Filter Summary Report: TIA simple Z2 Z3 ZL

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1 Examined $H(z)$ for TIA simple Z2 Z3 ZL: $\frac{Z_3 Z_L (Z_2 g_m + 1)}{Z_2 Z_3 g_m + Z_2 Z_L g_m + Z_3 + Z_L}$ **40**

2 HP **40**

3 BP **40**

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4 LP **92**

5 BS **92**
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10.42INVALID-ORDER-42 $Z(s) = \left(L_1 s + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \infty,\ \frac{L_L s}{C_L L_L s^2 + 1}\right)$ . . . 139
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10.44INVALID-ORDER-44 $Z(s) = \left(L_1 s + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \infty,\ \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$ . . . 140
10.45INVALID-ORDER-45 $Z(s) = \left(L_1 s + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \infty,\ \frac{R_L\left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$ . . . 140
10.46INVALID-ORDER-46 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1},\ \infty,\ \infty,\ \infty,\ \infty,\ \frac{1}{C_L s}\right)$ . . . 140
10.47INVALID-ORDER-47 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1},\ \infty,\ \infty,\ \infty,\ \infty,\ \frac{R_L}{C_L R_L s + 1}\right)$ . . . 140
10.48INVALID-ORDER-48 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1},\ \infty,\ \infty,\ \infty,\ \infty,\ R_L + \frac{1}{C_L s}\right)$ . . . 141
10.49INVALID-ORDER-49 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1},\ \infty,\ \infty,\ \infty,\ \infty,\ L_L s + \frac{1}{C_L s}\right)$ . . . 141
10.50INVALID-ORDER-50 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1},\ \infty,\ \infty,\ \infty,\ \infty,\ \frac{L_L s}{C_L L_L s^2 + 1}\right)$ . . . 141
10.51INVALID-ORDER-51 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1},\ \infty,\ \infty,\ \infty,\ \infty,\ L_L s + R_L + \frac{1}{C_L s}\right)$ . . . 141
10.52INVALID-ORDER-52 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1},\ \infty,\ \infty,\ \infty,\ \infty,\ \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$ . . . 141
10.53INVALID-ORDER-53 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1},\ \infty,\ \infty,\ \infty,\ \infty,\ \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$ . . . 142
10.54INVALID-ORDER-54 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1},\ \infty,\ \infty,\ \infty,\ \infty,\ \frac{R_L\left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$ . . . 142
10.55INVALID-ORDER-55 $Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \infty,\ R_L + \frac{1}{C_L s}\right)$ . . . 142
10.56INVALID-ORDER-56 $Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \infty,\ L_L s + \frac{1}{C_L s}\right)$ . . . 142
10.57INVALID-ORDER-57 $Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \infty,\ L_L s + R_L + \frac{1}{C_L s}\right)$ . . . 142

10.58INVALID-ORDER-58 $Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \infty,\ \frac{L_L s}{C_L L_L s^2+1} + R_L\right)$ . . . 143
10.59INVALID-ORDER-59 $Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \infty,\ \frac{R_L\left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$ . . . 143
10.60INVALID-ORDER-60 $Z(s) = \left(\frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}},\ \infty,\ \infty,\ \infty,\ \infty,\ \frac{1}{C_L s}\right)$ . . . 143
10.61INVALID-ORDER-61 $Z(s) = \left(\frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}},\ \infty,\ \infty,\ \infty,\ \infty,\ \frac{R_L}{C_L R_L s+1}\right)$ . . . 143
10.62INVALID-ORDER-62 $Z(s) = \left(\frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}},\ \infty,\ \infty,\ \infty,\ \infty,\ R_L + \frac{1}{C_L s}\right)$ . . . 143
10.63INVALID-ORDER-63 $Z(s) = \left(\frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}},\ \infty,\ \infty,\ \infty,\ \infty,\ L_L s + \frac{1}{C_L s}\right)$ . . . 144
10.64INVALID-ORDER-64 $Z(s) = \left(\frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}},\ \infty,\ \infty,\ \infty,\ \infty,\ \frac{L_L s}{C_L L_L s^2+1}\right)$ . . . 144
10.65INVALID-ORDER-65 $Z(s) = \left(\frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}},\ \infty,\ \infty,\ \infty,\ \infty,\ L_L s + R_L + \frac{1}{C_L s}\right)$ . . . 144
10.66INVALID-ORDER-66 $Z(s) = \left(\frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}},\ \infty,\ \infty,\ \infty,\ \infty,\ \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$ . . . 144
10.67INVALID-ORDER-67 $Z(s) = \left(\frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}},\ \infty,\ \infty,\ \infty,\ \infty,\ \frac{L_L s}{C_L L_L s^2+1} + R_L\right)$ . . . 144
10.68INVALID-ORDER-68 $Z(s) = \left(\frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}},\ \infty,\ \infty,\ \infty,\ \infty,\ \frac{R_L\left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$ . . . 145
10.69INVALID-ORDER-69 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2+1} + R_1,\ \infty,\ \infty,\ \infty,\ \infty,\ \frac{1}{C_L s}\right)$ . . . 145
10.70INVALID-ORDER-70 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2+1} + R_1,\ \infty,\ \infty,\ \infty,\ \infty,\ \frac{R_L}{C_L R_L s+1}\right)$ . . . 145
10.71INVALID-ORDER-71 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2+1} + R_1,\ \infty,\ \infty,\ \infty,\ \infty,\ R_L + \frac{1}{C_L s}\right)$ . . . 145
10.72INVALID-ORDER-72 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2+1} + R_1,\ \infty,\ \infty,\ \infty,\ \infty,\ L_L s + \frac{1}{C_L s}\right)$ . . . 145
10.73INVALID-ORDER-73 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2+1} + R_1,\ \infty,\ \infty,\ \infty,\ \infty,\ \frac{L_L s}{C_L L_L s^2+1}\right)$ . . . 146
10.74INVALID-ORDER-74 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2+1} + R_1,\ \infty,\ \infty,\ \infty,\ \infty,\ L_L s + R_L + \frac{1}{C_L s}\right)$ . . . 146
10.75INVALID-ORDER-75 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2+1} + R_1,\ \infty,\ \infty,\ \infty,\ \infty,\ \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$ . . . 146
10.76INVALID-ORDER-76 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2+1} + R_1,\ \infty,\ \infty,\ \infty,\ \infty,\ \frac{L_L s}{C_L L_L s^2+1} + R_L\right)$ . . . 146
10.77INVALID-ORDER-77 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2+1} + R_1,\ \infty,\ \infty,\ \infty,\ \infty,\ \frac{R_L\left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$ . . . 146

10.78INVALID-ORDER-78 $Z(s) = \left(\frac{R_1\left(L_1 s+\frac{1}{C_1 s}\right)}{L_1 s+R_1+\frac{1}{C_1 s}},\ \infty,\ \infty,\ \infty,\ \infty,\ R_L\right)$ . . . 147
10.79INVALID-ORDER-79 $Z(s) = \left(\frac{R_1\left(L_1 s+\frac{1}{C_1 s}\right)}{L_1 s+R_1+\frac{1}{C_1 s}},\ \infty,\ \infty,\ \infty,\ \infty,\ \frac{1}{C_L s}\right)$ . . . 147
10.80INVALID-ORDER-80 $Z(s) = \left(\frac{R_1\left(L_1 s+\frac{1}{C_1 s}\right)}{L_1 s+R_1+\frac{1}{C_1 s}},\ \infty,\ \infty,\ \infty,\ \infty,\ \frac{R_L}{C_L R_L s+1}\right)$ . . . 147
10.81INVALID-ORDER-81 $Z(s) = \left(\frac{R_1\left(L_1 s+\frac{1}{C_1 s}\right)}{L_1 s+R_1+\frac{1}{C_1 s}},\ \infty,\ \infty,\ \infty,\ \infty,\ R_L+\frac{1}{C_L s}\right)$ . . . 147
10.82INVALID-ORDER-82 $Z(s) = (\infty,\ R_2,\ \infty,\ \infty,\ \infty,\ R_L)$ . . . 147
10.83INVALID-ORDER-83 $Z(s) = \left(\infty,\ R_2,\ \infty,\ \infty,\ \infty,\ \frac{1}{C_L s}\right)$ . . . 148
10.84INVALID-ORDER-84 $Z(s) = \left(\infty,\ R_2,\ \infty,\ \infty,\ \infty,\ \frac{R_L}{C_L R_L s+1}\right)$ . . . 148
10.85INVALID-ORDER-85 $Z(s) = \left(\infty,\ R_2,\ \infty,\ \infty,\ \infty,\ R_L+\frac{1}{C_L s}\right)$ . . . 148
10.86INVALID-ORDER-86 $Z(s) = \left(\infty,\ R_2,\ \infty,\ \infty,\ \infty,\ L_L s+\frac{1}{C_L s}\right)$ . . . 148
10.87INVALID-ORDER-87 $Z(s) = \left(\infty,\ R_2,\ \infty,\ \infty,\ \infty,\ \frac{L_L s}{C_L L_L s^2+1}\right)$ . . . 148
10.88INVALID-ORDER-88 $Z(s) = \left(\infty,\ R_2,\ \infty,\ \infty,\ \infty,\ L_L s+R_L+\frac{1}{C_L s}\right)$ . . . 148
10.89INVALID-ORDER-89 $Z(s) = \left(\infty,\ R_2,\ \infty,\ \infty,\ \infty,\ \frac{L_L s}{C_L L_L s^2+1}+R_L\right)$ . . . 149
10.90INVALID-ORDER-90 $Z(s) = \left(\infty,\ R_2,\ \infty,\ \infty,\ \infty,\ \frac{R_L\left(L_L s+\frac{1}{C_L s}\right)}{L_L s+R_L+\frac{1}{C_L s}}\right)$ . . . 149
10.91INVALID-ORDER-91 $Z(s) = \left(\infty,\ \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ R_L\right)$ . . . 149
10.92INVALID-ORDER-92 $Z(s) = \left(\infty,\ \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_L s}\right)$ . . . 149
10.93INVALID-ORDER-93 $Z(s) = \left(\infty,\ \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{R_L}{C_L R_L s+1}\right)$ . . . 149
10.94INVALID-ORDER-94 $Z(s) = \left(\infty,\ \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ L_L s+\frac{1}{C_L s}\right)$ . . . 149
10.95INVALID-ORDER-95 $Z(s) = \left(\infty,\ \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ L_L s+R_L+\frac{1}{C_L s}\right)$ . . . 150
10.96INVALID-ORDER-96 $Z(s) = \left(\infty,\ \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{L_L s}{C_L L_L s^2+1}+R_L\right)$ . . . 150
10.97INVALID-ORDER-97 $Z(s) = \left(\infty,\ \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{R_L\left(L_L s+\frac{1}{C_L s}\right)}{L_L s+R_L+\frac{1}{C_L s}}\right)$ . . . 150
10.98INVALID-ORDER-98 $Z(s) = \left(\infty,\ \frac{R_2}{C_2 R_2 s+1},\ \infty,\ \infty,\ \infty,\ R_L\right)$ . . . 150
10.99INVALID-ORDER-99 $Z(s) = \left(\infty,\ \frac{R_2}{C_2 R_2 s+1},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_L s}\right)$ . . . 150

10.100 INVALID-ORDER-100 $Z(s) = \left(\infty,\ \frac{R_2}{C_2 R_2 s+1},\ \infty,\ \infty,\ \infty,\ R_L + \frac{1}{C_L s}\right)$ . . . 150
10.101 INVALID-ORDER-101 $Z(s) = \left(\infty,\ \frac{R_2}{C_2 R_2 s+1},\ \infty,\ \infty,\ \infty,\ L_L s + \frac{1}{C_L s}\right)$ . . . 151
10.102 INVALID-ORDER-102 $Z(s) = \left(\infty,\ \frac{R_2}{C_2 R_2 s+1},\ \infty,\ \infty,\ \infty,\ \frac{L_L s}{C_L L_L s^2+1}\right)$ . . . 151
10.103 INVALID-ORDER-103 $Z(s) = \left(\infty,\ \frac{R_2}{C_2 R_2 s+1},\ \infty,\ \infty,\ \infty,\ L_L s + R_L + \frac{1}{C_L s}\right)$ . . . 151
10.104 INVALID-ORDER-104 $Z(s) = \left(\infty,\ \frac{R_2}{C_2 R_2 s+1},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_L s+\frac{1}{R_L}+\frac{1}{L_L s}}\right)$ . . . 151
10.105 INVALID-ORDER-105 $Z(s) = \left(\infty,\ \frac{R_2}{C_2 R_2 s+1},\ \infty,\ \infty,\ \infty,\ \frac{L_L s}{C_L L_L s^2+1} + R_L\right)$ . . . 151
10.106 INVALID-ORDER-106 $Z(s) = \left(\infty,\ \frac{R_2}{C_2 R_2 s+1},\ \infty,\ \infty,\ \infty,\ \frac{R_L\left(L_L s+\frac{1}{C_L s}\right)}{L_L s+R_L+\frac{1}{C_L s}}\right)$ . . . 152
10.107 INVALID-ORDER-107 $Z(s) = \left(\infty,\ R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_L s}\right)$ . . . 152
10.108 INVALID-ORDER-108 $Z(s) = \left(\infty,\ R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{R_L}{C_L R_L s+1}\right)$ . . . 152
10.109 INVALID-ORDER-109 $Z(s) = \left(\infty,\ R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ R_L + \frac{1}{C_L s}\right)$ . . . 152
10.110 INVALID-ORDER-110 $Z(s) = \left(\infty,\ R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ L_L s + \frac{1}{C_L s}\right)$ . . . 152
10.111 INVALID-ORDER-111 $Z(s) = \left(\infty,\ R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{L_L s}{C_L L_L s^2+1}\right)$ . . . 153
10.112 INVALID-ORDER-112 $Z(s) = \left(\infty,\ R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ L_L s + R_L + \frac{1}{C_L s}\right)$ . . . 153
10.113 INVALID-ORDER-113 $Z(s) = \left(\infty,\ R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_L s+\frac{1}{R_L}+\frac{1}{L_L s}}\right)$ . . . 153
10.114 INVALID-ORDER-114 $Z(s) = \left(\infty,\ R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{L_L s}{C_L L_L s^2+1} + R_L\right)$ . . . 153
10.115 INVALID-ORDER-115 $Z(s) = \left(\infty,\ R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{R_L\left(L_L s+\frac{1}{C_L s}\right)}{L_L s+R_L+\frac{1}{C_L s}}\right)$ . . . 153
10.116 INVALID-ORDER-116 $Z(s) = \left(\infty,\ L_2 s + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_L s}\right)$ . . . 154
10.117 INVALID-ORDER-117 $Z(s) = \left(\infty,\ L_2 s + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ R_L + \frac{1}{C_L s}\right)$ . . . 154
10.118 INVALID-ORDER-118 $Z(s) = \left(\infty,\ L_2 s + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ L_L s + \frac{1}{C_L s}\right)$ . . . 154
10.119 INVALID-ORDER-119 $Z(s) = \left(\infty,\ L_2 s + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{L_L s}{C_L L_L s^2+1}\right)$ . . . 154
10.120 INVALID-ORDER-120 $Z(s) = \left(\infty,\ L_2 s + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ L_L s + R_L + \frac{1}{C_L s}\right)$ . . . 154
10.121 INVALID-ORDER-121 $Z(s) = \left(\infty,\ L_2 s + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{L_L s}{C_L L_L s^2+1} + R_L\right)$ . . . 154

10.122 INVALID-ORDER-122 $Z(s) = \left(\infty,\ L_2 s + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{R_L\left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$ . . . 155
10.123 INVALID-ORDER-123 $Z(s) = \left(\infty,\ L_2 s + R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_L s}\right)$ . . . 155
10.124 INVALID-ORDER-124 $Z(s) = \left(\infty,\ L_2 s + R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{R_L}{C_L R_L s + 1}\right)$ . . . 155
10.125 INVALID-ORDER-125 $Z(s) = \left(\infty,\ L_2 s + R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ R_L + \frac{1}{C_L s}\right)$ . . . 155
10.126 INVALID-ORDER-126 $Z(s) = \left(\infty,\ L_2 s + R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ L_L s + \frac{1}{C_L s}\right)$ . . . 155
10.127 INVALID-ORDER-127 $Z(s) = \left(\infty,\ L_2 s + R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{L_L s}{C_L L_L s^2 + 1}\right)$ . . . 156
10.128 INVALID-ORDER-128 $Z(s) = \left(\infty,\ L_2 s + R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ L_L s + R_L + \frac{1}{C_L s}\right)$ . . . 156
10.129 INVALID-ORDER-129 $Z(s) = \left(\infty,\ L_2 s + R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$ . . . 156
10.130 INVALID-ORDER-130 $Z(s) = \left(\infty,\ L_2 s + R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$ . . . 156
10.131 INVALID-ORDER-131 $Z(s) = \left(\infty,\ L_2 s + R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{R_L\left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$ . . . 156
10.132 INVALID-ORDER-132 $Z(s) = \left(\infty,\ \frac{L_2 s}{C_2 L_2 s^2 + 1} + R_2,\ \infty,\ \infty,\ \infty,\ R_L + \frac{1}{C_L s}\right)$ . . . 157
10.133 INVALID-ORDER-133 $Z(s) = \left(\infty,\ \frac{L_2 s}{C_2 L_2 s^2 + 1} + R_2,\ \infty,\ \infty,\ \infty,\ L_L s + \frac{1}{C_L s}\right)$ . . . 157
10.134 INVALID-ORDER-134 $Z(s) = \left(\infty,\ \frac{L_2 s}{C_2 L_2 s^2 + 1} + R_2,\ \infty,\ \infty,\ \infty,\ L_L s + R_L + \frac{1}{C_L s}\right)$ . . . 157
10.135 INVALID-ORDER-135 $Z(s) = \left(\infty,\ \frac{L_2 s}{C_2 L_2 s^2 + 1} + R_2,\ \infty,\ \infty,\ \infty,\ \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$ . . . 157
10.136 INVALID-ORDER-136 $Z(s) = \left(\infty,\ \frac{L_2 s}{C_2 L_2 s^2 + 1} + R_2,\ \infty,\ \infty,\ \infty,\ \frac{R_L\left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$ . . . 157
10.137 INVALID-ORDER-137 $Z(s) = \left(\infty,\ \frac{R_2\left(L_2 s + \frac{1}{C_2 s}\right)}{L_2 s + R_2 + \frac{1}{C_2 s}},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_L s}\right)$ . . . 158
10.138 INVALID-ORDER-138 $Z(s) = \left(\infty,\ \frac{R_2\left(L_2 s + \frac{1}{C_2 s}\right)}{L_2 s + R_2 + \frac{1}{C_2 s}},\ \infty,\ \infty,\ \infty,\ \frac{R_L}{C_L R_L s + 1}\right)$ . . . 158
10.139 INVALID-ORDER-139 $Z(s) = \left(\infty,\ \frac{R_2\left(L_2 s + \frac{1}{C_2 s}\right)}{L_2 s + R_2 + \frac{1}{C_2 s}},\ \infty,\ \infty,\ \infty,\ R_L + \frac{1}{C_L s}\right)$ . . . 158
10.140 INVALID-ORDER-140 $Z(s) = \left(\infty,\ \frac{R_2\left(L_2 s + \frac{1}{C_2 s}\right)}{L_2 s + R_2 + \frac{1}{C_2 s}},\ \infty,\ \infty,\ \infty,\ L_L s + \frac{1}{C_L s}\right)$ . . . 158
10.141 INVALID-ORDER-141 $Z(s) = \left(\infty,\ \frac{R_2\left(L_2 s + \frac{1}{C_2 s}\right)}{L_2 s + R_2 + \frac{1}{C_2 s}},\ \infty,\ \infty,\ \infty,\ \frac{L_L s}{C_L L_L s^2 + 1}\right)$ . . . 158

10.142 INVALID-ORDER-142 $Z(s) = \left(\infty,\ \frac{R_2\left(L_2 s+\frac{1}{C_2 s}\right)}{L_2 s+R_2+\frac{1}{C_2 s}},\ \infty,\ \infty,\ \infty,\ L_L s + R_L + \frac{1}{C_L s}\right)$ . . . 159
10.143 INVALID-ORDER-143 $Z(s) = \left(\infty,\ \frac{R_2\left(L_2 s+\frac{1}{C_2 s}\right)}{L_2 s+R_2+\frac{1}{C_2 s}},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_L s+\frac{1}{R_L}+\frac{1}{L_L s}}\right)$ . . . 159
10.144 INVALID-ORDER-144 $Z(s) = \left(\infty,\ \frac{R_2\left(L_2 s+\frac{1}{C_2 s}\right)}{L_2 s+R_2+\frac{1}{C_2 s}},\ \infty,\ \infty,\ \infty,\ \frac{L_L s}{C_L L_L s^2+1} + R_L\right)$ . . . 159
10.145 INVALID-ORDER-145 $Z(s) = \left(\infty,\ \frac{R_2\left(L_2 s+\frac{1}{C_2 s}\right)}{L_2 s+R_2+\frac{1}{C_2 s}},\ \infty,\ \infty,\ \infty,\ \frac{R_L\left(L_L s+\frac{1}{C_L s}\right)}{L_L s+R_L+\frac{1}{C_L s}}\right)$ . . . 159
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10.357 INVALID-ORDER-357 $Z(s) = \left(\infty,\ \infty,\ \infty,\ \infty,\ \frac{1}{C_4 s+\frac{1}{R_4}+\frac{1}{L_4 s}},\ L_L s + \frac{1}{C_L s}\right)$ . . . 199
10.358 INVALID-ORDER-358 $Z(s) = \left(\infty,\ \infty,\ \infty,\ \infty,\ \frac{1}{C_4 s+\frac{1}{R_4}+\frac{1}{L_4 s}},\ \frac{L_L s}{C_L L_L s^2+1}\right)$ . . . 199
10.359 INVALID-ORDER-359 $Z(s) = \left(\infty,\ \infty,\ \infty,\ \infty,\ \frac{1}{C_4 s+\frac{1}{R_4}+\frac{1}{L_4 s}},\ L_L s + R_L + \frac{1}{C_L s}\right)$ . . . 199
10.360 INVALID-ORDER-360 $Z(s) = \left(\infty,\ \infty,\ \infty,\ \infty,\ \frac{1}{C_4 s+\frac{1}{R_4}+\frac{1}{L_4 s}},\ \frac{1}{C_L s+\frac{1}{R_L}+\frac{1}{L_L s}}\right)$ . . . 199
10.361 INVALID-ORDER-361 $Z(s) = \left(\infty,\ \infty,\ \infty,\ \infty,\ \frac{1}{C_4 s+\frac{1}{R_4}+\frac{1}{L_4 s}},\ \frac{L_L s}{C_L L_L s^2+1} + R_L\right)$ . . . 199
10.362 INVALID-ORDER-362 $Z(s) = \left(\infty,\ \infty,\ \infty,\ \infty,\ \frac{1}{C_4 s+\frac{1}{R_4}+\frac{1}{L_4 s}},\ \frac{R_L\left(L_L s+\frac{1}{C_L s}\right)}{L_L s+R_L+\frac{1}{C_L s}}\right)$ . . . 200
10.363 INVALID-ORDER-363 $Z(s) = \left(\infty,\ \infty,\ \infty,\ \infty,\ \frac{L_4 s}{C_4 L_4 s^2+1} + R_4,\ R_L + \frac{1}{C_L s}\right)$ . . . 200
10.364 INVALID-ORDER-364 $Z(s) = \left(\infty,\ \infty,\ \infty,\ \infty,\ \frac{L_4 s}{C_4 L_4 s^2+1} + R_4,\ L_L s + \frac{1}{C_L s}\right)$ . . . 200
10.365 INVALID-ORDER-365 $Z(s) = \left(\infty,\ \infty,\ \infty,\ \infty,\ \frac{L_4 s}{C_4 L_4 s^2+1} + R_4,\ L_L s + R_L + \frac{1}{C_L s}\right)$ . . . 200
10.366 INVALID-ORDER-366 $Z(s) = \left(\infty,\ \infty,\ \infty,\ \infty,\ \frac{L_4 s}{C_4 L_4 s^2+1} + R_4,\ \frac{L_L s}{C_L L_L s^2+1} + R_L\right)$ . . . 200
10.367 INVALID-ORDER-367 $Z(s) = \left(\infty,\ \infty,\ \infty,\ \infty,\ \frac{L_4 s}{C_4 L_4 s^2+1} + R_4,\ \frac{R_L\left(L_L s+\frac{1}{C_L s}\right)}{L_L s+R_L+\frac{1}{C_L s}}\right)$ . . . 201
10.368 INVALID-ORDER-368 $Z(s) = \left(\infty,\ \infty,\ \infty,\ \infty,\ \frac{R_4\left(L_4 s+\frac{1}{C_4 s}\right)}{L_4 s+R_4+\frac{1}{C_4 s}},\ \frac{1}{C_L s}\right)$ . . . 201
10.369 INVALID-ORDER-369 $Z(s) = \left(\infty,\ \infty,\ \infty,\ \infty,\ \frac{R_4\left(L_4 s+\frac{1}{C_4 s}\right)}{L_4 s+R_4+\frac{1}{C_4 s}},\ \frac{R_L}{C_L R_L s+1}\right)$ . . . 201
10.370 INVALID-ORDER-370 $Z(s) = \left(\infty,\ \infty,\ \infty,\ \infty,\ \frac{R_4\left(L_4 s+\frac{1}{C_4 s}\right)}{L_4 s+R_4+\frac{1}{C_4 s}},\ R_L + \frac{1}{C_L s}\right)$ . . . 201
10.371 INVALID-ORDER-371 $Z(s) = \left(\infty,\ \infty,\ \infty,\ \infty,\ \frac{R_4\left(L_4 s+\frac{1}{C_4 s}\right)}{L_4 s+R_4+\frac{1}{C_4 s}},\ L_L s + \frac{1}{C_L s}\right)$ . . . 201

10.372 INVALID-ORDER-372 $Z(s) = \left(\infty,\ \infty,\ \infty,\ \infty,\ \frac{R_4\left(L_4 s+\frac{1}{C_4 s}\right)}{L_4 s+R_4+\frac{1}{C_4 s}},\ \frac{L_L s}{C_L L_L s^2+1}\right)$ . . . 202
10.373 INVALID-ORDER-373 $Z(s) = \left(\infty,\ \infty,\ \infty,\ \infty,\ \frac{R_4\left(L_4 s+\frac{1}{C_4 s}\right)}{L_4 s+R_4+\frac{1}{C_4 s}},\ L_L s + R_L + \frac{1}{C_L s}\right)$ . . . 202
10.374 INVALID-ORDER-374 $Z(s) = \left(\infty,\ \infty,\ \infty,\ \infty,\ \frac{R_4\left(L_4 s+\frac{1}{C_4 s}\right)}{L_4 s+R_4+\frac{1}{C_4 s}},\ \frac{1}{C_L s+\frac{1}{R_L}+\frac{1}{L_L s}}\right)$ . . . 202
10.375 INVALID-ORDER-375 $Z(s) = \left(\infty,\ \infty,\ \infty,\ \infty,\ \frac{R_4\left(L_4 s+\frac{1}{C_4 s}\right)}{L_4 s+R_4+\frac{1}{C_4 s}},\ \frac{L_L s}{C_L L_L s^2+1} + R_L\right)$ . . . 202
10.376 INVALID-ORDER-376 $Z(s) = \left(\infty,\ \infty,\ \infty,\ \infty,\ \frac{R_4\left(L_4 s+\frac{1}{C_4 s}\right)}{L_4 s+R_4+\frac{1}{C_4 s}},\ \frac{R_L\left(L_L s+\frac{1}{C_L s}\right)}{L_L s+R_L+\frac{1}{C_L s}}\right)$ . . . 202
10.377 INVALID-ORDER-377 $Z(s) = \left(R_1,\ R_2,\ \infty,\ \infty,\ \infty,\ \frac{1}{C_L s}\right)$ . . . 203
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10.379 INVALID-ORDER-379 $Z(s) = \left(R_1,\ R_2,\ \infty,\ \infty,\ \infty,\ R_L + \frac{1}{C_L s}\right)$ . . . 203
10.380 INVALID-ORDER-380 $Z(s) = \left(R_1,\ R_2,\ \infty,\ \infty,\ \infty,\ L_L s + \frac{1}{C_L s}\right)$ . . . 203
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10.383 INVALID-ORDER-383 $Z(s) = \left(R_1,\ R_2,\ \infty,\ \infty,\ \infty,\ \frac{1}{C_L s+\frac{1}{R_L}+\frac{1}{L_L s}}\right)$ . . . 204
10.384 INVALID-ORDER-384 $Z(s) = \left(R_1,\ R_2,\ \infty,\ \infty,\ \infty,\ \frac{L_L s}{C_L L_L s^2+1} + R_L\right)$ . . . 204
10.385 INVALID-ORDER-385 $Z(s) = \left(R_1,\ R_2,\ \infty,\ \infty,\ \infty,\ \frac{R_L\left(L_L s+\frac{1}{C_L s}\right)}{L_L s+R_L+\frac{1}{C_L s}}\right)$ . . . 204
10.386 INVALID-ORDER-386 $Z(s) = \left(R_1,\ \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ R_L\right)$ . . . 204
10.387 INVALID-ORDER-387 $Z(s) = \left(R_1,\ \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_L s}\right)$ . . . 204
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10.389 INVALID-ORDER-389 $Z(s) = \left(R_1,\ \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ R_L + \frac{1}{C_L s}\right)$ . . . 205
10.390 INVALID-ORDER-390 $Z(s) = \left(R_1,\ \frac{R_2}{C_2 R_2 s+1},\ \infty,\ \infty,\ \infty,\ R_L\right)$ . . . 205
10.391 INVALID-ORDER-391 $Z(s) = \left(R_1,\ \frac{R_2}{C_2 R_2 s+1},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_L s}\right)$ . . . 205
10.392 INVALID-ORDER-392 $Z(s) = \left(R_1,\ \frac{R_2}{C_2 R_2 s+1},\ \infty,\ \infty,\ \infty,\ \frac{R_L}{C_L R_L s+1}\right)$ . . . 205

10.393 INVALID-ORDER-393 $Z(s) = \left(R_1,\ \frac{R_2}{C_2 R_2 s+1},\ \infty,\ \infty,\ \infty,\ R_L + \frac{1}{C_L s}\right)$ . . . 205
10.394 INVALID-ORDER-394 $Z(s) = \left(R_1,\ \frac{R_2}{C_2 R_2 s+1},\ \infty,\ \infty,\ \infty,\ L_L s + \frac{1}{C_L s}\right)$ . . . 206
10.395 INVALID-ORDER-395 $Z(s) = \left(R_1,\ \frac{R_2}{C_2 R_2 s+1},\ \infty,\ \infty,\ \infty,\ \frac{L_L s}{C_L L_L s^2+1}\right)$ . . . 206
10.396 INVALID-ORDER-396 $Z(s) = \left(R_1,\ \frac{R_2}{C_2 R_2 s+1},\ \infty,\ \infty,\ \infty,\ L_L s + R_L + \frac{1}{C_L s}\right)$ . . . 206
10.397 INVALID-ORDER-397 $Z(s) = \left(R_1,\ \frac{R_2}{C_2 R_2 s+1},\ \infty,\ \infty,\ \infty,\ \frac{L_L s}{C_L L_L s^2+1} + R_L\right)$ . . . 206
10.398 INVALID-ORDER-398 $Z(s) = \left(R_1,\ \frac{R_2}{C_2 R_2 s+1},\ \infty,\ \infty,\ \infty,\ \frac{R_L\left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$ . . . 206
10.399 INVALID-ORDER-399 $Z(s) = \left(R_1,\ R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ R_L\right)$ . . . 206
10.400 INVALID-ORDER-400 $Z(s) = \left(R_1,\ R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_L s}\right)$ . . . 207
10.401 INVALID-ORDER-401 $Z(s) = \left(R_1,\ R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{R_L}{C_L R_L s+1}\right)$ . . . 207
10.402 INVALID-ORDER-402 $Z(s) = \left(R_1,\ R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ L_L s + \frac{1}{C_L s}\right)$ . . . 207
10.403 INVALID-ORDER-403 $Z(s) = \left(R_1,\ R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ L_L s + R_L + \frac{1}{C_L s}\right)$ . . . 207
10.404 INVALID-ORDER-404 $Z(s) = \left(R_1,\ R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{L_L s}{C_L L_L s^2+1} + R_L\right)$ . . . 207
10.405 INVALID-ORDER-405 $Z(s) = \left(R_1,\ R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{R_L\left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$ . . . 207
10.406 INVALID-ORDER-406 $Z(s) = \left(R_1,\ L_2 s + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ R_L\right)$ . . . 208
10.407 INVALID-ORDER-407 $Z(s) = \left(R_1,\ L_2 s + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_L s}\right)$ . . . 208
10.408 INVALID-ORDER-408 $Z(s) = \left(R_1,\ L_2 s + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ R_L + \frac{1}{C_L s}\right)$ . . . 208
10.409 INVALID-ORDER-409 $Z(s) = \left(R_1,\ L_2 s + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ L_L s + \frac{1}{C_L s}\right)$ . . . 208
10.410 INVALID-ORDER-410 $Z(s) = \left(R_1,\ L_2 s + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{L_L s}{C_L L_L s^2+1}\right)$ . . . 208
10.411 INVALID-ORDER-411 $Z(s) = \left(R_1,\ L_2 s + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ L_L s + R_L + \frac{1}{C_L s}\right)$ . . . 208
10.412 INVALID-ORDER-412 $Z(s) = \left(R_1,\ L_2 s + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$ . . . 209
10.413 INVALID-ORDER-413 $Z(s) = \left(R_1,\ L_2 s + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{L_L s}{C_L L_L s^2+1} + R_L\right)$ . . . 209
10.414 INVALID-ORDER-414 $Z(s) = \left(R_1,\ L_2 s + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{R_L\left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$ . . . 209

10.415 INVALID-ORDER-415 $Z(s) = \left(R_1,\ L_2 s + R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_L s}\right)$ . . . 209
10.416 INVALID-ORDER-416 $Z(s) = \left(R_1,\ L_2 s + R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{R_L}{C_L R_L s+1}\right)$ . . . 209
10.417 INVALID-ORDER-417 $Z(s) = \left(R_1,\ L_2 s + R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ R_L + \frac{1}{C_L s}\right)$ . . . 210
10.418 INVALID-ORDER-418 $Z(s) = \left(R_1,\ L_2 s + R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ L_L s + \frac{1}{C_L s}\right)$ . . . 210
10.419 INVALID-ORDER-419 $Z(s) = \left(R_1,\ L_2 s + R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{L_L s}{C_L L_L s^2+1}\right)$ . . . 210
10.420 INVALID-ORDER-420 $Z(s) = \left(R_1,\ L_2 s + R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ L_L s + R_L + \frac{1}{C_L s}\right)$ . . . 210
10.421 INVALID-ORDER-421 $Z(s) = \left(R_1,\ L_2 s + R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$ . . . 210
10.422 INVALID-ORDER-422 $Z(s) = \left(R_1,\ L_2 s + R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{L_L s}{C_L L_L s^2+1} + R_L\right)$ . . . 211
10.423 INVALID-ORDER-423 $Z(s) = \left(R_1,\ L_2 s + R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{R_L\left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$ . . . 211
10.424 INVALID-ORDER-424 $Z(s) = \left(R_1,\ \frac{L_2 s}{C_2 L_2 s^2+1} + R_2,\ \infty,\ \infty,\ \infty,\ \frac{1}{C_L s}\right)$ . . . 211
10.425 INVALID-ORDER-425 $Z(s) = \left(R_1,\ \frac{L_2 s}{C_2 L_2 s^2+1} + R_2,\ \infty,\ \infty,\ \infty,\ R_L + \frac{1}{C_L s}\right)$ . . . 211
10.426 INVALID-ORDER-426 $Z(s) = \left(R_1,\ \frac{L_2 s}{C_2 L_2 s^2+1} + R_2,\ \infty,\ \infty,\ \infty,\ L_L s + \frac{1}{C_L s}\right)$ . . . 211
10.427 INVALID-ORDER-427 $Z(s) = \left(R_1,\ \frac{L_2 s}{C_2 L_2 s^2+1} + R_2,\ \infty,\ \infty,\ \infty,\ \frac{L_L s}{C_L L_L s^2+1}\right)$ . . . 211
10.428 INVALID-ORDER-428 $Z(s) = \left(R_1,\ \frac{L_2 s}{C_2 L_2 s^2+1} + R_2,\ \infty,\ \infty,\ \infty,\ L_L s + R_L + \frac{1}{C_L s}\right)$ . . . 212
10.429 INVALID-ORDER-429 $Z(s) = \left(R_1,\ \frac{L_2 s}{C_2 L_2 s^2+1} + R_2,\ \infty,\ \infty,\ \infty,\ \frac{L_L s}{C_L L_L s^2+1} + R_L\right)$ . . . 212
10.430 INVALID-ORDER-430 $Z(s) = \left(R_1,\ \frac{L_2 s}{C_2 L_2 s^2+1} + R_2,\ \infty,\ \infty,\ \infty,\ \frac{R_L\left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$ . . . 212
10.431 INVALID-ORDER-431 $Z(s) = \left(R_1,\ \frac{R_2\left(L_2 s + \frac{1}{C_2 s}\right)}{L_2 s + R_2 + \frac{1}{C_2 s}},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_L s}\right)$ . . . 212
10.432 INVALID-ORDER-432 $Z(s) = \left(R_1,\ \frac{R_2\left(L_2 s + \frac{1}{C_2 s}\right)}{L_2 s + R_2 + \frac{1}{C_2 s}},\ \infty,\ \infty,\ \infty,\ \frac{R_L}{C_L R_L s+1}\right)$ . . . 212
10.433 INVALID-ORDER-433 $Z(s) = \left(R_1,\ \frac{R_2\left(L_2 s + \frac{1}{C_2 s}\right)}{L_2 s + R_2 + \frac{1}{C_2 s}},\ \infty,\ \infty,\ \infty,\ R_L + \frac{1}{C_L s}\right)$ . . . 213
10.434 INVALID-ORDER-434 $Z(s) = \left(R_1,\ \frac{R_2\left(L_2 s + \frac{1}{C_2 s}\right)}{L_2 s + R_2 + \frac{1}{C_2 s}},\ \infty,\ \infty,\ \infty,\ L_L s + \frac{1}{C_L s}\right)$ . . . 213
10.435 INVALID-ORDER-435 $Z(s) = \left(R_1,\ \frac{R_2\left(L_2 s + \frac{1}{C_2 s}\right)}{L_2 s + R_2 + \frac{1}{C_2 s}},\ \infty,\ \infty,\ \infty,\ \frac{L_L s}{C_L L_L s^2+1}\right)$ . . . 213

10.436 INVALID-ORDER-436 $Z(s) = \left(R_1,\ \frac{R_2\left(L_2 s+\frac{1}{C_2 s}\right)}{L_2 s+R_2+\frac{1}{C_2 s}},\ \infty,\ \infty,\ \infty,\ L_L s + R_L + \frac{1}{C_L s}\right)$ . . . 213
10.437 INVALID-ORDER-437 $Z(s) = \left(R_1,\ \frac{R_2\left(L_2 s+\frac{1}{C_2 s}\right)}{L_2 s+R_2+\frac{1}{C_2 s}},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_L s+\frac{1}{R_L}+\frac{1}{L_L s}}\right)$ . . . 213
10.438 INVALID-ORDER-438 $Z(s) = \left(R_1,\ \frac{R_2\left(L_2 s+\frac{1}{C_2 s}\right)}{L_2 s+R_2+\frac{1}{C_2 s}},\ \infty,\ \infty,\ \infty,\ \frac{L_L s}{C_L L_L s^2+1} + R_L\right)$ . . . 214
10.439 INVALID-ORDER-439 $Z(s) = \left(R_1,\ \frac{R_2\left(L_2 s+\frac{1}{C_2 s}\right)}{L_2 s+R_2+\frac{1}{C_2 s}},\ \infty,\ \infty,\ \infty,\ \frac{R_L\left(L_L s+\frac{1}{C_L s}\right)}{L_L s+R_L+\frac{1}{C_L s}}\right)$ . . . 214
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10.442 INVALID-ORDER-442 $Z(s) = \left(L_1 s,\ R_2,\ \infty,\ \infty,\ \infty,\ L_L s + R_L + \frac{1}{C_L s}\right)$ . . . 214
10.443 INVALID-ORDER-443 $Z(s) = \left(L_1 s,\ R_2,\ \infty,\ \infty,\ \infty,\ \frac{L_L s}{C_L L_L s^2+1} + R_L\right)$ . . . 215
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10.445 INVALID-ORDER-445 $Z(s) = \left(L_1 s,\ \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_L s}\right)$ . . . 215
10.446 INVALID-ORDER-446 $Z(s) = \left(L_1 s,\ \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{R_L}{C_L R_L s+1}\right)$ . . . 215
10.447 INVALID-ORDER-447 $Z(s) = \left(L_1 s,\ \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ R_L + \frac{1}{C_L s}\right)$ . . . 215
10.448 INVALID-ORDER-448 $Z(s) = \left(L_1 s,\ \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ L_L s + \frac{1}{C_L s}\right)$ . . . 216
10.449 INVALID-ORDER-449 $Z(s) = \left(L_1 s,\ \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{L_L s}{C_L L_L s^2+1}\right)$ . . . 216
10.450 INVALID-ORDER-450 $Z(s) = \left(L_1 s,\ \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ L_L s + R_L + \frac{1}{C_L s}\right)$ . . . 216
10.451 INVALID-ORDER-451 $Z(s) = \left(L_1 s,\ \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_L s+\frac{1}{R_L}+\frac{1}{L_L s}}\right)$ . . . 216
10.452 INVALID-ORDER-452 $Z(s) = \left(L_1 s,\ \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{L_L s}{C_L L_L s^2+1} + R_L\right)$ . . . 216
10.453 INVALID-ORDER-453 $Z(s) = \left(L_1 s,\ \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{R_L\left(L_L s+\frac{1}{C_L s}\right)}{L_L s+R_L+\frac{1}{C_L s}}\right)$ . . . 217
10.454 INVALID-ORDER-454 $Z(s) = \left(L_1 s,\ \frac{R_2}{C_2 R_2 s+1},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_L s}\right)$ . . . 217
10.455 INVALID-ORDER-455 $Z(s) = \left(L_1 s,\ \frac{R_2}{C_2 R_2 s+1},\ \infty,\ \infty,\ \infty,\ \frac{R_L}{C_L R_L s+1}\right)$ . . . 217
10.456 INVALID-ORDER-456 $Z(s) = \left(L_1 s,\ \frac{R_2}{C_2 R_2 s+1},\ \infty,\ \infty,\ \infty,\ R_L + \frac{1}{C_L s}\right)$ . . . 217

10.457 INVALID-ORDER-457 $Z(s) = \left(L_1 s,\ \frac{R_2}{C_2 R_2 s+1},\ \infty,\ \infty,\ \infty,\ L_L s + \frac{1}{C_L s}\right)$ . . . 217
10.458 INVALID-ORDER-458 $Z(s) = \left(L_1 s,\ \frac{R_2}{C_2 R_2 s+1},\ \infty,\ \infty,\ \infty,\ \frac{L_L s}{C_L L_L s^2+1}\right)$ . . . 218
10.459 INVALID-ORDER-459 $Z(s) = \left(L_1 s,\ \frac{R_2}{C_2 R_2 s+1},\ \infty,\ \infty,\ \infty,\ L_L s + R_L + \frac{1}{C_L s}\right)$ . . . 218
10.460 INVALID-ORDER-460 $Z(s) = \left(L_1 s,\ \frac{R_2}{C_2 R_2 s+1},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$ . . . 218
10.461 INVALID-ORDER-461 $Z(s) = \left(L_1 s,\ \frac{R_2}{C_2 R_2 s+1},\ \infty,\ \infty,\ \infty,\ \frac{L_L s}{C_L L_L s^2+1} + R_L\right)$ . . . 218
10.462 INVALID-ORDER-462 $Z(s) = \left(L_1 s,\ \frac{R_2}{C_2 R_2 s+1},\ \infty,\ \infty,\ \infty,\ \frac{R_L\left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$ . . . 218
10.463 INVALID-ORDER-463 $Z(s) = \left(L_1 s,\ R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ R_L\right)$ . . . 219
10.464 INVALID-ORDER-464 $Z(s) = \left(L_1 s,\ R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_L s}\right)$ . . . 219
10.465 INVALID-ORDER-465 $Z(s) = \left(L_1 s,\ R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{R_L}{C_L R_L s+1}\right)$ . . . 219
10.466 INVALID-ORDER-466 $Z(s) = \left(L_1 s,\ R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ R_L + \frac{1}{C_L s}\right)$ . . . 219
10.467 INVALID-ORDER-467 $Z(s) = \left(L_1 s,\ L_2 s + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ R_L\right)$ . . . 219
10.468 INVALID-ORDER-468 $Z(s) = \left(L_1 s,\ L_2 s + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_L s}\right)$ . . . 219
10.469 INVALID-ORDER-469 $Z(s) = \left(L_1 s,\ L_2 s + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{R_L}{C_L R_L s+1}\right)$ . . . 220
10.470 INVALID-ORDER-470 $Z(s) = \left(L_1 s,\ L_2 s + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ R_L + \frac{1}{C_L s}\right)$ . . . 220
10.471 INVALID-ORDER-471 $Z(s) = \left(L_1 s,\ L_2 s + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ L_L s + \frac{1}{C_L s}\right)$ . . . 220
10.472 INVALID-ORDER-472 $Z(s) = \left(L_1 s,\ L_2 s + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{L_L s}{C_L L_L s^2+1}\right)$ . . . 220
10.473 INVALID-ORDER-473 $Z(s) = \left(L_1 s,\ L_2 s + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ L_L s + R_L + \frac{1}{C_L s}\right)$ . . . 220
10.474 INVALID-ORDER-474 $Z(s) = \left(L_1 s,\ L_2 s + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{L_L s}{C_L L_L s^2+1} + R_L\right)$ . . . 220
10.475 INVALID-ORDER-475 $Z(s) = \left(L_1 s,\ L_2 s + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{R_L\left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$ . . . 221
10.476 INVALID-ORDER-476 $Z(s) = \left(L_1 s,\ L_2 s + R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ R_L\right)$ . . . 221
10.477 INVALID-ORDER-477 $Z(s) = \left(L_1 s,\ L_2 s + R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_L s}\right)$ . . . 221
10.478 INVALID-ORDER-478 $Z(s) = \left(L_1 s,\ L_2 s + R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{R_L}{C_L R_L s+1}\right)$ . . . 221
10.479 INVALID-ORDER-479 $Z(s) = \left(L_1 s,\ L_2 s + R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ L_L s + \frac{1}{C_L s}\right)$ . . . 221

10.480 INVALID-ORDER-480 $Z(s) = \left(L_1 s,\ L_2 s + R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ L_L s + R_L + \frac{1}{C_L s}\right)$ . . . 221
10.481 INVALID-ORDER-481 $Z(s) = \left(L_1 s,\ L_2 s + R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{L_L s}{C_L L_L s^2+1} + R_L\right)$ . . . 222
10.482 INVALID-ORDER-482 $Z(s) = \left(L_1 s,\ L_2 s + R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{R_L\left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$ . . . 222
10.483 INVALID-ORDER-483 $Z(s) = \left(L_1 s,\ \frac{L_2 s}{C_2 L_2 s^2+1} + R_2,\ \infty,\ \infty,\ \infty,\ R_L\right)$ . . . 222
10.484 INVALID-ORDER-484 $Z(s) = \left(L_1 s,\ \frac{L_2 s}{C_2 L_2 s^2+1} + R_2,\ \infty,\ \infty,\ \infty,\ \frac{1}{C_L s}\right)$ . . . 222
10.485 INVALID-ORDER-485 $Z(s) = \left(L_1 s,\ \frac{L_2 s}{C_2 L_2 s^2+1} + R_2,\ \infty,\ \infty,\ \infty,\ R_L + \frac{1}{C_L s}\right)$ . . . 222
10.486 INVALID-ORDER-486 $Z(s) = \left(L_1 s,\ \frac{L_2 s}{C_2 L_2 s^2+1} + R_2,\ \infty,\ \infty,\ \infty,\ L_L s + \frac{1}{C_L s}\right)$ . . . 222
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10.488 INVALID-ORDER-488 $Z(s) = \left(L_1 s,\ \frac{L_2 s}{C_2 L_2 s^2+1} + R_2,\ \infty,\ \infty,\ \infty,\ L_L s + R_L + \frac{1}{C_L s}\right)$ . . . 223
10.489 INVALID-ORDER-489 $Z(s) = \left(L_1 s,\ \frac{L_2 s}{C_2 L_2 s^2+1} + R_2,\ \infty,\ \infty,\ \infty,\ \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$ . . . 223
10.490 INVALID-ORDER-490 $Z(s) = \left(L_1 s,\ \frac{L_2 s}{C_2 L_2 s^2+1} + R_2,\ \infty,\ \infty,\ \infty,\ \frac{L_L s}{C_L L_L s^2+1} + R_L\right)$ . . . 223
10.491 INVALID-ORDER-491 $Z(s) = \left(L_1 s,\ \frac{L_2 s}{C_2 L_2 s^2+1} + R_2,\ \infty,\ \infty,\ \infty,\ \frac{R_L\left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$ . . . 223
10.492 INVALID-ORDER-492 $Z(s) = \left(L_1 s,\ \frac{R_2\left(L_2 s + \frac{1}{C_2 s}\right)}{L_2 s + R_2 + \frac{1}{C_2 s}},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_L s}\right)$ . . . 224
10.493 INVALID-ORDER-493 $Z(s) = \left(L_1 s,\ \frac{R_2\left(L_2 s + \frac{1}{C_2 s}\right)}{L_2 s + R_2 + \frac{1}{C_2 s}},\ \infty,\ \infty,\ \infty,\ \frac{R_L}{C_L R_L s+1}\right)$ . . . 224
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10.500INVALID-ORDER-500 $Z(s) = \left(L_1 s,\ \frac{R_2\left(L_2 s+\frac{1}{C_2 s}\right)}{L_2 s+R_2+\frac{1}{C_2 s}},\ \infty,\ \infty,\ \infty,\ \frac{R_L\left(L_L s+\frac{1}{C_L s}\right)}{L_L s+R_L+\frac{1}{C_L s}}\right)$ . . . 225
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10.502INVALID-ORDER-502 $Z(s) = \left(\frac{1}{C_1 s},\ R_2,\ \infty,\ \infty,\ \infty,\ R_L+\frac{1}{C_L s}\right)$ . . . 226
10.503INVALID-ORDER-503 $Z(s) = \left(\frac{1}{C_1 s},\ R_2,\ \infty,\ \infty,\ \infty,\ L_L s+\frac{1}{C_L s}\right)$ . . . 226
10.504INVALID-ORDER-504 $Z(s) = \left(\frac{1}{C_1 s},\ R_2,\ \infty,\ \infty,\ \infty,\ \frac{L_L s}{C_L L_L s^2+1}\right)$ . . . 226
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10.508INVALID-ORDER-508 $Z(s) = \left(\frac{1}{C_1 s},\ \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_L s}\right)$ . . . 227
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10.515INVALID-ORDER-515 $Z(s) = \left(\frac{1}{C_1 s},\ \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{L_L s}{C_L L_L s^2+1}+R_L\right)$ . . . 228
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10.525INVALID-ORDER-525 $Z(s) = \left(\frac{1}{C_1 s},\ R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ L_L s + \frac{1}{C_L s}\right)$ . . . 230
10.526INVALID-ORDER-526 $Z(s) = \left(\frac{1}{C_1 s},\ R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{L_L s}{C_L L_L s^2+1}\right)$ . . . 230
10.527INVALID-ORDER-527 $Z(s) = \left(\frac{1}{C_1 s},\ R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ L_L s + R_L + \frac{1}{C_L s}\right)$ . . . 230
10.528INVALID-ORDER-528 $Z(s) = \left(\frac{1}{C_1 s},\ R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_L s+\frac{1}{R_L}+\frac{1}{L_L s}}\right)$ . . . 230
10.529INVALID-ORDER-529 $Z(s) = \left(\frac{1}{C_1 s},\ R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{L_L s}{C_L L_L s^2+1} + R_L\right)$ . . . 231
10.530INVALID-ORDER-530 $Z(s) = \left(\frac{1}{C_1 s},\ R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{R_L\left(L_L s+\frac{1}{C_L s}\right)}{L_L s+R_L+\frac{1}{C_L s}}\right)$ . . . 231
10.531INVALID-ORDER-531 $Z(s) = \left(\frac{1}{C_1 s},\ L_2 s + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_L s}\right)$ . . . 231
10.532INVALID-ORDER-532 $Z(s) = \left(\frac{1}{C_1 s},\ L_2 s + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{R_L}{C_L R_L s+1}\right)$ . . . 231
10.533INVALID-ORDER-533 $Z(s) = \left(\frac{1}{C_1 s},\ L_2 s + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ R_L + \frac{1}{C_L s}\right)$ . . . 231
10.534INVALID-ORDER-534 $Z(s) = \left(\frac{1}{C_1 s},\ L_2 s + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ L_L s + \frac{1}{C_L s}\right)$ . . . 232
10.535INVALID-ORDER-535 $Z(s) = \left(\frac{1}{C_1 s},\ L_2 s + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{L_L s}{C_L L_L s^2+1}\right)$ . . . 232
10.536INVALID-ORDER-536 $Z(s) = \left(\frac{1}{C_1 s},\ L_2 s + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ L_L s + R_L + \frac{1}{C_L s}\right)$ . . . 232
10.537INVALID-ORDER-537 $Z(s) = \left(\frac{1}{C_1 s},\ L_2 s + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_L s+\frac{1}{R_L}+\frac{1}{L_L s}}\right)$ . . . 232
10.538INVALID-ORDER-538 $Z(s) = \left(\frac{1}{C_1 s},\ L_2 s + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{L_L s}{C_L L_L s^2+1} + R_L\right)$ . . . 232
10.539INVALID-ORDER-539 $Z(s) = \left(\frac{1}{C_1 s},\ L_2 s + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{R_L\left(L_L s+\frac{1}{C_L s}\right)}{L_L s+R_L+\frac{1}{C_L s}}\right)$ . . . 233
10.540INVALID-ORDER-540 $Z(s) = \left(\frac{1}{C_1 s},\ L_2 s + R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ R_L\right)$ . . . 233
10.541INVALID-ORDER-541 $Z(s) = \left(\frac{1}{C_1 s},\ L_2 s + R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_L s}\right)$ . . . 233
10.542INVALID-ORDER-542 $Z(s) = \left(\frac{1}{C_1 s},\ L_2 s + R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{R_L}{C_L R_L s+1}\right)$ . . . 233
10.543INVALID-ORDER-543 $Z(s) = \left(\frac{1}{C_1 s},\ L_2 s + R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ R_L + \frac{1}{C_L s}\right)$ . . . 233

10.544 INVALID-ORDER-544 $Z(s) = \left(\frac{1}{C_1 s},\ \frac{L_2 s}{C_2 L_2 s^2+1} + R_2,\ \infty,\ \infty,\ \infty,\ R_L\right)$ . . . 233
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10.546 INVALID-ORDER-546 $Z(s) = \left(\frac{1}{C_1 s},\ \frac{L_2 s}{C_2 L_2 s^2+1} + R_2,\ \infty,\ \infty,\ \infty,\ \frac{R_L}{C_L R_L s+1}\right)$ . . . 234
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10.548 INVALID-ORDER-548 $Z(s) = \left(\frac{1}{C_1 s},\ \frac{L_2 s}{C_2 L_2 s^2+1} + R_2,\ \infty,\ \infty,\ \infty,\ L_L s + \frac{1}{C_L s}\right)$ . . . 234
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10.551 INVALID-ORDER-551 $Z(s) = \left(\frac{1}{C_1 s},\ \frac{L_2 s}{C_2 L_2 s^2+1} + R_2,\ \infty,\ \infty,\ \infty,\ \frac{L_L s}{C_L L_L s^2+1} + R_L\right)$ . . . 235
10.552 INVALID-ORDER-552 $Z(s) = \left(\frac{1}{C_1 s},\ \frac{L_2 s}{C_2 L_2 s^2+1} + R_2,\ \infty,\ \infty,\ \infty,\ \frac{R_L\left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$ . . . 235
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10.554 INVALID-ORDER-554 $Z(s) = \left(\frac{1}{C_1 s},\ \frac{R_2\left(L_2 s + \frac{1}{C_2 s}\right)}{L_2 s + R_2 + \frac{1}{C_2 s}},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_L s}\right)$ . . . 235
10.555 INVALID-ORDER-555 $Z(s) = \left(\frac{1}{C_1 s},\ \frac{R_2\left(L_2 s + \frac{1}{C_2 s}\right)}{L_2 s + R_2 + \frac{1}{C_2 s}},\ \infty,\ \infty,\ \infty,\ \frac{R_L}{C_L R_L s+1}\right)$ . . . 235
10.556 INVALID-ORDER-556 $Z(s) = \left(\frac{1}{C_1 s},\ \frac{R_2\left(L_2 s + \frac{1}{C_2 s}\right)}{L_2 s + R_2 + \frac{1}{C_2 s}},\ \infty,\ \infty,\ \infty,\ L_L s + \frac{1}{C_L s}\right)$ . . . 236
10.557 INVALID-ORDER-557 $Z(s) = \left(\frac{1}{C_1 s},\ \frac{R_2\left(L_2 s + \frac{1}{C_2 s}\right)}{L_2 s + R_2 + \frac{1}{C_2 s}},\ \infty,\ \infty,\ \infty,\ L_L s + R_L + \frac{1}{C_L s}\right)$ . . . 236
10.558 INVALID-ORDER-558 $Z(s) = \left(\frac{1}{C_1 s},\ \frac{R_2\left(L_2 s + \frac{1}{C_2 s}\right)}{L_2 s + R_2 + \frac{1}{C_2 s}},\ \infty,\ \infty,\ \infty,\ \frac{L_L s}{C_L L_L s^2+1} + R_L\right)$ . . . 236
10.559 INVALID-ORDER-559 $Z(s) = \left(\frac{1}{C_1 s},\ \frac{R_2\left(L_2 s + \frac{1}{C_2 s}\right)}{L_2 s + R_2 + \frac{1}{C_2 s}},\ \infty,\ \infty,\ \infty,\ \frac{R_L\left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$ . . . 236
10.560 INVALID-ORDER-560 $Z(s) = \left(\frac{R_1}{C_1 R_1 s+1},\ R_2,\ \infty,\ \infty,\ \infty,\ R_L\right)$ . . . 236
10.561 INVALID-ORDER-561 $Z(s) = \left(\frac{R_1}{C_1 R_1 s+1},\ R_2,\ \infty,\ \infty,\ \infty,\ \frac{1}{C_L s}\right)$ . . . 237
10.562 INVALID-ORDER-562 $Z(s) = \left(\frac{R_1}{C_1 R_1 s+1},\ R_2,\ \infty,\ \infty,\ \infty,\ R_L + \frac{1}{C_L s}\right)$ . . . 237
10.563 INVALID-ORDER-563 $Z(s) = \left(\frac{R_1}{C_1 R_1 s+1},\ R_2,\ \infty,\ \infty,\ \infty,\ L_L s + \frac{1}{C_L s}\right)$ . . . 237
10.564 INVALID-ORDER-564 $Z(s) = \left(\frac{R_1}{C_1 R_1 s+1},\ R_2,\ \infty,\ \infty,\ \infty,\ \frac{L_L s}{C_L L_L s^2+1}\right)$ . . . 237

10.565 INVALID-ORDER-565 $Z(s) = \left(\frac{R_1}{C_1 R_1 s+1},\ R_2,\ \infty,\ \infty,\ \infty,\ L_L s + R_L + \frac{1}{C_L s}\right)$ . . . 237
10.566 INVALID-ORDER-566 $Z(s) = \left(\frac{R_1}{C_1 R_1 s+1},\ R_2,\ \infty,\ \infty,\ \infty,\ \frac{1}{C_L s+\frac{1}{R_L}+\frac{1}{L_L s}}\right)$ . . . 237
10.567 INVALID-ORDER-567 $Z(s) = \left(\frac{R_1}{C_1 R_1 s+1},\ R_2,\ \infty,\ \infty,\ \infty,\ \frac{L_L s}{C_L L_L s^2+1} + R_L\right)$ . . . 238
10.568 INVALID-ORDER-568 $Z(s) = \left(\frac{R_1}{C_1 R_1 s+1},\ R_2,\ \infty,\ \infty,\ \infty,\ \frac{R_L\left(L_L s+\frac{1}{C_L s}\right)}{L_L s+R_L+\frac{1}{C_L s}}\right)$ . . . 238
10.569 INVALID-ORDER-569 $Z(s) = \left(\frac{R_1}{C_1 R_1 s+1},\ \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_L s}\right)$ . . . 238
10.570 INVALID-ORDER-570 $Z(s) = \left(\frac{R_1}{C_1 R_1 s+1},\ \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{R_L}{C_L R_L s+1}\right)$ . . . 238
10.571 INVALID-ORDER-571 $Z(s) = \left(\frac{R_1}{C_1 R_1 s+1},\ \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ R_L + \frac{1}{C_L s}\right)$ . . . 238
10.572 INVALID-ORDER-572 $Z(s) = \left(\frac{R_1}{C_1 R_1 s+1},\ \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ L_L s + \frac{1}{C_L s}\right)$ . . . 239
10.573 INVALID-ORDER-573 $Z(s) = \left(\frac{R_1}{C_1 R_1 s+1},\ \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{L_L s}{C_L L_L s^2+1}\right)$ . . . 239
10.574 INVALID-ORDER-574 $Z(s) = \left(\frac{R_1}{C_1 R_1 s+1},\ \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ L_L s + R_L + \frac{1}{C_L s}\right)$ . . . 239
10.575 INVALID-ORDER-575 $Z(s) = \left(\frac{R_1}{C_1 R_1 s+1},\ \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_L s+\frac{1}{R_L}+\frac{1}{L_L s}}\right)$ . . . 239
10.576 INVALID-ORDER-576 $Z(s) = \left(\frac{R_1}{C_1 R_1 s+1},\ \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{L_L s}{C_L L_L s^2+1} + R_L\right)$ . . . 239
10.577 INVALID-ORDER-577 $Z(s) = \left(\frac{R_1}{C_1 R_1 s+1},\ \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{R_L\left(L_L s+\frac{1}{C_L s}\right)}{L_L s+R_L+\frac{1}{C_L s}}\right)$ . . . 240
10.578 INVALID-ORDER-578 $Z(s) = \left(\frac{R_1}{C_1 R_1 s+1},\ \frac{R_2}{C_2 R_2 s+1},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_L s}\right)$ . . . 240
10.579 INVALID-ORDER-579 $Z(s) = \left(\frac{R_1}{C_1 R_1 s+1},\ \frac{R_2}{C_2 R_2 s+1},\ \infty,\ \infty,\ \infty,\ R_L + \frac{1}{C_L s}\right)$ . . . 240
10.580 INVALID-ORDER-580 $Z(s) = \left(\frac{R_1}{C_1 R_1 s+1},\ \frac{R_2}{C_2 R_2 s+1},\ \infty,\ \infty,\ \infty,\ L_L s + \frac{1}{C_L s}\right)$ . . . 240
10.581 INVALID-ORDER-581 $Z(s) = \left(\frac{R_1}{C_1 R_1 s+1},\ \frac{R_2}{C_2 R_2 s+1},\ \infty,\ \infty,\ \infty,\ \frac{L_L s}{C_L L_L s^2+1}\right)$ . . . 240
10.582 INVALID-ORDER-582 $Z(s) = \left(\frac{R_1}{C_1 R_1 s+1},\ \frac{R_2}{C_2 R_2 s+1},\ \infty,\ \infty,\ \infty,\ L_L s + R_L + \frac{1}{C_L s}\right)$ . . . 240
10.583 INVALID-ORDER-583 $Z(s) = \left(\frac{R_1}{C_1 R_1 s+1},\ \frac{R_2}{C_2 R_2 s+1},\ \infty,\ \infty,\ \infty,\ \frac{L_L s}{C_L L_L s^2+1} + R_L\right)$ . . . 241
10.584 INVALID-ORDER-584 $Z(s) = \left(\frac{R_1}{C_1 R_1 s+1},\ \frac{R_2}{C_2 R_2 s+1},\ \infty,\ \infty,\ \infty,\ \frac{R_L\left(L_L s+\frac{1}{C_L s}\right)}{L_L s+R_L+\frac{1}{C_L s}}\right)$ . . . 241
10.585 INVALID-ORDER-585 $Z(s) = \left(\frac{R_1}{C_1 R_1 s+1},\ R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_L s}\right)$ . . . 241
10.586 INVALID-ORDER-586 $Z(s) = \left(\frac{R_1}{C_1 R_1 s+1},\ R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{R_L}{C_L R_L s+1}\right)$ . . . 241

10.587 INVALID-ORDER-587 $Z(s) = \left(\frac{R_1}{C_1 R_1 s+1},\ R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ R_L + \frac{1}{C_L s}\right)$ . . . 241
10.588 INVALID-ORDER-588 $Z(s) = \left(\frac{R_1}{C_1 R_1 s+1},\ R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ L_L s + \frac{1}{C_L s}\right)$ . . . 242
10.589 INVALID-ORDER-589 $Z(s) = \left(\frac{R_1}{C_1 R_1 s+1},\ R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{L_L s}{C_L L_L s^2+1}\right)$ . . . 242
10.590 INVALID-ORDER-590 $Z(s) = \left(\frac{R_1}{C_1 R_1 s+1},\ R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ L_L s + R_L + \frac{1}{C_L s}\right)$ . . . 242
10.591 INVALID-ORDER-591 $Z(s) = \left(\frac{R_1}{C_1 R_1 s+1},\ R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_L s+\frac{1}{R_L}+\frac{1}{L_L s}}\right)$ . . . 242
10.592 INVALID-ORDER-592 $Z(s) = \left(\frac{R_1}{C_1 R_1 s+1},\ R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{L_L s}{C_L L_L s^2+1} + R_L\right)$ . . . 242
10.593 INVALID-ORDER-593 $Z(s) = \left(\frac{R_1}{C_1 R_1 s+1},\ R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{R_L\left(L_L s+\frac{1}{C_L s}\right)}{L_L s+R_L+\frac{1}{C_L s}}\right)$ . . . 243
10.594 INVALID-ORDER-594 $Z(s) = \left(\frac{R_1}{C_1 R_1 s+1},\ L_2 s + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ R_L + \frac{1}{C_L s}\right)$ . . . 243
10.595 INVALID-ORDER-595 $Z(s) = \left(\frac{R_1}{C_1 R_1 s+1},\ L_2 s + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ L_L s + \frac{1}{C_L s}\right)$ . . . 243
10.596 INVALID-ORDER-596 $Z(s) = \left(\frac{R_1}{C_1 R_1 s+1},\ L_2 s + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ L_L s + R_L + \frac{1}{C_L s}\right)$ . . . 243
10.597 INVALID-ORDER-597 $Z(s) = \left(\frac{R_1}{C_1 R_1 s+1},\ L_2 s + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{L_L s}{C_L L_L s^2+1} + R_L\right)$ . . . 243
10.598 INVALID-ORDER-598 $Z(s) = \left(\frac{R_1}{C_1 R_1 s+1},\ L_2 s + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{R_L\left(L_L s+\frac{1}{C_L s}\right)}{L_L s+R_L+\frac{1}{C_L s}}\right)$ . . . 244
10.599 INVALID-ORDER-599 $Z(s) = \left(\frac{R_1}{C_1 R_1 s+1},\ L_2 s + R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_L s}\right)$ . . . 244
10.600 INVALID-ORDER-600 $Z(s) = \left(\frac{R_1}{C_1 R_1 s+1},\ L_2 s + R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{R_L}{C_L R_L s+1}\right)$ . . . 244
10.601 INVALID-ORDER-601 $Z(s) = \left(\frac{R_1}{C_1 R_1 s+1},\ L_2 s + R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ R_L + \frac{1}{C_L s}\right)$ . . . 244
10.602 INVALID-ORDER-602 $Z(s) = \left(\frac{R_1}{C_1 R_1 s+1},\ L_2 s + R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ L_L s + \frac{1}{C_L s}\right)$ . . . 244
10.603 INVALID-ORDER-603 $Z(s) = \left(\frac{R_1}{C_1 R_1 s+1},\ L_2 s + R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{L_L s}{C_L L_L s^2+1}\right)$ . . . 245
10.604 INVALID-ORDER-604 $Z(s) = \left(\frac{R_1}{C_1 R_1 s+1},\ L_2 s + R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ L_L s + R_L + \frac{1}{C_L s}\right)$ . . . 245
10.605 INVALID-ORDER-605 $Z(s) = \left(\frac{R_1}{C_1 R_1 s+1},\ L_2 s + R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_L s+\frac{1}{R_L}+\frac{1}{L_L s}}\right)$ . . . 245
10.606 INVALID-ORDER-606 $Z(s) = \left(\frac{R_1}{C_1 R_1 s+1},\ L_2 s + R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{L_L s}{C_L L_L s^2+1} + R_L\right)$ . . . 245
10.607 INVALID-ORDER-607 $Z(s) = \left(\frac{R_1}{C_1 R_1 s+1},\ L_2 s + R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{R_L\left(L_L s+\frac{1}{C_L s}\right)}{L_L s+R_L+\frac{1}{C_L s}}\right)$ . . . 245
10.608 INVALID-ORDER-608 $Z(s) = \left(\frac{R_1}{C_1 R_1 s+1},\ \frac{L_2 s}{C_2 L_2 s^2+1} + R_2,\ \infty,\ \infty,\ \infty,\ \frac{1}{C_L s}\right)$ . . . 246

10.609 INVALID-ORDER-609 $Z(s) = \left(\frac{R_1}{C_1 R_1 s+1},\ \frac{L_2 s}{C_2 L_2 s^2+1} + R_2,\ \infty,\ \infty,\ \infty,\ \frac{R_L}{C_L R_L s+1}\right)$ 246
10.610 INVALID-ORDER-610 $Z(s) = \left(\frac{R_1}{C_1 R_1 s+1},\ \frac{L_2 s}{C_2 L_2 s^2+1} + R_2,\ \infty,\ \infty,\ \infty,\ R_L + \frac{1}{C_L s}\right)$ 246
10.611 INVALID-ORDER-611 $Z(s) = \left(\frac{R_1}{C_1 R_1 s+1},\ \frac{L_2 s}{C_2 L_2 s^2+1} + R_2,\ \infty,\ \infty,\ \infty,\ L_L s + \frac{1}{C_L s}\right)$ 246
10.612 INVALID-ORDER-612 $Z(s) = \left(\frac{R_1}{C_1 R_1 s+1},\ \frac{L_2 s}{C_2 L_2 s^2+1} + R_2,\ \infty,\ \infty,\ \infty,\ \frac{L_L s}{C_L L_L s^2+1}\right)$ 246
10.613 INVALID-ORDER-613 $Z(s) = \left(\frac{R_1}{C_1 R_1 s+1},\ \frac{L_2 s}{C_2 L_2 s^2+1} + R_2,\ \infty,\ \infty,\ \infty,\ L_L s + R_L + \frac{1}{C_L s}\right)$ 246
10.614 INVALID-ORDER-614 $Z(s) = \left(\frac{R_1}{C_1 R_1 s+1},\ \frac{L_2 s}{C_2 L_2 s^2+1} + R_2,\ \infty,\ \infty,\ \infty,\ \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$ 247
10.615 INVALID-ORDER-615 $Z(s) = \left(\frac{R_1}{C_1 R_1 s+1},\ \frac{L_2 s}{C_2 L_2 s^2+1} + R_2,\ \infty,\ \infty,\ \infty,\ \frac{L_L s}{C_L L_L s^2+1} + R_L\right)$ 247
10.616 INVALID-ORDER-616 $Z(s) = \left(\frac{R_1}{C_1 R_1 s+1},\ \frac{L_2 s}{C_2 L_2 s^2+1} + R_2,\ \infty,\ \infty,\ \infty,\ \frac{R_L\left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$ 247

1 Examined $H(z)$ for TIA simple Z2 Z3 ZL: $\frac{Z_3 Z_L(Z_2 g_m+1)}{Z_2 Z_3 g_m+Z_2 Z_L g_m+Z_3+Z_L}$

$$H(z) = \frac{Z_3 Z_L \left(Z_2 g_m + 1\right)}{Z_2 Z_3 g_m + Z_2 Z_L g_m + Z_3 + Z_L}$$

2 HP

3 BP

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

$$H(s) = \frac{L_L R_3 s}{C_L L_L R_3 s^2 + L_L s + R_3}$$

Parameters:

Q: $C_L R_3 \sqrt{\frac{1}{C_L L_L}}$
wo: $\sqrt{\frac{1}{C_L L_L}}$
bandwidth: $\frac{1}{C_L R_3}$
K-LP: 0
K-HP: 0
K-BP: R_3
Qz: 0
Wz: None

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

$$H(s) = \frac{L_L R_3 R_L s}{C_L L_L R_3 R_L s^2 + L_L R_3 s + L_L R_L s + R_3 R_L}$$

Parameters:

Q: $\frac{C_L R_3 R_L \sqrt{\frac{1}{C_L L_L}}}{R_3+R_L}$
wo: $\sqrt{\frac{1}{C_L L_L}}$
bandwidth: $\frac{R_3+R_L}{C_L R_3 R_L}$
K-LP: 0
K-HP: 0
K-BP: $\frac{R_3 R_L}{R_3+R_L}$
Qz: 0
Wz: None

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

$$H(s) = \frac{L_L R_L s}{C_3 L_L R_L s^2 + C_L L_L R_L s^2 + L_L s + R_L}$$

Parameters:

Q: $R_L \sqrt{\frac{1}{L_L(C_3+C_L)}}\,(C_3+C_L)$
wo: $\sqrt{\frac{1}{L_L(C_3+C_L)}}$
bandwidth: $\frac{1}{R_L(C_3+C_L)}$
K-LP: 0
K-HP: 0
K-BP: R_L
Qz: 0
Wz: None

3.4 BP-4 $Z(s) = \left(\frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \infty,\ \frac{L_L s}{C_L L_L s^2+1}\right)$

$$H(s) = \frac{L_L R_3 s}{C_3 L_L R_3 s^2 + C_L L_L R_3 s^2 + L_L s + R_3}$$

Parameters:

Q: $R_3 \sqrt{\frac{1}{L_L(C_3+C_L)}}\,(C_3+C_L)$

wo: $\sqrt{\frac{1}{L_L(C_3+C_L)}}$
bandwidth: $\frac{1}{R_3(C_3+C_L)}$
K-LP: 0
K-HP: 0
K-BP: R_3
Qz: 0
Wz: None

3.5 BP-5 $Z(s) = \left(\frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \infty,\ \frac{1}{C_L s+\frac{1}{R_L}+\frac{1}{L_L s}}\right)$

$$H(s) = \frac{L_L R_3 R_L s}{C_3 L_L R_3 R_L s^2 + C_L L_L R_3 R_L s^2 + L_L R_3 s + L_L R_L s + R_3 R_L}$$

Parameters:

Q: $\frac{R_3 R_L \sqrt{\frac{1}{L_L(C_3+C_L)}}(C_3+C_L)}{R_3+R_L}$
wo: $\sqrt{\frac{1}{L_L(C_3+C_L)}}$
bandwidth: $\frac{R_3+R_L}{R_3 R_L(C_3+C_L)}$
K-LP: 0
K-HP: 0
K-BP: $\frac{R_3 R_L}{R_3+R_L}$
Qz: 0
Wz: None

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

$$H(s) = \frac{L_3 R_L s}{C_3 L_3 R_L s^2 + L_3 s + R_L}$$

Parameters:

Q: $C_3 R_L \sqrt{\frac{1}{C_3 L_3}}$
wo: $\sqrt{\frac{1}{C_3 L_3}}$

bandwidth: $\frac{1}{C_3 R_L}$
K-LP: 0
K-HP: 0
K-BP: R_L
Qz: 0
Wz: None

3.7 BP-7 $Z(s) = \left(L_1 s + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \infty,\ \frac{R_L}{C_L R_L s+1}\right)$

$$H(s) = \frac{L_3 R_L s}{C_3 L_3 R_L s^2 + C_L L_3 R_L s^2 + L_3 s + R_L}$$

Parameters:

Q: $R_L \sqrt{\frac{1}{L_3(C_3+C_L)}}\,(C_3 + C_L)$
wo: $\sqrt{\frac{1}{L_3(C_3+C_L)}}$
bandwidth: $\frac{1}{R_L(C_3+C_L)}$
K-LP: 0
K-HP: 0
K-BP: R_L
Qz: 0
Wz: None

3.8 BP-8 $Z(s) = \left(L_1 s + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \infty,\ \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$

$$H(s) = \frac{L_3 L_L R_L s}{C_3 L_3 L_L R_L s^2 + C_L L_3 L_L R_L s^2 + L_3 L_L s + L_3 R_L + L_L R_L}$$

Parameters:

Q: $R_L \sqrt{\frac{L_3+L_L}{L_3 L_L(C_3+C_L)}}\,(C_3 + C_L)$
wo: $\sqrt{\frac{L_3+L_L}{L_3 L_L(C_3+C_L)}}$
bandwidth: $\frac{1}{R_L(C_3+C_L)}$

K-LP: 0
K-HP: 0
K-BP: R_L
Qz: 0
Wz: None

3.9 BP-9 $Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \infty,\ R_L\right)$

$$H(s) = \frac{L_3 R_3 R_L s}{C_3 L_3 R_3 R_L s^2 + L_3 R_3 s + L_3 R_L s + R_3 R_L}$$

Parameters:

Q: $\frac{C_3 R_3 R_L \sqrt{\frac{1}{C_3 L_3}}}{R_3 + R_L}$
wo: $\sqrt{\frac{1}{C_3 L_3}}$
bandwidth: $\frac{R_3 + R_L}{C_3 R_3 R_L}$
K-LP: 0
K-HP: 0
K-BP: $\frac{R_3 R_L}{R_3 + R_L}$
Qz: 0
Wz: None

3.10 BP-10 $Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \infty,\ \frac{1}{C_L s}\right)$

$$H(s) = \frac{L_3 R_3 s}{C_3 L_3 R_3 s^2 + C_L L_3 R_3 s^2 + L_3 s + R_3}$$

Parameters:

Q: $R_3 \sqrt{\frac{1}{L_3 (C_3 + C_L)}}\,(C_3 + C_L)$
wo: $\sqrt{\frac{1}{L_3 (C_3 + C_L)}}$
bandwidth: $\frac{1}{R_3 (C_3 + C_L)}$
K-LP: 0

K-HP: 0
K-BP: R_3
Qz: 0
Wz: None

3.11 BP-11 $Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \infty,\ \frac{R_L}{C_L R_L s+1}\right)$

$$H(s) = \frac{L_3 R_3 R_L s}{C_3 L_3 R_3 R_L s^2 + C_L L_3 R_3 R_L s^2 + L_3 R_3 s + L_3 R_L s + R_3 R_L}$$

Parameters:

Q: $\frac{R_3 R_L \sqrt{\frac{1}{L_3(C_3+C_L)}}(C_3+C_L)}{R_3+R_L}$
wo: $\sqrt{\frac{1}{L_3(C_3+C_L)}}$
bandwidth: $\frac{R_3+R_L}{R_3 R_L (C_3+C_L)}$
K-LP: 0
K-HP: 0
K-BP: $\frac{R_3 R_L}{R_3+R_L}$
Qz: 0
Wz: None

3.12 BP-12 $Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \infty,\ \frac{L_L s}{C_L L_L s^2+1}\right)$

$$H(s) = \frac{L_3 L_L R_3 s}{C_3 L_3 L_L R_3 s^2 + C_L L_3 L_L R_3 s^2 + L_3 L_L s + L_3 R_3 + L_L R_3}$$

Parameters:

Q: $R_3 \sqrt{\frac{L_3+L_L}{L_3 L_L (C_3+C_L)}}\,(C_3 + C_L)$
wo: $\sqrt{\frac{L_3+L_L}{L_3 L_L (C_3+C_L)}}$
bandwidth: $\frac{1}{R_3(C_3+C_L)}$
K-LP: 0
K-HP: 0

K-BP: R_3
Qz: 0
Wz: None

3.13 BP-13 $Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \infty,\ \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$

$$H(s) = \frac{L_3 L_L R_3 R_L s}{C_3 L_3 L_L R_3 R_L s^2 + C_L L_3 L_L R_3 R_L s^2 + L_3 L_L R_3 s + L_3 L_L R_L s + L_3 R_3 R_L + L_L R_3 R_L}$$

Parameters:

Q: $\frac{R_3 R_L \sqrt{\frac{L_3+L_L}{L_3 L_L (C_3+C_L)}} (C_3+C_L)}{R_3+R_L}$
wo: $\sqrt{\frac{L_3+L_L}{L_3 L_L (C_3+C_L)}}$
bandwidth: $\frac{R_3+R_L}{R_3 R_L (C_3+C_L)}$
K-LP: 0
K-HP: 0
K-BP: $\frac{R_3 R_L}{R_3+R_L}$
Qz: 0
Wz: None

3.14 BP-14 $Z(s) = \left(\frac{R_1\left(L_1 s + \frac{1}{C_1 s}\right)}{L_1 s + R_1 + \frac{1}{C_1 s}},\ \infty,\ \infty,\ \infty,\ \infty,\ \frac{L_L s}{C_L L_L s^2 + 1}\right)$

$$H(s) = \frac{L_L R_3 s}{C_L L_L R_3 s^2 + L_L s + R_3}$$

Parameters:

Q: $C_L R_3 \sqrt{\frac{1}{C_L L_L}}$
wo: $\sqrt{\frac{1}{C_L L_L}}$
bandwidth: $\frac{1}{C_L R_3}$
K-LP: 0
K-HP: 0

K-BP: R_3
Qz: 0
Wz: None

3.15 BP-15 $Z(s) = \left(\frac{R_1\left(L_1 s + \frac{1}{C_1 s}\right)}{L_1 s + R_1 + \frac{1}{C_1 s}},\ \infty,\ \infty,\ \infty,\ \infty,\ \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$

$$H(s) = \frac{L_L R_3 R_L s}{C_L L_L R_3 R_L s^2 + L_L R_3 s + L_L R_L s + R_3 R_L}$$

Parameters:

Q: $\frac{C_L R_3 R_L \sqrt{\frac{1}{C_L L_L}}}{R_3 + R_L}$
wo: $\sqrt{\frac{1}{C_L L_L}}$
bandwidth: $\frac{R_3 + R_L}{C_L R_3 R_L}$
K-LP: 0
K-HP: 0
K-BP: $\frac{R_3 R_L}{R_3 + R_L}$
Qz: 0
Wz: None

3.16 BP-16 $Z(s) = \left(\infty,\ R_2,\ \infty,\ \infty,\ \infty,\ \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$

$$H(s) = \frac{L_L R_L s}{C_3 L_L R_L s^2 + C_L L_L R_L s^2 + L_L s + R_L}$$

Parameters:

Q: $R_L \sqrt{\frac{1}{L_L (C_3 + C_L)}}\,(C_3 + C_L)$
wo: $\sqrt{\frac{1}{L_L (C_3 + C_L)}}$
bandwidth: $\frac{1}{R_L (C_3 + C_L)}$
K-LP: 0
K-HP: 0
K-BP: R_L

Qz: 0
Wz: None

3.17 BP-17 $Z(s) = \left(\infty,\ \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{L_L s}{C_L L_L s^2+1}\right)$

$$H(s) = \frac{L_L R_3 s}{C_3 L_L R_3 s^2 + C_L L_L R_3 s^2 + L_L s + R_3}$$

Parameters:

Q: $R_3\sqrt{\frac{1}{L_L(C_3+C_L)}}\,(C_3+C_L)$
wo: $\sqrt{\frac{1}{L_L(C_3+C_L)}}$
bandwidth: $\frac{1}{R_3(C_3+C_L)}$
K-LP: 0
K-HP: 0
K-BP: R_3
Qz: 0
Wz: None

3.18 BP-18 $Z(s) = \left(\infty,\ \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_L s+\frac{1}{R_L}+\frac{1}{L_L s}}\right)$

$$H(s) = \frac{L_L R_3 R_L s}{C_3 L_L R_3 R_L s^2 + C_L L_L R_3 R_L s^2 + L_L R_3 s + L_L R_L s + R_3 R_L}$$

Parameters:

Q: $\frac{R_3 R_L\sqrt{\frac{1}{L_L(C_3+C_L)}}(C_3+C_L)}{R_3+R_L}$
wo: $\sqrt{\frac{1}{L_L(C_3+C_L)}}$
bandwidth: $\frac{R_3+R_L}{R_3 R_L(C_3+C_L)}$
K-LP: 0
K-HP: 0
K-BP: $\frac{R_3 R_L}{R_3+R_L}$
Qz: 0

Wz: None

3.19 BP-19 $Z(s) = \left(\infty,\ L_2 s + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ R_L\right)$

$$H(s) = \frac{L_3 R_L s}{C_3 L_3 R_L s^2 + L_3 s + R_L}$$

Parameters:

Q: $C_3 R_L \sqrt{\frac{1}{C_3 L_3}}$
wo: $\sqrt{\frac{1}{C_3 L_3}}$
bandwidth: $\frac{1}{C_3 R_L}$
K-LP: 0
K-HP: 0
K-BP: R_L
Qz: 0
Wz: None

3.20 BP-20 $Z(s) = \left(\infty,\ L_2 s + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{R_L}{C_L R_L s + 1}\right)$

$$H(s) = \frac{L_3 R_L s}{C_3 L_3 R_L s^2 + C_L L_3 R_L s^2 + L_3 s + R_L}$$

Parameters:

Q: $R_L \sqrt{\frac{1}{L_3 (C_3 + C_L)}}\,(C_3 + C_L)$
wo: $\sqrt{\frac{1}{L_3 (C_3 + C_L)}}$
bandwidth: $\frac{1}{R_L (C_3 + C_L)}$
K-LP: 0
K-HP: 0
K-BP: R_L
Qz: 0
Wz: None

3.21 BP-21 $Z(s) = \left(\infty,\ L_2 s + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$

$$H(s) = \frac{L_3 L_L R_L s}{C_3 L_3 L_L R_L s^2 + C_L L_3 L_L R_L s^2 + L_3 L_L s + L_3 R_L + L_L R_L}$$

Parameters:

Q: $R_L \sqrt{\frac{L_3 + L_L}{L_3 L_L (C_3 + C_L)}}\,(C_3 + C_L)$
wo: $\sqrt{\frac{L_3 + L_L}{L_3 L_L (C_3 + C_L)}}$
bandwidth: $\frac{1}{R_L (C_3 + C_L)}$
K-LP: 0
K-HP: 0
K-BP: R_L
Qz: 0
Wz: None

3.22 BP-22 $Z(s) = \left(\infty,\ \frac{L_2 s}{C_2 L_2 s^2 + 1} + R_2,\ \infty,\ \infty,\ \infty,\ R_L\right)$

$$H(s) = \frac{L_3 R_3 R_L s}{C_3 L_3 R_3 R_L s^2 + L_3 R_3 s + L_3 R_L s + R_3 R_L}$$

Parameters:

Q: $\frac{C_3 R_3 R_L \sqrt{\frac{1}{C_3 L_3}}}{R_3 + R_L}$
wo: $\sqrt{\frac{1}{C_3 L_3}}$
bandwidth: $\frac{R_3 + R_L}{C_3 R_3 R_L}$
K-LP: 0
K-HP: 0
K-BP: $\frac{R_3 R_L}{R_3 + R_L}$
Qz: 0
Wz: None

3.23 BP-23 $Z(s) = \left(\infty,\ \frac{L_2 s}{C_2 L_2 s^2+1} + R_2,\ \infty,\ \infty,\ \infty,\ \frac{1}{C_L s}\right)$

$$H(s) = \frac{L_3 R_3 s}{C_3 L_3 R_3 s^2 + C_L L_3 R_3 s^2 + L_3 s + R_3}$$

Parameters:

Q: $R_3\sqrt{\frac{1}{L_3(C_3+C_L)}}\,(C_3+C_L)$
wo: $\sqrt{\frac{1}{L_3(C_3+C_L)}}$
bandwidth: $\frac{1}{R_3(C_3+C_L)}$
K-LP: 0
K-HP: 0
K-BP: R_3
Qz: 0
Wz: None

3.24 BP-24 $Z(s) = \left(\infty,\ \frac{L_2 s}{C_2 L_2 s^2+1} + R_2,\ \infty,\ \infty,\ \infty,\ \frac{R_L}{C_L R_L s+1}\right)$

$$H(s) = \frac{L_3 R_3 R_L s}{C_3 L_3 R_3 R_L s^2 + C_L L_3 R_3 R_L s^2 + L_3 R_3 s + L_3 R_L s + R_3 R_L}$$

Parameters:

Q: $\frac{R_3 R_L \sqrt{\frac{1}{L_3(C_3+C_L)}}(C_3+C_L)}{R_3+R_L}$
wo: $\sqrt{\frac{1}{L_3(C_3+C_L)}}$
bandwidth: $\frac{R_3+R_L}{R_3 R_L(C_3+C_L)}$
K-LP: 0
K-HP: 0
K-BP: $\frac{R_3 R_L}{R_3+R_L}$
Qz: 0
Wz: None

3.25 BP-25 $Z(s) = \left(\infty,\ \frac{L_2 s}{C_2 L_2 s^2+1} + R_2,\ \infty,\ \infty,\ \infty,\ \frac{L_L s}{C_L L_L s^2+1}\right)$

$$H(s) = \frac{L_3 L_L R_3 s}{C_3 L_3 L_L R_3 s^2 + C_L L_3 L_L R_3 s^2 + L_3 L_L s + L_3 R_3 + L_L R_3}$$

Parameters:

Q: $R_3\sqrt{\frac{L_3+L_L}{L_3 L_L (C_3+C_L)}}\,(C_3+C_L)$
wo: $\sqrt{\frac{L_3+L_L}{L_3 L_L (C_3+C_L)}}$
bandwidth: $\frac{1}{R_3(C_3+C_L)}$
K-LP: 0
K-HP: 0
K-BP: R_3
Qz: 0
Wz: None

3.26 BP-26 $Z(s) = \left(\infty,\ \frac{L_2 s}{C_2 L_2 s^2+1} + R_2,\ \infty,\ \infty,\ \infty,\ \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$

$$H(s) = \frac{L_3 L_L R_3 R_L s}{C_3 L_3 L_L R_3 R_L s^2 + C_L L_3 L_L R_3 R_L s^2 + L_3 L_L R_3 s + L_3 L_L R_L s + L_3 R_3 R_L + L_L R_3 R_L}$$

Parameters:

Q: $\frac{R_3 R_L \sqrt{\frac{L_3+L_L}{L_3 L_L (C_3+C_L)}}(C_3+C_L)}{R_3+R_L}$
wo: $\sqrt{\frac{L_3+L_L}{L_3 L_L (C_3+C_L)}}$
bandwidth: $\frac{R_3+R_L}{R_3 R_L (C_3+C_L)}$
K-LP: 0
K-HP: 0
K-BP: $\frac{R_3 R_L}{R_3+R_L}$
Qz: 0
Wz: None

3.27 BP-27 $Z(s) = \left(\infty,\ \infty,\ \frac{1}{C_3 s},\ \infty,\ \infty,\ \frac{L_L s}{C_L L_L s^2+1}\right)$

$$H(s) = \frac{L_L R_3 s}{C_L L_L R_3 s^2 + L_L s + R_3}$$

Parameters:

Q: $C_L R_3 \sqrt{\frac{1}{C_L L_L}}$
wo: $\sqrt{\frac{1}{C_L L_L}}$
bandwidth: $\frac{1}{C_L R_3}$
K-LP: 0
K-HP: 0
K-BP: R_3
Qz: 0
Wz: None

3.28 BP-28 $Z(s) = \left(\infty,\ \infty,\ \frac{1}{C_3 s},\ \infty,\ \infty,\ \frac{1}{C_L s+\frac{1}{R_L}+\frac{1}{L_L s}}\right)$

$$H(s) = \frac{L_L R_3 R_L s}{C_L L_L R_3 R_L s^2 + L_L R_3 s + L_L R_L s + R_3 R_L}$$

Parameters:

Q: $\frac{C_L R_3 R_L \sqrt{\frac{1}{C_L L_L}}}{R_3+R_L}$
wo: $\sqrt{\frac{1}{C_L L_L}}$
bandwidth: $\frac{R_3+R_L}{C_L R_3 R_L}$
K-LP: 0
K-HP: 0
K-BP: $\frac{R_3 R_L}{R_3+R_L}$
Qz: 0
Wz: None

3.29 BP-29 $Z(s) = \left(\infty,\ \infty,\ \frac{R_3}{C_3R_3s+1},\ \infty,\ \infty,\ \frac{1}{C_Ls+\frac{1}{R_L}+\frac{1}{L_Ls}}\right)$

$$H(s) = \frac{L_LR_Ls}{C_3L_LR_Ls^2 + C_LL_LR_Ls^2 + L_Ls + R_L}$$

Parameters:

Q: $R_L\sqrt{\frac{1}{L_L(C_3+C_L)}}\,(C_3+C_L)$
wo: $\sqrt{\frac{1}{L_L(C_3+C_L)}}$
bandwidth: $\frac{1}{R_L(C_3+C_L)}$
K-LP: 0
K-HP: 0
K-BP: R_L
Qz: 0
Wz: None

3.30 BP-30 $Z(s) = \left(\infty,\ \infty,\ R_3+\frac{1}{C_3s},\ \infty,\ \infty,\ \frac{L_Ls}{C_LL_Ls^2+1}\right)$

$$H(s) = \frac{L_LR_3s}{C_3L_LR_3s^2 + C_LL_LR_3s^2 + L_Ls + R_3}$$

Parameters:

Q: $R_3\sqrt{\frac{1}{L_L(C_3+C_L)}}\,(C_3+C_L)$
wo: $\sqrt{\frac{1}{L_L(C_3+C_L)}}$
bandwidth: $\frac{1}{R_3(C_3+C_L)}$
K-LP: 0
K-HP: 0
K-BP: R_3
Qz: 0
Wz: None

3.31 BP-31 $Z(s) = \left(\infty,\ \infty,\ R_3 + \frac{1}{C_3 s},\ \infty,\ \infty,\ \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$

$$H(s) = \frac{L_L R_3 R_L s}{C_3 L_L R_3 R_L s^2 + C_L L_L R_3 R_L s^2 + L_L R_3 s + L_L R_L s + R_3 R_L}$$

Parameters:

Q: $\frac{R_3 R_L \sqrt{\frac{1}{L_L(C_3+C_L)}}(C_3+C_L)}{R_3+R_L}$
wo: $\sqrt{\frac{1}{L_L(C_3+C_L)}}$
bandwidth: $\frac{R_3+R_L}{R_3 R_L (C_3+C_L)}$
K-LP: 0
K-HP: 0
K-BP: $\frac{R_3 R_L}{R_3+R_L}$
Qz: 0
Wz: None

3.32 BP-32 $Z(s) = \left(\infty,\ \infty,\ L_3 s + R_3 + \frac{1}{C_3 s},\ \infty,\ \infty,\ R_L\right)$

$$H(s) = \frac{L_3 R_L s}{C_3 L_3 R_L s^2 + L_3 s + R_L}$$

Parameters:

Q: $C_3 R_L \sqrt{\frac{1}{C_3 L_3}}$
wo: $\sqrt{\frac{1}{C_3 L_3}}$
bandwidth: $\frac{1}{C_3 R_L}$
K-LP: 0
K-HP: 0
K-BP: R_L
Qz: 0
Wz: None

3.33 BP-33 $Z(s) = \left(\infty,\ \infty,\ L_3 s + R_3 + \frac{1}{C_3 s},\ \infty,\ \infty,\ \frac{R_L}{C_L R_L s+1}\right)$

$$H(s) = \frac{L_3 R_L s}{C_3 L_3 R_L s^2 + C_L L_3 R_L s^2 + L_3 s + R_L}$$

Parameters:

Q: $R_L \sqrt{\frac{1}{L_3(C_3+C_L)}}\,(C_3 + C_L)$
wo: $\sqrt{\frac{1}{L_3(C_3+C_L)}}$
bandwidth: $\frac{1}{R_L(C_3+C_L)}$
K-LP: 0
K-HP: 0
K-BP: R_L
Qz: 0
Wz: None

3.34 BP-34 $Z(s) = \left(\infty,\ \infty,\ L_3 s + R_3 + \frac{1}{C_3 s},\ \infty,\ \infty,\ \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$

$$H(s) = \frac{L_3 L_L R_L s}{C_3 L_3 L_L R_L s^2 + C_L L_3 L_L R_L s^2 + L_3 L_L s + L_3 R_L + L_L R_L}$$

Parameters:

Q: $R_L \sqrt{\frac{L_3+L_L}{L_3 L_L(C_3+C_L)}}\,(C_3 + C_L)$
wo: $\sqrt{\frac{L_3+L_L}{L_3 L_L(C_3+C_L)}}$
bandwidth: $\frac{1}{R_L(C_3+C_L)}$
K-LP: 0
K-HP: 0
K-BP: R_L
Qz: 0
Wz: None

3.35 BP-35 $Z(s) = \left(\infty,\ \infty,\ \frac{L_3 s}{C_3 L_3 s^2+1} + R_3,\ \infty,\ \infty,\ R_L\right)$

$$H(s) = \frac{L_3 R_3 R_L s}{C_3 L_3 R_3 R_L s^2 + L_3 R_3 s + L_3 R_L s + R_3 R_L}$$

Parameters:

Q: $\frac{C_3 R_3 R_L \sqrt{\frac{1}{C_3 L_3}}}{R_3 + R_L}$
wo: $\sqrt{\frac{1}{C_3 L_3}}$
bandwidth: $\frac{R_3 + R_L}{C_3 R_3 R_L}$
K-LP: 0
K-HP: 0
K-BP: $\frac{R_3 R_L}{R_3 + R_L}$
Qz: 0
Wz: None

3.36 BP-36 $Z(s) = \left(\infty,\ \infty,\ \frac{L_3 s}{C_3 L_3 s^2+1} + R_3,\ \infty,\ \infty,\ \frac{1}{C_L s}\right)$

$$H(s) = \frac{L_3 R_3 s}{C_3 L_3 R_3 s^2 + C_L L_3 R_3 s^2 + L_3 s + R_3}$$

Parameters:

Q: $R_3 \sqrt{\frac{1}{L_3 (C_3 + C_L)}}\,(C_3 + C_L)$
wo: $\sqrt{\frac{1}{L_3 (C_3 + C_L)}}$
bandwidth: $\frac{1}{R_3 (C_3 + C_L)}$
K-LP: 0
K-HP: 0
K-BP: R_3
Qz: 0
Wz: None

3.37 BP-37 $Z(s) = \left(\infty,\ \infty,\ \frac{L_3 s}{C_3 L_3 s^2+1} + R_3,\ \infty,\ \infty,\ \frac{R_L}{C_L R_L s+1}\right)$

$$H(s) = \frac{L_3 R_3 R_L s}{C_3 L_3 R_3 R_L s^2 + C_L L_3 R_3 R_L s^2 + L_3 R_3 s + L_3 R_L s + R_3 R_L}$$

Parameters:

Q: $\frac{R_3 R_L \sqrt{\frac{1}{L_3(C_3+C_L)}}(C_3+C_L)}{R_3+R_L}$
wo: $\sqrt{\frac{1}{L_3(C_3+C_L)}}$
bandwidth: $\frac{R_3+R_L}{R_3 R_L (C_3+C_L)}$
K-LP: 0
K-HP: 0
K-BP: $\frac{R_3 R_L}{R_3+R_L}$
Qz: 0
Wz: None

3.38 BP-38 $Z(s) = \left(\infty,\ \infty,\ \frac{L_3 s}{C_3 L_3 s^2+1} + R_3,\ \infty,\ \infty,\ \frac{L_L s}{C_L L_L s^2+1}\right)$

$$H(s) = \frac{L_3 L_L R_3 s}{C_3 L_3 L_L R_3 s^2 + C_L L_3 L_L R_3 s^2 + L_3 L_L s + L_3 R_3 + L_L R_3}$$

Parameters:

Q: $R_3 \sqrt{\frac{L_3+L_L}{L_3 L_L (C_3+C_L)}}\,(C_3+C_L)$
wo: $\sqrt{\frac{L_3+L_L}{L_3 L_L (C_3+C_L)}}$
bandwidth: $\frac{1}{R_3(C_3+C_L)}$
K-LP: 0
K-HP: 0
K-BP: R_3
Qz: 0
Wz: None

3.39 BP-39 $Z(s) = \left(\infty,\ \infty,\ \frac{L_3 s}{C_3 L_3 s^2+1} + R_3,\ \infty,\ \infty,\ \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$

$$H(s) = \frac{L_3 L_L R_3 R_L s}{C_3 L_3 L_L R_3 R_L s^2 + C_L L_3 L_L R_3 R_L s^2 + L_3 L_L R_3 s + L_3 L_L R_L s + L_3 R_3 R_L + L_L R_3 R_L}$$

Parameters:

Q: $\frac{R_3 R_L \sqrt{\frac{L_3+L_L}{L_3 L_L (C_3+C_L)}}(C_3+C_L)}{R_3+R_L}$
wo: $\sqrt{\frac{L_3+L_L}{L_3 L_L (C_3+C_L)}}$
bandwidth: $\frac{R_3+R_L}{R_3 R_L (C_3+C_L)}$
K-LP: 0
K-HP: 0
K-BP: $\frac{R_3 R_L}{R_3+R_L}$
Qz: 0
Wz: None

3.40 BP-40 $Z(s) = \left(\infty,\ \infty,\ \infty,\ \frac{1}{C_4 s},\ \infty,\ \frac{L_L s}{C_L L_L s^2+1}\right)$

$$H(s) = \frac{L_L R_3 s}{C_L L_L R_3 s^2 + L_L s + R_3}$$

Parameters:

Q: $C_L R_3 \sqrt{\frac{1}{C_L L_L}}$
wo: $\sqrt{\frac{1}{C_L L_L}}$
bandwidth: $\frac{1}{C_L R_3}$
K-LP: 0
K-HP: 0
K-BP: R_3
Qz: 0
Wz: None

3.41 BP-41 $Z(s) = \left(\infty,\ \infty,\ \infty,\ \frac{1}{C_4 s},\ \infty,\ \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$

$$H(s) = \frac{L_L R_3 R_L s}{C_L L_L R_3 R_L s^2 + L_L R_3 s + L_L R_L s + R_3 R_L}$$

Parameters:

Q: $\frac{C_L R_3 R_L \sqrt{\frac{1}{C_L L_L}}}{R_3 + R_L}$
wo: $\sqrt{\frac{1}{C_L L_L}}$
bandwidth: $\frac{R_3 + R_L}{C_L R_3 R_L}$
K-LP: 0
K-HP: 0
K-BP: $\frac{R_3 R_L}{R_3 + R_L}$
Qz: 0
Wz: None

3.42 BP-42 $Z(s) = \left(\infty,\ \infty,\ \infty,\ \frac{R_4}{C_4 R_4 s + 1},\ \infty,\ \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$

$$H(s) = \frac{L_L R_L s}{C_3 L_L R_L s^2 + C_L L_L R_L s^2 + L_L s + R_L}$$

Parameters:

Q: $R_L \sqrt{\frac{1}{L_L (C_3 + C_L)}}\,(C_3 + C_L)$
wo: $\sqrt{\frac{1}{L_L (C_3 + C_L)}}$
bandwidth: $\frac{1}{R_L (C_3 + C_L)}$
K-LP: 0
K-HP: 0
K-BP: R_L
Qz: 0
Wz: None

3.43 BP-43 $Z(s) = \left(\infty,\ \infty,\ \infty,\ R_4 + \frac{1}{C_4 s},\ \infty,\ \frac{L_L s}{C_L L_L s^2+1}\right)$

$$H(s) = \frac{L_L R_3 s}{C_3 L_L R_3 s^2 + C_L L_L R_3 s^2 + L_L s + R_3}$$

Parameters:

Q: $R_3\sqrt{\frac{1}{L_L(C_3+C_L)}}\,(C_3+C_L)$
wo: $\sqrt{\frac{1}{L_L(C_3+C_L)}}$
bandwidth: $\frac{1}{R_3(C_3+C_L)}$
K-LP: 0
K-HP: 0
K-BP: R_3
Qz: 0
Wz: None

3.44 BP-44 $Z(s) = \left(\infty,\ \infty,\ \infty,\ R_4 + \frac{1}{C_4 s},\ \infty,\ \frac{1}{C_L s+\frac{1}{R_L}+\frac{1}{L_L s}}\right)$

$$H(s) = \frac{L_L R_3 R_L s}{C_3 L_L R_3 R_L s^2 + C_L L_L R_3 R_L s^2 + L_L R_3 s + L_L R_L s + R_3 R_L}$$

Parameters:

Q: $\frac{R_3 R_L\sqrt{\frac{1}{L_L(C_3+C_L)}}(C_3+C_L)}{R_3+R_L}$
wo: $\sqrt{\frac{1}{L_L(C_3+C_L)}}$
bandwidth: $\frac{R_3+R_L}{R_3 R_L(C_3+C_L)}$
K-LP: 0
K-HP: 0
K-BP: $\frac{R_3 R_L}{R_3+R_L}$
Qz: 0
Wz: None

3.45 BP-45 $Z(s) = \left(\infty,\ \infty,\ \infty,\ L_4 s + R_4 + \frac{1}{C_4 s},\ \infty,\ R_L\right)$

$$H(s) = \frac{L_3 R_L s}{C_3 L_3 R_L s^2 + L_3 s + R_L}$$

Parameters:

Q: $C_3 R_L \sqrt{\frac{1}{C_3 L_3}}$
wo: $\sqrt{\frac{1}{C_3 L_3}}$
bandwidth: $\frac{1}{C_3 R_L}$
K-LP: 0
K-HP: 0
K-BP: R_L
Qz: 0
Wz: None

3.46 BP-46 $Z(s) = \left(\infty,\ \infty,\ \infty,\ L_4 s + R_4 + \frac{1}{C_4 s},\ \infty,\ \frac{R_L}{C_L R_L s + 1}\right)$

$$H(s) = \frac{L_3 R_L s}{C_3 L_3 R_L s^2 + C_L L_3 R_L s^2 + L_3 s + R_L}$$

Parameters:

Q: $R_L \sqrt{\frac{1}{L_3 (C_3 + C_L)}}\,(C_3 + C_L)$
wo: $\sqrt{\frac{1}{L_3 (C_3 + C_L)}}$
bandwidth: $\frac{1}{R_L (C_3 + C_L)}$
K-LP: 0
K-HP: 0
K-BP: R_L
Qz: 0
Wz: None

3.47 BP-47 $Z(s) = \left(\infty,\ \infty,\ \infty,\ L_4 s + R_4 + \frac{1}{C_4 s},\ \infty,\ \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$

$$H(s) = \frac{L_3 L_L R_L s}{C_3 L_3 L_L R_L s^2 + C_L L_3 L_L R_L s^2 + L_3 L_L s + L_3 R_L + L_L R_L}$$

Parameters:

Q: $R_L \sqrt{\frac{L_3 + L_L}{L_3 L_L (C_3 + C_L)}}\,(C_3 + C_L)$
wo: $\sqrt{\frac{L_3 + L_L}{L_3 L_L (C_3 + C_L)}}$
bandwidth: $\frac{1}{R_L (C_3 + C_L)}$
K-LP: 0
K-HP: 0
K-BP: R_L
Qz: 0
Wz: None

3.48 BP-48 $Z(s) = \left(\infty,\ \infty,\ \infty,\ \frac{L_4 s}{C_4 L_4 s^2 + 1} + R_4,\ \infty,\ R_L\right)$

$$H(s) = \frac{L_3 R_3 R_L s}{C_3 L_3 R_3 R_L s^2 + L_3 R_3 s + L_3 R_L s + R_3 R_L}$$

Parameters:

Q: $\frac{C_3 R_3 R_L \sqrt{\frac{1}{C_3 L_3}}}{R_3 + R_L}$
wo: $\sqrt{\frac{1}{C_3 L_3}}$
bandwidth: $\frac{R_3 + R_L}{C_3 R_3 R_L}$
K-LP: 0
K-HP: 0
K-BP: $\frac{R_3 R_L}{R_3 + R_L}$
Qz: 0
Wz: None

3.49 BP-49 $Z(s) = \left(\infty,\ \infty,\ \infty,\ \frac{L_4 s}{C_4 L_4 s^2+1} + R_4,\ \infty,\ \frac{1}{C_L s}\right)$

$$H(s) = \frac{L_3 R_3 s}{C_3 L_3 R_3 s^2 + C_L L_3 R_3 s^2 + L_3 s + R_3}$$

Parameters:

Q: $R_3\sqrt{\frac{1}{L_3(C_3+C_L)}}\,(C_3+C_L)$
wo: $\sqrt{\frac{1}{L_3(C_3+C_L)}}$
bandwidth: $\frac{1}{R_3(C_3+C_L)}$
K-LP: 0
K-HP: 0
K-BP: R_3
Qz: 0
Wz: None

3.50 BP-50 $Z(s) = \left(\infty,\ \infty,\ \infty,\ \frac{L_4 s}{C_4 L_4 s^2+1} + R_4,\ \infty,\ \frac{R_L}{C_L R_L s+1}\right)$

$$H(s) = \frac{L_3 R_3 R_L s}{C_3 L_3 R_3 R_L s^2 + C_L L_3 R_3 R_L s^2 + L_3 R_3 s + L_3 R_L s + R_3 R_L}$$

Parameters:

Q: $\frac{R_3 R_L \sqrt{\frac{1}{L_3(C_3+C_L)}}(C_3+C_L)}{R_3+R_L}$
wo: $\sqrt{\frac{1}{L_3(C_3+C_L)}}$
bandwidth: $\frac{R_3+R_L}{R_3 R_L(C_3+C_L)}$
K-LP: 0
K-HP: 0
K-BP: $\frac{R_3 R_L}{R_3+R_L}$
Qz: 0
Wz: None

3.51 BP-51 $Z(s) = \left(\infty,\ \infty,\ \infty,\ \frac{L_4 s}{C_4 L_4 s^2+1} + R_4,\ \infty,\ \frac{L_L s}{C_L L_L s^2+1}\right)$

$$H(s) = \frac{L_3 L_L R_3 s}{C_3 L_3 L_L R_3 s^2 + C_L L_3 L_L R_3 s^2 + L_3 L_L s + L_3 R_3 + L_L R_3}$$

Parameters:

Q: $R_3\sqrt{\frac{L_3+L_L}{L_3 L_L (C_3+C_L)}}\,(C_3+C_L)$
wo: $\sqrt{\frac{L_3+L_L}{L_3 L_L (C_3+C_L)}}$
bandwidth: $\frac{1}{R_3(C_3+C_L)}$
K-LP: 0
K-HP: 0
K-BP: R_3
Qz: 0
Wz: None

3.52 BP-52 $Z(s) = \left(\infty,\ \infty,\ \infty,\ \frac{L_4 s}{C_4 L_4 s^2+1} + R_4,\ \infty,\ \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$

$$H(s) = \frac{L_3 L_L R_3 R_L s}{C_3 L_3 L_L R_3 R_L s^2 + C_L L_3 L_L R_3 R_L s^2 + L_3 L_L R_3 s + L_3 L_L R_L s + L_3 R_3 R_L + L_L R_3 R_L}$$

Parameters:

Q: $\frac{R_3 R_L \sqrt{\frac{L_3+L_L}{L_3 L_L (C_3+C_L)}}(C_3+C_L)}{R_3+R_L}$
wo: $\sqrt{\frac{L_3+L_L}{L_3 L_L (C_3+C_L)}}$
bandwidth: $\frac{R_3+R_L}{R_3 R_L (C_3+C_L)}$
K-LP: 0
K-HP: 0
K-BP: $\frac{R_3 R_L}{R_3+R_L}$
Qz: 0
Wz: None

3.53 BP-53 $Z(s) = \left(\infty,\ \infty,\ \infty,\ \infty,\ \frac{1}{C_4 s},\ \frac{L_L s}{C_L L_L s^2+1}\right)$

$$H(s) = \frac{L_L R_3 s}{C_L L_L R_3 s^2 + L_L s + R_3}$$

Parameters:

Q: $C_L R_3 \sqrt{\frac{1}{C_L L_L}}$
wo: $\sqrt{\frac{1}{C_L L_L}}$
bandwidth: $\frac{1}{C_L R_3}$
K-LP: 0
K-HP: 0
K-BP: R_3
Qz: 0
Wz: None

3.54 BP-54 $Z(s) = \left(\infty,\ \infty,\ \infty,\ \infty,\ \frac{1}{C_4 s},\ \frac{1}{C_L s+\frac{1}{R_L}+\frac{1}{L_L s}}\right)$

$$H(s) = \frac{L_L R_3 R_L s}{C_L L_L R_3 R_L s^2 + L_L R_3 s + L_L R_L s + R_3 R_L}$$

Parameters:

Q: $\frac{C_L R_3 R_L \sqrt{\frac{1}{C_L L_L}}}{R_3+R_L}$
wo: $\sqrt{\frac{1}{C_L L_L}}$
bandwidth: $\frac{R_3+R_L}{C_L R_3 R_L}$
K-LP: 0
K-HP: 0
K-BP: $\frac{R_3 R_L}{R_3+R_L}$
Qz: 0
Wz: None

3.55 BP-55 $Z(s) = \left(\infty,\ \infty,\ \infty,\ \infty,\ \frac{R_4}{C_4 R_4 s+1},\ \frac{1}{C_L s+\frac{1}{R_L}+\frac{1}{L_L s}}\right)$

$$H(s) = \frac{L_L R_L s}{C_3 L_L R_L s^2 + C_L L_L R_L s^2 + L_L s + R_L}$$

Parameters:

Q: $R_L\sqrt{\frac{1}{L_L(C_3+C_L)}}\,(C_3+C_L)$
wo: $\sqrt{\frac{1}{L_L(C_3+C_L)}}$
bandwidth: $\frac{1}{R_L(C_3+C_L)}$
K-LP: 0
K-HP: 0
K-BP: R_L
Qz: 0
Wz: None

3.56 BP-56 $Z(s) = \left(\infty,\ \infty,\ \infty,\ \infty,\ R_4+\frac{1}{C_4 s},\ \frac{L_L s}{C_L L_L s^2+1}\right)$

$$H(s) = \frac{L_L R_3 s}{C_3 L_L R_3 s^2 + C_L L_L R_3 s^2 + L_L s + R_3}$$

Parameters:

Q: $R_3\sqrt{\frac{1}{L_L(C_3+C_L)}}\,(C_3+C_L)$
wo: $\sqrt{\frac{1}{L_L(C_3+C_L)}}$
bandwidth: $\frac{1}{R_3(C_3+C_L)}$
K-LP: 0
K-HP: 0
K-BP: R_3
Qz: 0
Wz: None

3.57 BP-57 $Z(s) = \left(\infty,\ \infty,\ \infty,\ \infty,\ R_4 + \frac{1}{C_4 s},\ \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$

$$H(s) = \frac{L_L R_3 R_L s}{C_3 L_L R_3 R_L s^2 + C_L L_L R_3 R_L s^2 + L_L R_3 s + L_L R_L s + R_3 R_L}$$

Parameters:

Q: $\frac{R_3 R_L \sqrt{\frac{1}{L_L(C_3+C_L)}}(C_3+C_L)}{R_3+R_L}$
wo: $\sqrt{\frac{1}{L_L(C_3+C_L)}}$
bandwidth: $\frac{R_3+R_L}{R_3 R_L (C_3+C_L)}$
K-LP: 0
K-HP: 0
K-BP: $\frac{R_3 R_L}{R_3+R_L}$
Qz: 0
Wz: None

3.58 BP-58 $Z(s) = \left(\infty,\ \infty,\ \infty,\ \infty,\ L_4 s + R_4 + \frac{1}{C_4 s},\ R_L\right)$

$$H(s) = \frac{L_3 R_L s}{C_3 L_3 R_L s^2 + L_3 s + R_L}$$

Parameters:

Q: $C_3 R_L \sqrt{\frac{1}{C_3 L_3}}$
wo: $\sqrt{\frac{1}{C_3 L_3}}$
bandwidth: $\frac{1}{C_3 R_L}$
K-LP: 0
K-HP: 0
K-BP: R_L
Qz: 0
Wz: None

3.59 BP-59 $Z(s) = \left(\infty,\ \infty,\ \infty,\ \infty,\ L_4 s + R_4 + \frac{1}{C_4 s},\ \frac{R_L}{C_L R_L s+1}\right)$

$$H(s) = \frac{L_3 R_L s}{C_3 L_3 R_L s^2 + C_L L_3 R_L s^2 + L_3 s + R_L}$$

Parameters:

Q: $R_L \sqrt{\frac{1}{L_3(C_3+C_L)}}\,(C_3 + C_L)$
wo: $\sqrt{\frac{1}{L_3(C_3+C_L)}}$
bandwidth: $\frac{1}{R_L(C_3+C_L)}$
K-LP: 0
K-HP: 0
K-BP: R_L
Qz: 0
Wz: None

3.60 BP-60 $Z(s) = \left(\infty,\ \infty,\ \infty,\ \infty,\ L_4 s + R_4 + \frac{1}{C_4 s},\ \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$

$$H(s) = \frac{L_3 L_L R_L s}{C_3 L_3 L_L R_L s^2 + C_L L_3 L_L R_L s^2 + L_3 L_L s + L_3 R_L + L_L R_L}$$

Parameters:

Q: $R_L \sqrt{\frac{L_3+L_L}{L_3 L_L(C_3+C_L)}}\,(C_3 + C_L)$
wo: $\sqrt{\frac{L_3+L_L}{L_3 L_L(C_3+C_L)}}$
bandwidth: $\frac{1}{R_L(C_3+C_L)}$
K-LP: 0
K-HP: 0
K-BP: R_L
Qz: 0
Wz: None

3.61 BP-61 $Z(s) = \left(\infty,\ \infty,\ \infty,\ \infty,\ \frac{L_4 s}{C_4 L_4 s^2+1} + R_4,\ R_L\right)$

$$H(s) = \frac{L_3 R_3 R_L s}{C_3 L_3 R_3 R_L s^2 + L_3 R_3 s + L_3 R_L s + R_3 R_L}$$

Parameters:

Q: $\frac{C_3 R_3 R_L \sqrt{\frac{1}{C_3 L_3}}}{R_3 + R_L}$
wo: $\sqrt{\frac{1}{C_3 L_3}}$
bandwidth: $\frac{R_3 + R_L}{C_3 R_3 R_L}$
K-LP: 0
K-HP: 0
K-BP: $\frac{R_3 R_L}{R_3 + R_L}$
Qz: 0
Wz: None

3.62 BP-62 $Z(s) = \left(\infty,\ \infty,\ \infty,\ \infty,\ \frac{L_4 s}{C_4 L_4 s^2+1} + R_4,\ \frac{1}{C_L s}\right)$

$$H(s) = \frac{L_3 R_3 s}{C_3 L_3 R_3 s^2 + C_L L_3 R_3 s^2 + L_3 s + R_3}$$

Parameters:

Q: $R_3 \sqrt{\frac{1}{L_3 (C_3 + C_L)}}\,(C_3 + C_L)$
wo: $\sqrt{\frac{1}{L_3 (C_3 + C_L)}}$
bandwidth: $\frac{1}{R_3 (C_3 + C_L)}$
K-LP: 0
K-HP: 0
K-BP: R_3
Qz: 0
Wz: None

3.63 BP-63 $Z(s) = \left(\infty,\ \infty,\ \infty,\ \infty,\ \frac{L_4 s}{C_4 L_4 s^2+1} + R_4,\ \frac{R_L}{C_L R_L s+1}\right)$

$$H(s) = \frac{L_3 R_3 R_L s}{C_3 L_3 R_3 R_L s^2 + C_L L_3 R_3 R_L s^2 + L_3 R_3 s + L_3 R_L s + R_3 R_L}$$

Parameters:

Q: $\frac{R_3 R_L \sqrt{\frac{1}{L_3(C_3+C_L)}}(C_3+C_L)}{R_3+R_L}$
wo: $\sqrt{\frac{1}{L_3(C_3+C_L)}}$
bandwidth: $\frac{R_3+R_L}{R_3 R_L (C_3+C_L)}$
K-LP: 0
K-HP: 0
K-BP: $\frac{R_3 R_L}{R_3+R_L}$
Qz: 0
Wz: None

3.64 BP-64 $Z(s) = \left(\infty,\ \infty,\ \infty,\ \infty,\ \frac{L_4 s}{C_4 L_4 s^2+1} + R_4,\ \frac{L_L s}{C_L L_L s^2+1}\right)$

$$H(s) = \frac{L_3 L_L R_3 s}{C_3 L_3 L_L R_3 s^2 + C_L L_3 L_L R_3 s^2 + L_3 L_L s + L_3 R_3 + L_L R_3}$$

Parameters:

Q: $R_3 \sqrt{\frac{L_3+L_L}{L_3 L_L (C_3+C_L)}}\,(C_3 + C_L)$
wo: $\sqrt{\frac{L_3+L_L}{L_3 L_L (C_3+C_L)}}$
bandwidth: $\frac{1}{R_3(C_3+C_L)}$
K-LP: 0
K-HP: 0
K-BP: R_3
Qz: 0
Wz: None

3.65 BP-65 $Z(s) = \left(\infty,\ \infty,\ \infty,\ \infty,\ \frac{L_4 s}{C_4 L_4 s^2+1} + R_4,\ \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$

$$H(s) = \frac{L_3 L_L R_3 R_L s}{C_3 L_3 L_L R_3 R_L s^2 + C_L L_3 L_L R_3 R_L s^2 + L_3 L_L R_3 s + L_3 L_L R_L s + L_3 R_3 R_L + L_L R_3 R_L}$$

Parameters:

Q: $\frac{R_3 R_L \sqrt{\frac{L_3+L_L}{L_3 L_L (C_3+C_L)}}(C_3+C_L)}{R_3+R_L}$
wo: $\sqrt{\frac{L_3+L_L}{L_3 L_L (C_3+C_L)}}$
bandwidth: $\frac{R_3+R_L}{R_3 R_L (C_3+C_L)}$
K-LP: 0
K-HP: 0
K-BP: $\frac{R_3 R_L}{R_3+R_L}$
Qz: 0
Wz: None

3.66 BP-66 $Z(s) = \left(R_1,\ \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{L_L s}{C_L L_L s^2+1}\right)$

$$H(s) = \frac{L_L R_3 s}{C_L L_L R_3 s^2 + L_L s + R_3}$$

Parameters:

Q: $C_L R_3 \sqrt{\frac{1}{C_L L_L}}$
wo: $\sqrt{\frac{1}{C_L L_L}}$
bandwidth: $\frac{1}{C_L R_3}$
K-LP: 0
K-HP: 0
K-BP: R_3
Qz: 0
Wz: None

3.67 BP-67 $Z(s) = \left(R_1,\ \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$

$$H(s) = \frac{L_L R_3 R_L s}{C_L L_L R_3 R_L s^2 + L_L R_3 s + L_L R_L s + R_3 R_L}$$

Parameters:

Q: $\frac{C_L R_3 R_L \sqrt{\frac{1}{C_L L_L}}}{R_3 + R_L}$
wo: $\sqrt{\frac{1}{C_L L_L}}$
bandwidth: $\frac{R_3 + R_L}{C_L R_3 R_L}$
K-LP: 0
K-HP: 0
K-BP: $\frac{R_3 R_L}{R_3 + R_L}$
Qz: 0
Wz: None

3.68 BP-68 $Z(s) = \left(R_1,\ \frac{R_2}{C_2 R_2 s + 1},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$

$$H(s) = \frac{L_L R_L s}{C_3 L_L R_L s^2 + C_L L_L R_L s^2 + L_L s + R_L}$$

Parameters:

Q: $R_L \sqrt{\frac{1}{L_L (C_3 + C_L)}}\,(C_3 + C_L)$
wo: $\sqrt{\frac{1}{L_L (C_3 + C_L)}}$
bandwidth: $\frac{1}{R_L (C_3 + C_L)}$
K-LP: 0
K-HP: 0
K-BP: R_L
Qz: 0
Wz: None

3.69 BP-69 $Z(s) = \left(R_1,\ R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{L_L s}{C_L L_L s^2+1}\right)$

$$H(s) = \frac{L_L R_3 s}{C_3 L_L R_3 s^2 + C_L L_L R_3 s^2 + L_L s + R_3}$$

Parameters:

Q: $R_3\sqrt{\frac{1}{L_L(C_3+C_L)}}\,(C_3+C_L)$
wo: $\sqrt{\frac{1}{L_L(C_3+C_L)}}$
bandwidth: $\frac{1}{R_3(C_3+C_L)}$
K-LP: 0
K-HP: 0
K-BP: R_3
Qz: 0
Wz: None

3.70 BP-70 $Z(s) = \left(R_1,\ R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_L s+\frac{1}{R_L}+\frac{1}{L_L s}}\right)$

$$H(s) = \frac{L_L R_3 R_L s}{C_3 L_L R_3 R_L s^2 + C_L L_L R_3 R_L s^2 + L_L R_3 s + L_L R_L s + R_3 R_L}$$

Parameters:

Q: $\frac{R_3 R_L\sqrt{\frac{1}{L_L(C_3+C_L)}}(C_3+C_L)}{R_3+R_L}$
wo: $\sqrt{\frac{1}{L_L(C_3+C_L)}}$
bandwidth: $\frac{R_3+R_L}{R_3 R_L(C_3+C_L)}$
K-LP: 0
K-HP: 0
K-BP: $\frac{R_3 R_L}{R_3+R_L}$
Qz: 0
Wz: None

3.71 BP-71 $Z(s) = \left(R_1,\ \frac{L_2 s}{C_2 L_2 s^2+1} + R_2,\ \infty,\ \infty,\ \infty,\ R_L\right)$

$$H(s) = \frac{L_3 R_L s}{C_3 L_3 R_L s^2 + L_3 s + R_L}$$

Parameters:

Q: $C_3 R_L \sqrt{\frac{1}{C_3 L_3}}$
wo: $\sqrt{\frac{1}{C_3 L_3}}$
bandwidth: $\frac{1}{C_3 R_L}$
K-LP: 0
K-HP: 0
K-BP: R_L
Qz: 0
Wz: None

3.72 BP-72 $Z(s) = \left(R_1,\ \frac{L_2 s}{C_2 L_2 s^2+1} + R_2,\ \infty,\ \infty,\ \infty,\ \frac{R_L}{C_L R_L s+1}\right)$

$$H(s) = \frac{L_3 R_L s}{C_3 L_3 R_L s^2 + C_L L_3 R_L s^2 + L_3 s + R_L}$$

Parameters:

Q: $R_L \sqrt{\frac{1}{L_3(C_3+C_L)}}\,(C_3 + C_L)$
wo: $\sqrt{\frac{1}{L_3(C_3+C_L)}}$
bandwidth: $\frac{1}{R_L(C_3+C_L)}$
K-LP: 0
K-HP: 0
K-BP: R_L
Qz: 0
Wz: None

3.73 BP-73 $Z(s) = \left(R_1,\ \frac{L_2 s}{C_2 L_2 s^2+1} + R_2,\ \infty,\ \infty,\ \infty,\ \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$

$$H(s) = \frac{L_3 L_L R_L s}{C_3 L_3 L_L R_L s^2 + C_L L_3 L_L R_L s^2 + L_3 L_L s + L_3 R_L + L_L R_L}$$

Parameters:

Q: $R_L \sqrt{\frac{L_3+L_L}{L_3 L_L (C_3+C_L)}}\,(C_3+C_L)$
wo: $\sqrt{\frac{L_3+L_L}{L_3 L_L (C_3+C_L)}}$
bandwidth: $\frac{1}{R_L(C_3+C_L)}$
K-LP: 0
K-HP: 0
K-BP: R_L
Qz: 0
Wz: None

3.74 BP-74 $Z(s) = (L_1 s,\ R_2,\ \infty,\ \infty,\ \infty,\ R_L)$

$$H(s) = \frac{L_3 R_3 R_L s}{C_3 L_3 R_3 R_L s^2 + L_3 R_3 s + L_3 R_L s + R_3 R_L}$$

Parameters:

Q: $\frac{C_3 R_3 R_L \sqrt{\frac{1}{C_3 L_3}}}{R_3+R_L}$
wo: $\sqrt{\frac{1}{C_3 L_3}}$
bandwidth: $\frac{R_3+R_L}{C_3 R_3 R_L}$
K-LP: 0
K-HP: 0
K-BP: $\frac{R_3 R_L}{R_3+R_L}$
Qz: 0
Wz: None

3.75 BP-75 $Z(s) = \left(L_1 s,\ R_2,\ \infty,\ \infty,\ \infty,\ \frac{1}{C_L s}\right)$

$$H(s) = \frac{L_3 R_3 s}{C_3 L_3 R_3 s^2 + C_L L_3 R_3 s^2 + L_3 s + R_3}$$

Parameters:

Q: $R_3\sqrt{\frac{1}{L_3(C_3+C_L)}}\,(C_3+C_L)$
wo: $\sqrt{\frac{1}{L_3(C_3+C_L)}}$
bandwidth: $\frac{1}{R_3(C_3+C_L)}$
K-LP: 0
K-HP: 0
K-BP: R_3
Qz: 0
Wz: None

3.76 BP-76 $Z(s) = \left(L_1 s,\ R_2,\ \infty,\ \infty,\ \infty,\ \frac{R_L}{C_L R_L s+1}\right)$

$$H(s) = \frac{L_3 R_3 R_L s}{C_3 L_3 R_3 R_L s^2 + C_L L_3 R_3 R_L s^2 + L_3 R_3 s + L_3 R_L s + R_3 R_L}$$

Parameters:

Q: $\frac{R_3 R_L \sqrt{\frac{1}{L_3(C_3+C_L)}}(C_3+C_L)}{R_3+R_L}$
wo: $\sqrt{\frac{1}{L_3(C_3+C_L)}}$
bandwidth: $\frac{R_3+R_L}{R_3 R_L(C_3+C_L)}$
K-LP: 0
K-HP: 0
K-BP: $\frac{R_3 R_L}{R_3+R_L}$
Qz: 0
Wz: None

3.77 BP-77 $Z(s) = \left(L_1 s,\ R_2,\ \infty,\ \infty,\ \infty,\ \frac{L_L s}{C_L L_L s^2+1}\right)$

$$H(s) = \frac{L_3 L_L R_3 s}{C_3 L_3 L_L R_3 s^2 + C_L L_3 L_L R_3 s^2 + L_3 L_L s + L_3 R_3 + L_L R_3}$$

Parameters:

Q: $R_3\sqrt{\frac{L_3+L_L}{L_3 L_L (C_3+C_L)}}\,(C_3+C_L)$
wo: $\sqrt{\frac{L_3+L_L}{L_3 L_L (C_3+C_L)}}$
bandwidth: $\frac{1}{R_3(C_3+C_L)}$
K-LP: 0
K-HP: 0
K-BP: R_3
Qz: 0
Wz: None

3.78 BP-78 $Z(s) = \left(L_1 s,\ R_2,\ \infty,\ \infty,\ \infty,\ \frac{1}{C_L s+\frac{1}{R_L}+\frac{1}{L_L s}}\right)$

$$H(s) = \frac{L_3 L_L R_3 R_L s}{C_3 L_3 L_L R_3 R_L s^2 + C_L L_3 L_L R_3 R_L s^2 + L_3 L_L R_3 s + L_3 L_L R_L s + L_3 R_3 R_L + L_L R_3 R_L}$$

Parameters:

Q: $\frac{R_3 R_L \sqrt{\frac{L_3+L_L}{L_3 L_L (C_3+C_L)}}(C_3+C_L)}{R_3+R_L}$
wo: $\sqrt{\frac{L_3+L_L}{L_3 L_L (C_3+C_L)}}$
bandwidth: $\frac{R_3+R_L}{R_3 R_L (C_3+C_L)}$
K-LP: 0
K-HP: 0
K-BP: $\frac{R_3 R_L}{R_3+R_L}$
Qz: 0
Wz: None

3.79 BP-79 $Z(s) = \left(L_1 s,\ R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{L_L s}{C_L L_L s^2+1}\right)$

$$H(s) = \frac{L_L R_3 s}{C_L L_L R_3 s^2 + L_L s + R_3}$$

Parameters:

Q: $C_L R_3 \sqrt{\frac{1}{C_L L_L}}$
wo: $\sqrt{\frac{1}{C_L L_L}}$
bandwidth: $\frac{1}{C_L R_3}$
K-LP: 0
K-HP: 0
K-BP: R_3
Qz: 0
Wz: None

3.80 BP-80 $Z(s) = \left(L_1 s,\ R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$

$$H(s) = \frac{L_L R_3 R_L s}{C_L L_L R_3 R_L s^2 + L_L R_3 s + L_L R_L s + R_3 R_L}$$

Parameters:

Q: $\frac{C_L R_3 R_L \sqrt{\frac{1}{C_L L_L}}}{R_3 + R_L}$
wo: $\sqrt{\frac{1}{C_L L_L}}$
bandwidth: $\frac{R_3 + R_L}{C_L R_3 R_L}$
K-LP: 0
K-HP: 0
K-BP: $\frac{R_3 R_L}{R_3 + R_L}$
Qz: 0
Wz: None

3.81 BP-81 $Z(s) = \left(L_1 s,\ L_2 s + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$

$$H(s) = \frac{L_L R_L s}{C_3 L_L R_L s^2 + C_L L_L R_L s^2 + L_L s + R_L}$$

Parameters:

Q: $R_L \sqrt{\frac{1}{L_L(C_3+C_L)}}\,(C_3 + C_L)$
wo: $\sqrt{\frac{1}{L_L(C_3+C_L)}}$
bandwidth: $\frac{1}{R_L(C_3+C_L)}$
K-LP: 0
K-HP: 0
K-BP: R_L
Qz: 0
Wz: None

3.82 BP-82 $Z(s) = \left(L_1 s,\ L_2 s + R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{L_L s}{C_L L_L s^2 + 1}\right)$

$$H(s) = \frac{L_L R_3 s}{C_3 L_L R_3 s^2 + C_L L_L R_3 s^2 + L_L s + R_3}$$

Parameters:

Q: $R_3 \sqrt{\frac{1}{L_L(C_3+C_L)}}\,(C_3 + C_L)$
wo: $\sqrt{\frac{1}{L_L(C_3+C_L)}}$
bandwidth: $\frac{1}{R_3(C_3+C_L)}$
K-LP: 0
K-HP: 0
K-BP: R_3
Qz: 0
Wz: None

3.83 BP-83 $Z(s) = \left(L_1 s,\ L_2 s + R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$

$$H(s) = \frac{L_L R_3 R_L s}{C_3 L_L R_3 R_L s^2 + C_L L_L R_3 R_L s^2 + L_L R_3 s + L_L R_L s + R_3 R_L}$$

Parameters:

Q: $\frac{R_3 R_L \sqrt{\frac{1}{L_L (C_3 + C_L)}} (C_3 + C_L)}{R_3 + R_L}$
wo: $\sqrt{\frac{1}{L_L (C_3 + C_L)}}$
bandwidth: $\frac{R_3 + R_L}{R_3 R_L (C_3 + C_L)}$
K-LP: 0
K-HP: 0
K-BP: $\frac{R_3 R_L}{R_3 + R_L}$
Qz: 0
Wz: None

3.84 BP-84 $Z(s) = \left(\frac{1}{C_1 s},\ R_2,\ \infty,\ \infty,\ \infty,\ R_L \right)$

$$H(s) = \frac{L_3 R_L s}{C_3 L_3 R_L s^2 + L_3 s + R_L}$$

Parameters:

Q: $C_3 R_L \sqrt{\frac{1}{C_3 L_3}}$
wo: $\sqrt{\frac{1}{C_3 L_3}}$
bandwidth: $\frac{1}{C_3 R_L}$
K-LP: 0
K-HP: 0
K-BP: R_L
Qz: 0
Wz: None

3.85 BP-85 $Z(s) = \left(\frac{1}{C_1 s},\ R_2,\ \infty,\ \infty,\ \infty,\ \frac{R_L}{C_L R_L s+1}\right)$

$$H(s) = \frac{L_3 R_L s}{C_3 L_3 R_L s^2 + C_L L_3 R_L s^2 + L_3 s + R_L}$$

Parameters:

Q: $R_L \sqrt{\frac{1}{L_3(C_3+C_L)}}\,(C_3+C_L)$
wo: $\sqrt{\frac{1}{L_3(C_3+C_L)}}$
bandwidth: $\frac{1}{R_L(C_3+C_L)}$
K-LP: 0
K-HP: 0
K-BP: R_L
Qz: 0
Wz: None

3.86 BP-86 $Z(s) = \left(\frac{1}{C_1 s},\ R_2,\ \infty,\ \infty,\ \infty,\ \frac{1}{C_L s+\frac{1}{R_L}+\frac{1}{L_L s}}\right)$

$$H(s) = \frac{L_3 L_L R_L s}{C_3 L_3 L_L R_L s^2 + C_L L_3 L_L R_L s^2 + L_3 L_L s + L_3 R_L + L_L R_L}$$

Parameters:

Q: $R_L \sqrt{\frac{L_3+L_L}{L_3 L_L(C_3+C_L)}}\,(C_3+C_L)$
wo: $\sqrt{\frac{L_3+L_L}{L_3 L_L(C_3+C_L)}}$
bandwidth: $\frac{1}{R_L(C_3+C_L)}$
K-LP: 0
K-HP: 0
K-BP: R_L
Qz: 0
Wz: None

3.87 BP-87 $Z(s) = \left(\frac{1}{C_1 s},\ \frac{R_2}{C_2 R_2 s+1},\ \infty,\ \infty,\ \infty,\ R_L\right)$

$$H(s) = \frac{L_3 R_3 R_L s}{C_3 L_3 R_3 R_L s^2 + L_3 R_3 s + L_3 R_L s + R_3 R_L}$$

Parameters:

Q: $\frac{C_3 R_3 R_L \sqrt{\frac{1}{C_3 L_3}}}{R_3 + R_L}$
wo: $\sqrt{\frac{1}{C_3 L_3}}$
bandwidth: $\frac{R_3 + R_L}{C_3 R_3 R_L}$
K-LP: 0
K-HP: 0
K-BP: $\frac{R_3 R_L}{R_3 + R_L}$
Qz: 0
Wz: None

3.88 BP-88 $Z(s) = \left(\frac{1}{C_1 s},\ \frac{R_2}{C_2 R_2 s+1},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_L s}\right)$

$$H(s) = \frac{L_3 R_3 s}{C_3 L_3 R_3 s^2 + C_L L_3 R_3 s^2 + L_3 s + R_3}$$

Parameters:

Q: $R_3 \sqrt{\frac{1}{L_3 (C_3 + C_L)}}\,(C_3 + C_L)$
wo: $\sqrt{\frac{1}{L_3 (C_3 + C_L)}}$
bandwidth: $\frac{1}{R_3 (C_3 + C_L)}$
K-LP: 0
K-HP: 0
K-BP: R_3
Qz: 0
Wz: None

3.89 BP-89 $Z(s) = \left(\frac{1}{C_1 s},\ \frac{R_2}{C_2 R_2 s+1},\ \infty,\ \infty,\ \infty,\ \frac{R_L}{C_L R_L s+1}\right)$

$$H(s) = \frac{L_3 R_3 R_L s}{C_3 L_3 R_3 R_L s^2 + C_L L_3 R_3 R_L s^2 + L_3 R_3 s + L_3 R_L s + R_3 R_L}$$

Parameters:

Q: $\frac{R_3 R_L \sqrt{\frac{1}{L_3(C_3+C_L)}}(C_3+C_L)}{R_3+R_L}$
wo: $\sqrt{\frac{1}{L_3(C_3+C_L)}}$
bandwidth: $\frac{R_3+R_L}{R_3 R_L(C_3+C_L)}$
K-LP: 0
K-HP: 0
K-BP: $\frac{R_3 R_L}{R_3+R_L}$
Qz: 0
Wz: None

3.90 BP-90 $Z(s) = \left(\frac{1}{C_1 s},\ \frac{R_2}{C_2 R_2 s+1},\ \infty,\ \infty,\ \infty,\ \frac{L_L s}{C_L L_L s^2+1}\right)$

$$H(s) = \frac{L_3 L_L R_3 s}{C_3 L_3 L_L R_3 s^2 + C_L L_3 L_L R_3 s^2 + L_3 L_L s + L_3 R_3 + L_L R_3}$$

Parameters:

Q: $R_3\sqrt{\frac{L_3+L_L}{L_3 L_L(C_3+C_L)}}\,(C_3+C_L)$
wo: $\sqrt{\frac{L_3+L_L}{L_3 L_L(C_3+C_L)}}$
bandwidth: $\frac{1}{R_3(C_3+C_L)}$
K-LP: 0
K-HP: 0
K-BP: R_3
Qz: 0
Wz: None

3.91 BP-91 $Z(s) = \left(\frac{1}{C_1 s},\ \frac{R_2}{C_2 R_2 s+1},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_L s+\frac{1}{R_L}+\frac{1}{L_L s}}\right)$

$$H(s) = \frac{L_3 L_L R_3 R_L s}{C_3 L_3 L_L R_3 R_L s^2 + C_L L_3 L_L R_3 R_L s^2 + L_3 L_L R_3 s + L_3 L_L R_L s + L_3 R_3 R_L + L_L R_3 R_L}$$

Parameters:

Q: $\frac{R_3 R_L \sqrt{\frac{L_3+L_L}{L_3 L_L (C_3+C_L)}}(C_3+C_L)}{R_3+R_L}$
wo: $\sqrt{\frac{L_3+L_L}{L_3 L_L (C_3+C_L)}}$
bandwidth: $\frac{R_3+R_L}{R_3 R_L (C_3+C_L)}$
K-LP: 0
K-HP: 0
K-BP: $\frac{R_3 R_L}{R_3+R_L}$
Qz: 0
Wz: None

3.92 BP-92 $Z(s) = \left(\frac{1}{C_1 s},\ L_2 s + R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{L_L s}{C_L L_L s^2+1}\right)$

$$H(s) = \frac{L_L R_3 s}{C_L L_L R_3 s^2 + L_L s + R_3}$$

Parameters:

Q: $C_L R_3 \sqrt{\frac{1}{C_L L_L}}$
wo: $\sqrt{\frac{1}{C_L L_L}}$
bandwidth: $\frac{1}{C_L R_3}$
K-LP: 0
K-HP: 0
K-BP: R_3
Qz: 0
Wz: None

3.93 BP-93 $Z(s) = \left(\frac{1}{C_1 s},\ L_2 s + R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$

$$H(s) = \frac{L_L R_3 R_L s}{C_L L_L R_3 R_L s^2 + L_L R_3 s + L_L R_L s + R_3 R_L}$$

Parameters:

Q: $\frac{C_L R_3 R_L \sqrt{\frac{1}{C_L L_L}}}{R_3 + R_L}$
wo: $\sqrt{\frac{1}{C_L L_L}}$
bandwidth: $\frac{R_3 + R_L}{C_L R_3 R_L}$
K-LP: 0
K-HP: 0
K-BP: $\frac{R_3 R_L}{R_3 + R_L}$
Qz: 0
Wz: None

3.94 BP-94 $Z(s) = \left(\frac{1}{C_1 s},\ \frac{L_2 s}{C_2 L_2 s^2 + 1} + R_2,\ \infty,\ \infty,\ \infty,\ \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$

$$H(s) = \frac{L_L R_L s}{C_3 L_L R_L s^2 + C_L L_L R_L s^2 + L_L s + R_L}$$

Parameters:

Q: $R_L \sqrt{\frac{1}{L_L (C_3 + C_L)}}\,(C_3 + C_L)$
wo: $\sqrt{\frac{1}{L_L (C_3 + C_L)}}$
bandwidth: $\frac{1}{R_L (C_3 + C_L)}$
K-LP: 0
K-HP: 0
K-BP: R_L
Qz: 0
Wz: None

3.95 BP-95 $Z(s) = \left(\frac{1}{C_1 s},\ \frac{R_2\left(L_2 s + \frac{1}{C_2 s}\right)}{L_2 s + R_2 + \frac{1}{C_2 s}},\ \infty,\ \infty,\ \infty,\ \frac{L_L s}{C_L L_L s^2 + 1} \right)$

$$H(s) = \frac{L_L R_3 s}{C_3 L_L R_3 s^2 + C_L L_L R_3 s^2 + L_L s + R_3}$$

Parameters:

Q: $R_3 \sqrt{\frac{1}{L_L(C_3+C_L)}}\,(C_3 + C_L)$
wo: $\sqrt{\frac{1}{L_L(C_3+C_L)}}$
bandwidth: $\frac{1}{R_3(C_3+C_L)}$
K-LP: 0
K-HP: 0
K-BP: R_3
Qz: 0
Wz: None

3.96 BP-96 $Z(s) = \left(\frac{1}{C_1 s},\ \frac{R_2\left(L_2 s + \frac{1}{C_2 s}\right)}{L_2 s + R_2 + \frac{1}{C_2 s}},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$

$$H(s) = \frac{L_L R_3 R_L s}{C_3 L_L R_3 R_L s^2 + C_L L_L R_3 R_L s^2 + L_L R_3 s + L_L R_L s + R_3 R_L}$$

Parameters:

Q: $\frac{R_3 R_L \sqrt{\frac{1}{L_L(C_3+C_L)}}(C_3+C_L)}{R_3+R_L}$
wo: $\sqrt{\frac{1}{L_L(C_3+C_L)}}$
bandwidth: $\frac{R_3+R_L}{R_3 R_L (C_3+C_L)}$
K-LP: 0
K-HP: 0
K-BP: $\frac{R_3 R_L}{R_3+R_L}$
Qz: 0
Wz: None

3.97 BP-97 $Z(s) = \left(\frac{R_1}{C_1R_1s+1},\ \frac{R_2}{C_2R_2s+1},\ \infty,\ \infty,\ \infty,\ R_L\right)$

$$H(s) = \frac{L_3R_Ls}{C_3L_3R_Ls^2 + L_3s + R_L}$$

Parameters:

Q: $C_3R_L\sqrt{\frac{1}{C_3L_3}}$
wo: $\sqrt{\frac{1}{C_3L_3}}$
bandwidth: $\frac{1}{C_3R_L}$
K-LP: 0
K-HP: 0
K-BP: R_L
Qz: 0
Wz: None

3.98 BP-98 $Z(s) = \left(\frac{R_1}{C_1R_1s+1},\ \frac{R_2}{C_2R_2s+1},\ \infty,\ \infty,\ \infty,\ \frac{R_L}{C_LR_Ls+1}\right)$

$$H(s) = \frac{L_3R_Ls}{C_3L_3R_Ls^2 + C_LL_3R_Ls^2 + L_3s + R_L}$$

Parameters:

Q: $R_L\sqrt{\frac{1}{L_3(C_3+C_L)}}\,(C_3+C_L)$
wo: $\sqrt{\frac{1}{L_3(C_3+C_L)}}$
bandwidth: $\frac{1}{R_L(C_3+C_L)}$
K-LP: 0
K-HP: 0
K-BP: R_L
Qz: 0
Wz: None

3.99 BP-99 $Z(s) = \left(\frac{R_1}{C_1 R_1 s+1},\ \frac{R_2}{C_2 R_2 s+1},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_L s+\frac{1}{R_L}+\frac{1}{L_L s}} \right)$

$$H(s) = \frac{L_3 L_L R_L s}{C_3 L_3 L_L R_L s^2 + C_L L_3 L_L R_L s^2 + L_3 L_L s + L_3 R_L + L_L R_L}$$

Parameters:

Q: $R_L \sqrt{\frac{L_3+L_L}{L_3 L_L (C_3+C_L)}}\,(C_3+C_L)$
wo: $\sqrt{\frac{L_3+L_L}{L_3 L_L (C_3+C_L)}}$
bandwidth: $\frac{1}{R_L (C_3+C_L)}$
K-LP: 0
K-HP: 0
K-BP: R_L
Qz: 0
Wz: None

3.100 BP-100 $Z(s) = \left(\frac{R_1}{C_1 R_1 s+1},\ L_2 s + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ R_L \right)$

$$H(s) = \frac{L_3 R_3 R_L s}{C_3 L_3 R_3 R_L s^2 + L_3 R_3 s + L_3 R_L s + R_3 R_L}$$

Parameters:

Q: $\frac{C_3 R_3 R_L \sqrt{\frac{1}{C_3 L_3}}}{R_3+R_L}$
wo: $\sqrt{\frac{1}{C_3 L_3}}$
bandwidth: $\frac{R_3+R_L}{C_3 R_3 R_L}$
K-LP: 0
K-HP: 0
K-BP: $\frac{R_3 R_L}{R_3+R_L}$
Qz: 0
Wz: None

3.101 BP-101 $Z(s) = \left(\frac{R_1}{C_1R_1s+1},\ L_2s + \frac{1}{C_2s},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_Ls}\right)$

$$H(s) = \frac{L_3R_3s}{C_3L_3R_3s^2 + C_LL_3R_3s^2 + L_3s + R_3}$$

Parameters:

Q: $R_3\sqrt{\frac{1}{L_3(C_3+C_L)}}\,(C_3+C_L)$
wo: $\sqrt{\frac{1}{L_3(C_3+C_L)}}$
bandwidth: $\frac{1}{R_3(C_3+C_L)}$
K-LP: 0
K-HP: 0
K-BP: R_3
Qz: 0
Wz: None

3.102 BP-102 $Z(s) = \left(\frac{R_1}{C_1R_1s+1},\ L_2s + \frac{1}{C_2s},\ \infty,\ \infty,\ \infty,\ \frac{R_L}{C_LR_Ls+1}\right)$

$$H(s) = \frac{L_3R_3R_Ls}{C_3L_3R_3R_Ls^2 + C_LL_3R_3R_Ls^2 + L_3R_3s + L_3R_Ls + R_3R_L}$$

Parameters:

Q: $\frac{R_3R_L\sqrt{\frac{1}{L_3(C_3+C_L)}}(C_3+C_L)}{R_3+R_L}$
wo: $\sqrt{\frac{1}{L_3(C_3+C_L)}}$
bandwidth: $\frac{R_3+R_L}{R_3R_L(C_3+C_L)}$
K-LP: 0
K-HP: 0
K-BP: $\frac{R_3R_L}{R_3+R_L}$
Qz: 0
Wz: None

3.103 BP-103 $Z(s) = \left(\frac{R_1}{C_1R_1s+1},\ L_2s + \frac{1}{C_2s},\ \infty,\ \infty,\ \infty,\ \frac{L_Ls}{C_LL_Ls^2+1}\right)$

$$H(s) = \frac{L_3L_LR_3s}{C_3L_3L_LR_3s^2 + C_LL_3L_LR_3s^2 + L_3L_Ls + L_3R_3 + L_LR_3}$$

Parameters:

Q: $R_3\sqrt{\frac{L_3+L_L}{L_3L_L(C_3+C_L)}}\,(C_3 + C_L)$
wo: $\sqrt{\frac{L_3+L_L}{L_3L_L(C_3+C_L)}}$
bandwidth: $\frac{1}{R_3(C_3+C_L)}$
K-LP: 0
K-HP: 0
K-BP: R_3
Qz: 0
Wz: None

3.104 BP-104 $Z(s) = \left(\frac{R_1}{C_1R_1s+1},\ L_2s + \frac{1}{C_2s},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_Ls+\frac{1}{R_L}+\frac{1}{L_Ls}}\right)$

$$H(s) = \frac{L_3L_LR_3R_Ls}{C_3L_3L_LR_3R_Ls^2 + C_LL_3L_LR_3R_Ls^2 + L_3L_LR_3s + L_3L_LR_Ls + L_3R_3R_L + L_LR_3R_L}$$

Parameters:

Q: $\frac{R_3R_L\sqrt{\frac{L_3+L_L}{L_3L_L(C_3+C_L)}}(C_3+C_L)}{R_3+R_L}$
wo: $\sqrt{\frac{L_3+L_L}{L_3L_L(C_3+C_L)}}$
bandwidth: $\frac{R_3+R_L}{R_3R_L(C_3+C_L)}$
K-LP: 0
K-HP: 0
K-BP: $\frac{R_3R_L}{R_3+R_L}$
Qz: 0
Wz: None

4 LP

5 BS

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

$$H(s) = \frac{R_3\left(C_L L_L s^2 + 1\right)}{C_L L_L s^2 + C_L R_3 s + 1}$$

Parameters:

Q: $\frac{L_L\sqrt{\frac{1}{C_L L_L}}}{R_3}$
wo: $\sqrt{\frac{1}{C_L L_L}}$
bandwidth: $\frac{R_3}{L_L}$
K-LP: R_3
K-HP: R_3
K-BP: 0
Qz: None
Wz: $\sqrt{\frac{1}{C_L L_L}}$

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

$$H(s) = \frac{R_3 R_L\left(C_L L_L s^2 + 1\right)}{C_L L_L R_3 s^2 + C_L L_L R_L s^2 + C_L R_3 R_L s + R_3 + R_L}$$

Parameters:

Q: $\frac{L_L\sqrt{\frac{1}{C_L L_L}}(R_3+R_L)}{R_3 R_L}$
wo: $\sqrt{\frac{1}{C_L L_L}}$
bandwidth: $\frac{R_3 R_L}{L_L(R_3+R_L)}$
K-LP: $\frac{R_3 R_L}{R_3+R_L}$

K-HP: $\frac{R_3 R_L}{R_3+R_L}$
K-BP: 0
Qz: None
Wz: $\sqrt{\frac{1}{C_L L_L}}$

5.3 BS-3 $Z(s) = \left(R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \infty,\ R_L\right)$

$$H(s) = \frac{R_L\left(C_3 L_3 s^2 + 1\right)}{C_3 L_3 s^2 + C_3 R_L s + 1}$$

Parameters:

Q: $\frac{L_3\sqrt{\frac{1}{C_3 L_3}}}{R_L}$
wo: $\sqrt{\frac{1}{C_3 L_3}}$
bandwidth: $\frac{R_L}{L_3}$
K-LP: R_L
K-HP: R_L
K-BP: 0
Qz: None
Wz: $\sqrt{\frac{1}{C_3 L_3}}$

5.4 BS-4 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2+1} + R_1,\ \infty,\ \infty,\ \infty,\ \infty,\ R_L\right)$

$$H(s) = \frac{R_3 R_L\left(C_3 L_3 s^2 + 1\right)}{C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + C_3 R_3 R_L s + R_3 + R_L}$$

Parameters:

Q: $\frac{L_3\sqrt{\frac{1}{C_3 L_3}}(R_3+R_L)}{R_3 R_L}$
wo: $\sqrt{\frac{1}{C_3 L_3}}$
bandwidth: $\frac{R_3 R_L}{L_3(R_3+R_L)}$
K-LP: $\frac{R_3 R_L}{R_3+R_L}$

K-HP: $\frac{R_3 R_L}{R_3+R_L}$
K-BP: 0
Qz: None
Wz: $\sqrt{\frac{1}{C_3 L_3}}$

5.5 BS-5 $Z(s) = \left(\frac{R_1\left(L_1 s+\frac{1}{C_1 s}\right)}{L_1 s+R_1+\frac{1}{C_1 s}},\ \infty,\ \infty,\ \infty,\ \infty,\ L_L s+\frac{1}{C_L s} \right)$

$$H(s) = \frac{R_3\left(C_L L_L s^2+1\right)}{C_L L_L s^2 + C_L R_3 s + 1}$$

Parameters:

Q: $\frac{L_L\sqrt{\frac{1}{C_L L_L}}}{R_3}$
wo: $\sqrt{\frac{1}{C_L L_L}}$
bandwidth: $\frac{R_3}{L_L}$
K-LP: R_3
K-HP: R_3
K-BP: 0
Qz: None
Wz: $\sqrt{\frac{1}{C_L L_L}}$

5.6 BS-6 $Z(s) = \left(\frac{R_1\left(L_1 s+\frac{1}{C_1 s}\right)}{L_1 s+R_1+\frac{1}{C_1 s}},\ \infty,\ \infty,\ \infty,\ \infty,\ \frac{R_L\left(L_L s+\frac{1}{C_L s}\right)}{L_L s+R_L+\frac{1}{C_L s}} \right)$

$$H(s) = \frac{R_3 R_L\left(C_L L_L s^2+1\right)}{C_L L_L R_3 s^2 + C_L L_L R_L s^2 + C_L R_3 R_L s + R_3 + R_L}$$

Parameters:

Q: $\frac{L_L\sqrt{\frac{1}{C_L L_L}}(R_3+R_L)}{R_3 R_L}$
wo: $\sqrt{\frac{1}{C_L L_L}}$
bandwidth: $\frac{R_3 R_L}{L_L(R_3+R_L)}$

K-LP: $\frac{R_3 R_L}{R_3+R_L}$
K-HP: $\frac{R_3 R_L}{R_3+R_L}$
K-BP: 0
Qz: None
Wz: $\sqrt{\frac{1}{C_L L_L}}$

5.7 BS-7 $Z(s) = \left(\infty,\ R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ R_L\right)$

$$H(s) = \frac{R_L\left(C_3 L_3 s^2 + 1\right)}{C_3 L_3 s^2 + C_3 R_L s + 1}$$

Parameters:

Q: $\frac{L_3\sqrt{\frac{1}{C_3 L_3}}}{R_L}$
wo: $\sqrt{\frac{1}{C_3 L_3}}$
bandwidth: $\frac{R_L}{L_3}$
K-LP: R_L
K-HP: R_L
K-BP: 0
Qz: None
Wz: $\sqrt{\frac{1}{C_3 L_3}}$

5.8 BS-8 $Z(s) = (\infty,\ \infty,\ R_3,\ \infty,\ \infty,\ R_L)$

$$H(s) = \frac{R_3 R_L\left(C_3 L_3 s^2 + 1\right)}{C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + C_3 R_3 R_L s + R_3 + R_L}$$

Parameters:

Q: $\frac{L_3\sqrt{\frac{1}{C_3 L_3}}(R_3+R_L)}{R_3 R_L}$
wo: $\sqrt{\frac{1}{C_3 L_3}}$
bandwidth: $\frac{R_3 R_L}{L_3(R_3+R_L)}$

K-LP: $\frac{R_3 R_L}{R_3+R_L}$
K-HP: $\frac{R_3 R_L}{R_3+R_L}$
K-BP: 0
Qz: None
Wz: $\sqrt{\frac{1}{C_3 L_3}}$

5.9 BS-9 $Z(s) = \left(\infty,\ \infty,\ \frac{1}{C_3 s},\ \infty,\ \infty,\ L_L s + \frac{1}{C_L s}\right)$

$$H(s) = \frac{R_3\left(C_L L_L s^2 + 1\right)}{C_L L_L s^2 + C_L R_3 s + 1}$$

Parameters:

Q: $\frac{L_L \sqrt{\frac{1}{C_L L_L}}}{R_3}$
wo: $\sqrt{\frac{1}{C_L L_L}}$
bandwidth: $\frac{R_3}{L_L}$
K-LP: R_3
K-HP: R_3
K-BP: 0
Qz: None
Wz: $\sqrt{\frac{1}{C_L L_L}}$

5.10 BS-10 $Z(s) = \left(\infty,\ \infty,\ \frac{1}{C_3 s},\ \infty,\ \infty,\ \frac{R_L\left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$

$$H(s) = \frac{R_3 R_L\left(C_L L_L s^2 + 1\right)}{C_L L_L R_3 s^2 + C_L L_L R_L s^2 + C_L R_3 R_L s + R_3 + R_L}$$

Parameters:

Q: $\frac{L_L \sqrt{\frac{1}{C_L L_L}}(R_3+R_L)}{R_3 R_L}$
wo: $\sqrt{\frac{1}{C_L L_L}}$
bandwidth: $\frac{R_3 R_L}{L_L(R_3+R_L)}$

K-LP: $\frac{R_3 R_L}{R_3+R_L}$
K-HP: $\frac{R_3 R_L}{R_3+R_L}$
K-BP: 0
Qz: None
Wz: $\sqrt{\frac{1}{C_L L_L}}$

5.11 BS-11 $Z(s) = \left(\infty,\ \infty,\ \frac{L_3 s}{C_3 L_3 s^2+1},\ \infty,\ \infty,\ R_L\right)$

$$H(s) = \frac{R_L\left(C_3 L_3 s^2+1\right)}{C_3 L_3 s^2 + C_3 R_L s + 1}$$

Parameters:

Q: $\frac{L_3\sqrt{\frac{1}{C_3 L_3}}}{R_L}$
wo: $\sqrt{\frac{1}{C_3 L_3}}$
bandwidth: $\frac{R_L}{L_3}$
K-LP: R_L
K-HP: R_L
K-BP: 0
Qz: None
Wz: $\sqrt{\frac{1}{C_3 L_3}}$

5.12 BS-12 $Z(s) = (\infty,\ \infty,\ \infty,\ R_4,\ \infty,\ R_L)$

$$H(s) = \frac{R_3 R_L\left(C_3 L_3 s^2+1\right)}{C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + C_3 R_3 R_L s + R_3 + R_L}$$

Parameters:

Q: $\frac{L_3\sqrt{\frac{1}{C_3 L_3}}(R_3+R_L)}{R_3 R_L}$
wo: $\sqrt{\frac{1}{C_3 L_3}}$
bandwidth: $\frac{R_3 R_L}{L_3(R_3+R_L)}$

K-LP: $\frac{R_3 R_L}{R_3+R_L}$
K-HP: $\frac{R_3 R_L}{R_3+R_L}$
K-BP: 0
Qz: None
Wz: $\sqrt{\frac{1}{C_3 L_3}}$

5.13 BS-13 $Z(s) = \left(\infty,\ \infty,\ \infty,\ \frac{1}{C_4 s},\ \infty,\ L_L s + \frac{1}{C_L s}\right)$

$$H(s) = \frac{R_3\left(C_L L_L s^2 + 1\right)}{C_L L_L s^2 + C_L R_3 s + 1}$$

Parameters:

Q: $\frac{L_L \sqrt{\frac{1}{C_L L_L}}}{R_3}$
wo: $\sqrt{\frac{1}{C_L L_L}}$
bandwidth: $\frac{R_3}{L_L}$
K-LP: R_3
K-HP: R_3
K-BP: 0
Qz: None
Wz: $\sqrt{\frac{1}{C_L L_L}}$

5.14 BS-14 $Z(s) = \left(\infty,\ \infty,\ \infty,\ \frac{1}{C_4 s},\ \infty,\ \frac{R_L\left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$

$$H(s) = \frac{R_3 R_L\left(C_L L_L s^2 + 1\right)}{C_L L_L R_3 s^2 + C_L L_L R_L s^2 + C_L R_3 R_L s + R_3 + R_L}$$

Parameters:

Q: $\frac{L_L \sqrt{\frac{1}{C_L L_L}}(R_3+R_L)}{R_3 R_L}$
wo: $\sqrt{\frac{1}{C_L L_L}}$
bandwidth: $\frac{R_3 R_L}{L_L(R_3+R_L)}$

K-LP: $\frac{R_3 R_L}{R_3+R_L}$
K-HP: $\frac{R_3 R_L}{R_3+R_L}$
K-BP: 0
Qz: None
Wz: $\sqrt{\frac{1}{C_L L_L}}$

5.15 BS-15 $Z(s) = \left(\infty,\ \infty,\ \infty,\ \frac{L_4 s}{C_4 L_4 s^2+1},\ \infty,\ R_L\right)$

$$H(s) = \frac{R_L\left(C_3 L_3 s^2+1\right)}{C_3 L_3 s^2 + C_3 R_L s + 1}$$

Parameters:

Q: $\frac{L_3\sqrt{\frac{1}{C_3 L_3}}}{R_L}$
wo: $\sqrt{\frac{1}{C_3 L_3}}$
bandwidth: $\frac{R_L}{L_3}$
K-LP: R_L
K-HP: R_L
K-BP: 0
Qz: None
Wz: $\sqrt{\frac{1}{C_3 L_3}}$

5.16 BS-16 $Z(s) = (\infty,\ \infty,\ \infty,\ \infty,\ R_4,\ R_L)$

$$H(s) = \frac{R_3 R_L\left(C_3 L_3 s^2+1\right)}{C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + C_3 R_3 R_L s + R_3 + R_L}$$

Parameters:

Q: $\frac{L_3\sqrt{\frac{1}{C_3 L_3}}(R_3+R_L)}{R_3 R_L}$
wo: $\sqrt{\frac{1}{C_3 L_3}}$
bandwidth: $\frac{R_3 R_L}{L_3(R_3+R_L)}$

K-LP: $\frac{R_3 R_L}{R_3+R_L}$
K-HP: $\frac{R_3 R_L}{R_3+R_L}$
K-BP: 0
Qz: None
Wz: $\sqrt{\frac{1}{C_3 L_3}}$

5.17 BS-17 $Z(s) = \left(\infty,\ \infty,\ \infty,\ \infty,\ \frac{1}{C_4 s},\ L_L s + \frac{1}{C_L s}\right)$

$$H(s) = \frac{R_3\left(C_L L_L s^2 + 1\right)}{C_L L_L s^2 + C_L R_3 s + 1}$$

Parameters:

Q: $\frac{L_L \sqrt{\frac{1}{C_L L_L}}}{R_3}$
wo: $\sqrt{\frac{1}{C_L L_L}}$
bandwidth: $\frac{R_3}{L_L}$
K-LP: R_3
K-HP: R_3
K-BP: 0
Qz: None
Wz: $\sqrt{\frac{1}{C_L L_L}}$

5.18 BS-18 $Z(s) = \left(\infty,\ \infty,\ \infty,\ \infty,\ \frac{1}{C_4 s},\ \frac{R_L\left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$

$$H(s) = \frac{R_3 R_L\left(C_L L_L s^2 + 1\right)}{C_L L_L R_3 s^2 + C_L L_L R_L s^2 + C_L R_3 R_L s + R_3 + R_L}$$

Parameters:

Q: $\frac{L_L \sqrt{\frac{1}{C_L L_L}}(R_3+R_L)}{R_3 R_L}$
wo: $\sqrt{\frac{1}{C_L L_L}}$
bandwidth: $\frac{R_3 R_L}{L_L(R_3+R_L)}$

K-LP: $\frac{R_3 R_L}{R_3+R_L}$
K-HP: $\frac{R_3 R_L}{R_3+R_L}$
K-BP: 0
Qz: None
Wz: $\sqrt{\frac{1}{C_L L_L}}$

5.19 BS-19 $Z(s) = \left(\infty,\ \infty,\ \infty,\ \infty,\ \frac{L_4 s}{C_4 L_4 s^2+1},\ R_L\right)$

$$H(s) = \frac{R_L\left(C_3 L_3 s^2+1\right)}{C_3 L_3 s^2 + C_3 R_L s + 1}$$

Parameters:

Q: $\frac{L_3\sqrt{\frac{1}{C_3 L_3}}}{R_L}$
wo: $\sqrt{\frac{1}{C_3 L_3}}$
bandwidth: $\frac{R_L}{L_3}$
K-LP: R_L
K-HP: R_L
K-BP: 0
Qz: None
Wz: $\sqrt{\frac{1}{C_3 L_3}}$

5.20 BS-20 $Z(s) = (R_1,\ R_2,\ \infty,\ \infty,\ \infty,\ R_L)$

$$H(s) = \frac{R_3 R_L\left(C_3 L_3 s^2+1\right)}{C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + C_3 R_3 R_L s + R_3 + R_L}$$

Parameters:

Q: $\frac{L_3\sqrt{\frac{1}{C_3 L_3}}(R_3+R_L)}{R_3 R_L}$
wo: $\sqrt{\frac{1}{C_3 L_3}}$
bandwidth: $\frac{R_3 R_L}{L_3(R_3+R_L)}$

K-LP: $\frac{R_3 R_L}{R_3+R_L}$
K-HP: $\frac{R_3 R_L}{R_3+R_L}$
K-BP: 0
Qz: None
Wz: $\sqrt{\frac{1}{C_3 L_3}}$

5.21 BS-21 $Z(s) = \left(R_1,\ \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ L_L s + \frac{1}{C_L s}\right)$

$$H(s) = \frac{R_3\left(C_L L_L s^2 + 1\right)}{C_L L_L s^2 + C_L R_3 s + 1}$$

Parameters:

Q: $\frac{L_L \sqrt{\frac{1}{C_L L_L}}}{R_3}$
wo: $\sqrt{\frac{1}{C_L L_L}}$
bandwidth: $\frac{R_3}{L_L}$
K-LP: R_3
K-HP: R_3
K-BP: 0
Qz: None
Wz: $\sqrt{\frac{1}{C_L L_L}}$

5.22 BS-22 $Z(s) = \left(R_1,\ \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{R_L\left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$

$$H(s) = \frac{R_3 R_L\left(C_L L_L s^2 + 1\right)}{C_L L_L R_3 s^2 + C_L L_L R_L s^2 + C_L R_3 R_L s + R_3 + R_L}$$

Parameters:

Q: $\frac{L_L \sqrt{\frac{1}{C_L L_L}}(R_3+R_L)}{R_3 R_L}$
wo: $\sqrt{\frac{1}{C_L L_L}}$
bandwidth: $\frac{R_3 R_L}{L_L(R_3+R_L)}$

K-LP: $\frac{R_3 R_L}{R_3+R_L}$
K-HP: $\frac{R_3 R_L}{R_3+R_L}$
K-BP: 0
Qz: None
Wz: $\sqrt{\frac{1}{C_L L_L}}$

5.23 BS-23 $Z(s) = \left(R_1,\ L_2 s + R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ R_L\right)$

$$H(s) = \frac{R_L\left(C_3 L_3 s^2 + 1\right)}{C_3 L_3 s^2 + C_3 R_L s + 1}$$

Parameters:

Q: $\frac{L_3\sqrt{\frac{1}{C_3 L_3}}}{R_L}$
wo: $\sqrt{\frac{1}{C_3 L_3}}$
bandwidth: $\frac{R_L}{L_3}$
K-LP: R_L
K-HP: R_L
K-BP: 0
Qz: None
Wz: $\sqrt{\frac{1}{C_3 L_3}}$

5.24 BS-24 $Z(s) = \left(L_1 s,\ \frac{R_2}{C_2 R_2 s+1},\ \infty,\ \infty,\ \infty,\ R_L\right)$

$$H(s) = \frac{R_3 R_L\left(C_3 L_3 s^2 + 1\right)}{C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + C_3 R_3 R_L s + R_3 + R_L}$$

Parameters:

Q: $\frac{L_3\sqrt{\frac{1}{C_3 L_3}}(R_3+R_L)}{R_3 R_L}$
wo: $\sqrt{\frac{1}{C_3 L_3}}$
bandwidth: $\frac{R_3 R_L}{L_3(R_3+R_L)}$

K-LP: $\frac{R_3 R_L}{R_3+R_L}$
K-HP: $\frac{R_3 R_L}{R_3+R_L}$
K-BP: 0
Qz: None
Wz: $\sqrt{\frac{1}{C_3 L_3}}$

5.25 BS-25 $Z(s) = \left(L_1 s,\ R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ L_L s + \frac{1}{C_L s}\right)$

$$H(s) = \frac{R_3\left(C_L L_L s^2 + 1\right)}{C_L L_L s^2 + C_L R_3 s + 1}$$

Parameters:

Q: $\frac{L_L\sqrt{\frac{1}{C_L L_L}}}{R_3}$
wo: $\sqrt{\frac{1}{C_L L_L}}$
bandwidth: $\frac{R_3}{L_L}$
K-LP: R_3
K-HP: R_3
K-BP: 0
Qz: None
Wz: $\sqrt{\frac{1}{C_L L_L}}$

5.26 BS-26 $Z(s) = \left(L_1 s,\ R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{R_L\left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$

$$H(s) = \frac{R_3 R_L\left(C_L L_L s^2 + 1\right)}{C_L L_L R_3 s^2 + C_L L_L R_L s^2 + C_L R_3 R_L s + R_3 + R_L}$$

Parameters:

Q: $\frac{L_L\sqrt{\frac{1}{C_L L_L}}(R_3+R_L)}{R_3 R_L}$
wo: $\sqrt{\frac{1}{C_L L_L}}$
bandwidth: $\frac{R_3 R_L}{L_L(R_3+R_L)}$

K-LP: $\frac{R_3 R_L}{R_3+R_L}$
K-HP: $\frac{R_3 R_L}{R_3+R_L}$
K-BP: 0
Qz: None
Wz: $\sqrt{\frac{1}{C_L L_L}}$

5.27 BS-27 $Z(s) = \left(L_1 s,\ \frac{R_2\left(L_2 s+\frac{1}{C_2 s}\right)}{L_2 s+R_2+\frac{1}{C_2 s}},\ \infty,\ \infty,\ \infty,\ R_L\right)$

$$H(s) = \frac{R_L\left(C_3 L_3 s^2+1\right)}{C_3 L_3 s^2 + C_3 R_L s + 1}$$

Parameters:

Q: $\frac{L_3\sqrt{\frac{1}{C_3 L_3}}}{R_L}$
wo: $\sqrt{\frac{1}{C_3 L_3}}$
bandwidth: $\frac{R_L}{L_3}$
K-LP: R_L
K-HP: R_L
K-BP: 0
Qz: None
Wz: $\sqrt{\frac{1}{C_3 L_3}}$

5.28 BS-28 $Z(s) = \left(\frac{1}{C_1 s},\ L_2 s+\frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ R_L\right)$

$$H(s) = \frac{R_3 R_L\left(C_3 L_3 s^2+1\right)}{C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + C_3 R_3 R_L s + R_3 + R_L}$$

Parameters:

Q: $\frac{L_3\sqrt{\frac{1}{C_3 L_3}}(R_3+R_L)}{R_3 R_L}$
wo: $\sqrt{\frac{1}{C_3 L_3}}$
bandwidth: $\frac{R_3 R_L}{L_3(R_3+R_L)}$

K-LP: $\frac{R_3 R_L}{R_3+R_L}$
K-HP: $\frac{R_3 R_L}{R_3+R_L}$
K-BP: 0
Qz: None
Wz: $\sqrt{\frac{1}{C_3 L_3}}$

5.29 BS-29 $Z(s) = \left(\frac{1}{C_1 s},\ L_2 s + R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ L_L s + \frac{1}{C_L s}\right)$

$$H(s) = \frac{R_3\left(C_L L_L s^2 + 1\right)}{C_L L_L s^2 + C_L R_3 s + 1}$$

Parameters:

Q: $\frac{L_L\sqrt{\frac{1}{C_L L_L}}}{R_3}$
wo: $\sqrt{\frac{1}{C_L L_L}}$
bandwidth: $\frac{R_3}{L_L}$
K-LP: R_3
K-HP: R_3
K-BP: 0
Qz: None
Wz: $\sqrt{\frac{1}{C_L L_L}}$

5.30 BS-30 $Z(s) = \left(\frac{1}{C_1 s},\ L_2 s + R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{R_L\left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$

$$H(s) = \frac{R_3 R_L\left(C_L L_L s^2 + 1\right)}{C_L L_L R_3 s^2 + C_L L_L R_L s^2 + C_L R_3 R_L s + R_3 + R_L}$$

Parameters:

Q: $\frac{L_L\sqrt{\frac{1}{C_L L_L}}(R_3+R_L)}{R_3 R_L}$
wo: $\sqrt{\frac{1}{C_L L_L}}$
bandwidth: $\frac{R_3 R_L}{L_L(R_3+R_L)}$

K-LP: $\frac{R_3 R_L}{R_3+R_L}$
K-HP: $\frac{R_3 R_L}{R_3+R_L}$
K-BP: 0
Qz: None
Wz: $\sqrt{\frac{1}{C_L L_L}}$

5.31 BS-31 $Z(s) = \left(\frac{R_1}{C_1 R_1 s+1},\ \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ R_L\right)$

$$H(s) = \frac{R_L\left(C_3 L_3 s^2+1\right)}{C_3 L_3 s^2 + C_3 R_L s + 1}$$

Parameters:

Q: $\frac{L_3\sqrt{\frac{1}{C_3 L_3}}}{R_L}$
wo: $\sqrt{\frac{1}{C_3 L_3}}$
bandwidth: $\frac{R_L}{L_3}$
K-LP: R_L
K-HP: R_L
K-BP: 0
Qz: None
Wz: $\sqrt{\frac{1}{C_3 L_3}}$

5.32 BS-32 $Z(s) = \left(\frac{R_1}{C_1 R_1 s+1},\ \frac{L_2 s}{C_2 L_2 s^2+1} + R_2,\ \infty,\ \infty,\ \infty,\ R_L\right)$

$$H(s) = \frac{R_3 R_L\left(C_3 L_3 s^2+1\right)}{C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + C_3 R_3 R_L s + R_3 + R_L}$$

Parameters:

Q: $\frac{L_3\sqrt{\frac{1}{C_3 L_3}}(R_3+R_L)}{R_3 R_L}$
wo: $\sqrt{\frac{1}{C_3 L_3}}$
bandwidth: $\frac{R_3 R_L}{L_3(R_3+R_L)}$

K-LP: $\frac{R_3 R_L}{R_3+R_L}$
K-HP: $\frac{R_3 R_L}{R_3+R_L}$
K-BP: 0
Qz: None
Wz: $\sqrt{\frac{1}{C_3 L_3}}$

6 GE

6.1 GE-1 $Z(s) = \left(R_1,\ \infty,\ \infty,\ \infty,\ \infty,\ L_L s + R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{R_3\left(C_L L_L s^2 + C_L R_L s + 1\right)}{C_L L_L s^2 + C_L R_3 s + C_L R_L s + 1}$$

Parameters:

Q: $\frac{L_L\sqrt{\frac{1}{C_L L_L}}}{R_3+R_L}$
wo: $\sqrt{\frac{1}{C_L L_L}}$
bandwidth: $\frac{R_3+R_L}{L_L}$
K-LP: R_3
K-HP: R_3
K-BP: $\frac{R_3 R_L}{R_3+R_L}$
Qz: $\frac{L_L\sqrt{\frac{1}{C_L L_L}}}{R_L}$
Wz: $\sqrt{\frac{1}{C_L L_L}}$

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

$$H(s) = \frac{R_3\left(C_L L_L R_L s^2 + L_L s + R_L\right)}{C_L L_L R_3 s^2 + C_L L_L R_L s^2 + L_L s + R_3 + R_L}$$

Parameters:

Q: $C_L\sqrt{\frac{1}{C_L L_L}}\,(R_3+R_L)$
wo: $\sqrt{\frac{1}{C_L L_L}}$
bandwidth: $\frac{1}{C_L(R_3+R_L)}$
K-LP: $\frac{R_3 R_L}{R_3+R_L}$
K-HP: $\frac{R_3 R_L}{R_3+R_L}$
K-BP: R_3
Qz: $C_L R_L\sqrt{\frac{1}{C_L L_L}}$
Wz: $\sqrt{\frac{1}{C_L L_L}}$

6.3 GE-3 $Z(s)=\left(\frac{L_1 s}{C_1 L_1 s^2+1},\ \infty,\ \infty,\ \infty,\ \infty,\ R_L\right)$

$$H(s)=\frac{R_L\left(C_3L_3s^2+C_3R_3s+1\right)}{C_3L_3s^2+C_3R_3s+C_3R_Ls+1}$$

Parameters:

Q: $\frac{L_3\sqrt{\frac{1}{C_3L_3}}}{R_3+R_L}$
wo: $\sqrt{\frac{1}{C_3L_3}}$
bandwidth: $\frac{R_3+R_L}{L_3}$
K-LP: R_L
K-HP: R_L
K-BP: $\frac{R_3R_L}{R_3+R_L}$
Qz: $\frac{L_3\sqrt{\frac{1}{C_3L_3}}}{R_3}$
Wz: $\sqrt{\frac{1}{C_3L_3}}$

6.4 GE-4 $Z(s)=\left(\frac{1}{C_1s+\frac{1}{R_1}+\frac{1}{L_1s}},\ \infty,\ \infty,\ \infty,\ \infty,\ R_L\right)$

$$H(s)=\frac{R_L\left(C_3L_3R_3s^2+L_3s+R_3\right)}{C_3L_3R_3s^2+C_3L_3R_Ls^2+L_3s+R_3+R_L}$$

Parameters:

Q: $C_3\sqrt{\frac{1}{C_3L_3}}\,(R_3+R_L)$
wo: $\sqrt{\frac{1}{C_3L_3}}$
bandwidth: $\frac{1}{C_3(R_3+R_L)}$
K-LP: $\frac{R_3R_L}{R_3+R_L}$
K-HP: $\frac{R_3R_L}{R_3+R_L}$
K-BP: R_L
Qz: $C_3R_3\sqrt{\frac{1}{C_3L_3}}$
Wz: $\sqrt{\frac{1}{C_3L_3}}$

6.5 GE-5 $Z(s) = \left(\frac{R_1\left(L_1s+\frac{1}{C_1s}\right)}{L_1s+R_1+\frac{1}{C_1s}},\ \infty,\ \infty,\ \infty,\ \infty,\ L_Ls+R_L+\frac{1}{C_Ls}\right)$

$$H(s) = \frac{R_3\left(C_LL_Ls^2+C_LR_Ls+1\right)}{C_LL_Ls^2+C_LR_3s+C_LR_Ls+1}$$

Parameters:

Q: $\frac{L_L\sqrt{\frac{1}{C_LL_L}}}{R_3+R_L}$
wo: $\sqrt{\frac{1}{C_LL_L}}$
bandwidth: $\frac{R_3+R_L}{L_L}$
K-LP: R_3
K-HP: R_3
K-BP: $\frac{R_3R_L}{R_3+R_L}$
Qz: $\frac{L_L\sqrt{\frac{1}{C_LL_L}}}{R_L}$
Wz: $\sqrt{\frac{1}{C_LL_L}}$

6.6 GE-6 $Z(s) = \left(\frac{R_1\left(L_1 s + \frac{1}{C_1 s}\right)}{L_1 s + R_1 + \frac{1}{C_1 s}},\ \infty,\ \infty,\ \infty,\ \infty,\ \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$

$$H(s) = \frac{R_3\left(C_L L_L R_L s^2 + L_L s + R_L\right)}{C_L L_L R_3 s^2 + C_L L_L R_L s^2 + L_L s + R_3 + R_L}$$

Parameters:

Q: $C_L \sqrt{\frac{1}{C_L L_L}}\,(R_3 + R_L)$
wo: $\sqrt{\frac{1}{C_L L_L}}$
bandwidth: $\frac{1}{C_L(R_3+R_L)}$
K-LP: $\frac{R_3 R_L}{R_3+R_L}$
K-HP: $\frac{R_3 R_L}{R_3+R_L}$
K-BP: R_3
Qz: $C_L R_L \sqrt{\frac{1}{C_L L_L}}$
Wz: $\sqrt{\frac{1}{C_L L_L}}$

6.7 GE-7 $Z(s) = \left(\infty,\ L_2 s + R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ R_L\right)$

$$H(s) = \frac{R_L\left(C_3 L_3 s^2 + C_3 R_3 s + 1\right)}{C_3 L_3 s^2 + C_3 R_3 s + C_3 R_L s + 1}$$

Parameters:

Q: $\frac{L_3 \sqrt{\frac{1}{C_3 L_3}}}{R_3+R_L}$
wo: $\sqrt{\frac{1}{C_3 L_3}}$
bandwidth: $\frac{R_3+R_L}{L_3}$
K-LP: R_L
K-HP: R_L
K-BP: $\frac{R_3 R_L}{R_3+R_L}$
Qz: $\frac{L_3 \sqrt{\frac{1}{C_3 L_3}}}{R_3}$
Wz: $\sqrt{\frac{1}{C_3 L_3}}$

6.8 GE-8 $Z(s) = \left(\infty,\ \frac{R_2\left(L_2 s + \frac{1}{C_2 s}\right)}{L_2 s + R_2 + \frac{1}{C_2 s}},\ \infty,\ \infty,\ \infty,\ R_L\right)$

$$H(s) = \frac{R_L\left(C_3 L_3 R_3 s^2 + L_3 s + R_3\right)}{C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + L_3 s + R_3 + R_L}$$

Parameters:

Q: $C_3\sqrt{\frac{1}{C_3 L_3}}\left(R_3 + R_L\right)$
wo: $\sqrt{\frac{1}{C_3 L_3}}$
bandwidth: $\frac{1}{C_3(R_3+R_L)}$
K-LP: $\frac{R_3 R_L}{R_3+R_L}$
K-HP: $\frac{R_3 R_L}{R_3+R_L}$
K-BP: R_L
Qz: $C_3 R_3\sqrt{\frac{1}{C_3 L_3}}$
Wz: $\sqrt{\frac{1}{C_3 L_3}}$

6.9 GE-9 $Z(s) = \left(\infty,\ \infty,\ \frac{1}{C_3 s},\ \infty,\ \infty,\ L_L s + R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{R_3\left(C_L L_L s^2 + C_L R_L s + 1\right)}{C_L L_L s^2 + C_L R_3 s + C_L R_L s + 1}$$

Parameters:

Q: $\frac{L_L\sqrt{\frac{1}{C_L L_L}}}{R_3+R_L}$
wo: $\sqrt{\frac{1}{C_L L_L}}$
bandwidth: $\frac{R_3+R_L}{L_L}$
K-LP: R_3
K-HP: R_3
K-BP: $\frac{R_3 R_L}{R_3+R_L}$
Qz: $\frac{L_L\sqrt{\frac{1}{C_L L_L}}}{R_L}$
Wz: $\sqrt{\frac{1}{C_L L_L}}$

6.10 GE-10 $Z(s) = \left(\infty,\ \infty,\ \frac{1}{C_3 s},\ \infty,\ \infty,\ \frac{L_L s}{C_L L_L s^2+1} + R_L\right)$

$$H(s) = \frac{R_3\left(C_L L_L R_L s^2 + L_L s + R_L\right)}{C_L L_L R_3 s^2 + C_L L_L R_L s^2 + L_L s + R_3 + R_L}$$

Parameters:

Q: $C_L\sqrt{\frac{1}{C_L L_L}}\,(R_3 + R_L)$
wo: $\sqrt{\frac{1}{C_L L_L}}$
bandwidth: $\frac{1}{C_L(R_3+R_L)}$
K-LP: $\frac{R_3 R_L}{R_3+R_L}$
K-HP: $\frac{R_3 R_L}{R_3+R_L}$
K-BP: R_3
Qz: $C_L R_L\sqrt{\frac{1}{C_L L_L}}$
Wz: $\sqrt{\frac{1}{C_L L_L}}$

6.11 GE-11 $Z(s) = \left(\infty,\ \infty,\ \frac{1}{C_3 s+\frac{1}{R_3}+\frac{1}{L_3 s}},\ \infty,\ \infty,\ R_L\right)$

$$H(s) = \frac{R_L\left(C_3 L_3 s^2 + C_3 R_3 s + 1\right)}{C_3 L_3 s^2 + C_3 R_3 s + C_3 R_L s + 1}$$

Parameters:

Q: $\frac{L_3\sqrt{\frac{1}{C_3 L_3}}}{R_3+R_L}$
wo: $\sqrt{\frac{1}{C_3 L_3}}$
bandwidth: $\frac{R_3+R_L}{L_3}$
K-LP: R_L
K-HP: R_L
K-BP: $\frac{R_3 R_L}{R_3+R_L}$
Qz: $\frac{L_3\sqrt{\frac{1}{C_3 L_3}}}{R_3}$
Wz: $\sqrt{\frac{1}{C_3 L_3}}$

6.12 GE-12 $Z(s) = \left(\infty,\ \infty,\ \frac{R_3\left(L_3 s+\frac{1}{C_3 s}\right)}{L_3 s+R_3+\frac{1}{C_3 s}},\ \infty,\ \infty,\ R_L\right)$

$$H(s) = \frac{R_L\left(C_3 L_3 R_3 s^2 + L_3 s + R_3\right)}{C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + L_3 s + R_3 + R_L}$$

Parameters:

Q: $C_3\sqrt{\frac{1}{C_3 L_3}}\left(R_3 + R_L\right)$
wo: $\sqrt{\frac{1}{C_3 L_3}}$
bandwidth: $\frac{1}{C_3(R_3+R_L)}$
K-LP: $\frac{R_3 R_L}{R_3+R_L}$
K-HP: $\frac{R_3 R_L}{R_3+R_L}$
K-BP: R_L
Qz: $C_3 R_3\sqrt{\frac{1}{C_3 L_3}}$
Wz: $\sqrt{\frac{1}{C_3 L_3}}$

6.13 GE-13 $Z(s) = \left(\infty,\ \infty,\ \infty,\ \frac{1}{C_4 s},\ \infty,\ L_L s + R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{R_3\left(C_L L_L s^2 + C_L R_L s + 1\right)}{C_L L_L s^2 + C_L R_3 s + C_L R_L s + 1}$$

Parameters:

Q: $\frac{L_L\sqrt{\frac{1}{C_L L_L}}}{R_3+R_L}$
wo: $\sqrt{\frac{1}{C_L L_L}}$
bandwidth: $\frac{R_3+R_L}{L_L}$
K-LP: R_3
K-HP: R_3
K-BP: $\frac{R_3 R_L}{R_3+R_L}$
Qz: $\frac{L_L\sqrt{\frac{1}{C_L L_L}}}{R_L}$
Wz: $\sqrt{\frac{1}{C_L L_L}}$

6.14 GE-14 $Z(s) = \left(\infty,\ \infty,\ \infty,\ \frac{1}{C_4 s},\ \infty,\ \frac{L_L s}{C_L L_L s^2+1} + R_L\right)$

$$H(s) = \frac{R_3\left(C_L L_L R_L s^2 + L_L s + R_L\right)}{C_L L_L R_3 s^2 + C_L L_L R_L s^2 + L_L s + R_3 + R_L}$$

Parameters:

Q: $C_L\sqrt{\frac{1}{C_L L_L}}\,(R_3 + R_L)$
wo: $\sqrt{\frac{1}{C_L L_L}}$
bandwidth: $\frac{1}{C_L(R_3+R_L)}$
K-LP: $\frac{R_3 R_L}{R_3+R_L}$
K-HP: $\frac{R_3 R_L}{R_3+R_L}$
K-BP: R_3
Qz: $C_L R_L\sqrt{\frac{1}{C_L L_L}}$
Wz: $\sqrt{\frac{1}{C_L L_L}}$

6.15 GE-15 $Z(s) = \left(\infty,\ \infty,\ \infty,\ \frac{1}{C_4 s+\frac{1}{R_4}+\frac{1}{L_4 s}},\ \infty,\ R_L\right)$

$$H(s) = \frac{R_L\left(C_3 L_3 s^2 + C_3 R_3 s + 1\right)}{C_3 L_3 s^2 + C_3 R_3 s + C_3 R_L s + 1}$$

Parameters:

Q: $\frac{L_3\sqrt{\frac{1}{C_3 L_3}}}{R_3+R_L}$
wo: $\sqrt{\frac{1}{C_3 L_3}}$
bandwidth: $\frac{R_3+R_L}{L_3}$
K-LP: R_L
K-HP: R_L
K-BP: $\frac{R_3 R_L}{R_3+R_L}$
Qz: $\frac{L_3\sqrt{\frac{1}{C_3 L_3}}}{R_3}$
Wz: $\sqrt{\frac{1}{C_3 L_3}}$

6.16 GE-16 $Z(s) = \left(\infty,\ \infty,\ \infty,\ \frac{R_4\left(L_4 s + \frac{1}{C_4 s}\right)}{L_4 s + R_4 + \frac{1}{C_4 s}},\ \infty,\ R_L\right)$

$$H(s) = \frac{R_L\left(C_3 L_3 R_3 s^2 + L_3 s + R_3\right)}{C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + L_3 s + R_3 + R_L}$$

Parameters:

Q: $C_3\sqrt{\frac{1}{C_3 L_3}}\left(R_3 + R_L\right)$
wo: $\sqrt{\frac{1}{C_3 L_3}}$
bandwidth: $\frac{1}{C_3(R_3+R_L)}$
K-LP: $\frac{R_3 R_L}{R_3+R_L}$
K-HP: $\frac{R_3 R_L}{R_3+R_L}$
K-BP: R_L
Qz: $C_3 R_3\sqrt{\frac{1}{C_3 L_3}}$
Wz: $\sqrt{\frac{1}{C_3 L_3}}$

6.17 GE-17 $Z(s) = \left(\infty,\ \infty,\ \infty,\ \infty,\ \frac{1}{C_4 s},\ L_L s + R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{R_3\left(C_L L_L s^2 + C_L R_L s + 1\right)}{C_L L_L s^2 + C_L R_3 s + C_L R_L s + 1}$$

Parameters:

Q: $\frac{L_L\sqrt{\frac{1}{C_L L_L}}}{R_3+R_L}$
wo: $\sqrt{\frac{1}{C_L L_L}}$
bandwidth: $\frac{R_3+R_L}{L_L}$
K-LP: R_3
K-HP: R_3
K-BP: $\frac{R_3 R_L}{R_3+R_L}$
Qz: $\frac{L_L\sqrt{\frac{1}{C_L L_L}}}{R_L}$
Wz: $\sqrt{\frac{1}{C_L L_L}}$

6.18 GE-18 $Z(s) = \left(\infty,\ \infty,\ \infty,\ \infty,\ \frac{1}{C_4 s},\ \frac{L_L s}{C_L L_L s^2+1} + R_L\right)$

$$H(s) = \frac{R_3\left(C_L L_L R_L s^2 + L_L s + R_L\right)}{C_L L_L R_3 s^2 + C_L L_L R_L s^2 + L_L s + R_3 + R_L}$$

Parameters:

Q: $C_L\sqrt{\frac{1}{C_L L_L}}\,(R_3 + R_L)$
wo: $\sqrt{\frac{1}{C_L L_L}}$
bandwidth: $\frac{1}{C_L(R_3+R_L)}$
K-LP: $\frac{R_3 R_L}{R_3+R_L}$
K-HP: $\frac{R_3 R_L}{R_3+R_L}$
K-BP: R_3
Qz: $C_L R_L\sqrt{\frac{1}{C_L L_L}}$
Wz: $\sqrt{\frac{1}{C_L L_L}}$

6.19 GE-19 $Z(s) = \left(\infty,\ \infty,\ \infty,\ \infty,\ \frac{1}{C_4 s+\frac{1}{R_4}+\frac{1}{L_4 s}},\ R_L\right)$

$$H(s) = \frac{R_L\left(C_3 L_3 s^2 + C_3 R_3 s + 1\right)}{C_3 L_3 s^2 + C_3 R_3 s + C_3 R_L s + 1}$$

Parameters:

Q: $\frac{L_3\sqrt{\frac{1}{C_3 L_3}}}{R_3+R_L}$
wo: $\sqrt{\frac{1}{C_3 L_3}}$
bandwidth: $\frac{R_3+R_L}{L_3}$
K-LP: R_L
K-HP: R_L
K-BP: $\frac{R_3 R_L}{R_3+R_L}$
Qz: $\frac{L_3\sqrt{\frac{1}{C_3 L_3}}}{R_3}$
Wz: $\sqrt{\frac{1}{C_3 L_3}}$

6.20 GE-20 $Z(s) = \left(\infty,\ \infty,\ \infty,\ \infty,\ \frac{R_4\left(L_4 s+\frac{1}{C_4 s}\right)}{L_4 s+R_4+\frac{1}{C_4 s}},\ R_L\right)$

$$H(s) = \frac{R_L\left(C_3 L_3 R_3 s^2 + L_3 s + R_3\right)}{C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + L_3 s + R_3 + R_L}$$

Parameters:

Q: $C_3\sqrt{\frac{1}{C_3 L_3}}\left(R_3 + R_L\right)$
wo: $\sqrt{\frac{1}{C_3 L_3}}$
bandwidth: $\frac{1}{C_3(R_3+R_L)}$
K-LP: $\frac{R_3 R_L}{R_3+R_L}$
K-HP: $\frac{R_3 R_L}{R_3+R_L}$
K-BP: R_L
Qz: $C_3 R_3\sqrt{\frac{1}{C_3 L_3}}$
Wz: $\sqrt{\frac{1}{C_3 L_3}}$

6.21 GE-21 $Z(s) = \left(R_1,\ \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ L_L s + R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{R_3\left(C_L L_L s^2 + C_L R_L s + 1\right)}{C_L L_L s^2 + C_L R_3 s + C_L R_L s + 1}$$

Parameters:

Q: $\frac{L_L\sqrt{\frac{1}{C_L L_L}}}{R_3+R_L}$
wo: $\sqrt{\frac{1}{C_L L_L}}$
bandwidth: $\frac{R_3+R_L}{L_L}$
K-LP: R_3
K-HP: R_3
K-BP: $\frac{R_3 R_L}{R_3+R_L}$
Qz: $\frac{L_L\sqrt{\frac{1}{C_L L_L}}}{R_L}$
Wz: $\sqrt{\frac{1}{C_L L_L}}$

6.22 GE-22 $Z(s) = \left(R_1,\ \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{L_L s}{C_L L_L s^2+1} + R_L\right)$

$$H(s) = \frac{R_3\left(C_L L_L R_L s^2 + L_L s + R_L\right)}{C_L L_L R_3 s^2 + C_L L_L R_L s^2 + L_L s + R_3 + R_L}$$

Parameters:

Q: $C_L\sqrt{\frac{1}{C_L L_L}}\,(R_3 + R_L)$
wo: $\sqrt{\frac{1}{C_L L_L}}$
bandwidth: $\frac{1}{C_L(R_3+R_L)}$
K-LP: $\frac{R_3 R_L}{R_3+R_L}$
K-HP: $\frac{R_3 R_L}{R_3+R_L}$
K-BP: R_3
Qz: $C_L R_L\sqrt{\frac{1}{C_L L_L}}$
Wz: $\sqrt{\frac{1}{C_L L_L}}$

6.23 GE-23 $Z(s) = \left(R_1,\ \frac{R_2\left(L_2 s+\frac{1}{C_2 s}\right)}{L_2 s+R_2+\frac{1}{C_2 s}},\ \infty,\ \infty,\ \infty,\ R_L\right)$

$$H(s) = \frac{R_L\left(C_3 L_3 s^2 + C_3 R_3 s + 1\right)}{C_3 L_3 s^2 + C_3 R_3 s + C_3 R_L s + 1}$$

Parameters:

Q: $\frac{L_3\sqrt{\frac{1}{C_3 L_3}}}{R_3+R_L}$
wo: $\sqrt{\frac{1}{C_3 L_3}}$
bandwidth: $\frac{R_3+R_L}{L_3}$
K-LP: R_L
K-HP: R_L
K-BP: $\frac{R_3 R_L}{R_3+R_L}$
Qz: $\frac{L_3\sqrt{\frac{1}{C_3 L_3}}}{R_3}$
Wz: $\sqrt{\frac{1}{C_3 L_3}}$

6.24 GE-24 $Z(s) = \left(L_1 s,\ \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ R_L\right)$

$$H(s) = \frac{R_L\left(C_3 L_3 R_3 s^2 + L_3 s + R_3\right)}{C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + L_3 s + R_3 + R_L}$$

Parameters:

Q: $C_3\sqrt{\frac{1}{C_3 L_3}}\left(R_3 + R_L\right)$
wo: $\sqrt{\frac{1}{C_3 L_3}}$
bandwidth: $\frac{1}{C_3(R_3+R_L)}$
K-LP: $\frac{R_3 R_L}{R_3+R_L}$
K-HP: $\frac{R_3 R_L}{R_3+R_L}$
K-BP: R_L
Qz: $C_3 R_3\sqrt{\frac{1}{C_3 L_3}}$
Wz: $\sqrt{\frac{1}{C_3 L_3}}$

6.25 GE-25 $Z(s) = \left(L_1 s,\ R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ L_L s + R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{R_3\left(C_L L_L s^2 + C_L R_L s + 1\right)}{C_L L_L s^2 + C_L R_3 s + C_L R_L s + 1}$$

Parameters:

Q: $\frac{L_L\sqrt{\frac{1}{C_L L_L}}}{R_3+R_L}$
wo: $\sqrt{\frac{1}{C_L L_L}}$
bandwidth: $\frac{R_3+R_L}{L_L}$
K-LP: R_3
K-HP: R_3
K-BP: $\frac{R_3 R_L}{R_3+R_L}$
Qz: $\frac{L_L\sqrt{\frac{1}{C_L L_L}}}{R_L}$
Wz: $\sqrt{\frac{1}{C_L L_L}}$

6.26 GE-26 $Z(s) = \left(L_1 s,\ R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{L_L s}{C_L L_L s^2+1} + R_L\right)$

$$H(s) = \frac{R_3\left(C_L L_L R_L s^2 + L_L s + R_L\right)}{C_L L_L R_3 s^2 + C_L L_L R_L s^2 + L_L s + R_3 + R_L}$$

Parameters:

Q: $C_L\sqrt{\frac{1}{C_L L_L}}\,(R_3 + R_L)$
wo: $\sqrt{\frac{1}{C_L L_L}}$
bandwidth: $\frac{1}{C_L(R_3+R_L)}$
K-LP: $\frac{R_3 R_L}{R_3+R_L}$
K-HP: $\frac{R_3 R_L}{R_3+R_L}$
K-BP: R_3
Qz: $C_L R_L\sqrt{\frac{1}{C_L L_L}}$
Wz: $\sqrt{\frac{1}{C_L L_L}}$

6.27 GE-27 $Z(s) = \left(\frac{1}{C_1 s},\ \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ R_L\right)$

$$H(s) = \frac{R_L\left(C_3 L_3 s^2 + C_3 R_3 s + 1\right)}{C_3 L_3 s^2 + C_3 R_3 s + C_3 R_L s + 1}$$

Parameters:

Q: $\frac{L_3\sqrt{\frac{1}{C_3 L_3}}}{R_3+R_L}$
wo: $\sqrt{\frac{1}{C_3 L_3}}$
bandwidth: $\frac{R_3+R_L}{L_3}$
K-LP: R_L
K-HP: R_L
K-BP: $\frac{R_3 R_L}{R_3+R_L}$
Qz: $\frac{L_3\sqrt{\frac{1}{C_3 L_3}}}{R_3}$
Wz: $\sqrt{\frac{1}{C_3 L_3}}$

6.28 GE-28 $Z(s) = \left(\frac{1}{C_1 s},\ R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ R_L\right)$

$$H(s) = \frac{R_L\left(C_3 L_3 R_3 s^2 + L_3 s + R_3\right)}{C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + L_3 s + R_3 + R_L}$$

Parameters:

Q: $C_3\sqrt{\frac{1}{C_3 L_3}}\left(R_3 + R_L\right)$
wo: $\sqrt{\frac{1}{C_3 L_3}}$
bandwidth: $\frac{1}{C_3(R_3+R_L)}$
K-LP: $\frac{R_3 R_L}{R_3+R_L}$
K-HP: $\frac{R_3 R_L}{R_3+R_L}$
K-BP: R_L
Qz: $C_3 R_3\sqrt{\frac{1}{C_3 L_3}}$
Wz: $\sqrt{\frac{1}{C_3 L_3}}$

6.29 GE-29 $Z(s) = \left(\frac{1}{C_1 s},\ L_2 s + R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ L_L s + R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{R_3\left(C_L L_L s^2 + C_L R_L s + 1\right)}{C_L L_L s^2 + C_L R_3 s + C_L R_L s + 1}$$

Parameters:

Q: $\frac{L_L\sqrt{\frac{1}{C_L L_L}}}{R_3+R_L}$
wo: $\sqrt{\frac{1}{C_L L_L}}$
bandwidth: $\frac{R_3+R_L}{L_L}$
K-LP: R_3
K-HP: R_3
K-BP: $\frac{R_3 R_L}{R_3+R_L}$
Qz: $\frac{L_L\sqrt{\frac{1}{C_L L_L}}}{R_L}$
Wz: $\sqrt{\frac{1}{C_L L_L}}$

6.30 GE-30 $Z(s) = \left(\frac{1}{C_1 s},\ L_2 s + R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{L_L s}{C_L L_L s^2+1} + R_L\right)$

$$H(s) = \frac{R_3\left(C_L L_L R_L s^2 + L_L s + R_L\right)}{C_L L_L R_3 s^2 + C_L L_L R_L s^2 + L_L s + R_3 + R_L}$$

Parameters:

Q: $C_L\sqrt{\frac{1}{C_L L_L}}\,(R_3 + R_L)$
wo: $\sqrt{\frac{1}{C_L L_L}}$
bandwidth: $\frac{1}{C_L(R_3+R_L)}$
K-LP: $\frac{R_3 R_L}{R_3+R_L}$
K-HP: $\frac{R_3 R_L}{R_3+R_L}$
K-BP: R_3
Qz: $C_L R_L\sqrt{\frac{1}{C_L L_L}}$
Wz: $\sqrt{\frac{1}{C_L L_L}}$

6.31 GE-31 $Z(s) = \left(\frac{R_1}{C_1 R_1 s+1},\ R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ R_L\right)$

$$H(s) = \frac{R_L\left(C_3 L_3 s^2 + C_3 R_3 s + 1\right)}{C_3 L_3 s^2 + C_3 R_3 s + C_3 R_L s + 1}$$

Parameters:

Q: $\frac{L_3\sqrt{\frac{1}{C_3 L_3}}}{R_3+R_L}$
wo: $\sqrt{\frac{1}{C_3 L_3}}$
bandwidth: $\frac{R_3+R_L}{L_3}$
K-LP: R_L
K-HP: R_L
K-BP: $\frac{R_3 R_L}{R_3+R_L}$
Qz: $\frac{L_3\sqrt{\frac{1}{C_3 L_3}}}{R_3}$
Wz: $\sqrt{\frac{1}{C_3 L_3}}$

6.32 GE-32 $Z(s) = \left(\frac{R_1}{C_1 R_1 s+1},\ L_2 s + R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ R_L\right)$

$$H(s) = \frac{R_L\left(C_3 L_3 R_3 s^2 + L_3 s + R_3\right)}{C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + L_3 s + R_3 + R_L}$$

Parameters:

Q: $C_3\sqrt{\frac{1}{C_3 L_3}}\left(R_3 + R_L\right)$
wo: $\sqrt{\frac{1}{C_3 L_3}}$
bandwidth: $\frac{1}{C_3(R_3+R_L)}$
K-LP: $\frac{R_3 R_L}{R_3+R_L}$
K-HP: $\frac{R_3 R_L}{R_3+R_L}$
K-BP: R_L
Qz: $C_3 R_3\sqrt{\frac{1}{C_3 L_3}}$
Wz: $\sqrt{\frac{1}{C_3 L_3}}$

7 AP

8 INVALID-NUMER

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

$$H(s) = \frac{R_3\left(C_L R_L s + 1\right)}{C_3 C_L R_3 R_L s^2 + C_3 R_3 s + C_L R_3 s + C_L R_L s + 1}$$

Parameters:

Q: $\frac{C_3 C_L R_3 R_L\sqrt{\frac{1}{C_3 C_L R_3 R_L}}}{C_3 R_3 + C_L R_3 + C_L R_L}$
wo: $\sqrt{\frac{1}{C_3 C_L R_3 R_L}}$
bandwidth: $\frac{C_3 R_3 + C_L R_3 + C_L R_L}{C_3 C_L R_3 R_L}$

K-LP: R_3
K-HP: 0
K-BP: $\frac{C_L R_3 R_L}{C_3 R_3 + C_L R_3 + C_L R_L}$
Qz: 0
Wz: None

8.2 INVALID-NUMER-2 $Z(s) = \left(\frac{R_1}{C_1 R_1 s+1},\ \infty,\ \infty,\ \infty,\ \infty,\ \frac{R_L}{C_L R_L s+1}\right)$

$$H(s) = \frac{R_L\left(C_3 R_3 s + 1\right)}{C_3 C_L R_3 R_L s^2 + C_3 R_3 s + C_3 R_L s + C_L R_L s + 1}$$

Parameters:

Q: $\frac{C_3 C_L R_3 R_L \sqrt{\frac{1}{C_3 C_L R_3 R_L}}}{C_3 R_3 + C_3 R_L + C_L R_L}$
wo: $\sqrt{\frac{1}{C_3 C_L R_3 R_L}}$
bandwidth: $\frac{C_3 R_3 + C_3 R_L + C_L R_L}{C_3 C_L R_3 R_L}$
K-LP: R_L
K-HP: 0
K-BP: $\frac{C_3 R_3 R_L}{C_3 R_3 + C_3 R_L + C_L R_L}$
Qz: 0
Wz: None

8.3 INVALID-NUMER-3 $Z(s) = \left(\infty,\ \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{R_3\left(C_L R_L s + 1\right)}{C_3 C_L R_3 R_L s^2 + C_3 R_3 s + C_L R_3 s + C_L R_L s + 1}$$

Parameters:

Q: $\frac{C_3 C_L R_3 R_L \sqrt{\frac{1}{C_3 C_L R_3 R_L}}}{C_3 R_3 + C_L R_3 + C_L R_L}$
wo: $\sqrt{\frac{1}{C_3 C_L R_3 R_L}}$
bandwidth: $\frac{C_3 R_3 + C_L R_3 + C_L R_L}{C_3 C_L R_3 R_L}$
K-LP: R_3

K-HP: 0
K-BP: $\frac{C_L R_3 R_L}{C_3 R_3 + C_L R_3 + C_L R_L}$
Qz: 0
Wz: None

8.4 INVALID-NUMER-4 $Z(s) = \left(\infty,\ \frac{R_2}{C_2 R_2 s+1},\ \infty,\ \infty,\ \infty,\ \frac{R_L}{C_L R_L s+1}\right)$

$$H(s) = \frac{R_L\left(C_3 R_3 s + 1\right)}{C_3 C_L R_3 R_L s^2 + C_3 R_3 s + C_3 R_L s + C_L R_L s + 1}$$

Parameters:

Q: $\frac{C_3 C_L R_3 R_L \sqrt{\frac{1}{C_3 C_L R_3 R_L}}}{C_3 R_3 + C_3 R_L + C_L R_L}$
wo: $\sqrt{\frac{1}{C_3 C_L R_3 R_L}}$
bandwidth: $\frac{C_3 R_3 + C_3 R_L + C_L R_L}{C_3 C_L R_3 R_L}$
K-LP: R_L
K-HP: 0
K-BP: $\frac{C_3 R_3 R_L}{C_3 R_3 + C_3 R_L + C_L R_L}$
Qz: 0
Wz: None

8.5 INVALID-NUMER-5 $Z(s) = \left(\infty,\ \infty,\ R_3 + \frac{1}{C_3 s},\ \infty,\ \infty,\ R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{R_3\left(C_L R_L s + 1\right)}{C_3 C_L R_3 R_L s^2 + C_3 R_3 s + C_L R_3 s + C_L R_L s + 1}$$

Parameters:

Q: $\frac{C_3 C_L R_3 R_L \sqrt{\frac{1}{C_3 C_L R_3 R_L}}}{C_3 R_3 + C_L R_3 + C_L R_L}$
wo: $\sqrt{\frac{1}{C_3 C_L R_3 R_L}}$
bandwidth: $\frac{C_3 R_3 + C_L R_3 + C_L R_L}{C_3 C_L R_3 R_L}$
K-LP: R_3
K-HP: 0

K-BP: $\frac{C_L R_3 R_L}{C_3 R_3 + C_L R_3 + C_L R_L}$
Qz: 0
Wz: None

8.6 INVALID-NUMER-6 $Z(s) = \left(\infty,\ \infty,\ L_3 s + \frac{1}{C_3 s},\ \infty,\ \infty,\ \frac{R_L}{C_L R_L s + 1}\right)$

$$H(s) = \frac{R_L \left(C_3 R_3 s + 1\right)}{C_3 C_L R_3 R_L s^2 + C_3 R_3 s + C_3 R_L s + C_L R_L s + 1}$$

Parameters:

Q: $\frac{C_3 C_L R_3 R_L \sqrt{\frac{1}{C_3 C_L R_3 R_L}}}{C_3 R_3 + C_3 R_L + C_L R_L}$
wo: $\sqrt{\frac{1}{C_3 C_L R_3 R_L}}$
bandwidth: $\frac{C_3 R_3 + C_3 R_L + C_L R_L}{C_3 C_L R_3 R_L}$
K-LP: R_L
K-HP: 0
K-BP: $\frac{C_3 R_3 R_L}{C_3 R_3 + C_3 R_L + C_L R_L}$
Qz: 0
Wz: None

8.7 INVALID-NUMER-7 $Z(s) = \left(\infty,\ \infty,\ \infty,\ R_4 + \frac{1}{C_4 s},\ \infty,\ R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{R_3 \left(C_L R_L s + 1\right)}{C_3 C_L R_3 R_L s^2 + C_3 R_3 s + C_L R_3 s + C_L R_L s + 1}$$

Parameters:

Q: $\frac{C_3 C_L R_3 R_L \sqrt{\frac{1}{C_3 C_L R_3 R_L}}}{C_3 R_3 + C_L R_3 + C_L R_L}$
wo: $\sqrt{\frac{1}{C_3 C_L R_3 R_L}}$
bandwidth: $\frac{C_3 R_3 + C_L R_3 + C_L R_L}{C_3 C_L R_3 R_L}$
K-LP: R_3
K-HP: 0
K-BP: $\frac{C_L R_3 R_L}{C_3 R_3 + C_L R_3 + C_L R_L}$

Qz: 0
Wz: None

8.8 INVALID-NUMER-8 $Z(s) = \left(\infty,\ \infty,\ \infty,\ L_4 s + \frac{1}{C_4 s},\ \infty,\ \frac{R_L}{C_L R_L s+1}\right)$

$$H(s) = \frac{R_L\left(C_3 R_3 s + 1\right)}{C_3 C_L R_3 R_L s^2 + C_3 R_3 s + C_3 R_L s + C_L R_L s + 1}$$

Parameters:

Q: $\frac{C_3 C_L R_3 R_L \sqrt{\frac{1}{C_3 C_L R_3 R_L}}}{C_3 R_3 + C_3 R_L + C_L R_L}$
wo: $\sqrt{\frac{1}{C_3 C_L R_3 R_L}}$
bandwidth: $\frac{C_3 R_3 + C_3 R_L + C_L R_L}{C_3 C_L R_3 R_L}$
K-LP: R_L
K-HP: 0
K-BP: $\frac{C_3 R_3 R_L}{C_3 R_3 + C_3 R_L + C_L R_L}$
Qz: 0
Wz: None

8.9 INVALID-NUMER-9 $Z(s) = \left(\infty,\ \infty,\ \infty,\ \infty,\ R_4 + \frac{1}{C_4 s},\ R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{R_3\left(C_L R_L s + 1\right)}{C_3 C_L R_3 R_L s^2 + C_3 R_3 s + C_L R_3 s + C_L R_L s + 1}$$

Parameters:

Q: $\frac{C_3 C_L R_3 R_L \sqrt{\frac{1}{C_3 C_L R_3 R_L}}}{C_3 R_3 + C_L R_3 + C_L R_L}$
wo: $\sqrt{\frac{1}{C_3 C_L R_3 R_L}}$
bandwidth: $\frac{C_3 R_3 + C_L R_3 + C_L R_L}{C_3 C_L R_3 R_L}$
K-LP: R_3
K-HP: 0
K-BP: $\frac{C_L R_3 R_L}{C_3 R_3 + C_L R_3 + C_L R_L}$
Qz: 0

Wz: None

8.10 INVALID-NUMER-10 $Z(s) = \left(\infty,\ \infty,\ \infty,\ \infty,\ L_4 s + \frac{1}{C_4 s},\ \frac{R_L}{C_L R_L s + 1}\right)$

$$H(s) = \frac{R_L \left(C_3 R_3 s + 1\right)}{C_3 C_L R_3 R_L s^2 + C_3 R_3 s + C_3 R_L s + C_L R_L s + 1}$$

Parameters:

Q: $\frac{C_3 C_L R_3 R_L \sqrt{\frac{1}{C_3 C_L R_3 R_L}}}{C_3 R_3 + C_3 R_L + C_L R_L}$
wo: $\sqrt{\frac{1}{C_3 C_L R_3 R_L}}$
bandwidth: $\frac{C_3 R_3 + C_3 R_L + C_L R_L}{C_3 C_L R_3 R_L}$
K-LP: R_L
K-HP: 0
K-BP: $\frac{C_3 R_3 R_L}{C_3 R_3 + C_3 R_L + C_L R_L}$
Qz: 0
Wz: None

8.11 INVALID-NUMER-11 $Z(s) = \left(R_1,\ R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{R_3 \left(C_L R_L s + 1\right)}{C_3 C_L R_3 R_L s^2 + C_3 R_3 s + C_L R_3 s + C_L R_L s + 1}$$

Parameters:

Q: $\frac{C_3 C_L R_3 R_L \sqrt{\frac{1}{C_3 C_L R_3 R_L}}}{C_3 R_3 + C_L R_3 + C_L R_L}$
wo: $\sqrt{\frac{1}{C_3 C_L R_3 R_L}}$
bandwidth: $\frac{C_3 R_3 + C_L R_3 + C_L R_L}{C_3 C_L R_3 R_L}$
K-LP: R_3
K-HP: 0
K-BP: $\frac{C_L R_3 R_L}{C_3 R_3 + C_L R_3 + C_L R_L}$
Qz: 0
Wz: None

8.12 INVALID-NUMER-12 $Z(s) = \left(R_1,\ L_2 s + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{R_L}{C_L R_L s+1}\right)$

$$H(s) = \frac{R_L\left(C_3 R_3 s + 1\right)}{C_3 C_L R_3 R_L s^2 + C_3 R_3 s + C_3 R_L s + C_L R_L s + 1}$$

Parameters:

Q: $\frac{C_3 C_L R_3 R_L \sqrt{\frac{1}{C_3 C_L R_3 R_L}}}{C_3 R_3 + C_3 R_L + C_L R_L}$
wo: $\sqrt{\frac{1}{C_3 C_L R_3 R_L}}$
bandwidth: $\frac{C_3 R_3 + C_3 R_L + C_L R_L}{C_3 C_L R_3 R_L}$
K-LP: R_L
K-HP: 0
K-BP: $\frac{C_3 R_3 R_L}{C_3 R_3 + C_3 R_L + C_L R_L}$
Qz: 0
Wz: None

8.13 INVALID-NUMER-13 $Z(s) = \left(L_1 s,\ L_2 s + R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{R_3\left(C_L R_L s + 1\right)}{C_3 C_L R_3 R_L s^2 + C_3 R_3 s + C_L R_3 s + C_L R_L s + 1}$$

Parameters:

Q: $\frac{C_3 C_L R_3 R_L \sqrt{\frac{1}{C_3 C_L R_3 R_L}}}{C_3 R_3 + C_L R_3 + C_L R_L}$
wo: $\sqrt{\frac{1}{C_3 C_L R_3 R_L}}$
bandwidth: $\frac{C_3 R_3 + C_L R_3 + C_L R_L}{C_3 C_L R_3 R_L}$
K-LP: R_3
K-HP: 0
K-BP: $\frac{C_L R_3 R_L}{C_3 R_3 + C_L R_3 + C_L R_L}$
Qz: 0
Wz: None

8.14 INVALID-NUMER-14 $Z(s) = \left(L_1 s,\ \frac{L_2 s}{C_2 L_2 s^2+1} + R_2,\ \infty,\ \infty,\ \infty,\ \frac{R_L}{C_L R_L s+1}\right)$

$$H(s) = \frac{R_L\left(C_3 R_3 s + 1\right)}{C_3 C_L R_3 R_L s^2 + C_3 R_3 s + C_3 R_L s + C_L R_L s + 1}$$

Parameters:

Q: $\frac{C_3 C_L R_3 R_L \sqrt{\frac{1}{C_3 C_L R_3 R_L}}}{C_3 R_3 + C_3 R_L + C_L R_L}$
wo: $\sqrt{\frac{1}{C_3 C_L R_3 R_L}}$
bandwidth: $\frac{C_3 R_3 + C_3 R_L + C_L R_L}{C_3 C_L R_3 R_L}$
K-LP: R_L
K-HP: 0
K-BP: $\frac{C_3 R_3 R_L}{C_3 R_3 + C_3 R_L + C_L R_L}$
Qz: 0
Wz: None

8.15 INVALID-NUMER-15 $Z(s) = \left(\frac{1}{C_1 s},\ \frac{R_2\left(L_2 s + \frac{1}{C_2 s}\right)}{L_2 s + R_2 + \frac{1}{C_2 s}},\ \infty,\ \infty,\ \infty,\ R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{R_3\left(C_L R_L s + 1\right)}{C_3 C_L R_3 R_L s^2 + C_3 R_3 s + C_L R_3 s + C_L R_L s + 1}$$

Parameters:

Q: $\frac{C_3 C_L R_3 R_L \sqrt{\frac{1}{C_3 C_L R_3 R_L}}}{C_3 R_3 + C_L R_3 + C_L R_L}$
wo: $\sqrt{\frac{1}{C_3 C_L R_3 R_L}}$
bandwidth: $\frac{C_3 R_3 + C_L R_3 + C_L R_L}{C_3 C_L R_3 R_L}$
K-LP: R_3
K-HP: 0
K-BP: $\frac{C_L R_3 R_L}{C_3 R_3 + C_L R_3 + C_L R_L}$
Qz: 0
Wz: None

8.16 INVALID-NUMER-16 $Z(s) = \left(\frac{R_1}{C_1 R_1 s+1},\ R_2,\ \infty,\ \infty,\ \infty,\ \frac{R_L}{C_L R_L s+1}\right)$

$$H(s) = \frac{R_L\left(C_3 R_3 s + 1\right)}{C_3 C_L R_3 R_L s^2 + C_3 R_3 s + C_3 R_L s + C_L R_L s + 1}$$

Parameters:

Q: $\frac{C_3 C_L R_3 R_L \sqrt{\frac{1}{C_3 C_L R_3 R_L}}}{C_3 R_3 + C_3 R_L + C_L R_L}$
wo: $\sqrt{\frac{1}{C_3 C_L R_3 R_L}}$
bandwidth: $\frac{C_3 R_3 + C_3 R_L + C_L R_L}{C_3 C_L R_3 R_L}$
K-LP: R_L
K-HP: 0
K-BP: $\frac{C_3 R_3 R_L}{C_3 R_3 + C_3 R_L + C_L R_L}$
Qz: 0
Wz: None

9 INVALID-WZ

10 INVALID-ORDER

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

$$H(s) = \frac{R_3 R_L}{R_3 + R_L}$$

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

$$H(s) = \frac{R_3}{C_L R_3 s + 1}$$

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

$$H(s) = \frac{R_3 R_L}{C_L R_3 R_L s + R_3 + R_L}$$

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

$$H(s) = \frac{R_3 \left(C_L R_L s + 1\right)}{C_L R_3 s + C_L R_L s + 1}$$

10.5 INVALID-ORDER-5 $Z(s) = (L_1 s,\ \infty,\ \infty,\ \infty,\ \infty,\ R_L)$

$$H(s) = \frac{R_L}{C_3 R_L s + 1}$$

10.6 INVALID-ORDER-6 $Z(s) = \left(L_1 s,\ \infty,\ \infty,\ \infty,\ \infty,\ \frac{1}{C_L s}\right)$

$$H(s) = \frac{1}{s \left(C_3 + C_L\right)}$$

10.7 INVALID-ORDER-7 $Z(s) = \left(L_1 s,\ \infty,\ \infty,\ \infty,\ \infty,\ \frac{R_L}{C_L R_L s+1}\right)$

$$H(s) = \frac{R_L}{C_3 R_L s + C_L R_L s + 1}$$

10.8 INVALID-ORDER-8 $Z(s) = \left(L_1 s,\ \infty,\ \infty,\ \infty,\ \infty,\ R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{C_L R_L s + 1}{s \left(C_3 C_L R_L s + C_3 + C_L\right)}$$

10.9 INVALID-ORDER-9 $Z(s) = \left(L_1 s,\ \infty,\ \infty,\ \infty,\ \infty,\ L_L s + \frac{1}{C_L s}\right)$

$$H(s) = \frac{C_L L_L s^2 + 1}{s\left(C_3 C_L L_L s^2 + C_3 + C_L\right)}$$

10.10 INVALID-ORDER-10 $Z(s) = \left(L_1 s,\ \infty,\ \infty,\ \infty,\ \infty,\ \frac{L_L s}{C_L L_L s^2 + 1}\right)$

$$H(s) = \frac{L_L s}{C_3 L_L s^2 + C_L L_L s^2 + 1}$$

10.11 INVALID-ORDER-11 $Z(s) = \left(L_1 s,\ \infty,\ \infty,\ \infty,\ \infty,\ L_L s + R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{C_L L_L s^2 + C_L R_L s + 1}{s\left(C_3 C_L L_L s^2 + C_3 C_L R_L s + C_3 + C_L\right)}$$

10.12 INVALID-ORDER-12 $Z(s) = \left(L_1 s,\ \infty,\ \infty,\ \infty,\ \infty,\ \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$

$$H(s) = \frac{C_L L_L R_L s^2 + L_L s + R_L}{C_3 C_L L_L R_L s^3 + C_3 L_L s^2 + C_3 R_L s + C_L L_L s^2 + 1}$$

10.13 INVALID-ORDER-13 $Z(s) = \left(L_1 s,\ \infty,\ \infty,\ \infty,\ \infty,\ \frac{R_L\left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$

$$H(s) = \frac{R_L\left(C_L L_L s^2 + 1\right)}{C_3 C_L L_L R_L s^3 + C_3 R_L s + C_L L_L s^2 + C_L R_L s + 1}$$

10.14 INVALID-ORDER-14 $Z(s) = \left(\frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \infty,\ R_L\right)$

$$H(s) = \frac{R_3 R_L}{C_3 R_3 R_L s + R_3 + R_L}$$

10.15 INVALID-ORDER-15 $Z(s) = \left(\frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \infty,\ \frac{1}{C_L s}\right)$

$$H(s) = \frac{R_3}{C_3 R_3 s + C_L R_3 s + 1}$$

10.16 INVALID-ORDER-16 $Z(s) = \left(\frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \infty,\ \frac{R_L}{C_L R_L s+1}\right)$

$$H(s) = \frac{R_3 R_L}{C_3 R_3 R_L s + C_L R_3 R_L s + R_3 + R_L}$$

10.17 INVALID-ORDER-17 $Z(s) = \left(\frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \infty,\ L_L s + \frac{1}{C_L s}\right)$

$$H(s) = \frac{R_3 \left(C_L L_L s^2 + 1\right)}{C_3 C_L L_L R_3 s^3 + C_3 R_3 s + C_L L_L s^2 + C_L R_3 s + 1}$$

10.18 INVALID-ORDER-18 $Z(s) = \left(\frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \infty,\ L_L s + R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{R_3 \left(C_L L_L s^2 + C_L R_L s + 1\right)}{C_3 C_L L_L R_3 s^3 + C_3 C_L R_3 R_L s^2 + C_3 R_3 s + C_L L_L s^2 + C_L R_3 s + C_L R_L s + 1}$$

10.19 INVALID-ORDER-19 $Z(s) = \left(\frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \infty,\ \frac{L_L s}{C_L L_L s^2+1} + R_L\right)$

$$H(s) = \frac{R_3 \left(C_L L_L R_L s^2 + L_L s + R_L\right)}{C_3 C_L L_L R_3 R_L s^3 + C_3 L_L R_3 s^2 + C_3 R_3 R_L s + C_L L_L R_3 s^2 + C_L L_L R_L s^2 + L_L s + R_3 + R_L}$$

10.20 INVALID-ORDER-20 $Z(s) = \left(\frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \infty,\ \frac{R_L\left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$

$$H(s) = \frac{R_3 R_L \left(C_L L_L s^2 + 1\right)}{C_3 C_L L_L R_3 R_L s^3 + C_3 R_3 R_L s + C_L L_L R_3 s^2 + C_L L_L R_L s^2 + C_L R_3 R_L s + R_3 + R_L}$$

10.21 INVALID-ORDER-21 $Z(s) = \left(\frac{R_1}{C_1 R_1 s+1},\ \infty,\ \infty,\ \infty,\ \infty,\ R_L\right)$

$$H(s) = \frac{R_L\left(C_3 R_3 s + 1\right)}{C_3 R_3 s + C_3 R_L s + 1}$$

10.22 INVALID-ORDER-22 $Z(s) = \left(\frac{R_1}{C_1 R_1 s+1},\ \infty,\ \infty,\ \infty,\ \infty,\ \frac{1}{C_L s}\right)$

$$H(s) = \frac{C_3 R_3 s + 1}{s\left(C_3 C_L R_3 s + C_3 + C_L\right)}$$

10.23 INVALID-ORDER-23 $Z(s) = \left(\frac{R_1}{C_1 R_1 s+1},\ \infty,\ \infty,\ \infty,\ \infty,\ R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{\left(C_3 R_3 s + 1\right)\left(C_L R_L s + 1\right)}{s\left(C_3 C_L R_3 s + C_3 C_L R_L s + C_3 + C_L\right)}$$

10.24 INVALID-ORDER-24 $Z(s) = \left(\frac{R_1}{C_1 R_1 s+1},\ \infty,\ \infty,\ \infty,\ \infty,\ L_L s + \frac{1}{C_L s}\right)$

$$H(s) = \frac{\left(C_3 R_3 s + 1\right)\left(C_L L_L s^2 + 1\right)}{s\left(C_3 C_L L_L s^2 + C_3 C_L R_3 s + C_3 + C_L\right)}$$

10.25 INVALID-ORDER-25 $Z(s) = \left(\frac{R_1}{C_1 R_1 s+1},\ \infty,\ \infty,\ \infty,\ \infty,\ \frac{L_L s}{C_L L_L s^2+1}\right)$

$$H(s) = \frac{L_L s\left(C_3 R_3 s + 1\right)}{C_3 C_L L_L R_3 s^3 + C_3 L_L s^2 + C_3 R_3 s + C_L L_L s^2 + 1}$$

10.26 INVALID-ORDER-26 $Z(s) = \left(\frac{R_1}{C_1 R_1 s+1},\ \infty,\ \infty,\ \infty,\ \infty,\ L_L s + R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{\left(C_3 R_3 s + 1\right)\left(C_L L_L s^2 + C_L R_L s + 1\right)}{s\left(C_3 C_L L_L s^2 + C_3 C_L R_3 s + C_3 C_L R_L s + C_3 + C_L\right)}$$

10.27 INVALID-ORDER-27 $Z(s) = \left(\frac{R_1}{C_1 R_1 s+1},\ \infty,\ \infty,\ \infty,\ \infty,\ \frac{1}{C_L s+\frac{1}{R_L}+\frac{1}{L_L s}} \right)$

$$H(s) = \frac{L_L R_L s \left(C_3 R_3 s + 1\right)}{C_3 C_L L_L R_3 R_L s^3 + C_3 L_L R_3 s^2 + C_3 L_L R_L s^2 + C_3 R_3 R_L s + C_L L_L R_L s^2 + L_L s + R_L}$$

10.28 INVALID-ORDER-28 $Z(s) = \left(\frac{R_1}{C_1 R_1 s+1},\ \infty,\ \infty,\ \infty,\ \infty,\ \frac{L_L s}{C_L L_L s^2+1} + R_L \right)$

$$H(s) = \frac{\left(C_3 R_3 s + 1\right) \left(C_L L_L R_L s^2 + L_L s + R_L\right)}{C_3 C_L L_L R_3 s^3 + C_3 C_L L_L R_L s^3 + C_3 L_L s^2 + C_3 R_3 s + C_3 R_L s + C_L L_L s^2 + 1}$$

10.29 INVALID-ORDER-29 $Z(s) = \left(\frac{R_1}{C_1 R_1 s+1},\ \infty,\ \infty,\ \infty,\ \infty,\ \frac{R_L \left(L_L s+\frac{1}{C_L s}\right)}{L_L s+R_L+\frac{1}{C_L s}} \right)$

$$H(s) = \frac{R_L \left(C_3 R_3 s + 1\right) \left(C_L L_L s^2 + 1\right)}{C_3 C_L L_L R_3 s^3 + C_3 C_L L_L R_L s^3 + C_3 C_L R_3 R_L s^2 + C_3 R_3 s + C_3 R_L s + C_L L_L s^2 + C_L R_L s + 1}$$

10.30 INVALID-ORDER-30 $Z(s) = \left(R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \infty,\ \frac{1}{C_L s} \right)$

$$H(s) = \frac{C_3 L_3 s^2 + 1}{s \left(C_3 C_L L_3 s^2 + C_3 + C_L\right)}$$

10.31 INVALID-ORDER-31 $Z(s) = \left(R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \infty,\ \frac{R_L}{C_L R_L s+1} \right)$

$$H(s) = \frac{R_L \left(C_3 L_3 s^2 + 1\right)}{C_3 C_L L_3 R_L s^3 + C_3 L_3 s^2 + C_3 R_L s + C_L R_L s + 1}$$

10.32 INVALID-ORDER-32 $Z(s) = \left(R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \infty,\ R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{\left(C_3 L_3 s^2 + 1\right)\left(C_L R_L s + 1\right)}{s\left(C_3 C_L L_3 s^2 + C_3 C_L R_L s + C_3 + C_L\right)}$$

10.33 INVALID-ORDER-33 $Z(s) = \left(R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \infty,\ L_L s + \frac{1}{C_L s}\right)$

$$H(s) = \frac{\left(C_3 L_3 s^2 + 1\right)\left(C_L L_L s^2 + 1\right)}{s\left(C_3 C_L L_3 s^2 + C_3 C_L L_L s^2 + C_3 + C_L\right)}$$

10.34 INVALID-ORDER-34 $Z(s) = \left(R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \infty,\ \frac{L_L s}{C_L L_L s^2 + 1}\right)$

$$H(s) = \frac{L_L s\left(C_3 L_3 s^2 + 1\right)}{C_3 C_L L_3 L_L s^4 + C_3 L_3 s^2 + C_3 L_L s^2 + C_L L_L s^2 + 1}$$

10.35 INVALID-ORDER-35 $Z(s) = \left(R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \infty,\ L_L s + R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{\left(C_3 L_3 s^2 + 1\right)\left(C_L L_L s^2 + C_L R_L s + 1\right)}{s\left(C_3 C_L L_3 s^2 + C_3 C_L L_L s^2 + C_3 C_L R_L s + C_3 + C_L\right)}$$

10.36 INVALID-ORDER-36 $Z(s) = \left(R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \infty,\ \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$

$$H(s) = \frac{L_L R_L s\left(C_3 L_3 s^2 + 1\right)}{C_3 C_L L_3 L_L R_L s^4 + C_3 L_3 L_L s^3 + C_3 L_3 R_L s^2 + C_3 L_L R_L s^2 + C_L L_L R_L s^2 + L_L s + R_L}$$

10.37 INVALID-ORDER-37 $Z(s) = \left(R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \infty,\ \frac{L_L s}{C_L L_L s^2+1} + R_L\right)$

$$H(s) = \frac{\left(C_3 L_3 s^2 + 1\right)\left(C_L L_L R_L s^2 + L_L s + R_L\right)}{C_3 C_L L_3 L_L s^4 + C_3 C_L L_L R_L s^3 + C_3 L_3 s^2 + C_3 L_L s^2 + C_3 R_L s + C_L L_L s^2 + 1}$$

10.38 INVALID-ORDER-38 $Z(s) = \left(R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \infty,\ \frac{R_L\left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$

$$H(s) = \frac{R_L\left(C_3 L_3 s^2 + 1\right)\left(C_L L_L s^2 + 1\right)}{C_3 C_L L_3 L_L s^4 + C_3 C_L L_3 R_L s^3 + C_3 C_L L_L R_L s^3 + C_3 L_3 s^2 + C_3 R_L s + C_L L_L s^2 + C_L R_L s + 1}$$

10.39 INVALID-ORDER-39 $Z(s) = \left(L_1 s + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \infty,\ \frac{1}{C_L s}\right)$

$$H(s) = \frac{L_3 s}{C_3 L_3 s^2 + C_L L_3 s^2 + 1}$$

10.40 INVALID-ORDER-40 $Z(s) = \left(L_1 s + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \infty,\ R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{L_3 s\left(C_L R_L s + 1\right)}{C_3 C_L L_3 R_L s^3 + C_3 L_3 s^2 + C_L L_3 s^2 + C_L R_L s + 1}$$

10.41 INVALID-ORDER-41 $Z(s) = \left(L_1 s + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \infty,\ L_L s + \frac{1}{C_L s}\right)$

$$H(s) = \frac{L_3 s\left(C_L L_L s^2 + 1\right)}{C_3 C_L L_3 L_L s^4 + C_3 L_3 s^2 + C_L L_3 s^2 + C_L L_L s^2 + 1}$$

10.42 INVALID-ORDER-42 $Z(s) = \left(L_1 s + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \infty,\ \frac{L_L s}{C_L L_L s^2+1}\right)$

$$H(s) = \frac{L_3 L_L s}{C_3 L_3 L_L s^2 + C_L L_3 L_L s^2 + L_3 + L_L}$$

10.43 INVALID-ORDER-43 $Z(s) = \left(L_1 s + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \infty,\ L_L s + R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{L_3 s \left(C_L L_L s^2 + C_L R_L s + 1\right)}{C_3 C_L L_3 L_L s^4 + C_3 C_L L_3 R_L s^3 + C_3 L_3 s^2 + C_L L_3 s^2 + C_L L_L s^2 + C_L R_L s + 1}$$

10.44 INVALID-ORDER-44 $Z(s) = \left(L_1 s + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \infty,\ \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$

$$H(s) = \frac{L_3 s \left(C_L L_L R_L s^2 + L_L s + R_L\right)}{C_3 C_L L_3 L_L R_L s^4 + C_3 L_3 L_L s^3 + C_3 L_3 R_L s^2 + C_L L_3 L_L s^3 + C_L L_L R_L s^2 + L_3 s + L_L s + R_L}$$

10.45 INVALID-ORDER-45 $Z(s) = \left(L_1 s + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \infty,\ \frac{R_L\left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$

$$H(s) = \frac{L_3 R_L s \left(C_L L_L s^2 + 1\right)}{C_3 C_L L_3 L_L R_L s^4 + C_3 L_3 R_L s^2 + C_L L_3 L_L s^3 + C_L L_3 R_L s^2 + C_L L_L R_L s^2 + L_3 s + R_L}$$

10.46 INVALID-ORDER-46 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1},\ \infty,\ \infty,\ \infty,\ \infty,\ \frac{1}{C_L s}\right)$

$$H(s) = \frac{C_3 L_3 s^2 + C_3 R_3 s + 1}{s\left(C_3 C_L L_3 s^2 + C_3 C_L R_3 s + C_3 + C_L\right)}$$

10.47 INVALID-ORDER-47 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1},\ \infty,\ \infty,\ \infty,\ \infty,\ \frac{R_L}{C_L R_L s + 1}\right)$

$$H(s) = \frac{R_L \left(C_3 L_3 s^2 + C_3 R_3 s + 1\right)}{C_3 C_L L_3 R_L s^3 + C_3 C_L R_3 R_L s^2 + C_3 L_3 s^2 + C_3 R_3 s + C_3 R_L s + C_L R_L s + 1}$$

10.48 INVALID-ORDER-48 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2+1},\ \infty,\ \infty,\ \infty,\ \infty,\ R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{(C_L R_L s + 1)\left(C_3 L_3 s^2 + C_3 R_3 s + 1\right)}{s\left(C_3 C_L L_3 s^2 + C_3 C_L R_3 s + C_3 C_L R_L s + C_3 + C_L\right)}$$

10.49 INVALID-ORDER-49 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2+1},\ \infty,\ \infty,\ \infty,\ \infty,\ L_L s + \frac{1}{C_L s}\right)$

$$H(s) = \frac{\left(C_L L_L s^2 + 1\right)\left(C_3 L_3 s^2 + C_3 R_3 s + 1\right)}{s\left(C_3 C_L L_3 s^2 + C_3 C_L L_L s^2 + C_3 C_L R_3 s + C_3 + C_L\right)}$$

10.50 INVALID-ORDER-50 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2+1},\ \infty,\ \infty,\ \infty,\ \infty,\ \frac{L_L s}{C_L L_L s^2+1}\right)$

$$H(s) = \frac{L_L s\left(C_3 L_3 s^2 + C_3 R_3 s + 1\right)}{C_3 C_L L_3 L_L s^4 + C_3 C_L L_L R_3 s^3 + C_3 L_3 s^2 + C_3 L_L s^2 + C_3 R_3 s + C_L L_L s^2 + 1}$$

10.51 INVALID-ORDER-51 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2+1},\ \infty,\ \infty,\ \infty,\ \infty,\ L_L s + R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{\left(C_3 L_3 s^2 + C_3 R_3 s + 1\right)\left(C_L L_L s^2 + C_L R_L s + 1\right)}{s\left(C_3 C_L L_3 s^2 + C_3 C_L L_L s^2 + C_3 C_L R_3 s + C_3 C_L R_L s + C_3 + C_L\right)}$$

10.52 INVALID-ORDER-52 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2+1},\ \infty,\ \infty,\ \infty,\ \infty,\ \frac{1}{C_L s+\frac{1}{R_L}+\frac{1}{L_L s}}\right)$

$$H(s) = \frac{L_L R_L s\left(C_3 L_3 s^2 + C_3 R_3 s + 1\right)}{C_3 C_L L_3 L_L R_L s^4 + C_3 C_L L_L R_3 R_L s^3 + C_3 L_3 L_L s^3 + C_3 L_3 R_L s^2 + C_3 L_L R_3 s^2 + C_3 L_L R_L s^2 + C_3 R_3 R_L s + C_L L_L R_L s^2 + L_L s + R_L}$$

10.53 INVALID-ORDER-53 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2+1},\ \infty,\ \infty,\ \infty,\ \infty,\ \frac{L_L s}{C_L L_L s^2+1} + R_L\right)$

$$H(s) = \frac{\left(C_3 L_3 s^2 + C_3 R_3 s + 1\right)\left(C_L L_L R_L s^2 + L_L s + R_L\right)}{C_3 C_L L_3 L_L s^4 + C_3 C_L L_L R_3 s^3 + C_3 C_L L_L R_L s^3 + C_3 L_3 s^2 + C_3 L_L s^2 + C_3 R_3 s + C_3 R_L s + C_L L_L s^2 + 1}$$

10.54 INVALID-ORDER-54 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2+1},\ \infty,\ \infty,\ \infty,\ \infty,\ \frac{R_L\left(L_L s+\frac{1}{C_L s}\right)}{L_L s+R_L+\frac{1}{C_L s}}\right)$

$$H(s) = \frac{R_L\left(C_L L_L s^2 + 1\right)\left(C_3 L_3 s^2 + C_3 R_3 s + 1\right)}{C_3 C_L L_3 L_L s^4 + C_3 C_L L_3 R_L s^3 + C_3 C_L L_L R_3 s^3 + C_3 C_L L_L R_L s^3 + C_3 C_L R_3 R_L s^2 + C_3 L_3 s^2 + C_3 R_3 s + C_3 R_L s + C_L L_L s^2 + C_L R_L s + 1}$$

10.55 INVALID-ORDER-55 $Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \infty,\ R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{L_3 R_3 s\left(C_L R_L s + 1\right)}{C_3 C_L L_3 R_3 R_L s^3 + C_3 L_3 R_3 s^2 + C_L L_3 R_3 s^2 + C_L L_3 R_L s^2 + C_L R_3 R_L s + L_3 s + R_3}$$

10.56 INVALID-ORDER-56 $Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \infty,\ L_L s + \frac{1}{C_L s}\right)$

$$H(s) = \frac{L_3 R_3 s\left(C_L L_L s^2 + 1\right)}{C_3 C_L L_3 L_L R_3 s^4 + C_3 L_3 R_3 s^2 + C_L L_3 L_L s^3 + C_L L_3 R_3 s^2 + C_L L_L R_3 s^2 + L_3 s + R_3}$$

10.57 INVALID-ORDER-57 $Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \infty,\ L_L s + R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{L_3 R_3 s\left(C_L L_L s^2 + C_L R_L s + 1\right)}{C_3 C_L L_3 L_L R_3 s^4 + C_3 C_L L_3 R_3 R_L s^3 + C_3 L_3 R_3 s^2 + C_L L_3 L_L s^3 + C_L L_3 R_3 s^2 + C_L L_3 R_L s^2 + C_L L_L R_3 s^2 + C_L R_3 R_L s + L_3 s + R_3}$$

10.58 INVALID-ORDER-58 $Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \infty,\ \frac{L_L s}{C_L L_L s^2+1} + R_L\right)$

$$H(s) = \frac{L_3 R_3 s \left(C_L L_L R_L s^2 + L_L s + R_L\right)}{C_3 C_L L_3 L_L R_3 R_L s^4 + C_3 L_3 L_L R_3 s^3 + C_3 L_3 R_3 R_L s^2 + C_L L_3 L_L R_3 s^3 + C_L L_3 L_L R_L s^3 + C_L L_L R_3 R_L s^2 + L_3 L_L s^2 + L_3 R_3 s + L_3 R_L s + L_L R_3 s + R_3 R_L}$$

10.59 INVALID-ORDER-59 $Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \infty,\ \frac{R_L\left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$

$$H(s) = \frac{L_3 R_3 R_L s \left(C_L L_L s^2 + 1\right)}{C_3 C_L L_3 L_L R_3 R_L s^4 + C_3 L_3 R_3 R_L s^2 + C_L L_3 L_L R_3 s^3 + C_L L_3 L_L R_L s^3 + C_L L_3 R_3 R_L s^2 + C_L L_L R_3 R_L s^2 + L_3 R_3 s + L_3 R_L s + R_3 R_L}$$

10.60 INVALID-ORDER-60 $Z(s) = \left(\frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}},\ \infty,\ \infty,\ \infty,\ \infty,\ \frac{1}{C_L s}\right)$

$$H(s) = \frac{C_3 L_3 R_3 s^2 + L_3 s + R_3}{C_3 C_L L_3 R_3 s^3 + C_3 L_3 s^2 + C_L L_3 s^2 + C_L R_3 s + 1}$$

10.61 INVALID-ORDER-61 $Z(s) = \left(\frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}},\ \infty,\ \infty,\ \infty,\ \infty,\ \frac{R_L}{C_L R_L s+1}\right)$

$$H(s) = \frac{R_L \left(C_3 L_3 R_3 s^2 + L_3 s + R_3\right)}{C_3 C_L L_3 R_3 R_L s^3 + C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + C_L L_3 R_L s^2 + C_L R_3 R_L s + L_3 s + R_3 + R_L}$$

10.62 INVALID-ORDER-62 $Z(s) = \left(\frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}},\ \infty,\ \infty,\ \infty,\ \infty,\ R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{(C_L R_L s + 1) \left(C_3 L_3 R_3 s^2 + L_3 s + R_3\right)}{C_3 C_L L_3 R_3 s^3 + C_3 C_L L_3 R_L s^3 + C_3 L_3 s^2 + C_L L_3 s^2 + C_L R_3 s + C_L R_L s + 1}$$

10.63 INVALID-ORDER-63 $Z(s) = \left(\frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}},\ \infty,\ \infty,\ \infty,\ \infty,\ L_L s + \frac{1}{C_L s} \right)$

$$H(s) = \frac{\left(C_L L_L s^2 + 1\right)\left(C_3 L_3 R_3 s^2 + L_3 s + R_3\right)}{C_3 C_L L_3 L_L s^4 + C_3 C_L L_3 R_3 s^3 + C_3 L_3 s^2 + C_L L_3 s^2 + C_L L_L s^2 + C_L R_3 s + 1}$$

10.64 INVALID-ORDER-64 $Z(s) = \left(\frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}},\ \infty,\ \infty,\ \infty,\ \infty,\ \frac{L_L s}{C_L L_L s^2 + 1} \right)$

$$H(s) = \frac{L_L s\left(C_3 L_3 R_3 s^2 + L_3 s + R_3\right)}{C_3 C_L L_3 L_L R_3 s^4 + C_3 L_3 L_L s^3 + C_3 L_3 R_3 s^2 + C_L L_3 L_L s^3 + C_L L_L R_3 s^2 + L_3 s + L_L s + R_3}$$

10.65 INVALID-ORDER-65 $Z(s) = \left(\frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}},\ \infty,\ \infty,\ \infty,\ \infty,\ L_L s + R_L + \frac{1}{C_L s} \right)$

$$H(s) = \frac{\left(C_L L_L s^2 + C_L R_L s + 1\right)\left(C_3 L_3 R_3 s^2 + L_3 s + R_3\right)}{C_3 C_L L_3 L_L s^4 + C_3 C_L L_3 R_3 s^3 + C_3 C_L L_3 R_L s^3 + C_3 L_3 s^2 + C_L L_3 s^2 + C_L L_L s^2 + C_L R_3 s + C_L R_L s + 1}$$

10.66 INVALID-ORDER-66 $Z(s) = \left(\frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}},\ \infty,\ \infty,\ \infty,\ \infty,\ \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$

$$H(s) = \frac{L_L R_L s\left(C_3 L_3 R_3 s^2 + L_3 s + R_3\right)}{C_3 C_L L_3 L_L R_3 R_L s^4 + C_3 L_3 L_L R_3 s^3 + C_3 L_3 L_L R_L s^3 + C_3 L_3 R_3 R_L s^2 + C_L L_3 L_L R_L s^3 + C_L L_L R_3 R_L s^2 + L_3 L_L s^2 + L_3 R_L s + L_L R_3 s + L_L R_L s + R_3 R_L}$$

10.67 INVALID-ORDER-67 $Z(s) = \left(\frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}},\ \infty,\ \infty,\ \infty,\ \infty,\ \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$

$$H(s) = \frac{\left(C_3 L_3 R_3 s^2 + L_3 s + R_3\right)\left(C_L L_L R_L s^2 + L_L s + R_L\right)}{C_3 C_L L_3 L_L R_3 s^4 + C_3 C_L L_3 L_L R_L s^4 + C_3 L_3 L_L s^3 + C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + C_L L_3 L_L s^3 + C_L L_L R_3 s^2 + C_L L_L R_L s^2 + L_3 s + L_L s + R_3 + R_L}$$

10.68 INVALID-ORDER-68 $Z(s) = \left(\frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}},\ \infty,\ \infty,\ \infty,\ \infty,\ \frac{R_L\left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$

$$H(s) = \frac{R_L \left(C_L L_L s^2 + 1\right) \left(C_3 L_3 R_3 s^2 + L_3 s + R_3\right)}{C_3 C_L L_3 L_L R_3 s^4 + C_3 C_L L_3 L_L R_L s^4 + C_3 C_L L_3 R_3 R_L s^3 + C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + C_L L_3 L_L s^3 + C_L L_3 R_L s^2 + C_L L_L R_3 s^2 + C_L L_L R_L s^2 + C_L R_3 R_L s + L_3 s + R_3 + R_L}$$

10.69 INVALID-ORDER-69 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1,\ \infty,\ \infty,\ \infty,\ \infty,\ \frac{1}{C_L s} \right)$

$$H(s) = \frac{R_3 \left(C_3 L_3 s^2 + 1\right)}{C_3 C_L L_3 R_3 s^3 + C_3 L_3 s^2 + C_3 R_3 s + C_L R_3 s + 1}$$

10.70 INVALID-ORDER-70 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1,\ \infty,\ \infty,\ \infty,\ \infty,\ \frac{R_L}{C_L R_L s + 1} \right)$

$$H(s) = \frac{R_3 R_L \left(C_3 L_3 s^2 + 1\right)}{C_3 C_L L_3 R_3 R_L s^3 + C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + C_3 R_3 R_L s + C_L R_3 R_L s + R_3 + R_L}$$

10.71 INVALID-ORDER-71 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1,\ \infty,\ \infty,\ \infty,\ \infty,\ R_L + \frac{1}{C_L s} \right)$

$$H(s) = \frac{R_3 \left(C_3 L_3 s^2 + 1\right) \left(C_L R_L s + 1\right)}{C_3 C_L L_3 R_3 s^3 + C_3 C_L L_3 R_L s^3 + C_3 C_L R_3 R_L s^2 + C_3 L_3 s^2 + C_3 R_3 s + C_L R_3 s + C_L R_L s + 1}$$

10.72 INVALID-ORDER-72 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1,\ \infty,\ \infty,\ \infty,\ \infty,\ L_L s + \frac{1}{C_L s} \right)$

$$H(s) = \frac{R_3 \left(C_3 L_3 s^2 + 1\right) \left(C_L L_L s^2 + 1\right)}{C_3 C_L L_3 L_L s^4 + C_3 C_L L_3 R_3 s^3 + C_3 C_L L_L R_3 s^3 + C_3 L_3 s^2 + C_3 R_3 s + C_L L_L s^2 + C_L R_3 s + 1}$$

10.73 INVALID-ORDER-73 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2+1} + R_1,\ \infty,\ \infty,\ \infty,\ \infty,\ \frac{L_L s}{C_L L_L s^2+1}\right)$

$$H(s) = \frac{L_L R_3 s \left(C_3 L_3 s^2 + 1\right)}{C_3 C_L L_3 L_L R_3 s^4 + C_3 L_3 L_L s^3 + C_3 L_3 R_3 s^2 + C_3 L_L R_3 s^2 + C_L L_L R_3 s^2 + L_L s + R_3}$$

10.74 INVALID-ORDER-74 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2+1} + R_1,\ \infty,\ \infty,\ \infty,\ \infty,\ L_L s + R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{R_3 \left(C_3 L_3 s^2 + 1\right) \left(C_L L_L s^2 + C_L R_L s + 1\right)}{C_3 C_L L_3 L_L s^4 + C_3 C_L L_3 R_3 s^3 + C_3 C_L L_3 R_L s^3 + C_3 C_L L_L R_3 s^3 + C_3 C_L R_3 R_L s^2 + C_3 L_3 s^2 + C_3 R_3 s + C_L L_L s^2 + C_L R_3 s + C_L R_L s + 1}$$

10.75 INVALID-ORDER-75 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2+1} + R_1,\ \infty,\ \infty,\ \infty,\ \infty,\ \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$

$$H(s) = \frac{L_L R_3 R_L s \left(C_3 L_3 s^2 + 1\right)}{C_3 C_L L_3 L_L R_3 R_L s^4 + C_3 L_3 L_L R_3 s^3 + C_3 L_3 L_L R_L s^3 + C_3 L_3 R_3 R_L s^2 + C_3 L_L R_3 R_L s^2 + C_L L_L R_3 R_L s^2 + L_L R_3 s + L_L R_L s + R_3 R_L}$$

10.76 INVALID-ORDER-76 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2+1} + R_1,\ \infty,\ \infty,\ \infty,\ \infty,\ \frac{L_L s}{C_L L_L s^2+1} + R_L\right)$

$$H(s) = \frac{R_3 \left(C_3 L_3 s^2 + 1\right) \left(C_L L_L R_L s^2 + L_L s + R_L\right)}{C_3 C_L L_3 L_L R_3 s^4 + C_3 C_L L_3 L_L R_L s^4 + C_3 C_L L_L R_3 R_L s^3 + C_3 L_3 L_L s^3 + C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + C_3 L_L R_3 s^2 + C_3 R_3 R_L s + C_L L_L R_3 s^2 + C_L L_L R_L s^2 + L_L s + R_3 + R_L}$$

10.77 INVALID-ORDER-77 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2+1} + R_1,\ \infty,\ \infty,\ \infty,\ \infty,\ \frac{R_L\left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$

$$H(s) = \frac{R_3 R_L \left(C_3 L_3 s^2 + 1\right) \left(C_L L_L s^2 + 1\right)}{C_3 C_L L_3 L_L R_3 s^4 + C_3 C_L L_3 L_L R_L s^4 + C_3 C_L L_3 R_3 R_L s^3 + C_3 C_L L_L R_3 R_L s^3 + C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + C_3 R_3 R_L s + C_L L_L R_3 s^2 + C_L L_L R_L s^2 + C_L R_3 R_L s + R_3 + R_L}$$

10.78 INVALID-ORDER-78 $Z(s) = \left(\frac{R_1\left(L_1 s + \frac{1}{C_1 s}\right)}{L_1 s + R_1 + \frac{1}{C_1 s}},\ \infty,\ \infty,\ \infty,\ \infty,\ R_L \right)$

$$H(s) = \frac{R_3 R_L}{R_3 + R_L}$$

10.79 INVALID-ORDER-79 $Z(s) = \left(\frac{R_1\left(L_1 s + \frac{1}{C_1 s}\right)}{L_1 s + R_1 + \frac{1}{C_1 s}},\ \infty,\ \infty,\ \infty,\ \infty,\ \frac{1}{C_L s} \right)$

$$H(s) = \frac{R_3}{C_L R_3 s + 1}$$

10.80 INVALID-ORDER-80 $Z(s) = \left(\frac{R_1\left(L_1 s + \frac{1}{C_1 s}\right)}{L_1 s + R_1 + \frac{1}{C_1 s}},\ \infty,\ \infty,\ \infty,\ \infty,\ \frac{R_L}{C_L R_L s + 1} \right)$

$$H(s) = \frac{R_3 R_L}{C_L R_3 R_L s + R_3 + R_L}$$

10.81 INVALID-ORDER-81 $Z(s) = \left(\frac{R_1\left(L_1 s + \frac{1}{C_1 s}\right)}{L_1 s + R_1 + \frac{1}{C_1 s}},\ \infty,\ \infty,\ \infty,\ \infty,\ R_L + \frac{1}{C_L s} \right)$

$$H(s) = \frac{R_3 \left(C_L R_L s + 1\right)}{C_L R_3 s + C_L R_L s + 1}$$

10.82 INVALID-ORDER-82 $Z(s) = (\infty,\ R_2,\ \infty,\ \infty,\ \infty,\ R_L)$

$$H(s) = \frac{R_L}{C_3 R_L s + 1}$$

10.83 INVALID-ORDER-83 $Z(s) = \left(\infty,\ R_2,\ \infty,\ \infty,\ \infty,\ \frac{1}{C_L s}\right)$

$$H(s) = \frac{1}{s\left(C_3 + C_L\right)}$$

10.84 INVALID-ORDER-84 $Z(s) = \left(\infty,\ R_2,\ \infty,\ \infty,\ \infty,\ \frac{R_L}{C_L R_L s+1}\right)$

$$H(s) = \frac{R_L}{C_3 R_L s + C_L R_L s + 1}$$

10.85 INVALID-ORDER-85 $Z(s) = \left(\infty,\ R_2,\ \infty,\ \infty,\ \infty,\ R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{C_L R_L s + 1}{s\left(C_3 C_L R_L s + C_3 + C_L\right)}$$

10.86 INVALID-ORDER-86 $Z(s) = \left(\infty,\ R_2,\ \infty,\ \infty,\ \infty,\ L_L s + \frac{1}{C_L s}\right)$

$$H(s) = \frac{C_L L_L s^2 + 1}{s\left(C_3 C_L L_L s^2 + C_3 + C_L\right)}$$

10.87 INVALID-ORDER-87 $Z(s) = \left(\infty,\ R_2,\ \infty,\ \infty,\ \infty,\ \frac{L_L s}{C_L L_L s^2+1}\right)$

$$H(s) = \frac{L_L s}{C_3 L_L s^2 + C_L L_L s^2 + 1}$$

10.88 INVALID-ORDER-88 $Z(s) = \left(\infty,\ R_2,\ \infty,\ \infty,\ \infty,\ L_L s + R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{C_L L_L s^2 + C_L R_L s + 1}{s\left(C_3 C_L L_L s^2 + C_3 C_L R_L s + C_3 + C_L\right)}$$

10.89 INVALID-ORDER-89 $Z(s) = \left(\infty,\ R_2,\ \infty,\ \infty,\ \infty,\ \frac{L_L s}{C_L L_L s^2+1} + R_L\right)$

$$H(s) = \frac{C_L L_L R_L s^2 + L_L s + R_L}{C_3 C_L L_L R_L s^3 + C_3 L_L s^2 + C_3 R_L s + C_L L_L s^2 + 1}$$

10.90 INVALID-ORDER-90 $Z(s) = \left(\infty,\ R_2,\ \infty,\ \infty,\ \infty,\ \frac{R_L\left(L_L s+\frac{1}{C_L s}\right)}{L_L s+R_L+\frac{1}{C_L s}}\right)$

$$H(s) = \frac{R_L\left(C_L L_L s^2 + 1\right)}{C_3 C_L L_L R_L s^3 + C_3 R_L s + C_L L_L s^2 + C_L R_L s + 1}$$

10.91 INVALID-ORDER-91 $Z(s) = \left(\infty,\ \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ R_L\right)$

$$H(s) = \frac{R_3 R_L}{C_3 R_3 R_L s + R_3 + R_L}$$

10.92 INVALID-ORDER-92 $Z(s) = \left(\infty,\ \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_L s}\right)$

$$H(s) = \frac{R_3}{C_3 R_3 s + C_L R_3 s + 1}$$

10.93 INVALID-ORDER-93 $Z(s) = \left(\infty,\ \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{R_L}{C_L R_L s+1}\right)$

$$H(s) = \frac{R_3 R_L}{C_3 R_3 R_L s + C_L R_3 R_L s + R_3 + R_L}$$

10.94 INVALID-ORDER-94 $Z(s) = \left(\infty,\ \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ L_L s + \frac{1}{C_L s}\right)$

$$H(s) = \frac{R_3\left(C_L L_L s^2 + 1\right)}{C_3 C_L L_L R_3 s^3 + C_3 R_3 s + C_L L_L s^2 + C_L R_3 s + 1}$$

10.95 INVALID-ORDER-95 $Z(s) = \left(\infty,\ \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ L_L s + R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{R_3\left(C_L L_L s^2 + C_L R_L s + 1\right)}{C_3 C_L L_L R_3 s^3 + C_3 C_L R_3 R_L s^2 + C_3 R_3 s + C_L L_L s^2 + C_L R_3 s + C_L R_L s + 1}$$

10.96 INVALID-ORDER-96 $Z(s) = \left(\infty,\ \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$

$$H(s) = \frac{R_3\left(C_L L_L R_L s^2 + L_L s + R_L\right)}{C_3 C_L L_L R_3 R_L s^3 + C_3 L_L R_3 s^2 + C_3 R_3 R_L s + C_L L_L R_3 s^2 + C_L L_L R_L s^2 + L_L s + R_3 + R_L}$$

10.97 INVALID-ORDER-97 $Z(s) = \left(\infty,\ \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{R_L\left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$

$$H(s) = \frac{R_3 R_L\left(C_L L_L s^2 + 1\right)}{C_3 C_L L_L R_3 R_L s^3 + C_3 R_3 R_L s + C_L L_L R_3 s^2 + C_L L_L R_L s^2 + C_L R_3 R_L s + R_3 + R_L}$$

10.98 INVALID-ORDER-98 $Z(s) = \left(\infty,\ \frac{R_2}{C_2 R_2 s + 1},\ \infty,\ \infty,\ \infty,\ R_L\right)$

$$H(s) = \frac{R_L\left(C_3 R_3 s + 1\right)}{C_3 R_3 s + C_3 R_L s + 1}$$

10.99 INVALID-ORDER-99 $Z(s) = \left(\infty,\ \frac{R_2}{C_2 R_2 s + 1},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_L s}\right)$

$$H(s) = \frac{C_3 R_3 s + 1}{s\left(C_3 C_L R_3 s + C_3 + C_L\right)}$$

10.100 INVALID-ORDER-100 $Z(s) = \left(\infty,\ \frac{R_2}{C_2 R_2 s + 1},\ \infty,\ \infty,\ \infty,\ R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{\left(C_3 R_3 s + 1\right)\left(C_L R_L s + 1\right)}{s\left(C_3 C_L R_3 s + C_3 C_L R_L s + C_3 + C_L\right)}$$

10.101 INVALID-ORDER-101 $Z(s) = \left(\infty,\ \frac{R_2}{C_2R_2s+1},\ \infty,\ \infty,\ \infty,\ L_Ls + \frac{1}{C_Ls}\right)$

$$H(s) = \frac{(C_3R_3s+1)\left(C_LL_Ls^2+1\right)}{s\left(C_3C_LL_Ls^2 + C_3C_LR_3s + C_3 + C_L\right)}$$

10.102 INVALID-ORDER-102 $Z(s) = \left(\infty,\ \frac{R_2}{C_2R_2s+1},\ \infty,\ \infty,\ \infty,\ \frac{L_Ls}{C_LL_Ls^2+1}\right)$

$$H(s) = \frac{L_Ls\left(C_3R_3s+1\right)}{C_3C_LL_LR_3s^3 + C_3L_Ls^2 + C_3R_3s + C_LL_Ls^2 + 1}$$

10.103 INVALID-ORDER-103 $Z(s) = \left(\infty,\ \frac{R_2}{C_2R_2s+1},\ \infty,\ \infty,\ \infty,\ L_Ls + R_L + \frac{1}{C_Ls}\right)$

$$H(s) = \frac{(C_3R_3s+1)\left(C_LL_Ls^2 + C_LR_Ls + 1\right)}{s\left(C_3C_LL_Ls^2 + C_3C_LR_3s + C_3C_LR_Ls + C_3 + C_L\right)}$$

10.104 INVALID-ORDER-104 $Z(s) = \left(\infty,\ \frac{R_2}{C_2R_2s+1},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_Ls+\frac{1}{R_L}+\frac{1}{L_Ls}}\right)$

$$H(s) = \frac{L_LR_Ls\left(C_3R_3s+1\right)}{C_3C_LL_LR_3R_Ls^3 + C_3L_LR_3s^2 + C_3L_LR_Ls^2 + C_3R_3R_Ls + C_LL_LR_Ls^2 + L_Ls + R_L}$$

10.105 INVALID-ORDER-105 $Z(s) = \left(\infty,\ \frac{R_2}{C_2R_2s+1},\ \infty,\ \infty,\ \infty,\ \frac{L_Ls}{C_LL_Ls^2+1} + R_L\right)$

$$H(s) = \frac{(C_3R_3s+1)\left(C_LL_LR_Ls^2 + L_Ls + R_L\right)}{C_3C_LL_LR_3s^3 + C_3C_LL_LR_Ls^3 + C_3L_Ls^2 + C_3R_3s + C_3R_Ls + C_LL_Ls^2 + 1}$$

10.106 INVALID-ORDER-106 $Z(s) = \left(\infty,\ \frac{R_2}{C_2 R_2 s+1},\ \infty,\ \infty,\ \infty,\ \frac{R_L\left(L_L s+\frac{1}{C_L s}\right)}{L_L s+R_L+\frac{1}{C_L s}}\right)$

$$H(s) = \frac{R_L\left(C_3 R_3 s+1\right)\left(C_L L_L s^2+1\right)}{C_3 C_L L_L R_3 s^3 + C_3 C_L L_L R_L s^3 + C_3 C_L R_3 R_L s^2 + C_3 R_3 s + C_3 R_L s + C_L L_L s^2 + C_L R_L s + 1}$$

10.107 INVALID-ORDER-107 $Z(s) = \left(\infty,\ R_2+\frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_L s}\right)$

$$H(s) = \frac{C_3 L_3 s^2+1}{s\left(C_3 C_L L_3 s^2 + C_3 + C_L\right)}$$

10.108 INVALID-ORDER-108 $Z(s) = \left(\infty,\ R_2+\frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{R_L}{C_L R_L s+1}\right)$

$$H(s) = \frac{R_L\left(C_3 L_3 s^2+1\right)}{C_3 C_L L_3 R_L s^3 + C_3 L_3 s^2 + C_3 R_L s + C_L R_L s + 1}$$

10.109 INVALID-ORDER-109 $Z(s) = \left(\infty,\ R_2+\frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ R_L+\frac{1}{C_L s}\right)$

$$H(s) = \frac{\left(C_3 L_3 s^2+1\right)\left(C_L R_L s+1\right)}{s\left(C_3 C_L L_3 s^2 + C_3 C_L R_L s + C_3 + C_L\right)}$$

10.110 INVALID-ORDER-110 $Z(s) = \left(\infty,\ R_2+\frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ L_L s+\frac{1}{C_L s}\right)$

$$H(s) = \frac{\left(C_3 L_3 s^2+1\right)\left(C_L L_L s^2+1\right)}{s\left(C_3 C_L L_3 s^2 + C_3 C_L L_L s^2 + C_3 + C_L\right)}$$

10.111 INVALID-ORDER-111 $Z(s) = \left(\infty,\ R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{L_L s}{C_L L_L s^2+1}\right)$

$$H(s) = \frac{L_L s \left(C_3 L_3 s^2 + 1\right)}{C_3 C_L L_3 L_L s^4 + C_3 L_3 s^2 + C_3 L_L s^2 + C_L L_L s^2 + 1}$$

10.112 INVALID-ORDER-112 $Z(s) = \left(\infty,\ R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ L_L s + R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{\left(C_3 L_3 s^2 + 1\right)\left(C_L L_L s^2 + C_L R_L s + 1\right)}{s\left(C_3 C_L L_3 s^2 + C_3 C_L L_L s^2 + C_3 C_L R_L s + C_3 + C_L\right)}$$

10.113 INVALID-ORDER-113 $Z(s) = \left(\infty,\ R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$

$$H(s) = \frac{L_L R_L s \left(C_3 L_3 s^2 + 1\right)}{C_3 C_L L_3 L_L R_L s^4 + C_3 L_3 L_L s^3 + C_3 L_3 R_L s^2 + C_3 L_L R_L s^2 + C_L L_L R_L s^2 + L_L s + R_L}$$

10.114 INVALID-ORDER-114 $Z(s) = \left(\infty,\ R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{L_L s}{C_L L_L s^2+1} + R_L\right)$

$$H(s) = \frac{\left(C_3 L_3 s^2 + 1\right)\left(C_L L_L R_L s^2 + L_L s + R_L\right)}{C_3 C_L L_3 L_L s^4 + C_3 C_L L_L R_L s^3 + C_3 L_3 s^2 + C_3 L_L s^2 + C_3 R_L s + C_L L_L s^2 + 1}$$

10.115 INVALID-ORDER-115 $Z(s) = \left(\infty,\ R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{R_L\left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$

$$H(s) = \frac{R_L \left(C_3 L_3 s^2 + 1\right)\left(C_L L_L s^2 + 1\right)}{C_3 C_L L_3 L_L s^4 + C_3 C_L L_3 R_L s^3 + C_3 C_L L_L R_L s^3 + C_3 L_3 s^2 + C_3 R_L s + C_L L_L s^2 + C_L R_L s + 1}$$

10.116 INVALID-ORDER-116 $Z(s) = \left(\infty,\ L_2 s + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_L s}\right)$

$$H(s) = \frac{L_3 s}{C_3 L_3 s^2 + C_L L_3 s^2 + 1}$$

10.117 INVALID-ORDER-117 $Z(s) = \left(\infty,\ L_2 s + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{L_3 s\left(C_L R_L s + 1\right)}{C_3 C_L L_3 R_L s^3 + C_3 L_3 s^2 + C_L L_3 s^2 + C_L R_L s + 1}$$

10.118 INVALID-ORDER-118 $Z(s) = \left(\infty,\ L_2 s + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ L_L s + \frac{1}{C_L s}\right)$

$$H(s) = \frac{L_3 s\left(C_L L_L s^2 + 1\right)}{C_3 C_L L_3 L_L s^4 + C_3 L_3 s^2 + C_L L_3 s^2 + C_L L_L s^2 + 1}$$

10.119 INVALID-ORDER-119 $Z(s) = \left(\infty,\ L_2 s + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{L_L s}{C_L L_L s^2 + 1}\right)$

$$H(s) = \frac{L_3 L_L s}{C_3 L_3 L_L s^2 + C_L L_3 L_L s^2 + L_3 + L_L}$$

10.120 INVALID-ORDER-120 $Z(s) = \left(\infty,\ L_2 s + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ L_L s + R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{L_3 s\left(C_L L_L s^2 + C_L R_L s + 1\right)}{C_3 C_L L_3 L_L s^4 + C_3 C_L L_3 R_L s^3 + C_3 L_3 s^2 + C_L L_3 s^2 + C_L L_L s^2 + C_L R_L s + 1}$$

10.121 INVALID-ORDER-121 $Z(s) = \left(\infty,\ L_2 s + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$

$$H(s) = \frac{L_3 s\left(C_L L_L R_L s^2 + L_L s + R_L\right)}{C_3 C_L L_3 L_L R_L s^4 + C_3 L_3 L_L s^3 + C_3 L_3 R_L s^2 + C_L L_3 L_L s^3 + C_L L_L R_L s^2 + L_3 s + L_L s + R_L}$$

10.122 INVALID-ORDER-122 $Z(s) = \left(\infty,\ L_2 s + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{R_L\left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$

$$H(s) = \frac{L_3 R_L s\left(C_L L_L s^2 + 1\right)}{C_3 C_L L_3 L_L R_L s^4 + C_3 L_3 R_L s^2 + C_L L_3 L_L s^3 + C_L L_3 R_L s^2 + C_L L_L R_L s^2 + L_3 s + R_L}$$

10.123 INVALID-ORDER-123 $Z(s) = \left(\infty,\ L_2 s + R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_L s}\right)$

$$H(s) = \frac{C_3 L_3 s^2 + C_3 R_3 s + 1}{s\left(C_3 C_L L_3 s^2 + C_3 C_L R_3 s + C_3 + C_L\right)}$$

10.124 INVALID-ORDER-124 $Z(s) = \left(\infty,\ L_2 s + R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{R_L}{C_L R_L s + 1}\right)$

$$H(s) = \frac{R_L\left(C_3 L_3 s^2 + C_3 R_3 s + 1\right)}{C_3 C_L L_3 R_L s^3 + C_3 C_L R_3 R_L s^2 + C_3 L_3 s^2 + C_3 R_3 s + C_3 R_L s + C_L R_L s + 1}$$

10.125 INVALID-ORDER-125 $Z(s) = \left(\infty,\ L_2 s + R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{\left(C_L R_L s + 1\right)\left(C_3 L_3 s^2 + C_3 R_3 s + 1\right)}{s\left(C_3 C_L L_3 s^2 + C_3 C_L R_3 s + C_3 C_L R_L s + C_3 + C_L\right)}$$

10.126 INVALID-ORDER-126 $Z(s) = \left(\infty,\ L_2 s + R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ L_L s + \frac{1}{C_L s}\right)$

$$H(s) = \frac{\left(C_L L_L s^2 + 1\right)\left(C_3 L_3 s^2 + C_3 R_3 s + 1\right)}{s\left(C_3 C_L L_3 s^2 + C_3 C_L L_L s^2 + C_3 C_L R_3 s + C_3 + C_L\right)}$$

10.127 INVALID-ORDER-127 $Z(s) = \left(\infty,\ L_2 s + R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{L_L s}{C_L L_L s^2+1}\right)$

$$H(s) = \frac{L_L s \left(C_3 L_3 s^2 + C_3 R_3 s + 1\right)}{C_3 C_L L_3 L_L s^4 + C_3 C_L L_L R_3 s^3 + C_3 L_3 s^2 + C_3 L_L s^2 + C_3 R_3 s + C_L L_L s^2 + 1}$$

10.128 INVALID-ORDER-128 $Z(s) = \left(\infty,\ L_2 s + R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ L_L s + R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{\left(C_3 L_3 s^2 + C_3 R_3 s + 1\right)\left(C_L L_L s^2 + C_L R_L s + 1\right)}{s\left(C_3 C_L L_3 s^2 + C_3 C_L L_L s^2 + C_3 C_L R_3 s + C_3 C_L R_L s + C_3 + C_L\right)}$$

10.129 INVALID-ORDER-129 $Z(s) = \left(\infty,\ L_2 s + R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$

$$H(s) = \frac{L_L R_L s \left(C_3 L_3 s^2 + C_3 R_3 s + 1\right)}{C_3 C_L L_3 L_L R_L s^4 + C_3 C_L L_L R_3 R_L s^3 + C_3 L_3 L_L s^3 + C_3 L_3 R_L s^2 + C_3 L_L R_3 s^2 + C_3 L_L R_L s^2 + C_3 R_3 R_L s + C_L L_L R_L s^2 + L_L s + R_L}$$

10.130 INVALID-ORDER-130 $Z(s) = \left(\infty,\ L_2 s + R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{L_L s}{C_L L_L s^2+1} + R_L\right)$

$$H(s) = \frac{\left(C_3 L_3 s^2 + C_3 R_3 s + 1\right)\left(C_L L_L R_L s^2 + L_L s + R_L\right)}{C_3 C_L L_3 L_L s^4 + C_3 C_L L_L R_3 s^3 + C_3 C_L L_L R_L s^3 + C_3 L_3 s^2 + C_3 L_L s^2 + C_3 R_3 s + C_3 R_L s + C_L L_L s^2 + 1}$$

10.131 INVALID-ORDER-131 $Z(s) = \left(\infty,\ L_2 s + R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{R_L\left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$

$$H(s) = \frac{R_L \left(C_L L_L s^2 + 1\right)\left(C_3 L_3 s^2 + C_3 R_3 s + 1\right)}{C_3 C_L L_3 L_L s^4 + C_3 C_L L_3 R_L s^3 + C_3 C_L L_L R_3 s^3 + C_3 C_L L_L R_L s^3 + C_3 C_L R_3 R_L s^2 + C_3 L_3 s^2 + C_3 R_3 s + C_3 R_L s + C_L L_L s^2 + C_L R_L s + 1}$$

10.132 INVALID-ORDER-132 $Z(s) = \left(\infty,\ \frac{L_2 s}{C_2 L_2 s^2+1} + R_2,\ \infty,\ \infty,\ \infty,\ R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{L_3 R_3 s \left(C_L R_L s + 1\right)}{C_3 C_L L_3 R_3 R_L s^3 + C_3 L_3 R_3 s^2 + C_L L_3 R_3 s^2 + C_L L_3 R_L s^2 + C_L R_3 R_L s + L_3 s + R_3}$$

10.133 INVALID-ORDER-133 $Z(s) = \left(\infty,\ \frac{L_2 s}{C_2 L_2 s^2+1} + R_2,\ \infty,\ \infty,\ \infty,\ L_L s + \frac{1}{C_L s}\right)$

$$H(s) = \frac{L_3 R_3 s \left(C_L L_L s^2 + 1\right)}{C_3 C_L L_3 L_L R_3 s^4 + C_3 L_3 R_3 s^2 + C_L L_3 L_L s^3 + C_L L_3 R_3 s^2 + C_L L_L R_3 s^2 + L_3 s + R_3}$$

10.134 INVALID-ORDER-134 $Z(s) = \left(\infty,\ \frac{L_2 s}{C_2 L_2 s^2+1} + R_2,\ \infty,\ \infty,\ \infty,\ L_L s + R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{L_3 R_3 s \left(C_L L_L s^2 + C_L R_L s + 1\right)}{C_3 C_L L_3 L_L R_3 s^4 + C_3 C_L L_3 R_3 R_L s^3 + C_3 L_3 R_3 s^2 + C_L L_3 L_L s^3 + C_L L_3 R_3 s^2 + C_L L_3 R_L s^2 + C_L L_L R_3 s^2 + C_L R_3 R_L s + L_3 s + R_3}$$

10.135 INVALID-ORDER-135 $Z(s) = \left(\infty,\ \frac{L_2 s}{C_2 L_2 s^2+1} + R_2,\ \infty,\ \infty,\ \infty,\ \frac{L_L s}{C_L L_L s^2+1} + R_L\right)$

$$H(s) = \frac{L_3 R_3 s \left(C_L L_L R_L s^2 + L_L s + R_L\right)}{C_3 C_L L_3 L_L R_3 R_L s^4 + C_3 L_3 L_L R_3 s^3 + C_3 L_3 R_3 R_L s^2 + C_L L_3 L_L R_3 s^3 + C_L L_3 L_L R_L s^3 + C_L L_L R_3 R_L s^2 + L_3 L_L s^2 + L_3 R_3 s + L_3 R_L s + L_L R_3 s + R_3 R_L}$$

10.136 INVALID-ORDER-136 $Z(s) = \left(\infty,\ \frac{L_2 s}{C_2 L_2 s^2+1} + R_2,\ \infty,\ \infty,\ \infty,\ \frac{R_L\left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$

$$H(s) = \frac{L_3 R_3 R_L s \left(C_L L_L s^2 + 1\right)}{C_3 C_L L_3 L_L R_3 R_L s^4 + C_3 L_3 R_3 R_L s^2 + C_L L_3 L_L R_3 s^3 + C_L L_3 L_L R_L s^3 + C_L L_3 R_3 R_L s^2 + C_L L_L R_3 R_L s^2 + L_3 R_3 s + L_3 R_L s + R_3 R_L}$$

10.137 INVALID-ORDER-137 $Z(s) = \left(\infty,\ \frac{R_2\left(L_2 s+\frac{1}{C_2 s}\right)}{L_2 s+R_2+\frac{1}{C_2 s}},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_L s}\right)$

$$H(s) = \frac{C_3 L_3 R_3 s^2 + L_3 s + R_3}{C_3 C_L L_3 R_3 s^3 + C_3 L_3 s^2 + C_L L_3 s^2 + C_L R_3 s + 1}$$

10.138 INVALID-ORDER-138 $Z(s) = \left(\infty,\ \frac{R_2\left(L_2 s+\frac{1}{C_2 s}\right)}{L_2 s+R_2+\frac{1}{C_2 s}},\ \infty,\ \infty,\ \infty,\ \frac{R_L}{C_L R_L s+1}\right)$

$$H(s) = \frac{R_L\left(C_3 L_3 R_3 s^2 + L_3 s + R_3\right)}{C_3 C_L L_3 R_3 R_L s^3 + C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + C_L L_3 R_L s^2 + C_L R_3 R_L s + L_3 s + R_3 + R_L}$$

10.139 INVALID-ORDER-139 $Z(s) = \left(\infty,\ \frac{R_2\left(L_2 s+\frac{1}{C_2 s}\right)}{L_2 s+R_2+\frac{1}{C_2 s}},\ \infty,\ \infty,\ \infty,\ R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{(C_L R_L s + 1)\left(C_3 L_3 R_3 s^2 + L_3 s + R_3\right)}{C_3 C_L L_3 R_3 s^3 + C_3 C_L L_3 R_L s^3 + C_3 L_3 s^2 + C_L L_3 s^2 + C_L R_3 s + C_L R_L s + 1}$$

10.140 INVALID-ORDER-140 $Z(s) = \left(\infty,\ \frac{R_2\left(L_2 s+\frac{1}{C_2 s}\right)}{L_2 s+R_2+\frac{1}{C_2 s}},\ \infty,\ \infty,\ \infty,\ L_L s + \frac{1}{C_L s}\right)$

$$H(s) = \frac{\left(C_L L_L s^2 + 1\right)\left(C_3 L_3 R_3 s^2 + L_3 s + R_3\right)}{C_3 C_L L_3 L_L s^4 + C_3 C_L L_3 R_3 s^3 + C_3 L_3 s^2 + C_L L_3 s^2 + C_L L_L s^2 + C_L R_3 s + 1}$$

10.141 INVALID-ORDER-141 $Z(s) = \left(\infty,\ \frac{R_2\left(L_2 s+\frac{1}{C_2 s}\right)}{L_2 s+R_2+\frac{1}{C_2 s}},\ \infty,\ \infty,\ \infty,\ \frac{L_L s}{C_L L_L s^2+1}\right)$

$$H(s) = \frac{L_L s\left(C_3 L_3 R_3 s^2 + L_3 s + R_3\right)}{C_3 C_L L_3 L_L R_3 s^4 + C_3 L_3 L_L s^3 + C_3 L_3 R_3 s^2 + C_L L_3 L_L s^3 + C_L L_L R_3 s^2 + L_3 s + L_L s + R_3}$$

10.142 INVALID-ORDER-142 $Z(s) = \left(\infty,\ \frac{R_2\left(L_2 s+\frac{1}{C_2 s}\right)}{L_2 s+R_2+\frac{1}{C_2 s}},\ \infty,\ \infty,\ \infty,\ L_L s + R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{\left(C_L L_L s^2 + C_L R_L s + 1\right)\left(C_3 L_3 R_3 s^2 + L_3 s + R_3\right)}{C_3 C_L L_3 L_L s^4 + C_3 C_L L_3 R_3 s^3 + C_3 C_L L_3 R_L s^3 + C_3 L_3 s^2 + C_L L_3 s^2 + C_L L_L s^2 + C_L R_3 s + C_L R_L s + 1}$$

10.143 INVALID-ORDER-143 $Z(s) = \left(\infty,\ \frac{R_2\left(L_2 s+\frac{1}{C_2 s}\right)}{L_2 s+R_2+\frac{1}{C_2 s}},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_L s+\frac{1}{R_L}+\frac{1}{L_L s}}\right)$

$$H(s) = \frac{L_L R_L s\left(C_3 L_3 R_3 s^2 + L_3 s + R_3\right)}{C_3 C_L L_3 L_L R_3 R_L s^4 + C_3 L_3 L_L R_3 s^3 + C_3 L_3 L_L R_L s^3 + C_3 L_3 R_3 R_L s^2 + C_L L_3 L_L R_L s^3 + C_L L_L R_3 R_L s^2 + L_3 L_L s^2 + L_3 R_L s + L_L R_3 s + L_L R_L s + R_3 R_L}$$

10.144 INVALID-ORDER-144 $Z(s) = \left(\infty,\ \frac{R_2\left(L_2 s+\frac{1}{C_2 s}\right)}{L_2 s+R_2+\frac{1}{C_2 s}},\ \infty,\ \infty,\ \infty,\ \frac{L_L s}{C_L L_L s^2+1} + R_L\right)$

$$H(s) = \frac{\left(C_3 L_3 R_3 s^2 + L_3 s + R_3\right)\left(C_L L_L R_L s^2 + L_L s + R_L\right)}{C_3 C_L L_3 L_L R_3 s^4 + C_3 C_L L_3 L_L R_L s^4 + C_3 L_3 L_L s^3 + C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + C_L L_3 L_L s^3 + C_L L_L R_3 s^2 + C_L L_L R_L s^2 + L_3 s + L_L s + R_3 + R_L}$$

10.145 INVALID-ORDER-145 $Z(s) = \left(\infty,\ \frac{R_2\left(L_2 s+\frac{1}{C_2 s}\right)}{L_2 s+R_2+\frac{1}{C_2 s}},\ \infty,\ \infty,\ \infty,\ \frac{R_L\left(L_L s+\frac{1}{C_L s}\right)}{L_L s+R_L+\frac{1}{C_L s}}\right)$

$$H(s) = \frac{R_L\left(C_L L_L s^2 + 1\right)\left(C_3 L_3 R_3 s^2 + L_3 s + R_3\right)}{C_3 C_L L_3 L_L R_3 s^4 + C_3 C_L L_3 L_L R_L s^4 + C_3 C_L L_3 R_3 R_L s^3 + C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + C_L L_3 L_L s^3 + C_L L_3 R_L s^2 + C_L L_L R_3 s^2 + C_L L_L R_L s^2 + C_L R_3 R_L s + L_3 s + R_3 + R_L}$$

10.146 INVALID-ORDER-146 $Z(s) = \left(\infty,\ \infty,\ R_3,\ \infty,\ \infty,\ \frac{1}{C_L s}\right)$

$$H(s) = \frac{R_3\left(C_3 L_3 s^2 + 1\right)}{C_3 C_L L_3 R_3 s^3 + C_3 L_3 s^2 + C_3 R_3 s + C_L R_3 s + 1}$$

10.147 INVALID-ORDER-147 $Z(s) = \left(\infty,\ \infty,\ R_3,\ \infty,\ \infty,\ \frac{R_L}{C_L R_L s+1}\right)$

$$H(s) = \frac{R_3 R_L \left(C_3 L_3 s^2+1\right)}{C_3 C_L L_3 R_3 R_L s^3 + C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + C_3 R_3 R_L s + C_L R_3 R_L s + R_3 + R_L}$$

10.148 INVALID-ORDER-148 $Z(s) = \left(\infty,\ \infty,\ R_3,\ \infty,\ \infty,\ R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{R_3 \left(C_3 L_3 s^2+1\right)\left(C_L R_L s+1\right)}{C_3 C_L L_3 R_3 s^3 + C_3 C_L L_3 R_L s^3 + C_3 C_L R_3 R_L s^2 + C_3 L_3 s^2 + C_3 R_3 s + C_L R_3 s + C_L R_L s + 1}$$

10.149 INVALID-ORDER-149 $Z(s) = \left(\infty,\ \infty,\ R_3,\ \infty,\ \infty,\ L_L s + \frac{1}{C_L s}\right)$

$$H(s) = \frac{R_3 \left(C_3 L_3 s^2+1\right)\left(C_L L_L s^2+1\right)}{C_3 C_L L_3 L_L s^4 + C_3 C_L L_3 R_3 s^3 + C_3 C_L L_L R_3 s^3 + C_3 L_3 s^2 + C_3 R_3 s + C_L L_L s^2 + C_L R_3 s + 1}$$

10.150 INVALID-ORDER-150 $Z(s) = \left(\infty,\ \infty,\ R_3,\ \infty,\ \infty,\ \frac{L_L s}{C_L L_L s^2+1}\right)$

$$H(s) = \frac{L_L R_3 s \left(C_3 L_3 s^2+1\right)}{C_3 C_L L_3 L_L R_3 s^4 + C_3 L_3 L_L s^3 + C_3 L_3 R_3 s^2 + C_3 L_L R_3 s^2 + C_L L_L R_3 s^2 + L_L s + R_3}$$

10.151 INVALID-ORDER-151 $Z(s) = \left(\infty,\ \infty,\ R_3,\ \infty,\ \infty,\ L_L s + R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{R_3 \left(C_3 L_3 s^2+1\right)\left(C_L L_L s^2 + C_L R_L s+1\right)}{C_3 C_L L_3 L_L s^4 + C_3 C_L L_3 R_3 s^3 + C_3 C_L L_3 R_L s^3 + C_3 C_L L_L R_3 s^3 + C_3 C_L R_3 R_L s^2 + C_3 L_3 s^2 + C_3 R_3 s + C_L L_L s^2 + C_L R_3 s + C_L R_L s + 1}$$

10.152 INVALID-ORDER-152 $Z(s) = \left(\infty,\ \infty,\ R_3,\ \infty,\ \infty,\ \frac{1}{C_L s+\frac{1}{R_L}+\frac{1}{L_L s}}\right)$

$$H(s) = \frac{L_L R_3 R_L s \left(C_3 L_3 s^2+1\right)}{C_3 C_L L_3 L_L R_3 R_L s^4 + C_3 L_3 L_L R_3 s^3 + C_3 L_3 L_L R_L s^3 + C_3 L_3 R_3 R_L s^2 + C_3 L_L R_3 R_L s^2 + C_L L_L R_3 R_L s^2 + L_L R_3 s + L_L R_L s + R_3 R_L}$$

10.153 INVALID-ORDER-153 $Z(s) = \left(\infty,\ \infty,\ R_3,\ \infty,\ \infty,\ \frac{L_L s}{C_L L_L s^2+1} + R_L\right)$

$$H(s) = \frac{R_3 \left(C_3 L_3 s^2+1\right) \left(C_L L_L R_L s^2 + L_L s + R_L\right)}{C_3 C_L L_3 L_L R_3 s^4 + C_3 C_L L_3 L_L R_L s^4 + C_3 C_L L_L R_3 R_L s^3 + C_3 L_3 L_L s^3 + C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + C_3 L_L R_3 s^2 + C_3 R_3 R_L s + C_L L_L R_3 s^2 + C_L L_L R_L s^2 + L_L s + R_3 + R_L}$$

10.154 INVALID-ORDER-154 $Z(s) = \left(\infty,\ \infty,\ R_3,\ \infty,\ \infty,\ \frac{R_L\left(L_L s+\frac{1}{C_L s}\right)}{L_L s+R_L+\frac{1}{C_L s}}\right)$

$$H(s) = \frac{R_3 R_L \left(C_3 L_3 s^2+1\right) \left(C_L L_L s^2+1\right)}{C_3 C_L L_3 L_L R_3 s^4 + C_3 C_L L_3 L_L R_L s^4 + C_3 C_L L_3 R_3 R_L s^3 + C_3 C_L L_L R_3 R_L s^3 + C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + C_3 R_3 R_L s + C_L L_L R_3 s^2 + C_L L_L R_L s^2 + C_L R_3 R_L s + R_3 + R_L}$$

10.155 INVALID-ORDER-155 $Z(s) = \left(\infty,\ \infty,\ \frac{1}{C_3 s},\ \infty,\ \infty,\ R_L\right)$

$$H(s) = \frac{R_3 R_L}{R_3 + R_L}$$

10.156 INVALID-ORDER-156 $Z(s) = \left(\infty,\ \infty,\ \frac{1}{C_3 s},\ \infty,\ \infty,\ \frac{1}{C_L s}\right)$

$$H(s) = \frac{R_3}{C_L R_3 s + 1}$$

10.157 INVALID-ORDER-157 $Z(s) = \left(\infty,\ \infty,\ \frac{1}{C_3 s},\ \infty,\ \infty,\ \frac{R_L}{C_L R_L s+1}\right)$

$$H(s) = \frac{R_3 R_L}{C_L R_3 R_L s + R_3 + R_L}$$

10.158 INVALID-ORDER-158 $Z(s) = \left(\infty,\ \infty,\ \frac{1}{C_3 s},\ \infty,\ \infty,\ R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{R_3 \left(C_L R_L s + 1\right)}{C_L R_3 s + C_L R_L s + 1}$$

10.159 INVALID-ORDER-159 $Z(s) = \left(\infty,\ \infty,\ \frac{R_3}{C_3 R_3 s+1},\ \infty,\ \infty,\ R_L\right)$

$$H(s) = \frac{R_L}{C_3 R_L s + 1}$$

10.160 INVALID-ORDER-160 $Z(s) = \left(\infty,\ \infty,\ \frac{R_3}{C_3 R_3 s+1},\ \infty,\ \infty,\ \frac{1}{C_L s}\right)$

$$H(s) = \frac{1}{s\left(C_3 + C_L\right)}$$

10.161 INVALID-ORDER-161 $Z(s) = \left(\infty,\ \infty,\ \frac{R_3}{C_3 R_3 s+1},\ \infty,\ \infty,\ \frac{R_L}{C_L R_L s+1}\right)$

$$H(s) = \frac{R_L}{C_3 R_L s + C_L R_L s + 1}$$

10.162 INVALID-ORDER-162 $Z(s) = \left(\infty,\ \infty,\ \frac{R_3}{C_3 R_3 s+1},\ \infty,\ \infty,\ R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{C_L R_L s + 1}{s\left(C_3 C_L R_L s + C_3 + C_L\right)}$$

10.163 INVALID-ORDER-163 $Z(s) = \left(\infty,\ \infty,\ \frac{R_3}{C_3 R_3 s+1},\ \infty,\ \infty,\ L_L s + \frac{1}{C_L s}\right)$

$$H(s) = \frac{C_L L_L s^2 + 1}{s\left(C_3 C_L L_L s^2 + C_3 + C_L\right)}$$

10.164 INVALID-ORDER-164 $Z(s) = \left(\infty,\ \infty,\ \frac{R_3}{C_3 R_3 s+1},\ \infty,\ \infty,\ \frac{L_L s}{C_L L_L s^2+1}\right)$

$$H(s) = \frac{L_L s}{C_3 L_L s^2 + C_L L_L s^2 + 1}$$

10.165 INVALID-ORDER-165 $Z(s) = \left(\infty,\ \infty,\ \frac{R_3}{C_3 R_3 s+1},\ \infty,\ \infty,\ L_L s + R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{C_L L_L s^2 + C_L R_L s + 1}{s\left(C_3 C_L L_L s^2 + C_3 C_L R_L s + C_3 + C_L\right)}$$

10.166 INVALID-ORDER-166 $Z(s) = \left(\infty,\ \infty,\ \frac{R_3}{C_3 R_3 s+1},\ \infty,\ \infty,\ \frac{L_L s}{C_L L_L s^2+1} + R_L\right)$

$$H(s) = \frac{C_L L_L R_L s^2 + L_L s + R_L}{C_3 C_L L_L R_L s^3 + C_3 L_L s^2 + C_3 R_L s + C_L L_L s^2 + 1}$$

10.167 INVALID-ORDER-167 $Z(s) = \left(\infty,\ \infty,\ \frac{R_3}{C_3 R_3 s+1},\ \infty,\ \infty,\ \frac{R_L\left(L_L s+\frac{1}{C_L s}\right)}{L_L s+R_L+\frac{1}{C_L s}}\right)$

$$H(s) = \frac{R_L\left(C_L L_L s^2 + 1\right)}{C_3 C_L L_L R_L s^3 + C_3 R_L s + C_L L_L s^2 + C_L R_L s + 1}$$

10.168 INVALID-ORDER-168 $Z(s) = \left(\infty,\ \infty,\ R_3 + \frac{1}{C_3 s},\ \infty,\ \infty,\ R_L\right)$

$$H(s) = \frac{R_3 R_L}{C_3 R_3 R_L s + R_3 + R_L}$$

10.169 INVALID-ORDER-169 $Z(s) = \left(\infty,\ \infty,\ R_3 + \frac{1}{C_3 s},\ \infty,\ \infty,\ \frac{1}{C_L s}\right)$

$$H(s) = \frac{R_3}{C_3 R_3 s + C_L R_3 s + 1}$$

10.170 INVALID-ORDER-170 $Z(s) = \left(\infty,\ \infty,\ R_3 + \frac{1}{C_3 s},\ \infty,\ \infty,\ \frac{R_L}{C_L R_L s + 1}\right)$

$$H(s) = \frac{R_3 R_L}{C_3 R_3 R_L s + C_L R_3 R_L s + R_3 + R_L}$$

10.171 INVALID-ORDER-171 $Z(s) = \left(\infty,\ \infty,\ R_3 + \frac{1}{C_3 s},\ \infty,\ \infty,\ L_L s + \frac{1}{C_L s}\right)$

$$H(s) = \frac{R_3 \left(C_L L_L s^2 + 1\right)}{C_3 C_L L_L R_3 s^3 + C_3 R_3 s + C_L L_L s^2 + C_L R_3 s + 1}$$

10.172 INVALID-ORDER-172 $Z(s) = \left(\infty,\ \infty,\ R_3 + \frac{1}{C_3 s},\ \infty,\ \infty,\ L_L s + R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{R_3 \left(C_L L_L s^2 + C_L R_L s + 1\right)}{C_3 C_L L_L R_3 s^3 + C_3 C_L R_3 R_L s^2 + C_3 R_3 s + C_L L_L s^2 + C_L R_3 s + C_L R_L s + 1}$$

10.173 INVALID-ORDER-173 $Z(s) = \left(\infty,\ \infty,\ R_3 + \frac{1}{C_3 s},\ \infty,\ \infty,\ \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$

$$H(s) = \frac{R_3 \left(C_L L_L R_L s^2 + L_L s + R_L\right)}{C_3 C_L L_L R_3 R_L s^3 + C_3 L_L R_3 s^2 + C_3 R_3 R_L s + C_L L_L R_3 s^2 + C_L L_L R_L s^2 + L_L s + R_3 + R_L}$$

10.174 INVALID-ORDER-174 $Z(s) = \left(\infty,\ \infty,\ R_3 + \frac{1}{C_3 s},\ \infty,\ \infty,\ \frac{R_L\left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$

$$H(s) = \frac{R_3 R_L \left(C_L L_L s^2 + 1\right)}{C_3 C_L L_L R_3 R_L s^3 + C_3 R_3 R_L s + C_L L_L R_3 s^2 + C_L L_L R_L s^2 + C_L R_3 R_L s + R_3 + R_L}$$

10.175 INVALID-ORDER-175 $Z(s) = \left(\infty,\ \infty,\ L_3 s + \frac{1}{C_3 s},\ \infty,\ \infty,\ R_L\right)$

$$H(s) = \frac{R_L\left(C_3 R_3 s + 1\right)}{C_3 R_3 s + C_3 R_L s + 1}$$

10.176 INVALID-ORDER-176 $Z(s) = \left(\infty,\ \infty,\ L_3 s + \frac{1}{C_3 s},\ \infty,\ \infty,\ \frac{1}{C_L s}\right)$

$$H(s) = \frac{C_3 R_3 s + 1}{s\left(C_3 C_L R_3 s + C_3 + C_L\right)}$$

10.177 INVALID-ORDER-177 $Z(s) = \left(\infty,\ \infty,\ L_3 s + \frac{1}{C_3 s},\ \infty,\ \infty,\ R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{\left(C_3 R_3 s + 1\right)\left(C_L R_L s + 1\right)}{s\left(C_3 C_L R_3 s + C_3 C_L R_L s + C_3 + C_L\right)}$$

10.178 INVALID-ORDER-178 $Z(s) = \left(\infty,\ \infty,\ L_3 s + \frac{1}{C_3 s},\ \infty,\ \infty,\ L_L s + \frac{1}{C_L s}\right)$

$$H(s) = \frac{\left(C_3 R_3 s + 1\right)\left(C_L L_L s^2 + 1\right)}{s\left(C_3 C_L L_L s^2 + C_3 C_L R_3 s + C_3 + C_L\right)}$$

10.179 INVALID-ORDER-179 $Z(s) = \left(\infty,\ \infty,\ L_3 s + \frac{1}{C_3 s},\ \infty,\ \infty,\ \frac{L_L s}{C_L L_L s^2 + 1}\right)$

$$H(s) = \frac{L_L s\left(C_3 R_3 s + 1\right)}{C_3 C_L L_L R_3 s^3 + C_3 L_L s^2 + C_3 R_3 s + C_L L_L s^2 + 1}$$

10.180 INVALID-ORDER-180 $Z(s) = \left(\infty,\ \infty,\ L_3 s + \frac{1}{C_3 s},\ \infty,\ \infty,\ L_L s + R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{\left(C_3 R_3 s + 1\right)\left(C_L L_L s^2 + C_L R_L s + 1\right)}{s\left(C_3 C_L L_L s^2 + C_3 C_L R_3 s + C_3 C_L R_L s + C_3 + C_L\right)}$$

10.181 INVALID-ORDER-181 $Z(s) = \left(\infty,\ \infty,\ L_3 s + \frac{1}{C_3 s},\ \infty,\ \infty,\ \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$

$$H(s) = \frac{L_L R_L s \left(C_3 R_3 s + 1\right)}{C_3 C_L L_L R_3 R_L s^3 + C_3 L_L R_3 s^2 + C_3 L_L R_L s^2 + C_3 R_3 R_L s + C_L L_L R_L s^2 + L_L s + R_L}$$

10.182 INVALID-ORDER-182 $Z(s) = \left(\infty,\ \infty,\ L_3 s + \frac{1}{C_3 s},\ \infty,\ \infty,\ \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$

$$H(s) = \frac{\left(C_3 R_3 s + 1\right)\left(C_L L_L R_L s^2 + L_L s + R_L\right)}{C_3 C_L L_L R_3 s^3 + C_3 C_L L_L R_L s^3 + C_3 L_L s^2 + C_3 R_3 s + C_3 R_L s + C_L L_L s^2 + 1}$$

10.183 INVALID-ORDER-183 $Z(s) = \left(\infty,\ \infty,\ L_3 s + \frac{1}{C_3 s},\ \infty,\ \infty,\ \frac{R_L\left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$

$$H(s) = \frac{R_L \left(C_3 R_3 s + 1\right)\left(C_L L_L s^2 + 1\right)}{C_3 C_L L_L R_3 s^3 + C_3 C_L L_L R_L s^3 + C_3 C_L R_3 R_L s^2 + C_3 R_3 s + C_3 R_L s + C_L L_L s^2 + C_L R_L s + 1}$$

10.184 INVALID-ORDER-184 $Z(s) = \left(\infty,\ \infty,\ \frac{L_3 s}{C_3 L_3 s^2 + 1},\ \infty,\ \infty,\ \frac{1}{C_L s}\right)$

$$H(s) = \frac{C_3 L_3 s^2 + 1}{s\left(C_3 C_L L_3 s^2 + C_3 + C_L\right)}$$

10.185 INVALID-ORDER-185 $Z(s) = \left(\infty,\ \infty,\ \frac{L_3 s}{C_3 L_3 s^2 + 1},\ \infty,\ \infty,\ \frac{R_L}{C_L R_L s + 1}\right)$

$$H(s) = \frac{R_L \left(C_3 L_3 s^2 + 1\right)}{C_3 C_L L_3 R_L s^3 + C_3 L_3 s^2 + C_3 R_L s + C_L R_L s + 1}$$

10.186 INVALID-ORDER-186 $Z(s) = \left(\infty,\ \infty,\ \frac{L_3 s}{C_3 L_3 s^2+1},\ \infty,\ \infty,\ R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{\left(C_3 L_3 s^2 + 1\right)\left(C_L R_L s + 1\right)}{s\left(C_3 C_L L_3 s^2 + C_3 C_L R_L s + C_3 + C_L\right)}$$

10.187 INVALID-ORDER-187 $Z(s) = \left(\infty,\ \infty,\ \frac{L_3 s}{C_3 L_3 s^2+1},\ \infty,\ \infty,\ L_L s + \frac{1}{C_L s}\right)$

$$H(s) = \frac{\left(C_3 L_3 s^2 + 1\right)\left(C_L L_L s^2 + 1\right)}{s\left(C_3 C_L L_3 s^2 + C_3 C_L L_L s^2 + C_3 + C_L\right)}$$

10.188 INVALID-ORDER-188 $Z(s) = \left(\infty,\ \infty,\ \frac{L_3 s}{C_3 L_3 s^2+1},\ \infty,\ \infty,\ \frac{L_L s}{C_L L_L s^2+1}\right)$

$$H(s) = \frac{L_L s\left(C_3 L_3 s^2 + 1\right)}{C_3 C_L L_3 L_L s^4 + C_3 L_3 s^2 + C_3 L_L s^2 + C_L L_L s^2 + 1}$$

10.189 INVALID-ORDER-189 $Z(s) = \left(\infty,\ \infty,\ \frac{L_3 s}{C_3 L_3 s^2+1},\ \infty,\ \infty,\ L_L s + R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{\left(C_3 L_3 s^2 + 1\right)\left(C_L L_L s^2 + C_L R_L s + 1\right)}{s\left(C_3 C_L L_3 s^2 + C_3 C_L L_L s^2 + C_3 C_L R_L s + C_3 + C_L\right)}$$

10.190 INVALID-ORDER-190 $Z(s) = \left(\infty,\ \infty,\ \frac{L_3 s}{C_3 L_3 s^2+1},\ \infty,\ \infty,\ \frac{1}{C_L s+\frac{1}{R_L}+\frac{1}{L_L s}}\right)$

$$H(s) = \frac{L_L R_L s\left(C_3 L_3 s^2 + 1\right)}{C_3 C_L L_3 L_L R_L s^4 + C_3 L_3 L_L s^3 + C_3 L_3 R_L s^2 + C_3 L_L R_L s^2 + C_L L_L R_L s^2 + L_L s + R_L}$$

10.191 INVALID-ORDER-191 $Z(s) = \left(\infty,\ \infty,\ \frac{L_3 s}{C_3 L_3 s^2+1},\ \infty,\ \infty,\ \frac{L_L s}{C_L L_L s^2+1} + R_L\right)$

$$H(s) = \frac{\left(C_3 L_3 s^2+1\right)\left(C_L L_L R_L s^2 + L_L s + R_L\right)}{C_3 C_L L_3 L_L s^4 + C_3 C_L L_L R_L s^3 + C_3 L_3 s^2 + C_3 L_L s^2 + C_3 R_L s + C_L L_L s^2 + 1}$$

10.192 INVALID-ORDER-192 $Z(s) = \left(\infty,\ \infty,\ \frac{L_3 s}{C_3 L_3 s^2+1},\ \infty,\ \infty,\ \frac{R_L\left(L_L s+\frac{1}{C_L s}\right)}{L_L s+R_L+\frac{1}{C_L s}}\right)$

$$H(s) = \frac{R_L\left(C_3 L_3 s^2+1\right)\left(C_L L_L s^2+1\right)}{C_3 C_L L_3 L_L s^4 + C_3 C_L L_3 R_L s^3 + C_3 C_L L_L R_L s^3 + C_3 L_3 s^2 + C_3 R_L s + C_L L_L s^2 + C_L R_L s + 1}$$

10.193 INVALID-ORDER-193 $Z(s) = \left(\infty,\ \infty,\ L_3 s + R_3 + \frac{1}{C_3 s},\ \infty,\ \infty,\ \frac{1}{C_L s}\right)$

$$H(s) = \frac{L_3 s}{C_3 L_3 s^2 + C_L L_3 s^2 + 1}$$

10.194 INVALID-ORDER-194 $Z(s) = \left(\infty,\ \infty,\ L_3 s + R_3 + \frac{1}{C_3 s},\ \infty,\ \infty,\ R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{L_3 s\left(C_L R_L s+1\right)}{C_3 C_L L_3 R_L s^3 + C_3 L_3 s^2 + C_L L_3 s^2 + C_L R_L s + 1}$$

10.195 INVALID-ORDER-195 $Z(s) = \left(\infty,\ \infty,\ L_3 s + R_3 + \frac{1}{C_3 s},\ \infty,\ \infty,\ L_L s + \frac{1}{C_L s}\right)$

$$H(s) = \frac{L_3 s\left(C_L L_L s^2+1\right)}{C_3 C_L L_3 L_L s^4 + C_3 L_3 s^2 + C_L L_3 s^2 + C_L L_L s^2 + 1}$$

10.196 INVALID-ORDER-196 $Z(s) = \left(\infty,\ \infty,\ L_3 s + R_3 + \frac{1}{C_3 s},\ \infty,\ \infty,\ \frac{L_L s}{C_L L_L s^2+1}\right)$

$$H(s) = \frac{L_3 L_L s}{C_3 L_3 L_L s^2 + C_L L_3 L_L s^2 + L_3 + L_L}$$

10.197 INVALID-ORDER-197 $Z(s) = \left(\infty,\ \infty,\ L_3 s + R_3 + \frac{1}{C_3 s},\ \infty,\ \infty,\ L_L s + R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{L_3 s \left(C_L L_L s^2 + C_L R_L s + 1\right)}{C_3 C_L L_3 L_L s^4 + C_3 C_L L_3 R_L s^3 + C_3 L_3 s^2 + C_L L_3 s^2 + C_L L_L s^2 + C_L R_L s + 1}$$

10.198 INVALID-ORDER-198 $Z(s) = \left(\infty,\ \infty,\ L_3 s + R_3 + \frac{1}{C_3 s},\ \infty,\ \infty,\ \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$

$$H(s) = \frac{L_3 s \left(C_L L_L R_L s^2 + L_L s + R_L\right)}{C_3 C_L L_3 L_L R_L s^4 + C_3 L_3 L_L s^3 + C_3 L_3 R_L s^2 + C_L L_3 L_L s^3 + C_L L_L R_L s^2 + L_3 s + L_L s + R_L}$$

10.199 INVALID-ORDER-199 $Z(s) = \left(\infty,\ \infty,\ L_3 s + R_3 + \frac{1}{C_3 s},\ \infty,\ \infty,\ \frac{R_L\left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$

$$H(s) = \frac{L_3 R_L s \left(C_L L_L s^2 + 1\right)}{C_3 C_L L_3 L_L R_L s^4 + C_3 L_3 R_L s^2 + C_L L_3 L_L s^3 + C_L L_3 R_L s^2 + C_L L_L R_L s^2 + L_3 s + R_L}$$

10.200 INVALID-ORDER-200 $Z(s) = \left(\infty,\ \infty,\ \frac{1}{C_3 s + \frac{1}{R_3} + \frac{1}{L_3 s}},\ \infty,\ \infty,\ \frac{1}{C_L s}\right)$

$$H(s) = \frac{C_3 L_3 s^2 + C_3 R_3 s + 1}{s\left(C_3 C_L L_3 s^2 + C_3 C_L R_3 s + C_3 + C_L\right)}$$

10.201 INVALID-ORDER-201 $Z(s) = \left(\infty,\ \infty,\ \frac{1}{C_3 s + \frac{1}{R_3} + \frac{1}{L_3 s}},\ \infty,\ \infty,\ \frac{R_L}{C_L R_L s + 1}\right)$

$$H(s) = \frac{R_L \left(C_3 L_3 s^2 + C_3 R_3 s + 1\right)}{C_3 C_L L_3 R_L s^3 + C_3 C_L R_3 R_L s^2 + C_3 L_3 s^2 + C_3 R_3 s + C_3 R_L s + C_L R_L s + 1}$$

10.202 INVALID-ORDER-202 $Z(s) = \left(\infty,\ \infty,\ \frac{1}{C_3 s + \frac{1}{R_3} + \frac{1}{L_3 s}},\ \infty,\ \infty,\ R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{(C_L R_L s + 1)\left(C_3 L_3 s^2 + C_3 R_3 s + 1\right)}{s\left(C_3 C_L L_3 s^2 + C_3 C_L R_3 s + C_3 C_L R_L s + C_3 + C_L\right)}$$

10.203 INVALID-ORDER-203 $Z(s) = \left(\infty,\ \infty,\ \frac{1}{C_3 s + \frac{1}{R_3} + \frac{1}{L_3 s}},\ \infty,\ \infty,\ L_L s + \frac{1}{C_L s}\right)$

$$H(s) = \frac{\left(C_L L_L s^2 + 1\right)\left(C_3 L_3 s^2 + C_3 R_3 s + 1\right)}{s\left(C_3 C_L L_3 s^2 + C_3 C_L L_L s^2 + C_3 C_L R_3 s + C_3 + C_L\right)}$$

10.204 INVALID-ORDER-204 $Z(s) = \left(\infty,\ \infty,\ \frac{1}{C_3 s + \frac{1}{R_3} + \frac{1}{L_3 s}},\ \infty,\ \infty,\ \frac{L_L s}{C_L L_L s^2 + 1}\right)$

$$H(s) = \frac{L_L s\left(C_3 L_3 s^2 + C_3 R_3 s + 1\right)}{C_3 C_L L_3 L_L s^4 + C_3 C_L L_L R_3 s^3 + C_3 L_3 s^2 + C_3 L_L s^2 + C_3 R_3 s + C_L L_L s^2 + 1}$$

10.205 INVALID-ORDER-205 $Z(s) = \left(\infty,\ \infty,\ \frac{1}{C_3 s + \frac{1}{R_3} + \frac{1}{L_3 s}},\ \infty,\ \infty,\ L_L s + R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{\left(C_3 L_3 s^2 + C_3 R_3 s + 1\right)\left(C_L L_L s^2 + C_L R_L s + 1\right)}{s\left(C_3 C_L L_3 s^2 + C_3 C_L L_L s^2 + C_3 C_L R_3 s + C_3 C_L R_L s + C_3 + C_L\right)}$$

10.206 INVALID-ORDER-206 $Z(s) = \left(\infty,\ \infty,\ \frac{1}{C_3 s + \frac{1}{R_3} + \frac{1}{L_3 s}},\ \infty,\ \infty,\ \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$

$$H(s) = \frac{L_L R_L s\left(C_3 L_3 s^2 + C_3 R_3 s + 1\right)}{C_3 C_L L_3 L_L R_L s^4 + C_3 C_L L_L R_3 R_L s^3 + C_3 L_3 L_L s^3 + C_3 L_3 R_L s^2 + C_3 L_L R_3 s^2 + C_3 L_L R_L s^2 + C_3 R_3 R_L s + C_L L_L R_L s^2 + L_L s + R_L}$$

10.207 INVALID-ORDER-207 $Z(s) = \left(\infty,\ \infty,\ \frac{1}{C_3 s+\frac{1}{R_3}+\frac{1}{L_3 s}},\ \infty,\ \infty,\ \frac{L_L s}{C_L L_L s^2+1} + R_L\right)$

$$H(s) = \frac{\left(C_3 L_3 s^2 + C_3 R_3 s + 1\right)\left(C_L L_L R_L s^2 + L_L s + R_L\right)}{C_3 C_L L_3 L_L s^4 + C_3 C_L L_L R_3 s^3 + C_3 C_L L_L R_L s^3 + C_3 L_3 s^2 + C_3 L_L s^2 + C_3 R_3 s + C_3 R_L s + C_L L_L s^2 + 1}$$

10.208 INVALID-ORDER-208 $Z(s) = \left(\infty,\ \infty,\ \frac{1}{C_3 s+\frac{1}{R_3}+\frac{1}{L_3 s}},\ \infty,\ \infty,\ \frac{R_L\left(L_L s+\frac{1}{C_L s}\right)}{L_L s+R_L+\frac{1}{C_L s}}\right)$

$$H(s) = \frac{R_L\left(C_L L_L s^2 + 1\right)\left(C_3 L_3 s^2 + C_3 R_3 s + 1\right)}{C_3 C_L L_3 L_L s^4 + C_3 C_L L_3 R_L s^3 + C_3 C_L L_L R_3 s^3 + C_3 C_L L_L R_L s^3 + C_3 C_L R_3 R_L s^2 + C_3 L_3 s^2 + C_3 R_3 s + C_3 R_L s + C_L L_L s^2 + C_L R_L s + 1}$$

10.209 INVALID-ORDER-209 $Z(s) = \left(\infty,\ \infty,\ \frac{L_3 s}{C_3 L_3 s^2+1} + R_3,\ \infty,\ \infty,\ R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{L_3 R_3 s\left(C_L R_L s + 1\right)}{C_3 C_L L_3 R_3 R_L s^3 + C_3 L_3 R_3 s^2 + C_L L_3 R_3 s^2 + C_L L_3 R_L s^2 + C_L R_3 R_L s + L_3 s + R_3}$$

10.210 INVALID-ORDER-210 $Z(s) = \left(\infty,\ \infty,\ \frac{L_3 s}{C_3 L_3 s^2+1} + R_3,\ \infty,\ \infty,\ L_L s + \frac{1}{C_L s}\right)$

$$H(s) = \frac{L_3 R_3 s\left(C_L L_L s^2 + 1\right)}{C_3 C_L L_3 L_L R_3 s^4 + C_3 L_3 R_3 s^2 + C_L L_3 L_L s^3 + C_L L_3 R_3 s^2 + C_L L_L R_3 s^2 + L_3 s + R_3}$$

10.211 INVALID-ORDER-211 $Z(s) = \left(\infty,\ \infty,\ \frac{L_3 s}{C_3 L_3 s^2+1} + R_3,\ \infty,\ \infty,\ L_L s + R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{L_3 R_3 s\left(C_L L_L s^2 + C_L R_L s + 1\right)}{C_3 C_L L_3 L_L R_3 s^4 + C_3 C_L L_3 R_3 R_L s^3 + C_3 L_3 R_3 s^2 + C_L L_3 L_L s^3 + C_L L_3 R_3 s^2 + C_L L_3 R_L s^2 + C_L L_L R_3 s^2 + C_L R_3 R_L s + L_3 s + R_3}$$

10.212 INVALID-ORDER-212 $Z(s) = \left(\infty,\ \infty,\ \frac{L_3 s}{C_3 L_3 s^2+1} + R_3,\ \infty,\ \infty,\ \frac{L_L s}{C_L L_L s^2+1} + R_L\right)$

$$H(s) = \frac{L_3 R_3 s \left(C_L L_L R_L s^2 + L_L s + R_L\right)}{C_3 C_L L_3 L_L R_3 R_L s^4 + C_3 L_3 L_L R_3 s^3 + C_3 L_3 R_3 R_L s^2 + C_L L_3 L_L R_3 s^3 + C_L L_3 L_L R_L s^3 + C_L L_L R_3 R_L s^2 + L_3 L_L s^2 + L_3 R_3 s + L_3 R_L s + L_L R_3 s + R_3 R_L}$$

10.213 INVALID-ORDER-213 $Z(s) = \left(\infty,\ \infty,\ \frac{L_3 s}{C_3 L_3 s^2+1} + R_3,\ \infty,\ \infty,\ \frac{R_L\left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$

$$H(s) = \frac{L_3 R_3 R_L s \left(C_L L_L s^2 + 1\right)}{C_3 C_L L_3 L_L R_3 R_L s^4 + C_3 L_3 R_3 R_L s^2 + C_L L_3 L_L R_3 s^3 + C_L L_3 L_L R_L s^3 + C_L L_3 R_3 R_L s^2 + C_L L_L R_3 R_L s^2 + L_3 R_3 s + L_3 R_L s + R_3 R_L}$$

10.214 INVALID-ORDER-214 $Z(s) = \left(\infty,\ \infty,\ \frac{R_3\left(L_3 s + \frac{1}{C_3 s}\right)}{L_3 s + R_3 + \frac{1}{C_3 s}},\ \infty,\ \infty,\ \frac{1}{C_L s}\right)$

$$H(s) = \frac{C_3 L_3 R_3 s^2 + L_3 s + R_3}{C_3 C_L L_3 R_3 s^3 + C_3 L_3 s^2 + C_L L_3 s^2 + C_L R_3 s + 1}$$

10.215 INVALID-ORDER-215 $Z(s) = \left(\infty,\ \infty,\ \frac{R_3\left(L_3 s + \frac{1}{C_3 s}\right)}{L_3 s + R_3 + \frac{1}{C_3 s}},\ \infty,\ \infty,\ \frac{R_L}{C_L R_L s+1}\right)$

$$H(s) = \frac{R_L \left(C_3 L_3 R_3 s^2 + L_3 s + R_3\right)}{C_3 C_L L_3 R_3 R_L s^3 + C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + C_L L_3 R_L s^2 + C_L R_3 R_L s + L_3 s + R_3 + R_L}$$

10.216 INVALID-ORDER-216 $Z(s) = \left(\infty,\ \infty,\ \frac{R_3\left(L_3 s + \frac{1}{C_3 s}\right)}{L_3 s + R_3 + \frac{1}{C_3 s}},\ \infty,\ \infty,\ R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{(C_L R_L s + 1)\left(C_3 L_3 R_3 s^2 + L_3 s + R_3\right)}{C_3 C_L L_3 R_3 s^3 + C_3 C_L L_3 R_L s^3 + C_3 L_3 s^2 + C_L L_3 s^2 + C_L R_3 s + C_L R_L s + 1}$$

10.217 INVALID-ORDER-217 $Z(s) = \left(\infty,\ \infty,\ \frac{R_3\left(L_3 s+\frac{1}{C_3 s}\right)}{L_3 s+R_3+\frac{1}{C_3 s}},\ \infty,\ \infty,\ L_L s+\frac{1}{C_L s}\right)$

$$H(s) = \frac{\left(C_L L_L s^2+1\right)\left(C_3 L_3 R_3 s^2+L_3 s+R_3\right)}{C_3 C_L L_3 L_L s^4+C_3 C_L L_3 R_3 s^3+C_3 L_3 s^2+C_L L_3 s^2+C_L L_L s^2+C_L R_3 s+1}$$

10.218 INVALID-ORDER-218 $Z(s) = \left(\infty,\ \infty,\ \frac{R_3\left(L_3 s+\frac{1}{C_3 s}\right)}{L_3 s+R_3+\frac{1}{C_3 s}},\ \infty,\ \infty,\ \frac{L_L s}{C_L L_L s^2+1}\right)$

$$H(s) = \frac{L_L s\left(C_3 L_3 R_3 s^2+L_3 s+R_3\right)}{C_3 C_L L_3 L_L R_3 s^4+C_3 L_3 L_L s^3+C_3 L_3 R_3 s^2+C_L L_3 L_L s^3+C_L L_L R_3 s^2+L_3 s+L_L s+R_3}$$

10.219 INVALID-ORDER-219 $Z(s) = \left(\infty,\ \infty,\ \frac{R_3\left(L_3 s+\frac{1}{C_3 s}\right)}{L_3 s+R_3+\frac{1}{C_3 s}},\ \infty,\ \infty,\ L_L s+R_L+\frac{1}{C_L s}\right)$

$$H(s) = \frac{\left(C_L L_L s^2+C_L R_L s+1\right)\left(C_3 L_3 R_3 s^2+L_3 s+R_3\right)}{C_3 C_L L_3 L_L s^4+C_3 C_L L_3 R_3 s^3+C_3 C_L L_3 R_L s^3+C_3 L_3 s^2+C_L L_3 s^2+C_L L_L s^2+C_L R_3 s+C_L R_L s+1}$$

10.220 INVALID-ORDER-220 $Z(s) = \left(\infty,\ \infty,\ \frac{R_3\left(L_3 s+\frac{1}{C_3 s}\right)}{L_3 s+R_3+\frac{1}{C_3 s}},\ \infty,\ \infty,\ \frac{1}{C_L s+\frac{1}{R_L}+\frac{1}{L_L s}}\right)$

$$H(s) = \frac{L_L R_L s\left(C_3 L_3 R_3 s^2+L_3 s+R_3\right)}{C_3 C_L L_3 L_L R_3 R_L s^4+C_3 L_3 L_L R_3 s^3+C_3 L_3 L_L R_L s^3+C_3 L_3 R_3 R_L s^2+C_L L_3 L_L R_L s^3+C_L L_L R_3 R_L s^2+L_3 L_L s^2+L_3 R_L s+L_L R_3 s+L_L R_L s+R_3 R_L}$$

10.221 INVALID-ORDER-221 $Z(s) = \left(\infty,\ \infty,\ \frac{R_3\left(L_3 s+\frac{1}{C_3 s}\right)}{L_3 s+R_3+\frac{1}{C_3 s}},\ \infty,\ \infty,\ \frac{L_L s}{C_L L_L s^2+1}+R_L\right)$

$$H(s) = \frac{\left(C_3 L_3 R_3 s^2+L_3 s+R_3\right)\left(C_L L_L R_L s^2+L_L s+R_L\right)}{C_3 C_L L_3 L_L R_3 s^4+C_3 C_L L_3 L_L R_L s^4+C_3 L_3 L_L s^3+C_3 L_3 R_3 s^2+C_3 L_3 R_L s^2+C_L L_3 L_L s^3+C_L L_L R_3 s^2+C_L L_L R_L s^2+L_3 s+L_L s+R_3+R_L}$$

10.222 INVALID-ORDER-222 $Z(s) = \left(\infty,\ \infty,\ \frac{R_3\left(L_3 s+\frac{1}{C_3 s}\right)}{L_3 s+R_3+\frac{1}{C_3 s}},\ \infty,\ \infty,\ \frac{R_L\left(L_L s+\frac{1}{C_L s}\right)}{L_L s+R_L+\frac{1}{C_L s}}\right)$

$$H(s) = \frac{R_L\left(C_L L_L s^2+1\right)\left(C_3 L_3 R_3 s^2+L_3 s+R_3\right)}{C_3 C_L L_3 L_L R_3 s^4+C_3 C_L L_3 L_L R_L s^4+C_3 C_L L_3 R_3 R_L s^3+C_3 L_3 R_3 s^2+C_3 L_3 R_L s^2+C_L L_3 L_L s^3+C_L L_3 R_L s^2+C_L L_L R_3 s^2+C_L L_L R_L s^2+C_L R_3 R_L s+L_3 s+R_3+R_L}$$

10.223 INVALID-ORDER-223 $Z(s) = \left(\infty,\ \infty,\ \infty,\ R_4,\ \infty,\ \frac{1}{C_L s}\right)$

$$H(s) = \frac{R_3\left(C_3 L_3 s^2+1\right)}{C_3 C_L L_3 R_3 s^3+C_3 L_3 s^2+C_3 R_3 s+C_L R_3 s+1}$$

10.224 INVALID-ORDER-224 $Z(s) = \left(\infty,\ \infty,\ \infty,\ R_4,\ \infty,\ \frac{R_L}{C_L R_L s+1}\right)$

$$H(s) = \frac{R_3 R_L\left(C_3 L_3 s^2+1\right)}{C_3 C_L L_3 R_3 R_L s^3+C_3 L_3 R_3 s^2+C_3 L_3 R_L s^2+C_3 R_3 R_L s+C_L R_3 R_L s+R_3+R_L}$$

10.225 INVALID-ORDER-225 $Z(s) = \left(\infty,\ \infty,\ \infty,\ R_4,\ \infty,\ R_L+\frac{1}{C_L s}\right)$

$$H(s) = \frac{R_3\left(C_3 L_3 s^2+1\right)\left(C_L R_L s+1\right)}{C_3 C_L L_3 R_3 s^3+C_3 C_L L_3 R_L s^3+C_3 C_L R_3 R_L s^2+C_3 L_3 s^2+C_3 R_3 s+C_L R_3 s+C_L R_L s+1}$$

10.226 INVALID-ORDER-226 $Z(s) = \left(\infty,\ \infty,\ \infty,\ R_4,\ \infty,\ L_L s+\frac{1}{C_L s}\right)$

$$H(s) = \frac{R_3\left(C_3 L_3 s^2+1\right)\left(C_L L_L s^2+1\right)}{C_3 C_L L_3 L_L s^4+C_3 C_L L_3 R_3 s^3+C_3 C_L L_L R_3 s^3+C_3 L_3 s^2+C_3 R_3 s+C_L L_L s^2+C_L R_3 s+1}$$

10.227 INVALID-ORDER-227 $Z(s) = \left(\infty,\ \infty,\ \infty,\ R_4,\ \infty,\ \frac{L_L s}{C_L L_L s^2+1}\right)$

$$H(s) = \frac{L_L R_3 s \left(C_3 L_3 s^2 + 1\right)}{C_3 C_L L_3 L_L R_3 s^4 + C_3 L_3 L_L s^3 + C_3 L_3 R_3 s^2 + C_3 L_L R_3 s^2 + C_L L_L R_3 s^2 + L_L s + R_3}$$

10.228 INVALID-ORDER-228 $Z(s) = \left(\infty,\ \infty,\ \infty,\ R_4,\ \infty,\ L_L s + R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{R_3 \left(C_3 L_3 s^2 + 1\right) \left(C_L L_L s^2 + C_L R_L s + 1\right)}{C_3 C_L L_3 L_L s^4 + C_3 C_L L_3 R_3 s^3 + C_3 C_L L_3 R_L s^3 + C_3 C_L L_L R_3 s^3 + C_3 C_L R_3 R_L s^2 + C_3 L_3 s^2 + C_3 R_3 s + C_L L_L s^2 + C_L R_3 s + C_L R_L s + 1}$$

10.229 INVALID-ORDER-229 $Z(s) = \left(\infty,\ \infty,\ \infty,\ R_4,\ \infty,\ \frac{1}{C_L s+\frac{1}{R_L}+\frac{1}{L_L s}}\right)$

$$H(s) = \frac{L_L R_3 R_L s \left(C_3 L_3 s^2 + 1\right)}{C_3 C_L L_3 L_L R_3 R_L s^4 + C_3 L_3 L_L R_3 s^3 + C_3 L_3 L_L R_L s^3 + C_3 L_3 R_3 R_L s^2 + C_3 L_L R_3 R_L s^2 + C_L L_L R_3 R_L s^2 + L_L R_3 s + L_L R_L s + R_3 R_L}$$

10.230 INVALID-ORDER-230 $Z(s) = \left(\infty,\ \infty,\ \infty,\ R_4,\ \infty,\ \frac{L_L s}{C_L L_L s^2+1} + R_L\right)$

$$H(s) = \frac{R_3 \left(C_3 L_3 s^2 + 1\right) \left(C_L L_L R_L s^2 + L_L s + R_L\right)}{C_3 C_L L_3 L_L R_3 s^4 + C_3 C_L L_3 L_L R_L s^4 + C_3 C_L L_L R_3 R_L s^3 + C_3 L_3 L_L s^3 + C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + C_3 L_L R_3 s^2 + C_3 R_3 R_L s + C_L L_L R_3 s^2 + C_L L_L R_L s^2 + L_L s + R_3 + R_L}$$

10.231 INVALID-ORDER-231 $Z(s) = \left(\infty,\ \infty,\ \infty,\ R_4,\ \infty,\ \frac{R_L\left(L_L s+\frac{1}{C_L s}\right)}{L_L s+R_L+\frac{1}{C_L s}}\right)$

$$H(s) = \frac{R_3 R_L \left(C_3 L_3 s^2 + 1\right) \left(C_L L_L s^2 + 1\right)}{C_3 C_L L_3 L_L R_3 s^4 + C_3 C_L L_3 L_L R_L s^4 + C_3 C_L L_3 R_3 R_L s^3 + C_3 C_L L_L R_3 R_L s^3 + C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + C_3 R_3 R_L s + C_L L_L R_3 s^2 + C_L L_L R_L s^2 + C_L R_3 R_L s + R_3 + R_L}$$

10.232 INVALID-ORDER-232 $Z(s) = \left(\infty,\ \infty,\ \infty,\ \frac{1}{C_4 s},\ \infty,\ R_L\right)$

$$H(s) = \frac{R_3 R_L}{R_3 + R_L}$$

10.233 INVALID-ORDER-233 $Z(s) = \left(\infty,\ \infty,\ \infty,\ \frac{1}{C_4 s},\ \infty,\ \frac{1}{C_L s}\right)$

$$H(s) = \frac{R_3}{C_L R_3 s + 1}$$

10.234 INVALID-ORDER-234 $Z(s) = \left(\infty,\ \infty,\ \infty,\ \frac{1}{C_4 s},\ \infty,\ \frac{R_L}{C_L R_L s + 1}\right)$

$$H(s) = \frac{R_3 R_L}{C_L R_3 R_L s + R_3 + R_L}$$

10.235 INVALID-ORDER-235 $Z(s) = \left(\infty,\ \infty,\ \infty,\ \frac{1}{C_4 s},\ \infty,\ R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{R_3 \left(C_L R_L s + 1\right)}{C_L R_3 s + C_L R_L s + 1}$$

10.236 INVALID-ORDER-236 $Z(s) = \left(\infty,\ \infty,\ \infty,\ \frac{R_4}{C_4 R_4 s + 1},\ \infty,\ R_L\right)$

$$H(s) = \frac{R_L}{C_3 R_L s + 1}$$

10.237 INVALID-ORDER-237 $Z(s) = \left(\infty,\ \infty,\ \infty,\ \frac{R_4}{C_4 R_4 s + 1},\ \infty,\ \frac{1}{C_L s}\right)$

$$H(s) = \frac{1}{s \left(C_3 + C_L\right)}$$

10.238 INVALID-ORDER-238 $Z(s) = \left(\infty,\ \infty,\ \infty,\ \frac{R_4}{C_4 R_4 s+1},\ \infty,\ \frac{R_L}{C_L R_L s+1}\right)$

$$H(s) = \frac{R_L}{C_3 R_L s + C_L R_L s + 1}$$

10.239 INVALID-ORDER-239 $Z(s) = \left(\infty,\ \infty,\ \infty,\ \frac{R_4}{C_4 R_4 s+1},\ \infty,\ R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{C_L R_L s + 1}{s\left(C_3 C_L R_L s + C_3 + C_L\right)}$$

10.240 INVALID-ORDER-240 $Z(s) = \left(\infty,\ \infty,\ \infty,\ \frac{R_4}{C_4 R_4 s+1},\ \infty,\ L_L s + \frac{1}{C_L s}\right)$

$$H(s) = \frac{C_L L_L s^2 + 1}{s\left(C_3 C_L L_L s^2 + C_3 + C_L\right)}$$

10.241 INVALID-ORDER-241 $Z(s) = \left(\infty,\ \infty,\ \infty,\ \frac{R_4}{C_4 R_4 s+1},\ \infty,\ \frac{L_L s}{C_L L_L s^2+1}\right)$

$$H(s) = \frac{L_L s}{C_3 L_L s^2 + C_L L_L s^2 + 1}$$

10.242 INVALID-ORDER-242 $Z(s) = \left(\infty,\ \infty,\ \infty,\ \frac{R_4}{C_4 R_4 s+1},\ \infty,\ L_L s + R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{C_L L_L s^2 + C_L R_L s + 1}{s\left(C_3 C_L L_L s^2 + C_3 C_L R_L s + C_3 + C_L\right)}$$

10.243 INVALID-ORDER-243 $Z(s) = \left(\infty,\ \infty,\ \infty,\ \frac{R_4}{C_4 R_4 s+1},\ \infty,\ \frac{L_L s}{C_L L_L s^2+1} + R_L\right)$

$$H(s) = \frac{C_L L_L R_L s^2 + L_L s + R_L}{C_3 C_L L_L R_L s^3 + C_3 L_L s^2 + C_3 R_L s + C_L L_L s^2 + 1}$$

10.244 INVALID-ORDER-244 $Z(s) = \left(\infty,\ \infty,\ \infty,\ \frac{R_4}{C_4 R_4 s+1},\ \infty,\ \frac{R_L\left(L_L s+\frac{1}{C_L s}\right)}{L_L s+R_L+\frac{1}{C_L s}}\right)$

$$H(s) = \frac{R_L\left(C_L L_L s^2+1\right)}{C_3 C_L L_L R_L s^3 + C_3 R_L s + C_L L_L s^2 + C_L R_L s + 1}$$

10.245 INVALID-ORDER-245 $Z(s) = \left(\infty,\ \infty,\ \infty,\ R_4+\frac{1}{C_4 s},\ \infty,\ R_L\right)$

$$H(s) = \frac{R_3 R_L}{C_3 R_3 R_L s + R_3 + R_L}$$

10.246 INVALID-ORDER-246 $Z(s) = \left(\infty,\ \infty,\ \infty,\ R_4+\frac{1}{C_4 s},\ \infty,\ \frac{1}{C_L s}\right)$

$$H(s) = \frac{R_3}{C_3 R_3 s + C_L R_3 s + 1}$$

10.247 INVALID-ORDER-247 $Z(s) = \left(\infty,\ \infty,\ \infty,\ R_4+\frac{1}{C_4 s},\ \infty,\ \frac{R_L}{C_L R_L s+1}\right)$

$$H(s) = \frac{R_3 R_L}{C_3 R_3 R_L s + C_L R_3 R_L s + R_3 + R_L}$$

10.248 INVALID-ORDER-248 $Z(s) = \left(\infty,\ \infty,\ \infty,\ R_4+\frac{1}{C_4 s},\ \infty,\ L_L s+\frac{1}{C_L s}\right)$

$$H(s) = \frac{R_3\left(C_L L_L s^2+1\right)}{C_3 C_L L_L R_3 s^3 + C_3 R_3 s + C_L L_L s^2 + C_L R_3 s + 1}$$

10.249 INVALID-ORDER-249 $Z(s) = \left(\infty,\ \infty,\ \infty,\ R_4+\frac{1}{C_4 s},\ \infty,\ L_L s+R_L+\frac{1}{C_L s}\right)$

$$H(s) = \frac{R_3\left(C_L L_L s^2 + C_L R_L s + 1\right)}{C_3 C_L L_L R_3 s^3 + C_3 C_L R_3 R_L s^2 + C_3 R_3 s + C_L L_L s^2 + C_L R_3 s + C_L R_L s + 1}$$

10.250 INVALID-ORDER-250 $Z(s) = \left(\infty,\ \infty,\ \infty,\ R_4 + \frac{1}{C_4 s},\ \infty,\ \frac{L_L s}{C_L L_L s^2+1} + R_L\right)$

$$H(s) = \frac{R_3\left(C_L L_L R_L s^2 + L_L s + R_L\right)}{C_3 C_L L_L R_3 R_L s^3 + C_3 L_L R_3 s^2 + C_3 R_3 R_L s + C_L L_L R_3 s^2 + C_L L_L R_L s^2 + L_L s + R_3 + R_L}$$

10.251 INVALID-ORDER-251 $Z(s) = \left(\infty,\ \infty,\ \infty,\ R_4 + \frac{1}{C_4 s},\ \infty,\ \frac{R_L\left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$

$$H(s) = \frac{R_3 R_L\left(C_L L_L s^2 + 1\right)}{C_3 C_L L_L R_3 R_L s^3 + C_3 R_3 R_L s + C_L L_L R_3 s^2 + C_L L_L R_L s^2 + C_L R_3 R_L s + R_3 + R_L}$$

10.252 INVALID-ORDER-252 $Z(s) = \left(\infty,\ \infty,\ \infty,\ L_4 s + \frac{1}{C_4 s},\ \infty,\ R_L\right)$

$$H(s) = \frac{R_L\left(C_3 R_3 s + 1\right)}{C_3 R_3 s + C_3 R_L s + 1}$$

10.253 INVALID-ORDER-253 $Z(s) = \left(\infty,\ \infty,\ \infty,\ L_4 s + \frac{1}{C_4 s},\ \infty,\ \frac{1}{C_L s}\right)$

$$H(s) = \frac{C_3 R_3 s + 1}{s\left(C_3 C_L R_3 s + C_3 + C_L\right)}$$

10.254 INVALID-ORDER-254 $Z(s) = \left(\infty,\ \infty,\ \infty,\ L_4 s + \frac{1}{C_4 s},\ \infty,\ R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{\left(C_3 R_3 s + 1\right)\left(C_L R_L s + 1\right)}{s\left(C_3 C_L R_3 s + C_3 C_L R_L s + C_3 + C_L\right)}$$

10.255 INVALID-ORDER-255 $Z(s) = \left(\infty,\ \infty,\ \infty,\ L_4 s + \frac{1}{C_4 s},\ \infty,\ L_L s + \frac{1}{C_L s}\right)$

$$H(s) = \frac{\left(C_3 R_3 s + 1\right)\left(C_L L_L s^2 + 1\right)}{s\left(C_3 C_L L_L s^2 + C_3 C_L R_3 s + C_3 + C_L\right)}$$

10.256 INVALID-ORDER-256 $Z(s) = \left(\infty,\ \infty,\ \infty,\ L_4 s + \frac{1}{C_4 s},\ \infty,\ \frac{L_L s}{C_L L_L s^2+1}\right)$

$$H(s) = \frac{L_L s\left(C_3 R_3 s + 1\right)}{C_3 C_L L_L R_3 s^3 + C_3 L_L s^2 + C_3 R_3 s + C_L L_L s^2 + 1}$$

10.257 INVALID-ORDER-257 $Z(s) = \left(\infty,\ \infty,\ \infty,\ L_4 s + \frac{1}{C_4 s},\ \infty,\ L_L s + R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{\left(C_3 R_3 s + 1\right)\left(C_L L_L s^2 + C_L R_L s + 1\right)}{s\left(C_3 C_L L_L s^2 + C_3 C_L R_3 s + C_3 C_L R_L s + C_3 + C_L\right)}$$

10.258 INVALID-ORDER-258 $Z(s) = \left(\infty,\ \infty,\ \infty,\ L_4 s + \frac{1}{C_4 s},\ \infty,\ \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$

$$H(s) = \frac{L_L R_L s\left(C_3 R_3 s + 1\right)}{C_3 C_L L_L R_3 R_L s^3 + C_3 L_L R_3 s^2 + C_3 L_L R_L s^2 + C_3 R_3 R_L s + C_L L_L R_L s^2 + L_L s + R_L}$$

10.259 INVALID-ORDER-259 $Z(s) = \left(\infty,\ \infty,\ \infty,\ L_4 s + \frac{1}{C_4 s},\ \infty,\ \frac{L_L s}{C_L L_L s^2+1} + R_L\right)$

$$H(s) = \frac{\left(C_3 R_3 s + 1\right)\left(C_L L_L R_L s^2 + L_L s + R_L\right)}{C_3 C_L L_L R_3 s^3 + C_3 C_L L_L R_L s^3 + C_3 L_L s^2 + C_3 R_3 s + C_3 R_L s + C_L L_L s^2 + 1}$$

10.260 INVALID-ORDER-260 $Z(s) = \left(\infty,\ \infty,\ \infty,\ L_4 s + \frac{1}{C_4 s},\ \infty,\ \frac{R_L\left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$

$$H(s) = \frac{R_L\left(C_3 R_3 s + 1\right)\left(C_L L_L s^2 + 1\right)}{C_3 C_L L_L R_3 s^3 + C_3 C_L L_L R_L s^3 + C_3 C_L R_3 R_L s^2 + C_3 R_3 s + C_3 R_L s + C_L L_L s^2 + C_L R_L s + 1}$$

10.261 INVALID-ORDER-261 $Z(s) = \left(\infty,\ \infty,\ \infty,\ \frac{L_4 s}{C_4 L_4 s^2+1},\ \infty,\ \frac{1}{C_L s}\right)$

$$H(s) = \frac{C_3 L_3 s^2 + 1}{s\left(C_3 C_L L_3 s^2 + C_3 + C_L\right)}$$

10.262 INVALID-ORDER-262 $Z(s) = \left(\infty,\ \infty,\ \infty,\ \frac{L_4 s}{C_4 L_4 s^2+1},\ \infty,\ \frac{R_L}{C_L R_L s+1}\right)$

$$H(s) = \frac{R_L\left(C_3 L_3 s^2 + 1\right)}{C_3 C_L L_3 R_L s^3 + C_3 L_3 s^2 + C_3 R_L s + C_L R_L s + 1}$$

10.263 INVALID-ORDER-263 $Z(s) = \left(\infty,\ \infty,\ \infty,\ \frac{L_4 s}{C_4 L_4 s^2+1},\ \infty,\ R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{\left(C_3 L_3 s^2 + 1\right)\left(C_L R_L s + 1\right)}{s\left(C_3 C_L L_3 s^2 + C_3 C_L R_L s + C_3 + C_L\right)}$$

10.264 INVALID-ORDER-264 $Z(s) = \left(\infty,\ \infty,\ \infty,\ \frac{L_4 s}{C_4 L_4 s^2+1},\ \infty,\ L_L s + \frac{1}{C_L s}\right)$

$$H(s) = \frac{\left(C_3 L_3 s^2 + 1\right)\left(C_L L_L s^2 + 1\right)}{s\left(C_3 C_L L_3 s^2 + C_3 C_L L_L s^2 + C_3 + C_L\right)}$$

10.265 INVALID-ORDER-265 $Z(s) = \left(\infty,\ \infty,\ \infty,\ \frac{L_4 s}{C_4 L_4 s^2+1},\ \infty,\ \frac{L_L s}{C_L L_L s^2+1}\right)$

$$H(s) = \frac{L_L s\left(C_3 L_3 s^2 + 1\right)}{C_3 C_L L_3 L_L s^4 + C_3 L_3 s^2 + C_3 L_L s^2 + C_L L_L s^2 + 1}$$

10.266 INVALID-ORDER-266 $Z(s) = \left(\infty,\ \infty,\ \infty,\ \frac{L_4 s}{C_4 L_4 s^2+1},\ \infty,\ L_L s + R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{\left(C_3 L_3 s^2 + 1\right)\left(C_L L_L s^2 + C_L R_L s + 1\right)}{s\left(C_3 C_L L_3 s^2 + C_3 C_L L_L s^2 + C_3 C_L R_L s + C_3 + C_L\right)}$$

10.267 INVALID-ORDER-267 $Z(s) = \left(\infty,\ \infty,\ \infty,\ \frac{L_4 s}{C_4 L_4 s^2+1},\ \infty,\ \frac{1}{C_L s+\frac{1}{R_L}+\frac{1}{L_L s}}\right)$

$$H(s) = \frac{L_L R_L s \left(C_3 L_3 s^2+1\right)}{C_3 C_L L_3 L_L R_L s^4 + C_3 L_3 L_L s^3 + C_3 L_3 R_L s^2 + C_3 L_L R_L s^2 + C_L L_L R_L s^2 + L_L s + R_L}$$

10.268 INVALID-ORDER-268 $Z(s) = \left(\infty,\ \infty,\ \infty,\ \frac{L_4 s}{C_4 L_4 s^2+1},\ \infty,\ \frac{L_L s}{C_L L_L s^2+1} + R_L\right)$

$$H(s) = \frac{\left(C_3 L_3 s^2+1\right)\left(C_L L_L R_L s^2 + L_L s + R_L\right)}{C_3 C_L L_3 L_L s^4 + C_3 C_L L_L R_L s^3 + C_3 L_3 s^2 + C_3 L_L s^2 + C_3 R_L s + C_L L_L s^2 + 1}$$

10.269 INVALID-ORDER-269 $Z(s) = \left(\infty,\ \infty,\ \infty,\ \frac{L_4 s}{C_4 L_4 s^2+1},\ \infty,\ \frac{R_L\left(L_L s+\frac{1}{C_L s}\right)}{L_L s+R_L+\frac{1}{C_L s}}\right)$

$$H(s) = \frac{R_L \left(C_3 L_3 s^2+1\right)\left(C_L L_L s^2+1\right)}{C_3 C_L L_3 L_L s^4 + C_3 C_L L_3 R_L s^3 + C_3 C_L L_L R_L s^3 + C_3 L_3 s^2 + C_3 R_L s + C_L L_L s^2 + C_L R_L s + 1}$$

10.270 INVALID-ORDER-270 $Z(s) = \left(\infty,\ \infty,\ \infty,\ L_4 s + R_4 + \frac{1}{C_4 s},\ \infty,\ \frac{1}{C_L s}\right)$

$$H(s) = \frac{L_3 s}{C_3 L_3 s^2 + C_L L_3 s^2 + 1}$$

10.271 INVALID-ORDER-271 $Z(s) = \left(\infty,\ \infty,\ \infty,\ L_4 s + R_4 + \frac{1}{C_4 s},\ \infty,\ R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{L_3 s \left(C_L R_L s+1\right)}{C_3 C_L L_3 R_L s^3 + C_3 L_3 s^2 + C_L L_3 s^2 + C_L R_L s + 1}$$

10.272 INVALID-ORDER-272 $Z(s) = \left(\infty,\ \infty,\ \infty,\ L_4 s + R_4 + \frac{1}{C_4 s},\ \infty,\ L_L s + \frac{1}{C_L s}\right)$

$$H(s) = \frac{L_3 s \left(C_L L_L s^2 + 1\right)}{C_3 C_L L_3 L_L s^4 + C_3 L_3 s^2 + C_L L_3 s^2 + C_L L_L s^2 + 1}$$

10.273 INVALID-ORDER-273 $Z(s) = \left(\infty,\ \infty,\ \infty,\ L_4 s + R_4 + \frac{1}{C_4 s},\ \infty,\ \frac{L_L s}{C_L L_L s^2 + 1}\right)$

$$H(s) = \frac{L_3 L_L s}{C_3 L_3 L_L s^2 + C_L L_3 L_L s^2 + L_3 + L_L}$$

10.274 INVALID-ORDER-274 $Z(s) = \left(\infty,\ \infty,\ \infty,\ L_4 s + R_4 + \frac{1}{C_4 s},\ \infty,\ L_L s + R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{L_3 s \left(C_L L_L s^2 + C_L R_L s + 1\right)}{C_3 C_L L_3 L_L s^4 + C_3 C_L L_3 R_L s^3 + C_3 L_3 s^2 + C_L L_3 s^2 + C_L L_L s^2 + C_L R_L s + 1}$$

10.275 INVALID-ORDER-275 $Z(s) = \left(\infty,\ \infty,\ \infty,\ L_4 s + R_4 + \frac{1}{C_4 s},\ \infty,\ \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$

$$H(s) = \frac{L_3 s \left(C_L L_L R_L s^2 + L_L s + R_L\right)}{C_3 C_L L_3 L_L R_L s^4 + C_3 L_3 L_L s^3 + C_3 L_3 R_L s^2 + C_L L_3 L_L s^3 + C_L L_L R_L s^2 + L_3 s + L_L s + R_L}$$

10.276 INVALID-ORDER-276 $Z(s) = \left(\infty,\ \infty,\ \infty,\ L_4 s + R_4 + \frac{1}{C_4 s},\ \infty,\ \frac{R_L\left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$

$$H(s) = \frac{L_3 R_L s \left(C_L L_L s^2 + 1\right)}{C_3 C_L L_3 L_L R_L s^4 + C_3 L_3 R_L s^2 + C_L L_3 L_L s^3 + C_L L_3 R_L s^2 + C_L L_L R_L s^2 + L_3 s + R_L}$$

10.277 INVALID-ORDER-277 $Z(s) = \left(\infty,\ \infty,\ \infty,\ \frac{1}{C_4 s+\frac{1}{R_4}+\frac{1}{L_4 s}},\ \infty,\ \frac{1}{C_L s}\right)$

$$H(s) = \frac{C_3 L_3 s^2 + C_3 R_3 s + 1}{s\left(C_3 C_L L_3 s^2 + C_3 C_L R_3 s + C_3 + C_L\right)}$$

10.278 INVALID-ORDER-278 $Z(s) = \left(\infty,\ \infty,\ \infty,\ \frac{1}{C_4 s+\frac{1}{R_4}+\frac{1}{L_4 s}},\ \infty,\ \frac{R_L}{C_L R_L s+1}\right)$

$$H(s) = \frac{R_L\left(C_3 L_3 s^2 + C_3 R_3 s + 1\right)}{C_3 C_L L_3 R_L s^3 + C_3 C_L R_3 R_L s^2 + C_3 L_3 s^2 + C_3 R_3 s + C_3 R_L s + C_L R_L s + 1}$$

10.279 INVALID-ORDER-279 $Z(s) = \left(\infty,\ \infty,\ \infty,\ \frac{1}{C_4 s+\frac{1}{R_4}+\frac{1}{L_4 s}},\ \infty,\ R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{\left(C_L R_L s + 1\right)\left(C_3 L_3 s^2 + C_3 R_3 s + 1\right)}{s\left(C_3 C_L L_3 s^2 + C_3 C_L R_3 s + C_3 C_L R_L s + C_3 + C_L\right)}$$

10.280 INVALID-ORDER-280 $Z(s) = \left(\infty,\ \infty,\ \infty,\ \frac{1}{C_4 s+\frac{1}{R_4}+\frac{1}{L_4 s}},\ \infty,\ L_L s + \frac{1}{C_L s}\right)$

$$H(s) = \frac{\left(C_L L_L s^2 + 1\right)\left(C_3 L_3 s^2 + C_3 R_3 s + 1\right)}{s\left(C_3 C_L L_3 s^2 + C_3 C_L L_L s^2 + C_3 C_L R_3 s + C_3 + C_L\right)}$$

10.281 INVALID-ORDER-281 $Z(s) = \left(\infty,\ \infty,\ \infty,\ \frac{1}{C_4 s+\frac{1}{R_4}+\frac{1}{L_4 s}},\ \infty,\ \frac{L_L s}{C_L L_L s^2+1}\right)$

$$H(s) = \frac{L_L s\left(C_3 L_3 s^2 + C_3 R_3 s + 1\right)}{C_3 C_L L_3 L_L s^4 + C_3 C_L L_L R_3 s^3 + C_3 L_3 s^2 + C_3 L_L s^2 + C_3 R_3 s + C_L L_L s^2 + 1}$$

10.282 INVALID-ORDER-282 $Z(s) = \left(\infty,\ \infty,\ \infty,\ \frac{1}{C_4 s+\frac{1}{R_4}+\frac{1}{L_4 s}},\ \infty,\ L_L s + R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{\left(C_3 L_3 s^2 + C_3 R_3 s + 1\right)\left(C_L L_L s^2 + C_L R_L s + 1\right)}{s\left(C_3 C_L L_3 s^2 + C_3 C_L L_L s^2 + C_3 C_L R_3 s + C_3 C_L R_L s + C_3 + C_L\right)}$$

10.283 INVALID-ORDER-283 $Z(s) = \left(\infty,\ \infty,\ \infty,\ \frac{1}{C_4 s+\frac{1}{R_4}+\frac{1}{L_4 s}},\ \infty,\ \frac{1}{C_L s+\frac{1}{R_L}+\frac{1}{L_L s}}\right)$

$$H(s) = \frac{L_L R_L s\left(C_3 L_3 s^2 + C_3 R_3 s + 1\right)}{C_3 C_L L_3 L_L R_L s^4 + C_3 C_L L_L R_3 R_L s^3 + C_3 L_3 L_L s^3 + C_3 L_3 R_L s^2 + C_3 L_L R_3 s^2 + C_3 L_L R_L s^2 + C_3 R_3 R_L s + C_L L_L R_L s^2 + L_L s + R_L}$$

10.284 INVALID-ORDER-284 $Z(s) = \left(\infty,\ \infty,\ \infty,\ \frac{1}{C_4 s+\frac{1}{R_4}+\frac{1}{L_4 s}},\ \infty,\ \frac{L_L s}{C_L L_L s^2+1} + R_L\right)$

$$H(s) = \frac{\left(C_3 L_3 s^2 + C_3 R_3 s + 1\right)\left(C_L L_L R_L s^2 + L_L s + R_L\right)}{C_3 C_L L_3 L_L s^4 + C_3 C_L L_L R_3 s^3 + C_3 C_L L_L R_L s^3 + C_3 L_3 s^2 + C_3 L_L s^2 + C_3 R_3 s + C_3 R_L s + C_L L_L s^2 + 1}$$

10.285 INVALID-ORDER-285 $Z(s) = \left(\infty,\ \infty,\ \infty,\ \frac{1}{C_4 s+\frac{1}{R_4}+\frac{1}{L_4 s}},\ \infty,\ \frac{R_L\left(L_L s+\frac{1}{C_L s}\right)}{L_L s+R_L+\frac{1}{C_L s}}\right)$

$$H(s) = \frac{R_L\left(C_L L_L s^2 + 1\right)\left(C_3 L_3 s^2 + C_3 R_3 s + 1\right)}{C_3 C_L L_3 L_L s^4 + C_3 C_L L_3 R_L s^3 + C_3 C_L L_L R_3 s^3 + C_3 C_L L_L R_L s^3 + C_3 C_L R_3 R_L s^2 + C_3 L_3 s^2 + C_3 R_3 s + C_3 R_L s + C_L L_L s^2 + C_L R_L s + 1}$$

10.286 INVALID-ORDER-286 $Z(s) = \left(\infty,\ \infty,\ \infty,\ \frac{L_4 s}{C_4 L_4 s^2+1} + R_4,\ \infty,\ R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{L_3 R_3 s\left(C_L R_L s + 1\right)}{C_3 C_L L_3 R_3 R_L s^3 + C_3 L_3 R_3 s^2 + C_L L_3 R_3 s^2 + C_L L_3 R_L s^2 + C_L R_3 R_L s + L_3 s + R_3}$$

10.287 INVALID-ORDER-287 $Z(s) = \left(\infty,\ \infty,\ \infty,\ \frac{L_4 s}{C_4 L_4 s^2+1} + R_4,\ \infty,\ L_L s + \frac{1}{C_L s}\right)$

$$H(s) = \frac{L_3 R_3 s \left(C_L L_L s^2 + 1\right)}{C_3 C_L L_3 L_L R_3 s^4 + C_3 L_3 R_3 s^2 + C_L L_3 L_L s^3 + C_L L_3 R_3 s^2 + C_L L_L R_3 s^2 + L_3 s + R_3}$$

10.288 INVALID-ORDER-288 $Z(s) = \left(\infty,\ \infty,\ \infty,\ \frac{L_4 s}{C_4 L_4 s^2+1} + R_4,\ \infty,\ L_L s + R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{L_3 R_3 s \left(C_L L_L s^2 + C_L R_L s + 1\right)}{C_3 C_L L_3 L_L R_3 s^4 + C_3 C_L L_3 R_3 R_L s^3 + C_3 L_3 R_3 s^2 + C_L L_3 L_L s^3 + C_L L_3 R_3 s^2 + C_L L_3 R_L s^2 + C_L L_L R_3 s^2 + C_L R_3 R_L s + L_3 s + R_3}$$

10.289 INVALID-ORDER-289 $Z(s) = \left(\infty,\ \infty,\ \infty,\ \frac{L_4 s}{C_4 L_4 s^2+1} + R_4,\ \infty,\ \frac{L_L s}{C_L L_L s^2+1} + R_L\right)$

$$H(s) = \frac{L_3 R_3 s \left(C_L L_L R_L s^2 + L_L s + R_L\right)}{C_3 C_L L_3 L_L R_3 R_L s^4 + C_3 L_3 L_L R_3 s^3 + C_3 L_3 R_3 R_L s^2 + C_L L_3 L_L R_3 s^3 + C_L L_3 L_L R_L s^3 + C_L L_L R_3 R_L s^2 + L_3 L_L s^2 + L_3 R_3 s + L_3 R_L s + L_L R_3 s + R_3 R_L}$$

10.290 INVALID-ORDER-290 $Z(s) = \left(\infty,\ \infty,\ \infty,\ \frac{L_4 s}{C_4 L_4 s^2+1} + R_4,\ \infty,\ \frac{R_L\left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$

$$H(s) = \frac{L_3 R_3 R_L s \left(C_L L_L s^2 + 1\right)}{C_3 C_L L_3 L_L R_3 R_L s^4 + C_3 L_3 R_3 R_L s^2 + C_L L_3 L_L R_3 s^3 + C_L L_3 L_L R_L s^3 + C_L L_3 R_3 R_L s^2 + C_L L_L R_3 R_L s^2 + L_3 R_3 s + L_3 R_L s + R_3 R_L}$$

10.291 INVALID-ORDER-291 $Z(s) = \left(\infty,\ \infty,\ \infty,\ \frac{R_4\left(L_4 s + \frac{1}{C_4 s}\right)}{L_4 s + R_4 + \frac{1}{C_4 s}},\ \infty,\ \frac{1}{C_L s}\right)$

$$H(s) = \frac{C_3 L_3 R_3 s^2 + L_3 s + R_3}{C_3 C_L L_3 R_3 s^3 + C_3 L_3 s^2 + C_L L_3 s^2 + C_L R_3 s + 1}$$

10.292 INVALID-ORDER-292 $Z(s) = \left(\infty,\ \infty,\ \infty,\ \frac{R_4\left(L_4 s+\frac{1}{C_4 s}\right)}{L_4 s+R_4+\frac{1}{C_4 s}},\ \infty,\ \frac{R_L}{C_L R_L s+1}\right)$

$$H(s) = \frac{R_L\left(C_3 L_3 R_3 s^2 + L_3 s + R_3\right)}{C_3 C_L L_3 R_3 R_L s^3 + C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + C_L L_3 R_L s^2 + C_L R_3 R_L s + L_3 s + R_3 + R_L}$$

10.293 INVALID-ORDER-293 $Z(s) = \left(\infty,\ \infty,\ \infty,\ \frac{R_4\left(L_4 s+\frac{1}{C_4 s}\right)}{L_4 s+R_4+\frac{1}{C_4 s}},\ \infty,\ R_L+\frac{1}{C_L s}\right)$

$$H(s) = \frac{\left(C_L R_L s + 1\right)\left(C_3 L_3 R_3 s^2 + L_3 s + R_3\right)}{C_3 C_L L_3 R_3 s^3 + C_3 C_L L_3 R_L s^3 + C_3 L_3 s^2 + C_L L_3 s^2 + C_L R_3 s + C_L R_L s + 1}$$

10.294 INVALID-ORDER-294 $Z(s) = \left(\infty,\ \infty,\ \infty,\ \frac{R_4\left(L_4 s+\frac{1}{C_4 s}\right)}{L_4 s+R_4+\frac{1}{C_4 s}},\ \infty,\ L_L s+\frac{1}{C_L s}\right)$

$$H(s) = \frac{\left(C_L L_L s^2 + 1\right)\left(C_3 L_3 R_3 s^2 + L_3 s + R_3\right)}{C_3 C_L L_3 L_L s^4 + C_3 C_L L_3 R_3 s^3 + C_3 L_3 s^2 + C_L L_3 s^2 + C_L L_L s^2 + C_L R_3 s + 1}$$

10.295 INVALID-ORDER-295 $Z(s) = \left(\infty,\ \infty,\ \infty,\ \frac{R_4\left(L_4 s+\frac{1}{C_4 s}\right)}{L_4 s+R_4+\frac{1}{C_4 s}},\ \infty,\ \frac{L_L s}{C_L L_L s^2+1}\right)$

$$H(s) = \frac{L_L s\left(C_3 L_3 R_3 s^2 + L_3 s + R_3\right)}{C_3 C_L L_3 L_L R_3 s^4 + C_3 L_3 L_L s^3 + C_3 L_3 R_3 s^2 + C_L L_3 L_L s^3 + C_L L_L R_3 s^2 + L_3 s + L_L s + R_3}$$

10.296 INVALID-ORDER-296 $Z(s) = \left(\infty,\ \infty,\ \infty,\ \frac{R_4\left(L_4 s+\frac{1}{C_4 s}\right)}{L_4 s+R_4+\frac{1}{C_4 s}},\ \infty,\ L_L s+R_L+\frac{1}{C_L s}\right)$

$$H(s) = \frac{\left(C_L L_L s^2 + C_L R_L s + 1\right)\left(C_3 L_3 R_3 s^2 + L_3 s + R_3\right)}{C_3 C_L L_3 L_L s^4 + C_3 C_L L_3 R_3 s^3 + C_3 C_L L_3 R_L s^3 + C_3 L_3 s^2 + C_L L_3 s^2 + C_L L_L s^2 + C_L R_3 s + C_L R_L s + 1}$$

10.297 INVALID-ORDER-297 $Z(s) = \left(\infty,\ \infty,\ \infty,\ \frac{R_4\left(L_4 s+\frac{1}{C_4 s}\right)}{L_4 s+R_4+\frac{1}{C_4 s}},\ \infty,\ \frac{1}{C_L s+\frac{1}{R_L}+\frac{1}{L_L s}}\right)$

$$H(s) = \frac{L_L R_L s\left(C_3 L_3 R_3 s^2 + L_3 s + R_3\right)}{C_3 C_L L_3 L_L R_3 R_L s^4 + C_3 L_3 L_L R_3 s^3 + C_3 L_3 L_L R_L s^3 + C_3 L_3 R_3 R_L s^2 + C_L L_3 L_L R_L s^3 + C_L L_L R_3 R_L s^2 + L_3 L_L s^2 + L_3 R_L s + L_L R_3 s + L_L R_L s + R_3 R_L}$$

10.298 INVALID-ORDER-298 $Z(s) = \left(\infty,\ \infty,\ \infty,\ \frac{R_4\left(L_4 s+\frac{1}{C_4 s}\right)}{L_4 s+R_4+\frac{1}{C_4 s}},\ \infty,\ \frac{L_L s}{C_L L_L s^2+1} + R_L\right)$

$$H(s) = \frac{\left(C_3 L_3 R_3 s^2 + L_3 s + R_3\right)\left(C_L L_L R_L s^2 + L_L s + R_L\right)}{C_3 C_L L_3 L_L R_3 s^4 + C_3 C_L L_3 L_L R_L s^4 + C_3 L_3 L_L s^3 + C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + C_L L_3 L_L s^3 + C_L L_L R_3 s^2 + C_L L_L R_L s^2 + L_3 s + L_L s + R_3 + R_L}$$

10.299 INVALID-ORDER-299 $Z(s) = \left(\infty,\ \infty,\ \infty,\ \frac{R_4\left(L_4 s+\frac{1}{C_4 s}\right)}{L_4 s+R_4+\frac{1}{C_4 s}},\ \infty,\ \frac{R_L\left(L_L s+\frac{1}{C_L s}\right)}{L_L s+R_L+\frac{1}{C_L s}}\right)$

$$H(s) = \frac{R_L\left(C_L L_L s^2 + 1\right)\left(C_3 L_3 R_3 s^2 + L_3 s + R_3\right)}{C_3 C_L L_3 L_L R_3 s^4 + C_3 C_L L_3 L_L R_L s^4 + C_3 C_L L_3 R_3 R_L s^3 + C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + C_L L_3 L_L s^3 + C_L L_3 R_L s^2 + C_L L_L R_3 s^2 + C_L L_L R_L s^2 + C_L R_3 R_L s + L_3 s + R_3 + R_L}$$

10.300 INVALID-ORDER-300 $Z(s) = \left(\infty,\ \infty,\ \infty,\ \infty,\ R_4,\ \frac{1}{C_L s}\right)$

$$H(s) = \frac{R_3\left(C_3 L_3 s^2 + 1\right)}{C_3 C_L L_3 R_3 s^3 + C_3 L_3 s^2 + C_3 R_3 s + C_L R_3 s + 1}$$

10.301 INVALID-ORDER-301 $Z(s) = \left(\infty,\ \infty,\ \infty,\ \infty,\ R_4,\ \frac{R_L}{C_L R_L s+1}\right)$

$$H(s) = \frac{R_3 R_L\left(C_3 L_3 s^2 + 1\right)}{C_3 C_L L_3 R_3 R_L s^3 + C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + C_3 R_3 R_L s + C_L R_3 R_L s + R_3 + R_L}$$

10.302 INVALID-ORDER-302 $Z(s) = \left(\infty,\ \infty,\ \infty,\ \infty,\ R_4,\ R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{R_3\left(C_3 L_3 s^2 + 1\right)\left(C_L R_L s + 1\right)}{C_3 C_L L_3 R_3 s^3 + C_3 C_L L_3 R_L s^3 + C_3 C_L R_3 R_L s^2 + C_3 L_3 s^2 + C_3 R_3 s + C_L R_3 s + C_L R_L s + 1}$$

10.303 INVALID-ORDER-303 $Z(s) = \left(\infty,\ \infty,\ \infty,\ \infty,\ R_4,\ L_L s + \frac{1}{C_L s}\right)$

$$H(s) = \frac{R_3\left(C_3 L_3 s^2 + 1\right)\left(C_L L_L s^2 + 1\right)}{C_3 C_L L_3 L_L s^4 + C_3 C_L L_3 R_3 s^3 + C_3 C_L L_L R_3 s^3 + C_3 L_3 s^2 + C_3 R_3 s + C_L L_L s^2 + C_L R_3 s + 1}$$

10.304 INVALID-ORDER-304 $Z(s) = \left(\infty,\ \infty,\ \infty,\ \infty,\ R_4,\ \frac{L_L s}{C_L L_L s^2 + 1}\right)$

$$H(s) = \frac{L_L R_3 s\left(C_3 L_3 s^2 + 1\right)}{C_3 C_L L_3 L_L R_3 s^4 + C_3 L_3 L_L s^3 + C_3 L_3 R_3 s^2 + C_3 L_L R_3 s^2 + C_L L_L R_3 s^2 + L_L s + R_3}$$

10.305 INVALID-ORDER-305 $Z(s) = \left(\infty,\ \infty,\ \infty,\ \infty,\ R_4,\ L_L s + R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{R_3\left(C_3 L_3 s^2 + 1\right)\left(C_L L_L s^2 + C_L R_L s + 1\right)}{C_3 C_L L_3 L_L s^4 + C_3 C_L L_3 R_3 s^3 + C_3 C_L L_3 R_L s^3 + C_3 C_L L_L R_3 s^3 + C_3 C_L R_3 R_L s^2 + C_3 L_3 s^2 + C_3 R_3 s + C_L L_L s^2 + C_L R_3 s + C_L R_L s + 1}$$

10.306 INVALID-ORDER-306 $Z(s) = \left(\infty,\ \infty,\ \infty,\ \infty,\ R_4,\ \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$

$$H(s) = \frac{L_L R_3 R_L s\left(C_3 L_3 s^2 + 1\right)}{C_3 C_L L_3 L_L R_3 R_L s^4 + C_3 L_3 L_L R_3 s^3 + C_3 L_3 L_L R_L s^3 + C_3 L_3 R_3 R_L s^2 + C_3 L_L R_3 R_L s^2 + C_L L_L R_3 R_L s^2 + L_L R_3 s + L_L R_L s + R_3 R_L}$$

10.307 INVALID-ORDER-307 $Z(s) = \left(\infty,\ \infty,\ \infty,\ \infty,\ R_4,\ \frac{L_L s}{C_L L_L s^2+1} + R_L\right)$

$$H(s) = \frac{R_3 \left(C_3 L_3 s^2 + 1\right) \left(C_L L_L R_L s^2 + L_L s + R_L\right)}{C_3 C_L L_3 L_L R_3 s^4 + C_3 C_L L_3 L_L R_L s^4 + C_3 C_L L_L R_3 R_L s^3 + C_3 L_3 L_L s^3 + C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + C_3 L_L R_3 s^2 + C_3 R_3 R_L s + C_L L_L R_3 s^2 + C_L L_L R_L s^2 + L_L s + R_3 + R_L}$$

10.308 INVALID-ORDER-308 $Z(s) = \left(\infty,\ \infty,\ \infty,\ \infty,\ R_4,\ \frac{R_L\left(L_L s+\frac{1}{C_L s}\right)}{L_L s+R_L+\frac{1}{C_L s}}\right)$

$$H(s) = \frac{R_3 R_L \left(C_3 L_3 s^2 + 1\right) \left(C_L L_L s^2 + 1\right)}{C_3 C_L L_3 L_L R_3 s^4 + C_3 C_L L_3 L_L R_L s^4 + C_3 C_L L_3 R_3 R_L s^3 + C_3 C_L L_L R_3 R_L s^3 + C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + C_3 R_3 R_L s + C_L L_L R_3 s^2 + C_L L_L R_L s^2 + C_L R_3 R_L s + R_3 + R_L}$$

10.309 INVALID-ORDER-309 $Z(s) = \left(\infty,\ \infty,\ \infty,\ \infty,\ \frac{1}{C_4 s},\ R_L\right)$

$$H(s) = \frac{R_3 R_L}{R_3 + R_L}$$

10.310 INVALID-ORDER-310 $Z(s) = \left(\infty,\ \infty,\ \infty,\ \infty,\ \frac{1}{C_4 s},\ \frac{1}{C_L s}\right)$

$$H(s) = \frac{R_3}{C_L R_3 s + 1}$$

10.311 INVALID-ORDER-311 $Z(s) = \left(\infty,\ \infty,\ \infty,\ \infty,\ \frac{1}{C_4 s},\ \frac{R_L}{C_L R_L s+1}\right)$

$$H(s) = \frac{R_3 R_L}{C_L R_3 R_L s + R_3 + R_L}$$

10.312 INVALID-ORDER-312 $Z(s) = \left(\infty,\ \infty,\ \infty,\ \infty,\ \frac{1}{C_4 s},\ R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{R_3 \left(C_L R_L s + 1\right)}{C_L R_3 s + C_L R_L s + 1}$$

10.313 INVALID-ORDER-313 $Z(s) = \left(\infty,\ \infty,\ \infty,\ \infty,\ \frac{R_4}{C_4 R_4 s+1},\ R_L\right)$

$$H(s) = \frac{R_L}{C_3 R_L s + 1}$$

10.314 INVALID-ORDER-314 $Z(s) = \left(\infty,\ \infty,\ \infty,\ \infty,\ \frac{R_4}{C_4 R_4 s+1},\ \frac{1}{C_L s}\right)$

$$H(s) = \frac{1}{s\left(C_3 + C_L\right)}$$

10.315 INVALID-ORDER-315 $Z(s) = \left(\infty,\ \infty,\ \infty,\ \infty,\ \frac{R_4}{C_4 R_4 s+1},\ \frac{R_L}{C_L R_L s+1}\right)$

$$H(s) = \frac{R_L}{C_3 R_L s + C_L R_L s + 1}$$

10.316 INVALID-ORDER-316 $Z(s) = \left(\infty,\ \infty,\ \infty,\ \infty,\ \frac{R_4}{C_4 R_4 s+1},\ R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{C_L R_L s + 1}{s\left(C_3 C_L R_L s + C_3 + C_L\right)}$$

10.317 INVALID-ORDER-317 $Z(s) = \left(\infty,\ \infty,\ \infty,\ \infty,\ \frac{R_4}{C_4 R_4 s+1},\ L_L s + \frac{1}{C_L s}\right)$

$$H(s) = \frac{C_L L_L s^2 + 1}{s\left(C_3 C_L L_L s^2 + C_3 + C_L\right)}$$

10.318 INVALID-ORDER-318 $Z(s) = \left(\infty,\ \infty,\ \infty,\ \infty,\ \frac{R_4}{C_4 R_4 s+1},\ \frac{L_L s}{C_L L_L s^2+1}\right)$

$$H(s) = \frac{L_L s}{C_3 L_L s^2 + C_L L_L s^2 + 1}$$

10.319 INVALID-ORDER-319 $Z(s) = \left(\infty,\ \infty,\ \infty,\ \infty,\ \frac{R_4}{C_4 R_4 s+1},\ L_L s + R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{C_L L_L s^2 + C_L R_L s + 1}{s\left(C_3 C_L L_L s^2 + C_3 C_L R_L s + C_3 + C_L\right)}$$

10.320 INVALID-ORDER-320 $Z(s) = \left(\infty,\ \infty,\ \infty,\ \infty,\ \frac{R_4}{C_4 R_4 s+1},\ \frac{L_L s}{C_L L_L s^2+1} + R_L\right)$

$$H(s) = \frac{C_L L_L R_L s^2 + L_L s + R_L}{C_3 C_L L_L R_L s^3 + C_3 L_L s^2 + C_3 R_L s + C_L L_L s^2 + 1}$$

10.321 INVALID-ORDER-321 $Z(s) = \left(\infty,\ \infty,\ \infty,\ \infty,\ \frac{R_4}{C_4 R_4 s+1},\ \frac{R_L\left(L_L s+\frac{1}{C_L s}\right)}{L_L s+R_L+\frac{1}{C_L s}}\right)$

$$H(s) = \frac{R_L\left(C_L L_L s^2 + 1\right)}{C_3 C_L L_L R_L s^3 + C_3 R_L s + C_L L_L s^2 + C_L R_L s + 1}$$

10.322 INVALID-ORDER-322 $Z(s) = \left(\infty,\ \infty,\ \infty,\ \infty,\ R_4 + \frac{1}{C_4 s},\ R_L\right)$

$$H(s) = \frac{R_3 R_L}{C_3 R_3 R_L s + R_3 + R_L}$$

10.323 INVALID-ORDER-323 $Z(s) = \left(\infty,\ \infty,\ \infty,\ \infty,\ R_4 + \frac{1}{C_4 s},\ \frac{1}{C_L s}\right)$

$$H(s) = \frac{R_3}{C_3 R_3 s + C_L R_3 s + 1}$$

10.324 INVALID-ORDER-324 $Z(s) = \left(\infty,\ \infty,\ \infty,\ \infty,\ R_4 + \frac{1}{C_4 s},\ \frac{R_L}{C_L R_L s+1}\right)$

$$H(s) = \frac{R_3 R_L}{C_3 R_3 R_L s + C_L R_3 R_L s + R_3 + R_L}$$

10.325 INVALID-ORDER-325 $Z(s) = \left(\infty,\ \infty,\ \infty,\ \infty,\ R_4 + \frac{1}{C_4 s},\ L_L s + \frac{1}{C_L s}\right)$

$$H(s) = \frac{R_3\left(C_L L_L s^2 + 1\right)}{C_3 C_L L_L R_3 s^3 + C_3 R_3 s + C_L L_L s^2 + C_L R_3 s + 1}$$

10.326 INVALID-ORDER-326 $Z(s) = \left(\infty,\ \infty,\ \infty,\ \infty,\ R_4 + \frac{1}{C_4 s},\ L_L s + R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{R_3\left(C_L L_L s^2 + C_L R_L s + 1\right)}{C_3 C_L L_L R_3 s^3 + C_3 C_L R_3 R_L s^2 + C_3 R_3 s + C_L L_L s^2 + C_L R_3 s + C_L R_L s + 1}$$

10.327 INVALID-ORDER-327 $Z(s) = \left(\infty,\ \infty,\ \infty,\ \infty,\ R_4 + \frac{1}{C_4 s},\ \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$

$$H(s) = \frac{R_3\left(C_L L_L R_L s^2 + L_L s + R_L\right)}{C_3 C_L L_L R_3 R_L s^3 + C_3 L_L R_3 s^2 + C_3 R_3 R_L s + C_L L_L R_3 s^2 + C_L L_L R_L s^2 + L_L s + R_3 + R_L}$$

10.328 INVALID-ORDER-328 $Z(s) = \left(\infty,\ \infty,\ \infty,\ \infty,\ R_4 + \frac{1}{C_4 s},\ \frac{R_L\left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$

$$H(s) = \frac{R_3 R_L\left(C_L L_L s^2 + 1\right)}{C_3 C_L L_L R_3 R_L s^3 + C_3 R_3 R_L s + C_L L_L R_3 s^2 + C_L L_L R_L s^2 + C_L R_3 R_L s + R_3 + R_L}$$

10.329 INVALID-ORDER-329 $Z(s) = \left(\infty,\ \infty,\ \infty,\ \infty,\ L_4 s + \frac{1}{C_4 s},\ R_L\right)$

$$H(s) = \frac{R_L\left(C_3 R_3 s + 1\right)}{C_3 R_3 s + C_3 R_L s + 1}$$

10.330 INVALID-ORDER-330 $Z(s) = \left(\infty,\ \infty,\ \infty,\ \infty,\ L_4 s + \frac{1}{C_4 s},\ \frac{1}{C_L s}\right)$

$$H(s) = \frac{C_3 R_3 s + 1}{s\left(C_3 C_L R_3 s + C_3 + C_L\right)}$$

10.331 INVALID-ORDER-331 $Z(s) = \left(\infty,\ \infty,\ \infty,\ \infty,\ L_4 s + \frac{1}{C_4 s},\ R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{\left(C_3 R_3 s + 1\right)\left(C_L R_L s + 1\right)}{s\left(C_3 C_L R_3 s + C_3 C_L R_L s + C_3 + C_L\right)}$$

10.332 INVALID-ORDER-332 $Z(s) = \left(\infty,\ \infty,\ \infty,\ \infty,\ L_4 s + \frac{1}{C_4 s},\ L_L s + \frac{1}{C_L s}\right)$

$$H(s) = \frac{\left(C_3 R_3 s + 1\right)\left(C_L L_L s^2 + 1\right)}{s\left(C_3 C_L L_L s^2 + C_3 C_L R_3 s + C_3 + C_L\right)}$$

10.333 INVALID-ORDER-333 $Z(s) = \left(\infty,\ \infty,\ \infty,\ \infty,\ L_4 s + \frac{1}{C_4 s},\ \frac{L_L s}{C_L L_L s^2 + 1}\right)$

$$H(s) = \frac{L_L s\left(C_3 R_3 s + 1\right)}{C_3 C_L L_L R_3 s^3 + C_3 L_L s^2 + C_3 R_3 s + C_L L_L s^2 + 1}$$

10.334 INVALID-ORDER-334 $Z(s) = \left(\infty,\ \infty,\ \infty,\ \infty,\ L_4 s + \frac{1}{C_4 s},\ L_L s + R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{\left(C_3 R_3 s + 1\right)\left(C_L L_L s^2 + C_L R_L s + 1\right)}{s\left(C_3 C_L L_L s^2 + C_3 C_L R_3 s + C_3 C_L R_L s + C_3 + C_L\right)}$$

10.335 INVALID-ORDER-335 $Z(s) = \left(\infty,\ \infty,\ \infty,\ \infty,\ L_4 s + \frac{1}{C_4 s},\ \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$

$$H(s) = \frac{L_L R_L s\left(C_3 R_3 s + 1\right)}{C_3 C_L L_L R_3 R_L s^3 + C_3 L_L R_3 s^2 + C_3 L_L R_L s^2 + C_3 R_3 R_L s + C_L L_L R_L s^2 + L_L s + R_L}$$

10.336 INVALID-ORDER-336 $Z(s) = \left(\infty,\ \infty,\ \infty,\ \infty,\ L_4 s + \frac{1}{C_4 s},\ \frac{L_L s}{C_L L_L s^2+1} + R_L\right)$

$$H(s) = \frac{(C_3 R_3 s + 1)\left(C_L L_L R_L s^2 + L_L s + R_L\right)}{C_3 C_L L_L R_3 s^3 + C_3 C_L L_L R_L s^3 + C_3 L_L s^2 + C_3 R_3 s + C_3 R_L s + C_L L_L s^2 + 1}$$

10.337 INVALID-ORDER-337 $Z(s) = \left(\infty,\ \infty,\ \infty,\ \infty,\ L_4 s + \frac{1}{C_4 s},\ \frac{R_L\left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$

$$H(s) = \frac{R_L\left(C_3 R_3 s + 1\right)\left(C_L L_L s^2 + 1\right)}{C_3 C_L L_L R_3 s^3 + C_3 C_L L_L R_L s^3 + C_3 C_L R_3 R_L s^2 + C_3 R_3 s + C_3 R_L s + C_L L_L s^2 + C_L R_L s + 1}$$

10.338 INVALID-ORDER-338 $Z(s) = \left(\infty,\ \infty,\ \infty,\ \infty,\ \frac{L_4 s}{C_4 L_4 s^2+1},\ \frac{1}{C_L s}\right)$

$$H(s) = \frac{C_3 L_3 s^2 + 1}{s\left(C_3 C_L L_3 s^2 + C_3 + C_L\right)}$$

10.339 INVALID-ORDER-339 $Z(s) = \left(\infty,\ \infty,\ \infty,\ \infty,\ \frac{L_4 s}{C_4 L_4 s^2+1},\ \frac{R_L}{C_L R_L s+1}\right)$

$$H(s) = \frac{R_L\left(C_3 L_3 s^2 + 1\right)}{C_3 C_L L_3 R_L s^3 + C_3 L_3 s^2 + C_3 R_L s + C_L R_L s + 1}$$

10.340 INVALID-ORDER-340 $Z(s) = \left(\infty,\ \infty,\ \infty,\ \infty,\ \frac{L_4 s}{C_4 L_4 s^2+1},\ R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{\left(C_3 L_3 s^2 + 1\right)\left(C_L R_L s + 1\right)}{s\left(C_3 C_L L_3 s^2 + C_3 C_L R_L s + C_3 + C_L\right)}$$

10.341 INVALID-ORDER-341 $Z(s) = \left(\infty,\ \infty,\ \infty,\ \infty,\ \frac{L_4 s}{C_4 L_4 s^2+1},\ L_L s + \frac{1}{C_L s}\right)$

$$H(s) = \frac{\left(C_3 L_3 s^2 + 1\right)\left(C_L L_L s^2 + 1\right)}{s\left(C_3 C_L L_3 s^2 + C_3 C_L L_L s^2 + C_3 + C_L\right)}$$

10.342 INVALID-ORDER-342 $Z(s) = \left(\infty,\ \infty,\ \infty,\ \infty,\ \frac{L_4 s}{C_4 L_4 s^2+1},\ \frac{L_L s}{C_L L_L s^2+1}\right)$

$$H(s) = \frac{L_L s\left(C_3 L_3 s^2 + 1\right)}{C_3 C_L L_3 L_L s^4 + C_3 L_3 s^2 + C_3 L_L s^2 + C_L L_L s^2 + 1}$$

10.343 INVALID-ORDER-343 $Z(s) = \left(\infty,\ \infty,\ \infty,\ \infty,\ \frac{L_4 s}{C_4 L_4 s^2+1},\ L_L s + R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{\left(C_3 L_3 s^2 + 1\right)\left(C_L L_L s^2 + C_L R_L s + 1\right)}{s\left(C_3 C_L L_3 s^2 + C_3 C_L L_L s^2 + C_3 C_L R_L s + C_3 + C_L\right)}$$

10.344 INVALID-ORDER-344 $Z(s) = \left(\infty,\ \infty,\ \infty,\ \infty,\ \frac{L_4 s}{C_4 L_4 s^2+1},\ \frac{1}{C_L s+\frac{1}{R_L}+\frac{1}{L_L s}}\right)$

$$H(s) = \frac{L_L R_L s\left(C_3 L_3 s^2 + 1\right)}{C_3 C_L L_3 L_L R_L s^4 + C_3 L_3 L_L s^3 + C_3 L_3 R_L s^2 + C_3 L_L R_L s^2 + C_L L_L R_L s^2 + L_L s + R_L}$$

10.345 INVALID-ORDER-345 $Z(s) = \left(\infty,\ \infty,\ \infty,\ \infty,\ \frac{L_4 s}{C_4 L_4 s^2+1},\ \frac{L_L s}{C_L L_L s^2+1} + R_L\right)$

$$H(s) = \frac{\left(C_3 L_3 s^2 + 1\right)\left(C_L L_L R_L s^2 + L_L s + R_L\right)}{C_3 C_L L_3 L_L s^4 + C_3 C_L L_L R_L s^3 + C_3 L_3 s^2 + C_3 L_L s^2 + C_3 R_L s + C_L L_L s^2 + 1}$$

10.346 INVALID-ORDER-346 $Z(s) = \left(\infty,\ \infty,\ \infty,\ \infty,\ \frac{L_4 s}{C_4 L_4 s^2+1},\ \frac{R_L\left(L_L s+\frac{1}{C_L s}\right)}{L_L s+R_L+\frac{1}{C_L s}}\right)$

$$H(s) = \frac{R_L\left(C_3 L_3 s^2+1\right)\left(C_L L_L s^2+1\right)}{C_3 C_L L_3 L_L s^4 + C_3 C_L L_3 R_L s^3 + C_3 C_L L_L R_L s^3 + C_3 L_3 s^2 + C_3 R_L s + C_L L_L s^2 + C_L R_L s + 1}$$

10.347 INVALID-ORDER-347 $Z(s) = \left(\infty,\ \infty,\ \infty,\ \infty,\ L_4 s + R_4 + \frac{1}{C_4 s},\ \frac{1}{C_L s}\right)$

$$H(s) = \frac{L_3 s}{C_3 L_3 s^2 + C_L L_3 s^2 + 1}$$

10.348 INVALID-ORDER-348 $Z(s) = \left(\infty,\ \infty,\ \infty,\ \infty,\ L_4 s + R_4 + \frac{1}{C_4 s},\ R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{L_3 s\left(C_L R_L s+1\right)}{C_3 C_L L_3 R_L s^3 + C_3 L_3 s^2 + C_L L_3 s^2 + C_L R_L s + 1}$$

10.349 INVALID-ORDER-349 $Z(s) = \left(\infty,\ \infty,\ \infty,\ \infty,\ L_4 s + R_4 + \frac{1}{C_4 s},\ L_L s + \frac{1}{C_L s}\right)$

$$H(s) = \frac{L_3 s\left(C_L L_L s^2+1\right)}{C_3 C_L L_3 L_L s^4 + C_3 L_3 s^2 + C_L L_3 s^2 + C_L L_L s^2 + 1}$$

10.350 INVALID-ORDER-350 $Z(s) = \left(\infty,\ \infty,\ \infty,\ \infty,\ L_4 s + R_4 + \frac{1}{C_4 s},\ \frac{L_L s}{C_L L_L s^2+1}\right)$

$$H(s) = \frac{L_3 L_L s}{C_3 L_3 L_L s^2 + C_L L_3 L_L s^2 + L_3 + L_L}$$

10.351 INVALID-ORDER-351 $Z(s) = \left(\infty,\ \infty,\ \infty,\ \infty,\ L_4 s + R_4 + \frac{1}{C_4 s},\ L_L s + R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{L_3 s\left(C_L L_L s^2 + C_L R_L s+1\right)}{C_3 C_L L_3 L_L s^4 + C_3 C_L L_3 R_L s^3 + C_3 L_3 s^2 + C_L L_3 s^2 + C_L L_L s^2 + C_L R_L s + 1}$$

10.352 INVALID-ORDER-352 $Z(s) = \left(\infty,\ \infty,\ \infty,\ \infty,\ L_4 s + R_4 + \frac{1}{C_4 s},\ \frac{L_L s}{C_L L_L s^2+1} + R_L\right)$

$$H(s) = \frac{L_3 s \left(C_L L_L R_L s^2 + L_L s + R_L\right)}{C_3 C_L L_3 L_L R_L s^4 + C_3 L_3 L_L s^3 + C_3 L_3 R_L s^2 + C_L L_3 L_L s^3 + C_L L_L R_L s^2 + L_3 s + L_L s + R_L}$$

10.353 INVALID-ORDER-353 $Z(s) = \left(\infty,\ \infty,\ \infty,\ \infty,\ L_4 s + R_4 + \frac{1}{C_4 s},\ \frac{R_L\left(L_L s+\frac{1}{C_L s}\right)}{L_L s+R_L+\frac{1}{C_L s}}\right)$

$$H(s) = \frac{L_3 R_L s \left(C_L L_L s^2 + 1\right)}{C_3 C_L L_3 L_L R_L s^4 + C_3 L_3 R_L s^2 + C_L L_3 L_L s^3 + C_L L_3 R_L s^2 + C_L L_L R_L s^2 + L_3 s + R_L}$$

10.354 INVALID-ORDER-354 $Z(s) = \left(\infty,\ \infty,\ \infty,\ \infty,\ \frac{1}{C_4 s+\frac{1}{R_4}+\frac{1}{L_4 s}},\ \frac{1}{C_L s}\right)$

$$H(s) = \frac{C_3 L_3 s^2 + C_3 R_3 s + 1}{s\left(C_3 C_L L_3 s^2 + C_3 C_L R_3 s + C_3 + C_L\right)}$$

10.355 INVALID-ORDER-355 $Z(s) = \left(\infty,\ \infty,\ \infty,\ \infty,\ \frac{1}{C_4 s+\frac{1}{R_4}+\frac{1}{L_4 s}},\ \frac{R_L}{C_L R_L s+1}\right)$

$$H(s) = \frac{R_L \left(C_3 L_3 s^2 + C_3 R_3 s + 1\right)}{C_3 C_L L_3 R_L s^3 + C_3 C_L R_3 R_L s^2 + C_3 L_3 s^2 + C_3 R_3 s + C_3 R_L s + C_L R_L s + 1}$$

10.356 INVALID-ORDER-356 $Z(s) = \left(\infty,\ \infty,\ \infty,\ \infty,\ \frac{1}{C_4 s+\frac{1}{R_4}+\frac{1}{L_4 s}},\ R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{\left(C_L R_L s + 1\right)\left(C_3 L_3 s^2 + C_3 R_3 s + 1\right)}{s\left(C_3 C_L L_3 s^2 + C_3 C_L R_3 s + C_3 C_L R_L s + C_3 + C_L\right)}$$

10.357 INVALID-ORDER-357 $Z(s) = \left(\infty,\ \infty,\ \infty,\ \infty,\ \frac{1}{C_4 s + \frac{1}{R_4} + \frac{1}{L_4 s}},\ L_L s + \frac{1}{C_L s}\right)$

$$H(s) = \frac{\left(C_L L_L s^2 + 1\right)\left(C_3 L_3 s^2 + C_3 R_3 s + 1\right)}{s\left(C_3 C_L L_3 s^2 + C_3 C_L L_L s^2 + C_3 C_L R_3 s + C_3 + C_L\right)}$$

10.358 INVALID-ORDER-358 $Z(s) = \left(\infty,\ \infty,\ \infty,\ \infty,\ \frac{1}{C_4 s + \frac{1}{R_4} + \frac{1}{L_4 s}},\ \frac{L_L s}{C_L L_L s^2 + 1}\right)$

$$H(s) = \frac{L_L s\left(C_3 L_3 s^2 + C_3 R_3 s + 1\right)}{C_3 C_L L_3 L_L s^4 + C_3 C_L L_L R_3 s^3 + C_3 L_3 s^2 + C_3 L_L s^2 + C_3 R_3 s + C_L L_L s^2 + 1}$$

10.359 INVALID-ORDER-359 $Z(s) = \left(\infty,\ \infty,\ \infty,\ \infty,\ \frac{1}{C_4 s + \frac{1}{R_4} + \frac{1}{L_4 s}},\ L_L s + R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{\left(C_3 L_3 s^2 + C_3 R_3 s + 1\right)\left(C_L L_L s^2 + C_L R_L s + 1\right)}{s\left(C_3 C_L L_3 s^2 + C_3 C_L L_L s^2 + C_3 C_L R_3 s + C_3 C_L R_L s + C_3 + C_L\right)}$$

10.360 INVALID-ORDER-360 $Z(s) = \left(\infty,\ \infty,\ \infty,\ \infty,\ \frac{1}{C_4 s + \frac{1}{R_4} + \frac{1}{L_4 s}},\ \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$

$$H(s) = \frac{L_L R_L s\left(C_3 L_3 s^2 + C_3 R_3 s + 1\right)}{C_3 C_L L_3 L_L R_L s^4 + C_3 C_L L_L R_3 R_L s^3 + C_3 L_3 L_L s^3 + C_3 L_3 R_L s^2 + C_3 L_L R_3 s^2 + C_3 L_L R_L s^2 + C_3 R_3 R_L s + C_L L_L R_L s^2 + L_L s + R_L}$$

10.361 INVALID-ORDER-361 $Z(s) = \left(\infty,\ \infty,\ \infty,\ \infty,\ \frac{1}{C_4 s + \frac{1}{R_4} + \frac{1}{L_4 s}},\ \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$

$$H(s) = \frac{\left(C_3 L_3 s^2 + C_3 R_3 s + 1\right)\left(C_L L_L R_L s^2 + L_L s + R_L\right)}{C_3 C_L L_3 L_L s^4 + C_3 C_L L_L R_3 s^3 + C_3 C_L L_L R_L s^3 + C_3 L_3 s^2 + C_3 L_L s^2 + C_3 R_3 s + C_3 R_L s + C_L L_L s^2 + 1}$$

10.362 INVALID-ORDER-362 $Z(s) = \left(\infty,\ \infty,\ \infty,\ \infty,\ \frac{1}{C_4 s+\frac{1}{R_4}+\frac{1}{L_4 s}},\ \frac{R_L\left(L_L s+\frac{1}{C_L s}\right)}{L_L s+R_L+\frac{1}{C_L s}}\right)$

$$H(s) = \frac{R_L\left(C_L L_L s^2+1\right)\left(C_3 L_3 s^2+C_3 R_3 s+1\right)}{C_3 C_L L_3 L_L s^4+C_3 C_L L_3 R_L s^3+C_3 C_L L_L R_3 s^3+C_3 C_L L_L R_L s^3+C_3 C_L R_3 R_L s^2+C_3 L_3 s^2+C_3 R_3 s+C_3 R_L s+C_L L_L s^2+C_L R_L s+1}$$

10.363 INVALID-ORDER-363 $Z(s) = \left(\infty,\ \infty,\ \infty,\ \infty,\ \frac{L_4 s}{C_4 L_4 s^2+1}+R_4,\ R_L+\frac{1}{C_L s}\right)$

$$H(s) = \frac{L_3 R_3 s\left(C_L R_L s+1\right)}{C_3 C_L L_3 R_3 R_L s^3+C_3 L_3 R_3 s^2+C_L L_3 R_3 s^2+C_L L_3 R_L s^2+C_L R_3 R_L s+L_3 s+R_3}$$

10.364 INVALID-ORDER-364 $Z(s) = \left(\infty,\ \infty,\ \infty,\ \infty,\ \frac{L_4 s}{C_4 L_4 s^2+1}+R_4,\ L_L s+\frac{1}{C_L s}\right)$

$$H(s) = \frac{L_3 R_3 s\left(C_L L_L s^2+1\right)}{C_3 C_L L_3 L_L R_3 s^4+C_3 L_3 R_3 s^2+C_L L_3 L_L s^3+C_L L_3 R_3 s^2+C_L L_L R_3 s^2+L_3 s+R_3}$$

10.365 INVALID-ORDER-365 $Z(s) = \left(\infty,\ \infty,\ \infty,\ \infty,\ \frac{L_4 s}{C_4 L_4 s^2+1}+R_4,\ L_L s+R_L+\frac{1}{C_L s}\right)$

$$H(s) = \frac{L_3 R_3 s\left(C_L L_L s^2+C_L R_L s+1\right)}{C_3 C_L L_3 L_L R_3 s^4+C_3 C_L L_3 R_3 R_L s^3+C_3 L_3 R_3 s^2+C_L L_3 L_L s^3+C_L L_3 R_3 s^2+C_L L_3 R_L s^2+C_L L_L R_3 s^2+C_L R_3 R_L s+L_3 s+R_3}$$

10.366 INVALID-ORDER-366 $Z(s) = \left(\infty,\ \infty,\ \infty,\ \infty,\ \frac{L_4 s}{C_4 L_4 s^2+1}+R_4,\ \frac{L_L s}{C_L L_L s^2+1}+R_L\right)$

$$H(s) = \frac{L_3 R_3 s\left(C_L L_L R_L s^2+L_L s+R_L\right)}{C_3 C_L L_3 L_L R_3 R_L s^4+C_3 L_3 L_L R_3 s^3+C_3 L_3 R_3 R_L s^2+C_L L_3 L_L R_3 s^3+C_L L_3 L_L R_L s^3+C_L L_L R_3 R_L s^2+L_3 L_L s^2+L_3 R_3 s+L_3 R_L s+L_L R_3 s+R_3 R_L}$$

10.367 INVALID-ORDER-367 $Z(s) = \left(\infty,\ \infty,\ \infty,\ \infty,\ \frac{L_4 s}{C_4 L_4 s^2+1} + R_4,\ \frac{R_L\left(L_L s+\frac{1}{C_L s}\right)}{L_L s+R_L+\frac{1}{C_L s}}\right)$

$$H(s) = \frac{L_3 R_3 R_L s\left(C_L L_L s^2+1\right)}{C_3 C_L L_3 L_L R_3 R_L s^4 + C_3 L_3 R_3 R_L s^2 + C_L L_3 L_L R_3 s^3 + C_L L_3 L_L R_L s^3 + C_L L_3 R_3 R_L s^2 + C_L L_L R_3 R_L s^2 + L_3 R_3 s + L_3 R_L s + R_3 R_L}$$

10.368 INVALID-ORDER-368 $Z(s) = \left(\infty,\ \infty,\ \infty,\ \infty,\ \frac{R_4\left(L_4 s+\frac{1}{C_4 s}\right)}{L_4 s+R_4+\frac{1}{C_4 s}},\ \frac{1}{C_L s}\right)$

$$H(s) = \frac{C_3 L_3 R_3 s^2 + L_3 s + R_3}{C_3 C_L L_3 R_3 s^3 + C_3 L_3 s^2 + C_L L_3 s^2 + C_L R_3 s + 1}$$

10.369 INVALID-ORDER-369 $Z(s) = \left(\infty,\ \infty,\ \infty,\ \infty,\ \frac{R_4\left(L_4 s+\frac{1}{C_4 s}\right)}{L_4 s+R_4+\frac{1}{C_4 s}},\ \frac{R_L}{C_L R_L s+1}\right)$

$$H(s) = \frac{R_L\left(C_3 L_3 R_3 s^2 + L_3 s + R_3\right)}{C_3 C_L L_3 R_3 R_L s^3 + C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + C_L L_3 R_L s^2 + C_L R_3 R_L s + L_3 s + R_3 + R_L}$$

10.370 INVALID-ORDER-370 $Z(s) = \left(\infty,\ \infty,\ \infty,\ \infty,\ \frac{R_4\left(L_4 s+\frac{1}{C_4 s}\right)}{L_4 s+R_4+\frac{1}{C_4 s}},\ R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{\left(C_L R_L s+1\right)\left(C_3 L_3 R_3 s^2 + L_3 s + R_3\right)}{C_3 C_L L_3 R_3 s^3 + C_3 C_L L_3 R_L s^3 + C_3 L_3 s^2 + C_L L_3 s^2 + C_L R_3 s + C_L R_L s + 1}$$

10.371 INVALID-ORDER-371 $Z(s) = \left(\infty,\ \infty,\ \infty,\ \infty,\ \frac{R_4\left(L_4 s+\frac{1}{C_4 s}\right)}{L_4 s+R_4+\frac{1}{C_4 s}},\ L_L s + \frac{1}{C_L s}\right)$

$$H(s) = \frac{\left(C_L L_L s^2+1\right)\left(C_3 L_3 R_3 s^2 + L_3 s + R_3\right)}{C_3 C_L L_3 L_L s^4 + C_3 C_L L_3 R_3 s^3 + C_3 L_3 s^2 + C_L L_3 s^2 + C_L L_L s^2 + C_L R_3 s + 1}$$

10.372 INVALID-ORDER-372 $Z(s) = \left(\infty,\ \infty,\ \infty,\ \infty,\ \frac{R_4\left(L_4 s+\frac{1}{C_4 s}\right)}{L_4 s+R_4+\frac{1}{C_4 s}},\ \frac{L_L s}{C_L L_L s^2+1}\right)$

$$H(s) = \frac{L_L s\left(C_3 L_3 R_3 s^2 + L_3 s + R_3\right)}{C_3 C_L L_3 L_L R_3 s^4 + C_3 L_3 L_L s^3 + C_3 L_3 R_3 s^2 + C_L L_3 L_L s^3 + C_L L_L R_3 s^2 + L_3 s + L_L s + R_3}$$

10.373 INVALID-ORDER-373 $Z(s) = \left(\infty,\ \infty,\ \infty,\ \infty,\ \frac{R_4\left(L_4 s+\frac{1}{C_4 s}\right)}{L_4 s+R_4+\frac{1}{C_4 s}},\ L_L s + R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{\left(C_L L_L s^2 + C_L R_L s + 1\right)\left(C_3 L_3 R_3 s^2 + L_3 s + R_3\right)}{C_3 C_L L_3 L_L s^4 + C_3 C_L L_3 R_3 s^3 + C_3 C_L L_3 R_L s^3 + C_3 L_3 s^2 + C_L L_3 s^2 + C_L L_L s^2 + C_L R_3 s + C_L R_L s + 1}$$

10.374 INVALID-ORDER-374 $Z(s) = \left(\infty,\ \infty,\ \infty,\ \infty,\ \frac{R_4\left(L_4 s+\frac{1}{C_4 s}\right)}{L_4 s+R_4+\frac{1}{C_4 s}},\ \frac{1}{C_L s+\frac{1}{R_L}+\frac{1}{L_L s}}\right)$

$$H(s) = \frac{L_L R_L s\left(C_3 L_3 R_3 s^2 + L_3 s + R_3\right)}{C_3 C_L L_3 L_L R_3 R_L s^4 + C_3 L_3 L_L R_3 s^3 + C_3 L_3 L_L R_L s^3 + C_3 L_3 R_3 R_L s^2 + C_L L_3 L_L R_L s^3 + C_L L_L R_3 R_L s^2 + L_3 L_L s^2 + L_3 R_L s + L_L R_3 s + L_L R_L s + R_3 R_L}$$

10.375 INVALID-ORDER-375 $Z(s) = \left(\infty,\ \infty,\ \infty,\ \infty,\ \frac{R_4\left(L_4 s+\frac{1}{C_4 s}\right)}{L_4 s+R_4+\frac{1}{C_4 s}},\ \frac{L_L s}{C_L L_L s^2+1} + R_L\right)$

$$H(s) = \frac{\left(C_3 L_3 R_3 s^2 + L_3 s + R_3\right)\left(C_L L_L R_L s^2 + L_L s + R_L\right)}{C_3 C_L L_3 L_L R_3 s^4 + C_3 C_L L_3 L_L R_L s^4 + C_3 L_3 L_L s^3 + C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + C_L L_3 L_L s^3 + C_L L_L R_3 s^2 + C_L L_L R_L s^2 + L_3 s + L_L s + R_3 + R_L}$$

10.376 INVALID-ORDER-376 $Z(s) = \left(\infty,\ \infty,\ \infty,\ \infty,\ \frac{R_4\left(L_4 s+\frac{1}{C_4 s}\right)}{L_4 s+R_4+\frac{1}{C_4 s}},\ \frac{R_L\left(L_L s+\frac{1}{C_L s}\right)}{L_L s+R_L+\frac{1}{C_L s}}\right)$

$$H(s) = \frac{R_L\left(C_L L_L s^2 + 1\right)\left(C_3 L_3 R_3 s^2 + L_3 s + R_3\right)}{C_3 C_L L_3 L_L R_3 s^4 + C_3 C_L L_3 L_L R_L s^4 + C_3 C_L L_3 R_3 R_L s^3 + C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + C_L L_3 L_L s^3 + C_L L_3 R_L s^2 + C_L L_L R_3 s^2 + C_L L_L R_L s^2 + C_L R_3 R_L s + L_3 s + R_3 + R_L}$$

10.377 INVALID-ORDER-377 $Z(s) = \left(R_1,\ R_2,\ \infty,\ \infty,\ \infty,\ \frac{1}{C_L s}\right)$

$$H(s) = \frac{R_3\left(C_3 L_3 s^2 + 1\right)}{C_3 C_L L_3 R_3 s^3 + C_3 L_3 s^2 + C_3 R_3 s + C_L R_3 s + 1}$$

10.378 INVALID-ORDER-378 $Z(s) = \left(R_1,\ R_2,\ \infty,\ \infty,\ \infty,\ \frac{R_L}{C_L R_L s+1}\right)$

$$H(s) = \frac{R_3 R_L\left(C_3 L_3 s^2 + 1\right)}{C_3 C_L L_3 R_3 R_L s^3 + C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + C_3 R_3 R_L s + C_L R_3 R_L s + R_3 + R_L}$$

10.379 INVALID-ORDER-379 $Z(s) = \left(R_1,\ R_2,\ \infty,\ \infty,\ \infty,\ R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{R_3\left(C_3 L_3 s^2 + 1\right)\left(C_L R_L s + 1\right)}{C_3 C_L L_3 R_3 s^3 + C_3 C_L L_3 R_L s^3 + C_3 C_L R_3 R_L s^2 + C_3 L_3 s^2 + C_3 R_3 s + C_L R_3 s + C_L R_L s + 1}$$

10.380 INVALID-ORDER-380 $Z(s) = \left(R_1,\ R_2,\ \infty,\ \infty,\ \infty,\ L_L s + \frac{1}{C_L s}\right)$

$$H(s) = \frac{R_3\left(C_3 L_3 s^2 + 1\right)\left(C_L L_L s^2 + 1\right)}{C_3 C_L L_3 L_L s^4 + C_3 C_L L_3 R_3 s^3 + C_3 C_L L_L R_3 s^3 + C_3 L_3 s^2 + C_3 R_3 s + C_L L_L s^2 + C_L R_3 s + 1}$$

10.381 INVALID-ORDER-381 $Z(s) = \left(R_1,\ R_2,\ \infty,\ \infty,\ \infty,\ \frac{L_L s}{C_L L_L s^2+1}\right)$

$$H(s) = \frac{L_L R_3 s\left(C_3 L_3 s^2 + 1\right)}{C_3 C_L L_3 L_L R_3 s^4 + C_3 L_3 L_L s^3 + C_3 L_3 R_3 s^2 + C_3 L_L R_3 s^2 + C_L L_L R_3 s^2 + L_L s + R_3}$$

10.382 INVALID-ORDER-382 $Z(s) = \left(R_1,\ R_2,\ \infty,\ \infty,\ \infty,\ L_L s + R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{R_3\left(C_3 L_3 s^2 + 1\right)\left(C_L L_L s^2 + C_L R_L s + 1\right)}{C_3 C_L L_3 L_L s^4 + C_3 C_L L_3 R_3 s^3 + C_3 C_L L_3 R_L s^3 + C_3 C_L L_L R_3 s^3 + C_3 C_L R_3 R_L s^2 + C_3 L_3 s^2 + C_3 R_3 s + C_L L_L s^2 + C_L R_3 s + C_L R_L s + 1}$$

10.383 INVALID-ORDER-383 $Z(s) = \left(R_1,\ R_2,\ \infty,\ \infty,\ \infty,\ \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$

$$H(s) = \frac{L_L R_3 R_L s \left(C_3 L_3 s^2 + 1\right)}{C_3 C_L L_3 L_L R_3 R_L s^4 + C_3 L_3 L_L R_3 s^3 + C_3 L_3 L_L R_L s^3 + C_3 L_3 R_3 R_L s^2 + C_3 L_L R_3 R_L s^2 + C_L L_L R_3 R_L s^2 + L_L R_3 s + L_L R_L s + R_3 R_L}$$

10.384 INVALID-ORDER-384 $Z(s) = \left(R_1,\ R_2,\ \infty,\ \infty,\ \infty,\ \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$

$$H(s) = \frac{R_3 \left(C_3 L_3 s^2 + 1\right) \left(C_L L_L R_L s^2 + L_L s + R_L\right)}{C_3 C_L L_3 L_L R_3 s^4 + C_3 C_L L_3 L_L R_L s^4 + C_3 C_L L_L R_3 R_L s^3 + C_3 L_3 L_L s^3 + C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + C_3 L_L R_3 s^2 + C_3 R_3 R_L s + C_L L_L R_3 s^2 + C_L L_L R_L s^2 + L_L s + R_3 + R_L}$$

10.385 INVALID-ORDER-385 $Z(s) = \left(R_1,\ R_2,\ \infty,\ \infty,\ \infty,\ \frac{R_L\left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$

$$H(s) = \frac{R_3 R_L \left(C_3 L_3 s^2 + 1\right) \left(C_L L_L s^2 + 1\right)}{C_3 C_L L_3 L_L R_3 s^4 + C_3 C_L L_3 L_L R_L s^4 + C_3 C_L L_3 R_3 R_L s^3 + C_3 C_L L_L R_3 R_L s^3 + C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + C_3 R_3 R_L s + C_L L_L R_3 s^2 + C_L L_L R_L s^2 + C_L R_3 R_L s + R_3 + R_L}$$

10.386 INVALID-ORDER-386 $Z(s) = \left(R_1,\ \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ R_L\right)$

$$H(s) = \frac{R_3 R_L}{R_3 + R_L}$$

10.387 INVALID-ORDER-387 $Z(s) = \left(R_1,\ \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_L s}\right)$

$$H(s) = \frac{R_3}{C_L R_3 s + 1}$$

10.388 INVALID-ORDER-388 $Z(s) = \left(R_1,\ \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{R_L}{C_L R_L s+1}\right)$

$$H(s) = \frac{R_3 R_L}{C_L R_3 R_L s + R_3 + R_L}$$

10.389 INVALID-ORDER-389 $Z(s) = \left(R_1,\ \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{R_3 \left(C_L R_L s + 1\right)}{C_L R_3 s + C_L R_L s + 1}$$

10.390 INVALID-ORDER-390 $Z(s) = \left(R_1,\ \frac{R_2}{C_2 R_2 s+1},\ \infty,\ \infty,\ \infty,\ R_L\right)$

$$H(s) = \frac{R_L}{C_3 R_L s + 1}$$

10.391 INVALID-ORDER-391 $Z(s) = \left(R_1,\ \frac{R_2}{C_2 R_2 s+1},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_L s}\right)$

$$H(s) = \frac{1}{s \left(C_3 + C_L\right)}$$

10.392 INVALID-ORDER-392 $Z(s) = \left(R_1,\ \frac{R_2}{C_2 R_2 s+1},\ \infty,\ \infty,\ \infty,\ \frac{R_L}{C_L R_L s+1}\right)$

$$H(s) = \frac{R_L}{C_3 R_L s + C_L R_L s + 1}$$

10.393 INVALID-ORDER-393 $Z(s) = \left(R_1,\ \frac{R_2}{C_2 R_2 s+1},\ \infty,\ \infty,\ \infty,\ R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{C_L R_L s + 1}{s \left(C_3 C_L R_L s + C_3 + C_L\right)}$$

10.394 INVALID-ORDER-394 $Z(s) = \left(R_1,\ \frac{R_2}{C_2 R_2 s+1},\ \infty,\ \infty,\ \infty,\ L_L s + \frac{1}{C_L s}\right)$

$$H(s) = \frac{C_L L_L s^2 + 1}{s\left(C_3 C_L L_L s^2 + C_3 + C_L\right)}$$

10.395 INVALID-ORDER-395 $Z(s) = \left(R_1,\ \frac{R_2}{C_2 R_2 s+1},\ \infty,\ \infty,\ \infty,\ \frac{L_L s}{C_L L_L s^2+1}\right)$

$$H(s) = \frac{L_L s}{C_3 L_L s^2 + C_L L_L s^2 + 1}$$

10.396 INVALID-ORDER-396 $Z(s) = \left(R_1,\ \frac{R_2}{C_2 R_2 s+1},\ \infty,\ \infty,\ \infty,\ L_L s + R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{C_L L_L s^2 + C_L R_L s + 1}{s\left(C_3 C_L L_L s^2 + C_3 C_L R_L s + C_3 + C_L\right)}$$

10.397 INVALID-ORDER-397 $Z(s) = \left(R_1,\ \frac{R_2}{C_2 R_2 s+1},\ \infty,\ \infty,\ \infty,\ \frac{L_L s}{C_L L_L s^2+1} + R_L\right)$

$$H(s) = \frac{C_L L_L R_L s^2 + L_L s + R_L}{C_3 C_L L_L R_L s^3 + C_3 L_L s^2 + C_3 R_L s + C_L L_L s^2 + 1}$$

10.398 INVALID-ORDER-398 $Z(s) = \left(R_1,\ \frac{R_2}{C_2 R_2 s+1},\ \infty,\ \infty,\ \infty,\ \frac{R_L\left(L_L s+\frac{1}{C_L s}\right)}{L_L s+R_L+\frac{1}{C_L s}}\right)$

$$H(s) = \frac{R_L\left(C_L L_L s^2 + 1\right)}{C_3 C_L L_L R_L s^3 + C_3 R_L s + C_L L_L s^2 + C_L R_L s + 1}$$

10.399 INVALID-ORDER-399 $Z(s) = \left(R_1,\ R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ R_L\right)$

$$H(s) = \frac{R_3 R_L}{C_3 R_3 R_L s + R_3 + R_L}$$

10.400 INVALID-ORDER-400 $Z(s) = \left(R_1,\ R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_L s}\right)$

$$H(s) = \frac{R_3}{C_3 R_3 s + C_L R_3 s + 1}$$

10.401 INVALID-ORDER-401 $Z(s) = \left(R_1,\ R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{R_L}{C_L R_L s + 1}\right)$

$$H(s) = \frac{R_3 R_L}{C_3 R_3 R_L s + C_L R_3 R_L s + R_3 + R_L}$$

10.402 INVALID-ORDER-402 $Z(s) = \left(R_1,\ R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ L_L s + \frac{1}{C_L s}\right)$

$$H(s) = \frac{R_3 \left(C_L L_L s^2 + 1\right)}{C_3 C_L L_L R_3 s^3 + C_3 R_3 s + C_L L_L s^2 + C_L R_3 s + 1}$$

10.403 INVALID-ORDER-403 $Z(s) = \left(R_1,\ R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ L_L s + R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{R_3 \left(C_L L_L s^2 + C_L R_L s + 1\right)}{C_3 C_L L_L R_3 s^3 + C_3 C_L R_3 R_L s^2 + C_3 R_3 s + C_L L_L s^2 + C_L R_3 s + C_L R_L s + 1}$$

10.404 INVALID-ORDER-404 $Z(s) = \left(R_1,\ R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$

$$H(s) = \frac{R_3 \left(C_L L_L R_L s^2 + L_L s + R_L\right)}{C_3 C_L L_L R_3 R_L s^3 + C_3 L_L R_3 s^2 + C_3 R_3 R_L s + C_L L_L R_3 s^2 + C_L L_L R_L s^2 + L_L s + R_3 + R_L}$$

10.405 INVALID-ORDER-405 $Z(s) = \left(R_1,\ R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{R_L\left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$

$$H(s) = \frac{R_3 R_L \left(C_L L_L s^2 + 1\right)}{C_3 C_L L_L R_3 R_L s^3 + C_3 R_3 R_L s + C_L L_L R_3 s^2 + C_L L_L R_L s^2 + C_L R_3 R_L s + R_3 + R_L}$$

10.406 INVALID-ORDER-406 $Z(s) = \left(R_1,\ L_2 s + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ R_L\right)$

$$H(s) = \frac{R_L\left(C_3 R_3 s + 1\right)}{C_3 R_3 s + C_3 R_L s + 1}$$

10.407 INVALID-ORDER-407 $Z(s) = \left(R_1,\ L_2 s + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_L s}\right)$

$$H(s) = \frac{C_3 R_3 s + 1}{s\left(C_3 C_L R_3 s + C_3 + C_L\right)}$$

10.408 INVALID-ORDER-408 $Z(s) = \left(R_1,\ L_2 s + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{\left(C_3 R_3 s + 1\right)\left(C_L R_L s + 1\right)}{s\left(C_3 C_L R_3 s + C_3 C_L R_L s + C_3 + C_L\right)}$$

10.409 INVALID-ORDER-409 $Z(s) = \left(R_1,\ L_2 s + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ L_L s + \frac{1}{C_L s}\right)$

$$H(s) = \frac{\left(C_3 R_3 s + 1\right)\left(C_L L_L s^2 + 1\right)}{s\left(C_3 C_L L_L s^2 + C_3 C_L R_3 s + C_3 + C_L\right)}$$

10.410 INVALID-ORDER-410 $Z(s) = \left(R_1,\ L_2 s + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{L_L s}{C_L L_L s^2 + 1}\right)$

$$H(s) = \frac{L_L s\left(C_3 R_3 s + 1\right)}{C_3 C_L L_L R_3 s^3 + C_3 L_L s^2 + C_3 R_3 s + C_L L_L s^2 + 1}$$

10.411 INVALID-ORDER-411 $Z(s) = \left(R_1,\ L_2 s + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ L_L s + R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{\left(C_3 R_3 s + 1\right)\left(C_L L_L s^2 + C_L R_L s + 1\right)}{s\left(C_3 C_L L_L s^2 + C_3 C_L R_3 s + C_3 C_L R_L s + C_3 + C_L\right)}$$

10.412 INVALID-ORDER-412 $Z(s) = \left(R_1,\ L_2 s + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$

$$H(s) = \frac{L_L R_L s \left(C_3 R_3 s + 1\right)}{C_3 C_L L_L R_3 R_L s^3 + C_3 L_L R_3 s^2 + C_3 L_L R_L s^2 + C_3 R_3 R_L s + C_L L_L R_L s^2 + L_L s + R_L}$$

10.413 INVALID-ORDER-413 $Z(s) = \left(R_1,\ L_2 s + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$

$$H(s) = \frac{\left(C_3 R_3 s + 1\right)\left(C_L L_L R_L s^2 + L_L s + R_L\right)}{C_3 C_L L_L R_3 s^3 + C_3 C_L L_L R_L s^3 + C_3 L_L s^2 + C_3 R_3 s + C_3 R_L s + C_L L_L s^2 + 1}$$

10.414 INVALID-ORDER-414 $Z(s) = \left(R_1,\ L_2 s + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{R_L\left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$

$$H(s) = \frac{R_L \left(C_3 R_3 s + 1\right)\left(C_L L_L s^2 + 1\right)}{C_3 C_L L_L R_3 s^3 + C_3 C_L L_L R_L s^3 + C_3 C_L R_3 R_L s^2 + C_3 R_3 s + C_3 R_L s + C_L L_L s^2 + C_L R_L s + 1}$$

10.415 INVALID-ORDER-415 $Z(s) = \left(R_1,\ L_2 s + R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_L s}\right)$

$$H(s) = \frac{C_3 L_3 s^2 + 1}{s\left(C_3 C_L L_3 s^2 + C_3 + C_L\right)}$$

10.416 INVALID-ORDER-416 $Z(s) = \left(R_1,\ L_2 s + R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{R_L}{C_L R_L s + 1}\right)$

$$H(s) = \frac{R_L \left(C_3 L_3 s^2 + 1\right)}{C_3 C_L L_3 R_L s^3 + C_3 L_3 s^2 + C_3 R_L s + C_L R_L s + 1}$$

10.417 INVALID-ORDER-417 $Z(s) = \left(R_1,\ L_2 s + R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{\left(C_3 L_3 s^2 + 1\right)\left(C_L R_L s + 1\right)}{s\left(C_3 C_L L_3 s^2 + C_3 C_L R_L s + C_3 + C_L\right)}$$

10.418 INVALID-ORDER-418 $Z(s) = \left(R_1,\ L_2 s + R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ L_L s + \frac{1}{C_L s}\right)$

$$H(s) = \frac{\left(C_3 L_3 s^2 + 1\right)\left(C_L L_L s^2 + 1\right)}{s\left(C_3 C_L L_3 s^2 + C_3 C_L L_L s^2 + C_3 + C_L\right)}$$

10.419 INVALID-ORDER-419 $Z(s) = \left(R_1,\ L_2 s + R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{L_L s}{C_L L_L s^2 + 1}\right)$

$$H(s) = \frac{L_L s\left(C_3 L_3 s^2 + 1\right)}{C_3 C_L L_3 L_L s^4 + C_3 L_3 s^2 + C_3 L_L s^2 + C_L L_L s^2 + 1}$$

10.420 INVALID-ORDER-420 $Z(s) = \left(R_1,\ L_2 s + R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ L_L s + R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{\left(C_3 L_3 s^2 + 1\right)\left(C_L L_L s^2 + C_L R_L s + 1\right)}{s\left(C_3 C_L L_3 s^2 + C_3 C_L L_L s^2 + C_3 C_L R_L s + C_3 + C_L\right)}$$

10.421 INVALID-ORDER-421 $Z(s) = \left(R_1,\ L_2 s + R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$

$$H(s) = \frac{L_L R_L s\left(C_3 L_3 s^2 + 1\right)}{C_3 C_L L_3 L_L R_L s^4 + C_3 L_3 L_L s^3 + C_3 L_3 R_L s^2 + C_3 L_L R_L s^2 + C_L L_L R_L s^2 + L_L s + R_L}$$

10.422 INVALID-ORDER-422 $Z(s) = \left(R_1,\ L_2 s + R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{L_L s}{C_L L_L s^2+1} + R_L\right)$

$$H(s) = \frac{\left(C_3 L_3 s^2 + 1\right)\left(C_L L_L R_L s^2 + L_L s + R_L\right)}{C_3 C_L L_3 L_L s^4 + C_3 C_L L_L R_L s^3 + C_3 L_3 s^2 + C_3 L_L s^2 + C_3 R_L s + C_L L_L s^2 + 1}$$

10.423 INVALID-ORDER-423 $Z(s) = \left(R_1,\ L_2 s + R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{R_L\left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$

$$H(s) = \frac{R_L\left(C_3 L_3 s^2 + 1\right)\left(C_L L_L s^2 + 1\right)}{C_3 C_L L_3 L_L s^4 + C_3 C_L L_3 R_L s^3 + C_3 C_L L_L R_L s^3 + C_3 L_3 s^2 + C_3 R_L s + C_L L_L s^2 + C_L R_L s + 1}$$

10.424 INVALID-ORDER-424 $Z(s) = \left(R_1,\ \frac{L_2 s}{C_2 L_2 s^2+1} + R_2,\ \infty,\ \infty,\ \infty,\ \frac{1}{C_L s}\right)$

$$H(s) = \frac{L_3 s}{C_3 L_3 s^2 + C_L L_3 s^2 + 1}$$

10.425 INVALID-ORDER-425 $Z(s) = \left(R_1,\ \frac{L_2 s}{C_2 L_2 s^2+1} + R_2,\ \infty,\ \infty,\ \infty,\ R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{L_3 s\left(C_L R_L s + 1\right)}{C_3 C_L L_3 R_L s^3 + C_3 L_3 s^2 + C_L L_3 s^2 + C_L R_L s + 1}$$

10.426 INVALID-ORDER-426 $Z(s) = \left(R_1,\ \frac{L_2 s}{C_2 L_2 s^2+1} + R_2,\ \infty,\ \infty,\ \infty,\ L_L s + \frac{1}{C_L s}\right)$

$$H(s) = \frac{L_3 s\left(C_L L_L s^2 + 1\right)}{C_3 C_L L_3 L_L s^4 + C_3 L_3 s^2 + C_L L_3 s^2 + C_L L_L s^2 + 1}$$

10.427 INVALID-ORDER-427 $Z(s) = \left(R_1,\ \frac{L_2 s}{C_2 L_2 s^2+1} + R_2,\ \infty,\ \infty,\ \infty,\ \frac{L_L s}{C_L L_L s^2+1}\right)$

$$H(s) = \frac{L_3 L_L s}{C_3 L_3 L_L s^2 + C_L L_3 L_L s^2 + L_3 + L_L}$$

10.428 INVALID-ORDER-428 $Z(s) = \left(R_1,\ \frac{L_2 s}{C_2 L_2 s^2+1} + R_2,\ \infty,\ \infty,\ \infty,\ L_L s + R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{L_3 s \left(C_L L_L s^2 + C_L R_L s + 1\right)}{C_3 C_L L_3 L_L s^4 + C_3 C_L L_3 R_L s^3 + C_3 L_3 s^2 + C_L L_3 s^2 + C_L L_L s^2 + C_L R_L s + 1}$$

10.429 INVALID-ORDER-429 $Z(s) = \left(R_1,\ \frac{L_2 s}{C_2 L_2 s^2+1} + R_2,\ \infty,\ \infty,\ \infty,\ \frac{L_L s}{C_L L_L s^2+1} + R_L\right)$

$$H(s) = \frac{L_3 s \left(C_L L_L R_L s^2 + L_L s + R_L\right)}{C_3 C_L L_3 L_L R_L s^4 + C_3 L_3 L_L s^3 + C_3 L_3 R_L s^2 + C_L L_3 L_L s^3 + C_L L_L R_L s^2 + L_3 s + L_L s + R_L}$$

10.430 INVALID-ORDER-430 $Z(s) = \left(R_1,\ \frac{L_2 s}{C_2 L_2 s^2+1} + R_2,\ \infty,\ \infty,\ \infty,\ \frac{R_L\left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$

$$H(s) = \frac{L_3 R_L s \left(C_L L_L s^2 + 1\right)}{C_3 C_L L_3 L_L R_L s^4 + C_3 L_3 R_L s^2 + C_L L_3 L_L s^3 + C_L L_3 R_L s^2 + C_L L_L R_L s^2 + L_3 s + R_L}$$

10.431 INVALID-ORDER-431 $Z(s) = \left(R_1,\ \frac{R_2\left(L_2 s + \frac{1}{C_2 s}\right)}{L_2 s + R_2 + \frac{1}{C_2 s}},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_L s}\right)$

$$H(s) = \frac{C_3 L_3 s^2 + C_3 R_3 s + 1}{s\left(C_3 C_L L_3 s^2 + C_3 C_L R_3 s + C_3 + C_L\right)}$$

10.432 INVALID-ORDER-432 $Z(s) = \left(R_1,\ \frac{R_2\left(L_2 s + \frac{1}{C_2 s}\right)}{L_2 s + R_2 + \frac{1}{C_2 s}},\ \infty,\ \infty,\ \infty,\ \frac{R_L}{C_L R_L s+1}\right)$

$$H(s) = \frac{R_L \left(C_3 L_3 s^2 + C_3 R_3 s + 1\right)}{C_3 C_L L_3 R_L s^3 + C_3 C_L R_3 R_L s^2 + C_3 L_3 s^2 + C_3 R_3 s + C_3 R_L s + C_L R_L s + 1}$$

10.433 INVALID-ORDER-433 $Z(s) = \left(R_1,\ \frac{R_2\left(L_2 s + \frac{1}{C_2 s}\right)}{L_2 s + R_2 + \frac{1}{C_2 s}},\ \infty,\ \infty,\ \infty,\ R_L + \frac{1}{C_L s} \right)$

$$H(s) = \frac{(C_L R_L s + 1)\left(C_3 L_3 s^2 + C_3 R_3 s + 1\right)}{s\left(C_3 C_L L_3 s^2 + C_3 C_L R_3 s + C_3 C_L R_L s + C_3 + C_L\right)}$$

10.434 INVALID-ORDER-434 $Z(s) = \left(R_1,\ \frac{R_2\left(L_2 s + \frac{1}{C_2 s}\right)}{L_2 s + R_2 + \frac{1}{C_2 s}},\ \infty,\ \infty,\ \infty,\ L_L s + \frac{1}{C_L s} \right)$

$$H(s) = \frac{\left(C_L L_L s^2 + 1\right)\left(C_3 L_3 s^2 + C_3 R_3 s + 1\right)}{s\left(C_3 C_L L_3 s^2 + C_3 C_L L_L s^2 + C_3 C_L R_3 s + C_3 + C_L\right)}$$

10.435 INVALID-ORDER-435 $Z(s) = \left(R_1,\ \frac{R_2\left(L_2 s + \frac{1}{C_2 s}\right)}{L_2 s + R_2 + \frac{1}{C_2 s}},\ \infty,\ \infty,\ \infty,\ \frac{L_L s}{C_L L_L s^2 + 1} \right)$

$$H(s) = \frac{L_L s\left(C_3 L_3 s^2 + C_3 R_3 s + 1\right)}{C_3 C_L L_3 L_L s^4 + C_3 C_L L_L R_3 s^3 + C_3 L_3 s^2 + C_3 L_L s^2 + C_3 R_3 s + C_L L_L s^2 + 1}$$

10.436 INVALID-ORDER-436 $Z(s) = \left(R_1,\ \frac{R_2\left(L_2 s + \frac{1}{C_2 s}\right)}{L_2 s + R_2 + \frac{1}{C_2 s}},\ \infty,\ \infty,\ \infty,\ L_L s + R_L + \frac{1}{C_L s} \right)$

$$H(s) = \frac{\left(C_3 L_3 s^2 + C_3 R_3 s + 1\right)\left(C_L L_L s^2 + C_L R_L s + 1\right)}{s\left(C_3 C_L L_3 s^2 + C_3 C_L L_L s^2 + C_3 C_L R_3 s + C_3 C_L R_L s + C_3 + C_L\right)}$$

10.437 INVALID-ORDER-437 $Z(s) = \left(R_1,\ \frac{R_2\left(L_2 s + \frac{1}{C_2 s}\right)}{L_2 s + R_2 + \frac{1}{C_2 s}},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$

$$H(s) = \frac{L_L R_L s\left(C_3 L_3 s^2 + C_3 R_3 s + 1\right)}{C_3 C_L L_3 L_L R_L s^4 + C_3 C_L L_L R_3 R_L s^3 + C_3 L_3 L_L s^3 + C_3 L_3 R_L s^2 + C_3 L_L R_3 s^2 + C_3 L_L R_L s^2 + C_3 R_3 R_L s + C_L L_L R_L s^2 + L_L s + R_L}$$

10.438 INVALID-ORDER-438 $Z(s) = \left(R_1,\ \frac{R_2\left(L_2 s+\frac{1}{C_2 s}\right)}{L_2 s+R_2+\frac{1}{C_2 s}},\ \infty,\ \infty,\ \infty,\ \frac{L_L s}{C_L L_L s^2+1}+R_L\right)$

$$H(s) = \frac{\left(C_3 L_3 s^2 + C_3 R_3 s + 1\right)\left(C_L L_L R_L s^2 + L_L s + R_L\right)}{C_3 C_L L_3 L_L s^4 + C_3 C_L L_L R_3 s^3 + C_3 C_L L_L R_L s^3 + C_3 L_3 s^2 + C_3 L_L s^2 + C_3 R_3 s + C_3 R_L s + C_L L_L s^2 + 1}$$

10.439 INVALID-ORDER-439 $Z(s) = \left(R_1,\ \frac{R_2\left(L_2 s+\frac{1}{C_2 s}\right)}{L_2 s+R_2+\frac{1}{C_2 s}},\ \infty,\ \infty,\ \infty,\ \frac{R_L\left(L_L s+\frac{1}{C_L s}\right)}{L_L s+R_L+\frac{1}{C_L s}}\right)$

$$H(s) = \frac{R_L\left(C_L L_L s^2 + 1\right)\left(C_3 L_3 s^2 + C_3 R_3 s + 1\right)}{C_3 C_L L_3 L_L s^4 + C_3 C_L L_3 R_L s^3 + C_3 C_L L_L R_3 s^3 + C_3 C_L L_L R_L s^3 + C_3 C_L R_3 R_L s^2 + C_3 L_3 s^2 + C_3 R_3 s + C_3 R_L s + C_L L_L s^2 + C_L R_L s + 1}$$

10.440 INVALID-ORDER-440 $Z(s) = \left(L_1 s,\ R_2,\ \infty,\ \infty,\ \infty,\ R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{L_3 R_3 s\left(C_L R_L s + 1\right)}{C_3 C_L L_3 R_3 R_L s^3 + C_3 L_3 R_3 s^2 + C_L L_3 R_3 s^2 + C_L L_3 R_L s^2 + C_L R_3 R_L s + L_3 s + R_3}$$

10.441 INVALID-ORDER-441 $Z(s) = \left(L_1 s,\ R_2,\ \infty,\ \infty,\ \infty,\ L_L s + \frac{1}{C_L s}\right)$

$$H(s) = \frac{L_3 R_3 s\left(C_L L_L s^2 + 1\right)}{C_3 C_L L_3 L_L R_3 s^4 + C_3 L_3 R_3 s^2 + C_L L_3 L_L s^3 + C_L L_3 R_3 s^2 + C_L L_L R_3 s^2 + L_3 s + R_3}$$

10.442 INVALID-ORDER-442 $Z(s) = \left(L_1 s,\ R_2,\ \infty,\ \infty,\ \infty,\ L_L s + R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{L_3 R_3 s\left(C_L L_L s^2 + C_L R_L s + 1\right)}{C_3 C_L L_3 L_L R_3 s^4 + C_3 C_L L_3 R_3 R_L s^3 + C_3 L_3 R_3 s^2 + C_L L_3 L_L s^3 + C_L L_3 R_3 s^2 + C_L L_3 R_L s^2 + C_L L_L R_3 s^2 + C_L R_3 R_L s + L_3 s + R_3}$$

10.443 INVALID-ORDER-443 $Z(s) = \left(L_1 s,\ R_2,\ \infty,\ \infty,\ \infty,\ \frac{L_L s}{C_L L_L s^2+1} + R_L\right)$

$$H(s) = \frac{L_3 R_3 s \left(C_L L_L R_L s^2 + L_L s + R_L\right)}{C_3 C_L L_3 L_L R_3 R_L s^4 + C_3 L_3 L_L R_3 s^3 + C_3 L_3 R_3 R_L s^2 + C_L L_3 L_L R_3 s^3 + C_L L_3 L_L R_L s^3 + C_L L_L R_3 R_L s^2 + L_3 L_L s^2 + L_3 R_3 s + L_3 R_L s + L_L R_3 s + R_3 R_L}$$

10.444 INVALID-ORDER-444 $Z(s) = \left(L_1 s,\ R_2,\ \infty,\ \infty,\ \infty,\ \frac{R_L\left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$

$$H(s) = \frac{L_3 R_3 R_L s \left(C_L L_L s^2 + 1\right)}{C_3 C_L L_3 L_L R_3 R_L s^4 + C_3 L_3 R_3 R_L s^2 + C_L L_3 L_L R_3 s^3 + C_L L_3 L_L R_L s^3 + C_L L_3 R_3 R_L s^2 + C_L L_L R_3 R_L s^2 + L_3 R_3 s + L_3 R_L s + R_3 R_L}$$

10.445 INVALID-ORDER-445 $Z(s) = \left(L_1 s,\ \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_L s}\right)$

$$H(s) = \frac{C_3 L_3 R_3 s^2 + L_3 s + R_3}{C_3 C_L L_3 R_3 s^3 + C_3 L_3 s^2 + C_L L_3 s^2 + C_L R_3 s + 1}$$

10.446 INVALID-ORDER-446 $Z(s) = \left(L_1 s,\ \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{R_L}{C_L R_L s+1}\right)$

$$H(s) = \frac{R_L \left(C_3 L_3 R_3 s^2 + L_3 s + R_3\right)}{C_3 C_L L_3 R_3 R_L s^3 + C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + C_L L_3 R_L s^2 + C_L R_3 R_L s + L_3 s + R_3 + R_L}$$

10.447 INVALID-ORDER-447 $Z(s) = \left(L_1 s,\ \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{\left(C_L R_L s + 1\right)\left(C_3 L_3 R_3 s^2 + L_3 s + R_3\right)}{C_3 C_L L_3 R_3 s^3 + C_3 C_L L_3 R_L s^3 + C_3 L_3 s^2 + C_L L_3 s^2 + C_L R_3 s + C_L R_L s + 1}$$

10.448 INVALID-ORDER-448 $Z(s) = \left(L_1 s,\ \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ L_L s + \frac{1}{C_L s}\right)$

$$H(s) = \frac{\left(C_L L_L s^2 + 1\right)\left(C_3 L_3 R_3 s^2 + L_3 s + R_3\right)}{C_3 C_L L_3 L_L s^4 + C_3 C_L L_3 R_3 s^3 + C_3 L_3 s^2 + C_L L_3 s^2 + C_L L_L s^2 + C_L R_3 s + 1}$$

10.449 INVALID-ORDER-449 $Z(s) = \left(L_1 s,\ \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{L_L s}{C_L L_L s^2 + 1}\right)$

$$H(s) = \frac{L_L s\left(C_3 L_3 R_3 s^2 + L_3 s + R_3\right)}{C_3 C_L L_3 L_L R_3 s^4 + C_3 L_3 L_L s^3 + C_3 L_3 R_3 s^2 + C_L L_3 L_L s^3 + C_L L_L R_3 s^2 + L_3 s + L_L s + R_3}$$

10.450 INVALID-ORDER-450 $Z(s) = \left(L_1 s,\ \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ L_L s + R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{\left(C_L L_L s^2 + C_L R_L s + 1\right)\left(C_3 L_3 R_3 s^2 + L_3 s + R_3\right)}{C_3 C_L L_3 L_L s^4 + C_3 C_L L_3 R_3 s^3 + C_3 C_L L_3 R_L s^3 + C_3 L_3 s^2 + C_L L_3 s^2 + C_L L_L s^2 + C_L R_3 s + C_L R_L s + 1}$$

10.451 INVALID-ORDER-451 $Z(s) = \left(L_1 s,\ \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$

$$H(s) = \frac{L_L R_L s\left(C_3 L_3 R_3 s^2 + L_3 s + R_3\right)}{C_3 C_L L_3 L_L R_3 R_L s^4 + C_3 L_3 L_L R_3 s^3 + C_3 L_3 L_L R_L s^3 + C_3 L_3 R_3 R_L s^2 + C_L L_3 L_L R_L s^3 + C_L L_L R_3 R_L s^2 + L_3 L_L s^2 + L_3 R_L s + L_L R_3 s + L_L R_L s + R_3 R_L}$$

10.452 INVALID-ORDER-452 $Z(s) = \left(L_1 s,\ \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$

$$H(s) = \frac{\left(C_3 L_3 R_3 s^2 + L_3 s + R_3\right)\left(C_L L_L R_L s^2 + L_L s + R_L\right)}{C_3 C_L L_3 L_L R_3 s^4 + C_3 C_L L_3 L_L R_L s^4 + C_3 L_3 L_L s^3 + C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + C_L L_3 L_L s^3 + C_L L_L R_3 s^2 + C_L L_L R_L s^2 + L_3 s + L_L s + R_3 + R_L}$$

10.453 INVALID-ORDER-453 $Z(s) = \left(L_1 s,\ \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{R_L\left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$

$$H(s) = \frac{R_L \left(C_L L_L s^2 + 1\right) \left(C_3 L_3 R_3 s^2 + L_3 s + R_3\right)}{C_3 C_L L_3 L_L R_3 s^4 + C_3 C_L L_3 L_L R_L s^4 + C_3 C_L L_3 R_3 R_L s^3 + C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + C_L L_3 L_L s^3 + C_L L_3 R_L s^2 + C_L L_L R_3 s^2 + C_L L_L R_L s^2 + C_L R_3 R_L s + L_3 s + R_3 + R_L}$$

10.454 INVALID-ORDER-454 $Z(s) = \left(L_1 s,\ \frac{R_2}{C_2 R_2 s + 1},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_L s} \right)$

$$H(s) = \frac{R_3 \left(C_3 L_3 s^2 + 1\right)}{C_3 C_L L_3 R_3 s^3 + C_3 L_3 s^2 + C_3 R_3 s + C_L R_3 s + 1}$$

10.455 INVALID-ORDER-455 $Z(s) = \left(L_1 s,\ \frac{R_2}{C_2 R_2 s + 1},\ \infty,\ \infty,\ \infty,\ \frac{R_L}{C_L R_L s + 1} \right)$

$$H(s) = \frac{R_3 R_L \left(C_3 L_3 s^2 + 1\right)}{C_3 C_L L_3 R_3 R_L s^3 + C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + C_3 R_3 R_L s + C_L R_3 R_L s + R_3 + R_L}$$

10.456 INVALID-ORDER-456 $Z(s) = \left(L_1 s,\ \frac{R_2}{C_2 R_2 s + 1},\ \infty,\ \infty,\ \infty,\ R_L + \frac{1}{C_L s} \right)$

$$H(s) = \frac{R_3 \left(C_3 L_3 s^2 + 1\right) \left(C_L R_L s + 1\right)}{C_3 C_L L_3 R_3 s^3 + C_3 C_L L_3 R_L s^3 + C_3 C_L R_3 R_L s^2 + C_3 L_3 s^2 + C_3 R_3 s + C_L R_3 s + C_L R_L s + 1}$$

10.457 INVALID-ORDER-457 $Z(s) = \left(L_1 s,\ \frac{R_2}{C_2 R_2 s + 1},\ \infty,\ \infty,\ \infty,\ L_L s + \frac{1}{C_L s} \right)$

$$H(s) = \frac{R_3 \left(C_3 L_3 s^2 + 1\right) \left(C_L L_L s^2 + 1\right)}{C_3 C_L L_3 L_L s^4 + C_3 C_L L_3 R_3 s^3 + C_3 C_L L_L R_3 s^3 + C_3 L_3 s^2 + C_3 R_3 s + C_L L_L s^2 + C_L R_3 s + 1}$$

10.458 INVALID-ORDER-458 $Z(s) = \left(L_1 s,\ \frac{R_2}{C_2 R_2 s+1},\ \infty,\ \infty,\ \infty,\ \frac{L_L s}{C_L L_L s^2+1}\right)$

$$H(s) = \frac{L_L R_3 s \left(C_3 L_3 s^2+1\right)}{C_3 C_L L_3 L_L R_3 s^4 + C_3 L_3 L_L s^3 + C_3 L_3 R_3 s^2 + C_3 L_L R_3 s^2 + C_L L_L R_3 s^2 + L_L s + R_3}$$

10.459 INVALID-ORDER-459 $Z(s) = \left(L_1 s,\ \frac{R_2}{C_2 R_2 s+1},\ \infty,\ \infty,\ \infty,\ L_L s + R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{R_3 \left(C_3 L_3 s^2+1\right)\left(C_L L_L s^2 + C_L R_L s + 1\right)}{C_3 C_L L_3 L_L s^4 + C_3 C_L L_3 R_3 s^3 + C_3 C_L L_3 R_L s^3 + C_3 C_L L_L R_3 s^3 + C_3 C_L R_3 R_L s^2 + C_3 L_3 s^2 + C_3 R_3 s + C_L L_L s^2 + C_L R_3 s + C_L R_L s + 1}$$

10.460 INVALID-ORDER-460 $Z(s) = \left(L_1 s,\ \frac{R_2}{C_2 R_2 s+1},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_L s+\frac{1}{R_L}+\frac{1}{L_L s}}\right)$

$$H(s) = \frac{L_L R_3 R_L s \left(C_3 L_3 s^2+1\right)}{C_3 C_L L_3 L_L R_3 R_L s^4 + C_3 L_3 L_L R_3 s^3 + C_3 L_3 L_L R_L s^3 + C_3 L_3 R_3 R_L s^2 + C_3 L_L R_3 R_L s^2 + C_L L_L R_3 R_L s^2 + L_L R_3 s + L_L R_L s + R_3 R_L}$$

10.461 INVALID-ORDER-461 $Z(s) = \left(L_1 s,\ \frac{R_2}{C_2 R_2 s+1},\ \infty,\ \infty,\ \infty,\ \frac{L_L s}{C_L L_L s^2+1} + R_L\right)$

$$H(s) = \frac{R_3 \left(C_3 L_3 s^2+1\right)\left(C_L L_L R_L s^2 + L_L s + R_L\right)}{C_3 C_L L_3 L_L R_3 s^4 + C_3 C_L L_3 L_L R_L s^4 + C_3 C_L L_L R_3 R_L s^3 + C_3 L_3 L_L s^3 + C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + C_3 L_L R_3 s^2 + C_3 R_3 R_L s + C_L L_L R_3 s^2 + C_L L_L R_L s^2 + L_L s + R_3 + R_L}$$

10.462 INVALID-ORDER-462 $Z(s) = \left(L_1 s,\ \frac{R_2}{C_2 R_2 s+1},\ \infty,\ \infty,\ \infty,\ \frac{R_L\left(L_L s+\frac{1}{C_L s}\right)}{L_L s+R_L+\frac{1}{C_L s}}\right)$

$$H(s) = \frac{R_3 R_L \left(C_3 L_3 s^2+1\right)\left(C_L L_L s^2+1\right)}{C_3 C_L L_3 L_L R_3 s^4 + C_3 C_L L_3 L_L R_L s^4 + C_3 C_L L_3 R_3 R_L s^3 + C_3 C_L L_L R_3 R_L s^3 + C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + C_3 R_3 R_L s + C_L L_L R_3 s^2 + C_L L_L R_L s^2 + C_L R_3 R_L s + R_3 + R_L}$$

10.463 INVALID-ORDER-463 $Z(s) = \left(L_1 s,\ R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ R_L\right)$

$$H(s) = \frac{R_3 R_L}{R_3 + R_L}$$

10.464 INVALID-ORDER-464 $Z(s) = \left(L_1 s,\ R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_L s}\right)$

$$H(s) = \frac{R_3}{C_L R_3 s + 1}$$

10.465 INVALID-ORDER-465 $Z(s) = \left(L_1 s,\ R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{R_L}{C_L R_L s + 1}\right)$

$$H(s) = \frac{R_3 R_L}{C_L R_3 R_L s + R_3 + R_L}$$

10.466 INVALID-ORDER-466 $Z(s) = \left(L_1 s,\ R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{R_3 \left(C_L R_L s + 1\right)}{C_L R_3 s + C_L R_L s + 1}$$

10.467 INVALID-ORDER-467 $Z(s) = \left(L_1 s,\ L_2 s + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ R_L\right)$

$$H(s) = \frac{R_L}{C_3 R_L s + 1}$$

10.468 INVALID-ORDER-468 $Z(s) = \left(L_1 s,\ L_2 s + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_L s}\right)$

$$H(s) = \frac{1}{s \left(C_3 + C_L\right)}$$

10.469 INVALID-ORDER-469 $Z(s) = \left(L_1 s,\ L_2 s + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{R_L}{C_L R_L s + 1}\right)$

$$H(s) = \frac{R_L}{C_3 R_L s + C_L R_L s + 1}$$

10.470 INVALID-ORDER-470 $Z(s) = \left(L_1 s,\ L_2 s + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{C_L R_L s + 1}{s\left(C_3 C_L R_L s + C_3 + C_L\right)}$$

10.471 INVALID-ORDER-471 $Z(s) = \left(L_1 s,\ L_2 s + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ L_L s + \frac{1}{C_L s}\right)$

$$H(s) = \frac{C_L L_L s^2 + 1}{s\left(C_3 C_L L_L s^2 + C_3 + C_L\right)}$$

10.472 INVALID-ORDER-472 $Z(s) = \left(L_1 s,\ L_2 s + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{L_L s}{C_L L_L s^2 + 1}\right)$

$$H(s) = \frac{L_L s}{C_3 L_L s^2 + C_L L_L s^2 + 1}$$

10.473 INVALID-ORDER-473 $Z(s) = \left(L_1 s,\ L_2 s + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ L_L s + R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{C_L L_L s^2 + C_L R_L s + 1}{s\left(C_3 C_L L_L s^2 + C_3 C_L R_L s + C_3 + C_L\right)}$$

10.474 INVALID-ORDER-474 $Z(s) = \left(L_1 s,\ L_2 s + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$

$$H(s) = \frac{C_L L_L R_L s^2 + L_L s + R_L}{C_3 C_L L_L R_L s^3 + C_3 L_L s^2 + C_3 R_L s + C_L L_L s^2 + 1}$$

10.475 INVALID-ORDER-475 $Z(s) = \left(L_1 s,\ L_2 s + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{R_L\left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$

$$H(s) = \frac{R_L\left(C_L L_L s^2 + 1\right)}{C_3 C_L L_L R_L s^3 + C_3 R_L s + C_L L_L s^2 + C_L R_L s + 1}$$

10.476 INVALID-ORDER-476 $Z(s) = \left(L_1 s,\ L_2 s + R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ R_L\right)$

$$H(s) = \frac{R_3 R_L}{C_3 R_3 R_L s + R_3 + R_L}$$

10.477 INVALID-ORDER-477 $Z(s) = \left(L_1 s,\ L_2 s + R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_L s}\right)$

$$H(s) = \frac{R_3}{C_3 R_3 s + C_L R_3 s + 1}$$

10.478 INVALID-ORDER-478 $Z(s) = \left(L_1 s,\ L_2 s + R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{R_L}{C_L R_L s + 1}\right)$

$$H(s) = \frac{R_3 R_L}{C_3 R_3 R_L s + C_L R_3 R_L s + R_3 + R_L}$$

10.479 INVALID-ORDER-479 $Z(s) = \left(L_1 s,\ L_2 s + R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ L_L s + \frac{1}{C_L s}\right)$

$$H(s) = \frac{R_3\left(C_L L_L s^2 + 1\right)}{C_3 C_L L_L R_3 s^3 + C_3 R_3 s + C_L L_L s^2 + C_L R_3 s + 1}$$

10.480 INVALID-ORDER-480 $Z(s) = \left(L_1 s,\ L_2 s + R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ L_L s + R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{R_3\left(C_L L_L s^2 + C_L R_L s + 1\right)}{C_3 C_L L_L R_3 s^3 + C_3 C_L R_3 R_L s^2 + C_3 R_3 s + C_L L_L s^2 + C_L R_3 s + C_L R_L s + 1}$$

10.481 INVALID-ORDER-481 $Z(s) = \left(L_1 s,\ L_2 s + R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{L_L s}{C_L L_L s^2+1} + R_L\right)$

$$H(s) = \frac{R_3\left(C_L L_L R_L s^2 + L_L s + R_L\right)}{C_3 C_L L_L R_3 R_L s^3 + C_3 L_L R_3 s^2 + C_3 R_3 R_L s + C_L L_L R_3 s^2 + C_L L_L R_L s^2 + L_L s + R_3 + R_L}$$

10.482 INVALID-ORDER-482 $Z(s) = \left(L_1 s,\ L_2 s + R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{R_L\left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$

$$H(s) = \frac{R_3 R_L\left(C_L L_L s^2 + 1\right)}{C_3 C_L L_L R_3 R_L s^3 + C_3 R_3 R_L s + C_L L_L R_3 s^2 + C_L L_L R_L s^2 + C_L R_3 R_L s + R_3 + R_L}$$

10.483 INVALID-ORDER-483 $Z(s) = \left(L_1 s,\ \frac{L_2 s}{C_2 L_2 s^2+1} + R_2,\ \infty,\ \infty,\ \infty,\ R_L\right)$

$$H(s) = \frac{R_L\left(C_3 R_3 s + 1\right)}{C_3 R_3 s + C_3 R_L s + 1}$$

10.484 INVALID-ORDER-484 $Z(s) = \left(L_1 s,\ \frac{L_2 s}{C_2 L_2 s^2+1} + R_2,\ \infty,\ \infty,\ \infty,\ \frac{1}{C_L s}\right)$

$$H(s) = \frac{C_3 R_3 s + 1}{s\left(C_3 C_L R_3 s + C_3 + C_L\right)}$$

10.485 INVALID-ORDER-485 $Z(s) = \left(L_1 s,\ \frac{L_2 s}{C_2 L_2 s^2+1} + R_2,\ \infty,\ \infty,\ \infty,\ R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{\left(C_3 R_3 s + 1\right)\left(C_L R_L s + 1\right)}{s\left(C_3 C_L R_3 s + C_3 C_L R_L s + C_3 + C_L\right)}$$

10.486 INVALID-ORDER-486 $Z(s) = \left(L_1 s,\ \frac{L_2 s}{C_2 L_2 s^2+1} + R_2,\ \infty,\ \infty,\ \infty,\ L_L s + \frac{1}{C_L s}\right)$

$$H(s) = \frac{\left(C_3 R_3 s + 1\right)\left(C_L L_L s^2 + 1\right)}{s\left(C_3 C_L L_L s^2 + C_3 C_L R_3 s + C_3 + C_L\right)}$$

10.487 INVALID-ORDER-487 $Z(s) = \left(L_1 s,\ \frac{L_2 s}{C_2 L_2 s^2+1} + R_2,\ \infty,\ \infty,\ \infty,\ \frac{L_L s}{C_L L_L s^2+1}\right)$

$$H(s) = \frac{L_L s\left(C_3 R_3 s + 1\right)}{C_3 C_L L_L R_3 s^3 + C_3 L_L s^2 + C_3 R_3 s + C_L L_L s^2 + 1}$$

10.488 INVALID-ORDER-488 $Z(s) = \left(L_1 s,\ \frac{L_2 s}{C_2 L_2 s^2+1} + R_2,\ \infty,\ \infty,\ \infty,\ L_L s + R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{\left(C_3 R_3 s + 1\right)\left(C_L L_L s^2 + C_L R_L s + 1\right)}{s\left(C_3 C_L L_L s^2 + C_3 C_L R_3 s + C_3 C_L R_L s + C_3 + C_L\right)}$$

10.489 INVALID-ORDER-489 $Z(s) = \left(L_1 s,\ \frac{L_2 s}{C_2 L_2 s^2+1} + R_2,\ \infty,\ \infty,\ \infty,\ \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$

$$H(s) = \frac{L_L R_L s\left(C_3 R_3 s + 1\right)}{C_3 C_L L_L R_3 R_L s^3 + C_3 L_L R_3 s^2 + C_3 L_L R_L s^2 + C_3 R_3 R_L s + C_L L_L R_L s^2 + L_L s + R_L}$$

10.490 INVALID-ORDER-490 $Z(s) = \left(L_1 s,\ \frac{L_2 s}{C_2 L_2 s^2+1} + R_2,\ \infty,\ \infty,\ \infty,\ \frac{L_L s}{C_L L_L s^2+1} + R_L\right)$

$$H(s) = \frac{\left(C_3 R_3 s + 1\right)\left(C_L L_L R_L s^2 + L_L s + R_L\right)}{C_3 C_L L_L R_3 s^3 + C_3 C_L L_L R_L s^3 + C_3 L_L s^2 + C_3 R_3 s + C_3 R_L s + C_L L_L s^2 + 1}$$

10.491 INVALID-ORDER-491 $Z(s) = \left(L_1 s,\ \frac{L_2 s}{C_2 L_2 s^2+1} + R_2,\ \infty,\ \infty,\ \infty,\ \frac{R_L\left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$

$$H(s) = \frac{R_L\left(C_3 R_3 s + 1\right)\left(C_L L_L s^2 + 1\right)}{C_3 C_L L_L R_3 s^3 + C_3 C_L L_L R_L s^3 + C_3 C_L R_3 R_L s^2 + C_3 R_3 s + C_3 R_L s + C_L L_L s^2 + C_L R_L s + 1}$$

10.492 INVALID-ORDER-492 $Z(s) = \left(L_1 s,\ \frac{R_2\left(L_2 s + \frac{1}{C_2 s}\right)}{L_2 s + R_2 + \frac{1}{C_2 s}},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_L s} \right)$

$$H(s) = \frac{C_3 L_3 s^2 + 1}{s\left(C_3 C_L L_3 s^2 + C_3 + C_L\right)}$$

10.493 INVALID-ORDER-493 $Z(s) = \left(L_1 s,\ \frac{R_2\left(L_2 s + \frac{1}{C_2 s}\right)}{L_2 s + R_2 + \frac{1}{C_2 s}},\ \infty,\ \infty,\ \infty,\ \frac{R_L}{C_L R_L s + 1} \right)$

$$H(s) = \frac{R_L\left(C_3 L_3 s^2 + 1\right)}{C_3 C_L L_3 R_L s^3 + C_3 L_3 s^2 + C_3 R_L s + C_L R_L s + 1}$$

10.494 INVALID-ORDER-494 $Z(s) = \left(L_1 s,\ \frac{R_2\left(L_2 s + \frac{1}{C_2 s}\right)}{L_2 s + R_2 + \frac{1}{C_2 s}},\ \infty,\ \infty,\ \infty,\ R_L + \frac{1}{C_L s} \right)$

$$H(s) = \frac{\left(C_3 L_3 s^2 + 1\right)\left(C_L R_L s + 1\right)}{s\left(C_3 C_L L_3 s^2 + C_3 C_L R_L s + C_3 + C_L\right)}$$

10.495 INVALID-ORDER-495 $Z(s) = \left(L_1 s,\ \frac{R_2\left(L_2 s + \frac{1}{C_2 s}\right)}{L_2 s + R_2 + \frac{1}{C_2 s}},\ \infty,\ \infty,\ \infty,\ L_L s + \frac{1}{C_L s} \right)$

$$H(s) = \frac{\left(C_3 L_3 s^2 + 1\right)\left(C_L L_L s^2 + 1\right)}{s\left(C_3 C_L L_3 s^2 + C_3 C_L L_L s^2 + C_3 + C_L\right)}$$

10.496 INVALID-ORDER-496 $Z(s) = \left(L_1 s,\ \frac{R_2\left(L_2 s + \frac{1}{C_2 s}\right)}{L_2 s + R_2 + \frac{1}{C_2 s}},\ \infty,\ \infty,\ \infty,\ \frac{L_L s}{C_L L_L s^2 + 1} \right)$

$$H(s) = \frac{L_L s\left(C_3 L_3 s^2 + 1\right)}{C_3 C_L L_3 L_L s^4 + C_3 L_3 s^2 + C_3 L_L s^2 + C_L L_L s^2 + 1}$$

10.497 INVALID-ORDER-497 $Z(s) = \left(L_1 s,\ \frac{R_2\left(L_2 s + \frac{1}{C_2 s}\right)}{L_2 s + R_2 + \frac{1}{C_2 s}},\ \infty,\ \infty,\ \infty,\ L_L s + R_L + \frac{1}{C_L s} \right)$

$$H(s) = \frac{\left(C_3 L_3 s^2 + 1\right)\left(C_L L_L s^2 + C_L R_L s + 1\right)}{s\left(C_3 C_L L_3 s^2 + C_3 C_L L_L s^2 + C_3 C_L R_L s + C_3 + C_L\right)}$$

10.498 INVALID-ORDER-498 $Z(s) = \left(L_1 s,\ \frac{R_2\left(L_2 s + \frac{1}{C_2 s}\right)}{L_2 s + R_2 + \frac{1}{C_2 s}},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$

$$H(s) = \frac{L_L R_L s\left(C_3 L_3 s^2 + 1\right)}{C_3 C_L L_3 L_L R_L s^4 + C_3 L_3 L_L s^3 + C_3 L_3 R_L s^2 + C_3 L_L R_L s^2 + C_L L_L R_L s^2 + L_L s + R_L}$$

10.499 INVALID-ORDER-499 $Z(s) = \left(L_1 s,\ \frac{R_2\left(L_2 s + \frac{1}{C_2 s}\right)}{L_2 s + R_2 + \frac{1}{C_2 s}},\ \infty,\ \infty,\ \infty,\ \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$

$$H(s) = \frac{\left(C_3 L_3 s^2 + 1\right)\left(C_L L_L R_L s^2 + L_L s + R_L\right)}{C_3 C_L L_3 L_L s^4 + C_3 C_L L_L R_L s^3 + C_3 L_3 s^2 + C_3 L_L s^2 + C_3 R_L s + C_L L_L s^2 + 1}$$

10.500 INVALID-ORDER-500 $Z(s) = \left(L_1 s,\ \frac{R_2\left(L_2 s + \frac{1}{C_2 s}\right)}{L_2 s + R_2 + \frac{1}{C_2 s}},\ \infty,\ \infty,\ \infty,\ \frac{R_L\left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$

$$H(s) = \frac{R_L\left(C_3 L_3 s^2 + 1\right)\left(C_L L_L s^2 + 1\right)}{C_3 C_L L_3 L_L s^4 + C_3 C_L L_3 R_L s^3 + C_3 C_L L_L R_L s^3 + C_3 L_3 s^2 + C_3 R_L s + C_L L_L s^2 + C_L R_L s + 1}$$

10.501 INVALID-ORDER-501 $Z(s) = \left(\frac{1}{C_1 s},\ R_2,\ \infty,\ \infty,\ \infty,\ \frac{1}{C_L s} \right)$

$$H(s) = \frac{L_3 s}{C_3 L_3 s^2 + C_L L_3 s^2 + 1}$$

10.502 INVALID-ORDER-502 $Z(s) = \left(\frac{1}{C_1 s},\ R_2,\ \infty,\ \infty,\ \infty,\ R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{L_3 s \left(C_L R_L s + 1\right)}{C_3 C_L L_3 R_L s^3 + C_3 L_3 s^2 + C_L L_3 s^2 + C_L R_L s + 1}$$

10.503 INVALID-ORDER-503 $Z(s) = \left(\frac{1}{C_1 s},\ R_2,\ \infty,\ \infty,\ \infty,\ L_L s + \frac{1}{C_L s}\right)$

$$H(s) = \frac{L_3 s \left(C_L L_L s^2 + 1\right)}{C_3 C_L L_3 L_L s^4 + C_3 L_3 s^2 + C_L L_3 s^2 + C_L L_L s^2 + 1}$$

10.504 INVALID-ORDER-504 $Z(s) = \left(\frac{1}{C_1 s},\ R_2,\ \infty,\ \infty,\ \infty,\ \frac{L_L s}{C_L L_L s^2 + 1}\right)$

$$H(s) = \frac{L_3 L_L s}{C_3 L_3 L_L s^2 + C_L L_3 L_L s^2 + L_3 + L_L}$$

10.505 INVALID-ORDER-505 $Z(s) = \left(\frac{1}{C_1 s},\ R_2,\ \infty,\ \infty,\ \infty,\ L_L s + R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{L_3 s \left(C_L L_L s^2 + C_L R_L s + 1\right)}{C_3 C_L L_3 L_L s^4 + C_3 C_L L_3 R_L s^3 + C_3 L_3 s^2 + C_L L_3 s^2 + C_L L_L s^2 + C_L R_L s + 1}$$

10.506 INVALID-ORDER-506 $Z(s) = \left(\frac{1}{C_1 s},\ R_2,\ \infty,\ \infty,\ \infty,\ \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$

$$H(s) = \frac{L_3 s \left(C_L L_L R_L s^2 + L_L s + R_L\right)}{C_3 C_L L_3 L_L R_L s^4 + C_3 L_3 L_L s^3 + C_3 L_3 R_L s^2 + C_L L_3 L_L s^3 + C_L L_L R_L s^2 + L_3 s + L_L s + R_L}$$

10.507 INVALID-ORDER-507 $Z(s) = \left(\frac{1}{C_1 s},\ R_2,\ \infty,\ \infty,\ \infty,\ \frac{R_L\left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$

$$H(s) = \frac{L_3 R_L s \left(C_L L_L s^2 + 1\right)}{C_3 C_L L_3 L_L R_L s^4 + C_3 L_3 R_L s^2 + C_L L_3 L_L s^3 + C_L L_3 R_L s^2 + C_L L_L R_L s^2 + L_3 s + R_L}$$

10.508 INVALID-ORDER-508 $Z(s) = \left(\frac{1}{C_1 s},\ \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_L s}\right)$

$$H(s) = \frac{C_3 L_3 s^2 + C_3 R_3 s + 1}{s\left(C_3 C_L L_3 s^2 + C_3 C_L R_3 s + C_3 + C_L\right)}$$

10.509 INVALID-ORDER-509 $Z(s) = \left(\frac{1}{C_1 s},\ \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{R_L}{C_L R_L s+1}\right)$

$$H(s) = \frac{R_L\left(C_3 L_3 s^2 + C_3 R_3 s + 1\right)}{C_3 C_L L_3 R_L s^3 + C_3 C_L R_3 R_L s^2 + C_3 L_3 s^2 + C_3 R_3 s + C_3 R_L s + C_L R_L s + 1}$$

10.510 INVALID-ORDER-510 $Z(s) = \left(\frac{1}{C_1 s},\ \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{\left(C_L R_L s + 1\right)\left(C_3 L_3 s^2 + C_3 R_3 s + 1\right)}{s\left(C_3 C_L L_3 s^2 + C_3 C_L R_3 s + C_3 C_L R_L s + C_3 + C_L\right)}$$

10.511 INVALID-ORDER-511 $Z(s) = \left(\frac{1}{C_1 s},\ \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ L_L s + \frac{1}{C_L s}\right)$

$$H(s) = \frac{\left(C_L L_L s^2 + 1\right)\left(C_3 L_3 s^2 + C_3 R_3 s + 1\right)}{s\left(C_3 C_L L_3 s^2 + C_3 C_L L_L s^2 + C_3 C_L R_3 s + C_3 + C_L\right)}$$

10.512 INVALID-ORDER-512 $Z(s) = \left(\frac{1}{C_1 s},\ \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{L_L s}{C_L L_L s^2+1}\right)$

$$H(s) = \frac{L_L s\left(C_3 L_3 s^2 + C_3 R_3 s + 1\right)}{C_3 C_L L_3 L_L s^4 + C_3 C_L L_L R_3 s^3 + C_3 L_3 s^2 + C_3 L_L s^2 + C_3 R_3 s + C_L L_L s^2 + 1}$$

10.513 INVALID-ORDER-513 $Z(s) = \left(\frac{1}{C_1 s},\ \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ L_L s + R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{\left(C_3 L_3 s^2 + C_3 R_3 s + 1\right)\left(C_L L_L s^2 + C_L R_L s + 1\right)}{s\left(C_3 C_L L_3 s^2 + C_3 C_L L_L s^2 + C_3 C_L R_3 s + C_3 C_L R_L s + C_3 + C_L\right)}$$

10.514 INVALID-ORDER-514 $Z(s) = \left(\frac{1}{C_1 s},\ \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$

$$H(s) = \frac{L_L R_L s \left(C_3 L_3 s^2 + C_3 R_3 s + 1\right)}{C_3 C_L L_3 L_L R_L s^4 + C_3 C_L L_L R_3 R_L s^3 + C_3 L_3 L_L s^3 + C_3 L_3 R_L s^2 + C_3 L_L R_3 s^2 + C_3 L_L R_L s^2 + C_3 R_3 R_L s + C_L L_L R_L s^2 + L_L s + R_L}$$

10.515 INVALID-ORDER-515 $Z(s) = \left(\frac{1}{C_1 s},\ \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$

$$H(s) = \frac{\left(C_3 L_3 s^2 + C_3 R_3 s + 1\right)\left(C_L L_L R_L s^2 + L_L s + R_L\right)}{C_3 C_L L_3 L_L s^4 + C_3 C_L L_L R_3 s^3 + C_3 C_L L_L R_L s^3 + C_3 L_3 s^2 + C_3 L_L s^2 + C_3 R_3 s + C_3 R_L s + C_L L_L s^2 + 1}$$

10.516 INVALID-ORDER-516 $Z(s) = \left(\frac{1}{C_1 s},\ \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{R_L\left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$

$$H(s) = \frac{R_L \left(C_L L_L s^2 + 1\right)\left(C_3 L_3 s^2 + C_3 R_3 s + 1\right)}{C_3 C_L L_3 L_L s^4 + C_3 C_L L_3 R_L s^3 + C_3 C_L L_L R_3 s^3 + C_3 C_L L_L R_L s^3 + C_3 C_L R_3 R_L s^2 + C_3 L_3 s^2 + C_3 R_3 s + C_3 R_L s + C_L L_L s^2 + C_L R_L s + 1}$$

10.517 INVALID-ORDER-517 $Z(s) = \left(\frac{1}{C_1 s},\ \frac{R_2}{C_2 R_2 s + 1},\ \infty,\ \infty,\ \infty,\ R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{L_3 R_3 s \left(C_L R_L s + 1\right)}{C_3 C_L L_3 R_3 R_L s^3 + C_3 L_3 R_3 s^2 + C_L L_3 R_3 s^2 + C_L L_3 R_L s^2 + C_L R_3 R_L s + L_3 s + R_3}$$

10.518 INVALID-ORDER-518 $Z(s) = \left(\frac{1}{C_1 s},\ \frac{R_2}{C_2 R_2 s + 1},\ \infty,\ \infty,\ \infty,\ L_L s + \frac{1}{C_L s}\right)$

$$H(s) = \frac{L_3 R_3 s \left(C_L L_L s^2 + 1\right)}{C_3 C_L L_3 L_L R_3 s^4 + C_3 L_3 R_3 s^2 + C_L L_3 L_L s^3 + C_L L_3 R_3 s^2 + C_L L_L R_3 s^2 + L_3 s + R_3}$$

10.519 INVALID-ORDER-519 $Z(s) = \left(\frac{1}{C_1 s},\ \frac{R_2}{C_2 R_2 s+1},\ \infty,\ \infty,\ \infty,\ L_L s + R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{L_3 R_3 s \left(C_L L_L s^2 + C_L R_L s + 1\right)}{C_3 C_L L_3 L_L R_3 s^4 + C_3 C_L L_3 R_3 R_L s^3 + C_3 L_3 R_3 s^2 + C_L L_3 L_L s^3 + C_L L_3 R_3 s^2 + C_L L_3 R_L s^2 + C_L L_L R_3 s^2 + C_L R_3 R_L s + L_3 s + R_3}$$

10.520 INVALID-ORDER-520 $Z(s) = \left(\frac{1}{C_1 s},\ \frac{R_2}{C_2 R_2 s+1},\ \infty,\ \infty,\ \infty,\ \frac{L_L s}{C_L L_L s^2+1} + R_L\right)$

$$H(s) = \frac{L_3 R_3 s \left(C_L L_L R_L s^2 + L_L s + R_L\right)}{C_3 C_L L_3 L_L R_3 R_L s^4 + C_3 L_3 L_L R_3 s^3 + C_3 L_3 R_3 R_L s^2 + C_L L_3 L_L R_3 s^3 + C_L L_3 L_L R_L s^3 + C_L L_L R_3 R_L s^2 + L_3 L_L s^2 + L_3 R_3 s + L_3 R_L s + L_L R_3 s + R_3 R_L}$$

10.521 INVALID-ORDER-521 $Z(s) = \left(\frac{1}{C_1 s},\ \frac{R_2}{C_2 R_2 s+1},\ \infty,\ \infty,\ \infty,\ \frac{R_L\left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$

$$H(s) = \frac{L_3 R_3 R_L s \left(C_L L_L s^2 + 1\right)}{C_3 C_L L_3 L_L R_3 R_L s^4 + C_3 L_3 R_3 R_L s^2 + C_L L_3 L_L R_3 s^3 + C_L L_3 L_L R_L s^3 + C_L L_3 R_3 R_L s^2 + C_L L_L R_3 R_L s^2 + L_3 R_3 s + L_3 R_L s + R_3 R_L}$$

10.522 INVALID-ORDER-522 $Z(s) = \left(\frac{1}{C_1 s},\ R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_L s}\right)$

$$H(s) = \frac{C_3 L_3 R_3 s^2 + L_3 s + R_3}{C_3 C_L L_3 R_3 s^3 + C_3 L_3 s^2 + C_L L_3 s^2 + C_L R_3 s + 1}$$

10.523 INVALID-ORDER-523 $Z(s) = \left(\frac{1}{C_1 s},\ R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{R_L}{C_L R_L s+1}\right)$

$$H(s) = \frac{R_L \left(C_3 L_3 R_3 s^2 + L_3 s + R_3\right)}{C_3 C_L L_3 R_3 R_L s^3 + C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + C_L L_3 R_L s^2 + C_L R_3 R_L s + L_3 s + R_3 + R_L}$$

10.524 INVALID-ORDER-524 $Z(s) = \left(\frac{1}{C_1 s},\ R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{(C_L R_L s + 1)\left(C_3 L_3 R_3 s^2 + L_3 s + R_3\right)}{C_3 C_L L_3 R_3 s^3 + C_3 C_L L_3 R_L s^3 + C_3 L_3 s^2 + C_L L_3 s^2 + C_L R_3 s + C_L R_L s + 1}$$

10.525 INVALID-ORDER-525 $Z(s) = \left(\frac{1}{C_1 s},\ R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ L_L s + \frac{1}{C_L s}\right)$

$$H(s) = \frac{\left(C_L L_L s^2 + 1\right)\left(C_3 L_3 R_3 s^2 + L_3 s + R_3\right)}{C_3 C_L L_3 L_L s^4 + C_3 C_L L_3 R_3 s^3 + C_3 L_3 s^2 + C_L L_3 s^2 + C_L L_L s^2 + C_L R_3 s + 1}$$

10.526 INVALID-ORDER-526 $Z(s) = \left(\frac{1}{C_1 s},\ R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{L_L s}{C_L L_L s^2 + 1}\right)$

$$H(s) = \frac{L_L s\left(C_3 L_3 R_3 s^2 + L_3 s + R_3\right)}{C_3 C_L L_3 L_L R_3 s^4 + C_3 L_3 L_L s^3 + C_3 L_3 R_3 s^2 + C_L L_3 L_L s^3 + C_L L_L R_3 s^2 + L_3 s + L_L s + R_3}$$

10.527 INVALID-ORDER-527 $Z(s) = \left(\frac{1}{C_1 s},\ R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ L_L s + R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{\left(C_L L_L s^2 + C_L R_L s + 1\right)\left(C_3 L_3 R_3 s^2 + L_3 s + R_3\right)}{C_3 C_L L_3 L_L s^4 + C_3 C_L L_3 R_3 s^3 + C_3 C_L L_3 R_L s^3 + C_3 L_3 s^2 + C_L L_3 s^2 + C_L L_L s^2 + C_L R_3 s + C_L R_L s + 1}$$

10.528 INVALID-ORDER-528 $Z(s) = \left(\frac{1}{C_1 s},\ R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$

$$H(s) = \frac{L_L R_L s\left(C_3 L_3 R_3 s^2 + L_3 s + R_3\right)}{C_3 C_L L_3 L_L R_3 R_L s^4 + C_3 L_3 L_L R_3 s^3 + C_3 L_3 L_L R_L s^3 + C_3 L_3 R_3 R_L s^2 + C_L L_3 L_L R_L s^3 + C_L L_L R_3 R_L s^2 + L_3 L_L s^2 + L_3 R_L s + L_L R_3 s + L_L R_L s + R_3 R_L}$$

10.529 INVALID-ORDER-529 $Z(s) = \left(\frac{1}{C_1 s},\ R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{L_L s}{C_L L_L s^2+1} + R_L\right)$

$$H(s) = \frac{\left(C_3 L_3 R_3 s^2 + L_3 s + R_3\right)\left(C_L L_L R_L s^2 + L_L s + R_L\right)}{C_3 C_L L_3 L_L R_3 s^4 + C_3 C_L L_3 L_L R_L s^4 + C_3 L_3 L_L s^3 + C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + C_L L_3 L_L s^3 + C_L L_L R_3 s^2 + C_L L_L R_L s^2 + L_3 s + L_L s + R_3 + R_L}$$

10.530 INVALID-ORDER-530 $Z(s) = \left(\frac{1}{C_1 s},\ R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{R_L\left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$

$$H(s) = \frac{R_L\left(C_L L_L s^2 + 1\right)\left(C_3 L_3 R_3 s^2 + L_3 s + R_3\right)}{C_3 C_L L_3 L_L R_3 s^4 + C_3 C_L L_3 L_L R_L s^4 + C_3 C_L L_3 R_3 R_L s^3 + C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + C_L L_3 L_L s^3 + C_L L_3 R_L s^2 + C_L L_L R_3 s^2 + C_L L_L R_L s^2 + C_L R_3 R_L s + L_3 s + R_3 + R_L}$$

10.531 INVALID-ORDER-531 $Z(s) = \left(\frac{1}{C_1 s},\ L_2 s + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_L s}\right)$

$$H(s) = \frac{R_3\left(C_3 L_3 s^2 + 1\right)}{C_3 C_L L_3 R_3 s^3 + C_3 L_3 s^2 + C_3 R_3 s + C_L R_3 s + 1}$$

10.532 INVALID-ORDER-532 $Z(s) = \left(\frac{1}{C_1 s},\ L_2 s + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{R_L}{C_L R_L s+1}\right)$

$$H(s) = \frac{R_3 R_L\left(C_3 L_3 s^2 + 1\right)}{C_3 C_L L_3 R_3 R_L s^3 + C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + C_3 R_3 R_L s + C_L R_3 R_L s + R_3 + R_L}$$

10.533 INVALID-ORDER-533 $Z(s) = \left(\frac{1}{C_1 s},\ L_2 s + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{R_3\left(C_3 L_3 s^2 + 1\right)\left(C_L R_L s + 1\right)}{C_3 C_L L_3 R_3 s^3 + C_3 C_L L_3 R_L s^3 + C_3 C_L R_3 R_L s^2 + C_3 L_3 s^2 + C_3 R_3 s + C_L R_3 s + C_L R_L s + 1}$$

10.534 INVALID-ORDER-534 $Z(s) = \left(\frac{1}{C_1 s},\ L_2 s + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ L_L s + \frac{1}{C_L s}\right)$

$$H(s) = \frac{R_3 \left(C_3 L_3 s^2 + 1\right) \left(C_L L_L s^2 + 1\right)}{C_3 C_L L_3 L_L s^4 + C_3 C_L L_3 R_3 s^3 + C_3 C_L L_L R_3 s^3 + C_3 L_3 s^2 + C_3 R_3 s + C_L L_L s^2 + C_L R_3 s + 1}$$

10.535 INVALID-ORDER-535 $Z(s) = \left(\frac{1}{C_1 s},\ L_2 s + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{L_L s}{C_L L_L s^2 + 1}\right)$

$$H(s) = \frac{L_L R_3 s \left(C_3 L_3 s^2 + 1\right)}{C_3 C_L L_3 L_L R_3 s^4 + C_3 L_3 L_L s^3 + C_3 L_3 R_3 s^2 + C_3 L_L R_3 s^2 + C_L L_L R_3 s^2 + L_L s + R_3}$$

10.536 INVALID-ORDER-536 $Z(s) = \left(\frac{1}{C_1 s},\ L_2 s + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ L_L s + R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{R_3 \left(C_3 L_3 s^2 + 1\right) \left(C_L L_L s^2 + C_L R_L s + 1\right)}{C_3 C_L L_3 L_L s^4 + C_3 C_L L_3 R_3 s^3 + C_3 C_L L_3 R_L s^3 + C_3 C_L L_L R_3 s^3 + C_3 C_L R_3 R_L s^2 + C_3 L_3 s^2 + C_3 R_3 s + C_L L_L s^2 + C_L R_3 s + C_L R_L s + 1}$$

10.537 INVALID-ORDER-537 $Z(s) = \left(\frac{1}{C_1 s},\ L_2 s + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$

$$H(s) = \frac{L_L R_3 R_L s \left(C_3 L_3 s^2 + 1\right)}{C_3 C_L L_3 L_L R_3 R_L s^4 + C_3 L_3 L_L R_3 s^3 + C_3 L_3 L_L R_L s^3 + C_3 L_3 R_3 R_L s^2 + C_3 L_L R_3 R_L s^2 + C_L L_L R_3 R_L s^2 + L_L R_3 s + L_L R_L s + R_3 R_L}$$

10.538 INVALID-ORDER-538 $Z(s) = \left(\frac{1}{C_1 s},\ L_2 s + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$

$$H(s) = \frac{R_3 \left(C_3 L_3 s^2 + 1\right) \left(C_L L_L R_L s^2 + L_L s + R_L\right)}{C_3 C_L L_3 L_L R_3 s^4 + C_3 C_L L_3 L_L R_L s^4 + C_3 C_L L_L R_3 R_L s^3 + C_3 L_3 L_L s^3 + C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + C_3 L_L R_3 s^2 + C_3 R_3 R_L s + C_L L_L R_3 s^2 + C_L L_L R_L s^2 + L_L s + R_3 + R_L}$$

10.539 INVALID-ORDER-539 $Z(s) = \left(\frac{1}{C_1 s},\ L_2 s + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{R_L\left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$

$$H(s) = \frac{R_3 R_L \left(C_3 L_3 s^2 + 1\right)\left(C_L L_L s^2 + 1\right)}{C_3 C_L L_3 L_L R_3 s^4 + C_3 C_L L_3 L_L R_L s^4 + C_3 C_L L_3 R_3 R_L s^3 + C_3 C_L L_L R_3 R_L s^3 + C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + C_3 R_3 R_L s + C_L L_L R_3 s^2 + C_L L_L R_L s^2 + C_L R_3 R_L s + R_3 + R_L}$$

10.540 INVALID-ORDER-540 $Z(s) = \left(\frac{1}{C_1 s},\ L_2 s + R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ R_L \right)$

$$H(s) = \frac{R_3 R_L}{R_3 + R_L}$$

10.541 INVALID-ORDER-541 $Z(s) = \left(\frac{1}{C_1 s},\ L_2 s + R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_L s} \right)$

$$H(s) = \frac{R_3}{C_L R_3 s + 1}$$

10.542 INVALID-ORDER-542 $Z(s) = \left(\frac{1}{C_1 s},\ L_2 s + R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{R_L}{C_L R_L s + 1} \right)$

$$H(s) = \frac{R_3 R_L}{C_L R_3 R_L s + R_3 + R_L}$$

10.543 INVALID-ORDER-543 $Z(s) = \left(\frac{1}{C_1 s},\ L_2 s + R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ R_L + \frac{1}{C_L s} \right)$

$$H(s) = \frac{R_3 \left(C_L R_L s + 1\right)}{C_L R_3 s + C_L R_L s + 1}$$

10.544 INVALID-ORDER-544 $Z(s) = \left(\frac{1}{C_1 s},\ \frac{L_2 s}{C_2 L_2 s^2 + 1} + R_2,\ \infty,\ \infty,\ \infty,\ R_L \right)$

$$H(s) = \frac{R_L}{C_3 R_L s + 1}$$

10.545 INVALID-ORDER-545 $Z(s) = \left(\frac{1}{C_1 s},\ \frac{L_2 s}{C_2 L_2 s^2+1} + R_2,\ \infty,\ \infty,\ \infty,\ \frac{1}{C_L s}\right)$

$$H(s) = \frac{1}{s\left(C_3 + C_L\right)}$$

10.546 INVALID-ORDER-546 $Z(s) = \left(\frac{1}{C_1 s},\ \frac{L_2 s}{C_2 L_2 s^2+1} + R_2,\ \infty,\ \infty,\ \infty,\ \frac{R_L}{C_L R_L s+1}\right)$

$$H(s) = \frac{R_L}{C_3 R_L s + C_L R_L s + 1}$$

10.547 INVALID-ORDER-547 $Z(s) = \left(\frac{1}{C_1 s},\ \frac{L_2 s}{C_2 L_2 s^2+1} + R_2,\ \infty,\ \infty,\ \infty,\ R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{C_L R_L s + 1}{s\left(C_3 C_L R_L s + C_3 + C_L\right)}$$

10.548 INVALID-ORDER-548 $Z(s) = \left(\frac{1}{C_1 s},\ \frac{L_2 s}{C_2 L_2 s^2+1} + R_2,\ \infty,\ \infty,\ \infty,\ L_L s + \frac{1}{C_L s}\right)$

$$H(s) = \frac{C_L L_L s^2 + 1}{s\left(C_3 C_L L_L s^2 + C_3 + C_L\right)}$$

10.549 INVALID-ORDER-549 $Z(s) = \left(\frac{1}{C_1 s},\ \frac{L_2 s}{C_2 L_2 s^2+1} + R_2,\ \infty,\ \infty,\ \infty,\ \frac{L_L s}{C_L L_L s^2+1}\right)$

$$H(s) = \frac{L_L s}{C_3 L_L s^2 + C_L L_L s^2 + 1}$$

10.550 INVALID-ORDER-550 $Z(s) = \left(\frac{1}{C_1 s},\ \frac{L_2 s}{C_2 L_2 s^2+1} + R_2,\ \infty,\ \infty,\ \infty,\ L_L s + R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{C_L L_L s^2 + C_L R_L s + 1}{s\left(C_3 C_L L_L s^2 + C_3 C_L R_L s + C_3 + C_L\right)}$$

10.551 INVALID-ORDER-551 $Z(s) = \left(\frac{1}{C_1 s},\ \frac{L_2 s}{C_2 L_2 s^2+1} + R_2,\ \infty,\ \infty,\ \infty,\ \frac{L_L s}{C_L L_L s^2+1} + R_L\right)$

$$H(s) = \frac{C_L L_L R_L s^2 + L_L s + R_L}{C_3 C_L L_L R_L s^3 + C_3 L_L s^2 + C_3 R_L s + C_L L_L s^2 + 1}$$

10.552 INVALID-ORDER-552 $Z(s) = \left(\frac{1}{C_1 s},\ \frac{L_2 s}{C_2 L_2 s^2+1} + R_2,\ \infty,\ \infty,\ \infty,\ \frac{R_L\left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$

$$H(s) = \frac{R_L\left(C_L L_L s^2 + 1\right)}{C_3 C_L L_L R_L s^3 + C_3 R_L s + C_L L_L s^2 + C_L R_L s + 1}$$

10.553 INVALID-ORDER-553 $Z(s) = \left(\frac{1}{C_1 s},\ \frac{R_2\left(L_2 s + \frac{1}{C_2 s}\right)}{L_2 s + R_2 + \frac{1}{C_2 s}},\ \infty,\ \infty,\ \infty,\ R_L\right)$

$$H(s) = \frac{R_3 R_L}{C_3 R_3 R_L s + R_3 + R_L}$$

10.554 INVALID-ORDER-554 $Z(s) = \left(\frac{1}{C_1 s},\ \frac{R_2\left(L_2 s + \frac{1}{C_2 s}\right)}{L_2 s + R_2 + \frac{1}{C_2 s}},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_L s}\right)$

$$H(s) = \frac{R_3}{C_3 R_3 s + C_L R_3 s + 1}$$

10.555 INVALID-ORDER-555 $Z(s) = \left(\frac{1}{C_1 s},\ \frac{R_2\left(L_2 s + \frac{1}{C_2 s}\right)}{L_2 s + R_2 + \frac{1}{C_2 s}},\ \infty,\ \infty,\ \infty,\ \frac{R_L}{C_L R_L s+1}\right)$

$$H(s) = \frac{R_3 R_L}{C_3 R_3 R_L s + C_L R_3 R_L s + R_3 + R_L}$$

10.556 INVALID-ORDER-556 $Z(s) = \left(\frac{1}{C_1 s},\ \frac{R_2\left(L_2 s + \frac{1}{C_2 s}\right)}{L_2 s + R_2 + \frac{1}{C_2 s}},\ \infty,\ \infty,\ \infty,\ L_L s + \frac{1}{C_L s} \right)$

$$H(s) = \frac{R_3\left(C_L L_L s^2 + 1\right)}{C_3 C_L L_L R_3 s^3 + C_3 R_3 s + C_L L_L s^2 + C_L R_3 s + 1}$$

10.557 INVALID-ORDER-557 $Z(s) = \left(\frac{1}{C_1 s},\ \frac{R_2\left(L_2 s + \frac{1}{C_2 s}\right)}{L_2 s + R_2 + \frac{1}{C_2 s}},\ \infty,\ \infty,\ \infty,\ L_L s + R_L + \frac{1}{C_L s} \right)$

$$H(s) = \frac{R_3\left(C_L L_L s^2 + C_L R_L s + 1\right)}{C_3 C_L L_L R_3 s^3 + C_3 C_L R_3 R_L s^2 + C_3 R_3 s + C_L L_L s^2 + C_L R_3 s + C_L R_L s + 1}$$

10.558 INVALID-ORDER-558 $Z(s) = \left(\frac{1}{C_1 s},\ \frac{R_2\left(L_2 s + \frac{1}{C_2 s}\right)}{L_2 s + R_2 + \frac{1}{C_2 s}},\ \infty,\ \infty,\ \infty,\ \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$

$$H(s) = \frac{R_3\left(C_L L_L R_L s^2 + L_L s + R_L\right)}{C_3 C_L L_L R_3 R_L s^3 + C_3 L_L R_3 s^2 + C_3 R_3 R_L s + C_L L_L R_3 s^2 + C_L L_L R_L s^2 + L_L s + R_3 + R_L}$$

10.559 INVALID-ORDER-559 $Z(s) = \left(\frac{1}{C_1 s},\ \frac{R_2\left(L_2 s + \frac{1}{C_2 s}\right)}{L_2 s + R_2 + \frac{1}{C_2 s}},\ \infty,\ \infty,\ \infty,\ \frac{R_L\left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$

$$H(s) = \frac{R_3 R_L\left(C_L L_L s^2 + 1\right)}{C_3 C_L L_L R_3 R_L s^3 + C_3 R_3 R_L s + C_L L_L R_3 s^2 + C_L L_L R_L s^2 + C_L R_3 R_L s + R_3 + R_L}$$

10.560 INVALID-ORDER-560 $Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1},\ R_2,\ \infty,\ \infty,\ \infty,\ R_L \right)$

$$H(s) = \frac{R_L\left(C_3 R_3 s + 1\right)}{C_3 R_3 s + C_3 R_L s + 1}$$

10.561 INVALID-ORDER-561 $Z(s) = \left(\frac{R_1}{C_1 R_1 s+1},\ R_2,\ \infty,\ \infty,\ \infty,\ \frac{1}{C_L s}\right)$

$$H(s) = \frac{C_3 R_3 s + 1}{s\left(C_3 C_L R_3 s + C_3 + C_L\right)}$$

10.562 INVALID-ORDER-562 $Z(s) = \left(\frac{R_1}{C_1 R_1 s+1},\ R_2,\ \infty,\ \infty,\ \infty,\ R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{\left(C_3 R_3 s + 1\right)\left(C_L R_L s + 1\right)}{s\left(C_3 C_L R_3 s + C_3 C_L R_L s + C_3 + C_L\right)}$$

10.563 INVALID-ORDER-563 $Z(s) = \left(\frac{R_1}{C_1 R_1 s+1},\ R_2,\ \infty,\ \infty,\ \infty,\ L_L s + \frac{1}{C_L s}\right)$

$$H(s) = \frac{\left(C_3 R_3 s + 1\right)\left(C_L L_L s^2 + 1\right)}{s\left(C_3 C_L L_L s^2 + C_3 C_L R_3 s + C_3 + C_L\right)}$$

10.564 INVALID-ORDER-564 $Z(s) = \left(\frac{R_1}{C_1 R_1 s+1},\ R_2,\ \infty,\ \infty,\ \infty,\ \frac{L_L s}{C_L L_L s^2+1}\right)$

$$H(s) = \frac{L_L s\left(C_3 R_3 s + 1\right)}{C_3 C_L L_L R_3 s^3 + C_3 L_L s^2 + C_3 R_3 s + C_L L_L s^2 + 1}$$

10.565 INVALID-ORDER-565 $Z(s) = \left(\frac{R_1}{C_1 R_1 s+1},\ R_2,\ \infty,\ \infty,\ \infty,\ L_L s + R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{\left(C_3 R_3 s + 1\right)\left(C_L L_L s^2 + C_L R_L s + 1\right)}{s\left(C_3 C_L L_L s^2 + C_3 C_L R_3 s + C_3 C_L R_L s + C_3 + C_L\right)}$$

10.566 INVALID-ORDER-566 $Z(s) = \left(\frac{R_1}{C_1 R_1 s+1},\ R_2,\ \infty,\ \infty,\ \infty,\ \frac{1}{C_L s+\frac{1}{R_L}+\frac{1}{L_L s}}\right)$

$$H(s) = \frac{L_L R_L s\left(C_3 R_3 s + 1\right)}{C_3 C_L L_L R_3 R_L s^3 + C_3 L_L R_3 s^2 + C_3 L_L R_L s^2 + C_3 R_3 R_L s + C_L L_L R_L s^2 + L_L s + R_L}$$

10.567 INVALID-ORDER-567 $Z(s) = \left(\frac{R_1}{C_1 R_1 s+1},\ R_2,\ \infty,\ \infty,\ \infty,\ \frac{L_L s}{C_L L_L s^2+1} + R_L\right)$

$$H(s) = \frac{(C_3 R_3 s + 1)\left(C_L L_L R_L s^2 + L_L s + R_L\right)}{C_3 C_L L_L R_3 s^3 + C_3 C_L L_L R_L s^3 + C_3 L_L s^2 + C_3 R_3 s + C_3 R_L s + C_L L_L s^2 + 1}$$

10.568 INVALID-ORDER-568 $Z(s) = \left(\frac{R_1}{C_1 R_1 s+1},\ R_2,\ \infty,\ \infty,\ \infty,\ \frac{R_L\left(L_L s+\frac{1}{C_L s}\right)}{L_L s+R_L+\frac{1}{C_L s}}\right)$

$$H(s) = \frac{R_L\left(C_3 R_3 s + 1\right)\left(C_L L_L s^2 + 1\right)}{C_3 C_L L_L R_3 s^3 + C_3 C_L L_L R_L s^3 + C_3 C_L R_3 R_L s^2 + C_3 R_3 s + C_3 R_L s + C_L L_L s^2 + C_L R_L s + 1}$$

10.569 INVALID-ORDER-569 $Z(s) = \left(\frac{R_1}{C_1 R_1 s+1},\ \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_L s}\right)$

$$H(s) = \frac{C_3 L_3 s^2 + 1}{s\left(C_3 C_L L_3 s^2 + C_3 + C_L\right)}$$

10.570 INVALID-ORDER-570 $Z(s) = \left(\frac{R_1}{C_1 R_1 s+1},\ \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{R_L}{C_L R_L s+1}\right)$

$$H(s) = \frac{R_L\left(C_3 L_3 s^2 + 1\right)}{C_3 C_L L_3 R_L s^3 + C_3 L_3 s^2 + C_3 R_L s + C_L R_L s + 1}$$

10.571 INVALID-ORDER-571 $Z(s) = \left(\frac{R_1}{C_1 R_1 s+1},\ \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{\left(C_3 L_3 s^2 + 1\right)\left(C_L R_L s + 1\right)}{s\left(C_3 C_L L_3 s^2 + C_3 C_L R_L s + C_3 + C_L\right)}$$

10.572 INVALID-ORDER-572 $Z(s) = \left(\frac{R_1}{C_1 R_1 s+1},\ \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ L_L s + \frac{1}{C_L s}\right)$

$$H(s) = \frac{\left(C_3 L_3 s^2 + 1\right)\left(C_L L_L s^2 + 1\right)}{s\left(C_3 C_L L_3 s^2 + C_3 C_L L_L s^2 + C_3 + C_L\right)}$$

10.573 INVALID-ORDER-573 $Z(s) = \left(\frac{R_1}{C_1 R_1 s+1},\ \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{L_L s}{C_L L_L s^2+1}\right)$

$$H(s) = \frac{L_L s\left(C_3 L_3 s^2 + 1\right)}{C_3 C_L L_3 L_L s^4 + C_3 L_3 s^2 + C_3 L_L s^2 + C_L L_L s^2 + 1}$$

10.574 INVALID-ORDER-574 $Z(s) = \left(\frac{R_1}{C_1 R_1 s+1},\ \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ L_L s + R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{\left(C_3 L_3 s^2 + 1\right)\left(C_L L_L s^2 + C_L R_L s + 1\right)}{s\left(C_3 C_L L_3 s^2 + C_3 C_L L_L s^2 + C_3 C_L R_L s + C_3 + C_L\right)}$$

10.575 INVALID-ORDER-575 $Z(s) = \left(\frac{R_1}{C_1 R_1 s+1},\ \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_L s+\frac{1}{R_L}+\frac{1}{L_L s}}\right)$

$$H(s) = \frac{L_L R_L s\left(C_3 L_3 s^2 + 1\right)}{C_3 C_L L_3 L_L R_L s^4 + C_3 L_3 L_L s^3 + C_3 L_3 R_L s^2 + C_3 L_L R_L s^2 + C_L L_L R_L s^2 + L_L s + R_L}$$

10.576 INVALID-ORDER-576 $Z(s) = \left(\frac{R_1}{C_1 R_1 s+1},\ \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{L_L s}{C_L L_L s^2+1} + R_L\right)$

$$H(s) = \frac{\left(C_3 L_3 s^2 + 1\right)\left(C_L L_L R_L s^2 + L_L s + R_L\right)}{C_3 C_L L_3 L_L s^4 + C_3 C_L L_L R_L s^3 + C_3 L_3 s^2 + C_3 L_L s^2 + C_3 R_L s + C_L L_L s^2 + 1}$$

10.577 INVALID-ORDER-577 $Z(s) = \left(\frac{R_1}{C_1 R_1 s+1},\ \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{R_L\left(L_L s+\frac{1}{C_L s}\right)}{L_L s+R_L+\frac{1}{C_L s}} \right)$

$$H(s) = \frac{R_L\left(C_3 L_3 s^2+1\right)\left(C_L L_L s^2+1\right)}{C_3 C_L L_3 L_L s^4 + C_3 C_L L_3 R_L s^3 + C_3 C_L L_L R_L s^3 + C_3 L_3 s^2 + C_3 R_L s + C_L L_L s^2 + C_L R_L s + 1}$$

10.578 INVALID-ORDER-578 $Z(s) = \left(\frac{R_1}{C_1 R_1 s+1},\ \frac{R_2}{C_2 R_2 s+1},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_L s} \right)$

$$H(s) = \frac{L_3 s}{C_3 L_3 s^2 + C_L L_3 s^2 + 1}$$

10.579 INVALID-ORDER-579 $Z(s) = \left(\frac{R_1}{C_1 R_1 s+1},\ \frac{R_2}{C_2 R_2 s+1},\ \infty,\ \infty,\ \infty,\ R_L+\frac{1}{C_L s} \right)$

$$H(s) = \frac{L_3 s\left(C_L R_L s+1\right)}{C_3 C_L L_3 R_L s^3 + C_3 L_3 s^2 + C_L L_3 s^2 + C_L R_L s + 1}$$

10.580 INVALID-ORDER-580 $Z(s) = \left(\frac{R_1}{C_1 R_1 s+1},\ \frac{R_2}{C_2 R_2 s+1},\ \infty,\ \infty,\ \infty,\ L_L s+\frac{1}{C_L s} \right)$

$$H(s) = \frac{L_3 s\left(C_L L_L s^2+1\right)}{C_3 C_L L_3 L_L s^4 + C_3 L_3 s^2 + C_L L_3 s^2 + C_L L_L s^2 + 1}$$

10.581 INVALID-ORDER-581 $Z(s) = \left(\frac{R_1}{C_1 R_1 s+1},\ \frac{R_2}{C_2 R_2 s+1},\ \infty,\ \infty,\ \infty,\ \frac{L_L s}{C_L L_L s^2+1} \right)$

$$H(s) = \frac{L_3 L_L s}{C_3 L_3 L_L s^2 + C_L L_3 L_L s^2 + L_3 + L_L}$$

10.582 INVALID-ORDER-582 $Z(s) = \left(\frac{R_1}{C_1 R_1 s+1},\ \frac{R_2}{C_2 R_2 s+1},\ \infty,\ \infty,\ \infty,\ L_L s+R_L+\frac{1}{C_L s} \right)$

$$H(s) = \frac{L_3 s\left(C_L L_L s^2+C_L R_L s+1\right)}{C_3 C_L L_3 L_L s^4 + C_3 C_L L_3 R_L s^3 + C_3 L_3 s^2 + C_L L_3 s^2 + C_L L_L s^2 + C_L R_L s + 1}$$

10.583 INVALID-ORDER-583 $Z(s) = \left(\frac{R_1}{C_1 R_1 s+1},\ \frac{R_2}{C_2 R_2 s+1},\ \infty,\ \infty,\ \infty,\ \frac{L_L s}{C_L L_L s^2+1} + R_L\right)$

$$H(s) = \frac{L_3 s\left(C_L L_L R_L s^2 + L_L s + R_L\right)}{C_3 C_L L_3 L_L R_L s^4 + C_3 L_3 L_L s^3 + C_3 L_3 R_L s^2 + C_L L_3 L_L s^3 + C_L L_L R_L s^2 + L_3 s + L_L s + R_L}$$

10.584 INVALID-ORDER-584 $Z(s) = \left(\frac{R_1}{C_1 R_1 s+1},\ \frac{R_2}{C_2 R_2 s+1},\ \infty,\ \infty,\ \infty,\ \frac{R_L\left(L_L s+\frac{1}{C_L s}\right)}{L_L s+R_L+\frac{1}{C_L s}}\right)$

$$H(s) = \frac{L_3 R_L s\left(C_L L_L s^2 + 1\right)}{C_3 C_L L_3 L_L R_L s^4 + C_3 L_3 R_L s^2 + C_L L_3 L_L s^3 + C_L L_3 R_L s^2 + C_L L_L R_L s^2 + L_3 s + R_L}$$

10.585 INVALID-ORDER-585 $Z(s) = \left(\frac{R_1}{C_1 R_1 s+1},\ R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_L s}\right)$

$$H(s) = \frac{C_3 L_3 s^2 + C_3 R_3 s + 1}{s\left(C_3 C_L L_3 s^2 + C_3 C_L R_3 s + C_3 + C_L\right)}$$

10.586 INVALID-ORDER-586 $Z(s) = \left(\frac{R_1}{C_1 R_1 s+1},\ R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{R_L}{C_L R_L s+1}\right)$

$$H(s) = \frac{R_L\left(C_3 L_3 s^2 + C_3 R_3 s + 1\right)}{C_3 C_L L_3 R_L s^3 + C_3 C_L R_3 R_L s^2 + C_3 L_3 s^2 + C_3 R_3 s + C_3 R_L s + C_L R_L s + 1}$$

10.587 INVALID-ORDER-587 $Z(s) = \left(\frac{R_1}{C_1 R_1 s+1},\ R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{\left(C_L R_L s + 1\right)\left(C_3 L_3 s^2 + C_3 R_3 s + 1\right)}{s\left(C_3 C_L L_3 s^2 + C_3 C_L R_3 s + C_3 C_L R_L s + C_3 + C_L\right)}$$

10.588 INVALID-ORDER-588 $Z(s) = \left(\frac{R_1}{C_1 R_1 s+1},\ R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ L_L s + \frac{1}{C_L s}\right)$

$$H(s) = \frac{\left(C_L L_L s^2 + 1\right)\left(C_3 L_3 s^2 + C_3 R_3 s + 1\right)}{s\left(C_3 C_L L_3 s^2 + C_3 C_L L_L s^2 + C_3 C_L R_3 s + C_3 + C_L\right)}$$

10.589 INVALID-ORDER-589 $Z(s) = \left(\frac{R_1}{C_1 R_1 s+1},\ R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{L_L s}{C_L L_L s^2+1}\right)$

$$H(s) = \frac{L_L s\left(C_3 L_3 s^2 + C_3 R_3 s + 1\right)}{C_3 C_L L_3 L_L s^4 + C_3 C_L L_L R_3 s^3 + C_3 L_3 s^2 + C_3 L_L s^2 + C_3 R_3 s + C_L L_L s^2 + 1}$$

10.590 INVALID-ORDER-590 $Z(s) = \left(\frac{R_1}{C_1 R_1 s+1},\ R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ L_L s + R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{\left(C_3 L_3 s^2 + C_3 R_3 s + 1\right)\left(C_L L_L s^2 + C_L R_L s + 1\right)}{s\left(C_3 C_L L_3 s^2 + C_3 C_L L_L s^2 + C_3 C_L R_3 s + C_3 C_L R_L s + C_3 + C_L\right)}$$

10.591 INVALID-ORDER-591 $Z(s) = \left(\frac{R_1}{C_1 R_1 s+1},\ R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$

$$H(s) = \frac{L_L R_L s\left(C_3 L_3 s^2 + C_3 R_3 s + 1\right)}{C_3 C_L L_3 L_L R_L s^4 + C_3 C_L L_L R_3 R_L s^3 + C_3 L_3 L_L s^3 + C_3 L_3 R_L s^2 + C_3 L_L R_3 s^2 + C_3 L_L R_L s^2 + C_3 R_3 R_L s + C_L L_L R_L s^2 + L_L s + R_L}$$

10.592 INVALID-ORDER-592 $Z(s) = \left(\frac{R_1}{C_1 R_1 s+1},\ R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{L_L s}{C_L L_L s^2+1} + R_L\right)$

$$H(s) = \frac{\left(C_3 L_3 s^2 + C_3 R_3 s + 1\right)\left(C_L L_L R_L s^2 + L_L s + R_L\right)}{C_3 C_L L_3 L_L s^4 + C_3 C_L L_L R_3 s^3 + C_3 C_L L_L R_L s^3 + C_3 L_3 s^2 + C_3 L_L s^2 + C_3 R_3 s + C_3 R_L s + C_L L_L s^2 + 1}$$

10.593 INVALID-ORDER-593 $Z(s) = \left(\frac{R_1}{C_1 R_1 s+1},\ R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{R_L\left(L_L s+\frac{1}{C_L s}\right)}{L_L s+R_L+\frac{1}{C_L s}} \right)$

$$H(s) = \frac{R_L \left(C_L L_L s^2+1\right)\left(C_3 L_3 s^2+C_3 R_3 s+1\right)}{C_3 C_L L_3 L_L s^4+C_3 C_L L_3 R_L s^3+C_3 C_L L_L R_3 s^3+C_3 C_L L_L R_L s^3+C_3 C_L R_3 R_L s^2+C_3 L_3 s^2+C_3 R_3 s+C_3 R_L s+C_L L_L s^2+C_L R_L s+1}$$

10.594 INVALID-ORDER-594 $Z(s) = \left(\frac{R_1}{C_1 R_1 s+1},\ L_2 s + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ R_L + \frac{1}{C_L s} \right)$

$$H(s) = \frac{L_3 R_3 s \left(C_L R_L s+1\right)}{C_3 C_L L_3 R_3 R_L s^3+C_3 L_3 R_3 s^2+C_L L_3 R_3 s^2+C_L L_3 R_L s^2+C_L R_3 R_L s+L_3 s+R_3}$$

10.595 INVALID-ORDER-595 $Z(s) = \left(\frac{R_1}{C_1 R_1 s+1},\ L_2 s + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ L_L s + \frac{1}{C_L s} \right)$

$$H(s) = \frac{L_3 R_3 s \left(C_L L_L s^2+1\right)}{C_3 C_L L_3 L_L R_3 s^4+C_3 L_3 R_3 s^2+C_L L_3 L_L s^3+C_L L_3 R_3 s^2+C_L L_L R_3 s^2+L_3 s+R_3}$$

10.596 INVALID-ORDER-596 $Z(s) = \left(\frac{R_1}{C_1 R_1 s+1},\ L_2 s + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ L_L s + R_L + \frac{1}{C_L s} \right)$

$$H(s) = \frac{L_3 R_3 s \left(C_L L_L s^2+C_L R_L s+1\right)}{C_3 C_L L_3 L_L R_3 s^4+C_3 C_L L_3 R_3 R_L s^3+C_3 L_3 R_3 s^2+C_L L_3 L_L s^3+C_L L_3 R_3 s^2+C_L L_3 R_L s^2+C_L L_L R_3 s^2+C_L R_3 R_L s+L_3 s+R_3}$$

10.597 INVALID-ORDER-597 $Z(s) = \left(\frac{R_1}{C_1 R_1 s+1},\ L_2 s + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{L_L s}{C_L L_L s^2+1} + R_L \right)$

$$H(s) = \frac{L_3 R_3 s \left(C_L L_L R_L s^2+L_L s+R_L\right)}{C_3 C_L L_3 L_L R_3 R_L s^4+C_3 L_3 L_L R_3 s^3+C_3 L_3 R_3 R_L s^2+C_L L_3 L_L R_3 s^3+C_L L_3 L_L R_L s^3+C_L L_L R_3 R_L s^2+L_3 L_L s^2+L_3 R_3 s+L_3 R_L s+L_L R_3 s+R_3 R_L}$$

10.598 INVALID-ORDER-598 $Z(s) = \left(\frac{R_1}{C_1 R_1 s+1},\ L_2 s + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{R_L\left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$

$$H(s) = \frac{L_3 R_3 R_L s \left(C_L L_L s^2 + 1\right)}{C_3 C_L L_3 L_L R_3 R_L s^4 + C_3 L_3 R_3 R_L s^2 + C_L L_3 L_L R_3 s^3 + C_L L_3 L_L R_L s^3 + C_L L_3 R_3 R_L s^2 + C_L L_L R_3 R_L s^2 + L_3 R_3 s + L_3 R_L s + R_3 R_L}$$

10.599 INVALID-ORDER-599 $Z(s) = \left(\frac{R_1}{C_1 R_1 s+1},\ L_2 s + R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_L s} \right)$

$$H(s) = \frac{C_3 L_3 R_3 s^2 + L_3 s + R_3}{C_3 C_L L_3 R_3 s^3 + C_3 L_3 s^2 + C_L L_3 s^2 + C_L R_3 s + 1}$$

10.600 INVALID-ORDER-600 $Z(s) = \left(\frac{R_1}{C_1 R_1 s+1},\ L_2 s + R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{R_L}{C_L R_L s+1} \right)$

$$H(s) = \frac{R_L \left(C_3 L_3 R_3 s^2 + L_3 s + R_3\right)}{C_3 C_L L_3 R_3 R_L s^3 + C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + C_L L_3 R_L s^2 + C_L R_3 R_L s + L_3 s + R_3 + R_L}$$

10.601 INVALID-ORDER-601 $Z(s) = \left(\frac{R_1}{C_1 R_1 s+1},\ L_2 s + R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ R_L + \frac{1}{C_L s} \right)$

$$H(s) = \frac{(C_L R_L s + 1) \left(C_3 L_3 R_3 s^2 + L_3 s + R_3\right)}{C_3 C_L L_3 R_3 s^3 + C_3 C_L L_3 R_L s^3 + C_3 L_3 s^2 + C_L L_3 s^2 + C_L R_3 s + C_L R_L s + 1}$$

10.602 INVALID-ORDER-602 $Z(s) = \left(\frac{R_1}{C_1 R_1 s+1},\ L_2 s + R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ L_L s + \frac{1}{C_L s} \right)$

$$H(s) = \frac{\left(C_L L_L s^2 + 1\right) \left(C_3 L_3 R_3 s^2 + L_3 s + R_3\right)}{C_3 C_L L_3 L_L s^4 + C_3 C_L L_3 R_3 s^3 + C_3 L_3 s^2 + C_L L_3 s^2 + C_L L_L s^2 + C_L R_3 s + 1}$$

10.603 INVALID-ORDER-603 $Z(s) = \left(\frac{R_1}{C_1 R_1 s+1},\ L_2 s + R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{L_L s}{C_L L_L s^2+1}\right)$

$$H(s) = \frac{L_L s \left(C_3 L_3 R_3 s^2 + L_3 s + R_3\right)}{C_3 C_L L_3 L_L R_3 s^4 + C_3 L_3 L_L s^3 + C_3 L_3 R_3 s^2 + C_L L_3 L_L s^3 + C_L L_L R_3 s^2 + L_3 s + L_L s + R_3}$$

10.604 INVALID-ORDER-604 $Z(s) = \left(\frac{R_1}{C_1 R_1 s+1},\ L_2 s + R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ L_L s + R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{\left(C_L L_L s^2 + C_L R_L s + 1\right)\left(C_3 L_3 R_3 s^2 + L_3 s + R_3\right)}{C_3 C_L L_3 L_L s^4 + C_3 C_L L_3 R_3 s^3 + C_3 C_L L_3 R_L s^3 + C_3 L_3 s^2 + C_L L_3 s^2 + C_L L_L s^2 + C_L R_3 s + C_L R_L s + 1}$$

10.605 INVALID-ORDER-605 $Z(s) = \left(\frac{R_1}{C_1 R_1 s+1},\ L_2 s + R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$

$$H(s) = \frac{L_L R_L s \left(C_3 L_3 R_3 s^2 + L_3 s + R_3\right)}{C_3 C_L L_3 L_L R_3 R_L s^4 + C_3 L_3 L_L R_3 s^3 + C_3 L_3 L_L R_L s^3 + C_3 L_3 R_3 R_L s^2 + C_L L_3 L_L R_L s^3 + C_L L_L R_3 R_L s^2 + L_3 L_L s^2 + L_3 R_L s + L_L R_3 s + L_L R_L s + R_3 R_L}$$

10.606 INVALID-ORDER-606 $Z(s) = \left(\frac{R_1}{C_1 R_1 s+1},\ L_2 s + R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{L_L s}{C_L L_L s^2+1} + R_L\right)$

$$H(s) = \frac{\left(C_3 L_3 R_3 s^2 + L_3 s + R_3\right)\left(C_L L_L R_L s^2 + L_L s + R_L\right)}{C_3 C_L L_3 L_L R_3 s^4 + C_3 C_L L_3 L_L R_L s^4 + C_3 L_3 L_L s^3 + C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + C_L L_3 L_L s^3 + C_L L_L R_3 s^2 + C_L L_L R_L s^2 + L_3 s + L_L s + R_3 + R_L}$$

10.607 INVALID-ORDER-607 $Z(s) = \left(\frac{R_1}{C_1 R_1 s+1},\ L_2 s + R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \frac{R_L\left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$

$$H(s) = \frac{R_L \left(C_L L_L s^2 + 1\right)\left(C_3 L_3 R_3 s^2 + L_3 s + R_3\right)}{C_3 C_L L_3 L_L R_3 s^4 + C_3 C_L L_3 L_L R_L s^4 + C_3 C_L L_3 R_3 R_L s^3 + C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + C_L L_3 L_L s^3 + C_L L_3 R_L s^2 + C_L L_L R_3 s^2 + C_L L_L R_L s^2 + C_L R_3 R_L s + L_3 s + R_3 + R_L}$$

10.608 INVALID-ORDER-608 $Z(s) = \left(\frac{R_1}{C_1R_1s+1},\ \frac{L_2s}{C_2L_2s^2+1} + R_2,\ \infty,\ \infty,\ \infty,\ \frac{1}{C_Ls}\right)$

$$H(s) = \frac{R_3\left(C_3L_3s^2+1\right)}{C_3C_LL_3R_3s^3 + C_3L_3s^2 + C_3R_3s + C_LR_3s + 1}$$

10.609 INVALID-ORDER-609 $Z(s) = \left(\frac{R_1}{C_1R_1s+1},\ \frac{L_2s}{C_2L_2s^2+1} + R_2,\ \infty,\ \infty,\ \infty,\ \frac{R_L}{C_LR_Ls+1}\right)$

$$H(s) = \frac{R_3R_L\left(C_3L_3s^2+1\right)}{C_3C_LL_3R_3R_Ls^3 + C_3L_3R_3s^2 + C_3L_3R_Ls^2 + C_3R_3R_Ls + C_LR_3R_Ls + R_3 + R_L}$$

10.610 INVALID-ORDER-610 $Z(s) = \left(\frac{R_1}{C_1R_1s+1},\ \frac{L_2s}{C_2L_2s^2+1} + R_2,\ \infty,\ \infty,\ \infty,\ R_L + \frac{1}{C_Ls}\right)$

$$H(s) = \frac{R_3\left(C_3L_3s^2+1\right)\left(C_LR_Ls+1\right)}{C_3C_LL_3R_3s^3 + C_3C_LL_3R_Ls^3 + C_3C_LR_3R_Ls^2 + C_3L_3s^2 + C_3R_3s + C_LR_3s + C_LR_Ls + 1}$$

10.611 INVALID-ORDER-611 $Z(s) = \left(\frac{R_1}{C_1R_1s+1},\ \frac{L_2s}{C_2L_2s^2+1} + R_2,\ \infty,\ \infty,\ \infty,\ L_Ls + \frac{1}{C_Ls}\right)$

$$H(s) = \frac{R_3\left(C_3L_3s^2+1\right)\left(C_LL_Ls^2+1\right)}{C_3C_LL_3L_Ls^4 + C_3C_LL_3R_3s^3 + C_3C_LL_LR_3s^3 + C_3L_3s^2 + C_3R_3s + C_LL_Ls^2 + C_LR_3s + 1}$$

10.612 INVALID-ORDER-612 $Z(s) = \left(\frac{R_1}{C_1R_1s+1},\ \frac{L_2s}{C_2L_2s^2+1} + R_2,\ \infty,\ \infty,\ \infty,\ \frac{L_Ls}{C_LL_Ls^2+1}\right)$

$$H(s) = \frac{L_LR_3s\left(C_3L_3s^2+1\right)}{C_3C_LL_3L_LR_3s^4 + C_3L_3L_Ls^3 + C_3L_3R_3s^2 + C_3L_LR_3s^2 + C_LL_LR_3s^2 + L_Ls + R_3}$$

10.613 INVALID-ORDER-613 $Z(s) = \left(\frac{R_1}{C_1R_1s+1},\ \frac{L_2s}{C_2L_2s^2+1} + R_2,\ \infty,\ \infty,\ \infty,\ L_Ls + R_L + \frac{1}{C_Ls}\right)$

$$H(s) = \frac{R_3\left(C_3L_3s^2+1\right)\left(C_LL_Ls^2 + C_LR_Ls + 1\right)}{C_3C_LL_3L_Ls^4 + C_3C_LL_3R_3s^3 + C_3C_LL_3R_Ls^3 + C_3C_LL_LR_3s^3 + C_3C_LR_3R_Ls^2 + C_3L_3s^2 + C_3R_3s + C_LL_Ls^2 + C_LR_3s + C_LR_Ls + 1}$$

10.614 INVALID-ORDER-614 $Z(s) = \left(\frac{R_1}{C_1 R_1 s+1},\ \frac{L_2 s}{C_2 L_2 s^2+1} + R_2,\ \infty,\ \infty,\ \infty,\ \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$

$$H(s) = \frac{L_L R_3 R_L s \left(C_3 L_3 s^2 + 1\right)}{C_3 C_L L_3 L_L R_3 R_L s^4 + C_3 L_3 L_L R_3 s^3 + C_3 L_3 L_L R_L s^3 + C_3 L_3 R_3 R_L s^2 + C_3 L_L R_3 R_L s^2 + C_L L_L R_3 R_L s^2 + L_L R_3 s + L_L R_L s + R_3 R_L}$$

10.615 INVALID-ORDER-615 $Z(s) = \left(\frac{R_1}{C_1 R_1 s+1},\ \frac{L_2 s}{C_2 L_2 s^2+1} + R_2,\ \infty,\ \infty,\ \infty,\ \frac{L_L s}{C_L L_L s^2+1} + R_L \right)$

$$H(s) = \frac{R_3 \left(C_3 L_3 s^2 + 1\right) \left(C_L L_L R_L s^2 + L_L s + R_L\right)}{C_3 C_L L_3 L_L R_3 s^4 + C_3 C_L L_3 L_L R_L s^4 + C_3 C_L L_L R_3 R_L s^3 + C_3 L_3 L_L s^3 + C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + C_3 L_L R_3 s^2 + C_3 R_3 R_L s + C_L L_L R_3 s^2 + C_L L_L R_L s^2 + L_L s + R_3 + R_L}$$

10.616 INVALID-ORDER-616 $Z(s) = \left(\frac{R_1}{C_1 R_1 s+1},\ \frac{L_2 s}{C_2 L_2 s^2+1} + R_2,\ \infty,\ \infty,\ \infty,\ \frac{R_L \left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$

$$H(s) = \frac{R_3 R_L \left(C_3 L_3 s^2 + 1\right) \left(C_L L_L s^2 + 1\right)}{C_3 C_L L_3 L_L R_3 s^4 + C_3 C_L L_3 L_L R_L s^4 + C_3 C_L L_3 R_3 R_L s^3 + C_3 C_L L_L R_3 R_L s^3 + C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + C_3 R_3 R_L s + C_L L_L R_3 s^2 + C_L L_L R_L s^2 + C_L R_3 R_L s + R_3 + R_L}$$