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, R_L \right)$$

$$H(s) = \frac{R_1 R_L (C_5 L_5 R_5 g_m s^2 - C_5 L_5 s^2 + L_5 g_m s + R_5 g_m - 1)}{C_5 L_5 R_1 R_5 g_m s^2 + 2C_5 L_5 R_1 R_L g_m s^2 + C_5 L_5 R_1 s^2 + C_5 L_5 R_5 s^2 + C_5 L_5 R_L s^2 + L_5 R_1 g_m s + L_5 s + R_1 R_5 g_m + 2R_1 R_L g_m + R_1 + R_5 + R_L}$$

**Parameters:**

$$\text{Q: } \frac{C_5 \sqrt{\frac{1}{C_5 L_5}} (R_1 R_5 g_m + 2R_1 R_L g_m + R_1 + R_5 + R_L)}{R_1 g_m + 1}$$

$$\text{wo: } \sqrt{\frac{1}{C_5 L_5}}$$

$$\text{bandwidth: } \frac{R_1 g_m + 1}{C_5 (R_1 R_5 g_m + 2R_1 R_L g_m + R_1 + R_5 + R_L)}$$

$$\text{K-LP: } \frac{R_1 R_L (R_5 g_m - 1)}{R_1 R_5 g_m + 2R_1 R_L g_m + R_1 + R_5 + R_L}$$

$$\text{K-HP: } \frac{R_1 R_L (R_5 g_m - 1)}{R_1 R_5 g_m + 2R_1 R_L g_m + R_1 + R_5 + R_L}$$

$$\text{K-BP: } \frac{R_1 R_L g_m}{R_1 g_m + 1}$$

$$\text{QZ: } \frac{C_5 \sqrt{\frac{1}{C_5 L_5}} (R_5 g_m - 1)}{g_m}$$

$$\text{WZ: } \sqrt{\frac{1}{C_5 L_5}}$$

$$\mathbf{6.8 \quad GE-8} \quad Z(s) = \left( R_1, \infty, \infty, \infty, \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, R_L \right)$$

$$H(s) = \frac{R_1 R_L (C_5 L_5 R_5 g_m s^2 - C_5 L_5 s^2 - C_5 R_5 s + R_5 g_m - 1)}{C_5 L_5 R_1 R_5 g_m s^2 + 2C_5 L_5 R_1 R_L g_m s^2 + C_5 L_5 R_1 s^2 + C_5 L_5 R_5 s^2 + C_5 L_5 R_L s^2 + 2C_5 R_1 R_5 R_L g_m s + C_5 R_1 R_5 s + C_5 R_5 R_L s + R_1 R_5 g_m + 2R_1 R_L g_m + R_1 + R_5 + R_L}$$

**Parameters:**

$$\text{Q: } \frac{L_5 \sqrt{\frac{1}{C_5 L_5}} (R_1 R_5 g_m + 2R_1 R_L g_m + R_1 + R_5 + R_L)}{R_5 (2R_1 R_L g_m + R_1 + R_L)}$$

$$\text{wo: } \sqrt{\frac{1}{C_5 L_5}}$$

$$\begin{aligned}
\text{bandwidth: } & \frac{R_5(2R_1R_Lg_m+R_1+R_L)}{L_5(R_1R_5g_m+2R_1R_Lg_m+R_1+R_5+R_L)} \\
\text{K-LP: } & \frac{R_1R_L(R_5g_m-1)}{R_1R_5g_m+2R_1R_Lg_m+R_1+R_5+R_L} \\
\text{K-HP: } & \frac{R_1R_L(R_5g_m-1)}{R_1R_5g_m+2R_1R_Lg_m+R_1+R_5+R_L} \\
\text{K-BP: } & -\frac{R_1R_L}{2R_1R_Lg_m+R_1+R_L} \\
\text{QZ: } & \frac{L_5\sqrt{\frac{1}{C_5L_5}}(-R_5g_m+1)}{R_5} \\
\text{WZ: } & \sqrt{\frac{1}{C_5L_5}}
\end{aligned}$$

**6.9 GE-9**  $Z(s) = \left( L_1s + R_1 + \frac{1}{C_1s}, \infty, \infty, \infty, R_5, R_L \right)$

$$H(s) = \frac{R_L(R_5g_m-1)(C_1L_1s^2+C_1R_1s+1)}{C_1L_1R_5g_ms^2+2C_1L_1R_Lg_ms^2+C_1L_1s^2+C_1R_1R_5g_ms+2C_1R_1R_Lg_ms+C_1R_1s+C_1R_5s+C_1R_Ls+R_5g_m+2R_Lg_m+1}$$

**Parameters:**

$$\begin{aligned}
\text{Q: } & \frac{L_1\sqrt{\frac{1}{C_1L_1}}(R_5g_m+2R_Lg_m+1)}{R_1R_5g_m+2R_1R_Lg_m+R_1+R_5+R_L} \\
\text{wo: } & \sqrt{\frac{1}{C_1L_1}} \\
\text{bandwidth: } & \frac{R_1R_5g_m+2R_1R_Lg_m+R_1+R_5+R_L}{L_1(R_5g_m+2R_Lg_m+1)} \\
\text{K-LP: } & \frac{R_L(R_5g_m-1)}{R_5g_m+2R_Lg_m+1} \\
\text{K-HP: } & \frac{R_L(R_5g_m-1)}{R_5g_m+2R_Lg_m+1} \\
\text{K-BP: } & \frac{R_1R_L(R_5g_m-1)}{R_1R_5g_m+2R_1R_Lg_m+R_1+R_5+R_L} \\
\text{QZ: } & \frac{L_1\sqrt{\frac{1}{C_1L_1}}}{R_1} \\
\text{WZ: } & \sqrt{\frac{1}{C_1L_1}}
\end{aligned}$$

**6.10 GE-10**  $Z(s) = \left( \frac{L_1s}{C_1L_1s^2+1} + R_1, \infty, \infty, \infty, R_5, R_L \right)$

$$H(s) = \frac{R_L(R_5g_m-1)(C_1L_1R_1s^2+L_1s+R_1)}{C_1L_1R_1R_5g_ms^2+2C_1L_1R_1R_Lg_ms^2+C_1L_1R_1s^2+C_1L_1R_5s^2+C_1L_1R_Ls^2+L_1R_5g_ms+2L_1R_Lg_ms+L_1s+R_1R_5g_m+2R_1R_Lg_m+R_1+R_5+R_L}$$

**Parameters:**

$$\begin{aligned}
\text{Q: } & \frac{C_1 \sqrt{\frac{1}{C_1 L_1}} (R_1 R_5 g_m + 2R_1 R_L g_m + R_1 + R_5 + R_L)}{R_5 g_m + 2R_L g_m + 1} \\
\text{wo: } & \sqrt{\frac{1}{C_1 L_1}} \\
\text{bandwidth: } & \frac{R_5 g_m + 2R_L g_m + 1}{C_1 (R_1 R_5 g_m + 2R_1 R_L g_m + R_1 + R_5 + R_L)} \\
\text{K-LP: } & \frac{R_1 R_L (R_5 g_m - 1)}{R_1 R_5 g_m + 2R_1 R_L g_m + R_1 + R_5 + R_L} \\
\text{K-HP: } & \frac{R_1 R_L (R_5 g_m - 1)}{R_1 R_5 g_m + 2R_1 R_L g_m + R_1 + R_5 + R_L} \\
\text{K-BP: } & \frac{R_L (R_5 g_m - 1)}{R_5 g_m + 2R_L g_m + 1} \\
\text{Qz: } & C_1 R_1 \sqrt{\frac{1}{C_1 L_1}} \\
\text{Wz: } & \sqrt{\frac{1}{C_1 L_1}}
\end{aligned}$$

## 7 AP

## 8 INVALID-NUMER

### 8.1 INVALID-NUMER-1

$$Z(s) = \left( R_1, \infty, \infty, \infty, \frac{1}{C_5 s}, \frac{R_L}{C_L R_L s + 1} \right)$$

$$H(s) = \frac{R_1 R_L (-C_5 s + g_m)}{C_5 C_L R_1 R_L s^2 + 2C_5 R_1 R_L g_m s + C_5 R_1 s + C_5 R_L s + C_L R_1 R_L g_m s + C_L R_L s + R_1 g_m + 1}$$

**Parameters:**

$$\begin{aligned}
\text{Q: } & \frac{C_5 C_L R_1 R_L \sqrt{\frac{R_1 g_m + 1}{C_5 C_L R_1 R_L}}}{2C_5 R_1 R_L g_m + C_5 R_1 + C_5 R_L + C_L R_1 R_L g_m + C_L R_L} \\
\text{wo: } & \sqrt{\frac{R_1 g_m + 1}{C_5 C_L R_1 R_L}} \\
\text{bandwidth: } & \frac{2C_5 R_1 R_L g_m + C_5 R_1 + C_5 R_L + C_L R_1 R_L g_m + C_L R_L}{C_5 C_L R_1 R_L} \\
\text{K-LP: } & \frac{R_1 R_L g_m}{R_1 g_m + 1} \\
\text{K-HP: } & 0 \\
\text{K-BP: } & -\frac{C_5 R_1 R_L}{2C_5 R_1 R_L g_m + C_5 R_1 + C_5 R_L + C_L R_1 R_L g_m + C_L R_L} \\
\text{Qz: } & 0 \\
\text{Wz: } & \text{None}
\end{aligned}$$

## 8.2 INVALID-NUMER-2 $Z(s) = \left( R_1, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, \frac{1}{C_L s} \right)$

$$H(s) = \frac{R_1 (-C_5 R_5 s + R_5 g_m - 1)}{C_5 C_L R_1 R_5 s^2 + 2C_5 R_1 R_5 g_m s + C_5 R_5 s + C_L R_1 R_5 g_m s + C_L R_1 s + C_L R_5 s + 2R_1 g_m + 1}$$

Parameters:

$$\begin{aligned} \text{Q: } & \frac{C_5 C_L R_1 R_5 \sqrt{\frac{2R_1 g_m + 1}{C_5 C_L R_1 R_5}}}{2C_5 R_1 R_5 g_m + C_5 R_5 + C_L R_1 R_5 g_m + C_L R_1 + C_L R_5} \\ \text{wo: } & \sqrt{\frac{2R_1 g_m + 1}{C_5 C_L R_1 R_5}} \\ \text{bandwidth: } & \frac{2C_5 R_1 R_5 g_m + C_5 R_5 + C_L R_1 R_5 g_m + C_L R_1 + C_L R_5}{C_5 C_L R_1 R_5} \\ \text{K-LP: } & \frac{R_1 (R_5 g_m - 1)}{2R_1 g_m + 1} \\ \text{K-HP: } & 0 \\ \text{K-BP: } & -\frac{C_5 R_1 R_5}{2C_5 R_1 R_5 g_m + C_5 R_5 + C_L R_1 R_5 g_m + C_L R_1 + C_L R_5} \\ \text{QZ: } & 0 \\ \text{Wz: } & \text{None} \end{aligned}$$

## 8.3 INVALID-NUMER-3 $Z(s) = \left( R_1, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, \frac{R_L}{C_L R_L s + 1} \right)$

$$H(s) = \frac{R_1 R_L (-C_5 R_5 s + R_5 g_m - 1)}{C_5 C_L R_1 R_5 R_L s^2 + 2C_5 R_1 R_5 R_L g_m s + C_5 R_1 R_5 s + C_5 R_5 R_L s + C_L R_1 R_5 R_L g_m s + C_L R_1 R_L s + C_L R_5 R_L s + R_1 R_5 g_m + 2R_1 R_L g_m + R_1 + R_5 + R_L}$$

Parameters:

$$\begin{aligned} \text{Q: } & \frac{C_5 C_L R_1 R_5 R_L \sqrt{\frac{R_1 R_5 g_m + 2R_1 R_L g_m + R_1 + R_5 + R_L}{C_5 C_L R_1 R_5 R_L}}}{2C_5 R_1 R_5 R_L g_m + C_5 R_1 R_5 + C_5 R_5 R_L + C_L R_1 R_5 R_L g_m + C_L R_1 R_L + C_L R_5 R_L} \\ \text{wo: } & \sqrt{\frac{R_1 R_5 g_m + 2R_1 R_L g_m + R_1 + R_5 + R_L}{C_5 C_L R_1 R_5 R_L}} \\ \text{bandwidth: } & \frac{2C_5 R_1 R_5 R_L g_m + C_5 R_1 R_5 + C_5 R_5 R_L + C_L R_1 R_5 R_L g_m + C_L R_1 R_L + C_L R_5 R_L}{C_5 C_L R_1 R_5 R_L} \\ \text{K-LP: } & \frac{R_1 R_L (R_5 g_m - 1)}{R_1 R_5 g_m + 2R_1 R_L g_m + R_1 + R_5 + R_L} \\ \text{K-HP: } & 0 \\ \text{K-BP: } & -\frac{C_5 R_1 R_5 R_L}{2C_5 R_1 R_5 R_L g_m + C_5 R_1 R_5 + C_5 R_5 R_L + C_L R_1 R_5 R_L g_m + C_L R_1 R_L + C_L R_5 R_L} \\ \text{QZ: } & 0 \\ \text{Wz: } & \text{None} \end{aligned}$$

#### 8.4 INVALID-NUMER-4 $Z(s) = \left( R_1, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, \frac{R_L}{C_L R_L s + 1} \right)$

$$H(s) = \frac{R_1 R_L (C_5 R_5 g_m s - C_5 s + g_m)}{C_5 C_L R_1 R_5 R_L g_m s^2 + C_5 C_L R_1 R_L s^2 + C_5 C_L R_5 R_L s^2 + C_5 R_1 R_5 g_m s + 2C_5 R_1 R_L g_m s + C_5 R_1 s + C_5 R_5 s + C_5 R_L s + C_L R_1 R_L g_m s + C_L R_L s + R_1 g_m + 1}$$

Parameters:

$$\begin{aligned} \text{Q: } & \frac{C_5 C_L R_L \sqrt{\frac{R_1 g_m + 1}{C_5 C_L R_L (R_1 R_5 g_m + R_1 + R_5)}} (R_1 R_5 g_m + R_1 + R_5)}{C_5 R_1 R_5 g_m + 2C_5 R_1 R_L g_m + C_5 R_1 + C_5 R_5 + C_5 R_L + C_L R_1 R_L g_m + C_L R_L} \\ \text{wo: } & \sqrt{\frac{R_1 g_m + 1}{C_5 C_L R_L (R_1 R_5 g_m + R_1 + R_5)}} \\ \text{bandwidth: } & \frac{C_5 R_1 R_5 g_m + 2C_5 R_1 R_L g_m + C_5 R_1 + C_5 R_5 + C_5 R_L + C_L R_1 R_L g_m + C_L R_L}{C_5 C_L R_L (R_1 R_5 g_m + R_1 + R_5)} \\ \text{K-LP: } & \frac{R_1 R_L g_m}{R_1 g_m + 1} \\ \text{K-HP: } & 0 \\ \text{K-BP: } & \frac{C_5 R_1 R_L (R_5 g_m - 1)}{C_5 R_1 R_5 g_m + 2C_5 R_1 R_L g_m + C_5 R_1 + C_5 R_5 + C_5 R_L + C_L R_1 R_L g_m + C_L R_L} \\ \text{QZ: } & 0 \\ \text{Wz: } & \text{None} \end{aligned}$$

#### 8.5 INVALID-NUMER-5 $Z(s) = \left( L_1 s, \infty, \infty, \infty, R_5, R_L + \frac{1}{C_L s} \right)$

$$H(s) = \frac{L_1 s (R_5 g_m - 1) (C_L R_L s + 1)}{C_L L_1 R_5 g_m s^2 + 2C_L L_1 R_L g_m s^2 + C_L L_1 s^2 + C_L R_5 s + C_L R_L s + 2L_1 g_m s + 1}$$

Parameters:

$$\begin{aligned} \text{Q: } & \frac{C_L L_1 \sqrt{\frac{1}{C_L L_1 (R_5 g_m + 2R_L g_m + 1)}} (R_5 g_m + 2R_L g_m + 1)}{C_L R_5 + C_L R_L + 2L_1 g_m} \\ \text{wo: } & \sqrt{\frac{1}{C_L L_1 (R_5 g_m + 2R_L g_m + 1)}} \\ \text{bandwidth: } & \frac{C_L R_5 + C_L R_L + 2L_1 g_m}{C_L L_1 (R_5 g_m + 2R_L g_m + 1)} \\ \text{K-LP: } & 0 \\ \text{K-HP: } & \frac{R_L (R_5 g_m - 1)}{R_5 g_m + 2R_L g_m + 1} \\ \text{K-BP: } & \frac{L_1 (R_5 g_m - 1)}{C_L R_5 + C_L R_L + 2L_1 g_m} \\ \text{QZ: } & C_L R_L \sqrt{\frac{1}{C_L L_1 (R_5 g_m + 2R_L g_m + 1)}} \\ \text{Wz: } & \text{None} \end{aligned}$$



## 8.6 INVALID-NUMER-6 $Z(s) = \left( L_1 s, \infty, \infty, \infty, \frac{1}{C_5 s}, R_L \right)$

$$H(s) = \frac{L_1 R_L s (-C_5 s + g_m)}{2C_5 L_1 R_L g_m s^2 + C_5 L_1 s^2 + C_5 R_L s + L_1 g_m s + 1}$$

Parameters:

$$\begin{aligned} \text{Q: } & \frac{C_5 L_1 \sqrt{\frac{1}{C_5 L_1 (2R_L g_m + 1)}} (2R_L g_m + 1)}{C_5 R_L + L_1 g_m} \\ \text{wo: } & \sqrt{\frac{1}{C_5 L_1 (2R_L g_m + 1)}} \\ \text{bandwidth: } & \frac{C_5 R_L + L_1 g_m}{C_5 L_1 (2R_L g_m + 1)} \\ \text{K-LP: } & 0 \\ \text{K-HP: } & -\frac{R_L}{2R_L g_m + 1} \\ \text{K-BP: } & \frac{L_1 R_L g_m}{C_5 R_L + L_1 g_m} \\ \text{QZ: } & -\frac{C_5 \sqrt{\frac{1}{C_5 L_1 (2R_L g_m + 1)}}}{g_m} \\ \text{Wz: } & \text{None} \end{aligned}$$

## 8.7 INVALID-NUMER-7 $Z(s) = \left( L_1 s, \infty, \infty, \infty, \frac{1}{C_5 s}, \frac{1}{C_L s} \right)$

$$H(s) = \frac{L_1 (-C_5 s + g_m)}{C_5 C_L L_1 s^2 + 2C_5 L_1 g_m s + C_5 + C_L L_1 g_m s + C_L}$$

Parameters:

$$\begin{aligned} \text{Q: } & \frac{C_5 C_L \sqrt{\frac{C_5 + C_L}{C_5 C_L L_1}}}{g_m (2C_5 + C_L)} \\ \text{wo: } & \sqrt{\frac{C_5 + C_L}{C_5 C_L L_1}} \\ \text{bandwidth: } & \frac{g_m (2C_5 + C_L)}{C_5 C_L} \\ \text{K-LP: } & \frac{L_1 g_m}{C_5 + C_L} \\ \text{K-HP: } & 0 \\ \text{K-BP: } & -\frac{C_5}{g_m (2C_5 + C_L)} \\ \text{QZ: } & 0 \\ \text{Wz: } & \text{None} \end{aligned}$$

### 8.8 INVALID-NUMER-8 $Z(s) = \left( L_1 s, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, R_L \right)$

$$H(s) = \frac{L_1 R_L s (-C_5 R_5 s + R_5 g_m - 1)}{2C_5 L_1 R_5 R_L g_m s^2 + C_5 L_1 R_5 s^2 + C_5 R_5 R_L s + L_1 R_5 g_m s + 2L_1 R_L g_m s + L_1 s + R_5 + R_L}$$

Parameters:

$$\begin{aligned} \text{Q: } & \frac{C_5 L_1 R_5 \sqrt{\frac{R_5 + R_L}{C_5 L_1 R_5 (2R_L g_m + 1)}} (2R_L g_m + 1)}{C_5 R_5 R_L + L_1 R_5 g_m + 2L_1 R_L g_m + L_1} \\ \text{wo: } & \sqrt{\frac{R_5 + R_L}{C_5 L_1 R_5 (2R_L g_m + 1)}} \\ \text{bandwidth: } & \frac{C_5 R_5 R_L + L_1 R_5 g_m + 2L_1 R_L g_m + L_1}{C_5 L_1 R_5 (2R_L g_m + 1)} \\ \text{K-LP: } & 0 \\ \text{K-HP: } & -\frac{R_L}{2R_L g_m + 1} \\ \text{K-BP: } & \frac{L_1 R_L (R_5 g_m - 1)}{C_5 R_5 R_L + L_1 R_5 g_m + 2L_1 R_L g_m + L_1} \\ \text{QZ: } & -\frac{C_5 R_5 \sqrt{\frac{R_5 + R_L}{C_5 L_1 R_5 (2R_L g_m + 1)}}}{R_5 g_m - 1} \\ \text{Wz: } & \text{None} \end{aligned}$$

### 8.9 INVALID-NUMER-9 $Z(s) = \left( L_1 s, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, R_L \right)$

$$H(s) = \frac{L_1 R_L s (C_5 R_5 g_m s - C_5 s + g_m)}{C_5 L_1 R_5 g_m s^2 + 2C_5 L_1 R_L g_m s^2 + C_5 L_1 s^2 + C_5 R_5 s + C_5 R_L s + L_1 g_m s + 1}$$

Parameters:

$$\begin{aligned} \text{Q: } & \frac{C_5 L_1 \sqrt{\frac{1}{C_5 L_1 (R_5 g_m + 2R_L g_m + 1)}} (R_5 g_m + 2R_L g_m + 1)}{C_5 R_5 + C_5 R_L + L_1 g_m} \\ \text{wo: } & \sqrt{\frac{1}{C_5 L_1 (R_5 g_m + 2R_L g_m + 1)}} \\ \text{bandwidth: } & \frac{C_5 R_5 + C_5 R_L + L_1 g_m}{C_5 L_1 (R_5 g_m + 2R_L g_m + 1)} \\ \text{K-LP: } & 0 \\ \text{K-HP: } & \frac{R_L (R_5 g_m - 1)}{R_5 g_m + 2R_L g_m + 1} \\ \text{K-BP: } & \frac{L_1 R_L g_m}{C_5 R_5 + C_5 R_L + L_1 g_m} \\ \text{QZ: } & \frac{C_5 \sqrt{\frac{1}{C_5 L_1 (R_5 g_m + 2R_L g_m + 1)}} (R_5 g_m - 1)}{g_m} \\ \text{Wz: } & \text{None} \end{aligned}$$

**8.10 INVALID-NUMER-10**  $Z(s) = \left( L_1 s, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, \frac{1}{C_L s} \right)$

$$H(s) = \frac{L_1 (C_5 R_5 g_m s - C_5 s + g_m)}{C_5 C_L L_1 R_5 g_m s^2 + C_5 C_L L_1 s^2 + C_5 C_L R_5 s + 2C_5 L_1 g_m s + C_5 + C_L L_1 g_m s + C_L}$$

**Parameters:**

$$\begin{aligned} \text{Q: } & \frac{C_5 C_L L_1 \sqrt{\frac{C_5 + C_L}{C_5 C_L L_1 (R_5 g_m + 1)}} (R_5 g_m + 1)}{C_5 C_L R_5 + 2C_5 L_1 g_m + C_L L_1 g_m} \\ \text{wo: } & \sqrt{\frac{C_5 + C_L}{C_5 C_L L_1 (R_5 g_m + 1)}} \\ \text{bandwidth: } & \frac{C_5 C_L R_5 + 2C_5 L_1 g_m + C_L L_1 g_m}{C_5 C_L L_1 (R_5 g_m + 1)} \\ \text{K-LP: } & \frac{L_1 g_m}{C_5 + C_L} \\ \text{K-HP: } & 0 \\ \text{K-BP: } & \frac{C_5 L_1 (R_5 g_m - 1)}{C_5 C_L R_5 + 2C_5 L_1 g_m + C_L L_1 g_m} \\ \text{QZ: } & 0 \\ \text{Wz: } & \text{None} \end{aligned}$$

**8.11 INVALID-NUMER-11**  $Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, R_5, R_L + \frac{1}{C_L s} \right)$

$$H(s) = \frac{(R_5 g_m - 1) (C_L R_L s + 1)}{C_1 C_L R_5 s^2 + C_1 C_L R_L s^2 + C_1 s + C_L R_5 g_m s + 2C_L R_L g_m s + C_L s + 2g_m}$$

**Parameters:**

$$\begin{aligned} \text{Q: } & \frac{\sqrt{2} C_1 C_L \sqrt{\frac{g_m}{C_1 C_L (R_5 + R_L)}} (R_5 + R_L)}{C_1 + C_L R_5 g_m + 2C_L R_L g_m + C_L} \\ \text{wo: } & \sqrt{2} \sqrt{\frac{g_m}{C_1 C_L (R_5 + R_L)}} \\ \text{bandwidth: } & \frac{C_1 + C_L R_5 g_m + 2C_L R_L g_m + C_L}{C_1 C_L (R_5 + R_L)} \\ \text{K-LP: } & \frac{R_5 g_m - 1}{2g_m} \\ \text{K-HP: } & 0 \\ \text{K-BP: } & \frac{C_L R_L (R_5 g_m - 1)}{C_1 + C_L R_5 g_m + 2C_L R_L g_m + C_L} \\ \text{QZ: } & 0 \\ \text{Wz: } & \text{None} \end{aligned}$$

### 8.12 INVALID-NUMER-12 $Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{1}{C_5 s}, R_L \right)$

$$H(s) = \frac{R_L (-C_5 s + g_m)}{C_1 C_5 R_L s^2 + C_1 s + 2C_5 R_L g_m s + C_5 s + g_m}$$

Parameters:

Q:  $\frac{C_1 C_5 R_L \sqrt{\frac{g_m}{C_1 C_5 R_L}}}{C_1 + 2C_5 R_L g_m + C_5}$   
 wo:  $\sqrt{\frac{g_m}{C_1 C_5 R_L}}$   
 bandwidth:  $\frac{C_1 + 2C_5 R_L g_m + C_5}{C_1 C_5 R_L}$   
 K-LP:  $R_L$   
 K-HP: 0  
 K-BP:  $-\frac{C_5 R_L}{C_1 + 2C_5 R_L g_m + C_5}$   
 QZ: 0  
 Wz: None

### 8.13 INVALID-NUMER-13 $Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{1}{C_5 s}, \frac{R_L}{C_L R_L s + 1} \right)$

$$H(s) = \frac{R_L (-C_5 s + g_m)}{C_1 C_5 R_L s^2 + C_1 C_L R_L s^2 + C_1 s + C_5 C_L R_L s^2 + 2C_5 R_L g_m s + C_5 s + C_L R_L g_m s + g_m}$$

Parameters:

Q:  $\frac{R_L \sqrt{\frac{g_m}{R_L (C_1 C_5 + C_1 C_L + C_5 C_L)}} (C_1 C_5 + C_1 C_L + C_5 C_L)}{C_1 + 2C_5 R_L g_m + C_5 + C_L R_L g_m}$   
 wo:  $\sqrt{\frac{g_m}{R_L (C_1 C_5 + C_1 C_L + C_5 C_L)}}$   
 bandwidth:  $\frac{C_1 + 2C_5 R_L g_m + C_5 + C_L R_L g_m}{R_L (C_1 C_5 + C_1 C_L + C_5 C_L)}$   
 K-LP:  $R_L$   
 K-HP: 0  
 K-BP:  $-\frac{C_5 R_L}{C_1 + 2C_5 R_L g_m + C_5 + C_L R_L g_m}$   
 QZ: 0  
 Wz: None

#### 8.14 INVALID-NUMER-14 $Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, R_L \right)$

$$H(s) = \frac{R_L (-C_5 R_5 s + R_5 g_m - 1)}{C_1 C_5 R_5 R_L s^2 + C_1 R_5 s + C_1 R_L s + 2C_5 R_5 R_L g_m s + C_5 R_5 s + R_5 g_m + 2R_L g_m + 1}$$

Parameters:

$$\begin{aligned} \text{Q: } & \frac{C_1 C_5 R_5 R_L \sqrt{\frac{R_5 g_m + 2R_L g_m + 1}{C_1 C_5 R_5 R_L}}}{C_1 R_5 + C_1 R_L + 2C_5 R_5 R_L g_m + C_5 R_5} \\ \text{wo: } & \sqrt{\frac{R_5 g_m + 2R_L g_m + 1}{C_1 C_5 R_5 R_L}} \\ \text{bandwidth: } & \frac{C_1 R_5 + C_1 R_L + 2C_5 R_5 R_L g_m + C_5 R_5}{C_1 C_5 R_5 R_L} \\ \text{K-LP: } & \frac{R_L (R_5 g_m - 1)}{R_5 g_m + 2R_L g_m + 1} \\ \text{K-HP: } & 0 \\ \text{K-BP: } & -\frac{C_5 R_5 R_L}{C_1 R_5 + C_1 R_L + 2C_5 R_5 R_L g_m + C_5 R_5} \\ \text{QZ: } & 0 \\ \text{Wz: } & \text{None} \end{aligned}$$

#### 8.15 INVALID-NUMER-15 $Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, \frac{1}{C_L s} \right)$

$$H(s) = \frac{-C_5 R_5 s + R_5 g_m - 1}{C_1 C_5 R_5 s^2 + C_1 C_L R_5 s^2 + C_1 s + C_5 C_L R_5 s^2 + 2C_5 R_5 g_m s + C_L R_5 g_m s + C_L s + 2g_m}$$

Parameters:

$$\begin{aligned} \text{Q: } & \frac{\sqrt{2} R_5 \sqrt{\frac{g_m}{R_5 (C_1 C_5 + C_1 C_L + C_5 C_L)}} (C_1 C_5 + C_1 C_L + C_5 C_L)}{C_1 + 2C_5 R_5 g_m + C_L R_5 g_m + C_L} \\ \text{wo: } & \sqrt{2} \sqrt{\frac{g_m}{R_5 (C_1 C_5 + C_1 C_L + C_5 C_L)}} \\ \text{bandwidth: } & \frac{C_1 + 2C_5 R_5 g_m + C_L R_5 g_m + C_L}{R_5 (C_1 C_5 + C_1 C_L + C_5 C_L)} \\ \text{K-LP: } & \frac{R_5 g_m - 1}{2g_m} \\ \text{K-HP: } & 0 \\ \text{K-BP: } & -\frac{C_5 R_5}{C_1 + 2C_5 R_5 g_m + C_L R_5 g_m + C_L} \\ \text{QZ: } & 0 \\ \text{Wz: } & \text{None} \end{aligned}$$

**8.16 INVALID-NUMER-16**  $Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, \frac{R_L}{C_L R_L s + 1} \right)$

$$H(s) = \frac{R_L (-C_5 R_5 s + R_5 g_m - 1)}{C_1 C_5 R_5 R_L s^2 + C_1 C_L R_5 R_L s^2 + C_1 R_5 s + C_1 R_L s + C_5 C_L R_5 R_L s^2 + 2C_5 R_5 R_L g_m s + C_5 R_5 s + C_L R_5 R_L g_m s + C_L R_L s + R_5 g_m + 2R_L g_m + 1}$$

**Parameters:**

Q:  $\frac{R_5 R_L \sqrt{\frac{R_5 g_m + 2R_L g_m + 1}{R_5 R_L (C_1 C_5 + C_1 C_L + C_5 C_L)}} (C_1 C_5 + C_1 C_L + C_5 C_L)}{C_1 R_5 + C_1 R_L + 2C_5 R_5 R_L g_m + C_5 R_5 + C_L R_5 R_L g_m + C_L R_L}$   
 wo:  $\sqrt{\frac{R_5 g_m + 2R_L g_m + 1}{R_5 R_L (C_1 C_5 + C_1 C_L + C_5 C_L)}}$   
 bandwidth:  $\frac{C_1 R_5 + C_1 R_L + 2C_5 R_5 R_L g_m + C_5 R_5 + C_L R_5 R_L g_m + C_L R_L}{R_5 R_L (C_1 C_5 + C_1 C_L + C_5 C_L)}$   
 K-LP:  $\frac{R_L (R_5 g_m - 1)}{R_5 g_m + 2R_L g_m + 1}$   
 K-HP: 0  
 K-BP:  $-\frac{C_5 R_5 R_L}{C_1 R_5 + C_1 R_L + 2C_5 R_5 R_L g_m + C_5 R_5 + C_L R_5 R_L g_m + C_L R_L}$   
 QZ: 0  
 Wz: None

**8.17 INVALID-NUMER-17**  $Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, R_L \right)$

$$H(s) = \frac{R_L (C_5 R_5 g_m s - C_5 s + g_m)}{C_1 C_5 R_5 s^2 + C_1 C_5 R_L s^2 + C_1 s + C_5 R_5 g_m s + 2C_5 R_L g_m s + C_5 s + g_m}$$

**Parameters:**

Q:  $\frac{C_1 C_5 \sqrt{\frac{g_m}{C_1 C_5 (R_5 + R_L)}} (R_5 + R_L)}{C_1 + C_5 R_5 g_m + 2C_5 R_L g_m + C_5}$   
 wo:  $\sqrt{\frac{g_m}{C_1 C_5 (R_5 + R_L)}}$   
 bandwidth:  $\frac{C_1 + C_5 R_5 g_m + 2C_5 R_L g_m + C_5}{C_1 C_5 (R_5 + R_L)}$   
 K-LP:  $R_L$   
 K-HP: 0  
 K-BP:  $\frac{C_5 R_L (R_5 g_m - 1)}{C_1 + C_5 R_5 g_m + 2C_5 R_L g_m + C_5}$   
 QZ: 0  
 Wz: None

**8.18 INVALID-NUMER-18**  $Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, R_5, R_L + \frac{1}{C_L s} \right)$

$$H(s) = \frac{R_1 (R_5 g_m - 1) (C_L R_L s + 1)}{C_1 C_L R_1 R_5 s^2 + C_1 C_L R_1 R_L s^2 + C_1 R_1 s + C_L R_1 R_5 g_m s + 2 C_L R_1 R_L g_m s + C_L R_1 s + C_L R_5 s + C_L R_L s + 2 R_1 g_m + 1}$$

**Parameters:**

Q:  $\frac{C_1 C_L R_1 \sqrt{\frac{2 R_1 g_m + 1}{C_1 C_L R_1 (R_5 + R_L)}} (R_5 + R_L)}{C_1 R_1 + C_L R_1 R_5 g_m + 2 C_L R_1 R_L g_m + C_L R_1 + C_L R_5 + C_L R_L}$   
 wo:  $\sqrt{\frac{2 R_1 g_m + 1}{C_1 C_L R_1 (R_5 + R_L)}}$   
 bandwidth:  $\frac{C_1 R_1 + C_L R_1 R_5 g_m + 2 C_L R_1 R_L g_m + C_L R_1 + C_L R_5 + C_L R_L}{C_1 C_L R_1 (R_5 + R_L)}$   
 K-LP:  $\frac{R_1 (R_5 g_m - 1)}{2 R_1 g_m + 1}$   
 K-HP: 0  
 K-BP:  $\frac{C_L R_1 R_L (R_5 g_m - 1)}{C_1 R_1 + C_L R_1 R_5 g_m + 2 C_L R_1 R_L g_m + C_L R_1 + C_L R_5 + C_L R_L}$   
 QZ: 0  
 Wz: None

**8.19 INVALID-NUMER-19**  $Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, \frac{1}{C_5 s}, R_L \right)$

$$H(s) = \frac{R_1 R_L (-C_5 s + g_m)}{C_1 C_5 R_1 R_L s^2 + C_1 R_1 s + 2 C_5 R_1 R_L g_m s + C_5 R_1 s + C_5 R_L s + R_1 g_m + 1}$$

**Parameters:**

Q:  $\frac{C_1 C_5 R_1 R_L \sqrt{\frac{R_1 g_m + 1}{C_1 C_5 R_1 R_L}}}{C_1 R_1 + 2 C_5 R_1 R_L g_m + C_5 R_1 + C_5 R_L}$   
 wo:  $\sqrt{\frac{R_1 g_m + 1}{C_1 C_5 R_1 R_L}}$   
 bandwidth:  $\frac{C_1 R_1 + 2 C_5 R_1 R_L g_m + C_5 R_1 + C_5 R_L}{C_1 C_5 R_1 R_L}$   
 K-LP:  $\frac{R_1 R_L g_m}{R_1 g_m + 1}$   
 K-HP: 0  
 K-BP:  $-\frac{C_5 R_1 R_L}{C_1 R_1 + 2 C_5 R_1 R_L g_m + C_5 R_1 + C_5 R_L}$   
 QZ: 0  
 Wz: None

**8.20 INVALID-NUMER-20**  $Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, \frac{1}{C_5 s}, \frac{R_L}{C_L R_L s + 1} \right)$

$$H(s) = \frac{R_1 R_L (-C_5 s + g_m)}{C_1 C_5 R_1 R_L s^2 + C_1 C_L R_1 R_L s^2 + C_1 R_1 s + C_5 C_L R_1 R_L s^2 + 2C_5 R_1 R_L g_m s + C_5 R_1 s + C_5 R_L s + C_L R_1 R_L g_m s + C_L R_L s + R_1 g_m + 1}$$

**Parameters:**

Q:  $\frac{R_1 R_L \sqrt{\frac{R_1 g_m + 1}{R_1 R_L (C_1 C_5 + C_1 C_L + C_5 C_L)}} (C_1 C_5 + C_1 C_L + C_5 C_L)}{C_1 R_1 + 2C_5 R_1 R_L g_m + C_5 R_1 + C_5 R_L + C_L R_1 R_L g_m + C_L R_L}$   
 wo:  $\sqrt{\frac{R_1 g_m + 1}{R_1 R_L (C_1 C_5 + C_1 C_L + C_5 C_L)}}$   
 bandwidth:  $\frac{C_1 R_1 + 2C_5 R_1 R_L g_m + C_5 R_1 + C_5 R_L + C_L R_1 R_L g_m + C_L R_L}{R_1 R_L (C_1 C_5 + C_1 C_L + C_5 C_L)}$   
 K-LP:  $\frac{R_1 R_L g_m}{R_1 g_m + 1}$   
 K-HP: 0  
 K-BP:  $-\frac{C_5 R_1 R_L}{C_1 R_1 + 2C_5 R_1 R_L g_m + C_5 R_1 + C_5 R_L + C_L R_1 R_L g_m + C_L R_L}$   
 QZ: 0  
 Wz: None

**8.21 INVALID-NUMER-21**  $Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, R_L \right)$

$$H(s) = \frac{R_1 R_L (-C_5 R_5 s + R_5 g_m - 1)}{C_1 C_5 R_1 R_5 R_L s^2 + C_1 R_1 R_5 s + C_1 R_1 R_L s + 2C_5 R_1 R_5 R_L g_m s + C_5 R_1 R_5 s + C_5 R_5 R_L s + R_1 R_5 g_m + 2R_1 R_L g_m + R_1 + R_5 + R_L}$$

**Parameters:**

Q:  $\frac{C_1 C_5 R_1 R_5 R_L \sqrt{\frac{R_1 R_5 g_m + 2R_1 R_L g_m + R_1 + R_5 + R_L}{C_1 C_5 R_1 R_5 R_L}}}{C_1 R_1 R_5 + C_1 R_1 R_L + 2C_5 R_1 R_5 R_L g_m + C_5 R_1 R_5 + C_5 R_5 R_L}$   
 wo:  $\sqrt{\frac{R_1 R_5 g_m + 2R_1 R_L g_m + R_1 + R_5 + R_L}{C_1 C_5 R_1 R_5 R_L}}$   
 bandwidth:  $\frac{C_1 R_1 R_5 + C_1 R_1 R_L + 2C_5 R_1 R_5 R_L g_m + C_5 R_1 R_5 + C_5 R_5 R_L}{C_1 C_5 R_1 R_5 R_L}$   
 K-LP:  $\frac{R_1 R_L (R_5 g_m - 1)}{R_1 R_5 g_m + 2R_1 R_L g_m + R_1 + R_5 + R_L}$   
 K-HP: 0  
 K-BP:  $-\frac{C_5 R_1 R_5 R_L}{C_1 R_1 R_5 + C_1 R_1 R_L + 2C_5 R_1 R_5 R_L g_m + C_5 R_1 R_5 + C_5 R_5 R_L}$   
 QZ: 0  
 Wz: None



**8.22 INVALID-NUMER-22**  $Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, \frac{1}{C_L s} \right)$

$$H(s) = \frac{R_1 (-C_5 R_5 s + R_5 g_m - 1)}{C_1 C_5 R_1 R_5 s^2 + C_1 C_L R_1 R_5 s^2 + C_1 R_1 s + C_5 C_L R_1 R_5 s^2 + 2C_5 R_1 R_5 g_m s + C_5 R_5 s + C_L R_1 R_5 g_m s + C_L R_1 s + C_L R_5 s + 2R_1 g_m + 1}$$

**Parameters:**

Q:  $\frac{R_1 R_5 \sqrt{\frac{2R_1 g_m + 1}{R_1 R_5 (C_1 C_5 + C_1 C_L + C_5 C_L)}} (C_1 C_5 + C_1 C_L + C_5 C_L)}{C_1 R_1 + 2C_5 R_1 R_5 g_m + C_5 R_5 + C_L R_1 R_5 g_m + C_L R_1 + C_L R_5}$   
 wo:  $\sqrt{\frac{2R_1 g_m + 1}{R_1 R_5 (C_1 C_5 + C_1 C_L + C_5 C_L)}}$   
 bandwidth:  $\frac{C_1 R_1 + 2C_5 R_1 R_5 g_m + C_5 R_5 + C_L R_1 R_5 g_m + C_L R_1 + C_L R_5}{R_1 R_5 (C_1 C_5 + C_1 C_L + C_5 C_L)}$   
 K-LP:  $\frac{R_1 (R_5 g_m - 1)}{2R_1 g_m + 1}$   
 K-HP: 0  
 K-BP:  $-\frac{C_5 R_1 R_5}{C_1 R_1 + 2C_5 R_1 R_5 g_m + C_5 R_5 + C_L R_1 R_5 g_m + C_L R_1 + C_L R_5}$   
 QZ: 0  
 Wz: None

**8.23 INVALID-NUMER-23**  $Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, \frac{R_L}{C_L R_L s + 1} \right)$

$$H(s) = \frac{R_1 R_L (-C_5 R_5 s + R_5 g_m - 1)}{C_1 C_5 R_1 R_5 R_L s^2 + C_1 C_L R_1 R_5 R_L s^2 + C_1 R_1 R_5 s + C_1 R_1 R_L s + C_5 C_L R_1 R_5 R_L s^2 + 2C_5 R_1 R_5 R_L g_m s + C_5 R_1 R_5 s + C_5 R_5 R_L s + C_L R_1 R_5 R_L g_m s + C_L R_1 R_L s + C_L R_5 R_L s +}$$

**Parameters:**

Q:  $\frac{R_1 R_5 R_L \sqrt{\frac{R_1 R_5 g_m + 2R_1 R_L g_m + R_1 + R_5 + R_L}{R_1 R_5 R_L (C_1 C_5 + C_1 C_L + C_5 C_L)}} (C_1 C_5 + C_1 C_L + C_5 C_L)}{C_1 R_1 R_5 + C_1 R_1 R_L + 2C_5 R_1 R_5 R_L g_m + C_5 R_1 R_5 + C_5 R_5 R_L + C_L R_1 R_5 R_L g_m + C_L R_1 R_L + C_L R_5 R_L}$   
 wo:  $\sqrt{\frac{R_1 R_5 g_m + 2R_1 R_L g_m + R_1 + R_5 + R_L}{R_1 R_5 R_L (C_1 C_5 + C_1 C_L + C_5 C_L)}}$   
 bandwidth:  $\frac{C_1 R_1 R_5 + C_1 R_1 R_L + 2C_5 R_1 R_5 R_L g_m + C_5 R_1 R_5 + C_5 R_5 R_L + C_L R_1 R_5 R_L g_m + C_L R_1 R_L + C_L R_5 R_L}{R_1 R_5 R_L (C_1 C_5 + C_1 C_L + C_5 C_L)}$   
 K-LP:  $\frac{R_1 R_L (R_5 g_m - 1)}{R_1 R_5 g_m + 2R_1 R_L g_m + R_1 + R_5 + R_L}$   
 K-HP: 0  
 K-BP:  $-\frac{C_5 R_1 R_5 R_L}{C_1 R_1 R_5 + C_1 R_1 R_L + 2C_5 R_1 R_5 R_L g_m + C_5 R_1 R_5 + C_5 R_5 R_L + C_L R_1 R_5 R_L g_m + C_L R_1 R_L + C_L R_5 R_L}$   
 QZ: 0  
 Wz: None

## 8.24 INVALID-NUMER-24 $Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, R_L \right)$

$$H(s) = \frac{R_1 R_L (C_5 R_5 g_m s - C_5 s + g_m)}{C_1 C_5 R_1 R_5 s^2 + C_1 C_5 R_1 R_L s^2 + C_1 R_1 s + C_5 R_1 R_5 g_m s + 2C_5 R_1 R_L g_m s + C_5 R_1 s + C_5 R_5 s + C_5 R_L s + R_1 g_m + 1}$$

Parameters:

$$\begin{aligned} \text{Q: } & \frac{C_1 C_5 R_1 \sqrt{\frac{R_1 g_m + 1}{C_1 C_5 R_1 (R_5 + R_L)}} (R_5 + R_L)}{C_1 R_1 + C_5 R_1 R_5 g_m + 2C_5 R_1 R_L g_m + C_5 R_1 + C_5 R_5 + C_5 R_L} \\ \text{wo: } & \sqrt{\frac{R_1 g_m + 1}{C_1 C_5 R_1 (R_5 + R_L)}} \\ \text{bandwidth: } & \frac{C_1 R_1 + C_5 R_1 R_5 g_m + 2C_5 R_1 R_L g_m + C_5 R_1 + C_5 R_5 + C_5 R_L}{C_1 C_5 R_1 (R_5 + R_L)} \\ \text{K-LP: } & \frac{R_1 R_L g_m}{R_1 g_m + 1} \\ \text{K-HP: } & 0 \\ \text{K-BP: } & \frac{C_5 R_1 R_L (R_5 g_m - 1)}{C_1 R_1 + C_5 R_1 R_5 g_m + 2C_5 R_1 R_L g_m + C_5 R_1 + C_5 R_5 + C_5 R_L} \\ \text{QZ: } & 0 \\ \text{Wz: } & \text{None} \end{aligned}$$

## 8.25 INVALID-NUMER-25 $Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, R_5, \frac{1}{C_L s} \right)$

$$H(s) = \frac{(R_5 g_m - 1) (C_1 R_1 s + 1)}{C_1 C_L R_1 R_5 g_m s^2 + C_1 C_L R_1 s^2 + C_1 C_L R_5 s^2 + 2C_1 R_1 g_m s + C_1 s + C_L R_5 g_m s + C_L s + 2g_m}$$

Parameters:

$$\begin{aligned} \text{Q: } & \frac{\sqrt{2} C_1 C_L \sqrt{\frac{g_m}{C_1 C_L (R_1 R_5 g_m + R_1 + R_5)}} (R_1 R_5 g_m + R_1 + R_5)}{2C_1 R_1 g_m + C_1 + C_L R_5 g_m + C_L} \\ \text{wo: } & \sqrt{2} \sqrt{\frac{g_m}{C_1 C_L (R_1 R_5 g_m + R_1 + R_5)}} \\ \text{bandwidth: } & \frac{2C_1 R_1 g_m + C_1 + C_L R_5 g_m + C_L}{C_1 C_L (R_1 R_5 g_m + R_1 + R_5)} \\ \text{K-LP: } & \frac{R_5 g_m - 1}{2g_m} \\ \text{K-HP: } & 0 \\ \text{K-BP: } & \frac{C_1 R_1 (R_5 g_m - 1)}{2C_1 R_1 g_m + C_1 + C_L R_5 g_m + C_L} \\ \text{QZ: } & 0 \\ \text{Wz: } & \text{None} \end{aligned}$$

**8.26 INVALID-NUMER-26**  $Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, R_5, \frac{R_L}{C_L R_L s + 1} \right)$

$$H(s) = \frac{R_L (R_5 g_m - 1) (C_1 R_1 s + 1)}{C_1 C_L R_1 R_5 R_L g_m s^2 + C_1 C_L R_1 R_L s^2 + C_1 C_L R_5 R_L s^2 + C_1 R_1 R_5 g_m s + 2C_1 R_1 R_L g_m s + C_1 R_1 s + C_1 R_5 s + C_1 R_L s + C_L R_5 R_L g_m s + C_L R_L s + R_5 g_m + 2R_L g_m + 1}$$

**Parameters:**

Q:  $\frac{C_1 C_L R_L \sqrt{\frac{R_5 g_m + 2R_L g_m + 1}{C_1 C_L R_L (R_1 R_5 g_m + R_1 + R_5)}} (R_1 R_5 g_m + R_1 + R_5)}{C_1 R_1 R_5 g_m + 2C_1 R_1 R_L g_m + C_1 R_1 + C_1 R_5 + C_1 R_L + C_L R_5 R_L g_m + C_L R_L}$   
 wo:  $\sqrt{\frac{R_5 g_m + 2R_L g_m + 1}{C_1 C_L R_L (R_1 R_5 g_m + R_1 + R_5)}}$   
 bandwidth:  $\frac{C_1 R_1 R_5 g_m + 2C_1 R_1 R_L g_m + C_1 R_1 + C_1 R_5 + C_1 R_L + C_L R_5 R_L g_m + C_L R_L}{C_1 C_L R_L (R_1 R_5 g_m + R_1 + R_5)}$   
 K-LP:  $\frac{R_L (R_5 g_m - 1)}{R_5 g_m + 2R_L g_m + 1}$   
 K-HP: 0  
 K-BP:  $\frac{C_1 R_1 R_L (R_5 g_m - 1)}{C_1 R_1 R_5 g_m + 2C_1 R_1 R_L g_m + C_1 R_1 + C_1 R_5 + C_1 R_L + C_L R_5 R_L g_m + C_L R_L}$   
 QZ: 0  
 Wz: None

**8.27 INVALID-NUMER-27**  $Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, \frac{1}{C_5 s}, \frac{1}{C_L s} \right)$

$$H(s) = \frac{L_1 (-C_5 s + g_m)}{C_1 C_5 L_1 s^2 + C_1 C_L L_1 s^2 + C_5 C_L L_1 s^2 + 2C_5 L_1 g_m s + C_5 + C_L L_1 g_m s + C_L}$$

**Parameters:**

Q:  $\frac{\sqrt{\frac{C_5 + C_L}{L_1 (C_1 C_5 + C_1 C_L + C_5 C_L)}} (C_1 C_5 + C_1 C_L + C_5 C_L)}{g_m (2C_5 + C_L)}$   
 wo:  $\sqrt{\frac{C_5 + C_L}{L_1 (C_1 C_5 + C_1 C_L + C_5 C_L)}}$   
 bandwidth:  $\frac{g_m (2C_5 + C_L)}{C_1 C_5 + C_1 C_L + C_5 C_L}$   
 K-LP:  $\frac{L_1 g_m}{C_5 + C_L}$   
 K-HP: 0  
 K-BP:  $-\frac{C_5}{g_m (2C_5 + C_L)}$   
 QZ: 0  
 Wz: None

**8.28 INVALID-NUMER-28**  $Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, \frac{1}{C_5 s}, \frac{1}{C_L s} \right)$

$$H(s) = \frac{L_1 R_1 (-C_5 s + g_m)}{C_1 C_5 L_1 R_1 s^2 + C_1 C_L L_1 R_1 s^2 + C_5 C_L L_1 R_1 s^2 + 2C_5 L_1 R_1 g_m s + C_5 L_1 s + C_5 R_1 + C_L L_1 R_1 g_m s + C_L L_1 s + C_L R_1}$$

**Parameters:**

$$\text{Q: } \frac{R_1 \sqrt{\frac{C_5 + C_L}{L_1 (C_1 C_5 + C_1 C_L + C_5 C_L)}} (C_1 C_5 + C_1 C_L + C_5 C_L)}{2C_5 R_1 g_m + C_5 + C_L R_1 g_m + C_L}$$

$$\text{wo: } \sqrt{\frac{C_5 + C_L}{L_1 (C_1 C_5 + C_1 C_L + C_5 C_L)}}$$

$$\text{bandwidth: } \frac{2C_5 R_1 g_m + C_5 + C_L R_1 g_m + C_L}{R_1 (C_1 C_5 + C_1 C_L + C_5 C_L)}$$

$$\text{K-LP: } \frac{L_1 g_m}{C_5 + C_L}$$

$$\text{K-HP: } 0$$

$$\text{K-BP: } -\frac{C_5 R_1}{2C_5 R_1 g_m + C_5 + C_L R_1 g_m + C_L}$$

$$\text{QZ: } 0$$

$$\text{WZ: None}$$

## 9 INVALID-WZ

**9.1 INVALID-WZ-1**  $Z(s) = \left( R_1, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, R_L + \frac{1}{C_L s} \right)$

$$H(s) = -\frac{R_1 (C_L R_L s + 1) (C_5 R_5 s - R_5 g_m + 1)}{2C_5 C_L R_1 R_5 R_L g_m s^2 + C_5 C_L R_1 R_5 s^2 + C_5 C_L R_5 R_L s^2 + 2C_5 R_1 R_5 g_m s + C_5 R_5 s + C_L R_1 R_5 g_m s + 2C_L R_1 R_L g_m s + C_L R_1 s + C_L R_5 s + C_L R_L s + 2R_1 g_m + 1}$$

**Parameters:**

$$\text{Q: } \frac{C_5 C_L R_5 \sqrt{\frac{2R_1 g_m + 1}{C_5 C_L R_5 (2R_1 R_L g_m + R_1 + R_L)}} (2R_1 R_L g_m + R_1 + R_L)}{2C_5 R_1 R_5 g_m + C_5 R_5 + C_L R_1 R_5 g_m + 2C_L R_1 R_L g_m + C_L R_1 + C_L R_5 + C_L R_L}$$

$$\text{wo: } \sqrt{\frac{2R_1 g_m + 1}{C_5 C_L R_5 (2R_1 R_L g_m + R_1 + R_L)}}$$

$$\text{bandwidth: } \frac{2C_5 R_1 R_5 g_m + C_5 R_5 + C_L R_1 R_5 g_m + 2C_L R_1 R_L g_m + C_L R_1 + C_L R_5 + C_L R_L}{C_5 C_L R_5 (2R_1 R_L g_m + R_1 + R_L)}$$

$$\text{K-LP: } \frac{R_1 (R_5 g_m - 1)}{2R_1 g_m + 1}$$

$$\text{K-HP: } -\frac{R_1 R_L}{2R_1 R_L g_m + R_1 + R_L}$$

$$\begin{aligned}
\text{K-BP: } & \frac{R_1(-C_5 R_5 + C_L R_5 R_L g_m - C_L R_L)}{2C_5 R_1 R_5 g_m + C_5 R_5 + C_L R_1 R_5 g_m + 2C_L R_1 R_L g_m + C_L R_1 + C_L R_5 + C_L R_L} \\
\text{QZ: } & \frac{C_5 C_L R_5 R_L \sqrt{\frac{2R_1 g_m + 1}{C_5 C_L R_5 (2R_1 R_L g_m + R_1 + R_L)}}}{C_5 R_5 - C_L R_5 R_L g_m + C_L R_L} \\
\text{WZ: } & \sqrt{\frac{-R_5 g_m + 1}{C_5 C_L R_5 R_L}}
\end{aligned}$$

## 9.2 INVALID-WZ-2 $Z(s) = \left( L_1 s, \infty, \infty, \infty, \frac{1}{C_5 s}, R_L + \frac{1}{C_L s} \right)$

$$H(s) = -\frac{L_1 (C_5 s - g_m) (C_L R_L s + 1)}{2C_5 C_L L_1 R_L g_m s^2 + C_5 C_L L_1 s^2 + C_5 C_L R_L s + 2C_5 L_1 g_m s + C_5 + C_L L_1 g_m s + C_L}$$

**Parameters:**

$$\begin{aligned}
\text{Q: } & \frac{C_5 C_L L_1 \sqrt{\frac{C_5 + C_L}{C_5 C_L L_1 (2R_L g_m + 1)}} (2R_L g_m + 1)}{C_5 C_L R_L + 2C_5 L_1 g_m + C_L L_1 g_m} \\
\text{wo: } & \sqrt{\frac{C_5 + C_L}{C_5 C_L L_1 (2R_L g_m + 1)}} \\
\text{bandwidth: } & \frac{C_5 C_L R_L + 2C_5 L_1 g_m + C_L L_1 g_m}{C_5 C_L L_1 (2R_L g_m + 1)} \\
\text{K-LP: } & \frac{L_1 g_m}{C_5 + C_L} \\
\text{K-HP: } & -\frac{R_L}{2R_L g_m + 1} \\
\text{K-BP: } & \frac{L_1 (-C_5 + C_L R_L g_m)}{C_5 C_L R_L + 2C_5 L_1 g_m + C_L L_1 g_m} \\
\text{QZ: } & \frac{C_5 C_L R_L \sqrt{\frac{C_5 + C_L}{C_5 C_L L_1 (2R_L g_m + 1)}}}{C_5 - C_L R_L g_m} \\
\text{WZ: } & \sqrt{-\frac{g_m}{C_5 C_L R_L}}
\end{aligned}$$

## 9.3 INVALID-WZ-3 $Z(s) = \left( L_1 s, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, R_L + \frac{1}{C_L s} \right)$

$$H(s) = \frac{L_1 (C_L R_L s + 1) (C_5 R_5 g_m s - C_5 s + g_m)}{C_5 C_L L_1 R_5 g_m s^2 + 2C_5 C_L L_1 R_L g_m s^2 + C_5 C_L L_1 s^2 + C_5 C_L R_5 s + C_5 C_L R_L s + 2C_5 L_1 g_m s + C_5 + C_L L_1 g_m s + C_L}$$

**Parameters:**

$$\begin{aligned}
\text{Q: } & \frac{C_5 C_L L_1 \sqrt{\frac{C_5 + C_L}{C_5 C_L L_1 (R_5 g_m + 2R_L g_m + 1)}} (R_5 g_m + 2R_L g_m + 1)}{C_5 C_L R_5 + C_5 C_L R_L + 2C_5 L_1 g_m + C_L L_1 g_m} \\
\text{wo: } & \sqrt{\frac{C_5 + C_L}{C_5 C_L L_1 (R_5 g_m + 2R_L g_m + 1)}}
\end{aligned}$$

$$\text{bandwidth: } \frac{C_5 C_L R_5 + C_5 C_L R_L + 2C_5 L_1 g_m + C_L L_1 g_m}{C_5 C_L L_1 (R_5 g_m + 2R_L g_m + 1)}$$

$$\text{K-LP: } \frac{L_1 g_m}{C_5 + C_L}$$

$$\text{K-HP: } \frac{R_L (R_5 g_m - 1)}{R_5 g_m + 2R_L g_m + 1}$$

$$\text{K-BP: } \frac{L_1 (C_5 R_5 g_m - C_5 + C_L R_L g_m)}{C_5 C_L R_5 + C_5 C_L R_L + 2C_5 L_1 g_m + C_L L_1 g_m}$$

$$\text{QZ: } \frac{C_5 C_L R_L \sqrt{\frac{C_5 + C_L}{C_5 C_L L_1 (R_5 g_m + 2R_L g_m + 1)}} (R_5 g_m - 1)}{C_5 R_5 g_m - C_5 + C_L R_L g_m}$$

$$\text{WZ: } \sqrt{\frac{g_m}{C_5 C_L R_L (R_5 g_m - 1)}}$$

$$\mathbf{9.4 \quad INVALID-WZ-4} \quad Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, R_5, R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{(R_5 g_m - 1) (C_1 R_1 s + 1) (C_L R_L s + 1)}{C_1 C_L R_1 R_5 g_m s^2 + 2C_1 C_L R_1 R_L g_m s^2 + C_1 C_L R_1 s^2 + C_1 C_L R_5 s^2 + C_1 C_L R_L s^2 + 2C_1 R_1 g_m s + C_1 s + C_L R_5 g_m s + 2C_L R_L g_m s + C_L s + 2g_m}$$

**Parameters:**

$$\text{Q: } \frac{\sqrt{2} C_1 C_L \sqrt{\frac{g_m}{C_1 C_L (R_1 R_5 g_m + 2R_1 R_L g_m + R_1 + R_5 + R_L)}} (R_1 R_5 g_m + 2R_1 R_L g_m + R_1 + R_5 + R_L)}{2C_1 R_1 g_m + C_1 + C_L R_5 g_m + 2C_L R_L g_m + C_L}$$

$$\text{wo: } \sqrt{2} \sqrt{\frac{g_m}{C_1 C_L (R_1 R_5 g_m + 2R_1 R_L g_m + R_1 + R_5 + R_L)}}$$

$$\text{bandwidth: } \frac{2C_1 R_1 g_m + C_1 + C_L R_5 g_m + 2C_L R_L g_m + C_L}{C_1 C_L (R_1 R_5 g_m + 2R_1 R_L g_m + R_1 + R_5 + R_L)}$$

$$\text{K-LP: } \frac{R_5 g_m - 1}{2g_m}$$

$$\text{K-HP: } \frac{R_1 R_L (R_5 g_m - 1)}{R_1 R_5 g_m + 2R_1 R_L g_m + R_1 + R_5 + R_L}$$

$$\text{K-BP: } \frac{C_1 R_1 R_5 g_m - C_1 R_1 + C_L R_5 R_L g_m - C_L R_L}{2C_1 R_1 g_m + C_1 + C_L R_5 g_m + 2C_L R_L g_m + C_L}$$

$$\text{QZ: } \frac{\sqrt{2} C_1 C_L R_1 R_L \sqrt{\frac{g_m}{C_1 C_L (R_1 R_5 g_m + 2R_1 R_L g_m + R_1 + R_5 + R_L)}}}{C_1 R_1 + C_L R_L}$$

$$\text{WZ: } \sqrt{\frac{1}{C_1 C_L R_1 R_L}}$$

$$\mathbf{9.5 \quad INVALID-WZ-5} \quad Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{1}{C_5 s}, R_L \right)$$

$$H(s) = -\frac{R_L (C_5 s - g_m) (C_1 R_1 s + 1)}{2C_1 C_5 R_1 R_L g_m s^2 + C_1 C_5 R_1 s^2 + C_1 C_5 R_L s^2 + C_1 R_1 g_m s + C_1 s + 2C_5 R_L g_m s + C_5 s + g_m}$$

**Parameters:**

$$Q: \frac{C_1 C_5 \sqrt{\frac{g_m}{C_1 C_5 (2R_1 R_L g_m + R_1 + R_L)}} (2R_1 R_L g_m + R_1 + R_L)}{C_1 R_1 g_m + C_1 + 2C_5 R_L g_m + C_5}$$

$$\text{wo: } \sqrt{\frac{g_m}{C_1 C_5 (2R_1 R_L g_m + R_1 + R_L)}}$$

$$\text{bandwidth: } \frac{C_1 R_1 g_m + C_1 + 2C_5 R_L g_m + C_5}{C_1 C_5 (2R_1 R_L g_m + R_1 + R_L)}$$

$$\text{K-LP: } R_L$$

$$\text{K-HP: } -\frac{R_1 R_L}{2R_1 R_L g_m + R_1 + R_L}$$

$$\text{K-BP: } \frac{R_L (C_1 R_1 g_m - C_5)}{C_1 R_1 g_m + C_1 + 2C_5 R_L g_m + C_5}$$

$$QZ: -\frac{C_1 C_5 R_1 \sqrt{\frac{g_m}{C_1 C_5 (2R_1 R_L g_m + R_1 + R_L)}}}{C_1 R_1 g_m - C_5}$$

$$\text{Wz: } \sqrt{-\frac{g_m}{C_1 C_5 R_1}}$$

$$\mathbf{9.6 \quad INVALID-WZ-6} \quad Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, R_L \right)$$

$$H(s) = -\frac{R_L (C_1 R_1 s + 1) (C_5 R_5 s - R_5 g_m + 1)}{2C_1 C_5 R_1 R_5 R_L g_m s^2 + C_1 C_5 R_1 R_5 s^2 + C_1 C_5 R_5 R_L s^2 + C_1 R_1 R_5 g_m s + 2C_1 R_1 R_L g_m s + C_1 R_1 s + C_1 R_5 s + C_1 R_L s + 2C_5 R_5 R_L g_m s + C_5 R_5 s + R_5 g_m + 2R_L g_m + 1}$$

**Parameters:**

$$Q: \frac{C_1 C_5 R_5 \sqrt{\frac{R_5 g_m + 2R_L g_m + 1}{C_1 C_5 R_5 (2R_1 R_L g_m + R_1 + R_L)}} (2R_1 R_L g_m + R_1 + R_L)}{C_1 R_1 R_5 g_m + 2C_1 R_1 R_L g_m + C_1 R_1 + C_1 R_5 + C_1 R_L + 2C_5 R_5 R_L g_m + C_5 R_5}$$

$$\text{wo: } \sqrt{\frac{R_5 g_m + 2R_L g_m + 1}{C_1 C_5 R_5 (2R_1 R_L g_m + R_1 + R_L)}}$$

$$\text{bandwidth: } \frac{C_1 R_1 R_5 g_m + 2C_1 R_1 R_L g_m + C_1 R_1 + C_1 R_5 + C_1 R_L + 2C_5 R_5 R_L g_m + C_5 R_5}{C_1 C_5 R_5 (2R_1 R_L g_m + R_1 + R_L)}$$

$$\text{K-LP: } \frac{R_L (R_5 g_m - 1)}{R_5 g_m + 2R_L g_m + 1}$$

$$\text{K-HP: } -\frac{R_1 R_L}{2R_1 R_L g_m + R_1 + R_L}$$

$$\text{K-BP: } \frac{R_L (C_1 R_1 R_5 g_m - C_1 R_1 - C_5 R_5)}{C_1 R_1 R_5 g_m + 2C_1 R_1 R_L g_m + C_1 R_1 + C_1 R_5 + C_1 R_L + 2C_5 R_5 R_L g_m + C_5 R_5}$$

$$QZ: \frac{C_1 C_5 R_1 R_5 \sqrt{\frac{R_5 g_m + 2R_L g_m + 1}{C_1 C_5 R_5 (2R_1 R_L g_m + R_1 + R_L)}}}{-C_1 R_1 R_5 g_m + C_1 R_1 + C_5 R_5}$$

$$\text{Wz: } \sqrt{\frac{-R_5 g_m + 1}{C_1 C_5 R_1 R_5}}$$

### 9.7 INVALID-WZ-7 $Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, R_L \right)$

$$H(s) = \frac{R_L (C_1 R_1 s + 1) (C_5 R_5 g_m s - C_5 s + g_m)}{C_1 C_5 R_1 R_5 g_m s^2 + 2C_1 C_5 R_1 R_L g_m s^2 + C_1 C_5 R_1 s^2 + C_1 C_5 R_5 s^2 + C_1 C_5 R_L s^2 + C_1 R_1 g_m s + C_1 s + C_5 R_5 g_m s + 2C_5 R_L g_m s + C_5 s + g_m}$$

Parameters:

$$\begin{aligned} \text{Q: } & \frac{C_1 C_5 \sqrt{\frac{g_m}{C_1 C_5 (R_1 R_5 g_m + 2R_1 R_L g_m + R_1 + R_5 + R_L)}} (R_1 R_5 g_m + 2R_1 R_L g_m + R_1 + R_5 + R_L)}{C_1 R_1 g_m + C_1 + C_5 R_5 g_m + 2C_5 R_L g_m + C_5} \\ \text{wo: } & \sqrt{\frac{g_m}{C_1 C_5 (R_1 R_5 g_m + 2R_1 R_L g_m + R_1 + R_5 + R_L)}} \\ \text{bandwidth: } & \frac{C_1 R_1 g_m + C_1 + C_5 R_5 g_m + 2C_5 R_L g_m + C_5}{C_1 C_5 (R_1 R_5 g_m + 2R_1 R_L g_m + R_1 + R_5 + R_L)} \\ \text{K-LP: } & R_L \\ \text{K-HP: } & \frac{R_1 R_L (R_5 g_m - 1)}{R_1 R_5 g_m + 2R_1 R_L g_m + R_1 + R_5 + R_L} \\ \text{K-BP: } & \frac{R_L (C_1 R_1 g_m + C_5 R_5 g_m - C_5)}{C_1 R_1 g_m + C_1 + C_5 R_5 g_m + 2C_5 R_L g_m + C_5} \\ \text{QZ: } & \frac{C_1 C_5 R_1 \sqrt{\frac{g_m}{C_1 C_5 (R_1 R_5 g_m + 2R_1 R_L g_m + R_1 + R_5 + R_L)}} (R_5 g_m - 1)}{C_1 R_1 g_m + C_5 R_5 g_m - C_5} \\ \text{WZ: } & \sqrt{\frac{g_m}{C_1 C_5 R_1 (R_5 g_m - 1)}} \end{aligned}$$

## 10 INVALID-ORDER

### 10.1 INVALID-ORDER-1 $Z(s) = (R_1, \infty, \infty, \infty, R_5, R_L)$

$$H(s) = \frac{R_1 R_L (R_5 g_m - 1)}{R_1 R_5 g_m + 2R_1 R_L g_m + R_1 + R_5 + R_L}$$

### 10.2 INVALID-ORDER-2 $Z(s) = \left( R_1, \infty, \infty, \infty, R_5, \frac{1}{C_L s} \right)$

$$H(s) = \frac{R_1 (R_5 g_m - 1)}{C_L R_1 R_5 g_m s + C_L R_1 s + C_L R_5 s + 2R_1 g_m + 1}$$



**10.3 INVALID-ORDER-3**  $Z(s) = \left( R_1, \infty, \infty, \infty, R_5, \frac{R_L}{C_L R_L s + 1} \right)$

$$H(s) = \frac{R_1 R_L (R_5 g_m - 1)}{C_L R_1 R_5 R_L g_m s + C_L R_1 R_L s + C_L R_5 R_L s + R_1 R_5 g_m + 2 R_1 R_L g_m + R_1 + R_5 + R_L}$$

**10.4 INVALID-ORDER-4**  $Z(s) = \left( R_1, \infty, \infty, \infty, R_5, R_L + \frac{1}{C_L s} \right)$

$$H(s) = \frac{R_1 (R_5 g_m - 1) (C_L R_L s + 1)}{C_L R_1 R_5 g_m s + 2 C_L R_1 R_L g_m s + C_L R_1 s + C_L R_5 s + C_L R_L s + 2 R_1 g_m + 1}$$

**10.5 INVALID-ORDER-5**  $Z(s) = \left( R_1, \infty, \infty, \infty, \frac{1}{C_5 s}, R_L \right)$

$$H(s) = \frac{R_1 R_L (-C_5 s + g_m)}{2 C_5 R_1 R_L g_m s + C_5 R_1 s + C_5 R_L s + R_1 g_m + 1}$$

**10.6 INVALID-ORDER-6**  $Z(s) = \left( R_1, \infty, \infty, \infty, \frac{1}{C_5 s}, \frac{1}{C_L s} \right)$

$$H(s) = \frac{R_1 (-C_5 s + g_m)}{s (C_5 C_L R_1 s + 2 C_5 R_1 g_m + C_5 + C_L R_1 g_m + C_L)}$$

**10.7 INVALID-ORDER-7**  $Z(s) = \left( R_1, \infty, \infty, \infty, \frac{1}{C_5 s}, R_L + \frac{1}{C_L s} \right)$

$$H(s) = -\frac{R_1 (C_5 s - g_m) (C_L R_L s + 1)}{s (2 C_5 C_L R_1 R_L g_m s + C_5 C_L R_1 s + C_5 C_L R_L s + 2 C_5 R_1 g_m + C_5 + C_L R_1 g_m + C_L)}$$

**10.8 INVALID-ORDER-8**  $Z(s) = \left( R_1, \infty, \infty, \infty, \frac{1}{C_5 s}, L_L s + \frac{1}{C_L s} \right)$

$$H(s) = -\frac{R_1 (C_5 s - g_m) (C_L L_L s^2 + 1)}{s (2 C_5 C_L L_L R_1 g_m s^2 + C_5 C_L L_L s^2 + C_5 C_L R_1 s + 2 C_5 R_1 g_m + C_5 + C_L R_1 g_m + C_L)}$$

**10.9 INVALID-ORDER-9**  $Z(s) = \left( R_1, \infty, \infty, \infty, \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} \right)$

$$H(s) = \frac{L_L R_1 s (-C_5 s + g_m)}{C_5 C_L L_L R_1 s^3 + 2C_5 L_L R_1 g_m s^2 + C_5 L_L s^2 + C_5 R_1 s + C_L L_L R_1 g_m s^2 + C_L L_L s^2 + R_1 g_m + 1}$$

**10.10 INVALID-ORDER-10**  $Z(s) = \left( R_1, \infty, \infty, \infty, \frac{1}{C_5 s}, L_L s + R_L + \frac{1}{C_L s} \right)$

$$H(s) = -\frac{R_1 (C_5 s - g_m) (C_L L_L s^2 + C_L R_L s + 1)}{s (2C_5 C_L L_L R_1 g_m s^2 + C_5 C_L L_L s^2 + 2C_5 C_L R_1 R_L g_m s + C_5 C_L R_1 s + C_5 C_L R_L s + 2C_5 R_1 g_m + C_5 + C_L R_1 g_m + C_L)}$$

**10.11 INVALID-ORDER-11**  $Z(s) = \left( R_1, \infty, \infty, \infty, \frac{1}{C_5 s}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$

$$H(s) = \frac{L_L R_1 R_L s (-C_5 s + g_m)}{C_5 C_L L_L R_1 R_L s^3 + 2C_5 L_L R_1 R_L g_m s^2 + C_5 L_L R_1 s^2 + C_5 L_L R_L s^2 + C_5 R_1 R_L s + C_L L_L R_1 R_L g_m s^2 + C_L L_L R_L s^2 + L_L R_1 g_m s + L_L s + R_1 R_L g_m + R_L}$$

**10.12 INVALID-ORDER-12**  $Z(s) = \left( R_1, \infty, \infty, \infty, \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$

$$H(s) = -\frac{R_1 (C_5 s - g_m) (C_L L_L R_L s^2 + L_L s + R_L)}{2C_5 C_L L_L R_1 R_L g_m s^3 + C_5 C_L L_L R_1 s^3 + C_5 C_L L_L R_L s^3 + 2C_5 L_L R_1 g_m s^2 + C_5 L_L s^2 + 2C_5 R_1 R_L g_m s + C_5 R_1 s + C_5 R_L s + C_L L_L R_1 g_m s^2 + C_L L_L s^2 + R_1 g_m + 1}$$

**10.13 INVALID-ORDER-13**  $Z(s) = \left( R_1, \infty, \infty, \infty, \frac{1}{C_5 s}, \frac{R_L (L_L s + \frac{1}{C_L s})}{L_L s + R_L + \frac{1}{C_L s}} \right)$

$$H(s) = -\frac{R_1 R_L (C_5 s - g_m) (C_L L_L s^2 + 1)}{2C_5 C_L L_L R_1 R_L g_m s^3 + C_5 C_L L_L R_1 s^3 + C_5 C_L L_L R_L s^3 + C_5 C_L R_1 R_L s^2 + 2C_5 R_1 R_L g_m s + C_5 R_1 s + C_5 R_L s + C_L L_L R_1 g_m s^2 + C_L L_L s^2 + C_L R_1 R_L g_m s + C_L R_L s + R_1 g_m}$$

**10.14 INVALID-ORDER-14**  $Z(s) = \left( R_1, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, R_L \right)$

$$H(s) = \frac{R_1 R_L (-C_5 R_5 s + R_5 g_m - 1)}{2C_5 R_1 R_5 R_L g_m s + C_5 R_1 R_5 s + C_5 R_5 R_L s + R_1 R_5 g_m + 2R_1 R_L g_m + R_1 + R_5 + R_L}$$

**10.15 INVALID-ORDER-15**  $Z(s) = \left( R_1, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, L_L s + \frac{1}{C_L s} \right)$

$$H(s) = -\frac{R_1 (C_L L_L s^2 + 1) (C_5 R_5 s - R_5 g_m + 1)}{2C_5 C_L L_L R_1 R_5 g_m s^3 + C_5 C_L L_L R_5 s^3 + C_5 C_L R_1 R_5 s^2 + 2C_5 R_1 R_5 g_m s + C_5 R_5 s + 2C_L L_L R_1 g_m s^2 + C_L L_L s^2 + C_L R_1 R_5 g_m s + C_L R_1 s + C_L R_5 s + 2R_1 g_m + 1}$$

**10.16 INVALID-ORDER-16**  $Z(s) = \left( R_1, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, \frac{L_L s}{C_L L_L s^2 + 1} \right)$

$$H(s) = \frac{L_L R_1 s (-C_5 R_5 s + R_5 g_m - 1)}{C_5 C_L L_L R_1 R_5 s^3 + 2C_5 L_L R_1 R_5 g_m s^2 + C_5 L_L R_5 s^2 + C_5 R_1 R_5 s + C_L L_L R_1 R_5 g_m s^2 + C_L L_L R_1 s^2 + C_L L_L R_5 s^2 + 2L_L R_1 g_m s + L_L s + R_1 R_5 g_m + R_1 + R_5}$$

**10.17 INVALID-ORDER-17**  $Z(s) = \left( R_1, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, L_L s + R_L + \frac{1}{C_L s} \right)$

$$H(s) = -\frac{R_1 (C_5 R_5 s - R_5 g_m + 1) (C_L L_L s^2 + C_L R_L s + 1)}{2C_5 C_L L_L R_1 R_5 g_m s^3 + C_5 C_L L_L R_5 s^3 + 2C_5 C_L R_1 R_5 R_L g_m s^2 + C_5 C_L R_1 R_5 s^2 + C_5 C_L R_5 R_L s^2 + 2C_5 R_1 R_5 g_m s + C_5 R_5 s + 2C_L L_L R_1 g_m s^2 + C_L L_L s^2 + C_L R_1 R_5 g_m s + 2C_L R_1 s + C_L R_5 s + 2R_1 g_m + 1}$$

**10.18 INVALID-ORDER-18**  $Z(s) = \left( R_1, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$

$$H(s) = \frac{L_L R_1 R_L s (-C_5 R_5 s + R_5 g_m - 1)}{C_5 C_L L_L R_1 R_5 R_L s^3 + 2C_5 L_L R_1 R_5 R_L g_m s^2 + C_5 L_L R_1 R_5 s^2 + C_5 L_L R_5 R_L s^2 + C_5 R_1 R_5 R_L s + C_L L_L R_1 R_5 R_L g_m s^2 + C_L L_L R_1 R_L s^2 + C_L L_L R_5 R_L s^2 + L_L R_1 R_5 g_m s + 2L_L R_1 s + C_L R_5 s + 2R_1 g_m + 1}$$

**10.19 INVALID-ORDER-19**  $Z(s) = \left( R_1, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$

$$H(s) = -\frac{R_1 (C_5 R_5 s - R_5 g_m + 1) (C_L L_L R_L s^2 + L_L s + R_L)}{2C_5 C_L L_L R_1 R_5 R_L g_m s^3 + C_5 C_L L_L R_1 R_5 s^3 + C_5 C_L L_L R_5 R_L s^3 + 2C_5 L_L R_1 R_5 g_m s^2 + C_5 L_L R_5 s^2 + 2C_5 R_1 R_5 R_L g_m s + C_5 R_1 R_5 s + C_5 R_5 R_L s + C_L L_L R_1 R_5 g_m s^2 + 2C_L L_L R_1 s + C_L R_5 s + 2R_1 g_m + 1}$$

$$10.20 \quad \text{INVALID-ORDER-20} \quad Z(s) = \left( R_1, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$$

$$H(s) = - \frac{R_1 R_L (C_L L_L s^2 + 1) (C_5 R_5 s - R_5 g_m + 1)}{2C_5 C_L L_L R_1 R_5 R_L g_m s^3 + C_5 C_L L_L R_1 R_5 s^3 + C_5 C_L L_L R_5 R_L s^3 + C_5 C_L R_1 R_5 R_L s^2 + 2C_5 R_1 R_5 R_L g_m s + C_5 R_1 R_5 s + C_5 R_5 R_L s + C_L L_L R_1 R_5 g_m s^2 + 2C_L L_L R_1 R_L g_m s^2 +}$$

$$10.21 \quad \text{INVALID-ORDER-21} \quad Z(s) = \left( R_1, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, R_L \right)$$

$$H(s) = \frac{R_1 R_L (C_5 R_5 g_m s - C_5 s + g_m)}{C_5 R_1 R_5 g_m s + 2C_5 R_1 R_L g_m s + C_5 R_1 s + C_5 R_5 s + C_5 R_L s + R_1 g_m + 1}$$

$$10.22 \quad \text{INVALID-ORDER-22} \quad Z(s) = \left( R_1, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, \frac{1}{C_L s} \right)$$

$$H(s) = \frac{R_1 (C_5 R_5 g_m s - C_5 s + g_m)}{s (C_5 C_L R_1 R_5 g_m s + C_5 C_L R_1 s + C_5 C_L R_5 s + 2C_5 R_1 g_m + C_5 + C_L R_1 g_m + C_L)}$$

$$10.23 \quad \text{INVALID-ORDER-23} \quad Z(s) = \left( R_1, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{R_1 (C_L R_L s + 1) (C_5 R_5 g_m s - C_5 s + g_m)}{s (C_5 C_L R_1 R_5 g_m s + 2C_5 C_L R_1 R_L g_m s + C_5 C_L R_1 s + C_5 C_L R_5 s + C_5 C_L R_L s + 2C_5 R_1 g_m + C_5 + C_L R_1 g_m + C_L)}$$

$$10.24 \quad \text{INVALID-ORDER-24} \quad Z(s) = \left( R_1, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, L_L s + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{R_1 (C_L L_L s^2 + 1) (C_5 R_5 g_m s - C_5 s + g_m)}{s (2C_5 C_L L_L R_1 g_m s^2 + C_5 C_L L_L s^2 + C_5 C_L R_1 R_5 g_m s + C_5 C_L R_1 s + C_5 C_L R_5 s + 2C_5 R_1 g_m + C_5 + C_L R_1 g_m + C_L)}$$

$$10.25 \quad \text{INVALID-ORDER-25} \quad Z(s) = \left( R_1, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} \right)$$

$$H(s) = \frac{L_L R_1 s (C_5 R_5 g_m s - C_5 s + g_m)}{C_5 C_L L_L R_1 R_5 g_m s^3 + C_5 C_L L_L R_1 s^3 + C_5 C_L L_L R_5 s^3 + 2C_5 L_L R_1 g_m s^2 + C_5 L_L s^2 + C_5 R_1 R_5 g_m s + C_5 R_1 s + C_5 R_5 s + C_L L_L R_1 g_m s^2 + C_L L_L s^2 + R_1 g_m + 1}$$

**10.26 INVALID-ORDER-26**  $Z(s) = \left( R_1, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, L_L s + R_L + \frac{1}{C_L s} \right)$

$$H(s) = \frac{R_1 (C_L L_L s^2 + C_L R_L s + 1) (C_5 R_5 g_m s - C_5 s + g_m)}{s (2C_5 C_L L_L R_1 g_m s^2 + C_5 C_L L_L s^2 + C_5 C_L R_1 R_5 g_m s + 2C_5 C_L R_1 R_L g_m s + C_5 C_L R_1 s + C_5 C_L R_5 s + C_5 C_L R_L s + 2C_5 R_1 g_m + C_5 + C_L R_1 g_m + C_L)}$$

**10.27 INVALID-ORDER-27**  $Z(s) = \left( R_1, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$

$$H(s) = \frac{L_L R_1 R_L s (C_5 R_5 g_m s - C_5 s + g_m)}{C_5 C_L L_L R_1 R_5 R_L g_m s^3 + C_5 C_L L_L R_1 R_L s^3 + C_5 C_L L_L R_5 R_L s^3 + C_5 L_L R_1 R_5 g_m s^2 + 2C_5 L_L R_1 R_L g_m s^2 + C_5 L_L R_1 s^2 + C_5 L_L R_5 s^2 + C_5 L_L R_L s^2 + C_5 R_1 R_5 R_L g_m s + C_5 R_1 R_L s^2 + C_5 R_1 R_5 s^2 + C_5 R_1 R_L s + C_5 R_1 R_5 + C_5 R_1 R_L}$$

**10.28 INVALID-ORDER-28**  $Z(s) = \left( R_1, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$

$$H(s) = \frac{R_1 (C_5 R_5 g_m s - C_5 s + g_m) (C_L L_L R_L s^2 + L_L s + R_L)}{C_5 C_L L_L R_1 R_5 g_m s^3 + 2C_5 C_L L_L R_1 R_L g_m s^3 + C_5 C_L L_L R_1 s^3 + C_5 C_L L_L R_5 s^3 + C_5 C_L L_L R_L s^3 + 2C_5 L_L R_1 g_m s^2 + C_5 L_L s^2 + C_5 R_1 R_5 g_m s + 2C_5 R_1 R_L g_m s + C_5 R_1 s + C_5 R_1 R_5 + C_5 R_1 R_L}$$

**10.29 INVALID-ORDER-29**  $Z(s) = \left( R_1, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, \frac{R_L (L_L s + \frac{1}{C_L s})}{L_L s + R_L + \frac{1}{C_L s}} \right)$

$$H(s) = \frac{R_1 R_L (C_L L_L s^2 + 1) (C_5 R_5 g_m s - C_5 s + g_m)}{C_5 C_L L_L R_1 R_5 g_m s^3 + 2C_5 C_L L_L R_1 R_L g_m s^3 + C_5 C_L L_L R_1 s^3 + C_5 C_L L_L R_5 s^3 + C_5 C_L L_L R_L s^3 + C_5 C_L R_1 R_5 R_L g_m s^2 + C_5 C_L R_1 R_L s^2 + C_5 C_L R_5 R_L s^2 + C_5 R_1 R_5 g_m s + 2C_5 R_1 R_L g_m s + C_5 R_1 s + C_5 R_1 R_5 + C_5 R_1 R_L}$$

**10.30 INVALID-ORDER-30**  $Z(s) = \left( R_1, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, \frac{1}{C_L s} \right)$

$$H(s) = \frac{R_1 (C_5 L_5 g_m s^2 - C_5 s + g_m)}{s (C_5 C_L L_5 R_1 g_m s^2 + C_5 C_L L_5 s^2 + C_5 C_L R_1 s + 2C_5 R_1 g_m + C_5 + C_L R_1 g_m + C_L)}$$

**10.31 INVALID-ORDER-31**  $Z(s) = \left( R_1, \infty, \infty, \infty, L_5s + \frac{1}{C_5s}, \frac{R_L}{C_LR_Ls+1} \right)$

$$H(s) = \frac{R_1R_L (C_5L_5g_ms^2 - C_5s + g_m)}{C_5C_LL_5R_1R_Lg_ms^3 + C_5C_LL_5R_Ls^3 + C_5C_LR_1R_Ls^2 + C_5L_5R_1g_ms^2 + C_5L_5s^2 + 2C_5R_1R_Lg_ms + C_5R_1s + C_5R_Ls + C_LR_1R_Lg_ms + C_LR_Ls + R_1g_m + 1}$$

**10.32 INVALID-ORDER-32**  $Z(s) = \left( R_1, \infty, \infty, \infty, L_5s + \frac{1}{C_5s}, R_L + \frac{1}{C_Ls} \right)$

$$H(s) = \frac{R_1 (C_LR_Ls + 1) (C_5L_5g_ms^2 - C_5s + g_m)}{s(C_5C_LL_5R_1g_ms^2 + C_5C_LL_5s^2 + 2C_5C_LR_1R_Lg_ms + C_5C_LR_1s + C_5C_LR_Ls + 2C_5R_1g_m + C_5 + C_LR_1g_m + C_L)}$$

**10.33 INVALID-ORDER-33**  $Z(s) = \left( R_1, \infty, \infty, \infty, L_5s + \frac{1}{C_5s}, L_Ls + \frac{1}{C_Ls} \right)$

$$H(s) = \frac{R_1 (C_LL_Ls^2 + 1) (C_5L_5g_ms^2 - C_5s + g_m)}{s(C_5C_LL_5R_1g_ms^2 + C_5C_LL_5s^2 + 2C_5C_LL_R_1g_ms^2 + C_5C_LL_Ls^2 + C_5C_LR_1s + 2C_5R_1g_m + C_5 + C_LR_1g_m + C_L)}$$

**10.34 INVALID-ORDER-34**  $Z(s) = \left( R_1, \infty, \infty, \infty, L_5s + \frac{1}{C_5s}, \frac{L_Ls}{C_LL_Ls^2+1} \right)$

$$H(s) = \frac{L_LR_1s (C_5L_5g_ms^2 - C_5s + g_m)}{C_5C_LL_5L_LR_1g_ms^4 + C_5C_LL_5L_Ls^4 + C_5C_LL_LR_1s^3 + C_5L_5R_1g_ms^2 + C_5L_5s^2 + 2C_5L_LR_1g_ms^2 + C_5L_Ls^2 + C_5R_1s + C_LL_LR_1g_ms^2 + C_LL_Ls^2 + R_1g_m + 1}$$

**10.35 INVALID-ORDER-35**  $Z(s) = \left( R_1, \infty, \infty, \infty, L_5s + \frac{1}{C_5s}, L_Ls + R_L + \frac{1}{C_Ls} \right)$

$$H(s) = \frac{R_1 (C_LL_Ls^2 + C_LR_Ls + 1) (C_5L_5g_ms^2 - C_5s + g_m)}{s(C_5C_LL_5R_1g_ms^2 + C_5C_LL_5s^2 + 2C_5C_LL_R_1g_ms^2 + C_5C_LL_Ls^2 + 2C_5C_LR_1R_Lg_ms + C_5C_LR_1s + C_5C_LR_Ls + 2C_5R_1g_m + C_5 + C_LR_1g_m + C_L)}$$

**10.36 INVALID-ORDER-36**  $Z(s) = \left( R_1, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$

$$H(s) = \frac{L_L R_1 R_L s (C_5 L_5 g_m s^2 - C_5 s + g_m)}{C_5 C_L L_5 L_L R_1 R_L g_m s^4 + C_5 C_L L_5 L_L R_L s^4 + C_5 C_L L_L R_1 R_L s^3 + C_5 L_5 L_L R_1 g_m s^3 + C_5 L_5 L_L s^3 + C_5 L_5 R_1 R_L g_m s^2 + C_5 L_5 R_L s^2 + 2 C_5 L_L R_1 R_L g_m s^2 + C_5 L_L R_1 s^2 + C_5 L_L R_L s^2}$$

**10.37 INVALID-ORDER-37**  $Z(s) = \left( R_1, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$

$$H(s) = \frac{R_1 (C_5 L_5 g_m s^2 - C_5 s + g_m) (C_L L_L R_L s^2 + L_L s + R_L)}{C_5 C_L L_5 L_L R_1 g_m s^4 + C_5 C_L L_5 L_L s^4 + 2C_5 C_L L_L R_1 R_L g_m s^3 + C_5 C_L L_L R_1 s^3 + C_5 C_L L_L R_L s^3 + C_5 L_5 R_1 g_m s^2 + C_5 L_5 s^2 + 2C_5 L_L R_1 g_m s^2 + C_5 L_L s^2 + 2C_5 R_1 R_L g_m s + C_5 R_1}.$$

**10.38 INVALID-ORDER-38**  $Z(s) = \left( R_1, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$

$$H(s) = \frac{R_1 R_L (C_L L_L s^2 + 1) (C_5 L_5 g_m s^2 - C_5 s + g_m)}{C_5 C_L L_5 L_L R_1 g_m s^4 + C_5 C_L L_5 L_L s^4 + C_5 C_L L_5 R_1 R_L g_m s^3 + C_5 C_L L_5 R_L s^3 + 2 C_5 C_L L_L R_1 R_L g_m s^3 + C_5 C_L L_L R_1 s^3 + C_5 C_L L_L R_L s^3 + C_5 C_L R_1 R_L s^2 + C_5 L_5 R_1 g_m s^2 + C_5 L_5 R_1 s^2 + C_5 L_5 R_1 s + C_5 L_5 R_1}$$

**10.39 INVALID-ORDER-39**  $Z(s) = \left( R_1, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{1}{C_L s} \right)$

$$H(s) = \frac{R_1(-C_5 L_5 s^2 + L_5 g_m s - 1)}{C_5 C_L L_5 R_1 s^3 + 2C_5 L_5 R_1 g_m s^2 + C_5 L_5 s^2 + C_L L_5 R_1 g_m s^2 + C_L L_5 s^2 + C_L R_1 s + 2R_1 g_m + 1}$$

**10.40 INVALID-ORDER-40**  $Z(s) = \left( R_1, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{R_L}{C_L R_L s + 1} \right)$

$$H(s) = \frac{R_1 R_L (-C_5 L_5 s^2 + L_5 g_m s - 1)}{C_5 C_L L_5 R_1 R_L s^3 + 2C_5 L_5 R_1 R_L g_m s^2 + C_5 L_5 R_1 s^2 + C_5 L_5 R_L s^2 + C_L L_5 R_1 R_L g_m s^2 + C_L L_5 R_L s^2 + C_L R_1 R_L s + L_5 R_1 g_m s + L_5 s + 2R_1 R_L g_m + R_1 + R_L}$$

$$10.41 \quad \text{INVALID-ORDER-41} \quad Z(s) = \left( R_1, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, R_L + \frac{1}{C_L s} \right)$$

$$H(s) = -\frac{R_1 (C_L R_L s + 1) (C_5 L_5 s^2 - L_5 g_m s + 1)}{2C_5 C_L L_5 R_1 R_L g_m s^3 + C_5 C_L L_5 R_1 s^3 + C_5 C_L L_5 R_L s^3 + 2C_5 L_5 R_1 g_m s^2 + C_5 L_5 s^2 + C_L L_5 R_1 g_m s^2 + C_L L_5 s^2 + 2C_L R_1 R_L g_m s + C_L R_1 s + C_L R_L s + 2R_1 g_m + 1}$$

$$10.42 \quad \text{INVALID-ORDER-42} \quad Z(s) = \left( R_1, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, L_L s + \frac{1}{C_L s} \right)$$

$$H(s) = -\frac{R_1 (C_L L_L s^2 + 1) (C_5 L_5 s^2 - L_5 g_m s + 1)}{2C_5 C_L L_5 L_L R_1 g_m s^4 + C_5 C_L L_5 L_L s^4 + C_5 C_L L_5 R_1 s^3 + 2C_5 L_5 R_1 g_m s^2 + C_5 L_5 s^2 + C_L L_5 R_1 g_m s^2 + C_L L_5 s^2 + 2C_L L_L R_1 g_m s^2 + C_L L_L s^2 + C_L R_1 s + 2R_1 g_m + 1}$$

$$10.43 \quad \text{INVALID-ORDER-43} \quad Z(s) = \left( R_1, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{L_L s}{C_L L_L s^2 + 1} \right)$$

$$H(s) = \frac{L_L R_1 s (-C_5 L_5 s^2 + L_5 g_m s - 1)}{C_5 C_L L_5 L_L R_1 s^4 + 2C_5 L_5 L_L R_1 g_m s^3 + C_5 L_5 L_L s^3 + C_5 L_5 R_1 s^2 + C_L L_5 L_L R_1 g_m s^3 + C_L L_5 L_L s^3 + C_L L_L R_1 s^2 + L_5 R_1 g_m s + L_5 s + 2L_L R_1 g_m s + L_L s + R_1}$$

$$10.44 \quad \text{INVALID-ORDER-44} \quad Z(s) = \left( R_1, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, L_L s + R_L + \frac{1}{C_L s} \right)$$

$$H(s) = -\frac{R_1 (C_5 L_5 s^2 - L_5 g_m s + 1) (C_L L_L s^2 + C_L R_L s + 1)}{2C_5 C_L L_5 L_L R_1 g_m s^4 + C_5 C_L L_5 L_L s^4 + 2C_5 C_L L_5 R_1 R_L g_m s^3 + C_5 C_L L_5 R_1 s^3 + C_5 C_L L_5 R_L s^3 + 2C_5 L_5 R_1 g_m s^2 + C_5 L_5 s^2 + C_L L_5 R_1 g_m s^2 + C_L L_5 s^2 + 2C_L L_L R_1 g_m s^2 + C_L L_L s^2 + C_L R_1 s + 2R_1 g_m + 1}$$

$$10.45 \quad \text{INVALID-ORDER-45} \quad Z(s) = \left( R_1, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$$

$$H(s) = \frac{L_L R_1 R_L s (-C_5 L_5 s^2 + L_5 g_m s - 1)}{C_5 C_L L_5 L_L R_1 R_L s^4 + 2C_5 L_5 L_L R_1 R_L g_m s^3 + C_5 L_5 L_L R_1 s^3 + C_5 L_5 L_L R_L s^3 + C_5 L_5 R_1 R_L s^2 + C_L L_5 L_L R_1 R_L g_m s^3 + C_L L_5 L_L R_L s^3 + C_L L_L R_1 R_L s^2 + L_5 L_L R_1 g_m s^2 + L_5 L_L s^2 + L_5 R_1 g_m s + L_5 s + 2L_L R_1 g_m s + L_L s + R_1}$$



**10.46 INVALID-ORDER-46**  $Z(s) = \left( R_1, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$

$$H(s) = -\frac{R_1 (C_5 L_5 s^2 - L_5 g_m s + 1) (C_L L_L R_L s^2 + L_L s + R_L)}{2C_5 C_L L_5 L_L R_1 R_L g_m s^4 + C_5 C_L L_5 L_L R_1 s^4 + C_5 C_L L_5 L_L R_L s^4 + 2C_5 L_5 L_L R_1 g_m s^3 + C_5 L_5 L_L s^3 + 2C_5 L_5 R_1 R_L g_m s^2 + C_5 L_5 R_1 s^2 + C_5 L_5 R_L s^2 + C_L L_5 L_L R_1 g_m s^3 + C_L L_5 L_L s^3 + C_L L_5 R_1 g_m s^2 + C_L L_5 R_1 s^2 + C_L L_5 R_L s^2 + C_L L_5 s^2 + C_L R_1 g_m s + C_L R_1 s + C_L R_L s + C_L}$$

**10.47 INVALID-ORDER-47**  $Z(s) = \left( R_1, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{R_L (L_L s + \frac{1}{C_L s})}{L_L s + R_L + \frac{1}{C_L s}} \right)$

$$H(s) = -\frac{R_1 R_L (C_L L_L s^2 + 1) (C_5 L_5 s^2 - L_5 g_m s + 1)}{2C_5 C_L L_5 L_L R_1 R_L g_m s^4 + C_5 C_L L_5 L_L R_1 s^4 + C_5 C_L L_5 L_L R_L s^4 + C_5 C_L L_5 R_1 R_L s^3 + 2C_5 L_5 R_1 R_L g_m s^2 + C_5 L_5 R_1 s^2 + C_5 L_5 R_L s^2 + C_L L_5 L_L R_1 g_m s^3 + C_L L_5 L_L s^3 + C_L L_5 R_1 g_m s^2 + C_L L_5 R_1 s^2 + C_L L_5 R_L s^2 + C_L L_5 s^2 + C_L R_1 g_m s + C_L R_1 s + C_L R_L s + C_L}$$

**10.48 INVALID-ORDER-48**  $Z(s) = \left( R_1, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{1}{C_L s} \right)$

$$H(s) = \frac{R_1 (C_5 L_5 g_m s^2 + C_5 R_5 g_m s - C_5 s + g_m)}{s (C_5 C_L L_5 R_1 g_m s^2 + C_5 C_L L_5 s^2 + C_5 C_L R_1 R_5 g_m s + C_5 C_L R_1 s + C_5 C_L R_5 s + 2C_5 R_1 g_m + C_5 + C_L R_1 g_m + C_L)}$$

**10.49 INVALID-ORDER-49**  $Z(s) = \left( R_1, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{R_L}{C_L R_L s + 1} \right)$

$$H(s) = \frac{R_1 R_L (C_5 L_5 g_m s^2 + C_5 R_5 g_m s - C_5 s + g_m)}{C_5 C_L L_5 R_1 R_L g_m s^3 + C_5 C_L L_5 R_L s^3 + C_5 C_L R_1 R_5 R_L g_m s^2 + C_5 C_L R_1 R_L s^2 + C_5 C_L R_5 R_L s^2 + C_5 L_5 R_1 g_m s^2 + C_5 L_5 s^2 + C_5 R_1 R_5 g_m s + 2C_5 R_1 R_L g_m s + C_5 R_1 s + C_5 R_5 s + C_L R_1 g_m s + C_L R_1 s + C_L R_L s + C_L}$$

**10.50 INVALID-ORDER-50**  $Z(s) = \left( R_1, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, R_L + \frac{1}{C_L s} \right)$

$$H(s) = \frac{R_1 (C_L R_L s + 1) (C_5 L_5 g_m s^2 + C_5 R_5 g_m s - C_5 s + g_m)}{s (C_5 C_L L_5 R_1 g_m s^2 + C_5 C_L L_5 s^2 + C_5 C_L R_1 R_5 g_m s + 2C_5 C_L R_1 R_L g_m s + C_5 C_L R_1 s + C_5 C_L R_5 s + C_5 C_L R_L s + 2C_5 R_1 g_m + C_5 + C_L R_1 g_m + C_L)}$$

**10.51 INVALID-ORDER-51**  $Z(s) = \left( R_1, \infty, \infty, \infty, L_5s + R_5 + \frac{1}{C_5s}, L_Ls + \frac{1}{C_Ls} \right)$

$$H(s) = \frac{R_1 (C_L L_L s^2 + 1) (C_5 L_5 g_m s^2 + C_5 R_5 g_m s - C_5 s + g_m)}{s (C_5 C_L L_5 R_1 g_m s^2 + C_5 C_L L_5 s^2 + 2C_5 C_L L_L R_1 g_m s^2 + C_5 C_L L_L s^2 + C_5 C_L R_1 R_5 g_m s + C_5 C_L R_1 s + C_5 C_L R_5 s + 2C_5 R_1 g_m + C_5 + C_L R_1 g_m + C_L)}$$

**10.52 INVALID-ORDER-52**  $Z(s) = \left( R_1, \infty, \infty, \infty, L_5s + R_5 + \frac{1}{C_5s}, \frac{L_L s}{C_L L_L s^2 + 1} \right)$

$$H(s) = \frac{L_L R_1 s (C_5 L_5 g_m s^2 + C_5 R_5 g_m s - C_5 s + g_m)}{C_5 C_L L_5 L_L R_1 g_m s^4 + C_5 C_L L_5 L_L s^4 + C_5 C_L L_L R_1 R_5 g_m s^3 + C_5 C_L L_L R_1 s^3 + C_5 C_L L_L R_5 s^3 + C_5 L_5 R_1 g_m s^2 + C_5 L_5 s^2 + 2C_5 L_L R_1 g_m s^2 + C_5 L_L s^2 + C_5 R_1 R_5 g_m s + C_5 R_1 s + C_5 R_5 s + 2C_5 R_1 g_m + C_5 + C_L R_1 g_m + C_L}$$

**10.53 INVALID-ORDER-53**  $Z(s) = \left( R_1, \infty, \infty, \infty, L_5s + R_5 + \frac{1}{C_5s}, L_Ls + R_L + \frac{1}{C_Ls} \right)$

$$H(s) = \frac{R_1 (C_L L_L s^2 + C_L R_L s + 1) (C_5 L_5 g_m s^2 + C_5 R_5 g_m s - C_5 s + g_m)}{s (C_5 C_L L_5 R_1 g_m s^2 + C_5 C_L L_5 s^2 + 2C_5 C_L L_L R_1 g_m s^2 + C_5 C_L L_L s^2 + C_5 C_L R_1 R_5 g_m s + 2C_5 C_L R_1 R_L g_m s + C_5 C_L R_1 s + C_5 C_L R_5 s + C_5 C_L R_L s + 2C_5 R_1 g_m + C_5 + C_L R_1 g_m + C_L)}$$

**10.54 INVALID-ORDER-54**  $Z(s) = \left( R_1, \infty, \infty, \infty, L_5s + R_5 + \frac{1}{C_5s}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$

$$H(s) = \frac{L_L R_1 R_L s (C_5 L_5 g_m s^2 + C_5 R_5 g_m s - C_5 s + g_m)}{C_5 C_L L_5 L_L R_1 R_L g_m s^4 + C_5 C_L L_5 L_L R_L s^4 + C_5 C_L L_L R_1 R_5 R_L g_m s^3 + C_5 C_L L_L R_1 R_L s^3 + C_5 C_L L_L R_5 R_L s^3 + C_5 L_5 L_L R_1 g_m s^3 + C_5 L_5 L_L s^3 + C_5 L_5 R_1 R_L g_m s^2 + C_5 L_5 R_L s^2 + C_5 R_1 R_5 g_m s + C_5 R_1 s + C_5 R_5 s + 2C_5 R_1 g_m + C_5 + C_L R_1 g_m + C_L}$$

**10.55 INVALID-ORDER-55**  $Z(s) = \left( R_1, \infty, \infty, \infty, L_5s + R_5 + \frac{1}{C_5s}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$

$$H(s) = \frac{R_1 (C_L L_L R_L s^2 + L_L s + R_L) (C_5 L_5 g_m s^2 + C_5 R_5 g_m s - C_5 s + g_m)}{C_5 C_L L_5 L_L R_1 g_m s^4 + C_5 C_L L_5 L_L s^4 + C_5 C_L L_L R_1 R_5 g_m s^3 + 2C_5 C_L L_L R_1 R_L g_m s^3 + C_5 C_L L_L R_1 s^3 + C_5 C_L L_L R_5 s^3 + C_5 C_L L_L R_L s^3 + C_5 L_5 R_1 g_m s^2 + C_5 L_5 s^2 + 2C_5 L_L R_1 g_m s + C_5 L_L s + C_5 R_1 R_5 g_m s + C_5 R_1 s + C_5 R_5 s + 2C_5 R_1 g_m + C_5 + C_L R_1 g_m + C_L}$$

$$10.56 \quad \text{INVALID-ORDER-56} \quad Z(s) = \left( R_1, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$$

$$H(s) = \frac{R_1 R_L (C_L L_L s^2 + 1)}{C_5 C_L L_5 L_L R_1 g_m s^4 + C_5 C_L L_5 L_L s^4 + C_5 C_L L_5 R_1 R_L g_m s^3 + C_5 C_L L_5 R_L s^3 + C_5 C_L L_L R_1 R_5 g_m s^3 + 2 C_5 C_L L_L R_1 R_L g_m s^3 + C_5 C_L L_L R_1 s^3 + C_5 C_L L_L R_5 s^3 + C_5 C_L L_L R_L s^3 -$$

$$10.57 \quad \text{INVALID-ORDER-57} \quad Z(s) = \left( R_1, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{1}{C_L s} \right)$$

$$H(s) = \frac{R_1 (-C_5 L_5 R_5 s^2 + L_5 R_5 g_m s - L_5 s - R_5)}{C_5 C_L L_5 R_1 R_5 s^3 + 2 C_5 L_5 R_1 R_5 g_m s^2 + C_5 L_5 R_5 s^2 + C_L L_5 R_1 R_5 g_m s^2 + C_L L_5 R_1 s^2 + C_L L_5 R_5 s^2 + C_L R_1 R_5 s + 2 L_5 R_1 g_m s + L_5 s + 2 R_1 R_5 g_m + R_5}$$

$$10.58 \quad \text{INVALID-ORDER-58} \quad Z(s) = \left( R_1, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{R_L}{C_L R_L s + 1} \right)$$

$$H(s) = \frac{R_1 R_L (-C_5 L_5 R_5 s^2 + L_5 R_5 g_m s - L_5 s - R_5)}{C_5 C_L L_5 R_1 R_5 R_L s^3 + 2 C_5 L_5 R_1 R_5 R_L g_m s^2 + C_5 L_5 R_1 R_5 s^2 + C_5 L_5 R_5 R_L s^2 + C_L L_5 R_1 R_5 R_L g_m s^2 + C_L L_5 R_1 R_L s^2 + C_L L_5 R_5 R_L s^2 + C_L R_1 R_5 R_L s + L_5 R_1 R_5 g_m s + 2 L_5 R_1 R_5}$$

$$10.59 \quad \text{INVALID-ORDER-59} \quad Z(s) = \left( R_1, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, R_L + \frac{1}{C_L s} \right)$$

$$H(s) = -\frac{R_1 (C_L R_L s + 1) (C_5 L_5 R_5 s^2 - L_5 R_5 g_m s + L_5 s + R_5)}{2 C_5 C_L L_5 R_1 R_5 R_L g_m s^3 + C_5 C_L L_5 R_1 R_5 s^3 + C_5 C_L L_5 R_5 R_L s^3 + 2 C_5 L_5 R_1 R_5 g_m s^2 + C_5 L_5 R_5 s^2 + C_L L_5 R_1 R_5 g_m s^2 + 2 C_L L_5 R_1 R_L g_m s^2 + C_L L_5 R_1 s^2 + C_L L_5 R_5 s^2 + C_L L_5 R_L s^2}$$

$$10.60 \quad \text{INVALID-ORDER-60} \quad Z(s) = \left( R_1, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, L_L s + \frac{1}{C_L s} \right)$$

$$H(s) = -\frac{R_1 (C_L L_L s^2 + 1) (C_5 L_5 R_5 s^2 - L_5 R_5 g_m s + L_5 s + R_5)}{2 C_5 C_L L_5 L_L R_1 R_5 g_m s^4 + C_5 C_L L_5 L_L R_5 s^4 + C_5 C_L L_5 R_1 R_5 s^3 + 2 C_5 L_5 R_1 R_5 g_m s^2 + C_5 L_5 R_5 s^2 + 2 C_L L_5 L_L R_1 g_m s^3 + C_L L_5 L_L s^3 + C_L L_5 R_1 R_5 g_m s^2 + C_L L_5 R_1 s^2 + C_L L_5 R_5 s^2 + C_L L_5 R_L s^2}$$

**10.61 INVALID-ORDER-61**  $Z(s) = \left( R_1, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{L_L s}{C_L L_L s^2 + 1} \right)$

$$H(s) = \frac{L_L R_1 s (-C_5 L_5 R_5 s^2 + L_5 R_5 g_m s - L_5 s - R_5)}{C_5 C_L L_5 L_L R_1 R_5 s^4 + 2C_5 L_5 L_L R_1 R_5 g_m s^3 + C_5 L_5 L_L R_5 s^3 + C_5 L_5 R_1 R_5 s^2 + C_L L_5 L_L R_1 R_5 g_m s^3 + C_L L_5 L_L R_1 s^3 + C_L L_5 L_L R_5 s^3 + C_L L_L R_1 R_5 s^2 + 2L_5 L_L R_1 g_m s^2 + L_5 L_L}$$

**10.62 INVALID-ORDER-62**  $Z(s) = \left( R_1, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5 + \frac{1}{L_5 s}}}, L_L s + R_L + \frac{1}{C_L s} \right)$

$$H(s) = -\frac{R_1 (C_L L_L s^2 + C_L L_L R_1 g_m s + C_L L_L R_1^2)}{2C_5 C_L L_5 L_L R_1 R_5 g_m s^4 + C_5 C_L L_5 L_L R_5 s^4 + 2C_5 C_L L_5 R_1 R_5 R_L g_m s^3 + C_5 C_L L_5 R_1 R_5 s^3 + C_5 C_L L_5 R_5 R_L s^3 + 2C_5 L_5 R_1 R_5 g_m s^2 + C_5 L_5 R_5 s^2 + 2C_L L_5 L_L R_1 g_m s^3 + C_L L_5 L_L R_1^2 s^2 + C_L L_5 L_L R_1^2 g_m s + C_L L_5 L_L R_1^2}$$

**10.63 INVALID-ORDER-63**  $Z(s) = \left( R_1, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$

$$H(s) = \frac{L_L R_1 R_L s}{C_5 C_L L_5 L_L R_1 R_5 R_L s^4 + 2C_5 L_5 L_L R_1 R_5 R_L g_m s^3 + C_5 L_5 L_L R_1 R_5 s^3 + C_5 L_5 L_L R_5 R_L s^3 + C_5 L_5 R_1 R_5 R_L s^2 + C_L L_5 L_L R_1 R_5 R_L g_m s^3 + C_L L_5 L_L R_1 R_L s^3 + C_L L_5 L_L R_5 R_L s^3 -}$$

10.64 INVALID-ORDER-64  $Z(s) = \left( R_1, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$

$$H(s) = -\frac{2C_5C_LL_5L_LR_1R_5R_Lq_ms^4 + C_5C_LL_5L_LR_1R_5s^4 + C_5C_LL_5L_LR_5R_Ls^4 + 2C_5L_5L_LR_1R_5q_ms^3 + C_5L_5L_LR_5s^3 + 2C_5L_5R_1R_5R_Lq_ms^2 + C_5L_5R_1R_5s^2 + C_5L_5R_5R_Ls^2 + C_5L_5R_5q_ms}{2C_5C_LL_5L_LR_1R_5R_Lq_ms^4 + C_5C_LL_5L_LR_1R_5s^4 + C_5C_LL_5L_LR_5R_Ls^4 + 2C_5L_5L_LR_1R_5q_ms^3 + C_5L_5L_LR_5s^3 + 2C_5L_5R_1R_5R_Lq_ms^2 + C_5L_5R_1R_5s^2 + C_5L_5R_5R_Ls^2 + C_5L_5R_5q_ms}.$$

**10.65 INVALID-ORDER-65**  $Z(s) = \left( R_1, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$

$$H(s) = -\frac{2C_5C_LL_5L_LR_1R_5R_Lg_ms^4 + C_5C_LL_5L_LR_1R_5s^4 + C_5C_LL_5L_LR_5R_Ls^4 + C_5C_LL_5R_1R_5R_Ls^3 + 2C_5L_5R_1R_5R_Lg_ms^2 + C_5L_5R_1R_5s^2 + C_5L_5R_5R_Ls^2 + C_LL_5L_LR_1R_5g_ms}{s^5}$$

$$10.66 \quad \text{INVALID-ORDER-66} \quad Z(s) = \left( R_1, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{1}{C_L s} \right)$$

$$H(s) = \frac{R_1 (C_5 L_5 R_5 g_m s^2 - C_5 L_5 s^2 + L_5 g_m s + R_5 g_m - 1)}{C_5 C_L L_5 R_1 R_5 g_m s^3 + C_5 C_L L_5 R_1 s^3 + C_5 C_L L_5 R_5 s^3 + 2C_5 L_5 R_1 g_m s^2 + C_5 L_5 s^2 + C_L L_5 R_1 g_m s^2 + C_L L_5 s^2 + C_L R_1 R_5 g_m s + C_L R_1 s + C_L R_5 s + 2R_1 g_m + 1}$$

$$10.67 \quad \text{INVALID-ORDER-67} \quad Z(s) = \left( R_1, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{R_L}{C_L R_L s + 1} \right)$$

$$H(s) = \frac{R_1 R_L (C_5 L_5 R_5 g_m s^2 - C_5 L_5 s^2 + L_5 g_m s + R_5 g_m - 1)}{C_5 C_L L_5 R_1 R_5 R_L g_m s^3 + C_5 C_L L_5 R_1 R_L s^3 + C_5 C_L L_5 R_5 R_L s^3 + C_5 L_5 R_1 R_5 g_m s^2 + 2C_5 L_5 R_1 R_L g_m s^2 + C_5 L_5 R_1 s^2 + C_5 L_5 R_5 s^2 + C_5 L_5 R_L s^2 + C_L L_5 R_1 R_L g_m s^2 + C_L L_5 R_L s^2}$$

$$10.68 \quad \text{INVALID-ORDER-68} \quad Z(s) = \left( R_1, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{R_1 (C_L R_L s + 1) (C_5 L_5 R_5 g_m s^2 - C_5 L_5 s^2 + L_5 g_m s + R_5 g_m - 1)}{C_5 C_L L_5 R_1 R_5 g_m s^3 + 2C_5 C_L L_5 R_1 R_L g_m s^3 + C_5 C_L L_5 R_1 s^3 + C_5 C_L L_5 R_5 s^3 + C_5 C_L L_5 R_L s^3 + 2C_5 L_5 R_1 g_m s^2 + C_5 L_5 s^2 + C_L L_5 R_1 g_m s^2 + C_L L_5 s^2 + C_L R_1 R_5 g_m s + 2C_L R_1 s}$$

$$10.69 \quad \text{INVALID-ORDER-69} \quad Z(s) = \left( R_1, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, L_L s + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{R_1 (C_L L_L s^2 + 1) (C_5 L_5 R_5 g_m s^2 - C_5 L_5 s^2 + L_5 g_m s + R_5 g_m - 1)}{2C_5 C_L L_5 L_L R_1 g_m s^4 + C_5 C_L L_5 L_L s^4 + C_5 C_L L_5 R_1 R_5 g_m s^3 + C_5 C_L L_5 R_1 s^3 + C_5 C_L L_5 R_5 s^3 + 2C_5 L_5 R_1 g_m s^2 + C_5 L_5 s^2 + C_L L_5 R_1 g_m s^2 + C_L L_5 s^2 + 2C_L L_L R_1 g_m s^2 + C_L L_L s^2}$$

$$10.70 \quad \text{INVALID-ORDER-70} \quad Z(s) = \left( R_1, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{L_L s}{C_L L_L s^2 + 1} \right)$$

$$H(s) = \frac{L_L R_1 s (C_5 L_5 R_5 g_m s^2 - C_5 L_5 s^2 + L_5 g_m s + R_5 g_m - 1)}{C_5 C_L L_5 L_L R_1 R_5 g_m s^4 + C_5 C_L L_5 L_L R_1 s^4 + C_5 C_L L_5 L_L R_5 s^4 + 2C_5 L_5 L_L R_1 g_m s^3 + C_5 L_5 L_L s^3 + C_5 L_5 R_1 R_5 g_m s^2 + C_5 L_5 R_1 s^2 + C_5 L_5 R_5 s^2 + C_L L_5 L_L R_1 g_m s^3 + C_L L_5 L_L s^3}$$

$$10.71 \quad \text{INVALID-ORDER-71} \quad Z(s) = \left( R_1, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, L_L s + R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{R_1 (C_L L_L s^2 + C_L R_L s + 1) (C_5 L_5 R_5 g_m s^2 - C_5 L_5 s^2 + L_5 g_m s + R_5 g_m - 1)}{2C_5 C_L L_5 L_L R_1 g_m s^4 + C_5 C_L L_5 L_L s^4 + C_5 C_L L_5 R_1 R_5 g_m s^3 + 2C_5 C_L L_5 R_1 R_L g_m s^3 + C_5 C_L L_5 R_1 s^3 + C_5 C_L L_5 R_5 s^3 + C_5 C_L L_5 R_L s^3 + 2C_5 L_5 R_1 g_m s^2 + C_5 L_5 s^2 + C_L L_5 R_1 g_m s^2 + C_L L_5 s^2 + C_L R_1 R_5 g_m s + C_L R_1 s + C_L R_5 s + 2R_1 g_m + 1}$$

$$\mathbf{10.72 \quad INVALID-ORDER-72} \quad Z(s) = \left( R_1, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$$

$$H(s) = \frac{C_5 C_L L_5 L_L R_1 R_5 R_L g_m s^4 + C_5 C_L L_5 L_L R_1 R_L s^4 + C_5 C_L L_5 L_L R_5 R_L s^4 + C_5 L_5 L_L R_1 R_5 g_m s^3 + 2C_5 L_5 L_L R_1 R_L g_m s^3 + C_5 L_5 L_L R_1 s^3 + C_5 L_5 L_L R_5 s^3 + C_5 L_5 L_L R_L s^3 + C_5 L_5 s^3}{C_5 C_L L_5 L_L R_1 R_5 g_m s^4 + C_5 C_L L_5 L_L R_1 R_L s^4 + C_5 C_L L_5 L_L R_5 R_L s^4 + C_5 L_5 L_L R_1 R_5 g_m s^3 + 2C_5 L_5 L_L R_1 R_L g_m s^3 + C_5 L_5 L_L R_1 s^3 + C_5 L_5 L_L R_5 s^3 + C_5 L_5 L_L R_L s^3 + C_5 L_5 s^3}$$

$$\mathbf{10.73 \quad INVALID-ORDER-73} \quad Z(s) = \left( R_1, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$$

$$H(s) = \frac{R_1}{C_5 C_L L_5 L_L R_1 R_5 g_m s^4 + 2C_5 C_L L_5 L_L R_1 R_L g_m s^4 + C_5 C_L L_5 L_L R_1 s^4 + C_5 C_L L_5 L_L R_5 s^4 + C_5 C_L L_5 L_L R_L s^4 + 2C_5 L_5 L_L R_1 g_m s^3 + C_5 L_5 L_L s^3 + C_5 L_5 R_1 R_5 g_m s^2 + 2C_5 L_5 R_1 L g_m s^2 + C_5 L_5 R_1 s^2 + C_5 L_5 R_5 g_m s^2 + 2C_5 L_5 R_5 L g_m s^2 + C_5 L_5 R_5 s^2 + C_5 L_5 R_L g_m s^2 + 2C_5 L_5 R_L L g_m s^2 + C_5 L_5 R_L s^2 + C_5 L_5 s^2}$$

$$\mathbf{10.74 \quad INVALID-ORDER-74} \quad Z(s) = \left( R_1, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$$

$$H(s) = \frac{C_5 C_L L_5 L_L R_1 R_5 g_m s^4 + 2C_5 C_L L_5 L_L R_1 R_L g_m s^4 + C_5 C_L L_5 L_L R_1 s^4 + C_5 C_L L_5 L_L R_5 s^4 + C_5 C_L L_5 L_L R_L s^4 + C_5 C_L L_5 R_1 R_5 R_L g_m s^3 + C_5 C_L L_5 R_1 R_L s^3 + C_5 C_L L_5 R_5 R_L s^3 + C_5 C_L L_5 R_L s^3 + C_5 C_L L_5 s^3}{C_5 C_L L_5 L_L R_1 R_5 g_m s^4 + 2C_5 C_L L_5 L_L R_1 R_L g_m s^4 + C_5 C_L L_5 L_L R_1 s^4 + C_5 C_L L_5 L_L R_5 s^4 + C_5 C_L L_5 L_L R_L s^4 + C_5 C_L L_5 R_1 R_5 R_L g_m s^3 + C_5 C_L L_5 R_1 R_L s^3 + C_5 C_L L_5 R_5 R_L s^3 + C_5 C_L L_5 R_L s^3 + C_5 C_L L_5 s^3}$$

$$\mathbf{10.75 \quad INVALID-ORDER-75} \quad Z(s) = \left( R_1, \infty, \infty, \infty, \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{1}{C_L s} \right)$$

$$H(s) = \frac{R_1 (C_5 L_5 R_5 g_m s^2 - C_5 L_5 s^2 - C_5 R_5 s + R_5 g_m - 1)}{C_5 C_L L_5 R_1 R_5 g_m s^3 + C_5 C_L L_5 R_1 s^3 + C_5 C_L L_5 R_5 s^3 + C_5 C_L R_1 R_5 s^2 + 2C_5 L_5 R_1 g_m s^2 + C_5 L_5 s^2 + 2C_5 R_1 R_5 g_m s + C_5 R_5 s + C_L R_1 R_5 g_m s + C_L R_1 s + C_L R_5 s + 2R_1 g_m + 1}$$

$$\mathbf{10.76 \quad INVALID-ORDER-76} \quad Z(s) = \left( R_1, \infty, \infty, \infty, \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{R_L}{C_L R_L s + 1} \right)$$

$$H(s) = \frac{R_1 R_L (C_5 L_5 R_5 g_m s^2 - C_5 L_5 s^2 - C_5 R_5 s + R_5 g_m - 1)}{C_5 C_L L_5 R_1 R_5 R_L g_m s^3 + C_5 C_L L_5 R_1 R_L s^3 + C_5 C_L L_5 R_5 R_L s^3 + C_5 C_L R_1 R_5 R_L s^2 + C_5 L_5 R_1 R_5 g_m s^2 + 2C_5 L_5 R_1 R_L g_m s^2 + C_5 L_5 R_1 s^2 + C_5 L_5 R_5 s^2 + C_5 L_5 R_L s^2 + 2C_5 R_1 R_5 g_m s + C_5 R_5 s + C_L R_1 R_5 g_m s + C_L R_1 s + C_L R_5 s + 2R_1 g_m + 1}$$

**10.77 INVALID-ORDER-77**  $Z(s) = \left( R_1, \infty, \infty, \infty, \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, R_L + \frac{1}{C_L s} \right)$

$$H(s) = -\frac{R_1(C_L R_L s + 1)(-C_5 L_5 R_5 g_m s^2 + C_5 L_5 s^2 + C_5 R_5 s - R_5 g_m + C_5 L_5 R_5 g_m s)}{C_5 C_L L_5 R_1 R_5 g_m s^3 + 2C_5 C_L L_5 R_1 R_L g_m s^3 + C_5 C_L L_5 R_1 s^3 + C_5 C_L L_5 R_5 s^3 + C_5 C_L L_5 R_L s^3 + 2C_5 C_L R_1 R_5 R_L g_m s^2 + C_5 C_L R_1 R_5 s^2 + C_5 C_L R_5 R_L s^2 + 2C_5 L_5 R_1 g_m s^2 + C_5 L_5 R_1 s^2 + C_5 L_5 R_5 s^2 + C_5 L_5 R_L s^2 + C_5 R_5 g_m s + R_5 g_m}$$

**10.78 INVALID-ORDER-78**  $Z(s) = \left( R_1, \infty, \infty, \infty, \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, L_L s + \frac{1}{C_L s} \right)$

$$H(s) = -\frac{R_1 (C_L L_L s^2 + 1) (-C_5 L_5 R_5 g_m s^2 + C_5 L_5 s^2 + C_5 R_5 s - R_5 g_m + 2C_5 C_L L_5 L_L R_1 g_m s^4 + C_5 C_L L_5 L_L s^4 + C_5 C_L L_5 R_1 R_5 g_m s^3 + C_5 C_L L_5 R_1 s^3 + C_5 C_L L_5 R_5 s^3 + 2C_5 C_L L_L R_1 R_5 g_m s^3 + C_5 C_L L_L R_5 s^3 + C_5 C_L R_1 R_5 s^2 + 2C_5 L_5 R_1 g_m s^2 + C_5 L_5 R_5 s^2 + C_5 R_5 s - R_5 g_m)}{2C_5 C_L L_5 L_L R_1 g_m s^4 + C_5 C_L L_5 L_L s^4 + C_5 C_L L_5 R_1 R_5 g_m s^3 + C_5 C_L L_5 R_1 s^3 + C_5 C_L L_5 R_5 s^3 + 2C_5 C_L L_L R_1 R_5 g_m s^3 + C_5 C_L L_L R_5 s^3 + C_5 C_L R_1 R_5 s^2 + 2C_5 L_5 R_1 g_m s^2 + C_5 L_5 R_5 s^2 + C_5 R_5 s - R_5 g_m}$$

**10.79 INVALID-ORDER-79**  $Z(s) = \left( R_1, \infty, \infty, \infty, \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{L_L s}{C_L L_L s^2 + 1} \right)$

$$H(s) = \frac{L_L R_1 s (C_5 L_5 R_5 g_m s^2 - C_5 L_5 s^2 - C_5 R_5 s + R_5 g_m - C_5 C_L L_5 L_L R_1 R_5 g_m s^4 + C_5 C_L L_5 L_L R_1 s^4 + C_5 C_L L_5 L_L R_5 s^4 + C_5 C_L L_L R_1 R_5 s^3 + 2 C_5 L_5 L_L R_1 g_m s^3 + C_5 L_5 L_L s^3 + C_5 L_5 R_1 R_5 g_m s^2 + C_5 L_5 R_1 s^2 + C_5 L_5 R_5 s^2 + 2 C_5 L_L R_1 L_5 g_m s - C_5 L_L R_1 s^2 - C_5 L_L R_5 s + R_5 g_m - R_5 s^2)}{C_5 C_L L_5 L_L R_1 R_5 g_m s^4 + C_5 C_L L_5 L_L R_1 s^4 + C_5 C_L L_5 L_L R_5 s^4 + C_5 C_L L_L R_1 R_5 s^3 + 2 C_5 L_5 L_L R_1 g_m s^3 + C_5 L_5 L_L s^3 + C_5 L_5 R_1 R_5 g_m s^2 + C_5 L_5 R_1 s^2 + C_5 L_5 R_5 s^2 + 2 C_5 L_L R_1 L_5 g_m s - C_5 L_L R_1 s^2 - C_5 L_L R_5 s + R_5 g_m - R_5 s^2}$$

**10.80 INVALID-ORDER-80**  $Z(s) = \left( R_1, \infty, \infty, \infty, \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, L_L s + R_L + \frac{1}{C_L s} \right)$

$$H(s) = -\frac{R_1 (C_L L_L s^2 + C_L L_L R_1 g_m s + C_L L_L R_1^2)}{2C_5 C_L L_5 L_L R_1 g_m s^4 + C_5 C_L L_5 L_L s^4 + C_5 C_L L_5 R_1 R_5 g_m s^3 + 2C_5 C_L L_5 R_1 R_L g_m s^3 + C_5 C_L L_5 R_1 s^3 + C_5 C_L L_5 R_5 s^3 + C_5 C_L L_5 R_L s^3 + 2C_5 C_L L_L R_1 R_5 g_m s^3 + C_5 C_L L_L R_5 s^3 + C_5 C_L L_L R_L s^3 + C_5 C_L L_L R_1^2 s^2 + C_5 C_L L_L R_1 R_5 s^2 + C_5 C_L L_L R_1 R_L s^2 + C_5 C_L L_L R_5 R_L s^2 + C_5 C_L L_L R_1^2 R_L s + C_5 C_L L_L R_1 R_5 R_L s + C_5 C_L L_L R_1 R_L^2 s + C_5 C_L L_L R_5 R_L^2 s + C_5 C_L L_L R_1^2 R_L^2 + C_5 C_L L_L R_1 R_5 R_L^2 + C_5 C_L L_L R_1 R_L^3 + C_5 C_L L_L R_5 R_L^3 + C_5 C_L L_L R_L^4}$$

**10.81 INVALID-ORDER-81**  $Z(s) = \left( R_1, \infty, \infty, \infty, \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$

$$H(s) = \frac{C_5 C_L L_5 L_L R_1 R_5 R_L g_m s^4 + C_5 C_L L_5 L_L R_1 R_L s^4 + C_5 C_L L_5 L_L R_5 R_L s^4 + C_5 C_L L_L R_1 R_5 R_L s^3 + C_5 L_5 L_L R_1 R_5 g_m s^3 + 2 C_5 L_5 L_L R_1 R_L g_m s^3 + C_5 L_5 L_L R_1 s^3 + C_5 L_5 L_L R_5 s^3 +$$

$$10.82 \quad \text{INVALID-ORDER-82} \quad Z(s) = \left( R_1, \infty, \infty, \infty, \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$$

$$H(s) = - \frac{C_5 C_L L_5 L_L R_1 R_5 g_m s^4 + 2 C_5 C_L L_5 L_L R_1 R_L g_m s^4 + C_5 C_L L_5 L_L R_1 s^4 + C_5 C_L L_5 L_L R_5 s^4 + C_5 C_L L_5 L_L R_L s^4 + 2 C_5 C_L L_L R_1 R_5 R_L g_m s^3 + C_5 C_L L_L R_1 R_5 s^3 + C_5 C_L L_L R_5 R_L s^3}{C_5 C_L L_5 L_L R_1 R_5 g_m s^4 + 2 C_5 C_L L_5 L_L R_1 R_L g_m s^4 + C_5 C_L L_5 L_L R_1 s^4 + C_5 C_L L_5 L_L R_5 s^4 + C_5 C_L L_5 L_L R_L s^4 + 2 C_5 C_L L_L R_1 R_5 R_L g_m s^3 + C_5 C_L L_L R_1 R_5 s^3 + C_5 C_L L_L R_5 R_L s^3}$$

$$10.83 \quad \text{INVALID-ORDER-83} \quad Z(s) = \left( R_1, \infty, \infty, \infty, \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$$

$$H(s) = - \frac{C_5 C_L L_5 L_L R_1 R_5 g_m s^4 + 2 C_5 C_L L_5 L_L R_1 R_L g_m s^4 + C_5 C_L L_5 L_L R_1 s^4 + C_5 C_L L_5 L_L R_5 s^4 + C_5 C_L L_5 L_L R_L s^4 + C_5 C_L L_5 R_1 R_5 R_L g_m s^3 + C_5 C_L L_5 R_1 R_L s^3 + C_5 C_L L_5 R_5 R_L s^3}{C_5 C_L L_5 L_L R_1 R_5 g_m s^4 + 2 C_5 C_L L_5 L_L R_1 R_L g_m s^4 + C_5 C_L L_5 L_L R_1 s^4 + C_5 C_L L_5 L_L R_5 s^4 + C_5 C_L L_5 L_L R_L s^4 + C_5 C_L L_5 R_1 R_5 R_L g_m s^3 + C_5 C_L L_5 R_1 R_L s^3 + C_5 C_L L_5 R_5 R_L s^3}$$

$$10.84 \quad \text{INVALID-ORDER-84} \quad Z(s) = (L_1 s, \infty, \infty, \infty, R_5, R_L)$$

$$H(s) = \frac{L_1 R_L s (R_5 g_m - 1)}{L_1 R_5 g_m s + 2 L_1 R_L g_m s + L_1 s + R_5 + R_L}$$

$$10.85 \quad \text{INVALID-ORDER-85} \quad Z(s) = \left( L_1 s, \infty, \infty, \infty, R_5, L_L s + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_1 s (R_5 g_m - 1) (C_L L_L s^2 + 1)}{2 C_L L_1 L_L g_m s^3 + C_L L_1 R_5 g_m s^2 + C_L L_1 s^2 + C_L L_L s^2 + C_L R_5 s + 2 L_1 g_m s + 1}$$

$$10.86 \quad \text{INVALID-ORDER-86} \quad Z(s) = \left( L_1 s, \infty, \infty, \infty, R_5, \frac{L_L s}{C_L L_L s^2 + 1} \right)$$

$$H(s) = \frac{L_1 L_L s^2 (R_5 g_m - 1)}{C_L L_1 L_L R_5 g_m s^3 + C_L L_1 L_L s^3 + C_L L_L R_5 s^2 + 2 L_1 L_L g_m s^2 + L_1 R_5 g_m s + L_1 s + L_L s + R_5}$$



**10.87 INVALID-ORDER-87**  $Z(s) = \left( L_1 s, \infty, \infty, \infty, R_5, L_L s + R_L + \frac{1}{C_L s} \right)$

$$H(s) = \frac{L_1 s (R_5 g_m - 1) (C_L L_L s^2 + C_L R_L s + 1)}{2C_L L_1 L_L g_m s^3 + C_L L_1 R_5 g_m s^2 + 2C_L L_1 R_L g_m s^2 + C_L L_1 s^2 + C_L L_L s^2 + C_L R_5 s + C_L R_L s + 2L_1 g_m s + 1}$$

**10.88 INVALID-ORDER-88**  $Z(s) = \left( L_1 s, \infty, \infty, \infty, R_5, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$

$$H(s) = \frac{L_1 L_L R_L s^2 (R_5 g_m - 1)}{C_L L_1 L_L R_5 R_L g_m s^3 + C_L L_1 L_L R_L s^3 + C_L L_L R_5 R_L s^2 + L_1 L_L R_5 g_m s^2 + 2L_1 L_L R_L g_m s^2 + L_1 L_L s^2 + L_1 R_5 R_L g_m s + L_1 R_L s + L_L R_5 s + L_L R_L s + R_5 R_L}$$

**10.89 INVALID-ORDER-89**  $Z(s) = \left( L_1 s, \infty, \infty, \infty, R_5, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$

$$H(s) = \frac{L_1 s (R_5 g_m - 1) (C_L L_L R_L s^2 + L_L s + R_L)}{C_L L_1 L_L R_5 g_m s^3 + 2C_L L_1 L_L R_L g_m s^3 + C_L L_1 L_L s^3 + C_L L_L R_5 s^2 + C_L L_L R_L s^2 + 2L_1 L_L g_m s^2 + L_1 R_5 g_m s + 2L_1 R_L g_m s + L_1 s + L_L s + R_5 + R_L}$$

**10.90 INVALID-ORDER-90**  $Z(s) = \left( L_1 s, \infty, \infty, \infty, R_5, \frac{R_L (L_L s + \frac{1}{C_L s})}{L_L s + R_L + \frac{1}{C_L s}} \right)$

$$H(s) = \frac{L_1 R_L s (R_5 g_m - 1) (C_L L_L s^2 + 1)}{C_L L_1 L_L R_5 g_m s^3 + 2C_L L_1 L_L R_L g_m s^3 + C_L L_1 L_L s^3 + C_L L_1 R_5 R_L g_m s^2 + C_L L_1 R_L s^2 + C_L L_L R_5 s^2 + C_L L_L R_L s^2 + C_L R_5 R_L s + L_1 R_5 g_m s + 2L_1 R_L g_m s + L_1 s + R_5 + R_L}$$

**10.91 INVALID-ORDER-91**  $Z(s) = \left( L_1 s, \infty, \infty, \infty, \frac{1}{C_5 s}, \frac{R_L}{C_L R_L s + 1} \right)$

$$H(s) = \frac{L_1 R_L s (-C_5 s + g_m)}{C_5 C_L L_1 R_L s^3 + 2C_5 L_1 R_L g_m s^2 + C_5 L_1 s^2 + C_5 R_L s + C_L L_1 R_L g_m s^2 + C_L R_L s + L_1 g_m s + 1}$$

**10.92 INVALID-ORDER-92**  $Z(s) = \left( L_1 s, \infty, \infty, \infty, \frac{1}{C_5 s}, L_L s + \frac{1}{C_L s} \right)$

$$H(s) = -\frac{L_1 (C_5 s - g_m) (C_L L_L s^2 + 1)}{2C_5 C_L L_1 L_L g_m s^3 + C_5 C_L L_1 s^2 + C_5 C_L L_L s^2 + 2C_5 L_1 g_m s + C_5 + C_L L_1 g_m s + C_L}$$

**10.93 INVALID-ORDER-93**  $Z(s) = \left( L_1 s, \infty, \infty, \infty, \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} \right)$

$$H(s) = \frac{L_1 L_L s^2 (-C_5 s + g_m)}{C_5 C_L L_1 L_L s^4 + 2C_5 L_1 L_L g_m s^3 + C_5 L_1 s^2 + C_5 L_L s^2 + C_L L_1 L_L g_m s^3 + C_L L_L s^2 + L_1 g_m s + 1}$$

**10.94 INVALID-ORDER-94**  $Z(s) = \left( L_1 s, \infty, \infty, \infty, \frac{1}{C_5 s}, L_L s + R_L + \frac{1}{C_L s} \right)$

$$H(s) = -\frac{L_1 (C_5 s - g_m) (C_L L_L s^2 + C_L R_L s + 1)}{2C_5 C_L L_1 L_L g_m s^3 + 2C_5 C_L L_1 R_L g_m s^2 + C_5 C_L L_1 s^2 + C_5 C_L L_L s^2 + C_5 C_L R_L s + 2C_5 L_1 g_m s + C_5 + C_L L_1 g_m s + C_L}$$

**10.95 INVALID-ORDER-95**  $Z(s) = \left( L_1 s, \infty, \infty, \infty, \frac{1}{C_5 s}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$

$$H(s) = \frac{L_1 L_L R_L s^2 (-C_5 s + g_m)}{C_5 C_L L_1 L_L R_L s^4 + 2C_5 L_1 L_L R_L g_m s^3 + C_5 L_1 L_L s^3 + C_5 L_1 R_L s^2 + C_5 L_L R_L s^2 + C_L L_1 L_L R_L g_m s^3 + C_L L_L R_L s^2 + L_1 L_L g_m s^2 + L_1 R_L g_m s + L_L s + R_L}$$

**10.96 INVALID-ORDER-96**  $Z(s) = \left( L_1 s, \infty, \infty, \infty, \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$

$$H(s) = -\frac{L_1 s (C_5 s - g_m) (C_L L_L R_L s^2 + L_L s + R_L)}{2C_5 C_L L_1 L_L R_L g_m s^4 + C_5 C_L L_1 L_L s^4 + C_5 C_L L_L R_L s^3 + 2C_5 L_1 L_L g_m s^3 + 2C_5 L_1 R_L g_m s^2 + C_5 L_1 s^2 + C_5 L_L s^2 + C_5 R_L s + C_L L_1 L_L g_m s^3 + C_L L_L s^2 + L_1 g_m s + 1}$$

$$10.97 \quad \text{INVALID-ORDER-97} \quad Z(s) = \left( L_1 s, \infty, \infty, \infty, \frac{1}{C_5 s}, \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$$

$$H(s) = -\frac{L_1 R_L s (C_5 s - g_m) (C_L L_L s^2 + 1)}{2C_5 C_L L_1 L_L R_L g_m s^4 + C_5 C_L L_1 L_L s^4 + C_5 C_L L_1 R_L s^3 + C_5 C_L L_L R_L s^3 + 2C_5 L_1 R_L g_m s^2 + C_5 L_1 s^2 + C_5 R_L s + C_L L_1 L_L g_m s^3 + C_L L_1 R_L g_m s^2 + C_L L_L s^2 + C_L R_L s + L_1 g_m}$$

$$10.98 \quad \text{INVALID-ORDER-98} \quad Z(s) = \left( L_1 s, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_1 s (-C_5 R_5 s + R_5 g_m - 1)}{C_5 C_L L_1 R_5 s^3 + 2C_5 L_1 R_5 g_m s^2 + C_5 R_5 s + C_L L_1 R_5 g_m s^2 + C_L L_1 s^2 + C_L R_5 s + 2L_1 g_m s + 1}$$

$$10.99 \quad \text{INVALID-ORDER-99} \quad Z(s) = \left( L_1 s, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, \frac{R_L}{C_L R_L s + 1} \right)$$

$$H(s) = \frac{L_1 R_L s (-C_5 R_5 s + R_5 g_m - 1)}{C_5 C_L L_1 R_5 R_L s^3 + 2C_5 L_1 R_5 R_L g_m s^2 + C_5 L_1 R_5 s^2 + C_5 R_5 R_L s + C_L L_1 R_5 R_L g_m s^2 + C_L L_1 R_L s^2 + C_L R_5 R_L s + L_1 R_5 g_m s + 2L_1 R_L g_m s + L_1 s + R_5 + R_L}$$

$$10.100 \quad \text{INVALID-ORDER-100} \quad Z(s) = \left( L_1 s, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, R_L + \frac{1}{C_L s} \right)$$

$$H(s) = -\frac{L_1 s (C_L R_L s + 1) (C_5 R_5 s - R_5 g_m + 1)}{2C_5 C_L L_1 R_5 R_L g_m s^3 + C_5 C_L L_1 R_5 s^3 + C_5 C_L R_5 R_L s^2 + 2C_5 L_1 R_5 g_m s^2 + C_5 R_5 s + C_L L_1 R_5 g_m s^2 + 2C_L L_1 R_L g_m s^2 + C_L L_1 s^2 + C_L R_5 s + C_L R_L s + 2L_1 g_m s + 1}$$

$$10.101 \quad \text{INVALID-ORDER-101} \quad Z(s) = \left( L_1 s, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, L_L s + \frac{1}{C_L s} \right)$$

$$H(s) = -\frac{L_1 s (C_L L_L s^2 + 1) (C_5 R_5 s - R_5 g_m + 1)}{2C_5 C_L L_1 L_L R_5 g_m s^4 + C_5 C_L L_1 R_5 s^3 + C_5 C_L L_L R_5 s^3 + 2C_5 L_1 R_5 g_m s^2 + C_5 R_5 s + 2C_L L_1 L_L g_m s^3 + C_L L_1 R_5 g_m s^2 + C_L L_1 s^2 + C_L L_L s^2 + C_L R_5 s + 2L_1 g_m s + 1}$$

$$10.102 \quad \text{INVALID-ORDER-102} \quad Z(s) = \left( L_1 s, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, \frac{L_L s}{C_L L_L s^2 + 1} \right)$$

$$H(s) = \frac{L_1 L_L s^2 (-C_5 R_5 s + R_5 g_m - 1)}{C_5 C_L L_1 L_L R_5 s^4 + 2C_5 L_1 L_L R_5 g_m s^3 + C_5 L_1 R_5 s^2 + C_5 L_L R_5 s^2 + C_L L_1 L_L R_5 g_m s^3 + C_L L_1 L_L s^3 + C_L L_L R_5 s^2 + 2L_1 L_L g_m s^2 + L_1 R_5 g_m s + L_1 s + L_L s + R_5}$$

$$10.103 \quad \text{INVALID-ORDER-103} \quad Z(s) = \left( L_1 s, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, L_L s + R_L + \frac{1}{C_L s} \right)$$

$$H(s) = -\frac{L_1 s (C_5 R_5 s - R_5 g_m + 1) (C_L L_L s^2 + C_L R_L s + 1)}{2C_5 C_L L_1 L_L R_5 g_m s^4 + 2C_5 C_L L_1 R_5 R_L g_m s^3 + C_5 C_L L_1 R_5 s^3 + C_5 C_L L_L R_5 s^3 + C_5 C_L R_5 R_L s^2 + 2C_5 L_1 R_5 g_m s^2 + C_5 R_5 s + 2C_L L_1 L_L g_m s^3 + C_L L_1 R_5 g_m s^2 + 2C_L L_1 R_L g_m s + C_L R_L s + 1}$$

$$10.104 \quad \text{INVALID-ORDER-104} \quad Z(s) = \left( L_1 s, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$$

$$H(s) = \frac{L_1 L_L R_L s^2 (-C_5 R_5 s + R_5 g_m - 1)}{C_5 C_L L_1 L_L R_5 R_L s^4 + 2C_5 L_1 L_L R_5 R_L g_m s^3 + C_5 L_1 L_L R_5 s^3 + C_5 L_1 R_5 R_L s^2 + C_5 L_L R_5 R_L s^2 + C_L L_1 L_L R_5 R_L g_m s^3 + C_L L_1 L_L R_L s^3 + C_L L_L R_5 R_L s^2 + L_1 L_L R_5 g_m s^2 + 2L_1 L_L R_L g_m s + C_L R_L s + 1}$$

$$10.105 \quad \text{INVALID-ORDER-105} \quad Z(s) = \left( L_1 s, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$$

$$H(s) = -\frac{L_1 s (C_5 R_5 s - R_5 g_m + 1) (C_L L_L R_L s^2 + L_L s + R_L)}{2C_5 C_L L_1 L_L R_5 R_L g_m s^4 + C_5 C_L L_1 L_L R_5 s^4 + C_5 C_L L_L R_5 R_L s^3 + 2C_5 L_1 L_L R_5 g_m s^3 + 2C_5 L_1 R_5 R_L g_m s^2 + C_5 L_1 R_5 s^2 + C_5 L_L R_5 s^2 + C_5 R_5 R_L s + C_L L_1 L_L R_5 g_m s^3 + 2C_L L_1 L_L R_L g_m s^3 + C_L L_L R_5 R_L s^2 + L_L s + R_L}$$

$$10.106 \quad \text{INVALID-ORDER-106} \quad Z(s) = \left( L_1 s, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, \frac{R_L (L_L s + \frac{1}{C_L s})}{L_L s + R_L + \frac{1}{C_L s}} \right)$$

$$H(s) = -\frac{L_1 R_L s (C_L L_L s^2 + 1) (C_5 R_5 s - R_5 g_m + 1)}{2C_5 C_L L_1 L_L R_5 R_L g_m s^4 + C_5 C_L L_1 L_L R_5 s^4 + C_5 C_L L_1 R_5 R_L s^3 + C_5 C_L L_L R_5 R_L s^3 + 2C_5 L_1 R_5 R_L g_m s^2 + C_5 L_1 R_5 s^2 + C_5 R_5 R_L s + C_L L_1 L_L R_5 g_m s^3 + 2C_L L_1 L_L R_L g_m s^3 + C_L L_L R_5 R_L s^2 + L_L s + R_L}$$

$$10.107 \quad \text{INVALID-ORDER-107} \quad Z(s) = \left( L_1 s, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, \frac{R_L}{C_L R_L s + 1} \right)$$

$$H(s) = \frac{L_1 R_L s (C_5 R_5 g_m s - C_5 s + g_m)}{C_5 C_L L_1 R_5 R_L g_m s^3 + C_5 C_L L_1 R_L s^3 + C_5 C_L R_5 R_L s^2 + C_5 L_1 R_5 g_m s^2 + 2C_5 L_1 R_L g_m s^2 + C_5 L_1 s^2 + C_5 R_5 s + C_5 R_L s + C_L L_1 R_L g_m s^2 + C_L R_L s + L_1 g_m s + 1}$$

**10.108 INVALID-ORDER-108**  $Z(s) = \left( L_1 s, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, L_L s + \frac{1}{C_L s} \right)$

$$H(s) = \frac{L_1 (C_L L_L s^2 + 1) (C_5 R_5 g_m s - C_5 s + g_m)}{2C_5 C_L L_1 L_L g_m s^3 + C_5 C_L L_1 R_5 g_m s^2 + C_5 C_L L_1 s^2 + C_5 C_L L_L s^2 + C_5 C_L R_5 s + 2C_5 L_1 g_m s + C_5 + C_L L_1 g_m s + C_L}$$

**10.109 INVALID-ORDER-109**  $Z(s) = \left( L_1 s, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} \right)$

$$H(s) = \frac{L_1 L_L s^2 (C_5 R_5 g_m s - C_5 s + g_m)}{C_5 C_L L_1 L_L R_5 g_m s^4 + C_5 C_L L_1 L_L s^4 + C_5 C_L L_L R_5 s^3 + 2C_5 L_1 L_L g_m s^3 + C_5 L_1 R_5 g_m s^2 + C_5 L_1 s^2 + C_5 L_L s^2 + C_5 R_5 s + C_L L_1 L_L g_m s^3 + C_L L_L s^2 + L_1 g_m s + 1}$$

**10.110 INVALID-ORDER-110**  $Z(s) = \left( L_1 s, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, L_L s + R_L + \frac{1}{C_L s} \right)$

$$H(s) = \frac{L_1 (C_L L_L s^2 + C_L R_L s + 1) (C_5 R_5 g_m s - C_5 s + g_m)}{2C_5 C_L L_1 L_L g_m s^3 + C_5 C_L L_1 R_5 g_m s^2 + 2C_5 C_L L_1 R_L g_m s^2 + C_5 C_L L_1 s^2 + C_5 C_L L_L s^2 + C_5 C_L R_5 s + C_5 C_L R_L s + 2C_5 L_1 g_m s + C_5 + C_L L_1 g_m s + C_L}$$

**10.111 INVALID-ORDER-111**  $Z(s) = \left( L_1 s, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$

$$H(s) = \frac{L_1 L_L R_L s^2 (C_5 R_5 g_m s - C_5 s + g_m)}{C_5 C_L L_1 L_L R_5 R_L g_m s^4 + C_5 C_L L_1 L_L R_L s^4 + C_5 C_L L_L R_5 R_L s^3 + C_5 L_1 L_L R_5 g_m s^3 + 2C_5 L_1 L_L R_L g_m s^3 + C_5 L_1 L_L s^3 + C_5 L_1 R_5 R_L g_m s^2 + C_5 L_1 R_L s^2 + C_5 L_L R_5 s^2 + C_5 L_L R_L s^2 + C_5 R_5 s + C_L L_1 R_L g_m s^3 + C_L R_L s^2 + L_1 R_L g_m s + 1}$$

**10.112 INVALID-ORDER-112**  $Z(s) = \left( L_1 s, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$

$$H(s) = \frac{L_1 s (C_5 R_5 g_m s - C_5 s + g_m) (C_L L_L R_L s^2 + L_L s + R_L)}{C_5 C_L L_1 L_L R_5 g_m s^4 + 2C_5 C_L L_1 L_L R_L g_m s^4 + C_5 C_L L_1 L_L s^4 + C_5 C_L L_L R_5 s^3 + C_5 C_L L_L R_L s^3 + 2C_5 L_1 L_L g_m s^3 + C_5 L_1 R_5 g_m s^2 + 2C_5 L_1 R_L g_m s^2 + C_5 L_1 s^2 + C_5 L_L s^2 + C_5 R_5 s + C_L L_1 R_L g_m s^3 + C_L R_L s^2 + L_1 R_L g_m s + 1}$$

$$10.113 \quad \text{INVALID-ORDER-113} \quad Z(s) = \left( L_1 s, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$$

$$H(s) = \frac{L_1 R_L s (C_L L_L s^2 + 1) (C_5 R_5 g_m s - C_5 s + g_m)}{C_5 C_L L_1 L_L R_5 g_m s^4 + 2 C_5 C_L L_1 L_L R_L g_m s^4 + C_5 C_L L_1 L_L s^4 + C_5 C_L L_1 R_5 R_L g_m s^3 + C_5 C_L L_1 R_L s^3 + C_5 C_L L_L R_5 s^3 + C_5 C_L L_L R_L s^3 + C_5 C_L R_5 R_L s^2 + C_5 L_1 R_5 g_m s^2 + 2 C_5 L_1 R_5 s + C_5 L_1 R_L s + C_5 L_1 s + C_5 R_L s + L_1 g_m s + 1}$$

$$10.114 \quad \text{INVALID-ORDER-114} \quad Z(s) = \left( L_1 s, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, R_L \right)$$

$$H(s) = \frac{L_1 R_L s (C_5 L_5 g_m s^2 - C_5 s + g_m)}{C_5 L_1 L_5 g_m s^3 + 2 C_5 L_1 R_L g_m s^2 + C_5 L_1 s^2 + C_5 L_5 s^2 + C_5 R_L s + L_1 g_m s + 1}$$

$$10.115 \quad \text{INVALID-ORDER-115} \quad Z(s) = \left( L_1 s, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_1 (C_5 L_5 g_m s^2 - C_5 s + g_m)}{C_5 C_L L_1 L_5 g_m s^3 + C_5 C_L L_1 s^2 + C_5 C_L L_5 s^2 + 2 C_5 L_1 g_m s + C_5 + C_L L_1 g_m s + C_L}$$

$$10.116 \quad \text{INVALID-ORDER-116} \quad Z(s) = \left( L_1 s, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, \frac{R_L}{C_L R_L s + 1} \right)$$

$$H(s) = \frac{L_1 R_L s (C_5 L_5 g_m s^2 - C_5 s + g_m)}{C_5 C_L L_1 L_5 R_L g_m s^4 + C_5 C_L L_1 R_L s^3 + C_5 C_L L_5 R_L s^3 + C_5 L_1 L_5 g_m s^3 + 2 C_5 L_1 R_L g_m s^2 + C_5 L_1 s^2 + C_5 L_5 s^2 + C_5 R_L s + C_L L_1 R_L g_m s^2 + C_L R_L s + L_1 g_m s + 1}$$

$$10.117 \quad \text{INVALID-ORDER-117} \quad Z(s) = \left( L_1 s, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_1 (C_L R_L s + 1) (C_5 L_5 g_m s^2 - C_5 s + g_m)}{C_5 C_L L_1 L_5 g_m s^3 + 2 C_5 C_L L_1 R_L g_m s^2 + C_5 C_L L_1 s^2 + C_5 C_L L_5 s^2 + C_5 C_L R_L s + 2 C_5 L_1 g_m s + C_5 + C_L L_1 g_m s + C_L}$$

**10.118 INVALID-ORDER-118**  $Z(s) = \left( L_1 s, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, L_L s + \frac{1}{C_L s} \right)$

$$H(s) = \frac{L_1 (C_L L_L s^2 + 1) (C_5 L_5 g_m s^2 - C_5 s + g_m)}{C_5 C_L L_1 L_5 g_m s^3 + 2C_5 C_L L_1 L_L g_m s^3 + C_5 C_L L_1 s^2 + C_5 C_L L_5 s^2 + C_5 C_L L_L s^2 + 2C_5 L_1 g_m s + C_5 + C_L L_1 g_m s + C_L}$$

**10.119 INVALID-ORDER-119**  $Z(s) = \left( L_1 s, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} \right)$

$$H(s) = \frac{L_1 L_L s^2 (C_5 L_5 g_m s^2 - C_5 s + g_m)}{C_5 C_L L_1 L_5 L_L g_m s^5 + C_5 C_L L_1 L_L s^4 + C_5 C_L L_5 L_L s^4 + C_5 L_1 L_5 g_m s^3 + 2C_5 L_1 L_L g_m s^3 + C_5 L_1 s^2 + C_5 L_5 s^2 + C_5 L_L s^2 + C_L L_1 L_L g_m s^3 + C_L L_L s^2 + L_1 g_m s + 1}$$

**10.120 INVALID-ORDER-120**  $Z(s) = \left( L_1 s, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, L_L s + R_L + \frac{1}{C_L s} \right)$

$$H(s) = \frac{L_1 (C_L L_L s^2 + C_L R_L s + 1) (C_5 L_5 g_m s^2 - C_5 s + g_m)}{C_5 C_L L_1 L_5 g_m s^3 + 2C_5 C_L L_1 L_L g_m s^3 + 2C_5 C_L L_1 R_L g_m s^2 + C_5 C_L L_1 s^2 + C_5 C_L L_5 s^2 + C_5 C_L L_L s^2 + C_5 C_L R_L s + 2C_5 L_1 g_m s + C_5 + C_L L_1 g_m s + C_L}$$

**10.121 INVALID-ORDER-121**  $Z(s) = \left( L_1 s, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$

$$H(s) = \frac{L_1 L_L R_L s^2 (C_5 L_5 g_m s^2 - C_5 s + g_m)}{C_5 C_L L_1 L_5 L_L R_L g_m s^5 + C_5 C_L L_1 L_L R_L s^4 + C_5 C_L L_5 L_L R_L s^4 + C_5 L_1 L_5 L_L g_m s^4 + C_5 L_1 L_5 R_L g_m s^3 + 2C_5 L_1 L_L R_L g_m s^3 + C_5 L_1 L_L s^3 + C_5 L_1 R_L s^2 + C_5 L_5 L_L s^3 + C_5 L_5 R_L s}$$

**10.122 INVALID-ORDER-122**  $Z(s) = \left( L_1 s, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$

$$H(s) = \frac{L_1 s (C_5 L_5 g_m s^2 - C_5 s + g_m) (C_L L_L R_L s^2 + L_L s + R_L)}{C_5 C_L L_1 L_5 L_L g_m s^5 + 2C_5 C_L L_1 L_L R_L g_m s^4 + C_5 C_L L_1 L_L s^4 + C_5 C_L L_5 L_L s^4 + C_5 C_L L_L R_L s^3 + C_5 L_1 L_5 g_m s^3 + 2C_5 L_1 L_L g_m s^3 + 2C_5 L_1 R_L g_m s^2 + C_5 L_1 s^2 + C_5 L_5 s^2 + C_5 L_L s}$$

$$10.123 \quad \text{INVALID-ORDER-123} \quad Z(s) = \left( L_1 s, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$$

$$H(s) = \frac{L_1 R_L s (C_L L_L s^2 + 1) (C_5 L_5 g_m s^2 - C_5 s + g_m)}{C_5 C_L L_1 L_5 L_L g_m s^5 + C_5 C_L L_1 L_5 R_L g_m s^4 + 2 C_5 C_L L_1 L_L R_L g_m s^4 + C_5 C_L L_1 L_L s^4 + C_5 C_L L_1 R_L s^3 + C_5 C_L L_5 L_L s^4 + C_5 C_L L_5 R_L s^3 + C_5 C_L L_L R_L s^3 + C_5 L_1 L_5 g_m s^3 + 2 C_5 L_1 L_5 s^3 + C_5 L_1 L_5 R_L s^2 + C_5 L_1 L_L s^2 + C_5 L_1 R_L s + C_5 L_5 s + C_5 R_L}$$

$$10.124 \quad \text{INVALID-ORDER-124} \quad Z(s) = \left( L_1 s, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, R_L \right)$$

$$H(s) = \frac{L_1 R_L s (-C_5 L_5 s^2 + L_5 g_m s - 1)}{2 C_5 L_1 L_5 R_L g_m s^3 + C_5 L_1 L_5 s^3 + C_5 L_5 R_L s^2 + L_1 L_5 g_m s^2 + 2 L_1 R_L g_m s + L_1 s + L_5 s + R_L}$$

$$10.125 \quad \text{INVALID-ORDER-125} \quad Z(s) = \left( L_1 s, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_1 s (-C_5 L_5 s^2 + L_5 g_m s - 1)}{C_5 C_L L_1 L_5 s^4 + 2 C_5 L_1 L_5 g_m s^3 + C_5 L_5 s^2 + C_L L_1 L_5 g_m s^3 + C_L L_1 s^2 + C_L L_5 s^2 + 2 L_1 g_m s + 1}$$

$$10.126 \quad \text{INVALID-ORDER-126} \quad Z(s) = \left( L_1 s, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{R_L}{C_L R_L s + 1} \right)$$

$$H(s) = \frac{L_1 R_L s (-C_5 L_5 s^2 + L_5 g_m s - 1)}{C_5 C_L L_1 L_5 R_L s^4 + 2 C_5 L_1 L_5 R_L g_m s^3 + C_5 L_1 L_5 s^3 + C_5 L_5 R_L s^2 + C_L L_1 L_5 R_L g_m s^3 + C_L L_1 R_L s^2 + C_L L_5 R_L s^2 + L_1 L_5 g_m s^2 + 2 L_1 R_L g_m s + L_1 s + L_5 s + R_L}$$

$$10.127 \quad \text{INVALID-ORDER-127} \quad Z(s) = \left( L_1 s, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, R_L + \frac{1}{C_L s} \right)$$

$$H(s) = -\frac{L_1 s (C_L R_L s + 1) (C_5 L_5 s^2 - L_5 g_m s + 1)}{2 C_5 C_L L_1 L_5 R_L g_m s^4 + C_5 C_L L_1 L_5 s^4 + C_5 C_L L_5 R_L s^3 + 2 C_5 L_1 L_5 g_m s^3 + C_5 L_5 s^2 + C_L L_1 L_5 g_m s^3 + 2 C_L L_1 R_L g_m s^2 + C_L L_1 s^2 + C_L L_5 s^2 + C_L R_L s + 2 L_1 g_m s + 1}$$



$$10.128 \quad \text{INVALID-ORDER-128} \quad Z(s) = \left( L_1 s, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, L_L s + \frac{1}{C_L s} \right)$$

$$H(s) = -\frac{L_1 s (C_L L_L s^2 + 1) (C_5 L_5 s^2 - L_5 g_m s + 1)}{2C_5 C_L L_1 L_5 L_L g_m s^5 + C_5 C_L L_1 L_5 s^4 + C_5 C_L L_5 L_L s^4 + 2C_5 L_1 L_5 g_m s^3 + C_5 L_5 s^2 + C_L L_1 L_5 g_m s^3 + 2C_L L_1 L_L g_m s^3 + C_L L_1 s^2 + C_L L_5 s^2 + C_L L_L s^2 + 2L_1 g_m s + 1}$$

$$10.129 \quad \text{INVALID-ORDER-129} \quad Z(s) = \left( L_1 s, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{L_L s}{C_L L_L s^2 + 1} \right)$$

$$H(s) = \frac{L_1 L_L s (-C_5 L_5 s^2 + L_5 g_m s - 1)}{C_5 C_L L_1 L_5 L_L s^4 + 2C_5 L_1 L_5 L_L g_m s^3 + C_5 L_1 L_5 s^2 + C_5 L_5 L_L s^2 + C_L L_1 L_5 L_L g_m s^3 + C_L L_1 L_L s^2 + C_L L_5 L_L s^2 + L_1 L_5 g_m s + 2L_1 L_L g_m s + L_1 + L_5 + L_L}$$

$$10.130 \quad \text{INVALID-ORDER-130} \quad Z(s) = \left( L_1 s, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, L_L s + R_L + \frac{1}{C_L s} \right)$$

$$H(s) = -\frac{L_1 s (C_5 L_5 s^2 - L_5 g_m s + 1) (C_L L_L s^2 + C_L R_L s + 1)}{2C_5 C_L L_1 L_5 L_L g_m s^5 + 2C_5 C_L L_1 L_5 R_L g_m s^4 + C_5 C_L L_1 L_5 s^4 + C_5 C_L L_5 L_L s^4 + C_5 C_L L_5 R_L s^3 + 2C_5 L_1 L_5 g_m s^3 + C_5 L_5 s^2 + C_L L_1 L_5 g_m s^3 + 2C_L L_1 L_L g_m s^3 + 2C_L L_1 R_L g_m s^3 + C_L L_1 s^2 + C_L L_5 s^2 + C_L R_L s^2 + L_1 L_5 g_m s + 2L_1 L_L g_m s + L_1 + R_L + \frac{1}{C_L s}}$$

$$10.131 \quad \text{INVALID-ORDER-131} \quad Z(s) = \left( L_1 s, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$$

$$H(s) = \frac{L_1 L_L R_L s (-C_5 L_5 s^2 + L_5 g_m s - 1)}{C_5 C_L L_1 L_5 L_L R_L s^4 + 2C_5 L_1 L_5 L_L R_L g_m s^3 + C_5 L_1 L_5 L_L s^3 + C_5 L_1 L_5 R_L s^2 + C_5 L_5 L_L R_L s^2 + C_L L_1 L_5 L_L R_L g_m s^3 + C_L L_1 L_L R_L s^2 + C_L L_5 L_L R_L s^2 + L_1 L_5 L_L g_m s^2 + L_1 L_5 R_L s^2 + L_1 L_L g_m s + L_1 + R_L + \frac{1}{L_L s}}$$

$$10.132 \quad \text{INVALID-ORDER-132} \quad Z(s) = \left( L_1 s, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$$

$$H(s) = -\frac{L_1 s (C_5 L_5 s^2 - L_5 g_m s + 1) (C_L L_L R_L s^2 + L_L s + R_L)}{2C_5 C_L L_1 L_5 L_L R_L g_m s^5 + C_5 C_L L_1 L_5 L_L s^5 + C_5 C_L L_5 L_L R_L s^4 + 2C_5 L_1 L_5 L_L g_m s^4 + 2C_5 L_1 L_5 R_L g_m s^3 + C_5 L_1 L_5 s^3 + C_5 L_5 L_L s^3 + C_5 L_5 R_L s^2 + C_L L_1 L_5 L_L g_m s^4 + 2C_L L_1 L_L R_L g_m s^3 + C_L L_1 L_L s^2 + C_L L_5 L_L s^2 + L_1 L_5 L_L g_m s + L_1 L_5 R_L s + L_1 + R_L + \frac{1}{L_L s}}$$

$$10.133 \quad \text{INVALID-ORDER-133} \quad Z(s) = \left( L_1 s, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$$

$$H(s) = - \frac{L_1 R_L s (C_L L_L s^2 + 1) (C_5 L_5 s^2 - L_5 g_m s - 1)}{2 C_5 C_L L_1 L_5 L_L R_L g_m s^5 + C_5 C_L L_1 L_5 L_L s^5 + C_5 C_L L_1 L_5 R_L s^4 + C_5 C_L L_5 L_L R_L s^4 + 2 C_5 L_1 L_5 R_L g_m s^3 + C_5 L_1 L_5 s^3 + C_5 L_5 R_L s^2 + C_L L_1 L_5 L_L g_m s^4 + C_L L_1 L_5 R_L g_m s^3 + 2 C_L L_1 L_5 s^3 + C_L L_1 R_L s^2 + C_L L_1 s^2 + C_L R_L s + L_1 g_m s + 1}$$

$$10.134 \quad \text{INVALID-ORDER-134} \quad Z(s) = \left( L_1 s, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, R_L \right)$$

$$H(s) = \frac{L_1 R_L s (C_5 L_5 g_m s^2 + C_5 R_5 g_m s - C_5 s + g_m)}{C_5 L_1 L_5 g_m s^3 + C_5 L_1 R_5 g_m s^2 + 2 C_5 L_1 R_L g_m s^2 + C_5 L_1 s^2 + C_5 L_5 s^2 + C_5 R_5 s + C_5 R_L s + L_1 g_m s + 1}$$

$$10.135 \quad \text{INVALID-ORDER-135} \quad Z(s) = \left( L_1 s, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_1 (C_5 L_5 g_m s^2 + C_5 R_5 g_m s - C_5 s + g_m)}{C_5 C_L L_1 L_5 g_m s^3 + C_5 C_L L_1 R_5 g_m s^2 + C_5 C_L L_1 s^2 + C_5 C_L L_5 s^2 + C_5 C_L R_5 s + 2 C_5 L_1 g_m s + C_5 + C_L L_1 g_m s + C_L}$$

$$10.136 \quad \text{INVALID-ORDER-136} \quad Z(s) = \left( L_1 s, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{R_L}{C_L R_L s + 1} \right)$$

$$H(s) = \frac{L_1 R_L s (C_5 L_5 g_m s^2 + C_5 R_5 g_m s - C_5 s + g_m)}{C_5 C_L L_1 L_5 R_L g_m s^4 + C_5 C_L L_1 R_5 R_L g_m s^3 + C_5 C_L L_1 R_L s^3 + C_5 C_L L_5 R_L s^3 + C_5 C_L R_5 R_L s^2 + C_5 L_1 L_5 g_m s^3 + C_5 L_1 R_5 g_m s^2 + 2 C_5 L_1 R_L g_m s^2 + C_5 L_1 s^2 + C_5 L_5 s^2 + C_5 R_5 s + C_5 R_L s + L_1 g_m s + 1}$$

$$10.137 \quad \text{INVALID-ORDER-137} \quad Z(s) = \left( L_1 s, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_1 (C_L R_L s + 1) (C_5 L_5 g_m s^2 + C_5 R_5 g_m s - C_5 s + g_m)}{C_5 C_L L_1 L_5 g_m s^3 + C_5 C_L L_1 R_5 g_m s^2 + 2 C_5 C_L L_1 R_L g_m s^2 + C_5 C_L L_1 s^2 + C_5 C_L L_5 s^2 + C_5 C_L R_5 s + C_5 C_L R_L s + 2 C_5 L_1 g_m s + C_5 + C_L L_1 g_m s + C_L}$$

**10.138 INVALID-ORDER-138**  $Z(s) = \left( L_1 s, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, L_L s + \frac{1}{C_L s} \right)$

$$H(s) = \frac{L_1 (C_L L_L s^2 + 1) (C_5 L_5 g_m s^2 + C_5 R_5 g_m s - C_5 s + g_m)}{C_5 C_L L_1 L_5 g_m s^3 + 2C_5 C_L L_1 L_L g_m s^3 + C_5 C_L L_1 R_5 g_m s^2 + C_5 C_L L_1 s^2 + C_5 C_L L_5 s^2 + C_5 C_L L_L s^2 + C_5 C_L R_5 s + 2C_5 L_1 g_m s + C_5 + C_L L_1 g_m s + C_L}$$

**10.139 INVALID-ORDER-139**  $Z(s) = \left( L_1 s, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} \right)$

$$H(s) = \frac{L_1 L_L s^2 (C_5 L_5 g_m s^2 + C_5 R_5 g_m s - C_5 s + g_m)}{C_5 C_L L_1 L_5 L_L g_m s^5 + C_5 C_L L_1 L_L R_5 g_m s^4 + C_5 C_L L_1 L_L s^4 + C_5 C_L L_5 L_L s^4 + C_5 C_L L_L R_5 s^3 + C_5 L_1 L_5 g_m s^3 + 2C_5 L_1 L_L g_m s^3 + C_5 L_1 R_5 g_m s^2 + C_5 L_1 s^2 + C_5 L_5 s^2 + C_5 L_L s^2}$$

**10.140 INVALID-ORDER-140**  $Z(s) = \left( L_1 s, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, L_L s + R_L + \frac{1}{C_L s} \right)$

$$H(s) = \frac{L_1 (C_L L_L s^2 + C_L R_L s + 1) (C_5 L_5 g_m s^2 + C_5 R_5 g_m s - C_5 s + g_m)}{C_5 C_L L_1 L_5 g_m s^3 + 2C_5 C_L L_1 L_L g_m s^3 + C_5 C_L L_1 R_5 g_m s^2 + 2C_5 C_L L_1 R_L g_m s^2 + C_5 C_L L_1 s^2 + C_5 C_L L_5 s^2 + C_5 C_L L_L s^2 + C_5 C_L R_5 s + C_5 C_L R_L s + 2C_5 L_1 g_m s + C_5 + C_L L_1 g_m s}$$

**10.141 INVALID-ORDER-141**  $Z(s) = \left( L_1 s, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$

$$H(s) = \frac{L_1 L_L R_L s^2}{C_5 C_L L_1 L_5 L_L R_L g_m s^5 + C_5 C_L L_1 L_L R_5 R_L g_m s^4 + C_5 C_L L_1 L_L R_L s^4 + C_5 C_L L_5 L_L R_L s^4 + C_5 C_L L_L R_5 R_L s^3 + C_5 L_1 L_5 L_L g_m s^4 + C_5 L_1 L_5 R_L g_m s^3 + C_5 L_1 L_L R_5 g_m s^3 + 2C_5 L_1 R_L g_m s^2 + C_5 L_1 R_5 g_m s^2 + C_5 L_1 s^2 + C_5 L_5 s^2 + C_5 L_L s^2}$$

**10.142 INVALID-ORDER-142**  $Z(s) = \left( L_1 s, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$

$$H(s) = \frac{L_1 s (C_L L_L R_L s^2 + L_L s + R_L) (C_5 L_5 g_m s^2 + C_5 R_5 g_m s - C_5 s + g_m)}{C_5 C_L L_1 L_5 L_L g_m s^5 + C_5 C_L L_1 L_L R_5 g_m s^4 + 2C_5 C_L L_1 L_L R_L g_m s^4 + C_5 C_L L_1 L_L s^4 + C_5 C_L L_5 L_L s^4 + C_5 C_L L_L R_5 s^3 + C_5 C_L L_L R_L s^3 + C_5 L_1 L_5 g_m s^3 + 2C_5 L_1 L_L g_m s^3 + C_5 L_1 R_5 g_m s^2 + C_5 L_1 R_L g_m s^2 + C_5 L_1 s^2 + C_5 L_5 s^2 + C_5 L_L s^2}$$

$$10.143 \quad \text{INVALID-ORDER-143} \quad Z(s) = \left( L_1 s, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$$

$$H(s) = \frac{L_1 R_L s \left( C_5 C_L L_1 L_5 L_L g_m s^5 + C_5 C_L L_1 L_5 R_L g_m s^4 + C_5 C_L L_1 L_L R_5 g_m s^4 + 2 C_5 C_L L_1 L_L R_L g_m s^4 + C_5 C_L L_1 L_L s^4 + C_5 C_L L_1 R_5 R_L g_m s^3 + C_5 C_L L_1 R_L s^3 + C_5 C_L L_5 L_L s^4 + C_5 C_L L_5 R_L s^3 \right)}{C_5 C_L L_1 L_5 L_L g_m s^5 + C_5 C_L L_1 L_5 R_L g_m s^4 + C_5 C_L L_1 L_L R_5 g_m s^4 + 2 C_5 C_L L_1 L_L R_L g_m s^4 + C_5 C_L L_1 L_L s^4 + C_5 C_L L_1 R_5 R_L g_m s^3 + C_5 C_L L_1 R_L s^3 + C_5 C_L L_5 L_L s^4 + C_5 C_L L_5 R_L s^3}$$

$$10.144 \quad \text{INVALID-ORDER-144} \quad Z(s) = \left( L_1 s, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, R_L \right)$$

$$H(s) = \frac{L_1 R_L s \left( -C_5 L_5 R_5 s^2 + L_5 R_5 g_m s - L_5 s - R_5 \right)}{2 C_5 L_1 L_5 R_5 R_L g_m s^3 + C_5 L_1 L_5 R_5 s^3 + C_5 L_5 R_5 R_L s^2 + L_1 L_5 R_5 g_m s^2 + 2 L_1 L_5 R_L g_m s^2 + L_1 L_5 s^2 + 2 L_1 R_5 R_L g_m s + L_1 R_5 s + L_5 R_5 s + L_5 R_L s + R_5 R_L}$$

$$10.145 \quad \text{INVALID-ORDER-145} \quad Z(s) = \left( L_1 s, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_1 s \left( -C_5 L_5 R_5 s^2 + L_5 R_5 g_m s - L_5 s - R_5 \right)}{C_5 C_L L_1 L_5 R_5 s^4 + 2 C_5 L_1 L_5 R_5 g_m s^3 + C_5 L_5 R_5 s^2 + C_L L_1 L_5 R_5 g_m s^3 + C_L L_1 L_5 s^3 + C_L L_1 R_5 s^2 + C_L L_5 R_5 s^2 + 2 L_1 L_5 g_m s^2 + 2 L_1 R_5 g_m s + L_5 s + R_5}$$

$$10.146 \quad \text{INVALID-ORDER-146} \quad Z(s) = \left( L_1 s, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{R_L}{C_L R_L s + 1} \right)$$

$$H(s) = \frac{L_1 R_L s \left( -C_5 L_5 R_5 s^2 + L_5 R_5 g_m s - L_5 s - R_5 \right)}{C_5 C_L L_1 L_5 R_5 R_L s^4 + 2 C_5 L_1 L_5 R_5 R_L g_m s^3 + C_5 L_1 L_5 R_5 s^3 + C_5 L_5 R_5 R_L s^2 + C_L L_1 L_5 R_5 R_L g_m s^3 + C_L L_1 L_5 R_L s^3 + C_L L_1 R_5 R_L s^2 + C_L L_5 R_5 R_L s^2 + L_1 L_5 R_5 g_m s^2 + 2 L_1 L_5 s^2 + 2 L_1 R_5 g_m s + L_5 s + R_5}$$

$$10.147 \quad \text{INVALID-ORDER-147} \quad Z(s) = \left( L_1 s, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, R_L + \frac{1}{C_L s} \right)$$

$$H(s) = - \frac{L_1 s \left( C_L R_L s + 1 \right) \left( C_5 L_5 R_5 s^2 - L_5 R_5 g_m s + L_5 s + R_5 \right)}{2 C_5 C_L L_1 L_5 R_5 R_L g_m s^4 + C_5 C_L L_1 L_5 R_5 s^4 + C_5 C_L L_5 R_5 R_L s^3 + 2 C_5 L_1 L_5 R_5 g_m s^3 + C_5 L_5 R_5 s^2 + C_L L_1 L_5 R_5 g_m s^3 + 2 C_L L_1 L_5 R_L g_m s^3 + C_L L_1 L_5 s^3 + 2 C_L L_1 R_5 R_L g_m s^2 + 2 C_L L_1 R_5 s^2 + 2 C_L R_5 g_m s + L_5 s + R_5}$$

$$10.148 \quad \text{INVALID-ORDER-148} \quad Z(s) = \left( L_1 s, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, L_L s + \frac{1}{C_L s} \right)$$

$$H(s) = -\frac{L_1 s (C_L L_L s^2 + 1) (C_5 L_5 R_5 s^2 - L_5 R_5 g_m s + L_5 s + R_5)}{2C_5 C_L L_1 L_5 L_L R_5 g_m s^5 + C_5 C_L L_1 L_5 R_5 s^4 + C_5 C_L L_5 L_L R_5 s^4 + 2C_5 L_1 L_5 R_5 g_m s^3 + C_5 L_5 R_5 s^2 + 2C_L L_1 L_5 L_L g_m s^4 + C_L L_1 L_5 R_5 g_m s^3 + C_L L_1 L_5 s^3 + 2C_L L_1 L_L R_5 g_m s^3 + C_L L_1 L_L R_5 s^2 + C_L L_1 L_L s^2 + C_L L_1 L_L s}$$

$$10.149 \quad \text{INVALID-ORDER-149} \quad Z(s) = \left( L_1 s, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{L_L s}{C_L L_L s^2 + 1} \right)$$

$$H(s) = \frac{L_1 L_L s (-C_5 L_5 R_5 s^2 + L_5 R_5 g_m s - L_5 s - R_5)}{C_5 C_L L_1 L_5 L_L R_5 s^4 + 2C_5 L_1 L_5 L_L R_5 g_m s^3 + C_5 L_1 L_5 R_5 s^2 + C_5 L_5 L_L R_5 s^2 + C_L L_1 L_5 L_L R_5 g_m s^3 + C_L L_1 L_5 L_L s^3 + C_L L_1 L_L R_5 s^2 + C_L L_5 L_L R_5 s^2 + 2L_1 L_5 L_L g_m s^2 + L_1 L_5 R_5 s + L_1 L_L R_5 s}$$

$$10.150 \quad \text{INVALID-ORDER-150} \quad Z(s) = \left( L_1 s, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, L_L s + R_L + \frac{1}{C_L s} \right)$$

$$H(s) = -\frac{L_1 s (C_L L_L s^2 + C_L L_L R_L s + C_L R_L)}{2C_5 C_L L_1 L_5 L_L R_5 g_m s^5 + 2C_5 C_L L_1 L_5 R_5 R_L g_m s^4 + C_5 C_L L_1 L_5 R_5 s^4 + C_5 C_L L_5 L_L R_5 s^4 + C_5 C_L L_5 R_5 R_L s^3 + 2C_5 L_1 L_5 R_5 g_m s^3 + C_5 L_5 R_5 s^2 + 2C_L L_1 L_5 L_L g_m s^4 + C_L L_1 L_5 R_5 g_m s^3 + C_L L_1 L_5 s^3 + C_L L_1 L_L R_5 g_m s^3 + C_L L_1 L_L R_5 s^2 + C_L L_1 L_L s^2 + C_L L_1 L_L s}$$

$$10.151 \quad \text{INVALID-ORDER-151} \quad Z(s) = \left( L_1 s, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$$

$$H(s) = \frac{L_1 L_L R_L s (-C_5 L_5 R_5 s^2 + L_5 R_5 g_m s - L_5 s - R_5)}{C_5 C_L L_1 L_5 L_L R_5 R_L s^4 + 2C_5 L_1 L_5 L_L R_5 R_L g_m s^3 + C_5 L_1 L_5 L_L R_5 s^3 + C_5 L_1 L_5 R_5 R_L s^2 + C_5 L_5 L_L R_5 R_L s^2 + C_L L_1 L_5 L_L R_5 R_L g_m s^3 + C_L L_1 L_5 L_L R_L s^3 + C_L L_1 L_L R_5 R_L s^2 + C_L L_1 L_L R_5 s^2 + C_L L_1 L_L s^2 + C_L L_1 L_L s}$$

$$10.152 \quad \text{INVALID-ORDER-152} \quad Z(s) = \left( L_1 s, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$$

$$H(s) = -\frac{L_1 s (C_L L_L s^2 + 1) (C_5 L_5 R_5 s^2 - L_5 R_5 g_m s + L_5 s + R_5)}{2C_5 C_L L_1 L_5 L_L R_5 R_L g_m s^5 + C_5 C_L L_1 L_5 L_L R_5 s^5 + C_5 C_L L_5 L_L R_5 R_L s^4 + 2C_5 L_1 L_5 L_L R_5 g_m s^4 + 2C_5 L_1 L_5 R_5 R_L g_m s^3 + C_5 L_1 L_5 R_5 s^3 + C_5 L_5 L_L R_5 s^3 + C_5 L_5 R_5 R_L s^2 + C_L L_1 L_5 L_L R_5 R_L g_m s^3 + C_L L_1 L_5 L_L R_L s^3 + C_L L_1 L_L R_5 R_L s^2 + C_L L_1 L_L R_5 s^2 + C_L L_1 L_L s^2 + C_L L_1 L_L s}$$

$$10.153 \quad \text{INVALID-ORDER-153} \quad Z(s) = \left( L_1 s, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$$

$$H(s) = - \frac{2C_5 C_L L_1 L_5 L_L R_5 R_L g_m s^5 + C_5 C_L L_1 L_5 L_L R_5 s^5 + C_5 C_L L_1 L_5 R_5 R_L s^4 + C_5 C_L L_5 L_L R_5 R_L s^4 + 2C_5 L_1 L_5 R_5 R_L g_m s^3 + C_5 L_1 L_5 R_5 s^3 + C_5 L_5 R_5 R_L s^2 + C_L L_1 L_5 L_L R_5 g_m s^4}{2C_5 C_L L_1 L_5 L_L R_5 R_L g_m s^5 + C_5 C_L L_1 L_5 L_L R_5 s^5 + C_5 C_L L_1 L_5 R_5 R_L s^4 + C_5 C_L L_5 L_L R_5 R_L s^4 + 2C_5 L_1 L_5 R_5 R_L g_m s^3 + C_5 L_1 L_5 R_5 s^3 + C_5 L_5 R_5 R_L s^2 + C_L L_1 L_5 L_L R_5 g_m s^4}$$

$$10.154 \quad \text{INVALID-ORDER-154} \quad Z(s) = \left( L_1 s, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, R_L \right)$$

$$H(s) = \frac{L_1 R_L s (C_5 L_5 R_5 g_m s^2 - C_5 L_5 s^2 + L_5 g_m s + R_5 g_m - 1)}{C_5 L_1 L_5 R_5 g_m s^3 + 2C_5 L_1 L_5 R_L g_m s^3 + C_5 L_1 L_5 s^3 + C_5 L_5 R_5 s^2 + C_5 L_5 R_L s^2 + L_1 L_5 g_m s^2 + L_1 R_5 g_m s + 2L_1 R_L g_m s + L_1 s + L_5 s + R_5 + R_L}$$

$$10.155 \quad \text{INVALID-ORDER-155} \quad Z(s) = \left( L_1 s, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_1 s (C_5 L_5 R_5 g_m s^2 - C_5 L_5 s^2 + L_5 g_m s + R_5 g_m - 1)}{C_5 C_L L_1 L_5 R_5 g_m s^4 + C_5 C_L L_1 L_5 s^4 + C_5 C_L L_5 R_5 s^3 + 2C_5 L_1 L_5 g_m s^3 + C_5 L_5 s^2 + C_L L_1 L_5 g_m s^3 + C_L L_1 R_5 g_m s^2 + C_L L_1 s^2 + C_L L_5 s^2 + C_L R_5 s + 2L_1 g_m s + 1}$$

$$10.156 \quad \text{INVALID-ORDER-156} \quad Z(s) = \left( L_1 s, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{R_L}{C_L R_L s + 1} \right)$$

$$H(s) = \frac{L_1 R_L s (C_5 L_5 R_5 g_m s^2 - C_5 L_5 s^2 + L_5 g_m s + R_5 g_m - 1)}{C_5 C_L L_1 L_5 R_5 R_L g_m s^4 + C_5 C_L L_1 L_5 R_L s^4 + C_5 C_L L_5 R_5 R_L s^3 + C_5 L_1 L_5 R_5 g_m s^3 + 2C_5 L_1 L_5 R_L g_m s^3 + C_5 L_1 L_5 s^3 + C_5 L_5 R_5 s^2 + C_5 L_5 R_L s^2 + C_L L_1 L_5 R_L g_m s^3 + C_L L_1 R_5 R_L s^2 + C_L L_1 s^2 + C_L L_5 s^2 + C_L R_5 s + 2L_1 g_m s + 1}$$

$$10.157 \quad \text{INVALID-ORDER-157} \quad Z(s) = \left( L_1 s, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_1 s (C_L R_L s + 1) (C_5 L_5 R_5 g_m s^2 - C_5 L_5 s^2 + L_5 g_m s + R_5 g_m - 1)}{C_5 C_L L_1 L_5 R_5 g_m s^4 + 2C_5 C_L L_1 L_5 R_L g_m s^4 + C_5 C_L L_1 L_5 s^4 + C_5 C_L L_5 R_5 s^3 + C_5 C_L L_5 R_L s^3 + 2C_5 L_1 L_5 g_m s^3 + C_5 L_5 s^2 + C_L L_1 L_5 g_m s^3 + C_L L_1 R_5 g_m s^2 + 2C_L L_1 R_L g_m s^2 + C_L L_1 s^2 + C_L L_5 s^2 + C_L R_5 s + 2L_1 g_m s + 1}$$

**10.158 INVALID-ORDER-158**  $Z(s) = \left( L_1 s, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, L_L s + \frac{1}{C_L s} \right)$

$$H(s) = \frac{L_1 s (C_L L_L s^2 + 1) (C_5 L_5 R_5 g_m s^2 - C_5 L_5 s^2 + L_5 g_m s + R_5 g_m - 1)}{2C_5 C_L L_1 L_5 L_L g_m s^5 + C_5 C_L L_1 L_5 R_5 g_m s^4 + C_5 C_L L_1 L_5 s^4 + C_5 C_L L_5 L_L s^4 + C_5 C_L L_5 R_5 s^3 + 2C_5 L_1 L_5 g_m s^3 + C_5 L_5 s^2 + C_L L_1 L_5 g_m s^3 + 2C_L L_1 L_L g_m s^3 + C_L L_1 R_5 g_m s^2 + C}$$

**10.159 INVALID-ORDER-159**  $Z(s) = \left( L_1 s, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{L_L s}{C_L L_L s^2 + 1} \right)$

$$H(s) = \frac{L_1 L_L s^2 (C_5 L_5 R_5 g_m s^2 - C_5 L_5 s^2 + L_5 g_m s + R_5 g_m - 1)}{C_5 C_L L_1 L_5 L_L R_5 g_m s^5 + C_5 C_L L_1 L_5 L_L s^5 + C_5 C_L L_5 L_L R_5 s^4 + 2 C_5 L_1 L_5 L_L g_m s^4 + C_5 L_1 L_5 R_5 g_m s^3 + C_5 L_1 L_5 s^3 + C_5 L_5 L_L s^3 + C_5 L_5 R_5 s^2 + C_L L_1 L_5 L_L g_m s^4 + C_L L_1 L_L R_5}$$

**10.160 INVALID-ORDER-160**  $Z(s) = \left( L_1 s, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, L_L s + R_L + \frac{1}{C_L s} \right)$

$$H(s) = \frac{L_1 s (C_L L_L s^2 + C_L R_L s + 1) (C_5 L_5 R_5 g_m s^2 - C_5 L_5 s^2 + L_5 g_m s}{2C_5 C_L L_1 L_5 L_L g_m s^5 + C_5 C_L L_1 L_5 R_5 g_m s^4 + 2C_5 C_L L_1 L_5 R_L g_m s^4 + C_5 C_L L_1 L_5 s^4 + C_5 C_L L_5 L_L s^4 + C_5 C_L L_5 R_5 s^3 + C_5 C_L L_5 R_L s^3 + 2C_5 L_1 L_5 g_m s^3 + C_5 L_5 s^2 + C_L L_1 L_5 g_m}$$

10.161 INVALID-ORDER-161  $Z(s) = \left( L_1 s, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$

$$H(s) = \frac{C_5 C_L L_1 L_5 L_L R_5 R_L g_m s^5 + C_5 C_L L_1 L_5 L_L R_L s^5 + C_5 C_L L_5 L_L R_5 R_L s^4 + C_5 L_1 L_5 L_L R_5 g_m s^4 + 2C_5 L_1 L_5 L_L R_L g_m s^4 + C_5 L_1 L_5 L_L s^4 + C_5 L_1 L_5 R_5 R_L g_m s^3 + C_5 L_1 L_5 R_L s^3 + C_5 L_1 L_5 s^3 + C_5 L_1 R_5 R_L g_m s^2 + C_5 L_1 R_L s^2 + C_5 R_5 R_L g_m s + C_5 R_L s}{C_5 C_L L_1 L_5 L_L R_5 R_L g_m s^5 + C_5 C_L L_1 L_5 L_L R_L s^5 + C_5 C_L L_5 L_L R_5 R_L s^4 + C_5 L_1 L_5 L_L R_5 g_m s^4 + 2C_5 L_1 L_5 L_L R_L g_m s^4 + C_5 L_1 L_5 L_L s^4 + C_5 L_1 L_5 R_5 R_L g_m s^3 + C_5 L_1 L_5 R_L s^3 + C_5 L_1 L_5 s^3 + C_5 L_1 R_5 R_L g_m s^2 + C_5 L_1 R_L s^2 + C_5 R_5 R_L g_m s + C_5 R_L s}.$$

**10.162 INVALID-ORDER-162**  $Z(s) = \left( L_1 s, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$

$$H(s) = \frac{L_1}{C_5 C_L L_1 L_5 L_L R_5 g_m s^5 + 2C_5 C_L L_1 L_5 L_L R_L g_m s^5 + C_5 C_L L_1 L_5 L_L s^5 + C_5 C_L L_5 L_L R_5 s^4 + C_5 C_L L_5 L_L R_L s^4 + 2C_5 L_1 L_5 L_L g_m s^4 + C_5 L_1 L_5 R_5 g_m s^3 + 2C_5 L_1 L_5 R_L g_m s^3 + C_5 L_1 L_5 s^3 + 2C_5 L_1 L_5 R_L s^2 + C_5 L_1 L_5 R_5 s^2 + C_5 L_1 L_5 s^2 + C_5 L_1 L_5 R_L s + C_5 L_1 L_5 R_5 s + C_5 L_1 L_5 s + C_5 L_1 L_5 R_L + C_5 L_1 L_5 R_5 + C_5 L_1 L_5}$$

$$\mathbf{10.163 \quad INVALID-ORDER-163} \quad Z(s) = \left( L_1 s, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$$

$$H(s) = \frac{C_5 C_L L_1 L_5 L_L R_5 g_m s^5 + 2C_5 C_L L_1 L_5 L_L R_L g_m s^5 + C_5 C_L L_1 L_5 L_L s^5 + C_5 C_L L_1 L_5 R_5 R_L g_m s^4 + C_5 C_L L_1 L_5 R_L s^4 + C_5 C_L L_5 L_L R_5 s^4 + C_5 C_L L_5 L_L R_L s^4 + C_5 C_L L_5 R_5 R_L s^3 +$$

$$\mathbf{10.164 \quad INVALID-ORDER-164} \quad Z(s) = \left( L_1 s, \infty, \infty, \infty, \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, R_L \right)$$

$$H(s) = \frac{L_1 R_L s (C_5 L_5 R_5 g_m s^2 - C_5 L_5 s^2 - C_5 R_5 s + R_5 g_m - 1)}{C_5 L_1 L_5 R_5 g_m s^3 + 2C_5 L_1 L_5 R_L g_m s^3 + C_5 L_1 L_5 s^3 + 2C_5 L_1 R_5 R_L g_m s^2 + C_5 L_1 R_5 s^2 + C_5 L_5 R_5 s^2 + C_5 L_5 R_L s^2 + C_5 R_5 R_L s + L_1 R_5 g_m s + 2L_1 R_L g_m s + L_1 s + R_5 + R_L}$$

$$\mathbf{10.165 \quad INVALID-ORDER-165} \quad Z(s) = \left( L_1 s, \infty, \infty, \infty, \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_1 s (C_5 L_5 R_5 g_m s^2 - C_5 L_5 s^2 - C_5 R_5 s + R_5 g_m - 1)}{C_5 C_L L_1 L_5 R_5 g_m s^4 + C_5 C_L L_1 L_5 s^4 + C_5 C_L L_1 R_5 s^3 + C_5 C_L L_5 R_5 s^3 + 2C_5 L_1 L_5 g_m s^3 + 2C_5 L_1 R_5 g_m s^2 + C_5 L_5 s^2 + C_5 R_5 s + C_L L_1 R_5 g_m s^2 + C_L L_1 s^2 + C_L R_5 s + 2L_1 g_m s +}$$

$$\mathbf{10.166 \quad INVALID-ORDER-166} \quad Z(s) = \left( L_1 s, \infty, \infty, \infty, \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{R_L}{C_L R_L s + 1} \right)$$

$$H(s) = \frac{L_1 R_L s (C_5 L_5 R_5 g_m s^2 - C_5 L_5 s^2 - C_5 R_5 s + R_5 g_m - 1)}{C_5 C_L L_1 L_5 R_5 R_L g_m s^4 + C_5 C_L L_1 L_5 R_L s^4 + C_5 C_L L_1 R_5 R_L s^3 + C_5 C_L L_5 R_5 R_L s^3 + C_5 L_1 L_5 R_5 g_m s^3 + 2C_5 L_1 L_5 R_L g_m s^3 + C_5 L_1 L_5 s^3 + 2C_5 L_1 R_5 R_L g_m s^2 + C_5 L_1 R_5 s^2 + C_5 L_1 R_5 s + C_L L_1 R_5 g_m s^2 + C_L L_1 s^2 + C_L R_5 s + 2L_1 g_m s +}$$

$$\mathbf{10.167 \quad INVALID-ORDER-167} \quad Z(s) = \left( L_1 s, \infty, \infty, \infty, \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, R_L + \frac{1}{C_L s} \right)$$

$$H(s) = -\frac{L_1 s (C_L R_L s + 1) (-C_5 L_5 R_5 g_m s^2 + C_5 L_5 s^2 + C_5 R_5 s - R_5 g_m - 1)}{C_5 C_L L_1 L_5 R_5 g_m s^4 + 2C_5 C_L L_1 L_5 R_L g_m s^4 + C_5 C_L L_1 L_5 s^4 + 2C_5 C_L L_1 R_5 R_L g_m s^3 + C_5 C_L L_1 R_5 s^3 + C_5 C_L L_5 R_5 s^3 + C_5 C_L L_5 R_L s^3 + 2C_5 L_1 L_5 g_m s^3 + 2C_5 L_1 R_5 g_m s^2 + C_5 L_1 R_5 s^2 + C_5 L_1 R_5 s + C_L L_1 R_5 g_m s^2 + C_L L_1 s^2 + C_L R_5 s + 2L_1 g_m s +}$$



$$10.168 \quad \text{INVALID-ORDER-168} \quad Z(s) = \left( L_1 s, \infty, \infty, \infty, \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, L_L s + \frac{1}{C_L s} \right)$$

$$H(s) = - \frac{L_1 s (C_L L_L s^2 + 1) (-C_5 L_5 R_5 g_m s^2 + C_5 L_5 s^2 + C_5 R_5 s - R_5 g_m)}{2C_5 C_L L_1 L_5 L_L g_m s^5 + C_5 C_L L_1 L_5 R_5 g_m s^4 + C_5 C_L L_1 L_5 s^4 + 2C_5 C_L L_1 L_L R_5 g_m s^4 + C_5 C_L L_1 R_5 s^3 + C_5 C_L L_5 L_L s^4 + C_5 C_L L_5 R_5 s^3 + C_5 C_L L_L R_5 s^3 + 2C_5 L_1 L_5 g_m s^3 + 2C_5 L_1 L_5 s^2 + C_5 L_1 L_L R_5 g_m s^2 + C_5 L_1 L_L s^2 + C_5 L_1 R_5 s + C_5 L_1 g_m}$$

$$10.169 \quad \text{INVALID-ORDER-169} \quad Z(s) = \left( L_1 s, \infty, \infty, \infty, \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{L_L s}{C_L L_L s^2 + 1} \right)$$

$$H(s) = \frac{L_1 L_L s^2 (C_5 L_5 R_5 g_m s^2 - C_5 L_5 s^2 - C_5 R_5 s + R_5 g_m)}{C_5 C_L L_1 L_5 L_L R_5 g_m s^5 + C_5 C_L L_1 L_5 L_L s^5 + C_5 C_L L_1 L_L R_5 s^4 + C_5 C_L L_5 L_L R_5 s^4 + 2C_5 L_1 L_5 L_L g_m s^4 + C_5 L_1 L_5 R_5 g_m s^3 + C_5 L_1 L_5 s^3 + 2C_5 L_1 L_L R_5 g_m s^3 + C_5 L_1 R_5 s^2 + C_5 L_1 g_m}$$

$$10.170 \quad \text{INVALID-ORDER-170} \quad Z(s) = \left( L_1 s, \infty, \infty, \infty, \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, L_L s + R_L + \frac{1}{C_L s} \right)$$

$$H(s) = - \frac{L_1 s (C_L L_L s^2 + 1)}{2C_5 C_L L_1 L_5 L_L g_m s^5 + C_5 C_L L_1 L_5 R_5 g_m s^4 + 2C_5 C_L L_1 L_5 R_L g_m s^4 + C_5 C_L L_1 L_5 s^4 + 2C_5 C_L L_1 L_L R_5 g_m s^4 + 2C_5 C_L L_1 R_5 R_L g_m s^3 + C_5 C_L L_1 R_5 s^3 + C_5 C_L L_5 L_L s^4 + C_5 C_L L_5 R_5 s^3 + C_5 C_L L_L R_5 s^3 + 2C_5 L_1 L_5 g_m s^3 + C_5 L_1 L_5 s^2 + C_5 L_1 L_L R_5 g_m s^2 + C_5 L_1 L_L s^2 + C_5 L_1 R_5 s + C_5 L_1 g_m}$$

$$10.171 \quad \text{INVALID-ORDER-171} \quad Z(s) = \left( L_1 s, \infty, \infty, \infty, \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$$

$$H(s) = \frac{1}{C_5 C_L L_1 L_5 L_L R_5 R_L g_m s^5 + C_5 C_L L_1 L_5 L_L R_L s^5 + C_5 C_L L_1 L_L R_5 R_L s^4 + C_5 C_L L_5 L_L R_5 R_L s^4 + C_5 L_1 L_5 L_L R_5 g_m s^4 + 2C_5 L_1 L_5 L_L R_L g_m s^4 + C_5 L_1 L_5 L_L s^4 + C_5 L_1 L_5 R_5 R_L g_m s^3 + C_5 L_1 L_5 R_5 s^3 + C_5 L_1 L_L R_5 g_m s^3 + C_5 L_1 L_L s^3 + C_5 L_1 R_5 R_L g_m s^2 + C_5 L_1 R_5 s^2 + C_5 L_1 g_m}$$

$$10.172 \quad \text{INVALID-ORDER-172} \quad Z(s) = \left( L_1 s, \infty, \infty, \infty, \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$$

$$H(s) = - \frac{L_1 s (C_L L_L s^2 + 1)}{C_5 C_L L_1 L_5 L_L R_5 g_m s^5 + 2C_5 C_L L_1 L_5 L_L R_L g_m s^5 + C_5 C_L L_1 L_5 L_L s^5 + 2C_5 C_L L_1 L_L R_5 R_L g_m s^4 + C_5 C_L L_1 L_L R_5 s^4 + C_5 C_L L_5 L_L R_5 s^4 + C_5 C_L L_5 L_L R_L s^4 + C_5 C_L L_L R_5 R_L s^3 + C_5 C_L L_L R_5 s^3 + C_5 C_L L_5 R_5 g_m s^3 + C_5 C_L L_5 R_5 s^3 + C_5 C_L L_L R_5 g_m s^2 + C_5 C_L L_L R_5 s^2 + C_5 C_L L_5 g_m s^2 + C_5 C_L L_5 s^2 + C_5 C_L L_L g_m s + C_5 C_L L_L s + C_5 C_L R_5 g_m + C_5 C_L R_5}$$

$$\textbf{10.173} \quad \textbf{INVALID-ORDER-173} \quad Z(s) = \left( L_1 s, \infty, \infty, \infty, \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$$

$$H(s) = -\frac{C_5 C_L L_1 L_5 L_L R_5 g_m s^5 + 2 C_5 C_L L_1 L_5 L_L R_L g_m s^5 + C_5 C_L L_1 L_5 L_L s^5 + C_5 C_L L_1 L_5 R_5 R_L g_m s^4 + C_5 C_L L_1 L_5 R_L s^4 + 2 C_5 C_L L_1 L_L R_5 R_L g_m s^4 + C_5 C_L L_1 L_L R_5 s^4 + C_5 C_L L_1 R_5 R_L g_m s^4 + C_5 C_L L_1 R_5 s^4 + C_5 C_L L_1 R_L R_5 g_m s^4 + C_5 C_L L_1 R_L s^4 + C_5 C_L L_1 s^4 + C_5 C_L L s^4 + C_5 C_L R_5 R_L g_m s^4 + C_5 C_L R_5 s^4 + C_5 C_L R_L R_5 g_m s^4 + C_5 C_L R_L s^4 + C_5 C_L s^4 + C_5 C L_1 L_5 L_L R_5 g_m s^5 + C_5 C L_1 L_5 L_L R_L g_m s^5 + C_5 C L_1 L_5 L_L s^5 + C_5 C L_1 L_5 R_5 R_L g_m s^4 + C_5 C L_1 L_5 R_L s^4 + 2 C_5 C L_1 L_L R_5 R_L g_m s^4 + C_5 C L_1 L_L R_5 s^4 + C_5 C L_1 L_L R_L R_5 g_m s^4 + C_5 C L_1 L_L R_L s^4 + C_5 C L_1 L s^4 + C_5 C L_1 R_5 R_L g_m s^4 + C_5 C L_1 R_5 s^4 + C_5 C L_1 R_L R_5 g_m s^4 + C_5 C L_1 R_L s^4 + C_5 C L_1 s^4 + C_5 C L s^4 + C_5 C R_5 R_L g_m s^4 + C_5 C R_5 s^4 + C_5 C R_L R_5 g_m s^4 + C_5 C R_L s^4 + C_5 C s^4}{C_5 C L_1 L_5 L_L R_5 g_m s^5 + 2 C_5 C L_1 L_5 L_L R_L g_m s^5 + C_5 C L_1 L_5 L_L s^5 + C_5 C L_1 L_5 R_5 R_L g_m s^4 + C_5 C L_1 L_5 R_L s^4 + 2 C_5 C L_1 L_L R_5 R_L g_m s^4 + C_5 C L_1 L_L R_5 s^4 + C_5 C L_1 L_L R_L R_5 g_m s^4 + C_5 C L_1 L_L R_L s^4 + C_5 C L_1 L s^4 + C_5 C L_1 R_5 R_L g_m s^4 + C_5 C L_1 R_5 s^4 + C_5 C L_1 R_L R_5 g_m s^4 + C_5 C L_1 R_L s^4 + C_5 C L_1 s^4 + C_5 C L s^4 + C_5 C R_5 R_L g_m s^4 + C_5 C R_5 s^4 + C_5 C R_L R_5 g_m s^4 + C_5 C R_L s^4 + C_5 C s^4}.$$

**10.174 INVALID-ORDER-174**  $Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, R_5, R_L \right)$

$$H(s) = \frac{R_L (R_5 g_m - 1)}{C_1 R_5 s + C_1 R_L s + R_5 g_m + 2R_L g_m + 1}$$

**10.175 INVALID-ORDER-175**  $Z(s) = \left( \frac{1}{C_{1s}}, \infty, \infty, \infty, R_5, L_L s + \frac{1}{C_{Ls}} \right)$

$$H(s) = \frac{(R_5 g_m - 1)(C_L L_L s^2 + 1)}{C_1 C_L L_L s^3 + C_1 C_L R_5 s^2 + C_1 s + 2 C_L L_L q_m s^2 + C_L R_5 q_m s + C_L s + 2 q_m}$$

**10.176 INVALID-ORDER-176**  $Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, R_5, \frac{L_L s}{C_L L_L s^2 + 1} \right)$

$$H(s) = \frac{L_L s (R_5 g_m - 1)}{C_1 C_L L_L R_5 s^3 + C_1 L_L s^2 + C_1 R_5 s + C_L L_L R_5 g_m s^2 + C_L L_L s^2 + 2 L_L g_m s + R_5 g_m + 1}$$

**10.177 INVALID-ORDER-177**  $Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, R_5, L_L s + R_L + \frac{1}{C_L s} \right)$

$$H(s) = \frac{(R_5 g_m - 1)(C_L L_L s^2 + C_L R_L s + 1)}{C_1 C_L L_L s^3 + C_1 C_L R_5 s^2 + C_1 C_L R_L s^2 + C_1 s + 2C_L L_L g_m s^2 + C_L R_5 g_m s + 2C_L R_L g_m s + C_L s + 2g_m}$$

$$10.178 \quad \text{INVALID-ORDER-178} \quad Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, R_5, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$$

$$H(s) = \frac{L_L R_L s (R_5 g_m - 1)}{C_1 C_L L_L R_5 R_L s^3 + C_1 L_L R_5 s^2 + C_1 L_L R_L s^2 + C_1 R_5 R_L s + C_L L_L R_5 R_L g_m s^2 + C_L L_L R_L s^2 + L_L R_5 g_m s + 2 L_L R_L g_m s + L_L s + R_5 R_L g_m + R_L}$$

$$10.179 \quad \text{INVALID-ORDER-179} \quad Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, R_5, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$$

$$H(s) = \frac{(R_5 g_m - 1) (C_L L_L R_L s^2 + L_L s + R_L)}{C_1 C_L L_L R_5 s^3 + C_1 C_L L_L R_L s^3 + C_1 L_L s^2 + C_1 R_5 s + C_1 R_L s + C_L L_L R_5 g_m s^2 + 2 C_L L_L R_L g_m s^2 + C_L L_L s^2 + 2 L_L g_m s + R_5 g_m + 2 R_L g_m + 1}$$

$$10.180 \quad \text{INVALID-ORDER-180} \quad Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, R_5, \frac{R_L (L_L s + \frac{1}{C_L s})}{L_L s + R_L + \frac{1}{C_L s}} \right)$$

$$H(s) = \frac{R_L (R_5 g_m - 1) (C_L L_L s^2 + 1)}{C_1 C_L L_L R_5 s^3 + C_1 C_L L_L R_L s^3 + C_1 C_L R_5 R_L s^2 + C_1 R_5 s + C_1 R_L s + C_L L_L R_5 g_m s^2 + 2 C_L L_L R_L g_m s^2 + C_L L_L s^2 + C_L R_5 R_L g_m s + C_L R_L s + R_5 g_m + 2 R_L g_m + 1}$$

$$10.181 \quad \text{INVALID-ORDER-181} \quad Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{1}{C_5 s}, \frac{1}{C_L s} \right)$$

$$H(s) = \frac{-C_5 s + g_m}{s (C_1 C_5 s + C_1 C_L s + C_5 C_L s + 2 C_5 g_m + C_L g_m)}$$

$$10.182 \quad \text{INVALID-ORDER-182} \quad Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{1}{C_5 s}, R_L + \frac{1}{C_L s} \right)$$

$$H(s) = -\frac{(C_5 s - g_m) (C_L R_L s + 1)}{s (C_1 C_5 C_L R_L s^2 + C_1 C_5 s + C_1 C_L s + 2 C_5 C_L R_L g_m s + C_5 C_L s + 2 C_5 g_m + C_L g_m)}$$

**10.183 INVALID-ORDER-183**  $Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{1}{C_5 s}, L_L s + \frac{1}{C_L s} \right)$

$$H(s) = -\frac{(C_5 s - g_m)(C_L L_L s^2 + 1)}{s(C_1 C_5 C_L L_L s^3 + C_1 C_5 s + C_1 C_L s + 2C_5 C_L L_L g_m s^2 + C_5 C_L s + 2C_5 g_m + C_L g_m)}$$

**10.184 INVALID-ORDER-184**  $Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} \right)$

$$H(s) = \frac{L_L s(-C_5 s + g_m)}{C_1 C_5 L_L s^3 + C_1 C_L L_L s^3 + C_1 s + C_5 C_L L_L s^3 + 2C_5 L_L g_m s^2 + C_5 s + C_L L_L g_m s^2 + g_m}$$

**10.185 INVALID-ORDER-185**  $Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{1}{C_5 s}, L_L s + R_L + \frac{1}{C_L s} \right)$

$$H(s) = -\frac{(C_5 s - g_m)(C_L L_L s^2 + C_L R_L s + 1)}{s(C_1 C_5 C_L L_L s^3 + C_1 C_5 C_L R_L s^2 + C_1 C_5 s + C_1 C_L s + 2C_5 C_L L_L g_m s^2 + 2C_5 C_L R_L g_m s + C_5 C_L s + 2C_5 g_m + C_L g_m)}$$

**10.186 INVALID-ORDER-186**  $Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{1}{C_5 s}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$

$$H(s) = \frac{L_L R_L s(-C_5 s + g_m)}{C_1 C_5 L_L R_L s^3 + C_1 C_L L_L R_L s^3 + C_1 L_L s^2 + C_1 R_L s + C_5 C_L L_L R_L s^3 + 2C_5 L_L R_L g_m s^2 + C_5 L_L s^2 + C_5 R_L s + C_L L_L R_L g_m s^2 + L_L g_m s + R_L g_m}$$

**10.187 INVALID-ORDER-187**  $Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$

$$H(s) = -\frac{(C_5 s - g_m)(C_L L_L R_L s^2 + L_L s + R_L)}{C_1 C_5 C_L L_L R_L s^4 + C_1 C_5 L_L s^3 + C_1 C_5 R_L s^2 + C_1 C_L L_L s^3 + C_1 s + 2C_5 C_L L_L R_L g_m s^3 + C_5 C_L L_L s^3 + 2C_5 L_L g_m s^2 + 2C_5 R_L g_m s + C_5 s + C_L L_L g_m s^2 + g_m}$$

$$10.188 \quad \text{INVALID-ORDER-188} \quad Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{1}{C_5 s}, \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$$

$$H(s) = - \frac{R_L (C_5 s - g_m) (C_L L_L s^2 + 1)}{C_1 C_5 C_L L_L R_L s^4 + C_1 C_5 R_L s^2 + C_1 C_L L_L s^3 + C_1 C_L R_L s^2 + C_1 s + 2C_5 C_L L_L R_L g_m s^3 + C_5 C_L L_L s^3 + C_5 C_L R_L s^2 + 2C_5 R_L g_m s + C_5 s + C_L L_L g_m s^2 + C_L R_L g_m s + g_m}$$

$$10.189 \quad \text{INVALID-ORDER-189} \quad Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, R_L + \frac{1}{C_L s} \right)$$

$$H(s) = - \frac{(C_L R_L s + 1) (C_5 R_5 s - R_5 g_m + 1)}{C_1 C_5 C_L R_5 R_L s^3 + C_1 C_5 R_5 s^2 + C_1 C_L R_5 s^2 + C_1 C_L R_L s^2 + C_1 s + 2C_5 C_L R_5 R_L g_m s^2 + C_5 C_L R_5 s^2 + 2C_5 R_5 g_m s + C_L R_5 g_m s + 2C_L R_L g_m s + C_L s + 2g_m}$$

$$10.190 \quad \text{INVALID-ORDER-190} \quad Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, L_L s + \frac{1}{C_L s} \right)$$

$$H(s) = - \frac{(C_L L_L s^2 + 1) (C_5 R_5 s - R_5 g_m + 1)}{C_1 C_5 C_L L_L R_5 s^4 + C_1 C_5 R_5 s^2 + C_1 C_L L_L s^3 + C_1 C_L R_5 s^2 + C_1 s + 2C_5 C_L L_L R_5 g_m s^3 + C_5 C_L R_5 s^2 + 2C_5 R_5 g_m s + 2C_L L_L g_m s^2 + C_L R_5 g_m s + C_L s + 2g_m}$$

$$10.191 \quad \text{INVALID-ORDER-191} \quad Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, \frac{L_L s}{C_L L_L s^2 + 1} \right)$$

$$H(s) = \frac{L_L s (-C_5 R_5 s + R_5 g_m - 1)}{C_1 C_5 L_L R_5 s^3 + C_1 C_L L_L R_5 s^3 + C_1 L_L s^2 + C_1 R_5 s + C_5 C_L L_L R_5 s^3 + 2C_5 L_L R_5 g_m s^2 + C_5 R_5 s + C_L L_L R_5 g_m s^2 + C_L L_L s^2 + 2L_L g_m s + R_5 g_m + 1}$$

$$10.192 \quad \text{INVALID-ORDER-192} \quad Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, L_L s + R_L + \frac{1}{C_L s} \right)$$

$$H(s) = - \frac{(C_5 R_5 s - R_5 g_m + 1) (C_L L_L s^2 + C_L R_L s + 1)}{C_1 C_5 C_L L_L R_5 s^4 + C_1 C_5 C_L R_5 R_L s^3 + C_1 C_5 R_5 s^2 + C_1 C_L L_L s^3 + C_1 C_L R_5 s^2 + C_1 C_L R_L s^2 + C_1 s + 2C_5 C_L L_L R_5 g_m s^3 + 2C_5 C_L R_5 R_L g_m s^2 + C_5 C_L R_5 s^2 + 2C_5 R_5 g_m s + 2C_L L_L g_m s^2 + C_L R_5 g_m s + C_L R_L g_m s + g_m}$$

**10.193 INVALID-ORDER-193**  $Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, \frac{1}{C_L s + \frac{1}{R_L + \frac{1}{L_L s}}} \right)$

$$H(s) = \frac{L_L R_L s (-C_5 R_5 s + R_5 g_m - 1)}{C_1 C_5 L_L R_5 R_L s^3 + C_1 C_L L_L R_5 R_L s^3 + C_1 L_L R_5 s^2 + C_1 L_L R_L s^2 + C_1 R_5 R_L s + C_5 C_L L_L R_5 R_L s^3 + 2C_5 L_L R_5 R_L g_m s^2 + C_5 L_L R_5 s^2 + C_5 R_5 R_L s + C_L L_L R_5 R_L g_m s^2 + C_L L_L}$$

**10.194 INVALID-ORDER-194**  $Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$

$$H(s) = -\frac{(C_5 R_5 s - R_5 g_m + 1)(C_L L_L R_L s^2 + L_L s + R_L)}{C_1 C_5 C_L L_L R_5 R_L s^4 + C_1 C_5 L_L R_5 s^3 + C_1 C_5 R_5 R_L s^2 + C_1 C_L L_L R_5 s^3 + C_1 C_L L_L R_L s^3 + C_1 L_L s^2 + C_1 R_5 s + C_1 R_L s + 2C_5 C_L L_L R_5 R_L g_m s^3 + C_5 C_L L_L R_5 s^3 + 2C_5 L_L R_5 g_m}$$

10.195 INVALID-ORDER-195  $Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$

$$H(s) = -\frac{R_L (C_L L_L s^2 + 1) (C_5 R_5 s - R_5 g_m + 1)}{C_1 C_5 C_L L_L R_5 R_L s^4 + C_1 C_5 R_5 R_L s^2 + C_1 C_L L_L R_5 s^3 + C_1 C_L L_L R_L s^3 + C_1 C_L R_5 R_L s^2 + C_1 R_5 s + C_1 R_L s + 2 C_5 C_L L_L R_5 R_L g_m s^3 + C_5 C_L L_L R_5 s^3 + C_5 C_L R_5 R_L s^2 + 2 C_5 R_5 s}$$

**10.196 INVALID-ORDER-196**  $Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, \frac{1}{C_L s} \right)$

$$H(s) = \frac{C_5 R_5 g_m s - C_5 s + g_m}{s(C_1 C_5 C_L R_5 s^2 + C_1 C_5 s + C_1 C_L s + C_5 C_L R_5 g_m s + C_5 C_L s + 2C_5 g_m + C_L g_m)}$$

**10.197 INVALID-ORDER-197**  $Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, \frac{R_L}{C_L R_L s + 1} \right)$

$$H(s) = \frac{R_L (C_5 R_5 g_m s - C_5 s + g_m)}{C_1 C_5 C_L R_5 R_L s^3 + C_1 C_5 R_5 s^2 + C_1 C_5 R_L s^2 + C_1 C_L R_L s^2 + C_1 s + C_5 C_L R_5 R_L g_m s^2 + C_5 C_L R_L s^2 + C_5 R_5 g_m s + 2C_5 R_L g_m s + C_5 s + C_L R_L g_m s + g_m}$$

**10.198 INVALID-ORDER-198**  $Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, R_L + \frac{1}{C_L s} \right)$

$$H(s) = \frac{(C_L R_L s + 1)(C_5 R_5 g_m s - C_5 s + g_m)}{s(C_1 C_5 C_L R_5 s^2 + C_1 C_5 C_L R_L s^2 + C_1 C_5 s + C_1 C_L s + C_5 C_L R_5 g_m s + 2C_5 C_L R_L g_m s + C_5 C_L s + 2C_5 g_m + C_L g_m)}$$

**10.199 INVALID-ORDER-199**  $Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, L_L s + \frac{1}{C_L s} \right)$

$$H(s) = \frac{(C_L L_L s^2 + 1)(C_5 R_5 g_m s - C_5 s + g_m)}{s(C_1 C_5 C_L L_L s^3 + C_1 C_5 C_L R_5 s^2 + C_1 C_5 s + C_1 C_L s + 2C_5 C_L L_L g_m s^2 + C_5 C_L R_5 g_m s + C_5 C_L s + 2C_5 g_m + C_L g_m)}$$

**10.200 INVALID-ORDER-200**  $Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} \right)$

$$H(s) = \frac{L_L s (C_5 R_5 g_m s - C_5 s + g_m)}{C_1 C_5 C_L L_L R_5 s^4 + C_1 C_5 L_L s^3 + C_1 C_5 R_5 s^2 + C_1 C_L L_L s^3 + C_1 s + C_5 C_L L_L R_5 g_m s^3 + C_5 C_L L_L s^3 + 2C_5 L_L g_m s^2 + C_5 R_5 g_m s + C_5 s + C_L L_L g_m s^2 + g_m}$$

**10.201 INVALID-ORDER-201**  $Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, L_L s + R_L + \frac{1}{C_L s} \right)$

$$H(s) = \frac{(C_L L_L s^2 + C_L R_L s + 1)(C_5 R_5 g_m s - C_5 s + g_m)}{s(C_1 C_5 C_L L_L s^3 + C_1 C_5 C_L R_5 s^2 + C_1 C_5 C_L R_L s^2 + C_1 C_5 s + C_1 C_L s + 2C_5 C_L L_L g_m s^2 + C_5 C_L R_5 g_m s + 2C_5 C_L R_L g_m s + C_5 C_L s + 2C_5 g_m + C_L g_m)}$$

**10.202 INVALID-ORDER-202**  $Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$

$$H(s) = \frac{L_L R_L s (C_5 R_5 g_m s - C_5 s + g_m)}{C_1 C_5 C_L L_L R_5 R_L s^4 + C_1 C_5 L_L R_5 s^3 + C_1 C_5 L_L R_L s^3 + C_1 C_5 R_5 R_L s^2 + C_1 C_L L_L R_L s^3 + C_1 L_L s^2 + C_1 R_L s + C_5 C_L L_L R_5 R_L g_m s^3 + C_5 C_L L_L R_L s^3 + C_5 L_L R_5 g_m s^2 + 2C_5 L_L R_L g_m s + C_5 R_L g_m s + C_5 g_m}$$

**10.203 INVALID-ORDER-203**  $Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$

$$H(s) = \frac{(C_5 R_5 g_m s - C_5 s + g_m)(C_L L_L R_L s^2 + L_L s + R_L)}{C_1 C_5 C_L L_L R_5 s^4 + C_1 C_5 C_L L_L R_L s^4 + C_1 C_5 L_L s^3 + C_1 C_5 R_5 s^2 + C_1 C_5 R_L s^2 + C_1 C_L L_L s^3 + C_1 s + C_5 C_L L_L R_5 g_m s^3 + 2C_5 C_L L_L R_L g_m s^3 + C_5 C_L L_L s^3 + 2C_5 L_L g_m s^2 + C_5 R_L g_m s + C_5 g_m}$$

$$10.204 \quad \text{INVALID-ORDER-204} \quad Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$$

$$H(s) = \frac{R_L (C_L L_L s^2 + 1) (C_5 R_5 g_m s - C_5 s + g_m)}{C_1 C_5 C_L L_L R_5 s^4 + C_1 C_5 C_L L_L R_L s^4 + C_1 C_5 C_L R_5 R_L s^3 + C_1 C_5 R_5 s^2 + C_1 C_5 R_L s^2 + C_1 C_L L_L s^3 + C_1 C_L R_L s^2 + C_1 s + C_5 C_L L_L R_5 g_m s^3 + 2 C_5 C_L L_L R_L g_m s^3 + C_5 C_L L_L s^3}$$

$$10.205 \quad \text{INVALID-ORDER-205} \quad Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, R_L \right)$$

$$H(s) = \frac{R_L (C_5 L_5 g_m s^2 - C_5 s + g_m)}{C_1 C_5 L_5 s^3 + C_1 C_5 R_L s^2 + C_1 s + C_5 L_5 g_m s^2 + 2 C_5 R_L g_m s + C_5 s + g_m}$$

$$10.206 \quad \text{INVALID-ORDER-206} \quad Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, \frac{1}{C_L s} \right)$$

$$H(s) = \frac{C_5 L_5 g_m s^2 - C_5 s + g_m}{s (C_1 C_5 C_L L_5 s^3 + C_1 C_5 s + C_1 C_L s + C_5 C_L L_5 g_m s^2 + C_5 C_L s + 2 C_5 g_m + C_L g_m)}$$

$$10.207 \quad \text{INVALID-ORDER-207} \quad Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, \frac{R_L}{C_L R_L s + 1} \right)$$

$$H(s) = \frac{R_L (C_5 L_5 g_m s^2 - C_5 s + g_m)}{C_1 C_5 C_L L_5 R_L s^4 + C_1 C_5 L_5 s^3 + C_1 C_5 R_L s^2 + C_1 C_L R_L s^2 + C_1 s + C_5 C_L L_5 R_L g_m s^3 + C_5 C_L R_L s^2 + C_5 L_5 g_m s^2 + 2 C_5 R_L g_m s + C_5 s + C_L R_L g_m s + g_m}$$

$$10.208 \quad \text{INVALID-ORDER-208} \quad Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{(C_L R_L s + 1) (C_5 L_5 g_m s^2 - C_5 s + g_m)}{s (C_1 C_5 C_L L_5 s^3 + C_1 C_5 C_L R_L s^2 + C_1 C_5 s + C_1 C_L s + C_5 C_L L_5 g_m s^2 + 2 C_5 C_L R_L g_m s + C_5 C_L s + 2 C_5 g_m + C_L g_m)}$$



**10.209 INVALID-ORDER-209**  $Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, L_L s + \frac{1}{C_L s} \right)$

$$H(s) = \frac{(C_L L_L s^2 + 1)(C_5 L_5 g_m s^2 - C_5 s + g_m)}{s(C_1 C_5 C_L L_5 s^3 + C_1 C_5 C_L L_L s^3 + C_1 C_5 s + C_1 C_L s + C_5 C_L L_5 g_m s^2 + 2C_5 C_L L_L g_m s^2 + C_5 C_L s + 2C_5 g_m + C_L g_m)}$$

**10.210 INVALID-ORDER-210**  $Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} \right)$

$$H(s) = \frac{L_L s (C_5 L_5 g_m s^2 - C_5 s + g_m)}{C_1 C_5 C_L L_5 L_L s^5 + C_1 C_5 L_5 s^3 + C_1 C_5 L_L s^3 + C_1 C_L L_L s^3 + C_1 s + C_5 C_L L_5 L_L g_m s^4 + C_5 C_L L_L s^3 + C_5 L_5 g_m s^2 + 2C_5 L_L g_m s^2 + C_5 s + C_L L_L g_m s^2 + g_m}$$

**10.211 INVALID-ORDER-211**  $Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, L_L s + R_L + \frac{1}{C_L s} \right)$

$$H(s) = \frac{(C_L L_L s^2 + C_L R_L s + 1)(C_5 L_5 g_m s^2 - C_5 s + g_m)}{s(C_1 C_5 C_L L_5 s^3 + C_1 C_5 C_L L_L s^3 + C_1 C_5 C_L R_L s^2 + C_1 C_5 s + C_1 C_L s + C_5 C_L L_5 g_m s^2 + 2C_5 C_L L_L g_m s^2 + 2C_5 C_L R_L g_m s + C_5 C_L s + 2C_5 g_m + C_L g_m)}$$

**10.212 INVALID-ORDER-212**  $Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$

$$H(s) = \frac{L_L R_L s (C_5 L_5 g_m s^2 - C_5 s + g_m)}{C_1 C_5 C_L L_5 L_L R_L s^5 + C_1 C_5 L_5 L_L s^4 + C_1 C_5 L_5 R_L s^3 + C_1 C_5 L_L R_L s^3 + C_1 C_L L_L R_L s^3 + C_1 L_L s^2 + C_1 R_L s + C_5 C_L L_5 L_L R_L g_m s^4 + C_5 C_L L_L R_L s^3 + C_5 L_5 L_L g_m s^3 + C_5 L_5 R_L s^2 + C_5 L_L g_m s^2 + C_5 g_m}$$

**10.213 INVALID-ORDER-213**  $Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$

$$H(s) = \frac{(C_5 L_5 g_m s^2 - C_5 s + g_m)(C_L L_L R_L s^2 + L_L s + R_L)}{C_1 C_5 C_L L_5 L_L s^5 + C_1 C_5 C_L L_L R_L s^4 + C_1 C_5 L_5 s^3 + C_1 C_5 L_L s^3 + C_1 C_5 R_L s^2 + C_1 C_L L_L s^3 + C_1 s + C_5 C_L L_5 L_L g_m s^4 + 2C_5 C_L L_L R_L g_m s^3 + C_5 C_L L_L s^3 + C_5 L_5 g_m s^2 + 2C_5 L_L g_m s^2 + C_5 g_m}$$

$$10.214 \quad \text{INVALID-ORDER-214} \quad Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$$

$$H(s) = \frac{R_L (C_L L_L s^2 + 1) (C_5 L_5 g_m s^2 - C_5 s + g_m)}{C_1 C_5 C_L L_5 L_L s^5 + C_1 C_5 C_L L_5 R_L s^4 + C_1 C_5 C_L L_L R_L s^4 + C_1 C_5 L_5 s^3 + C_1 C_5 R_L s^2 + C_1 C_L L_L s^3 + C_1 C_L R_L s^2 + C_1 s + C_5 C_L L_5 L_L g_m s^4 + C_5 C_L L_5 R_L g_m s^3 + 2 C_5 C_L L_L R_L g_m s^2 + C_5 C_L L_L g_m s + C_5 R_L g_m s + g_m}$$

$$10.215 \quad \text{INVALID-ORDER-215} \quad Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, R_L \right)$$

$$H(s) = \frac{R_L (-C_5 L_5 s^2 + L_5 g_m s - 1)}{C_1 C_5 L_5 R_L s^3 + C_1 L_5 s^2 + C_1 R_L s + 2 C_5 L_5 R_L g_m s^2 + C_5 L_5 s^2 + L_5 g_m s + 2 R_L g_m + 1}$$

$$10.216 \quad \text{INVALID-ORDER-216} \quad Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{1}{C_L s} \right)$$

$$H(s) = \frac{-C_5 L_5 s^2 + L_5 g_m s - 1}{C_1 C_5 L_5 s^3 + C_1 C_L L_5 s^3 + C_1 s + C_5 C_L L_5 s^3 + 2 C_5 L_5 g_m s^2 + C_L L_5 g_m s^2 + C_L s + 2 g_m}$$

$$10.217 \quad \text{INVALID-ORDER-217} \quad Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{R_L}{C_L R_L s + 1} \right)$$

$$H(s) = \frac{R_L (-C_5 L_5 s^2 + L_5 g_m s - 1)}{C_1 C_5 L_5 R_L s^3 + C_1 C_L L_5 R_L s^3 + C_1 L_5 s^2 + C_1 R_L s + C_5 C_L L_5 R_L s^3 + 2 C_5 L_5 R_L g_m s^2 + C_5 L_5 s^2 + C_L L_5 R_L g_m s^2 + C_L R_L s + L_5 g_m s + 2 R_L g_m + 1}$$

$$10.218 \quad \text{INVALID-ORDER-218} \quad Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, R_L + \frac{1}{C_L s} \right)$$

$$H(s) = - \frac{(C_L R_L s + 1) (C_5 L_5 s^2 - L_5 g_m s + 1)}{C_1 C_5 C_L L_5 R_L s^4 + C_1 C_5 L_5 s^3 + C_1 C_L L_5 s^3 + C_1 C_L R_L s^2 + C_1 s + 2 C_5 C_L L_5 R_L g_m s^3 + C_5 C_L L_5 s^3 + 2 C_5 L_5 g_m s^2 + C_L L_5 g_m s^2 + 2 C_L R_L g_m s + C_L s + 2 g_m}$$

**10.219 INVALID-ORDER-219**  $Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, L_L s + \frac{1}{C_L s} \right)$

$$H(s) = - \frac{(C_L L_L s^2 + 1)(C_5 L_5 s^2 - L_5 g_m s + 1)}{C_1 C_5 C_L L_5 L_L s^5 + C_1 C_5 L_5 s^3 + C_1 C_L L_5 s^3 + C_1 C_L L_L s^3 + C_1 s + 2C_5 C_L L_5 L_L g_m s^4 + C_5 C_L L_5 s^3 + 2C_5 L_5 g_m s^2 + C_L L_5 g_m s^2 + 2C_L L_L g_m s^2 + C_L s + 2g_m}$$

**10.220 INVALID-ORDER-220**  $Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{L_L s}{C_L L_L s^2 + 1} \right)$

$$H(s) = \frac{L_L s (-C_5 L_5 s^2 + L_5 g_m s - 1)}{C_1 C_5 L_5 L_L s^4 + C_1 C_L L_5 L_L s^4 + C_1 L_5 s^2 + C_1 L_L s^2 + C_5 C_L L_5 L_L s^4 + 2C_5 L_5 L_L g_m s^3 + C_5 L_5 s^2 + C_L L_5 L_L g_m s^3 + C_L L_L s^2 + L_5 g_m s + 2L_L g_m s + 1}$$

**10.221 INVALID-ORDER-221**  $Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, L_L s + R_L + \frac{1}{C_L s} \right)$

$$H(s) = - \frac{(C_5 L_5 s^2 - L_5 g_m s + 1)(C_L L_L s^2 + C_L R_L s + 1)}{C_1 C_5 C_L L_5 L_L s^5 + C_1 C_5 C_L L_5 R_L s^4 + C_1 C_5 L_5 s^3 + C_1 C_L L_5 s^3 + C_1 C_L L_L s^3 + C_1 C_L R_L s^2 + C_1 s + 2C_5 C_L L_5 L_L g_m s^4 + 2C_5 C_L L_5 R_L g_m s^3 + C_5 C_L L_5 s^3 + 2C_5 L_5 g_m s^2 + C_L L_5 s^2 + C_L R_L s + 2g_m}$$

**10.222 INVALID-ORDER-222**  $Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$

$$H(s) = \frac{L_L R_L s (-C_5 L_5 s^2 + L_5 g_m s - 1)}{C_1 C_5 L_5 L_L R_L s^4 + C_1 C_L L_5 L_L R_L s^4 + C_1 L_5 L_L s^3 + C_1 L_5 R_L s^2 + C_1 L_L R_L s^2 + C_5 C_L L_5 L_L R_L s^4 + 2C_5 L_5 L_L R_L g_m s^3 + C_5 L_5 L_L s^3 + C_5 L_5 R_L s^2 + C_L L_5 L_L R_L g_m s^3 + C_L L_L s^2 + L_5 g_m s + 2L_L g_m s + 1}$$

**10.223 INVALID-ORDER-223**  $Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$

$$H(s) = - \frac{(C_5 L_5 s^2 - L_5 g_m s + 1)(C_L L_L R_L s^2 + L_L s + R_L)}{C_1 C_5 C_L L_5 L_L R_L s^5 + C_1 C_5 L_5 L_L s^4 + C_1 C_5 L_5 R_L s^3 + C_1 C_L L_5 L_L s^4 + C_1 C_L L_L R_L s^3 + C_1 L_5 s^2 + C_1 L_L s^2 + C_1 R_L s + 2C_5 C_L L_5 L_L R_L g_m s^4 + C_5 C_L L_5 L_L s^4 + 2C_5 L_5 L_L g_m s^2 + C_L L_5 L_L R_L g_m s^3 + C_L L_L s^2 + L_5 g_m s + 2L_L g_m s + 1}$$

$$10.224 \quad \text{INVALID-ORDER-224} \quad Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$$

$$H(s) = - \frac{R_L (C_L L_L s^2 + 1) (C_5 L_5 s^2 - L_5 g_m s + 1)}{C_1 C_5 C_L L_5 L_L R_L s^5 + C_1 C_5 L_5 R_L s^3 + C_1 C_L L_5 L_L s^4 + C_1 C_L L_5 R_L s^3 + C_1 C_L L_L R_L s^3 + C_1 L_5 s^2 + C_1 R_L s + 2 C_5 C_L L_5 L_L R_L g_m s^4 + C_5 C_L L_5 L_L s^4 + C_5 C_L L_5 R_L s^3 + 2 C_5 L_5 g_m s^2 + C_5 R_5 g_m s - C_5 s + g_m}$$

$$10.225 \quad \text{INVALID-ORDER-225} \quad Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, R_L \right)$$

$$H(s) = \frac{R_L (C_5 L_5 g_m s^2 + C_5 R_5 g_m s - C_5 s + g_m)}{C_1 C_5 L_5 s^3 + C_1 C_5 R_5 s^2 + C_1 C_5 R_L s^2 + C_1 s + C_5 L_5 g_m s^2 + C_5 R_5 g_m s + 2 C_5 R_L g_m s + C_5 s + g_m}$$

$$10.226 \quad \text{INVALID-ORDER-226} \quad Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{1}{C_L s} \right)$$

$$H(s) = \frac{C_5 L_5 g_m s^2 + C_5 R_5 g_m s - C_5 s + g_m}{s (C_1 C_5 C_L L_5 s^3 + C_1 C_5 C_L R_5 s^2 + C_1 C_5 s + C_1 C_L s + C_5 C_L L_5 g_m s^2 + C_5 C_L R_5 g_m s + C_5 C_L s + 2 C_5 g_m + C_L g_m)}$$

$$10.227 \quad \text{INVALID-ORDER-227} \quad Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{R_L}{C_L R_L s + 1} \right)$$

$$H(s) = \frac{R_L (C_5 L_5 g_m s^2 + C_5 R_5 g_m s - C_5 s + g_m)}{C_1 C_5 C_L L_5 R_L s^4 + C_1 C_5 C_L R_5 R_L s^3 + C_1 C_5 L_5 s^3 + C_1 C_5 R_5 s^2 + C_1 C_5 R_L s^2 + C_1 C_L R_L s^2 + C_1 s + C_5 C_L L_5 R_L g_m s^3 + C_5 C_L R_5 R_L g_m s^2 + C_5 C_L R_L s^2 + C_5 L_5 g_m s^2 + C_5 R_5 g_m s - C_5 s + g_m}$$

$$10.228 \quad \text{INVALID-ORDER-228} \quad Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{(C_L R_L s + 1) (C_5 L_5 g_m s^2 + C_5 R_5 g_m s - C_5 s + g_m)}{s (C_1 C_5 C_L L_5 s^3 + C_1 C_5 C_L R_5 s^2 + C_1 C_5 C_L R_L s^2 + C_1 C_5 s + C_1 C_L s + C_5 C_L L_5 g_m s^2 + C_5 C_L R_5 g_m s + 2 C_5 C_L R_L g_m s + C_5 C_L s + 2 C_5 g_m + C_L g_m)}$$

$$10.229 \quad \text{INVALID-ORDER-229} \quad Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, L_L s + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{(C_L L_L s^2 + 1)(C_5 L_5 g_m s^2 + C_5 R_5 g_m s - C_5 s + g_m)}{s(C_1 C_5 C_L L_5 s^3 + C_1 C_5 C_L L_L s^3 + C_1 C_5 C_L R_5 s^2 + C_1 C_5 s + C_1 C_L s + C_5 C_L L_5 g_m s^2 + 2C_5 C_L L_L g_m s^2 + C_5 C_L R_5 g_m s + C_5 C_L s + 2C_5 g_m + C_L g_m)}$$

$$10.230 \quad \text{INVALID-ORDER-230} \quad Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} \right)$$

$$H(s) = \frac{L_L s (C_5 L_5 g_m s^2 + C_5 R_5 g_m s - C_5 s + g_m)}{C_1 C_5 C_L L_5 L_L s^5 + C_1 C_5 C_L L_L R_5 s^4 + C_1 C_5 L_5 s^3 + C_1 C_5 L_L s^3 + C_1 C_5 R_5 s^2 + C_1 C_L L_L s^3 + C_1 s + C_5 C_L L_5 L_L g_m s^4 + C_5 C_L L_L R_5 g_m s^3 + C_5 C_L L_L s^3 + C_5 L_5 g_m s^2 + 2C_5 L_L g_m s + C_5 R_5 g_m s - C_5 s + g_m}$$

$$10.231 \quad \text{INVALID-ORDER-231} \quad Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, L_L s + R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{(C_L L_L s^2 + C_L R_L s + 1)(C_5 L_5 g_m s^2 + C_5 R_5 g_m s - C_5 s + g_m)}{s(C_1 C_5 C_L L_5 s^3 + C_1 C_5 C_L L_L s^3 + C_1 C_5 C_L R_5 s^2 + C_1 C_5 C_L R_L s^2 + C_1 C_5 s + C_1 C_L s + C_5 C_L L_5 g_m s^2 + 2C_5 C_L L_L g_m s^2 + C_5 C_L R_5 g_m s + 2C_5 C_L R_L g_m s + C_5 C_L s + 2C_5 g_m + C_L g_m)}$$

$$10.232 \quad \text{INVALID-ORDER-232} \quad Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$$

$$H(s) = \frac{L_L R_L s (C_5 L_5 g_m s^2 + C_5 R_5 g_m s - C_5 s + g_m)}{C_1 C_5 C_L L_5 L_L R_L s^5 + C_1 C_5 C_L L_L R_5 R_L s^4 + C_1 C_5 L_5 L_L s^4 + C_1 C_5 L_5 R_L s^3 + C_1 C_5 L_L R_5 s^3 + C_1 C_5 L_L R_L s^3 + C_1 C_5 R_5 R_L s^2 + C_1 C_L L_L R_L s^3 + C_1 L_L s^2 + C_1 R_L s + C_5 C_L L_5 g_m s^4 + C_5 C_L L_L R_5 g_m s^3 + C_5 C_L L_L R_L g_m s^2 + C_5 C_L R_5 g_m s - C_5 s + g_m}$$

$$10.233 \quad \text{INVALID-ORDER-233} \quad Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$$

$$H(s) = \frac{(C_L L_L R_L s^2 + L_L s + R_L)(C_5 L_5 g_m s^2 + C_5 R_5 g_m s - C_5 s + g_m)}{C_1 C_5 C_L L_5 L_L s^5 + C_1 C_5 C_L L_L R_5 s^4 + C_1 C_5 C_L L_L R_L s^4 + C_1 C_5 L_5 s^3 + C_1 C_5 L_L s^3 + C_1 C_5 R_5 s^2 + C_1 C_5 R_L s^2 + C_1 C_L L_L s^3 + C_1 s + C_5 C_L L_5 L_L g_m s^4 + C_5 C_L L_L R_5 g_m s^3 + 2C_5 C_L L_L R_L g_m s^2 + C_5 C_L R_5 g_m s - C_5 s + g_m}$$

$$10.234 \quad \text{INVALID-ORDER-234} \quad Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$$

$$H(s) = \frac{R_L (C_L L_L s^2}{C_1 C_5 C_L L_5 L_L s^5 + C_1 C_5 C_L L_5 R_L s^4 + C_1 C_5 C_L L_L R_5 s^4 + C_1 C_5 C_L L_L R_L s^4 + C_1 C_5 C_L R_5 R_L s^3 + C_1 C_5 L_5 s^3 + C_1 C_5 R_5 s^2 + C_1 C_5 R_L s^2 + C_1 C_L L_L s^3 + C_1 C_L R_L s^2 + C_1 s + C_5}$$

$$10.235 \quad \text{INVALID-ORDER-235} \quad Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, R_L \right)$$

$$H(s) = \frac{R_L (-C_5 L_5 R_5 s^2 + L_5 R_5 g_m s - L_5 s - R_5)}{C_1 C_5 L_5 R_5 R_L s^3 + C_1 L_5 R_5 s^2 + C_1 L_5 R_L s^2 + C_1 R_5 R_L s + 2C_5 L_5 R_5 R_L g_m s^2 + C_5 L_5 R_5 s^2 + L_5 R_5 g_m s + 2L_5 R_L g_m s + L_5 s + 2R_5 R_L g_m + R_5}$$

$$10.236 \quad \text{INVALID-ORDER-236} \quad Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{1}{C_L s} \right)$$

$$H(s) = \frac{-C_5 L_5 R_5 s^2 + L_5 R_5 g_m s - L_5 s - R_5}{C_1 C_5 L_5 R_5 s^3 + C_1 C_L L_5 R_5 s^3 + C_1 L_5 s^2 + C_1 R_5 s + C_5 C_L L_5 R_5 s^3 + 2C_5 L_5 R_5 g_m s^2 + C_L L_5 R_5 g_m s^2 + C_L L_5 s^2 + C_L R_5 s + 2L_5 g_m s + 2R_5 g_m}$$

$$10.237 \quad \text{INVALID-ORDER-237} \quad Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{R_L}{C_L R_L s + 1} \right)$$

$$H(s) = \frac{R_L (-C_5 L_5 R_5 s^2 + L_5 R_5 g_m s - L_5 s - R_5)}{C_1 C_5 L_5 R_5 R_L s^3 + C_1 C_L L_5 R_5 R_L s^3 + C_1 L_5 R_5 s^2 + C_1 L_5 R_L s^2 + C_1 R_5 R_L s + C_5 C_L L_5 R_5 R_L s^3 + 2C_5 L_5 R_5 R_L g_m s^2 + C_5 L_5 R_5 s^2 + C_L L_5 R_5 R_L g_m s^2 + C_L L_5 R_L s^2 + C_L R_5 R_L}$$

$$10.238 \quad \text{INVALID-ORDER-238} \quad Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, R_L + \frac{1}{C_L s} \right)$$

$$H(s) = -\frac{(C_L R_L s + 1) (C_5 L_5 R_5 s^2 - L_5 R_5 g_m s + L_5 s + R_5)}{C_1 C_5 C_L L_5 R_5 R_L s^4 + C_1 C_5 L_5 R_5 s^3 + C_1 C_L L_5 R_5 s^3 + C_1 C_L L_5 R_L s^3 + C_1 C_L R_5 R_L s^2 + C_1 L_5 s^2 + C_1 R_5 s + 2C_5 C_L L_5 R_5 R_L g_m s^3 + C_5 C_L L_5 R_5 s^3 + 2C_5 L_5 R_5 g_m s^2 + C_L L_5 R_5}$$

**10.239 INVALID-ORDER-239**  $Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, L_L s + \frac{1}{C_L s} \right)$

$$H(s) = -\frac{(C_L L_L s^2 + 1)(C_5 L_5 R_5 s^2 - L_5 R_5 g_m s + L_5 s + R_5)}{C_1 C_5 C_L L_5 L_L R_5 s^5 + C_1 C_5 L_5 R_5 s^3 + C_1 C_L L_5 L_L s^4 + C_1 C_L L_5 R_5 s^3 + C_1 C_L L_L R_5 s^3 + C_1 L_5 s^2 + C_1 R_5 s + 2 C_5 C_L L_5 L_L R_5 g_m s^4 + C_5 C_L L_5 R_5 s^3 + 2 C_5 L_5 R_5 g_m s^2 + 2 C_L L_5}$$

**10.240 INVALID-ORDER-240**  $Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{L_L s}{C_L L_L s^2 + 1} \right)$

$$H(s) = \frac{L_L s (-C_5 L_5 R_5 s^2 + L_5 R_5 g_m s - L_5 s - R_5)}{C_1 C_5 L_5 L_L R_5 s^4 + C_1 C_L L_5 L_L R_5 s^4 + C_1 L_5 L_L s^3 + C_1 L_5 R_5 s^2 + C_1 L_L R_5 s^2 + C_5 C_L L_5 L_L R_5 s^4 + 2C_5 L_5 L_L R_5 g_m s^3 + C_5 L_5 R_5 s^2 + C_L L_5 L_L R_5 g_m s^3 + C_L L_5 L_L s^3 + C_L L_L R_5 s^2}$$

10.241 INVALID-ORDER-241  $Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, L_L s + R_L + \frac{1}{C_L s} \right)$

$$H(s) = -\frac{(C_L L_L s^2 + C_L R)}{C_1 C_5 C_L L_5 L_L R_5 s^5 + C_1 C_5 C_L L_5 R_5 R_L s^4 + C_1 C_5 L_5 R_5 s^3 + C_1 C_L L_5 L_L s^4 + C_1 C_L L_5 R_5 s^3 + C_1 C_L L_5 R_L s^3 + C_1 C_L L_L R_5 s^3 + C_1 C_L R_5 R_L s^2 + C_1 L_5 s^2 + C_1 R_5 s + 2C_5 C_L L}$$

10.242 INVALID-ORDER-242  $Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$

$$H(s) = \frac{L_L R_L s (-C_5 L_5 R_5 s^2 + C_1 C_5 L_5 L_L R_5 R_L s^4 + C_1 C_L L_5 L_L R_5 R_L s^4 + C_1 L_5 L_L R_5 s^3 + C_1 L_5 L_L R_L s^3 + C_1 L_5 R_5 R_L s^2 + C_1 L_L R_5 R_L s^2 + C_5 C_L L_5 L_L R_5 R_L s^4 + 2C_5 L_5 L_L R_5 R_L q_m s^3 + C_5 L_5 L_L R_5 s^3 +$$

10.243 INVALID-ORDER-243  $Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$

$$H(s) = -\frac{1}{C_1 C_5 C_L L_5 L_L R_5 R_L s^5 + C_1 C_5 L_5 L_L R_5 s^4 + C_1 C_5 L_5 R_5 R_L s^3 + C_1 C_L L_5 L_L R_5 s^4 + C_1 C_L L_5 L_L R_L s^4 + C_1 C_L L_L R_5 R_L s^3 + C_1 L_5 L_L s^3 + C_1 L_5 R_5 s^2 + C_1 L_5 R_L s^2 + C_1 L_L R_5}$$

10.244 INVALID-ORDER-244  $Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$

$$H(s) = -\frac{1}{C_1 C_5 C_L L_5 L_L R_5 R_L s^5 + C_1 C_5 L_5 R_5 R_L s^3 + C_1 C_L L_5 L_L R_5 s^4 + C_1 C_L L_5 L_L R_L s^4 + C_1 C_L L_5 R_5 R_L s^3 + C_1 C_L L_L R_5 R_L s^3 + C_1 L_5 R_5 s^2 + C_1 L_5 R_L s^2 + C_1 R_5 R_L s + 2 C_5 C_L L}$$

**10.245 INVALID-ORDER-245**  $Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, R_L \right)$

$$H(s) = \frac{R_L (C_5 L_5 R_5 g_m s^2 - C_5 L_5 s^2 + L_5 g_m s + R_5 g_m - 1)}{C_1 C_5 L_5 R_5 s^3 + C_1 C_5 L_5 R_L s^3 + C_1 L_5 s^2 + C_1 R_5 s + C_1 R_L s + C_5 L_5 R_5 q_m s^2 + 2 C_5 L_5 R_L q_m s^2 + C_5 L_5 s^2 + L_5 q_m s + R_5 q_m + 2 R_L q_m + 1}$$

**10.246 INVALID-ORDER-246**  $Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{1}{C_L s} \right)$

$$H(s) = \frac{C_5 L_5 R_5 g_m s^2 - C_5 L_5 s^2 + L_5 g_m s + R_5 g_m - 1}{C_1 C_5 C_L L_5 R_5 s^4 + C_1 C_5 L_5 s^3 + C_1 C_L L_5 s^3 + C_1 C_L R_5 s^2 + C_1 s + C_5 C_L L_5 R_5 g_m s^3 + C_5 C_L L_5 s^3 + 2C_5 L_5 g_m s^2 + C_L L_5 g_m s^2 + C_L R_5 g_m s + C_L s + 2g_m}$$

**10.247 INVALID-ORDER-247**  $Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{R_L}{C_L R_L s + 1} \right)$

$$H(s) = \frac{R_L (C_5 L_5 R_5 g_m s^2 - C_5 L_5 s^2 + L_5 g_m s + R_5 g_m - 1)}{C_1 C_5 C_L L_5 R_5 R_L s^4 + C_1 C_5 L_5 R_5 s^3 + C_1 C_5 L_5 R_L s^3 + C_1 C_L L_5 R_L s^3 + C_1 C_L R_5 R_L s^2 + C_1 L_5 s^2 + C_1 R_5 s + C_1 R_L s + C_5 C_L L_5 R_5 R_L g_m s^3 + C_5 C_L L_5 R_L s^3 + C_5 L_5 R_5 g_m s^2 +}$$

**10.248 INVALID-ORDER-248**  $Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, R_L + \frac{1}{C_L s} \right)$

$$H(s) = \frac{(C_L R_L s + 1)(C_5 L_5 R_5 g_m s^2 - C_5 L_5 s^2 + L_5 g_m s + R_5 g_m - 1)}{C_1 C_5 C_L L_5 R_5 s^4 + C_1 C_5 C_L L_5 R_L s^4 + C_1 C_5 L_5 s^3 + C_1 C_L L_5 s^3 + C_1 C_L R_5 s^2 + C_1 C_L R_L s^2 + C_1 s + C_5 C_L L_5 R_5 g_m s^3 + 2C_5 C_L L_5 R_L g_m s^3 + C_5 C_L L_5 s^3 + 2C_5 L_5 g_m s^2 + C_L L_5$$



$$10.249 \quad \text{INVALID-ORDER-249} \quad Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, L_L s + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{(C_L L_L s^2 + 1) (C_5 L_5 R_5 g_m s^2 - C_5 L_5 s^2 + L_5 g_m s + R_5 g_m - 1)}{C_1 C_5 C_L L_5 L_L s^5 + C_1 C_5 C_L L_5 R_5 s^4 + C_1 C_5 L_5 s^3 + C_1 C_L L_5 s^3 + C_1 C_L L_L s^3 + C_1 C_L R_5 s^2 + C_1 s + 2 C_5 C_L L_5 L_L g_m s^4 + C_5 C_L L_5 R_5 g_m s^3 + C_5 C_L L_5 s^3 + 2 C_5 L_5 g_m s^2 + C_L L_5 s}$$

$$10.250 \quad \text{INVALID-ORDER-250} \quad Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{L_L s}{C_L L_L s^2 + 1} \right)$$

$$H(s) = \frac{L_L s (C_5 L_5 R_5 g_m s^2 - C_5 L_5 s^2 + L_5 g_m s + R_5 g_m - 1)}{C_1 C_5 C_L L_5 L_L R_5 s^5 + C_1 C_5 L_5 L_L s^4 + C_1 C_5 L_5 R_5 s^3 + C_1 C_L L_5 L_L s^4 + C_1 C_L L_L R_5 s^3 + C_1 L_5 s^2 + C_1 L_L s^2 + C_1 R_5 s + C_5 C_L L_5 L_L R_5 g_m s^4 + C_5 C_L L_5 L_L s^4 + 2 C_5 L_5 L_L g_m s^3 + C_5 L_5 s^3 + 2 C_5 L_5 g_m s^2 + C_L L_5 s}$$

$$10.251 \quad \text{INVALID-ORDER-251} \quad Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, L_L s + R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{(C_L L_L s^2 + C_L R_L s + 1) (C_5 L_5 R_5 g_m s^2 - C_5 L_5 s^2 + L_5 g_m s + R_5 g_m - 1)}{C_1 C_5 C_L L_5 L_L s^5 + C_1 C_5 C_L L_5 R_5 s^4 + C_1 C_5 C_L L_5 R_L s^4 + C_1 C_5 L_5 s^3 + C_1 C_L L_5 s^3 + C_1 C_L L_L s^3 + C_1 C_L R_5 s^2 + C_1 C_L R_L s^2 + C_1 s + 2 C_5 C_L L_5 L_L g_m s^4 + C_5 C_L L_5 R_5 g_m s^3 + 2 C_5 L_5 g_m s^2 + C_L L_5 s}$$

$$10.252 \quad \text{INVALID-ORDER-252} \quad Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$$

$$H(s) = \frac{(C_L L_L s^2 + C_L R_L s + 1) (C_5 L_5 R_5 g_m s^2 - C_5 L_5 s^2 + L_5 g_m s + R_5 g_m - 1)}{C_1 C_5 C_L L_5 L_L R_5 R_L s^5 + C_1 C_5 L_5 L_L R_5 s^4 + C_1 C_5 L_5 L_L R_L s^4 + C_1 C_5 L_5 R_5 R_L s^3 + C_1 C_L L_5 L_L R_L s^4 + C_1 C_L L_L R_5 R_L s^3 + C_1 L_5 L_L s^3 + C_1 L_5 R_L s^2 + C_1 L_L R_5 s^2 + C_1 L_L R_L s}$$

$$10.253 \quad \text{INVALID-ORDER-253} \quad Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$$

$$H(s) = \frac{(C_L L_L s^2 + C_L R_L s + 1) (C_5 L_5 R_5 g_m s^2 - C_5 L_5 s^2 + L_5 g_m s + R_5 g_m - 1)}{C_1 C_5 C_L L_5 L_L R_5 s^5 + C_1 C_5 C_L L_5 L_L R_L s^5 + C_1 C_5 L_5 L_L s^4 + C_1 C_5 L_5 R_5 s^3 + C_1 C_5 L_5 R_L s^3 + C_1 C_L L_5 L_L s^4 + C_1 C_L L_L R_5 s^3 + C_1 C_L L_L R_L s^3 + C_1 L_5 s^2 + C_1 L_L s^2 + C_1 R_5 s + C_1 R_L s}$$

10.254 INVALID-ORDER-254  $Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$

$$H(s) = \frac{1}{C_1 C_5 C_L L_5 L_L R_5 s^5 + C_1 C_5 C_L L_5 L_L R_L s^5 + C_1 C_5 C_L L_5 R_5 R_L s^4 + C_1 C_5 L_5 R_5 s^3 + C_1 C_5 L_5 R_L s^3 + C_1 C_L L_5 L_L s^4 + C_1 C_L L_5 R_L s^3 + C_1 C_L L_L R_5 s^3 + C_1 C_L L_L R_L s^3 + C_1 C_L R_5 s^2 + C_1 C_L R_L s^2 + C_1 L_5 L_L s^3 + C_1 L_5 R_5 s^2 + C_1 L_5 R_L s^2 + C_1 L_L R_5 s^2 + C_1 L_L R_L s^2 + C_5 L_5 L_L s^3 + C_5 L_5 R_5 s^2 + C_5 L_5 R_L s^2 + C_5 L_L R_5 s^2 + C_5 L_L R_L s^2 + R_5 s + R_L s + 1}$$

**10.255 INVALID-ORDER-255**  $Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, R_L \right)$

$$H(s) = \frac{R_L (C_5 L_5 R_5 g_m s^2 - C_5 L_5 s^2 - C_5 R_5 s + R_5 g_m - 1)}{C_1 C_5 L_5 R_5 s^3 + C_1 C_5 L_5 R_L s^3 + C_1 C_5 R_5 R_L s^2 + C_1 R_5 s + C_1 R_L s + C_5 L_5 R_5 g_m s^2 + 2C_5 L_5 R_L g_m s^2 + C_5 L_5 s^2 + 2C_5 R_5 R_L g_m s + C_5 R_5 s + R_5 g_m + 2R_L g_m + 1}$$

**10.256 INVALID-ORDER-256**  $Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{1}{C_L s} \right)$

$$H(s) = \frac{C_5 L_5 R_5 g_m s^2 - C_5 L_5 s^2 - C_5 R_5 s + R_5 g_m - 1}{C_1 C_5 C_L L_5 R_5 s^4 + C_1 C_5 L_5 s^3 + C_1 C_5 R_5 s^2 + C_1 C_L R_5 s^2 + C_1 s + C_5 C_L L_5 R_5 g_m s^3 + C_5 C_L L_5 s^3 + C_5 C_L R_5 s^2 + 2C_5 L_5 g_m s^2 + 2C_5 R_5 g_m s + C_L R_5 g_m s + C_L s + 2g_m}$$

10.257 INVALID-ORDER-257  $Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{R_L}{C_L R_L s + 1} \right)$

$$H(s) = \frac{R_L (C_5 L_5 R_5 g_m s^2 - C_5 L_5 s^2 - C_5 R_5 s + R_5 g_m - 1)}{C_1 C_5 C_L L_5 R_5 R_L s^4 + C_1 C_5 L_5 R_5 s^3 + C_1 C_5 L_5 R_L s^3 + C_1 C_5 R_5 R_L s^2 + C_1 C_L R_5 R_L s^2 + C_1 R_5 s + C_1 R_L s + C_5 C_L L_5 R_5 R_L g_m s^3 + C_5 C_L L_5 R_L s^3 + C_5 C_L R_5 R_L s^2 + C_5 L_5 R_5 g_m}$$

10.258 INVALID-ORDER-258  $Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, R_L + \frac{1}{C_L s} \right)$

$$H(s) = -\frac{(C_L R_L s + 1)(-C_5 L_5 R_5 g_m s^2 + C_5 L_5 s^2 + C_5 R_5 s - R_5 g_m + 1)}{C_1 C_5 C_L L_5 R_5 s^4 + C_1 C_5 C_L L_5 R_L s^4 + C_1 C_5 C_L R_5 R_L s^3 + C_1 C_5 L_5 s^3 + C_1 C_5 R_5 s^2 + C_1 C_L R_5 s^2 + C_1 C_L R_L s^2 + C_1 s + C_5 C_L L_5 R_5 g_m s^3 + 2C_5 C_L L_5 R_L g_m s^3 + C_5 C_L L_5 s^3 +$$

$$\mathbf{10.259 \quad INVALID-ORDER-259} \quad Z(s) = \left( \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \infty, \quad \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \quad L_L s + \frac{1}{C_L s} \right)$$

$$H(s) = - \frac{(C_L L_L s^2 + 1) (-C_5 L_5 R_5 g_m s^2 + C_5 L_5 s^2 + C_5 R_5 s - R_5 g_m + 1)}{C_1 C_5 C_L L_5 L_L s^5 + C_1 C_5 C_L L_5 R_5 s^4 + C_1 C_5 C_L L_L R_5 s^4 + C_1 C_5 L_5 s^3 + C_1 C_5 R_5 s^2 + C_1 C_L L_L s^3 + C_1 C_L R_5 s^2 + C_1 s + 2 C_5 C_L L_5 L_L g_m s^4 + C_5 C_L L_5 R_5 g_m s^3 + C_5 C_L L_5 s^3 +}$$

$$\mathbf{10.260 \quad INVALID-ORDER-260} \quad Z(s) = \left( \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \infty, \quad \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \quad \frac{L_L s}{C_L L_L s^2 + 1} \right)$$

$$H(s) = \frac{L_L s (C_5 L_5 R_5 g_m s^2 - C_5 L_5 s^2 - C_5 R_5 s + R_5 g_m - 1)}{C_1 C_5 C_L L_5 L_L R_5 s^5 + C_1 C_5 L_5 L_L s^4 + C_1 C_5 L_5 R_5 s^3 + C_1 C_5 L_L R_5 s^3 + C_1 C_L L_L R_5 s^3 + C_1 L_L s^2 + C_1 R_5 s + C_5 C_L L_5 L_L R_5 g_m s^4 + C_5 C_L L_5 L_L s^4 + C_5 C_L L_L R_5 s^3 + 2 C_5 L_5 L_L s^3 +}$$

$$\mathbf{10.261 \quad INVALID-ORDER-261} \quad Z(s) = \left( \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \infty, \quad \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \quad L_L s + R_L + \frac{1}{C_L s} \right)$$

$$H(s) = - \frac{(C_L L_L s^2 + C_L R_L)}{C_1 C_5 C_L L_5 L_L s^5 + C_1 C_5 C_L L_5 R_5 s^4 + C_1 C_5 C_L L_5 R_L s^4 + C_1 C_5 C_L L_L R_5 s^4 + C_1 C_5 C_L R_5 R_L s^3 + C_1 C_5 L_5 s^3 + C_1 C_5 R_5 s^2 + C_1 C_L L_L s^3 + C_1 C_L R_5 s^2 + C_1 C_L R_L s^2 + C_1 s +}$$

$$\mathbf{10.262 \quad INVALID-ORDER-262} \quad Z(s) = \left( \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \infty, \quad \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \quad \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$$

$$H(s) = \frac{1}{C_1 C_5 C_L L_5 L_L R_5 R_L s^5 + C_1 C_5 L_5 L_L R_5 s^4 + C_1 C_5 L_5 L_L R_L s^4 + C_1 C_5 L_5 R_5 R_L s^3 + C_1 C_5 L_L R_5 R_L s^3 + C_1 C_L L_L R_5 R_L s^3 + C_1 L_L R_5 s^2 + C_1 L_L R_L s^2 + C_1 R_5 R_L s + C_5 C_L L_5 L_L s^3 +}$$

$$\mathbf{10.263 \quad INVALID-ORDER-263} \quad Z(s) = \left( \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \infty, \quad \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \quad \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$$

$$H(s) = - \frac{1}{C_1 C_5 C_L L_5 L_L R_5 s^5 + C_1 C_5 C_L L_5 L_L R_L s^5 + C_1 C_5 C_L L_L R_5 R_L s^4 + C_1 C_5 L_5 L_L s^4 + C_1 C_5 L_5 R_5 s^3 + C_1 C_5 L_5 R_L s^3 + C_1 C_5 L_L R_5 s^3 + C_1 C_5 R_5 R_L s^2 + C_1 C_L L_L R_5 s^3 + C_1 C_L R_5 s^2 + C_1 C_L R_L s^2 + C_1 s +}$$

10.264 INVALID-ORDER-264  $Z(s) = \left( \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$

$$H(s) = -\frac{C_1 C_5 C_L L_5 L_L R_5 s^5 + C_1 C_5 C_L L_5 L_L R_L s^5 + C_1 C_5 C_L L_5 R_5 R_L s^4 + C_1 C_5 C_L L_L R_5 R_L s^4 + C_1 C_5 L_5 R_5 s^3 + C_1 C_5 L_5 R_L s^3 + C_1 C_5 R_5 R_L s^2 + C_1 C_L L_L R_5 s^3 + C_1 C_L L_L R_L s^3 +$$

**10.265 INVALID-ORDER-265**  $Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, R_5, R_L \right)$

$$H(s) = \frac{R_1 R_L (R_5 g_m - 1)}{C_1 R_1 R_5 s + C_1 R_1 R_L s + R_1 R_5 q_m + 2 R_1 R_L q_m + R_1 + R_5 + R_L}$$

**10.266 INVALID-ORDER-266**  $Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, R_5, L_L s + \frac{1}{C_L s} \right)$

$$H(s) = \frac{R_1 (R_5 g_m - 1) (C_L L_L s^2 + 1)}{C_1 C_L L_L R_1 s^3 + C_1 C_L R_1 R_5 s^2 + C_1 R_1 s + 2 C_L L_L R_1 g_m s^2 + C_L L_L s^2 + C_L R_1 R_5 g_m s + C_L R_1 s + C_L R_5 s + 2 R_1 g_m + 1}$$

**10.267 INVALID-ORDER-267**  $Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, R_5, \frac{L_L s}{C_L L_L s^2 + 1} \right)$

$$H(s) = \frac{L_L R_1 s (R_5 g_m - 1)}{C_1 C_L L_L R_1 R_5 s^3 + C_1 L_L R_1 s^2 + C_1 R_1 R_5 s + C_L L_L R_1 R_5 g_m s^2 + C_L L_L R_1 s^2 + C_L L_L R_5 s^2 + 2 L_L R_1 g_m s + L_L s + R_1 R_5 g_m + R_1 + R_5}$$

**10.268 INVALID-ORDER-268**  $Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, R_5, L_L s + R_L + \frac{1}{C_L s} \right)$

$$H(s) = \frac{R_1 (R_5 g_m - 1) (C_L L_L s^2 + C_L R_L s + 1)}{C_1 C_L L_L R_1 s^3 + C_1 C_L R_1 R_5 s^2 + C_1 C_L R_1 R_L s^2 + C_1 R_1 s + 2 C_L L_L R_1 g_m s^2 + C_L L_L s^2 + C_L R_1 R_5 g_m s + 2 C_L R_1 R_L g_m s + C_L R_1 s + C_L R_5 s + C_L R_L s + 2 R_1 g_m + 1}$$

$$10.269 \quad \text{INVALID-ORDER-269} \quad Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, R_5, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$$

$$H(s) = \frac{L_L R_1 R_L s (R_5 g_m - 1)}{C_1 C_L L_L R_1 R_5 R_L s^3 + C_1 L_L R_1 R_5 s^2 + C_1 L_L R_1 R_L s^2 + C_1 R_1 R_5 R_L s + C_L L_L R_1 R_5 R_L g_m s^2 + C_L L_L R_1 R_L s^2 + C_L L_L R_5 R_L s^2 + L_L R_1 R_5 g_m s + 2 L_L R_1 R_L g_m s + L_L R_1 s + L_L}$$

$$10.270 \quad \text{INVALID-ORDER-270} \quad Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, R_5, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$$

$$H(s) = \frac{R_1 (R_5 g_m - 1) (C_L L_L R_L s^2 + L_L s + R_L)}{C_1 C_L L_L R_1 R_5 s^3 + C_1 C_L L_L R_1 R_L s^3 + C_1 L_L R_1 s^2 + C_1 R_1 R_5 s + C_1 R_1 R_L s + C_L L_L R_1 R_5 g_m s^2 + 2 C_L L_L R_1 R_L g_m s^2 + C_L L_L R_1 s^2 + C_L L_L R_5 s^2 + C_L L_L R_L s^2 + 2 L_L R_1 g_m s}$$

$$10.271 \quad \text{INVALID-ORDER-271} \quad Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, R_5, \frac{R_L (L_L s + \frac{1}{C_L s})}{L_L s + R_L + \frac{1}{C_L s}} \right)$$

$$H(s) = \frac{R_1 R_L (R_5 g_m - 1) (C_L L_L s^2 + 1)}{C_1 C_L L_L R_1 R_5 s^3 + C_1 C_L L_L R_1 R_L s^3 + C_1 C_L R_1 R_5 R_L s^2 + C_1 R_1 R_5 s + C_1 R_1 R_L s + C_L L_L R_1 R_5 g_m s^2 + 2 C_L L_L R_1 R_L g_m s^2 + C_L L_L R_1 s^2 + C_L L_L R_5 s^2 + C_L L_L R_L s^2 + C_L R_1}$$

$$10.272 \quad \text{INVALID-ORDER-272} \quad Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, \frac{1}{C_5 s}, \frac{1}{C_L s} \right)$$

$$H(s) = \frac{R_1 (-C_5 s + g_m)}{s (C_1 C_5 R_1 s + C_1 C_L R_1 s + C_5 C_L R_1 s + 2 C_5 R_1 g_m + C_5 + C_L R_1 g_m + C_L)}$$

$$10.273 \quad \text{INVALID-ORDER-273} \quad Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, \frac{1}{C_5 s}, R_L + \frac{1}{C_L s} \right)$$

$$H(s) = -\frac{R_1 (C_5 s - g_m) (C_L R_L s + 1)}{s (C_1 C_5 C_L R_1 R_L s^2 + C_1 C_5 R_1 s + C_1 C_L R_1 s + 2 C_5 C_L R_1 R_L g_m s + C_5 C_L R_1 s + C_5 C_L R_L s + 2 C_5 R_1 g_m + C_5 + C_L R_1 g_m + C_L)}$$

**10.274 INVALID-ORDER-274**  $Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, \frac{1}{C_5 s}, L_L s + \frac{1}{C_L s} \right)$

$$H(s) = -\frac{R_1 (C_5 s - g_m) (C_L L_L s^2 + 1)}{s (C_1 C_5 C_L L_L R_1 s^3 + C_1 C_5 R_1 s + C_1 C_L R_1 s + 2C_5 C_L L_L R_1 g_m s^2 + C_5 C_L L_L s^2 + C_5 C_L R_1 s + 2C_5 R_1 g_m + C_5 + C_L R_1 g_m + C_L)}$$

**10.275 INVALID-ORDER-275**  $Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} \right)$

$$H(s) = \frac{L_L R_1 s (-C_5 s + g_m)}{C_1 C_5 L_L R_1 s^3 + C_1 C_L L_L R_1 s^3 + C_1 R_1 s + C_5 C_L L_L R_1 s^3 + 2C_5 L_L R_1 g_m s^2 + C_5 L_L s^2 + C_5 R_1 s + C_L L_L R_1 g_m s^2 + C_L L_L s^2 + R_1 g_m + 1}$$

**10.276 INVALID-ORDER-276**  $Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, \frac{1}{C_5 s}, L_L s + R_L + \frac{1}{C_L s} \right)$

$$H(s) = -\frac{R_1 (C_5 s - g_m) (C_L L_L s^2 + C_L R_L s + 1)}{s (C_1 C_5 C_L L_L R_1 s^3 + C_1 C_5 C_L R_1 R_L s^2 + C_1 C_5 R_1 s + C_1 C_L R_1 s + 2C_5 C_L L_L R_1 g_m s^2 + C_5 C_L L_L s^2 + 2C_5 C_L R_1 R_L g_m s + C_5 C_L R_1 s + C_5 C_L R_L s + 2C_5 R_1 g_m + C_5 + C_L R_1 g_m)}$$

**10.277 INVALID-ORDER-277**  $Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, \frac{1}{C_5 s}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$

$$H(s) = \frac{L_L R_1 R_L s (-C_5 s + g_m)}{C_1 C_5 L_L R_1 R_L s^3 + C_1 C_L L_L R_1 R_L s^3 + C_1 L_L R_1 s^2 + C_1 R_1 R_L s + C_5 C_L L_L R_1 R_L s^3 + 2C_5 L_L R_1 R_L g_m s^2 + C_5 L_L R_1 s^2 + C_5 L_L R_L s^2 + C_5 R_1 R_L s + C_L L_L R_1 R_L g_m s^2 + C_L L_L}$$

**10.278 INVALID-ORDER-278**  $Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$

$$H(s) = -\frac{R_1 (C_5 s - g_m) (C_L L_L R_L s^2 + L_L s + R_L)}{C_1 C_5 C_L L_L R_1 R_L s^4 + C_1 C_5 L_L R_1 s^3 + C_1 C_5 R_1 R_L s^2 + C_1 C_L L_L R_1 s^3 + C_1 R_1 s + 2C_5 C_L L_L R_1 R_L g_m s^3 + C_5 C_L L_L R_1 s^3 + C_5 C_L L_L R_L s^3 + 2C_5 L_L R_1 g_m s^2 + C_5 L_L s^2 + 2C_5}$$

$$10.279 \quad \text{INVALID-ORDER-279} \quad Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, \frac{1}{C_5 s}, \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$$

$$H(s) = - \frac{R_1 R_L (C_5 s - g_m) (C_L L_L s^2 + 1)}{C_1 C_5 C_L L_L R_1 R_L s^4 + C_1 C_5 R_1 R_L s^2 + C_1 C_L L_L R_1 s^3 + C_1 C_L R_1 R_L s^2 + C_1 R_1 s + 2C_5 C_L L_L R_1 R_L g_m s^3 + C_5 C_L L_L R_1 s^3 + C_5 C_L L_L R_L s^3 + C_5 C_L R_1 R_L s^2 + 2C_5 R_1 R_L g_m s}$$

$$10.280 \quad \text{INVALID-ORDER-280} \quad Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, R_L + \frac{1}{C_L s} \right)$$

$$H(s) = - \frac{R_1 (C_L R_L s + 1) (C_5 R_5 s - R_5 g_m + 1)}{C_1 C_5 C_L R_1 R_5 R_L s^3 + C_1 C_5 R_1 R_5 s^2 + C_1 C_L R_1 R_5 s^2 + C_1 C_L R_1 R_L s^2 + C_1 R_1 s + 2C_5 C_L R_1 R_5 R_L g_m s^2 + C_5 C_L R_1 R_5 s^2 + C_5 C_L R_5 R_L s^2 + 2C_5 R_1 R_5 g_m s + C_5 R_5 s + C_L R_1 s}$$

$$10.281 \quad \text{INVALID-ORDER-281} \quad Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, L_L s + \frac{1}{C_L s} \right)$$

$$H(s) = - \frac{R_1 (C_L L_L s^2 + 1) (C_5 R_5 s - R_5 g_m + 1)}{C_1 C_5 C_L L_L R_1 R_5 s^4 + C_1 C_5 R_1 R_5 s^2 + C_1 C_L L_L R_1 s^3 + C_1 C_L R_1 R_5 s^2 + C_1 R_1 s + 2C_5 C_L L_L R_1 R_5 g_m s^3 + C_5 C_L L_L R_5 s^3 + C_5 C_L R_1 R_5 s^2 + 2C_5 R_1 R_5 g_m s + C_5 R_5 s + 2C_L L_L R_1 s}$$

$$10.282 \quad \text{INVALID-ORDER-282} \quad Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, \frac{L_L s}{C_L L_L s^2 + 1} \right)$$

$$H(s) = \frac{L_L R_1 s (-C_5 R_5 s + R_5 g_m - 1)}{C_1 C_5 L_L R_1 R_5 s^3 + C_1 C_L L_L R_1 R_5 s^3 + C_1 L_L R_1 s^2 + C_1 R_1 R_5 s + C_5 C_L L_L R_1 R_5 s^3 + 2C_5 L_L R_1 R_5 g_m s^2 + C_5 L_L R_5 s^2 + C_5 R_1 R_5 s + C_L L_L R_1 R_5 g_m s^2 + C_L L_L R_1 s^2 + C_L L_L R_5 s}$$

$$10.283 \quad \text{INVALID-ORDER-283} \quad Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, L_L s + R_L + \frac{1}{C_L s} \right)$$

$$H(s) = - \frac{R_1 (C_5 R_5 s - R_5 g_m + 1)}{C_1 C_5 C_L L_L R_1 R_5 s^4 + C_1 C_5 C_L R_1 R_5 R_L s^3 + C_1 C_5 R_1 R_5 s^2 + C_1 C_L L_L R_1 s^3 + C_1 C_L R_1 R_5 s^2 + C_1 C_L R_1 R_L s^2 + C_1 R_1 s + 2C_5 C_L L_L R_1 R_5 g_m s^3 + C_5 C_L L_L R_5 s^3 + 2C_5 C_L R_1 R_5 s^2}$$

$$10.284 \quad \text{INVALID-ORDER-284} \quad Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$$

$$H(s) = \frac{L_L R_1 R_L s (-C_5 R_5 s}{C_1 C_5 L_L R_1 R_5 R_L s^3 + C_1 C_L L_L R_1 R_5 R_L s^3 + C_1 L_L R_1 R_5 s^2 + C_1 L_L R_1 R_L s^2 + C_1 R_1 R_5 R_L s + C_5 C_L L_L R_1 R_5 R_L s^3 + 2C_5 L_L R_1 R_5 R_L g_m s^2 + C_5 L_L R_1 R_5 s^2 + C_5 L_L R_5 R_L s^2 +$$

$$10.285 \quad \text{INVALID-ORDER-285} \quad Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$$

$$H(s) = -\frac{C_1 C_5 C_L L_L R_1 R_5 R_L s^4 + C_1 C_5 L_L R_1 R_5 s^3 + C_1 C_5 R_1 R_5 R_L s^2 + C_1 C_L L_L R_1 R_5 s^3 + C_1 C_L L_L R_1 R_L s^3 + C_1 L_L R_1 s^2 + C_1 R_1 R_5 s + C_1 R_1 R_L s + 2C_5 C_L L_L R_1 R_5 R_L g_m s^3 + C_5$$

$$10.286 \quad \text{INVALID-ORDER-286} \quad Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, \frac{R_L (L_L s + \frac{1}{C_L s})}{L_L s + R_L + \frac{1}{C_L s}} \right)$$

$$H(s) = -\frac{C_1 C_5 C_L L_L R_1 R_5 R_L s^4 + C_1 C_5 R_1 R_5 R_L s^2 + C_1 C_L L_L R_1 R_5 s^3 + C_1 C_L L_L R_1 R_L s^3 + C_1 C_L R_1 R_5 R_L s^2 + C_1 R_1 R_5 s + C_1 R_1 R_L s + 2C_5 C_L L_L R_1 R_5 R_L g_m s^3 + C_5 C_L L_L R_1 R_5 s$$

$$10.287 \quad \text{INVALID-ORDER-287} \quad Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, \frac{1}{C_L s} \right)$$

$$H(s) = \frac{R_1 (C_5 R_5 g_m s - C_5 s + g_m)}{s (C_1 C_5 C_L R_1 R_5 s^2 + C_1 C_5 R_1 s + C_1 C_L R_1 s + C_5 C_L R_1 R_5 g_m s + C_5 C_L R_1 s + C_5 C_L R_5 s + 2C_5 R_1 g_m + C_5 + C_L R_1 g_m + C_L)}$$

$$10.288 \quad \text{INVALID-ORDER-288} \quad Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, \frac{R_L}{C_L R_L s + 1} \right)$$

$$H(s) = \frac{R_1 R_L (C_5 R_5 g_m s - C_5 s + g_m)}{C_1 C_5 C_L R_1 R_5 R_L s^3 + C_1 C_5 R_1 R_5 s^2 + C_1 C_5 R_1 R_L s^2 + C_1 C_L R_1 R_L s^2 + C_1 R_1 s + C_5 C_L R_1 R_5 R_L g_m s^2 + C_5 C_L R_1 R_L s^2 + C_5 C_L R_5 R_L s^2 + C_5 R_1 R_5 g_m s + 2C_5 R_1 R_L g_m s + C_5}$$



$$10.289 \quad \text{INVALID-ORDER-289} \quad Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{R_1 (C_L R_L s + 1) (C_5 R_5 g_m s - C_5 s + g_m)}{s (C_1 C_5 C_L R_1 R_5 s^2 + C_1 C_5 C_L R_1 R_L s^2 + C_1 C_5 R_1 s + C_1 C_L R_1 s + C_5 C_L R_1 R_5 g_m s + 2C_5 C_L R_1 R_L g_m s + C_5 C_L R_1 s + C_5 C_L R_5 s + C_5 C_L R_L s + 2C_5 R_1 g_m + C_5 + C_L R_1 g_m + C_L)}$$

$$10.290 \quad \text{INVALID-ORDER-290} \quad Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, L_L s + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{R_1 (C_L L_L s^2 + 1) (C_5 R_5 g_m s - C_5 s + g_m)}{s (C_1 C_5 C_L L_L R_1 s^3 + C_1 C_5 C_L R_1 R_5 s^2 + C_1 C_5 R_1 s + C_1 C_L R_1 s + 2C_5 C_L L_L R_1 g_m s^2 + C_5 C_L L_L s^2 + C_5 C_L R_1 R_5 g_m s + C_5 C_L R_1 s + C_5 C_L R_5 s + 2C_5 R_1 g_m + C_5 + C_L R_1 g_m + C_L)}$$

$$10.291 \quad \text{INVALID-ORDER-291} \quad Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} \right)$$

$$H(s) = \frac{L_L R_1 s (C_5 R_5 g_m s - C_5 s + g_m)}{C_1 C_5 C_L L_L R_1 R_5 s^4 + C_1 C_5 L_L R_1 s^3 + C_1 C_5 R_1 R_5 s^2 + C_1 C_L L_L R_1 s^3 + C_1 R_1 s + C_5 C_L L_L R_1 R_5 g_m s^3 + C_5 C_L L_L R_1 s^3 + C_5 C_L L_L R_5 s^3 + 2C_5 L_L R_1 g_m s^2 + C_5 L_L s^2 + C_5 R_1 R_5}$$

$$10.292 \quad \text{INVALID-ORDER-292} \quad Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, L_L s + R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{R_1 (C_L L_L s^2 + C_L R_L s + 1) (C_5 R_5 g_m s - C_5 s + g_m)}{s (C_1 C_5 C_L L_L R_1 s^3 + C_1 C_5 C_L R_1 R_5 s^2 + C_1 C_5 C_L R_1 R_L s^2 + C_1 C_5 R_1 s + C_1 C_L R_1 s + 2C_5 C_L L_L R_1 g_m s^2 + C_5 C_L L_L s^2 + C_5 C_L R_1 R_5 g_m s + 2C_5 C_L R_1 R_L g_m s + C_5 C_L R_1 s + C_5 C_L R_5 s + C_5 C_L R_L s + 2C_5 R_1 g_m + C_5 + C_L R_1 g_m + C_L)}$$

$$10.293 \quad \text{INVALID-ORDER-293} \quad Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$$

$$H(s) = \frac{R_1 (C_5 R_5 g_m s - C_5 s + g_m)}{C_1 C_5 C_L L_L R_1 R_5 R_L s^4 + C_1 C_5 L_L R_1 R_5 s^3 + C_1 C_5 L_L R_1 R_L s^3 + C_1 C_5 R_1 R_5 R_L s^2 + C_1 C_L L_L R_1 R_L s^3 + C_1 L_L R_1 s^2 + C_1 R_1 R_L s + C_5 C_L L_L R_1 R_5 R_L g_m s^3 + C_5 C_L L_L R_1 R_L s^3 + C_5 C_L R_1 R_5 R_L s^2 + C_5 C_L R_1 R_L s^2 + C_5 C_L R_1 s + C_5 C_L R_5 s + C_5 C_L R_L s + 2C_5 R_1 g_m + C_5 + C_L R_1 g_m + C_L}$$

$$10.294 \quad \text{INVALID-ORDER-294} \quad Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$$

$$H(s) = \frac{R_1 (C_5 R_5 g_m s - C_5 s + g_m)}{C_1 C_5 C_L L_L R_1 R_5 s^4 + C_1 C_5 C_L L_L R_1 R_L s^4 + C_1 C_5 L_L R_1 s^3 + C_1 C_5 R_1 R_5 s^2 + C_1 C_5 R_1 R_L s^2 + C_1 C_L L_L R_1 s^3 + C_1 R_1 s + C_5 C_L L_L R_1 R_5 g_m s^3 + 2C_5 C_L L_L R_1 R_L g_m s^3 + C_5 C_L R_1 R_5 s^2 + C_5 C_L R_1 R_L s^2 + C_5 C_L R_1 s + C_5 C_L R_5 s + C_5 C_L R_L s + 2C_5 R_1 g_m + C_5 + C_L R_1 g_m + C_L}$$

$$10.295 \quad \text{INVALID-ORDER-295} \quad Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$$

$$H(s) = \frac{C_1 C_5 C_L L_L R_1 R_5 s^4 + C_1 C_5 C_L L_L R_1 R_L s^4 + C_1 C_5 C_L R_1 R_5 R_L s^3 + C_1 C_5 R_1 R_5 s^2 + C_1 C_5 R_1 R_L s^2 + C_1 C_L L_L R_1 s^3 + C_1 C_L R_1 R_L s^2 + C_1 R_1 s + C_5 C_L L_L R_1 R_5 g_m s^3 + 2 C_5 C_L R_1 R_5 g_m s^2 + C_5 C_L R_1 R_L g_m s + C_5 R_1 s + C_5 R_L s + R_1 g_m + 1}{C_1 C_5 C_L L_L R_1 R_5 s^4 + C_1 C_5 C_L L_L R_1 R_L s^4 + C_1 C_5 C_L R_1 R_5 R_L s^3 + C_1 C_5 R_1 R_5 s^2 + C_1 C_5 R_1 R_L s^2 + C_1 C_L L_L R_1 s^3 + C_1 C_L R_1 R_L s^2 + C_1 R_1 s + C_5 C_L L_L R_1 R_5 g_m s^3 + 2 C_5 C_L R_1 R_5 g_m s^2 + C_5 C_L R_1 R_L g_m s + C_5 R_1 s + C_5 R_L s + R_1 g_m + 1}$$

$$10.296 \quad \text{INVALID-ORDER-296} \quad Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, R_L \right)$$

$$H(s) = \frac{R_1 R_L (C_5 L_5 g_m s^2 - C_5 s + g_m)}{C_1 C_5 L_5 R_1 s^3 + C_1 C_5 R_1 R_L s^2 + C_1 R_1 s + C_5 L_5 R_1 g_m s^2 + C_5 L_5 s^2 + 2 C_5 R_1 R_L g_m s + C_5 R_1 s + C_5 R_L s + R_1 g_m + 1}$$

$$10.297 \quad \text{INVALID-ORDER-297} \quad Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, \frac{1}{C_L s} \right)$$

$$H(s) = \frac{R_1 (C_5 L_5 g_m s^2 - C_5 s + g_m)}{s (C_1 C_5 C_L L_5 R_1 s^3 + C_1 C_5 R_1 s + C_1 C_L R_1 s + C_5 C_L L_5 R_1 g_m s^2 + C_5 C_L L_5 s^2 + C_5 C_L R_1 s + 2 C_5 R_1 g_m + C_5 + C_L R_1 g_m + C_L)}$$

$$10.298 \quad \text{INVALID-ORDER-298} \quad Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, \frac{R_L}{C_L R_L s + 1} \right)$$

$$H(s) = \frac{R_1 R_L (C_5 L_5 g_m s^2 - C_5 s + g_m)}{C_1 C_5 C_L L_5 R_1 R_L s^4 + C_1 C_5 L_5 R_1 s^3 + C_1 C_5 R_1 R_L s^2 + C_1 C_L R_1 R_L s^2 + C_1 R_1 s + C_5 C_L L_5 R_1 R_L g_m s^3 + C_5 C_L L_5 R_L s^3 + C_5 C_L R_1 R_L s^2 + C_5 L_5 R_1 g_m s^2 + C_5 L_5 s^2 + 2 C_5 R_1 R_L g_m s + C_5 R_1 s + C_5 R_L s + R_1 g_m + 1}$$

$$10.299 \quad \text{INVALID-ORDER-299} \quad Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{R_1 (C_L R_L s + 1) (C_5 L_5 g_m s^2 - C_5 s + g_m)}{s (C_1 C_5 C_L L_5 R_1 s^3 + C_1 C_5 C_L R_1 R_L s^2 + C_1 C_5 R_1 s + C_1 C_L R_1 s + C_5 C_L L_5 R_1 g_m s^2 + C_5 C_L L_5 s^2 + 2 C_5 C_L R_1 R_L g_m s + C_5 C_L R_1 s + C_5 C_L R_L s + 2 C_5 R_1 g_m + C_5 + C_L R_1 g_m + 1)}$$

$$10.300 \quad \text{INVALID-ORDER-300} \quad Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, L_L s + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{R_1 (C_L L_L s^2 + 1) (C_5 L_5 g_m s^2 - C_5 s + g_m)}{s (C_1 C_5 C_L L_5 R_1 s^3 + C_1 C_5 C_L L_L R_1 s^3 + C_1 C_5 R_1 s + C_1 C_L R_1 s + C_5 C_L L_5 R_1 g_m s^2 + C_5 C_L L_5 s^2 + 2 C_5 C_L L_L R_1 g_m s^2 + C_5 C_L L_L s^2 + C_5 C_L R_1 s + 2 C_5 R_1 g_m + C_5 + C_L R_1 g_m)}$$

$$10.301 \quad \text{INVALID-ORDER-301} \quad Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} \right)$$

$$H(s) = \frac{L_L R_1 s (C_5 L_5 g_m s^2 - C_5 s + g_m)}{C_1 C_5 C_L L_5 L_L R_1 s^5 + C_1 C_5 L_5 R_1 s^3 + C_1 C_5 L_L R_1 s^3 + C_1 C_L L_L R_1 s^3 + C_1 R_1 s + C_5 C_L L_5 L_L R_1 g_m s^4 + C_5 C_L L_5 L_L s^4 + C_5 C_L L_L R_1 s^3 + C_5 L_5 R_1 g_m s^2 + C_5 L_5 s^2 + 2 C_5 L_L R_1 g_m s + C_5 R_1 g_m}$$

$$10.302 \quad \text{INVALID-ORDER-302} \quad Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, L_L s + R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{R_1 (C_L L_L s^2 + C_L R_L s + 1) (C_5 L_5 g_m s^2 - C_5 s + g_m)}{s (C_1 C_5 C_L L_5 R_1 s^3 + C_1 C_5 C_L L_L R_1 s^3 + C_1 C_5 C_L R_1 R_L s^2 + C_1 C_5 R_1 s + C_1 C_L R_1 s + C_5 C_L L_5 R_1 g_m s^2 + C_5 C_L L_5 s^2 + 2 C_5 C_L L_L R_1 g_m s^2 + C_5 C_L L_L s^2 + 2 C_5 C_L R_1 R_L g_m s + C_5 R_1 g_m)}$$

$$10.303 \quad \text{INVALID-ORDER-303} \quad Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$$

$$H(s) = \frac{R_1 (C_5 L_5 g_m s^2 - C_5 s + g_m)}{C_1 C_5 C_L L_5 L_L R_1 R_L s^5 + C_1 C_5 L_5 L_L R_1 s^4 + C_1 C_5 L_5 R_1 R_L s^3 + C_1 C_5 L_L R_1 R_L s^3 + C_1 C_L L_L R_1 R_L s^3 + C_1 L_L R_1 s^2 + C_1 R_1 R_L s + C_5 C_L L_5 L_L R_1 R_L g_m s^4 + C_5 C_L L_5 L_L R_L s^4 + C_5 C_L R_1 R_L g_m s + C_5 R_1 g_m}$$

$$10.304 \quad \text{INVALID-ORDER-304} \quad Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$$

$$H(s) = \frac{R_1 (C_5 L_5 g_m s^2 - C_5 s + g_m)}{C_1 C_5 C_L L_5 L_L R_1 s^5 + C_1 C_5 C_L L_L R_1 R_L s^4 + C_1 C_5 L_5 R_1 s^3 + C_1 C_5 L_L R_1 s^3 + C_1 C_5 R_1 R_L s^2 + C_1 C_L L_L R_1 s^3 + C_1 R_1 s + C_5 C_L L_5 L_L R_1 g_m s^4 + C_5 C_L L_5 L_L s^4 + 2 C_5 C_L L_L R_1 g_m s + C_5 R_1 g_m}$$

$$10.305 \quad \text{INVALID-ORDER-305} \quad Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$$

$$H(s) = \frac{C_1 C_5 C_L L_5 L_L R_1 s^5 + C_1 C_5 C_L L_5 R_1 R_L s^4 + C_1 C_5 C_L L_L R_1 R_L s^4 + C_1 C_5 L_5 R_1 s^3 + C_1 C_5 R_1 R_L s^2 + C_1 C_L L_L R_1 s^3 + C_1 C_L R_1 R_L s^2 + C_1 R_1 s + C_5 C_L L_5 L_L R_1 g_m s^4 + C_5 C_L L_5 R_1 R_L s^3 + C_5 C_L L_5 R_1 s^2 + C_5 C_L R_1 R_L s + C_5 R_1}{C_1 C_5 C_L L_5 L_L R_1 s^5 + C_1 C_5 C_L L_5 R_1 R_L s^4 + C_1 C_5 C_L L_L R_1 R_L s^4 + C_1 C_5 L_5 R_1 s^3 + C_1 C_5 R_1 R_L s^2 + C_1 C_L L_L R_1 s^3 + C_1 C_L R_1 R_L s^2 + C_1 R_1 s + C_5 C_L L_5 L_L R_1 g_m s^4 + C_5 C_L L_5 R_1 R_L s^3 + C_5 C_L L_5 R_1 s^2 + C_5 C_L R_1 R_L s + C_5 R_1}$$

$$10.306 \quad \text{INVALID-ORDER-306} \quad Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, R_L \right)$$

$$H(s) = \frac{R_1 R_L (-C_5 L_5 s^2 + L_5 g_m s - 1)}{C_1 C_5 L_5 R_1 R_L s^3 + C_1 L_5 R_1 s^2 + C_1 R_1 R_L s + 2C_5 L_5 R_1 R_L g_m s^2 + C_5 L_5 R_1 s^2 + C_5 L_5 R_L s^2 + L_5 R_1 g_m s + L_5 s + 2R_1 R_L g_m + R_1 + R_L}$$

$$10.307 \quad \text{INVALID-ORDER-307} \quad Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{1}{C_L s} \right)$$

$$H(s) = \frac{R_1 (-C_5 L_5 s^2 + L_5 g_m s - 1)}{C_1 C_5 L_5 R_1 s^3 + C_1 C_L L_5 R_1 s^3 + C_1 R_1 s + C_5 C_L L_5 R_1 s^3 + 2C_5 L_5 R_1 g_m s^2 + C_5 L_5 s^2 + C_L L_5 R_1 g_m s^2 + C_L L_5 s^2 + C_L R_1 s + 2R_1 g_m + 1}$$

$$10.308 \quad \text{INVALID-ORDER-308} \quad Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{R_L}{C_L R_L s + 1} \right)$$

$$H(s) = \frac{R_1 R_L (-C_5 L_5 s^2 + L_5 g_m s - 1)}{C_1 C_5 L_5 R_1 R_L s^3 + C_1 C_L L_5 R_1 R_L s^3 + C_1 L_5 R_1 s^2 + C_1 R_1 R_L s + C_5 C_L L_5 R_1 R_L s^3 + 2C_5 L_5 R_1 R_L g_m s^2 + C_5 L_5 R_1 s^2 + C_5 L_5 R_L s^2 + C_L L_5 R_1 R_L g_m s^2 + C_L L_5 R_L s^2 + C_L R_1 R_L s + 2R_1 R_L g_m + R_1 + R_L}$$

$$10.309 \quad \text{INVALID-ORDER-309} \quad Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, R_L + \frac{1}{C_L s} \right)$$

$$H(s) = -\frac{R_1 (C_L R_L s + 1) (C_5 L_5 s^2 - L_5 g_m s + 1)}{C_1 C_5 C_L L_5 R_1 R_L s^4 + C_1 C_5 L_5 R_1 s^3 + C_1 C_L L_5 R_1 s^3 + C_1 C_L R_1 R_L s^2 + C_1 R_1 s + 2C_5 C_L L_5 R_1 R_L g_m s^3 + C_5 C_L L_5 R_1 s^3 + C_5 C_L L_5 R_L s^3 + 2C_5 L_5 R_1 g_m s^2 + C_5 L_5 s^2 + C_L L_5 R_1 R_L g_m s^2 + C_L L_5 R_L s^2 + C_L R_1 R_L s + 2R_1 R_L g_m + R_1 + R_L}$$

$$10.310 \quad \text{INVALID-ORDER-310} \quad Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, L_L s + \frac{1}{C_L s} \right)$$

$$H(s) = - \frac{R_1 (C_L L_L s^2 + 1) (C_5 L_5 s^2 - L_5 g_m s + 1)}{C_1 C_5 C_L L_5 L_L R_1 s^5 + C_1 C_5 L_5 R_1 s^3 + C_1 C_L L_5 R_1 s^3 + C_1 C_L L_L R_1 s^3 + C_1 R_1 s + 2C_5 C_L L_5 L_L R_1 g_m s^4 + C_5 C_L L_5 L_L s^4 + C_5 C_L L_5 R_1 s^3 + 2C_5 L_5 R_1 g_m s^2 + C_5 L_5 s^2 + C_L L_5 L_L s^3 + C_L L_L R_1 s^2 + C_L L_L R_1 s + C_L R_1}$$

$$10.311 \quad \text{INVALID-ORDER-311} \quad Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{L_L s}{C_L L_L s^2 + 1} \right)$$

$$H(s) = \frac{L_L R_1 s (-C_5 L_5 s^2 + L_5 g_m s - 1)}{C_1 C_5 L_5 L_L R_1 s^4 + C_1 C_L L_5 L_L R_1 s^4 + C_1 L_5 R_1 s^2 + C_1 L_L R_1 s^2 + C_5 C_L L_5 L_L R_1 s^4 + 2C_5 L_5 L_L R_1 g_m s^3 + C_5 L_5 L_L s^3 + C_5 L_5 R_1 s^2 + C_L L_5 L_L R_1 g_m s^3 + C_L L_5 L_L s^3 + C_L L_L R_1 s^2 + C_L L_L R_1 s + C_L R_1}$$

$$10.312 \quad \text{INVALID-ORDER-312} \quad Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, L_L s + R_L + \frac{1}{C_L s} \right)$$

$$H(s) = - \frac{R_1 (C_5 L_5 s^2 - L_5 g_m s + 1)}{C_1 C_5 C_L L_5 L_L R_1 s^5 + C_1 C_5 C_L L_5 R_1 R_L s^4 + C_1 C_5 L_5 R_1 s^3 + C_1 C_L L_5 R_1 s^3 + C_1 C_L L_L R_1 s^3 + C_1 C_L R_1 R_L s^2 + C_1 R_1 s + 2C_5 C_L L_5 L_L R_1 g_m s^4 + C_5 C_L L_5 L_L s^4 + 2C_5 C_L L_5 R_1 s^3 + C_5 L_5 L_L R_1 g_m s^3 + C_5 L_5 L_L R_1 s^3 + C_5 L_5 L_L R_L s^3 + C_5 L_5 L_L R_L s^2 + C_5 L_5 L_L R_L s + C_5 L_5 L_L R_L}$$

$$10.313 \quad \text{INVALID-ORDER-313} \quad Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$$

$$H(s) = \frac{L_L R_1 R_L s (-C_5 L_5 s^2 + L_5 g_m s - 1)}{C_1 C_5 L_5 L_L R_1 R_L s^4 + C_1 C_L L_5 L_L R_1 R_L s^4 + C_1 L_5 L_L R_1 s^3 + C_1 L_5 R_1 R_L s^2 + C_1 L_L R_1 R_L s^2 + C_5 C_L L_5 L_L R_1 R_L s^4 + 2C_5 L_5 L_L R_1 R_L g_m s^3 + C_5 L_5 L_L R_1 s^3 + C_5 L_5 L_L R_L s^3 + C_5 L_5 L_L R_L s^2 + C_5 L_5 L_L R_L s + C_5 L_5 L_L R_L}$$

$$10.314 \quad \text{INVALID-ORDER-314} \quad Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$$

$$H(s) = - \frac{R_1 (C_5 L_5 s^2 - L_5 g_m s + 1)}{C_1 C_5 C_L L_5 L_L R_1 R_L s^5 + C_1 C_5 L_5 L_L R_1 s^4 + C_1 C_5 L_5 R_1 R_L s^3 + C_1 C_L L_5 L_L R_1 s^4 + C_1 C_L L_L R_1 R_L s^3 + C_1 L_5 R_1 s^2 + C_1 L_L R_1 s^2 + C_1 R_1 R_L s + 2C_5 C_L L_5 L_L R_1 R_L g_m s^4 + C_5 C_L L_5 L_L R_1 R_L s^4 + C_5 C_L L_5 R_1 R_L s^3 + C_5 L_5 L_L R_1 R_L g_m s^3 + C_5 L_5 L_L R_1 s^3 + C_5 L_5 L_L R_L s^3 + C_5 L_5 L_L R_L s^2 + C_5 L_5 L_L R_L s + C_5 L_5 L_L R_L}$$

$$10.315 \quad \text{INVALID-ORDER-315} \quad Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$$

$$H(s) = - \frac{C_1 C_5 C_L L_5 L_L R_1 R_L s^5 + C_1 C_5 L_5 R_1 R_L s^3 + C_1 C_L L_5 L_L R_1 s^4 + C_1 C_L L_5 R_1 R_L s^3 + C_1 C_L L_L R_1 R_L s^3 + C_1 L_5 R_1 s^2 + C_1 R_1 R_L s + 2 C_5 C_L L_5 L_L R_1 R_L g_m s^4 + C_5 C_L L_5 L_L R_1 s}{C_1 C_5 C_L L_5 L_L R_1 R_L s^5 + C_1 C_5 L_5 R_1 R_L s^3 + C_1 C_L L_5 L_L R_1 s^4 + C_1 C_L L_5 R_1 R_L s^3 + C_1 C_L L_L R_1 R_L s^3 + C_1 L_5 R_1 s^2 + C_1 R_1 R_L s + 2 C_5 C_L L_5 L_L R_1 R_L g_m s^4 + C_5 C_L L_5 L_L R_1 s}$$

$$10.316 \quad \text{INVALID-ORDER-316} \quad Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, R_L \right)$$

$$H(s) = \frac{R_1 R_L (C_5 L_5 g_m s^2 + C_5 R_5 g_m s - C_5 s + g_m)}{C_1 C_5 L_5 R_1 s^3 + C_1 C_5 R_1 R_5 s^2 + C_1 C_5 R_1 R_L s^2 + C_1 R_1 s + C_5 L_5 R_1 g_m s^2 + C_5 L_5 s^2 + C_5 R_1 R_5 g_m s + 2 C_5 R_1 R_L g_m s + C_5 R_1 s + C_5 R_5 s + C_5 R_L s + R_1 g_m + 1}$$

$$10.317 \quad \text{INVALID-ORDER-317} \quad Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{1}{C_L s} \right)$$

$$H(s) = \frac{R_1 (C_5 L_5 g_m s^2 + C_5 R_5 g_m s - C_5 s + g_m)}{s (C_1 C_5 C_L L_5 R_1 s^3 + C_1 C_5 C_L R_1 R_5 s^2 + C_1 C_5 R_1 s + C_1 C_L R_1 s + C_5 C_L L_5 R_1 g_m s^2 + C_5 C_L L_5 s^2 + C_5 C_L R_1 R_5 g_m s + C_5 C_L R_1 s + C_5 C_L R_5 s + 2 C_5 R_1 g_m + C_5 + C_L R_1 g_m + C_L R_5 s)}$$

$$10.318 \quad \text{INVALID-ORDER-318} \quad Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{R_L}{C_L R_L s + 1} \right)$$

$$H(s) = \frac{R_1 R_L (C_5 L_5 g_m s^2 + C_5 R_5 g_m s - C_5 s + g_m)}{C_1 C_5 C_L L_5 R_1 R_L s^4 + C_1 C_5 C_L R_1 R_5 R_L s^3 + C_1 C_5 L_5 R_1 s^3 + C_1 C_5 R_1 R_5 s^2 + C_1 C_5 R_1 R_L s^2 + C_1 C_L R_1 R_L s^2 + C_1 R_1 s + C_5 C_L L_5 R_1 R_L g_m s^3 + C_5 C_L L_5 R_L s^3 + C_5 C_L R_1 R_5 R_L s^2 + C_5 C_L R_1 R_5 s^2 + C_5 C_L R_1 R_L s^2 + C_5 C_L R_1 s + C_5 C_L R_5 s + 2 C_5 R_1 g_m + C_5 + C_L R_1 g_m + C_L R_5 s}$$

$$10.319 \quad \text{INVALID-ORDER-319} \quad Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{R_1 (C_L R_L s + 1) (C_5 L_5 g_m s^2 + C_5 R_5 g_m s - C_5 s + g_m)}{s (C_1 C_5 C_L L_5 R_1 s^3 + C_1 C_5 C_L R_1 R_5 s^2 + C_1 C_5 C_L R_1 R_L s^2 + C_1 C_5 R_1 s + C_1 C_L R_1 s + C_5 C_L L_5 R_1 g_m s^2 + C_5 C_L L_5 s^2 + C_5 C_L R_1 R_5 g_m s + 2 C_5 C_L R_1 R_L g_m s + C_5 C_L R_1 s + C_5 C_L R_5 s + 2 C_5 R_1 g_m + C_5 + C_L R_1 g_m + C_L R_5 s)}$$

$$10.320 \quad \text{INVALID-ORDER-320} \quad Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, L_L s + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{R_1 (C_L L_L s^2 + 1) (C_5 L_5 g_m s^2 + C_5 R_5 g_m s - C_5 s + g_m)}{s (C_1 C_5 C_L L_5 R_1 s^3 + C_1 C_5 C_L L_L R_1 s^3 + C_1 C_5 C_L R_1 R_5 s^2 + C_1 C_5 R_1 s + C_1 C_L R_1 s + C_5 C_L L_5 R_1 g_m s^2 + C_5 C_L L_5 s^2 + 2 C_5 C_L L_L R_1 g_m s^2 + C_5 C_L L_L s^2 + C_5 C_L R_1 R_5 g_m s + C_5 C_L R_1 s)}$$

$$10.321 \quad \text{INVALID-ORDER-321} \quad Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} \right)$$

$$H(s) = \frac{L_L R_1 s (C_5 L_5 g_m s^2 + C_5 R_5 g_m s - C_5 s + g_m)}{C_1 C_5 C_L L_5 L_L R_1 s^5 + C_1 C_5 C_L L_L R_1 R_5 s^4 + C_1 C_5 L_5 R_1 s^3 + C_1 C_5 L_L R_1 s^3 + C_1 C_5 R_1 R_5 s^2 + C_1 C_L L_L R_1 s^3 + C_1 R_1 s + C_5 C_L L_5 L_L R_1 g_m s^4 + C_5 C_L L_5 L_L s^4 + C_5 C_L L_L R_1 R_5 g_m s^3 + C_5 C_L L_L R_1 s}$$

$$10.322 \quad \text{INVALID-ORDER-322} \quad Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, L_L s + R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{R_1 (C_L L_L s^2 + C_L R_L s + 1) (C_5 L_5 g_m s^2 + C_5 R_5 g_m s - C_5 s + g_m)}{s (C_1 C_5 C_L L_5 R_1 s^3 + C_1 C_5 C_L L_L R_1 s^3 + C_1 C_5 C_L R_1 R_5 s^2 + C_1 C_5 C_L R_1 R_L s^2 + C_1 C_5 R_1 s + C_1 C_L R_1 s + C_5 C_L L_5 R_1 g_m s^2 + C_5 C_L L_5 s^2 + 2 C_5 C_L L_L R_1 g_m s^2 + C_5 C_L L_L s^2 + C_5 C_L R_1 R_5 g_m s + C_5 C_L R_1 s)}$$

$$10.323 \quad \text{INVALID-ORDER-323} \quad Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$$

$$H(s) = \frac{R_1 (C_L L_L s^2 + C_L R_L s + 1) (C_5 L_5 g_m s^2 + C_5 R_5 g_m s - C_5 s + g_m)}{C_1 C_5 C_L L_5 L_L R_1 R_L s^5 + C_1 C_5 C_L L_L R_1 R_5 R_L s^4 + C_1 C_5 L_5 L_L R_1 s^4 + C_1 C_5 L_5 R_1 R_L s^3 + C_1 C_5 L_L R_1 R_5 s^3 + C_1 C_5 L_L R_1 R_L s^3 + C_1 C_5 R_1 R_5 R_L s^2 + C_1 C_L L_L R_1 R_L s^3 + C_1 L_L R_1 s}$$

$$10.324 \quad \text{INVALID-ORDER-324} \quad Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$$

$$H(s) = \frac{R_1 (C_L L_L s^2 + C_L R_L s + 1) (C_5 L_5 g_m s^2 + C_5 R_5 g_m s - C_5 s + g_m)}{C_1 C_5 C_L L_5 L_L R_1 s^5 + C_1 C_5 C_L L_L R_1 R_5 s^4 + C_1 C_5 C_L L_L R_1 R_L s^4 + C_1 C_5 L_5 R_1 s^3 + C_1 C_5 L_L R_1 s^3 + C_1 C_5 R_1 R_5 s^2 + C_1 C_5 R_1 R_L s^2 + C_1 C_L L_L R_1 s^3 + C_1 R_1 s + C_5 C_L L_5 L_L R_1 g_m s^4 + C_5 C_L L_5 L_L s^4 + C_5 C_L L_L R_1 R_5 g_m s^3 + C_5 C_L L_L R_1 s}$$

$$10.325 \quad \text{INVALID-ORDER-325} \quad Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$$

$$H(s) = \frac{C_1 C_5 C_L L_5 L_L R_1 s^5 + C_1 C_5 C_L L_5 R_1 R_L s^4 + C_1 C_5 C_L L_L R_1 R_5 s^4 + C_1 C_5 C_L L_L R_1 R_L s^4 + C_1 C_5 C_L R_1 R_5 R_L s^3 + C_1 C_5 L_5 R_1 s^3 + C_1 C_5 R_1 R_5 s^2 + C_1 C_5 R_1 R_L s^2 + C_1 C_L L_L R_1 s}{C_1 C_5 C_L L_5 L_L R_1 s^5 + C_1 C_5 C_L L_5 R_1 R_L s^4 + C_1 C_5 C_L L_L R_1 R_5 s^4 + C_1 C_5 C_L L_L R_1 R_L s^4 + C_1 C_5 C_L R_1 R_5 R_L s^3 + C_1 C_5 L_5 R_1 s^3 + C_1 C_5 R_1 R_5 s^2 + C_1 C_5 R_1 R_L s^2 + C_1 C_L L_L R_1 s}$$

$$10.326 \quad \text{INVALID-ORDER-326} \quad Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, R_L \right)$$

$$H(s) = \frac{R_1 R_L (-C_5 L_5 R_5 s^2 + L_5 R_5 g_m s - L_5 s - R_5)}{C_1 C_5 L_5 R_1 R_5 R_L s^3 + C_1 L_5 R_1 R_5 s^2 + C_1 L_5 R_1 R_L s^2 + C_1 R_1 R_5 R_L s + 2C_5 L_5 R_1 R_5 R_L g_m s^2 + C_5 L_5 R_1 R_5 s^2 + C_5 L_5 R_5 R_L s^2 + L_5 R_1 R_5 g_m s + 2L_5 R_1 R_L g_m s + L_5 R_1 s + L_5 R_5}$$

$$10.327 \quad \text{INVALID-ORDER-327} \quad Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{1}{C_L s} \right)$$

$$H(s) = \frac{R_1 (-C_5 L_5 R_5 s^2 + L_5 R_5 g_m s - L_5 s - R_5)}{C_1 C_5 L_5 R_1 R_5 s^3 + C_1 C_L L_5 R_1 R_5 s^3 + C_1 L_5 R_1 s^2 + C_1 R_1 R_5 s + C_5 C_L L_5 R_1 R_5 s^3 + 2C_5 L_5 R_1 R_5 g_m s^2 + C_5 L_5 R_5 s^2 + C_L L_5 R_1 R_5 g_m s^2 + C_L L_5 R_1 s^2 + C_L L_5 R_5 s^2 + C_L R_1 R_5 s}$$

$$10.328 \quad \text{INVALID-ORDER-328} \quad Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{R_L}{C_L R_L s + 1} \right)$$

$$H(s) = \frac{R_1 R_L (-C_5 L_5 R_5 s^2 + L_5 R_5 g_m s - L_5 s - R_5)}{C_1 C_5 L_5 R_1 R_5 R_L s^3 + C_1 C_L L_5 R_1 R_5 R_L s^3 + C_1 L_5 R_1 R_5 s^2 + C_1 L_5 R_1 R_L s^2 + C_1 R_1 R_5 R_L s + C_5 C_L L_5 R_1 R_5 R_L s^3 + 2C_5 L_5 R_1 R_5 R_L g_m s^2 + C_5 L_5 R_1 R_5 s^2 + C_5 L_5 R_5 R_L s^2 + C_L L_5 R_1 R_5 g_m s^2 + C_L L_5 R_1 s^2 + C_L L_5 R_5 s^2 + C_L R_1 R_5 s}$$

$$10.329 \quad \text{INVALID-ORDER-329} \quad Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, R_L + \frac{1}{C_L s} \right)$$

$$H(s) = -\frac{R_1}{C_1 C_5 C_L L_5 R_1 R_5 R_L s^4 + C_1 C_5 L_5 R_1 R_5 s^3 + C_1 C_L L_5 R_1 R_5 s^3 + C_1 C_L L_5 R_1 R_L s^3 + C_1 C_L R_1 R_5 R_L s^2 + C_1 L_5 R_1 s^2 + C_1 R_1 R_5 s + 2C_5 C_L L_5 R_1 R_5 R_L g_m s^3 + C_5 C_L L_5 R_1 R_5 s^3}$$



10.330 INVALID-ORDER-330  $Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, L_L s + \frac{1}{C_L s} \right)$

$$H(s) = -\frac{R_1 (C_1 C_5 C_L L_5 L_L R_1 R_5 s^5 + C_1 C_5 L_5 R_1 R_5 s^3 + C_1 C_L L_5 L_L R_1 s^4 + C_1 C_L L_5 R_1 R_5 s^3 + C_1 C_L L_L R_1 R_5 s^3 + C_1 L_5 R_1 s^2 + C_1 R_1 R_5 s + 2 C_5 C_L L_5 L_L R_1 R_5 g_m s^4 + C_5 C_L L_5 L_L R_5 s^4)}{C_1 C_5 C_L L_5 L_L R_1 R_5 s^5 + C_1 C_5 L_5 R_1 R_5 s^3 + C_1 C_L L_5 L_L R_1 s^4 + C_1 C_L L_5 R_1 R_5 s^3 + C_1 C_L L_L R_1 R_5 s^3 + C_1 L_5 R_1 s^2 + C_1 R_1 R_5 s + 2 C_5 C_L L_5 L_L R_1 R_5 g_m s^4 + C_5 C_L L_5 L_L R_5 s^4}.$$

10.331 INVALID-ORDER-331  $Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{L_L s}{C_L L_L s^2 + 1} \right)$

$$H(s) = \frac{L_L R_1 s (-C_5 L_5 R_5 s^2 + L_5 R_5)}{C_1 C_5 L_5 L_L R_1 R_5 s^4 + C_1 C_L L_5 L_L R_1 R_5 s^4 + C_1 L_5 L_L R_1 s^3 + C_1 L_5 R_1 R_5 s^2 + C_1 L_L R_1 R_5 s^2 + C_5 C_L L_5 L_L R_1 R_5 s^4 + 2C_5 L_5 L_L R_1 R_5 q_m s^3 + C_5 L_5 L_L R_5 s^3 + C_5 L_5 R_1 R_5 s^2 + C_L R_1 R_5 s^2}$$

**10.332 INVALID-ORDER-332**  $Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, L_L s + R_L + \frac{1}{C_L s} \right)$

$$H(s) = -\frac{C_1 C_5 C_L L_5 L_L R_1 R_5 s^5 + C_1 C_5 C_L L_5 R_1 R_5 R_L s^4 + C_1 C_5 L_5 R_1 R_5 s^3 + C_1 C_L L_5 L_L R_1 s^4 + C_1 C_L L_5 R_1 R_5 s^3 + C_1 C_L L_5 R_1 R_L s^3 + C_1 C_L L_L R_1 R_5 s^3 + C_1 C_L R_1 R_5 R_L s^2 + C_1 L_5}{C_1 C_5 C_L L_5 L_L R_1 R_5 s^5 + C_1 C_5 C_L L_5 R_1 R_5 R_L s^4 + C_1 C_5 L_5 R_1 R_5 s^3 + C_1 C_L L_5 L_L R_1 s^4 + C_1 C_L L_5 R_1 R_5 s^3 + C_1 C_L L_5 R_1 R_L s^3 + C_1 C_L L_L R_1 R_5 s^3 + C_1 C_L R_1 R_5 R_L s^2 + C_1 L_5}$$

**10.333 INVALID-ORDER-333**  $Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$

$$H(s) = \frac{C_1 C_5 L_5 L_L R_1 R_5 R_L s^4 + C_1 C_L L_5 L_L R_1 R_5 R_L s^4 + C_1 L_5 L_L R_1 R_5 s^3 + C_1 L_5 L_L R_1 R_L s^3 + C_1 L_5 R_1 R_5 R_L s^2 + C_1 L_L R_1 R_5 R_L s^2 + C_5 C_L L_5 L_L R_1 R_5 R_L s^4 + 2C_5 L_5 L_L R_1 R_5 R_L g}{C_1 C_5 L_5 L_L R_1 R_5 R_L s^4 + C_1 C_L L_5 L_L R_1 R_5 R_L s^4 + C_1 L_5 L_L R_1 R_5 s^3 + C_1 L_5 L_L R_1 R_L s^3 + C_1 L_5 R_1 R_5 R_L s^2 + C_1 L_L R_1 R_5 R_L s^2 + C_5 C_L L_5 L_L R_1 R_5 R_L s^4 + 2C_5 L_5 L_L R_1 R_5 R_L g}$$

10.334 INVALID-ORDER-334  $Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$

$$H(s) = -\frac{C_1 C_5 C_L L_5 L_L R_1 R_5 R_L s^5 + C_1 C_5 L_5 L_L R_1 R_5 s^4 + C_1 C_5 L_5 R_1 R_5 R_L s^3 + C_1 C_L L_5 L_L R_1 R_5 s^4 + C_1 C_L L_5 L_L R_1 R_L s^4 + C_1 C_L L_L R_1 R_5 R_L s^3 + C_1 L_5 L_L R_1 s^3 + C_1 L_5 R_1 R_5 s^2 +$$

10.335 INVALID-ORDER-335  $Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$

$$H(s) = -\frac{C_1 C_5 C_L L_5 L_L R_1 R_5 R_L s^5 + C_1 C_5 L_5 R_1 R_5 R_L s^3 + C_1 C_L L_5 L_L R_1 R_5 s^4 + C_1 C_L L_5 L_L R_1 R_L s^4 + C_1 C_L L_5 R_1 R_5 R_L s^3 + C_1 C_L L_L R_1 R_5 R_L s^3 + C_1 L_5 R_1 R_5 s^2 + C_1 L_5 R_1 R_L s^2 +$$

**10.336 INVALID-ORDER-336**  $Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, R_L \right)$

$$H(s) = \frac{R_1 R_L (C_5 L_5 R_5 g_m s^2 - C_5 L_5 s^2 + L_5 g_m s + R_5 g_m - 1)}{C_1 C_5 L_5 R_1 R_5 s^3 + C_1 C_5 L_5 R_1 R_L s^3 + C_1 L_5 R_1 s^2 + C_1 R_1 R_5 s + C_1 R_1 R_L s + C_5 L_5 R_1 R_5 g_m s^2 + 2 C_5 L_5 R_1 R_L g_m s^2 + C_5 L_5 R_1 s^2 + C_5 L_5 R_5 s^2 + C_5 L_5 R_L s^2 + L_5 R_1 g_m s + L_5 s}$$

**10.337 INVALID-ORDER-337**  $Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{1}{C_L s} \right)$

$$H(s) = \frac{R_1 (C_5 L_5 R_5 g_m s^2 - C_5 L_5 s^2 + L_5 g_m s + R_5 g_m - 1)}{C_1 C_5 C_L L_5 R_1 R_5 s^4 + C_1 C_5 L_5 R_1 s^3 + C_1 C_L L_5 R_1 s^3 + C_1 C_L R_1 R_5 s^2 + C_1 R_1 s + C_5 C_L L_5 R_1 R_5 g_m s^3 + C_5 C_L L_5 R_1 s^3 + C_5 C_L L_5 R_5 s^3 + 2 C_5 L_5 R_1 g_m s^2 + C_5 L_5 s^2 + C_L L_5 R_1 g_m}$$

**10.338 INVALID-ORDER-338**  $Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{R_L}{C_L R_L s + 1} \right)$

$$H(s) = \frac{C_1 C_5 C_L L_5 R_1 R_5 R_L s^4 + C_1 C_5 L_5 R_1 R_5 s^3 + C_1 C_5 L_5 R_1 R_L s^3 + C_1 C_L L_5 R_1 R_L s^3 + C_1 C_L R_1 R_5 R_L s^2 + C_1 L_5 R_1 s^2 + C_1 R_1 R_5 s + C_1 R_1 R_L s + C_5 C_L L_5 R_1 R_5 R_L g_m s^3 + C_5 C_L L_5 R_1 R_5 R_L s^2 + C_5 C_L L_5 R_1 R_5 R_L s + C_5 C_L L_5 R_1 R_5 R_L}{C_1 C_5 C_L L_5 R_1 R_5 R_L s^4 + C_1 C_5 L_5 R_1 R_5 s^3 + C_1 C_5 L_5 R_1 R_L s^3 + C_1 C_L L_5 R_1 R_L s^3 + C_1 C_L R_1 R_5 R_L s^2 + C_1 L_5 R_1 s^2 + C_1 R_1 R_5 s + C_1 R_1 R_L s + C_5 C_L L_5 R_1 R_5 R_L g_m s^3 + C_5 C_L L_5 R_1 R_5 R_L s^2 + C_5 C_L L_5 R_1 R_5 R_L s + C_5 C_L L_5 R_1 R_5 R_L}$$

**10.339 INVALID-ORDER-339**  $Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, R_L + \frac{1}{C_L s} \right)$

$$H(s) = \frac{R_1 (C_L R_L s + 1) (C_5 L_5 R_5 g_m s^2 - C_5 L_5 R_5 g_m)}{C_1 C_5 C_L L_5 R_1 R_5 s^4 + C_1 C_5 C_L L_5 R_1 R_L s^4 + C_1 C_5 L_5 R_1 s^3 + C_1 C_L L_5 R_1 s^3 + C_1 C_L R_1 R_5 s^2 + C_1 C_L R_1 R_L s^2 + C_1 R_1 s + C_5 C_L L_5 R_1 R_5 g_m s^3 + 2 C_5 C_L L_5 R_1 R_L g_m s^3 + C_5 C_L L_5 R_1 R_5 g_m}$$

**10.340 INVALID-ORDER-340**  $Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, L_L s + \frac{1}{C_L s} \right)$

$$H(s) = \frac{R_1 (C_L L_L s^2 + 1) (C_5 L_5 R_5 g_m s^2 - C_1 C_5 C_L L_5 L_L R_1 s^5 + C_1 C_5 C_L L_5 R_1 R_5 s^4 + C_1 C_5 L_5 R_1 s^3 + C_1 C_L L_5 R_1 s^3 + C_1 C_L L_L R_1 s^3 + C_1 C_L R_1 R_5 s^2 + C_1 R_1 s + 2 C_5 C_L L_5 L_L R_1 g_m s^4 + C_5 C_L L_5 L_L s^4 + C_5 C_L L_5 R_1 R_5 s^3 + C_5 L_5 R_5 g_m s^2 + C_5 R_5 s + 1)}{C_1 C_5 C_L L_5 L_L R_1 s^5 + C_1 C_5 C_L L_5 R_1 R_5 s^4 + C_1 C_5 L_5 R_1 s^3 + C_1 C_L L_5 R_1 s^3 + C_1 C_L L_L R_1 s^3 + C_1 C_L R_1 R_5 s^2 + C_1 R_1 s + 2 C_5 C_L L_5 L_L R_1 g_m s^4 + C_5 C_L L_5 L_L s^4 + C_5 C_L L_5 R_1 R_5 s^3 + C_5 L_5 R_5 g_m s^2 + C_5 R_5 s + 1}$$

**10.341 INVALID-ORDER-341**  $Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{L_L s}{C_L L_L s^2 + 1} \right)$

$$H(s) = \frac{C_1 C_5 C_L L_5 L_L R_1 R_5 s^5 + C_1 C_5 L_5 L_L R_1 s^4 + C_1 C_5 L_5 R_1 R_5 s^3 + C_1 C_L L_5 L_L R_1 s^4 + C_1 C_L L_L R_1 R_5 s^3 + C_1 L_5 R_1 s^2 + C_1 L_L R_1 s^2 + C_1 R_1 R_5 s + C_5 C_L L_5 L_L R_1 R_5 q_m s^4 + C_5 C_L L_L}{C_1 C_5 C_L L_5 L_L R_1 R_5 s^5 + C_1 C_5 L_5 L_L R_1 s^4 + C_1 C_5 L_5 R_1 R_5 s^3 + C_1 C_L L_5 L_L R_1 s^4 + C_1 C_L L_L R_1 R_5 s^3 + C_1 L_5 R_1 s^2 + C_1 L_L R_1 s^2 + C_1 R_1 R_5 s + C_5 C_L L_5 L_L R_1 R_5 q_m s^4 + C_5 C_L L_L}$$

**10.342 INVALID-ORDER-342**  $Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, L_L s + R_L + \frac{1}{C_L s} \right)$

$$H(s) = \frac{C_1 C_5 C_L L_5 L_L R_1 s^5 + C_1 C_5 C_L L_5 R_1 R_5 s^4 + C_1 C_5 C_L L_5 R_1 R_L s^4 + C_1 C_5 L_5 R_1 s^3 + C_1 C_L L_5 R_1 s^3 + C_1 C_L L_L R_1 s^3 + C_1 C_L R_1 R_5 s^2 + C_1 C_L R_1 R_L s^2 + C_1 R_1 s + 2 C_5 C_L L_5 L_L R_1}{C_1 C_5 C_L L_5 L_L R_1 s^5 + C_1 C_5 C_L L_5 R_1 R_5 s^4 + C_1 C_5 C_L L_5 R_1 R_L s^4 + C_1 C_5 L_5 R_1 s^3 + C_1 C_L L_5 R_1 s^3 + C_1 C_L L_L R_1 s^3 + C_1 C_L R_1 R_5 s^2 + C_1 C_L R_1 R_L s^2 + C_1 R_1 s + 2 C_5 C_L L_5 L_L R_1}$$

10.343 INVALID-ORDER-343  $Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$

$$H(s) = \frac{C_1 C_5 C_L L_5 L_L R_1 R_5 R_L s^5 + C_1 C_5 L_5 L_L R_1 R_5 s^4 + C_1 C_5 L_5 L_L R_1 R_L s^4 + C_1 C_5 L_5 R_1 R_5 R_L s^3 + C_1 C_L L_5 L_L R_1 R_L s^4 + C_1 C_L L_L R_1 R_5 R_L s^3 + C_1 L_5 L_L R_1 s^3 + C_1 L_5 R_1 R_L s^2 + C_1 L_5 R_1 s^2 + C_1 L_5 s^2}{C_1 C_5 C_L L_5 L_L R_1 R_5 R_L s^5 + C_1 C_5 L_5 L_L R_1 R_5 s^4 + C_1 C_5 L_5 L_L R_1 R_L s^4 + C_1 C_5 L_5 R_1 R_5 R_L s^3 + C_1 C_L L_5 L_L R_1 R_L s^4 + C_1 C_L L_L R_1 R_5 R_L s^3 + C_1 L_5 L_L R_1 s^3 + C_1 L_5 R_1 R_L s^2 + C_1 L_5 R_1 s^2 + C_1 L_5 s^2}$$

**10.344 INVALID-ORDER-344**  $Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$

$$H(s) = \frac{C_1 C_5 C_L L_5 L_L R_1 R_5 s^5 + C_1 C_5 C_L L_5 L_L R_1 R_L s^5 + C_1 C_5 L_5 L_L R_1 s^4 + C_1 C_5 L_5 R_1 R_5 s^3 + C_1 C_5 L_5 R_1 R_L s^3 + C_1 C_L L_5 L_L R_1 s^4 + C_1 C_L L_L R_1 R_5 s^3 + C_1 C_L L_L R_1 R_L s^3 + C_1 L_5 R_1 R_5 s^3 + C_1 L_5 R_1 R_L s^3 + C_1 L_5 R_1 s^2 + C_1 L_5 R_1 s + C_1 L_5 s + C_1 C_5 C_L L_5 L_L R_1 R_5 s^5 + C_1 C_5 C_L L_5 L_L R_1 R_L s^5 + C_1 C_5 L_5 L_L R_1 s^4 + C_1 C_5 L_5 R_1 R_5 s^3 + C_1 C_5 L_5 R_1 R_L s^3 + C_1 C_L L_5 L_L R_1 s^4 + C_1 C_L L_L R_1 R_5 s^3 + C_1 C_L L_L R_1 R_L s^3 + C_1 L_5 R_1 R_5 s^3 + C_1 L_5 R_1 R_L s^3 + C_1 L_5 R_1 s^2 + C_1 L_5 R_1 s + C_1 L_5 s}{C_1 C_5 C_L L_5 L_L R_1 R_5 s^5 + C_1 C_5 C_L L_5 L_L R_1 R_L s^5 + C_1 C_5 L_5 L_L R_1 s^4 + C_1 C_5 L_5 R_1 R_5 s^3 + C_1 C_5 L_5 R_1 R_L s^3 + C_1 C_L L_5 L_L R_1 s^4 + C_1 C_L L_L R_1 R_5 s^3 + C_1 C_L L_L R_1 R_L s^3 + C_1 L_5 R_1 R_5 s^3 + C_1 L_5 R_1 R_L s^3 + C_1 L_5 R_1 s^2 + C_1 L_5 R_1 s + C_1 L_5 s}$$

10.345 INVALID-ORDER-345  $Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$

$$H(s) = \frac{C_1 C_5 C_L L_5 L_L R_1 R_5 s^5 + C_1 C_5 C_L L_5 L_L R_1 R_L s^5 + C_1 C_5 C_L L_5 R_1 R_5 R_L s^4 + C_1 C_5 L_5 R_1 R_5 s^3 + C_1 C_5 L_5 R_1 R_L s^3 + C_1 C_L L_5 L_L R_1 s^4 + C_1 C_L L_5 R_1 R_L s^3 + C_1 C_L L_L R_1 R_5 s^3 + C_1 C_L L_L R_1 R_L s^3 + C_1 C_L L_L R_1 s^4}{C_1 C_5 C_L L_5 L_L R_1 R_5 s^5 + C_1 C_5 C_L L_5 L_L R_1 R_L s^5 + C_1 C_5 C_L L_5 R_1 R_5 R_L s^4 + C_1 C_5 L_5 R_1 R_5 s^3 + C_1 C_5 L_5 R_1 R_L s^3 + C_1 C_L L_5 L_L R_1 s^4 + C_1 C_L L_5 R_1 R_L s^3 + C_1 C_L L_L R_1 R_5 s^3 + C_1 C_L L_L R_1 R_L s^3 + C_1 C_L L_L R_1 s^4}$$

**10.346 INVALID-ORDER-346**  $Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, R_L \right)$

$$H(s) = \frac{R_1 R_L (C_5 L_5 R_5 g_m s^2 - C_5 L_5 s^2 - C_5 R_5 s + R_5 g_m - 1)}{C_1 C_5 L_5 R_1 R_5 s^3 + C_1 C_5 L_5 R_1 R_L s^3 + C_1 C_5 R_1 R_5 R_L s^2 + C_1 R_1 R_5 s + C_1 R_1 R_L s + C_5 L_5 R_1 R_5 g_m s^2 + 2C_5 L_5 R_1 R_L g_m s^2 + C_5 L_5 R_1 s^2 + C_5 L_5 R_5 s^2 + C_5 L_5 R_L s^2 + 2C_5 R_1 R_5 R_L s + R_1 R_5 g_m - 1}$$

10.347 INVALID-ORDER-347  $Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{1}{C_L s} \right)$

$$H(s) = \frac{R_1 (C_5 L_5 R_5 g_m s^2 - C_5 L_5 s^2 - C_5 R_5 s + R_5 g_m - 1)}{C_1 C_5 C_L L_5 R_1 R_5 s^4 + C_1 C_5 L_5 R_1 s^3 + C_1 C_5 R_1 R_5 s^2 + C_1 C_L R_1 R_5 s^2 + C_1 R_1 s + C_5 C_L L_5 R_1 R_5 g_m s^3 + C_5 C_L L_5 R_1 s^3 + C_5 C_L L_5 R_5 s^3 + C_5 C_L R_1 R_5 s^2 + 2 C_5 L_5 R_1 g_m s^2 + C_5 L_5 R_1 g_m s + C_5 R_1 g_m - 1}$$

10.348 INVALID-ORDER-348  $Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{R_L}{C_L R_L s + 1} \right)$

$$H(s) = \frac{C_1 C_5 C_L L_5 R_1 R_5 R_L s^4 + C_1 C_5 L_5 R_1 R_5 s^3 + C_1 C_5 L_5 R_1 R_L s^3 + C_1 C_5 R_1 R_5 R_L s^2 + C_1 C_L R_1 R_5 R_L s^2 + C_1 R_1 R_5 s + C_1 R_1 R_L s + C_5 C_L L_5 R_1 R_5 R_L g_m s^3 + C_5 C_L L_5 R_1 R_L s^3 + C_5 C_L L_5 R_1 R_5 s^2 + C_5 C_L L_5 R_1 R_L s^2 + C_5 C_L L_5 R_1 R_5 s + C_5 C_L L_5 R_1 R_L}{C_1 C_5 C_L L_5 R_1 R_5 R_L s^4 + C_1 C_5 L_5 R_1 R_5 s^3 + C_1 C_5 L_5 R_1 R_L s^3 + C_1 C_5 R_1 R_5 R_L s^2 + C_1 C_L R_1 R_5 R_L s^2 + C_1 R_1 R_5 s + C_1 R_1 R_L s + C_5 C_L L_5 R_1 R_5 R_L g_m s^3 + C_5 C_L L_5 R_1 R_L s^3 + C_5 C_L L_5 R_1 R_5 s^2 + C_5 C_L L_5 R_1 R_L s^2 + C_5 C_L L_5 R_1 R_5 s + C_5 C_L L_5 R_1 R_L}$$

**10.349 INVALID-ORDER-349**  $Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, R_L + \frac{1}{C_L s} \right)$

$$H(s) = -\frac{C_1 C_5 C_L L_5 R_1 R_5 s^4 + C_1 C_5 C_L L_5 R_1 R_L s^4 + C_1 C_5 C_L R_1 R_5 R_L s^3 + C_1 C_5 L_5 R_1 s^3 + C_1 C_5 R_1 R_5 s^2 + C_1 C_L R_1 R_5 s^2 + C_1 C_L R_1 R_L s^2 + C_1 R_1 s + C_5 C_L L_5 R_1 R_5 g_m s^3 + 2 C_5 C_L L_5 R_1 R_5 s^4}{C_1 C_5 C_L L_5 R_1 R_5 s^4 + C_1 C_5 C_L L_5 R_1 R_L s^4 + C_1 C_5 C_L R_1 R_5 R_L s^3 + C_1 C_5 L_5 R_1 s^3 + C_1 C_5 R_1 R_5 s^2 + C_1 C_L R_1 R_5 s^2 + C_1 C_L R_1 R_L s^2 + C_1 R_1 s + C_5 C_L L_5 R_1 R_5 g_m s^3 + 2 C_5 C_L L_5 R_1 R_5 s^4}$$

**10.350 INVALID-ORDER-350**  $Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, L_L s + \frac{1}{C_L s} \right)$

$$H(s) = -\frac{C_1 C_5 C_L L_5 L_L R_1 s^5 + C_1 C_5 C_L L_5 R_1 R_5 s^4 + C_1 C_5 C_L L_L R_1 R_5 s^4 + C_1 C_5 L_5 R_1 s^3 + C_1 C_5 R_1 R_5 s^2 + C_1 C_L L_L R_1 s^3 + C_1 C_L R_1 R_5 s^2 + C_1 R_1 s + 2C_5 C_L L_5 L_L R_1 g_m s^4 + C_5 C_L L_L}{C_1 C_5 C_L L_5 L_L R_1 s^5 + C_1 C_5 C_L L_5 R_1 R_5 s^4 + C_1 C_5 C_L L_L R_1 R_5 s^4 + C_1 C_5 L_5 R_1 s^3 + C_1 C_5 R_1 R_5 s^2 + C_1 C_L L_L R_1 s^3 + C_1 C_L R_1 R_5 s^2 + C_1 R_1 s + 2C_5 C_L L_5 L_L R_1 g_m s^4 + C_5 C_L L_L}$$

$$10.351 \quad \text{INVALID-ORDER-351} \quad Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{L_L s}{C_L L_L s^2 + 1} \right)$$

$$H(s) = \frac{C_1 C_5 C_L L_5 L_L R_1 R_5 s^5 + C_1 C_5 L_5 L_L R_1 s^4 + C_1 C_5 L_5 R_1 R_5 s^3 + C_1 C_5 L_L R_1 R_5 s^3 + C_1 C_L L_L R_1 R_5 s^3 + C_1 L_L R_1 s^2 + C_1 R_1 R_5 s + C_5 C_L L_5 L_L R_1 R_5 q_m s^4 + C_5 C_L L_5 L_L R_1 s^4 + C_5 C_L L_5 L_L R_1 R_5 s^4}{C_1 C_5 C_L L_5 L_L R_1 R_5 s^5 + C_1 C_5 L_5 L_L R_1 s^4 + C_1 C_5 L_5 R_1 R_5 s^3 + C_1 C_5 L_L R_1 R_5 s^3 + C_1 C_L L_L R_1 R_5 s^3 + C_1 L_L R_1 s^2 + C_1 R_1 R_5 s + C_5 C_L L_5 L_L R_1 R_5 q_m s^4 + C_5 C_L L_5 L_L R_1 s^4 + C_5 C_L L_5 L_L R_1 R_5 s^4}$$

**10.352 INVALID-ORDER-352**  $Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, L_L s + R_L + \frac{1}{C_L s} \right)$

$$H(s) = -\frac{C_1 C_5 C_L L_5 L_L R_1 s^5 + C_1 C_5 C_L L_5 R_1 R_5 s^4 + C_1 C_5 C_L L_5 R_1 R_L s^4 + C_1 C_5 C_L L_L R_1 R_5 s^4 + C_1 C_5 C_L R_1 R_5 R_L s^3 + C_1 C_5 L_5 R_1 s^3 + C_1 C_5 R_1 R_5 s^2 + C_1 C_L L_L R_1 s^3 + C_1 C_L R_1 R_5}{C_1 C_5 C_L L_5 L_L R_1 s^5 + C_1 C_5 C_L L_5 R_1 R_5 s^4 + C_1 C_5 C_L L_5 R_1 R_L s^4 + C_1 C_5 C_L L_L R_1 R_5 s^4 + C_1 C_5 C_L R_1 R_5 R_L s^3 + C_1 C_5 L_5 R_1 s^3 + C_1 C_5 R_1 R_5 s^2 + C_1 C_L L_L R_1 s^3 + C_1 C_L R_1 R_5}$$

**10.353 INVALID-ORDER-353**  $Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$

$$H(s) = \frac{C_1 C_5 C_L L_5 L_L R_1 R_5 R_L s^5 + C_1 C_5 L_5 L_L R_1 R_5 s^4 + C_1 C_5 L_5 L_L R_1 R_L s^4 + C_1 C_5 L_5 R_1 R_5 R_L s^3 + C_1 C_5 L_L R_1 R_5 R_L s^3 + C_1 C_L L_L R_1 R_5 R_L s^3 + C_1 L_L R_1 R_5 s^2 + C_1 L_L R_1 R_L s^2 + C_1 L_L R_1 s^2 + C_1 L_L R_1 s + C_1 L_L R_1}{C_1 C_5 C_L L_5 L_L R_1 R_5 R_L s^5 + C_1 C_5 L_5 L_L R_1 R_5 s^4 + C_1 C_5 L_5 L_L R_1 R_L s^4 + C_1 C_5 L_5 R_1 R_5 R_L s^3 + C_1 C_5 L_L R_1 R_5 R_L s^3 + C_1 C_L L_L R_1 R_5 R_L s^3 + C_1 L_L R_1 R_5 s^2 + C_1 L_L R_1 R_L s^2 + C_1 L_L R_1 s^2 + C_1 L_L R_1 s + C_1 L_L R_1}$$

**10.354 INVALID-ORDER-354**  $Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$

$$H(s) = -\frac{C_1 C_5 C_L L_5 L_L R_1 R_5 s^5 + C_1 C_5 C_L L_5 L_L R_1 R_L s^5 + C_1 C_5 C_L L_L R_1 R_5 R_L s^4 + C_1 C_5 L_5 L_L R_1 s^4 + C_1 C_5 L_5 R_1 R_5 s^3 + C_1 C_5 L_5 R_1 R_L s^3 + C_1 C_5 L_L R_1 R_5 s^3 + C_1 C_5 R_1 R_5 R_L s^2 +$$

**10.355 INVALID-ORDER-355**  $Z(s) = \left( \frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$

$$H(s) = -\frac{C_1 C_5 C_L L_5 L_L R_1 R_5 s^5 + C_1 C_5 C_L L_5 L_L R_1 R_L s^5 + C_1 C_5 C_L L_5 R_1 R_5 R_L s^4 + C_1 C_5 C_L L_L R_1 R_5 R_L s^4 + C_1 C_5 L_5 R_1 R_5 s^3 + C_1 C_5 L_5 R_1 R_L s^3 + C_1 C_5 R_1 R_5 R_L s^2 + C_1 C_L L_L R_1 R_5 s}{C_1 C_5 C_L L_5 L_L R_1 R_5 s^5 + C_1 C_5 C_L L_5 L_L R_1 R_L s^5 + C_1 C_5 C_L L_5 R_1 R_5 R_L s^4 + C_1 C_5 C_L L_L R_1 R_5 R_L s^4 + C_1 C_5 L_5 R_1 R_5 s^3 + C_1 C_5 L_5 R_1 R_L s^3 + C_1 C_5 R_1 R_5 R_L s^2 + C_1 C_L L_L R_1 R_5 s}$$

**10.356 INVALID-ORDER-356**  $Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, R_5, R_L \right)$

$$H(s) = \frac{R_L (R_5 g_m - 1) (C_1 R_1 s + 1)}{C_1 R_1 R_5 g_m s + 2C_1 R_1 R_L g_m s + C_1 R_1 s + C_1 R_5 s + C_1 R_L s + R_5 g_m + 2R_L g_m + 1}$$

**10.357 INVALID-ORDER-357**  $Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, R_5, L_L s + \frac{1}{C_L s} \right)$

$$H(s) = \frac{(R_5 g_m - 1)(C_1 R_1 s + 1)(C_L L_L s^2 + 1)}{2C_1 C_L L_L R_1 g_m s^3 + C_1 C_L L_L s^3 + C_1 C_L R_1 R_5 g_m s^2 + C_1 C_L R_1 s^2 + C_1 C_L R_5 s^2 + 2C_1 R_1 g_m s + C_1 s + 2C_L L_L g_m s^2 + C_L R_5 g_m s + C_L s + 2g_m}$$

**10.358 INVALID-ORDER-358**  $Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, R_5, \frac{L_L s}{C_L L_L s^2 + 1} \right)$

$$H(s) = \frac{L_L s (R_5 g_m - 1) (C_1 R_1 s + 1)}{C_1 C_L L_L R_1 R_5 g_m s^3 + C_1 C_L L_L R_1 s^3 + C_1 C_L L_L R_5 s^3 + 2 C_1 L_L R_1 g_m s^2 + C_1 L_L s^2 + C_1 R_1 R_5 g_m s + C_1 R_1 s + C_1 R_5 s + C_L L_L R_5 g_m s^2 + C_L L_L s^2 + 2 L_L g_m s + R_5 g_m + 1}$$

**10.359 INVALID-ORDER-359**  $Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, R_5, L_L s + R_L + \frac{1}{C_L s} \right)$

$$H(s) = \frac{(R_5 g_m - 1)(C_1 R_1 s + 1)(C_L L_L s^2 + C_L R_L s + 1)}{2C_1 C_L L_L R_1 g_m s^3 + C_1 C_L L_L s^3 + C_1 C_L R_1 R_5 g_m s^2 + 2C_1 C_L R_1 R_L g_m s^2 + C_1 C_L R_1 s^2 + C_1 C_L R_5 s^2 + C_1 C_L R_L s^2 + 2C_1 R_1 g_m s + C_1 s + 2C_L L_L g_m s^2 + C_L R_5 g_m s + 2C_L R_L g_m}$$

$$10.360 \quad \text{INVALID-ORDER-360} \quad Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, R_5, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$$

$$H(s) = \frac{L_L R_L s (R_5 g_m - 1) (C_1 R_1 s + 1)}{C_1 C_L L_L R_1 R_5 R_L g_m s^3 + C_1 C_L L_L R_1 R_L s^3 + C_1 C_L L_L R_5 R_L s^3 + C_1 L_L R_1 R_5 g_m s^2 + 2 C_1 L_L R_1 R_L g_m s^2 + C_1 L_L R_1 s^2 + C_1 L_L R_5 s^2 + C_1 L_L R_L s^2 + C_1 R_1 R_5 R_L g_m s + C_1 R_1 R_L g_m s}$$

$$10.361 \quad \text{INVALID-ORDER-361} \quad Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, R_5, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$$

$$H(s) = \frac{(R_5 g_m - 1) (C_1 R_1 s + 1) (C_L L_L R_L s^2 + L_L s + R_L)}{C_1 C_L L_L R_1 R_5 g_m s^3 + 2 C_1 C_L L_L R_1 R_L g_m s^3 + C_1 C_L L_L R_1 s^3 + C_1 C_L L_L R_5 s^3 + C_1 C_L L_L R_L s^3 + 2 C_1 L_L R_1 g_m s^2 + C_1 L_L s^2 + C_1 R_1 R_5 g_m s + 2 C_1 R_1 R_L g_m s + C_1 R_1 s + C_1 R_5 s}$$

$$10.362 \quad \text{INVALID-ORDER-362} \quad Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, R_5, \frac{R_L (L_L s + \frac{1}{C_L s})}{L_L s + R_L + \frac{1}{C_L s}} \right)$$

$$H(s) = \frac{R_L (R_5 g_m - 1) (C_1 R_1 s + 1) (C_L L_L s^2 + L_L s + R_L)}{C_1 C_L L_L R_1 R_5 g_m s^3 + 2 C_1 C_L L_L R_1 R_L g_m s^3 + C_1 C_L L_L R_1 s^3 + C_1 C_L L_L R_5 s^3 + C_1 C_L L_L R_L s^3 + C_1 C_L R_1 R_5 R_L g_m s^2 + C_1 C_L R_1 R_L s^2 + C_1 C_L R_5 R_L s^2 + C_1 R_1 R_5 g_m s + 2 C_1 R_1 R_L g_m s}$$

$$10.363 \quad \text{INVALID-ORDER-363} \quad Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{1}{C_5 s}, \frac{1}{C_L s} \right)$$

$$H(s) = -\frac{(C_5 s - g_m) (C_1 R_1 s + 1)}{s (C_1 C_5 C_L R_1 s^2 + 2 C_1 C_5 R_1 g_m s + C_1 C_5 s + C_1 C_L R_1 g_m s + C_1 C_L s + C_5 C_L s + 2 C_5 g_m + C_L g_m)}$$

$$10.364 \quad \text{INVALID-ORDER-364} \quad Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{1}{C_5 s}, \frac{R_L}{C_L R_L s + 1} \right)$$

$$H(s) = -\frac{R_L (C_5 s - g_m) (C_1 R_1 s + 1)}{C_1 C_5 C_L R_1 R_L s^3 + 2 C_1 C_5 R_1 R_L g_m s^2 + C_1 C_5 R_1 s^2 + C_1 C_5 R_L s^2 + C_1 C_L R_1 R_L g_m s^2 + C_1 C_L R_L s^2 + C_1 R_1 g_m s + C_1 s + C_5 C_L R_L s^2 + 2 C_5 R_L g_m s + C_5 s + C_L R_L g_m s + g_m}$$

$$10.365 \quad \text{INVALID-ORDER-365} \quad Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{1}{C_5 s}, R_L + \frac{1}{C_L s} \right)$$

$$H(s) = -\frac{(C_5 s - g_m)(C_1 R_1 s + 1)(C_L R_L s + 1)}{s(2C_1 C_5 C_L R_1 R_L g_m s^2 + C_1 C_5 C_L R_1 s^2 + C_1 C_5 C_L R_L s^2 + 2C_1 C_5 R_1 g_m s + C_1 C_5 s + C_1 C_L R_1 g_m s + C_1 C_L s + 2C_5 C_L R_L g_m s + C_5 C_L s + 2C_5 g_m + C_L g_m)}$$

$$10.366 \quad \text{INVALID-ORDER-366} \quad Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{1}{C_5 s}, L_L s + \frac{1}{C_L s} \right)$$

$$H(s) = -\frac{(C_5 s - g_m)(C_1 R_1 s + 1)(C_L L_L s^2 + 1)}{s(2C_1 C_5 C_L L_L R_1 g_m s^3 + C_1 C_5 C_L L_L s^3 + C_1 C_5 C_L R_1 s^2 + 2C_1 C_5 R_1 g_m s + C_1 C_5 s + C_1 C_L R_1 g_m s + C_1 C_L s + 2C_5 C_L L_L g_m s^2 + C_5 C_L s + 2C_5 g_m + C_L g_m)}$$

$$10.367 \quad \text{INVALID-ORDER-367} \quad Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} \right)$$

$$H(s) = -\frac{L_L s(C_5 s - g_m)(C_1 R_1 s + 1)}{C_1 C_5 C_L L_L R_1 s^4 + 2C_1 C_5 L_L R_1 g_m s^3 + C_1 C_5 L_L s^3 + C_1 C_5 R_1 s^2 + C_1 C_L L_L R_1 g_m s^3 + C_1 C_L L_L s^3 + C_1 R_1 g_m s + C_1 s + C_5 C_L L_L s^3 + 2C_5 L_L g_m s^2 + C_5 s + C_L L_L g_m s^2 + g_m}$$

$$10.368 \quad \text{INVALID-ORDER-368} \quad Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{1}{C_5 s}, L_L s + R_L + \frac{1}{C_L s} \right)$$

$$H(s) = -\frac{(C_5 s - g_m)(C_1 R_1 s + 1)(C_L L_L s^2 + C_L R_L s + 1)}{s(2C_1 C_5 C_L L_L R_1 g_m s^3 + C_1 C_5 C_L L_L s^3 + 2C_1 C_5 C_L R_1 R_L g_m s^2 + C_1 C_5 C_L R_1 s^2 + C_1 C_5 C_L R_L s^2 + 2C_1 C_5 R_1 g_m s + C_1 C_5 s + C_1 C_L R_1 g_m s + C_1 C_L s + 2C_5 C_L L_L g_m s^2 + 2C_5 R_L g_m s + C_5 s + C_L R_L g_m s^2 + C_L g_m)}$$

$$10.369 \quad \text{INVALID-ORDER-369} \quad Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{1}{C_5 s}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$$

$$H(s) = -\frac{L_L R_L s(C_5 s - g_m)(C_1 R_1 s + 1)}{C_1 C_5 C_L L_L R_1 R_L s^4 + 2C_1 C_5 L_L R_1 R_L g_m s^3 + C_1 C_5 L_L R_1 s^3 + C_1 C_5 L_L R_L s^3 + C_1 C_5 R_1 R_L s^2 + C_1 C_L L_L R_1 R_L g_m s^3 + C_1 C_L L_L R_L s^3 + C_1 L_L R_1 g_m s^2 + C_1 L_L s^2 + C_1 R_1 R_L s^2 + C_1 R_1 s^2 + C_1 s + C_5 C_L L_L s^3 + 2C_5 L_L g_m s^2 + C_5 s + C_L R_L g_m s^2 + C_L g_m}$$

$$10.370 \quad \text{INVALID-ORDER-370} \quad Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$$

$$H(s) = -\frac{(C_5 s - g_m)(C_1 R_1 s + 1)(C_L L_L R_L s^2 + L_L s + R_L)}{2C_1 C_5 C_L L_L R_1 R_L g_m s^4 + C_1 C_5 C_L L_L R_1 s^4 + C_1 C_5 C_L L_L R_L s^4 + 2C_1 C_5 L_L R_1 g_m s^3 + C_1 C_5 L_L s^3 + 2C_1 C_5 R_1 R_L g_m s^2 + C_1 C_5 R_1 s^2 + C_1 C_5 R_L s^2 + C_1 C_L L_L R_1 g_m s^3 + C_1 C_L R_L s^3 + C_1 L_L R_1 g_m s^2 + C_1 L_L s^2 + C_1 R_1 R_L s^2 + C_1 R_1 s^2 + C_1 s + C_5 C_L L_L s^3 + 2C_5 L_L g_m s^2 + C_5 s + C_L R_L g_m s^2 + C_L g_m}$$



$$10.371 \quad \text{INVALID-ORDER-371} \quad Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{1}{C_5 s}, \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$$

$$H(s) = - \frac{R_L (C_5 s - g_m) (C_1 R_1 s + 1) (C_L s + 1)}{2C_1 C_5 C_L L_L R_1 R_L g_m s^4 + C_1 C_5 C_L L_L R_1 s^4 + C_1 C_5 C_L L_L R_L s^4 + C_1 C_5 C_L R_1 R_L s^3 + 2C_1 C_5 R_1 R_L g_m s^2 + C_1 C_5 R_1 s^2 + C_1 C_5 R_L s^2 + C_1 C_L L_L R_1 g_m s^3 + C_1 C_L L_L s^3 + C_1 C_L R_1 g_m s^2 + C_1 C_L R_1 s^2 + C_1 C_L R_L s^2 + C_1 R_1 R_L g_m s + C_1 R_1 s + C_1 R_L g_m s + C_1 R_L s + 2g_m}$$

$$10.372 \quad \text{INVALID-ORDER-372} \quad Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, \frac{1}{C_L s} \right)$$

$$H(s) = - \frac{(C_1 R_1 s + 1) (C_5 R_5 s - R_5 g_m + 1)}{C_1 C_5 C_L R_1 R_5 s^3 + 2C_1 C_5 R_1 R_5 g_m s^2 + C_1 C_5 R_5 s^2 + C_1 C_L R_1 R_5 g_m s^2 + C_1 C_L R_1 s^2 + C_1 C_L R_5 s^2 + 2C_1 R_1 g_m s + C_1 s + C_5 C_L R_5 s^2 + 2C_5 R_5 g_m s + C_L R_5 g_m s + C_L s + 2g_m}$$

$$10.373 \quad \text{INVALID-ORDER-373} \quad Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, \frac{R_L}{C_L R_L s + 1} \right)$$

$$H(s) = - \frac{R_L (C_1 R_1 s + 1) (C_5 R_5 s - R_5 g_m + 1)}{C_1 C_5 C_L R_1 R_5 R_L s^3 + 2C_1 C_5 R_1 R_5 R_L g_m s^2 + C_1 C_5 R_1 R_5 s^2 + C_1 C_5 R_5 R_L s^2 + C_1 C_L R_1 R_5 R_L g_m s^2 + C_1 C_L R_1 R_L s^2 + C_1 C_L R_5 R_L s^2 + C_1 R_1 R_5 g_m s + 2C_1 R_1 R_L g_m s + C_1 R_1 R_L s + C_1 R_1 s + C_1 R_5 g_m s + C_1 R_5 s + C_1 R_L g_m s + C_1 R_L s + 2g_m}$$

$$10.374 \quad \text{INVALID-ORDER-374} \quad Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, R_L + \frac{1}{C_L s} \right)$$

$$H(s) = - \frac{(C_1 R_1 s + 1) (C_L R_L s + 1) (C_5 R_5 s - R_5 g_m + 1)}{2C_1 C_5 C_L R_1 R_5 R_L g_m s^3 + C_1 C_5 C_L R_1 R_5 s^3 + C_1 C_5 C_L R_5 R_L s^3 + 2C_1 C_5 R_1 R_5 g_m s^2 + C_1 C_5 R_5 s^2 + C_1 C_L R_1 R_5 g_m s^2 + 2C_1 C_L R_1 R_L g_m s^2 + C_1 C_L R_1 s^2 + C_1 C_L R_5 s^2 + C_1 C_L R_L s^2 + C_1 R_1 R_5 g_m s + 2C_1 R_1 R_L g_m s + C_1 R_1 R_L s + C_1 R_1 s + C_1 R_5 g_m s + C_1 R_5 s + C_1 R_L g_m s + C_1 R_L s + 2g_m}$$

$$10.375 \quad \text{INVALID-ORDER-375} \quad Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, L_L s + \frac{1}{C_L s} \right)$$

$$H(s) = - \frac{(C_1 R_1 s + 1) (C_L L_L s^2 + 1) (C_5 R_5 s - R_5 g_m + 1)}{2C_1 C_5 C_L L_L R_1 R_5 g_m s^4 + C_1 C_5 C_L L_L R_5 s^4 + C_1 C_5 C_L R_1 R_5 s^3 + 2C_1 C_5 R_1 R_5 g_m s^2 + C_1 C_5 R_5 s^2 + 2C_1 C_L L_L R_1 g_m s^3 + C_1 C_L L_L s^3 + C_1 C_L R_1 R_5 g_m s^2 + C_1 C_L R_1 s^2 + C_1 C_L R_L s^2 + C_1 R_1 R_5 g_m s + 2C_1 R_1 R_L g_m s + C_1 R_1 R_L s + C_1 R_1 s + C_1 R_5 g_m s + C_1 R_5 s + C_1 R_L g_m s + C_1 R_L s + 2g_m}$$

$$10.376 \quad \text{INVALID-ORDER-376} \quad Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, \frac{L_L s}{C_L L_L s^2 + 1} \right)$$

$$H(s) = - \frac{L_L s (C_1 R_1 s + 1) (C_5 R_5 s - R_5 g_m + 1)}{C_1 C_5 C_L L_L R_1 R_5 s^4 + 2C_1 C_5 L_L R_1 R_5 g_m s^3 + C_1 C_5 L_L R_5 s^3 + C_1 C_5 R_1 R_5 s^2 + C_1 C_L L_L R_1 R_5 g_m s^3 + C_1 C_L L_L R_1 s^3 + C_1 C_L L_L R_5 s^3 + 2C_1 L_L R_1 g_m s^2 + C_1 L_L s^2 + C_1 R_1 R_5 g_m s + 2C_1 R_1 R_L g_m s + C_1 R_1 R_L s + C_1 R_1 s + C_1 R_5 g_m s + C_1 R_5 s + C_1 R_L g_m s + C_1 R_L s + 2g_m}$$

$$10.377 \quad \text{INVALID-ORDER-377} \quad Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, L_L s + R_L + \frac{1}{C_L s} \right)$$

$$H(s) = -\frac{2C_1 C_5 C_L L_L R_1 R_5 g_m s^4 + C_1 C_5 C_L L_L R_5 s^4 + 2C_1 C_5 C_L R_1 R_5 R_L g_m s^3 + C_1 C_5 C_L R_1 R_5 s^3 + C_1 C_5 C_L R_5 R_L s^3 + 2C_1 C_5 R_1 R_5 g_m s^2 + C_1 C_5 R_5 s^2 + 2C_1 C_L L_L R_1 g_m s^3 + C_1 C_L}{2C_1 C_5 C_L L_L R_1 R_5 g_m s^4 + C_1 C_5 C_L L_L R_5 s^4 + 2C_1 C_5 C_L R_1 R_5 R_L g_m s^3 + C_1 C_5 C_L R_1 R_5 s^3 + C_1 C_5 C_L R_5 R_L s^3 + 2C_1 C_5 R_1 R_5 g_m s^2 + C_1 C_5 R_5 s^2 + 2C_1 C_L L_L R_1 g_m s^3 + C_1 C_L}$$

$$10.378 \quad \text{INVALID-ORDER-378} \quad Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$$

$$H(s) = -\frac{C_1 C_5 C_L L_L R_1 R_5 R_L s^4 + 2C_1 C_5 L_L R_1 R_5 R_L g_m s^3 + C_1 C_5 L_L R_1 R_5 s^3 + C_1 C_5 L_L R_5 R_L s^3 + C_1 C_5 R_1 R_5 R_L s^2 + C_1 C_L L_L R_1 R_5 R_L g_m s^3 + C_1 C_L L_L R_1 R_L s^3 + C_1 C_L L_L R_5 R_L s^3 + C_1 C_L}{C_1 C_5 C_L L_L R_1 R_5 R_L s^4 + 2C_1 C_5 L_L R_1 R_5 R_L g_m s^3 + C_1 C_5 L_L R_1 R_5 s^3 + C_1 C_5 L_L R_5 R_L s^3 + C_1 C_5 R_1 R_5 R_L s^2 + C_1 C_L L_L R_1 R_5 R_L g_m s^3 + C_1 C_L L_L R_1 R_L s^3 + C_1 C_L L_L R_5 R_L s^3 + C_1 C_L}$$

$$10.379 \quad \text{INVALID-ORDER-379} \quad Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$$

$$H(s) = -\frac{2C_1 C_5 C_L L_L R_1 R_5 R_L g_m s^4 + C_1 C_5 C_L L_L R_1 R_5 s^4 + C_1 C_5 C_L L_L R_5 R_L s^4 + 2C_1 C_5 L_L R_1 R_5 g_m s^3 + C_1 C_5 L_L R_5 s^3 + 2C_1 C_5 R_1 R_5 R_L g_m s^2 + C_1 C_5 R_1 R_5 s^2 + C_1 C_5 R_5 R_L s^2 + C_1 C_L}{2C_1 C_5 C_L L_L R_1 R_5 R_L g_m s^4 + C_1 C_5 C_L L_L R_1 R_5 s^4 + C_1 C_5 C_L L_L R_5 R_L s^4 + 2C_1 C_5 L_L R_1 R_5 g_m s^3 + C_1 C_5 L_L R_5 s^3 + 2C_1 C_5 R_1 R_5 R_L g_m s^2 + C_1 C_5 R_1 R_5 s^2 + C_1 C_5 R_5 R_L s^2 + C_1 C_L}$$

$$10.380 \quad \text{INVALID-ORDER-380} \quad Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$$

$$H(s) = -\frac{2C_1 C_5 C_L L_L R_1 R_5 R_L g_m s^4 + C_1 C_5 C_L L_L R_1 R_5 s^4 + C_1 C_5 C_L L_L R_5 R_L s^4 + C_1 C_5 C_L R_1 R_5 R_L s^3 + 2C_1 C_5 R_1 R_5 R_L g_m s^2 + C_1 C_5 R_1 R_5 s^2 + C_1 C_5 R_5 R_L s^2 + C_1 C_L L_L R_1 R_5 g_m s^3 + C_1 C_L}{2C_1 C_5 C_L L_L R_1 R_5 R_L g_m s^4 + C_1 C_5 C_L L_L R_1 R_5 s^4 + C_1 C_5 C_L L_L R_5 R_L s^4 + C_1 C_5 C_L R_1 R_5 R_L s^3 + 2C_1 C_5 R_1 R_5 R_L g_m s^2 + C_1 C_5 R_1 R_5 s^2 + C_1 C_5 R_5 R_L s^2 + C_1 C_L L_L R_1 R_5 g_m s^3 + C_1 C_L}$$

$$10.381 \quad \text{INVALID-ORDER-381} \quad Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, \frac{1}{C_L s} \right)$$

$$H(s) = \frac{(C_1 R_1 s + 1)(C_5 R_5 g_m s - C_5 s + g_m)}{s(C_1 C_5 C_L R_1 R_5 g_m s^2 + C_1 C_5 C_L R_1 s^2 + C_1 C_5 C_L R_5 s^2 + 2C_1 C_5 R_1 g_m s + C_1 C_5 s + C_1 C_L R_1 g_m s + C_1 C_L s + C_5 C_L R_5 g_m s + C_5 C_L s + 2C_5 g_m + C_L g_m)}$$

**10.382 INVALID-ORDER-382**  $Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, \frac{R_L}{C_L R_L s + 1} \right)$

$$H(s) = \frac{R_L (C_1 R_1 s + 1) (C_5 R_5 g_m s - C_5 s + g_m)}{C_1 C_5 C_L R_1 R_5 R_L g_m s^3 + C_1 C_5 C_L R_1 R_L s^3 + C_1 C_5 C_L R_5 R_L s^3 + C_1 C_5 R_1 R_5 g_m s^2 + 2 C_1 C_5 R_1 R_L g_m s^2 + C_1 C_5 R_1 s^2 + C_1 C_5 R_5 s^2 + C_1 C_5 R_L s^2 + C_1 C_L R_1 R_L g_m s^2 + C_1 C_L R_L}$$

**10.383 INVALID-ORDER-383**  $Z(s) = \left( R_1 + \frac{1}{C_{1s}}, \infty, \infty, \infty, R_5 + \frac{1}{C_{5s}}, R_L + \frac{1}{C_{Ls}} \right)$

$$H(s) = \frac{(C_1 R_1 s + 1)(C_L R_L s + 1)(C_5 R_5 g_m s - C_5 s + g_m)}{s(C_1 C_5 C_L R_1 R_5 g_m s^2 + 2C_1 C_5 C_L R_1 R_L g_m s^2 + C_1 C_5 C_L R_1 s^2 + C_1 C_5 C_L R_5 s^2 + C_1 C_5 C_L R_L s^2 + 2C_1 C_5 R_1 g_m s + C_1 C_5 s + C_1 C_L R_1 g_m s + C_1 C_L s + C_5 C_L R_5 g_m s + 2C_5 C_L R_1 g_m s + C_5 C_L s + g_m)}$$

**10.384 INVALID-ORDER-384**  $Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, L_L s + \frac{1}{C_L s} \right)$

$$H(s) = \frac{(C_1 R_1 s + 1)(C_L L_L s^2 + 1)(C_5 R_5 g_m s - C_5 s + g_m)}{s(2C_1 C_5 C_L L_L R_1 q_m s^3 + C_1 C_5 C_L L_L s^3 + C_1 C_5 C_L R_1 R_5 q_m s^2 + C_1 C_5 C_L R_1 s^2 + C_1 C_5 C_L R_5 s^2 + 2C_1 C_5 R_1 q_m s + C_1 C_5 s + C_1 C_L R_1 q_m s + C_1 C_L s + 2C_5 C_L L_L q_m s^2 + C_5 C_L L_L s^2 + C_5 C_L R_1 q_m s + C_5 C_L R_1 s + C_5 C_L s + g_m)}$$

**10.385 INVALID-ORDER-385**  $Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} \right)$

$$H(s) = \frac{L_L s (C_1 R_1 s + 1) (C_5 R_5 g_m s - C_5 s + g_m)}{C_1 C_5 C_L L_L R_1 R_5 g_m s^4 + C_1 C_5 C_L L_L R_1 s^4 + C_1 C_5 C_L L_L R_5 s^4 + 2 C_1 C_5 L_L R_1 g_m s^3 + C_1 C_5 L_L s^3 + C_1 C_5 R_1 R_5 g_m s^2 + C_1 C_5 R_1 s^2 + C_1 C_5 R_5 s^2 + C_1 C_L L_L R_1 g_m s^3 + C_1 C_L L_L s^3}$$

**10.386 INVALID-ORDER-386**  $Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, L_L s + R_L + \frac{1}{C_L s} \right)$

$$H(s) = \frac{(C_1 R_1 s + 1)(C_L L_L s^2 + C_L R_L s + 1)(C_5 R_5 g_m s - C_5 s + g_m)}{s(2C_1 C_5 C_L L_L R_1 q_m s^3 + C_1 C_5 C_L L_L s^3 + C_1 C_5 C_L R_1 R_5 q_m s^2 + 2C_1 C_5 C_L R_1 R_L q_m s^2 + C_1 C_5 C_L R_1 s^2 + C_1 C_5 C_L R_5 s^2 + C_1 C_5 C_L R_L s^2 + 2C_1 C_5 R_1 q_m s + C_1 C_5 s + C_1 C_L R_1 q_m)}$$

10.387 INVALID-ORDER-387  $Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, \frac{1}{C_L s + \frac{1}{R_L + \frac{1}{L_L s}}} \right)$

$$H(s) = \frac{C_1 C_5 C_L L_L R_1 R_5 R_L q_m s^4 + C_1 C_5 C_L L_L R_1 R_L s^4 + C_1 C_5 C_L L_L R_5 R_L s^4 + C_1 C_5 L_L R_1 R_5 q_m s^3 + 2 C_1 C_5 L_L R_1 R_L q_m s^3 + C_1 C_5 L_L R_1 s^3 + C_1 C_5 L_L R_5 s^3 + C_1 C_5 L_L R_L s^3 + C_1 C_5 L_L s^3}{C_1 C_5 C_L L_L R_1 R_5 R_L q_m s^4 + C_1 C_5 C_L L_L R_1 R_L s^4 + C_1 C_5 C_L L_L R_5 R_L s^4 + C_1 C_5 L_L R_1 R_5 q_m s^3 + 2 C_1 C_5 L_L R_1 R_L q_m s^3 + C_1 C_5 L_L R_1 s^3 + C_1 C_5 L_L R_5 s^3 + C_1 C_5 L_L R_L s^3 + C_1 C_5 L_L s^3}$$

$$10.388 \quad \text{INVALID-ORDER-388} \quad Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$$

$$H(s) = \frac{(C_1 R_1 s + 1) (C_5 L_5 g_m s^2 - C_5 s + g_m)}{C_1 C_5 C_L L_L R_1 R_5 g_m s^4 + 2 C_1 C_5 C_L L_L R_1 R_L g_m s^4 + C_1 C_5 C_L L_L R_1 s^4 + C_1 C_5 C_L L_L R_5 s^4 + C_1 C_5 C_L L_L R_L s^4 + 2 C_1 C_5 L_L R_1 g_m s^3 + C_1 C_5 L_L s^3 + C_1 C_5 R_1 R_5 g_m s^2 + 2 C_1 C_5 R_1 R_L g_m s^2 + C_1 C_5 R_1 R_L s^2 + C_1 C_5 R_5 g_m s + C_1 C_5 R_L g_m s + C_1 C_5 s + C_5 L_5 g_m s^2 + 2 C_5 R_L g_m s + C_5 s + g_m}$$

$$10.389 \quad \text{INVALID-ORDER-389} \quad Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, \frac{R_L (L_L s + \frac{1}{C_L s})}{L_L s + R_L + \frac{1}{C_L s}} \right)$$

$$H(s) = \frac{R_L (C_1 R_1 s + 1) (C_5 L_5 g_m s^2 - C_5 s + g_m)}{C_1 C_5 C_L L_L R_1 R_5 g_m s^4 + 2 C_1 C_5 C_L L_L R_1 R_L g_m s^4 + C_1 C_5 C_L L_L R_1 s^4 + C_1 C_5 C_L L_L R_5 s^4 + C_1 C_5 C_L L_L R_L s^4 + C_1 C_5 C_L R_1 R_5 R_L g_m s^3 + C_1 C_5 C_L R_1 R_L s^3 + C_1 C_5 C_L R_5 R_L s^3 + C_1 C_5 R_1 R_5 g_m s^2 + 2 C_1 C_5 R_1 R_L g_m s^2 + C_1 C_5 R_1 R_L s^2 + C_1 C_5 R_5 g_m s + C_1 C_5 R_L g_m s + C_1 C_5 s + C_5 L_5 g_m s^2 + 2 C_5 R_L g_m s + C_5 s + g_m}$$

$$10.390 \quad \text{INVALID-ORDER-390} \quad Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, R_L \right)$$

$$H(s) = \frac{R_L (C_1 R_1 s + 1) (C_5 L_5 g_m s^2 - C_5 s + g_m)}{C_1 C_5 L_5 R_1 g_m s^3 + C_1 C_5 L_5 s^3 + 2 C_1 C_5 R_1 R_L g_m s^2 + C_1 C_5 R_1 s^2 + C_1 C_5 R_L s^2 + C_1 R_1 g_m s + C_1 s + C_5 L_5 g_m s^2 + 2 C_5 R_L g_m s + C_5 s + g_m}$$

$$10.391 \quad \text{INVALID-ORDER-391} \quad Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, \frac{1}{C_L s} \right)$$

$$H(s) = \frac{(C_1 R_1 s + 1) (C_5 L_5 g_m s^2 - C_5 s + g_m)}{s (C_1 C_5 C_L L_5 R_1 g_m s^3 + C_1 C_5 C_L L_5 s^3 + C_1 C_5 C_L R_1 s^2 + 2 C_1 C_5 R_1 g_m s + C_1 C_5 s + C_1 C_L R_1 g_m s + C_1 C_L s + C_5 C_L L_5 g_m s^2 + C_5 C_L s + 2 C_5 g_m + C_L g_m)}$$

$$10.392 \quad \text{INVALID-ORDER-392} \quad Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, \frac{R_L}{C_L R_L s + 1} \right)$$

$$H(s) = \frac{R_L (C_1 R_1 s + 1) (C_5 L_5 g_m s^2 - C_5 s + g_m)}{C_1 C_5 C_L L_5 R_1 R_L g_m s^4 + C_1 C_5 C_L L_5 R_L s^4 + C_1 C_5 C_L R_1 R_L s^3 + C_1 C_5 L_5 R_1 g_m s^3 + C_1 C_5 L_5 s^3 + 2 C_1 C_5 R_1 R_L g_m s^2 + C_1 C_5 R_1 s^2 + C_1 C_5 R_L s^2 + C_1 C_L R_1 R_L g_m s^2 + C_1 C_L R_L s^2 + C_1 C_L R_1 g_m s + C_1 C_L s + C_5 L_5 g_m s^2 + 2 C_5 R_L g_m s + C_5 s + g_m}$$

$$10.393 \quad \text{INVALID-ORDER-393} \quad Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{(C_1 R_1 s + 1)(C_L R_L s + 1)(C_5 L_5 g_m s^2 - C_5 s + g_m)}{s(C_1 C_5 C_L L_5 R_1 g_m s^3 + C_1 C_5 C_L L_5 s^3 + 2C_1 C_5 C_L R_1 R_L g_m s^2 + C_1 C_5 C_L R_1 s^2 + C_1 C_5 C_L R_L s^2 + 2C_1 C_5 R_1 g_m s + C_1 C_5 s + C_1 C_L R_1 g_m s + C_1 C_L s + C_5 C_L L_5 g_m s^2 + 2C_5 C_L L_5 s + g_m)}$$

$$10.394 \quad \text{INVALID-ORDER-394} \quad Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, L_L s + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{(C_1 R_1 s + 1)(C_L L_L s^2 + 1)(C_5 L_5 g_m s^2 - C_5 s + g_m)}{s(C_1 C_5 C_L L_5 R_1 g_m s^3 + C_1 C_5 C_L L_5 s^3 + 2C_1 C_5 C_L L_L R_1 g_m s^3 + C_1 C_5 C_L L_L s^3 + C_1 C_5 C_L R_1 s^2 + 2C_1 C_5 R_1 g_m s + C_1 C_5 s + C_1 C_L R_1 g_m s + C_1 C_L s + C_5 C_L L_5 g_m s^2 + 2C_5 C_L L_5 s + g_m)}$$

$$10.395 \quad \text{INVALID-ORDER-395} \quad Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} \right)$$

$$H(s) = \frac{L_L s (C_1 R_1 s + 1)(C_5 L_5 g_m s^2 - C_5 s + g_m)}{C_1 C_5 C_L L_5 L_L R_1 g_m s^5 + C_1 C_5 C_L L_5 L_L s^5 + C_1 C_5 C_L L_L R_1 s^4 + C_1 C_5 L_5 R_1 g_m s^3 + C_1 C_5 L_5 s^3 + 2C_1 C_5 L_L R_1 g_m s^3 + C_1 C_5 L_L s^3 + C_1 C_5 R_1 s^2 + C_1 C_L L_L R_1 g_m s^3 + C_1 C_L L_L s^3}$$

$$10.396 \quad \text{INVALID-ORDER-396} \quad Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, L_L s + R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{(C_1 R_1 s + 1)(C_L L_L s^2 + C_L R_L s + 1)(C_5 L_5 g_m s^2 - C_5 s + g_m)}{s(C_1 C_5 C_L L_5 R_1 g_m s^3 + C_1 C_5 C_L L_5 s^3 + 2C_1 C_5 C_L L_L R_1 g_m s^3 + C_1 C_5 C_L L_L s^3 + 2C_1 C_5 C_L R_1 R_L g_m s^2 + C_1 C_5 C_L R_1 s^2 + C_1 C_5 C_L R_L s^2 + 2C_1 C_5 R_1 g_m s + C_1 C_5 s + C_1 C_L R_1 g_m s + C_1 C_L R_L s + \frac{1}{C_L s})}$$

$$10.397 \quad \text{INVALID-ORDER-397} \quad Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$$

$$H(s) = \frac{1}{C_1 C_5 C_L L_5 L_L R_1 R_L g_m s^5 + C_1 C_5 C_L L_5 L_L R_L s^5 + C_1 C_5 C_L L_L R_1 R_L s^4 + C_1 C_5 L_5 L_L R_1 g_m s^4 + C_1 C_5 L_5 L_L s^4 + C_1 C_5 L_5 R_1 R_L g_m s^3 + C_1 C_5 L_5 R_L s^3 + 2C_1 C_5 L_L R_1 R_L g_m s^3 + C_1 C_5 L_L R_1 s^3 + C_1 C_5 L_L R_L s^3 + C_1 C_5 R_1 s^2 + C_1 C_L R_1 g_m s + C_1 C_L R_L s + \frac{1}{C_L s}}$$

$$10.398 \quad \text{INVALID-ORDER-398} \quad Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$$

$$H(s) = \frac{(C_1 R_1 s)}{C_1 C_5 C_L L_5 L_L R_1 g_m s^5 + C_1 C_5 C_L L_5 L_L s^5 + 2C_1 C_5 C_L L_L R_1 R_L g_m s^4 + C_1 C_5 C_L L_L R_1 s^4 + C_1 C_5 C_L L_L R_L s^4 + C_1 C_5 L_5 R_1 g_m s^3 + C_1 C_5 L_5 s^3 + 2C_1 C_5 L_L R_1 g_m s^3 + C_1 C_5 L_L s^3}$$

$$10.399 \quad \text{INVALID-ORDER-399} \quad Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$$

$$H(s) = \frac{(C_1 R_1 s)}{C_1 C_5 C_L L_5 L_L R_1 g_m s^5 + C_1 C_5 C_L L_5 L_L s^5 + C_1 C_5 C_L L_5 R_1 R_L g_m s^4 + C_1 C_5 C_L L_5 R_L s^4 + 2C_1 C_5 C_L L_L R_1 R_L g_m s^4 + C_1 C_5 C_L L_L R_1 s^4 + C_1 C_5 C_L L_L R_L s^4 + C_1 C_5 C_L R_1 R_L s^3 + C_1 C_5 C_L R_L s^3}$$

$$10.400 \quad \text{INVALID-ORDER-400} \quad Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, R_L \right)$$

$$H(s) = -\frac{R_L (C_1 R_1 s + 1) (C_5 L_5 s^2 - L_5 g_m s + 1)}{2C_1 C_5 L_5 R_1 R_L g_m s^3 + C_1 C_5 L_5 R_1 s^3 + C_1 C_5 L_5 R_L s^3 + C_1 L_5 R_1 g_m s^2 + C_1 L_5 s^2 + 2C_1 R_1 R_L g_m s + C_1 R_1 s + C_1 R_L s + 2C_5 L_5 R_L g_m s^2 + C_5 L_5 s^2 + L_5 g_m s + 2R_L g_m + 1}$$

$$10.401 \quad \text{INVALID-ORDER-401} \quad Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{1}{C_L s} \right)$$

$$H(s) = -\frac{(C_1 R_1 s + 1) (C_5 L_5 s^2 - L_5 g_m s + 1)}{C_1 C_5 C_L L_5 R_1 s^4 + 2C_1 C_5 L_5 R_1 g_m s^3 + C_1 C_5 L_5 s^3 + C_1 C_L L_5 R_1 g_m s^3 + C_1 C_L L_5 s^3 + C_1 C_L R_1 s^2 + 2C_1 R_1 g_m s + C_1 s + C_5 C_L L_5 s^3 + 2C_5 L_5 g_m s^2 + C_L L_5 g_m s^2 + C_L s + 2g_m}$$

$$10.402 \quad \text{INVALID-ORDER-402} \quad Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{R_L}{C_L R_L s + 1} \right)$$

$$H(s) = -\frac{R_L (C_1 R_1 s + 1) (C_5 L_5 s^2 - L_5 g_m s + 1)}{C_1 C_5 C_L L_5 R_1 R_L s^4 + 2C_1 C_5 L_5 R_1 R_L g_m s^3 + C_1 C_5 L_5 R_1 s^3 + C_1 C_5 L_5 R_L s^3 + C_1 C_L L_5 R_1 R_L g_m s^3 + C_1 C_L L_5 R_L s^3 + C_1 C_L R_1 R_L s^2 + C_1 L_5 R_1 g_m s^2 + C_1 L_5 s^2 + 2C_1 R_1 R_L g_m s + C_1 R_1 s + C_1 R_L s + 2C_5 L_5 R_L g_m s^2 + C_5 L_5 s^2 + L_5 g_m s + 2R_L g_m + 1}$$

$$10.403 \quad \text{INVALID-ORDER-403} \quad Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, R_L + \frac{1}{C_L s} \right)$$

$$H(s) = -\frac{(C_1 R_1 s + 1)(C_L R_L s + 1)(C_5 L_5 s^2 - L_5 g_m s + 1)}{2C_1 C_5 C_L L_5 R_1 R_L g_m s^4 + C_1 C_5 C_L L_5 R_1 s^4 + C_1 C_5 C_L L_5 R_L s^4 + 2C_1 C_5 L_5 R_1 g_m s^3 + C_1 C_5 L_5 s^3 + C_1 C_L L_5 R_1 g_m s^3 + C_1 C_L L_5 s^3 + 2C_1 C_L R_1 R_L g_m s^2 + C_1 C_L R_1 s^2 + C_1 C_L}$$

$$10.404 \quad \text{INVALID-ORDER-404} \quad Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, L_L s + \frac{1}{C_L s} \right)$$

$$H(s) = -\frac{(C_1 R_1 s + 1)(C_L L_L s^2 + 1)(C_5 L_5 s^2 - L_5 g_m s + 1)}{2C_1 C_5 C_L L_5 L_L R_1 g_m s^5 + C_1 C_5 C_L L_5 L_L s^5 + C_1 C_5 C_L L_5 R_1 s^4 + 2C_1 C_5 L_5 R_1 g_m s^3 + C_1 C_5 L_5 s^3 + C_1 C_L L_5 R_1 g_m s^3 + C_1 C_L L_5 s^3 + 2C_1 C_L L_L R_1 g_m s^3 + C_1 C_L L_L s^3 + C_1 C_L}$$

$$10.405 \quad \text{INVALID-ORDER-405} \quad Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{L_L s}{C_L L_L s^2 + 1} \right)$$

$$H(s) = -\frac{L_L s (C_1 R_1 s + 1)(C_5 L_5 s^2 - L_5 g_m s + 1)}{C_1 C_5 C_L L_5 L_L R_1 s^5 + 2C_1 C_5 L_5 L_L R_1 g_m s^4 + C_1 C_5 L_5 L_L s^4 + C_1 C_5 L_5 R_1 s^3 + C_1 C_L L_5 L_L R_1 g_m s^4 + C_1 C_L L_5 L_L s^4 + C_1 C_L L_L R_1 s^3 + C_1 L_5 R_1 g_m s^2 + C_1 L_5 s^2 + 2C_1 L_L R_1 g_m}$$

$$10.406 \quad \text{INVALID-ORDER-406} \quad Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, L_L s + R_L + \frac{1}{C_L s} \right)$$

$$H(s) = -\frac{L_L s (C_1 R_1 s + 1)(C_5 L_5 s^2 - L_5 g_m s + 1)}{2C_1 C_5 C_L L_5 L_L R_1 g_m s^5 + C_1 C_5 C_L L_5 L_L s^5 + 2C_1 C_5 C_L L_5 R_1 R_L g_m s^4 + C_1 C_5 C_L L_5 R_1 s^4 + C_1 C_5 C_L L_5 R_L s^4 + 2C_1 C_5 L_5 R_1 g_m s^3 + C_1 C_5 L_5 s^3 + C_1 C_L L_5 R_1 g_m s^3 + C_1 C_L L_5}$$

$$10.407 \quad \text{INVALID-ORDER-407} \quad Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$$

$$H(s) = -\frac{L_L s (C_1 R_1 s + 1)(C_5 L_5 s^2 - L_5 g_m s + 1)}{C_1 C_5 C_L L_5 L_L R_1 R_L s^5 + 2C_1 C_5 L_5 L_L R_1 R_L g_m s^4 + C_1 C_5 L_5 L_L R_1 s^4 + C_1 C_5 L_5 L_L R_L s^4 + C_1 C_5 L_5 R_1 R_L s^3 + C_1 C_L L_5 L_L R_1 R_L g_m s^4 + C_1 C_L L_5 L_L R_L s^4 + C_1 C_L L_L R_1 R_L s^3}$$

$$10.408 \quad \text{INVALID-ORDER-408} \quad Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$$

$$H(s) = -\frac{2C_1 C_5 C_L L_5 L_L R_1 R_L g_m s^5 + C_1 C_5 C_L L_5 L_L R_1 s^5 + C_1 C_5 C_L L_5 L_L R_L s^5 + 2C_1 C_5 L_5 L_L R_1 g_m s^4 + C_1 C_5 L_5 L_L s^4 + 2C_1 C_5 L_5 R_1 R_L g_m s^3 + C_1 C_5 L_5 R_1 s^3 + C_1 C_5 L_5 R_L s^3 + C_1 C_5 L_5 R_L g_m s^2 + C_1 C_5 L_5 R_L s^2 + C_1 C_5 L_5 R_L g_m s + C_1 C_5 L_5 R_L}{2C_1 C_5 C_L L_5 L_L R_1 R_L g_m s^5 + C_1 C_5 C_L L_5 L_L R_1 s^5 + C_1 C_5 C_L L_5 L_L R_L s^5 + 2C_1 C_5 L_5 L_L R_1 g_m s^4 + C_1 C_5 L_5 L_L s^4 + 2C_1 C_5 L_5 R_1 R_L g_m s^3 + C_1 C_5 L_5 R_1 s^3 + C_1 C_5 L_5 R_L s^3 + C_1 C_5 L_5 R_L g_m s^2 + C_1 C_5 L_5 R_L s^2 + C_1 C_5 L_5 R_L g_m s + C_1 C_5 L_5 R_L}$$

$$10.409 \quad \text{INVALID-ORDER-409} \quad Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$$

$$H(s) = -\frac{2C_1 C_5 C_L L_5 L_L R_1 R_L g_m s^5 + C_1 C_5 C_L L_5 L_L R_1 s^5 + C_1 C_5 C_L L_5 L_L R_L s^5 + C_1 C_5 C_L L_5 R_1 R_L s^4 + 2C_1 C_5 L_5 R_1 R_L g_m s^3 + C_1 C_5 L_5 R_1 s^3 + C_1 C_5 L_5 R_L s^3 + C_1 C_L L_5 L_L R_1 g_m s^4 + C_1 C_L L_5 L_L R_1 s^4 + C_1 C_L L_5 L_L R_L s^4 + 2C_1 C_L L_5 R_1 R_L g_m s^3 + C_1 C_L L_5 R_1 s^3 + C_1 C_L L_5 R_L s^3 + C_1 C_L L_5 R_L g_m s^2 + C_1 C_L L_5 R_L s^2 + C_1 C_L L_5 R_L g_m s + C_1 C_L L_5 R_L}{2C_1 C_5 C_L L_5 L_L R_1 R_L g_m s^5 + C_1 C_5 C_L L_5 L_L R_1 s^5 + C_1 C_5 C_L L_5 L_L R_L s^5 + C_1 C_5 C_L L_5 R_1 R_L s^4 + 2C_1 C_5 L_5 R_1 R_L g_m s^3 + C_1 C_5 L_5 R_1 s^3 + C_1 C_5 L_5 R_L s^3 + C_1 C_L L_5 L_L R_1 g_m s^4 + C_1 C_L L_5 L_L R_1 s^4 + C_1 C_L L_5 L_L R_L s^4 + 2C_1 C_L L_5 R_1 R_L g_m s^3 + C_1 C_L L_5 R_1 s^3 + C_1 C_L L_5 R_L s^3 + C_1 C_L L_5 R_L g_m s^2 + C_1 C_L L_5 R_L s^2 + C_1 C_L L_5 R_L g_m s + C_1 C_L L_5 R_L}$$

$$10.410 \quad \text{INVALID-ORDER-410} \quad Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, R_L \right)$$

$$H(s) = \frac{R_L (C_1 R_1 s + 1) (C_5 L_5 g_m s^2 + C_5 R_5 g_m s - C_5 s + g_m)}{C_1 C_5 L_5 R_1 g_m s^3 + C_1 C_5 L_5 s^3 + C_1 C_5 R_1 R_5 g_m s^2 + 2C_1 C_5 R_1 R_L g_m s^2 + C_1 C_5 R_1 s^2 + C_1 C_5 R_5 s^2 + C_1 C_5 R_L s^2 + C_1 R_1 g_m s + C_1 s + C_5 L_5 g_m s^2 + C_5 R_5 g_m s + 2C_5 R_L g_m s + C_5 s + g_m}$$

$$10.411 \quad \text{INVALID-ORDER-411} \quad Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{1}{C_L s} \right)$$

$$H(s) = \frac{(C_1 R_1 s + 1) (C_5 L_5 g_m s^2 + C_5 R_5 g_m s - C_5 s + g_m)}{s (C_1 C_5 C_L L_5 R_1 g_m s^3 + C_1 C_5 C_L L_5 s^3 + C_1 C_5 C_L R_1 R_5 g_m s^2 + C_1 C_5 C_L R_1 s^2 + C_1 C_5 C_L R_5 s^2 + 2C_1 C_5 R_1 g_m s + C_1 C_5 s + C_1 C_L R_1 g_m s + C_1 C_L s + C_5 C_L L_5 g_m s^2 + C_5 C_L R_5 g_m s + C_5 C_L s + g_m)}$$

$$10.412 \quad \text{INVALID-ORDER-412} \quad Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{R_L}{C_L R_L s + 1} \right)$$

$$H(s) = \frac{R_L (C_1 R_1 s + 1) (C_5 L_5 g_m s^2 + C_5 R_5 g_m s - C_5 s + g_m)}{C_1 C_5 C_L L_5 R_1 R_L g_m s^4 + C_1 C_5 C_L L_5 R_L s^4 + C_1 C_5 C_L R_1 R_5 R_L g_m s^3 + C_1 C_5 C_L R_1 R_L s^3 + C_1 C_5 C_L R_5 R_L s^3 + C_1 C_5 L_5 R_1 g_m s^3 + C_1 C_5 L_5 s^3 + C_1 C_5 R_1 R_5 g_m s^2 + 2C_1 C_5 R_1 R_L g_m s^2 + C_1 C_5 R_1 R_L s^2 + C_1 C_5 R_5 R_L g_m s^2 + C_1 C_5 R_5 R_L s^2 + C_1 C_5 R_L g_m s^2 + C_1 C_5 R_L s^2 + C_1 C_5 R_L g_m s + C_1 C_5 R_L s + C_5 C_L L_5 g_m s^2 + C_5 C_L R_5 g_m s + C_5 C_L s + g_m}$$



$$10.413 \quad \text{INVALID-ORDER-413} \quad Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{(C_1 R_1 s + 1)(C_L R_L s + 1)(C_5 L_5 g_m s^2 + C_5 R_5 g_m s - C_5 s + g_m)}{s(C_1 C_5 C_L L_5 R_1 g_m s^3 + C_1 C_5 C_L L_5 s^3 + C_1 C_5 C_L R_1 R_5 g_m s^2 + 2C_1 C_5 C_L R_1 R_L g_m s^2 + C_1 C_5 C_L R_1 s^2 + C_1 C_5 C_L R_5 s^2 + C_1 C_5 C_L R_L s^2 + 2C_1 C_5 R_1 g_m s + C_1 C_5 s + C_1 C_L R_1 g_m)}$$

$$10.414 \quad \text{INVALID-ORDER-414} \quad Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, L_L s + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{(C_1 R_1 s + 1)(C_L L_L s^2 + 1)(C_5 L_5 g_m s^2 + C_5 R_5 g_m s - C_5 s + g_m)}{s(C_1 C_5 C_L L_5 R_1 g_m s^3 + C_1 C_5 C_L L_5 s^3 + 2C_1 C_5 C_L L_L R_1 g_m s^3 + C_1 C_5 C_L L_L s^3 + C_1 C_5 C_L R_1 R_5 g_m s^2 + C_1 C_5 C_L R_1 s^2 + C_1 C_5 C_L R_5 s^2 + 2C_1 C_5 R_1 g_m s + C_1 C_5 s + C_1 C_L R_1 g_m)}$$

$$10.415 \quad \text{INVALID-ORDER-415} \quad Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} \right)$$

$$H(s) = \frac{L_L s (C_1 R_1 s + 1)(C_L L_L s^2 + 1)(C_5 L_5 g_m s^2 + C_5 R_5 g_m s - C_5 s + g_m)}{C_1 C_5 C_L L_5 L_L R_1 g_m s^5 + C_1 C_5 C_L L_5 L_L s^5 + C_1 C_5 C_L L_L R_1 R_5 g_m s^4 + C_1 C_5 C_L L_L R_1 s^4 + C_1 C_5 C_L L_L R_5 s^4 + C_1 C_5 L_5 R_1 g_m s^3 + C_1 C_5 L_5 s^3 + 2C_1 C_5 L_L R_1 g_m s^3 + C_1 C_5 L_L s^3 +}$$

$$10.416 \quad \text{INVALID-ORDER-416} \quad Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, L_L s + R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{(C_1 R_1 s + 1)(C_L L_L s^2 + C_L R_L s + 1)(C_5 L_5 g_m s^2 + C_5 R_5 g_m s - C_5 s + g_m)}{s(C_1 C_5 C_L L_5 R_1 g_m s^3 + C_1 C_5 C_L L_5 s^3 + 2C_1 C_5 C_L L_L R_1 g_m s^3 + C_1 C_5 C_L L_L s^3 + C_1 C_5 C_L R_1 R_5 g_m s^2 + 2C_1 C_5 C_L R_1 R_L g_m s^2 + C_1 C_5 C_L R_1 s^2 + C_1 C_5 C_L R_5 s^2 + C_1 C_5 C_L R_L s^2 +}$$

$$10.417 \quad \text{INVALID-ORDER-417} \quad Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$$

$$H(s) = \frac{1}{C_1 C_5 C_L L_5 L_L R_1 R_L g_m s^5 + C_1 C_5 C_L L_5 L_L R_L s^5 + C_1 C_5 C_L L_L R_1 R_5 R_L g_m s^4 + C_1 C_5 C_L L_L R_1 R_L s^4 + C_1 C_5 C_L L_L R_5 R_L s^4 + C_1 C_5 L_5 L_L R_1 g_m s^4 + C_1 C_5 L_5 L_L s^4 + C_1 C_5 L_5 R_1 g_m s^3 + C_1 C_5 L_5 s^3 +}$$

$$10.418 \quad \text{INVALID-ORDER-418} \quad Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$$

$$H(s) = \frac{C_1 C_5 C_L L_5 L_L R_1 g_m s^5 + C_1 C_5 C_L L_5 L_L s^5 + C_1 C_5 C_L L_L R_1 R_5 g_m s^4 + 2 C_1 C_5 C_L L_L R_1 R_L g_m s^4 + C_1 C_5 C_L L_L R_1 s^4 + C_1 C_5 C_L L_L R_5 s^4 + C_1 C_5 C_L L_L R_L s^4 + C_1 C_5 L_5 R_1 g_m s^3 + C_1 C_5 L_5 R_1 s^3 + C_1 C_5 L_5 R_5 s^3 + C_1 C_5 L_5 R_L s^3 + C_1 C_L L_5 R_1 R_5 g_m s^3 + C_1 C_L L_5 R_1 R_5 s^3 + C_1 C_L L_5 R_1 s^3 + C_1 C_L L_5 R_5 s^3 + C_1 C_L L_5 R_L s^3 + C_1 C_L R_1 R_5 g_m s^2 + C_1 C_L R_1 R_5 s^2 + C_1 C_L R_1 s^2 + C_1 C_L R_5 s^2 + C_1 C_L R_L s^2 + C_1 R_1 R_5 g_m s + C_1 R_1 R_5 s + C_1 R_1 R_L s + C_1 R_5 R_L s + C_1 R_L s}{C_1 C_5 C_L L_5 L_L R_1 g_m s^5 + C_1 C_5 C_L L_5 L_L s^5 + C_1 C_5 C_L L_L R_1 R_5 g_m s^4 + 2 C_1 C_5 C_L L_L R_1 R_L g_m s^4 + C_1 C_5 C_L L_L R_1 s^4 + C_1 C_5 C_L L_L R_5 s^4 + C_1 C_5 C_L L_L R_L s^4 + C_1 C_5 L_5 R_1 g_m s^3 + C_1 C_5 L_5 R_1 s^3 + C_1 C_5 L_5 R_5 s^3 + C_1 C_5 L_5 R_L s^3 + C_1 C_L L_5 R_1 R_5 g_m s^3 + C_1 C_L L_5 R_1 R_5 s^3 + C_1 C_L L_5 R_1 s^3 + C_1 C_L L_5 R_5 s^3 + C_1 C_L L_5 R_L s^3 + C_1 C_L R_1 R_5 g_m s^2 + C_1 C_L R_1 R_5 s^2 + C_1 C_L R_1 s^2 + C_1 C_L R_5 s^2 + C_1 C_L R_L s^2 + C_1 R_1 R_5 g_m s + C_1 R_1 R_5 s + C_1 R_1 R_L s + C_1 R_5 R_L s + C_1 R_L s}$$

$$10.419 \quad \text{INVALID-ORDER-419} \quad Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{R_L (L_L s + \frac{1}{C_L s})}{L_L s + R_L + \frac{1}{C_L s}} \right)$$

$$H(s) = \frac{C_1 C_5 C_L L_5 L_L R_1 g_m s^5 + C_1 C_5 C_L L_5 L_L s^5 + C_1 C_5 C_L L_5 R_1 R_L g_m s^4 + C_1 C_5 C_L L_5 R_L s^4 + C_1 C_5 C_L L_L R_1 R_5 g_m s^4 + 2 C_1 C_5 C_L L_L R_1 R_L g_m s^4 + C_1 C_5 C_L L_L R_1 s^4 + C_1 C_5 C_L L_L R_5 s^4 + C_1 C_5 C_L L_L R_L s^4 + C_1 C_5 L_5 R_1 g_m s^3 + C_1 C_5 L_5 R_1 s^3 + C_1 C_5 L_5 R_5 s^3 + C_1 C_5 L_5 R_L s^3 + C_1 C_L L_5 R_1 R_5 g_m s^3 + C_1 C_L L_5 R_1 R_5 s^3 + C_1 C_L L_5 R_1 s^3 + C_1 C_L L_5 R_5 s^3 + C_1 C_L L_5 R_L s^3 + C_1 C_L R_1 R_5 g_m s^2 + C_1 C_L R_1 R_5 s^2 + C_1 C_L R_1 s^2 + C_1 C_L R_5 s^2 + C_1 C_L R_L s^2 + C_1 R_1 R_5 g_m s + C_1 R_1 R_5 s + C_1 R_1 R_L s + C_1 R_5 R_L s + C_1 R_L s}{C_1 C_5 C_L L_5 L_L R_1 g_m s^5 + C_1 C_5 C_L L_5 L_L s^5 + C_1 C_5 C_L L_5 R_1 R_L g_m s^4 + C_1 C_5 C_L L_5 R_L s^4 + C_1 C_5 C_L L_L R_1 R_5 g_m s^4 + 2 C_1 C_5 C_L L_L R_1 R_L g_m s^4 + C_1 C_5 C_L L_L R_1 s^4 + C_1 C_5 C_L L_L R_5 s^4 + C_1 C_5 C_L L_L R_L s^4 + C_1 C_5 L_5 R_1 g_m s^3 + C_1 C_5 L_5 R_1 s^3 + C_1 C_5 L_5 R_5 s^3 + C_1 C_5 L_5 R_L s^3 + C_1 C_L L_5 R_1 R_5 g_m s^3 + C_1 C_L L_5 R_1 R_5 s^3 + C_1 C_L L_5 R_1 s^3 + C_1 C_L L_5 R_5 s^3 + C_1 C_L L_5 R_L s^3 + C_1 C_L R_1 R_5 g_m s^2 + C_1 C_L R_1 R_5 s^2 + C_1 C_L R_1 s^2 + C_1 C_L R_5 s^2 + C_1 C_L R_L s^2 + C_1 R_1 R_5 g_m s + C_1 R_1 R_5 s + C_1 R_1 R_L s + C_1 R_5 R_L s + C_1 R_L s}$$

$$10.420 \quad \text{INVALID-ORDER-420} \quad Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, R_L \right)$$

$$H(s) = -\frac{R_L (C_1 R_1 s + 1) (C_5 L_5 R_5 s^2 - L_5 R_5 g_m s + L_5 s + R_5)}{2 C_1 C_5 L_5 R_1 R_5 R_L g_m s^3 + C_1 C_5 L_5 R_1 R_5 s^3 + C_1 C_5 L_5 R_5 R_L s^3 + C_1 L_5 R_1 R_5 g_m s^2 + 2 C_1 L_5 R_1 R_L g_m s^2 + C_1 L_5 R_1 s^2 + C_1 L_5 R_5 s^2 + C_1 L_5 R_L s^2 + 2 C_1 R_1 R_5 R_L g_m s + C_1 R_1 R_5 s + C_1 R_1 R_L s + C_1 R_5 R_L s + C_1 R_L s}$$

$$10.421 \quad \text{INVALID-ORDER-421} \quad Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{1}{C_L s} \right)$$

$$H(s) = -\frac{(C_1 R_1 s + 1) (C_5 L_5 R_5 s^2 - L_5 R_5 g_m s + L_5 s + R_5)}{C_1 C_5 C_L L_5 R_1 R_5 s^4 + 2 C_1 C_5 L_5 R_1 R_5 g_m s^3 + C_1 C_5 L_5 R_5 s^3 + C_1 C_L L_5 R_1 R_5 g_m s^3 + C_1 C_L L_5 R_1 s^3 + C_1 C_L L_5 R_5 s^3 + C_1 C_L R_1 R_5 s^2 + 2 C_1 L_5 R_1 g_m s^2 + C_1 L_5 s^2 + 2 C_1 R_1 R_5 g_m s + C_1 R_1 R_5 s + C_1 R_1 R_L s + C_1 R_5 R_L s + C_1 R_L s}$$

$$10.422 \quad \text{INVALID-ORDER-422} \quad Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{R_L}{C_L R_L s + 1} \right)$$

$$H(s) = -\frac{C_1 C_5 C_L L_5 R_1 R_5 R_L s^4 + 2 C_1 C_5 L_5 R_1 R_5 R_L g_m s^3 + C_1 C_5 L_5 R_1 R_5 s^3 + C_1 C_5 L_5 R_5 R_L s^3 + C_1 C_L L_5 R_1 R_5 R_L g_m s^3 + C_1 C_L L_5 R_1 R_L s^3 + C_1 C_L L_5 R_5 R_L s^3 + C_1 C_L R_1 R_5 R_L s^2 + 2 C_1 L_5 R_1 R_5 R_L g_m s + C_1 L_5 R_1 R_5 s + C_1 L_5 R_5 R_L s + C_1 L_5 R_L s + C_1 R_1 R_5 R_L s + C_1 R_1 R_5 s + C_1 R_1 R_L s + C_1 R_5 R_L s + C_1 R_L s}{C_1 C_5 C_L L_5 R_1 R_5 R_L s^4 + 2 C_1 C_5 L_5 R_1 R_5 R_L g_m s^3 + C_1 C_5 L_5 R_1 R_5 s^3 + C_1 C_5 L_5 R_5 R_L s^3 + C_1 C_L L_5 R_1 R_5 R_L g_m s^3 + C_1 C_L L_5 R_1 R_L s^3 + C_1 C_L L_5 R_5 R_L s^3 + C_1 C_L R_1 R_5 R_L s^2 + 2 C_1 L_5 R_1 R_5 R_L g_m s + C_1 L_5 R_1 R_5 s + C_1 L_5 R_5 R_L s + C_1 L_5 R_L s + C_1 R_1 R_5 R_L s + C_1 R_1 R_5 s + C_1 R_1 R_L s + C_1 R_5 R_L s + C_1 R_L s}$$

$$10.423 \quad \text{INVALID-ORDER-423} \quad Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, R_L + \frac{1}{C_L s} \right)$$

$$H(s) = -\frac{2C_1 C_5 C_L L_5 R_1 R_5 R_L g_m s^4 + C_1 C_5 C_L L_5 R_1 R_5 s^4 + C_1 C_5 C_L L_5 R_5 R_L s^4 + 2C_1 C_5 L_5 R_1 R_5 g_m s^3 + C_1 C_5 L_5 R_5 s^3 + C_1 C_L L_5 R_1 R_5 g_m s^3 + 2C_1 C_L L_5 R_1 R_L g_m s^3 + C_1 C_L L_5 R_1 s^3}{2C_1 C_5 C_L L_5 R_1 R_5 R_L g_m s^4 + C_1 C_5 C_L L_5 R_1 R_5 s^4 + C_1 C_5 C_L L_5 R_5 R_L s^4 + 2C_1 C_5 L_5 R_1 R_5 g_m s^3 + C_1 C_5 L_5 R_5 s^3 + C_1 C_L L_5 R_1 R_5 g_m s^3 + 2C_1 C_L L_5 R_1 R_L g_m s^3 + C_1 C_L L_5 R_1 s^3}$$

$$10.424 \quad \text{INVALID-ORDER-424} \quad Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, L_L s + \frac{1}{C_L s} \right)$$

$$H(s) = -\frac{2C_1 C_5 C_L L_5 L_L R_1 R_5 g_m s^5 + C_1 C_5 C_L L_5 L_L R_5 s^5 + C_1 C_5 C_L L_5 R_1 R_5 s^4 + 2C_1 C_5 L_5 R_1 R_5 g_m s^3 + C_1 C_5 L_5 R_5 s^3 + 2C_1 C_L L_5 L_L R_1 g_m s^4 + C_1 C_L L_5 L_L s^4 + C_1 C_L L_5 R_1 R_5 g_m s^3}{2C_1 C_5 C_L L_5 L_L R_1 R_5 g_m s^5 + C_1 C_5 C_L L_5 L_L R_5 s^5 + C_1 C_5 C_L L_5 R_1 R_5 s^4 + 2C_1 C_5 L_5 R_1 R_5 g_m s^3 + C_1 C_5 L_5 R_5 s^3 + 2C_1 C_L L_5 L_L R_1 g_m s^4 + C_1 C_L L_5 L_L s^4 + C_1 C_L L_5 R_1 R_5 g_m s^3}$$

$$10.425 \quad \text{INVALID-ORDER-425} \quad Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{L_L s}{C_L L_L s^2 + 1} \right)$$

$$H(s) = -\frac{C_1 C_5 C_L L_5 L_L R_1 R_5 s^5 + 2C_1 C_5 L_5 L_L R_1 R_5 g_m s^4 + C_1 C_5 L_5 L_L R_5 s^4 + C_1 C_5 L_5 R_1 R_5 s^3 + C_1 C_L L_5 L_L R_1 R_5 g_m s^4 + C_1 C_L L_5 L_L R_1 s^4 + C_1 C_L L_5 L_L R_5 s^4 + C_1 C_L L_L R_1 R_5 s^3}{C_1 C_5 C_L L_5 L_L R_1 R_5 s^5 + 2C_1 C_5 L_5 L_L R_1 R_5 g_m s^4 + C_1 C_5 L_5 L_L R_5 s^4 + C_1 C_5 L_5 R_1 R_5 s^3 + C_1 C_L L_5 L_L R_1 R_5 g_m s^4 + C_1 C_L L_5 L_L R_1 s^4 + C_1 C_L L_5 L_L R_5 s^4 + C_1 C_L L_L R_1 R_5 s^3}$$

$$10.426 \quad \text{INVALID-ORDER-426} \quad Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, L_L s + R_L + \frac{1}{C_L s} \right)$$

$$H(s) = -\frac{2C_1 C_5 C_L L_5 L_L R_1 R_5 g_m s^5 + C_1 C_5 C_L L_5 L_L R_5 s^5 + 2C_1 C_5 C_L L_5 R_1 R_5 R_L g_m s^4 + C_1 C_5 C_L L_5 R_1 R_5 s^4 + C_1 C_5 C_L L_5 R_5 R_L s^4 + 2C_1 C_5 L_5 R_1 R_5 g_m s^3 + C_1 C_5 L_5 R_5 s^3 + 2C_1 C_L L_5 L_L R_1 g_m s^4 + C_1 C_L L_5 L_L R_1 s^4 + C_1 C_L L_5 L_L R_5 s^4 + C_1 C_L L_L R_1 R_5 s^3}{2C_1 C_5 C_L L_5 L_L R_1 R_5 g_m s^5 + C_1 C_5 C_L L_5 L_L R_5 s^5 + 2C_1 C_5 C_L L_5 R_1 R_5 R_L g_m s^4 + C_1 C_5 C_L L_5 R_1 R_5 s^4 + C_1 C_5 C_L L_5 R_5 R_L s^4 + 2C_1 C_5 L_5 R_1 R_5 g_m s^3 + C_1 C_5 L_5 R_5 s^3 + 2C_1 C_L L_5 L_L R_1 g_m s^4 + C_1 C_L L_5 L_L R_1 s^4 + C_1 C_L L_5 L_L R_5 s^4 + C_1 C_L L_L R_1 R_5 s^3}$$

$$10.427 \quad \text{INVALID-ORDER-427} \quad Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$$

$$H(s) = -\frac{C_1 C_5 C_L L_5 L_L R_1 R_5 R_L s^5 + 2C_1 C_5 L_5 L_L R_1 R_5 R_L g_m s^4 + C_1 C_5 L_5 L_L R_1 R_5 s^4 + C_1 C_5 L_5 L_L R_5 R_L s^4 + C_1 C_5 L_5 R_1 R_5 R_L s^3 + C_1 C_L L_5 L_L R_1 R_5 R_L g_m s^4 + C_1 C_L L_5 L_L R_1 R_L s^4}{C_1 C_5 C_L L_5 L_L R_1 R_5 R_L s^5 + 2C_1 C_5 L_5 L_L R_1 R_5 R_L g_m s^4 + C_1 C_5 L_5 L_L R_1 R_5 s^4 + C_1 C_5 L_5 L_L R_5 R_L s^4 + C_1 C_5 L_5 R_1 R_5 R_L s^3 + C_1 C_L L_5 L_L R_1 R_5 R_L g_m s^4 + C_1 C_L L_5 L_L R_1 R_L s^4}$$

10.428 INVALID-ORDER-428  $Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$

$$H(s) = -\frac{2C_1C_5C_LR_5L_LR_1R_5R_Lg_ms^5 + C_1C_5C_LR_5L_LR_1R_5s^5 + C_1C_5C_LR_5L_LR_5R_Ls^5 + 2C_1C_5L_5L_LR_1R_5g_ms^4 + C_1C_5L_5L_LR_5s^4 + 2C_1C_5L_5R_1R_5R_Lg_ms^3 + C_1C_5L_5R_1R_5s^3 +$$

**10.429 INVALID-ORDER-429**  $Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$

$$H(s) = -\frac{2C_1C_5C_L L_5 L_L R_1 R_5 R_L g_m s^5 + C_1C_5C_L L_5 L_L R_1 R_5 s^5 + C_1C_5C_L L_5 L_L R_5 R_L s^5 + C_1C_5C_L L_5 R_1 R_5 R_L s^4 + 2C_1C_5L_5R_1R_5R_L g_m s^3 + C_1C_5L_5R_1R_5 s^3 + C_1C_5L_5R_5R_L s^3 +$$

**10.430 INVALID-ORDER-430**  $Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, R_L \right)$

$$H(s) = \frac{R_L (C_1 R_1 s + 1) (C_5 L_5 R_5 g_m s^2 - C_5 L_5 s^2 + L_5 g_m s + R_5 g_m - 1)}{C_1 C_5 L_5 R_1 R_5 g_m s^3 + 2C_1 C_5 L_5 R_1 R_L g_m s^3 + C_1 C_5 L_5 R_1 s^3 + C_1 C_5 L_5 R_5 s^3 + C_1 C_5 L_5 R_L s^3 + C_1 L_5 R_1 g_m s^2 + C_1 L_5 s^2 + C_1 R_1 R_5 g_m s + 2C_1 R_1 R_L g_m s + C_1 R_1 s + C_1 R_5 s + C_1}$$

**10.431 INVALID-ORDER-431**  $Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{1}{C_L s} \right)$

$$H(s) = \frac{(C_1 R_1 s + 1) (C_5 L_5 R_5 g_m s^2 - C_5 L_5 s^2 + L_5 g_m s + R_5 g_m - 1)}{C_1 C_5 C_L L_5 R_1 R_5 g_m s^4 + C_1 C_5 C_L L_5 R_1 s^4 + C_1 C_5 C_L L_5 R_5 s^4 + 2 C_1 C_5 L_5 R_1 g_m s^3 + C_1 C_5 L_5 s^3 + C_1 C_L L_5 R_1 g_m s^3 + C_1 C_L L_5 s^3 + C_1 C_L R_1 R_5 g_m s^2 + C_1 C_L R_1 s^2 + C_1 C_L R_5 s^2}$$

**10.432 INVALID-ORDER-432**  $Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{R_L}{C_L R_L s + 1} \right)$

$$H(s) = \frac{C_1 C_5 C_L L_5 R_1 R_5 R_L g_m s^4 + C_1 C_5 C_L L_5 R_1 R_L s^4 + C_1 C_5 C_L L_5 R_5 R_L s^4 + C_1 C_5 L_5 R_1 R_5 g_m s^3 + 2 C_1 C_5 L_5 R_1 R_L g_m s^3 + C_1 C_5 L_5 R_1 s^3 + C_1 C_5 L_5 R_5 s^3 + C_1 C_5 L_5 R_L s^3 + C_1 C_L L}{\dots}$$

**10.433 INVALID-ORDER-433**  $Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, R_L + \frac{1}{C_L s} \right)$

$$H(s) = \frac{(C_1 R_1 s + 1)}{C_1 C_5 C_L L_5 R_1 R_5 g_m s^4 + 2C_1 C_5 C_L L_5 R_1 R_L g_m s^4 + C_1 C_5 C_L L_5 R_1 s^4 + C_1 C_5 C_L L_5 R_5 s^4 + C_1 C_5 C_L L_5 R_L s^4 + 2C_1 C_5 L_5 R_1 g_m s^3 + C_1 C_5 L_5 s^3 + C_1 C_L L_5 R_1 g_m s^3 + C_1 C_L L_5 s^3 +}$$

**10.434 INVALID-ORDER-434**  $Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, L_L s + \frac{1}{C_L s} \right)$

$$H(s) = \frac{(C_1 R_1 s + 1)}{2C_1 C_5 C_L L_5 L_L R_1 g_m s^5 + C_1 C_5 C_L L_5 L_L s^5 + C_1 C_5 C_L L_5 R_1 R_5 g_m s^4 + C_1 C_5 C_L L_5 R_1 s^4 + C_1 C_5 C_L L_5 R_5 s^4 + 2C_1 C_5 L_5 R_1 g_m s^3 + C_1 C_5 L_5 s^3 + C_1 C_L L_5 R_1 g_m s^3 + C_1 C_L L_5 s^3 +}$$

**10.435 INVALID-ORDER-435**  $Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{L_L s}{C_L L_L s^2 + 1} \right)$

$$H(s) = \frac{(C_1 R_1 s + 1)}{C_1 C_5 C_L L_5 L_L R_1 R_5 g_m s^5 + C_1 C_5 C_L L_5 L_L R_1 s^5 + C_1 C_5 C_L L_5 L_L R_5 s^5 + 2C_1 C_5 L_5 L_L R_1 g_m s^4 + C_1 C_5 L_5 L_L s^4 + C_1 C_5 L_5 R_1 R_5 g_m s^3 + C_1 C_5 L_5 R_1 s^3 + C_1 C_5 L_5 R_5 s^3 + C_1 C_L L_5}$$

**10.436 INVALID-ORDER-436**  $Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, L_L s + R_L + \frac{1}{C_L s} \right)$

$$H(s) = \frac{(C_1 R_1 s + 1)}{2C_1 C_5 C_L L_5 L_L R_1 g_m s^5 + C_1 C_5 C_L L_5 L_L s^5 + C_1 C_5 C_L L_5 R_1 R_5 g_m s^4 + 2C_1 C_5 C_L L_5 R_1 R_L g_m s^4 + C_1 C_5 C_L L_5 R_1 s^4 + C_1 C_5 C_L L_5 R_5 s^4 + C_1 C_5 C_L L_5 R_L s^4 + 2C_1 C_5 L_5 R_1 g_m s^3 +}$$

**10.437 INVALID-ORDER-437**  $Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$

$$H(s) = \frac{(C_1 R_1 s + 1)}{C_1 C_5 C_L L_5 L_L R_1 R_5 R_L g_m s^5 + C_1 C_5 C_L L_5 L_L R_1 R_L s^5 + C_1 C_5 C_L L_5 L_L R_5 R_L s^5 + C_1 C_5 L_5 L_L R_1 R_5 g_m s^4 + 2C_1 C_5 L_5 L_L R_1 R_L g_m s^4 + C_1 C_5 L_5 L_L R_1 s^4 + C_1 C_5 L_5 L_L R_5 s^4 + C_1 C_L L_5 R_1 R_5 R_L g_m s^3 +}$$

$$10.438 \quad \text{INVALID-ORDER-438} \quad Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$$

$$H(s) = \frac{C_1 C_5 C_L L_5 L_L R_1 R_5 g_m s^5 + 2C_1 C_5 C_L L_5 L_L R_1 R_L g_m s^5 + C_1 C_5 C_L L_5 L_L R_1 s^5 + C_1 C_5 C_L L_5 L_L R_5 s^5 + C_1 C_5 C_L L_5 L_L R_L s^5 + 2C_1 C_5 L_5 L_L R_1 g_m s^4 + C_1 C_5 L_5 L_L s^4 + C_1 C_5 L_5 R_1 R_5 g_m s^3 + 2C_1 C_5 L_5 R_1 R_L g_m s^3 + C_1 C_5 L_5 R_1 s^3 + C_1 C_5 L_5 R_5 s^3 + C_1 C_5 L_5 R_L s^3 + 2C_1 C_5 R_1 R_5 R_L g_m s^2 + C_1 C_5 R_1 R_5 s^2 + C_1 C_5 R_5 R_L s^2 + C_1 R_1 R_5 g_m s + 2C_1 R_1 R_5 s + C_1 R_1 R_5 s + C_1 R_1 R_5 s}{C_1 C_5 C_L L_5 L_L R_1 R_5 g_m s^5 + 2C_1 C_5 C_L L_5 L_L R_1 R_L g_m s^5 + C_1 C_5 C_L L_5 L_L R_1 s^5 + C_1 C_5 C_L L_5 L_L R_5 s^5 + C_1 C_5 C_L L_5 L_L R_L s^5 + 2C_1 C_5 L_5 L_L R_1 g_m s^4 + C_1 C_5 L_5 L_L s^4 + C_1 C_5 L_5 R_1 R_5 g_m s^3 + 2C_1 C_5 L_5 R_1 R_L g_m s^3 + C_1 C_5 L_5 R_1 s^3 + C_1 C_5 L_5 R_5 s^3 + C_1 C_5 L_5 R_L s^3 + 2C_1 C_5 R_1 R_5 R_L g_m s^2 + C_1 C_5 R_1 R_5 s^2 + C_1 C_5 R_5 R_L s^2 + C_1 R_1 R_5 g_m s + 2C_1 R_1 R_5 s + C_1 R_1 R_5 s + C_1 R_1 R_5 s}$$

$$10.439 \quad \text{INVALID-ORDER-439} \quad Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{R_L (L_L s + \frac{1}{C_L s})}{L_L s + R_L + \frac{1}{C_L s}} \right)$$

$$H(s) = \frac{C_1 C_5 C_L L_5 L_L R_1 R_5 g_m s^5 + 2C_1 C_5 C_L L_5 L_L R_1 R_L g_m s^5 + C_1 C_5 C_L L_5 L_L R_1 s^5 + C_1 C_5 C_L L_5 L_L R_5 s^5 + C_1 C_5 C_L L_5 L_L R_L s^5 + C_1 C_5 C_L L_5 R_1 R_5 R_L g_m s^4 + C_1 C_5 C_L L_5 R_1 R_L s^4 + C_1 C_5 C_L L_5 R_5 R_L s^4 + C_1 C_5 C_L L_5 R_L s^4 + C_1 C_5 C_L R_1 R_5 g_m s^3 + 2C_1 C_5 C_L R_1 R_L g_m s^3 + C_1 C_5 C_L R_1 s^3 + C_1 C_5 C_L R_5 s^3 + C_1 C_5 C_L R_L s^3 + 2C_1 C_5 R_1 R_5 R_L g_m s^2 + C_1 C_5 R_1 R_5 s^2 + C_1 C_5 R_5 R_L s^2 + C_1 R_1 R_5 g_m s + 2C_1 R_1 R_5 s + C_1 R_1 R_5 s + C_1 R_1 R_5 s}{C_1 C_5 C_L L_5 L_L R_1 R_5 g_m s^5 + 2C_1 C_5 C_L L_5 L_L R_1 R_L g_m s^5 + C_1 C_5 C_L L_5 L_L R_1 s^5 + C_1 C_5 C_L L_5 L_L R_5 s^5 + C_1 C_5 C_L L_5 L_L R_L s^5 + C_1 C_5 C_L L_5 R_1 R_5 R_L g_m s^4 + C_1 C_5 C_L L_5 R_1 R_L s^4 + C_1 C_5 C_L L_5 R_5 R_L s^4 + C_1 C_5 C_L L_5 R_L s^4 + C_1 C_5 C_L R_1 R_5 g_m s^3 + 2C_1 C_5 C_L R_1 R_L g_m s^3 + C_1 C_5 C_L R_1 s^3 + C_1 C_5 C_L R_5 s^3 + C_1 C_5 C_L R_L s^3 + 2C_1 C_5 R_1 R_5 R_L g_m s^2 + C_1 C_5 R_1 R_5 s^2 + C_1 C_5 R_5 R_L s^2 + C_1 R_1 R_5 g_m s + 2C_1 R_1 R_5 s + C_1 R_1 R_5 s + C_1 R_1 R_5 s}$$

$$10.440 \quad \text{INVALID-ORDER-440} \quad Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{R_5 (L_5 s + \frac{1}{C_5 s})}{L_5 s + R_5 + \frac{1}{C_5 s}}, R_L \right)$$

$$H(s) = -\frac{R_L (C_1 R_1 s + 1) (-C_5 L_5 R_5 g_m s^2 + C_5 L_5 s^2 + C_5 R_5 s - C_5 R_5 s)}{C_1 C_5 L_5 R_1 R_5 g_m s^3 + 2C_1 C_5 L_5 R_1 R_L g_m s^3 + C_1 C_5 L_5 R_1 s^3 + C_1 C_5 L_5 R_5 s^3 + C_1 C_5 L_5 R_L s^3 + 2C_1 C_5 R_1 R_5 R_L g_m s^2 + C_1 C_5 R_1 R_5 s^2 + C_1 C_5 R_5 R_L s^2 + C_1 R_1 R_5 g_m s + 2C_1 R_1 R_5 s + C_1 R_1 R_5 s + C_1 R_1 R_5 s}$$

$$10.441 \quad \text{INVALID-ORDER-441} \quad Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{R_5 (L_5 s + \frac{1}{C_5 s})}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{1}{C_L s} \right)$$

$$H(s) = -\frac{(C_1 R_1 s + 1) (-C_5 L_5 R_5 g_m s^2 + C_5 L_5 s^2 + C_5 R_5 s - C_5 R_5 s)}{C_1 C_5 C_L L_5 R_1 R_5 g_m s^4 + C_1 C_5 C_L L_5 R_1 s^4 + C_1 C_5 C_L L_5 R_5 s^4 + C_1 C_5 C_L R_1 R_5 s^3 + 2C_1 C_5 L_5 R_1 g_m s^3 + C_1 C_5 L_5 s^3 + 2C_1 C_5 R_1 R_5 g_m s^2 + C_1 C_5 R_5 s^2 + C_1 C_L R_1 R_5 g_m s^2 + C_1 C_L R_1 R_5 s^2 + C_1 C_L R_5 g_m s + 2C_1 C_L R_5 s + C_1 C_L R_5 s + C_1 C_L R_5 s}$$

$$10.442 \quad \text{INVALID-ORDER-442} \quad Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{R_5 (L_5 s + \frac{1}{C_5 s})}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{R_L}{C_L R_L s + 1} \right)$$

$$H(s) = -\frac{C_1 C_5 C_L L_5 R_1 R_5 R_L g_m s^4 + C_1 C_5 C_L L_5 R_1 R_L s^4 + C_1 C_5 C_L L_5 R_5 R_L s^4 + C_1 C_5 C_L R_1 R_5 R_L s^3 + C_1 C_5 L_5 R_1 R_5 g_m s^3 + 2C_1 C_5 L_5 R_1 R_L g_m s^3 + C_1 C_5 L_5 R_1 s^3 + C_1 C_5 L_5 R_5 s^3 + C_1 C_5 L_5 R_L s^3 + 2C_1 C_5 R_1 R_5 R_L g_m s^2 + C_1 C_5 R_1 R_5 s^2 + C_1 C_5 R_5 R_L s^2 + C_1 R_1 R_5 g_m s + 2C_1 R_1 R_5 s + C_1 R_1 R_5 s + C_1 R_1 R_5 s}{C_1 C_5 C_L L_5 R_1 R_5 R_L g_m s^4 + C_1 C_5 C_L L_5 R_1 R_L s^4 + C_1 C_5 C_L L_5 R_5 R_L s^4 + C_1 C_5 C_L R_1 R_5 R_L s^3 + C_1 C_5 L_5 R_1 R_5 g_m s^3 + 2C_1 C_5 L_5 R_1 R_L g_m s^3 + C_1 C_5 L_5 R_1 s^3 + C_1 C_5 L_5 R_5 s^3 + C_1 C_5 L_5 R_L s^3 + 2C_1 C_5 R_1 R_5 R_L g_m s^2 + C_1 C_5 R_1 R_5 s^2 + C_1 C_5 R_5 R_L s^2 + C_1 R_1 R_5 g_m s + 2C_1 R_1 R_5 s + C_1 R_1 R_5 s + C_1 R_1 R_5 s}$$

$$10.443 \quad \text{INVALID-ORDER-443} \quad Z(s) = \left( R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \infty, \quad \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \quad R_L + \frac{1}{C_L s} \right)$$

$$H(s) = - \frac{C_1 C_5 C_L L_5 R_1 R_5 g_m s^4 + 2 C_1 C_5 C_L L_5 R_1 R_L g_m s^4 + C_1 C_5 C_L L_5 R_1 s^4 + C_1 C_5 C_L L_5 R_5 s^4 + C_1 C_5 C_L L_5 R_L s^4 + 2 C_1 C_5 C_L R_1 R_5 R_L g_m s^3 + C_1 C_5 C_L R_1 R_5 s^3 + C_1 C_5 C_L R_5 R_L s^3}{C_1 C_5 C_L L_5 R_1 R_5 g_m s^4 + 2 C_1 C_5 C_L L_5 R_1 R_L g_m s^4 + C_1 C_5 C_L L_5 R_1 s^4 + C_1 C_5 C_L L_5 R_5 s^4 + C_1 C_5 C_L L_5 R_L s^4 + 2 C_1 C_5 C_L R_1 R_5 R_L g_m s^3 + C_1 C_5 C_L R_1 R_5 s^3 + C_1 C_5 C_L R_5 R_L s^3}$$

$$10.444 \quad \text{INVALID-ORDER-444} \quad Z(s) = \left( R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \infty, \quad \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \quad L_L s + \frac{1}{C_L s} \right)$$

$$H(s) = - \frac{2 C_1 C_5 C_L L_5 L_L R_1 g_m s^5 + C_1 C_5 C_L L_5 L_L s^5 + C_1 C_5 C_L L_5 R_1 R_5 g_m s^4 + C_1 C_5 C_L L_5 R_1 s^4 + C_1 C_5 C_L L_5 R_5 s^4 + 2 C_1 C_5 C_L L_L R_1 R_5 g_m s^4 + C_1 C_5 C_L L_L R_5 s^4 + C_1 C_5 C_L R_1 R_5 s^3}{2 C_1 C_5 C_L L_5 L_L R_1 g_m s^5 + C_1 C_5 C_L L_5 L_L s^5 + C_1 C_5 C_L L_5 R_1 R_5 g_m s^4 + C_1 C_5 C_L L_5 R_1 s^4 + C_1 C_5 C_L L_5 R_5 s^4 + 2 C_1 C_5 C_L L_L R_1 R_5 g_m s^4 + C_1 C_5 C_L L_L R_5 s^4 + C_1 C_5 C_L R_1 R_5 s^3}$$

$$10.445 \quad \text{INVALID-ORDER-445} \quad Z(s) = \left( R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \infty, \quad \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \quad \frac{L_L s}{C_L L_L s^2 + 1} \right)$$

$$H(s) = - \frac{C_1 C_5 C_L L_5 L_L R_1 R_5 g_m s^5 + C_1 C_5 C_L L_5 L_L R_1 s^5 + C_1 C_5 C_L L_5 L_L R_5 s^5 + C_1 C_5 C_L L_L R_1 R_5 s^4 + 2 C_1 C_5 L_5 L_L R_1 g_m s^4 + C_1 C_5 L_5 L_L s^4 + C_1 C_5 L_5 R_1 R_5 g_m s^3 + C_1 C_5 L_5 R_1 s^3 + C_1 C_5 L_5 R_5 s^3}{C_1 C_5 C_L L_5 L_L R_1 R_5 g_m s^5 + C_1 C_5 C_L L_5 L_L R_1 s^5 + C_1 C_5 C_L L_5 L_L R_5 s^5 + C_1 C_5 C_L L_L R_1 R_5 s^4 + 2 C_1 C_5 L_5 L_L R_1 g_m s^4 + C_1 C_5 L_5 L_L s^4 + C_1 C_5 L_5 R_1 R_5 g_m s^3 + C_1 C_5 L_5 R_1 s^3 + C_1 C_5 L_5 R_5 s^3}$$

$$10.446 \quad \text{INVALID-ORDER-446} \quad Z(s) = \left( R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \infty, \quad \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \quad L_L s + R_L + \frac{1}{C_L s} \right)$$

$$H(s) = - \frac{2 C_1 C_5 C_L L_5 L_L R_1 g_m s^5 + C_1 C_5 C_L L_5 L_L s^5 + C_1 C_5 C_L L_5 R_1 R_5 g_m s^4 + 2 C_1 C_5 C_L L_5 R_1 R_L g_m s^4 + C_1 C_5 C_L L_5 R_1 s^4 + C_1 C_5 C_L L_5 R_5 s^4 + C_1 C_5 C_L L_5 R_L s^4 + 2 C_1 C_5 C_L L_L R_1 R_5 g_m s^4 + C_1 C_5 C_L L_L R_5 s^4 + C_1 C_5 C_L L_L R_1 R_5 s^3}{2 C_1 C_5 C_L L_5 L_L R_1 g_m s^5 + C_1 C_5 C_L L_5 L_L s^5 + C_1 C_5 C_L L_5 R_1 R_5 g_m s^4 + 2 C_1 C_5 C_L L_5 R_1 R_L g_m s^4 + C_1 C_5 C_L L_5 R_1 s^4 + C_1 C_5 C_L L_5 R_5 s^4 + C_1 C_5 C_L L_5 R_L s^4 + 2 C_1 C_5 C_L L_L R_1 R_5 g_m s^4 + C_1 C_5 C_L L_L R_5 s^4 + C_1 C_5 C_L L_L R_1 R_5 s^3}$$

$$10.447 \quad \text{INVALID-ORDER-447} \quad Z(s) = \left( R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \infty, \quad \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \quad \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$$

$$H(s) = - \frac{C_1 C_5 C_L L_5 L_L R_1 R_5 R_L g_m s^5 + C_1 C_5 C_L L_5 L_L R_1 R_L s^5 + C_1 C_5 C_L L_5 L_L R_5 R_L s^5 + C_1 C_5 C_L L_L R_1 R_5 R_L s^4 + C_1 C_5 L_5 L_L R_1 R_5 g_m s^4 + 2 C_1 C_5 L_5 L_L R_1 R_L g_m s^4 + C_1 C_5 L_5 L_L R_1 R_5 s^4 + C_1 C_5 L_5 L_L R_5 s^4 + C_1 C_5 L_5 L_L R_L s^4}{C_1 C_5 C_L L_5 L_L R_1 R_5 R_L g_m s^5 + C_1 C_5 C_L L_5 L_L R_1 R_L s^5 + C_1 C_5 C_L L_5 L_L R_5 R_L s^5 + C_1 C_5 C_L L_L R_1 R_5 R_L s^4 + C_1 C_5 L_5 L_L R_1 R_5 g_m s^4 + 2 C_1 C_5 L_5 L_L R_1 R_L g_m s^4 + C_1 C_5 L_5 L_L R_1 R_5 s^4 + C_1 C_5 L_5 L_L R_5 s^4 + C_1 C_5 L_5 L_L R_L s^4}$$

$$10.448 \quad \text{INVALID-ORDER-448} \quad Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$$

$$H(s) = - \frac{C_1 C_5 C_L L_5 L_L R_1 R_5 g_m s^5 + 2 C_1 C_5 C_L L_5 L_L R_1 R_L g_m s^5 + C_1 C_5 C_L L_5 L_L R_1 s^5 + C_1 C_5 C_L L_5 L_L R_5 s^5 + C_1 C_5 C_L L_5 L_L R_L s^5 + 2 C_1 C_5 C_L L_L R_1 R_5 R_L g_m s^4 + C_1 C_5 C_L L_L R_1 R_5 s^4}{C_1 C_5 C_L L_5 L_L R_1 R_5 g_m s^5 + 2 C_1 C_5 C_L L_5 L_L R_1 R_L g_m s^5 + C_1 C_5 C_L L_5 L_L R_1 s^5 + C_1 C_5 C_L L_5 L_L R_5 s^5 + C_1 C_5 C_L L_5 L_L R_L s^5 + 2 C_1 C_5 C_L L_L R_1 R_5 R_L g_m s^4 + C_1 C_5 C_L L_L R_1 R_5 s^4}$$

$$10.449 \quad \text{INVALID-ORDER-449} \quad Z(s) = \left( R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$$

$$H(s) = - \frac{C_1 C_5 C_L L_5 L_L R_1 R_5 g_m s^5 + 2 C_1 C_5 C_L L_5 L_L R_1 R_L g_m s^5 + C_1 C_5 C_L L_5 L_L R_1 s^5 + C_1 C_5 C_L L_5 L_L R_5 s^5 + C_1 C_5 C_L L_5 L_L R_L s^5 + C_1 C_5 C_L L_5 R_1 R_5 R_L g_m s^4 + C_1 C_5 C_L L_5 R_1 R_L s^4}{C_1 C_5 C_L L_5 L_L R_1 R_5 g_m s^5 + 2 C_1 C_5 C_L L_5 L_L R_1 R_L g_m s^5 + C_1 C_5 C_L L_5 L_L R_1 s^5 + C_1 C_5 C_L L_5 L_L R_5 s^5 + C_1 C_5 C_L L_5 L_L R_L s^5 + C_1 C_5 C_L L_5 R_1 R_5 R_L g_m s^4 + C_1 C_5 C_L L_5 R_1 R_L s^4}$$

$$10.450 \quad \text{INVALID-ORDER-450} \quad Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \infty, \infty, \infty, R_5, \frac{1}{C_L s} \right)$$

$$H(s) = \frac{(R_5 g_m - 1) (C_1 L_1 s^2 + 1)}{C_1 C_L L_1 R_5 g_m s^3 + C_1 C_L L_1 s^3 + C_1 C_L R_5 s^2 + 2 C_1 L_1 g_m s^2 + C_1 s + C_L R_5 g_m s + C_L s + 2 g_m}$$

$$10.451 \quad \text{INVALID-ORDER-451} \quad Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \infty, \infty, \infty, R_5, \frac{R_L}{C_L R_L s + 1} \right)$$

$$H(s) = \frac{R_L (R_5 g_m - 1) (C_1 L_1 s^2 + 1)}{C_1 C_L L_1 R_5 R_L g_m s^3 + C_1 C_L L_1 R_L s^3 + C_1 C_L R_5 R_L s^2 + C_1 L_1 R_5 g_m s^2 + 2 C_1 L_1 R_L g_m s^2 + C_1 L_1 s^2 + C_1 R_5 s + C_1 R_L s + C_L R_5 R_L g_m s + C_L R_L s + R_5 g_m + 2 R_L g_m + 1}$$

$$10.452 \quad \text{INVALID-ORDER-452} \quad Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \infty, \infty, \infty, R_5, R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{(R_5 g_m - 1) (C_1 L_1 s^2 + 1) (C_L R_L s + 1)}{C_1 C_L L_1 R_5 g_m s^3 + 2 C_1 C_L L_1 R_L g_m s^3 + C_1 C_L L_1 s^3 + C_1 C_L R_5 s^2 + C_1 C_L R_L s^2 + 2 C_1 L_1 g_m s^2 + C_1 s + C_L R_5 g_m s + 2 C_L R_L g_m s + C_L s + 2 g_m}$$



**10.453 INVALID-ORDER-453**  $Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \infty, \infty, \infty, R_5, L_L s + \frac{1}{C_L s} \right)$

$$H(s) = \frac{(R_5 g_m - 1) (C_1 L_1 s^2 + 1) (C_L L_L s^2 + 1)}{2C_1 C_L L_1 L_L g_m s^4 + C_1 C_L L_1 R_5 g_m s^3 + C_1 C_L L_1 s^3 + C_1 C_L L_L s^3 + C_1 C_L R_5 s^2 + 2C_1 L_1 g_m s^2 + C_1 s + 2C_L L_L g_m s^2 + C_L R_5 g_m s + C_L s + 2g_m}$$

**10.454 INVALID-ORDER-454**  $Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \infty, \infty, \infty, R_5, \frac{L_L s}{C_L L_L s^2 + 1} \right)$

$$H(s) = \frac{L_L s (R_5 g_m - 1) (C_1 L_1 s^2 + 1)}{C_1 C_L L_1 L_L R_5 g_m s^4 + C_1 C_L L_1 L_L s^4 + C_1 C_L L_L R_5 s^3 + 2C_1 L_1 L_L g_m s^3 + C_1 L_1 R_5 g_m s^2 + C_1 L_1 s^2 + C_1 L_L s^2 + C_1 R_5 s + C_L L_L R_5 g_m s^2 + C_L L_L s^2 + 2L_L g_m s + R_5 g_m + 1}$$

**10.455 INVALID-ORDER-455**  $Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \infty, \infty, \infty, R_5, L_L s + R_L + \frac{1}{C_L s} \right)$

$$H(s) = \frac{(R_5 g_m - 1) (C_1 L_1 s^2 + 1) (C_L L_L s^2 + C_L R_L s + 1)}{2C_1 C_L L_1 L_L g_m s^4 + C_1 C_L L_1 R_5 g_m s^3 + 2C_1 C_L L_1 R_L g_m s^3 + C_1 C_L L_1 s^3 + C_1 C_L L_L s^3 + C_1 C_L R_5 s^2 + C_1 C_L R_L s^2 + 2C_1 L_1 g_m s^2 + C_1 s + 2C_L L_L g_m s^2 + C_L R_5 g_m s + 2C_L R_L g_m s + C_L s + 2g_m}$$

**10.456 INVALID-ORDER-456**  $Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \infty, \infty, \infty, R_5, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$

$$H(s) = \frac{L_L R_L s (R_5 g_m - 1) (C_1 L_1 s^2 + 1)}{C_1 C_L L_1 L_L R_5 R_L g_m s^4 + C_1 C_L L_1 L_L R_L s^4 + C_1 C_L L_L R_5 R_L s^3 + C_1 L_1 L_L R_5 g_m s^3 + 2C_1 L_1 L_L R_L g_m s^3 + C_1 L_1 L_L s^3 + C_1 L_1 R_5 R_L g_m s^2 + C_1 L_1 R_L s^2 + C_1 L_L R_5 s^2 + C_1 L_L R_L s^2 + C_1 R_5 s + C_L R_L s + 2g_m}$$

**10.457 INVALID-ORDER-457**  $Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \infty, \infty, \infty, R_5, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$

$$H(s) = \frac{(R_5 g_m - 1) (C_1 L_1 s^2 + 1) (C_L L_L R_L s^2 + L_L s + R_L)}{C_1 C_L L_1 L_L R_5 g_m s^4 + 2C_1 C_L L_1 L_L R_L g_m s^4 + C_1 C_L L_1 L_L s^4 + C_1 C_L L_L R_5 s^3 + C_1 C_L L_L R_L s^3 + 2C_1 L_1 L_L g_m s^3 + C_1 L_1 R_5 g_m s^2 + 2C_1 L_1 R_L g_m s^2 + C_1 L_1 s^2 + C_1 L_L s^2 + C_1 R_5 s + C_L R_L s + 2g_m}$$

$$10.458 \quad \text{INVALID-ORDER-458} \quad Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \infty, \infty, \infty, R_5, \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$$

$$H(s) = \frac{R_L (R_5 g_m - 1) (C_1 L_1 s^2 + 1) (C_L L_L s^2 + 1)}{C_1 C_L L_1 L_L R_5 g_m s^4 + 2C_1 C_L L_1 L_L R_L g_m s^4 + C_1 C_L L_1 L_L s^4 + C_1 C_L L_1 R_5 R_L g_m s^3 + C_1 C_L L_1 R_L s^3 + C_1 C_L L_L R_5 s^3 + C_1 C_L L_L R_L s^3 + C_1 C_L R_5 R_L s^2 + C_1 L_1 R_5 g_m s^2 + 2C_1 L_1 R_L g_m s + C_1 s + C_5 R_L g_m s + C_5 s + g_m}$$

$$10.459 \quad \text{INVALID-ORDER-459} \quad Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{1}{C_5 s}, R_L \right)$$

$$H(s) = -\frac{R_L (C_5 s - g_m) (C_1 L_1 s^2 + 1)}{2C_1 C_5 L_1 R_L g_m s^3 + C_1 C_5 L_1 s^3 + C_1 C_5 R_L s^2 + C_1 L_1 g_m s^2 + C_1 s + 2C_5 R_L g_m s + C_5 s + g_m}$$

$$10.460 \quad \text{INVALID-ORDER-460} \quad Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{1}{C_5 s}, \frac{1}{C_L s} \right)$$

$$H(s) = -\frac{(C_5 s - g_m) (C_1 L_1 s^2 + 1)}{s (C_1 C_5 C_L L_1 s^3 + 2C_1 C_5 L_1 g_m s^2 + C_1 C_5 s + C_1 C_L L_1 g_m s^2 + C_1 C_L s + C_5 C_L s + 2C_5 g_m + C_L g_m)}$$

$$10.461 \quad \text{INVALID-ORDER-461} \quad Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{1}{C_5 s}, \frac{R_L}{C_L R_L s + 1} \right)$$

$$H(s) = -\frac{R_L (C_5 s - g_m) (C_1 L_1 s^2 + 1)}{C_1 C_5 C_L L_1 R_L s^4 + 2C_1 C_5 L_1 R_L g_m s^3 + C_1 C_5 L_1 s^3 + C_1 C_5 R_L s^2 + C_1 C_L L_1 R_L g_m s^3 + C_1 C_L R_L s^2 + C_1 L_1 g_m s^2 + C_1 s + C_5 C_L R_L s^2 + 2C_5 R_L g_m s + C_5 s + C_L R_L g_m s + g_m}$$

$$10.462 \quad \text{INVALID-ORDER-462} \quad Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{1}{C_5 s}, R_L + \frac{1}{C_L s} \right)$$

$$H(s) = -\frac{(C_5 s - g_m) (C_1 L_1 s^2 + 1) (C_L R_L s + 1)}{s (2C_1 C_5 C_L L_1 R_L g_m s^3 + C_1 C_5 C_L L_1 s^3 + C_1 C_5 C_L R_L s^2 + 2C_1 C_5 L_1 g_m s^2 + C_1 C_5 s + C_1 C_L L_1 g_m s^2 + C_1 C_L s + 2C_5 C_L R_L g_m s + C_5 C_L s + 2C_5 g_m + C_L g_m)}$$

**10.463 INVALID-ORDER-463**  $Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{1}{C_5 s}, L_L s + \frac{1}{C_L s} \right)$

$$H(s) = -\frac{(C_5 s - g_m)(C_1 L_1 s^2 + 1)(C_L L_L s^2 + 1)}{s(2C_1 C_5 C_L L_1 L_L g_m s^4 + C_1 C_5 C_L L_1 s^3 + C_1 C_5 C_L L_L s^3 + 2C_1 C_5 L_1 g_m s^2 + C_1 C_5 s + C_1 C_L L_1 g_m s^2 + C_1 C_L s + 2C_5 C_L L_L g_m s^2 + C_5 C_L s + 2C_5 g_m + C_L g_m)}$$

**10.464 INVALID-ORDER-464**  $Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} \right)$

$$H(s) = -\frac{L_L s(C_5 s - g_m)(C_1 L_1 s^2 + 1)}{C_1 C_5 C_L L_1 L_L s^5 + 2C_1 C_5 L_1 L_L g_m s^4 + C_1 C_5 L_1 s^3 + C_1 C_5 L_L s^3 + C_1 C_L L_1 L_L g_m s^4 + C_1 C_L L_L s^3 + C_1 L_1 g_m s^2 + C_1 s + C_5 C_L L_L s^3 + 2C_5 L_L g_m s^2 + C_5 s + C_L L_L g_m s^2 + g_m}$$

**10.465 INVALID-ORDER-465**  $Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{1}{C_5 s}, L_L s + R_L + \frac{1}{C_L s} \right)$

$$H(s) = -\frac{(C_5 s - g_m)(C_1 L_1 s^2 + 1)(C_L L_L s^2 + C_L R_L s + 1)}{s(2C_1 C_5 C_L L_1 L_L g_m s^4 + 2C_1 C_5 C_L L_1 R_L g_m s^3 + C_1 C_5 C_L L_1 s^3 + C_1 C_5 C_L L_L s^3 + C_1 C_5 C_L R_L s^2 + 2C_1 C_5 L_1 g_m s^2 + C_1 C_5 s + C_1 C_L L_1 g_m s^2 + C_1 C_L s + 2C_5 C_L L_L g_m s^2 + 2C_5 R_L g_m s + C_L g_m)}$$

**10.466 INVALID-ORDER-466**  $Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{1}{C_5 s}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$

$$H(s) = -\frac{L_L R_L s(C_5 s - g_m)(C_1 L_1 s^2 + 1)}{C_1 C_5 C_L L_1 L_L R_L s^5 + 2C_1 C_5 L_1 L_L R_L g_m s^4 + C_1 C_5 L_1 L_L s^4 + C_1 C_5 L_1 R_L s^3 + C_1 C_5 L_L R_L s^3 + C_1 C_L L_1 L_L R_L g_m s^4 + C_1 C_L L_L R_L s^3 + C_1 L_1 L_L g_m s^3 + C_1 L_1 R_L g_m s^2 + C_1 L_1 s + C_5 C_L L_L g_m s^2 + C_5 R_L g_m s + C_L g_m}$$

**10.467 INVALID-ORDER-467**  $Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$

$$H(s) = -\frac{(C_5 s - g_m)(C_1 L_1 s^2 + 1)(C_L L_L R_L s^2 + L_L s + R_L)}{2C_1 C_5 C_L L_1 L_L R_L g_m s^5 + C_1 C_5 C_L L_1 L_L s^5 + C_1 C_5 C_L L_L R_L s^4 + 2C_1 C_5 L_1 L_L g_m s^4 + 2C_1 C_5 L_1 R_L g_m s^3 + C_1 C_5 L_1 s^3 + C_1 C_5 L_L s^3 + C_1 C_5 R_L s^2 + C_1 C_L L_1 L_L g_m s^4 + C_1 C_L L_L R_L g_m s^3 + C_1 L_1 L_L g_m s^3 + C_1 L_1 R_L g_m s^2 + C_1 L_1 s + C_5 C_L L_L g_m s^2 + C_5 R_L g_m s + C_L g_m}$$

$$10.468 \quad \text{INVALID-ORDER-468} \quad Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \infty, \quad \frac{1}{C_5 s}, \quad \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$$

$$H(s) = - \frac{R_L (C_5 s - g_m) (C_1 L_1 s^2 + 1) (C_L}{2 C_1 C_5 C_L L_1 L_L R_L g_m s^5 + C_1 C_5 C_L L_1 L_L s^5 + C_1 C_5 C_L L_1 R_L s^4 + C_1 C_5 C_L L_L R_L s^4 + 2 C_1 C_5 L_1 R_L g_m s^3 + C_1 C_5 L_1 s^3 + C_1 C_5 R_L s^2 + C_1 C_L L_1 L_L g_m s^4 + C_1 C_L L_1 R_L g_m s^3 +$$

$$10.469 \quad \text{INVALID-ORDER-469} \quad Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \infty, \quad \frac{R_5}{C_5 R_5 s + 1}, \quad R_L \right)$$

$$H(s) = - \frac{R_L (C_1 L_1 s^2 + 1) (C_5 R_5 s - R_5 g_m + 1)}{2 C_1 C_5 L_1 R_5 R_L g_m s^3 + C_1 C_5 L_1 R_5 s^3 + C_1 C_5 R_5 R_L s^2 + C_1 L_1 R_5 g_m s^2 + 2 C_1 L_1 R_L g_m s^2 + C_1 L_1 s^2 + C_1 R_5 s + C_1 R_L s + 2 C_5 R_5 R_L g_m s + C_5 R_5 s + R_5 g_m + 2 R_L g_m + 1}$$

$$10.470 \quad \text{INVALID-ORDER-470} \quad Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \infty, \quad \frac{R_5}{C_5 R_5 s + 1}, \quad \frac{1}{C_L s} \right)$$

$$H(s) = - \frac{(C_1 L_1 s^2 + 1) (C_5 R_5 s - R_5 g_m + 1)}{C_1 C_5 C_L L_1 R_5 s^4 + 2 C_1 C_5 L_1 R_5 g_m s^3 + C_1 C_5 R_5 s^2 + C_1 C_L L_1 R_5 g_m s^3 + C_1 C_L L_1 s^3 + C_1 C_L R_5 s^2 + 2 C_1 L_1 g_m s^2 + C_1 s + C_5 C_L R_5 s^2 + 2 C_5 R_5 g_m s + C_L R_5 g_m s + C_L s + 2 g_m}$$

$$10.471 \quad \text{INVALID-ORDER-471} \quad Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \infty, \quad \frac{R_5}{C_5 R_5 s + 1}, \quad \frac{R_L}{C_L R_L s + 1} \right)$$

$$H(s) = - \frac{R_L (C_1 L_1 s^2 + 1) (C_5 R_5 s - R_5 g_m + 1)}{C_1 C_5 C_L L_1 R_5 R_L s^4 + 2 C_1 C_5 L_1 R_5 R_L g_m s^3 + C_1 C_5 L_1 R_5 s^3 + C_1 C_5 R_5 R_L s^2 + C_1 C_L L_1 R_5 R_L g_m s^3 + C_1 C_L L_1 R_L s^3 + C_1 C_L R_5 R_L s^2 + C_1 L_1 R_5 g_m s^2 + 2 C_1 L_1 R_L g_m s^2 + C_1 L_1 s^2 + C_1 R_5 s + C_1 R_L s + 2 C_5 R_5 R_L g_m s + C_5 R_5 s + R_5 g_m + 2 R_L g_m + 1}$$

$$10.472 \quad \text{INVALID-ORDER-472} \quad Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \infty, \quad \frac{R_5}{C_5 R_5 s + 1}, \quad R_L + \frac{1}{C_L s} \right)$$

$$H(s) = - \frac{(C_1 L_1 s^2 + 1) (C_L R_L s + 1) (C_5 R_5 s - R_5 g_m + 1)}{2 C_1 C_5 C_L L_1 R_5 R_L g_m s^4 + C_1 C_5 C_L L_1 R_5 s^4 + C_1 C_5 C_L R_5 R_L s^3 + 2 C_1 C_5 L_1 R_5 g_m s^3 + C_1 C_5 R_5 s^2 + C_1 C_L L_1 R_5 g_m s^3 + 2 C_1 C_L L_1 R_L g_m s^3 + C_1 C_L L_1 s^3 + C_1 C_L R_5 s^2 + C_1 C_L s^2 + C_1 L_1 R_5 g_m s^2 + 2 C_1 L_1 R_L g_m s^2 + C_1 L_1 s^2 + C_1 R_5 s + C_1 R_L s + 2 C_5 R_5 R_L g_m s + C_5 R_5 s + R_5 g_m + 2 R_L g_m + 1}$$

**10.473 INVALID-ORDER-473**  $Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, L_L s + \frac{1}{C_L s} \right)$

$$H(s) = -\frac{(C_1 L_1 s^2 + 1)(C_L L_L s^2 + 1)(C_5 R_5 s - R_5 g_m + 1)}{2C_1 C_5 C_L L_1 L_L R_5 g_m s^5 + C_1 C_5 C_L L_1 R_5 s^4 + C_1 C_5 C_L L_L R_5 s^4 + 2C_1 C_5 L_1 R_5 g_m s^3 + C_1 C_5 R_5 s^2 + 2C_1 C_L L_1 L_L g_m s^4 + C_1 C_L L_1 R_5 g_m s^3 + C_1 C_L L_1 s^3 + C_1 C_L L_L s^3 + C_1 C_L}$$

**10.474 INVALID-ORDER-474**  $Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, \frac{L_L s}{C_L L_L s^2 + 1} \right)$

$$H(s) = -\frac{L_L s (C_1 L_1 s^2 + 1)(C_5 R_5 s - R_5 g_m + 1)}{C_1 C_5 C_L L_1 L_L R_5 s^5 + 2C_1 C_5 L_1 L_L R_5 g_m s^4 + C_1 C_5 L_1 R_5 s^3 + C_1 C_5 L_L R_5 s^3 + C_1 C_L L_1 L_L R_5 g_m s^4 + C_1 C_L L_1 L_L s^4 + C_1 C_L L_L R_5 s^3 + 2C_1 L_1 L_L g_m s^3 + C_1 L_1 R_5 g_m s^2 + C_1 L_L}$$

**10.475 INVALID-ORDER-475**  $Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, L_L s + R_L + \frac{1}{C_L s} \right)$

$$H(s) = -\frac{2C_1 C_5 C_L L_1 L_L R_5 g_m s^5 + 2C_1 C_5 C_L L_1 R_5 R_L g_m s^4 + C_1 C_5 C_L L_1 R_5 s^4 + C_1 C_5 C_L L_L R_5 s^4 + C_1 C_5 C_L R_5 R_L s^3 + 2C_1 C_5 L_1 R_5 g_m s^3 + C_1 C_5 R_5 s^2 + 2C_1 C_L L_1 L_L g_m s^4 + C_1 C_L L_1 R_5 g_m s^3 + C_1 C_L L_1 s^3 + C_1 C_L L_L s^3 + C_1 C_L R_L s^2 + C_1 C_L R_L s + C_1 C_L}{2C_1 C_5 C_L L_1 L_L R_5 g_m s^5 + 2C_1 C_5 C_L L_1 R_5 R_L g_m s^4 + C_1 C_5 C_L L_1 R_5 s^4 + C_1 C_5 C_L L_L R_5 s^4 + C_1 C_5 C_L R_5 R_L s^3 + 2C_1 C_5 L_1 R_5 g_m s^3 + C_1 C_5 R_5 s^2 + 2C_1 C_L L_1 L_L g_m s^4 + C_1 C_L L_1 R_5 g_m s^3 + C_1 C_L L_1 s^3 + C_1 C_L L_L s^3 + C_1 C_L R_L s^2 + C_1 C_L R_L s + C_1 C_L}$$

**10.476 INVALID-ORDER-476**  $Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$

$$H(s) = -\frac{C_1 C_5 C_L L_1 L_L R_5 R_L s^5 + 2C_1 C_5 L_1 L_L R_5 R_L g_m s^4 + C_1 C_5 L_1 L_L R_5 s^4 + C_1 C_5 L_1 R_5 R_L s^3 + C_1 C_5 L_L R_5 R_L s^3 + C_1 C_L L_1 L_L R_5 R_L g_m s^4 + C_1 C_L L_1 L_L R_L s^4 + C_1 C_L L_L R_5 R_L s^3 + C_1 C_L L_L R_L s^2 + C_1 C_L R_L s + C_1 C_L}{C_1 C_5 C_L L_1 L_L R_5 R_L s^5 + 2C_1 C_5 L_1 L_L R_5 R_L g_m s^4 + C_1 C_5 L_1 L_L R_5 s^4 + C_1 C_5 L_1 R_5 R_L s^3 + C_1 C_5 L_L R_5 R_L s^3 + C_1 C_L L_1 L_L R_5 R_L g_m s^4 + C_1 C_L L_1 L_L R_L s^4 + C_1 C_L L_L R_5 R_L s^3 + C_1 C_L L_L R_L s^2 + C_1 C_L R_L s + C_1 C_L}$$

**10.477 INVALID-ORDER-477**  $Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$

$$H(s) = -\frac{2C_1 C_5 C_L L_1 L_L R_5 R_L g_m s^5 + C_1 C_5 C_L L_1 L_L R_5 s^5 + C_1 C_5 C_L L_L R_5 R_L s^4 + 2C_1 C_5 L_1 L_L R_5 g_m s^4 + 2C_1 C_5 L_1 R_5 R_L g_m s^3 + C_1 C_5 L_1 R_5 s^3 + C_1 C_5 L_L R_5 s^3 + C_1 C_5 R_5 R_L s^2 + C_1 C_L L_1 L_L R_5 R_L g_m s^4 + C_1 C_L L_1 L_L R_L s^4 + C_1 C_L L_L R_5 R_L s^3 + C_1 C_L L_L R_L s^2 + C_1 C_L R_L s + C_1 C_L}{2C_1 C_5 C_L L_1 L_L R_5 R_L g_m s^5 + C_1 C_5 C_L L_1 L_L R_5 s^5 + C_1 C_5 C_L L_L R_5 R_L s^4 + 2C_1 C_5 L_1 L_L R_5 g_m s^4 + 2C_1 C_5 L_1 R_5 R_L g_m s^3 + C_1 C_5 L_1 R_5 s^3 + C_1 C_5 L_L R_5 s^3 + C_1 C_5 R_5 R_L s^2 + C_1 C_L L_1 L_L R_5 R_L g_m s^4 + C_1 C_L L_1 L_L R_L s^4 + C_1 C_L L_L R_5 R_L s^3 + C_1 C_L L_L R_L s^2 + C_1 C_L R_L s + C_1 C_L}$$

$$10.478 \quad \text{INVALID-ORDER-478} \quad Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \infty, \quad \frac{R_5}{C_5 R_5 s + 1}, \quad \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$$

$$H(s) = -\frac{2C_1 C_5 C_L L_1 L_L R_5 R_L g_m s^5 + C_1 C_5 C_L L_1 L_L R_5 s^5 + C_1 C_5 C_L L_1 R_5 R_L s^4 + C_1 C_5 C_L L_L R_5 R_L s^4 + 2C_1 C_5 L_1 R_5 R_L g_m s^3 + C_1 C_5 L_1 R_5 s^3 + C_1 C_5 R_5 R_L s^2 + C_1 C_L L_1 L_L R_5 g_m s^4}{2C_1 C_5 C_L L_1 L_L R_5 R_L g_m s^5 + C_1 C_5 C_L L_1 L_L R_5 s^5 + C_1 C_5 C_L L_1 R_5 R_L s^4 + C_1 C_5 C_L L_L R_5 R_L s^4 + 2C_1 C_5 L_1 R_5 R_L g_m s^3 + C_1 C_5 L_1 R_5 s^3 + C_1 C_5 R_5 R_L s^2 + C_1 C_L L_1 L_L R_5 g_m s^4}$$

$$10.479 \quad \text{INVALID-ORDER-479} \quad Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \infty, \quad R_5 + \frac{1}{C_5 s}, \quad R_L \right)$$

$$H(s) = \frac{R_L (C_1 L_1 s^2 + 1) (C_5 R_5 g_m s - C_5 s + g_m)}{C_1 C_5 L_1 R_5 g_m s^3 + 2C_1 C_5 L_1 R_L g_m s^3 + C_1 C_5 L_1 s^3 + C_1 C_5 R_5 s^2 + C_1 C_5 R_L s^2 + C_1 L_1 g_m s^2 + C_1 s + C_5 R_5 g_m s + 2C_5 R_L g_m s + C_5 s + g_m}$$

$$10.480 \quad \text{INVALID-ORDER-480} \quad Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \infty, \quad R_5 + \frac{1}{C_5 s}, \quad \frac{1}{C_L s} \right)$$

$$H(s) = \frac{(C_1 L_1 s^2 + 1) (C_5 R_5 g_m s - C_5 s + g_m)}{s (C_1 C_5 C_L L_1 R_5 g_m s^3 + C_1 C_5 C_L L_1 s^3 + C_1 C_5 C_L R_5 s^2 + 2C_1 C_5 L_1 g_m s^2 + C_1 C_5 s + C_1 C_L L_1 g_m s^2 + C_1 C_L s + C_5 C_L R_5 g_m s + C_5 C_L s + 2C_5 g_m + C_L g_m)}$$

$$10.481 \quad \text{INVALID-ORDER-481} \quad Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \infty, \quad R_5 + \frac{1}{C_5 s}, \quad \frac{R_L}{C_L R_L s + 1} \right)$$

$$H(s) = \frac{R_L (C_1 L_1 s^2 + 1) (C_5 R_5 g_m s - C_5 s + g_m)}{C_1 C_5 C_L L_1 R_5 R_L g_m s^4 + C_1 C_5 C_L L_1 R_L s^4 + C_1 C_5 C_L R_5 R_L s^3 + C_1 C_5 L_1 R_5 g_m s^3 + 2C_1 C_5 L_1 R_L g_m s^3 + C_1 C_5 L_1 s^3 + C_1 C_5 R_5 s^2 + C_1 C_5 R_L s^2 + C_1 C_L L_1 R_L g_m s^3 + C_1 C_L R_L s^3}$$

$$10.482 \quad \text{INVALID-ORDER-482} \quad Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \infty, \quad R_5 + \frac{1}{C_5 s}, \quad R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{(C_1 L_1 s^2 + 1) (C_L R_L s + 1) (C_5 R_5 g_m s - C_5 s + g_m)}{s (C_1 C_5 C_L L_1 R_5 g_m s^3 + 2C_1 C_5 C_L L_1 R_L g_m s^3 + C_1 C_5 C_L L_1 s^3 + C_1 C_5 C_L R_5 s^2 + C_1 C_5 C_L R_L s^2 + 2C_1 C_5 L_1 g_m s^2 + C_1 C_5 s + C_1 C_L L_1 g_m s^2 + C_1 C_L s + C_5 C_L R_5 g_m s + 2C_5 C_L s)}$$

**10.483 INVALID-ORDER-483**  $Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, L_L s + \frac{1}{C_L s} \right)$

$$H(s) = \frac{(C_1 L_1 s^2 + 1) (C_L L_L s^2 + 1) (C_5 R_5 g_m s - C_5 s + g_m)}{s (2C_1 C_5 C_L L_1 L_L g_m s^4 + C_1 C_5 C_L L_1 R_5 g_m s^3 + C_1 C_5 C_L L_1 s^3 + C_1 C_5 C_L L_L s^3 + C_1 C_5 C_L R_5 s^2 + 2C_1 C_5 L_1 g_m s^2 + C_1 C_5 s + C_1 C_L L_1 g_m s^2 + C_1 C_L s + 2C_5 C_L L_L g_m s^2 + C_5 C_L s)}$$

**10.484 INVALID-ORDER-484**  $Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} \right)$

$$H(s) = \frac{L_L s (C_1 L_1 s^2 + 1) (C_5 R_5 g_m s - C_5 s + g_m)}{C_1 C_5 C_L L_1 L_L R_5 g_m s^5 + C_1 C_5 C_L L_1 L_L s^5 + C_1 C_5 C_L L_L R_5 s^4 + 2C_1 C_5 L_1 L_L g_m s^4 + C_1 C_5 L_1 R_5 g_m s^3 + C_1 C_5 L_1 s^3 + C_1 C_5 L_L s^3 + C_1 C_5 R_5 s^2 + C_1 C_L L_1 L_L g_m s^4 + C_1 C_L L_L s^3}$$

**10.485 INVALID-ORDER-485**  $Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, L_L s + R_L + \frac{1}{C_L s} \right)$

$$H(s) = \frac{(C_1 L_1 s^2 + 1) (C_L L_L s^2 + C_L R_L s + 1) (C_5 R_5 g_m s - C_5 s + g_m)}{s (2C_1 C_5 C_L L_1 L_L g_m s^4 + C_1 C_5 C_L L_1 R_5 g_m s^3 + 2C_1 C_5 C_L L_1 R_L g_m s^3 + C_1 C_5 C_L L_1 s^3 + C_1 C_5 C_L L_L s^3 + C_1 C_5 C_L R_5 s^2 + C_1 C_5 C_L R_L s^2 + 2C_1 C_5 L_1 g_m s^2 + C_1 C_5 s + C_1 C_L L_1 g_m s^2)}$$

**10.486 INVALID-ORDER-486**  $Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$

$$H(s) = \frac{(C_1 L_1 s^2 + 1) (C_L L_L s^2 + C_L R_L s + 1) (C_5 R_5 g_m s - C_5 s + g_m)}{C_1 C_5 C_L L_1 L_L R_5 R_L g_m s^5 + C_1 C_5 C_L L_1 L_L R_L s^5 + C_1 C_5 C_L L_L R_5 R_L s^4 + C_1 C_5 L_1 L_L R_5 g_m s^4 + 2C_1 C_5 L_1 L_L R_L g_m s^4 + C_1 C_5 L_1 L_L s^4 + C_1 C_5 L_1 R_5 R_L g_m s^3 + C_1 C_5 L_1 R_L s^3 + C_1 C_L L_1 L_L g_m s^4}$$

**10.487 INVALID-ORDER-487**  $Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$

$$H(s) = \frac{(C_1 L_1 s^2 + 1) (C_L L_L s^2 + C_L R_L s + 1) (C_5 R_5 g_m s - C_5 s + g_m)}{C_1 C_5 C_L L_1 L_L R_5 g_m s^5 + 2C_1 C_5 C_L L_1 L_L R_L g_m s^5 + C_1 C_5 C_L L_1 L_L s^5 + C_1 C_5 C_L L_L R_5 s^4 + C_1 C_5 C_L L_L R_L s^4 + 2C_1 C_5 L_1 L_L g_m s^4 + C_1 C_5 L_1 R_5 g_m s^3 + 2C_1 C_5 L_1 R_L g_m s^3 + C_1 C_L L_1 L_L g_m s^4}$$

$$10.488 \quad \text{INVALID-ORDER-488} \quad Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \infty, \quad R_5 + \frac{1}{C_5 s}, \quad \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$$

$$H(s) = \frac{C_1 C_5 C_L L_1 L_L R_5 g_m s^5 + 2 C_1 C_5 C_L L_1 L_L R_L g_m s^5 + C_1 C_5 C_L L_1 L_L s^5 + C_1 C_5 C_L L_1 R_5 R_L g_m s^4 + C_1 C_5 C_L L_1 R_L s^4 + C_1 C_5 C_L L_L R_5 s^4 + C_1 C_5 C_L L_L R_L s^4 + C_1 C_5 C_L R_5 R_L s^3 + \dots}{\dots}$$

$$10.489 \quad \text{INVALID-ORDER-489} \quad Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \infty, \quad L_5 s + \frac{1}{C_5 s}, \quad R_L \right)$$

$$H(s) = \frac{R_L (C_1 L_1 s^2 + 1) (C_5 L_5 g_m s^2 - C_5 s + g_m)}{C_1 C_5 L_1 L_5 g_m s^4 + 2 C_1 C_5 L_1 R_L g_m s^3 + C_1 C_5 L_1 s^3 + C_1 C_5 L_5 s^3 + C_1 C_5 R_L s^2 + C_1 L_1 g_m s^2 + C_1 s + C_5 L_5 g_m s^2 + 2 C_5 R_L g_m s + C_5 s + g_m}$$

$$10.490 \quad \text{INVALID-ORDER-490} \quad Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \infty, \quad L_5 s + \frac{1}{C_5 s}, \quad \frac{1}{C_L s} \right)$$

$$H(s) = \frac{(C_1 L_1 s^2 + 1) (C_5 L_5 g_m s^2 - C_5 s + g_m)}{s (C_1 C_5 C_L L_1 L_5 g_m s^4 + C_1 C_5 C_L L_1 s^3 + C_1 C_5 C_L L_5 s^3 + 2 C_1 C_5 L_1 g_m s^2 + C_1 C_5 s + C_1 C_L L_1 g_m s^2 + C_1 C_L s + C_5 C_L L_5 g_m s^2 + C_5 C_L s + 2 C_5 g_m + C_L g_m)}$$

$$10.491 \quad \text{INVALID-ORDER-491} \quad Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \infty, \quad L_5 s + \frac{1}{C_5 s}, \quad \frac{R_L}{C_L R_L s + 1} \right)$$

$$H(s) = \frac{R_L (C_1 L_1 s^2 + 1) (C_5 L_5 g_m s^2 - C_5 s + g_m)}{C_1 C_5 C_L L_1 L_5 R_L g_m s^5 + C_1 C_5 C_L L_1 R_L s^4 + C_1 C_5 C_L L_5 R_L s^4 + C_1 C_5 L_1 L_5 g_m s^4 + 2 C_1 C_5 L_1 R_L g_m s^3 + C_1 C_5 L_1 s^3 + C_1 C_5 L_5 s^3 + C_1 C_5 R_L s^2 + C_1 C_L L_1 R_L g_m s^3 + C_1 C_L R_L s^2 + \dots}$$

$$10.492 \quad \text{INVALID-ORDER-492} \quad Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \infty, \quad L_5 s + \frac{1}{C_5 s}, \quad R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{(C_1 L_1 s^2 + 1) (C_L R_L s + 1) (C_5 L_5 g_m s^2 - C_5 s + g_m)}{s (C_1 C_5 C_L L_1 L_5 g_m s^4 + 2 C_1 C_5 C_L L_1 R_L g_m s^3 + C_1 C_5 C_L L_1 s^3 + C_1 C_5 C_L L_5 s^3 + C_1 C_5 C_L R_L s^2 + 2 C_1 C_5 L_1 g_m s^2 + C_1 C_5 s + C_1 C_L L_1 g_m s^2 + C_1 C_L s + C_5 C_L L_5 g_m s^2 + 2 C_5 C_L s + g_m)}$$



$$10.493 \quad \text{INVALID-ORDER-493} \quad Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, L_L s + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{(C_1 L_1 s^2 + 1) (C_L L_L s^2 + 1) (C_5 L_5 g_m s^2 - C_5 s + g_m)}{s (C_1 C_5 C_L L_1 L_5 g_m s^4 + 2 C_1 C_5 C_L L_1 L_L g_m s^4 + C_1 C_5 C_L L_1 s^3 + C_1 C_5 C_L L_5 s^3 + C_1 C_5 C_L L_L s^3 + 2 C_1 C_5 L_1 g_m s^2 + C_1 C_5 s + C_1 C_L L_1 g_m s^2 + C_1 C_L s + C_5 C_L L_5 g_m s^2 + 2 C_5 C_L s)}$$

$$10.494 \quad \text{INVALID-ORDER-494} \quad Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} \right)$$

$$H(s) = \frac{L_L s (C_1 L_1 s^2 + 1) (C_5 L_5 g_m s^2 - C_5 s + g_m)}{C_1 C_5 C_L L_1 L_5 L_L g_m s^6 + C_1 C_5 C_L L_1 L_L s^5 + C_1 C_5 C_L L_5 L_L s^5 + C_1 C_5 L_1 L_5 g_m s^4 + 2 C_1 C_5 L_1 L_L g_m s^4 + C_1 C_5 L_1 s^3 + C_1 C_5 L_5 s^3 + C_1 C_5 L_L s^3 + C_1 C_L L_1 L_L g_m s^4 + C_1 C_L L_L s^3}$$

$$10.495 \quad \text{INVALID-ORDER-495} \quad Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, L_L s + R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{(C_1 L_1 s^2 + 1) (C_L L_L s^2 + C_L R_L s + 1) (C_5 L_5 g_m s^2 - C_5 s + g_m)}{s (C_1 C_5 C_L L_1 L_5 g_m s^4 + 2 C_1 C_5 C_L L_1 L_L g_m s^4 + 2 C_1 C_5 C_L L_1 R_L g_m s^3 + C_1 C_5 C_L L_1 s^3 + C_1 C_5 C_L L_5 s^3 + C_1 C_5 C_L L_L s^3 + C_1 C_5 C_L R_L s^2 + 2 C_1 C_5 L_1 g_m s^2 + C_1 C_5 s + C_1 C_L L_1 g_m s^2 + C_1 C_L s + C_5 C_L L_5 g_m s^2 + 2 C_5 C_L s)}$$

$$10.496 \quad \text{INVALID-ORDER-496} \quad Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$$

$$H(s) = \frac{(C_1 L_1 s^2 + 1) (C_L L_L s^2 + C_L R_L s + 1) (C_5 L_5 g_m s^2 - C_5 s + g_m)}{C_1 C_5 C_L L_1 L_5 L_L R_L g_m s^6 + C_1 C_5 C_L L_1 L_L R_L s^5 + C_1 C_5 C_L L_5 L_L R_L s^5 + C_1 C_5 L_1 L_5 L_L g_m s^5 + C_1 C_5 L_1 L_5 R_L g_m s^4 + 2 C_1 C_5 L_1 L_L R_L g_m s^4 + C_1 C_5 L_1 L_L s^4 + C_1 C_5 L_1 R_L s^3 + C_1 C_5 L_5 R_L s^3 + C_1 C_5 L_L R_L s^3 + C_1 C_L L_1 L_L g_m s^4 + C_1 C_L L_L s^3}$$

$$10.497 \quad \text{INVALID-ORDER-497} \quad Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$$

$$H(s) = \frac{(C_1 L_1 s^2 + 1) (C_L L_L s^2 + C_L R_L s + 1) (C_5 L_5 g_m s^2 - C_5 s + g_m)}{C_1 C_5 C_L L_1 L_5 L_L g_m s^6 + 2 C_1 C_5 C_L L_1 L_L R_L g_m s^5 + C_1 C_5 C_L L_1 L_L s^5 + C_1 C_5 C_L L_5 L_L s^5 + C_1 C_5 C_L L_L R_L s^4 + C_1 C_5 L_1 L_5 g_m s^4 + 2 C_1 C_5 L_1 L_L g_m s^4 + 2 C_1 C_5 L_1 R_L g_m s^3 + C_1 C_5 L_5 R_L s^3 + C_1 C_5 L_L R_L s^3 + C_1 C_L L_1 L_L g_m s^4 + C_1 C_L L_L s^3}$$

$$10.498 \quad \text{INVALID-ORDER-498} \quad Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \infty, \quad L_5 s + \frac{1}{C_5 s}, \quad \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$$

$$H(s) = \frac{C_1 C_5 C_L L_1 L_5 L_L g_m s^6 + C_1 C_5 C_L L_1 L_5 R_L g_m s^5 + 2 C_1 C_5 C_L L_1 L_L R_L g_m s^5 + C_1 C_5 C_L L_1 L_L s^5 + C_1 C_5 C_L L_1 R_L s^4 + C_1 C_5 C_L L_5 L_L s^5 + C_1 C_5 C_L L_5 R_L s^4 + C_1 C_5 C_L L_L R_L s^4 + C_1 C_5 C_L L_1 L_5 R_L g_m s^4 + C_1 C_5 C_L L_1 L_5 s^4 + C_1 C_5 C_L L_5 R_L s^3 + C_1 L_1 L_5 g_m s^3 + 2 C_1 L_1 R_L g_m s^2 + C_1 L_1 s^2 + C_1 L_5 s^2 + C_1 R_L s + 2 C_5 L_5 R_L g_m s^2 + C_5 L_5 s^2 + L_5 g_m s + 2 R_L g_m + 1}{C_1 C_5 C_L L_1 L_5 R_L s^5 + 2 C_1 C_5 C_L L_1 L_5 R_L g_m s^4 + C_1 C_5 C_L L_1 L_5 s^4 + C_1 C_5 C_L L_5 R_L s^3 + C_1 C_L L_1 L_5 g_m s^4 + C_1 C_L L_1 s^3 + C_1 C_L L_5 s^3 + 2 C_1 L_1 g_m s^2 + C_1 s + C_5 C_L L_5 s^3 + 2 C_5 L_5 g_m s^2 + C_L L_5 g_m s^2 + C_L s + 2 g_m}$$

$$10.499 \quad \text{INVALID-ORDER-499} \quad Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \infty, \quad \frac{L_5 s}{C_5 L_5 s^2 + 1}, \quad R_L \right)$$

$$H(s) = - \frac{R_L (C_1 L_1 s^2 + 1) (C_5 L_5 s^2 - L_5 g_m s + 1)}{2 C_1 C_5 L_1 L_5 R_L g_m s^4 + C_1 C_5 L_1 L_5 s^4 + C_1 C_5 L_5 R_L s^3 + C_1 L_1 L_5 g_m s^3 + 2 C_1 L_1 R_L g_m s^2 + C_1 L_1 s^2 + C_1 L_5 s^2 + C_1 R_L s + 2 C_5 L_5 R_L g_m s^2 + C_5 L_5 s^2 + L_5 g_m s + 2 R_L g_m + 1}$$

$$10.500 \quad \text{INVALID-ORDER-500} \quad Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \infty, \quad \frac{L_5 s}{C_5 L_5 s^2 + 1}, \quad \frac{1}{C_L s} \right)$$

$$H(s) = - \frac{(C_1 L_1 s^2 + 1) (C_5 L_5 s^2 - L_5 g_m s + 1)}{C_1 C_5 C_L L_1 L_5 s^5 + 2 C_1 C_5 L_1 L_5 g_m s^4 + C_1 C_5 L_5 s^3 + C_1 C_L L_1 L_5 g_m s^4 + C_1 C_L L_1 s^3 + C_1 C_L L_5 s^3 + 2 C_1 L_1 g_m s^2 + C_1 s + C_5 C_L L_5 s^3 + 2 C_5 L_5 g_m s^2 + C_L L_5 g_m s^2 + C_L s + 2 g_m}$$

$$10.501 \quad \text{INVALID-ORDER-501} \quad Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \infty, \quad \frac{L_5 s}{C_5 L_5 s^2 + 1}, \quad \frac{R_L}{C_L R_L s + 1} \right)$$

$$H(s) = - \frac{R_L (C_1 L_1 s^2 + 1) (C_5 L_5 s^2 - L_5 g_m s + 1)}{C_1 C_5 C_L L_1 L_5 R_L s^5 + 2 C_1 C_5 L_1 L_5 R_L g_m s^4 + C_1 C_5 L_1 L_5 s^4 + C_1 C_5 L_5 R_L s^3 + C_1 C_L L_1 L_5 R_L g_m s^4 + C_1 C_L L_1 R_L s^3 + C_1 C_L L_5 R_L s^3 + C_1 L_1 L_5 g_m s^3 + 2 C_1 L_1 R_L g_m s^2 + C_1 L_1 s^2 + C_1 L_5 s^2 + C_1 R_L s + 2 C_5 L_5 R_L g_m s^2 + C_5 L_5 s^2 + L_5 g_m s + 2 R_L g_m + 1}$$

$$10.502 \quad \text{INVALID-ORDER-502} \quad Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \infty, \quad \frac{L_5 s}{C_5 L_5 s^2 + 1}, \quad R_L + \frac{1}{C_L s} \right)$$

$$H(s) = - \frac{(C_1 L_1 s^2 + 1) (C_L R_L s + 1) (C_5 L_5 s^2 - L_5 g_m s + 1)}{2 C_1 C_5 C_L L_1 L_5 R_L g_m s^5 + C_1 C_5 C_L L_1 L_5 s^5 + C_1 C_5 C_L L_5 R_L s^4 + 2 C_1 C_5 L_1 L_5 g_m s^4 + C_1 C_5 L_5 s^3 + C_1 C_L L_1 L_5 g_m s^4 + 2 C_1 C_L L_1 R_L g_m s^3 + C_1 C_L L_1 s^3 + C_1 C_L L_5 s^3 + C_1 C_L R_L s + 2 C_5 L_5 R_L g_m s^2 + C_5 L_5 s^2 + L_5 g_m s + 2 R_L g_m + 1}$$

$$10.503 \quad \text{INVALID-ORDER-503} \quad Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \infty, \quad \frac{L_5 s}{C_5 L_5 s^2 + 1}, \quad L_L s + \frac{1}{C_L s} \right)$$

$$H(s) = - \frac{(C_1 L_1 s^2 + 1) (C_L L_L s^2 + 1) (C_5 L_5 s^2 - L_5 g_m s + 1)}{2 C_1 C_5 C_L L_1 L_5 L_L g_m s^6 + C_1 C_5 C_L L_1 L_5 s^5 + C_1 C_5 C_L L_5 L_L s^5 + 2 C_1 C_5 L_1 L_5 g_m s^4 + C_1 C_5 L_5 s^3 + C_1 C_L L_1 L_5 g_m s^4 + 2 C_1 C_L L_1 L_L g_m s^4 + C_1 C_L L_1 s^3 + C_1 C_L L_5 s^3 + C_1 C_L L_L s^3 + C_1 C_L L_L s^2 + 1}$$

$$10.504 \quad \text{INVALID-ORDER-504} \quad Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \infty, \quad \frac{L_5 s}{C_5 L_5 s^2 + 1}, \quad \frac{L_L s}{C_L L_L s^2 + 1} \right)$$

$$H(s) = - \frac{L_L s (C_1 L_1 s^2 + 1) (C_5 L_5 s^2 - L_5 g_m s + 1)}{C_1 C_5 C_L L_1 L_5 L_L s^6 + 2 C_1 C_5 L_1 L_5 L_L g_m s^5 + C_1 C_5 L_1 L_5 s^4 + C_1 C_5 L_5 L_L s^4 + C_1 C_L L_1 L_5 L_L g_m s^5 + C_1 C_L L_1 L_L s^4 + C_1 C_L L_5 L_L s^4 + C_1 L_1 L_5 g_m s^3 + 2 C_1 L_1 L_L g_m s^3 + C_1 L_1 L_L s^3 + C_1 L_1 L_L s^2 + 1}$$

$$10.505 \quad \text{INVALID-ORDER-505} \quad Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \infty, \quad \frac{L_5 s}{C_5 L_5 s^2 + 1}, \quad L_L s + R_L + \frac{1}{C_L s} \right)$$

$$H(s) = - \frac{(C_1 L_1 s^2 + 1) (C_L L_L s^2 + 1) (C_5 L_5 s^2 - L_5 g_m s + 1)}{2 C_1 C_5 C_L L_1 L_5 L_L g_m s^6 + 2 C_1 C_5 C_L L_1 L_5 R_L g_m s^5 + C_1 C_5 C_L L_1 L_5 s^5 + C_1 C_5 C_L L_5 L_L s^5 + C_1 C_5 C_L L_5 R_L s^4 + 2 C_1 C_5 L_1 L_5 g_m s^4 + C_1 C_5 L_5 s^3 + C_1 C_L L_1 L_5 g_m s^4 + 2 C_1 C_L L_1 L_L s^4 + C_1 C_L L_5 L_L s^4 + C_1 L_1 L_5 g_m s^3 + 2 C_1 L_1 L_L g_m s^3 + C_1 L_1 L_L s^3 + C_1 L_1 L_L s^2 + 1}$$

$$10.506 \quad \text{INVALID-ORDER-506} \quad Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \infty, \quad \frac{L_5 s}{C_5 L_5 s^2 + 1}, \quad \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$$

$$H(s) = - \frac{(C_1 L_1 s^2 + 1) (C_L L_L s^2 + 1) (C_5 L_5 s^2 - L_5 g_m s + 1)}{2 C_1 C_5 C_L L_1 L_5 L_L R_L s^6 + 2 C_1 C_5 L_1 L_5 L_L R_L g_m s^5 + C_1 C_5 L_1 L_5 L_L s^5 + C_1 C_5 L_1 L_5 R_L s^4 + C_1 C_5 L_5 L_L R_L s^4 + C_1 C_L L_1 L_5 L_L R_L g_m s^5 + C_1 C_L L_1 L_L R_L s^4 + C_1 C_L L_5 L_L R_L s^4 + C_1 L_1 L_5 g_m s^3 + 2 C_1 L_1 L_L g_m s^3 + C_1 L_1 L_L s^3 + C_1 L_1 L_L s^2 + 1}$$

$$10.507 \quad \text{INVALID-ORDER-507} \quad Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \infty, \quad \frac{L_5 s}{C_5 L_5 s^2 + 1}, \quad \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$$

$$H(s) = - \frac{(C_1 L_1 s^2 + 1) (C_L L_L s^2 + 1) (C_5 L_5 s^2 - L_5 g_m s + 1)}{2 C_1 C_5 C_L L_1 L_5 L_L R_L g_m s^6 + C_1 C_5 C_L L_1 L_5 L_L s^6 + C_1 C_5 C_L L_5 L_L R_L s^5 + 2 C_1 C_5 L_1 L_5 L_L g_m s^5 + 2 C_1 C_5 L_1 L_5 R_L g_m s^4 + C_1 C_5 L_1 L_5 s^4 + C_1 C_5 L_5 L_L s^4 + C_1 C_5 L_5 R_L s^3 + C_1 C_L L_1 L_5 g_m s^4 + 2 C_1 C_L L_1 L_L g_m s^4 + C_1 C_L L_5 L_L s^4 + C_1 L_1 L_5 g_m s^3 + 2 C_1 L_1 L_L g_m s^3 + C_1 L_1 L_L s^3 + C_1 L_1 L_L s^2 + 1}$$

$$10.508 \quad \text{INVALID-ORDER-508} \quad Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \infty, \quad \frac{L_5 s}{C_5 L_5 s^2 + 1}, \quad \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$$

$$H(s) = - \frac{2C_1 C_5 C_L L_1 L_5 L_L R_L g_m s^6 + C_1 C_5 C_L L_1 L_5 L_L s^6 + C_1 C_5 C_L L_1 L_5 R_L s^5 + C_1 C_5 C_L L_5 L_L R_L s^5 + 2C_1 C_5 L_1 L_5 R_L g_m s^4 + C_1 C_5 L_1 L_5 s^4 + C_1 C_5 L_5 R_L s^3 + C_1 C_L L_1 L_5 L_L g_m s^5 -$$

$$10.509 \quad \text{INVALID-ORDER-509} \quad Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \infty, \quad L_5 s + R_5 + \frac{1}{C_5 s}, \quad R_L \right)$$

$$H(s) = \frac{R_L (C_1 L_1 s^2 + 1) (C_5 L_5 g_m s^2 + C_5 R_5 g_m s - C_5 s + g_m)}{C_1 C_5 L_1 L_5 g_m s^4 + C_1 C_5 L_1 R_5 g_m s^3 + 2C_1 C_5 L_1 R_L g_m s^3 + C_1 C_5 L_1 s^3 + C_1 C_5 L_5 s^3 + C_1 C_5 R_5 s^2 + C_1 C_5 R_L s^2 + C_1 L_1 g_m s^2 + C_1 s + C_5 L_5 g_m s^2 + C_5 R_5 g_m s + 2C_5 R_L g_m s + C_5}$$

$$10.510 \quad \text{INVALID-ORDER-510} \quad Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \infty, \quad L_5 s + R_5 + \frac{1}{C_5 s}, \quad \frac{1}{C_L s} \right)$$

$$H(s) = \frac{(C_1 L_1 s^2 + 1) (C_5 L_5 g_m s^2 + C_5 R_5 g_m s - C_5 s + g_m)}{s (C_1 C_5 C_L L_1 L_5 g_m s^4 + C_1 C_5 C_L L_1 R_5 g_m s^3 + C_1 C_5 C_L L_1 s^3 + C_1 C_5 C_L L_5 s^3 + C_1 C_5 C_L R_5 s^2 + 2C_1 C_5 L_1 g_m s^2 + C_1 C_5 s + C_1 C_L L_1 g_m s^2 + C_1 C_L s + C_5 C_L L_5 g_m s^2 + C_5 C_L R_5 s}$$

$$10.511 \quad \text{INVALID-ORDER-511} \quad Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \infty, \quad L_5 s + R_5 + \frac{1}{C_5 s}, \quad \frac{R_L}{C_L R_L s + 1} \right)$$

$$H(s) = \frac{R_L (C_1 L_1 s^2 + 1) (C_5 L_5 g_m s^2 + C_5 R_5 g_m s - C_5 s + g_m)}{C_1 C_5 C_L L_1 L_5 R_L g_m s^5 + C_1 C_5 C_L L_1 R_5 R_L g_m s^4 + C_1 C_5 C_L L_1 R_L s^4 + C_1 C_5 C_L L_5 R_L s^4 + C_1 C_5 C_L R_5 R_L s^3 + C_1 C_5 L_1 L_5 g_m s^4 + C_1 C_5 L_1 R_5 g_m s^3 + 2C_1 C_5 L_1 R_L g_m s^3 + C_1 C_5 L_1 s^3 + C_1 C_5 L_5 s^3 + C_1 C_5 R_5 s^2 + C_1 C_5 R_L s^2 + C_1 L_1 g_m s^2 + C_1 s + C_5 L_5 g_m s^2 + C_5 R_5 g_m s + 2C_5 R_L g_m s + C_5}$$

$$10.512 \quad \text{INVALID-ORDER-512} \quad Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \infty, \quad L_5 s + R_5 + \frac{1}{C_5 s}, \quad R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{(C_1 L_1 s^2 + 1) (C_L R_L s + 1) (C_5 L_5 g_m s^2 + C_5 R_5 g_m s - C_5 s + g_m)}{s (C_1 C_5 C_L L_1 L_5 g_m s^4 + C_1 C_5 C_L L_1 R_5 g_m s^3 + 2C_1 C_5 C_L L_1 R_L g_m s^3 + C_1 C_5 C_L L_1 s^3 + C_1 C_5 C_L L_5 s^3 + C_1 C_5 C_L R_5 s^2 + C_1 C_5 C_L R_L s^2 + 2C_1 C_5 L_1 g_m s^2 + C_1 C_5 s + C_1 C_L L_1 g_m s^2 + C_1 C_L s + C_5 C_L L_5 g_m s^2 + C_5 C_L R_5 s}$$

$$10.513 \quad \text{INVALID-ORDER-513} \quad Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \infty, \quad L_5 s + R_5 + \frac{1}{C_5 s}, \quad L_L s + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{(C_1 L_1 s^2 + 1) (C_L L_L s^2 + 1) (C_5 L_5 g_m s^2 + C_5 R_5 g_m s - C_5 s + g_m)}{s (C_1 C_5 C_L L_1 L_5 g_m s^4 + 2 C_1 C_5 C_L L_1 L_L g_m s^4 + C_1 C_5 C_L L_1 R_5 g_m s^3 + C_1 C_5 C_L L_1 s^3 + C_1 C_5 C_L L_5 s^3 + C_1 C_5 C_L L_L s^3 + C_1 C_5 C_L R_5 s^2 + 2 C_1 C_5 L_1 g_m s^2 + C_1 C_5 s + C_1 C_L L_1 g_m s)}$$

$$10.514 \quad \text{INVALID-ORDER-514} \quad Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \infty, \quad L_5 s + R_5 + \frac{1}{C_5 s}, \quad \frac{L_L s}{C_L L_L s^2 + 1} \right)$$

$$H(s) = \frac{L_L s (C_1 L_1 s^2 + 1) (C_L L_L s^2 + 1) (C_5 L_5 g_m s^2 + C_5 R_5 g_m s - C_5 s + g_m)}{C_1 C_5 C_L L_1 L_5 L_L g_m s^6 + C_1 C_5 C_L L_1 L_L R_5 g_m s^5 + C_1 C_5 C_L L_1 L_L s^5 + C_1 C_5 C_L L_5 L_L s^5 + C_1 C_5 C_L L_L R_5 s^4 + C_1 C_5 L_1 L_5 g_m s^4 + 2 C_1 C_5 L_1 L_L g_m s^4 + C_1 C_5 L_1 R_5 g_m s^3 + C_1 C_5 L_1 s^3 + C_1 C_5 C_L L_5 s^3 + C_1 C_5 C_L L_L s^3 + C_1 C_5 C_L R_5 s^2 + C_1 C_5 L_1 g_m s^2 + C_1 C_5 s + C_1 C_L L_1 g_m s}$$

$$10.515 \quad \text{INVALID-ORDER-515} \quad Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \infty, \quad L_5 s + R_5 + \frac{1}{C_5 s}, \quad L_L s + R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{(C_1 L_1 s^2 + 1) (C_L L_L s^2 + C_L R_L s + 1) (C_5 L_5 g_m s^2 + C_5 R_5 g_m s - C_5 s + g_m)}{s (C_1 C_5 C_L L_1 L_5 g_m s^4 + 2 C_1 C_5 C_L L_1 L_L g_m s^4 + C_1 C_5 C_L L_1 R_5 g_m s^3 + 2 C_1 C_5 C_L L_1 R_L g_m s^3 + C_1 C_5 C_L L_1 s^3 + C_1 C_5 C_L L_5 s^3 + C_1 C_5 C_L L_L s^3 + C_1 C_5 C_L R_5 s^2 + C_1 C_5 C_L R_L s^2 + C_1 C_5 L_1 g_m s^2 + C_1 C_5 L_1 R_5 g_m s + C_1 C_5 L_1 s + C_1 C_L L_1 g_m s)}$$

$$10.516 \quad \text{INVALID-ORDER-516} \quad Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \infty, \quad L_5 s + R_5 + \frac{1}{C_5 s}, \quad \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$$

$$H(s) = \frac{1}{C_1 C_5 C_L L_1 L_5 L_L R_L g_m s^6 + C_1 C_5 C_L L_1 L_L R_5 R_L g_m s^5 + C_1 C_5 C_L L_1 L_L R_L s^5 + C_1 C_5 C_L L_5 L_L R_L s^5 + C_1 C_5 C_L L_L R_5 R_L s^4 + C_1 C_5 L_1 L_5 L_L g_m s^5 + C_1 C_5 L_1 L_5 R_L g_m s^4 + C_1 C_5 L_1 L_5 s^4 + C_1 C_5 C_L L_5 s^4 + C_1 C_5 C_L L_L s^4 + C_1 C_5 C_L R_5 s^3 + C_1 C_5 C_L R_L s^3 + C_1 C_5 L_1 g_m s^3 + C_1 C_5 L_1 R_5 g_m s^2 + C_1 C_5 L_1 R_L g_m s^2 + C_1 C_5 L_1 s^2 + C_1 C_L L_1 g_m s + C_1 C_L L_1 s}$$

$$10.517 \quad \text{INVALID-ORDER-517} \quad Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \infty, \quad L_5 s + R_5 + \frac{1}{C_5 s}, \quad \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$$

$$H(s) = \frac{L_L s (C_1 L_1 s^2 + 1) (C_L L_L s^2 + 1) (C_5 L_5 g_m s^2 + C_5 R_5 g_m s - C_5 s + g_m)}{C_1 C_5 C_L L_1 L_5 L_L g_m s^6 + C_1 C_5 C_L L_1 L_L R_5 g_m s^5 + 2 C_1 C_5 C_L L_1 L_L R_L g_m s^5 + C_1 C_5 C_L L_1 L_L s^5 + C_1 C_5 C_L L_5 L_L s^5 + C_1 C_5 C_L L_L R_5 s^4 + C_1 C_5 C_L L_L R_L s^4 + C_1 C_5 L_1 L_5 g_m s^4 + C_1 C_5 L_1 L_5 R_5 g_m s^3 + C_1 C_5 L_1 L_5 R_L g_m s^3 + C_1 C_5 L_1 L_5 s^3 + C_1 C_5 C_L L_5 s^3 + C_1 C_5 C_L L_L s^3 + C_1 C_5 C_L R_5 s^2 + C_1 C_5 C_L R_L s^2 + C_1 C_5 L_1 g_m s^2 + C_1 C_5 L_1 R_5 g_m s + C_1 C_5 L_1 R_L g_m s + C_1 C_5 L_1 s + C_1 C_L L_1 g_m s}$$

$$10.518 \quad \text{INVALID-ORDER-518} \quad Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$$

$$H(s) = \frac{C_1 C_5 C_L L_1 L_5 L_L g_m s^6 + C_1 C_5 C_L L_1 L_5 R_L g_m s^5 + C_1 C_5 C_L L_1 L_L R_5 g_m s^5 + 2 C_1 C_5 C_L L_1 L_L R_L g_m s^5 + C_1 C_5 C_L L_1 L_L s^5 + C_1 C_5 C_L L_1 R_5 R_L g_m s^4 + C_1 C_5 C_L L_1 R_L s^4 + C_1 C_5 C_L$$

**10.519 INVALID-ORDER-519**  $Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, R_L \right)$

$$H(s) = -\frac{R_L (C_1 L_1 s^2 + 1) (C_5 L_5 R_5 s^2 - L_5 R_5 g_m s + L_5 s + R_5)}{2C_1 C_5 L_1 L_5 R_5 R_L g_m s^4 + C_1 C_5 L_1 L_5 R_5 s^4 + C_1 C_5 L_5 R_5 R_L s^3 + C_1 L_1 L_5 R_5 g_m s^3 + 2C_1 L_1 L_5 R_L g_m s^3 + C_1 L_1 L_5 s^3 + 2C_1 L_1 R_5 R_L g_m s^2 + C_1 L_1 R_5 s^2 + C_1 L_5 R_5 s^2 + C_1 L_5 R_L s^2 + C_1 L_5 R_L s + C_1 R_5}$$

**10.520 INVALID-ORDER-520**  $Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{1}{C_L s} \right)$

$$H(s) = -\frac{(C_1 L_1 s^2 + 1)(C_5 L_5 R_5 s^2 - L_5 R_5 g_m s + L_5 s + R_5)}{C_1 C_5 C_L L_1 L_5 R_5 s^5 + 2C_1 C_5 L_1 L_5 R_5 g_m s^4 + C_1 C_5 L_5 R_5 s^3 + C_1 C_L L_1 L_5 R_5 g_m s^4 + C_1 C_L L_1 L_5 s^4 + C_1 C_L L_1 R_5 s^3 + C_1 C_L L_5 R_5 s^3 + 2C_1 L_1 L_5 g_m s^3 + 2C_1 L_1 R_5 g_m s^2 + C_1 L_5}$$

10.521 INVALID-ORDER-521  $Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{R_L}{C_L R_L s + 1} \right)$

$$H(s) = -\frac{C_1 C_5 C_L L_1 L_5 R_5 R_L s^5 + 2C_1 C_5 L_1 L_5 R_5 R_L g_m s^4 + C_1 C_5 L_1 L_5 R_5 s^4 + C_1 C_5 L_5 R_5 R_L s^3 + C_1 C_L L_1 L_5 R_5 R_L g_m s^4 + C_1 C_L L_1 L_5 R_L s^4 + C_1 C_L L_1 R_5 R_L s^3 + C_1 C_L L_5 R_5 R_L s^3 +$$

**10.522 INVALID-ORDER-522**  $Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, R_L + \frac{1}{C_L s} \right)$

$$H(s) = -\frac{2C_1C_5C_LL_1L_5R_5R_Lg_ms^5 + C_1C_5C_LL_1L_5R_5s^5 + C_1C_5C_LL_5R_5R_Ls^4 + 2C_1C_5L_1L_5R_5g_ms^4 + C_1C_5L_5R_5s^3 + C_1C_LL_1L_5R_5g_ms^4 + 2C_1C_LL_1L_5R_Lg_ms^4 + C_1C_LL_1L_5s^4}{2C_1C_5C_LL_1L_5R_5R_Lg_ms^5 + C_1C_5C_LL_1L_5R_5s^5 + C_1C_5C_LL_5R_5R_Ls^4 + 2C_1C_5L_1L_5R_5g_ms^4 + C_1C_5L_5R_5s^3 + C_1C_LL_1L_5R_5g_ms^4 + 2C_1C_LL_1L_5R_Lg_ms^4 + C_1C_LL_1L_5s^4}$$

**10.523 INVALID-ORDER-523**  $Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, L_L s + \frac{1}{C_L s} \right)$

$$H(s) = -\frac{2C_1C_5C_LL_1L_5L_LR_5gm^6 + C_1C_5C_LL_1L_5R_5s^5 + C_1C_5C_LL_5L_LR_5s^5 + 2C_1C_5L_1L_5R_5gm^4 + C_1C_5L_5R_5s^3 + 2C_1C_LL_1L_5L_LR_5gm^5 + C_1C_LL_1L_5R_5gm^4 + C_1C_LL_1L_5s^4 +$$

10.524 INVALID-ORDER-524  $Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{L_L s}{C_L L_L s^2 + 1} \right)$

$$H(s) = -\frac{C_1 C_5 C_L L_1 L_5 L_L R_5 s^6 + 2 C_1 C_5 L_1 L_5 L_L R_5 g_m s^5 + C_1 C_5 L_1 L_5 R_5 s^4 + C_1 C_5 L_5 L_L R_5 s^4 + C_1 C_L L_1 L_5 L_L R_5 g_m s^5 + C_1 C_L L_1 L_5 L_L s^5 + C_1 C_L L_1 L_L R_5 s^4 + C_1 C_L L_5 L_L R_5 s^4 + 2 C_1 C_L L_5 L_L g_m s^3}{C_1 C_5 C_L L_1 L_5 L_L R_5 s^7 + C_1 C_5 C_L L_1 L_5 L_L R_5 g_m s^6 + C_1 C_5 C_L L_1 L_5 L_L s^5 + C_1 C_5 C_L L_1 L_5 R_5 s^4 + C_1 C_5 C_L L_1 L_L R_5 s^4 + C_1 C_5 C_L L_1 L_L g_m s^3 + C_1 C_5 C_L L_1 L_L s^3 + C_1 C_5 C_L L_5 L_L R_5 s^4 + C_1 C_5 C_L L_5 L_L g_m s^3 + C_1 C_5 C_L L_5 L_L s^3 + C_1 C_5 C_L L_5 R_5 s^3 + C_1 C_5 C_L L_R s^3 + C_1 C_5 C_L L_L R_5 s^3 + C_1 C_5 C_L L_L g_m s^2 + C_1 C_5 C_L L_L s^2 + C_1 C_5 C_L R_5 s^2 + C_1 C_5 C_L g_m s + C_1 C_5 C_L s}.$$

**10.525   INVALID-ORDER-525**  $Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5 + \frac{1}{L_5 s}}}, L_L s + R_L + \frac{1}{C_L s} \right)$

$$H(s) = -\frac{2C_1C_5C_LL_1L_5L_LR_5g_ms^6 + 2C_1C_5C_LL_1L_5R_5RLg_ms^5 + C_1C_5C_LL_1L_5R_5s^5 + C_1C_5C_LL_5L_LR_5s^5 + C_1C_5C_LL_5R_5RLs^4 + 2C_1C_5L_1L_5R_5g_ms^4 + C_1C_5L_5R_5s^3 + 2C_1C_LL_1L_5L_LR_5s^2 + C_1C_LL_1L_5R_5RLs^2 + C_1C_LL_1L_5R_5s^2 + C_1C_LL_5L_LR_5s^2 + C_1C_LL_5R_5RLs^2 + C_1C_LL_5R_5s^2 + C_1C_LL_5R_5s^2 + C_1C_LL_5R_5s^2}{2C_1C_5C_LL_1L_5L_LR_5g_ms^6 + 2C_1C_5C_LL_1L_5R_5RLg_ms^5 + C_1C_5C_LL_1L_5R_5s^5 + C_1C_5C_LL_5L_LR_5s^5 + C_1C_5C_LL_5R_5RLs^4 + 2C_1C_5L_1L_5R_5g_ms^4 + C_1C_5L_5R_5s^3 + 2C_1C_LL_1L_5L_LR_5s^2 + C_1C_LL_1L_5R_5RLs^2 + C_1C_LL_1L_5R_5s^2 + C_1C_LL_5L_LR_5s^2 + C_1C_LL_5R_5RLs^2 + C_1C_LL_5R_5s^2 + C_1C_LL_5R_5s^2 + C_1C_LL_5R_5s^2 + C_1C_LL_5R_5s^2}$$

**10.526 INVALID-ORDER-526**  $Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$

$$H(s) = -\frac{C_1 C_5 C_L L_1 L_5 L_L R_5 R_L s^6 + 2C_1 C_5 L_1 L_5 L_L R_5 R_L g_m s^5 + C_1 C_5 L_1 L_5 L_L R_5 s^5 + C_1 C_5 L_1 L_5 R_5 R_L s^4 + C_1 C_5 L_5 L_L R_5 R_L s^4 + C_1 C_L L_1 L_5 L_L R_5 R_L g_m s^5 + C_1 C_L L_1 L_5 L_L R_L s^5 -$$

10.527 INVALID-ORDER-527  $Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$

$$H(s) = -\frac{2C_1C_5C_LL_1L_5L_LR_5R_Lg_ms^6 + C_1C_5C_LL_1L_5L_LR_5s^6 + C_1C_5C_LL_5L_LR_5R_Ls^5 + 2C_1C_5L_1L_5L_LR_5g_ms^5 + 2C_1C_5L_1L_5R_5R_Lg_ms^4 + C_1C_5L_1L_5R_5s^4 + C_1C_5L_5L_LR_5s^4 +$$

10.528 INVALID-ORDER-528  $Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$

$$H(s) = -\frac{2C_1C_5C_LL_1L_5L_LR_5R_Lg_ms^6 + C_1C_5C_LL_1L_5L_LR_5s^6 + C_1C_5C_LL_1L_5R_5R_Ls^5 + C_1C_5C_LL_5L_LR_5R_Ls^5 + 2C_1C_5L_1L_5R_5R_Lg_ms^4 + C_1C_5L_1L_5R_5s^4 + C_1C_5L_5R_5R_Ls^3 + C_1C_5L_5R_5s^3 + C_1C_5L_5s^3 + C_1C_5s^3}{2C_1C_5C_LL_1L_5L_LR_5R_Lg_ms^6 + C_1C_5C_LL_1L_5L_LR_5s^6 + C_1C_5C_LL_1L_5R_5R_Ls^5 + C_1C_5C_LL_5L_LR_5R_Ls^5 + 2C_1C_5L_1L_5R_5R_Lg_ms^4 + C_1C_5L_1L_5R_5s^4 + C_1C_5L_5R_5R_Ls^3 + C_1C_5L_5R_5s^3 + C_1C_5L_5s^3 + C_1C_5s^3}.$$

**10.529 INVALID-ORDER-529**  $Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, R_L \right)$

$$H(s) = \frac{R_L (C_1 L_1 s^2 + 1) (C_5 L_5 R_5 g_m s^2 - C_5 L_5 s^2 + L_5 g_m s + R_5 g_m - 1)}{C_1 C_5 L_1 L_5 R_5 g_m s^4 + 2 C_1 C_5 L_1 L_5 R_L g_m s^4 + C_1 C_5 L_1 L_5 s^4 + C_1 C_5 L_5 R_5 s^3 + C_1 C_5 L_5 R_L s^3 + C_1 L_1 L_5 g_m s^3 + C_1 L_1 R_5 g_m s^2 + 2 C_1 L_1 R_L g_m s^2 + C_1 L_1 s^2 + C_1 L_5 s^2 + C_1 R_5 s + 1}$$

**10.530 INVALID-ORDER-530**  $Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{1}{C_L s} \right)$

$$H(s) = \frac{(C_1 L_1 s^2 + 1) (C_5 L_5 R_5 g_m s^2 - C_5 L_5 s^2 + L_5 g_m s + R_5 g_m - 1)}{C_1 C_5 C_L L_1 L_5 R_5 g_m s^5 + C_1 C_5 C_L L_1 L_5 s^5 + C_1 C_5 C_L L_5 R_5 s^4 + 2 C_1 C_5 L_1 L_5 g_m s^4 + C_1 C_5 L_5 s^3 + C_1 C_L L_1 L_5 g_m s^4 + C_1 C_L L_1 R_5 g_m s^3 + C_1 C_L L_1 s^3 + C_1 C_L L_5 s^3 + C_1 C_L R_5 s^2 +$$

**10.531 INVALID-ORDER-531**  $Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{R_L}{C_L R_L s + 1} \right)$

$$H(s) = \frac{C_1 C_5 C_L L_1 L_5 R_5 R_L g_m s^5 + C_1 C_5 C_L L_1 L_5 R_L s^5 + C_1 C_5 C_L L_5 R_5 R_L s^4 + C_1 C_5 L_1 L_5 R_5 g_m s^4 + 2 C_1 C_5 L_1 L_5 R_L g_m s^4 + C_1 C_5 L_1 L_5 s^4 + C_1 C_5 L_5 R_5 s^3 + C_1 C_5 L_5 R_L s^3 + C_1 C_L L_1}{C_1 C_5 C_L L_1 L_5 R_5 R_L g_m s^5 + C_1 C_5 C_L L_1 L_5 R_L s^5 + C_1 C_5 C_L L_5 R_5 R_L s^4 + C_1 C_5 L_1 L_5 R_5 g_m s^4 + 2 C_1 C_5 L_1 L_5 R_L g_m s^4 + C_1 C_5 L_1 L_5 s^4 + C_1 C_5 L_5 R_5 s^3 + C_1 C_5 L_5 R_L s^3 + C_1 C_L L_1}$$

**10.532 INVALID-ORDER-532**  $Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, R_L + \frac{1}{C_L s} \right)$

$$H(s) = \frac{(C_1 L_1 s^2 + 1)}{C_1 C_5 C_L L_1 L_5 R_5 g_m s^5 + 2C_1 C_5 C_L L_1 L_5 R_L g_m s^5 + C_1 C_5 C_L L_1 L_5 s^5 + C_1 C_5 C_L L_5 R_5 s^4 + C_1 C_5 C_L L_5 R_L s^4 + 2C_1 C_5 L_1 L_5 g_m s^4 + C_1 C_5 L_5 s^3 + C_1 C_L L_1 L_5 g_m s^4 + C_1 C_L L_1 R_5 g_m s^4 + C_1 C_L L_1 R_5 s^3 + C_1 C_L L_1 s^2 + 1}$$



**10.533 INVALID-ORDER-533**  $Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, L_L s + \frac{1}{C_L s} \right)$

$$H(s) = \frac{(C_1 L_1 s^2 + 1)}{2C_1 C_5 C_L L_1 L_5 L_L g_m s^6 + C_1 C_5 C_L L_1 L_5 R_5 g_m s^5 + C_1 C_5 C_L L_1 L_5 s^5 + C_1 C_5 C_L L_5 L_L s^5 + C_1 C_5 C_L L_5 R_5 s^4 + 2C_1 C_5 L_1 L_5 g_m s^4 + C_1 C_5 L_5 s^3 + C_1 C_L L_1 L_5 g_m s^4 + 2C_1 C_L L_1 L_L s^4 + C_1 C_L L_1 L_L R_5 s^3 + C_1 C_L L_1 L_L s^3 + C_1 C_L L_1 L_L R_5 s^2 + C_1 C_L L_1 L_L s^2 + C_1 C_L L_1 L_L R_5 s + C_1 C_L L_1 L_L s + C_1 C_L L_1 L_L R_5 + C_1 C_L L_1 L_L s + C_1 C_L L_1 L_L R_5}$$

**10.534 INVALID-ORDER-534**  $Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{L_L s}{C_L L_L s^2 + 1} \right)$

$$H(s) = \frac{(C_1 L_1 s^2 + 1)}{C_1 C_5 C_L L_1 L_5 L_L R_5 g_m s^6 + C_1 C_5 C_L L_1 L_5 L_L s^6 + C_1 C_5 C_L L_5 L_L R_5 s^5 + 2C_1 C_5 L_1 L_5 L_L g_m s^5 + C_1 C_5 L_1 L_5 R_5 g_m s^4 + C_1 C_5 L_1 L_5 s^4 + C_1 C_5 L_5 L_L s^4 + C_1 C_5 L_5 R_5 s^3 + C_1 C_L L_1 L_5 g_m s^4 + 2C_1 C_L L_1 L_L s^4 + C_1 C_L L_1 L_L R_5 s^3 + C_1 C_L L_1 L_L s^3 + C_1 C_L L_1 L_L R_5 s^2 + C_1 C_L L_1 L_L s^2 + C_1 C_L L_1 L_L R_5 s + C_1 C_L L_1 L_L s + C_1 C_L L_1 L_L R_5 + C_1 C_L L_1 L_L s + C_1 C_L L_1 L_L R_5}$$

**10.535 INVALID-ORDER-535**  $Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, L_L s + R_L + \frac{1}{C_L s} \right)$

$$H(s) = \frac{(C_1 L_1 s^2 + 1)}{2C_1 C_5 C_L L_1 L_5 L_L g_m s^6 + C_1 C_5 C_L L_1 L_5 R_5 g_m s^5 + 2C_1 C_5 C_L L_1 L_5 R_L g_m s^5 + C_1 C_5 C_L L_1 L_5 s^5 + C_1 C_5 C_L L_5 L_L s^5 + C_1 C_5 C_L L_5 R_5 s^4 + C_1 C_5 C_L L_5 R_L s^4 + 2C_1 C_5 L_1 L_5 g_m s^4 + C_1 C_5 L_1 L_5 s^4 + C_1 C_5 L_5 L_L s^4 + C_1 C_5 L_5 R_5 s^3 + C_1 C_L L_1 L_5 g_m s^4 + 2C_1 C_L L_1 L_L s^4 + C_1 C_L L_1 L_L R_5 s^3 + C_1 C_L L_1 L_L s^3 + C_1 C_L L_1 L_L R_5 s^2 + C_1 C_L L_1 L_L s^2 + C_1 C_L L_1 L_L R_5 s + C_1 C_L L_1 L_L s + C_1 C_L L_1 L_L R_5 + C_1 C_L L_1 L_L s + C_1 C_L L_1 L_L R_5}$$

**10.536 INVALID-ORDER-536**  $Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$

$$H(s) = \frac{(C_1 L_1 s^2 + 1)}{C_1 C_5 C_L L_1 L_5 L_L R_5 R_L g_m s^6 + C_1 C_5 C_L L_1 L_5 L_L R_L s^6 + C_1 C_5 C_L L_5 L_L R_5 R_L s^5 + C_1 C_5 L_1 L_5 L_L R_5 g_m s^5 + 2C_1 C_5 L_1 L_5 L_L R_L g_m s^5 + C_1 C_5 L_1 L_5 L_L s^5 + C_1 C_5 L_1 L_5 R_5 R_L g_m s^4 + C_1 C_5 L_1 L_5 s^4 + C_1 C_5 L_5 L_L s^4 + C_1 C_5 L_5 R_5 s^3 + C_1 C_L L_1 L_5 g_m s^4 + 2C_1 C_L L_1 L_L s^4 + C_1 C_L L_1 L_L R_5 s^3 + C_1 C_L L_1 L_L s^3 + C_1 C_L L_1 L_L R_5 s^2 + C_1 C_L L_1 L_L s^2 + C_1 C_L L_1 L_L R_5 s + C_1 C_L L_1 L_L s + C_1 C_L L_1 L_L R_5 + C_1 C_L L_1 L_L s + C_1 C_L L_1 L_L R_5}$$

**10.537 INVALID-ORDER-537**  $Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$

$$H(s) = \frac{(C_1 L_1 s^2 + 1)}{C_1 C_5 C_L L_1 L_5 L_L R_5 g_m s^6 + 2C_1 C_5 C_L L_1 L_5 L_L R_L g_m s^6 + C_1 C_5 C_L L_1 L_5 L_L s^6 + C_1 C_5 C_L L_5 L_L R_5 s^5 + C_1 C_5 C_L L_5 L_L R_L s^5 + 2C_1 C_5 L_1 L_5 L_L g_m s^5 + C_1 C_5 L_1 L_5 R_5 g_m s^4 + C_1 C_5 L_1 L_5 s^4 + C_1 C_5 L_5 L_L s^4 + C_1 C_5 L_5 R_5 s^3 + C_1 C_L L_1 L_5 g_m s^4 + 2C_1 C_L L_1 L_L s^4 + C_1 C_L L_1 L_L R_5 s^3 + C_1 C_L L_1 L_L s^3 + C_1 C_L L_1 L_L R_5 s^2 + C_1 C_L L_1 L_L s^2 + C_1 C_L L_1 L_L R_5 s + C_1 C_L L_1 L_L s + C_1 C_L L_1 L_L R_5 + C_1 C_L L_1 L_L s + C_1 C_L L_1 L_L R_5}$$

$$\mathbf{10.538 \quad INVALID-ORDER-538} \quad Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \infty, \quad \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \quad \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$$

$$H(s) = \frac{C_1 C_5 C_L L_1 L_5 L_L R_5 g_m s^6 + 2 C_1 C_5 C_L L_1 L_5 L_L R_L g_m s^6 + C_1 C_5 C_L L_1 L_5 L_L s^6 + C_1 C_5 C_L L_1 L_5 R_5 R_L g_m s^5 + C_1 C_5 C_L L_1 L_5 R_L s^5 + C_1 C_5 C_L L_5 L_L R_5 s^5 + C_1 C_5 C_L L_5 L_L R_L s^5 + C_1 C_5 C_L L_5 L_L R_5 g_m s^4 + 2 C_1 C_5 C_L L_1 L_5 R_5 R_L g_m s^4 + C_1 C_5 C_L L_1 L_5 R_L s^4 + 2 C_1 C_5 C_L L_1 R_5 R_L g_m s^3 + C_1 C_5 C_L L_1 R_5 s^3 + C_1 C_5 C_L L_5 R_5 s^3 + C_1 C_5 C_L L_5 R_L s^3 + C_1 C_5 R_5 R_L s^2 + C_1 L_1 R_5 g_m s^2 + 2 C_1 L_1 R_5 s^2 + C_1 L_1 R_5 g_m s + C_1 L_1 R_5 s + C_1 L_1 R_5 g_m}{C_1 C_5 C_L L_1 L_5 L_L R_5 g_m s^6 + 2 C_1 C_5 C_L L_1 L_5 L_L R_L g_m s^6 + C_1 C_5 C_L L_1 L_5 L_L s^6 + C_1 C_5 C_L L_1 L_5 R_5 R_L g_m s^5 + C_1 C_5 C_L L_1 L_5 R_L s^5 + C_1 C_5 C_L L_5 L_L R_5 s^5 + C_1 C_5 C_L L_5 L_L R_L s^5 + C_1 C_5 C_L L_5 L_L R_5 g_m s^4 + 2 C_1 C_5 C_L L_1 L_5 R_5 R_L g_m s^4 + C_1 C_5 C_L L_1 L_5 R_L s^4 + 2 C_1 C_5 C_L L_1 R_5 R_L g_m s^3 + C_1 C_5 C_L L_1 R_5 s^3 + C_1 C_5 C_L L_5 R_5 s^3 + C_1 C_5 C_L L_5 R_L s^3 + C_1 C_5 R_5 R_L s^2 + C_1 L_1 R_5 g_m s^2 + 2 C_1 L_1 R_5 s^2 + C_1 L_1 R_5 g_m s + C_1 L_1 R_5 s + C_1 L_1 R_5 g_m}$$

$$\mathbf{10.539 \quad INVALID-ORDER-539} \quad Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \infty, \quad \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \quad R_L \right)$$

$$H(s) = - \frac{R_L (C_1 L_1 s^2 + 1) (-C_5 L_5 R_5 g_m s^2 + C_5 L_5 s^2 + C_5 R_5 s + C_5 g_m)}{C_1 C_5 C_L L_1 L_5 R_5 g_m s^4 + 2 C_1 C_5 C_L L_1 L_5 R_L g_m s^4 + C_1 C_5 C_L L_1 L_5 s^4 + 2 C_1 C_5 C_L L_1 R_5 R_L g_m s^3 + C_1 C_5 C_L L_1 R_5 s^3 + C_1 C_5 C_L L_5 R_5 s^3 + C_1 C_5 C_L L_5 R_L s^3 + C_1 C_5 R_5 R_L s^2 + C_1 L_1 R_5 g_m s^2 + 2 C_1 L_1 R_5 s^2 + C_1 L_1 R_5 g_m s + C_1 L_1 R_5 s + C_1 L_1 R_5 g_m}$$

$$\mathbf{10.540 \quad INVALID-ORDER-540} \quad Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \infty, \quad \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \quad \frac{1}{C_L s} \right)$$

$$H(s) = - \frac{(C_1 L_1 s^2 + 1) (-C_5 L_5 R_5 g_m s^2 + C_5 L_5 s^2 + C_5 R_5 s + C_5 g_m)}{C_1 C_5 C_L L_1 L_5 R_5 g_m s^5 + C_1 C_5 C_L L_1 L_5 s^5 + C_1 C_5 C_L L_1 R_5 s^4 + C_1 C_5 C_L L_5 R_5 s^4 + 2 C_1 C_5 C_L L_1 L_5 g_m s^4 + 2 C_1 C_5 C_L L_1 R_5 g_m s^3 + C_1 C_5 C_L L_5 R_5 g_m s^3 + C_1 C_5 C_L L_5 R_L s^3 + C_1 C_5 R_5 R_L s^2 + C_1 L_1 R_5 g_m s^2 + 2 C_1 L_1 R_5 s^2 + C_1 L_1 R_5 g_m s + C_1 L_1 R_5 s + C_1 L_1 R_5 g_m}$$

$$\mathbf{10.541 \quad INVALID-ORDER-541} \quad Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \infty, \quad \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \quad \frac{R_L}{C_L R_L s + 1} \right)$$

$$H(s) = - \frac{C_1 C_5 C_L L_1 L_5 R_5 R_L g_m s^5 + C_1 C_5 C_L L_1 L_5 R_L s^5 + C_1 C_5 C_L L_1 R_5 R_L s^4 + C_1 C_5 C_L L_5 R_5 R_L s^4 + C_1 C_5 C_L L_5 R_5 g_m s^4 + 2 C_1 C_5 C_L L_1 L_5 R_L g_m s^4 + C_1 C_5 C_L L_1 L_5 s^4 + 2 C_1 C_5 C_L L_1 R_5 R_L g_m s^3 + C_1 C_5 C_L L_1 R_5 s^3 + C_1 C_5 C_L L_5 R_5 s^3 + C_1 C_5 C_L L_5 R_L s^3 + C_1 C_5 R_5 R_L s^2 + C_1 L_1 R_5 g_m s^2 + 2 C_1 L_1 R_5 s^2 + C_1 L_1 R_5 g_m s + C_1 L_1 R_5 s + C_1 L_1 R_5 g_m}{C_1 C_5 C_L L_1 L_5 R_5 R_L g_m s^5 + C_1 C_5 C_L L_1 L_5 R_L s^5 + C_1 C_5 C_L L_1 R_5 R_L s^4 + C_1 C_5 C_L L_5 R_5 R_L s^4 + C_1 C_5 C_L L_5 R_5 g_m s^4 + 2 C_1 C_5 C_L L_1 L_5 R_L g_m s^4 + C_1 C_5 C_L L_1 L_5 s^4 + 2 C_1 C_5 C_L L_1 R_5 R_L g_m s^3 + C_1 C_5 C_L L_1 R_5 s^3 + C_1 C_5 C_L L_5 R_5 s^3 + C_1 C_5 C_L L_5 R_L s^3 + C_1 C_5 R_5 R_L s^2 + C_1 L_1 R_5 g_m s^2 + 2 C_1 L_1 R_5 s^2 + C_1 L_1 R_5 g_m s + C_1 L_1 R_5 s + C_1 L_1 R_5 g_m}$$

$$\mathbf{10.542 \quad INVALID-ORDER-542} \quad Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \infty, \quad \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \quad R_L + \frac{1}{C_L s} \right)$$

$$H(s) = - \frac{C_1 C_5 C_L L_1 L_5 R_5 g_m s^5 + 2 C_1 C_5 C_L L_1 L_5 R_L g_m s^5 + C_1 C_5 C_L L_1 L_5 s^5 + 2 C_1 C_5 C_L L_1 R_5 R_L g_m s^4 + C_1 C_5 C_L L_1 R_5 s^4 + C_1 C_5 C_L L_5 R_5 s^4 + C_1 C_5 C_L L_5 R_L s^4 + C_1 C_5 C_L R_5 R_L s^3 + C_1 L_1 R_5 g_m s^3 + 2 C_1 L_1 R_5 s^3 + C_1 L_1 R_5 g_m s + C_1 L_1 R_5 s + C_1 L_1 R_5 g_m}{C_1 C_5 C_L L_1 L_5 R_5 g_m s^5 + 2 C_1 C_5 C_L L_1 L_5 R_L g_m s^5 + C_1 C_5 C_L L_1 L_5 s^5 + 2 C_1 C_5 C_L L_1 R_5 R_L g_m s^4 + C_1 C_5 C_L L_1 R_5 s^4 + C_1 C_5 C_L L_5 R_5 s^4 + C_1 C_5 C_L L_5 R_L s^4 + C_1 C_5 C_L R_5 R_L s^3 + C_1 L_1 R_5 g_m s^3 + 2 C_1 L_1 R_5 s^3 + C_1 L_1 R_5 g_m s + C_1 L_1 R_5 s + C_1 L_1 R_5 g_m}$$

**10.543 INVALID-ORDER-543**  $Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, L_L s + \frac{1}{C_L s} \right)$

$$H(s) = -\frac{2C_1C_5C_LL_1L_5L_Lg_ms^6 + C_1C_5C_LL_1L_5R_5g_ms^5 + C_1C_5C_LL_1L_5s^5 + 2C_1C_5C_LL_1L_LR_5g_ms^5 + C_1C_5C_LL_1R_5s^4 + C_1C_5C_LL_5L_Ls^5 + C_1C_5C_LL_5R_5s^4 + C_1C_5C_LL_LR_5s^4 +$$

10.544 INVALID-ORDER-544  $Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{L_L s}{C_L L_L s^2 + 1} \right)$

$$H(s) = -\frac{C_1 C_5 C_L L_1 L_5 L_L R_5 g_m s^6 + C_1 C_5 C_L L_1 L_5 L_L s^6 + C_1 C_5 C_L L_1 L_L R_5 s^5 + C_1 C_5 C_L L_5 L_L R_5 s^5 + 2C_1 C_5 L_1 L_5 L_L g_m s^5 + C_1 C_5 L_1 L_5 R_5 g_m s^4 + C_1 C_5 L_1 L_5 s^4 + 2C_1 C_5 L_1 L_L R_5 g_m}{...}$$

**10.545 INVALID-ORDER-545**  $Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, L_L s + R_L + \frac{1}{C_L s} \right)$

$$H(s) = -\frac{2C_1 C_5 C_L L_1 L_5 L_L q_m s^6 + C_1 C_5 C_L L_1 L_5 R_5 q_m s^5 + 2C_1 C_5 C_L L_1 L_5 R_L q_m s^5 + C_1 C_5 C_L L_1 L_5 s^5 + 2C_1 C_5 C_L L_1 L_L R_5 q_m s^5 + 2C_1 C_5 C_L L_1 R_5 R_L q_m s^4 + C_1 C_5 C_L L_1 R_5 s^4 + C_1 C_5 C_L L_1 R_5 s^4 + C_1 C_5 C_L L_1 R_5 s^4 + C_1 C_5 C_L L_1 R_5 s^4}{(s^2 + \gamma)^2}$$

10.546 INVALID-ORDER-546  $Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$

$$H(s) = -\frac{C_1 C_5 C_L L_1 L_5 L_L R_5 R_L g_m s^6 + C_1 C_5 C_L L_1 L_5 L_L R_L s^6 + C_1 C_5 C_L L_1 L_L R_5 R_L s^5 + C_1 C_5 C_L L_5 L_L R_5 R_L s^5 + C_1 C_5 L_1 L_5 L_L R_5 g_m s^5 + 2C_1 C_5 L_1 L_5 L_L R_L g_m s^5 + C_1 C_5 L_1 L_5 L_L R_L s^5}{C_1 C_5 C_L L_1 L_5 L_L R_5 R_L g_m s^6 + C_1 C_5 C_L L_1 L_5 L_L R_L s^6 + C_1 C_5 C_L L_1 L_L R_5 R_L s^5 + C_1 C_5 C_L L_5 L_L R_5 R_L s^5 + C_1 C_5 L_1 L_5 L_L R_5 g_m s^5 + 2C_1 C_5 L_1 L_5 L_L R_L g_m s^5 + C_1 C_5 L_1 L_5 L_L R_L s^5}.$$

**10.547 INVALID-ORDER-547**  $Z(s) = \left( L_1 s + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$

$$H(s) = -\frac{C_1 C_5 C_L L_1 L_5 L_L R_5 g_m s^6 + 2 C_1 C_5 C_L L_1 L_5 L_L R_L g_m s^6 + C_1 C_5 C_L L_1 L_5 L_L s^6 + 2 C_1 C_5 C_L L_1 L_L R_5 R_L g_m s^5 + C_1 C_5 C_L L_1 L_L R_5 s^5 + C_1 C_5 C_L L_5 L_L R_5 s^5 + C_1 C_5 C_L L_5 L_L R_L s^5}{C_1 C_5 C_L L_1 L_5 L_L R_5 g_m s^6 + 2 C_1 C_5 C_L L_1 L_5 L_L R_L g_m s^6 + C_1 C_5 C_L L_1 L_5 L_L s^6 + 2 C_1 C_5 C_L L_1 L_L R_5 R_L g_m s^5 + C_1 C_5 C_L L_1 L_L R_5 s^5 + C_1 C_5 C_L L_5 L_L R_5 s^5 + C_1 C_5 C_L L_5 L_L R_L s^5}$$

**10.548 INVALID-ORDER-548**  $Z(s) = \left( L_1s + \frac{1}{C_1s}, \infty, \infty, \infty, \frac{R_5 \left( L_5s + \frac{1}{C_5s} \right)}{L_5s + R_5 + \frac{1}{C_5s}}, \frac{R_L \left( L_Ls + \frac{1}{C_Ls} \right)}{L_Ls + R_L + \frac{1}{C_Ls}} \right)$

$$H(s) = -\frac{C_1C_5C_LL_1L_5L_LR_5g_ms^6 + 2C_1C_5C_LL_1L_5L_LR_Lg_ms^6 + C_1C_5C_LL_1L_5L_Ls^6 + C_1C_5C_LL_1L_5R_5R_Lg_ms^5 + C_1C_5C_LL_1L_5R_Ls^5 + 2C_1C_5C_LL_1L_LR_5R_Lg_ms^5 + C_1C_5C_LL_1L_LR_Ls^5}{C_1C_5C_LL_1L_5L_LR_5g_ms^6 + 2C_1C_5C_LL_1L_5L_LR_Lg_ms^6 + C_1C_5C_LL_1L_5L_Ls^6 + C_1C_5C_LL_1L_5R_5R_Lg_ms^5 + C_1C_5C_LL_1L_5R_Ls^5 + 2C_1C_5C_LL_1L_LR_5R_Lg_ms^5 + C_1C_5C_LL_1L_LR_Ls^5}$$

**10.549 INVALID-ORDER-549**  $Z(s) = \left( \frac{L_1s}{C_1L_1s^2+1}, \infty, \infty, \infty, R_5, \frac{1}{C_Ls} \right)$

$$H(s) = \frac{L_1s(R_5g_m - 1)}{C_1C_LL_1R_5s^3 + C_1L_1s^2 + C_LL_1R_5g_ms^2 + C_LL_1s^2 + C_LR_5s + 2L_1g_ms + 1}$$

**10.550 INVALID-ORDER-550**  $Z(s) = \left( \frac{L_1s}{C_1L_1s^2+1}, \infty, \infty, \infty, R_5, \frac{R_L}{C_LR_Ls+1} \right)$

$$H(s) = \frac{L_1R_Ls(R_5g_m - 1)}{C_1C_LL_1R_5R_Ls^3 + C_1L_1R_5s^2 + C_1L_1R_Ls^2 + C_LL_1R_5R_Lg_ms^2 + C_LL_1R_Ls^2 + C_LR_5R_Ls + L_1R_5g_ms + 2L_1R_Lg_ms + L_1s + R_5 + R_L}$$

**10.551 INVALID-ORDER-551**  $Z(s) = \left( \frac{L_1s}{C_1L_1s^2+1}, \infty, \infty, \infty, R_5, R_L + \frac{1}{C_Ls} \right)$

$$H(s) = \frac{L_1s(R_5g_m - 1)(C_LR_Ls + 1)}{C_1C_LL_1R_5s^3 + C_1C_LL_1R_Ls^3 + C_1L_1s^2 + C_LL_1R_5g_ms^2 + 2C_LL_1R_Lg_ms^2 + C_LL_1s^2 + C_LR_5s + C_LR_Ls + 2L_1g_ms + 1}$$

**10.552 INVALID-ORDER-552**  $Z(s) = \left( \frac{L_1s}{C_1L_1s^2+1}, \infty, \infty, \infty, R_5, L_Ls + \frac{1}{C_Ls} \right)$

$$H(s) = \frac{L_1s(R_5g_m - 1)(C_LL_Ls^2 + 1)}{C_1C_LL_1L_Ls^4 + C_1C_LL_1R_5s^3 + C_1L_1s^2 + 2C_LL_1L_Lg_ms^3 + C_LL_1R_5g_ms^2 + C_LL_1s^2 + C_LL_Ls^2 + C_LR_5s + 2L_1g_ms + 1}$$

**10.553 INVALID-ORDER-553**  $Z(s) = \left( \frac{L_1s}{C_1L_1s^2+1}, \infty, \infty, \infty, R_5, \frac{L_Ls}{C_LL_Ls^2+1} \right)$

$$H(s) = \frac{L_1L_Ls^2(R_5g_m - 1)}{C_1C_LL_1L_LR_5s^4 + C_1L_1L_Ls^3 + C_1L_1R_5s^2 + C_LL_1L_LR_5g_ms^3 + C_LL_1L_Ls^3 + C_LL_LR_5s^2 + 2L_1L_Lg_ms^2 + L_1R_5g_ms + L_1s + L_Ls + R_5}$$

**10.554 INVALID-ORDER-554**  $Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, R_5, L_L s + R_L + \frac{1}{C_L s} \right)$

$$H(s) = \frac{L_1 s (R_5 g_m - 1) (C_L L_L s^2 + C_L R_L s + 1)}{C_1 C_L L_1 L_L s^4 + C_1 C_L L_1 R_5 s^3 + C_1 C_L L_1 R_L s^3 + C_1 L_1 s^2 + 2 C_L L_1 L_L g_m s^3 + C_L L_1 R_5 g_m s^2 + 2 C_L L_1 R_L g_m s^2 + C_L L_1 s^2 + C_L L_L s^2 + C_L R_5 s + C_L R_L s + 2 L_1 g_m s + 1}$$

**10.555 INVALID-ORDER-555**  $Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, R_5, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$

$$H(s) = \frac{L_1 L_L R_L s^2 (R_5 g_m - 1)}{C_1 C_L L_1 L_L R_5 R_L s^4 + C_1 L_1 L_L R_5 s^3 + C_1 L_1 L_L R_L s^3 + C_1 L_1 R_5 R_L s^2 + C_L L_1 L_L R_5 R_L g_m s^3 + C_L L_1 L_L R_L s^3 + C_L L_L R_5 R_L s^2 + L_1 L_L R_5 g_m s^2 + 2 L_1 L_L R_L g_m s^2 + L_1 L_L s^2 +}$$

**10.556 INVALID-ORDER-556**  $Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, R_5, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$

$$H(s) = \frac{L_1 s (R_5 g_m - 1) (C_L L_L R_L s^2 + L_L s + R_L)}{C_1 C_L L_1 L_L R_5 s^4 + C_1 C_L L_1 L_L R_L s^4 + C_1 L_1 L_L s^3 + C_1 L_1 R_5 s^2 + C_1 L_1 R_L s^2 + C_L L_1 L_L R_5 g_m s^3 + 2 C_L L_1 L_L R_L g_m s^3 + C_L L_1 L_L s^3 + C_L L_L R_5 s^2 + C_L L_L R_L s^2 + 2 L_1 L_L g_m s +}$$

**10.557 INVALID-ORDER-557**  $Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, R_5, \frac{R_L (L_L s + \frac{1}{C_L s})}{L_L s + R_L + \frac{1}{C_L s}} \right)$

$$H(s) = \frac{L_1 R_L s (R_5 g_m - 1) (C_L L_L s^2 + 1)}{C_1 C_L L_1 L_L R_5 s^4 + C_1 C_L L_1 L_L R_L s^4 + C_1 C_L L_1 R_5 R_L s^3 + C_1 L_1 R_5 s^2 + C_1 L_1 R_L s^2 + C_L L_1 L_L R_5 g_m s^3 + 2 C_L L_1 L_L R_L g_m s^3 + C_L L_1 L_L s^3 + C_L L_1 R_5 R_L g_m s^2 + C_L L_1 R_L s^2 +}$$

**10.558 INVALID-ORDER-558**  $Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, \frac{1}{C_5 s}, R_L \right)$

$$H(s) = \frac{L_1 R_L s (-C_5 s + g_m)}{C_1 C_5 L_1 R_L s^3 + C_1 L_1 s^2 + 2 C_5 L_1 R_L g_m s^2 + C_5 L_1 s^2 + C_5 R_L s + L_1 g_m s + 1}$$

**10.559 INVALID-ORDER-559**  $Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, \frac{1}{C_5 s}, \frac{R_L}{C_L R_L s + 1} \right)$

$$H(s) = \frac{L_1 R_L s (-C_5 s + g_m)}{C_1 C_5 L_1 R_L s^3 + C_1 C_L L_1 R_L s^3 + C_1 L_1 s^2 + C_5 C_L L_1 R_L s^3 + 2C_5 L_1 R_L g_m s^2 + C_5 L_1 s^2 + C_5 R_L s + C_L L_1 R_L g_m s^2 + C_L R_L s + L_1 g_m s + 1}$$

**10.560 INVALID-ORDER-560**  $Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, \frac{1}{C_5 s}, R_L + \frac{1}{C_L s} \right)$

$$H(s) = -\frac{L_1 (C_5 s - g_m) (C_L R_L s + 1)}{C_1 C_5 C_L L_1 R_L s^3 + C_1 C_5 L_1 s^2 + C_1 C_L L_1 s^2 + 2C_5 C_L L_1 R_L g_m s^2 + C_5 C_L L_1 s^2 + C_5 C_L R_L s + 2C_5 L_1 g_m s + C_5 + C_L L_1 g_m s + C_L}$$

**10.561 INVALID-ORDER-561**  $Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, \frac{1}{C_5 s}, L_L s + \frac{1}{C_L s} \right)$

$$H(s) = -\frac{L_1 (C_5 s - g_m) (C_L L_L s^2 + 1)}{C_1 C_5 C_L L_1 L_L s^4 + C_1 C_5 L_1 s^2 + C_1 C_L L_1 s^2 + 2C_5 C_L L_1 L_L g_m s^3 + C_5 C_L L_1 s^2 + C_5 C_L L_L s^2 + 2C_5 L_1 g_m s + C_5 + C_L L_1 g_m s + C_L}$$

**10.562 INVALID-ORDER-562**  $Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} \right)$

$$H(s) = \frac{L_1 L_L s^2 (-C_5 s + g_m)}{C_1 C_5 L_1 L_L s^4 + C_1 C_L L_1 L_L s^4 + C_1 L_1 s^2 + C_5 C_L L_1 L_L s^4 + 2C_5 L_1 L_L g_m s^3 + C_5 L_1 s^2 + C_5 L_L s^2 + C_L L_1 L_L g_m s^3 + C_L L_L s^2 + L_1 g_m s + 1}$$

**10.563 INVALID-ORDER-563**  $Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, \frac{1}{C_5 s}, L_L s + R_L + \frac{1}{C_L s} \right)$

$$H(s) = -\frac{L_1 (C_5 s - g_m) (C_L L_L s^2 + C_L R_L s + 1)}{C_1 C_5 C_L L_1 L_L s^4 + C_1 C_5 C_L L_1 R_L s^3 + C_1 C_5 L_1 s^2 + C_1 C_L L_1 s^2 + 2C_5 C_L L_1 L_L g_m s^3 + 2C_5 C_L L_1 R_L g_m s^2 + C_5 C_L L_1 s^2 + C_5 C_L L_L s^2 + C_5 C_L R_L s + 2C_5 L_1 g_m s + C_5 + C_L L_1 g_m s + C_L}$$

**10.564 INVALID-ORDER-564**  $Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, \frac{1}{C_5 s}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$

$$H(s) = \frac{L_1 L_L R_L s^2 (-C_5 s + g_m)}{C_1 C_5 L_1 L_L R_L s^4 + C_1 C_L L_1 L_L R_L s^4 + C_1 L_1 L_L s^3 + C_1 L_1 R_L s^2 + C_5 C_L L_1 L_L R_L s^4 + 2C_5 L_1 L_L R_L g_m s^3 + C_5 L_1 L_L s^3 + C_5 L_1 R_L s^2 + C_5 L_L R_L s^2 + C_L L_1 L_L R_L g_m s^3 + C_L L_L R_L s^2 + L_1 g_m s + 1}$$

**10.565 INVALID-ORDER-565**  $Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$

$$H(s) = -\frac{L_1 s (C_5 s - g_m) (C_L L_L R_L s^2 + L_L s + R_L)}{C_1 C_5 C_L L_1 L_L R_L s^5 + C_1 C_5 L_1 L_L s^4 + C_1 C_5 L_1 R_L s^3 + C_1 C_L L_1 L_L s^4 + C_1 L_1 s^2 + 2C_5 C_L L_1 L_L R_L g_m s^4 + C_5 C_L L_1 L_L s^4 + C_5 C_L L_L R_L s^3 + 2C_5 L_1 L_L g_m s^3 + 2C_5 L_1 R_L g_m s^2}$$

**10.566 INVALID-ORDER-566**  $Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, \frac{1}{C_5 s}, \frac{R_L (L_L s + \frac{1}{C_L s})}{L_L s + R_L + \frac{1}{C_L s}} \right)$

$$H(s) = -\frac{L_1 R_L s (C_5 s - g_m) (C_L L_L s^2 + 1)}{C_1 C_5 C_L L_1 L_L R_L s^5 + C_1 C_5 L_1 R_L s^3 + C_1 C_L L_1 L_L s^4 + C_1 C_L L_1 R_L s^3 + C_1 L_1 s^2 + 2C_5 C_L L_1 L_L R_L g_m s^4 + C_5 C_L L_1 L_L s^4 + C_5 C_L L_1 R_L s^3 + C_5 C_L L_L R_L s^3 + 2C_5 L_1 R_L g_m s^2}$$

**10.567 INVALID-ORDER-567**  $Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, R_L \right)$

$$H(s) = \frac{L_1 R_L s (-C_5 R_5 s + R_5 g_m - 1)}{C_1 C_5 L_1 R_5 R_L s^3 + C_1 L_1 R_5 s^2 + C_1 L_1 R_L s^2 + 2C_5 L_1 R_5 R_L g_m s^2 + C_5 L_1 R_5 s^2 + C_5 R_5 R_L s + L_1 R_5 g_m s + 2L_1 R_L g_m s + L_1 s + R_5 + R_L}$$

**10.568 INVALID-ORDER-568**  $Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, \frac{1}{C_L s} \right)$

$$H(s) = \frac{L_1 s (-C_5 R_5 s + R_5 g_m - 1)}{C_1 C_5 L_1 R_5 s^3 + C_1 C_L L_1 R_5 s^3 + C_1 L_1 s^2 + C_5 C_L L_1 R_5 s^3 + 2C_5 L_1 R_5 g_m s^2 + C_5 R_5 s + C_L L_1 R_5 g_m s^2 + C_L L_1 s^2 + C_L R_5 s + 2L_1 g_m s + 1}$$

**10.569 INVALID-ORDER-569**  $Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, \frac{R_L}{C_L R_L s + 1} \right)$

$$H(s) = \frac{L_1 R_L s (-C_5 R_5 s + R_5 g_m - 1)}{C_1 C_5 L_1 R_5 R_L s^3 + C_1 C_L L_1 R_5 R_L s^3 + C_1 L_1 R_5 s^2 + C_1 L_1 R_L s^2 + C_5 C_L L_1 R_5 R_L s^3 + 2C_5 L_1 R_5 R_L g_m s^2 + C_5 L_1 R_5 s^2 + C_5 R_5 R_L s + C_L L_1 R_5 R_L g_m s^2 + C_L L_1 R_L s^2 + C_L R_5 R_L}$$

**10.570 INVALID-ORDER-570**  $Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, R_L + \frac{1}{C_L s} \right)$

$$H(s) = -\frac{L_1 s (C_L R_L s + 1) (C_5 R_5 s - R_5 g_m + 1)}{C_1 C_5 C_L L_1 R_5 R_L s^4 + C_1 C_5 L_1 R_5 s^3 + C_1 C_L L_1 R_5 s^3 + C_1 C_L L_1 R_L s^3 + C_1 L_1 s^2 + 2C_5 C_L L_1 R_5 R_L g_m s^3 + C_5 C_L L_1 R_5 s^3 + C_5 C_L R_5 R_L s^2 + 2C_5 L_1 R_5 g_m s^2 + C_5 R_5 s + C_L L_1}$$

$$10.571 \quad \text{INVALID-ORDER-571} \quad Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, L_L s + \frac{1}{C_L s} \right)$$

$$H(s) = -\frac{L_1 s (C_L L_L s^2 + 1) (C_5 R_5 s - R_5 g_m + 1)}{C_1 C_5 C_L L_1 L_L R_5 s^5 + C_1 C_5 L_1 R_5 s^3 + C_1 C_L L_1 L_L s^4 + C_1 C_L L_1 R_5 s^3 + C_1 L_1 s^2 + 2C_5 C_L L_1 L_L R_5 g_m s^4 + C_5 C_L L_1 R_5 s^3 + C_5 C_L L_L R_5 s^3 + 2C_5 L_1 R_5 g_m s^2 + C_5 R_5 s + 2C_L L_L R_5}$$

$$10.572 \quad \text{INVALID-ORDER-572} \quad Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, \frac{L_L s}{C_L L_L s^2 + 1} \right)$$

$$H(s) = \frac{L_1 L_L s^2 (-C_5 R_5 s + R_5 g_m - 1)}{C_1 C_5 L_1 L_L R_5 s^4 + C_1 C_L L_1 L_L R_5 s^4 + C_1 L_1 L_L s^3 + C_1 L_1 R_5 s^2 + C_5 C_L L_1 L_L R_5 s^4 + 2C_5 L_1 L_L R_5 g_m s^3 + C_5 L_1 R_5 s^2 + C_5 L_L R_5 s^2 + C_L L_1 L_L R_5 g_m s^3 + C_L L_1 L_L s^3 + C_L L_L R_5}$$

$$10.573 \quad \text{INVALID-ORDER-573} \quad Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, L_L s + R_L + \frac{1}{C_L s} \right)$$

$$H(s) = -\frac{L_1 s (C_5 R_5 s - R_5 g_m + 1)}{C_1 C_5 C_L L_1 L_L R_5 s^5 + C_1 C_5 C_L L_1 R_5 R_L s^4 + C_1 C_5 L_1 R_5 s^3 + C_1 C_L L_1 L_L s^4 + C_1 C_L L_1 R_5 s^3 + C_1 C_L L_1 R_L s^3 + C_1 L_1 s^2 + 2C_5 C_L L_1 L_L R_5 g_m s^4 + 2C_5 C_L L_1 R_5 R_L g_m s^3 + C_5 C_L L_1 R_5 s^3 + C_5 C_L L_L R_5 s^3 + 2C_5 L_1 R_5 g_m s^2 + C_5 R_5 s + 2C_L L_L R_5}$$

$$10.574 \quad \text{INVALID-ORDER-574} \quad Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$$

$$H(s) = \frac{L_1 L_L R_L s^2 (-C_5 R_5 s + R_5 g_m - 1)}{C_1 C_5 L_1 L_L R_5 R_L s^4 + C_1 C_L L_1 L_L R_5 R_L s^4 + C_1 L_1 L_L R_5 s^3 + C_1 L_1 L_L R_L s^3 + C_1 L_1 R_5 R_L s^2 + C_5 C_L L_1 L_L R_5 R_L s^4 + 2C_5 L_1 L_L R_5 R_L g_m s^3 + C_5 L_1 L_L R_5 s^3 + C_5 L_1 R_5 R_L s^2 + C_5 R_5 s + 2C_L L_L R_5}$$

$$10.575 \quad \text{INVALID-ORDER-575} \quad Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$$

$$H(s) = -\frac{L_1 s (C_5 R_5 s - R_5 g_m + 1)}{C_1 C_5 C_L L_1 L_L R_5 R_L s^5 + C_1 C_5 L_1 L_L R_5 s^4 + C_1 C_5 L_1 R_5 R_L s^3 + C_1 C_L L_1 L_L R_5 s^4 + C_1 C_L L_1 L_L R_L s^4 + C_1 L_1 L_L s^3 + C_1 L_1 R_5 s^2 + C_1 L_1 R_L s^2 + 2C_5 C_L L_1 L_L R_5 R_L g_m s^4 + C_5 C_L L_1 R_5 R_L s^3 + C_5 C_L L_L R_5 s^3 + 2C_5 L_1 R_5 g_m s^2 + C_5 R_5 s + 2C_L L_L R_5}$$



$$10.576 \quad \text{INVALID-ORDER-576} \quad Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$$

$$H(s) = -\frac{C_1 C_5 C_L L_1 L_L R_5 R_L s^5 + C_1 C_5 L_1 R_5 R_L s^3 + C_1 C_L L_1 L_L R_5 s^4 + C_1 C_L L_1 L_L R_L s^4 + C_1 C_L L_1 R_5 R_L s^3 + C_1 L_1 R_5 s^2 + C_1 L_1 R_L s^2 + 2C_5 C_L L_1 L_L R_5 R_L g_m s^4 + C_5 C_L L_1 L_L R_5}{C_1 C_5 C_L L_1 L_L R_5 R_L s^5 + C_1 C_5 L_1 R_5 R_L s^3 + C_1 C_L L_1 L_L R_5 s^4 + C_1 C_L L_1 L_L R_L s^4 + C_1 C_L L_1 R_5 R_L s^3 + C_1 L_1 R_5 s^2 + C_1 L_1 R_L s^2 + 2C_5 C_L L_1 L_L R_5 R_L g_m s^4 + C_5 C_L L_1 L_L R_5}$$

**10.577 INVALID-ORDER-577**  $Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, R_L \right)$

$$H(s) = \frac{L_1 R_L s (C_5 R_5 g_m s - C_5 s + g_m)}{C_1 C_5 L_1 R_5 s^3 + C_1 C_5 L_1 R_L s^3 + C_1 L_1 s^2 + C_5 L_1 R_5 q_m s^2 + 2 C_5 L_1 R_L q_m s^2 + C_5 L_1 s^2 + C_5 R_5 s + C_5 R_L s + L_1 q_m s + 1}$$

**10.578 INVALID-ORDER-578**  $Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, \frac{1}{C_L s} \right)$

$$H(s) = \frac{L_1 (C_5 R_5 g_m s - C_5 s + g_m)}{C_1 C_5 C_L L_1 R_5 s^3 + C_1 C_5 L_1 s^2 + C_1 C_L L_1 s^2 + C_5 C_L L_1 R_5 g_m s^2 + C_5 C_L L_1 s^2 + C_5 C_L R_5 s + 2C_5 L_1 g_m s + C_5 + C_L L_1 g_m s + C_L}$$

**10.579 INVALID-ORDER-579**  $Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, \frac{R_L}{C_L R_L s + 1} \right)$

$$H(s) = \frac{L_1 R_L s (C_5 R_5 g_m s - C_5 s + g_m)}{C_1 C_5 C_L L_1 R_5 R_L s^4 + C_1 C_5 L_1 R_5 s^3 + C_1 C_5 L_1 R_L s^3 + C_1 C_L L_1 R_L s^3 + C_1 L_1 s^2 + C_5 C_L L_1 R_5 R_L g_m s^3 + C_5 C_L L_1 R_L s^3 + C_5 C_L R_5 R_L s^2 + C_5 L_1 R_5 g_m s^2 + 2 C_5 L_1 R_L g_m s^2 + C_5 g_m^2}$$

**10.580 INVALID-ORDER-580**  $Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, R_L + \frac{1}{C_L s} \right)$

$$H(s) = \frac{L_1 (C_L R_L s + 1) (C_5 R_5 g_m s - C_5 s + g_m)}{C_1 C_5 C_L L_1 R_5 s^3 + C_1 C_5 C_L L_1 R_L s^3 + C_1 C_5 L_1 s^2 + C_1 C_L L_1 s^2 + C_5 C_L L_1 R_5 g_m s^2 + 2 C_5 C_L L_1 R_L g_m s^2 + C_5 C_L L_1 s^2 + C_5 C_L R_5 s + C_5 C_L R_L s + 2 C_5 L_1 g_m s + C_5 + C_L L_1 g_m s}$$

**10.581 INVALID-ORDER-581**  $Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, L_L s + \frac{1}{C_L s} \right)$

$$H(s) = \frac{L_1 (C_L L_L s^2 + 1) (C_5 R_5 g_m s - C_5 s + g_m)}{C_1 C_5 C_L L_1 L_L s^4 + C_1 C_5 C_L L_1 R_5 s^3 + C_1 C_5 L_1 s^2 + C_1 C_L L_1 s^2 + 2 C_5 C_L L_1 L_L g_m s^3 + C_5 C_L L_1 R_5 g_m s^2 + C_5 C_L L_1 s^2 + C_5 C_L L_L s^2 + C_5 C_L R_5 s + 2 C_5 L_1 g_m s + C_5 + C_L L_1 g_m s}$$

**10.582 INVALID-ORDER-582**  $Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} \right)$

$$H(s) = \frac{L_1 L_L s^2 (C_5 R_5 g_m s - C_5 s + g_m)}{C_1 C_5 C_L L_1 L_L R_5 s^5 + C_1 C_5 L_1 L_L s^4 + C_1 C_5 L_1 R_5 s^3 + C_1 C_L L_1 L_L s^4 + C_1 L_1 s^2 + C_5 C_L L_1 L_L R_5 g_m s^4 + C_5 C_L L_1 L_L s^4 + C_5 C_L L_L R_5 s^3 + 2 C_5 L_1 L_L g_m s^3 + C_5 L_1 R_5 g_m s^2 + C_5}$$

**10.583 INVALID-ORDER-583**  $Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, L_L s + R_L + \frac{1}{C_L s} \right)$

$$H(s) = \frac{L_1 (C_L L_L s^2 + C_L R_L s + 1) (C_5 R_5 g_m s - C_5 s + g_m)}{C_1 C_5 C_L L_1 L_L s^4 + C_1 C_5 C_L L_1 R_5 s^3 + C_1 C_5 C_L L_1 R_L s^3 + C_1 C_5 L_1 s^2 + C_1 C_L L_1 s^2 + 2 C_5 C_L L_1 L_L g_m s^3 + C_5 C_L L_1 R_5 g_m s^2 + 2 C_5 C_L L_1 R_L g_m s^2 + C_5 C_L L_1 s^2 + C_5 C_L L_L s^2 + C_5 C_L R_L s + g_m}$$

10.584 INVALID-ORDER-584  $Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, \frac{1}{C_L s + \frac{1}{R_L + \frac{1}{L_L s}}} \right)$

$$H(s) = \frac{C_1 C_5 C_L L_L R_5 R_L s^5 + C_1 C_5 L_1 L_L R_5 s^4 + C_1 C_5 L_1 L_L R_L s^4 + C_1 C_5 L_1 R_5 R_L s^3 + C_1 C_L L_1 L_L R_L s^4 + C_1 L_1 L_L s^3 + C_1 L_1 R_L s^2 + C_5 C_L L_1 L_L R_5 R_L g_m s^4 + C_5 C_L L_1 L_L R_L s^4 -$$

**10.585 INVALID-ORDER-585**  $Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$

$$H(s) = \frac{L_1 s (C_5 R_5 g_m s - C_5 s + g_m)}{C_1 C_5 C_L L_1 L_L R_5 s^5 + C_1 C_5 C_L L_1 L_L R_L s^5 + C_1 C_5 L_1 L_L s^4 + C_1 C_5 L_1 R_5 s^3 + C_1 C_5 L_1 R_L s^3 + C_1 C_L L_1 L_L s^4 + C_1 L_1 s^2 + C_5 C_L L_1 L_L R_5 g_m s^4 + 2 C_5 C_L L_1 L_L R_L g_m s^4 + C_5 C_L L}$$

10.586 INVALID-ORDER-586  $Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$

$$H(s) = \frac{C_1 C_5 C_L L_1 L_L R_5 s^5 + C_1 C_5 C_L L_1 L_L R_L s^5 + C_1 C_5 C_L L_1 R_5 R_L s^4 + C_1 C_5 L_1 R_5 s^3 + C_1 C_5 L_1 R_L s^3 + C_1 C_L L_1 L_L s^4 + C_1 C_L L_1 R_L s^3 + C_1 L_1 s^2 + C_5 C_L L_1 L_L R_5 g_m s^4 + 2 C_5 C_L L_1 L_L R_5 g_m s^3 + C_5 C_L L_1 L_L R_5 g_m s^2 + C_5 C_L L_1 L_L R_5 g_m s + C_5 C_L L_1 L_L R_5 g_m}{C_1 C_5 C_L L_1 L_L R_5 s^5 + C_1 C_5 C_L L_1 L_L R_L s^5 + C_1 C_5 C_L L_1 R_5 R_L s^4 + C_1 C_5 L_1 R_5 s^3 + C_1 C_5 L_1 R_L s^3 + C_1 C_L L_1 L_L s^4 + C_1 C_L L_1 R_L s^3 + C_1 L_1 s^2 + C_5 C_L L_1 L_L R_5 g_m s^4 + 2 C_5 C_L L_1 L_L R_5 g_m s^3 + C_5 C_L L_1 L_L R_5 g_m s^2 + C_5 C_L L_1 L_L R_5 g_m s + C_5 C_L L_1 L_L R_5 g_m}$$

**10.587 INVALID-ORDER-587**  $Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, R_L \right)$

$$H(s) = \frac{L_1 R_L s (C_5 L_5 g_m s^2 - C_5 s + g_m)}{C_1 C_5 L_1 L_5 s^4 + C_1 C_5 L_1 R_L s^3 + C_1 L_1 s^2 + C_5 L_1 L_5 g_m s^3 + 2C_5 L_1 R_L g_m s^2 + C_5 L_1 s^2 + C_5 L_5 s^2 + C_5 R_L s + L_1 g_m s + 1}$$

**10.588 INVALID-ORDER-588**  $Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, \frac{1}{C_L s} \right)$

$$H(s) = \frac{L_1 (C_5 L_5 g_m s^2 - C_5 s + g_m)}{C_1 C_5 C_L L_1 L_5 s^4 + C_1 C_5 L_1 s^2 + C_1 C_L L_1 s^2 + C_5 C_L L_1 L_5 g_m s^3 + C_5 C_L L_1 s^2 + C_5 C_L L_5 s^2 + 2C_5 L_1 g_m s + C_5 + C_L L_1 g_m s + C_L}$$

**10.589 INVALID-ORDER-589**  $Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, \frac{R_L}{C_L R_L s + 1} \right)$

$$H(s) = \frac{L_1 R_L s (C_5 L_5 g_m s^2 - C_5 s + g_m)}{C_1 C_5 C_L L_1 L_5 R_L s^5 + C_1 C_5 L_1 L_5 s^4 + C_1 C_5 L_1 R_L s^3 + C_1 C_L L_1 R_L s^3 + C_1 L_1 s^2 + C_5 C_L L_1 L_5 R_L g_m s^4 + C_5 C_L L_1 R_L s^3 + C_5 C_L L_5 R_L s^3 + C_5 L_1 L_5 g_m s^3 + 2C_5 L_1 R_L g_m s^2 + C_5}$$

**10.590 INVALID-ORDER-590**  $Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, R_L + \frac{1}{C_L s} \right)$

$$H(s) = \frac{L_1 (C_L R_L s + 1) (C_5 L_5 g_m s^2 - C_5 s + g_m)}{C_1 C_5 C_L L_1 L_5 s^4 + C_1 C_5 C_L L_1 R_L s^3 + C_1 C_5 L_1 s^2 + C_1 C_L L_1 s^2 + C_5 C_L L_1 L_5 g_m s^3 + 2C_5 C_L L_1 R_L g_m s^2 + C_5 C_L L_1 s^2 + C_5 C_L L_5 s^2 + C_5 C_L R_L s + 2C_5 L_1 g_m s + C_5 + C_L L_1 g_m s}$$

**10.591 INVALID-ORDER-591**  $Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, L_L s + \frac{1}{C_L s} \right)$

$$H(s) = \frac{L_1 (C_L L_L s^2 + 1) (C_5 L_5 g_m s^2 - C_5 s + g_m)}{C_1 C_5 C_L L_1 L_5 s^4 + C_1 C_5 C_L L_1 L_L s^4 + C_1 C_5 L_1 s^2 + C_1 C_L L_1 s^2 + C_5 C_L L_1 L_5 g_m s^3 + 2C_5 C_L L_1 L_L g_m s^3 + C_5 C_L L_1 s^2 + C_5 C_L L_5 s^2 + C_5 C_L L_L s^2 + 2C_5 L_1 g_m s + C_5 + C_L L_1 g_m s}$$

**10.592 INVALID-ORDER-592**  $Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} \right)$

$$H(s) = \frac{L_1 L_L s^2 (C_5 L_5 g_m s^2 - C_5 s + g_m)}{C_1 C_5 C_L L_1 L_5 L_L s^6 + C_1 C_5 L_1 L_5 s^4 + C_1 C_5 L_1 L_L s^4 + C_1 C_L L_1 L_L s^4 + C_1 L_1 s^2 + C_5 C_L L_1 L_5 L_L g_m s^5 + C_5 C_L L_1 L_L s^4 + C_5 C_L L_5 L_L s^4 + C_5 L_1 L_5 g_m s^3 + 2C_5 L_1 L_L g_m s^3 + C_5 L_1}$$

**10.593 INVALID-ORDER-593**  $Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, L_L s + R_L + \frac{1}{C_L s} \right)$

$$H(s) = \frac{L_1 (C_L L_L s^2 + C_L R_L s + 1) (C_5 L_5 g_m s^2 - C_5 s + g_m)}{C_1 C_5 C_L L_1 L_5 s^4 + C_1 C_5 C_L L_1 L_L s^4 + C_1 C_5 C_L L_1 R_L s^3 + C_1 C_5 L_1 s^2 + C_1 C_L L_1 s^2 + C_5 C_L L_1 L_5 g_m s^3 + 2 C_5 C_L L_1 L_L g_m s^3 + 2 C_5 C_L L_1 R_L g_m s^2 + C_5 C_L L_1 s^2 + C_5 C_L L_5 s^2 + C_5 C_L L_L s^2 + C_5 C_L R_L s + g_m}$$

**10.594 INVALID-ORDER-594**  $Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$

$$H(s) = \frac{L_1 s (C_5 L_5 g_m s^2 - C_5 s + g_m)}{C_1 C_5 C_L L_1 L_5 L_L R_L s^6 + C_1 C_5 L_1 L_5 L_L s^5 + C_1 C_5 L_1 L_5 R_L s^4 + C_1 C_5 L_1 L_L R_L s^4 + C_1 C_L L_1 L_L R_L s^4 + C_1 L_1 L_L s^3 + C_1 L_1 R_L s^2 + C_5 C_L L_1 L_5 L_L R_L g_m s^5 + C_5 C_L L_1 L_L R_L s^4 + C_5 C_L L_1 L_5 g_m s^3 + 2 C_5 C_L L_1 L_L g_m s^3 + 2 C_5 C_L L_1 R_L g_m s^2 + C_5 C_L L_1 s^2 + C_5 C_L L_5 s^2 + C_5 C_L L_L s^2 + C_5 C_L R_L s + g_m}$$

**10.595 INVALID-ORDER-595**  $Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$

$$H(s) = \frac{L_1 s (C_5 L_5 g_m s^2 - C_5 s + g_m)}{C_1 C_5 C_L L_1 L_5 L_L s^6 + C_1 C_5 C_L L_1 L_L R_L s^5 + C_1 C_5 L_1 L_5 s^4 + C_1 C_5 L_1 L_L s^4 + C_1 C_5 L_1 R_L s^3 + C_1 C_L L_1 L_L s^4 + C_1 L_1 s^2 + C_5 C_L L_1 L_5 L_L g_m s^5 + 2 C_5 C_L L_1 L_L R_L g_m s^4 + C_5 C_L L_1 L_5 g_m s^3 + 2 C_5 C_L L_1 L_L g_m s^3 + 2 C_5 C_L L_1 R_L g_m s^2 + C_5 C_L L_1 s^2 + C_5 C_L L_5 s^2 + C_5 C_L L_L s^2 + C_5 C_L R_L s + g_m}$$

**10.596 INVALID-ORDER-596**  $Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, \frac{R_L (L_L s + \frac{1}{C_L s})}{L_L s + R_L + \frac{1}{C_L s}} \right)$

$$H(s) = \frac{R_L (L_L s + \frac{1}{C_L s}) (C_5 L_5 g_m s^2 - C_5 s + g_m)}{C_1 C_5 C_L L_1 L_5 L_L s^6 + C_1 C_5 C_L L_1 L_5 R_L s^5 + C_1 C_5 C_L L_1 L_L R_L s^5 + C_1 C_5 L_1 L_5 s^4 + C_1 C_5 L_1 R_L s^3 + C_1 C_L L_1 L_L s^4 + C_1 C_L L_1 R_L s^3 + C_1 L_1 s^2 + C_5 C_L L_1 L_5 L_L g_m s^5 + C_5 C_L L_1 L_5 g_m s^3 + 2 C_5 C_L L_1 L_L g_m s^3 + 2 C_5 C_L L_1 R_L g_m s^2 + C_5 C_L L_1 s^2 + C_5 C_L L_5 s^2 + C_5 C_L L_L s^2 + C_5 C_L R_L s + g_m}$$

**10.597 INVALID-ORDER-597**  $Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, R_L \right)$

$$H(s) = \frac{L_1 R_L s (-C_5 L_5 s^2 + L_5 g_m s - 1)}{C_1 C_5 L_1 L_5 R_L s^4 + C_1 L_1 L_5 s^3 + C_1 L_1 R_L s^2 + 2 C_5 L_1 L_5 R_L g_m s^3 + C_5 L_1 L_5 s^3 + C_5 L_5 R_L s^2 + L_1 L_5 g_m s^2 + 2 L_1 R_L g_m s + L_1 s + L_5 s + R_L}$$

$$10.598 \quad \text{INVALID-ORDER-598} \quad Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_1 s (-C_5 L_5 s^2 + L_5 g_m s - 1)}{C_1 C_5 L_1 L_5 s^4 + C_1 C_L L_1 L_5 s^4 + C_1 L_1 s^2 + C_5 C_L L_1 L_5 s^4 + 2C_5 L_1 L_5 g_m s^3 + C_5 L_5 s^2 + C_L L_1 L_5 g_m s^3 + C_L L_1 s^2 + C_L L_5 s^2 + 2L_1 g_m s + 1}$$

$$10.599 \quad \text{INVALID-ORDER-599} \quad Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{R_L}{C_L R_L s + 1} \right)$$

$$H(s) = \frac{L_1 R_L s (-C_5 L_5 s^2 + L_5 g_m s - 1)}{C_1 C_5 L_1 L_5 R_L s^4 + C_1 C_L L_1 L_5 R_L s^4 + C_1 L_1 L_5 s^3 + C_1 L_1 R_L s^2 + C_5 C_L L_1 L_5 R_L s^4 + 2C_5 L_1 L_5 R_L g_m s^3 + C_5 L_1 L_5 s^3 + C_5 L_5 R_L s^2 + C_L L_1 L_5 R_L g_m s^3 + C_L L_1 R_L s^2 + C_L L_5 R_L s}$$

$$10.600 \quad \text{INVALID-ORDER-600} \quad Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, R_L + \frac{1}{C_L s} \right)$$

$$H(s) = -\frac{L_1 s (C_L R_L s + 1) (C_5 L_5 s^2 - L_5 g_m s + 1)}{C_1 C_5 C_L L_1 L_5 R_L s^5 + C_1 C_5 L_1 L_5 s^4 + C_1 C_L L_1 L_5 s^4 + C_1 C_L L_1 R_L s^3 + C_1 L_1 s^2 + 2C_5 C_L L_1 L_5 R_L g_m s^4 + C_5 C_L L_1 L_5 s^4 + C_5 C_L L_5 R_L s^3 + 2C_5 L_1 L_5 g_m s^3 + C_5 L_5 s^2 + C_L L_1 L_5 R_L s}$$

$$10.601 \quad \text{INVALID-ORDER-601} \quad Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, L_L s + \frac{1}{C_L s} \right)$$

$$H(s) = -\frac{L_1 s (C_L L_L s^2 + 1) (C_5 L_5 s^2 - L_5 g_m s + 1)}{C_1 C_5 C_L L_1 L_5 L_L s^6 + C_1 C_5 L_1 L_5 s^4 + C_1 C_L L_1 L_5 s^4 + C_1 C_L L_1 L_L s^4 + C_1 L_1 s^2 + 2C_5 C_L L_1 L_5 L_L g_m s^5 + C_5 C_L L_1 L_5 s^4 + C_5 C_L L_5 L_L s^4 + 2C_5 L_1 L_5 g_m s^3 + C_5 L_5 s^2 + C_L L_1 L_5 L_L s}$$

$$10.602 \quad \text{INVALID-ORDER-602} \quad Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{L_L s}{C_L L_L s^2 + 1} \right)$$

$$H(s) = \frac{L_1 L_L s (-C_5 L_5 s^2 + L_5 g_m s - 1)}{C_1 C_5 L_1 L_5 L_L s^4 + C_1 C_L L_1 L_5 L_L s^4 + C_1 L_1 L_5 s^2 + C_1 L_1 L_L s^2 + C_5 C_L L_1 L_5 L_L s^4 + 2C_5 L_1 L_5 L_L g_m s^3 + C_5 L_1 L_5 s^2 + C_5 L_5 L_L s^2 + C_L L_1 L_5 L_L g_m s^3 + C_L L_1 L_L s^2 + C_L L_5 L_L s}$$

$$10.603 \quad \text{INVALID-ORDER-603} \quad Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, L_L s + R_L + \frac{1}{C_L s} \right)$$

$$H(s) = -\frac{L_1 s (C_5 L_5 s^2 - L_5 g_m s + 1)}{C_1 C_5 C_L L_1 L_5 L_L s^6 + C_1 C_5 C_L L_1 L_5 R_L s^5 + C_1 C_5 L_1 L_5 s^4 + C_1 C_L L_1 L_5 s^4 + C_1 C_L L_1 L_L s^4 + C_1 C_L L_1 R_L s^3 + C_1 L_1 s^2 + 2C_5 C_L L_1 L_5 L_L g_m s^5 + 2C_5 C_L L_1 L_5 R_L g_m s^4 + C_5 C_L L_1 L_5 L_L s^4 + C_5 C_L L_5 L_L s^4 + 2C_5 L_1 L_5 g_m s^3 + C_5 L_5 s^2 + C_L L_1 L_5 L_L s}$$

10.604 INVALID-ORDER-604  $Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$

$$H(s) = \frac{L_1 L_L R_L s (-C_5 L_5 s^2 + C_1 C_5 L_1 L_5 L_L R_L s^4 + C_1 C_L L_1 L_5 L_L R_L s^4 + C_1 L_1 L_5 L_L s^3 + C_1 L_1 L_5 R_L s^2 + C_1 L_1 L_L R_L s^2 + C_5 C_L L_1 L_5 L_L R_L s^4 + 2 C_5 L_1 L_5 L_L R_L q_m s^3 + C_5 L_1 L_5 L_L s^3 + C_5 L_1 L_5 R_L s^2 + C_5 L_1 L_5 R_L q_m s)}{C_1 C_5 L_1 L_5 L_L R_L s^4 + C_1 C_L L_1 L_5 L_L R_L s^4 + C_1 L_1 L_5 L_L s^3 + C_1 L_1 L_5 R_L s^2 + C_1 L_1 L_L R_L s^2 + C_5 C_L L_1 L_5 L_L R_L s^4 + 2 C_5 L_1 L_5 L_L R_L q_m s^3 + C_5 L_1 L_5 L_L s^3 + C_5 L_1 L_5 R_L s^2 + C_5 L_1 L_5 R_L q_m s}$$

**10.605 INVALID-ORDER-605**  $Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$

$$H(s) = -\frac{C_1 C_5 C_L L_1 L_5 L_L R_L s^6 + C_1 C_5 L_1 L_5 L_L s^5 + C_1 C_5 L_1 L_5 R_L s^4 + C_1 C_L L_1 L_5 L_L s^5 + C_1 C_L L_1 L_L R_L s^4 + C_1 L_1 L_5 s^3 + C_1 L_1 L_L s^3 + C_1 L_1 R_L s^2 + 2C_5 C_L L_1 L_5 L_L R_L g_m s^5 + C_5}{C_1 C_5 C_L L_1 L_5 L_L R_L s^6 + C_1 C_5 L_1 L_5 L_L s^5 + C_1 C_5 L_1 L_5 R_L s^4 + C_1 C_L L_1 L_5 L_L s^5 + C_1 C_L L_1 L_L R_L s^4 + C_1 L_1 L_5 s^3 + C_1 L_1 L_L s^3 + C_1 L_1 R_L s^2 + 2C_5 C_L L_1 L_5 L_L R_L g_m s^5 + C_5}$$

10.606 INVALID-ORDER-606  $Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$

$$H(s) = -\frac{C_1 C_5 C_L L_1 L_5 L_L R_L s^6 + C_1 C_5 L_1 L_5 R_L s^4 + C_1 C_L L_1 L_5 L_L s^5 + C_1 C_L L_1 L_5 R_L s^4 + C_1 C_L L_1 L_L R_L s^4 + C_1 L_1 L_5 s^3 + C_1 L_1 R_L s^2 + 2C_5 C_L L_1 L_5 L_L R_L g_m s^5 + C_5 C_L L_1 L_5 L_L s^5}{C_1 C_5 C_L L_1 L_5 L_L R_L s^6 + C_1 C_5 L_1 L_5 R_L s^4 + C_1 C_L L_1 L_5 L_L s^5 + C_1 C_L L_1 L_5 R_L s^4 + C_1 C_L L_1 L_L R_L s^4 + C_1 L_1 L_5 s^3 + C_1 L_1 R_L s^2 + 2C_5 C_L L_1 L_5 L_L R_L g_m s^5 + C_5 C_L L_1 L_5 L_L s^5}$$

**10.607 INVALID-ORDER-607**  $Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, R_L \right)$

$$H(s) = \frac{L_1 R_L s (C_5 L_5 g_m s^2 + C_5 R_5 g_m s - C_5 s + g_m)}{C_1 C_5 L_1 L_5 s^4 + C_1 C_5 L_1 R_5 s^3 + C_1 C_5 L_1 R_L s^3 + C_1 L_1 s^2 + C_5 L_1 L_5 g_m s^3 + C_5 L_1 R_5 g_m s^2 + 2 C_5 L_1 R_L g_m s^2 + C_5 L_1 s^2 + C_5 L_5 s^2 + C_5 R_5 s + C_5 R_L s + L_1 g_m s + 1}$$

**10.608 INVALID-ORDER-608**  $Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{1}{C_L s} \right)$

$$H(s) = \frac{L_1 (C_5 L_5 g_m s^2 + C_5 R_5 g_m s - C_5 s + g_m)}{C_1 C_5 C_L L_1 L_5 s^4 + C_1 C_5 C_L L_1 R_5 s^3 + C_1 C_5 L_1 s^2 + C_1 C_L L_1 s^2 + C_5 C_L L_1 L_5 g_m s^3 + C_5 C_L L_1 R_5 g_m s^2 + C_5 C_L L_1 s^2 + C_5 C_L L_5 s^2 + C_5 C_L R_5 s + 2C_5 L_1 g_m s + C_5 + C_L L_1 g_m s +}$$

$$10.609 \quad \text{INVALID-ORDER-609} \quad Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{R_L}{C_L R_L s + 1} \right)$$

$$H(s) = \frac{L_1 R_L s (C_5 L_5 g_m s^2 + C_5 R_5 g_m s - C_5 s + g_m)}{C_1 C_5 C_L L_1 L_5 R_L s^5 + C_1 C_5 C_L L_1 R_5 R_L s^4 + C_1 C_5 L_1 L_5 s^4 + C_1 C_5 L_1 R_5 s^3 + C_1 C_5 L_1 R_L s^3 + C_1 C_L L_1 R_L s^3 + C_1 L_1 s^2 + C_5 C_L L_1 L_5 R_L g_m s^4 + C_5 C_L L_1 R_5 R_L g_m s^3 + C_5 C_L L_1 L_5 g_m s^2 + C_5 C_L L_1 R_5 g_m s - C_5 s + g_m}$$

$$10.610 \quad \text{INVALID-ORDER-610} \quad Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_1 (C_L R_L s + 1) (C_5 L_5 g_m s^2 + C_5 R_5 g_m s - C_5 s + g_m)}{C_1 C_5 C_L L_1 L_5 s^4 + C_1 C_5 C_L L_1 R_5 s^3 + C_1 C_5 C_L L_1 R_L s^3 + C_1 C_5 L_1 s^2 + C_1 C_L L_1 s^2 + C_5 C_L L_1 L_5 g_m s^3 + C_5 C_L L_1 R_5 g_m s^2 + 2 C_5 C_L L_1 R_L g_m s^2 + C_5 C_L L_1 s^2 + C_5 C_L L_5 s^2 + C_5 C_L R_L s + g_m}$$

$$10.611 \quad \text{INVALID-ORDER-611} \quad Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, L_L s + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_1 (C_L L_L s^2 + 1) (C_5 L_5 g_m s^2 + C_5 R_5 g_m s - C_5 s + g_m)}{C_1 C_5 C_L L_1 L_5 s^4 + C_1 C_5 C_L L_1 L_L s^4 + C_1 C_5 C_L L_1 R_5 s^3 + C_1 C_5 L_1 s^2 + C_1 C_L L_1 s^2 + C_5 C_L L_1 L_5 g_m s^3 + 2 C_5 C_L L_1 L_L g_m s^3 + C_5 C_L L_1 R_5 g_m s^2 + C_5 C_L L_1 s^2 + C_5 C_L L_5 s^2 + C_5 C_L L_L s + g_m}$$

$$10.612 \quad \text{INVALID-ORDER-612} \quad Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} \right)$$

$$H(s) = \frac{L_1 L_L s^2 (C_5 L_5 g_m s^2 + C_5 R_5 g_m s - C_5 s + g_m)}{C_1 C_5 C_L L_1 L_5 L_L s^6 + C_1 C_5 C_L L_1 L_L R_5 s^5 + C_1 C_5 L_1 L_5 s^4 + C_1 C_5 L_1 L_L s^4 + C_1 C_5 L_1 R_5 s^3 + C_1 C_L L_1 L_L s^4 + C_1 L_1 s^2 + C_5 C_L L_1 L_5 L_L g_m s^5 + C_5 C_L L_1 L_L R_5 g_m s^4 + C_5 C_L L_1 L_5 g_m s^3 + C_5 C_L L_1 L_L g_m s^2 + C_5 C_L L_1 R_5 g_m s - C_5 s + g_m}$$

$$10.613 \quad \text{INVALID-ORDER-613} \quad Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, L_L s + R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_1 (C_L L_L s^2 + C_L R_L s + 1) (C_5 L_5 g_m s^2 + C_5 R_5 g_m s - C_5 s + g_m)}{C_1 C_5 C_L L_1 L_5 s^4 + C_1 C_5 C_L L_1 L_L s^4 + C_1 C_5 C_L L_1 R_5 s^3 + C_1 C_5 C_L L_1 R_L s^3 + C_1 C_5 L_1 s^2 + C_1 C_L L_1 s^2 + C_5 C_L L_1 L_5 g_m s^3 + 2 C_5 C_L L_1 L_L g_m s^3 + C_5 C_L L_1 R_5 g_m s^2 + 2 C_5 C_L L_1 R_L g_m s^2 + C_5 C_L L_1 R_5 g_m s - C_5 s + g_m}$$

$$\mathbf{10.614 \quad INVALID-ORDER-614} \quad Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$$

$$H(s) = \frac{C_1 C_5 C_L L_1 L_5 L_L R_L s^6 + C_1 C_5 C_L L_1 L_L R_5 R_L s^5 + C_1 C_5 L_1 L_5 L_L s^5 + C_1 C_5 L_1 L_5 R_L s^4 + C_1 C_5 L_1 L_L R_5 s^4 + C_1 C_5 L_1 L_L R_L s^4 + C_1 C_5 L_1 R_5 R_L s^3 + C_1 C_L L_1 L_L R_L s^4 + C_1 L_1 L_L R_5 s^3}{C_1 C_5 C_L L_1 L_5 L_L R_L s^6 + C_1 C_5 C_L L_1 L_L R_5 R_L s^5 + C_1 C_5 C_L L_1 L_L R_L s^5 + C_1 C_5 L_1 L_5 s^4 + C_1 C_5 L_1 L_L s^4 + C_1 C_5 L_1 R_5 s^3 + C_1 C_5 L_1 R_L s^3 + C_1 C_L L_1 L_L s^4 + C_1 L_1 s^2 + C_5 C_L L_1 L_5 L_L s^4}$$

$$\mathbf{10.615 \quad INVALID-ORDER-615} \quad Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$$

$$H(s) = \frac{C_1 C_5 C_L L_1 L_5 L_L s^6 + C_1 C_5 C_L L_1 L_L R_5 s^5 + C_1 C_5 C_L L_1 L_L R_L s^5 + C_1 C_5 L_1 L_5 s^4 + C_1 C_5 L_1 L_L s^4 + C_1 C_5 L_1 R_5 s^3 + C_1 C_5 L_1 R_L s^3 + C_1 C_L L_1 L_L s^4 + C_1 L_1 s^2 + C_5 C_L L_1 L_5 L_L s^4}{C_1 C_5 C_L L_1 L_5 L_L s^6 + C_1 C_5 C_L L_1 L_L R_5 s^5 + C_1 C_5 C_L L_1 L_L R_L s^5 + C_1 C_5 L_1 L_5 s^4 + C_1 C_5 L_1 L_L s^4 + C_1 C_5 L_1 R_5 s^3 + C_1 C_5 L_1 R_L s^3 + C_1 C_L L_1 L_L s^4 + C_1 L_1 s^2 + C_5 C_L L_1 L_5 L_L s^4}$$

$$\mathbf{10.616 \quad INVALID-ORDER-616} \quad Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$$

$$H(s) = \frac{C_1 C_5 C_L L_1 L_5 L_L s^6 + C_1 C_5 C_L L_1 L_5 R_L s^5 + C_1 C_5 C_L L_1 L_L R_5 s^5 + C_1 C_5 C_L L_1 L_L R_L s^5 + C_1 C_5 C_L L_1 R_5 R_L s^4 + C_1 C_5 L_1 L_5 s^4 + C_1 C_5 L_1 R_5 s^3 + C_1 C_5 L_1 R_L s^3 + C_1 C_L L_1 L_L s^4}{C_1 C_5 C_L L_1 L_5 L_L s^6 + C_1 C_5 C_L L_1 L_5 R_L s^5 + C_1 C_5 C_L L_1 L_L R_5 s^5 + C_1 C_5 C_L L_1 L_L R_L s^5 + C_1 C_5 C_L L_1 R_5 R_L s^4 + C_1 C_5 L_1 L_5 s^4 + C_1 C_5 L_1 R_5 s^3 + C_1 C_5 L_1 R_L s^3 + C_1 C_L L_1 L_L s^4}$$

$$\mathbf{10.617 \quad INVALID-ORDER-617} \quad Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, R_L \right)$$

$$H(s) = \frac{L_1 R_L s \left( -C_5 L_5 R_5 s^2 + L_5 R_5 g_m s - L_5 s - R_5 \right)}{C_1 C_5 L_1 L_5 R_5 R_L s^4 + C_1 L_1 L_5 R_5 s^3 + C_1 L_1 L_5 R_L s^3 + C_1 L_1 R_5 R_L s^2 + 2 C_5 L_1 L_5 R_5 R_L g_m s^3 + C_5 L_1 L_5 R_5 s^3 + C_5 L_5 R_5 R_L s^2 + L_1 L_5 R_5 g_m s^2 + 2 L_1 L_5 R_L g_m s^2 + L_1 L_5 s^2 + 2 L_1 R_5 s}$$

$$\mathbf{10.618 \quad INVALID-ORDER-618} \quad Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_1 s \left( -C_5 L_5 R_5 s^2 + L_5 R_5 g_m s - L_5 s - R_5 \right)}{C_1 C_5 L_1 L_5 R_5 s^4 + C_1 C_L L_1 L_5 R_5 s^4 + C_1 L_1 L_5 s^3 + C_1 L_1 R_5 s^2 + C_5 C_L L_1 L_5 R_5 s^4 + 2 C_5 L_1 L_5 R_5 g_m s^3 + C_5 L_5 R_5 s^2 + C_L L_1 L_5 R_5 g_m s^3 + C_L L_1 L_5 s^3 + C_L L_1 R_5 s^2 + C_L L_5 R_5 s^2}$$



10.619 INVALID-ORDER-619  $Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{R_L}{C_L R_L s + 1} \right)$

$$H(s) = \frac{L_1 R_L s (-C_5 L_5 R_5 s^2 + L_5 I_5)}{C_1 C_5 L_1 L_5 R_5 R_L s^4 + C_1 C_L L_1 L_5 R_5 R_L s^4 + C_1 L_1 L_5 R_5 s^3 + C_1 L_1 L_5 R_L s^3 + C_1 L_1 R_5 R_L s^2 + C_5 C_L L_1 L_5 R_5 R_L s^4 + 2C_5 L_1 L_5 R_5 R_L g_m s^3 + C_5 L_1 L_5 R_5 s^3 + C_5 L_5 R_5 R_L s^2 + C_L}$$

10.620 INVALID-ORDER-620  $Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, R_L + \frac{1}{C_L s} \right)$

$$H(s) = -\frac{L_1}{C_1 C_5 C_L L_1 L_5 R_5 R_L s^5 + C_1 C_5 L_1 L_5 R_5 s^4 + C_1 C_L L_1 L_5 R_5 s^4 + C_1 C_L L_1 L_5 R_L s^4 + C_1 C_L L_1 R_5 R_L s^3 + C_1 L_1 L_5 s^3 + C_1 L_1 R_5 s^2 + 2C_5 C_L L_1 L_5 R_5 R_L q_m s^4 + C_5 C_L L_1 L_5 R_5 s^4}$$

10.621 INVALID-ORDER-621  $Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, L_L s + \frac{1}{C_L s} \right)$

$$H(s) = -\frac{L_1 s}{C_1 C_5 C_L L_1 L_5 L_L R_5 s^6 + C_1 C_5 L_1 L_5 R_5 s^4 + C_1 C_L L_1 L_5 L_L s^5 + C_1 C_L L_1 L_5 R_5 s^4 + C_1 C_L L_1 L_L R_5 s^4 + C_1 L_1 L_5 s^3 + C_1 L_1 R_5 s^2 + 2 C_5 C_L L_1 L_5 L_L R_5 g_m s^5 + C_5 C_L L_1 L_5 R_5 s^4 +}$$

**10.622 INVALID-ORDER-622**  $Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{L_L s}{C_L L_L s^2 + 1} \right)$

$$H(s) = \frac{L_1 L_L s (-C_5 L_5 R_5 s^2 + L_5 R_5 g_r)}{C_1 C_5 L_1 L_5 L_L R_5 s^4 + C_1 C_L L_1 L_5 L_L R_5 s^4 + C_1 L_1 L_5 L_L s^3 + C_1 L_1 L_5 R_5 s^2 + C_1 L_1 L_L R_5 s^2 + C_5 C_L L_1 L_5 L_L R_5 s^4 + 2 C_5 L_1 L_5 L_L R_5 g_m s^3 + C_5 L_1 L_5 R_5 s^2 + C_5 L_5 L_L R_5 s^2 + C_L L_1 L_5 R_5 s^2 + C_L L_1 L_5 L_L s^3 + C_L L_1 L_5 R_5 s^2 + C_L L_1 L_L R_5 s^2 + C_L L_5 L_L R_5 s^2 + C_L L_5 L_L s^3 + C_L L_5 R_5 s^2 + C_L L_L R_5 s^2 + C_L R_5 s^2 + C_L g_r}$$

**10.623 INVALID-ORDER-623**  $Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, L_L s + R_L + \frac{1}{C_L s} \right)$

$$H(s) = -\frac{C_1 C_5 C_L L_1 L_5 L_L R_5 s^6 + C_1 C_5 C_L L_1 L_5 R_5 R_L s^5 + C_1 C_5 L_1 L_5 R_5 s^4 + C_1 C_L L_1 L_5 L_L s^5 + C_1 C_L L_1 L_5 R_5 s^4 + C_1 C_L L_1 L_5 R_L s^4 + C_1 C_L L_1 L_L R_5 s^4 + C_1 C_L L_1 R_5 R_L s^3 + C_1 L_1 L$$

10.624 INVALID-ORDER-624  $Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$

$$H(s) = \frac{C_1 C_5 L_1 L_5 L_L R_5 R_L s^4 + C_1 C_L L_1 L_5 L_L R_5 R_L s^4 + C_1 L_1 L_5 L_L R_5 s^3 + C_1 L_1 L_5 L_L R_L s^3 + C_1 L_1 L_5 R_5 R_L s^2 + C_1 L_1 L_L R_5 R_L s^2 + C_5 C_L L_1 L_5 L_L R_5 R_L s^4 + 2C_5 L_1 L_5 L_L R_5 R_L g_m}{\dots}$$

10.625 INVALID-ORDER-625  $Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$

$$H(s) = -\frac{C_1 C_5 C_L L_1 L_5 L_L R_5 R_L s^6 + C_1 C_5 L_1 L_5 L_L R_5 s^5 + C_1 C_5 L_1 L_5 R_5 R_L s^4 + C_1 C_L L_1 L_5 L_L R_5 s^5 + C_1 C_L L_1 L_5 L_L R_L s^5 + C_1 C_L L_1 L_L R_5 R_L s^4 + C_1 L_1 L_5 L_L s^4 + C_1 L_1 L_5 R_5 s^3 + C_1 L_1 L_5 s^2 + C_1 L_1 s}{C_1 C_5 C_L L_1 L_5 L_L R_5 R_L s^6 + C_1 C_5 L_1 L_5 L_L R_5 s^5 + C_1 C_5 L_1 L_5 R_5 R_L s^4 + C_1 C_L L_1 L_5 L_L R_5 s^5 + C_1 C_L L_1 L_5 L_L R_L s^5 + C_1 C_L L_1 L_L R_5 R_L s^4 + C_1 L_1 L_5 L_L s^4 + C_1 L_1 L_5 R_5 s^3 + C_1 L_1 L_5 s^2 + C_1 L_1 s}$$

10.626 INVALID-ORDER-626  $Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$

$$H(s) = -\frac{C_1 C_5 C_L L_1 L_5 L_L R_5 R_L s^6 + C_1 C_5 L_1 L_5 R_5 R_L s^4 + C_1 C_L L_1 L_5 L_L R_5 s^5 + C_1 C_L L_1 L_5 L_L R_L s^5 + C_1 C_L L_1 L_5 R_5 R_L s^4 + C_1 C_L L_1 L_L R_5 R_L s^4 + C_1 L_1 L_5 R_5 s^3 + C_1 L_1 L_5 R_L s^3 +$$

**10.627 INVALID-ORDER-627**  $Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, R_L \right)$

$$H(s) = \frac{L_1 R_L s (C_5 L_5 R_5 g_m s^2 - C_5 L_5 s^2 + L_5 g_m s + R_5 g_m - 1)}{C_1 C_5 L_1 L_5 R_5 s^4 + C_1 C_5 L_1 L_5 R_L s^4 + C_1 L_1 L_5 s^3 + C_1 L_1 R_5 s^2 + C_1 L_1 R_L s^2 + C_5 L_1 L_5 R_5 g_m s^3 + 2 C_5 L_1 L_5 R_L g_m s^3 + C_5 L_1 L_5 s^3 + C_5 L_5 R_5 s^2 + C_5 L_5 R_L s^2 + L_1 L_5 g_m s^2 + L_1 L_5 R_5 s + L_1 R_5 g_m}$$

**10.628 INVALID-ORDER-628**  $Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{1}{C_L s} \right)$

$$H(s) = \frac{L_1 s (C_5 L_5 R_5 g_m s^2 - C_5 L_5 s^2 + L_5 g_m s + R_5 g_m - 1)}{C_1 C_5 C_L L_1 L_5 R_5 s^5 + C_1 C_5 L_1 L_5 s^4 + C_1 C_L L_1 L_5 s^4 + C_1 C_L L_1 R_5 s^3 + C_1 L_1 s^2 + C_5 C_L L_1 L_5 R_5 g_m s^4 + C_5 C_L L_1 L_5 s^4 + C_5 C_L L_5 R_5 s^3 + 2 C_5 L_1 L_5 g_m s^3 + C_5 L_5 s^2 + C_L L_1 L_5 g_m}$$

**10.629 INVALID-ORDER-629**  $Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{R_L}{C_L R_L s + 1} \right)$

$$H(s) = \frac{C_1 C_5 C_L L_1 L_5 R_5 R_L s^5 + C_1 C_3 L_1 L_5 R_5 s^4 + C_1 C_5 L_1 L_5 R_L s^4 + C_1 C_L L_1 L_5 R_L s^4 + C_1 C_L L_1 R_5 R_L s^3 + C_1 L_1 L_5 s^3 + C_1 L_1 R_5 s^2 + C_1 L_1 R_L s^2 + C_5 C_L L_1 L_5 R_5 R_L g_m s^4 + C_5 C_L L_1 L_5 R_5 R_L s^4}{C_1 C_5 C_L L_1 L_5 R_5 R_L s^5 + C_1 C_3 L_1 L_5 R_5 s^4 + C_1 C_5 L_1 L_5 R_L s^4 + C_1 C_L L_1 L_5 R_L s^4 + C_1 C_L L_1 R_5 R_L s^3 + C_1 L_1 L_5 s^3 + C_1 L_1 R_5 s^2 + C_1 L_1 R_L s^2 + C_5 C_L L_1 L_5 R_5 R_L g_m s^4 + C_5 C_L L_1 L_5 R_5 R_L s^4}$$

**10.630 INVALID-ORDER-630**  $Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, R_L + \frac{1}{C_L s} \right)$

$$H(s) = \frac{L_1 s (C_L R_L s + 1) (C_5 L_5 R_5 g_m s^2 + C_5 C_L L_1 L_5 R_5 s^5 + C_1 C_5 C_L L_1 L_5 R_L s^5 + C_1 C_5 L_1 L_5 s^4 + C_1 C_L L_1 L_5 s^4 + C_1 C_L L_1 R_5 s^3 + C_1 C_L L_1 R_L s^3 + C_1 L_1 s^2 + C_5 C_L L_1 L_5 R_5 g_m s^4 + 2 C_5 C_L L_1 L_5 R_L g_m s^4 + C_5 C_L L_1$$

**10.631 INVALID-ORDER-631**  $Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, L_L s + \frac{1}{C_L s} \right)$

$$H(s) = \frac{L_1 s (C_L L_L s^2 + 1) (C_5 L_5 R_5 g_m s^2}{C_1 C_5 C_L L_1 L_5 L_L s^6 + C_1 C_5 C_L L_1 L_5 R_5 s^5 + C_1 C_5 L_1 L_5 s^4 + C_1 C_L L_1 L_5 s^4 + C_1 C_L L_1 L_L s^4 + C_1 C_L L_1 R_5 s^3 + C_1 L_1 s^2 + 2 C_5 C_L L_1 L_5 L_L g_m s^5 + C_5 C_L L_1 L_5 R_5 g_m s^4 + C_5 C_L L_1 L_5 L_L g_m s^3 + C_5 C_L L_1 L_5 R_5 g_m s^2 + C_5 C_L L_1 L_5 L_L g_m s + C_5 C_L L_1 L_5 R_5 g_m}$$

**10.632 INVALID-ORDER-632**  $Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{L_L s}{C_L L_L s^2 + 1} \right)$

$$H(s) = \frac{C_1 C_5 C_L L_1 L_5 L_L R_5 s^6 + C_1 C_5 L_1 L_5 L_L s^5 + C_1 C_5 L_1 L_5 R_5 s^4 + C_1 C_L L_1 L_5 L_L s^5 + C_1 C_L L_1 L_L R_5 s^4 + C_1 L_1 L_5 s^3 + C_1 L_1 L_L s^3 + C_1 L_1 R_5 s^2 + C_5 C_L L_1 L_5 L_L R_5 g_m s^5 + C_5 C_L L_1 L_5 L_L R_5 s^4 + C_5 C_L L_1 L_5 L_L R_5 s^3 + C_5 C_L L_1 L_5 L_L R_5 s^2 + C_5 C_L L_1 L_5 L_L R_5 s}{C_1 C_5 C_L L_1 L_5 L_L R_5 s^6 + C_1 C_5 L_1 L_5 L_L s^5 + C_1 C_5 L_1 L_5 R_5 s^4 + C_1 C_L L_1 L_5 L_L s^5 + C_1 C_L L_1 L_L R_5 s^4 + C_1 L_1 L_5 s^3 + C_1 L_1 L_L s^3 + C_1 L_1 R_5 s^2 + C_5 C_L L_1 L_5 L_L R_5 g_m s^5 + C_5 C_L L_1 L_5 L_L R_5 s^4 + C_5 C_L L_1 L_5 L_L R_5 s^3 + C_5 C_L L_1 L_5 L_L R_5 s^2 + C_5 C_L L_1 L_5 L_L R_5 s}$$

**10.633 INVALID-ORDER-633**  $Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, L_L s + R_L + \frac{1}{C_L s} \right)$

$$H(s) = \frac{C_1 C_5 C_L L_1 L_5 L_L s^6 + C_1 C_5 C_L L_1 L_5 R_5 s^5 + C_1 C_5 C_L L_1 L_5 R_L s^5 + C_1 C_5 L_1 L_5 s^4 + C_1 C_L L_1 L_5 s^4 + C_1 C_L L_1 L_L s^4 + C_1 C_L L_1 R_5 s^3 + C_1 C_L L_1 R_L s^3 + C_1 L_1 s^2 + 2 C_5 C_L L_1 L_5 L_L}{C_1 C_5 C_L L_1 L_5 L_L s^6 + C_1 C_5 C_L L_1 L_5 R_5 s^5 + C_1 C_5 C_L L_1 L_5 R_L s^5 + C_1 C_5 L_1 L_5 s^4 + C_1 C_L L_1 L_5 s^4 + C_1 C_L L_1 L_L s^4 + C_1 C_L L_1 R_5 s^3 + C_1 C_L L_1 R_L s^3 + C_1 L_1 s^2 + 2 C_5 C_L L_1 L_5 L_L}$$

10.634 INVALID-ORDER-634  $Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{1}{C_{Ls} + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$

$$H(s) = \frac{C_1 C_5 C_L L_1 L_5 L_L R_5 R_L s^6 + C_1 C_5 L_1 L_5 L_L R_5 s^5 + C_1 C_5 L_1 L_5 L_L R_L s^5 + C_1 C_5 L_1 L_5 R_5 R_L s^4 + C_1 C_L L_1 L_5 L_L R_L s^5 + C_1 C_L L_1 L_L R_5 R_L s^4 + C_1 L_1 L_5 L_L s^4 + C_1 L_1 L_5 R_L s^3 + C_1 L_1 L_L s^3 + C_1 L_1 L s^3 + C_1 L s^3 + C_1 s^3}{C_1 C_5 C_L L_1 L_5 L_L R_5 R_L s^6 + C_1 C_5 L_1 L_5 L_L R_5 s^5 + C_1 C_5 L_1 L_5 L_L R_L s^5 + C_1 C_5 L_1 L_5 R_5 R_L s^4 + C_1 C_L L_1 L_5 L_L R_L s^5 + C_1 C_L L_1 L_L R_5 R_L s^4 + C_1 L_1 L_5 L_L s^4 + C_1 L_1 L_5 R_L s^3 + C_1 L_1 L_L s^3 + C_1 L_1 L s^3 + C_1 L s^3 + C_1 s^3}$$

**10.635 INVALID-ORDER-635**  $Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$

$$H(s) = \frac{C_1 C_5 C_L L_1 L_5 L_L R_5 s^6 + C_1 C_5 C_L L_1 L_5 L_L R_L s^6 + C_1 C_5 L_1 L_5 L_L s^5 + C_1 C_5 L_1 L_5 R_5 s^4 + C_1 C_5 L_1 L_5 R_L s^4 + C_1 C_L L_1 L_5 L_L s^5 + C_1 C_L L_1 L_L R_5 s^4 + C_1 C_L L_1 L_L R_L s^4 + C_1 L_1 L_5 s^3}{C_1 C_5 C_L L_1 L_5 L_L R_5 s^6 + C_1 C_5 C_L L_1 L_5 L_L R_L s^6 + C_1 C_5 L_1 L_5 L_L s^5 + C_1 C_5 L_1 L_5 R_5 s^4 + C_1 C_5 L_1 L_5 R_L s^4 + C_1 C_L L_1 L_5 L_L s^5 + C_1 C_L L_1 L_L R_5 s^4 + C_1 C_L L_1 L_L R_L s^4 + C_1 L_1 L_5 s^3}.$$

10.636 INVALID-ORDER-636  $Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$

$$H(s) = \frac{C_1 C_5 C_L L_1 L_5 L_L R_5 s^6 + C_1 C_5 C_L L_1 L_5 L_L R_L s^6 + C_1 C_5 C_L L_1 L_5 R_5 R_L s^5 + C_1 C_5 L_1 L_5 R_5 s^4 + C_1 C_5 L_1 L_5 R_L s^4 + C_1 C_L L_1 L_5 L_L s^5 + C_1 C_L L_1 L_5 R_L s^4 + C_1 C_L L_1 L_L R_5 s^4 + C_1 C_L L_1 L_L R_L s^4 + C_1 C_L L_1 L_L s^4 + C_1 C_L L_1 L_L s^3 + C_1 C_L L_1 L_L s^2 + C_1 C_L L_1 L_L s + C_1 C_L L_1 L_L}{C_1 C_5 C_L L_1 L_5 L_L R_5 s^6 + C_1 C_5 C_L L_1 L_5 L_L R_L s^6 + C_1 C_5 C_L L_1 L_5 R_5 R_L s^5 + C_1 C_5 L_1 L_5 R_5 s^4 + C_1 C_5 L_1 L_5 R_L s^4 + C_1 C_L L_1 L_5 L_L s^5 + C_1 C_L L_1 L_5 R_L s^4 + C_1 C_L L_1 L_L R_5 s^4 + C_1 C_L L_1 L_L R_L s^4 + C_1 C_L L_1 L_L s^4 + C_1 C_L L_1 L_L s^3 + C_1 C_L L_1 L_L s^2 + C_1 C_L L_1 L_L s + C_1 C_L L_1 L_L}$$

**10.637 INVALID-ORDER-637**  $Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, R_L \right)$

$$H(s) = \frac{L_1 R_L s (C_5 L_5 R_5 g_m s^2 - C_5 L_5 s^2 - C_5 R_5 s + R_5 g_m - 1)}{C_1 C_5 L_1 L_5 R_5 s^4 + C_1 C_5 L_1 L_5 R_L s^4 + C_1 C_5 L_1 R_5 R_L s^3 + C_1 L_1 R_5 s^2 + C_1 L_1 R_L s^2 + C_5 L_1 L_5 R_5 g_m s^3 + 2 C_5 L_1 L_5 R_L g_m s^3 + C_5 L_1 L_5 s^3 + 2 C_5 L_1 R_5 R_L g_m s^2 + C_5 L_1 R_5 s^2 + C_5 L_1 R_L s^2 + C_5 L_1 R_L g_m s + C_5 L_1 R_L}$$

10.638 INVALID-ORDER-638  $Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{1}{C_L s} \right)$

$$H(s) = \frac{L_1 s (C_5 L_5 R_5 g_m s^2 - C_5 L_5 s^2 - C_5 R_5 s + R_5 g_m - 1)}{C_1 C_5 C_L L_1 L_5 R_5 s^5 + C_1 C_5 L_1 L_5 s^4 + C_1 C_5 L_1 R_5 s^3 + C_1 C_L L_1 R_5 s^3 + C_1 L_1 s^2 + C_5 C_L L_1 L_5 R_5 g_m s^4 + C_5 C_L L_1 L_5 s^4 + C_5 C_L L_1 R_5 s^3 + C_5 C_L L_5 R_5 s^3 + 2 C_5 L_1 L_5 g_m s^3 + 2 C_5 L_1 L_5 s^2 + 2 C_5 L_1 R_5 s + 2 C_5 R_5 g_m - 1}$$

**10.639 INVALID-ORDER-639**  $Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{R_L}{C_L R_L s + 1} \right)$

$$H(s) = \frac{C_1 C_5 C_L L_1 L_5 R_5 R_L s^5 + C_1 C_5 L_1 L_5 R_5 s^4 + C_1 C_5 L_1 L_5 R_L s^4 + C_1 C_5 L_1 R_5 R_L s^3 + C_1 C_L L_1 R_5 R_L s^3 + C_1 L_1 R_5 s^2 + C_1 L_1 R_L s^2 + C_5 C_L L_1 L_5 R_5 R_L g_m s^4 + C_5 C_L L_1 L_5 R_L s^4 + C_5 C_L L_1 L_5 R_5 s^4 + C_5 C_L L_1 L_5 R_L s^4 + C_5 C_L L_1 L_5 R_5 s^4 + C_5 C_L L_1 L_5 R_L s^4 + C_5 C_L L_1 L_5 R_5 s^4 + C_5 C_L L_1 L_5 R_L s^4}{C_1 C_5 C_L L_1 L_5 R_5 R_L s^5 + C_1 C_5 L_1 L_5 R_5 s^4 + C_1 C_5 L_1 L_5 R_L s^4 + C_1 C_5 L_1 R_5 R_L s^3 + C_1 C_L L_1 R_5 R_L s^3 + C_1 L_1 R_5 s^2 + C_1 L_1 R_L s^2 + C_5 C_L L_1 L_5 R_5 R_L g_m s^4 + C_5 C_L L_1 L_5 R_L s^4 + C_5 C_L L_1 L_5 R_5 s^4 + C_5 C_L L_1 L_5 R_L s^4 + C_5 C_L L_1 L_5 R_5 s^4 + C_5 C_L L_1 L_5 R_L s^4 + C_5 C_L L_1 L_5 R_5 s^4 + C_5 C_L L_1 L_5 R_L s^4}$$

10.640 INVALID-ORDER-640  $Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, R_L + \frac{1}{C_L s} \right)$

$$H(s) = -\frac{C_1 C_5 C_L L_1 L_5 R_5 s^5 + C_1 C_5 C_L L_1 L_5 R_L s^5 + C_1 C_5 C_L L_1 R_5 R_L s^4 + C_1 C_5 L_1 L_5 s^4 + C_1 C_5 L_1 R_5 s^3 + C_1 C_L L_1 R_5 s^3 + C_1 C_L L_1 R_L s^3 + C_1 L_1 s^2 + C_5 C_L L_1 L_5 R_5 g_m s^4 + 2 C_5 C_L L_1 L_5 R_5 s^4}{C_1 C_5 C_L L_1 L_5 R_5 s^5 + C_1 C_5 C_L L_1 L_5 R_L s^5 + C_1 C_5 C_L L_1 R_5 R_L s^4 + C_1 C_5 L_1 L_5 s^4 + C_1 C_5 L_1 R_5 s^3 + C_1 C_L L_1 R_5 s^3 + C_1 C_L L_1 R_L s^3 + C_1 L_1 s^2 + C_5 C_L L_1 L_5 R_5 g_m s^4 + 2 C_5 C_L L_1 L_5 R_5 s^4}$$

$$10.641 \quad \text{INVALID-ORDER-641} \quad Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, L_L s + \frac{1}{C_L s} \right)$$

$$H(s) = -\frac{C_1 C_5 C_L L_1 L_5 L_L s^6 + C_1 C_5 C_L L_1 L_5 R_5 s^5 + C_1 C_5 C_L L_1 L_L R_5 s^5 + C_1 C_5 L_1 L_5 s^4 + C_1 C_5 L_1 R_5 s^3 + C_1 C_L L_1 L_L s^4 + C_1 C_L L_1 R_5 s^3 + C_1 L_1 s^2 + 2C_5 C_L L_1 L_5 L_L g_m s^5 + C_5 C_L L_1 L_5 L_L s^6}{C_1 C_5 C_L L_1 L_5 L_L s^6 + C_1 C_5 C_L L_1 L_5 R_5 s^5 + C_1 C_5 C_L L_1 L_L R_5 s^5 + C_1 C_5 L_1 L_5 s^4 + C_1 C_5 L_1 R_5 s^3 + C_1 C_L L_1 L_L s^4 + C_1 C_L L_1 R_5 s^3 + C_1 L_1 s^2 + 2C_5 C_L L_1 L_5 L_L g_m s^5 + C_5 C_L L_1 L_5 L_L s^6}$$

**10.642 INVALID-ORDER-642**  $Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{L_L s}{C_L L_L s^2 + 1} \right)$

$$H(s) = \frac{C_1 C_5 C_L L_1 L_5 L_L R_5 s^6 + C_1 C_5 L_1 L_5 L_L s^5 + C_1 C_5 L_1 L_5 R_5 s^4 + C_1 C_5 L_1 L_L R_5 s^4 + C_1 C_L L_1 L_L R_5 s^4 + C_1 L_1 L_L s^3 + C_1 L_1 R_5 s^2 + C_5 C_L L_1 L_5 L_L R_5 g_m s^5 + C_5 C_L L_1 L_5 L_L s^5 + C_5 C_L L_1 L_5 L_L R_5 s^5 + C_5 C_L L_1 L_5 L_L R_5 s^5}{C_1 C_5 C_L L_1 L_5 L_L R_5 s^6 + C_1 C_5 L_1 L_5 L_L s^5 + C_1 C_5 L_1 L_5 R_5 s^4 + C_1 C_5 L_1 L_L R_5 s^4 + C_1 C_L L_1 L_L R_5 s^4 + C_1 L_1 L_L s^3 + C_1 L_1 R_5 s^2 + C_5 C_L L_1 L_5 L_L R_5 g_m s^5 + C_5 C_L L_1 L_5 L_L s^5 + C_5 C_L L_1 L_5 L_L R_5 s^5 + C_5 C_L L_1 L_5 L_L R_5 s^5}$$

**10.643 INVALID-ORDER-643**  $Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, L_L s + R_L + \frac{1}{C_L s} \right)$

$$H(s) = -\frac{1}{C_1 C_5 C_L L_1 L_5 L_L s^6 + C_1 C_5 C_L L_1 L_5 R_5 s^5 + C_1 C_5 C_L L_1 L_5 R_L s^5 + C_1 C_5 C_L L_1 L_L R_5 s^5 + C_1 C_5 C_L L_1 R_5 R_L s^4 + C_1 C_5 L_1 L_5 s^4 + C_1 C_5 L_1 R_5 s^3 + C_1 C_L L_1 L_L s^4 + C_1 C_L L_1 R_5 s^3}$$

10.644 INVALID-ORDER-644  $Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$

$$H(s) = \frac{C_1 C_5 C_L L_1 L_5 L_L R_5 R_L s^6 + C_1 C_5 L_1 L_5 L_L R_5 s^5 + C_1 C_5 L_1 L_5 L_L R_L s^5 + C_1 C_5 L_1 L_5 R_5 R_L s^4 + C_1 C_5 L_1 L_L R_5 R_L s^4 + C_1 C_L L_1 L_L R_5 R_L s^4 + C_1 L_1 L_L R_5 s^3 + C_1 L_1 L_L R_L s^3 + C_1 L_1 L_L R_5 s^2 + C_1 L_1 L_L R_L s^2 + C_1 L_1 L_L s^2 + C_1 L_1 L s^2 + C_1 L_1 s^2 + C_1 L s^2 + C_1 s^2}{C_1 C_5 C_L L_1 L_5 L_L R_5 R_L s^6 + C_1 C_5 C_L L_1 L_5 L_L R_5 s^5 + C_1 C_5 C_L L_1 L_5 L_L R_L s^5 + C_1 C_5 C_L L_1 L_5 R_5 R_L s^4 + C_1 C_5 C_L L_1 L_L R_5 R_L s^4 + C_1 C_5 C_L L_1 L_L R_5 s^3 + C_1 C_5 C_L L_1 L_L R_L s^3 + C_1 C_5 C_L L_1 L_L s^2 + C_1 C_5 C_L L_1 L s^2 + C_1 C_5 C_L L_1 s^2 + C_1 C_5 C_L L s^2 + C_1 C_5 C_L s^2 + C_1 C_5 L_1 L_5 L_L R_5 R_L s^6 + C_1 C_5 L_1 L_5 L_L R_5 s^5 + C_1 C_5 L_1 L_5 L_L R_L s^5 + C_1 C_5 L_1 L_5 R_5 R_L s^4 + C_1 C_5 L_1 L_L R_5 R_L s^4 + C_1 C_5 L_1 L_L R_5 s^3 + C_1 C_5 L_1 L_L R_L s^3 + C_1 C_5 L_1 L_L s^2 + C_1 C_5 L_1 L s^2 + C_1 C_5 L_1 s^2 + C_1 C_5 L s^2 + C_1 C_5 s^2 + C_1 C_L L_1 L_L R_5 R_L s^4 + C_1 C_L L_1 L_L R_5 s^3 + C_1 C_L L_1 L_L R_L s^3 + C_1 C_L L_1 L_L s^2 + C_1 C_L L_1 L s^2 + C_1 C_L L_1 s^2 + C_1 C_L L s^2 + C_1 C_L s^2 + C_1 L_1 L_L R_5 s^3 + C_1 L_1 L_L R_L s^3 + C_1 L_1 L_L s^2 + C_1 L_1 L s^2 + C_1 L_1 s^2 + C_1 L s^2 + C_1 s^2}.$$

**10.645 INVALID-ORDER-645**  $Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$

$$H(s) = -\frac{C_1 C_5 C_L L_1 L_5 L_L R_5 s^6 + C_1 C_5 C_L L_1 L_5 L_L R_L s^6 + C_1 C_5 C_L L_1 L_L R_5 R_L s^5 + C_1 C_5 L_1 L_5 L_L s^5 + C_1 C_5 L_1 L_5 R_5 s^4 + C_1 C_5 L_1 L_5 R_L s^4 + C_1 C_5 L_1 L_L R_5 s^4 + C_1 C_5 L_1 R_5 R_L s^3 + C}{...}$$

$$10.646 \quad \text{INVALID-ORDER-646} \quad Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$$

$$H(s) = -\frac{C_1 C_5 C_L L_1 L_5 L_L R_5 s^6 + C_1 C_5 C_L L_1 L_5 L_L R_L s^6 + C_1 C_5 C_L L_1 L_5 R_5 R_L s^5 + C_1 C_5 C_L L_1 L_L R_5 R_L s^5 + C_1 C_5 L_1 L_5 R_5 s^4 + C_1 C_5 L_1 L_5 R_L s^4 + C_1 C_5 L_1 R_5 R_L s^3 + C_1 C_L L_1 L_L R_5}{C_1 C_5 C_L L_1 L_5 L_L R_5 s^6 + C_1 C_5 C_L L_1 L_5 L_L R_L s^6 + C_1 C_5 C_L L_1 L_5 R_5 R_L s^5 + C_1 C_5 C_L L_1 L_L R_5 R_L s^5 + C_1 C_5 L_1 L_5 R_5 s^4 + C_1 C_5 L_1 L_5 R_L s^4 + C_1 C_5 L_1 R_5 R_L s^3 + C_1 C_L L_1 L_L R_5}$$

**10.647 INVALID-ORDER-647**  $Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, R_5, \frac{1}{C_L s} \right)$

$$H(s) = \frac{(R_5 g_m - 1)(C_1 L_1 s^2 + C_1 R_1 s + 1)}{C_1 C_L L_1 R_5 g_m s^3 + C_1 C_L L_1 s^3 + C_1 C_L R_1 R_5 g_m s^2 + C_1 C_L R_1 s^2 + C_1 C_L R_5 s^2 + 2C_1 L_1 g_m s^2 + 2C_1 R_1 g_m s + C_1 s + C_L R_5 g_m s + C_L s + 2g_m}$$

**10.648 INVALID-ORDER-648**  $Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, R_5, \frac{R_L}{C_L R_L s + 1} \right)$

$$H(s) = \frac{R_L (R_5 g_m - 1) (C_1 L_1 s^2 + C_1 R_1 s + 1)}{C_1 C_L L_1 R_5 R_L g_m s^3 + C_1 C_L L_1 R_L s^3 + C_1 C_L R_1 R_5 R_L g_m s^2 + C_1 C_L R_1 R_L s^2 + C_1 C_L R_5 R_L s^2 + C_1 L_1 R_5 g_m s^2 + 2 C_1 L_1 R_L g_m s^2 + C_1 L_1 s^2 + C_1 R_1 R_5 g_m s + 2 C_1 R_1 R_L g_m s + C_1 R_1 s + 1}$$

**10.649 INVALID-ORDER-649**  $Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, R_5, R_L + \frac{1}{C_L s} \right)$

$$H(s) = \frac{(R_5 g_m - 1)(C_L R_L s + 1)(C_1 L_1 s^2 + C_1 R_1 s + 1)}{C_1 C_L L_1 R_5 g_m s^3 + 2C_1 C_L L_1 R_L g_m s^3 + C_1 C_L L_1 s^3 + C_1 C_L R_1 R_5 g_m s^2 + 2C_1 C_L R_1 R_L g_m s^2 + C_1 C_L R_1 s^2 + C_1 C_L R_5 s^2 + C_1 C_L R_L s^2 + 2C_1 L_1 g_m s^2 + 2C_1 R_1 g_m s + C_1 s + C_L}$$

**10.650 INVALID-ORDER-650**  $Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, R_5, L_L s + \frac{1}{C_L s} \right)$

$$H(s) = \frac{(R_5 g_m - 1)(C_L L_L s^2 + 1)(C_1 L_1 s^2 + C_1 R_1 s + 1)}{2C_1 C_L L_1 L_L g_m s^4 + C_1 C_L L_1 R_5 g_m s^3 + C_1 C_L L_1 s^3 + 2C_1 C_L L_L R_1 g_m s^3 + C_1 C_L L_L s^3 + C_1 C_L R_1 R_5 g_m s^2 + C_1 C_L R_1 s^2 + C_1 C_L R_5 s^2 + 2C_1 L_1 g_m s^2 + 2C_1 R_1 g_m s + C_1 s + 2C_L}$$

**10.651 INVALID-ORDER-651**  $Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, R_5, \frac{L_L s}{C_L L_L s^2 + 1} \right)$

$$H(s) = \frac{L_L s (R_5 g_m - 1)(C_1 L_1 s^2 + C_1 R_1 s + 1)}{C_1 C_L L_1 L_L R_5 g_m s^4 + C_1 C_L L_1 L_L s^4 + C_1 C_L L_L R_1 R_5 g_m s^3 + C_1 C_L L_L R_1 s^3 + C_1 C_L L_L R_5 s^3 + 2C_1 L_1 L_L g_m s^3 + C_1 L_1 R_5 g_m s^2 + C_1 L_1 s^2 + 2C_1 L_L R_1 g_m s^2 + C_1 L_L s^2 + C_1 R_1}$$

**10.652 INVALID-ORDER-652**  $Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, R_5, L_L s + R_L + \frac{1}{C_L s} \right)$

$$H(s) = \frac{(R_5 g_m - 1)(C_1 L_1 s^2 + C_1 R_1 s + 1)(C_L L_L s^2 + C_L R_L s + 1)}{2C_1 C_L L_1 L_L g_m s^4 + C_1 C_L L_1 R_5 g_m s^3 + 2C_1 C_L L_1 R_L g_m s^3 + C_1 C_L L_1 s^3 + 2C_1 C_L L_L R_1 g_m s^3 + C_1 C_L L_L s^3 + C_1 C_L R_1 R_5 g_m s^2 + 2C_1 C_L R_1 R_L g_m s^2 + C_1 C_L R_1 s^2 + C_1 C_L R_5 s^2}$$

**10.653 INVALID-ORDER-653**  $Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, R_5, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$

$$H(s) = \frac{C_1 C_L L_1 L_L R_5 R_L g_m s^4 + C_1 C_L L_1 L_L R_L s^4 + C_1 C_L L_L R_1 R_5 R_L g_m s^3 + C_1 C_L L_L R_1 R_L s^3 + C_1 C_L L_L R_5 R_L s^3 + C_1 L_1 L_L R_5 g_m s^3 + 2C_1 L_1 L_L R_L g_m s^3 + C_1 L_1 L_L s^3 + C_1 L_1 R_5 s^2 + C_1 L_1 R_L s^2 + C_1 L_1 s^2 + C_1 R_5 s^2 + C_1 R_L s^2 + C_1 s + C_L}{C_1 C_L L_1 L_L R_5 R_L g_m s^4 + C_1 C_L L_1 L_L R_L s^4 + C_1 C_L L_L R_1 R_5 R_L g_m s^3 + C_1 C_L L_L R_1 R_L s^3 + C_1 C_L L_L R_5 R_L s^3 + C_1 L_1 L_L R_5 g_m s^3 + 2C_1 L_1 L_L R_L g_m s^3 + C_1 L_1 L_L s^3 + C_1 L_1 R_5 s^2 + C_1 L_1 R_L s^2 + C_1 L_1 s^2 + C_1 R_5 s^2 + C_1 R_L s^2 + C_1 s + C_L}$$

$$10.654 \quad \text{INVALID-ORDER-654} \quad Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \infty, \quad R_5, \quad \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$$

$$H(s) = \frac{(R_5 g_m - 1)}{C_1 C_L L_1 L_L R_5 g_m s^4 + 2C_1 C_L L_1 L_L R_L g_m s^4 + C_1 C_L L_1 L_L s^4 + C_1 C_L L_L R_1 R_5 g_m s^3 + 2C_1 C_L L_L R_1 R_L g_m s^3 + C_1 C_L L_L R_1 s^3 + C_1 C_L L_L R_5 s^3 + C_1 C_L L_L R_L s^3 + 2C_1 L_1 L_L g_m s^2 + C_1 L_1 L_L s^2 + C_1 L_1 R_1 s^2 + C_1 L_1 R_5 s^2 + C_1 L_1 R_L s^2 + C_1 L_1 s^2 + C_1 R_1 s + C_1 R_5 + C_1 R_L}$$

$$10.655 \quad \text{INVALID-ORDER-655} \quad Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \infty, \quad R_5, \quad \frac{R_L (L_L s + \frac{1}{C_L s})}{L_L s + R_L + \frac{1}{C_L s}} \right)$$

$$H(s) = \frac{(R_5 g_m - 1)}{C_1 C_L L_1 L_L R_5 g_m s^4 + 2C_1 C_L L_1 L_L R_L g_m s^4 + C_1 C_L L_1 L_L s^4 + C_1 C_L L_1 R_5 R_L g_m s^3 + C_1 C_L L_1 R_L s^3 + C_1 C_L L_L R_1 R_5 g_m s^3 + 2C_1 C_L L_L R_1 R_L g_m s^3 + C_1 C_L L_L R_1 s^3 + C_1 C_L L_L R_5 s^3 + C_1 C_L L_L R_L s^3 + 2C_1 L_1 L_L g_m s^2 + C_1 L_1 L_L s^2 + C_1 L_1 R_1 s^2 + C_1 L_1 R_5 s^2 + C_1 L_1 R_L s^2 + C_1 L_1 s^2 + C_1 R_1 s + C_1 R_5 + C_1 R_L}$$

$$10.656 \quad \text{INVALID-ORDER-656} \quad Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \infty, \quad \frac{1}{C_5 s}, \quad R_L \right)$$

$$H(s) = -\frac{R_L (C_5 s - g_m) (C_1 L_1 s^2 + C_1 R_1 s + 1)}{2C_1 C_5 L_1 R_L g_m s^3 + C_1 C_5 L_1 s^3 + 2C_1 C_5 R_1 R_L g_m s^2 + C_1 C_5 R_1 s^2 + C_1 C_5 R_L s^2 + C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + 2C_5 R_L g_m s + C_5 s + g_m}$$

$$10.657 \quad \text{INVALID-ORDER-657} \quad Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \infty, \quad \frac{1}{C_5 s}, \quad \frac{1}{C_L s} \right)$$

$$H(s) = -\frac{(C_5 s - g_m) (C_1 L_1 s^2 + C_1 R_1 s + 1)}{s (C_1 C_5 C_L L_1 s^3 + C_1 C_5 C_L R_1 s^2 + 2C_1 C_5 L_1 g_m s^2 + 2C_1 C_5 R_1 g_m s + C_1 C_5 s + C_1 C_L L_1 g_m s^2 + C_1 C_L R_1 g_m s + C_1 C_L s + C_5 C_L s + 2C_5 g_m + C_L g_m)}$$

$$10.658 \quad \text{INVALID-ORDER-658} \quad Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \infty, \quad \frac{1}{C_5 s}, \quad \frac{R_L}{C_L R_L s + 1} \right)$$

$$H(s) = -\frac{R_L (C_5 s - g_m) (C_1 L_1 s^2 + C_1 R_1 s + 1)}{C_1 C_5 C_L L_1 R_L s^4 + C_1 C_5 C_L R_1 R_L s^3 + 2C_1 C_5 L_1 R_L g_m s^3 + C_1 C_5 L_1 s^3 + 2C_1 C_5 R_1 R_L g_m s^2 + C_1 C_5 R_1 s^2 + C_1 C_5 R_L s^2 + C_1 C_L L_1 R_L g_m s^3 + C_1 C_L R_1 R_L g_m s^2 + C_1 C_L R_L s^2 + C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + 2C_5 R_L g_m s + C_5 s + g_m}$$



**10.659 INVALID-ORDER-659**  $Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{1}{C_5 s}, R_L + \frac{1}{C_L s} \right)$

$$H(s) = -\frac{(C_5 s - g_m)(C_L R_L s + 1)(C_1 L_1 s^2 + C_1 R_1 s + 1)}{s(2C_1 C_5 C_L L_1 R_L g_m s^3 + C_1 C_5 C_L L_1 s^3 + 2C_1 C_5 C_L R_1 R_L g_m s^2 + C_1 C_5 C_L R_1 s^2 + C_1 C_5 C_L R_L s^2 + 2C_1 C_5 L_1 g_m s^2 + 2C_1 C_5 R_1 g_m s + C_1 C_5 s + C_1 C_L L_1 g_m s^2 + C_1 C_L R_1 g_m s}$$

**10.660 INVALID-ORDER-660**  $Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{1}{C_5 s}, L_L s + \frac{1}{C_L s} \right)$

$$H(s) = -\frac{(C_5 s - g_m)(C_L L_L s^2 + 1)(C_1 L_1 s^2 + C_1 R_1 s + 1)}{s(2C_1 C_5 C_L L_1 L_L g_m s^4 + C_1 C_5 C_L L_1 s^3 + 2C_1 C_5 C_L L_L R_1 g_m s^3 + C_1 C_5 C_L L_L s^3 + C_1 C_5 C_L R_1 s^2 + 2C_1 C_5 L_1 g_m s^2 + 2C_1 C_5 R_1 g_m s + C_1 C_5 s + C_1 C_L L_1 g_m s^2 + C_1 C_L R_1 g_m s}$$

**10.661 INVALID-ORDER-661**  $Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} \right)$

$$H(s) = -\frac{L_L s(C_5 s - g_m)(C_1 L_1 s^2 + C_1 R_1 s + 1)}{C_1 C_5 C_L L_1 L_L s^5 + C_1 C_5 C_L L_L R_1 s^4 + 2C_1 C_5 L_1 L_L g_m s^4 + C_1 C_5 L_1 s^3 + 2C_1 C_5 L_L R_1 g_m s^3 + C_1 C_5 L_L s^3 + C_1 C_5 R_1 s^2 + C_1 C_L L_1 L_L g_m s^4 + C_1 C_L L_L R_1 g_m s^3 + C_1 C_L L_L s^3 +$$

**10.662 INVALID-ORDER-662**  $Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{1}{C_5 s}, L_L s + R_L + \frac{1}{C_L s} \right)$

$$H(s) = -\frac{(C_5 s - g_m)(C_1 L_1 s^2 + C_1 R_1 s + 1)(C_L L_L s^2 + 1)}{s(2C_1 C_5 C_L L_1 L_L g_m s^4 + 2C_1 C_5 C_L L_1 R_L g_m s^3 + C_1 C_5 C_L L_1 s^3 + 2C_1 C_5 C_L L_L R_1 g_m s^3 + C_1 C_5 C_L L_L s^3 + 2C_1 C_5 C_L R_1 R_L g_m s^2 + C_1 C_5 C_L R_1 s^2 + C_1 C_5 C_L R_L s^2 + 2C_1 C_5 L_1 g_m s^2 + 2C_1 C_5 R_1 g_m s + C_1 C_5 s + C_1 C_L L_1 g_m s^2 + C_1 C_L R_1 g_m s}$$

**10.663 INVALID-ORDER-663**  $Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{1}{C_5 s}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$

$$H(s) = -\frac{1}{C_1 C_5 C_L L_1 L_L R_L s^5 + C_1 C_5 C_L L_L R_1 R_L s^4 + 2C_1 C_5 L_1 L_L R_L g_m s^4 + C_1 C_5 L_1 L_L s^4 + C_1 C_5 L_1 R_L s^3 + 2C_1 C_5 L_L R_1 R_L g_m s^3 + C_1 C_5 L_L R_1 s^3 + C_1 C_5 L_L R_L s^3 + C_1 C_5 R_1 R_L s^2 + 2C_1 C_5 L_1 g_m s^2 + 2C_1 C_5 R_1 g_m s + C_1 C_5 s + C_1 C_L L_1 g_m s^2 + C_1 C_L R_1 g_m s}$$

$$10.664 \quad \text{INVALID-ORDER-664} \quad Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \infty, \quad \frac{1}{C_5 s}, \quad \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$$

$$H(s) = -\frac{2C_1 C_5 C_L L_1 L_L R_L g_m s^5 + C_1 C_5 C_L L_1 L_L s^5 + 2C_1 C_5 C_L L_L R_1 R_L g_m s^4 + C_1 C_5 C_L L_L R_1 s^4 + C_1 C_5 C_L L_L R_L s^4 + 2C_1 C_5 L_1 L_L g_m s^4 + 2C_1 C_5 L_1 R_L g_m s^3 + C_1 C_5 L_1 s^3 + 2C_1 C_5 L_L R_L g_m s^2 + C_1 C_5 L_L R_1 s^2 + C_1 C_5 L_L s^2 + C_1 C_5 R_1 R_L g_m s + C_1 C_5 R_1 s + C_1 C_5 R_L s + C_1 C_5 s}{2C_1 C_5 C_L L_1 L_L R_L g_m s^5 + C_1 C_5 C_L L_1 L_L s^5 + 2C_1 C_5 C_L L_L R_1 R_L g_m s^4 + C_1 C_5 C_L L_L R_1 s^4 + C_1 C_5 C_L L_L R_L s^4 + 2C_1 C_5 L_1 L_L g_m s^4 + 2C_1 C_5 L_1 R_L g_m s^3 + C_1 C_5 L_1 s^3 + 2C_1 C_5 L_L R_L g_m s^2 + C_1 C_5 L_L R_1 s^2 + C_1 C_5 L_L s^2 + C_1 C_5 R_1 R_L g_m s + C_1 C_5 R_1 s + C_1 C_5 R_L s + C_1 C_5 s}$$

$$10.665 \quad \text{INVALID-ORDER-665} \quad Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \infty, \quad \frac{1}{C_5 s}, \quad \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$$

$$H(s) = -\frac{2C_1 C_5 C_L L_1 L_L R_L g_m s^5 + C_1 C_5 C_L L_1 L_L s^5 + C_1 C_5 C_L L_1 R_L s^4 + 2C_1 C_5 C_L L_L R_1 R_L g_m s^4 + C_1 C_5 C_L L_L R_1 s^4 + C_1 C_5 C_L L_L R_L s^4 + C_1 C_5 C_L R_1 R_L s^3 + 2C_1 C_5 L_1 R_L g_m s^3 + C_1 C_5 L_1 s^3 + 2C_1 C_5 L_L R_L g_m s^2 + C_1 C_5 L_L R_1 s^2 + C_1 C_5 L_L s^2 + C_1 C_5 R_1 R_L g_m s + C_1 C_5 R_1 s + C_1 C_5 R_L s + C_1 C_5 s}{2C_1 C_5 C_L L_1 L_L R_L g_m s^5 + C_1 C_5 C_L L_1 L_L s^5 + C_1 C_5 C_L L_1 R_L s^4 + 2C_1 C_5 C_L L_L R_1 R_L g_m s^4 + C_1 C_5 C_L L_L R_1 s^4 + C_1 C_5 C_L L_L R_L s^4 + C_1 C_5 C_L R_1 R_L s^3 + 2C_1 C_5 L_1 R_L g_m s^3 + C_1 C_5 L_1 s^3 + 2C_1 C_5 L_L R_L g_m s^2 + C_1 C_5 L_L R_1 s^2 + C_1 C_5 L_L s^2 + C_1 C_5 R_1 R_L g_m s + C_1 C_5 R_1 s + C_1 C_5 R_L s + C_1 C_5 s}$$

$$10.666 \quad \text{INVALID-ORDER-666} \quad Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \infty, \quad \frac{R_5}{C_5 R_5 s + 1}, \quad R_L \right)$$

$$H(s) = -\frac{R_L (C_1 L_1 s^2 + C_1 R_1 s + 1) (C_5 R_5 s - R_5 g_m + 1)}{2C_1 C_5 L_1 R_5 R_L g_m s^3 + C_1 C_5 L_1 R_5 s^3 + 2C_1 C_5 R_1 R_5 R_L g_m s^2 + C_1 C_5 R_1 R_5 s^2 + C_1 C_5 R_5 R_L s^2 + C_1 L_1 R_5 g_m s^2 + 2C_1 L_1 R_L g_m s^2 + C_1 L_1 s^2 + C_1 R_1 R_5 g_m s + 2C_1 R_1 R_L g_m s + C_1 R_1 R_5 s + C_1 R_1 s + C_1 R_L s + C_1 s}$$

$$10.667 \quad \text{INVALID-ORDER-667} \quad Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \infty, \quad \frac{R_5}{C_5 R_5 s + 1}, \quad \frac{1}{C_L s} \right)$$

$$H(s) = -\frac{(C_1 L_1 s^2 + C_1 R_1 s + 1) (C_5 R_5 s - R_5 g_m + 1)}{C_1 C_5 C_L L_1 R_5 s^4 + C_1 C_5 C_L R_1 R_5 s^3 + 2C_1 C_5 L_1 R_5 g_m s^3 + 2C_1 C_5 R_1 R_5 g_m s^2 + C_1 C_5 R_5 s^2 + C_1 C_L L_1 R_5 g_m s^3 + C_1 C_L L_1 s^3 + C_1 C_L R_1 R_5 g_m s^2 + C_1 C_L R_1 s^2 + C_1 C_L R_5 s^2 + C_1 C_L s^2 + C_1 C_L s + C_1 s}$$

$$10.668 \quad \text{INVALID-ORDER-668} \quad Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \infty, \quad \frac{R_5}{C_5 R_5 s + 1}, \quad \frac{R_L}{C_L R_L s + 1} \right)$$

$$H(s) = -\frac{C_1 C_5 C_L L_1 R_5 R_L s^4 + C_1 C_5 C_L R_1 R_5 R_L s^3 + 2C_1 C_5 L_1 R_5 R_L g_m s^3 + C_1 C_5 L_1 R_5 s^3 + 2C_1 C_5 R_1 R_5 R_L g_m s^2 + C_1 C_5 R_1 R_5 s^2 + C_1 C_5 R_5 R_L s^2 + C_1 C_L L_1 R_5 R_L g_m s^3 + C_1 C_L L_1 s^3 + C_1 C_L R_1 R_5 g_m s^2 + C_1 C_L R_1 s^2 + C_1 C_L R_5 s^2 + C_1 C_L s^2 + C_1 C_L s + C_1 s}{C_1 C_5 C_L L_1 R_5 R_L s^4 + C_1 C_5 C_L R_1 R_5 R_L s^3 + 2C_1 C_5 L_1 R_5 R_L g_m s^3 + C_1 C_5 L_1 R_5 s^3 + 2C_1 C_5 R_1 R_5 R_L g_m s^2 + C_1 C_5 R_1 R_5 s^2 + C_1 C_5 R_5 R_L s^2 + C_1 C_L L_1 R_5 R_L g_m s^3 + C_1 C_L L_1 s^3 + C_1 C_L R_1 R_5 g_m s^2 + C_1 C_L R_1 s^2 + C_1 C_L R_5 s^2 + C_1 C_L s^2 + C_1 C_L s + C_1 s}$$

**10.669 INVALID-ORDER-669**  $Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, R_L + \frac{1}{C_L s} \right)$

$$H(s) = -\frac{2C_1 C_5 C_L L_1 R_5 R_L g_m s^4 + C_1 C_5 C_L L_1 R_5 s^4 + 2C_1 C_5 C_L R_1 R_5 R_L g_m s^3 + C_1 C_5 C_L R_1 R_5 s^3 + C_1 C_5 C_L R_5 R_L s^3 + 2C_1 C_5 L_1 R_5 g_m s^3 + 2C_1 C_5 R_1 R_5 g_m s^2 + C_1 C_5 R_5 s^2 + C_1 C_L L_1 R_5 s^2 + C_1 C_L L_1 R_5 s^2 + C_1 C_L L_1 R_5 s^2}{2C_1 C_5 C_L L_1 R_5 R_L g_m s^4 + C_1 C_5 C_L L_1 R_5 s^4 + 2C_1 C_5 C_L R_1 R_5 R_L g_m s^3 + C_1 C_5 C_L R_1 R_5 s^3 + C_1 C_5 C_L R_5 R_L s^3 + 2C_1 C_5 L_1 R_5 g_m s^3 + 2C_1 C_5 R_1 R_5 g_m s^2 + C_1 C_5 R_5 s^2 + C_1 C_L L_1 R_5 s^2 + C_1 C_L L_1 R_5 s^2 + C_1 C_L L_1 R_5 s^2}$$

**10.670 INVALID-ORDER-670**  $Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, L_L s + \frac{1}{C_L s} \right)$

$$H(s) = -\frac{2C_1 C_5 C_L L_1 L_L R_5 g_m s^5 + C_1 C_5 C_L L_1 R_5 s^4 + 2C_1 C_5 C_L L_L R_1 R_5 g_m s^4 + C_1 C_5 C_L L_L R_5 s^4 + C_1 C_5 C_L R_1 R_5 s^3 + 2C_1 C_5 L_1 R_5 g_m s^3 + 2C_1 C_5 R_1 R_5 g_m s^2 + C_1 C_5 R_5 s^2 + 2C_1 C_L L_1 R_5 s^2 + C_1 C_L L_1 R_5 s^2 + C_1 C_L L_1 R_5 s^2}{2C_1 C_5 C_L L_1 L_L R_5 g_m s^5 + C_1 C_5 C_L L_1 R_5 s^4 + 2C_1 C_5 C_L L_L R_1 R_5 g_m s^4 + C_1 C_5 C_L L_L R_5 s^4 + C_1 C_5 C_L R_1 R_5 s^3 + 2C_1 C_5 L_1 R_5 g_m s^3 + 2C_1 C_5 R_1 R_5 g_m s^2 + C_1 C_5 R_5 s^2 + 2C_1 C_L L_1 R_5 s^2 + C_1 C_L L_1 R_5 s^2 + C_1 C_L L_1 R_5 s^2}$$

**10.671 INVALID-ORDER-671**  $Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, \frac{L_L s}{C_L L_L s^2 + 1} \right)$

$$H(s) = -\frac{C_1 C_5 C_L L_1 L_L R_5 s^5 + C_1 C_5 C_L L_L R_1 R_5 s^4 + 2C_1 C_5 L_1 L_L R_5 g_m s^4 + C_1 C_5 L_1 R_5 s^3 + 2C_1 C_5 L_L R_1 R_5 g_m s^3 + C_1 C_5 L_L R_5 s^3 + C_1 C_5 R_1 R_5 s^2 + C_1 C_L L_1 L_L R_5 g_m s^4 + C_1 C_L L_1 L_L R_5 g_m s^4 + C_1 C_L L_1 L_L R_5 g_m s^4}{C_1 C_5 C_L L_1 L_L R_5 s^5 + C_1 C_5 C_L L_L R_1 R_5 s^4 + 2C_1 C_5 L_1 L_L R_5 g_m s^4 + C_1 C_5 L_1 R_5 s^3 + 2C_1 C_5 L_L R_1 R_5 g_m s^3 + C_1 C_5 L_L R_5 s^3 + C_1 C_5 R_1 R_5 s^2 + C_1 C_L L_1 L_L R_5 g_m s^4 + C_1 C_L L_1 L_L R_5 g_m s^4 + C_1 C_L L_1 L_L R_5 g_m s^4}$$

**10.672 INVALID-ORDER-672**  $Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, L_L s + R_L + \frac{1}{C_L s} \right)$

$$H(s) = -\frac{2C_1 C_5 C_L L_1 L_L R_5 g_m s^5 + 2C_1 C_5 C_L L_1 R_5 R_L g_m s^4 + C_1 C_5 C_L L_1 R_5 s^4 + 2C_1 C_5 C_L L_L R_1 R_5 g_m s^4 + C_1 C_5 C_L L_L R_5 s^4 + 2C_1 C_5 C_L R_1 R_5 R_L g_m s^3 + C_1 C_5 C_L R_1 R_5 s^3 + C_1 C_5 C_L R_1 R_5 s^3 + C_1 C_5 C_L R_1 R_5 s^3 + C_1 C_5 C_L R_1 R_5 s^3}{2C_1 C_5 C_L L_1 L_L R_5 g_m s^5 + 2C_1 C_5 C_L L_1 R_5 R_L g_m s^4 + C_1 C_5 C_L L_1 R_5 s^4 + 2C_1 C_5 C_L L_L R_1 R_5 g_m s^4 + C_1 C_5 C_L L_L R_5 s^4 + 2C_1 C_5 C_L R_1 R_5 R_L g_m s^3 + C_1 C_5 C_L R_1 R_5 s^3 + C_1 C_5 C_L R_1 R_5 s^3 + C_1 C_5 C_L R_1 R_5 s^3 + C_1 C_5 C_L R_1 R_5 s^3}$$

**10.673 INVALID-ORDER-673**  $Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$

$$H(s) = -\frac{C_1 C_5 C_L L_1 L_L R_5 R_L s^5 + C_1 C_5 C_L L_L R_1 R_5 R_L s^4 + 2C_1 C_5 L_1 L_L R_5 R_L g_m s^4 + C_1 C_5 L_1 L_L R_5 s^4 + C_1 C_5 L_1 R_5 R_L s^3 + 2C_1 C_5 L_L R_1 R_5 R_L g_m s^3 + C_1 C_5 L_L R_1 R_5 s^3 + C_1 C_5 L_L R_1 R_5 s^3 + C_1 C_5 L_L R_1 R_5 s^3 + C_1 C_5 L_L R_1 R_5 s^3}{C_1 C_5 C_L L_1 L_L R_5 R_L s^5 + C_1 C_5 C_L L_L R_1 R_5 R_L s^4 + 2C_1 C_5 L_1 L_L R_5 R_L g_m s^4 + C_1 C_5 L_1 L_L R_5 s^4 + C_1 C_5 L_1 R_5 R_L s^3 + 2C_1 C_5 L_L R_1 R_5 R_L g_m s^3 + C_1 C_5 L_L R_1 R_5 s^3 + C_1 C_5 L_L R_1 R_5 s^3 + C_1 C_5 L_L R_1 R_5 s^3 + C_1 C_5 L_L R_1 R_5 s^3}$$

$$10.674 \quad \text{INVALID-ORDER-674} \quad Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$$

$$H(s) = -\frac{2C_1 C_5 C_L L_1 L_L R_5 R_L g_m s^5 + C_1 C_5 C_L L_1 L_L R_5 s^5 + 2C_1 C_5 C_L L_L R_1 R_5 R_L g_m s^4 + C_1 C_5 C_L L_L R_1 R_5 s^4 + C_1 C_5 C_L L_L R_5 R_L s^4 + 2C_1 C_5 L_1 L_L R_5 g_m s^4 + 2C_1 C_5 L_1 R_5 R_L g_m s^3 + C_1 C_5 L_1 R_5 R_L s^3 + C_1 C_5 L_1 R_5 s^3 + C_1 C_5 L_1 s^3 + C_1 C_5 R_1 R_5 g_m s^2 + 2C_1 C_5 R_1 R_L g_m s^2 + C_1 C_5 R_1 s^2 + C_1 C_5 R_5 s^2 + C_1 C_5 R_L s^2 + C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + C_5 R_5 g_m s + C_5 R_5 s + C_5 s + g_m}{2C_1 C_5 C_L L_1 L_L R_5 R_L g_m s^5 + C_1 C_5 C_L L_1 L_L R_5 s^5 + 2C_1 C_5 C_L L_L R_1 R_5 R_L g_m s^4 + C_1 C_5 C_L L_L R_1 R_5 s^4 + C_1 C_5 C_L L_L R_5 R_L s^4 + 2C_1 C_5 L_1 L_L R_5 g_m s^4 + 2C_1 C_5 L_1 R_5 R_L g_m s^3 + C_1 C_5 L_1 R_5 R_L s^3 + C_1 C_5 L_1 R_5 s^3 + C_1 C_5 L_1 s^3 + C_1 C_5 R_1 R_5 g_m s^2 + 2C_1 C_5 R_1 R_L g_m s^2 + C_1 C_5 R_1 s^2 + C_1 C_5 R_5 s^2 + C_1 C_5 R_L s^2 + C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + C_5 R_5 g_m s + C_5 R_5 s + C_5 s + g_m}$$

$$10.675 \quad \text{INVALID-ORDER-675} \quad Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$$

$$H(s) = -\frac{2C_1 C_5 C_L L_1 L_L R_5 R_L g_m s^5 + C_1 C_5 C_L L_1 L_L R_5 s^5 + C_1 C_5 C_L L_1 R_5 R_L s^4 + 2C_1 C_5 C_L L_L R_1 R_5 R_L g_m s^4 + C_1 C_5 C_L L_L R_1 R_5 s^4 + C_1 C_5 C_L L_L R_5 R_L s^4 + C_1 C_5 C_L R_1 R_5 R_L s^3 + C_1 C_5 C_L R_1 R_5 s^3 + C_1 C_5 C_L R_1 s^3 + C_1 C_5 C_L s^3 + C_1 C_5 R_1 R_5 g_m s^2 + 2C_1 C_5 R_1 R_L g_m s^2 + C_1 C_5 R_1 s^2 + C_1 C_5 R_5 s^2 + C_1 C_5 R_L s^2 + C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + C_5 R_5 g_m s + C_5 R_5 s + C_5 s + g_m}{2C_1 C_5 C_L L_1 L_L R_5 R_L g_m s^5 + C_1 C_5 C_L L_1 L_L R_5 s^5 + C_1 C_5 C_L L_1 R_5 R_L s^4 + 2C_1 C_5 C_L L_L R_1 R_5 R_L g_m s^4 + C_1 C_5 C_L L_L R_1 R_5 s^4 + C_1 C_5 C_L L_L R_5 R_L s^4 + C_1 C_5 C_L R_1 R_5 R_L s^3 + C_1 C_5 C_L R_1 R_5 s^3 + C_1 C_5 C_L R_1 s^3 + C_1 C_5 C_L s^3 + C_1 C_5 R_1 R_5 g_m s^2 + 2C_1 C_5 R_1 R_L g_m s^2 + C_1 C_5 R_1 s^2 + C_1 C_5 R_5 s^2 + C_1 C_5 R_L s^2 + C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + C_5 R_5 g_m s + C_5 R_5 s + C_5 s + g_m}$$

$$10.676 \quad \text{INVALID-ORDER-676} \quad Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, R_L \right)$$

$$H(s) = \frac{R_L (C_1 L_1 s^2 + C_1 R_1 s + 1) (C_5 R_5 g_m s - C_5 s + g_m)}{C_1 C_5 L_1 R_5 g_m s^3 + 2C_1 C_5 L_1 R_L g_m s^3 + C_1 C_5 L_1 s^3 + C_1 C_5 R_1 R_5 g_m s^2 + 2C_1 C_5 R_1 R_L g_m s^2 + C_1 C_5 R_1 s^2 + C_1 C_5 R_5 s^2 + C_1 C_5 R_L s^2 + C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + C_5 R_5 g_m s + C_5 R_5 s + C_5 s + g_m}$$

$$10.677 \quad \text{INVALID-ORDER-677} \quad Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, \frac{1}{C_L s} \right)$$

$$H(s) = \frac{(C_1 L_1 s^2 + C_1 R_1 s + 1) (C_5 R_5 g_m s - C_5 s + g_m)}{s (C_1 C_5 C_L L_1 R_5 g_m s^3 + C_1 C_5 C_L L_1 s^3 + C_1 C_5 C_L R_1 R_5 g_m s^2 + C_1 C_5 C_L R_1 s^2 + C_1 C_5 C_L R_5 s^2 + 2C_1 C_5 L_1 g_m s^2 + 2C_1 C_5 R_1 g_m s + C_1 C_5 s + C_1 C_L L_1 g_m s^2 + C_1 C_L R_1 g_m s + C_1 s + C_5 R_5 g_m s + C_5 R_5 s + C_5 s + g_m)}$$

$$10.678 \quad \text{INVALID-ORDER-678} \quad Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, \frac{R_L}{C_L R_L s + 1} \right)$$

$$H(s) = \frac{2C_1 C_5 C_L L_1 R_5 R_L g_m s^4 + C_1 C_5 C_L L_1 R_L s^4 + C_1 C_5 C_L R_1 R_5 R_L g_m s^3 + C_1 C_5 C_L R_1 R_L s^3 + C_1 C_5 C_L R_5 R_L s^3 + C_1 C_5 L_1 R_5 g_m s^3 + 2C_1 C_5 L_1 R_L g_m s^3 + C_1 C_5 L_1 s^3 + C_1 C_5 R_1 R_5 s^2 + 2C_1 C_5 R_1 R_L g_m s^2 + C_1 C_5 R_1 s^2 + C_1 C_5 R_5 s^2 + C_1 C_5 R_L s^2 + C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + C_5 R_5 g_m s + C_5 R_5 s + C_5 s + g_m}{2C_1 C_5 C_L L_1 R_5 R_L g_m s^4 + C_1 C_5 C_L L_1 R_L s^4 + C_1 C_5 C_L R_1 R_5 R_L g_m s^3 + C_1 C_5 C_L R_1 R_L s^3 + C_1 C_5 C_L R_5 R_L s^3 + C_1 C_5 L_1 R_5 g_m s^3 + 2C_1 C_5 L_1 R_L g_m s^3 + C_1 C_5 L_1 s^3 + C_1 C_5 R_1 R_5 s^2 + 2C_1 C_5 R_1 R_L g_m s^2 + C_1 C_5 R_1 s^2 + C_1 C_5 R_5 s^2 + C_1 C_5 R_L s^2 + C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + C_5 R_5 g_m s + C_5 R_5 s + C_5 s + g_m}$$

$$10.679 \quad \text{INVALID-ORDER-679} \quad Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \infty, \quad R_5 + \frac{1}{C_5 s}, \quad R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{(C_L R_L s + 1) (C_1 L_1 s^2 + C_1 R_1 s + 1) (C_5 R_5 g_m s - C_5 R_5 g_m)}{s (C_1 C_5 C_L L_1 R_5 g_m s^3 + 2 C_1 C_5 C_L L_1 R_L g_m s^3 + C_1 C_5 C_L L_1 s^3 + C_1 C_5 C_L R_1 R_5 g_m s^2 + 2 C_1 C_5 C_L R_1 R_L g_m s^2 + C_1 C_5 C_L R_1 s^2 + C_1 C_5 C_L R_5 s^2 + C_1 C_5 C_L R_L s^2 + 2 C_1 C_5 L_1 g_m s^2 + C_1 C_5 L_1 R_5 g_m s^2 + C_1 C_5 L_1 R_L g_m s^2 + C_1 C_5 L_1 s^2 + C_1 C_5 R_1 R_5 g_m s^2 + C_1 C_5 R_1 R_L g_m s^2 + C_1 C_5 R_1 s^2 + C_1 C_5 R_5 s^2 + C_1 C_5 R_L s^2 + C_1 C_5 s^2 + C_1 C_5)}{s (C_1 C_5 C_L L_1 R_5 g_m s^3 + 2 C_1 C_5 C_L L_1 R_L g_m s^3 + C_1 C_5 C_L L_1 s^3 + C_1 C_5 C_L R_1 R_5 g_m s^2 + 2 C_1 C_5 C_L R_1 R_L g_m s^2 + C_1 C_5 C_L R_1 s^2 + C_1 C_5 C_L R_5 s^2 + C_1 C_5 C_L R_L s^2 + 2 C_1 C_5 L_1 g_m s^2 + C_1 C_5 L_1 R_5 g_m s^2 + C_1 C_5 L_1 R_L g_m s^2 + C_1 C_5 L_1 s^2 + C_1 C_5 R_1 R_5 g_m s^2 + C_1 C_5 R_1 R_L g_m s^2 + C_1 C_5 R_1 s^2 + C_1 C_5 R_5 s^2 + C_1 C_5 R_L s^2 + C_1 C_5 s^2 + C_1 C_5)}$$

$$10.680 \quad \text{INVALID-ORDER-680} \quad Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \infty, \quad R_5 + \frac{1}{C_5 s}, \quad L_L s + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{(C_L L_L s^2 + 1) (C_1 L_1 s^2 + C_1 R_1 s + 1) (C_5 R_5 g_m s - C_5 R_5 g_m)}{s (2 C_1 C_5 C_L L_1 L_L g_m s^4 + C_1 C_5 C_L L_1 R_5 g_m s^3 + C_1 C_5 C_L L_1 s^3 + 2 C_1 C_5 C_L L_L R_1 g_m s^3 + C_1 C_5 C_L L_L s^3 + C_1 C_5 C_L R_1 R_5 g_m s^2 + C_1 C_5 C_L R_1 s^2 + C_1 C_5 C_L R_5 s^2 + 2 C_1 C_5 L_1 g_m s^2 + C_1 C_5 L_1 R_5 g_m s^2 + C_1 C_5 L_1 R_L g_m s^2 + C_1 C_5 L_1 s^2 + C_1 C_5 R_1 R_5 g_m s^2 + C_1 C_5 R_1 R_L g_m s^2 + C_1 C_5 R_1 s^2 + C_1 C_5 R_5 s^2 + C_1 C_5 R_L s^2 + C_1 C_5 s^2 + C_1 C_5)}$$

$$10.681 \quad \text{INVALID-ORDER-681} \quad Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \infty, \quad R_5 + \frac{1}{C_5 s}, \quad \frac{L_L s}{C_L L_L s^2 + 1} \right)$$

$$H(s) = \frac{(C_1 L_1 s^2 + C_1 R_1 s + 1) (C_5 R_5 g_m s - C_5 R_5 g_m)}{C_1 C_5 C_L L_1 L_L R_5 g_m s^5 + C_1 C_5 C_L L_1 L_L s^5 + C_1 C_5 C_L L_L R_1 R_5 g_m s^4 + C_1 C_5 C_L L_L R_1 s^4 + C_1 C_5 C_L L_L R_5 s^4 + 2 C_1 C_5 L_1 L_L g_m s^4 + C_1 C_5 L_1 R_5 g_m s^3 + C_1 C_5 L_1 s^3 + 2 C_1 C_5 L_L R_1 g_m s^3 + C_1 C_5 L_L R_1 s^3 + C_1 C_5 L_L R_5 s^3 + C_1 C_5 L_L s^3 + C_1 C_5 R_1 R_5 g_m s^2 + C_1 C_5 R_1 R_L g_m s^2 + C_1 C_5 R_1 s^2 + C_1 C_5 R_5 s^2 + C_1 C_5 R_L s^2 + C_1 C_5 s^2 + C_1 C_5}$$

$$10.682 \quad \text{INVALID-ORDER-682} \quad Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \infty, \quad R_5 + \frac{1}{C_5 s}, \quad L_L s + R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{(C_1 L_1 s^2 + C_1 R_1 s + 1) (C_5 R_5 g_m s - C_5 R_5 g_m)}{s (2 C_1 C_5 C_L L_1 L_L g_m s^4 + C_1 C_5 C_L L_1 R_5 g_m s^3 + 2 C_1 C_5 C_L L_1 R_L g_m s^3 + C_1 C_5 C_L L_1 s^3 + 2 C_1 C_5 C_L L_L R_1 g_m s^3 + C_1 C_5 C_L L_L s^3 + C_1 C_5 C_L R_1 R_5 g_m s^2 + 2 C_1 C_5 C_L R_1 R_L g_m s^2 + C_1 C_5 C_L R_1 s^2 + C_1 C_5 C_L R_5 s^2 + C_1 C_5 C_L R_L s^2 + 2 C_1 C_5 L_1 g_m s^2 + C_1 C_5 L_1 R_5 g_m s^2 + C_1 C_5 L_1 R_L g_m s^2 + C_1 C_5 L_1 s^2 + C_1 C_5 R_1 R_5 g_m s^2 + C_1 C_5 R_1 R_L g_m s^2 + C_1 C_5 R_1 s^2 + C_1 C_5 R_5 s^2 + C_1 C_5 R_L s^2 + C_1 C_5 s^2 + C_1 C_5)}$$

$$10.683 \quad \text{INVALID-ORDER-683} \quad Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \infty, \quad R_5 + \frac{1}{C_5 s}, \quad \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$$

$$H(s) = \frac{(C_1 L_1 s^2 + C_1 R_1 s + 1) (C_5 R_5 g_m s - C_5 R_5 g_m)}{C_1 C_5 C_L L_1 L_L R_5 R_L g_m s^5 + C_1 C_5 C_L L_1 L_L R_L s^5 + C_1 C_5 C_L L_L R_1 R_5 R_L g_m s^4 + C_1 C_5 C_L L_L R_1 R_L s^4 + C_1 C_5 C_L L_L R_5 R_L s^4 + C_1 C_5 L_1 L_L R_5 g_m s^4 + 2 C_1 C_5 L_1 L_L R_L g_m s^4 + C_1 C_5 L_1 R_5 g_m s^3 + C_1 C_5 L_1 R_L g_m s^3 + C_1 C_5 L_1 s^3 + 2 C_1 C_5 L_L R_1 g_m s^3 + C_1 C_5 L_L R_1 s^3 + C_1 C_5 L_L R_5 s^3 + C_1 C_5 L_L s^3 + C_1 C_5 R_1 R_5 g_m s^2 + C_1 C_5 R_1 R_L g_m s^2 + C_1 C_5 R_1 s^2 + C_1 C_5 R_5 s^2 + C_1 C_5 R_L s^2 + C_1 C_5 s^2 + C_1 C_5}$$

$$10.684 \quad \text{INVALID-ORDER-684} \quad Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \infty, \quad R_5 + \frac{1}{C_5 s}, \quad \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$$

$$H(s) = \frac{C_1 C_5 C_L L_1 L_L R_5 g_m s^5 + 2C_1 C_5 C_L L_1 L_L R_L g_m s^5 + C_1 C_5 C_L L_1 L_L s^5 + C_1 C_5 C_L L_L R_1 R_5 g_m s^4 + 2C_1 C_5 C_L L_L R_1 R_L g_m s^4 + C_1 C_5 C_L L_L R_1 s^4 + C_1 C_5 C_L L_L R_5 s^4 + C_1 C_5 C_L L_L}{C_1 C_5 C_L L_1 L_L R_5 g_m s^5 + 2C_1 C_5 C_L L_1 L_L R_L g_m s^5 + C_1 C_5 C_L L_1 L_L s^5 + C_1 C_5 C_L L_L R_1 R_5 g_m s^4 + 2C_1 C_5 C_L L_L R_1 R_L g_m s^4 + C_1 C_5 C_L L_L R_1 s^4 + C_1 C_5 C_L L_L R_5 s^4 + C_1 C_5 C_L L_L}$$

$$10.685 \quad \text{INVALID-ORDER-685} \quad Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \infty, \quad R_5 + \frac{1}{C_5 s}, \quad \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$$

$$H(s) = \frac{C_1 C_5 C_L L_1 L_L R_5 g_m s^5 + 2C_1 C_5 C_L L_1 L_L R_L g_m s^5 + C_1 C_5 C_L L_1 L_L s^5 + C_1 C_5 C_L L_1 R_5 R_L g_m s^4 + C_1 C_5 C_L L_1 R_L s^4 + C_1 C_5 C_L L_L R_1 R_5 g_m s^4 + 2C_1 C_5 C_L L_L R_1 R_L g_m s^4 + C_1 C_5 C_L L_L R_1 s^4 + C_1 C_5 C_L L_L R_5 s^4 + C_1 C_5 C_L L_L}{C_1 C_5 C_L L_1 L_L R_5 g_m s^5 + 2C_1 C_5 C_L L_1 L_L R_L g_m s^5 + C_1 C_5 C_L L_1 L_L s^5 + C_1 C_5 C_L L_1 R_5 R_L g_m s^4 + C_1 C_5 C_L L_1 R_L s^4 + C_1 C_5 C_L L_L R_1 R_5 g_m s^4 + 2C_1 C_5 C_L L_L R_1 R_L g_m s^4 + C_1 C_5 C_L L_L R_1 s^4 + C_1 C_5 C_L L_L R_5 s^4 + C_1 C_5 C_L L_L}$$

$$10.686 \quad \text{INVALID-ORDER-686} \quad Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \infty, \quad L_5 s + \frac{1}{C_5 s}, \quad R_L \right)$$

$$H(s) = \frac{R_L (C_1 L_1 s^2 + C_1 R_1 s + 1) (C_5 L_5 g_m s^2 - C_5 s + g_m)}{C_1 C_5 L_1 L_5 g_m s^4 + 2C_1 C_5 L_1 R_L g_m s^3 + C_1 C_5 L_1 s^3 + C_1 C_5 L_5 R_1 g_m s^3 + C_1 C_5 L_5 s^3 + 2C_1 C_5 R_1 R_L g_m s^2 + C_1 C_5 R_1 s^2 + C_1 C_5 R_L s^2 + C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + C_5 L_5 g_m s^2 - C_5 s + g_m}$$

$$10.687 \quad \text{INVALID-ORDER-687} \quad Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \infty, \quad L_5 s + \frac{1}{C_5 s}, \quad \frac{1}{C_L s} \right)$$

$$H(s) = \frac{(C_1 L_1 s^2 + C_1 R_1 s + 1) (C_5 L_5 g_m s^2 - C_5 s + g_m)}{s (C_1 C_5 C_L L_1 L_5 g_m s^4 + C_1 C_5 C_L L_1 s^3 + C_1 C_5 C_L L_5 R_1 g_m s^3 + C_1 C_5 C_L L_5 s^3 + C_1 C_5 C_L R_1 s^2 + 2C_1 C_5 L_1 g_m s^2 + 2C_1 C_5 R_1 g_m s + C_1 C_5 s + C_1 C_L L_1 g_m s^2 + C_1 C_L R_1 g_m s + C_1 s + C_5 L_5 g_m s^2 - C_5 s + g_m)}$$

$$10.688 \quad \text{INVALID-ORDER-688} \quad Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \infty, \quad L_5 s + \frac{1}{C_5 s}, \quad \frac{R_L}{C_L R_L s + 1} \right)$$

$$H(s) = \frac{C_1 C_5 C_L L_1 L_5 R_L g_m s^5 + C_1 C_5 C_L L_1 R_L s^4 + C_1 C_5 C_L L_5 R_1 R_L g_m s^4 + C_1 C_5 C_L L_5 R_L s^4 + C_1 C_5 C_L R_1 R_L s^3 + C_1 C_5 L_1 L_5 g_m s^4 + 2C_1 C_5 L_1 R_L g_m s^3 + C_1 C_5 L_1 s^3 + C_1 C_5 L_5 R_1 g_m s^3 + C_1 C_5 L_5 s^3 + C_1 C_5 R_1 R_L g_m s^2 + C_1 C_5 R_1 s^2 + C_1 C_5 R_L s^2 + C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + C_5 L_5 g_m s^2 - C_5 s + g_m}{C_1 C_5 C_L L_1 L_5 R_L g_m s^5 + C_1 C_5 C_L L_1 R_L s^4 + C_1 C_5 C_L L_5 R_1 R_L g_m s^4 + C_1 C_5 C_L L_5 R_L s^4 + C_1 C_5 C_L R_1 R_L s^3 + C_1 C_5 L_1 L_5 g_m s^4 + 2C_1 C_5 L_1 R_L g_m s^3 + C_1 C_5 L_1 s^3 + C_1 C_5 L_5 R_1 g_m s^3 + C_1 C_5 L_5 s^3 + C_1 C_5 R_1 R_L g_m s^2 + C_1 C_5 R_1 s^2 + C_1 C_5 R_L s^2 + C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + C_5 L_5 g_m s^2 - C_5 s + g_m}$$

**10.689 INVALID-ORDER-689**  $Z(s) = \left( L_1s + R_1 + \frac{1}{C_1s}, \infty, \infty, \infty, L_5s + \frac{1}{C_5s}, R_L + \frac{1}{C_Ls} \right)$

$$H(s) = \frac{(C_LR_Ls + 1)(C_1L_1s^2 + C_1R_1s + 1)(C_5L_5g_ms^2 - C_5L_5g_m)}{s(C_1C_5C_LL_1L_5g_ms^4 + 2C_1C_5C_LL_1R_Lg_ms^3 + C_1C_5C_LL_1s^3 + C_1C_5C_LL_5R_1g_ms^3 + C_1C_5C_LL_5s^3 + 2C_1C_5C_LL_1R_Lg_ms^2 + C_1C_5C_LL_1s^2 + C_1C_5C_LL_5s^2 + 2C_1C_5L_1g_ms^2 - C_5L_5g_m)}$$

**10.690 INVALID-ORDER-690**  $Z(s) = \left( L_1s + R_1 + \frac{1}{C_1s}, \infty, \infty, \infty, L_5s + \frac{1}{C_5s}, L_Ls + \frac{1}{C_Ls} \right)$

$$H(s) = \frac{(C_LL_Ls^2 + 1)(C_1L_1s^2 + C_1R_1s + 1)(C_5L_5g_ms^2 - C_5L_5g_m)}{s(C_1C_5C_LL_1L_5g_ms^4 + 2C_1C_5C_LL_1L_Lg_ms^4 + C_1C_5C_LL_1s^3 + C_1C_5C_LL_5R_1g_ms^3 + C_1C_5C_LL_5s^3 + 2C_1C_5C_LL_1R_1g_ms^3 + C_1C_5C_LL_1s^2 + C_1C_5C_LL_5s^2 + 2C_1C_5L_1g_ms^2 - C_5L_5g_m)}$$

**10.691 INVALID-ORDER-691**  $Z(s) = \left( L_1s + R_1 + \frac{1}{C_1s}, \infty, \infty, \infty, L_5s + \frac{1}{C_5s}, \frac{L_Ls}{C_LL_Ls^2 + 1} \right)$

$$H(s) = \frac{(C_1C_5C_LL_1L_5L_Lg_ms^6 + C_1C_5C_LL_1L_Ls^5 + C_1C_5C_LL_5L_LR_1g_ms^5 + C_1C_5C_LL_5L_Ls^5 + C_1C_5C_LL_LR_1s^4 + C_1C_5L_1L_5g_ms^4 + 2C_1C_5L_1L_Lg_ms^4 + C_1C_5L_1s^3 + C_1C_5L_5R_1g_ms^3 + C_1C_5L_5s^3 + 2C_1C_5L_1R_1g_ms^3 + C_1C_5L_1s^2 + C_1C_5L_5s^2 + 2C_1C_5L_1g_ms^2 - C_5L_5g_m)}{s(C_1C_5C_LL_1L_5L_Lg_ms^6 + C_1C_5C_LL_1L_Ls^5 + C_1C_5C_LL_5L_LR_1g_ms^5 + C_1C_5C_LL_5L_Ls^5 + C_1C_5C_LL_LR_1s^4 + C_1C_5L_1L_5g_ms^4 + 2C_1C_5L_1L_Lg_ms^4 + C_1C_5L_1s^3 + C_1C_5L_5R_1g_ms^3 + C_1C_5L_5s^3 + 2C_1C_5L_1R_1g_ms^3 + C_1C_5L_1s^2 + C_1C_5L_5s^2 + 2C_1C_5L_1g_ms^2 - C_5L_5g_m)}$$

**10.692 INVALID-ORDER-692**  $Z(s) = \left( L_1s + R_1 + \frac{1}{C_1s}, \infty, \infty, \infty, L_5s + \frac{1}{C_5s}, L_Ls + R_L + \frac{1}{C_Ls} \right)$

$$H(s) = \frac{(C_1L_1s^2 + C_1R_1s + 1)(C_5L_5g_ms^2 - C_5L_5g_m)}{s(C_1C_5C_LL_1L_5g_ms^4 + 2C_1C_5C_LL_1L_Lg_ms^4 + 2C_1C_5C_LL_1R_Lg_ms^3 + C_1C_5C_LL_1s^3 + C_1C_5C_LL_5R_1g_ms^3 + C_1C_5C_LL_5s^3 + 2C_1C_5C_LL_LR_1g_ms^3 + C_1C_5C_LL_Ls^3 + 2C_1C_5L_1g_ms^2 - C_5L_5g_m)}$$

**10.693 INVALID-ORDER-693**  $Z(s) = \left( L_1s + R_1 + \frac{1}{C_1s}, \infty, \infty, \infty, L_5s + \frac{1}{C_5s}, \frac{1}{C_Ls + \frac{1}{R_L} + \frac{1}{L_Ls}} \right)$

$$H(s) = \frac{(C_1C_5C_LL_1L_5L_LR_Lg_ms^6 + C_1C_5C_LL_1L_LR_Ls^5 + C_1C_5C_LL_5L_LR_1R_Lg_ms^5 + C_1C_5C_LL_5L_LR_Ls^5 + C_1C_5C_LL_LR_1R_Ls^4 + C_1C_5L_1L_5L_Lg_ms^5 + C_1C_5L_1L_5R_Lg_ms^4 + 2C_1C_5L_1R_1g_ms^3 + C_1C_5L_1s^2 + C_1C_5L_5R_1g_ms^3 + C_1C_5L_5s^3 + 2C_1C_5L_1R_1g_ms^3 + C_1C_5L_1s^2 + C_1C_5L_5s^2 + 2C_1C_5L_1g_ms^2 - C_5L_5g_m)}{s(C_1C_5C_LL_1L_5L_LR_Lg_ms^6 + C_1C_5C_LL_1L_LR_Ls^5 + C_1C_5C_LL_5L_LR_1R_Lg_ms^5 + C_1C_5C_LL_5L_LR_Ls^5 + C_1C_5C_LL_LR_1R_Ls^4 + C_1C_5L_1L_5L_Lg_ms^5 + C_1C_5L_1L_5R_Lg_ms^4 + 2C_1C_5L_1R_1g_ms^3 + C_1C_5L_1s^2 + C_1C_5L_5R_1g_ms^3 + C_1C_5L_5s^3 + 2C_1C_5L_1R_1g_ms^3 + C_1C_5L_1s^2 + C_1C_5L_5s^2 + 2C_1C_5L_1g_ms^2 - C_5L_5g_m)}$$

**10.694 INVALID-ORDER-694**  $Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$

$$H(s) = \frac{C_1 C_5 C_L L_1 L_5 L_L g_m s^6 + 2 C_1 C_5 C_L L_1 L_L R_L g_m s^5 + C_1 C_5 C_L L_1 L_L s^5 + C_1 C_5 C_L L_5 L_L R_1 g_m s^5 + C_1 C_5 C_L L_5 L_L s^5 + 2 C_1 C_5 C_L L_L R_1 R_L g_m s^4 + C_1 C_5 C_L L_L R_1 s^4 + C_1 C_5 C_L L_L s^4}{C_1 C_5 C_L L_1 L_5 L_L R_1 R_L g_m s^6 + 2 C_1 C_5 C_L L_1 L_L R_L R_1 g_m s^5 + C_1 C_5 C_L L_1 L_L R_1 s^5 + C_1 C_5 C_L L_5 L_L R_1 R_L g_m s^5 + C_1 C_5 C_L L_5 L_L R_1 s^5 + 2 C_1 C_5 C_L L_L R_1 R_L g_m s^4 + C_1 C_5 C_L L_L R_1 s^4 + C_1 C_5 C_L L_L s^4}.$$

**10.695 INVALID-ORDER-695**  $Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$

$$H(s) = \frac{C_1 C_5 C_L L_1 L_5 L_L q_m s^6 + C_1 C_5 C_L L_1 L_5 R_L q_m s^5 + 2 C_1 C_5 C_L L_1 L_L R_L q_m s^5 + C_1 C_5 C_L L_1 L_L s^5 + C_1 C_5 C_L L_1 R_L s^4 + C_1 C_5 C_L L_5 L_L R_1 q_m s^5 + C_1 C_5 C_L L_5 L_L s^5 + C_1 C_5 C_L L_5 R_1$$

**10.696 INVALID-ORDER-696**  $Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, R_L \right)$

$$H(s) = -\frac{R_L (C_1 L_1 s^2 + C_1 R_1 s + 1) (C_5 L_5 s^2 - L_5 g_m s + 1)}{2C_1 C_5 L_1 L_5 R_L g_m s^4 + C_1 C_5 L_1 L_5 s^4 + 2C_1 C_5 L_5 R_1 R_L g_m s^3 + C_1 C_5 L_5 R_1 s^3 + C_1 C_5 L_5 R_L s^3 + C_1 L_1 L_5 g_m s^3 + 2C_1 L_1 R_L g_m s^2 + C_1 L_1 s^2 + C_1 L_5 R_1 g_m s^2 + C_1 L_5 s^2 + 2C_1 R_1}$$

**10.697 INVALID-ORDER-697**  $Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{1}{C_L s} \right)$

$$H(s) = -\frac{(C_1 L_1 s^2 + C_1 R_1 s + 1)(C_5 L_5 s^2 - L_5 g_m s + 1)}{C_1 C_5 C_L L_1 L_5 s^5 + C_1 C_5 C_L L_5 R_1 s^4 + 2C_1 C_5 L_1 L_5 g_m s^4 + 2C_1 C_5 L_5 R_1 g_m s^3 + C_1 C_5 L_5 s^3 + C_1 C_L L_1 L_5 g_m s^4 + C_1 C_L L_1 s^3 + C_1 C_L L_5 R_1 g_m s^3 + C_1 C_L L_5 s^3 + C_1 C_L R_1 s^2 + 2}$$

**10.698 INVALID-ORDER-698**  $Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{R_L}{C_L R_L s + 1} \right)$

$$H(s) = -\frac{C_1 C_5 C_L L_1 L_5 R_L s^5 + C_1 C_5 C_L L_5 R_1 R_L s^4 + 2 C_1 C_5 L_1 L_5 R_L g_m s^4 + C_1 C_5 L_1 L_5 s^4 + 2 C_1 C_5 L_5 R_1 R_L g_m s^3 + C_1 C_5 L_5 R_1 s^3 + C_1 C_5 L_5 R_L s^3 + C_1 C_L L_1 L_5 R_L g_m s^4 + C_1 C_L L_1 R_L s^4}{C_1 C_5 C_L L_1 L_5 R_L s^5 + C_1 C_5 C_L L_5 R_1 R_L s^4 + 2 C_1 C_5 L_1 L_5 R_L g_m s^4 + C_1 C_5 L_1 L_5 s^4 + 2 C_1 C_5 L_5 R_1 R_L g_m s^3 + C_1 C_5 L_5 R_1 s^3 + C_1 C_5 L_5 R_L s^3 + C_1 C_L L_1 L_5 R_L g_m s^4 + C_1 C_L L_1 R_L s^4}.$$



**10.699 INVALID-ORDER-699**  $Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, R_L + \frac{1}{C_L s} \right)$

$$H(s) = -\frac{2C_1C_5C_LL_1L_5R_Lg_ms^5 + C_1C_5C_LL_1L_5s^5 + 2C_1C_5C_LL_5R_1R_Lg_ms^4 + C_1C_5C_LL_5R_1s^4 + C_1C_5C_LL_5R_Ls^4 + 2C_1C_5L_1L_5g_ms^4 + 2C_1C_5L_5R_1g_ms^3 + C_1C_5L_5s^3 + C_1C_LL_1}{\dots}$$

**10.700 INVALID-ORDER-700**  $Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, L_L s + \frac{1}{C_L s} \right)$

$$H(s) = -\frac{2C_1C_5C_LL_1L_5L_Lg_ms^6 + C_1C_5C_LL_1L_5s^5 + 2C_1C_5C_LL_5L_LR_1g_ms^5 + C_1C_5C_LL_5L_Ls^5 + C_1C_5C_LL_5R_1s^4 + 2C_1C_5L_1L_5g_ms^4 + 2C_1C_5L_5R_1g_ms^3 + C_1C_5L_5s^3 + C_1C_LL_1L_5L_LR_1g_ms^2 + C_1C_LL_1L_5s^2 + C_1C_LL_1R_1s + C_1C_LL_5L_LR_1g_ms + C_1C_LL_5L_Ls + C_1C_LL_5R_1 + C_1C_LL_1L_5L_LR_1g_m + C_1C_LL_1L_5s + C_1C_LL_1R_1 + C_1C_LL_5L_LR_1g_m + C_1C_LL_5L_Ls + C_1C_LL_5R_1 + C_1C_LL_1L_5L_LR_1 + C_1C_LL_1L_5 + C_1C_LL_1R_1 + C_1C_LL_5L_LR_1 + C_1C_LL_5L_L + C_1C_LL_5R_1}{2C_1C_5C_LL_1L_5L_Lg_ms^6 + C_1C_5C_LL_1L_5s^5 + 2C_1C_5C_LL_5L_LR_1g_ms^5 + C_1C_5C_LL_5L_Ls^5 + C_1C_5C_LL_5R_1s^4 + 2C_1C_5L_1L_5g_ms^4 + 2C_1C_5L_5R_1g_ms^3 + C_1C_5L_5s^3 + C_1C_LL_1L_5L_LR_1g_ms^2 + C_1C_LL_1L_5s^2 + C_1C_LL_1R_1s + C_1C_LL_5L_LR_1g_ms + C_1C_LL_5L_Ls + C_1C_LL_5R_1 + C_1C_LL_1L_5L_LR_1g_m + C_1C_LL_1L_5s + C_1C_LL_1R_1 + C_1C_LL_5L_LR_1g_m + C_1C_LL_5L_Ls + C_1C_LL_5R_1 + C_1C_LL_1L_5L_LR_1 + C_1C_LL_1L_5 + C_1C_LL_1R_1 + C_1C_LL_5L_LR_1 + C_1C_LL_5L_L + C_1C_LL_5R_1}.$$

**10.701 INVALID-ORDER-701**  $Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{L_L s}{C_L L_L s^2 + 1} \right)$

$$H(s) = -\frac{C_1 C_5 C_L L_1 L_5 L_L s^6 + C_1 C_5 C_L L_5 L_L R_1 s^5 + 2 C_1 C_5 L_1 L_5 L_L g_m s^5 + C_1 C_5 L_1 L_5 s^4 + 2 C_1 C_5 L_5 L_L R_1 g_m s^4 + C_1 C_5 L_5 L_L s^4 + C_1 C_5 L_5 R_1 s^3 + C_1 C_L L_1 L_5 L_L g_m s^5 + C_1 C_L L_1 L_L}{C_1 C_5 C_L L_1 L_5 L_L s^6 + C_1 C_5 C_L L_5 L_L R_1 s^5 + 2 C_1 C_5 L_1 L_5 L_L g_m s^5 + C_1 C_5 L_1 L_5 s^4 + 2 C_1 C_5 L_5 L_L R_1 g_m s^4 + C_1 C_5 L_5 L_L s^4 + C_1 C_5 L_5 R_1 s^3 + C_1 C_L L_1 L_5 L_L g_m s^5 + C_1 C_L L_1 L_L}$$

**10.702 INVALID-ORDER-702**  $Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, L_L s + R_L + \frac{1}{C_L s} \right)$

$$H(s) = -\frac{2C_1C_5C_LL_1L_5L_Lg_ms^6 + 2C_1C_5C_LL_1L_5R_Lg_ms^5 + C_1C_5C_LL_1L_5s^5 + 2C_1C_5C_LL_5L_LR_1g_ms^5 + C_1C_5C_LL_5L_Ls^5 + 2C_1C_5C_LL_5R_LR_Lg_ms^4 + C_1C_5C_LL_5R_1s^4 + C_1C_5C_LL_5L_Ls^4}{2C_1C_5C_LL_1L_5L_LR_1g_ms^5 + C_1C_5C_LL_1L_5L_LR_Ls^5 + C_1C_5C_LL_1L_5L_Ls^5 + 2C_1C_5C_LL_1L_5R_LR_Ls^5 + C_1C_5C_LL_1L_5R_1s^5 + C_1C_5C_LL_1L_5R_Ls^5 + C_1C_5C_LL_1L_5s^5 + 2C_1C_5C_LL_5L_LR_1g_ms^5 + C_1C_5C_LL_5L_LR_Ls^5 + C_1C_5C_LL_5L_LRs^5 + 2C_1C_5C_LL_5L_R_1g_ms^4 + C_1C_5C_LL_5L_R_Ls^4 + C_1C_5C_LL_5L_Rs^4 + C_1C_5C_LL_5Ls^4 + C_1C_5C_LL_5s^4 + 2C_1C_5C_LL_5L_Ls^4 + C_1C_5C_LL_5Ls^4 + C_1C_5C_LL_5s^4 + 2C_1C_5C_LL_5L_Ls^3 + C_1C_5C_LL_5Ls^3 + C_1C_5C_LL_5s^3 + 2C_1C_5C_LL_5L_Ls^2 + C_1C_5C_LL_5Ls^2 + C_1C_5C_LL_5s^2 + 2C_1C_5C_LL_5L_Ls + C_1C_5C_LL_5Ls + C_1C_5C_LL_5s + 2C_1C_5C_LL_5L + C_1C_5C_LL_5 + C_1C_5C_LL + C_1C_5C_L + C_1C_5C + C_1C_5 + C_1C + C_1 + C_5 + C + 1}$$

**10.703 INVALID-ORDER-703**  $Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$

$$H(s) = -\frac{C_1 C_5 C_L L_1 L_5 L_L R_L s^6 + C_1 C_5 C_L L_5 L_L R_1 R_L s^5 + 2C_1 C_5 L_1 L_5 L_L R_L g_m s^5 + C_1 C_5 L_1 L_5 L_L s^5 + C_1 C_5 L_1 L_5 R_L s^4 + 2C_1 C_5 L_5 L_L R_1 R_L g_m s^4 + C_1 C_5 L_5 L_L R_1 s^4 + C_1 C_5 L_5 L_L}{C_1 C_5 C_L L_1 L_5 L_L R_L s^6 + C_1 C_5 C_L L_5 L_L R_1 R_L s^5 + 2C_1 C_5 L_1 L_5 L_L R_L g_m s^5 + C_1 C_5 L_1 L_5 L_L s^5 + C_1 C_5 L_1 L_5 R_L s^4 + 2C_1 C_5 L_5 L_L R_1 R_L g_m s^4 + C_1 C_5 L_5 L_L R_1 s^4 + C_1 C_5 L_5 L_L}$$

**10.704 INVALID-ORDER-704**  $Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$

$$H(s) = -\frac{2C_1C_5C_LL_1L_5L_LR_Lg_ms^6 + C_1C_5C_LL_1L_5L_Ls^6 + 2C_1C_5C_LL_5L_LR_1R_Lg_ms^5 + C_1C_5C_LL_5L_LR_1s^5 + C_1C_5C_LL_5L_LR_Ls^5 + 2C_1C_5L_1L_5L_Lg_ms^5 + 2C_1C_5L_1L_5R_Lg_ms^4 + \dots}{\dots}$$

**10.705 INVALID-ORDER-705**  $Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$

$$H(s) = -\frac{2C_1 C_5 C_L L_1 L_5 L_L R_L g_m s^6 + C_1 C_5 C_L L_1 L_5 L_L s^6 + C_1 C_5 C_L L_1 L_5 R_L s^5 + 2C_1 C_5 C_L L_5 L_L R_1 R_L g_m s^5 + C_1 C_5 C_L L_5 L_L R_1 s^5 + C_1 C_5 C_L L_5 L_L R_L s^5 + C_1 C_5 C_L L_5 R_1 R_L s^4 + 2C_1 C_5 C_L L_5 R_1 s^4 + 2C_1 C_5 C_L L_5 R_L s^4 + 2C_1 C_5 C_L L_5 s^4 + 2C_1 C_5 C_L L_5 R_L s^3 + 2C_1 C_5 C_L L_5 R_1 s^3 + 2C_1 C_5 C_L L_5 R_L s^3 + 2C_1 C_5 C_L L_5 s^3 + 2C_1 C_5 C_L L_5 R_L s^2 + 2C_1 C_5 C_L L_5 R_1 s^2 + 2C_1 C_5 C_L L_5 R_L s^2 + 2C_1 C_5 C_L L_5 s^2 + 2C_1 C_5 C_L L_5 R_L s + 2C_1 C_5 C_L L_5 R_1 s + 2C_1 C_5 C_L L_5 R_L s + 2C_1 C_5 C_L L_5 s}{(s^2 + \omega_{L_1}^2)(s^2 + \omega_{L_5}^2)(s^2 + \omega_{L_L}^2)(s^2 + \omega_{R_1}^2)(s^2 + \omega_{R_L}^2)}.$$

**10.706 INVALID-ORDER-706**  $Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, R_L \right)$

$$H(s) = \frac{R_L (C_1 L_1 s^2 + C_1 R_1 s + 1) (C_5 L_5 g_m s^2 + C_5 R_5 g_m s - C_5 s + g_m)}{C_1 C_5 L_1 L_5 g_m s^4 + C_1 C_5 L_1 R_5 g_m s^3 + 2 C_1 C_5 L_1 R_L g_m s^3 + C_1 C_5 L_1 s^3 + C_1 C_5 L_5 R_1 g_m s^3 + C_1 C_5 L_5 s^3 + C_1 C_5 R_1 R_5 g_m s^2 + 2 C_1 C_5 R_1 R_L g_m s^2 + C_1 C_5 R_1 s^2 + C_1 C_5 R_5 s^2 + C_1 C_5 s^2 + C_1 C_5 g_m s + C_1 C_5 g_m}$$

**10.707 INVALID-ORDER-707**  $Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{1}{C_L s} \right)$

$$H(s) = \frac{(C_1 L_1 s^2 + C_1 R_1 s + 1) (C_5 L_5 g_m s^2 + C_5 R_5 g_m s - C_5 s}{s (C_1 C_5 C_L L_1 L_5 g_m s^4 + C_1 C_5 C_L L_1 R_5 g_m s^3 + C_1 C_5 C_L L_1 s^3 + C_1 C_5 C_L L_5 R_1 g_m s^3 + C_1 C_5 C_L L_5 s^3 + C_1 C_5 C_L R_1 R_5 g_m s^2 + C_1 C_5 C_L R_1 s^2 + C_1 C_5 C_L R_5 s^2 + 2 C_1 C_5 L_1 g_m s^2 +$$

**10.708 INVALID-ORDER-708**  $Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{R_L}{C_L R_L s + 1} \right)$

$$H(s) = \frac{C_1 C_5 C_L L_1 L_5 R_L q_m s^5 + C_1 C_5 C_L L_1 R_5 R_L q_m s^4 + C_1 C_5 C_L L_1 R_L s^4 + C_1 C_5 C_L L_5 R_1 R_L q_m s^4 + C_1 C_5 C_L L_5 R_L s^4 + C_1 C_5 C_L R_1 R_5 R_L q_m s^3 + C_1 C_5 C_L R_1 R_L s^3 + C_1 C_5 C_L R_5 R_L s^3}{C_1 C_5 C_L L_1 L_5 R_L q_m s^5 + C_1 C_5 C_L L_1 R_5 R_L q_m s^4 + C_1 C_5 C_L L_1 R_L s^4 + C_1 C_5 C_L L_5 R_1 R_L q_m s^4 + C_1 C_5 C_L L_5 R_L s^4 + C_1 C_5 C_L R_1 R_5 R_L q_m s^3 + C_1 C_5 C_L R_1 R_L s^3 + C_1 C_5 C_L R_5 R_L s^3}$$

**10.709 INVALID-ORDER-709**  $Z(s) = \left( L_1s + R_1 + \frac{1}{C_1s}, \infty, \infty, \infty, L_5s + R_5 + \frac{1}{C_5s}, R_L + \frac{1}{C_Ls} \right)$

$$H(s) = \frac{(C_LR_Ls + 1)(C_1L_1s + R_1 + \frac{1}{C_1s})}{s(C_1C_5C_LL_1L_5g_ms^4 + C_1C_5C_LL_1R_5g_ms^3 + 2C_1C_5C_LL_1R_Lg_ms^3 + C_1C_5C_LL_1s^3 + C_1C_5C_LL_5R_1g_ms^3 + C_1C_5C_LL_5s^3 + C_1C_5C_LR_1R_5g_ms^2 + 2C_1C_5C_LR_1R_Lg_ms^2 + C_1C_5C_LR_1s^2 + C_1C_5C_LR_5R_Lg_ms + C_1C_5C_LR_5s + C_1C_5C_Ls^2 + C_1C_5C_LR_Lg_ms + C_1C_5C_LR_Ls + C_1C_5C_Ls^2)}$$

**10.710 INVALID-ORDER-710**  $Z(s) = \left( L_1s + R_1 + \frac{1}{C_1s}, \infty, \infty, \infty, L_5s + R_5 + \frac{1}{C_5s}, L_Ls + \frac{1}{C_Ls} \right)$

$$H(s) = \frac{(C_LL_Ls^2 + 1)(C_1L_1s + R_1 + \frac{1}{C_1s})}{s(C_1C_5C_LL_1L_5g_ms^4 + 2C_1C_5C_LL_1L_Lg_ms^4 + C_1C_5C_LL_1R_5g_ms^3 + C_1C_5C_LL_1s^3 + C_1C_5C_LL_5R_1g_ms^3 + C_1C_5C_LL_5s^3 + 2C_1C_5C_LL_LR_1g_ms^3 + C_1C_5C_LL_Ls^3 + C_1C_5C_LL_R_1g_ms^2 + C_1C_5C_LL_R_1s^2 + C_1C_5C_LL_R_5g_ms + C_1C_5C_LL_R_5s + C_1C_5C_LLs^2)}$$

**10.711 INVALID-ORDER-711**  $Z(s) = \left( L_1s + R_1 + \frac{1}{C_1s}, \infty, \infty, \infty, L_5s + R_5 + \frac{1}{C_5s}, \frac{L_Ls}{C_LL_Ls^2 + 1} \right)$

$$H(s) = \frac{(C_LL_Ls^2 + 1)(C_1L_1s + R_1 + \frac{1}{C_1s})}{C_1C_5C_LL_1L_5L_Lg_ms^6 + C_1C_5C_LL_1L_LR_5g_ms^5 + C_1C_5C_LL_1L_Ls^5 + C_1C_5C_LL_5L_LR_1g_ms^5 + C_1C_5C_LL_5L_Ls^5 + C_1C_5C_LL_LR_1R_5g_ms^4 + C_1C_5C_LL_LR_1s^4 + C_1C_5C_LL_LR_5g_ms^3 + C_1C_5C_LL_Ls^3 + C_1C_5C_LL_R_1g_ms^2 + C_1C_5C_LL_R_1s^2 + C_1C_5C_LL_R_5g_ms + C_1C_5C_LL_R_5s + C_1C_5C_LLs^2}$$

**10.712 INVALID-ORDER-712**  $Z(s) = \left( L_1s + R_1 + \frac{1}{C_1s}, \infty, \infty, \infty, L_5s + R_5 + \frac{1}{C_5s}, L_Ls + R_L + \frac{1}{C_Ls} \right)$

$$H(s) = \frac{(C_1L_1s + R_1 + \frac{1}{C_1s})(C_5L_5s + R_5 + \frac{1}{C_5s})(C_LL_Ls + R_L + \frac{1}{C_Ls})}{s(C_1C_5C_LL_1L_5g_ms^4 + 2C_1C_5C_LL_1L_Lg_ms^4 + C_1C_5C_LL_1R_5g_ms^3 + 2C_1C_5C_LL_1R_Lg_ms^3 + C_1C_5C_LL_1s^3 + C_1C_5C_LL_5R_1g_ms^3 + C_1C_5C_LL_5s^3 + 2C_1C_5C_LL_LR_1g_ms^3 + C_1C_5C_LL_Ls^3 + C_1C_5C_LL_R_1g_ms^2 + C_1C_5C_LL_R_1s^2 + C_1C_5C_LL_R_5g_ms + C_1C_5C_LL_R_5s + C_1C_5C_LLs^2)}$$

**10.713 INVALID-ORDER-713**  $Z(s) = \left( L_1s + R_1 + \frac{1}{C_1s}, \infty, \infty, \infty, L_5s + R_5 + \frac{1}{C_5s}, \frac{1}{C_Ls + \frac{1}{R_L} + \frac{1}{L_Ls}} \right)$

$$H(s) = \frac{(C_1L_1s + R_1 + \frac{1}{C_1s})(C_5L_5s + R_5 + \frac{1}{C_5s})}{C_1C_5C_LL_1L_5L_LR_Lg_ms^6 + C_1C_5C_LL_1L_LR_5R_Lg_ms^5 + C_1C_5C_LL_1L_LR_Ls^5 + C_1C_5C_LL_5L_LR_1R_Lg_ms^5 + C_1C_5C_LL_5L_LR_Ls^5 + C_1C_5C_LL_LR_1R_5R_Lg_ms^4 + C_1C_5C_LL_LR_1s^4 + C_1C_5C_LL_LR_5R_Lg_ms^3 + C_1C_5C_LL_Ls^3 + C_1C_5C_LL_R_1R_5R_Lg_ms^2 + C_1C_5C_LL_R_1s^2 + C_1C_5C_LL_R_5R_Lg_ms + C_1C_5C_LL_R_5s + C_1C_5C_LLs^2}$$

**10.714 INVALID-ORDER-714**  $Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$

$$H(s) = \frac{C_1 C_5 C_L L_1 L_5 L_L g_m s^6 + C_1 C_5 C_L L_1 L_L R_5 g_m s^5 + 2 C_1 C_5 C_L L_1 L_L R_L g_m s^5 + C_1 C_5 C_L L_1 L_L s^5 + C_1 C_5 C_L L_5 L_L R_1 g_m s^5 + C_1 C_5 C_L L_5 L_L s^5 + C_1 C_5 C_L L_L R_1 R_5 g_m s^4 + 2 C_1 C_5 C_L L_L R_1 R_5 s^4 + C_1 C_5 C_L L_L R_1 R_5 s^4 + C_1 C_5 C_L L_L R_1 R_5 s^4 + C_1 C_5 C_L L_L R_1 R_5 s^4}{C_1 C_5 C_L L_1 L_5 L_L g_m s^6 + C_1 C_5 C_L L_1 L_L R_5 g_m s^5 + 2 C_1 C_5 C_L L_1 L_L R_L g_m s^5 + C_1 C_5 C_L L_1 L_L s^5 + C_1 C_5 C_L L_5 L_L R_1 g_m s^5 + C_1 C_5 C_L L_5 L_L s^5 + C_1 C_5 C_L L_L R_1 R_5 g_m s^4 + 2 C_1 C_5 C_L L_L R_1 R_5 s^4 + C_1 C_5 C_L L_L R_1 R_5 s^4 + C_1 C_5 C_L L_L R_1 R_5 s^4 + C_1 C_5 C_L L_L R_1 R_5 s^4}$$

**10.715 INVALID-ORDER-715**  $Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$

$$H(s) = \frac{C_1 C_5 C_L L_1 L_5 L_L g_m s^6 + C_1 C_5 C_L L_1 L_5 R_L g_m s^5 + C_1 C_5 C_L L_1 L_L R_5 g_m s^5 + 2 C_1 C_5 C_L L_1 L_L R_L g_m s^5 + C_1 C_5 C_L L_1 L_L s^5 + C_1 C_5 C_L L_1 R_5 R_L g_m s^4 + C_1 C_5 C_L L_1 R_L s^4 + C_1 C_5 C_L$$

**10.716 INVALID-ORDER-716**  $Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, R_L \right)$

$$H(s) = - \frac{R_L}{2C_1C_5L_1L_5R_5R_Lg_ms^4 + C_1C_5L_1L_5R_5s^4 + 2C_1C_5L_5R_1R_5R_Lg_ms^3 + C_1C_5L_5R_1R_5s^3 + C_1C_5L_5R_5R_Ls^3 + C_1L_1L_5R_5g_ms^3 + 2C_1L_1L_5R_Lg_ms^3 + C_1L_1L_5s^3 + 2C_1L_1R_5I}$$

10.717 INVALID-ORDER-717  $Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5 + \frac{1}{L_5 s}}}, \frac{1}{C_L s} \right)$

$$H(s) = -\frac{C_1 C_5 C_L L_1 L_5 R_5 s^5 + C_1 C_5 C_L L_5 R_1 R_5 s^4 + 2C_1 C_5 L_1 L_5 R_5 g_m s^4 + 2C_1 C_5 L_5 R_1 R_5 g_m s^3 + C_1 C_5 L_5 R_5 s^3 + C_1 C_L L_1 L_5 R_5 g_m s^4 + C_1 C_L L_1 L_5 s^4 + C_1 C_L L_1 R_5 s^3 + C_1 C_L L_5 R_1}{C_1 C_5 C_L L_1 L_5 R_5 s^5 + C_1 C_5 C_L L_5 R_1 R_5 s^4 + 2C_1 C_5 L_1 L_5 R_5 g_m s^4 + 2C_1 C_5 L_5 R_1 R_5 g_m s^3 + C_1 C_5 L_5 R_5 s^3 + C_1 C_L L_1 L_5 R_5 g_m s^4 + C_1 C_L L_1 L_5 s^4 + C_1 C_L L_1 R_5 s^3 + C_1 C_L L_5 R_1}$$

10.718 INVALID-ORDER-718  $Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5 + \frac{1}{L_5 s}}}, \frac{R_L}{C_L R_L s + 1} \right)$

$$H(s) = -\frac{C_1 C_5 C_L L_1 L_5 R_5 R_L s^5 + C_1 C_5 C_L L_5 R_1 R_5 R_L s^4 + 2 C_1 C_5 L_1 L_5 R_5 R_L g_m s^4 + C_1 C_5 L_1 L_5 R_5 s^4 + 2 C_1 C_5 L_5 R_1 R_5 R_L g_m s^3 + C_1 C_5 L_5 R_1 R_5 s^3 + C_1 C_5 L_5 R_5 R_L s^3 + C_1 C_L L_1 L_5 R_5}{C_1 C_5 C_L L_1 L_5 R_5 R_L s^5 + C_1 C_5 C_L L_5 R_1 R_5 R_L s^4 + 2 C_1 C_5 L_1 L_5 R_5 R_L g_m s^4 + C_1 C_5 L_1 L_5 R_5 s^4 + 2 C_1 C_5 L_5 R_1 R_5 R_L g_m s^3 + C_1 C_5 L_5 R_1 R_5 s^3 + C_1 C_5 L_5 R_5 R_L s^3 + C_1 C_L L_1 L_5 R_5}$$

**10.719 INVALID-ORDER-719**  $Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, R_L + \frac{1}{C_L s} \right)$

$$H(s) = -\frac{2C_1C_5C_LL_1L_5R_5R_Lg_ms^5 + C_1C_5C_LL_1L_5R_5s^5 + 2C_1C_5C_LL_5R_1R_5R_Lg_ms^4 + C_1C_5C_LL_5R_1R_5s^4 + C_1C_5C_LL_5R_5R_Ls^4 + 2C_1C_5L_1L_5R_5g_ms^4 + 2C_1C_5L_5R_1R_5g_ms^3 + C_1C_5L_5R_5R_Lg_ms^3 + C_1C_5L_5R_5s^3 + C_1C_5L_5s^3}{2C_1C_5C_LL_1L_5R_5R_Lg_ms^5 + C_1C_5C_LL_1L_5R_5s^5 + 2C_1C_5C_LL_5R_1R_5R_Lg_ms^4 + C_1C_5C_LL_5R_1R_5s^4 + C_1C_5C_LL_5R_5R_Ls^4 + 2C_1C_5L_1L_5R_5g_ms^4 + 2C_1C_5L_5R_1R_5g_ms^3 + C_1C_5L_5R_5R_Lg_ms^3 + C_1C_5L_5R_5s^3 + C_1C_5L_5s^3}$$

**10.720 INVALID-ORDER-720**  $Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5 + \frac{1}{L_5 s}}}, L_L s + \frac{1}{C_L s} \right)$

$$H(s) = -\frac{2C_1 C_5 C_L L_1 L_5 L_L R_5 g_m s^6 + C_1 C_5 C_L L_1 L_5 R_5 s^5 + 2C_1 C_5 C_L L_5 L_L R_1 R_5 g_m s^5 + C_1 C_5 C_L L_5 L_L R_5 s^5 + C_1 C_5 C_L L_5 R_1 R_5 s^4 + 2C_1 C_5 L_1 L_5 R_5 g_m s^4 + 2C_1 C_5 L_5 R_1 R_5 g_m s^3 + C_1}{...}$$

**10.721 INVALID-ORDER-721**  $Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{L_L s}{C_L L_L s^2 + 1} \right)$

$$H(s) = -\frac{C_1 C_5 C_L L_1 L_5 L_L R_5 s^6 + C_1 C_5 C_L L_5 L_L R_1 R_5 s^5 + 2C_1 C_5 L_1 L_5 L_L R_5 g_m s^5 + C_1 C_5 L_1 L_5 R_5 s^4 + 2C_1 C_5 L_5 L_L R_1 R_5 g_m s^4 + C_1 C_5 L_5 L_L R_5 s^4 + C_1 C_5 L_5 R_1 R_5 s^3 + C_1 C_L L_1 L_5 L_L}{C_1 C_5 C_L L_1 L_5 L_L R_5 s^6 + C_1 C_5 C_L L_5 L_L R_1 R_5 s^5 + 2C_1 C_5 L_1 L_5 L_L R_5 g_m s^5 + C_1 C_5 L_1 L_5 R_5 s^4 + 2C_1 C_5 L_5 L_L R_1 R_5 g_m s^4 + C_1 C_5 L_5 L_L R_5 s^4 + C_1 C_5 L_5 R_1 R_5 s^3 + C_1 C_L L_1 L_5 L_L}$$

**10.722 INVALID-ORDER-722**  $Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, L_L s + R_L + \frac{1}{C_L s} \right)$

$$H(s) = -\frac{2C_1C_5C_LL_1L_5L_LR_5q_ms^6 + 2C_1C_5C_LL_1L_5R_5RLq_ms^5 + C_1C_5C_LL_1L_5R_5s^5 + 2C_1C_5C_LL_5L_LR_1R_5q_ms^5 + C_1C_5C_LL_5L_LR_5s^5 + 2C_1C_5C_LL_5R_1R_5RLq_ms^4 + C_1C_5C_LL_5R_1R_5R_5s^4 + C_1C_5C_LL_5R_1R_5s^4 + C_1C_5C_LL_5R_1R_5s^4}{2C_1C_5C_LL_1L_5L_LR_5q_ms^6 + 2C_1C_5C_LL_1L_5R_5RLq_ms^5 + C_1C_5C_LL_1L_5R_5s^5 + 2C_1C_5C_LL_5L_LR_1R_5q_ms^5 + C_1C_5C_LL_5L_LR_5s^5 + 2C_1C_5C_LL_5R_1R_5RLq_ms^4 + C_1C_5C_LL_5R_1R_5R_5s^4 + C_1C_5C_LL_5R_1R_5s^4 + C_1C_5C_LL_5R_1R_5s^4}.$$

**10.723 INVALID-ORDER-723**  $Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$

$$H(s) = -\frac{C_1 C_5 C_L L_1 L_5 L_L R_5 R_L s^6 + C_1 C_5 C_L L_5 L_L R_1 R_5 R_L s^5 + 2C_1 C_5 L_1 L_5 L_L R_5 R_L g_m s^5 + C_1 C_5 L_1 L_5 L_L R_5 s^5 + C_1 C_5 L_1 L_5 R_5 R_L s^4 + 2C_1 C_5 L_5 L_L R_1 R_5 R_L g_m s^4 + C_1 C_5 L_5 L_L R_1 R_5 R_L s^4}{C_1 C_5 C_L L_1 L_5 L_L R_5 R_L s^6 + C_1 C_5 C_L L_5 L_L R_1 R_5 R_L s^5 + 2C_1 C_5 L_1 L_5 L_L R_5 R_L g_m s^5 + C_1 C_5 L_1 L_5 L_L R_5 s^5 + C_1 C_5 L_1 L_5 R_5 R_L s^4 + 2C_1 C_5 L_5 L_L R_1 R_5 R_L g_m s^4 + C_1 C_5 L_5 L_L R_1 R_5 R_L s^4}$$

**10.724 INVALID-ORDER-724**  $Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$

$$H(s) = -\frac{2C_1 C_5 C_L L_1 L_5 L_L R_5 R_L g_m s^6 + C_1 C_5 C_L L_1 L_5 L_L R_5 s^6 + 2C_1 C_5 C_L L_5 L_L R_1 R_5 R_L g_m s^5 + C_1 C_5 C_L L_5 L_L R_1 R_5 s^5 + C_1 C_5 C_L L_5 L_L R_5 R_L s^5 + 2C_1 C_5 L_1 L_5 L_L R_5 g_m s^5 + 2C_1 C_5$$

**10.725 INVALID-ORDER-725**  $Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$

$$H(s) = -\frac{2C_1C_5C_LL_1L_5L_LR_5R_Lg_ms^6 + C_1C_5C_LL_1L_5L_LR_5s^6 + C_1C_5C_LL_1L_5R_5R_Ls^5 + 2C_1C_5C_LL_5L_LR_1R_5R_Lg_ms^5 + C_1C_5C_LL_5L_LR_1R_5s^5 + C_1C_5C_LL_5L_LR_5R_Ls^5 + C_1C_5C$$

**10.726 INVALID-ORDER-726**  $Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, R_L \right)$

$$H(s) = \frac{R_L (C_1 L_1 s^2 + C_1 R_1 s + 1)}{C_1 C_5 L_1 L_5 R_5 g_m s^4 + 2C_1 C_5 L_1 L_5 R_L g_m s^4 + C_1 C_5 L_1 L_5 s^4 + C_1 C_5 L_5 R_1 R_5 g_m s^3 + 2C_1 C_5 L_5 R_1 R_L g_m s^3 + C_1 C_5 L_5 R_1 s^3 + C_1 C_5 L_5 R_5 s^3 + C_1 C_5 L_5 R_L s^3 + C_1 L_1 L_5 g_m s^3 + C_1 L_1 R_5 s^3 + C_1 L_1 R_L s^3 + C_1 L_1 s^3 + C_1 R_1 s^2 + C_1 R_1 s + 1}$$

**10.727 INVALID-ORDER-727**  $Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{1}{C_L s} \right)$

$$H(s) = \frac{(C_1 C_5 C_L L_1 L_5 R_5 g_m s^5 + C_1 C_5 C_L L_1 L_5 s^5 + C_1 C_5 C_L L_5 R_1 R_5 g_m s^4 + C_1 C_5 C_L L_5 R_1 s^4 + C_1 C_5 C_L L_5 R_5 s^4 + 2C_1 C_5 L_1 L_5 g_m s^4 + 2C_1 C_5 L_5 R_1 g_m s^3 + C_1 C_5 L_5 s^3 + C_1 C_L L_1 L_5 g_m s^2 + C_1 C_L L_1 s^2 + C_1 C_L L_5 R_1 s + C_1 C_L R_1)}{C_1 C_5 C_L L_1 L_5 R_5 g_m s^5 + C_1 C_5 C_L L_1 L_5 s^5 + C_1 C_5 C_L L_5 R_1 R_5 g_m s^4 + C_1 C_5 C_L L_5 R_1 s^4 + C_1 C_5 C_L L_5 R_5 s^4 + 2C_1 C_5 L_1 L_5 g_m s^4 + 2C_1 C_5 L_5 R_1 g_m s^3 + C_1 C_5 L_5 s^3 + C_1 C_L L_1 L_5 g_m s^2 + C_1 C_L L_1 s^2 + C_1 C_L L_5 R_1 s + C_1 C_L R_1} \quad (C_1)$$

**10.728 INVALID-ORDER-728**  $Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{R_L}{C_L R_L s + 1} \right)$

$$H(s) = \frac{C_1 C_5 C_L L_1 L_5 R_5 R_L g_m s^5 + C_1 C_5 C_L L_1 L_5 R_L s^5 + C_1 C_5 C_L L_5 R_1 R_5 R_L g_m s^4 + C_1 C_5 C_L L_5 R_1 R_L s^4 + C_1 C_5 C_L L_5 R_5 R_L s^4 + C_1 C_5 L_1 L_5 R_5 g_m s^4 + 2 C_1 C_5 L_1 L_5 R_L g_m s^4 + C_1 C_5 L_1 L_5 R_L s^4 + C_1 C_5 L_1 L_5 R_5 s^4 + C_1 C_5 L_1 L_5 s^4}{C_1 C_5 C_L L_1 L_5 R_5 R_L g_m s^5 + C_1 C_5 C_L L_1 L_5 R_L s^5 + C_1 C_5 C_L L_5 R_1 R_5 R_L g_m s^4 + C_1 C_5 C_L L_5 R_1 R_L s^4 + C_1 C_5 C_L L_5 R_5 R_L s^4 + C_1 C_5 L_1 L_5 R_5 g_m s^4 + 2 C_1 C_5 L_1 L_5 R_L g_m s^4 + C_1 C_5 L_1 L_5 R_L s^4 + C_1 C_5 L_1 L_5 R_5 s^4 + C_1 C_5 L_1 L_5 s^4}.$$

$$\mathbf{10.729 \quad INVALID-ORDER-729} \quad Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \infty, \quad \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \quad R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{C_1 C_5 C_L L_1 L_5 R_5 g_m s^5 + 2 C_1 C_5 C_L L_1 L_5 R_L g_m s^5 + C_1 C_5 C_L L_1 L_5 s^5 + C_1 C_5 C_L L_5 R_1 R_5 g_m s^4 + 2 C_1 C_5 C_L L_5 R_1 R_L g_m s^4 + C_1 C_5 C_L L_5 R_1 s^4 + C_1 C_5 C_L L_5 R_5 s^4 + C_1 C_5 C_L L_5 R_L s^4}{C_1 C_5 C_L L_1 L_5 R_5 g_m s^5 + 2 C_1 C_5 C_L L_1 L_5 R_L g_m s^5 + C_1 C_5 C_L L_1 L_5 s^5 + C_1 C_5 C_L L_5 R_1 R_5 g_m s^4 + 2 C_1 C_5 C_L L_5 R_1 R_L g_m s^4 + C_1 C_5 C_L L_5 R_1 s^4 + C_1 C_5 C_L L_5 R_5 s^4 + C_1 C_5 C_L L_5 R_L s^4}$$

$$\mathbf{10.730 \quad INVALID-ORDER-730} \quad Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \infty, \quad \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \quad L_L s + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{2 C_1 C_5 C_L L_1 L_5 L_L g_m s^6 + C_1 C_5 C_L L_1 L_5 R_5 g_m s^5 + C_1 C_5 C_L L_1 L_5 s^5 + 2 C_1 C_5 C_L L_5 L_L R_1 g_m s^5 + C_1 C_5 C_L L_5 L_L s^5 + C_1 C_5 C_L L_5 R_1 R_5 g_m s^4 + C_1 C_5 C_L L_5 R_1 s^4 + C_1 C_5 C_L L_5 R_5 s^4}{2 C_1 C_5 C_L L_1 L_5 L_L g_m s^6 + C_1 C_5 C_L L_1 L_5 R_5 g_m s^5 + C_1 C_5 C_L L_1 L_5 s^5 + 2 C_1 C_5 C_L L_5 L_L R_1 g_m s^5 + C_1 C_5 C_L L_5 L_L s^5 + C_1 C_5 C_L L_5 R_1 R_5 g_m s^4 + C_1 C_5 C_L L_5 R_1 s^4 + C_1 C_5 C_L L_5 R_5 s^4}$$

$$\mathbf{10.731 \quad INVALID-ORDER-731} \quad Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \infty, \quad \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \quad \frac{L_L s}{C_L L_L s^2 + 1} \right)$$

$$H(s) = \frac{C_1 C_5 C_L L_1 L_5 L_L R_5 g_m s^6 + C_1 C_5 C_L L_1 L_5 L_L s^6 + C_1 C_5 C_L L_5 L_L R_1 R_5 g_m s^5 + C_1 C_5 C_L L_5 L_L R_1 s^5 + C_1 C_5 C_L L_5 L_L R_5 s^5 + 2 C_1 C_5 L_1 L_5 L_L g_m s^5 + C_1 C_5 L_1 L_5 R_5 g_m s^4 + C_1 C_5 L_1 L_5 R_5 s^4}{C_1 C_5 C_L L_1 L_5 L_L R_5 g_m s^6 + C_1 C_5 C_L L_1 L_5 L_L s^6 + C_1 C_5 C_L L_5 L_L R_1 R_5 g_m s^5 + C_1 C_5 C_L L_5 L_L R_1 s^5 + C_1 C_5 C_L L_5 L_L R_5 s^5 + 2 C_1 C_5 L_1 L_5 L_L g_m s^5 + C_1 C_5 L_1 L_5 R_5 g_m s^4 + C_1 C_5 L_1 L_5 R_5 s^4}$$

$$\mathbf{10.732 \quad INVALID-ORDER-732} \quad Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \infty, \quad \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \quad L_L s + R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{2 C_1 C_5 C_L L_1 L_5 L_L g_m s^6 + C_1 C_5 C_L L_1 L_5 R_5 g_m s^5 + 2 C_1 C_5 C_L L_1 L_5 R_L g_m s^5 + C_1 C_5 C_L L_1 L_5 s^5 + 2 C_1 C_5 C_L L_5 L_L R_1 g_m s^5 + C_1 C_5 C_L L_5 L_L s^5 + C_1 C_5 C_L L_5 R_1 R_5 g_m s^4 + 2 C_1 C_5 C_L L_5 R_1 s^4 + C_1 C_5 C_L L_5 R_5 s^4}{2 C_1 C_5 C_L L_1 L_5 L_L g_m s^6 + C_1 C_5 C_L L_1 L_5 R_5 g_m s^5 + 2 C_1 C_5 C_L L_1 L_5 R_L g_m s^5 + C_1 C_5 C_L L_1 L_5 s^5 + 2 C_1 C_5 C_L L_5 L_L R_1 g_m s^5 + C_1 C_5 C_L L_5 L_L s^5 + C_1 C_5 C_L L_5 R_1 R_5 g_m s^4 + 2 C_1 C_5 C_L L_5 R_1 s^4 + C_1 C_5 C_L L_5 R_5 s^4}$$

$$\mathbf{10.733 \quad INVALID-ORDER-733} \quad Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \infty, \quad \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \quad \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$$

$$H(s) = \frac{C_1 C_5 C_L L_1 L_5 L_L R_5 R_L g_m s^6 + C_1 C_5 C_L L_1 L_5 L_L R_L s^6 + C_1 C_5 C_L L_5 L_L R_1 R_5 R_L g_m s^5 + C_1 C_5 C_L L_5 L_L R_1 R_L s^5 + C_1 C_5 C_L L_5 L_L R_5 R_L s^5 + C_1 C_5 L_1 L_5 L_L R_5 g_m s^5 + 2 C_1 C_5 L_1 L_5 R_5 g_m s^4 + C_1 C_5 L_1 L_5 R_5 s^4}{C_1 C_5 C_L L_1 L_5 L_L R_5 R_L g_m s^6 + C_1 C_5 C_L L_1 L_5 L_L R_L s^6 + C_1 C_5 C_L L_5 L_L R_1 R_5 R_L g_m s^5 + C_1 C_5 C_L L_5 L_L R_1 R_L s^5 + C_1 C_5 C_L L_5 L_L R_5 R_L s^5 + C_1 C_5 L_1 L_5 L_L R_5 g_m s^5 + 2 C_1 C_5 L_1 L_5 R_5 g_m s^4 + C_1 C_5 L_1 L_5 R_5 s^4}$$

**10.734 INVALID-ORDER-734**  $Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$

$$H(s) = \frac{C_1 C_5 C_L L_1 L_5 L_L R_5 g_m s^6 + 2 C_1 C_5 C_L L_1 L_5 L_L R_L g_m s^6 + C_1 C_5 C_L L_1 L_5 L_L s^6 + C_1 C_5 C_L L_5 L_L R_1 R_5 g_m s^5 + 2 C_1 C_5 C_L L_5 L_L R_1 R_L g_m s^5 + C_1 C_5 C_L L_5 L_L R_1 s^5 + C_1 C_5 C_L L_5 L_L L$$

**10.735   INVALID-ORDER-735**  $Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$

$$H(s) = \frac{C_1 C_5 C_L L_1 L_5 L_L R_5 q_m s^6 + 2C_1 C_5 C_L L_1 L_5 L_L R_L q_m s^6 + C_1 C_5 C_L L_1 L_5 L_L s^6 + C_1 C_5 C_L L_1 L_5 R_5 R_L q_m s^5 + C_1 C_5 C_L L_1 L_5 R_L s^5 + C_1 C_5 C_L L_5 L_L R_1 R_5 q_m s^5 + 2C_1 C_5 C_L L_5 L_L R_1 R_5 s^5 + C_1 C_5 C_L L_5 L_L R_1 R_5 s^5 + C_1 C_5 C_L L_5 L_L R_1 R_5 s^5}{C_1 C_5 C_L L_1 L_5 L_L R_5 q_m s^6 + 2C_1 C_5 C_L L_1 L_5 L_L R_L q_m s^6 + C_1 C_5 C_L L_1 L_5 L_L s^6 + C_1 C_5 C_L L_1 L_5 R_5 R_L q_m s^5 + C_1 C_5 C_L L_1 L_5 R_L s^5 + C_1 C_5 C_L L_5 L_L R_1 R_5 q_m s^5 + 2C_1 C_5 C_L L_5 L_L R_1 R_5 s^5 + C_1 C_5 C_L L_5 L_L R_1 R_5 s^5 + C_1 C_5 C_L L_5 L_L R_1 R_5 s^5}$$

**10.736 INVALID-ORDER-736**  $Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, R_L \right)$

$$H(s) = -\frac{C_1 C_5 L_1 L_5 R_5 g_m s^4 + 2C_1 C_5 L_1 L_5 R_L g_m s^4 + C_1 C_5 L_1 L_5 s^4 + 2C_1 C_5 L_1 R_5 R_L g_m s^3 + C_1 C_5 L_1 R_5 s^3 + C_1 C_5 L_5 R_1 R_5 g_m s^3 + 2C_1 C_5 L_5 R_1 R_L g_m s^3 + C_1 C_5 L_5 R_1 s^3 + C_1 C_5 L_5 R_5$$

**10.737 INVALID-ORDER-737**  $Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{1}{C_L s} \right)$

$$H(s) = -\frac{C_1 C_5 C_L L_1 L_5 R_5 q_m s^5 + C_1 C_5 C_L L_1 L_5 s^5 + C_1 C_5 C_L L_1 R_5 s^4 + C_1 C_5 C_L L_5 R_1 R_5 q_m s^4 + C_1 C_5 C_L L_5 R_1 s^4 + C_1 C_5 C_L L_5 R_5 s^4 + C_1 C_5 C_L R_1 R_5 s^3 + 2C_1 C_5 L_1 L_5 q_m s^4 + 2C_1 C_5$$

**10.738 INVALID-ORDER-738**  $Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{R_L}{C_L R_L s + 1} \right)$

$$H(s) = -\frac{C_1 C_5 C_L L_1 L_5 R_5 R_L g_m s^5 + C_1 C_5 C_L L_1 L_5 R_L s^5 + C_1 C_5 C_L L_1 R_5 R_L s^4 + C_1 C_5 C_L L_5 R_1 R_5 R_L g_m s^4 + C_1 C_5 C_L L_5 R_1 R_L s^4 + C_1 C_5 C_L L_5 R_5 R_L s^4 + C_1 C_5 C_L R_1 R_5 R_L s^3 + C_1 C_5 C_L R_1 R_5 R_L s^2 + C_1 C_5 C_L R_1 R_5 R_L s + C_1 C_5 C_L R_1 R_5 R_L}{C_1 C_5 C_L L_1 L_5 R_5 R_L g_m s^5 + C_1 C_5 C_L L_1 L_5 R_L s^5 + C_1 C_5 C_L L_1 R_5 R_L s^4 + C_1 C_5 C_L L_5 R_1 R_5 R_L g_m s^4 + C_1 C_5 C_L L_5 R_1 R_L s^4 + C_1 C_5 C_L L_5 R_5 R_L s^4 + C_1 C_5 C_L R_1 R_5 R_L s^3 + C_1 C_5 C_L R_1 R_5 R_L s^2 + C_1 C_5 C_L R_1 R_5 R_L s + C_1 C_5 C_L R_1 R_5 R_L}$$



**10.739 INVALID-ORDER-739**  $Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, R_L + \frac{1}{C_L s} \right)$

$$H(s) = -\frac{C_1 C_5 C_L L_1 L_5 R_5 g_m s^5 + 2 C_1 C_5 C_L L_1 L_5 R_L g_m s^5 + C_1 C_5 C_L L_1 L_5 s^5 + 2 C_1 C_5 C_L L_1 R_5 R_L g_m s^4 + C_1 C_5 C_L L_1 R_5 s^4 + C_1 C_5 C_L L_5 R_1 R_5 g_m s^4 + 2 C_1 C_5 C_L L_5 R_1 R_L g_m s^4 + C_1 C_5$$

**10.740 INVALID-ORDER-740**  $Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, L_L s + \frac{1}{C_L s} \right)$

$$H(s) = -\frac{2C_1C_5C_LL_1L_5L_Lg_ms^6 + C_1C_5C_LL_1L_5R_5g_ms^5 + C_1C_5C_LL_1L_5s^5 + 2C_1C_5C_LL_1L_LR_5g_ms^5 + C_1C_5C_LL_1R_5s^4 + 2C_1C_5C_LL_5L_LR_1g_ms^5 + C_1C_5C_LL_5L_Ls^5 + C_1C_5C_LL_5L_Ls^5 + C_1C_5C_LL_5L_Ls^5}{2C_1C_5C_LL_1L_5L_LR_5g_ms^5 + C_1C_5C_LL_1L_5R_5g_ms^5 + C_1C_5C_LL_1L_5s^5 + 2C_1C_5C_LL_1L_LR_5g_ms^5 + C_1C_5C_LL_1R_5s^4 + 2C_1C_5C_LL_5L_LR_1g_ms^5 + C_1C_5C_LL_5L_Ls^5 + C_1C_5C_LL_5L_Ls^5 + C_1C_5C_LL_5L_Ls^5}$$

**10.741 INVALID-ORDER-741**  $Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{L_L s}{C_L L_L s^2 + 1} \right)$

$$H(s) = -\frac{C_1 C_5 C_L L_1 L_5 L_L R_5 g_m s^6 + C_1 C_5 C_L L_1 L_5 L_L s^6 + C_1 C_5 C_L L_1 L_L R_5 s^5 + C_1 C_5 C_L L_5 L_L R_1 R_5 g_m s^5 + C_1 C_5 C_L L_5 L_L R_1 s^5 + C_1 C_5 C_L L_5 L_L R_5 s^5 + C_1 C_5 C_L L_L R_1 R_5 s^4 + 2 C_1 C$$

**10.742 INVALID-ORDER-742**  $Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, L_L s + R_L + \frac{1}{C_L s} \right)$

$$H(s) = -\frac{2C_1 C_5 C_L L_1 L_5 L_L g_m s^6 + C_1 C_5 C_L L_1 L_5 R_5 g_m s^5 + 2C_1 C_5 C_L L_1 L_5 R_L g_m s^5 + C_1 C_5 C_L L_1 L_5 s^5 + 2C_1 C_5 C_L L_1 L_L R_5 g_m s^5 + 2C_1 C_5 C_L L_1 R_5 R_L g_m s^4 + C_1 C_5 C_L L_1 R_5 s^4 + 2C_1$$

**10.743 INVALID-ORDER-743**  $Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$

$$H(s) = -\frac{C_1 C_5 C_L L_1 L_5 L_L R_5 R_L g_m s^6 + C_1 C_5 C_L L_1 L_5 L_L R_L s^6 + C_1 C_5 C_L L_1 L_L R_5 R_L s^5 + C_1 C_5 C_L L_5 L_L R_1 R_5 R_L g_m s^5 + C_1 C_5 C_L L_5 L_L R_1 R_L s^5 + C_1 C_5 C_L L_5 L_L R_5 R_L s^5 + C_1 C_5 C_L$$

$$10.744 \quad \text{INVALID-ORDER-744} \quad Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \infty, \quad \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \quad \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$$

$$H(s) = - \frac{C_1 C_5 C_L L_1 L_5 L_L R_5 g_m s^6 + 2 C_1 C_5 C_L L_1 L_5 L_L R_L g_m s^6 + C_1 C_5 C_L L_1 L_5 L_L s^6 + 2 C_1 C_5 C_L L_1 L_L R_5 R_L g_m s^5 + C_1 C_5 C_L L_1 L_L R_5 s^5 + C_1 C_5 C_L L_5 L_L R_1 R_5 g_m s^5 + 2 C_1 C_5 C_L L_5 L_L R_1 R_5 s^5 + C_1 C_5 C_L L_5 L_L R_1 R_5 g_m s^4 + 2 C_1 C_5 C_L L_5 L_L R_1 R_5 s^4 + C_1 C_5 C_L L_5 L_L R_1 R_5 g_m s^3 + 2 C_1 C_5 C_L L_5 L_L R_1 R_5 s^3 + C_1 C_5 C_L L_5 L_L R_1 R_5 g_m s^2 + 2 C_1 C_5 C_L L_5 L_L R_1 R_5 s^2 + C_1 C_5 C_L L_5 L_L R_1 R_5 g_m s + 2 C_1 C_5 C_L L_5 L_L R_1 R_5 s + C_1 C_5 C_L L_5 L_L R_1 R_5}{C_1 C_5 C_L L_1 L_5 L_L R_5 g_m s^6 + 2 C_1 C_5 C_L L_1 L_5 L_L R_L g_m s^6 + C_1 C_5 C_L L_1 L_5 L_L s^6 + 2 C_1 C_5 C_L L_1 L_L R_5 R_L g_m s^5 + C_1 C_5 C_L L_1 L_L R_5 s^5 + C_1 C_5 C_L L_5 L_L R_1 R_5 g_m s^5 + 2 C_1 C_5 C_L L_5 L_L R_1 R_5 s^5 + C_1 C_5 C_L L_5 L_L R_1 R_5 g_m s^4 + 2 C_1 C_5 C_L L_5 L_L R_1 R_5 s^4 + C_1 C_5 C_L L_5 L_L R_1 R_5 g_m s^3 + 2 C_1 C_5 C_L L_5 L_L R_1 R_5 s^3 + C_1 C_5 C_L L_5 L_L R_1 R_5 g_m s^2 + 2 C_1 C_5 C_L L_5 L_L R_1 R_5 s^2 + C_1 C_5 C_L L_5 L_L R_1 R_5 g_m s + 2 C_1 C_5 C_L L_5 L_L R_1 R_5 s + C_1 C_5 C_L L_5 L_L R_1 R_5}$$

$$10.745 \quad \text{INVALID-ORDER-745} \quad Z(s) = \left( L_1 s + R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \infty, \quad \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \quad \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$$

$$H(s) = - \frac{C_1 C_5 C_L L_1 L_5 L_L R_5 g_m s^6 + 2 C_1 C_5 C_L L_1 L_5 L_L R_L g_m s^6 + C_1 C_5 C_L L_1 L_5 L_L s^6 + C_1 C_5 C_L L_1 L_5 R_5 R_L g_m s^5 + C_1 C_5 C_L L_1 L_5 R_5 s^5 + 2 C_1 C_5 C_L L_1 L_L R_5 R_L g_m s^5 + C_1 C_5 C_L L_1 L_L R_5 s^5 + 2 C_1 C_5 C_L L_1 L_L R_5 R_L g_m s^4 + C_1 C_5 C_L L_1 L_L R_5 s^4 + 2 C_1 C_5 C_L L_1 L_L R_5 R_L g_m s^3 + C_1 C_5 C_L L_1 L_L R_5 s^3 + 2 C_1 C_5 C_L L_1 L_L R_5 R_L g_m s^2 + C_1 C_5 C_L L_1 L_L R_5 s^2 + 2 C_1 C_5 C_L L_1 L_L R_5 R_L g_m s + C_1 C_5 C_L L_1 L_L R_5 s + 2 C_1 C_5 C_L L_1 L_L R_5 R_L g_m}{C_1 C_5 C_L L_1 L_5 L_L R_5 g_m s^6 + 2 C_1 C_5 C_L L_1 L_5 L_L R_L g_m s^6 + C_1 C_5 C_L L_1 L_5 L_L s^6 + C_1 C_5 C_L L_1 L_5 R_5 R_L g_m s^5 + C_1 C_5 C_L L_1 L_5 R_5 s^5 + C_1 C_5 C_L L_1 L_L R_5 R_L g_m s^5 + C_1 C_5 C_L L_1 L_L R_5 s^5 + 2 C_1 C_5 C_L L_1 L_L R_5 R_L g_m s^4 + C_1 C_5 C_L L_1 L_L R_5 s^4 + 2 C_1 C_5 C_L L_1 L_L R_5 R_L g_m s^3 + C_1 C_5 C_L L_1 L_L R_5 s^3 + 2 C_1 C_5 C_L L_1 L_L R_5 R_L g_m s^2 + C_1 C_5 C_L L_1 L_L R_5 s^2 + 2 C_1 C_5 C_L L_1 L_L R_5 R_L g_m s + C_1 C_5 C_L L_1 L_L R_5 s + 2 C_1 C_5 C_L L_1 L_L R_5 R_L g_m}$$

$$10.746 \quad \text{INVALID-ORDER-746} \quad Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \quad \infty, \quad \infty, \quad \infty, \quad R_5, \quad \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_1 R_1 s (R_5 g_m - 1)}{C_1 C_L L_1 R_1 R_5 s^3 + C_1 L_1 R_1 s^2 + C_L L_1 R_1 R_5 g_m s^2 + C_L L_1 R_1 s^2 + C_L L_1 R_5 s^2 + C_L R_1 R_5 s + 2 L_1 R_1 g_m s + L_1 s + R_1}$$

$$10.747 \quad \text{INVALID-ORDER-747} \quad Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \quad \infty, \quad \infty, \quad \infty, \quad R_5, \quad \frac{R_L}{C_L R_L s + 1} \right)$$

$$H(s) = \frac{L_1 R_1 R_L s (R_5 g_m - 1)}{C_1 C_L L_1 R_1 R_5 R_L s^3 + C_1 L_1 R_1 R_5 s^2 + C_1 L_1 R_1 R_L s^2 + C_L L_1 R_1 R_5 R_L g_m s^2 + C_L L_1 R_1 R_L s^2 + C_L L_1 R_5 R_L s^2 + C_L R_1 R_5 R_L s + L_1 R_1 R_5 g_m s + 2 L_1 R_1 R_L g_m s + L_1 R_1 s + L_1 R_1}$$

$$10.748 \quad \text{INVALID-ORDER-748} \quad Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \quad \infty, \quad \infty, \quad \infty, \quad R_5, \quad R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_1 R_1 s (R_5 g_m - 1) (C_L R_L s + 1)}{C_1 C_L L_1 R_1 R_5 s^3 + C_1 C_L L_1 R_1 R_L s^3 + C_1 L_1 R_1 s^2 + C_L L_1 R_1 R_5 g_m s^2 + 2 C_L L_1 R_1 R_L g_m s^2 + C_L L_1 R_1 s^2 + C_L L_1 R_5 s^2 + C_L L_1 R_L s^2 + C_L R_1 R_5 s + C_L R_1 R_L s + 2 L_1 R_1 g_m s + L_1 s + R_1}$$

$$\mathbf{10.749 \quad INVALID-ORDER-749} \quad Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, R_5, L_L s + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_1 R_1 s (R_5 g_m - 1) (C_L L_L s^2 + 1)}{C_1 C_L L_1 L_L R_1 s^4 + C_1 C_L L_1 R_1 R_5 s^3 + C_1 L_1 R_1 s^2 + 2 C_L L_1 L_L R_1 g_m s^3 + C_L L_1 L_L s^3 + C_L L_1 R_1 R_5 g_m s^2 + C_L L_1 R_1 s^2 + C_L L_1 R_5 s^2 + C_L L_L R_1 s^2 + C_L R_1 R_5 s + 2 L_1 R_1 g_m s + L_1 L_L s^2}$$

$$\mathbf{10.750 \quad INVALID-ORDER-750} \quad Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, R_5, \frac{L_L s}{C_L L_L s^2 + 1} \right)$$

$$H(s) = \frac{L_1 L_L R_1 s^2 (R_5 g_m - 1)}{C_1 C_L L_1 L_L R_1 R_5 s^4 + C_1 L_1 L_L R_1 s^3 + C_1 L_1 R_1 R_5 s^2 + C_L L_1 L_L R_1 R_5 g_m s^3 + C_L L_1 L_L R_1 s^3 + C_L L_1 L_L R_5 s^3 + C_L L_L R_1 R_5 s^2 + 2 L_1 L_L R_1 g_m s^2 + L_1 L_L s^2 + L_1 R_1 R_5 g_m s + L_1 L_L s^2}$$

$$\mathbf{10.751 \quad INVALID-ORDER-751} \quad Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, R_5, L_L s + R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_1 R_1 s (R_5 g_m - 1) (C_L L_L s^2 + C_L R_L s + 1)}{C_1 C_L L_1 L_L R_1 s^4 + C_1 C_L L_1 R_1 R_5 s^3 + C_1 C_L L_1 R_1 R_L s^3 + C_1 L_1 R_1 s^2 + 2 C_L L_1 L_L R_1 g_m s^3 + C_L L_1 L_L s^3 + C_L L_1 R_1 R_5 g_m s^2 + 2 C_L L_1 R_1 R_L g_m s^2 + C_L L_1 R_1 s^2 + C_L L_1 R_5 s^2 + L_1 L_L s^2}$$

$$\mathbf{10.752 \quad INVALID-ORDER-752} \quad Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, R_5, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$$

$$H(s) = \frac{L_1 L_L R_1 R_L s^2 (R_5 g_m - 1)}{C_1 C_L L_1 L_L R_1 R_5 R_L s^4 + C_1 L_1 L_L R_1 R_5 s^3 + C_1 L_1 L_L R_1 R_L s^3 + C_1 L_1 R_1 R_5 R_L s^2 + C_L L_1 L_L R_1 R_5 R_L g_m s^3 + C_L L_1 L_L R_1 R_L s^3 + C_L L_1 L_L R_5 R_L s^3 + C_L L_L R_1 R_5 R_L s^2 + L_1 L_L s^2}$$

$$\mathbf{10.753 \quad INVALID-ORDER-753} \quad Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, R_5, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$$

$$H(s) = \frac{L_1 R_1 s (R_5 g_m - 1) (C_L L_L s^2 + 1)}{C_1 C_L L_1 L_L R_1 R_5 s^4 + C_1 C_L L_1 L_L R_1 R_L s^4 + C_1 L_1 L_L R_1 s^3 + C_1 L_1 R_1 R_5 s^2 + C_1 L_1 R_1 R_L s^2 + C_L L_1 L_L R_1 R_5 g_m s^3 + 2 C_L L_1 L_L R_1 R_L g_m s^3 + C_L L_1 L_L R_1 s^3 + C_L L_1 L_L R_5 s^3 + L_1 L_L s^2}$$

$$10.754 \quad \text{INVALID-ORDER-754} \quad Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, R_5, \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$$

$$H(s) = \frac{L_1}{C_1 C_L L_1 L_L R_1 R_5 s^4 + C_1 C_L L_1 L_L R_1 R_L s^4 + C_1 C_L L_1 R_1 R_5 R_L s^3 + C_1 L_1 R_1 R_5 s^2 + C_1 L_1 R_1 R_L s^2 + C_L L_1 L_L R_1 R_5 g_m s^3 + 2 C_L L_1 L_L R_1 R_L g_m s^3 + C_L L_1 L_L R_1 s^3 + C_L L_1 L_L R_1 s^2 + C_L L_1 L_L R_1 s + C_L L_1 L_L R_1}$$

$$10.755 \quad \text{INVALID-ORDER-755} \quad Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, \frac{1}{C_5 s}, R_L \right)$$

$$H(s) = \frac{L_1 R_1 R_L s (-C_5 s + g_m)}{C_1 C_5 L_1 R_1 R_L s^3 + C_1 L_1 R_1 s^2 + 2 C_5 L_1 R_1 R_L g_m s^2 + C_5 L_1 R_1 s^2 + C_5 L_1 R_L s^2 + C_5 R_1 R_L s + L_1 R_1 g_m s + L_1 s + R_1}$$

$$10.756 \quad \text{INVALID-ORDER-756} \quad Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, \frac{1}{C_5 s}, \frac{R_L}{C_L R_L s + 1} \right)$$

$$H(s) = \frac{L_1 R_1 R_L s (-C_5 s + g_m)}{C_1 C_5 L_1 R_1 R_L s^3 + C_1 C_L L_1 R_1 R_L s^3 + C_1 L_1 R_1 s^2 + C_5 C_L L_1 R_1 R_L s^3 + 2 C_5 L_1 R_1 R_L g_m s^2 + C_5 L_1 R_1 s^2 + C_5 L_1 R_L s^2 + C_5 R_1 R_L s + C_L L_1 R_1 R_L g_m s^2 + C_L L_1 R_L s^2 + C_L R_1 R_L s + C_L R_1 R_L}$$

$$10.757 \quad \text{INVALID-ORDER-757} \quad Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, \frac{1}{C_5 s}, R_L + \frac{1}{C_L s} \right)$$

$$H(s) = -\frac{L_1 R_1 (C_5 s - g_m) (C_L R_L s + 1)}{C_1 C_5 C_L L_1 R_1 R_L s^3 + C_1 C_5 L_1 R_1 s^2 + C_1 C_L L_1 R_1 s^2 + 2 C_5 C_L L_1 R_1 R_L g_m s^2 + C_5 C_L L_1 R_1 s^2 + C_5 C_L L_1 R_L s^2 + C_5 C_L R_1 R_L s + 2 C_5 L_1 R_1 g_m s + C_5 L_1 s + C_5 R_1 + C_L L_1 R_1 g_m s + C_L L_1 R_L s + C_L R_1 R_L}$$

$$10.758 \quad \text{INVALID-ORDER-758} \quad Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, \frac{1}{C_5 s}, L_L s + \frac{1}{C_L s} \right)$$

$$H(s) = -\frac{L_1 R_1 (C_5 s - g_m) (C_L L_L s^2 + 1)}{C_1 C_5 C_L L_1 L_L R_1 s^4 + C_1 C_5 L_1 R_1 s^2 + C_1 C_L L_1 R_1 s^2 + 2 C_5 C_L L_1 L_L R_1 g_m s^3 + C_5 C_L L_1 L_L s^3 + C_5 C_L L_1 R_1 s^2 + C_5 C_L L_L R_1 s^2 + 2 C_5 L_1 R_1 g_m s + C_5 L_1 s + C_5 R_1 + C_L L_1 R_1 g_m s + C_L L_1 R_L s + C_L R_1 R_L}$$

$$\mathbf{10.759 \quad INVALID-ORDER-759} \quad Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} \right)$$

$$H(s) = \frac{L_1 L_L R_1 s^2 (-C_5 s + g_m)}{C_1 C_5 L_1 L_L R_1 s^4 + C_1 C_L L_1 L_L R_1 s^4 + C_1 L_1 R_1 s^2 + C_5 C_L L_1 L_L R_1 s^4 + 2C_5 L_1 L_L R_1 g_m s^3 + C_5 L_1 L_L s^3 + C_5 L_1 R_1 s^2 + C_5 L_L R_1 s^2 + C_L L_1 L_L R_1 g_m s^3 + C_L L_1 L_L s^3 + C_L L_L R_1 s^2}$$

$$\mathbf{10.760 \quad INVALID-ORDER-760} \quad Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, \frac{1}{C_5 s}, L_L s + R_L + \frac{1}{C_L s} \right)$$

$$H(s) = -\frac{L_1 R_1 (C_5 s - g_m) (C_L L_L s^2 + C_L R_L s + 1)}{C_1 C_5 C_L L_1 L_L R_1 s^4 + C_1 C_5 C_L L_1 R_1 R_L s^3 + C_1 C_5 L_1 R_1 s^2 + C_1 C_L L_1 R_1 s^2 + 2C_5 C_L L_1 L_L R_1 g_m s^3 + C_5 C_L L_1 L_L s^3 + 2C_5 C_L L_1 R_1 R_L g_m s^2 + C_5 C_L L_1 R_1 s^2 + C_5 C_L L_1 R_L s^2}$$

$$\mathbf{10.761 \quad INVALID-ORDER-761} \quad Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, \frac{1}{C_5 s}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$$

$$H(s) = \frac{L_1 L_L R_1 R_L s^2 (-C_5 s + g_m)}{C_1 C_5 L_1 L_L R_1 R_L s^4 + C_1 C_L L_1 L_L R_1 R_L s^4 + C_1 L_1 L_L R_1 s^3 + C_1 L_1 R_1 R_L s^2 + C_5 C_L L_1 L_L R_1 R_L s^4 + 2C_5 L_1 L_L R_1 R_L g_m s^3 + C_5 L_1 L_L R_1 s^3 + C_5 L_1 L_L R_L s^3 + C_5 L_1 R_1 R_L s^2 + C_5 L_1 R_L s^2}$$

$$\mathbf{10.762 \quad INVALID-ORDER-762} \quad Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$$

$$H(s) = -\frac{L_1 R_1 s (C_5 s - g_m)}{C_1 C_5 C_L L_1 L_L R_1 R_L s^5 + C_1 C_5 L_1 L_L R_1 s^4 + C_1 C_5 L_1 R_1 R_L s^3 + C_1 C_L L_1 L_L R_1 s^4 + C_1 L_1 R_1 s^2 + 2C_5 C_L L_1 L_L R_1 R_L g_m s^4 + C_5 C_L L_1 L_L R_1 s^4 + C_5 C_L L_1 L_L R_L s^4 + C_5 C_L L_L R_1 s^4}$$

$$\mathbf{10.763 \quad INVALID-ORDER-763} \quad Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, \frac{1}{C_5 s}, \frac{R_L (L_L s + \frac{1}{C_L s})}{L_L s + R_L + \frac{1}{C_L s}} \right)$$

$$H(s) = -\frac{L_1 R_1 s (C_5 s - g_m)}{C_1 C_5 C_L L_1 L_L R_1 R_L s^5 + C_1 C_5 L_1 R_1 R_L s^3 + C_1 C_L L_1 L_L R_1 s^4 + C_1 C_L L_1 R_1 R_L s^3 + C_1 L_1 R_1 s^2 + 2C_5 C_L L_1 L_L R_1 R_L g_m s^4 + C_5 C_L L_1 L_L R_1 s^4 + C_5 C_L L_1 L_L R_L s^4 + C_5 C_L L_1 R_1 s^4}$$

$$\mathbf{10.764 \quad INVALID-ORDER-764} \quad Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, R_L \right)$$

$$H(s) = \frac{L_1 R_1 R_L s (-C_5 R_5 s + R_5 g_m - 1)}{C_1 C_5 L_1 R_1 R_5 R_L s^3 + C_1 L_1 R_1 R_5 s^2 + C_1 L_1 R_1 R_L s^2 + 2C_5 L_1 R_1 R_5 R_L g_m s^2 + C_5 L_1 R_1 R_5 s^2 + C_5 L_1 R_5 R_L s^2 + C_5 R_1 R_5 R_L s + L_1 R_1 R_5 g_m s + 2L_1 R_1 R_L g_m s + L_1 R_1 s + L_1 R_5 s}$$

$$\mathbf{10.765 \quad INVALID-ORDER-765} \quad Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_1 R_1 s (-C_5 R_5 s + R_5 g_m - 1)}{C_1 C_5 L_1 R_1 R_5 s^3 + C_1 C_L L_1 R_1 R_5 s^3 + C_1 L_1 R_1 s^2 + C_5 C_L L_1 R_1 R_5 s^3 + 2C_5 L_1 R_1 R_5 g_m s^2 + C_5 L_1 R_5 s^2 + C_5 R_1 R_5 s + C_L L_1 R_1 R_5 g_m s^2 + C_L L_1 R_1 s^2 + C_L L_1 R_5 s^2 + C_L R_1 R_5 s}$$

$$\mathbf{10.766 \quad INVALID-ORDER-766} \quad Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, \frac{R_L}{C_L R_L s + 1} \right)$$

$$H(s) = \frac{L_1 R_1 R_L s (-C_5 R_5 s + R_5 g_m - 1)}{C_1 C_5 L_1 R_1 R_5 R_L s^3 + C_1 C_L L_1 R_1 R_5 R_L s^3 + C_1 L_1 R_1 R_5 s^2 + C_1 L_1 R_1 R_L s^2 + C_5 C_L L_1 R_1 R_5 R_L s^3 + 2C_5 L_1 R_1 R_5 R_L g_m s^2 + C_5 L_1 R_1 R_5 s^2 + C_5 L_1 R_5 R_L s^2 + C_5 R_1 R_5 R_L s + C_L L_1 R_1 R_5 g_m s^2 + C_L L_1 R_1 s^2 + C_L L_1 R_5 s^2 + C_L R_1 R_5 s}$$

$$\mathbf{10.767 \quad INVALID-ORDER-767} \quad Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, R_L + \frac{1}{C_L s} \right)$$

$$H(s) = -\frac{L_1 R_1 s (C_L R_L s + 1)}{C_1 C_5 C_L L_1 R_1 R_5 R_L s^4 + C_1 C_5 L_1 R_1 R_5 s^3 + C_1 C_L L_1 R_1 R_5 s^3 + C_1 C_L L_1 R_1 R_L s^3 + C_1 L_1 R_1 s^2 + 2C_5 C_L L_1 R_1 R_5 R_L g_m s^3 + C_5 C_L L_1 R_1 R_5 s^3 + C_5 C_L L_1 R_5 R_L s^3 + C_5 C_L R_1 R_5 s^2 + C_5 R_1 R_5 R_L s + C_L L_1 R_1 R_5 g_m s^2 + C_L L_1 R_1 s^2 + C_L L_1 R_5 s^2 + C_L R_1 R_5 s}$$

$$\mathbf{10.768 \quad INVALID-ORDER-768} \quad Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, L_L s + \frac{1}{C_L s} \right)$$

$$H(s) = -\frac{L_1 R_1 s (C_L L_L s + 1)}{C_1 C_5 C_L L_1 L_L R_1 R_5 s^5 + C_1 C_5 L_1 R_1 R_5 s^3 + C_1 C_L L_1 L_L R_1 s^4 + C_1 C_L L_1 R_1 R_5 s^3 + C_1 L_1 R_1 s^2 + 2C_5 C_L L_1 L_L R_1 R_5 g_m s^4 + C_5 C_L L_1 L_L R_5 s^4 + C_5 C_L L_1 R_1 R_5 s^3 + C_5 C_L L_L R_1 R_5 s^2 + C_5 R_1 R_5 R_L s + C_L L_1 R_1 R_5 g_m s^2 + C_L L_1 R_1 s^2 + C_L L_1 R_5 s^2 + C_L R_1 R_5 s}$$

$$\mathbf{10.769 \quad INVALID-ORDER-769} \quad Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, \frac{L_L s}{C_L L_L s^2 + 1} \right)$$

$$H(s) = \frac{L_1 L_L R_1 s^2 (-C_5 R_5 s + R_5 g_m)}{C_1 C_5 L_1 L_L R_1 R_5 s^4 + C_1 C_L L_1 L_L R_1 R_5 s^4 + C_1 L_1 L_L R_1 s^3 + C_1 L_1 R_1 R_5 s^2 + C_5 C_L L_1 L_L R_1 R_5 s^4 + 2C_5 L_1 L_L R_1 R_5 g_m s^3 + C_5 L_1 L_L R_5 s^3 + C_5 L_1 R_1 R_5 s^2 + C_5 L_L R_1 R_5 s^2 + C_5 C_L L_1 L_L R_1 R_5 s^4}$$

$$\mathbf{10.770 \quad INVALID-ORDER-770} \quad Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, L_L s + R_L + \frac{1}{C_L s} \right)$$

$$H(s) = -\frac{L_1 L_L R_1 s^2 (-C_5 R_5 s + R_5 g_m)}{C_1 C_5 C_L L_1 L_L R_1 R_5 s^5 + C_1 C_5 C_L L_1 R_1 R_5 R_L s^4 + C_1 C_5 L_1 R_1 R_5 s^3 + C_1 C_L L_1 L_L R_1 s^4 + C_1 C_L L_1 R_1 R_5 s^3 + C_1 C_L L_1 R_1 R_L s^3 + C_1 L_1 R_1 s^2 + 2C_5 C_L L_1 L_L R_1 R_5 g_m s^4 + C_5 C_L L_1 L_L R_1 R_5 s^4}$$

$$\mathbf{10.771 \quad INVALID-ORDER-771} \quad Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$$

$$H(s) = \frac{L_1 L_L R_1 s^2 (-C_5 R_5 s + R_5 g_m)}{C_1 C_5 L_1 L_L R_1 R_5 R_L s^4 + C_1 C_L L_1 L_L R_1 R_5 R_L s^4 + C_1 L_1 L_L R_1 R_5 s^3 + C_1 L_1 L_L R_1 R_L s^3 + C_1 L_1 R_1 R_5 R_L s^2 + C_5 C_L L_1 L_L R_1 R_5 R_L s^4 + 2C_5 L_1 L_L R_1 R_5 R_L g_m s^3 + C_5 L_1 L_L R_1 R_5 R_L s^3}$$

$$\mathbf{10.772 \quad INVALID-ORDER-772} \quad Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$$

$$H(s) = -\frac{L_1 L_L R_1 s^2 (-C_5 R_5 s + R_5 g_m)}{C_1 C_5 C_L L_1 L_L R_1 R_5 R_L s^5 + C_1 C_5 L_1 L_L R_1 R_5 s^4 + C_1 C_5 L_1 R_1 R_5 R_L s^3 + C_1 C_L L_1 L_L R_1 R_5 s^4 + C_1 C_L L_1 L_L R_1 R_L s^4 + C_1 L_1 L_L R_1 s^3 + C_1 L_1 R_1 R_5 s^2 + C_1 L_1 R_1 R_L s^2 + 2C_5 C_L L_1 L_L R_1 R_5 R_L s^4}$$

$$\mathbf{10.773 \quad INVALID-ORDER-773} \quad Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$$

$$H(s) = -\frac{L_1 L_L R_1 s^2 (-C_5 R_5 s + R_5 g_m)}{C_1 C_5 C_L L_1 L_L R_1 R_5 R_L s^5 + C_1 C_5 L_1 R_1 R_5 R_L s^3 + C_1 C_L L_1 L_L R_1 R_5 s^4 + C_1 C_L L_1 L_L R_1 R_L s^4 + C_1 C_L L_1 R_1 R_5 R_L s^3 + C_1 L_1 R_1 R_5 s^2 + C_1 L_1 R_1 R_L s^2 + 2C_5 C_L L_1 L_L R_1 R_5 R_L s^4}$$

$$10.774 \quad \text{INVALID-ORDER-774} \quad Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, R_L \right)$$

$$H(s) = \frac{L_1 R_1 R_L s (C_5 R_5 g_m s - C_5 s + g_m)}{C_1 C_5 L_1 R_1 R_5 s^3 + C_1 C_5 L_1 R_1 R_L s^3 + C_1 L_1 R_1 s^2 + C_5 L_1 R_1 R_5 g_m s^2 + 2C_5 L_1 R_1 R_L g_m s^2 + C_5 L_1 R_1 s^2 + C_5 L_1 R_5 s^2 + C_5 L_1 R_L s^2 + C_5 R_1 R_5 s + C_5 R_1 R_L s + L_1 R_1 g_m s + L_1 s}$$

$$10.775 \quad \text{INVALID-ORDER-775} \quad Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_1 R_1 (C_5 R_5 g_m s - C_5 s + g_m)}{C_1 C_5 C_L L_1 R_1 R_5 s^3 + C_1 C_5 L_1 R_1 s^2 + C_1 C_L L_1 R_1 s^2 + C_5 C_L L_1 R_1 R_5 g_m s^2 + C_5 C_L L_1 R_1 s^2 + C_5 C_L L_1 R_5 s^2 + C_5 C_L R_1 R_5 s + 2C_5 L_1 R_1 g_m s + C_5 L_1 s + C_5 R_1 + C_L L_1 R_1 g_m s +}$$

$$10.776 \quad \text{INVALID-ORDER-776} \quad Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, \frac{R_L}{C_L R_L s + 1} \right)$$

$$H(s) = \frac{L_1 R_1 R_L s (C_5 R_5 g_m s - C_5 s + g_m)}{C_1 C_5 C_L L_1 R_1 R_5 R_L s^4 + C_1 C_5 L_1 R_1 R_5 s^3 + C_1 C_5 L_1 R_1 R_L s^3 + C_1 C_L L_1 R_1 R_L s^3 + C_1 L_1 R_1 s^2 + C_5 C_L L_1 R_1 R_5 R_L g_m s^3 + C_5 C_L L_1 R_1 R_L s^3 + C_5 C_L L_1 R_5 R_L s^3 + C_5 C_L R_1 R_5 R_L s^3 +}$$

$$10.777 \quad \text{INVALID-ORDER-777} \quad Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_1 R_1 (C_L R_L s + 1) (C_5 R_5 g_m s - C_5 s + g_m)}{C_1 C_5 C_L L_1 R_1 R_5 s^3 + C_1 C_5 C_L L_1 R_1 R_L s^3 + C_1 C_5 L_1 R_1 s^2 + C_1 C_L L_1 R_1 s^2 + C_5 C_L L_1 R_1 R_5 g_m s^2 + 2C_5 C_L L_1 R_1 R_L g_m s^2 + C_5 C_L L_1 R_1 s^2 + C_5 C_L L_1 R_5 s^2 + C_5 C_L L_1 R_L s^2 + C_5 C_L R_1 R_5 s^2 +}$$

$$10.778 \quad \text{INVALID-ORDER-778} \quad Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, L_L s + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_1 R_1 (C_L L_L s^2 + 1) (C_5 R_5 g_m s - C_5 s + g_m)}{C_1 C_5 C_L L_1 L_L R_1 s^4 + C_1 C_5 C_L L_1 R_1 R_5 s^3 + C_1 C_5 L_1 R_1 s^2 + C_1 C_L L_1 R_1 s^2 + 2C_5 C_L L_1 L_L R_1 g_m s^3 + C_5 C_L L_1 L_L s^3 + C_5 C_L L_1 R_1 R_5 g_m s^2 + C_5 C_L L_1 R_1 s^2 + C_5 C_L L_1 R_5 s^2 + C_5 C_L R_1 R_5 s^2 +}$$



$$10.779 \quad \text{INVALID-ORDER-779} \quad Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} \right)$$

$$H(s) = \frac{L_1 L_L R_1 s^2 (C_5 L_L s + R_L)}{C_1 C_5 C_L L_1 L_L R_1 R_5 s^5 + C_1 C_5 L_1 L_L R_1 s^4 + C_1 C_5 L_1 R_1 R_5 s^3 + C_1 C_L L_1 L_L R_1 s^4 + C_1 L_1 R_1 s^2 + C_5 C_L L_1 L_L R_1 R_5 g_m s^4 + C_5 C_L L_1 L_L R_1 s^4 + C_5 C_L L_1 L_L R_5 s^4 + C_5 C_L L_L R_1 R_5 s^4}$$

$$10.780 \quad \text{INVALID-ORDER-780} \quad Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, L_L s + R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_1 R_1 (C_L L_L s^2 + C_L R_L s + R_L)}{C_1 C_5 C_L L_1 L_L R_1 s^4 + C_1 C_5 C_L L_1 R_1 R_5 s^3 + C_1 C_5 C_L L_1 R_1 R_L s^3 + C_1 C_5 L_1 R_1 s^2 + C_1 C_L L_1 R_1 s^2 + 2C_5 C_L L_1 L_L R_1 g_m s^3 + C_5 C_L L_1 L_L s^3 + C_5 C_L L_1 R_1 R_5 g_m s^2 + 2C_5 C_L L_1 R_1 s^2}$$

$$10.781 \quad \text{INVALID-ORDER-781} \quad Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$$

$$H(s) = \frac{C_5 C_L L_1 L_L R_1 R_5 R_L s^5 + C_1 C_5 L_1 L_L R_1 R_5 s^4 + C_1 C_5 L_1 L_L R_1 R_L s^4 + C_1 C_5 L_1 R_1 R_5 R_L s^3 + C_1 C_L L_1 L_L R_1 R_L s^4 + C_1 L_1 L_L R_1 s^3 + C_1 L_1 R_1 R_L s^2 + C_5 C_L L_1 L_L R_1 R_5 R_L g_m s^4}{C_1 C_5 C_L L_1 L_L R_1 R_5 s^5 + C_1 C_5 C_L L_1 L_L R_1 R_L s^5 + C_1 C_5 L_1 L_L R_1 s^4 + C_1 C_5 L_1 R_1 R_5 s^3 + C_1 C_5 L_1 R_1 R_L s^3 + C_1 C_L L_1 L_L R_1 s^4 + C_1 L_1 R_1 s^2 + C_5 C_L L_1 L_L R_1 R_5 g_m s^4 + 2C_5 C_L L_1 R_1 s^2}$$

$$10.782 \quad \text{INVALID-ORDER-782} \quad Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$$

$$H(s) = \frac{C_5 C_L L_1 L_L R_1 R_5 s^5 + C_1 C_5 C_L L_1 L_L R_1 R_L s^5 + C_1 C_5 L_1 L_L R_1 s^4 + C_1 C_5 L_1 R_1 R_5 s^3 + C_1 C_5 L_1 R_1 R_L s^3 + C_1 C_L L_1 L_L R_1 s^4 + C_1 L_1 R_1 s^2 + C_5 C_L L_1 L_L R_1 R_5 g_m s^4 + 2C_5 C_L L_1 R_1 s^2}{C_1 C_5 C_L L_1 L_L R_1 R_5 s^5 + C_1 C_5 C_L L_1 L_L R_1 R_L s^5 + C_1 C_5 L_1 L_L R_1 s^4 + C_1 C_5 L_1 R_1 R_5 s^3 + C_1 C_5 L_1 R_1 R_L s^3 + C_1 C_L L_1 L_L R_1 s^4 + C_1 L_1 R_1 s^2 + C_5 C_L L_1 L_L R_1 R_5 g_m s^4 + 2C_5 C_L L_1 R_1 s^2}$$

$$10.783 \quad \text{INVALID-ORDER-783} \quad Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, \frac{R_L (L_L s + \frac{1}{C_L s})}{L_L s + R_L + \frac{1}{C_L s}} \right)$$

$$H(s) = \frac{C_5 C_L L_1 L_L R_1 R_5 s^5 + C_1 C_5 C_L L_1 L_L R_1 R_L s^5 + C_1 C_5 C_L L_1 R_1 R_5 R_L s^4 + C_1 C_5 L_1 R_1 R_5 s^3 + C_1 C_5 L_1 R_1 R_L s^3 + C_1 C_L L_1 L_L R_1 s^4 + C_1 C_L L_1 R_1 R_L s^3 + C_1 L_1 R_1 s^2 + C_5 C_L L_1 L_L R_1 R_5 g_m s^4 + 2C_5 C_L L_1 R_1 s^2}{C_1 C_5 C_L L_1 L_L R_1 R_5 s^5 + C_1 C_5 C_L L_1 L_L R_1 R_L s^5 + C_1 C_5 L_1 L_L R_1 s^4 + C_1 C_5 L_1 R_1 R_5 s^3 + C_1 C_5 L_1 R_1 R_L s^3 + C_1 C_L L_1 L_L R_1 s^4 + C_1 C_L L_1 R_1 R_L s^3 + C_1 L_1 R_1 s^2 + C_5 C_L L_1 L_L R_1 R_5 g_m s^4 + 2C_5 C_L L_1 R_1 s^2}$$

$$\mathbf{10.784 \quad INVALID-ORDER-784} \quad Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, R_L \right)$$

$$H(s) = \frac{L_1 R_1 R_L s (C_5 L_5 g_m s^2 - C_5 s + g_m)}{C_1 C_5 L_1 L_5 R_1 s^4 + C_1 C_5 L_1 R_1 R_L s^3 + C_1 L_1 R_1 s^2 + C_5 L_1 L_5 R_1 g_m s^3 + C_5 L_1 L_5 s^3 + 2C_5 L_1 R_1 R_L g_m s^2 + C_5 L_1 R_1 s^2 + C_5 L_1 R_L s^2 + C_5 L_5 R_1 s^2 + C_5 R_1 R_L s + L_1 R_1 g_m s + L_1 s}$$

$$\mathbf{10.785 \quad INVALID-ORDER-785} \quad Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_1 R_1 (C_5 L_5 g_m s^2 - C_5 s + g_m)}{C_1 C_5 C_L L_1 L_5 R_1 s^4 + C_1 C_5 L_1 R_1 s^2 + C_1 C_L L_1 R_1 s^2 + C_5 C_L L_1 L_5 R_1 g_m s^3 + C_5 C_L L_1 L_5 s^3 + C_5 C_L L_1 R_1 s^2 + C_5 C_L L_5 R_1 s^2 + 2C_5 L_1 R_1 g_m s + C_5 L_1 s + C_5 R_1 + C_L L_1 R_1 g_m s + L_1 s}$$

$$\mathbf{10.786 \quad INVALID-ORDER-786} \quad Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, \frac{R_L}{C_L R_L s + 1} \right)$$

$$H(s) = \frac{L_1 R_1 R_L s (C_5 L_5 g_m s^2 - C_5 s + g_m)}{C_1 C_5 C_L L_1 L_5 R_1 R_L s^5 + C_1 C_5 L_1 L_5 R_1 s^4 + C_1 C_5 L_1 R_1 R_L s^3 + C_1 C_L L_1 R_1 R_L s^3 + C_1 L_1 R_1 s^2 + C_5 C_L L_1 L_5 R_1 R_L g_m s^4 + C_5 C_L L_1 L_5 R_L s^4 + C_5 C_L L_1 R_1 R_L s^3 + C_5 C_L L_5 R_1 R_L s^3 + C_5 C_L L_1 R_1 s^2 + C_5 C_L L_1 R_L s^2 + C_5 C_L L_5 R_1 s^2 + C_5 R_1 R_L s + L_1 R_1 g_m s + L_1 s}$$

$$\mathbf{10.787 \quad INVALID-ORDER-787} \quad Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_1 R_1 (C_L R_L s + 1) (C_5 L_5 g_m s^2 - C_5 s + g_m)}{C_1 C_5 C_L L_1 L_5 R_1 s^4 + C_1 C_5 C_L L_1 R_1 R_L s^3 + C_1 C_5 L_1 R_1 s^2 + C_1 C_L L_1 R_1 s^2 + C_5 C_L L_1 L_5 R_1 g_m s^3 + C_5 C_L L_1 L_5 s^3 + 2C_5 C_L L_1 R_1 R_L g_m s^2 + C_5 C_L L_1 R_1 s^2 + C_5 C_L L_1 R_L s^2 + C_5 C_L L_5 R_1 s^2 + C_5 R_1 R_L s + L_1 R_1 g_m s + L_1 s}$$

$$\mathbf{10.788 \quad INVALID-ORDER-788} \quad Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, L_L s + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_1 R_1 (C_L L_L s^2 + 1) (C_5 L_5 g_m s^2 - C_5 s + g_m)}{C_1 C_5 C_L L_1 L_5 R_1 s^4 + C_1 C_5 C_L L_1 L_L R_1 s^4 + C_1 C_5 L_1 R_1 s^2 + C_1 C_L L_1 R_1 s^2 + C_5 C_L L_1 L_5 R_1 g_m s^3 + C_5 C_L L_1 L_5 s^3 + 2C_5 C_L L_1 L_L R_1 g_m s^3 + C_5 C_L L_1 L_L s^3 + C_5 C_L L_1 R_1 s^2 + C_5 C_L L_1 R_L s^2 + C_5 C_L L_5 R_1 s^2 + C_5 R_1 R_L s + L_1 R_1 g_m s + L_1 s}$$

10.789 INVALID-ORDER-789  $Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} \right)$

$$H(s) = \frac{L_1 L_L R_1 s^2 (C_5 C_L L_1 L_5 L_L R_1 s^6 + C_1 C_5 L_1 L_5 R_1 s^4 + C_1 C_5 L_1 L_L R_1 s^4 + C_1 C_L L_1 L_L R_1 s^4 + C_1 L_1 R_1 s^2 + C_5 C_L L_1 L_5 L_L R_1 g_m s^5 + C_5 C_L L_1 L_5 L_L s^5 + C_5 C_L L_1 L_L R_1 s^4 + C_5 C_L L_5 L_L R_1 s^4)}{C_1 C_5 C_L L_1 L_5 L_L R_1 s^6 + C_1 C_5 L_1 L_5 R_1 s^4 + C_1 C_5 L_1 L_L R_1 s^4 + C_1 C_L L_1 L_L R_1 s^4 + C_1 L_1 R_1 s^2 + C_5 C_L L_1 L_5 L_L R_1 g_m s^5 + C_5 C_L L_1 L_5 L_L s^5 + C_5 C_L L_1 L_L R_1 s^4 + C_5 C_L L_5 L_L R_1 s^4}$$

**10.790 INVALID-ORDER-790**  $Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, L_L s + R_L + \frac{1}{C_L s} \right)$

$$H(s) = \frac{L_1 R_1 (C_L L_L s^2 + C_L R_L s + C_L L_L R_1)}{C_1 C_5 C_L L_1 L_5 R_1 s^4 + C_1 C_5 C_L L_1 L_L R_1 s^4 + C_1 C_5 C_L L_1 R_1 R_L s^3 + C_1 C_5 L_1 R_1 s^2 + C_1 C_L L_1 R_1 s^2 + C_5 C_L L_1 L_5 R_1 q_m s^3 + C_5 C_L L_1 L_5 s^3 + 2 C_5 C_L L_1 L_L R_1 q_m s^3 + C_5 C_L L_1 L_L s^3}$$

**10.791 INVALID-ORDER-791**  $Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$

$$H(s) = \frac{C_1 C_5 C_L L_1 L_5 L_L R_1 R_L s^6 + C_1 C_5 L_1 L_5 L_L R_1 s^5 + C_1 C_5 L_1 L_5 R_1 R_L s^4 + C_1 C_5 L_1 L_L R_1 R_L s^4 + C_1 C_L L_1 L_L R_1 R_L s^4 + C_1 L_1 L_L R_1 s^3 + C_1 L_1 R_1 R_L s^2 + C_5 C_L L_1 L_5 L_L R_1 R_L g_m s}{C_1 C_5 C_L L_1 L_5 L_L R_1 R_L s^6 + C_1 C_5 L_1 L_5 L_L R_1 s^5 + C_1 C_5 L_1 L_5 R_1 R_L s^4 + C_1 C_5 L_1 L_L R_1 R_L s^4 + C_1 C_L L_1 L_L R_1 R_L s^4 + C_1 L_1 L_L R_1 s^3 + C_1 L_1 R_1 R_L s^2 + C_5 C_L L_1 L_5 L_L R_1 R_L g_m s}$$

**10.792 INVALID-ORDER-792**  $Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1 + \frac{1}{L_1 s}}}, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$

$$H(s) = \frac{C_1 C_5 C_L L_1 L_5 L_L R_1 s^6 + C_1 C_5 C_L L_1 L_L R_1 R_L s^5 + C_1 C_5 L_1 L_5 R_1 s^4 + C_1 C_5 L_1 L_L R_1 s^4 + C_1 C_5 L_1 R_1 R_L s^3 + C_1 C_L L_1 L_L R_1 s^4 + C_1 L_1 R_1 s^2 + C_5 C_L L_1 L_5 L_L R_1 g_m s^5 + C_5 C_L L_1 L_5 L_L R_1 s^4}{C_1 C_5 C_L L_1 L_5 L_L R_1 s^6 + C_1 C_5 C_L L_1 L_L R_1 R_L s^5 + C_1 C_5 L_1 L_5 R_1 s^4 + C_1 C_5 L_1 L_L R_1 s^4 + C_1 C_5 L_1 R_1 R_L s^3 + C_1 C_L L_1 L_L R_1 s^4 + C_1 L_1 R_1 s^2 + C_5 C_L L_1 L_5 L_L R_1 g_m s^5 + C_5 C_L L_1 L_5 L_L R_1 s^4}$$

**10.793 INVALID-ORDER-793**  $Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$

$$H(s) = \frac{C_1 C_5 C_L L_1 L_5 L_L R_1 s^6 + C_1 C_5 C_L L_1 L_5 R_1 R_L s^5 + C_1 C_5 C_L L_1 L_L R_1 R_L s^5 + C_1 C_5 L_1 L_5 R_1 s^4 + C_1 C_5 L_1 R_1 R_L s^3 + C_1 C_L L_1 L_L R_1 s^4 + C_1 C_L L_1 R_1 R_L s^3 + C_1 L_1 R_1 s^2 + C_5 C_L L_1}{C_1 C_5 C_L L_1 L_5 L_L R_1 s^6 + C_1 C_5 C_L L_1 L_5 R_1 R_L s^5 + C_1 C_5 C_L L_1 L_L R_1 R_L s^5 + C_1 C_5 L_1 L_5 R_1 s^4 + C_1 C_5 L_1 R_1 R_L s^3 + C_1 C_L L_1 L_L R_1 s^4 + C_1 C_L L_1 R_1 R_L s^3 + C_1 L_1 R_1 s^2 + C_5 C_L L_1}$$

$$\mathbf{10.794 \quad INVALID-ORDER-794} \quad Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, R_L \right)$$

$$H(s) = \frac{L_1 R_1 R_L s (-C_5 L_5 s^2 + L_5 g_m s - 1)}{C_1 C_5 L_1 L_5 R_1 R_L s^4 + C_1 L_1 L_5 R_1 s^3 + C_1 L_1 R_1 R_L s^2 + 2C_5 L_1 L_5 R_1 R_L g_m s^3 + C_5 L_1 L_5 R_1 s^3 + C_5 L_1 L_5 R_L s^3 + C_5 L_5 R_1 R_L s^2 + L_1 L_5 R_1 g_m s^2 + L_1 L_5 s^2 + 2L_1 R_1 R_L g_m s + L_1 R_1 s}$$

$$\mathbf{10.795 \quad INVALID-ORDER-795} \quad Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_1 R_1 s (-C_5 L_5 s^2 + L_5 g_m s - 1)}{C_1 C_5 L_1 L_5 R_1 s^4 + C_1 C_L L_1 L_5 R_1 s^4 + C_1 L_1 R_1 s^2 + C_5 C_L L_1 L_5 R_1 s^4 + 2C_5 L_1 L_5 R_1 g_m s^3 + C_5 L_1 L_5 s^3 + C_5 L_5 R_1 s^2 + C_L L_1 L_5 R_1 g_m s^3 + C_L L_1 L_5 s^3 + C_L L_1 R_1 s^2 + C_L L_5 R_1 s^2}$$

$$\mathbf{10.796 \quad INVALID-ORDER-796} \quad Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{R_L}{C_L R_L s + 1} \right)$$

$$H(s) = \frac{L_1 R_1 R_L s (-C_5 L_5 s^2 + L_5 g_m s - 1)}{C_1 C_5 L_1 L_5 R_1 R_L s^4 + C_1 C_L L_1 L_5 R_1 R_L s^4 + C_1 L_1 L_5 R_1 s^3 + C_1 L_1 R_1 R_L s^2 + C_5 C_L L_1 L_5 R_1 R_L s^4 + 2C_5 L_1 L_5 R_1 R_L g_m s^3 + C_5 L_1 L_5 R_1 s^3 + C_5 L_1 L_5 R_L s^3 + C_5 L_5 R_1 R_L s^2 + C_L L_1 L_5 R_1 g_m s^3 + C_L L_1 L_5 s^3 + C_L L_1 R_1 s^2 + C_L L_5 R_1 s^2}$$

$$\mathbf{10.797 \quad INVALID-ORDER-797} \quad Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, R_L + \frac{1}{C_L s} \right)$$

$$H(s) = -\frac{L_1 R_1 s (C_L R_L s^2 + L_5 g_m s - 1)}{C_1 C_5 C_L L_1 L_5 R_1 R_L s^5 + C_1 C_5 L_1 L_5 R_1 s^4 + C_1 C_L L_1 L_5 R_1 s^4 + C_1 C_L L_1 R_1 R_L s^3 + C_1 L_1 R_1 s^2 + 2C_5 C_L L_1 L_5 R_1 R_L g_m s^4 + C_5 C_L L_1 L_5 R_1 s^4 + C_5 C_L L_1 L_5 R_L s^4 + C_5 C_L L_5 R_1 s^3 + C_5 L_1 L_5 R_1 g_m s^3 + C_5 L_1 L_5 s^3 + C_5 L_5 R_1 R_L s^2 + C_L L_1 L_5 R_1 g_m s^3 + C_L L_1 L_5 s^3 + C_L L_1 R_1 s^2 + C_L L_5 R_1 s^2}$$

$$\mathbf{10.798 \quad INVALID-ORDER-798} \quad Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, L_L s + \frac{1}{C_L s} \right)$$

$$H(s) = -\frac{L_1 R_1 s (C_L L_L s^2 + L_5 g_m s - 1)}{C_1 C_5 C_L L_1 L_5 L_L R_1 s^6 + C_1 C_5 L_1 L_5 R_1 s^4 + C_1 C_L L_1 L_5 R_1 s^4 + C_1 C_L L_1 L_L R_1 s^4 + C_1 L_1 R_1 s^2 + 2C_5 C_L L_1 L_5 L_L R_1 g_m s^5 + C_5 C_L L_1 L_5 L_L s^5 + C_5 C_L L_1 L_5 R_1 s^4 + C_5 C_L L_5 L_L s^3 + C_5 L_1 L_5 R_1 g_m s^3 + C_5 L_1 L_5 s^3 + C_5 L_5 R_1 R_L s^2 + C_L L_1 L_5 R_1 g_m s^3 + C_L L_1 L_5 s^3 + C_L L_1 R_1 s^2 + C_L L_5 R_1 s^2}$$

**10.799 INVALID-ORDER-799**  $Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{L_L s}{C_L L_L s^2 + 1} \right)$

$$H(s) = \frac{L_1 L_L R_1 s (-C_5 L_5 s^2 + L_5 g_m s - 1)}{C_1 C_5 L_1 L_5 L_L R_1 s^4 + C_1 C_L L_1 L_5 L_L R_1 s^4 + C_1 L_1 L_5 R_1 s^2 + C_1 L_1 L_L R_1 s^2 + C_5 C_L L_1 L_5 L_L R_1 s^4 + 2C_5 L_1 L_5 L_L R_1 g_m s^3 + C_5 L_1 L_5 L_L s^3 + C_5 L_1 L_5 R_1 s^2 + C_5 L_5 L_L R_1 s^2 + C_L L_1 L_5 R_1 s^2}$$

10.800 INVALID-ORDER-800  $Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, L_L s + R_L + \frac{1}{C_L s} \right)$

$$H(s) = -\frac{C_1 C_5 C_L L_1 L_5 L_L R_1 s^6 + C_1 C_5 C_L L_1 L_5 R_1 R_L s^5 + C_1 C_5 L_1 L_5 R_1 s^4 + C_1 C_L L_1 L_5 R_1 s^4 + C_1 C_L L_1 L_L R_1 s^4 + C_1 C_L L_1 R_1 R_L s^3 + C_1 L_1 R_1 s^2 + 2C_5 C_L L_1 L_5 L_L R_1 g_m s^5 + C_5 C_L}{C_1 C_5 C_L L_1 L_5 L_L R_1 s^6 + C_1 C_5 C_L L_1 L_5 R_1 R_L s^5 + C_1 C_5 L_1 L_5 R_1 s^4 + C_1 C_L L_1 L_5 R_1 s^4 + C_1 C_L L_1 L_L R_1 s^4 + C_1 C_L L_1 R_1 R_L s^3 + C_1 L_1 R_1 s^2 + 2C_5 C_L L_1 L_5 L_L R_1 g_m s^5 + C_5 C_L}$$

10.801 INVALID-ORDER-801  $Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$

$$H(s) = \frac{C_1 C_5 L_1 L_5 L_L R_1 R_L s^4 + C_1 C_L L_1 L_5 L_L R_1 R_L s^4 + C_1 L_1 L_5 L_L R_1 s^3 + C_1 L_1 L_5 R_1 R_L s^2 + C_1 L_1 L_L R_1 R_L s^2 + C_5 C_L L_1 L_5 L_L R_1 R_L s^4 + 2C_5 L_1 L_5 L_L R_1 R_L g_m s^3 + C_5 L_1 L_5 L_L R_1 R_L s^4}{C_1 C_5 L_1 L_5 L_L R_1 R_L s^4 + C_1 C_L L_1 L_5 L_L R_1 R_L s^4 + C_1 L_1 L_5 L_L R_1 s^3 + C_1 L_1 L_5 R_1 R_L s^2 + C_1 L_1 L_L R_1 R_L s^2 + C_5 C_L L_1 L_5 L_L R_1 R_L s^4 + 2C_5 L_1 L_5 L_L R_1 R_L g_m s^3 + C_5 L_1 L_5 L_L R_1 R_L s^4}$$

**10.802 INVALID-ORDER-802**  $Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$

$$H(s) = -\frac{C_1 C_5 C_L L_1 L_5 L_L R_1 R_L s^6 + C_1 C_5 L_1 L_5 L_L R_1 s^5 + C_1 C_5 L_1 L_5 R_1 R_L s^4 + C_1 C_L L_1 L_5 L_L R_1 s^5 + C_1 C_L L_1 L_L R_1 R_L s^4 + C_1 L_1 L_5 R_1 s^3 + C_1 L_1 L_L R_1 s^3 + C_1 L_1 R_1 R_L s^2 + 2C_5 C_L}{C_1 C_5 C_L L_1 L_5 L_L R_1 R_L s^6 + C_1 C_5 L_1 L_5 L_L R_1 s^5 + C_1 C_5 L_1 L_5 R_1 R_L s^4 + C_1 C_L L_1 L_5 L_L R_1 s^5 + C_1 C_L L_1 L_L R_1 R_L s^4 + C_1 L_1 L_5 R_1 s^3 + C_1 L_1 L_L R_1 s^3 + C_1 L_1 R_1 R_L s^2 + 2C_5 C_L}$$

10.803 INVALID-ORDER-803  $Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$

$$H(s) = -\frac{C_1 C_5 C_L L_1 L_5 L_L R_1 R_L s^6 + C_1 C_5 L_1 L_5 R_1 R_L s^4 + C_1 C_L L_1 L_5 L_L R_1 s^5 + C_1 C_L L_1 L_5 R_1 R_L s^4 + C_1 C_L L_1 L_L R_1 R_L s^4 + C_1 L_1 L_5 R_1 s^3 + C_1 L_1 R_1 R_L s^2 + 2C_5 C_L L_1 L_5 L_L R_1 R_L g}{\dots}$$

$$H(s) = \frac{L_1 R_1 R_L s (C_5 L_5 g_m s^2 + C_5 R_5 g_m s - C_5 s + g_m)}{C_1 C_5 L_1 L_5 R_1 s^4 + C_1 C_5 L_1 R_1 R_5 s^3 + C_1 C_5 L_1 R_1 R_L s^3 + C_1 L_1 R_1 s^2 + C_5 L_1 L_5 R_1 g_m s^3 + C_5 L_1 L_5 s^3 + C_5 L_1 R_1 R_5 g_m s^2 + 2 C_5 L_1 R_1 R_L g_m s^2 + C_5 L_1 R_1 s^2 + C_5 L_1 R_5 s^2 + C_5 L_1$$

$$H(s) = \frac{L_1 R_1 (C_5 L_5 g_m s^2 + C_5 R_5 g_m s - C_5 s + g_m)}{C_1 C_5 C_L L_1 L_5 R_1 s^4 + C_1 C_5 C_L L_1 R_1 R_5 s^3 + C_1 C_5 L_1 R_1 s^2 + C_1 C_L L_1 R_1 s^2 + C_5 C_L L_1 L_5 R_1 g_m s^3 + C_5 C_L L_1 L_5 s^3 + C_5 C_L L_1 R_1 R_5 g_m s^2 + C_5 C_L L_1 R_1 s^2 + C_5 C_L L_1 R_5 s^2 + C_5 C_L L_1 R_5 g_m s + C_5 C_L L_1 R_5}.$$

$$H(s) = \frac{C_1 C_5 C_L L_1 L_5 R_1 R_L s^5 + C_1 C_5 C_L L_1 R_1 R_5 R_L s^4 + C_1 C_5 L_1 L_5 R_1 s^4 + C_1 C_5 L_1 R_1 R_5 s^3 + C_1 C_5 L_1 R_1 R_L s^3 + C_1 C_L L_1 R_1 R_L s^3 + C_1 L_1 R_1 s^2 + C_5 C_L L_1 L_5 R_1 R_L g_m s^4 + C_5 C_L L_1 L_5 R_1 R_L s^4}{C_1 C_5 C_L L_1 L_5 R_1 R_L s^5 + C_1 C_5 C_L L_1 R_1 R_5 R_L s^4 + C_1 C_5 L_1 L_5 R_1 s^4 + C_1 C_5 L_1 R_1 R_5 s^3 + C_1 C_5 L_1 R_1 R_L s^3 + C_1 C_L L_1 R_1 R_L s^3 + C_1 L_1 R_1 s^2 + C_5 C_L L_1 L_5 R_1 R_L g_m s^4 + C_5 C_L L_1 L_5 R_1 R_L s^4}$$

$$H(s) = \frac{L_1 R_1 (C_L R_L s + 1) (C_5 L_5 g_m s + 1)}{C_1 C_5 C_L L_1 L_5 R_1 s^4 + C_1 C_5 C_L L_1 R_1 R_5 s^3 + C_1 C_5 C_L L_1 R_1 R_L s^3 + C_1 C_5 L_1 R_1 s^2 + C_1 C_L L_1 R_1 s^2 + C_5 C_L L_1 L_5 R_1 g_m s^3 + C_5 C_L L_1 L_5 s^3 + C_5 C_L L_1 R_1 R_5 g_m s^2 + 2 C_5 C_L L_1 R_1 R_5 s + C_5 C_L L_1 R_1 R_5}$$

$$H(s) = \frac{L_1 R_1 (C_L L_L s^2 + 1) (C_5 L_5 g_m)}{C_1 C_5 C_L L_1 L_5 R_1 s^4 + C_1 C_5 C_L L_1 L_L R_1 s^4 + C_1 C_5 C_L L_1 R_1 R_5 s^3 + C_1 C_5 L_1 R_1 s^2 + C_1 C_L L_1 R_1 s^2 + C_5 C_L L_1 L_5 R_1 g_m s^3 + C_5 C_L L_1 L_5 s^3 + 2 C_5 C_L L_1 L_L R_1 g_m s^3 + C_5 C_L L_1 L_L s^3}$$

10.809 INVALID-ORDER-809  $Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} \right)$

$$H(s) = \frac{C_1 C_5 C_L L_1 L_5 L_L R_1 s^6 + C_1 C_5 C_L L_1 L_L R_1 R_5 s^5 + C_1 C_5 L_1 L_5 R_1 s^4 + C_1 C_5 L_1 L_L R_1 s^4 + C_1 C_5 L_1 R_1 R_5 s^3 + C_1 C_L L_1 L_L R_1 s^4 + C_1 L_1 R_1 s^2 + C_5 C_L L_1 L_5 L_L R_1 g_m s^5 + C_5 C_L L_1 L_5 L_L R_1 s^4 + C_5 C_L L_1 L_5 L_L R_1 s^3 + C_5 C_L L_1 L_5 L_L R_1 s^2 + C_5 C_L L_1 L_5 L_L R_1 s}{C_1 C_5 C_L L_1 L_5 L_L R_1 s^6 + C_1 C_5 C_L L_1 L_L R_1 R_5 s^5 + C_1 C_5 L_1 L_5 R_1 s^4 + C_1 C_5 L_1 L_L R_1 s^4 + C_1 C_5 L_1 R_1 R_5 s^3 + C_1 C_L L_1 L_L R_1 s^4 + C_1 L_1 R_1 s^2 + C_5 C_L L_1 L_5 L_L R_1 g_m s^5 + C_5 C_L L_1 L_5 L_L R_1 s^4 + C_5 C_L L_1 L_5 L_L R_1 s^3 + C_5 C_L L_1 L_5 L_L R_1 s^2 + C_5 C_L L_1 L_5 L_L R_1 s}$$

10.810 INVALID-ORDER-810  $Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, L_L s + R_L + \frac{1}{C_L s} \right)$

$$H(s) = \frac{C_1 C_5 C_L L_1 L_5 R_1 s^4 + C_1 C_5 C_L L_1 L_L R_1 s^4 + C_1 C_5 C_L L_1 R_1 R_5 s^3 + C_1 C_5 C_L L_1 R_1 R_L s^3 + C_1 C_5 L_1 R_1 s^2 + C_1 C_L L_1 R_1 s^2 + C_5 C_L L_1 L_5 R_1 g_m s^3 + C_5 C_L L_1 L_5 s^3 + 2 C_5 C_L L_1 L_L R_1}{C_1 C_5 C_L L_1 L_5 R_1 s^4 + C_1 C_5 C_L L_1 L_L R_1 s^4 + C_1 C_5 C_L L_1 R_1 R_5 s^3 + C_1 C_5 C_L L_1 R_1 R_L s^3 + C_1 C_5 L_1 R_1 s^2 + C_1 C_L L_1 R_1 s^2 + C_5 C_L L_1 L_5 R_1 g_m s^3 + C_5 C_L L_1 L_5 s^3 + 2 C_5 C_L L_1 L_L R_1}$$

10.811 INVALID-ORDER-811  $Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$

$$H(s) = \frac{C_1 C_5 C_L L_1 L_5 L_L R_1 R_L s^6 + C_1 C_5 C_L L_1 L_L R_1 R_5 R_L s^5 + C_1 C_5 L_1 L_5 L_L R_1 s^5 + C_1 C_5 L_1 L_5 R_1 R_L s^4 + C_1 C_5 L_1 L_L R_1 R_5 s^4 + C_1 C_5 L_1 L_L R_1 R_L s^4 + C_1 C_5 L_1 R_1 R_5 R_L s^3 + C_1 C_L L$$

10.812 INVALID-ORDER-812  $Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$

$$H(s) = \frac{C_1 C_5 C_L L_1 L_5 L_L R_1 s^6 + C_1 C_5 C_L L_1 L_L R_1 R_5 s^5 + C_1 C_5 C_L L_1 L_L R_1 R_L s^5 + C_1 C_5 L_1 L_5 R_1 s^4 + C_1 C_5 L_1 L_L R_1 s^4 + C_1 C_5 L_1 R_1 R_5 s^3 + C_1 C_5 L_1 R_1 R_L s^3 + C_1 C_L L_1 L_L R_1 s^4 + C_1}{...}$$

**10.813 INVALID-ORDER-813**  $Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$

$$H(s) = \frac{C_1 C_5 C_L L_1 L_5 L_L R_1 s^6 + C_1 C_5 C_L L_1 L_5 R_1 R_L s^5 + C_1 C_5 C_L L_1 L_L R_1 R_5 s^5 + C_1 C_5 C_L L_1 L_L R_1 R_L s^5 + C_1 C_5 C_L L_1 R_1 R_5 R_L s^4 + C_1 C_5 L_1 L_5 R_1 s^4 + C_1 C_5 L_1 R_1 R_5 s^3 + C_1 C_5 L_1 R_1}{C_1 C_5 C_L L_1 L_5 L_L R_1 s^6 + C_1 C_5 C_L L_1 L_5 R_1 R_L s^5 + C_1 C_5 C_L L_1 L_L R_1 R_5 s^5 + C_1 C_5 C_L L_1 L_L R_1 R_L s^5 + C_1 C_5 C_L L_1 R_1 R_5 R_L s^4 + C_1 C_5 L_1 L_5 R_1 s^4 + C_1 C_5 L_1 R_1 R_5 s^3 + C_1 C_5 L_1 R_1}$$

$$10.814 \quad \text{INVALID-ORDER-814} \quad Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, R_L \right)$$

$$H(s) = \frac{L_1 R_1 R_L s (-C_5 L_5 R_5 s^2 + L_5 R_5 g_m s)}{C_1 C_5 L_1 L_5 R_1 R_5 R_L s^4 + C_1 L_1 L_5 R_1 R_5 s^3 + C_1 L_1 L_5 R_1 R_L s^3 + C_1 L_1 R_1 R_5 R_L s^2 + 2C_5 L_1 L_5 R_1 R_5 R_L g_m s^3 + C_5 L_1 L_5 R_1 R_5 s^3 + C_5 L_1 L_5 R_5 R_L s^3 + C_5 L_5 R_1 R_5 R_L s^2 + L_1 L_5 R_1 R_5 s^2}$$

$$10.815 \quad \text{INVALID-ORDER-815} \quad Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_1 R_1 s (-C_5 L_5 R_5 s^2 + L_5 R_5 g_m s - L_5 s)}{C_1 C_5 L_1 L_5 R_1 R_5 s^4 + C_1 C_L L_1 L_5 R_1 R_5 s^4 + C_1 L_1 L_5 R_1 s^3 + C_1 L_1 R_1 R_5 s^2 + C_5 C_L L_1 L_5 R_1 R_5 s^4 + 2C_5 L_1 L_5 R_1 R_5 g_m s^3 + C_5 L_1 L_5 R_5 s^3 + C_5 L_5 R_1 R_5 s^2 + C_L L_1 L_5 R_1 R_5 g_m s^3 + C_L L_1 L_5 R_1 R_5 s^2}$$

$$10.816 \quad \text{INVALID-ORDER-816} \quad Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{R_L}{C_L R_L s + 1} \right)$$

$$H(s) = \frac{C_1 C_5 L_1 L_5 R_1 R_5 R_L s^4 + C_1 C_L L_1 L_5 R_1 R_5 R_L s^4 + C_1 L_1 L_5 R_1 R_5 s^3 + C_1 L_1 L_5 R_1 R_L s^3 + C_1 L_1 R_1 R_5 R_L s^2 + C_5 C_L L_1 L_5 R_1 R_5 R_L s^4 + 2C_5 L_1 L_5 R_1 R_5 R_L g_m s^3 + C_5 L_1 L_5 R_1 R_5 s^3}{C_1 C_5 L_1 L_5 R_1 R_5 R_L s^4 + C_1 C_L L_1 L_5 R_1 R_5 R_L s^4 + C_1 L_1 L_5 R_1 R_5 s^3 + C_1 L_1 L_5 R_1 R_L s^3 + C_1 L_1 R_1 R_5 R_L s^2 + C_5 C_L L_1 L_5 R_1 R_5 R_L s^4 + 2C_5 L_1 L_5 R_1 R_5 R_L g_m s^3 + C_5 L_1 L_5 R_1 R_5 s^3}$$

$$10.817 \quad \text{INVALID-ORDER-817} \quad Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, R_L + \frac{1}{C_L s} \right)$$

$$H(s) = -\frac{C_1 C_5 C_L L_1 L_5 R_1 R_5 R_L s^5 + C_1 C_5 L_1 L_5 R_1 R_5 s^4 + C_1 C_L L_1 L_5 R_1 R_5 s^4 + C_1 C_L L_1 L_5 R_1 R_L s^4 + C_1 C_L L_1 R_1 R_5 R_L s^3 + C_1 L_1 L_5 R_1 s^3 + C_1 L_1 R_1 R_5 s^2 + 2C_5 C_L L_1 L_5 R_1 R_5 R_L g_m s^3}{C_1 C_5 C_L L_1 L_5 R_1 R_5 R_L s^5 + C_1 C_5 L_1 L_5 R_1 R_5 s^4 + C_1 C_L L_1 L_5 R_1 R_5 s^4 + C_1 C_L L_1 L_5 R_1 R_L s^4 + C_1 C_L L_1 R_1 R_5 R_L s^3 + C_1 L_1 L_5 R_1 s^3 + C_1 L_1 R_1 R_5 s^2 + 2C_5 C_L L_1 L_5 R_1 R_5 R_L g_m s^3}$$

$$10.818 \quad \text{INVALID-ORDER-818} \quad Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, L_L s + \frac{1}{C_L s} \right)$$

$$H(s) = -\frac{C_1 C_5 C_L L_1 L_5 L_L R_1 R_5 s^6 + C_1 C_5 L_1 L_5 R_1 R_5 s^4 + C_1 C_L L_1 L_5 L_L R_1 s^5 + C_1 C_L L_1 L_5 R_1 R_5 s^4 + C_1 C_L L_1 L_L R_1 R_5 s^4 + C_1 L_1 L_5 R_1 s^3 + C_1 L_1 R_1 R_5 s^2 + 2C_5 C_L L_1 L_5 L_L R_1 R_5 g_m s^3}{C_1 C_5 C_L L_1 L_5 L_L R_1 R_5 s^6 + C_1 C_5 L_1 L_5 R_1 R_5 s^4 + C_1 C_L L_1 L_5 L_L R_1 s^5 + C_1 C_L L_1 L_5 R_1 R_5 s^4 + C_1 C_L L_1 L_L R_1 R_5 s^4 + C_1 L_1 L_5 R_1 s^3 + C_1 L_1 R_1 R_5 s^2 + 2C_5 C_L L_1 L_5 L_L R_1 R_5 g_m s^3}$$



$$\mathbf{10.819 \quad INVALID-ORDER-819} \quad Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{L_L s}{C_L L_L s^2 + 1} \right)$$

$$H(s) = \frac{1}{C_1 C_5 L_1 L_5 L_L R_1 R_5 s^4 + C_1 C_L L_1 L_5 L_L R_1 R_5 s^4 + C_1 L_1 L_5 L_L R_1 s^3 + C_1 L_1 L_5 R_1 R_5 s^2 + C_1 L_1 L_L R_1 R_5 s^2 + C_5 C_L L_1 L_5 L_L R_1 R_5 s^4 + 2 C_5 L_1 L_5 L_L R_1 R_5 g_m s^3 + C_5 L_1 L_5 L_L R_5 s^3}$$

$$\mathbf{10.820 \quad INVALID-ORDER-820} \quad Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, L_L s + R_L + \frac{1}{C_L s} \right)$$

$$H(s) = -\frac{1}{C_1 C_5 C_L L_1 L_5 L_L R_1 R_5 s^6 + C_1 C_5 C_L L_1 L_5 R_1 R_5 R_L s^5 + C_1 C_5 L_1 L_5 R_1 R_5 s^4 + C_1 C_L L_1 L_5 L_L R_1 s^5 + C_1 C_L L_1 L_5 R_1 R_5 s^4 + C_1 C_L L_1 L_5 R_1 R_L s^4 + C_1 C_L L_1 L_L R_1 R_5 s^4 + C_1 C_L L_1 L_L R_1 R_5 s^4 + C_1 C_L L_1 L_L R_1 R_5 s^4}$$

$$\mathbf{10.821 \quad INVALID-ORDER-821} \quad Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$$

$$H(s) = \frac{1}{C_1 C_5 L_1 L_5 L_L R_1 R_5 R_L s^4 + C_1 C_L L_1 L_5 L_L R_1 R_5 R_L s^4 + C_1 L_1 L_5 L_L R_1 R_5 s^3 + C_1 L_1 L_5 L_L R_1 R_L s^3 + C_1 L_1 L_5 R_1 R_5 R_L s^2 + C_1 L_1 L_L R_1 R_5 R_L s^2 + C_5 C_L L_1 L_5 L_L R_1 R_5 R_L s^4 + 2}$$

$$\mathbf{10.822 \quad INVALID-ORDER-822} \quad Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$$

$$H(s) = -\frac{1}{C_1 C_5 C_L L_1 L_5 L_L R_1 R_5 R_L s^6 + C_1 C_5 L_1 L_5 L_L R_1 R_5 s^5 + C_1 C_5 L_1 L_5 R_1 R_5 R_L s^4 + C_1 C_L L_1 L_5 L_L R_1 R_5 s^5 + C_1 C_L L_1 L_5 L_L R_1 R_L s^5 + C_1 C_L L_1 L_L R_1 R_5 R_L s^4 + C_1 L_1 L_5 L_L R_1 s^4}$$

$$\mathbf{10.823 \quad INVALID-ORDER-823} \quad Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$$

$$H(s) = -\frac{1}{C_1 C_5 C_L L_1 L_5 L_L R_1 R_5 R_L s^6 + C_1 C_5 L_1 L_5 R_1 R_5 R_L s^4 + C_1 C_L L_1 L_5 L_L R_1 R_5 s^5 + C_1 C_L L_1 L_5 L_L R_1 R_L s^5 + C_1 C_L L_1 L_5 R_1 R_5 R_L s^4 + C_1 C_L L_1 L_L R_1 R_5 R_L s^4 + C_1 L_1 L_5 R_1 R_5 s^3}$$

$$\mathbf{10.824 \quad INVALID-ORDER-824} \quad Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, R_L \right)$$

$$H(s) = \frac{L_1 R_1 R_L s (C_5 L_5 R_5 g_m s^2 - C_5 L_5 s^2 + C_5 L_5)}{C_1 C_5 L_1 L_5 R_1 R_5 s^4 + C_1 C_5 L_1 L_5 R_1 R_L s^4 + C_1 L_1 L_5 R_1 s^3 + C_1 L_1 R_1 R_5 s^2 + C_1 L_1 R_1 R_L s^2 + C_5 L_1 L_5 R_1 R_5 g_m s^3 + 2 C_5 L_1 L_5 R_1 R_L g_m s^3 + C_5 L_1 L_5 R_1 s^3 + C_5 L_1 L_5 R_5 s^3 + C_5 L_1 L_5 R_L s^3}$$

$$\mathbf{10.825 \quad INVALID-ORDER-825} \quad Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_1 R_1 s (C_5 L_5 R_5 g_m s^2 - C_5 L_5 s^2 + C_5 L_5)}{C_1 C_5 C_L L_1 L_5 R_1 R_5 s^5 + C_1 C_5 L_1 L_5 R_1 s^4 + C_1 C_L L_1 L_5 R_1 s^4 + C_1 C_L L_1 R_1 R_5 s^3 + C_1 L_1 R_1 s^2 + C_5 C_L L_1 L_5 R_1 R_5 g_m s^4 + C_5 C_L L_1 L_5 R_1 s^4 + C_5 C_L L_1 L_5 R_5 s^4 + C_5 C_L L_5 R_1 R_5 s^3}$$

$$\mathbf{10.826 \quad INVALID-ORDER-826} \quad Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{R_L}{C_L R_L s + 1} \right)$$

$$H(s) = \frac{L_1 R_1 s (C_5 L_5 R_5 g_m s^2 - C_5 L_5 s^2 + C_5 L_5)}{C_1 C_5 C_L L_1 L_5 R_1 R_5 R_L s^5 + C_1 C_5 L_1 L_5 R_1 R_5 s^4 + C_1 C_5 L_1 L_5 R_1 R_L s^4 + C_1 C_L L_1 L_5 R_1 R_L s^4 + C_1 C_L L_1 R_1 R_5 R_L s^3 + C_1 L_1 L_5 R_1 s^3 + C_1 L_1 R_1 R_5 s^2 + C_1 L_1 R_1 R_L s^2 + C_5 C_L L_1 L_5 R_1 R_5 g_m s^4 + 2 C_5 C_L L_1 L_5 R_1 R_L g_m s^4}$$

$$\mathbf{10.827 \quad INVALID-ORDER-827} \quad Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_1 R_1 s (C_5 L_5 R_5 g_m s^2 - C_5 L_5 s^2 + C_5 L_5)}{C_1 C_5 C_L L_1 L_5 R_1 R_5 s^5 + C_1 C_5 C_L L_1 L_5 R_1 R_L s^5 + C_1 C_5 L_1 L_5 R_1 s^4 + C_1 C_L L_1 L_5 R_1 s^4 + C_1 C_L L_1 R_1 R_5 s^3 + C_1 C_L L_1 R_1 R_L s^3 + C_1 L_1 R_1 s^2 + C_5 C_L L_1 L_5 R_1 R_5 g_m s^4 + 2 C_5 C_L L_1 L_5 R_1 R_L g_m s^4}$$

$$\mathbf{10.828 \quad INVALID-ORDER-828} \quad Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, L_L s + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_1 R_1 s (C_5 L_5 R_5 g_m s^2 - C_5 L_5 s^2 + C_5 L_5)}{C_1 C_5 C_L L_1 L_5 L_L R_1 s^6 + C_1 C_5 C_L L_1 L_5 R_1 R_5 s^5 + C_1 C_5 L_1 L_5 R_1 s^4 + C_1 C_L L_1 L_5 R_1 s^4 + C_1 C_L L_1 L_L R_1 s^4 + C_1 C_L L_1 R_1 R_5 s^3 + C_1 L_1 R_1 s^2 + 2 C_5 C_L L_1 L_5 L_L R_1 g_m s^5 + C_5 C_L L_1 L_5 R_1 R_5 g_m s^4 + 2 C_5 C_L L_1 L_5 R_1 R_L g_m s^4}$$

**10.829 INVALID-ORDER-829**  $Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{L_L s}{C_L L_L s^2 + 1} \right)$

$$H(s) = \frac{C_1 C_5 C_L L_1 L_5 L_L R_1 R_5 s^6 + C_1 C_5 L_1 L_5 L_L R_1 s^5 + C_1 C_5 L_1 L_5 R_1 R_5 s^4 + C_1 C_L L_1 L_5 L_L R_1 s^5 + C_1 C_L L_1 L_L R_1 R_5 s^4 + C_1 L_1 L_5 R_1 s^3 + C_1 L_1 L_L R_1 s^3 + C_1 L_1 R_1 R_5 s^2 + C_5 C_L L_1 L_1}{C_1 C_5 C_L L_1 L_5 L_L R_1 R_5 s^6 + C_1 C_5 L_1 L_5 L_L R_1 s^5 + C_1 C_5 L_1 L_5 R_1 R_5 s^4 + C_1 C_L L_1 L_5 L_L R_1 s^5 + C_1 C_L L_1 L_L R_1 R_5 s^4 + C_1 L_1 L_5 R_1 s^3 + C_1 L_1 L_L R_1 s^3 + C_1 L_1 R_1 R_5 s^2 + C_5 C_L L_1 L_1}$$

**10.830 INVALID-ORDER-830**  $Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, L_L s + R_L + \frac{1}{C_L s} \right)$

$$H(s) = \frac{C_1 C_5 C_L L_1 L_5 L_R R_1 s^6 + C_1 C_5 C_L L_1 L_5 R_1 R_5 s^5 + C_1 C_5 C_L L_1 L_5 R_1 R_L s^5 + C_1 C_5 L_1 L_5 R_1 s^4 + C_1 C_L L_1 L_5 R_1 s^4 + C_1 C_L L_1 L_L R_1 s^4 + C_1 C_L L_1 R_1 R_5 s^3 + C_1 C_L L_1 R_1 R_L s^3 + C_1}{\dots}$$

10.831 INVALID-ORDER-831  $Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$

$$H(s) = \frac{C_1 C_5 C_L L_1 L_5 L_L R_1 R_5 R_L s^6 + C_1 C_5 L_1 L_5 L_L R_1 R_5 s^5 + C_1 C_5 L_1 L_5 L_L R_1 R_L s^5 + C_1 C_5 L_1 L_5 R_1 R_5 R_L s^4 + C_1 C_L L_1 L_5 L_L R_1 R_L s^5 + C_1 C_L L_1 L_L R_1 R_5 R_L s^4 + C_1 L_1 L_5 L_L R_1 s^4 +$$

**10.832 INVALID-ORDER-832**  $Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$

$$H(s) = \frac{C_1 C_5 C_L L_1 L_5 L_L R_1 R_5 s^6 + C_1 C_5 C_L L_1 L_5 L_L R_1 R_L s^6 + C_1 C_5 L_1 L_5 L_L R_1 s^5 + C_1 C_5 L_1 L_5 R_1 R_5 s^4 + C_1 C_5 L_1 L_5 R_1 R_L s^4 + C_1 C_L L_1 L_5 L_L R_1 s^5 + C_1 C_L L_1 L_L R_1 R_5 s^4 + C_1 C_L L_1}{\dots}$$

**10.833 INVALID-ORDER-833**  $Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$

$$H(s) = \frac{C_1 C_5 C_L L_1 L_5 L_L R_1 R_5 s^6 + C_1 C_5 C_L L_1 L_5 L_L R_1 R_L s^6 + C_1 C_5 C_L L_1 L_5 R_1 R_5 R_L s^5 + C_1 C_5 L_1 L_5 R_1 R_5 s^4 + C_1 C_5 L_1 L_5 R_1 R_L s^4 + C_1 C_L L_1 L_5 L_L R_1 s^5 + C_1 C_L L_1 L_5 R_1 R_L s^4 + C_1$$

$$10.834 \quad \text{INVALID-ORDER-834} \quad Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, R_L \right)$$

$$H(s) = \frac{L_1 R_1 R_L s (C_5 L_5 s^4 + C_4 L_4 s^3 + C_3 L_3 s^2 + C_2 L_2 s + C_1)}{C_1 C_5 L_1 L_5 R_1 R_5 s^4 + C_1 C_5 L_1 L_5 R_1 R_L s^4 + C_1 C_5 L_1 R_1 R_5 R_L s^3 + C_1 L_1 R_1 R_5 s^2 + C_1 L_1 R_1 R_L s^2 + C_5 L_1 L_5 R_1 R_5 g_m s^3 + 2 C_5 L_1 L_5 R_1 R_L g_m s^3 + C_5 L_1 L_5 R_1 s^3 + C_5 L_1 L_5 R_5 s^3 + C_5 L_1 L_5 R_L s^3 + C_5 L_1 R_1 R_5 s^2 + C_5 L_1 R_1 R_L s^2 + C_5 L_1 R_5 s + C_5 L_1 R_L s + C_5 R_5 + C_5 R_L + C_5}$$

10.835 INVALID-ORDER-835  $Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{1}{C_L s} \right)$

$$H(s) = \frac{L_1 R_1 s (C_5 L_5 R_5)}{C_1 C_5 C_L L_1 L_5 R_1 R_5 s^5 + C_1 C_5 L_1 L_5 R_1 s^4 + C_1 C_5 L_1 R_1 R_5 s^3 + C_1 C_L L_1 R_1 R_5 s^3 + C_1 L_1 R_1 s^2 + C_5 C_L L_1 L_5 R_1 R_5 q_m s^4 + C_5 C_L L_1 L_5 R_1 s^4 + C_5 C_L L_1 L_5 R_5 s^4 + C_5 C_L L_1 R_1 R_5 s^3}$$

**10.836 INVALID-ORDER-836**  $Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{R_L}{C_L R_L s + 1} \right)$

$$H(s) = \frac{C_1 C_5 C_L L_1 L_5 R_1 R_5 R_L s^5 + C_1 C_5 L_1 L_5 R_1 R_5 s^4 + C_1 C_5 L_1 L_5 R_1 R_L s^4 + C_1 C_5 L_1 R_1 R_5 R_L s^3 + C_1 C_L L_1 R_1 R_5 R_L s^3 + C_1 L_1 R_1 R_5 s^2 + C_1 L_1 R_1 R_L s^2 + C_5 C_L L_1 L_5 R_1 R_5 R_L g_m s^4}{C_1 C_5 C_L L_1 L_5 R_1 R_5 R_L s^5 + C_1 C_5 L_1 L_5 R_1 R_5 s^4 + C_1 C_5 L_1 L_5 R_1 R_L s^4 + C_1 C_5 L_1 R_1 R_5 R_L s^3 + C_1 C_L L_1 R_1 R_5 R_L s^3 + C_1 L_1 R_1 R_5 s^2 + C_1 L_1 R_1 R_L s^2 + C_5 C_L L_1 L_5 R_1 R_5 R_L g_m s^4}$$

**10.837 INVALID-ORDER-837**  $Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, R_L + \frac{1}{C_L s} \right)$

$$H(s) = -\frac{C_1 C_5 C_L L_1 L_5 R_1 R_5 s^5 + C_1 C_5 C_L L_1 L_5 R_1 R_L s^5 + C_1 C_5 C_L L_1 R_1 R_5 R_L s^4 + C_1 C_5 L_1 L_5 R_1 s^4 + C_1 C_5 L_1 R_1 R_5 s^3 + C_1 C_L L_1 R_1 R_5 s^3 + C_1 C_L L_1 R_1 R_L s^3 + C_1 L_1 R_1 s^2 + C_5 C_L L_1}{C_1 C_5 C_L L_1 L_5 R_1 R_5 s^5 + C_1 C_5 C_L L_1 L_5 R_1 R_L s^5 + C_1 C_5 C_L L_1 R_1 R_5 R_L s^4 + C_1 C_5 L_1 L_5 R_1 s^4 + C_1 C_5 L_1 R_1 R_5 s^3 + C_1 C_L L_1 R_1 R_5 s^3 + C_1 C_L L_1 R_1 R_L s^3 + C_1 L_1 R_1 s^2 + C_5 C_L L_1}$$

10.838 INVALID-ORDER-838  $Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, L_L s + \frac{1}{C_L s} \right)$

$$H(s) = -\frac{C_1 C_5 C_L L_1 L_5 L_L R_1 s^6 + C_1 C_5 C_L L_1 L_5 R_1 R_5 s^5 + C_1 C_5 C_L L_1 L_L R_1 R_5 s^5 + C_1 C_5 L_1 L_5 R_1 s^4 + C_1 C_5 L_1 R_1 R_5 s^3 + C_1 C_L L_1 L_L R_1 s^4 + C_1 C_L L_1 R_1 R_5 s^3 + C_1 L_1 R_1 s^2 + 2 C_5 C_L L_1 R_1 s}{C_1 C_5 C_L L_1 L_5 L_L R_1 s^6 + C_1 C_5 C_L L_1 L_5 R_1 R_5 s^5 + C_1 C_5 C_L L_1 L_L R_1 R_5 s^5 + C_1 C_5 L_1 L_5 R_1 s^4 + C_1 C_5 L_1 R_1 R_5 s^3 + C_1 C_L L_1 L_L R_1 s^4 + C_1 C_L L_1 R_1 R_5 s^3 + C_1 L_1 R_1 s^2 + 2 C_5 C_L L_1 R_1 s}$$

10.839 INVALID-ORDER-839  $Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{L_L s}{C_L L_L s^2 + 1} \right)$

$$H(s) = \frac{C_1 C_5 C_L L_1 L_5 L_L R_1 R_5 s^6 + C_1 C_5 L_1 L_5 L_L R_1 s^5 + C_1 C_5 L_1 L_5 R_1 R_5 s^4 + C_1 C_5 L_1 L_L R_1 R_5 s^4 + C_1 C_L L_1 L_L R_1 R_5 s^4 + C_1 L_1 L_L R_1 s^3 + C_1 L_1 R_1 R_5 s^2 + C_5 C_L L_1 L_5 L_L R_1 R_5 g_m s^5}{C_1 C_5 C_L L_1 L_5 L_L R_1 R_5 s^6 + C_1 C_5 L_1 L_5 L_L R_1 s^5 + C_1 C_5 L_1 L_5 R_1 R_5 s^4 + C_1 C_5 L_1 L_L R_1 R_5 s^4 + C_1 C_L L_1 L_L R_1 R_5 s^4 + C_1 L_1 L_L R_1 s^3 + C_1 L_1 R_1 R_5 s^2 + C_5 C_L L_1 L_5 L_L R_1 R_5 g_m s^5}.$$

10.840 INVALID-ORDER-840  $Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1 + \frac{1}{L_1 s}}}, \infty, \infty, \infty, \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, L_L s + R_L + \frac{1}{C_L s} \right)$

$$H(s) = -\frac{C_1 C_5 C_L L_1 L_5 L_L R_1 s^6 + C_1 C_5 C_L L_1 L_5 R_1 R_5 s^5 + C_1 C_5 C_L L_1 L_5 R_1 R_L s^5 + C_1 C_5 C_L L_1 L_L R_1 R_5 s^5 + C_1 C_5 C_L L_1 R_1 R_5 R_L s^4 + C_1 C_5 L_1 L_5 R_1 s^4 + C_1 C_5 L_1 R_1 R_5 s^3 + C_1 C_L L_1 L$$

10.841 INVALID-ORDER-841  $Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$

$$H(s) = \frac{C_1 C_5 C_L L_1 L_5 L_L R_1 R_5 R_L s^6 + C_1 C_5 L_1 L_5 L_L R_1 R_5 s^5 + C_1 C_5 L_1 L_5 L_L R_1 R_L s^5 + C_1 C_5 L_1 L_5 R_1 R_5 R_L s^4 + C_1 C_5 L_1 L_L R_1 R_5 R_L s^4 + C_1 C_L L_1 L_L R_1 R_5 R_L s^4 + C_1 L_1 L_L R_1 R_5 s^3 +$$

**10.842 INVALID-ORDER-842**  $Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$

$$H(s) = -\frac{C_1 C_5 C_L L_1 L_5 L_L R_1 R_5 s^6 + C_1 C_5 C_L L_1 L_5 L_L R_1 R_L s^6 + C_1 C_5 C_L L_1 L_L R_1 R_5 R_L s^5 + C_1 C_5 L_1 L_5 L_L R_1 s^5 + C_1 C_5 L_1 L_5 R_1 R_5 s^4 + C_1 C_5 L_1 L_5 R_1 R_L s^4 + C_1 C_5 L_1 L_L R_1 R_5 s^4 + C_1 C_5 L_1 L_L R_1 R_L s^4 + C_1 C_5 L_1 L_L R_5 R_L s^4 + C_1 C_5 L_1 L_L R_5 s^4 + C_1 C_5 L_1 L_L R_L s^4 + C_1 C_5 L_1 L_L s^4 + C_1 C_5 L_1 L s^4 + C_1 C_5 L_1 s^4 + C_1 C_5 L s^4 + C_1 C_5 s^4 + C_1 C s^4 + C_1 C_L s^4 + C_1 C_L L s^4 + C_1 C_L L_1 s^4 + C_1 C_L L_5 s^4 + C_1 C_L L_L s^4 + C_1 C_L R_1 s^4 + C_1 C_L R_5 s^4 + C_1 C_L R_L s^4 + C_1 C_L s^4 + C_1 C s^3 + C_1 C_L s^3 + C_1 C_L L s^3 + C_1 C_L L_1 s^3 + C_1 C_L L_5 s^3 + C_1 C_L L_L s^3 + C_1 C_L R_1 s^3 + C_1 C_L R_5 s^3 + C_1 C_L R_L s^3 + C_1 C_L s^3 + C_1 C s^2 + C_1 C_L s^2 + C_1 C_L L s^2 + C_1 C_L L_1 s^2 + C_1 C_L L_5 s^2 + C_1 C_L L_L s^2 + C_1 C_L R_1 s^2 + C_1 C_L R_5 s^2 + C_1 C_L R_L s^2 + C_1 C_L s^2 + C_1 C s + C_1 C_L s + C_1 C_L L s + C_1 C_L L_1 s + C_1 C_L L_5 s + C_1 C_L L_L s + C_1 C_L R_1 s + C_1 C_L R_5 s + C_1 C_L R_L s + C_1 C_L s + C_1 C}{C_1 C_5 C_L L_1 L_5 L_L R_1 R_5 s^6 + C_1 C_5 C_L L_1 L_5 L_L R_1 R_L s^6 + C_1 C_5 C_L L_1 L_L R_1 R_5 R_L s^5 + C_1 C_5 L_1 L_5 L_L R_1 s^5 + C_1 C_5 L_1 L_5 R_1 R_5 s^4 + C_1 C_5 L_1 L_5 R_1 R_L s^4 + C_1 C_5 L_1 L_L R_1 R_5 s^4 + C_1 C_5 L_1 L_L R_1 R_L s^4 + C_1 C_5 L_1 L_L R_5 R_L s^4 + C_1 C_5 L_1 L_L R_5 s^4 + C_1 C_5 L_1 L_L R_L s^4 + C_1 C_5 L_1 L_L s^4 + C_1 C_5 L_1 L s^4 + C_1 C_5 L_1 s^4 + C_1 C_5 L s^4 + C_1 C s^4 + C_1 C_L s^4 + C_1 C_L L s^4 + C_1 C_L L_1 s^4 + C_1 C_L L_5 s^4 + C_1 C_L L_L s^4 + C_1 C_L R_1 s^4 + C_1 C_L R_5 s^4 + C_1 C_L R_L s^4 + C_1 C_L s^4 + C_1 C s^3 + C_1 C_L s^3 + C_1 C_L L s^3 + C_1 C_L L_1 s^3 + C_1 C_L L_5 s^3 + C_1 C_L L_L s^3 + C_1 C_L R_1 s^3 + C_1 C_L R_5 s^3 + C_1 C_L R_L s^3 + C_1 C_L s^3 + C_1 C s^2 + C_1 C_L s^2 + C_1 C_L L s^2 + C_1 C_L L_1 s^2 + C_1 C_L L_5 s^2 + C_1 C_L L_L s^2 + C_1 C_L R_1 s^2 + C_1 C_L R_5 s^2 + C_1 C_L R_L s^2 + C_1 C_L s^2 + C_1 C s + C_1 C_L s + C_1 C_L L s + C_1 C_L L_1 s + C_1 C_L L_5 s + C_1 C_L L_L s + C_1 C_L R_1 s + C_1 C_L R_5 s + C_1 C_L R_L s + C_1 C_L s + C_1 C}.$$

**10.843 INVALID-ORDER-843**  $Z(s) = \left( \frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$

$$H(s) = -\frac{C_1 C_5 C_L L_1 L_5 L_L R_1 R_5 s^6 + C_1 C_5 C_L L_1 L_5 L_L R_1 R_L s^6 + C_1 C_5 C_L L_1 L_5 R_1 R_5 R_L s^5 + C_1 C_5 C_L L_1 L_L R_1 R_5 R_L s^5 + C_1 C_5 L_1 L_5 R_1 R_5 s^4 + C_1 C_5 L_1 L_5 R_1 R_L s^4 + C_1 C_5 L_1 R_1 R_5 R_L s^4}{C_1 C_5 C_L L_1 L_5 L_L R_1 R_5 s^6 + C_1 C_5 C_L L_1 L_5 L_L R_1 R_L s^6 + C_1 C_5 C_L L_1 L_5 R_1 R_5 R_L s^5 + C_1 C_5 C_L L_1 L_L R_1 R_5 R_L s^5 + C_1 C_5 L_1 L_5 R_1 R_5 s^4 + C_1 C_5 L_1 L_5 R_1 R_L s^4 + C_1 C_5 L_1 R_1 R_5 R_L s^4}$$

$$10.844 \quad \text{INVALID-ORDER-844} \quad Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, R_5, \frac{1}{C_L s} \right)$$

$$H(s) = \frac{(R_5 g_m - 1)(C_1 L_1 R_1 s^2 + L_1 s + R_1)}{C_1 C_L L_1 R_1 R_5 g_m s^3 + C_1 C_L L_1 R_1 s^3 + C_1 C_L L_1 R_5 s^3 + 2C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + C_L L_1 R_5 g_m s^2 + C_L L_1 s^2 + C_L R_1 R_5 g_m s + C_L R_1 s + C_L R_5 s + 2L_1 g_m s + 2R_1 g_m + 1}$$

$$10.845 \quad \text{INVALID-ORDER-845} \quad Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, R_5, \frac{R_L}{C_L R_L s + 1} \right)$$

$$H(s) = \frac{R_L (R_5 g_m - 1)(C_1 L_1 R_1 s^2 + L_1 s + R_1)}{C_1 C_L L_1 R_1 R_5 R_L g_m s^3 + C_1 C_L L_1 R_1 R_L s^3 + C_1 C_L L_1 R_5 R_L s^3 + C_1 L_1 R_1 R_5 g_m s^2 + 2C_1 L_1 R_1 R_L g_m s^2 + C_1 L_1 R_1 s^2 + C_1 L_1 R_5 s^2 + C_1 L_1 R_L s^2 + C_L L_1 R_5 R_L g_m s^2 + C_L L_1 R_L s^2}$$

$$10.846 \quad \text{INVALID-ORDER-846} \quad Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, R_5, R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{(R_5 g_m - 1)(C_L R_L s + 1)(C_1 L_1 R_1 s^2 + L_1 s + R_1)}{C_1 C_L L_1 R_1 R_5 g_m s^3 + 2C_1 C_L L_1 R_1 R_L g_m s^3 + C_1 C_L L_1 R_1 s^3 + C_1 C_L L_1 R_5 s^3 + C_1 C_L L_1 R_L s^3 + 2C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + C_L L_1 R_5 g_m s^2 + 2C_L L_1 R_L g_m s^2 + C_L L_1 s^2 + C_L R_L s}$$

$$10.847 \quad \text{INVALID-ORDER-847} \quad Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, R_5, L_L s + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{(R_5 g_m - 1)(C_L L_L s^2 + 1)(C_1 L_1 R_1 s^2 + L_1 s + R_1)}{2C_1 C_L L_1 L_L R_1 g_m s^4 + C_1 C_L L_1 L_L s^4 + C_1 C_L L_1 R_1 R_5 g_m s^3 + C_1 C_L L_1 R_1 s^3 + C_1 C_L L_1 R_5 s^3 + 2C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + 2C_L L_1 L_L g_m s^3 + C_L L_1 R_5 g_m s^2 + C_L L_1 s^2 + 2C_L L_L s}$$

$$10.848 \quad \text{INVALID-ORDER-848} \quad Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, R_5, \frac{L_L s}{C_L L_L s^2 + 1} \right)$$

$$H(s) = \frac{L_L s (R_5 g_m - 1)(C_1 L_1 R_1 s^2 + L_1 s + R_1)}{C_1 C_L L_1 L_L R_1 R_5 g_m s^4 + C_1 C_L L_1 L_L R_1 s^4 + C_1 C_L L_1 L_L R_5 s^4 + 2C_1 L_1 L_L R_1 g_m s^3 + C_1 L_1 L_L s^3 + C_1 L_1 R_1 R_5 g_m s^2 + C_1 L_1 R_1 s^2 + C_1 L_1 R_5 s^2 + C_L L_1 L_L R_5 g_m s^3 + C_L L_1 L_L s^3}$$

$$10.849 \quad \text{INVALID-ORDER-849} \quad Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, R_5, L_L s + R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{(R_5 g_m - 1)(C_L L_L s^2 + C_L R_L s + 1)}{2C_1 C_L L_1 L_L R_1 g_m s^4 + C_1 C_L L_1 L_L s^4 + C_1 C_L L_1 R_1 R_5 g_m s^3 + 2C_1 C_L L_1 R_1 R_L g_m s^3 + C_1 C_L L_1 R_1 s^3 + C_1 C_L L_1 R_5 s^3 + C_1 C_L L_1 R_L s^3 + 2C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + 2C_L L_1 L_L s^3 + C_L L_1 R_5 s^2 + C_L L_1 R_L s^2}$$

10.850 INVALID-ORDER-850  $Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, R_5, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$

$$H(s) = \frac{C_1 C_L L_1 L_L R_1 R_5 R_L g_m s^4 + C_1 C_L L_1 L_L R_1 R_L s^4 + C_1 C_L L_1 L_L R_5 R_L s^4 + C_1 L_1 L_L R_1 R_5 g_m s^3 + 2C_1 L_1 L_L R_1 R_L g_m s^3 + C_1 L_1 L_L R_1 s^3 + C_1 L_1 L_L R_5 s^3 + C_1 L_1 L_L R_L s^3 + C_1 L_1}{\dots}$$

**10.851 INVALID-ORDER-851**  $Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, R_5, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$

$$H(s) = \frac{C_1 C_L L_1 L_L R_1 R_5 g_m s^4 + 2C_1 C_L L_1 L_L R_1 R_L g_m s^4 + C_1 C_L L_1 L_L R_1 s^4 + C_1 C_L L_1 L_L R_5 s^4 + C_1 C_L L_1 L_L R_L s^4 + 2C_1 L_1 L_L R_1 g_m s^3 + C_1 L_1 L_L s^3 + C_1 L_1 R_1 R_5 g_m s^2 + 2C_1 L_1 R_1 l}{C_1 C_L L_1 L_L R_1 R_5 g_m s^4 + 2C_1 C_L L_1 L_L R_1 R_L g_m s^4 + C_1 C_L L_1 L_L R_1 s^4 + C_1 C_L L_1 L_L R_5 s^4 + C_1 C_L L_1 L_L R_L s^4 + 2C_1 L_1 L_L R_1 g_m s^3 + C_1 L_1 L_L s^3 + C_1 L_1 R_1 R_5 g_m s^2 + 2C_1 L_1 R_1 l}$$

10.852 INVALID-ORDER-852  $Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, R_5, \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$

$$H(s) = \frac{C_1 C_L L_1 L_L R_1 R_5 g_m s^4 + 2 C_1 C_L L_1 L_L R_1 R_L g_m s^4 + C_1 C_L L_1 L_L R_1 s^4 + C_1 C_L L_1 L_L R_5 s^4 + C_1 C_L L_1 L_L R_L s^4 + C_1 C_L L_1 R_1 R_5 R_L g_m s^3 + C_1 C_L L_1 R_1 R_L s^3 + C_1 C_L L_1 R_5 R_L s^3 +$$

**10.853 INVALID-ORDER-853**  $Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, \frac{1}{C_5 s}, R_L \right)$

$$H(s) = -\frac{R_L(C_5s - g_m)(C_1L_1R_1s^2 + L_1s + R_1)}{2C_1C_5L_1R_1R_Lg_ms^3 + C_1C_5L_1R_1s^3 + C_1C_5L_1R_Ls^3 + C_1L_1R_1g_ms^2 + C_1L_1s^2 + 2C_5L_1R_Lg_ms^2 + C_5L_1s^2 + 2C_5R_1R_Lg_ms + C_5R_1s + C_5R_Ls + L_1g_ms + R_1g_m + 1}$$

**10.854 INVALID-ORDER-854**  $Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, \frac{1}{C_5 s}, \frac{1}{C_L s} \right)$

$$H(s) = -\frac{(C_5s - g_m)(C_1L_1R_1s^2 + L_1s + R_1)}{s(C_1C_5C_LL_1R_1s^3 + 2C_1C_5L_1R_1g_ms^2 + C_1C_5L_1s^2 + C_1C_LL_1R_1g_ms^2 + C_1C_LL_1s^2 + C_5C_LL_1s^2 + C_5C_LR_1s + 2C_5L_1g_ms + 2C_5R_1g_m + C_5 + C_LL_1g_ms + C_LR_1g_m + C)}$$

$$10.855 \quad \text{INVALID-ORDER-855} \quad Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, \frac{1}{C_5 s}, \frac{R_L}{C_L R_L s + 1} \right)$$

$$H(s) = - \frac{R_L (C_5 s - g_m) (C_1 L_1 R_1 s^2 + L_1 s + R_1)}{C_1 C_5 C_L L_1 R_1 R_L s^4 + 2C_1 C_5 L_1 R_1 R_L g_m s^3 + C_1 C_5 L_1 R_1 s^3 + C_1 C_5 L_1 R_L s^3 + C_1 C_L L_1 R_1 R_L g_m s^3 + C_1 C_L L_1 R_L s^3 + C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + C_5 C_L L_1 R_L s^3 + C_5 C_L R_1 R_L s^3}$$

$$10.856 \quad \text{INVALID-ORDER-856} \quad Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, \frac{1}{C_5 s}, R_L + \frac{1}{C_L s} \right)$$

$$H(s) = - \frac{(C_5 s - g_m) (C_L R_L s + 1) (C_1 L_1 R_1 s^2 + L_1 s + R_1)}{s (2C_1 C_5 C_L L_1 R_1 R_L g_m s^3 + C_1 C_5 C_L L_1 R_1 s^3 + C_1 C_5 C_L L_1 R_L s^3 + 2C_1 C_5 L_1 R_1 g_m s^2 + C_1 C_5 L_1 s^2 + C_1 C_L L_1 R_1 g_m s^2 + C_1 C_L L_1 s^2 + 2C_5 C_L L_1 R_L g_m s^2 + C_5 C_L L_1 s^2 + 2C_5 C_L R_1 R_L s^2)}$$

$$10.857 \quad \text{INVALID-ORDER-857} \quad Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, \frac{1}{C_5 s}, L_L s + \frac{1}{C_L s} \right)$$

$$H(s) = - \frac{(C_5 s - g_m) (C_L L_L s^2 + 1) (C_1 L_1 R_1 s^2 + L_1 s + R_1)}{s (2C_1 C_5 C_L L_1 L_L R_1 g_m s^4 + C_1 C_5 C_L L_1 L_L s^4 + C_1 C_5 C_L L_1 R_1 s^3 + 2C_1 C_5 L_1 R_1 g_m s^2 + C_1 C_5 L_1 s^2 + C_1 C_L L_1 R_1 g_m s^2 + C_1 C_L L_1 s^2 + 2C_5 C_L L_1 L_L g_m s^3 + C_5 C_L L_1 s^2 + 2C_5 C_L R_1 R_L s^2)}$$

$$10.858 \quad \text{INVALID-ORDER-858} \quad Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} \right)$$

$$H(s) = - \frac{L_L s (C_5 s - g_m) (C_1 L_1 R_1 s^2 + L_1 s + R_1)}{C_1 C_5 C_L L_1 L_L R_1 s^5 + 2C_1 C_5 L_1 L_L R_1 g_m s^4 + C_1 C_5 L_1 L_L s^4 + C_1 C_5 L_1 R_1 s^3 + C_1 C_L L_1 L_L R_1 g_m s^4 + C_1 C_L L_1 L_L s^4 + C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + C_5 C_L L_1 L_L s^4 + C_5 C_L L_L R_1 s^4}$$

$$10.859 \quad \text{INVALID-ORDER-859} \quad Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, \frac{1}{C_5 s}, L_L s + R_L + \frac{1}{C_L s} \right)$$

$$H(s) = - \frac{(C_5 s - g_m) (C_L L_L s^2 + 1) (C_1 L_1 R_1 s^2 + L_1 s + R_1)}{s (2C_1 C_5 C_L L_1 L_L R_1 g_m s^4 + C_1 C_5 C_L L_1 L_L s^4 + 2C_1 C_5 C_L L_1 R_1 R_L g_m s^3 + C_1 C_5 C_L L_1 R_1 s^3 + C_1 C_5 C_L L_1 R_L s^3 + 2C_1 C_5 L_1 R_1 g_m s^2 + C_1 C_5 L_1 s^2 + C_1 C_L L_1 R_1 g_m s^2 + C_1 C_L L_1 s^2 + 2C_5 C_L L_1 L_L g_m s^3 + C_5 C_L L_1 s^2 + 2C_5 C_L R_1 R_L s^2)}$$



$$10.860 \quad \text{INVALID-ORDER-860} \quad Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, \frac{1}{C_5 s}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$$

$$H(s) = - \frac{C_1 C_5 C_L L_1 L_L R_1 R_L s^5 + 2C_1 C_5 L_1 L_L R_1 R_L g_m s^4 + C_1 C_5 L_1 L_L R_1 s^4 + C_1 C_5 L_1 L_L R_L s^4 + C_1 C_5 L_1 R_1 R_L s^3 + C_1 C_L L_1 L_L R_1 R_L g_m s^4 + C_1 C_L L_1 L_L R_L s^4 + C_1 L_1 L_L R_1 g_m s^3}{C_1 C_5 C_L L_1 L_L R_1 R_L s^5 + 2C_1 C_5 L_1 L_L R_1 R_L g_m s^4 + C_1 C_5 L_1 L_L R_1 s^4 + C_1 C_5 L_1 L_L R_L s^4 + C_1 C_5 L_1 R_1 R_L s^3 + C_1 C_L L_1 L_L R_1 R_L g_m s^4 + C_1 C_L L_1 L_L R_L s^4 + C_1 L_1 L_L R_1 g_m s^3}$$

$$10.861 \quad \text{INVALID-ORDER-861} \quad Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$$

$$H(s) = - \frac{2C_1 C_5 C_L L_1 L_L R_1 R_L g_m s^5 + C_1 C_5 C_L L_1 L_L R_1 s^5 + C_1 C_5 C_L L_1 L_L R_L s^5 + 2C_1 C_5 L_1 L_L R_1 g_m s^4 + C_1 C_5 L_1 L_L s^4 + 2C_1 C_5 L_1 R_1 R_L g_m s^3 + C_1 C_5 L_1 R_1 s^3 + C_1 C_5 L_1 R_L s^3 + C_1 C_L L_1 L_L R_1 g_m s^4}{2C_1 C_5 C_L L_1 L_L R_1 R_L g_m s^5 + C_1 C_5 C_L L_1 L_L R_1 s^5 + C_1 C_5 C_L L_1 L_L R_L s^5 + 2C_1 C_5 L_1 L_L R_1 g_m s^4 + C_1 C_5 L_1 L_L s^4 + 2C_1 C_5 L_1 R_1 R_L g_m s^3 + C_1 C_5 L_1 R_1 s^3 + C_1 C_5 L_1 R_L s^3 + C_1 C_L L_1 L_L R_1 g_m s^4}$$

$$10.862 \quad \text{INVALID-ORDER-862} \quad Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, \frac{1}{C_5 s}, \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$$

$$H(s) = - \frac{2C_1 C_5 C_L L_1 L_L R_1 R_L g_m s^5 + C_1 C_5 C_L L_1 L_L R_1 s^5 + C_1 C_5 C_L L_1 L_L R_L s^5 + C_1 C_5 C_L L_1 R_1 R_L s^4 + 2C_1 C_5 L_1 R_1 R_L g_m s^3 + C_1 C_5 L_1 R_1 s^3 + C_1 C_5 L_1 R_L s^3 + C_1 C_L L_1 L_L R_1 g_m s^4}{2C_1 C_5 C_L L_1 L_L R_1 R_L g_m s^5 + C_1 C_5 C_L L_1 L_L R_1 s^5 + C_1 C_5 C_L L_1 L_L R_L s^5 + C_1 C_5 C_L L_1 R_1 R_L s^4 + 2C_1 C_5 L_1 R_1 R_L g_m s^3 + C_1 C_5 L_1 R_1 s^3 + C_1 C_5 L_1 R_L s^3 + C_1 C_L L_1 L_L R_1 g_m s^4}$$

$$10.863 \quad \text{INVALID-ORDER-863} \quad Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, R_L \right)$$

$$H(s) = - \frac{R_L (C_5 R_5 s - R_5 g_m + 1) (C_1 L_1 R_1 s^2 + L_1 s + R_1)}{2C_1 C_5 L_1 R_1 R_5 R_L g_m s^3 + C_1 C_5 L_1 R_1 R_5 s^3 + C_1 C_5 L_1 R_5 R_L s^3 + C_1 L_1 R_1 R_5 g_m s^2 + 2C_1 L_1 R_1 R_L g_m s^2 + C_1 L_1 R_1 s^2 + C_1 L_1 R_5 s^2 + C_1 L_1 R_L s^2 + 2C_5 L_1 R_5 R_L g_m s^2 + C_5 L_1 R_5 s^2}$$

$$10.864 \quad \text{INVALID-ORDER-864} \quad Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, \frac{1}{C_L s} \right)$$

$$H(s) = - \frac{(C_5 R_5 s - R_5 g_m + 1) (C_1 L_1 R_1 s^2 + L_1 s + R_1)}{C_1 C_5 C_L L_1 R_1 R_5 s^4 + 2C_1 C_5 L_1 R_1 R_5 g_m s^3 + C_1 C_5 L_1 R_5 s^3 + C_1 C_L L_1 R_1 R_5 g_m s^3 + C_1 C_L L_1 R_1 s^3 + C_1 C_L L_1 R_5 s^3 + 2C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + C_5 C_L L_1 R_5 s^3 + C_5 C_L R_1 R_5 s^2}$$

**10.865 INVALID-ORDER-865**  $Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, \frac{R_L}{C_L R_L s + 1} \right)$

$$H(s) = -\frac{C_1 C_5 C_L L_1 R_1 R_5 R_L s^4 + 2C_1 C_5 L_1 R_1 R_5 R_L g_m s^3 + C_1 C_5 L_1 R_1 R_5 s^3 + C_1 C_5 L_1 R_5 R_L s^3 + C_1 C_L L_1 R_1 R_5 R_L g_m s^3 + C_1 C_L L_1 R_1 R_L s^3 + C_1 C_L L_1 R_5 R_L s^3 + C_1 L_1 R_1 R_5 g_m s^2 + \dots}{\dots}$$

**10.866 INVALID-ORDER-866**  $Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, R_L + \frac{1}{C_L s} \right)$

$$H(s) = -\frac{2C_1 C_5 C_L L_1 R_1 R_5 R_L g_m s^4 + C_1 C_5 C_L L_1 R_1 R_5 s^4 + C_1 C_5 C_L L_1 R_5 R_L s^4 + 2C_1 C_5 L_1 R_1 R_5 g_m s^3 + C_1 C_5 L_1 R_5 s^3 + C_1 C_L L_1 R_1 R_5 g_m s^3 + 2C_1 C_L L_1 R_1 R_L g_m s^3 + C_1 C_L L_1 R_1 s^3}{\dots}$$

**10.867 INVALID-ORDER-867**  $Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, L_L s + \frac{1}{C_L s} \right)$

$$H(s) = -\frac{2C_1 C_5 C_L L_1 L_L R_1 R_5 g_m s^5 + C_1 C_5 C_L L_1 L_L R_5 s^5 + C_1 C_5 C_L L_1 R_1 R_5 s^4 + 2C_1 C_5 L_1 R_1 R_5 g_m s^3 + C_1 C_5 L_1 R_5 s^3 + 2C_1 C_L L_1 L_L R_1 g_m s^4 + C_1 C_L L_1 L_L s^4 + C_1 C_L L_1 R_1 R_5 g_m s^3}{\dots}$$

**10.868 INVALID-ORDER-868**  $Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, \frac{L_L s}{C_L L_L s^2 + 1} \right)$

$$H(s) = -\frac{C_1 C_5 C_L L_1 L_L R_1 R_5 s^5 + 2C_1 C_5 L_1 L_L R_1 R_5 g_m s^4 + C_1 C_5 L_1 L_L R_5 s^4 + C_1 C_5 L_1 R_1 R_5 s^3 + C_1 C_L L_1 L_L R_1 R_5 g_m s^4 + C_1 C_L L_1 L_L R_1 s^4 + C_1 C_L L_1 L_L R_5 s^4 + 2C_1 L_1 L_L R_1 g_m s^3}{\dots}$$

**10.869 INVALID-ORDER-869**  $Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, L_L s + R_L + \frac{1}{C_L s} \right)$

$$H(s) = -\frac{2C_1 C_5 C_L L_1 L_L R_1 R_5 g_m s^5 + C_1 C_5 C_L L_1 L_L R_5 s^5 + 2C_1 C_5 C_L L_1 R_1 R_5 R_L g_m s^4 + C_1 C_5 C_L L_1 R_1 R_5 s^4 + C_1 C_5 C_L L_1 R_5 R_L s^4 + 2C_1 C_5 L_1 R_1 R_5 g_m s^3 + C_1 C_5 L_1 R_5 s^3 + 2C_1 C_L L_1 R_1 R_5 g_m s^3}{\dots}$$

$$10.870 \quad \text{INVALID-ORDER-870} \quad Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$$

$$H(s) = -\frac{C_1 C_5 C_L L_1 L_L R_1 R_5 R_L s^5 + 2C_1 C_5 L_1 L_L R_1 R_5 R_L g_m s^4 + C_1 C_5 L_1 L_L R_1 R_5 s^4 + C_1 C_5 L_1 L_L R_5 R_L s^4 + C_1 C_5 L_1 R_1 R_5 R_L s^3 + C_1 C_L L_1 L_L R_1 R_5 R_L g_m s^4 + C_1 C_L L_1 L_L R_1 R_L s^4}{C_1 C_5 C_L L_1 L_L R_1 R_5 R_L s^5 + 2C_1 C_5 L_1 L_L R_1 R_5 R_L g_m s^4 + C_1 C_5 L_1 L_L R_1 R_5 s^4 + C_1 C_5 L_1 L_L R_5 R_L s^4 + C_1 C_5 L_1 R_1 R_5 R_L s^3 + C_1 C_L L_1 L_L R_1 R_5 R_L g_m s^4 + C_1 C_L L_1 L_L R_1 R_L s^4}$$

$$10.871 \quad \text{INVALID-ORDER-871} \quad Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$$

$$H(s) = -\frac{2C_1 C_5 C_L L_1 L_L R_1 R_5 R_L g_m s^5 + C_1 C_5 C_L L_1 L_L R_1 R_5 s^5 + C_1 C_5 C_L L_1 L_L R_5 R_L s^5 + 2C_1 C_5 L_1 L_L R_1 R_5 g_m s^4 + C_1 C_5 L_1 L_L R_5 s^4 + 2C_1 C_5 L_1 R_1 R_5 R_L g_m s^3 + C_1 C_5 L_1 R_1 R_5 s^3 + C_1 C_L L_1 L_L R_1 R_5 R_L g_m s^4 + C_1 C_L L_1 L_L R_1 R_L s^4}{2C_1 C_5 C_L L_1 L_L R_1 R_5 R_L g_m s^5 + C_1 C_5 C_L L_1 L_L R_1 R_5 s^5 + C_1 C_5 C_L L_1 L_L R_5 R_L s^5 + 2C_1 C_5 L_1 L_L R_1 R_5 g_m s^4 + C_1 C_5 L_1 L_L R_5 s^4 + 2C_1 C_5 L_1 R_1 R_5 R_L g_m s^3 + C_1 C_5 L_1 R_1 R_5 s^3 + C_1 C_L L_1 L_L R_1 R_5 R_L g_m s^4 + C_1 C_L L_1 L_L R_1 R_L s^4}$$

$$10.872 \quad \text{INVALID-ORDER-872} \quad Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, \frac{R_L (L_L s + \frac{1}{C_L s})}{L_L s + R_L + \frac{1}{C_L s}} \right)$$

$$H(s) = -\frac{2C_1 C_5 C_L L_1 L_L R_1 R_5 R_L g_m s^5 + C_1 C_5 C_L L_1 L_L R_1 R_5 s^5 + C_1 C_5 C_L L_1 L_L R_5 R_L s^5 + C_1 C_5 C_L L_1 R_1 R_5 R_L s^4 + 2C_1 C_5 L_1 R_1 R_5 R_L g_m s^3 + C_1 C_5 L_1 R_1 R_5 s^3 + C_1 C_5 L_1 R_5 R_L s^3 + C_1 C_L L_1 L_L R_1 R_5 R_L g_m s^4 + C_1 C_L L_1 L_L R_1 R_L s^4}{2C_1 C_5 C_L L_1 L_L R_1 R_5 R_L g_m s^5 + C_1 C_5 C_L L_1 L_L R_1 R_5 s^5 + C_1 C_5 C_L L_1 L_L R_5 R_L s^5 + C_1 C_5 C_L L_1 R_1 R_5 R_L s^4 + 2C_1 C_5 L_1 R_1 R_5 R_L g_m s^3 + C_1 C_5 L_1 R_1 R_5 s^3 + C_1 C_5 L_1 R_5 R_L s^3 + C_1 C_L L_1 L_L R_1 R_5 R_L g_m s^4 + C_1 C_L L_1 L_L R_1 R_L s^4}$$

$$10.873 \quad \text{INVALID-ORDER-873} \quad Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, R_L \right)$$

$$H(s) = \frac{R_L (C_1 L_1 R_1 s^2 + L_1 s + R_1) (C_5 R_5 g_m s - C_5 s + g_m)}{C_1 C_5 L_1 R_1 R_5 g_m s^3 + 2C_1 C_5 L_1 R_1 R_L g_m s^3 + C_1 C_5 L_1 R_1 s^3 + C_1 C_5 L_1 R_5 s^3 + C_1 C_5 L_1 R_L s^3 + C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + C_5 L_1 R_5 g_m s^2 + 2C_5 L_1 R_L g_m s^2 + C_5 L_1 s^2 + C_5 R_1 R_5 s^2}$$

$$10.874 \quad \text{INVALID-ORDER-874} \quad Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, \frac{1}{C_L s} \right)$$

$$H(s) = \frac{(C_1 L_1 R_1 s^2 + L_1 s + R_1) (C_5 R_5 g_m s - C_5 s + g_m)}{s (C_1 C_5 C_L L_1 R_1 R_5 g_m s^3 + C_1 C_5 C_L L_1 R_1 s^3 + C_1 C_5 C_L L_1 R_5 s^3 + 2C_1 C_5 L_1 R_1 g_m s^2 + C_1 C_5 L_1 s^2 + C_1 C_L L_1 R_1 g_m s^2 + C_1 C_L L_1 s^2 + C_5 C_L L_1 R_5 g_m s^2 + C_5 C_L L_1 s^2 + C_5 C_L R_1 R_5 s^2)}$$

**10.875 INVALID-ORDER-875**  $Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, \frac{R_L}{C_L R_L s + 1} \right)$

$$H(s) = \frac{C_1 C_5 C_L L R_1 R_5 R_L g_m s^4 + C_1 C_5 C_L L R_1 R_L s^4 + C_1 C_5 C_L L R_5 R_L s^4 + C_1 C_5 L R_1 R_5 g_m s^3 + 2 C_1 C_5 L R_1 R_L g_m s^3 + C_1 C_5 L R_1 s^3 + C_1 C_5 L R_5 s^3 + C_1 C_5 L R_L s^3 + C_1 C_L L}{C_1 C_5 C_L L R_1 R_5 R_L g_m s^4 + C_1 C_5 C_L L R_1 R_L s^4 + C_1 C_5 C_L L R_5 R_L s^4 + C_1 C_5 L R_1 R_5 g_m s^3 + 2 C_1 C_5 L R_1 R_L g_m s^3 + C_1 C_5 L R_1 s^3 + C_1 C_5 L R_5 s^3 + C_1 C_5 L R_L s^3 + C_1 C_L L}$$

**10.876 INVALID-ORDER-876**  $Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, R_L + \frac{1}{C_L s} \right)$

$$H(s) = \frac{(C_L R_L s + 1)(C_1 L_1 l}{s(C_1 C_5 C_L L_1 R_1 R_5 g_m s^3 + 2C_1 C_5 C_L L_1 R_1 R_L g_m s^3 + C_1 C_5 C_L L_1 R_1 s^3 + C_1 C_5 C_L L_1 R_5 s^3 + C_1 C_5 C_L L_1 R_L s^3 + 2C_1 C_5 L_1 R_1 g_m s^2 + C_1 C_5 L_1 s^2 + C_1 C_L L_1 R_1 g_m s^2 + C_1 C_L L_1 s$$

**10.877 INVALID-ORDER-877**  $Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, L_L s + \frac{1}{C_L s} \right)$

$$H(s) = \frac{(C_L L_L s^2 + 1)(C_1 L_1 s^2 + 1)}{s(2C_1 C_5 C_L L_1 L_L R_1 g_m s^4 + C_1 C_5 C_L L_1 L_L s^4 + C_1 C_5 C_L L_1 R_1 R_5 g_m s^3 + C_1 C_5 C_L L_1 R_1 s^3 + C_1 C_5 C_L L_1 R_5 s^3 + 2C_1 C_5 L_1 R_1 g_m s^2 + C_1 C_5 L_1 s^2 + C_1 C_L L_1 R_1 g_m s^2 + C_1 C_L L_1 s^2 + C_1 C_L L_1)}.$$

**10.878 INVALID-ORDER-878**  $Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} \right)$

$$H(s) = \frac{C_1 C_5 C_L L_1 L_L R_1 R_5 g_m s^5 + C_1 C_5 C_L L_1 L_L R_1 s^5 + C_1 C_5 C_L L_1 L_L R_5 s^5 + 2 C_1 C_5 L_1 L_L R_1 g_m s^4 + C_1 C_5 L_1 L_L s^4 + C_1 C_5 L_1 R_1 R_5 g_m s^3 + C_1 C_5 L_1 R_1 s^3 + C_1 C_5 L_1 R_5 s^3 + C_1 C_L L_1}{C_1 C_5 C_L L_1 L_L R_1 R_5 g_m s^5 + C_1 C_5 C_L L_1 L_L R_1 s^5 + C_1 C_5 C_L L_1 L_L R_5 s^5 + 2 C_1 C_5 L_1 L_L R_1 g_m s^4 + C_1 C_5 L_1 L_L s^4 + C_1 C_5 L_1 R_1 R_5 g_m s^3 + C_1 C_5 L_1 R_1 s^3 + C_1 C_5 L_1 R_5 s^3 + C_1 C_L L_1}$$

**10.879 INVALID-ORDER-879**  $Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, L_L s + R_L + \frac{1}{C_L s} \right)$

$$H(s) = \frac{s(2C_1C_5C_LL_1L_LR_1g_ms^4 + C_1C_5C_LL_1L_Ls^4 + C_1C_5C_LL_1R_1R_5g_ms^3 + 2C_1C_5C_LL_1R_1R_Lg_ms^3 + C_1C_5C_LL_1R_1s^3 + C_1C_5C_LL_1R_5s^3 + C_1C_5C_LL_1R_Ls^3 + 2C_1C_5L_1R_1g_ms^2 + C_1C_5L_1R_1s^2 + C_1C_5L_1R_5s^2 + C_1C_5L_1R_Ls^2 + C_1C_5L_1s^2 + C_1C_5L_5s^2 + C_1C_5L_Rs^2 + C_1C_5Ls^2 + C_1C_5s^2 + C_1C_Ls^2 + C_1Cs^2 + C_5s^2 + Ls^2 + R_1s^2 + R_5s^2 + R_Ls^2 + s^2)}{s^2(2C_1C_5C_LL_1L_LR_1g_ms^4 + C_1C_5C_LL_1L_Ls^4 + C_1C_5C_LL_1R_1R_5g_ms^3 + 2C_1C_5C_LL_1R_1R_Lg_ms^3 + C_1C_5C_LL_1R_1s^3 + C_1C_5C_LL_1R_5s^3 + C_1C_5C_LL_1R_Ls^3 + 2C_1C_5L_1R_1g_ms^2 + C_1C_5L_1R_1s^2 + C_1C_5L_1R_5s^2 + C_1C_5L_1R_Ls^2 + C_1C_5L_1s^2 + C_1C_5L_5s^2 + C_1C_5L_Rs^2 + C_1C_5Ls^2 + C_1C_5s^2 + C_1C_Ls^2 + C_1Cs^2 + C_5s^2 + Ls^2 + R_1s^2 + R_5s^2 + R_Ls^2 + s^2)}$$

10.880 INVALID-ORDER-880  $Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, \frac{1}{C_L s + \frac{1}{R_L + \frac{1}{L_L s}}} \right)$

$$H(s) = \frac{C_1 C_5 C_L L_L R_1 R_5 R_L g_m s^5 + C_1 C_5 C_L L_L L_L R_1 R_L s^5 + C_1 C_5 C_L L_L L_L R_5 R_L s^5 + C_1 C_5 L_1 L_L R_1 R_5 g_m s^4 + 2 C_1 C_5 L_1 L_L R_1 R_L g_m s^4 + C_1 C_5 L_1 L_L R_1 s^4 + C_1 C_5 L_1 L_L R_5 s^4 + C_1$$

**10.881 INVALID-ORDER-881**  $Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$

$$H(s) = \frac{C_1 C_5 C_L L_L L_L R_1 R_5 g_m s^5 + 2 C_1 C_5 C_L L_1 L_L R_1 R_L g_m s^5 + C_1 C_5 C_L L_1 L_L R_1 s^5 + C_1 C_5 C_L L_1 L_L R_5 s^5 + C_1 C_5 C_L L_1 L_L R_L s^5 + 2 C_1 C_5 L_1 L_L R_1 g_m s^4 + C_1 C_5 L_1 L_L s^4 + C_1 C_5 L_1 R_1 g_m s^4 + 2 C_1 C_5 L_1 R_1 s^4 + C_1 C_5 L_1 R_1 s^4 + C_1 C_5 L_1 R_1 s^4}{C_1 C_5 C_L L_L L_L R_1 R_5 g_m s^5 + 2 C_1 C_5 C_L L_1 L_L R_1 R_L g_m s^5 + C_1 C_5 C_L L_1 L_L R_1 s^5 + C_1 C_5 C_L L_1 L_L R_5 s^5 + C_1 C_5 C_L L_1 L_L R_L s^5 + 2 C_1 C_5 L_1 L_L R_1 g_m s^4 + C_1 C_5 L_1 L_L s^4 + C_1 C_5 L_1 R_1 g_m s^4 + 2 C_1 C_5 L_1 R_1 s^4 + C_1 C_5 L_1 R_1 s^4 + C_1 C_5 L_1 R_1 s^4}$$

10.882 INVALID-ORDER-882  $Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$

$$H(s) = \frac{C_1 C_5 C_L L_1 L_L R_1 R_5 g_m s^5 + 2 C_1 C_5 C_L L_1 L_L R_1 R_L g_m s^5 + C_1 C_5 C_L L_1 L_L R_1 s^5 + C_1 C_5 C_L L_1 L_L R_5 s^5 + C_1 C_5 C_L L_1 L_L R_L s^5 + C_1 C_5 C_L L_1 R_1 R_5 R_L g_m s^4 + C_1 C_5 C_L L_1 R_1 R_L s^4 +$$

**10.883 INVALID-ORDER-883**  $Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, R_L \right)$

$$H(s) = \frac{R_L (C_1 L_1 R_1 s^2 + L_1 s + R_1) (C_5 L_5 g_m s^2 - C_5 s + g_m)}{C_1 C_5 L_1 L_5 R_1 g_m s^4 + C_1 C_5 L_1 L_5 s^4 + 2 C_1 C_5 L_1 R_1 R_L g_m s^3 + C_1 C_5 L_1 R_1 s^3 + C_1 C_5 L_1 R_L s^3 + C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + C_5 L_1 L_5 g_m s^3 + 2 C_5 L_1 R_L g_m s^2 + C_5 L_1 s^2 + C_5 L_5 R_1 g}$$

**10.884 INVALID-ORDER-884**  $Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, \frac{1}{C_L s} \right)$

$$H(s) = \frac{(C_1 L_1 R_1 s^2 + L_1 s + R_1)(C_5 L_5 g_m s^2 - C_5 s + g_m)}{s(C_1 C_5 C_L L_1 L_5 R_1 g_m s^4 + C_1 C_5 C_L L_1 L_5 s^4 + C_1 C_5 C_L L_1 R_1 s^3 + 2C_1 C_5 L_1 R_1 g_m s^2 + C_1 C_5 L_1 s^2 + C_1 C_L L_1 R_1 g_m s^2 + C_1 C_L L_1 s^2 + C_5 C_L L_1 L_5 g_m s^3 + C_5 C_L L_1 s^2 + C_5 C_L L_5 R_1 s + C_5 R_1)}$$

$$10.885 \quad \text{INVALID-ORDER-885} \quad Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, \frac{R_L}{C_L R_L s + 1} \right)$$

$$H(s) = \frac{C_1 C_5 C_L L_1 L_5 R_1 R_L g_m s^5 + C_1 C_5 C_L L_1 L_5 R_L s^5 + C_1 C_5 C_L L_1 R_1 R_L s^4 + C_1 C_5 L_1 L_5 R_1 g_m s^4 + C_1 C_5 L_1 L_5 s^4 + 2C_1 C_5 L_1 R_1 R_L g_m s^3 + C_1 C_5 L_1 R_1 s^3 + C_1 C_5 L_1 R_L s^3 + C_1 C_L L_1 s^3}{s(C_1 C_5 C_L L_1 L_5 R_1 g_m s^4 + C_1 C_5 C_L L_1 L_5 s^4 + 2C_1 C_5 C_L L_1 R_1 R_L g_m s^3 + C_1 C_5 C_L L_1 R_1 s^3 + C_1 C_5 C_L L_1 R_L s^3 + 2C_1 C_5 L_1 R_1 g_m s^2 + C_1 C_5 L_1 s^2 + C_1 C_L L_1 R_1 g_m s^2 + C_1 C_L L_1 s^2)}$$

$$10.886 \quad \text{INVALID-ORDER-886} \quad Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{(C_L R_L s + 1)(C_1 L_1 L_5 R_1 g_m s^4 + C_1 C_5 C_L L_1 L_5 s^4 + 2C_1 C_5 C_L L_1 R_1 R_L g_m s^3 + C_1 C_5 C_L L_1 R_1 s^3 + C_1 C_5 C_L L_1 R_L s^3 + 2C_1 C_5 L_1 R_1 g_m s^2 + C_1 C_5 L_1 s^2 + C_1 C_L L_1 R_1 g_m s^2 + C_1 C_L L_1 s^2)}{s(C_1 C_5 C_L L_1 L_5 R_1 g_m s^4 + C_1 C_5 C_L L_1 L_5 s^4 + 2C_1 C_5 C_L L_1 R_1 R_L g_m s^3 + C_1 C_5 C_L L_1 R_1 s^3 + C_1 C_5 C_L L_1 R_L s^3 + 2C_1 C_5 L_1 R_1 g_m s^2 + C_1 C_5 L_1 s^2 + C_1 C_L L_1 R_1 g_m s^2 + C_1 C_L L_1 s^2)}$$

$$10.887 \quad \text{INVALID-ORDER-887} \quad Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, L_L s + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{(C_L L_L s^2 + 1)(C_1 L_1 L_5 R_1 g_m s^4 + C_1 C_5 C_L L_1 L_5 s^4 + 2C_1 C_5 C_L L_1 L_L R_1 g_m s^4 + C_1 C_5 C_L L_1 L_L s^4 + C_1 C_5 C_L L_1 R_1 s^3 + 2C_1 C_5 L_1 R_1 g_m s^2 + C_1 C_5 L_1 s^2 + C_1 C_L L_1 R_1 g_m s^2 + C_1 C_L L_1 s^2)}{s(C_1 C_5 C_L L_1 L_5 R_1 g_m s^4 + C_1 C_5 C_L L_1 L_5 s^4 + 2C_1 C_5 C_L L_1 L_L R_1 g_m s^4 + C_1 C_5 C_L L_1 L_L s^4 + C_1 C_5 C_L L_1 R_1 s^3 + 2C_1 C_5 L_1 R_1 g_m s^2 + C_1 C_5 L_1 s^2 + C_1 C_L L_1 R_1 g_m s^2 + C_1 C_L L_1 s^2)}$$

$$10.888 \quad \text{INVALID-ORDER-888} \quad Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} \right)$$

$$H(s) = \frac{C_1 C_5 C_L L_1 L_5 L_L R_1 g_m s^6 + C_1 C_5 C_L L_1 L_5 L_L s^6 + C_1 C_5 C_L L_1 L_L R_1 s^5 + C_1 C_5 L_1 L_5 R_1 g_m s^4 + C_1 C_5 L_1 L_5 s^4 + 2C_1 C_5 L_1 L_L R_1 g_m s^4 + C_1 C_5 L_1 L_L s^4 + C_1 C_5 L_1 R_1 s^3 + C_1 C_L L_1 s^3}{s(C_1 C_5 C_L L_1 L_5 L_L R_1 g_m s^6 + C_1 C_5 C_L L_1 L_5 L_L s^6 + C_1 C_5 C_L L_1 L_L R_1 s^5 + C_1 C_5 L_1 L_5 R_1 g_m s^4 + C_1 C_5 L_1 L_5 s^4 + 2C_1 C_5 L_1 L_L R_1 g_m s^4 + C_1 C_5 L_1 L_L s^4 + C_1 C_5 L_1 R_1 s^3 + C_1 C_L L_1 s^3)}$$

$$10.889 \quad \text{INVALID-ORDER-889} \quad Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, L_L s + R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{C_1 C_5 C_L L_1 L_5 R_1 g_m s^4 + C_1 C_5 C_L L_1 L_5 s^4 + 2C_1 C_5 C_L L_1 L_L R_1 g_m s^4 + C_1 C_5 C_L L_1 L_L s^4 + 2C_1 C_5 C_L L_1 R_1 R_L g_m s^3 + C_1 C_5 C_L L_1 R_1 s^3 + C_1 C_5 C_L L_1 R_L s^3 + 2C_1 C_5 L_1 R_1 g_m s^2}{s(C_1 C_5 C_L L_1 L_5 R_1 g_m s^4 + C_1 C_5 C_L L_1 L_5 s^4 + 2C_1 C_5 C_L L_1 L_L R_1 g_m s^4 + C_1 C_5 C_L L_1 L_L s^4 + 2C_1 C_5 C_L L_1 R_1 R_L g_m s^3 + C_1 C_5 C_L L_1 R_1 s^3 + C_1 C_5 C_L L_1 R_L s^3 + 2C_1 C_5 L_1 R_1 g_m s^2)}$$

10.890 INVALID-ORDER-890  $Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$

$$H(s) = \frac{C_1 C_5 C_L L_1 L_5 L_L R_1 R_L g_m s^6 + C_1 C_5 C_L L_1 L_5 L_L R_L s^6 + C_1 C_5 C_L L_1 L_L R_1 R_L s^5 + C_1 C_5 L_1 L_5 L_L R_1 g_m s^5 + C_1 C_5 L_1 L_5 L_L s^5 + C_1 C_5 L_1 L_5 R_1 R_L g_m s^4 + C_1 C_5 L_1 L_5 R_L s^4 + 2 C_1 C_5 L_1 L_5 s^4}{C_1 C_5 C_L L_1 L_5 L_L R_1 R_L g_m s^6 + C_1 C_5 C_L L_1 L_5 L_L R_L s^6 + C_1 C_5 C_L L_1 L_L R_1 R_L s^5 + C_1 C_5 L_1 L_5 L_L R_1 g_m s^5 + C_1 C_5 L_1 L_5 L_L s^5 + C_1 C_5 L_1 L_5 R_1 R_L g_m s^4 + C_1 C_5 L_1 L_5 R_L s^4 + 2 C_1 C_5 L_1 L_5 s^4}$$

**10.891 INVALID-ORDER-891**  $Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$

$$H(s) = \frac{C_1 C_5 C_L L_1 L_5 L_L R_1 g_m s^6 + C_1 C_5 C_L L_1 L_5 L_L s^6 + 2 C_1 C_5 C_L L_1 L_L R_1 R_L g_m s^5 + C_1 C_5 C_L L_1 L_L R_1 s^5 + C_1 C_5 C_L L_1 L_L R_L s^5 + C_1 C_5 L_1 L_5 R_1 g_m s^4 + C_1 C_5 L_1 L_5 s^4 + 2 C_1 C_5 L_1 L_L}{C_1 C_5 C_L L_1 L_5 L_L R_1 g_m s^6 + C_1 C_5 C_L L_1 L_5 L_L s^6 + 2 C_1 C_5 C_L L_1 L_L R_1 R_L g_m s^5 + C_1 C_5 C_L L_1 L_L R_1 s^5 + C_1 C_5 C_L L_1 L_L R_L s^5 + C_1 C_5 L_1 L_5 R_1 g_m s^4 + C_1 C_5 L_1 L_5 s^4 + 2 C_1 C_5 L_1 L_L}$$

**10.892 INVALID-ORDER-892**  $Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$

$$H(s) = \frac{C_1 C_5 C_L L_1 L_5 L_L R_1 g_m s^6 + C_1 C_5 C_L L_1 L_5 L_L s^6 + C_1 C_5 C_L L_1 L_5 R_1 R_L g_m s^5 + C_1 C_5 C_L L_1 L_5 R_L s^5 + 2 C_1 C_5 C_L L_1 L_L R_1 R_L g_m s^5 + C_1 C_5 C_L L_1 L_L R_1 s^5 + C_1 C_5 C_L L_1 L_L R_L s^5 +$$

**10.893 INVALID-ORDER-893**  $Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, R_L \right)$

$$H(s) = -\frac{R_L (C_5 L_5 s^2 - L_5 g_m s + 1) (C_1 L_1 R_1 s^2 + L_1 s + 1)}{2C_1 C_5 L_1 L_5 R_1 R_L g_m s^4 + C_1 C_5 L_1 L_5 R_1 s^4 + C_1 C_5 L_1 L_5 R_L s^4 + C_1 L_1 L_5 R_1 g_m s^3 + C_1 L_1 L_5 s^3 + 2C_1 L_1 R_1 R_L g_m s^2 + C_1 L_1 R_1 s^2 + C_1 L_1 R_L s^2 + 2C_5 L_1 L_5 R_L g_m s^3 + C_5 L_1 L_5}$$

**10.894 INVALID-ORDER-894**  $Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{1}{C_L s} \right)$

$$H(s) = -\frac{(C_5 L_5 s^2 - L_5 g_m s + 1)(C_1 L_1 R_1 s^2 + L_1 s + R_1)}{C_1 C_5 C_L L_1 L_5 R_1 s^5 + 2C_1 C_5 L_1 L_5 R_1 g_m s^4 + C_1 C_5 L_1 L_5 s^4 + C_1 C_L L_1 L_5 R_1 g_m s^4 + C_1 C_L L_1 L_5 s^4 + C_1 C_L L_1 R_1 s^3 + 2C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + C_5 C_L L_1 L_5 s^4 + C_5 C_L L_5 R_1 s^3}$$

**10.895 INVALID-ORDER-895**  $Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{R_L}{C_L R_L s + 1} \right)$

$$H(s) = -\frac{C_1 C_5 C_L L_1 L_5 R_1 R_L s^5 + 2C_1 C_5 L_1 L_5 R_1 R_L g_m s^4 + C_1 C_5 L_1 L_5 R_1 s^4 + C_1 C_5 L_1 L_5 R_L s^4 + C_1 C_L L_1 L_5 R_1 R_L g_m s^4 + C_1 C_L L_1 L_5 R_L s^4 + C_1 C_L L_1 R_1 R_L s^3 + C_1 L_1 L_5 R_1 g_m s^3 +$$

**10.896 INVALID-ORDER-896**  $Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, R_L + \frac{1}{C_L s} \right)$

$$H(s) = -\frac{2C_1C_5C_LL_1L_5R_1R_Lg_ms^5 + C_1C_5C_LL_1L_5R_1s^5 + C_1C_5C_LL_1L_5R_Ls^5 + 2C_1C_5L_1L_5R_1g_ms^4 + C_1C_5L_1L_5s^4 + C_1C_LL_1L_5R_1g_ms^4 + C_1C_LL_1L_5s^4 + 2C_1C_LL_1R_1R_Lg_ms^3}{2C_1C_5C_LL_1L_5R_1R_Lg_ms^5 + C_1C_5C_LL_1L_5R_1s^5 + C_1C_5C_LL_1L_5R_Ls^5 + 2C_1C_5L_1L_5R_1g_ms^4 + C_1C_5L_1L_5s^4 + C_1C_LL_1L_5R_1g_ms^4 + C_1C_LL_1L_5s^4 + 2C_1C_LL_1R_1R_Lg_ms^3}$$

**10.897 INVALID-ORDER-897**  $Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, L_L s + \frac{1}{C_L s} \right)$

$$H(s) = -\frac{2C_1C_5C_LL_1L_5L_LR_1g_ms^6 + C_1C_5C_LL_1L_5L_Ls^6 + C_1C_5C_LL_1L_5R_1s^5 + 2C_1C_5L_1L_5R_1g_ms^4 + C_1C_5L_1L_5s^4 + C_1C_LL_1L_5R_1g_ms^4 + C_1C_LL_1L_5s^4 + 2C_1C_LL_1L_LR_1g_ms^4 +$$

**10.898 INVALID-ORDER-898**  $Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{L_L s}{C_L L_L s^2 + 1} \right)$

$$H(s) = -\frac{C_1 C_5 C_L L_1 L_5 L_L R_1 s^6 + 2 C_1 C_5 L_1 L_5 L_L R_1 g_m s^5 + C_1 C_5 L_1 L_5 L_L s^5 + C_1 C_5 L_1 L_5 R_1 s^4 + C_1 C_L L_1 L_5 L_L R_1 g_m s^5 + C_1 C_L L_1 L_5 L_L s^5 + C_1 C_L L_1 L_L R_1 s^4 + C_1 L_1 L_5 R_1 g_m s^3 + C_1 L_1 L_5 L_L s^3 + C_1 L_1 L_L R_1 s^2 + C_1 L_1 L_L s^2 + C_1 L_1 R_1 s + C_1 R_1}{C_1 C_5 C_L L_1 L_5 L_L R_1 s^6 + 2 C_1 C_5 L_1 L_5 L_L R_1 g_m s^5 + C_1 C_5 L_1 L_5 L_L s^5 + C_1 C_5 L_1 L_5 R_1 s^4 + C_1 C_L L_1 L_5 L_L R_1 g_m s^5 + C_1 C_L L_1 L_5 L_L s^5 + C_1 C_L L_1 L_L R_1 s^4 + C_1 L_1 L_5 R_1 g_m s^3 + C_1 L_1 L_5 L_L s^3 + C_1 L_1 L_L R_1 s^2 + C_1 L_1 L_L s^2 + C_1 L_1 R_1 s + C_1 R_1}$$

**10.899 INVALID-ORDER-899**  $Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, L_L s + R_L + \frac{1}{C_L s} \right)$

$$H(s) = -\frac{2C_1C_5C_L L_1L_5L_L R_1g_ms^6 + C_1C_5C_L L_1L_5L_L s^6 + 2C_1C_5C_L L_1L_5R_1R_Lg_ms^5 + C_1C_5C_L L_1L_5R_1s^5 + C_1C_5C_L L_1L_5R_Ls^5 + 2C_1C_5L_1L_5R_1g_ms^4 + C_1C_5L_1L_5s^4 + C_1C_L L_1L_5R_1g_ms^3 + C_1C_L L_1L_5s^3 + C_1C_L L_1R_1g_ms^2 + C_1C_L L_1s^2 + C_1C_L R_1g_ms + C_1C_L s}{2C_1C_5C_L L_1L_5L_L R_1g_ms^6 + C_1C_5C_L L_1L_5L_L s^6 + 2C_1C_5C_L L_1L_5R_1R_Lg_ms^5 + C_1C_5C_L L_1L_5R_1s^5 + C_1C_5C_L L_1L_5R_Ls^5 + 2C_1C_5L_1L_5R_1g_ms^4 + C_1C_5L_1L_5s^4 + C_1C_L L_1L_5R_1g_ms^3 + C_1C_L L_1L_5s^3 + C_1C_L L_1R_1g_ms^2 + C_1C_L L_1s^2 + C_1C_L R_1g_ms + C_1C_L s}.$$



10.900 INVALID-ORDER-900  $Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$

$$H(s) = -\frac{C_1 C_5 C_L L_1 L_5 L_L R_1 R_L s^6 + 2C_1 C_5 L_1 L_5 L_L R_1 R_L g_m s^5 + C_1 C_5 L_1 L_5 L_L R_1 s^5 + C_1 C_5 L_1 L_5 L_L R_L s^5 + C_1 C_5 L_1 L_5 R_1 R_L s^4 + C_1 C_L L_1 L_5 L_L R_1 R_L g_m s^5 + C_1 C_L L_1 L_5 L_L R_L s^5 +$$

**10.901 INVALID-ORDER-901**  $Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$

$$H(s) = -\frac{2C_1 C_5 C_L L_1 L_5 L_L R_1 R_L g_m s^6 + C_1 C_5 C_L L_1 L_5 L_L R_1 s^6 + C_1 C_5 C_L L_1 L_5 L_L R_L s^6 + 2C_1 C_5 L_1 L_5 L_L R_1 g_m s^5 + C_1 C_5 L_1 L_5 L_L s^5 + 2C_1 C_5 L_1 L_5 R_1 R_L g_m s^4 + C_1 C_5 L_1 L_5 R_1 s^4 + \dots}{\dots}$$

**10.902 INVALID-ORDER-902**  $Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$

$$H(s) = -\frac{2C_1 C_5 C_L L_1 L_5 L_L R_1 R_L g_m s^6 + C_1 C_5 C_L L_1 L_5 L_L R_1 s^6 + C_1 C_5 C_L L_1 L_5 L_L R_L s^6 + C_1 C_5 C_L L_1 L_5 R_1 R_L s^5 + 2C_1 C_5 L_1 L_5 R_1 R_L g_m s^4 + C_1 C_5 L_1 L_5 R_1 s^4 + C_1 C_5 L_1 L_5 R_L s^4 + C_1 C_5 L_1 L_5 s^3 + C_1 C_5 L_1 R_1 R_L s^3 + C_1 C_5 L_1 R_L s^3 + C_1 C_5 L_1 s^2 + C_1 C_5 R_1 R_L s^2 + C_1 C_5 R_L s^2 + C_1 C_5 s}{(s^2 + \gamma_1 s + \gamma_2)(s^2 + \gamma_3 s + \gamma_4)}$$

**10.903 INVALID-ORDER-903**  $Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, R_L \right)$

$$H(s) = \frac{R_L (C_1 L_1 R_1 s^2 + L_1 s + R_1) (C_5 L_5 g_m s^2 + C_5 L_5 g_m s + R_5)}{C_1 C_5 L_1 L_5 R_1 g_m s^4 + C_1 C_5 L_1 L_5 s^4 + C_1 C_5 L_1 R_1 R_5 g_m s^3 + 2 C_1 C_5 L_1 R_1 R_L g_m s^3 + C_1 C_5 L_1 R_1 s^3 + C_1 C_5 L_1 R_5 s^3 + C_1 C_5 L_1 R_L s^3 + C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + C_5 L_1 L_5 g_m s^3 + C_5 L_1 L_5 s^3 + C_5 L_1 R_1 g_m s^2 + C_5 L_1 R_1 s^2 + C_5 L_1 R_5 g_m s^2 + C_5 L_1 R_5 s^2 + C_5 L_1 R_L g_m s^2 + C_5 L_1 R_L s^2 + C_5 L_1 s^2 + C_5 L_5 g_m s^2 + C_5 L_5 s^2 + R_L (C_1 L_1 R_1 s^2 + L_1 s + R_1) (C_5 L_5 g_m s^2 + C_5 L_5 g_m s + R_5)}$$

**10.904 INVALID-ORDER-904**  $Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{1}{C_L s} \right)$

$$H(s) = \frac{(C_1 L_1 R_1 s^2 + L_1 s + R_1)}{s(C_1 C_5 C_L L_1 L_5 R_1 g_m s^4 + C_1 C_5 C_L L_1 L_5 s^4 + C_1 C_5 C_L L_1 R_1 R_5 g_m s^3 + C_1 C_5 C_L L_1 R_1 s^3 + C_1 C_5 C_L L_1 R_5 s^3 + 2C_1 C_5 L_1 R_1 g_m s^2 + C_1 C_5 L_1 s^2 + C_1 C_L L_1 R_1 g_m s^2 + C_1 C_L L_1 s^2}$$

**10.905 INVALID-ORDER-905**  $Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{R_L}{C_L R_L s + 1} \right)$

$$H(s) = \frac{1}{C_1 C_5 C_L L_1 L_5 R_1 R_L g_m s^5 + C_1 C_5 C_L L_1 L_5 R_L s^5 + C_1 C_5 C_L L_1 R_1 R_5 R_L g_m s^4 + C_1 C_5 C_L L_1 R_1 R_L s^4 + C_1 C_5 C_L L_1 R_5 R_L s^4 + C_1 C_5 L_1 L_5 R_1 g_m s^4 + C_1 C_5 L_1 L_5 s^4 + C_1 C_5 L_1 R_1 R_5}$$

**10.906 INVALID-ORDER-906**  $Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, R_L + \frac{1}{C_L s} \right)$

$$H(s) = \frac{C_1 C_5 C_L L_1 L_5 R_1 g_m s^4 + C_1 C_5 C_L L_1 L_5 s^4 + C_1 C_5 C_L L_1 R_1 R_5 g_m s^3 + 2 C_1 C_5 C_L L_1 R_1 R_L g_m s^3 + C_1 C_5 C_L L_1 R_1 s^3 + C_1 C_5 C_L L_1 R_5 s^3 + C_1 C_5 C_L L_1 R_L s^3 + 2 C_1 C_5 L_1 R_1 g_m s^2 -$$

**10.907 INVALID-ORDER-907**  $Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, L_L s + \frac{1}{C_L s} \right)$

$$H(s) = \frac{s(C_1C_5C_LL_1L_5R_1g_ms^4 + C_1C_5C_LL_1L_5s^4 + 2C_1C_5C_LL_1L_LR_1g_ms^4 + C_1C_5C_LL_1L_Ls^4 + C_1C_5C_LL_1R_1R_5g_ms^3 + C_1C_5C_LL_1R_1s^3 + C_1C_5C_LL_1R_5s^3 + 2C_1C_5L_1R_1g_ms^2 +$$

**10.908 INVALID-ORDER-908**  $Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} \right)$

$$H(s) = \frac{C_1 C_5 C_L L_1 L_5 L_L R_1 g_m s^6 + C_1 C_5 C_L L_1 L_5 L_L s^6 + C_1 C_5 C_L L_1 L_L R_1 R_5 g_m s^5 + C_1 C_5 C_L L_1 L_L R_1 s^5 + C_1 C_5 C_L L_1 L_L R_5 s^5 + C_1 C_5 L_1 L_5 R_1 g_m s^4 + C_1 C_5 L_1 L_5 s^4 + 2 C_1 C_5 L_1 L_L R_1 g_m s^3 + 2 C_1 C_5 L_1 L_L R_1 s^3 + C_1 C_5 L_1 L_L R_5 s^3 + C_1 C_5 L_1 L_L R_5 g_m s^2 + C_1 C_5 L_1 L_L R_5 s^2 + C_1 C_5 L_1 L_L R_5 g_m s + C_1 C_5 L_1 L_L R_5 s}{C_1 C_5 C_L L_1 L_5 L_L R_1 g_m s^6 + C_1 C_5 C_L L_1 L_5 L_L s^6 + C_1 C_5 C_L L_1 L_L R_1 R_5 g_m s^5 + C_1 C_5 C_L L_1 L_L R_1 s^5 + C_1 C_5 C_L L_1 L_L R_5 s^5 + C_1 C_5 L_1 L_5 R_1 g_m s^4 + C_1 C_5 L_1 L_5 s^4 + 2 C_1 C_5 L_1 L_L R_1 g_m s^3 + 2 C_1 C_5 L_1 L_L R_1 s^3 + C_1 C_5 L_1 L_L R_5 s^3 + C_1 C_5 L_1 L_L R_5 g_m s^2 + C_1 C_5 L_1 L_L R_5 s^2 + C_1 C_5 L_1 L_L R_5 g_m s + C_1 C_5 L_1 L_L R_5 s}$$

**10.909 INVALID-ORDER-909**  $Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, L_L s + R_L + \frac{1}{C_L s} \right)$

$$H(s) = \frac{s(C_1 C_5 C_L L_1 L_5 R_1 g_m s^4 + C_1 C_5 C_L L_1 L_5 s^4 + 2C_1 C_5 C_L L_1 L_L R_1 g_m s^4 + C_1 C_5 C_L L_1 L_L s^4 + C_1 C_5 C_L L_1 R_1 R_5 g_m s^3 + 2C_1 C_5 C_L L_1 R_1 R_L g_m s^3 + C_1 C_5 C_L L_1 R_1 s^3 + C_1 C_5 C_L L_1$$

**10.910 INVALID-ORDER-910**  $Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{1}{C_L s + \frac{1}{R_L + \frac{1}{L_L s}}} \right)$

$$H(s) = \frac{C_1 C_5 C_L L_1 L_5 L_L R_1 R_L g_m s^6 + C_1 C_5 C_L L_1 L_5 L_L R_L s^6 + C_1 C_5 C_L L_1 L_L R_1 R_5 R_L g_m s^5 + C_1 C_5 C_L L_1 L_L R_1 R_L s^5 + C_1 C_5 C_L L_1 L_L R_5 R_L s^5 + C_1 C_5 L_1 L_5 L_L R_1 g_m s^5 + C_1 C_5 L_1 L_5 L_L R_1 R_L s^5 + C_1 C_5 L_1 L_5 L_L R_5 g_m s^5 + C_1 C_5 L_1 L_5 L_L R_5 R_L s^5 + C_1 C_5 L_1 L_5 L_L R_L s^5 + C_1 C_5 L_1 L_5 L_L R_L g_m s^5 + C_1 C_5 L_1 L_5 L_L R_L s^5}{C_1 C_5 C_L L_1 L_5 L_L R_1 R_L g_m s^6 + C_1 C_5 C_L L_1 L_5 L_L R_L s^6 + C_1 C_5 C_L L_1 L_L R_1 R_5 R_L g_m s^5 + C_1 C_5 C_L L_1 L_L R_1 R_L s^5 + C_1 C_5 C_L L_1 L_L R_5 R_L s^5 + C_1 C_5 L_1 L_5 L_L R_1 g_m s^5 + C_1 C_5 L_1 L_5 L_L R_1 R_L s^5 + C_1 C_5 L_1 L_5 L_L R_5 g_m s^5 + C_1 C_5 L_1 L_5 L_L R_5 R_L s^5 + C_1 C_5 L_1 L_5 L_L R_L s^5 + C_1 C_5 L_1 L_5 L_L R_L g_m s^5 + C_1 C_5 L_1 L_5 L_L R_L s^5}$$

**10.911 INVALID-ORDER-911**  $Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$

$$H(s) = \frac{C_1 C_5 C_L L_1 L_5 L_L R_1 g_m s^6 + C_1 C_5 C_L L_1 L_5 L_L s^6 + C_1 C_5 C_L L_1 L_L R_1 R_5 g_m s^5 + 2 C_1 C_5 C_L L_1 L_L R_1 R_L g_m s^5 + C_1 C_5 C_L L_1 L_L R_1 s^5 + C_1 C_5 C_L L_1 L_L R_5 s^5 + C_1 C_5 C_L L_1 L_L R_L s^5 +$$

$$\textbf{10.912} \quad \textbf{INVALID-ORDER-912} \quad Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$$

$$H(s) = \frac{C_1 C_5 C_L L_1 L_5 L_L R_1 g_m s^6 + C_1 C_5 C_L L_1 L_5 L_L s^6 + C_1 C_5 C_L L_1 L_5 R_1 R_L g_m s^5 + C_1 C_5 C_L L_1 L_5 R_L s^5 + C_1 C_5 C_L L_1 L_L R_1 R_5 g_m s^5 + 2 C_1 C_5 C_L L_1 L_L R_1 R_L g_m s^5 + C_1 C_5 C_L L_1 L_L R_1 R_5 s^5}{C_1 C_5 C_L L_1 L_5 L_L R_1 R_5 g_m s^7 + C_1 C_5 C_L L_1 L_5 L_L R_1 R_5 s^7 + C_1 C_5 C_L L_1 L_5 R_1 R_L R_5 g_m s^6 + C_1 C_5 C_L L_1 L_5 R_1 R_L R_5 s^6 + C_1 C_5 C_L L_1 L_L R_1 R_5 R_5 g_m s^6 + C_1 C_5 C_L L_1 L_L R_1 R_5 R_5 s^6 + C_1 C_5 C_L L_1 L_L R_1 R_5 g_m s^6 + C_1 C_5 C_L L_1 L_L R_1 R_5 s^6 + C_1 C_5 C_L L_1 L_L R_1 R_5 g_m s^6 + C_1 C_5 C_L L_1 L_L R_1 R_5 s^6}$$

10.913 INVALID-ORDER-913  $Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, R_L \right)$

$$H(s) = -\frac{2C_1 C_5 L_1 L_5 R_1 R_5 R_L g_m s^4 + C_1 C_5 L_1 L_5 R_1 R_5 s^4 + C_1 C_5 L_1 L_5 R_5 R_L s^4 + C_1 L_1 L_5 R_1 R_5 g_m s^3 + 2C_1 L_1 L_5 R_1 R_L g_m s^3 + C_1 L_1 L_5 R_1 s^3 + C_1 L_1 L_5 R_5 s^3 + C_1 L_1 L_5 R_L s^3 + 2C_1 L_1}{...}$$

**10.914 INVALID-ORDER-914**  $Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{1}{C_L s} \right)$

$$H(s) = -\frac{C_1 C_5 C_L L_1 L_5 R_1 R_5 s^5 + 2C_1 C_5 L_1 L_5 R_1 R_5 g_m s^4 + C_1 C_5 L_1 L_5 R_5 s^4 + C_1 C_L L_1 L_5 R_1 R_5 g_m s^4 + C_1 C_L L_1 L_5 R_1 s^4 + C_1 C_L L_1 L_5 R_5 s^4 + C_1 C_L L_1 R_1 R_5 s^3 + 2C_1 L_1 L_5 R_1 g_m s^3 + C_1 L_1 L_5 R_1 R_5 s^3 + C_1 L_1 L_5 R_5 g_m s^3 + C_1 L_1 L_5 R_5 s^3 + C_1 L_1 R_1 R_5 s^3 + C_1 L_1 R_5 g_m s^3 + C_1 L_1 R_5 s^3 + C_1 R_1 R_5 s^3}{C_1 C_5 C_L L_1 L_5 R_1 R_5 s^5 + 2C_1 C_5 L_1 L_5 R_1 R_5 g_m s^4 + C_1 C_5 L_1 L_5 R_5 s^4 + C_1 C_L L_1 L_5 R_1 R_5 g_m s^4 + C_1 C_L L_1 L_5 R_1 s^4 + C_1 C_L L_1 L_5 R_5 s^4 + C_1 C_L L_1 R_1 R_5 s^3 + 2C_1 L_1 L_5 R_1 g_m s^3 + C_1 L_1 L_5 R_1 R_5 s^3 + C_1 L_1 L_5 R_5 g_m s^3 + C_1 L_1 L_5 R_5 s^3 + C_1 L_1 R_1 R_5 s^3 + C_1 L_1 R_5 g_m s^3 + C_1 L_1 R_5 s^3 + C_1 R_1 R_5 s^3}$$

**10.915 INVALID-ORDER-915**  $Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{R_L}{C_L R_L s + 1} \right)$

$$H(s) = -\frac{1}{C_1 C_5 C_L L_1 L_5 R_1 R_5 R_L s^5 + 2C_1 C_5 L_1 L_5 R_1 R_5 R_L g_m s^4 + C_1 C_5 L_1 L_5 R_1 R_5 s^4 + C_1 C_5 L_1 L_5 R_5 R_L s^4 + C_1 C_L L_1 L_5 R_1 R_5 R_L g_m s^4 + C_1 C_L L_1 L_5 R_1 R_L s^4 + C_1 C_L L_1 L_5 R_5 R_L s^4 +$$

**10.916 INVALID-ORDER-916**  $Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, R_L + \frac{1}{C_L s} \right)$

$$H(s) = -\frac{2C_1C_5C_LL_1L_5R_1R_5R_Lg_ms^5 + C_1C_5C_LL_1L_5R_1R_5s^5 + C_1C_5C_LL_1L_5R_5R_Ls^5 + 2C_1C_5L_1L_5R_1R_5g_ms^4 + C_1C_5L_1L_5R_5s^4 + C_1C_LL_1L_5R_1R_5g_ms^4 + 2C_1C_LL_1L_5R_1R_Lg_m}{2C_1C_5C_LL_1L_5R_1R_5R_Lg_ms^5 + C_1C_5C_LL_1L_5R_1R_5s^5 + C_1C_5C_LL_1L_5R_5R_Ls^5 + 2C_1C_5L_1L_5R_1R_5g_ms^4 + C_1C_5L_1L_5R_5s^4 + C_1C_LL_1L_5R_1R_5g_ms^4 + 2C_1C_LL_1L_5R_1R_Lg_m}$$

**10.917 INVALID-ORDER-917**  $Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, L_L s + \frac{1}{C_L s} \right)$

$$H(s) = -\frac{2C_1 C_5 C_L L_1 L_5 L_L R_1 R_5 g_m s^6 + C_1 C_5 C_L L_1 L_5 L_L R_5 s^6 + C_1 C_5 C_L L_1 L_5 R_1 R_5 s^5 + 2C_1 C_5 L_1 L_5 R_1 R_5 g_m s^4 + C_1 C_5 L_1 L_5 R_5 s^4 + 2C_1 C_L L_1 L_5 L_L R_1 g_m s^5 + C_1 C_L L_1 L_5 L_L s^5 + C_1 C_L L_1 L_5 L_L R_1 s^5 + C_1 C_L L_1 L_5 L_L R_5 s^5 + C_1 C_L L_1 L_5 L_L R_5 g_m s^5}{(s^2 + \omega_{L_1}^2)(s^2 + \omega_{L_5}^2)(s^2 + \omega_{L_L}^2)(s^2 + \omega_{R_1}^2)(s^2 + \omega_{R_5}^2)}$$

10.918 INVALID-ORDER-918  $Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{L_L s}{C_L L_L s^2 + 1} \right)$

$$H(s) = -\frac{C_1 C_5 C_L L_1 L_5 L_L R_1 R_5 s^6 + 2C_1 C_5 L_1 L_5 L_L R_1 R_5 g_m s^5 + C_1 C_5 L_1 L_5 L_L R_5 s^5 + C_1 C_5 L_1 L_5 R_1 R_5 s^4 + C_1 C_L L_1 L_5 L_L R_1 R_5 g_m s^5 + C_1 C_L L_1 L_5 L_L R_1 s^5 + C_1 C_L L_1 L_5 L_L R_5 s^5 +$$

10.919 INVALID-ORDER-919  $Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, L_L s + R_L + \frac{1}{C_L s} \right)$

$$H(s) = -\frac{2C_1C_5C_L L_1L_5L_L R_1R_5g_ms^6 + C_1C_5C_L L_1L_5L_L R_5s^6 + 2C_1C_5C_L L_1L_5R_1R_5R_Lg_ms^5 + C_1C_5C_L L_1L_5R_1R_5s^5 + C_1C_5C_L L_1L_5R_5R_Ls^5 + 2C_1C_5L_1L_5R_1R_5g_ms^4 + C_1C_5L_1$$

**10.920 INVALID-ORDER-920**  $Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$

$$H(s) = -\frac{C_1 C_5 C_L L_1 L_5 L_L R_1 R_5 R_L s^6 + 2 C_1 C_5 L_1 L_5 L_L R_1 R_5 R_L g_m s^5 + C_1 C_5 L_1 L_5 L_L R_1 R_5 s^5 + C_1 C_5 L_1 L_5 L_L R_5 R_L s^5 + C_1 C_5 L_1 L_5 R_1 R_5 R_L s^4 + C_1 C_L L_1 L_5 L_L R_1 R_5 R_L g_m s^5 + C_1 C_L L_1 L_5 L_L R_1 R_5 R_L s^4 + C_1 C_L L_1 L_5 L_L R_1 R_5 R_L s^4 + C_1 C_L L_1 L_5 L_L R_1 R_5 R_L s^4 + C_1 C_L L_1 L_5 L_L R_1 R_5 R_L s^4 + C_1 C_L L_1 L_5 L_L R_1 R_5 R_L s^4}{C_1 C_5 C_L L_1 L_5 L_L R_1 R_5 R_L s^6 + 2 C_1 C_5 L_1 L_5 L_L R_1 R_5 R_L g_m s^5 + C_1 C_5 L_1 L_5 L_L R_1 R_5 s^5 + C_1 C_5 L_1 L_5 L_L R_5 R_L s^5 + C_1 C_5 L_1 L_5 R_1 R_5 R_L s^4 + C_1 C_L L_1 L_5 L_L R_1 R_5 R_L g_m s^5 + C_1 C_L L_1 L_5 L_L R_1 R_5 R_L s^4 + C_1 C_L L_1 L_5 L_L R_1 R_5 R_L s^4 + C_1 C_L L_1 L_5 L_L R_1 R_5 R_L s^4 + C_1 C_L L_1 L_5 L_L R_1 R_5 R_L s^4 + C_1 C_L L_1 L_5 L_L R_1 R_5 R_L s^4}$$

**10.921 INVALID-ORDER-921**  $Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$

$$H(s) = -\frac{2C_1 C_5 C_L L_1 L_5 L_L R_1 R_5 R_L g_m s^6 + C_1 C_5 C_L L_1 L_5 L_L R_1 R_5 s^6 + C_1 C_5 C_L L_1 L_5 L_L R_5 R_L s^6 + 2C_1 C_5 L_1 L_5 L_L R_1 R_5 g_m s^5 + C_1 C_5 L_1 L_5 L_L R_5 s^5 + 2C_1 C_5 L_1 L_5 R_1 R_5 R_L g_m s^4 + C_1 C_5 L_1 L_5 R_1 R_5 R_L s^4 + 2C_1 C_5 L_1 L_5 R_5 R_L s^4 + C_1 C_5 L_1 L_5 R_5 s^4 + C_1 C_5 L_1 L_5 R_5 g_m s^3 + C_1 C_5 L_1 L_5 R_5 s^3 + C_1 C_5 L_1 L_5 g_m s^3 + C_1 C_5 L_1 L_5 s^3 + C_1 C_5 L_1 R_1 R_5 R_L g_m s^2 + C_1 C_5 L_1 R_1 R_5 R_L s^2 + C_1 C_5 L_1 R_1 R_5 s^2 + C_1 C_5 L_1 R_1 g_m s^2 + C_1 C_5 L_1 R_1 s^2 + C_1 C_5 L_1 g_m s^2 + C_1 C_5 L_1 s^2 + C_1 C_5 R_1 R_5 R_L g_m s + C_1 C_5 R_1 R_5 R_L s + C_1 C_5 R_1 R_5 s + C_1 C_5 R_1 g_m s + C_1 C_5 R_1 s + C_1 C_5 g_m s + C_1 C_5 s}{(s^2 + \omega_{L_1}^2)(s^2 + \omega_{L_5}^2)(s^2 + \omega_{L_L}^2)(s^2 + \omega_{R_1}^2)(s^2 + \omega_{R_5}^2)(s^2 + \omega_{R_L}^2)}.$$

**10.922 INVALID-ORDER-922**  $Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$

$$H(s) = -\frac{2C_1C_5C_LL_1L_5L_LR_1R_5R_Lg_ms^6 + C_1C_5C_LL_1L_5L_LR_1R_5s^6 + C_1C_5C_LL_1L_5L_LR_5R_Ls^6 + C_1C_5C_LL_1L_5R_1R_5R_Ls^5 + 2C_1C_5L_1L_5R_1R_5R_Lg_ms^4 + C_1C_5L_1L_5R_1R_5s^4 + C_1$$

**10.923 INVALID-ORDER-923**  $Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, R_L \right)$

$$H(s) = \frac{C_1 C_5 L_1 L_5 R_1 R_5 g_m s^4 + 2 C_1 C_5 L_1 L_5 R_1 R_L g_m s^4 + C_1 C_5 L_1 L_5 R_1 s^4 + C_1 C_5 L_1 L_5 R_5 s^4 + C_1 C_5 L_1 L_5 R_L s^4 + C_1 L_1 L_5 R_1 g_m s^3 + C_1 L_1 L_5 s^3 + C_1 L_1 R_1 R_5 g_m s^2 + 2 C_1 L_1 R_1 R_L g_m s}{C_1 C_5 L_1 L_5 R_1 R_5 g_m s^4 + 2 C_1 C_5 L_1 L_5 R_1 R_L g_m s^4 + C_1 C_5 L_1 L_5 R_1 s^4 + C_1 C_5 L_1 L_5 R_5 s^4 + C_1 C_5 L_1 L_5 R_L s^4 + C_1 L_1 L_5 R_1 g_m s^3 + C_1 L_1 L_5 s^3 + C_1 L_1 R_1 R_5 g_m s^2 + 2 C_1 L_1 R_1 R_L g_m s}$$

**10.924 INVALID-ORDER-924**  $Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{1}{C_L s} \right)$

$$H(s) = \frac{C_1 C_5 C_L L_1 L_5 R_1 R_5 g_m s^5 + C_1 C_5 C_L L_1 L_5 R_1 s^5 + C_1 C_5 C_L L_1 L_5 R_5 s^5 + 2 C_1 C_5 L_1 L_5 R_1 g_m s^4 + C_1 C_5 L_1 L_5 s^4 + C_1 C_L L_1 L_5 R_1 g_m s^4 + C_1 C_L L_1 L_5 s^4 + C_1 C_L L_1 R_1 R_5 g_m s^3 + C_1 C_L L_1 R_1 R_5 s^3 + C_1 C_L L_1 R_1 s^3 + C_1 C_L L_1 s^3 + C_1 C_L R_1 R_5 g_m s^2 + C_1 C_L R_1 R_5 s^2 + C_1 C_L R_1 s^2 + C_1 C_L s^2 + C_1 R_1 R_5 g_m s + C_1 R_1 R_5 s + C_1 R_1 s + C_1 s}{C_1 C_5 C_L L_1 L_5 R_1 R_5 g_m s^5 + C_1 C_5 C_L L_1 L_5 R_1 s^5 + C_1 C_5 C_L L_1 L_5 R_5 s^5 + 2 C_1 C_5 L_1 L_5 R_1 g_m s^4 + C_1 C_5 L_1 L_5 s^4 + C_1 C_L L_1 L_5 R_1 g_m s^4 + C_1 C_L L_1 L_5 s^4 + C_1 C_L L_1 R_1 R_5 g_m s^3 + C_1 C_L L_1 R_1 R_5 s^3 + C_1 C_L L_1 R_1 s^3 + C_1 C_L L_1 s^3 + C_1 C_L R_1 R_5 g_m s^2 + C_1 C_L R_1 R_5 s^2 + C_1 C_L R_1 s^2 + C_1 C_L s^2 + C_1 R_1 R_5 g_m s + C_1 R_1 R_5 s + C_1 R_1 s + C_1 s}$$

$$\mathbf{10.925 \quad INVALID-ORDER-925} \quad Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{R_L}{C_L R_L s + 1} \right)$$

$$H(s) = \frac{C_1 C_5 C_L L_1 L_5 R_1 R_5 R_L g_m s^5 + C_1 C_5 C_L L_1 L_5 R_1 R_L s^5 + C_1 C_5 C_L L_1 L_5 R_5 R_L s^5 + C_1 C_5 L_1 L_5 R_1 R_5 g_m s^4 + 2 C_1 C_5 L_1 L_5 R_1 R_L g_m s^4 + C_1 C_5 L_1 L_5 R_1 s^4 + C_1 C_5 L_1 L_5 R_5 s^4 + C_1 C_5}{C_1 C_5 C_L L_1 L_5 R_1 R_5 R_L g_m s^5 + C_1 C_5 C_L L_1 L_5 R_1 R_L s^5 + C_1 C_5 C_L L_1 L_5 R_5 R_L s^5 + C_1 C_5 L_1 L_5 R_1 R_5 g_m s^4 + 2 C_1 C_5 L_1 L_5 R_1 R_L g_m s^4 + C_1 C_5 L_1 L_5 R_1 s^4 + C_1 C_5 L_1 L_5 R_5 s^4 + C_1 C_5}$$

$$\mathbf{10.926 \quad INVALID-ORDER-926} \quad Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{C_1 C_5 C_L L_1 L_5 R_1 R_5 g_m s^5 + 2 C_1 C_5 C_L L_1 L_5 R_1 R_L g_m s^5 + C_1 C_5 C_L L_1 L_5 R_1 s^5 + C_1 C_5 C_L L_1 L_5 R_5 s^5 + C_1 C_5 C_L L_1 L_5 R_L s^5 + 2 C_1 C_5 L_1 L_5 R_1 g_m s^4 + C_1 C_5 L_1 L_5 s^4 + C_1 C_L L_1 L_5 R_1}{C_1 C_5 C_L L_1 L_5 R_1 R_5 g_m s^5 + 2 C_1 C_5 C_L L_1 L_5 R_1 R_L g_m s^5 + C_1 C_5 C_L L_1 L_5 R_1 s^5 + C_1 C_5 C_L L_1 L_5 R_5 s^5 + C_1 C_5 C_L L_1 L_5 R_L s^5 + 2 C_1 C_5 L_1 L_5 R_1 g_m s^4 + C_1 C_5 L_1 L_5 s^4 + C_1 C_L L_1 L_5 R_1}$$

$$\mathbf{10.927 \quad INVALID-ORDER-927} \quad Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, L_L s + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{2 C_1 C_5 C_L L_1 L_5 L_L R_1 g_m s^6 + C_1 C_5 C_L L_1 L_5 L_L R_1 s^6 + C_1 C_5 C_L L_1 L_5 R_1 R_5 g_m s^5 + C_1 C_5 C_L L_1 L_5 R_1 s^5 + C_1 C_5 C_L L_1 L_5 R_5 s^5 + 2 C_1 C_5 L_1 L_5 R_1 g_m s^4 + C_1 C_5 L_1 L_5 s^4 + C_1 C_L L_1 L_5 R_1}{2 C_1 C_5 C_L L_1 L_5 L_L R_1 g_m s^6 + C_1 C_5 C_L L_1 L_5 L_L R_1 s^6 + C_1 C_5 C_L L_1 L_5 R_1 R_5 g_m s^5 + C_1 C_5 C_L L_1 L_5 R_1 s^5 + C_1 C_5 C_L L_1 L_5 R_5 s^5 + 2 C_1 C_5 L_1 L_5 R_1 g_m s^4 + C_1 C_5 L_1 L_5 s^4 + C_1 C_L L_1 L_5 R_1}$$

$$\mathbf{10.928 \quad INVALID-ORDER-928} \quad Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{L_L s}{C_L L_L s^2 + 1} \right)$$

$$H(s) = \frac{C_1 C_5 C_L L_1 L_5 L_L R_1 R_5 g_m s^6 + C_1 C_5 C_L L_1 L_5 L_L R_1 s^6 + C_1 C_5 C_L L_1 L_5 L_L R_5 s^6 + 2 C_1 C_5 L_1 L_5 L_L R_1 g_m s^5 + C_1 C_5 L_1 L_5 L_L s^5 + C_1 C_5 L_1 L_5 R_1 R_5 g_m s^4 + C_1 C_5 L_1 L_5 R_1 s^4 + C_1 C_5}{C_1 C_5 C_L L_1 L_5 L_L R_1 R_5 g_m s^6 + C_1 C_5 C_L L_1 L_5 L_L R_1 s^6 + C_1 C_5 C_L L_1 L_5 L_L R_5 s^6 + 2 C_1 C_5 L_1 L_5 L_L R_1 g_m s^5 + C_1 C_5 L_1 L_5 L_L s^5 + C_1 C_5 L_1 L_5 R_1 R_5 g_m s^4 + C_1 C_5 L_1 L_5 R_1 s^4 + C_1 C_5}$$

$$\mathbf{10.929 \quad INVALID-ORDER-929} \quad Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, L_L s + R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{2 C_1 C_5 C_L L_1 L_5 L_L R_1 g_m s^6 + C_1 C_5 C_L L_1 L_5 L_L s^6 + C_1 C_5 C_L L_1 L_5 R_1 R_5 g_m s^5 + 2 C_1 C_5 C_L L_1 L_5 R_1 R_L g_m s^5 + C_1 C_5 C_L L_1 L_5 R_1 s^5 + C_1 C_5 C_L L_1 L_5 R_5 s^5 + C_1 C_5 C_L L_1 L_5 R_L s^5 + 2 C_1 C_5 L_1 L_5 R_1 g_m s^4 + C_1 C_5 L_1 L_5 s^4 + C_1 C_L L_1 L_5 R_1}{2 C_1 C_5 C_L L_1 L_5 L_L R_1 g_m s^6 + C_1 C_5 C_L L_1 L_5 L_L s^6 + C_1 C_5 C_L L_1 L_5 R_1 R_5 g_m s^5 + 2 C_1 C_5 C_L L_1 L_5 R_1 R_L g_m s^5 + C_1 C_5 C_L L_1 L_5 R_1 s^5 + C_1 C_5 C_L L_1 L_5 R_5 s^5 + C_1 C_5 C_L L_1 L_5 R_L s^5 + 2 C_1 C_5 L_1 L_5 R_1 g_m s^4 + C_1 C_5 L_1 L_5 s^4 + C_1 C_L L_1 L_5 R_1}$$

**10.930 INVALID-ORDER-930**  $Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$

$$H(s) = \frac{C_1 C_5 C_L L_1 L_5 L_L R_1 R_5 R_L g_m s^6 + C_1 C_5 C_L L_1 L_5 L_L R_1 R_L s^6 + C_1 C_5 C_L L_1 L_5 L_L R_5 R_L s^6 + C_1 C_5 L_1 L_5 L_L R_1 R_5 g_m s^5 + 2 C_1 C_5 L_1 L_5 L_L R_1 R_L g_m s^5 + C_1 C_5 L_1 L_5 L_L R_1 s^5 + C_1 C_5$$

**10.931 INVALID-ORDER-931**  $Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$

$$H(s) = \frac{C_1 C_5 C_L L_1 L_5 L_L R_1 R_5 g_m s^6 + 2 C_1 C_5 C_L L_1 L_5 L_L R_1 R_L g_m s^6 + C_1 C_5 C_L L_1 L_5 L_L R_1 s^6 + C_1 C_5 C_L L_1 L_5 L_L R_5 s^6 + C_1 C_5 C_L L_1 L_5 L_L R_L s^6 + 2 C_1 C_5 L_1 L_5 L_L R_1 g_m s^5 + C_1 C_5 L_1 L_5}{\dots}$$

**10.932 INVALID-ORDER-932**  $Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$

$$H(s) = \frac{C_1 C_5 C_L L_1 L_5 L_L R_1 R_5 g_m s^6 + 2 C_1 C_5 C_L L_1 L_5 L_L R_1 R_L g_m s^6 + C_1 C_5 C_L L_1 L_5 L_L R_1 s^6 + C_1 C_5 C_L L_1 L_5 L_L R_5 s^6 + C_1 C_5 C_L L_1 L_5 L_L R_L s^6 + C_1 C_5 C_L L_1 L_5 R_1 R_5 R_L g_m s^5 + C_1 C_5$$

**10.933 INVALID-ORDER-933**  $Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, R_L \right)$

$$H(s) = -\frac{C_1 C_5 L_1 L_5 R_1 R_5 g_m s^4 + 2 C_1 C_5 L_1 L_5 R_1 R_L g_m s^4 + C_1 C_5 L_1 L_5 R_1 s^4 + C_1 C_5 L_1 L_5 R_5 s^4 + C_1 C_5 L_1 L_5 R_L s^4 + 2 C_1 C_5 L_1 R_1 R_5 R_L g_m s^3 + C_1 C_5 L_1 R_1 R_5 s^3 + C_1 C_5 L_1 R_5 R_L s^3 + C_1 C_5 L_1 R_5 s^3}{C_1 C_5 L_1 L_5 R_1 R_5 g_m s^4 + 2 C_1 C_5 L_1 L_5 R_1 R_L g_m s^4 + C_1 C_5 L_1 L_5 R_1 s^4 + C_1 C_5 L_1 L_5 R_5 s^4 + C_1 C_5 L_1 L_5 R_L s^4 + 2 C_1 C_5 L_1 R_1 R_5 R_L g_m s^3 + C_1 C_5 L_1 R_1 R_5 s^3 + C_1 C_5 L_1 R_5 R_L s^3 + C_1 C_5 L_1 R_5 s^3}.$$

10.934 INVALID-ORDER-934  $Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{1}{C_L s} \right)$

$$H(s) = -\frac{C_1 C_5 C_L L_1 L_5 R_1 R_5 g_m s^5 + C_1 C_5 C_L L_1 L_5 R_1 s^5 + C_1 C_5 C_L L_1 L_5 R_5 s^5 + C_1 C_5 C_L L_1 R_1 R_5 s^4 + 2C_1 C_5 L_1 L_5 R_1 g_m s^4 + C_1 C_5 L_1 L_5 s^4 + 2C_1 C_5 L_1 R_1 R_5 g_m s^3 + C_1 C_5 L_1 R_5 s^3 + C_1 C_5 R_1 R_5 s^3 + C_1 C_5 s^3}{C_1 C_5 C_L L_1 L_5 R_1 R_5 g_m s^5 + C_1 C_5 C_L L_1 L_5 R_1 s^5 + C_1 C_5 C_L L_1 L_5 R_5 s^5 + C_1 C_5 C_L L_1 R_1 R_5 s^4 + 2C_1 C_5 L_1 L_5 R_1 g_m s^4 + C_1 C_5 L_1 L_5 s^4 + 2C_1 C_5 L_1 R_1 R_5 g_m s^3 + C_1 C_5 L_1 R_5 s^3 + C_1 C_5 R_1 R_5 s^3 + C_1 C_5 s^3}.$$

$$\mathbf{10.935 \quad INVALID-ORDER-935} \quad Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{R_L}{C_L R_L s + 1} \right)$$

$$H(s) = - \frac{C_1 C_5 C_L L_1 L_5 R_1 R_5 R_L g_m s^5 + C_1 C_5 C_L L_1 L_5 R_1 R_L s^5 + C_1 C_5 C_L L_1 L_5 R_5 R_L s^5 + C_1 C_5 C_L L_1 R_1 R_5 R_L s^4 + C_1 C_5 L_1 L_5 R_1 R_5 g_m s^4 + 2 C_1 C_5 L_1 L_5 R_1 R_L g_m s^4 + C_1 C_5 L_1 L_5 R_1 s^4}{C_1 C_5 C_L L_1 L_5 R_1 R_5 g_m s^5 + C_1 C_5 C_L L_1 L_5 R_1 R_L s^5 + C_1 C_5 C_L L_1 L_5 R_5 R_L s^5 + C_1 C_5 C_L L_1 R_1 R_5 R_L s^4 + C_1 C_5 L_1 L_5 R_1 R_5 g_m s^4 + 2 C_1 C_5 L_1 L_5 R_1 R_L g_m s^4 + C_1 C_5 L_1 L_5 R_1 s^4}$$

$$\mathbf{10.936 \quad INVALID-ORDER-936} \quad Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, R_L + \frac{1}{C_L s} \right)$$

$$H(s) = - \frac{C_1 C_5 C_L L_1 L_5 R_1 R_5 g_m s^5 + 2 C_1 C_5 C_L L_1 L_5 R_1 R_L g_m s^5 + C_1 C_5 C_L L_1 L_5 R_1 s^5 + C_1 C_5 C_L L_1 L_5 R_5 s^5 + C_1 C_5 C_L L_1 L_5 R_L s^5 + 2 C_1 C_5 C_L L_1 R_1 R_5 R_L g_m s^4 + C_1 C_5 C_L L_1 R_1 R_5 s^4}{C_1 C_5 C_L L_1 L_5 R_1 R_5 g_m s^5 + 2 C_1 C_5 C_L L_1 L_5 R_1 R_L g_m s^5 + C_1 C_5 C_L L_1 L_5 R_1 s^5 + C_1 C_5 C_L L_1 L_5 R_5 s^5 + C_1 C_5 C_L L_1 L_5 R_L s^5 + 2 C_1 C_5 C_L L_1 R_1 R_5 R_L g_m s^4 + C_1 C_5 C_L L_1 R_1 R_5 s^4}$$

$$\mathbf{10.937 \quad INVALID-ORDER-937} \quad Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, L_L s + \frac{1}{C_L s} \right)$$

$$H(s) = - \frac{2 C_1 C_5 C_L L_1 L_5 L_L R_1 g_m s^6 + C_1 C_5 C_L L_1 L_5 L_L s^6 + C_1 C_5 C_L L_1 L_5 R_1 R_5 g_m s^5 + C_1 C_5 C_L L_1 L_5 R_1 s^5 + C_1 C_5 C_L L_1 L_5 R_5 s^5 + 2 C_1 C_5 C_L L_1 L_L R_1 R_5 g_m s^5 + C_1 C_5 C_L L_1 L_L R_5 s^5}{2 C_1 C_5 C_L L_1 L_5 L_L R_1 g_m s^6 + C_1 C_5 C_L L_1 L_5 L_L s^6 + C_1 C_5 C_L L_1 L_5 R_1 R_5 g_m s^5 + C_1 C_5 C_L L_1 L_5 R_1 s^5 + C_1 C_5 C_L L_1 L_5 R_5 s^5 + 2 C_1 C_5 C_L L_1 L_L R_1 R_5 g_m s^5 + C_1 C_5 C_L L_1 L_L R_5 s^5}$$

$$\mathbf{10.938 \quad INVALID-ORDER-938} \quad Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{L_L s}{C_L L_L s^2 + 1} \right)$$

$$H(s) = - \frac{C_1 C_5 C_L L_1 L_5 L_L R_1 R_5 g_m s^6 + C_1 C_5 C_L L_1 L_5 L_L R_1 s^6 + C_1 C_5 C_L L_1 L_5 L_L R_5 s^6 + C_1 C_5 C_L L_1 L_L R_1 R_5 s^5 + 2 C_1 C_5 L_1 L_5 L_L R_1 g_m s^5 + C_1 C_5 L_1 L_5 L_L s^5 + C_1 C_5 L_1 L_5 R_1 R_5 g_m s^4}{C_1 C_5 C_L L_1 L_5 L_L R_1 R_5 g_m s^6 + C_1 C_5 C_L L_1 L_5 L_L R_1 s^6 + C_1 C_5 C_L L_1 L_5 L_L R_5 s^6 + C_1 C_5 C_L L_1 L_L R_1 R_5 s^5 + 2 C_1 C_5 L_1 L_5 L_L R_1 g_m s^5 + C_1 C_5 L_1 L_5 L_L s^5 + C_1 C_5 L_1 L_5 R_1 R_5 g_m s^4}$$

$$\mathbf{10.939 \quad INVALID-ORDER-939} \quad Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, L_L s + R_L + \frac{1}{C_L s} \right)$$

$$H(s) = - \frac{2 C_1 C_5 C_L L_1 L_5 L_L R_1 g_m s^6 + C_1 C_5 C_L L_1 L_5 L_L s^6 + C_1 C_5 C_L L_1 L_5 R_1 R_5 g_m s^5 + 2 C_1 C_5 C_L L_1 L_5 R_1 R_L g_m s^5 + C_1 C_5 C_L L_1 L_5 R_1 s^5 + C_1 C_5 C_L L_1 L_5 R_5 s^5 + C_1 C_5 C_L L_1 L_5 R_L s^5}{2 C_1 C_5 C_L L_1 L_5 L_L R_1 g_m s^6 + C_1 C_5 C_L L_1 L_5 L_L s^6 + C_1 C_5 C_L L_1 L_5 R_1 R_5 g_m s^5 + 2 C_1 C_5 C_L L_1 L_5 R_1 R_L g_m s^5 + C_1 C_5 C_L L_1 L_5 R_1 s^5 + C_1 C_5 C_L L_1 L_5 R_5 s^5 + C_1 C_5 C_L L_1 L_5 R_L s^5}$$



$$\mathbf{10.940 \quad INVALID-ORDER-940} \quad Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$$

$$H(s) = - \frac{C_1 C_5 C_L L_1 L_5 L_L R_1 R_5 R_L g_m s^6 + C_1 C_5 C_L L_1 L_5 L_L R_1 R_L s^6 + C_1 C_5 C_L L_1 L_5 L_L R_5 R_L s^6 + C_1 C_5 C_L L_1 L_L R_1 R_5 R_L s^5 + C_1 C_5 L_1 L_5 L_L R_1 R_5 g_m s^5 + 2 C_1 C_5 L_1 L_5 L_L R_1 R_L g_m s^5}{C_1 C_5 C_L L_1 L_5 L_L R_1 R_5 g_m s^6 + C_1 C_5 C_L L_1 L_5 L_L R_1 R_L g_m s^6 + C_1 C_5 C_L L_1 L_5 L_L R_1 s^6 + C_1 C_5 C_L L_1 L_5 L_L R_5 s^6 + C_1 C_5 C_L L_1 L_5 L_L R_L s^6 + 2 C_1 C_5 C_L L_1 L_L R_1 R_5 R_L g_m s^5 + C_1 C_5 C_L L_1 L_L R_1 R_5 s^5 + C_1 C_5 C_L L_1 L_L R_1 R_L g_m s^5 + C_1 C_5 C_L L_1 L_L R_1 R_L s^5 + C_1 C_5 C_L L_1 L_L R_5 R_L g_m s^5 + C_1 C_5 C_L L_1 L_L R_5 s^5 + C_1 C_5 C_L L_1 L_L R_L g_m s^5 + C_1 C_5 C_L L_1 L_L R_L s^5}$$

$$\mathbf{10.941 \quad INVALID-ORDER-941} \quad Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$$

$$H(s) = - \frac{C_1 C_5 C_L L_1 L_5 L_L R_1 R_5 g_m s^6 + 2 C_1 C_5 C_L L_1 L_5 L_L R_1 R_L g_m s^6 + C_1 C_5 C_L L_1 L_5 L_L R_1 s^6 + C_1 C_5 C_L L_1 L_5 L_L R_5 s^6 + C_1 C_5 C_L L_1 L_5 L_L R_L s^6 + 2 C_1 C_5 C_L L_1 L_L R_1 R_5 R_L g_m s^5 + C_1 C_5 C_L L_1 L_L R_1 R_5 s^5 + C_1 C_5 C_L L_1 L_L R_1 R_L g_m s^5 + C_1 C_5 C_L L_1 L_L R_1 R_L s^5 + C_1 C_5 C_L L_1 L_L R_5 R_L g_m s^5 + C_1 C_5 C_L L_1 L_L R_5 s^5 + C_1 C_5 C_L L_1 L_L R_L g_m s^5 + C_1 C_5 C_L L_1 L_L R_L s^5}$$

$$\mathbf{10.942 \quad INVALID-ORDER-942} \quad Z(s) = \left( \frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \infty, \infty, \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$$

$$H(s) = - \frac{C_1 C_5 C_L L_1 L_5 L_L R_1 R_5 g_m s^6 + 2 C_1 C_5 C_L L_1 L_5 L_L R_1 R_L g_m s^6 + C_1 C_5 C_L L_1 L_5 L_L R_1 s^6 + C_1 C_5 C_L L_1 L_5 L_L R_5 s^6 + C_1 C_5 C_L L_1 L_5 L_L R_L s^6 + C_1 C_5 C_L L_1 L_5 R_1 R_5 R_L g_m s^5 + C_1 C_5 C_L L_1 L_5 R_1 R_5 s^5 + C_1 C_5 C_L L_1 L_5 R_1 R_L g_m s^5 + C_1 C_5 C_L L_1 L_5 R_1 R_L s^5 + C_1 C_5 C_L L_1 L_5 R_5 R_L g_m s^5 + C_1 C_5 C_L L_1 L_5 R_5 s^5 + C_1 C_5 C_L L_1 L_5 R_L g_m s^5 + C_1 C_5 C_L L_1 L_5 R_L s^5}$$

$$\mathbf{10.943 \quad INVALID-ORDER-943} \quad Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, R_5, \frac{1}{C_L s} \right)$$

$$H(s) = \frac{R_1 (R_5 g_m - 1) (C_1 L_1 s^2 + 1)}{C_1 C_L L_1 R_1 R_5 g_m s^3 + C_1 C_L L_1 R_1 s^3 + C_1 C_L L_1 R_5 s^3 + C_1 C_L R_1 R_5 s^2 + 2 C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + C_1 R_1 s + C_L R_1 R_5 g_m s + C_L R_1 s + C_L R_5 s + 2 R_1 g_m + 1}$$

$$\mathbf{10.944 \quad INVALID-ORDER-944} \quad Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, R_5, \frac{R_L}{C_L R_L s + 1} \right)$$

$$H(s) = \frac{R_1 R_L (R_5 g_m - 1) (C_1 L_1 s^2 + 1)}{C_1 C_L L_1 R_1 R_5 R_L g_m s^3 + C_1 C_L L_1 R_1 R_L s^3 + C_1 C_L L_1 R_5 R_L s^3 + C_1 C_L R_1 R_5 R_L s^2 + C_1 L_1 R_1 R_5 g_m s^2 + 2 C_1 L_1 R_1 R_L g_m s^2 + C_1 L_1 R_1 s^2 + C_1 L_1 R_5 s^2 + C_1 L_1 R_L s^2 + C_1 R_1 R_5 s + C_1 R_1 R_L s + C_1 R_5 s + 2 R_1 g_m + 1}$$

$$\mathbf{10.945 \quad INVALID-ORDER-945} \quad Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, R_5, R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{R_1 (R_5 g_m - 1) (C_1 L_1 s^2 + 1) (C_L R_L s + 1)}{C_1 C_L L_1 R_1 R_5 g_m s^3 + 2C_1 C_L L_1 R_1 R_L g_m s^3 + C_1 C_L L_1 R_1 s^3 + C_1 C_L L_1 R_5 s^3 + C_1 C_L L_1 R_L s^3 + C_1 C_L R_1 R_5 s^2 + C_1 C_L R_1 R_L s^2 + 2C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + C_1 R_1 s + C_L R_1 R_L s}$$

$$\mathbf{10.946 \quad INVALID-ORDER-946} \quad Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, R_5, L_L s + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{R_1 (R_5 g_m - 1) (C_1 L_1 s^2 + 1) (C_L L_L s^2 + 1)}{2C_1 C_L L_1 L_L R_1 g_m s^4 + C_1 C_L L_1 L_L s^4 + C_1 C_L L_1 R_1 R_5 g_m s^3 + C_1 C_L L_1 R_1 s^3 + C_1 C_L L_1 R_5 s^3 + C_1 C_L L_L R_1 s^3 + C_1 C_L R_1 R_5 s^2 + 2C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + C_1 R_1 s + 2C_L L_L R_1 R_L s}$$

$$\mathbf{10.947 \quad INVALID-ORDER-947} \quad Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, R_5, \frac{L_L s}{C_L L_L s^2 + 1} \right)$$

$$H(s) = \frac{L_L R_1 s (R_5 g_m - 1) (C_1 L_1 s^2 + 1)}{C_1 C_L L_1 L_L R_1 R_5 g_m s^4 + C_1 C_L L_1 L_L R_1 s^4 + C_1 C_L L_1 L_L R_5 s^4 + C_1 C_L L_L R_1 R_5 s^3 + 2C_1 L_1 L_L R_1 g_m s^3 + C_1 L_1 L_L s^3 + C_1 L_1 R_1 R_5 g_m s^2 + C_1 L_1 R_1 s^2 + C_1 L_1 R_5 s^2 + C_1 L_L R_1 s^2}$$

$$\mathbf{10.948 \quad INVALID-ORDER-948} \quad Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, R_5, L_L s + R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{R_1 (R_5 g_m - 1) (C_1 L_1 s^2 + 1) (C_L L_L s + R_L C_L s + 1)}{2C_1 C_L L_1 L_L R_1 g_m s^4 + C_1 C_L L_1 L_L s^4 + C_1 C_L L_1 R_1 R_5 g_m s^3 + 2C_1 C_L L_1 R_1 R_L g_m s^3 + C_1 C_L L_1 R_1 s^3 + C_1 C_L L_1 R_5 s^3 + C_1 C_L L_1 R_L s^3 + C_1 C_L L_L R_1 s^3 + C_1 C_L R_1 R_5 s^2 + C_1 C_L R_1 R_L s^2 + C_1 L_1 R_1 R_5 g_m s^2 + C_1 L_1 R_1 s^2 + C_1 L_1 R_5 s^2 + C_1 L_L R_1 s^2}$$

$$\mathbf{10.949 \quad INVALID-ORDER-949} \quad Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, R_5, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$$

$$H(s) = \frac{R_1 (R_5 g_m - 1) (C_1 L_1 s^2 + 1) (C_L L_L s + R_L C_L s + 1)}{C_1 C_L L_1 L_L R_1 R_5 R_L g_m s^4 + C_1 C_L L_1 L_L R_1 R_L s^4 + C_1 C_L L_1 L_L R_5 R_L s^4 + C_1 C_L L_L R_1 R_5 R_L s^3 + C_1 L_1 L_L R_1 R_5 g_m s^3 + 2C_1 L_1 L_L R_1 R_L g_m s^3 + C_1 L_1 L_L R_1 s^3 + C_1 L_1 L_L R_5 s^3 + C_1 L_L R_1 R_5 g_m s^2 + C_1 L_L R_1 R_L s^2 + C_1 L_1 R_1 R_5 g_m s^2 + C_1 L_1 R_1 s^2 + C_1 L_1 R_5 s^2 + C_1 L_L R_1 s^2}$$

**10.950 INVALID-ORDER-950**  $Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, R_5, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$

$$H(s) = \frac{C_1 C_L L_1 L_L R_1 R_5 g_m s^4 + 2C_1 C_L L_1 L_L R_1 R_L g_m s^4 + C_1 C_L L_1 L_L R_1 s^4 + C_1 C_L L_1 L_L R_5 s^4 + C_1 C_L L_1 L_L R_L s^4 + C_1 C_L L_L R_1 R_5 s^3 + C_1 C_L L_L R_1 R_L s^3 + 2C_1 L_1 L_L R_1 g_m s^3 + C_1 L_1 L_L R_1 s^3 + C_1 L_1 L_L R_5 s^3 + C_1 L_1 L_L R_L s^3 + C_1 L_1 L_L s^3 + C_1 L_1 R_1 R_5 s^2 + C_1 L_1 R_1 R_L s^2 + C_1 L_1 R_1 s^2 + C_1 L_1 R_5 s^2 + C_1 L_1 R_L s^2 + C_1 L_1 s^2 + C_1 R_1 R_5 s + C_1 R_1 R_L s + C_1 R_1 s + C_1 R_5 s + C_1 R_L s + C_1 s}{C_1 C_L L_1 L_L R_1 R_5 g_m s^4 + 2C_1 C_L L_1 L_L R_1 R_L g_m s^4 + C_1 C_L L_1 L_L R_1 s^4 + C_1 C_L L_1 L_L R_5 s^4 + C_1 C_L L_1 L_L R_L s^4 + C_1 C_L L_L R_1 R_5 s^3 + C_1 C_L L_L R_1 R_L s^3 + 2C_1 L_1 L_L R_1 g_m s^3 + C_1 L_1 L_L R_1 s^3 + C_1 L_1 L_L R_5 s^3 + C_1 L_1 L_L R_L s^3 + C_1 L_1 L_L s^3 + C_1 L_1 R_1 R_5 s^2 + C_1 L_1 R_1 R_L s^2 + C_1 L_1 R_1 s^2 + C_1 L_1 R_5 s^2 + C_1 L_1 R_L s^2 + C_1 L_1 s^2 + C_1 R_1 R_5 s + C_1 R_1 R_L s + C_1 R_1 s + C_1 R_5 s + C_1 R_L s + C_1 s}$$

10.951 INVALID-ORDER-951  $Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, R_5, \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$

$$H(s) = \frac{1}{C_1 C_L L_1 L_L R_1 R_5 g_m s^4 + 2C_1 C_L L_1 L_L R_1 R_L g_m s^4 + C_1 C_L L_1 L_L R_1 s^4 + C_1 C_L L_1 L_L R_5 s^4 + C_1 C_L L_1 L_L R_L s^4 + C_1 C_L L_1 R_1 R_5 R_L g_m s^3 + C_1 C_L L_1 R_1 R_L s^3 + C_1 C_L L_1 R_5 R_L s^3 +$$

**10.952 INVALID-ORDER-952**  $Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, \frac{1}{C_5 s}, R_L \right)$

$$H(s) = -\frac{R_1 R_L (C_5 s - g_m) (C_1 L_1 s^2 + 1)}{2C_1 C_5 L_1 R_1 R_L g_m s^3 + C_1 C_5 L_1 R_1 s^3 + C_1 C_5 L_1 R_L s^3 + C_1 C_5 R_1 R_L s^2 + C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + C_1 R_1 s + 2C_5 R_1 R_L g_m s + C_5 R_1 s + C_5 R_L s + R_1 g_m + 1}$$

**10.953 INVALID-ORDER-953**  $Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, \frac{1}{C_5 s}, \frac{1}{C_L s} \right)$

$$H(s) = -\frac{R_1(C_5s - g_m)(C_1L_1s^2 + 1)}{s(C_1C_5C_LL_1R_1s^3 + 2C_1C_5L_1R_1g_ms^2 + C_1C_5L_1s^2 + C_1C_5R_1s + C_1C_LL_1R_1g_ms^2 + C_1C_LL_1s^2 + C_1C_LR_1s + C_5C_LR_1s + 2C_5R_1g_m + C_5 + C_LR_1g_m + C_L)}$$

**10.954 INVALID-ORDER-954**  $Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, \frac{1}{C_5 s}, \frac{R_L}{C_L R_L s + 1} \right)$

$$H(s) = -\frac{R_1 R_L (C_5 s - g_m) (C_1 L_1 s^2 + 1)}{C_1 C_5 C_L L_1 R_1 R_L s^4 + 2C_1 C_5 L_1 R_1 R_L g_m s^3 + C_1 C_5 L_1 R_1 s^3 + C_1 C_5 L_1 R_L s^3 + C_1 C_5 R_1 R_L s^2 + C_1 C_L L_1 R_1 R_L g_m s^3 + C_1 C_L L_1 R_L s^3 + C_1 C_L R_1 R_L s^2 + C_1 L_1 R_1 g_m s^2 + C_1 L_1 R_1 s^2}$$

$$\mathbf{10.955 \quad INVALID-ORDER-955} \quad Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \quad \infty, \quad \infty, \quad \infty, \quad \frac{1}{C_5 s}, \quad R_L + \frac{1}{C_L s} \right)$$

$$H(s) = - \frac{R_1 (C_5 s - g_m) (C_1 L_1 s^2 + 1) (C_L R_L s + 1)}{s (2C_1 C_5 C_L L_1 R_1 R_L g_m s^3 + C_1 C_5 C_L L_1 R_1 s^3 + C_1 C_5 C_L L_1 R_L s^3 + C_1 C_5 C_L R_1 R_L s^2 + 2C_1 C_5 L_1 R_1 g_m s^2 + C_1 C_5 L_1 s^2 + C_1 C_5 R_1 s + C_1 C_L L_1 R_1 g_m s^2 + C_1 C_L L_1 s^2 + C_1 C_L R_L s + 1)}$$

$$\mathbf{10.956 \quad INVALID-ORDER-956} \quad Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \quad \infty, \quad \infty, \quad \infty, \quad \frac{1}{C_5 s}, \quad L_L s + \frac{1}{C_L s} \right)$$

$$H(s) = - \frac{R_1 (C_5 s - g_m) (C_1 L_1 s^2 + 1) (C_L L_L s^2 + 1)}{s (2C_1 C_5 C_L L_1 L_L R_1 g_m s^4 + C_1 C_5 C_L L_1 L_L s^4 + C_1 C_5 C_L L_1 R_1 s^3 + C_1 C_5 C_L L_L R_1 s^3 + 2C_1 C_5 L_1 R_1 g_m s^2 + C_1 C_5 L_1 s^2 + C_1 C_5 R_1 s + C_1 C_L L_1 R_1 g_m s^2 + C_1 C_L L_1 s^2 + C_1 C_L R_L s + 1)}$$

$$\mathbf{10.957 \quad INVALID-ORDER-957} \quad Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \quad \infty, \quad \infty, \quad \infty, \quad \frac{1}{C_5 s}, \quad \frac{L_L s}{C_L L_L s^2 + 1} \right)$$

$$H(s) = - \frac{L_L R_1 s (C_5 s - g_m) (C_1 L_1 s^2 + 1)}{C_1 C_5 C_L L_1 L_L R_1 s^5 + 2C_1 C_5 L_1 L_L R_1 g_m s^4 + C_1 C_5 L_1 L_L s^4 + C_1 C_5 L_1 R_1 s^3 + C_1 C_5 L_L R_1 s^3 + C_1 C_L L_1 L_L R_1 g_m s^4 + C_1 C_L L_1 L_L s^4 + C_1 C_L L_L R_1 s^3 + C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + C_1 R_1 s + 1}$$

$$\mathbf{10.958 \quad INVALID-ORDER-958} \quad Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \quad \infty, \quad \infty, \quad \infty, \quad \frac{1}{C_5 s}, \quad L_L s + R_L + \frac{1}{C_L s} \right)$$

$$H(s) = - \frac{R_1 (C_5 s - g_m) (C_1 L_1 s^2 + 1)}{s (2C_1 C_5 C_L L_1 L_L R_1 g_m s^4 + C_1 C_5 C_L L_1 L_L s^4 + 2C_1 C_5 C_L L_1 R_1 R_L g_m s^3 + C_1 C_5 C_L L_1 R_1 s^3 + C_1 C_5 C_L L_1 R_L s^3 + C_1 C_5 C_L L_L R_1 s^3 + C_1 C_5 C_L R_1 R_L s^2 + 2C_1 C_5 L_1 R_1 g_m s^2 + C_1 C_5 L_1 s^2 + C_1 C_5 R_1 s + C_1 C_L L_1 R_1 g_m s^2 + C_1 C_L L_1 s^2 + C_1 C_L R_L s + 1)}$$

$$\mathbf{10.959 \quad INVALID-ORDER-959} \quad Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \quad \infty, \quad \infty, \quad \infty, \quad \frac{1}{C_5 s}, \quad \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$$

$$H(s) = - \frac{R_1 (C_5 s - g_m) (C_1 L_1 s^2 + 1)}{C_1 C_5 C_L L_1 L_L R_1 R_L s^5 + 2C_1 C_5 L_1 L_L R_1 R_L g_m s^4 + C_1 C_5 L_1 L_L R_1 s^4 + C_1 C_5 L_1 L_L R_L s^4 + C_1 C_5 L_1 R_1 R_L s^3 + C_1 C_5 L_L R_1 R_L s^3 + C_1 C_L L_1 L_L R_1 R_L g_m s^4 + C_1 C_L L_1 L_L R_L s^4 + C_1 C_L L_1 R_1 R_L s^3 + C_1 C_L L_L R_1 R_L s^3 + C_1 C_L R_1 R_L s^2 + 2C_1 C_5 L_1 R_1 g_m s^2 + C_1 C_5 L_1 s^2 + C_1 C_5 R_1 s + C_1 C_L L_1 R_1 g_m s^2 + C_1 C_L L_1 s^2 + C_1 C_L R_L s + 1}$$

10.960 INVALID-ORDER-960  $Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$

$$H(s) = -\frac{2C_1C_5C_LL_1L_LR_1R_Lg_ms^5 + C_1C_5C_LL_1L_LR_1s^5 + C_1C_5C_LL_1L_LR_Ls^5 + C_1C_5C_LL_1R_1R_Ls^4 + 2C_1C_5L_1L_LR_1g_ms^4 + C_1C_5L_1L_Ls^4 + 2C_1C_5L_1R_1R_Lg_ms^3 + C_1C_5L_1R_1s^3}{2C_1C_5C_LL_1L_LR_1R_Lg_ms^5 + C_1C_5C_LL_1L_LR_1s^5 + C_1C_5C_LL_1L_LR_Ls^5 + C_1C_5C_LL_1R_1R_Ls^4 + 2C_1C_5L_1L_LR_1g_ms^4 + C_1C_5L_1L_Ls^4 + 2C_1C_5L_1R_1R_Lg_ms^3 + C_1C_5L_1R_1s^3}.$$

10.961 INVALID-ORDER-961  $Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, \frac{1}{C_5 s}, \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$

$$H(s) = -\frac{2C_1C_5C_LL_1L_LR_1R_Lg_ms^5 + C_1C_5C_LL_1L_LR_1s^5 + C_1C_5C_LL_1L_LR_Ls^5 + C_1C_5C_LL_1R_1R_Ls^4 + C_1C_5C_LL_R_1R_Ls^4 + 2C_1C_5L_1R_1R_Lg_ms^3 + C_1C_5L_1R_1s^3 + C_1C_5L_1R_Ls^3}{2C_1C_5C_LL_1L_LR_1R_Lg_ms^5 + C_1C_5C_LL_1L_LR_1s^5 + C_1C_5C_LL_1L_LR_Ls^5 + C_1C_5C_LL_1R_1R_Ls^4 + C_1C_5C_LL_R_1R_Ls^4 + 2C_1C_5L_1R_1R_Lg_ms^3 + C_1C_5L_1R_1s^3 + C_1C_5L_1R_Ls^3}$$

10.962 INVALID-ORDER-962  $Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, R_L \right)$

$$H(s) = -\frac{R_1 R_L (C_1 L_1 s^2 + 1) (C_5 R_5 s - R_5 g_m + 1)}{2C_1 C_5 L_1 R_1 R_5 R_L g_m s^3 + C_1 C_5 L_1 R_1 R_5 s^3 + C_1 C_5 L_1 R_5 R_L s^3 + C_1 C_5 R_1 R_5 R_L s^2 + C_1 L_1 R_1 R_5 g_m s^2 + 2C_1 L_1 R_1 R_L g_m s^2 + C_1 L_1 R_1 s^2 + C_1 L_1 R_5 s^2 + C_1 L_1 R_L s^2 + C_1 R_1 R_5}$$

**10.963 INVALID-ORDER-963**  $Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, \frac{1}{C_L s} \right)$

$$H(s) = -\frac{R_1 (C_1 L_1 s^2 + 1) (C_5 R_5 s - R_5 g_m + 1)}{C_1 C_5 C_L L_1 R_1 R_5 s^4 + 2C_1 C_5 L_1 R_1 R_5 g_m s^3 + C_1 C_5 L_1 R_5 s^3 + C_1 C_5 R_1 R_5 s^2 + C_1 C_L L_1 R_1 R_5 g_m s^3 + C_1 C_L L_1 R_1 s^3 + C_1 C_L L_1 R_5 s^3 + C_1 C_L R_1 R_5 s^2 + 2C_1 L_1 R_1 g_m s^2 + C_1 L_1 R_1 s^2 + C_1 L_1 R_5 s + C_1 R_1}$$

10.964 INVALID-ORDER-964  $Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, \frac{R_L}{C_L R_L s + 1} \right)$

$$H(s) = -\frac{C_1 C_5 C_L L_1 R_1 R_5 R_L s^4 + 2C_1 C_5 L_1 R_1 R_5 R_L g_m s^3 + C_1 C_5 L_1 R_1 R_5 s^3 + C_1 C_5 L_1 R_5 R_L s^3 + C_1 C_5 R_1 R_5 R_L s^2 + C_1 C_L L_1 R_1 R_5 R_L g_m s^3 + C_1 C_L L_1 R_1 R_L s^3 + C_1 C_L L_1 R_5 R_L s^3}{C_1 C_5 C_L L_1 R_1 R_5 R_L s^4 + 2C_1 C_5 L_1 R_1 R_5 R_L g_m s^3 + C_1 C_5 L_1 R_1 R_5 s^3 + C_1 C_5 L_1 R_5 R_L s^3 + C_1 C_5 R_1 R_5 R_L s^2 + C_1 C_L L_1 R_1 R_5 R_L g_m s^3 + C_1 C_L L_1 R_1 R_L s^3 + C_1 C_L L_1 R_5 R_L s^3}.$$

$$\mathbf{10.965 \quad INVALID-ORDER-965} \quad Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \quad \infty, \quad \infty, \quad \infty, \quad \frac{R_5}{C_5 R_5 s + 1}, \quad R_L + \frac{1}{C_L s} \right)$$

$$H(s) = - \frac{2C_1 C_5 C_L L_1 R_1 R_5 R_L g_m s^4 + C_1 C_5 C_L L_1 R_1 R_5 s^4 + C_1 C_5 C_L L_1 R_5 R_L s^4 + C_1 C_5 C_L R_1 R_5 R_L s^3 + 2C_1 C_5 L_1 R_1 R_5 g_m s^3 + C_1 C_5 L_1 R_5 s^3 + C_1 C_5 R_1 R_5 s^2 + C_1 C_L L_1 R_1 R_5 g_m s^3 -}{}$$

$$\mathbf{10.966 \quad INVALID-ORDER-966} \quad Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \quad \infty, \quad \infty, \quad \infty, \quad \frac{R_5}{C_5 R_5 s + 1}, \quad L_L s + \frac{1}{C_L s} \right)$$

$$H(s) = - \frac{2C_1 C_5 C_L L_1 L_L R_1 R_5 g_m s^5 + C_1 C_5 C_L L_1 L_L R_5 s^5 + C_1 C_5 C_L L_1 R_1 R_5 s^4 + C_1 C_5 C_L L_L R_1 R_5 s^4 + 2C_1 C_5 L_1 R_1 R_5 g_m s^3 + C_1 C_5 L_1 R_5 s^3 + C_1 C_5 R_1 R_5 s^2 + 2C_1 C_L L_1 L_L R_1 g_m s^4 -}{}$$

$$\mathbf{10.967 \quad INVALID-ORDER-967} \quad Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \quad \infty, \quad \infty, \quad \infty, \quad \frac{R_5}{C_5 R_5 s + 1}, \quad \frac{L_L s}{C_L L_L s^2 + 1} \right)$$

$$H(s) = - \frac{C_1 C_5 C_L L_1 L_L R_1 R_5 s^5 + 2C_1 C_5 L_1 L_L R_1 R_5 g_m s^4 + C_1 C_5 L_1 L_L R_5 s^4 + C_1 C_5 L_1 R_1 R_5 s^3 + C_1 C_5 L_L R_1 R_5 s^3 + C_1 C_L L_1 L_L R_1 R_5 g_m s^4 + C_1 C_L L_1 L_L R_1 s^4 + C_1 C_L L_1 L_L R_5 s^4 +}{}$$

$$\mathbf{10.968 \quad INVALID-ORDER-968} \quad Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \quad \infty, \quad \infty, \quad \infty, \quad \frac{R_5}{C_5 R_5 s + 1}, \quad L_L s + R_L + \frac{1}{C_L s} \right)$$

$$H(s) = - \frac{2C_1 C_5 C_L L_1 L_L R_1 R_5 g_m s^5 + C_1 C_5 C_L L_1 L_L R_5 s^5 + 2C_1 C_5 C_L L_1 R_1 R_5 R_L g_m s^4 + C_1 C_5 C_L L_1 R_1 R_5 s^4 + C_1 C_5 C_L L_1 R_5 R_L s^4 + C_1 C_5 C_L L_L R_1 R_5 s^4 + C_1 C_5 C_L R_1 R_5 R_L s^3 + 2C_1 C_L L_1 L_L R_1 g_m s^4 -}{}$$

$$\mathbf{10.969 \quad INVALID-ORDER-969} \quad Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \quad \infty, \quad \infty, \quad \infty, \quad \frac{R_5}{C_5 R_5 s + 1}, \quad \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$$

$$H(s) = - \frac{C_1 C_5 C_L L_1 L_L R_1 R_5 R_L s^5 + 2C_1 C_5 L_1 L_L R_1 R_5 R_L g_m s^4 + C_1 C_5 L_1 L_L R_1 R_5 s^4 + C_1 C_5 L_1 L_L R_5 R_L s^4 + C_1 C_5 L_1 R_1 R_5 R_L s^3 + C_1 C_5 L_L R_1 R_5 R_L s^3 + C_1 C_L L_1 L_L R_1 R_5 R_L g_m s^4 -}{}$$

$$\mathbf{10.970 \quad INVALID-ORDER-970} \quad Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$$

$$H(s) = - \frac{2C_1 C_5 C_L L_1 L_L R_1 R_5 R_L g_m s^5 + C_1 C_5 C_L L_1 L_L R_1 R_5 s^5 + C_1 C_5 C_L L_1 L_L R_5 R_L s^5 + C_1 C_5 C_L L_L R_1 R_5 R_L s^4 + 2C_1 C_5 L_1 L_L R_1 R_5 g_m s^4 + C_1 C_5 L_1 L_L R_5 s^4 + 2C_1 C_5 L_1 R_1 R_5 R_L s^3 + C_1 C_5 L_1 R_1 R_5 g_m s^3 + C_1 C_5 L_1 R_1 R_5 s^3 + C_1 C_5 L_1 R_1 R_5 g_m s^2 + C_1 C_5 L_1 R_1 R_5 s^2 + C_1 C_5 L_1 R_1 R_5 g_m s + C_1 C_5 L_1 R_1 R_5 s + C_1 C_5 L_1 R_1 R_5 g_m}{2C_1 C_5 C_L L_1 L_L R_1 R_5 R_L g_m s^5 + C_1 C_5 C_L L_1 L_L R_1 R_5 s^5 + C_1 C_5 C_L L_1 L_L R_5 R_L s^5 + C_1 C_5 C_L L_L R_1 R_5 R_L s^4 + 2C_1 C_5 L_1 L_L R_1 R_5 g_m s^4 + C_1 C_5 L_1 L_L R_5 s^4 + 2C_1 C_5 L_1 R_1 R_5 R_L s^3 + C_1 C_5 L_1 R_1 R_5 g_m s^3 + C_1 C_5 L_1 R_1 R_5 s^3 + C_1 C_5 L_1 R_1 R_5 g_m s^2 + C_1 C_5 L_1 R_1 R_5 s^2 + C_1 C_5 L_1 R_1 R_5 g_m s + C_1 C_5 L_1 R_1 R_5 s + C_1 C_5 L_1 R_1 R_5 g_m}$$

$$\mathbf{10.971 \quad INVALID-ORDER-971} \quad Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$$

$$H(s) = - \frac{2C_1 C_5 C_L L_1 L_L R_1 R_5 R_L g_m s^5 + C_1 C_5 C_L L_1 L_L R_1 R_5 s^5 + C_1 C_5 C_L L_1 L_L R_5 R_L s^5 + C_1 C_5 C_L L_1 R_1 R_5 R_L s^4 + C_1 C_5 C_L L_L R_1 R_5 R_L s^4 + 2C_1 C_5 L_1 R_1 R_5 R_L g_m s^3 + C_1 C_5 L_1 R_1 R_5 s^3 + C_1 C_5 L_1 R_1 R_5 g_m s^2 + C_1 C_5 L_1 R_1 R_5 s^2 + C_1 C_5 L_1 R_1 R_5 g_m s + C_1 C_5 L_1 R_1 R_5 s + C_1 C_5 L_1 R_1 R_5 g_m}{2C_1 C_5 C_L L_1 L_L R_1 R_5 R_L g_m s^5 + C_1 C_5 C_L L_1 L_L R_1 R_5 s^5 + C_1 C_5 C_L L_1 L_L R_5 R_L s^5 + C_1 C_5 C_L L_1 R_1 R_5 R_L s^4 + C_1 C_5 C_L L_L R_1 R_5 R_L s^4 + 2C_1 C_5 L_1 R_1 R_5 R_L g_m s^3 + C_1 C_5 L_1 R_1 R_5 s^3 + C_1 C_5 L_1 R_1 R_5 g_m s^2 + C_1 C_5 L_1 R_1 R_5 s^2 + C_1 C_5 L_1 R_1 R_5 g_m s + C_1 C_5 L_1 R_1 R_5 s + C_1 C_5 L_1 R_1 R_5 g_m}$$

$$\mathbf{10.972 \quad INVALID-ORDER-972} \quad Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, R_L \right)$$

$$H(s) = \frac{R_1 R_L (C_1 L_1 s^2 + 1) (C_5 R_5 g_m s - C_5 s + g_m)}{C_1 C_5 L_1 R_1 R_5 g_m s^3 + 2C_1 C_5 L_1 R_1 R_L g_m s^3 + C_1 C_5 L_1 R_1 s^3 + C_1 C_5 L_1 R_5 s^3 + C_1 C_5 L_1 R_L s^3 + C_1 C_5 R_1 R_5 s^2 + C_1 C_5 R_1 R_L s^2 + C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + C_1 R_1 s + C_5 R_1 R_5 g_m s + C_5 R_1 R_5 s + C_5 R_1 R_5 g_m}$$

$$\mathbf{10.973 \quad INVALID-ORDER-973} \quad Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, \frac{1}{C_L s} \right)$$

$$H(s) = \frac{R_1 (C_1 L_1 s^2 + 1) (C_5 R_5 g_m s - C_5 s + g_m)}{s (C_1 C_5 C_L L_1 R_1 R_5 g_m s^3 + C_1 C_5 C_L L_1 R_1 s^3 + C_1 C_5 C_L L_1 R_5 s^3 + C_1 C_5 C_L R_1 R_5 s^2 + 2C_1 C_5 L_1 R_1 g_m s^2 + C_1 C_5 L_1 s^2 + C_1 C_5 R_1 s + C_1 C_L L_1 R_1 g_m s^2 + C_1 C_L L_1 s^2 + C_1 C_L R_1 s + C_5 R_1 R_5 g_m s + C_5 R_1 R_5 s + C_5 R_1 R_5 g_m)}$$

$$\mathbf{10.974 \quad INVALID-ORDER-974} \quad Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, \frac{R_L}{C_L R_L s + 1} \right)$$

$$H(s) = \frac{2C_1 C_5 C_L L_1 R_1 R_5 R_L g_m s^4 + C_1 C_5 C_L L_1 R_1 R_L s^4 + C_1 C_5 C_L L_1 R_5 R_L s^4 + C_1 C_5 C_L R_1 R_5 R_L s^3 + C_1 C_5 L_1 R_1 R_5 g_m s^3 + 2C_1 C_5 L_1 R_1 R_L g_m s^3 + C_1 C_5 L_1 R_1 s^3 + C_1 C_5 L_1 R_5 s^3 + C_1 C_5 L_1 R_L s^3 + C_1 C_5 R_1 R_5 s^2 + C_1 C_5 R_1 R_L s^2 + C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + C_1 R_1 s + C_5 R_1 R_5 g_m s + C_5 R_1 R_5 s + C_5 R_1 R_5 g_m}{2C_1 C_5 C_L L_1 R_1 R_5 R_L g_m s^4 + C_1 C_5 C_L L_1 R_1 R_L s^4 + C_1 C_5 C_L L_1 R_5 R_L s^4 + C_1 C_5 C_L R_1 R_5 R_L s^3 + C_1 C_5 L_1 R_1 R_5 g_m s^3 + 2C_1 C_5 L_1 R_1 R_L g_m s^3 + C_1 C_5 L_1 R_1 s^3 + C_1 C_5 L_1 R_5 s^3 + C_1 C_5 L_1 R_L s^3 + C_1 C_5 R_1 R_5 s^2 + C_1 C_5 R_1 R_L s^2 + C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + C_1 R_1 s + C_5 R_1 R_5 g_m s + C_5 R_1 R_5 s + C_5 R_1 R_5 g_m}$$

10.975 INVALID-ORDER-975  $Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, R_L + \frac{1}{C_L s} \right)$

$$H(s) = \frac{R_1 (C_1 L_1 s^2 + 1) (C_L R_L s + 1)}{s (C_1 C_5 C_L L_1 R_1 R_5 g_m s^3 + 2 C_1 C_5 C_L L_1 R_1 R_L g_m s^3 + C_1 C_5 C_L L_1 R_1 s^3 + C_1 C_5 C_L L_1 R_5 s^3 + C_1 C_5 C_L L_1 R_L s^3 + C_1 C_5 C_L R_1 R_5 s^2 + C_1 C_5 C_L R_1 R_L s^2 + 2 C_1 C_5 L_1 R_1 g_m s^2 + C_1 C_5 L_1 R_1 s^2 + C_1 C_5 L_1 R_5 s^2 + C_1 C_5 L_1 R_L s^2 + C_1 C_5 R_1 R_5 s + C_1 C_5 R_1 R_L s + C_1 C_5 R_5 + C_1 C_5 R_L)}$$

**10.976 INVALID-ORDER-976**  $Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, L_L s + \frac{1}{C_L s} \right)$

$$H(s) = \frac{R_1(C_1 L_1 s^2 + 1)(C_L L_L)}{s(2C_1 C_5 C_L L_1 L_L R_1 g_m s^4 + C_1 C_5 C_L L_1 L_L s^4 + C_1 C_5 C_L L_1 R_1 R_5 g_m s^3 + C_1 C_5 C_L L_1 R_1 s^3 + C_1 C_5 C_L L_1 R_5 s^3 + C_1 C_5 C_L L_L R_1 s^3 + C_1 C_5 C_L R_1 R_5 s^2 + 2C_1 C_5 L_1 R_1 g_m s^2 + C_1 C_5 L_1 R_1 s^2 + C_1 C_5 L_1 R_1 s^2 + C_1 C_5 L_1 R_1 s^2)}$$

10.977 INVALID-ORDER-977  $Z(s) = \left( \frac{R_1(L_1s + \frac{1}{C_1s})}{L_1s + R_1 + \frac{1}{C_1s}}, \infty, \infty, \infty, R_5 + \frac{1}{C_5s}, \frac{L_Ls}{C_L L_L s^2 + 1} \right)$

$$H(s) = \frac{C_1 C_5 C_L L_1 L_L R_1 R_5 q_m s^5 + C_1 C_5 C_L L_1 L_L R_1 s^5 + C_1 C_5 C_L L_1 L_L R_5 s^5 + C_1 C_5 C_L L_L R_1 R_5 s^4 + 2 C_1 C_5 L_1 L_L R_1 q_m s^4 + C_1 C_5 L_1 L_L s^4 + C_1 C_5 L_1 R_1 R_5 q_m s^3 + C_1 C_5 L_1 R_1 s^3 + C_1 C_5 R_1 R_5 q_m s^2 + C_1 C_5 R_1 R_5 s^2 + C_1 C_5 L_1 R_1 s^2 + C_1 C_5 L_1 s^2 + C_1 C_5 R_1 s^2 + C_1 C_5 s^2}{C_1 C_5 C_L L_1 L_L R_1 R_5 q_m s^5 + C_1 C_5 C_L L_1 L_L R_1 s^5 + C_1 C_5 C_L L_1 L_L R_5 s^5 + C_1 C_5 C_L L_L R_1 R_5 s^4 + 2 C_1 C_5 L_1 L_L R_1 q_m s^4 + C_1 C_5 L_1 L_L s^4 + C_1 C_5 L_1 R_1 R_5 q_m s^3 + C_1 C_5 L_1 R_1 s^3 + C_1 C_5 R_1 R_5 q_m s^2 + C_1 C_5 R_1 R_5 s^2 + C_1 C_5 L_1 R_1 s^2 + C_1 C_5 L_1 s^2 + C_1 C_5 R_1 s^2 + C_1 C_5 s^2}.$$

10.978 INVALID-ORDER-978  $Z(s) = \left( \frac{R_1(L_1s + \frac{1}{C_1s})}{L_1s + R_1 + \frac{1}{C_1s}}, \infty, \infty, \infty, R_5 + \frac{1}{C_5s}, L_Ls + R_L + \frac{1}{C_Ls} \right)$

$$H(s) = \frac{s(2C_1C_5C_LL_1L_LR_1g_ms^4 + C_1C_5C_LL_1L_Ls^4 + C_1C_5C_LL_1R_1R_5g_ms^3 + 2C_1C_5C_LL_1R_1R_Lg_ms^3 + C_1C_5C_LL_1R_1s^3 + C_1C_5C_LL_1R_5s^3 + C_1C_5C_LL_1R_Ls^3 + C_1C_5C_LL_1R_1s^3)}{s(2C_1C_5C_LL_1L_LR_1g_ms^4 + C_1C_5C_LL_1L_Ls^4 + C_1C_5C_LL_1R_1R_5g_ms^3 + 2C_1C_5C_LL_1R_1R_Lg_ms^3 + C_1C_5C_LL_1R_1s^3 + C_1C_5C_LL_1R_5s^3 + C_1C_5C_LL_1R_Ls^3 + C_1C_5C_LL_1R_1s^3)}$$

**10.979 INVALID-ORDER-979**  $Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$

$$H(s) = \frac{C_1 C_5 C_L L_L R_1 R_5 R_L g_m s^5 + C_1 C_5 C_L L_L L_L R_1 R_L s^5 + C_1 C_5 C_L L_L L_L R_5 R_L s^5 + C_1 C_5 C_L L_L R_1 R_5 R_L s^4 + C_1 C_5 L_1 L_L R_1 R_5 g_m s^4 + 2 C_1 C_5 L_1 L_L R_1 R_L g_m s^4 + C_1 C_5 L_1 L_L R_1 s}{C_1 C_5 C_L L_L R_1 R_5 R_L g_m s^5 + C_1 C_5 C_L L_L L_L R_1 R_L s^5 + C_1 C_5 C_L L_L L_L R_5 R_L s^5 + C_1 C_5 C_L L_L R_1 R_5 R_L s^4 + C_1 C_5 L_1 L_L R_1 R_5 g_m s^4 + 2 C_1 C_5 L_1 L_L R_1 R_L g_m s^4 + C_1 C_5 L_1 L_L R_1 s}$$



10.980 INVALID-ORDER-980  $Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$

$$H(s) = \frac{C_1 C_5 C_L L_1 L_L R_1 R_5 g_m s^5 + 2 C_1 C_5 C_L L_1 L_L R_1 R_L g_m s^5 + C_1 C_5 C_L L_1 L_L R_1 s^5 + C_1 C_5 C_L L_1 L_L R_5 s^5 + C_1 C_5 C_L L_1 L_L R_L s^5 + C_1 C_5 C_L L_L R_1 R_5 s^4 + C_1 C_5 C_L L_L R_1 R_L s^4 + 2 C_1 C_5 C_L L_L R_1 R_L s^4 + 2 C_1 C_5 C_L L_L R_1 R_L s^4 + 2 C_1 C_5 C_L L_L R_1 R_L s^4}{C_1 C_5 C_L L_1 L_L R_1 R_5 g_m s^5 + 2 C_1 C_5 C_L L_1 L_L R_1 R_L g_m s^5 + C_1 C_5 C_L L_1 L_L R_1 s^5 + C_1 C_5 C_L L_1 L_L R_5 s^5 + C_1 C_5 C_L L_1 L_L R_L s^5 + C_1 C_5 C_L L_L R_1 R_5 s^4 + C_1 C_5 C_L L_L R_1 R_L s^4 + 2 C_1 C_5 C_L L_L R_1 R_L s^4 + 2 C_1 C_5 C_L L_L R_1 R_L s^4 + 2 C_1 C_5 C_L L_L R_1 R_L s^4}$$

$$\text{10.981} \quad \text{INVALID-ORDER-981} \quad Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, R_5 + \frac{1}{C_5 s}, \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$$

$$H(s) = \frac{C_1 C_5 C_L L_1 L_L R_1 R_5 g_m s^5 + 2 C_1 C_5 C_L L_1 L_L R_1 R_L g_m s^5 + C_1 C_5 C_L L_1 L_L R_1 s^5 + C_1 C_5 C_L L_1 L_L R_5 s^5 + C_1 C_5 C_L L_1 L_L R_L s^5 + C_1 C_5 C_L L_1 R_1 R_5 R_L g_m s^4 + C_1 C_5 C_L L_1 R_1 R_L s^4 +$$

**10.982 INVALID-ORDER-982**  $Z(s) = \left( \frac{R_1(L_1s + \frac{1}{C_1s})}{L_1s + R_1 + \frac{1}{C_1s}}, \infty, \infty, \infty, L_5s + \frac{1}{C_5s}, R_L \right)$

$$H(s) = \frac{R_1 R_L (C_1 L_1 s^2 + 1) (C_5 L_5 g_m s^2 - C_5 s + g_m)}{C_1 C_5 L_1 L_5 R_1 g_m s^4 + C_1 C_5 L_1 L_5 s^4 + 2 C_1 C_5 L_1 R_1 R_L g_m s^3 + C_1 C_5 L_1 R_1 s^3 + C_1 C_5 L_1 R_L s^3 + C_1 C_5 L_5 R_1 s^3 + C_1 C_5 R_1 R_L s^2 + C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + C_1 R_1 s + C_5 L_5 R_1 g_m}$$

**10.983 INVALID-ORDER-983**  $Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, \frac{1}{C_L s} \right)$

$$H(s) = \frac{R_1 (C_1 L_1 s^2 + 1) (C_5 L_5 g_m s^2 - C_5 s + g_m)}{s (C_1 C_5 C_L L_1 L_5 R_1 g_m s^4 + C_1 C_5 C_L L_1 L_5 s^4 + C_1 C_5 C_L L_1 R_1 s^3 + C_1 C_5 C_L L_5 R_1 s^3 + 2 C_1 C_5 L_1 R_1 g_m s^2 + C_1 C_5 L_1 s^2 + C_1 C_5 R_1 s + C_1 C_L L_1 R_1 g_m s^2 + C_1 C_L L_1 s^2 + C_1 C_L R_1 s + g_m)}$$

10.984 INVALID-ORDER-984  $Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, \frac{R_L}{C_L R_L s + 1} \right)$

$$H(s) = \frac{C_1 C_5 C_L L_1 L_5 R_1 R_L g_m s^5 + C_1 C_5 C_L L_1 L_5 R_L s^5 + C_1 C_5 C_L L_1 R_1 R_L s^4 + C_1 C_5 C_L L_5 R_1 R_L s^4 + C_1 C_5 L_1 L_5 R_1 g_m s^4 + C_1 C_5 L_1 L_5 s^4 + 2 C_1 C_5 L_1 R_1 R_L g_m s^3 + C_1 C_5 L_1 R_1 s^3 + C_1 C_5 L_1 s^3 + C_1 C_5 s^3}{C_1 C_5 C_L L_1 L_5 R_1 R_L g_m s^5 + C_1 C_5 C_L L_1 L_5 R_L s^5 + C_1 C_5 C_L L_1 R_1 R_L s^4 + C_1 C_5 C_L L_5 R_1 R_L s^4 + C_1 C_5 L_1 L_5 R_1 g_m s^4 + C_1 C_5 L_1 L_5 s^4 + 2 C_1 C_5 L_1 R_1 R_L g_m s^3 + C_1 C_5 L_1 R_1 s^3 + C_1 C_5 L_1 s^3 + C_1 C_5 s^3}.$$

10.985 INVALID-ORDER-985  $Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, R_L + \frac{1}{C_L s} \right)$

$$H(s) = \frac{R_1(C_L L_1 s^2 + 1)(C_L R_L}{s(C_1 C_5 C_L L_1 L_5 R_1 g_m s^4 + C_1 C_5 C_L L_1 L_5 s^4 + 2C_1 C_5 C_L L_1 R_1 R_L g_m s^3 + C_1 C_5 C_L L_1 R_1 s^3 + C_1 C_5 C_L L_1 R_L s^3 + C_1 C_5 C_L L_5 R_1 s^3 + C_1 C_5 C_L R_1 R_L s^2 + 2C_1 C_5 L_1 R_1 g_m s^2 + C_1 C_5 L_1 R_1 s^2 + C_1 C_5 L_1 R_L s^2 + C_1 C_5 L_5 R_1 s^2 + C_1 C_5 L_5 R_L s^2 + C_1 C_5 R_1 R_L)}.$$

10.986 INVALID-ORDER-986  $Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, L_L s + \frac{1}{C_L s} \right)$

$$H(s) = \frac{R_1 (C_1 L_1 s^2 + 1) (C_L L_L s^2 + 1)}{s (C_1 C_5 C_L L_1 L_5 R_1 q_m s^4 + C_1 C_5 C_L L_1 L_5 s^4 + 2 C_1 C_5 C_L L_1 L_L R_1 q_m s^4 + C_1 C_5 C_L L_1 L_L s^4 + C_1 C_5 C_L L_1 R_1 s^3 + C_1 C_5 C_L L_5 R_1 s^3 + C_1 C_5 C_L L_L R_1 s^3 + 2 C_1 C_5 L_1 R_1 q_m s^2 + C_1 C_5 L_1 R_1 s^2 + C_1 C_5 L_L R_1 s^2 + C_1 C_5 R_1 s^2 + C_1 C_5 s^2 + C_1 C_5)}.$$

10.987 INVALID-ORDER-987  $Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} \right)$

$$H(s) = \frac{C_1 C_5 C_L L_1 L_5 L_L R_1 g_m s^6 + C_1 C_5 C_L L_1 L_5 L_L s^6 + C_1 C_5 C_L L_1 L_L R_1 s^5 + C_1 C_5 C_L L_5 L_L R_1 s^5 + C_1 C_5 L_1 L_5 R_1 g_m s^4 + C_1 C_5 L_1 L_5 s^4 + 2 C_1 C_5 L_1 L_L R_1 g_m s^4 + C_1 C_5 L_1 L_L s^4 + C_1 C_5 L_1 L_L R_1 g_m s^3 + C_1 C_5 L_1 L_L R_1 s^3 + C_1 C_5 L_1 L_L s^3 + C_1 C_5 L_1 L_L R_1 s^2 + C_1 C_5 L_1 L_L s^2 + C_1 C_5 L_1 L_L R_1 s + C_1 C_5 L_1 L_L}{C_1 C_5 C_L L_1 L_5 L_L R_1 g_m s^6 + C_1 C_5 C_L L_1 L_5 L_L s^6 + C_1 C_5 C_L L_1 L_L R_1 s^5 + C_1 C_5 C_L L_5 L_L R_1 s^5 + C_1 C_5 L_1 L_5 R_1 g_m s^4 + C_1 C_5 L_1 L_5 s^4 + 2 C_1 C_5 L_1 L_L R_1 g_m s^4 + C_1 C_5 L_1 L_L s^4 + C_1 C_5 L_1 L_L R_1 g_m s^3 + C_1 C_5 L_1 L_L R_1 s^3 + C_1 C_5 L_1 L_L s^3 + C_1 C_5 L_1 L_L R_1 s^2 + C_1 C_5 L_1 L_L s^2 + C_1 C_5 L_1 L_L R_1 s + C_1 C_5 L_1 L_L}$$

10.988 INVALID-ORDER-988  $Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, L_L s + R_L + \frac{1}{C_L s} \right)$

$$H(s) = \frac{1}{s(C_1C_5C_LL_1L_5R_1g_ms^4 + C_1C_5C_LL_1L_5s^4 + 2C_1C_5C_LL_1L_LR_1g_ms^4 + C_1C_5C_LL_1L_Ls^4 + 2C_1C_5C_LL_1R_1R_Lg_ms^3 + C_1C_5C_LL_1R_1s^3 + C_1C_5C_LL_1R_Ls^3 + C_1C_5C_LL_5R_1s^3}$$

10.989 INVALID-ORDER-989  $Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, \frac{1}{C_L s + \frac{1}{R_L + \frac{1}{L_L s}}} \right)$

$$H(s) = \frac{C_1 C_5 C_L L_1 L_5 L_L R_1 R_L g_m s^6 + C_1 C_5 C_L L_1 L_5 L_L R_L s^6 + C_1 C_5 C_L L_1 L_L R_1 R_L s^5 + C_1 C_5 C_L L_5 L_L R_1 R_L s^5 + C_1 C_5 L_1 L_5 L_L R_1 g_m s^5 + C_1 C_5 L_1 L_5 L_L s^5 + C_1 C_5 L_1 L_5 R_1 R_L g_m s^4 +$$

10.990 INVALID-ORDER-990  $Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$

$$H(s) = \frac{C_1 C_5 C_L L_1 L_5 L_L R_1 g_m s^6 + C_1 C_5 C_L L_1 L_5 L_L s^6 + 2 C_1 C_5 C_L L_1 L_L R_1 R_L g_m s^5 + C_1 C_5 C_L L_1 L_L R_1 s^5 + C_1 C_5 C_L L_1 L_L R_L s^5 + C_1 C_5 C_L L_5 L_L R_1 s^5 + C_1 C_5 C_L L_L R_1 R_L s^4 + C_1 C_5$$

10.991 INVALID-ORDER-991  $Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$

$$H(s) = \frac{C_1 C_5 C_L L_1 L_5 L_L R_1 g_m s^6 + C_1 C_5 C_L L_1 L_5 L_L s^6 + C_1 C_5 C_L L_1 L_5 R_1 R_L g_m s^5 + C_1 C_5 C_L L_1 L_5 R_L s^5 + 2C_1 C_5 C_L L_1 L_L R_1 R_L g_m s^5 + C_1 C_5 C_L L_1 L_L R_1 s^5 + C_1 C_5 C_L L_1 L_L R_L s^5 +$$

**10.992 INVALID-ORDER-992**  $Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, R_L \right)$

$$H(s) = -\frac{R_1 R_L (C_1 L_1 s^2 + 1) (C_5 L_5 s^2 - L_5 g_m s + 1)}{2C_1 C_5 L_1 L_5 R_1 R_L g_m s^4 + C_1 C_5 L_1 L_5 R_1 s^4 + C_1 C_5 L_1 L_5 R_L s^4 + C_1 C_5 L_5 R_1 R_L s^3 + C_1 L_1 L_5 R_1 g_m s^3 + C_1 L_1 L_5 s^3 + 2C_1 L_1 R_1 R_L g_m s^2 + C_1 L_1 R_1 s^2 + C_1 L_1 R_L s^2 + C_1 L_5 R_1 s}$$

**10.993 INVALID-ORDER-993**  $Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{1}{C_L s} \right)$

$$H(s) = -\frac{R_1 (C_1 L_1 s^2 + 1) (C_5 L_5 s^2 - L_5 g_m s + 1)}{C_1 C_5 C_L L_1 L_5 R_1 s^5 + 2C_1 C_5 L_1 L_5 R_1 g_m s^4 + C_1 C_5 L_1 L_5 s^4 + C_1 C_5 L_5 R_1 s^3 + C_1 C_L L_1 L_5 R_1 g_m s^4 + C_1 C_L L_1 L_5 s^4 + C_1 C_L L_1 R_1 s^3 + C_1 C_L L_5 R_1 s^3 + 2C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2}$$

10.994 INVALID-ORDER-994  $Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{R_L}{C_L R_L s + 1} \right)$

$$H(s) = -\frac{C_1 C_5 C_L L_1 L_5 R_1 R_L s^5 + 2C_1 C_5 L_1 L_5 R_1 R_L g_m s^4 + C_1 C_5 L_1 L_5 R_1 s^4 + C_1 C_5 L_1 L_5 R_L s^4 + C_1 C_5 L_5 R_1 R_L s^3 + C_1 C_L L_1 L_5 R_1 R_L g_m s^4 + C_1 C_L L_1 L_5 R_L s^4 + C_1 C_L L_1 R_1 R_L s^3 +$$

10.995 INVALID-ORDER-995  $Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, R_L + \frac{1}{C_L s} \right)$

$$H(s) = -\frac{2C_1C_5C_LL_1L_5R_1R_Lg_ms^5 + C_1C_5C_LL_1L_5R_1s^5 + C_1C_5C_LL_1L_5R_Ls^5 + C_1C_5C_LL_5R_1R_Ls^4 + 2C_1C_5L_1L_5R_1g_ms^4 + C_1C_5L_1L_5s^4 + C_1C_5L_5R_1s^3 + C_1C_LL_1L_5R_1g_ms^4 +$$

10.996 INVALID-ORDER-996  $Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, L_L s + \frac{1}{C_L s} \right)$

$$H(s) = -\frac{2C_1C_5C_LL_1L_5L_LR_1g_ms^6 + C_1C_5C_LL_1L_5L_Ls^6 + C_1C_5C_LL_1L_5R_1s^5 + C_1C_5C_LL_5L_LR_1s^5 + 2C_1C_5L_1L_5R_1g_ms^4 + C_1C_5L_1L_5s^4 + C_1C_5L_5R_1s^3 + C_1C_LL_1L_5R_1g_ms^4 + C_1C_LL_1L_5R_1s^3 + C_1C_LL_1L_5s^2 + C_1C_LL_1s}{2C_1C_5C_LL_1L_5L_LR_1g_ms^6 + C_1C_5C_LL_1L_5L_Ls^6 + C_1C_5C_LL_1L_5R_1s^5 + C_1C_5C_LL_5L_LR_1s^5 + 2C_1C_5L_1L_5R_1g_ms^4 + C_1C_5L_1L_5s^4 + C_1C_5L_5R_1s^3 + C_1C_LL_1L_5R_1g_ms^4 + C_1C_LL_1L_5R_1s^3 + C_1C_LL_1L_5s^2 + C_1C_LL_1s}$$

10.997 INVALID-ORDER-997  $Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{L_L s}{C_L L_L s^2 + 1} \right)$

$$H(s) = -\frac{C_1 C_5 C_L L_1 L_5 L_L R_1 s^6 + 2 C_1 C_5 L_1 L_5 L_L R_1 g_m s^5 + C_1 C_5 L_1 L_5 L_L s^5 + C_1 C_5 L_1 L_5 R_1 s^4 + C_1 C_5 L_5 L_L R_1 s^4 + C_1 C_L L_1 L_5 L_L R_1 g_m s^5 + C_1 C_L L_1 L_5 L_L s^5 + C_1 C_L L_1 L_L R_1 s^4 + C_1 C_L L_1 L_L s^4}{C_1 C_5 C_L L_1 L_5 L_L R_1 s^6 + 2 C_1 C_5 L_1 L_5 L_L R_1 g_m s^5 + C_1 C_5 L_1 L_5 L_L s^5 + C_1 C_5 L_1 L_5 R_1 s^4 + C_1 C_5 L_5 L_L R_1 s^4 + C_1 C_L L_1 L_5 L_L R_1 g_m s^5 + C_1 C_L L_1 L_5 L_L s^5 + C_1 C_L L_1 L_L R_1 s^4 + C_1 C_L L_1 L_L s^4}.$$

10.998 INVALID-ORDER-998  $Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, L_L s + R_L + \frac{1}{C_L s} \right)$

$$H(s) = -\frac{2C_1C_5C_LL_1L_5L_LR_1g_ms^6 + C_1C_5C_LL_1L_5L_Ls^6 + 2C_1C_5C_LL_1L_5R_1R_Lg_ms^5 + C_1C_5C_LL_1L_5R_1s^5 + C_1C_5C_LL_1L_5R_Ls^5 + C_1C_5C_LL_5L_LR_1s^5 + C_1C_5C_LL_5R_1R_Ls^4 + 2C_1C_5C_LL_5R_1R_Ls^3 + C_1C_5C_LL_5R_1R_Ls^2 + C_1C_5C_LL_5R_1R_Ls + C_1C_5C_LL_5R_1R_L}{2C_1C_5C_LL_1L_5L_LR_1g_ms^6 + C_1C_5C_LL_1L_5L_Ls^6 + 2C_1C_5C_LL_1L_5R_1R_Lg_ms^5 + C_1C_5C_LL_1L_5R_1s^5 + C_1C_5C_LL_1L_5R_Ls^5 + C_1C_5C_LL_5L_LR_1s^5 + C_1C_5C_LL_5R_1R_Ls^4 + 2C_1C_5C_LL_5R_1R_Ls^3 + C_1C_5C_LL_5R_1R_Ls^2 + C_1C_5C_LL_5R_1R_Ls + C_1C_5C_LL_5R_1R_L}.$$

10.999 INVALID-ORDER-999  $Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$

$$H(s) = -\frac{C_1 C_5 C_L L_1 L_5 L_L R_1 R_L s^6 + 2 C_1 C_5 L_1 L_5 L_L R_1 R_L g_m s^5 + C_1 C_5 L_1 L_5 L_L R_1 s^5 + C_1 C_5 L_1 L_5 L_L R_L s^5 + C_1 C_5 L_1 L_5 R_1 R_L s^4 + C_1 C_5 L_5 L_L R_1 R_L s^4 + C_1 C_L L_1 L_5 L_L R_1 R_L g_m s^5 +$$

10.1000 INVALID-ORDER-1000  $Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$

$$H(s) = -\frac{2C_1C_5C_L L_1L_5L_L R_1R_L g_m s^6 + C_1C_5C_L L_1L_5L_L R_1 s^6 + C_1C_5C_L L_1L_5L_L R_L s^6 + C_1C_5C_L L_5L_L R_1R_L s^5 + 2C_1C_5L_1L_5L_L R_1g_m s^5 + C_1C_5L_1L_5L_L s^5 + 2C_1C_5L_1L_5R_1R_L g_m s^4 + C_1C_5L_1L_5R_1R_L s^4 + C_1C_5L_1L_5R_L g_m s^4 + C_1C_5L_1L_5R_L s^4 + C_1C_5L_1L_5R_L g_m s^3 + C_1C_5L_1L_5R_L s^3 + C_1C_5L_1L_5R_L g_m s^2 + C_1C_5L_1L_5R_L s^2 + C_1C_5L_1L_5R_L g_m s + C_1C_5L_1L_5R_L s}{2C_1C_5C_L L_1L_5L_L R_1R_L g_m s^6 + C_1C_5C_L L_1L_5L_L R_1 s^6 + C_1C_5C_L L_1L_5L_L R_L s^6 + C_1C_5C_L L_5L_L R_1R_L s^5 + 2C_1C_5L_1L_5L_L R_1g_m s^5 + C_1C_5L_1L_5L_L s^5 + 2C_1C_5L_1L_5R_1R_L g_m s^4 + C_1C_5L_1L_5R_1R_L s^4 + C_1C_5L_1L_5R_L g_m s^4 + C_1C_5L_1L_5R_L s^4 + C_1C_5L_1L_5R_L g_m s^3 + C_1C_5L_1L_5R_L s^3 + C_1C_5L_1L_5R_L g_m s^2 + C_1C_5L_1L_5R_L s^2 + C_1C_5L_1L_5R_L g_m s + C_1C_5L_1L_5R_L s}$$

10.1001 INVALID-ORDER-1001  $Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$

$$H(s) = -\frac{2C_1C_5C_LL_1L_5L_LR_1R_Lg_ms^6 + C_1C_5C_LL_1L_5L_LR_1s^6 + C_1C_5C_LL_1L_5L_LR_Ls^6 + C_1C_5C_LL_1L_5R_1R_Ls^5 + C_1C_5C_LL_5L_LR_1R_Ls^5 + 2C_1C_5L_1L_5R_1R_Lg_ms^4 + C_1C_5L_1L_5R_1R_Lg_ms^4 + C_1C_5L_1L_5R_1R_Lg_ms^4}{2C_1C_5C_LL_1L_5L_LR_1R_Lg_ms^6 + C_1C_5C_LL_1L_5L_LR_1s^6 + C_1C_5C_LL_1L_5L_LR_Ls^6 + C_1C_5C_LL_1L_5R_1R_Ls^5 + C_1C_5C_LL_5L_LR_1R_Ls^5 + 2C_1C_5L_1L_5R_1R_Lg_ms^4 + C_1C_5L_1L_5R_1R_Lg_ms^4 + C_1C_5L_1L_5R_1R_Lg_ms^4}$$

**10.1002 INVALID-ORDER-1002**  $Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, R_L \right)$

$$H(s) = \frac{R_1 R_L (C_1 L_1 s^2 + 1) (C_5 L_5 g_m s^2 + C_5 R_5 g_m s + C_5 R_5)}{C_1 C_5 L_1 L_5 R_1 g_m s^4 + C_1 C_5 L_1 L_5 s^4 + C_1 C_5 L_1 R_1 R_5 g_m s^3 + 2 C_1 C_5 L_1 R_1 R_L g_m s^3 + C_1 C_5 L_1 R_1 s^3 + C_1 C_5 L_1 R_5 s^3 + C_1 C_5 L_1 R_L s^3 + C_1 C_5 L_5 R_1 s^3 + C_1 C_5 R_1 R_5 s^2 + C_1 C_5 R_1 R_L s^2 + C_1 C_5 R_5 R_L s^2 + C_1 C_5 R_5}$$

10.1003 INVALID-ORDER-1003  $Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{1}{C_L s} \right)$

$$H(s) = \frac{R_1(C_1 L_1 s^2 + 1)(C_5 L_5 g_m}{s(C_1 C_5 C_L L_1 L_5 R_1 g_m s^4 + C_1 C_5 C_L L_1 L_5 s^4 + C_1 C_5 C_L L_1 R_1 R_5 g_m s^3 + C_1 C_5 C_L L_1 R_1 s^3 + C_1 C_5 C_L L_1 R_5 s^3 + C_1 C_5 C_L L_5 R_1 s^3 + C_1 C_5 C_L R_1 R_5 s^2 + 2C_1 C_5 L_1 R_1 g_m s^2 + C_1 C_5$$

10.1004 INVALID-ORDER-1004  $Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{R_L}{C_L R_L s + 1} \right)$

$$H(s) = \frac{C_1 C_5 C_L L_1 L_5 R_1 R_L g_m s^5 + C_1 C_5 C_L L_1 L_5 R_L s^5 + C_1 C_5 C_L L_1 R_1 R_5 R_L g_m s^4 + C_1 C_5 C_L L_1 R_1 R_L s^4 + C_1 C_5 C_L L_1 R_5 R_L s^4 + C_1 C_5 C_L L_5 R_1 R_L s^4 + C_1 C_5 C_L R_1 R_5 R_L s^3 + C_1 C_5}{C_1 C_5 C_L L_1 L_5 R_1 R_L g_m s^5 + C_1 C_5 C_L L_1 L_5 R_L s^5 + C_1 C_5 C_L L_1 R_1 R_5 R_L g_m s^4 + C_1 C_5 C_L L_1 R_1 R_L s^4 + C_1 C_5 C_L L_1 R_5 R_L s^4 + C_1 C_5 C_L L_5 R_1 R_L s^4 + C_1 C_5 C_L R_1 R_5 R_L s^3 + C_1 C_5}$$

10.1005 INVALID-ORDER-1005  $Z(s) = \left( \frac{R_1(L_1s + \frac{1}{C_1s})}{L_1s + R_1 + \frac{1}{C_1s}}, \infty, \infty, \infty, L_5s + R_5 + \frac{1}{C_5s}, R_L + \frac{1}{C_Ls} \right)$

$$H(s) = \frac{1}{s(C_1 C_5 C_L L_1 L_5 R_1 g_m s^4 + C_1 C_5 C_L L_1 L_5 s^4 + C_1 C_5 C_L L_1 R_1 R_5 g_m s^3 + 2C_1 C_5 C_L L_1 R_1 R_L g_m s^3 + C_1 C_5 C_L L_1 R_1 s^3 + C_1 C_5 C_L L_1 R_5 s^3 + C_1 C_5 C_L L_1 R_L s^3 + C_1 C_5 C_L L_5 R_1 s^3 +$$

**10.1006 INVALID-ORDER-1006**  $Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, L_L s + \frac{1}{C_L s} \right)$

$$H(s) = \frac{s(C_1 C_5 C_L L_1 L_5 R_1 g_m s^4 + C_1 C_5 C_L L_1 L_5 s^4 + 2C_1 C_5 C_L L_1 L_L R_1 g_m s^4 + C_1 C_5 C_L L_1 L_L s^4 + C_1 C_5 C_L L_1 R_1 R_5 g_m s^3 + C_1 C_5 C_L L_1 R_1 s^3 + C_1 C_5 C_L L_1 R_5 s^3 + C_1 C_5 C_L L_5 R_1 s^3 +$$

10.1007 INVALID-ORDER-1007  $Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} \right)$

$$H(s) = \frac{C_1 C_5 C_L L_1 L_5 L_L R_1 g_m s^6 + C_1 C_5 C_L L_1 L_5 L_L s^6 + C_1 C_5 C_L L_1 L_L R_1 R_5 g_m s^5 + C_1 C_5 C_L L_1 L_L R_1 s^5 + C_1 C_5 C_L L_1 L_L R_5 s^5 + C_1 C_5 C_L L_5 L_L R_1 s^5 + C_1 C_5 C_L L_L R_1 R_5 s^4 + C_1 C_5 L$$

10.1008 INVALID-ORDER-1008  $Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, L_L s + R_L + \frac{1}{C_L s} \right)$

$$H(s) = \frac{s(C_1C_5C_LL_1L_5R_1g_ms^4 + C_1C_5C_LL_1L_5s^4 + 2C_1C_5C_LL_1L_LR_1g_ms^4 + C_1C_5C_LL_1L_Ls^4 + C_1C_5C_LL_1R_1R_5g_ms^3 + 2C_1C_5C_LL_1R_1R_Lg_ms^3 + C_1C_5C_LL_1R_1s^3 + C_1C_5C_LL_1$$

10.1009 INVALID-ORDER-1009  $Z(s) = \left( \frac{R_1(L_1s + \frac{1}{C_1s})}{L_1s + R_1 + \frac{1}{C_1s}}, \infty, \infty, \infty, L_5s + R_5 + \frac{1}{C_5s}, \frac{1}{C_Ls + \frac{1}{R_L} + \frac{1}{L_Ls}} \right)$

$$H(s) = \frac{C_1 C_5 C_L L_1 L_5 L_L R_1 R_L g_m s^6 + C_1 C_5 C_L L_1 L_5 L_L R_L s^6 + C_1 C_5 C_L L_1 L_L R_1 R_5 R_L g_m s^5 + C_1 C_5 C_L L_1 L_L R_1 R_L s^5 + C_1 C_5 C_L L_1 L_L R_5 R_L s^5 + C_1 C_5 C_L L_5 L_L R_1 R_L s^5 + C_1 C_5 C_L L$$

**10.1010 INVALID-ORDER-1010**  $Z(s) = \left( \frac{R_1(L_1s + \frac{1}{C_1s})}{L_1s + R_1 + \frac{1}{C_1s}}, \infty, \infty, \infty, L_5s + R_5 + \frac{1}{C_5s}, \frac{L_Ls}{C_LL_Ls^2 + 1} + R_L \right)$

$$H(s) = \frac{C_1 C_5 C_L L_1 L_5 L_L R_1 g_m s^6 + C_1 C_5 C_L L_1 L_5 L_L s^6 + C_1 C_5 C_L L_1 L_L R_1 R_5 g_m s^5 + 2 C_1 C_5 C_L L_1 L_L R_1 R_L g_m s^5 + C_1 C_5 C_L L_1 L_L R_1 s^5 + C_1 C_5 C_L L_1 L_L R_5 s^5 + C_1 C_5 C_L L_1 L_L R_L s^5 +$$

$$\text{10.1011 INVALID-ORDER-1011 } Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$$

$$H(s) = \frac{C_1 C_5 C_L L_1 L_5 L_L R_1 g_m s^6 + C_1 C_5 C_L L_1 L_5 L_L s^6 + C_1 C_5 C_L L_1 L_5 R_1 R_L g_m s^5 + C_1 C_5 C_L L_1 L_5 R_L s^5 + C_1 C_5 C_L L_1 L_L R_1 R_5 g_m s^5 + 2 C_1 C_5 C_L L_1 L_L R_1 R_L g_m s^5 + C_1 C_5 C_L L_1 L_L R_1 R_5 s^5 + C_1 C_5 C_L L_1 L_L R_1 R_5 s^5}{C_1 C_5 C_L L_1 L_5 L_L R_1 g_m s^6 + C_1 C_5 C_L L_1 L_5 L_L s^6 + C_1 C_5 C_L L_1 L_5 R_1 R_L g_m s^5 + C_1 C_5 C_L L_1 L_5 R_L s^5 + C_1 C_5 C_L L_1 L_L R_1 R_5 g_m s^5 + 2 C_1 C_5 C_L L_1 L_L R_1 R_L g_m s^5 + C_1 C_5 C_L L_1 L_L R_1 R_5 s^5 + C_1 C_5 C_L L_1 L_L R_1 R_5 s^5}$$

**10.1012 INVALID-ORDER-1012**  $Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, R_L \right)$

$$H(s) = -\frac{2C_1C_5L_1L_5R_1R_5R_Lg_ms^4 + C_1C_5L_1L_5R_1R_5s^4 + C_1C_5L_1L_5R_5R_Ls^4 + C_1C_5L_5R_1R_5R_Ls^3 + C_1L_1L_5R_1R_5g_ms^3 + 2C_1L_1L_5R_1R_Lg_ms^3 + C_1L_1L_5R_1s^3 + C_1L_1L_5R_5s^3 + C_1L_1L_5R_5R_Ls^3 + C_1L_1L_5R_5R_Lg_ms^3 + C_1L_1L_5R_5R_Ls^3 + C_1L_1L_5R_5R_Ls^3 + C_1L_1L_5R_5R_Ls^3}{2C_1C_5L_1L_5R_1R_5R_Lg_ms^4 + C_1C_5L_1L_5R_1R_5s^4 + C_1C_5L_1L_5R_5R_Ls^4 + C_1C_5L_5R_1R_5R_Ls^3 + C_1L_1L_5R_1R_5g_ms^3 + 2C_1L_1L_5R_1R_Lg_ms^3 + C_1L_1L_5R_1s^3 + C_1L_1L_5R_5s^3 + C_1L_1L_5R_5R_Ls^3 + C_1L_1L_5R_5R_Lg_ms^3 + C_1L_1L_5R_5R_Ls^3 + C_1L_1L_5R_5R_Ls^3 + C_1L_1L_5R_5R_Ls^3}.$$

10.1013 INVALID-ORDER-1013  $Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{1}{C_L s} \right)$

$$H(s) = -\frac{C_1 C_5 C_L L_1 L_5 R_1 R_5 s^5 + 2C_1 C_5 L_1 L_5 R_1 R_5 g_m s^4 + C_1 C_5 L_1 L_5 R_5 s^4 + C_1 C_5 L_5 R_1 R_5 s^3 + C_1 C_L L_1 L_5 R_1 R_5 g_m s^4 + C_1 C_L L_1 L_5 R_1 s^4 + C_1 C_L L_1 L_5 R_5 s^4 + C_1 C_L L_1 R_1 R_5 s^3 + C_1 C_L L_1 R_5 s^2 + C_1 C_L L_1 R_1 s + C_1 C_L L_1}{C_1 C_5 C_L L_1 L_5 R_1 R_5 s^5 + 2C_1 C_5 L_1 L_5 R_1 R_5 g_m s^4 + C_1 C_5 L_1 L_5 R_5 s^4 + C_1 C_5 L_5 R_1 R_5 s^3 + C_1 C_L L_1 L_5 R_1 R_5 g_m s^4 + C_1 C_L L_1 L_5 R_1 s^4 + C_1 C_L L_1 L_5 R_5 s^4 + C_1 C_L L_1 R_1 R_5 s^3 + C_1 C_L L_1 R_5 s^2 + C_1 C_L L_1 R_1 s + C_1 C_L L_1}$$

10.1014 INVALID-ORDER-1014  $Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{R_L}{C_L R_L s + 1} \right)$

$$H(s) = -\frac{C_1 C_5 C_L L_1 L_5 R_1 R_5 R_L s^5 + 2C_1 C_5 L_1 L_5 R_1 R_5 R_L g_m s^4 + C_1 C_5 L_1 L_5 R_1 R_5 s^4 + C_1 C_5 L_1 L_5 R_5 R_L s^4 + C_1 C_5 L_5 R_1 R_5 R_L s^3 + C_1 C_L L_1 L_5 R_1 R_5 R_L g_m s^4 + C_1 C_L L_1 L_5 R_1 R_L s^4 +$$

10.1015 INVALID-ORDER-1015  $Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5 + \frac{1}{L_5 s}}}, R_L + \frac{1}{C_L s} \right)$

$$H(s) = -\frac{2C_1C_5C_L L_1L_5R_1R_5R_Lg_ms^5 + C_1C_5C_L L_1L_5R_1R_5s^5 + C_1C_5C_L L_1L_5R_5R_Ls^5 + C_1C_5C_L L_5R_1R_5R_Ls^4 + 2C_1C_5L_1L_5R_1R_5g_ms^4 + C_1C_5L_1L_5R_5s^4 + C_1C_5L_5R_1R_5s^3 + C_1C_5L_5R_5s^2}{2C_1C_5C_L L_1L_5R_1R_5R_Lg_ms^5 + C_1C_5C_L L_1L_5R_1R_5s^5 + C_1C_5C_L L_1L_5R_5R_Ls^5 + C_1C_5C_L L_5R_1R_5R_Ls^4 + 2C_1C_5L_1L_5R_1R_5g_ms^4 + C_1C_5L_1L_5R_5s^4 + C_1C_5L_5R_1R_5s^3 + C_1C_5L_5R_5s^2}.$$

10.1016 INVALID-ORDER-1016  $Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, L_L s + \frac{1}{C_L s} \right)$

$$H(s) = -\frac{2C_1 C_5 C_L L_1 L_5 L_L R_1 R_5 g_m s^6 + C_1 C_5 C_L L_1 L_5 L_L R_5 s^6 + C_1 C_5 C_L L_1 L_5 R_1 R_5 s^5 + C_1 C_5 C_L L_5 L_L R_1 R_5 s^5 + 2C_1 C_5 L_1 L_5 R_1 R_5 g_m s^4 + C_1 C_5 L_1 L_5 R_5 s^4 + C_1 C_5 L_5 R_1 R_5 s^3 + 2C$$

10.1017 INVALID-ORDER-1017  $Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{L_L s}{C_L L_L s^2 + 1} \right)$

$$H(s) = -\frac{C_1 C_5 C_L L_1 L_5 L_L R_1 R_5 s^6 + 2C_1 C_5 L_1 L_5 L_L R_1 R_5 g_m s^5 + C_1 C_5 L_1 L_5 L_L R_5 s^5 + C_1 C_5 L_1 L_5 R_1 R_5 s^4 + C_1 C_5 L_5 L_L R_1 R_5 s^4 + C_1 C_L L_1 L_5 L_L R_1 R_5 g_m s^5 + C_1 C_L L_1 L_5 L_L R_1 s^5 + C_1 C_L L_1 L_5 L_L R_5 s^5}{C_1 C_5 C_L L_1 L_5 L_L R_1 R_5 s^6 + 2C_1 C_5 L_1 L_5 L_L R_1 R_5 g_m s^5 + C_1 C_5 L_1 L_5 L_L R_5 s^5 + C_1 C_5 L_1 L_5 R_1 R_5 s^4 + C_1 C_5 L_5 L_L R_1 R_5 s^4 + C_1 C_L L_1 L_5 L_L R_1 R_5 g_m s^5 + C_1 C_L L_1 L_5 L_L R_1 s^5 + C_1 C_L L_1 L_5 L_L R_5 s^5}.$$

10.1018 INVALID-ORDER-1018  $Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, L_L s + R_L + \frac{1}{C_L s} \right)$

$$H(s) = -\frac{2C_1C_5C_LL_1L_5L_LR_1R_5g_ms^6 + C_1C_5C_LL_1L_5L_LR_5s^6 + 2C_1C_5C_LL_1L_5R_1R_5R_Lg_ms^5 + C_1C_5C_LL_1L_5R_1R_5s^5 + C_1C_5C_LL_1L_5R_5R_Ls^5 + C_1C_5C_LL_5L_LR_1R_5s^5 + C_1C_5C_L$$

10.1019 INVALID-ORDER-1019  $Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$

$$H(s) = -\frac{C_1 C_5 C_L L_1 L_5 L_L R_1 R_5 R_L s^6 + 2C_1 C_5 L_1 L_5 L_L R_1 R_5 R_L g_m s^5 + C_1 C_5 L_1 L_5 L_L R_1 R_5 s^5 + C_1 C_5 L_1 L_5 L_L R_5 R_L s^5 + C_1 C_5 L_1 L_5 R_1 R_5 R_L s^4 + C_1 C_5 L_5 L_L R_1 R_5 R_L s^4 + C_1 C_L L_1 L_5 L_L R_1 R_5 R_L s^4 + C_1 C_L L_1 L_5 L_L R_1 R_5 s^4 + C_1 C_L L_1 L_5 L_L R_5 R_L s^4 + C_1 C_L L_1 L_5 R_1 R_5 R_L s^4 + C_1 C_L L_1 L_5 R_1 R_5 s^4 + C_1 C_L L_1 L_5 R_5 R_L s^4 + C_1 C_L L_1 L_5 R_5 s^4 + C_1 C_L L_1 L_5 R s^4 + C_1 C_L L_1 L_5 s^4 + C_1 C_L L_1 L s^4 + C_1 C_L L_1 s^4 + C_1 C_L L s^4 + C_1 C_L s^4 + C_1 C s^4 + C_1 s^4}{C_1 C_5 C_L L_1 L_5 L_L R_1 R_5 R_L s^6 + 2C_1 C_5 L_1 L_5 L_L R_1 R_5 R_L g_m s^5 + C_1 C_5 L_1 L_5 L_L R_1 R_5 s^5 + C_1 C_5 L_1 L_5 L_L R_5 R_L s^5 + C_1 C_5 L_1 L_5 R_1 R_5 R_L s^4 + C_1 C_5 L_5 L_L R_1 R_5 R_L s^4 + C_1 C_L L_1 L_5 L_L R_1 R_5 R_L s^4 + C_1 C_L L_1 L_5 L_L R_1 R_5 s^4 + C_1 C_L L_1 L_5 L_L R_5 R_L s^4 + C_1 C_L L_1 L_5 R_1 R_5 R_L s^4 + C_1 C_L L_1 L_5 R_1 R_5 s^4 + C_1 C_L L_1 L_5 R_5 R_L s^4 + C_1 C_L L_1 L_5 R_5 s^4 + C_1 C_L L_1 L_5 R s^4 + C_1 C_L L_1 L_5 s^4 + C_1 C_L L_1 L s^4 + C_1 C_L L_1 s^4 + C_1 C_L L s^4 + C_1 C_L s^4 + C_1 C s^4 + C_1 s^4}$$



**10.1020 INVALID-ORDER-1020**  $Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$

$$H(s) = -\frac{2C_1C_5C_LL_1L_5L_LR_1R_5R_Lg_ms^6 + C_1C_5C_LL_1L_5L_LR_1R_5s^6 + C_1C_5C_LL_1L_5L_LR_5R_Ls^6 + C_1C_5C_LL_5L_LR_1R_5R_Ls^5 + 2C_1C_5L_1L_5L_LR_1R_5g_ms^5 + C_1C_5L_1L_5L_LR_5s^5 + 2C_1C_5L_1L_5L_LR_5g_ms^4 + C_1C_5L_1L_5L_LR_5s^4 + 2C_1C_5L_1L_5L_LR_5g_ms^3 + C_1C_5L_1L_5L_LR_5s^3 + 2C_1C_5L_1L_5L_LR_5g_ms^2 + C_1C_5L_1L_5L_LR_5s^2 + 2C_1C_5L_1L_5L_LR_5g_ms + C_1C_5L_1L_5L_LR_5s + 2C_1C_5L_1L_5L_LR_5g_m + C_1C_5L_1L_5L_LR_5}{2C_1C_5C_LL_1L_5L_LR_1R_5R_Lg_ms^6 + C_1C_5C_LL_1L_5L_LR_1R_5s^6 + C_1C_5C_LL_1L_5L_LR_5R_Ls^6 + C_1C_5C_LL_5L_LR_1R_5R_Ls^5 + 2C_1C_5L_1L_5L_LR_1R_5g_ms^5 + C_1C_5L_1L_5L_LR_5s^5 + 2C_1C_5L_1L_5L_LR_5g_ms^4 + C_1C_5L_1L_5L_LR_5s^4 + 2C_1C_5L_1L_5L_LR_5g_ms^3 + C_1C_5L_1L_5L_LR_5s^3 + 2C_1C_5L_1L_5L_LR_5g_ms^2 + C_1C_5L_1L_5L_LR_5s^2 + 2C_1C_5L_1L_5L_LR_5g_ms + C_1C_5L_1L_5L_LR_5}$$

10.1021 INVALID-ORDER-1021  $Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$

$$H(s) = -\frac{2C_1C_5C_LL_1L_5L_LR_1R_5R_Lg_ms^6 + C_1C_5C_LL_1L_5L_LR_1R_5s^6 + C_1C_5C_LL_1L_5L_LR_5R_Ls^6 + C_1C_5C_LL_1L_5R_1R_5R_Ls^5 + C_1C_5C_LL_5L_LR_1R_5R_Ls^5 + 2C_1C_5L_1L_5R_1R_5R_Lg_ms^5}{2C_1C_5C_LL_1L_5L_LR_1R_5R_Lg_ms^6 + C_1C_5C_LL_1L_5L_LR_1R_5s^6 + C_1C_5C_LL_1L_5L_LR_5R_Ls^6 + C_1C_5C_LL_1L_5R_1R_5R_Ls^5 + C_1C_5C_LL_5L_LR_1R_5R_Ls^5 + 2C_1C_5L_1L_5R_1R_5R_Lg_ms^5}$$

10.1022 INVALID-ORDER-1022  $Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, R_L \right)$

$$H(s) = \frac{1}{C_1 C_5 L_1 L_5 R_1 R_5 g_m s^4 + 2 C_1 C_5 L_1 L_5 R_1 R_L g_m s^4 + C_1 C_5 L_1 L_5 R_1 s^4 + C_1 C_5 L_1 L_5 R_5 s^4 + C_1 C_5 L_1 L_5 R_L s^4 + C_1 C_5 L_5 R_1 R_5 s^3 + C_1 C_5 L_5 R_1 R_L s^3 + C_1 L_1 L_5 R_1 g_m s^3 + C_1 L_1 L_5 s^3}$$

**10.1023 INVALID-ORDER-1023**  $Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{1}{C_L s} \right)$

$$H(s) = \frac{C_1 C_5 C_L L_1 L_5 R_1 R_5 g_m s^5 + C_1 C_5 C_L L_1 L_5 R_1 s^5 + C_1 C_5 C_L L_1 L_5 R_5 s^5 + C_1 C_5 C_L L_5 R_1 R_5 s^4 + 2 C_1 C_5 L_1 L_5 R_1 g_m s^4 + C_1 C_5 L_1 L_5 s^4 + C_1 C_5 L_5 R_1 s^3 + C_1 C_L L_1 L_5 R_1 g_m s^4 + C_1 C_L L_1 L_5 R_1 s^3}{C_1 C_5 C_L L_1 L_5 R_1 R_5 g_m s^5 + C_1 C_5 C_L L_1 L_5 R_1 s^5 + C_1 C_5 C_L L_1 L_5 R_5 s^5 + C_1 C_5 C_L L_5 R_1 R_5 s^4 + 2 C_1 C_5 L_1 L_5 R_1 g_m s^4 + C_1 C_5 L_1 L_5 s^4 + C_1 C_5 L_5 R_1 s^3 + C_1 C_L L_1 L_5 R_1 g_m s^4 + C_1 C_L L_1 L_5 R_1 s^3}$$

10.1024 INVALID-ORDER-1024  $Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{R_L}{C_L R_L s + 1} \right)$

$$H(s) = \frac{C_1 C_5 C_L L_1 L_5 R_1 R_5 R_L g_m s^5 + C_1 C_5 C_L L_1 L_5 R_1 R_L s^5 + C_1 C_5 C_L L_1 L_5 R_5 R_L s^5 + C_1 C_5 C_L L_5 R_1 R_5 R_L s^4 + C_1 C_5 L_1 L_5 R_1 R_5 g_m s^4 + 2 C_1 C_5 L_1 L_5 R_1 R_L g_m s^4 + C_1 C_5 L_1 L_5 R_1 s^4 +$$

10.1025 INVALID-ORDER-1025  $Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, R_L + \frac{1}{C_L s} \right)$

$$H(s) = \frac{C_1 C_5 C_L L_1 L_5 R_1 R_5 g_m s^5 + 2 C_1 C_5 C_L L_1 L_5 R_1 R_L g_m s^5 + C_1 C_5 C_L L_1 L_5 R_1 s^5 + C_1 C_5 C_L L_1 L_5 R_5 s^5 + C_1 C_5 C_L L_1 L_5 R_L s^5 + C_1 C_5 C_L L_5 R_1 R_5 s^4 + C_1 C_5 C_L L_5 R_1 R_L s^4 + 2 C_1 C_5$$

**10.1026 INVALID-ORDER-1026**  $Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, L_L s + \frac{1}{C_L s} \right)$

$$H(s) = \frac{2C_1 C_5 C_L L_1 L_5 L_L R_1 q_m s^6 + C_1 C_5 C_L L_1 L_5 L_L s^6 + C_1 C_5 C_L L_1 L_5 R_1 R_5 q_m s^5 + C_1 C_5 C_L L_1 L_5 R_1 s^5 + C_1 C_5 C_L L_1 L_5 R_5 s^5 + C_1 C_5 C_L L_5 L_L R_1 s^5 + C_1 C_5 C_L L_5 R_1 R_5 s^4 + 2C_1 C_5}{2C_1 C_5 C_L L_1 L_5 L_L R_1 q_m s^6 + C_1 C_5 C_L L_1 L_5 L_L s^6 + C_1 C_5 C_L L_1 L_5 R_1 R_5 q_m s^5 + C_1 C_5 C_L L_1 L_5 R_1 s^5 + C_1 C_5 C_L L_1 L_5 R_5 s^5 + C_1 C_5 C_L L_5 L_L R_1 s^5 + C_1 C_5 C_L L_5 R_1 R_5 s^4 + 2C_1 C_5}$$

10.1027 INVALID-ORDER-1027  $Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{L_L s}{C_L L_L s^2 + 1} \right)$

$$H(s) = \frac{C_1 C_5 C_L L_1 L_5 L_L R_1 R_5 g_m s^6 + C_1 C_5 C_L L_1 L_5 L_L R_1 s^6 + C_1 C_5 C_L L_1 L_5 L_L R_5 s^6 + C_1 C_5 C_L L_5 L_L R_1 R_5 s^5 + 2 C_1 C_5 L_1 L_5 L_L R_1 g_m s^5 + C_1 C_5 L_1 L_5 L_L s^5 + C_1 C_5 L_1 L_5 R_1 R_5 g_m s^4 +$$

10.1028 INVALID-ORDER-1028  $Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, L_L s + R_L + \frac{1}{C_L s} \right)$

$$H(s) = \frac{2C_1C_5C_LL_1L_5L_LR_1q_ms^6 + C_1C_5C_LL_1L_5L_Ls^6 + C_1C_5C_LL_1L_5R_1R_5q_ms^5 + 2C_1C_5C_LL_1L_5R_1R_Lq_ms^5 + C_1C_5C_LL_1L_5R_1s^5 + C_1C_5C_LL_1L_5R_5s^5 + C_1C_5C_LL_1L_5R_Ls^5 + C_1C_5C_LL_1L_5R_5R_Ls^5 + C_1C_5C_LL_1L_5R_LR_5s^5 + C_1C_5C_LL_1L_5R_LR_5R_Ls^5}{2C_1C_5C_LL_1L_5L_LR_1q_ms^6 + C_1C_5C_LL_1L_5L_Ls^6 + C_1C_5C_LL_1L_5R_1R_5q_ms^5 + 2C_1C_5C_LL_1L_5R_1R_Lq_ms^5 + C_1C_5C_LL_1L_5R_1s^5 + C_1C_5C_LL_1L_5R_5s^5 + C_1C_5C_LL_1L_5R_Ls^5 + C_1C_5C_LL_1L_5R_5R_Ls^5 + C_1C_5C_LL_1L_5R_LR_5s^5 + C_1C_5C_LL_1L_5R_LR_5R_Ls^5}.$$

**10.1029 INVALID-ORDER-1029**  $Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$

$$H(s) = \frac{C_1 C_5 C_L L_1 L_5 L_L R_1 R_5 R_L g_m s^6 + C_1 C_5 C_L L_1 L_5 L_L R_1 R_L s^6 + C_1 C_5 C_L L_1 L_5 L_L R_5 R_L s^6 + C_1 C_5 C_L L_5 L_L R_1 R_5 R_L s^5 + C_1 C_5 L_1 L_5 L_L R_1 R_5 g_m s^5 + 2 C_1 C_5 L_1 L_5 L_L R_1 R_L g_m s^5 +$$

**10.1030 INVALID-ORDER-1030**  $Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$

$$H(s) = \frac{C_1 C_5 C_L L_1 L_5 L_L R_1 R_5 g_m s^6 + 2 C_1 C_5 C_L L_1 L_5 L_L R_1 R_L g_m s^6 + C_1 C_5 C_L L_1 L_5 L_L R_1 s^6 + C_1 C_5 C_L L_1 L_5 L_L R_5 s^6 + C_1 C_5 C_L L_1 L_5 L_L R_L s^6 + C_1 C_5 C_L L_5 L_L R_1 R_5 s^5 + C_1 C_5 C_L L_5}{\dots}$$

10.1031 INVALID-ORDER-1031  $Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$

$$H(s) = \frac{C_1 C_5 C_L L_1 L_5 L_L R_1 R_5 g_m s^6 + 2 C_1 C_5 C_L L_1 L_5 L_L R_1 R_L g_m s^6 + C_1 C_5 C_L L_1 L_5 L_L R_1 s^6 + C_1 C_5 C_L L_1 L_5 L_L R_5 s^6 + C_1 C_5 C_L L_1 L_5 L_L R_L s^6 + C_1 C_5 C_L L_1 L_5 R_1 R_5 R_L g_m s^5 + C_1 C_5$$

**10.1032 INVALID-ORDER-1032**  $Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, R_L \right)$

$$H(s) = -\frac{C_1 C_5 L_1 L_5 R_1 R_5 g_m s^4 + 2 C_1 C_5 L_1 L_5 R_1 R_L g_m s^4 + C_1 C_5 L_1 L_5 R_1 s^4 + C_1 C_5 L_1 L_5 R_5 s^4 + C_1 C_5 L_1 L_5 R_L s^4 + 2 C_1 C_5 L_1 R_1 R_5 R_L g_m s^3 + C_1 C_5 L_1 R_1 R_5 s^3 + C_1 C_5 L_1 R_5 R_L s^3 + C_1 C_5 L_1 R_5 s^3 + C_1 C_5 L_1 R_1 R_5 s^3 + C_1 C_5 L_1 R_1 s^3 + C_1 C_5 L_1 R_5 s^3 + C_1 C_5 L_1 s^3 + C_1 C_5 s^3}{C_1 C_5 L_1 L_5 R_1 R_5 g_m s^4 + 2 C_1 C_5 L_1 L_5 R_1 R_L g_m s^4 + C_1 C_5 L_1 L_5 R_1 s^4 + C_1 C_5 L_1 L_5 R_5 s^4 + C_1 C_5 L_1 L_5 R_L s^4 + 2 C_1 C_5 L_1 R_1 R_5 R_L g_m s^3 + C_1 C_5 L_1 R_1 R_5 s^3 + C_1 C_5 L_1 R_5 R_L s^3 + C_1 C_5 L_1 R_5 s^3 + C_1 C_5 L_1 R_1 R_5 s^3 + C_1 C_5 L_1 R_1 s^3 + C_1 C_5 L_1 R_5 s^3 + C_1 C_5 L_1 s^3 + C_1 C_5 s^3}$$

**10.1033 INVALID-ORDER-1033**  $Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{1}{C_L s} \right)$

$$H(s) = -\frac{C_1 C_5 C_L L_1 L_5 R_1 R_5 g_m s^5 + C_1 C_5 C_L L_1 L_5 R_1 s^5 + C_1 C_5 C_L L_1 L_5 R_5 s^5 + C_1 C_5 C_L L_1 R_1 R_5 s^4 + C_1 C_5 C_L L_5 R_1 R_5 s^4 + 2C_1 C_5 L_1 L_5 R_1 g_m s^4 + C_1 C_5 L_1 L_5 s^4 + 2C_1 C_5 L_1 R_1 R_5 g_m}{C_1 C_5 C_L L_1 L_5 R_1 R_5 g_m s^5 + C_1 C_5 C_L L_1 L_5 R_1 s^5 + C_1 C_5 C_L L_1 L_5 R_5 s^5 + C_1 C_5 C_L L_1 R_1 R_5 s^4 + C_1 C_5 C_L L_5 R_1 R_5 s^4 + 2C_1 C_5 L_1 L_5 R_1 g_m s^4 + C_1 C_5 L_1 L_5 s^4 + 2C_1 C_5 L_1 R_1 R_5 g_m}$$

10.1034 INVALID-ORDER-1034  $Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{R_L}{C_L R_L s + 1} \right)$

$$H(s) = -\frac{C_1 C_5 C_L L_1 L_5 R_1 R_5 R_L g_m s^5 + C_1 C_5 C_L L_1 L_5 R_1 R_L s^5 + C_1 C_5 C_L L_1 L_5 R_5 R_L s^5 + C_1 C_5 C_L L_1 R_1 R_5 R_L s^4 + C_1 C_5 C_L L_5 R_1 R_5 R_L s^4 + C_1 C_5 L_1 L_5 R_1 R_5 g_m s^4 + 2 C_1 C_5 L_1 L_5 R_1 R_5}{C_1 C_5 C_L L_1 L_5 R_1 R_5 R_L g_m s^5 + C_1 C_5 C_L L_1 L_5 R_1 R_L s^5 + C_1 C_5 C_L L_1 L_5 R_5 R_L s^5 + C_1 C_5 C_L L_1 R_1 R_5 R_L s^4 + C_1 C_5 C_L L_5 R_1 R_5 R_L s^4 + C_1 C_5 L_1 L_5 R_1 R_5 g_m s^4 + 2 C_1 C_5 L_1 L_5 R_1 R_5}$$

**10.1035 INVALID-ORDER-1035**  $Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, R_L + \frac{1}{C_L s} \right)$

$$H(s) = -\frac{C_1 C_5 C_L L_1 L_5 R_1 R_5 g_m s^5 + 2 C_1 C_5 C_L L_1 L_5 R_1 R_L g_m s^5 + C_1 C_5 C_L L_1 L_5 R_1 s^5 + C_1 C_5 C_L L_1 L_5 R_5 s^5 + C_1 C_5 C_L L_1 L_5 R_L s^5 + 2 C_1 C_5 C_L L_1 R_1 R_5 R_L g_m s^4 + C_1 C_5 C_L L_1 R_1 R_5 s^4}{C_1 C_5 C_L L_1 L_5 R_1 R_5 g_m s^5 + 2 C_1 C_5 C_L L_1 L_5 R_1 R_L g_m s^5 + C_1 C_5 C_L L_1 L_5 R_1 s^5 + C_1 C_5 C_L L_1 L_5 R_5 s^5 + C_1 C_5 C_L L_1 L_5 R_L s^5 + 2 C_1 C_5 C_L L_1 R_1 R_5 R_L g_m s^4 + C_1 C_5 C_L L_1 R_1 R_5 s^4 + 2 C_1 C_5 C_L L_1 R_1 R_L g_m s^4 + C_1 C_5 C_L L_1 R_1 s^4 + C_1 C_5 C_L L_1 R_5 s^4 + C_1 C_5 C_L L_1 R_L s^4 + 2 C_1 C_5 C_L L_1 s^4 + C_1 C_5 C_L L_5 R_1 R_5 g_m s^5 + 2 C_1 C_5 C_L L_5 R_1 R_L g_m s^5 + C_1 C_5 C_L L_5 R_1 s^5 + C_1 C_5 C_L L_5 R_5 s^5 + C_1 C_5 C_L L_5 R_L s^5 + 2 C_1 C_5 C_L L_5 R_1 R_5 g_m s^4 + C_1 C_5 C_L L_5 R_1 R_5 s^4 + 2 C_1 C_5 C_L L_5 R_1 R_L g_m s^4 + C_1 C_5 C_L L_5 R_1 s^4 + C_1 C_5 C_L L_5 R_5 s^4 + C_1 C_5 C_L L_5 R_L s^4 + 2 C_1 C_5 C_L L_5 s^4 + C_1 C_5 C_L R_1 R_5 R_L g_m s^4 + C_1 C_5 C_L R_1 R_5 s^4 + 2 C_1 C_5 C_L R_1 R_L g_m s^4 + C_1 C_5 C_L R_1 s^4 + C_1 C_5 C_L R_5 s^4 + C_1 C_5 C_L R_L s^4 + 2 C_1 C_5 C_L s^4 + C_1 C_5 R_1 R_5 R_L g_m s^4 + C_1 C_5 R_1 R_5 s^4 + 2 C_1 C_5 R_1 R_L g_m s^4 + C_1 C_5 R_1 s^4 + C_1 C_5 R_5 s^4 + C_1 C_5 R_L s^4 + 2 C_1 C_5 s^4 + C_1 R_1 R_5 R_L g_m s^4 + C_1 R_1 R_5 s^4 + 2 C_1 R_1 R_L g_m s^4 + C_1 R_1 s^4 + C_1 R_5 s^4 + C_1 R_L s^4 + 2 C_1 s^4 + C_5 R_1 R_5 R_L g_m s^4 + C_5 R_1 R_5 s^4 + 2 C_5 R_1 R_L g_m s^4 + C_5 R_1 s^4 + C_5 R_5 s^4 + C_5 R_L s^4 + 2 C_5 s^4 + R_1 R_5 R_L g_m s^4 + R_1 R_5 s^4 + 2 R_1 R_L g_m s^4 + R_1 s^4 + R_5 s^4 + R_L s^4 + 2 s^4}.$$

10.1036 INVALID-ORDER-1036  $Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, L_L s + \frac{1}{C_L s} \right)$

$$H(s) = -\frac{2C_1C_5C_LL_1L_5L_LR_1g_ms^6 + C_1C_5C_LL_1L_5L_Ls^6 + C_1C_5C_LL_1L_5R_1R_5g_ms^5 + C_1C_5C_LL_1L_5R_1s^5 + C_1C_5C_LL_1L_5R_5s^5 + 2C_1C_5C_LL_1L_LR_1R_5g_ms^5 + C_1C_5C_LL_1L_LR_5s^5 +$$

10.1037 INVALID-ORDER-1037  $Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{L_L s}{C_L L_L s^2 + 1} \right)$

$$H(s) = -\frac{C_1 C_5 C_L L_1 L_5 L_L R_1 R_5 g_m s^6 + C_1 C_5 C_L L_1 L_5 L_L R_1 s^6 + C_1 C_5 C_L L_1 L_5 L_L R_5 s^6 + C_1 C_5 C_L L_1 L_L R_1 R_5 s^5 + C_1 C_5 C_L L_5 L_L R_1 R_5 s^5 + 2 C_1 C_5 L_1 L_5 L_L R_1 g_m s^5 + C_1 C_5 L_1 L_5 L_L s^5}{C_1 C_5 C_L L_1 L_5 L_L R_1 R_5 g_m s^6 + C_1 C_5 C_L L_1 L_5 L_L R_1 s^6 + C_1 C_5 C_L L_1 L_5 L_L R_5 s^6 + C_1 C_5 C_L L_1 L_L R_1 R_5 s^5 + C_1 C_5 C_L L_5 L_L R_1 R_5 s^5 + 2 C_1 C_5 L_1 L_5 L_L R_1 g_m s^5 + C_1 C_5 L_1 L_5 L_L s^5}$$

10.1038 INVALID-ORDER-1038  $Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, L_L s + R_L + \frac{1}{C_L s} \right)$

$$H(s) = -\frac{2C_1C_5C_LL_1L_5L_LR_1q_ms^6 + C_1C_5C_LL_1L_5L_Ls^6 + C_1C_5C_LL_1L_5R_1R_5q_ms^5 + 2C_1C_5C_LL_1L_5R_1RLq_ms^5 + C_1C_5C_LL_1L_5R_1s^5 + C_1C_5C_LL_1L_5R_5s^5 + C_1C_5C_LL_1L_5R_Ls^5 +$$

**10.1039** INVALID-ORDER-1039  $Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$

$$H(s) = -\frac{C_1 C_5 C_L L_1 L_5 L_L R_1 R_5 R_L g_m s^6 + C_1 C_5 C_L L_1 L_5 L_L R_1 R_L s^6 + C_1 C_5 C_L L_1 L_5 L_L R_5 R_L s^6 + C_1 C_5 C_L L_1 L_L R_1 R_5 R_L s^5 + C_1 C_5 C_L L_5 L_L R_1 R_5 R_L s^5 + C_1 C_5 L_1 L_5 L_L R_1 R_5 g_m s^5}{C_1 C_5 C_L L_1 L_5 L_L R_1 R_5 R_L g_m s^6 + C_1 C_5 C_L L_1 L_5 L_L R_1 R_L s^6 + C_1 C_5 C_L L_1 L_5 L_L R_5 R_L s^6 + C_1 C_5 C_L L_1 L_L R_1 R_5 R_L s^5 + C_1 C_5 C_L L_5 L_L R_1 R_5 R_L s^5 + C_1 C_5 L_1 L_5 L_L R_1 R_5 g_m s^5}.$$

$$10.1040 \quad \text{INVALID-ORDER-1040} \quad Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \quad \infty, \quad \infty, \quad \infty, \quad \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \quad \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$$

$$H(s) = - \frac{C_1 C_5 C_L L_1 L_5 L_L R_1 R_5 g_m s^6 + 2 C_1 C_5 C_L L_1 L_5 L_L R_1 R_L g_m s^6 + C_1 C_5 C_L L_1 L_5 L_L R_1 s^6 + C_1 C_5 C_L L_1 L_5 L_L R_5 s^6 + C_1 C_5 C_L L_1 L_5 L_L R_L s^6 + 2 C_1 C_5 C_L L_1 L_L R_1 R_5 R_L g_m s^5 + C_1 C_5 C_L L_1 L_L R_1 R_5 R_L s^5 + C_1 C_5 C_L L_1 L_L R_1 R_L g_m s^5 + C_1 C_5 C_L L_1 L_L R_1 R_L s^5 + C_1 C_5 C_L L_1 L_L R_5 R_L g_m s^5 + C_1 C_5 C_L L_1 L_L R_5 R_L s^5 + C_1 C_5 C_L L_1 L_L R_L R_5 g_m s^5 + C_1 C_5 C_L L_1 L_L R_L R_5 s^5 + C_1 C_5 C_L L_1 L_L R_L R_L g_m s^5 + C_1 C_5 C_L L_1 L_L R_L R_L s^5}{C_1 C_5 C_L L_1 L_5 L_L R_1 R_5 g_m s^6 + 2 C_1 C_5 C_L L_1 L_5 L_L R_1 R_L g_m s^6 + C_1 C_5 C_L L_1 L_5 L_L R_1 s^6 + C_1 C_5 C_L L_1 L_5 L_L R_5 s^6 + C_1 C_5 C_L L_1 L_5 L_L R_L s^6 + 2 C_1 C_5 C_L L_1 L_L R_1 R_5 R_L g_m s^5 + C_1 C_5 C_L L_1 L_L R_1 R_5 R_L s^5 + C_1 C_5 C_L L_1 L_L R_1 R_L g_m s^5 + C_1 C_5 C_L L_1 L_L R_1 R_L s^5 + C_1 C_5 C_L L_1 L_L R_5 R_L g_m s^5 + C_1 C_5 C_L L_1 L_L R_5 R_L s^5 + C_1 C_5 C_L L_1 L_L R_L R_5 g_m s^5 + C_1 C_5 C_L L_1 L_L R_L R_5 s^5 + C_1 C_5 C_L L_1 L_L R_L R_L g_m s^5 + C_1 C_5 C_L L_1 L_L R_L R_L s^5}$$

$$10.1041 \quad \text{INVALID-ORDER-1041} \quad Z(s) = \left( \frac{R_1 \left( L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \quad \infty, \quad \infty, \quad \infty, \quad \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \quad \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$$

$$H(s) = - \frac{C_1 C_5 C_L L_1 L_5 L_L R_1 R_5 g_m s^6 + 2 C_1 C_5 C_L L_1 L_5 L_L R_1 R_L g_m s^6 + C_1 C_5 C_L L_1 L_5 L_L R_1 s^6 + C_1 C_5 C_L L_1 L_5 L_L R_5 s^6 + C_1 C_5 C_L L_1 L_5 L_L R_L s^6 + C_1 C_5 C_L L_1 L_5 R_1 R_5 R_L g_m s^5 + C_1 C_5 C_L L_1 L_5 R_1 R_5 R_L s^5 + C_1 C_5 C_L L_1 L_5 R_L R_5 g_m s^5 + C_1 C_5 C_L L_1 L_5 R_L R_5 s^5 + C_1 C_5 C_L L_1 L_L R_1 R_5 R_L g_m s^5 + C_1 C_5 C_L L_1 L_L R_1 R_5 R_L s^5 + C_1 C_5 C_L L_1 L_L R_L R_5 g_m s^5 + C_1 C_5 C_L L_1 L_L R_L R_5 s^5 + C_1 C_5 C_L L_1 L_L R_L R_L g_m s^5 + C_1 C_5 C_L L_1 L_L R_L R_L s^5}{C_1 C_5 C_L L_1 L_5 L_L R_1 R_5 g_m s^6 + 2 C_1 C_5 C_L L_1 L_5 L_L R_1 R_L g_m s^6 + C_1 C_5 C_L L_1 L_5 L_L R_1 s^6 + C_1 C_5 C_L L_1 L_5 L_L R_5 s^6 + C_1 C_5 C_L L_1 L_5 L_L R_L s^6 + C_1 C_5 C_L L_1 L_5 R_1 R_5 R_L g_m s^5 + C_1 C_5 C_L L_1 L_5 R_1 R_5 R_L s^5 + C_1 C_5 C_L L_1 L_5 R_L R_5 g_m s^5 + C_1 C_5 C_L L_1 L_5 R_L R_5 s^5 + C_1 C_5 C_L L_1 L_L R_1 R_5 R_L g_m s^5 + C_1 C_5 C_L L_1 L_L R_1 R_5 R_L s^5 + C_1 C_5 C_L L_1 L_L R_L R_5 g_m s^5 + C_1 C_5 C_L L_1 L_L R_L R_5 s^5 + C_1 C_5 C_L L_1 L_L R_L R_L g_m s^5 + C_1 C_5 C_L L_1 L_L R_L R_L s^5}$$