# Filter Summary Report: TIA,some,parasitic,Z4,Z5,ZL

# Generated by MacAnalog-Symbolix

# December 5, 2024

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10.44INVALID-ORDER-44 $Z(s) = \left(\infty, \infty, \infty, R_4, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{1}{C_L s}\right)$	. 61
10.45INVALID-ORDER-45 $Z(s) = \left(\infty, \infty, \infty, R_4, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{R_L}{C_L R_L s + 1}\right)$	. 61
10.46INVALID-ORDER-46 $Z(s) = \left(\infty, \infty, \infty, R_4, L_5s + R_5 + \frac{1}{C_5s}, R_L + \frac{1}{C_Ls}\right)$	. 61
$10.471\text{NVALID-ORDER-47 }Z(s) = \left(\infty, \ \infty, \ \infty, \ R_4, \ L_5s + R_5 + \frac{1}{C_5s}, \ L_Ls + \frac{1}{C_Ls}\right)  \dots $	. 61
10.48INVALID-ORDER-48 $Z(s) = \left( \infty, \infty, \infty, R_4, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} \right)'$	. 61
$10.49 \text{INVALID-ORDER-49 } Z(s) = \left(\infty, \ \infty, \ \infty, \ R_4, \ L_5 s + R_5 + \frac{1}{C_5 s}, \ L_L s + R_L + \frac{1}{C_L s}\right) $	. 61
$10.50 \text{INVALID-ORDER-} 50 \ Z(s) = \left( \infty, \ \infty, \ \infty, \ R_4, \ L_5 s + R_5 + \frac{1}{C_5 s}, \ \frac{1}{C_5 s + \frac{1}{1 + \frac{1}{1$	. 62
10.51INVALID-ORDER-51 $Z(s) = \left(\infty, \infty, \infty, R_4, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$	. 62
10.52INVALID-ORDER-52 $Z(s) = \left( \infty, \ \infty, \ \infty, \ R_4, \ L_5 s + R_5 + \frac{1}{C_5 s}, \ \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$	. 62
10.53INVALID-ORDER-53 $Z(s) = \left( \infty, \infty, \infty, R_4, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{1}{C_L s} \right)$	. 62
$10.54 \text{INVALID-ORDER-} 54 \ Z(s) = \left( \infty, \ \infty, \ \infty, \ R_4, \ \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \ \frac{R_L}{C_L R_L s + 1} \right)  \dots $	. 62
$10.55 \text{INVALID-ORDER-} 55 \ Z(s) = \left(\infty, \ \infty, \ \infty, \ R_4, \ \frac{1}{C_5 s + \frac{1}{R_{\mathcal{E}}} + \frac{1}{L_{\mathcal{E}} s}}, \ R_L + \frac{1}{C_L s}\right) $	. 62
10.56INVALID-ORDER-56 $Z(s) = \left( \infty, \infty, \infty, R_4, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, L_L s + \frac{1}{C_L s} \right)$	. 62

10.57INVALID-ORDER-57 $Z(s) = \left(\infty, \infty, \infty, R_4, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{L_L s}{C_L L_L s^2 + 1}\right)$	. 62
10.58INVALID-ORDER-58 $Z(s) = \left(\infty, \infty, \infty, R_4, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, L_L s + R_L + \frac{1}{C_L s}\right)$	. 63
10.59INVALID-ORDER-59 $Z(s) = \left(\infty, \infty, \infty, R_4, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$	. 63
10.60INVALID-ORDER-60 $Z(s) = \left(\infty, \infty, \infty, R_4, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$	. 63
10.61INVALID-ORDER-61 $Z(s) = \left(\infty, \infty, \infty, R_4, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{R_L \left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$	. 63
10.62INVALID-ORDER-62 $Z(s) = \left(\infty, \infty, \infty, R_4, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{1}{C_L s}\right)$	. 63
10.63INVALID-ORDER-63 $Z(s) = \left(\infty, \infty, \infty, R_4, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{R_L}{C_L R_L s + 1}\right)$	. 63
10.64INVALID-ORDER-64 $Z(s) = \left(\infty, \infty, \infty, R_4, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, R_L + \frac{1}{C_L s}\right)$	. 63
10.65INVALID-ORDER-65 $Z(s) = \left(\infty, \infty, \infty, R_4, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, L_L s + \frac{1}{C_L s}\right)$	. 63
10.66INVALID-ORDER-66 $Z(s) = \left(\infty, \infty, \infty, R_4, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{L_L s}{C_L L_L s^2 + 1}\right)$	. 64
10.67INVALID-ORDER-67 $Z(s) = \left( \infty, \infty, \infty, R_4, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, L_L s + R_L + \frac{1}{C_L s} \right)$	. 64
10.68INVALID-ORDER-68 $Z(s) = \left(\infty, \infty, \infty, R_4, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$	. 64
10.69INVALID-ORDER-69 $Z(s) = \left( \infty, \infty, \infty, R_4, \frac{L_{5s}}{C_5L_5s^2+1} + R_5, \frac{L_{Ls}}{C_LL_s^2+1} + R_L \right)$	. 64
10.70INVALID-ORDER-70 $Z(s) = \left(\infty, \ \infty, \ \infty, \ R_4, \ \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \ \frac{R_L \left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$	. 64
10.71INVALID-ORDER-71 $Z(s) = \left(\infty, \ \infty, \ \infty, \ R_4, \ \frac{R_5\left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \ \frac{1}{C_L s}\right)$	. 64
$10.72 \text{INVALID-ORDER-} 72 \ Z(s) = \left( \infty, \ \infty, \ \infty, \ R_4, \ \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \ \frac{R_L}{C_L R_L s + 1} \right) \ . $	. 64
10.73INVALID-ORDER-73 $Z(s) = \left(\infty, \ \infty, \ \infty, \ R_4, \ \frac{R_5\left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \ R_L + \frac{1}{C_L s}\right)$	. 64
10.74INVALID-ORDER-74 $Z(s) = \left(\infty, \ \infty, \ \infty, \ R_4, \ \frac{R_5\left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \ L_L s + \frac{1}{C_L s}\right)$	. 65
10.75INVALID-ORDER-75 $Z(s) = \left(\infty, \ \infty, \ \infty, \ R_4, \ \frac{R_5\left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \ \frac{L_L s}{C_L L_L s^2 + 1}\right)$	. 65
10.76INVALID-ORDER-76 $Z(s) = \left(\infty, \infty, \infty, R_4, \frac{R_5\left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, L_L s + R_L + \frac{1}{C_L s}\right)$	. 65
10.77INVALID-ORDER-77 $Z(s) = \left(\infty, \infty, \infty, R_4, \frac{R_5\left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$ 10.78INVALID-ORDER-78 $Z(s) = \left(\infty, \infty, \infty, R_4, \frac{R_5\left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$	. 65
10.78INVALID-ORDER-78 $Z(s) = \left(\infty, \ \infty, \ \infty, \ R_4, \ \frac{R_5\left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \ \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$	. 65
10.79INVALID-ORDER-79 $Z(s) = \left(\infty, \infty, \infty, R_4, \frac{R_5\left(L_5s + \frac{1}{C_5s}\right)}{L_5s + R_5 + \frac{1}{C_5s}}, \frac{R_L\left(L_Ls + \frac{1}{C_Ls}\right)}{L_Ls + R_L + \frac{1}{C_Ls}}\right)$ 10.80INVALID-ORDER-80 $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4s}, R_5, R_L\right)$	. 65
10.80INVALID-ORDER-80 $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s}, R_5, R_L\right)$	. 65
10.01D/J/41 ID. ODDDD 01.7() $\begin{pmatrix} 1 & p & 1 \end{pmatrix}$	0.5
$10.82 \text{INVALID-ORDER-82 } Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s}, R_5, \frac{R_L}{C_L R_L s + 1}\right) \dots \dots$	. 66
10.83INVALID-ORDER-83 $Z(s) = (\infty, \infty, \infty, \frac{1}{C_4 s}, R_5, L_L s + \frac{1}{C_L s})$	. 66
10.81INVALID-ORDER-81 $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s}, R_5, \frac{1}{C_L s}\right)$ 10.82INVALID-ORDER-82 $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s}, R_5, \frac{R_L}{C_L R_L s + 1}\right)$ 10.83INVALID-ORDER-83 $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s}, R_5, L_L s + \frac{1}{C_L s}\right)$ 10.84INVALID-ORDER-84 $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s}, R_5, L_L s + R_L + \frac{1}{C_L s}\right)$	. 66
$10.85 \text{INVALID-ORDER-} 85 \ Z(s) = \{\infty, \infty, \infty, \frac{1}{C_s}, R_5, \frac{1}{C_s} R_5, $	. 66
$10.86 \text{INVALID-ORDER-} 86 \ Z(s) = \left(\infty, \ \infty, \ \infty, \ \frac{1}{C_{1s}}, \ R_{5}, \ \frac{R_{L}\left(L_{L}s + \frac{1}{C_{L}s}\right)}{L_{1s} + R_{1} + \frac{1}{L}}\right) \ \dots $	. 66
$10.87 \text{INVALID-ORDER-87 } Z(s) = \left(\infty, \ \infty, \ \infty, \ \frac{1}{C_4 s}, \ \frac{1}{C_5 s}, \ \frac{1}{C_L s}\right) $	. 66

$10.88 \text{INVALID-ORDER-88 } Z(s) = \left(\infty, \ \infty, \ \infty, \ \frac{1}{C_5 s}, \ R_L + \frac{1}{C_L s}\right)  \dots $	66
$10.89 \text{INVALID-ORDER-89 } Z(s) = \left(\infty, \ \infty, \ \infty, \ \frac{1}{C_4 s}, \ \frac{1}{C_5 s}, \ L_L s + \frac{1}{C_L s}\right) \dots \dots$	66
$10.90 \text{INVALID-ORDER-90 } Z(s) = \left(\infty, \ \infty, \ \infty, \ \frac{1}{C_4 s}, \ \frac{1}{C_5 s}, \ \frac{L_L s}{C_L L_L s^2 + 1}\right) \qquad . $	66
10.91INVALID-ORDER-91 $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s}, \frac{1}{C_5 s}, L_L s + R_L + \frac{1}{C_L s}\right)$	67
10.92INVALID-ORDER-92 $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s}, \frac{1}{C_5 s}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$	67
$10.93 \text{INVALID-ORDER-93 } Z(s) = \left(\infty, \ \infty, \ \infty, \ \frac{1}{C_4 s}, \ \frac{1}{C_5 s}, \ \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right) $	67
10.94INVALID-ORDER-94 $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s}, \frac{1}{C_5 s}, \frac{R_L \left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$	67
10.95INVALID-ORDER-95 $Z(s) = \left( \infty, \infty, \infty, \frac{1}{C_4 s}, \frac{R_5}{C_5 R_5 s + 1}, R_L + \frac{1}{C_L s} \right)$	67
10.96INVALID-ORDER-96 $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s}, \frac{R_5}{C_5 R_5 s + 1}, L_L s + \frac{1}{C_L s}\right)$	67
$10.97 \text{INVALID-ORDER-} 97 \ Z(s) = \left(\infty, \ \infty, \ \infty, \ \frac{1}{C_4 s}, \ \frac{R_5}{C_5 R_5 s+1}, \ \frac{L_L s}{C_L L_L s^2+1}\right) \ \dots $	67
10.98INVALID-ORDER-98 $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s}, \frac{R_5}{C_5 R_5 s + 1}, L_L s + R_L + \frac{1}{C_L s}\right)$	67
10.99INVALID-ORDER-99 $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s}, \frac{R_5}{C_5 R_5 s + 1}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$	68
10.10 INVALID-ORDER-100 $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s}, \frac{R_5}{C_5 R_5 s + 1}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$	68
$10.10 \text{INVALID-ORDER-101 } Z(s) = \left( \infty, \ \infty, \ \infty, \ \frac{1}{C_4 s}, \ \frac{R_5}{C_5 R_5 s + 1}, \ \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right) $	68
10.10 <b>2</b> NVALID-ORDER-102 $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s}, R_5 + \frac{1}{C_5 s}, \frac{1}{C_L s}\right)$	68
10.10 <b>2</b> NVALID-ORDER-103 $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s}, R_5 + \frac{1}{C_5 s}, R_L + \frac{1}{C_L s}\right)$	68
10.10 INVALID-ORDER-104 $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s}, R_5 + \frac{1}{C_5 s}, L_L s + \frac{1}{C_L s}\right)$	68
10.10 INVALID-ORDER-105 $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s}, R_5 + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1}\right)$	68
10.10 <b>C</b> NVALID-ORDER-106 $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s}, R_5 + \frac{1}{C_5 s}, L_L s + R_L + \frac{1}{C_L s}\right)$	68
10.10 <b>T</b> NVALID-ORDER-107 $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s}, R_5 + \frac{1}{C_5 s}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$	69
10.10 NVALID-ORDER-108 $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s}, R_5 + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$	69
$10.10 \text{ @NVALID-ORDER-109 } Z(s) = \left( \infty, \ \infty, \ \infty, \ \frac{1}{C_4 s}, \ R_5 + \frac{1}{C_5 s}, \ \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right) \ . \dots $	69
$10.11 \text{@NVALID-ORDER-}110 \ Z(s) = \left(\infty, \ \infty, \ \infty, \ \frac{1}{C_4 s}, \ L_5 s + \frac{1}{C_5 s}, \ R_L\right) $ $10.11 \text{@NVALID-ORDER-}111 \ Z(s) = \left(\infty, \ \infty, \ \infty, \ \frac{1}{C_4 s}, \ L_5 s + \frac{1}{C_5 s}, \ \frac{1}{C_L s}\right) $ $10.11 \text{@NVALID-ORDER-}112 \ Z(s) = \left(\infty, \ \infty, \ \infty, \ \frac{1}{C_4 s}, \ L_5 s + \frac{1}{C_5 s}, \ \frac{R_L}{C_L R_L s + 1}\right) $	69
10.11INVALID-ORDER-111 $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s}, L_5 s + \frac{1}{C_5 s}, \frac{1}{C_L s}\right)$	69
10.112NVALID-ORDER-112 $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s}, L_5 s + \frac{1}{C_5 s}, \frac{R_L}{C_L R_L s + 1}\right)$	69
10.11 2NVALID-ORDER-113 $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s}, L_5 s + \frac{1}{C_5 s}, R_L + \frac{1}{C_L s}\right)$	69
10.114NVALID-ORDER-114 $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s}, L_5 s + \frac{1}{C_5 s}, L_L s + \frac{1}{C_L s}\right)$	69
10.11 INVALID-ORDER-115 $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s}, L_5 s + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1}\right)$	70
10.116NVALID-ORDER-116 $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s}, L_5 s + \frac{1}{C_5 s}, L_L s + R_L + \frac{1}{C_L s}\right)$	70
10.11 <b>T</b> NVALID-ORDER-117 $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_{4s}}, L_{5s} + \frac{1}{C_{5s}}, \frac{1}{C_{Ls} + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$	70
10.11\( \text{INVALID-ORDER-117} \( Z(s) = \bigg( \infty, \infty, \infty, \frac{1}{C_4 s}, \ L_5 s + \frac{1}{C_5 s}, \ \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \bigg) \frac{1}{C_L L_L s^2 + 1} + R_L \bigg) \frac{1}{C_L s^2 + 1} + R_L \bigg	70
$10.11 \mathfrak{D} \text{NVALID-ORDER-} 119 \ Z(s) = \left( \infty, \ \infty, \ \infty, \ \frac{1}{C_4 s}, \ L_5 s + \frac{1}{C_5 s}, \ \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right) $ $10.12 \mathfrak{D} \text{NVALID-ORDER-} 120 \ Z(s) = \left( \infty, \ \infty, \ \infty, \ \frac{1}{C_4 s}, \ \frac{L_5 s}{C_5 L_5 s^2 + 1}, \ R_L \right) $	70
10.12 <b>0</b> NVALID-ORDER-120 $Z(s) = \left( \infty, \infty, \infty, \frac{1}{C_4 s}, \frac{L_5 s}{C_5 L_5 s^2 + 1}, R_L \right)$	70
10.12INVALID-ORDER-121 $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s}, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{1}{C_L s}\right)$	70

$10.122 \text{NVALID-ORDER-} 122 \ Z(s) = \left(\infty, \ \infty, \ \infty, \ \frac{1}{C_4 s}, \ \frac{L_5 s}{C_5 L_5 s^2 + 1}, \ \frac{R_L}{C_L R_L s + 1}\right) \ \dots \ $
10.12\( \text{2NVALID-ORDER-123} \( Z(s) = \int(\infty, \infty, \infty, \infty, \infty, \frac{L_5s}{C_5L_5s^2+1}, \ R_L + \frac{1}{C_Ls} \infty \] \qquad \qqqq \qqq \qqqq \qqq \qqqq
10.12\(\text{4NVALID-ORDER-124}\(Z(s) = \left(\infty, \infty, \infty, \infty, \frac{L_5s}{C_5L_5s^2+1}, L_Ls + \frac{1}{C_Ls}\right)  \tag{71}\)
$10.12 \text{5NVALID-ORDER-} 125 \ Z(s) = \left( \infty, \ \infty, \ \infty, \ \frac{1}{C_4 s}, \ \frac{L_5 s}{C_5 L_5 s^2 + 1}, \ \frac{L_L s}{C_L L_L s^2 + 1} \right) \ \dots $
10.126NVALID-ORDER-126 $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s}, \frac{L_5 s}{C_5 L_5 s^2 + 1}, L_L s + R_L + \frac{1}{C_L s}\right)$
$10.12\text{INVALID-ORDER-}127 \ Z(s) = \left(\infty, \ \infty, \ \infty, \ \frac{1}{C_4 s}, \ \frac{L_5 s}{C_5 L_5 s^2 + 1}, \ \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)  \dots $
10.12 NVALID-ORDER-128 $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s}, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$
$10.12 \text{ @NVALID-ORDER-129 } Z(s) = \left( \infty, \ \infty, \ \infty, \ \frac{1}{C_4 s}, \ \frac{L_5 s}{C_5 L_5 s^2 + 1}, \ \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right) $
10.13 <b>0</b> NVALID-ORDER-130 $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s}, L_5 s + R_5 + \frac{1}{C_5 s}, R_L\right)$ .
10.13INVALID-ORDER-131 $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s}, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{1}{C_L s}\right)$
10.132NVALID-ORDER-132 $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s}, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{R_L}{C_L R_L s + 1}\right)$ 72
10.13 <b>E</b> NVALID-ORDER-133 $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s}, L_5 s + R_5 + \frac{1}{C_5 s}, R_L + \frac{1}{C_L s}\right)$
10.13\(\text{LNVALID-ORDER-134}\(Z(s) = \left(\infty, \infty, \infty, \infty, \infty, \frac{1}{C_4 s}, \ L_5 s + R_5 + \frac{1}{C_5 s}, \ L_L s + \frac{1}{C_L s}\right)  \tag{2.}
10.135NVALID-ORDER-135 $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s}, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1}\right)$
10.136NVALID-ORDER-136 $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s}, L_5 s + R_5 + \frac{1}{C_5 s}, L_L s + R_L + \frac{1}{C_L s}\right)$
10.13 <b>T</b> NVALID-ORDER-137 $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s}, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$
10.13 NVALID-ORDER-138 $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s}, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$
10.13 <b>Q</b> NVALID-ORDER-139 $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s}, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{R_L \left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$
10.14 <b>0</b> NVALID-ORDER-140 $Z(s) = \left( \infty, \infty, \infty, \frac{1}{C_4 s}, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, R_L \right)$
10.14INVALID-ORDER-141 $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s}, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{1}{C_L s}\right)$
10.142NVALID-ORDER-142 $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s}, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{R_L}{C_L R_L s + 1}\right)$
10.14 INVALID-ORDER-143 $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s}, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, R_L + \frac{1}{C_L s}\right)$
$10.14 \text{ INVALID-ORDER-} 143 \ Z(s) = \left( \infty, \ \infty, \ \infty, \ \frac{1}{C_4 s}, \ \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \ R_L + \frac{1}{C_L s} \right) $ $10.14 \text{ INVALID-ORDER-} 144 \ Z(s) = \left( \infty, \ \infty, \ \infty, \ \frac{1}{C_4 s}, \ \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \ L_L s + \frac{1}{C_L s} \right) $ $73$
$10.145 \text{NVALID-ORDER-} 145 \ Z(s) = \left(\infty, \ \infty, \ \infty, \ \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \ \frac{L_L s}{C_L L_L s^2 + 1}\right)'  \dots $
10.146NVALID-ORDER-146 $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_L s}, \frac{1}{C_L s + \frac{1}{L} + \frac{1}{L}}, L_L s + R_L + \frac{1}{C_L s}\right)$
10.14 INVALID-ORDER-147 $Z(s) = \left( \infty, \infty, \infty, \frac{1}{C_4 s}, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right) $
$10.14 \text{INVALID-ORDER-} 147 \ Z(s) = \left( \infty, \ \infty, \ \infty, \ \frac{1}{C_4 s}, \ \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \ \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right) $ $10.14 \text{INVALID-ORDER-} 148 \ Z(s) = \left( \infty, \ \infty, \ \infty, \ \frac{1}{C_4 s}, \ \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \ \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right) $ $74$
10.15 <b>0</b> NVALID-ORDER-150 $Z(s) = (\infty, \infty, \infty, \frac{1}{C_4 s}, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, R_L)$
10.15INVALID-ORDER-151 $Z(s) = (\infty, \infty, \infty, \frac{1}{C_4 s}, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{1}{C_L s})$
10.152NVALID-ORDER-152 $Z(s) = (\infty, \infty, \infty, \frac{1}{C_4 s}, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{R_L}{C_L R_L s + 1})$
10.15 <b>2</b> NVALID-ORDER-153 $Z(s) = (\infty, \infty, \infty, \frac{1}{C_4 s}, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, R_L + \frac{1}{C_L s})$
7

10.15 <b>4</b> NVALID-ORDER-154 $Z(s) =$	$\left(\infty, \ \infty, \ \infty, \ \frac{1}{C_4 s}, \ \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \ L_L s + \frac{1}{C_L s}\right)$	74
10.15 NVALID-ORDER-155 $Z(s) =$	$\left(\infty, \ \infty, \ \infty, \ \frac{1}{C_4 s}, \ \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \ \frac{L_L s}{C_L L_L s^2 + 1}\right)$	75
10.156NVALID-ORDER-156 $Z(s) =$	$\left(\infty, \ \infty, \ \infty, \ \frac{1}{C_4 s}, \ \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \ L_L s + R_L + \frac{1}{C_L s}\right) \ \dots \ $	75
10.15 INVALID-ORDER-157 $Z(s) =$	$\left(\infty, \ \infty, \ \infty, \ \frac{1}{C_4 s}, \ \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \ \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)  \dots $	75
10.15 NVALID-ORDER-158 $Z(s) =$	$(\infty, \infty, \infty, \frac{1}{C_4 s}, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{L_L s}{C_L L_L s^2 + 1} + R_L)$	75
10.15 <b>9</b> NVALID-ORDER-159 $Z(s) =$	$\left(\infty,  \infty,  \infty,  \frac{1}{C_4 s},  \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5,  \frac{R_L \left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_T s}}\right)  \dots $	75
	$\left(\infty, \ \infty, \ \infty, \ \frac{1}{C_4 s}, \ \frac{R_5 \left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \ R_L \right)$	75
10.16INVALID-ORDER-161 $Z(s) =$	$\left(\infty, \ \infty, \ \infty, \ \frac{1}{C_4 s}, \ \frac{R_5 \left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \ \frac{1}{C_L s}\right)$	75
	$\left(\infty, \ \infty, \ \infty, \ \frac{1}{C_4 s}, \ \frac{R_5 \left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \ \frac{R_L}{C_L R_L s + 1}\right)$	75
	$\left(\infty, \ \infty, \ \infty, \ \frac{1}{C_4 s}, \ \frac{R_5 \left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \ R_L + \frac{1}{C_L s}\right) \ \dots $	76
	$\left(\infty, \ \infty, \ \infty, \ \frac{1}{C_4 s}, \ \frac{R_5 \left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \ L_L s + \frac{1}{C_L s}\right)$	76
	$\left(\infty, \ \infty, \ \infty, \ \frac{1}{C_4 s}, \ \frac{R_5 \left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \ \frac{L_L s}{C_L L_L s^2 + 1}\right)$	76
	$\left(\infty, \ \infty, \ \infty, \ \frac{1}{C_4 s}, \ \frac{R_5 \left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \ L_L s + R_L + \frac{1}{C_L s}\right)  \dots $	76
10.16 <b>T</b> NVALID-ORDER-167 $Z(s) =$	$\left(\infty, \ \infty, \ \infty, \ \frac{1}{C_4 s}, \ \frac{R_5 \left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \ \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right) \right) \ . \ . \ . \ . \ . \ . \ . \ . \ . \ $	76
10.16&NVALID-ORDER-168 $Z(s) =$	$\left(\infty, \ \infty, \ \infty, \ \frac{1}{C_4 s}, \ \frac{R_5 \left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \ \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right) \ \dots $	76
10.16 <b>9</b> NVALID-ORDER-169 $Z(s) =$	$\left(\infty, \ \infty, \ \infty, \ \frac{1}{C_4 s}, \ \frac{R_5 \left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \ \frac{R_L \left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right) \ \dots $	76
10.17 <b>0</b> NVALID-ORDER-170 $Z(s) =$	$\left(\infty,  \infty,  \infty,  \frac{R_4}{C_4R_4s+1},  R_5,  R_L\right)$	76
10.17INVALID-ORDER-171 $Z(s) =$		77
	$\left(\infty, \infty, \infty, \frac{R_4}{C_4R_4s+1}, R_5, \frac{R_L}{C_LR_Ls+1}\right)$	77
10.178NVALID-ORDER-173 $Z(s) =$	$(\infty, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, R_5, L_L s + \frac{1}{C_L s}) \dots \dots$	77
10.17 <b>4</b> NVALID-ORDER-174 $Z(s) =$	$\left(\infty, \ \infty, \ \infty, \ \frac{R_4}{C_4 R_4 s + 1}, \ R_5, \ L_L s + R_L + \frac{1}{C_L s}\right)$	77
10.175NVALID-ORDER-175 $Z(s) =$	$\left(\infty,  \infty,  \infty,  \frac{R_4}{C_4 R_4 s + 1},  R_5,  \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$	77
10.17 <b>6</b> NVALID-ORDER-176 $Z(s) =$	$\left(\infty,\infty,\infty,rac{R_4}{C_4R_4s+1},R_5,rac{R_L\left(L_Ls+rac{1}{C_Ls} ight)}{L_Ls+R_L+rac{1}{L_L}} ight)$	77
10.17 INVALID-ORDER-177 $Z(s) =$	$\left(\infty, \infty, \infty, \frac{R_4}{C_L R_L s+1}, \frac{1}{C_L s}, R_L + \frac{1}{C_L s}\right)$	77
10.178NVALID-ORDER-178 $Z(s) =$	$\left(\infty, \infty, \infty, \frac{R_4}{C_4R_4s+1}, \frac{1}{C_5s}, L_Ls + \frac{1}{C_Ls}\right)$	77
10.17 <b>9</b> NVALID-ORDER-179 $Z(s) =$	$(\infty, \infty, \infty, \frac{R_4}{C_4R_4s+1}, \frac{1}{C_5s}, \frac{L_Ls}{C_LL_Ls^2+1})$	77
10.18 <b>0</b> NVALID-ORDER-180 $Z(s) =$	$ \begin{pmatrix} \infty,  \infty,  \infty,  \frac{R_4}{C_4 R_4 s + 1},  \frac{1}{C_5 s},  \frac{L_L s}{C_L L_L s^2 + 1} \end{pmatrix} \dots $ $ \begin{pmatrix} \infty,  \infty,  \infty,  \frac{R_4}{C_4 R_4 s + 1},  \frac{1}{C_5 s},  L_L s + R_L + \frac{1}{C_L s} \end{pmatrix} \dots $	78
10.18 INVALID-ORDER-181 $Z(s)=$	$ \left(\infty,  \infty,  \infty,  \frac{R_4}{C_4 R_4 s + 1},  \frac{1}{C_5 s},  \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right) \\ \left(\infty,  \infty,  \infty,  \frac{R_4}{C_4 R_4 s + 1},  \frac{1}{C_5 s},  \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right) \\ \left(\infty,  \infty,  \infty,  \frac{R_4}{C_4 R_4 s + 1},  \frac{1}{C_5 s},  \frac{R_L \left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right) \\ \left(\infty,  \infty,  \infty,  \frac{R_4}{C_4 R_4 s + 1},  \frac{1}{C_5 s},  \frac{R_L \left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right) \\ \right) \\ $	78
10.182NVALID-ORDER-182 $Z(s) =$	$\left(\infty,  \infty,  \infty,  \frac{R_4}{C_4 R_4 s + 1},  \frac{1}{C_5 s},  \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)  \dots  \dots  \dots  \dots  \dots  \dots  \dots  \dots  \dots  $	78
10.18 <b>B</b> NVALID-ORDER-183 $Z(s) =$	$\left(\infty,  \infty,  \infty,  \frac{R_4}{C_4 R_4 s + 1},  \frac{1}{C_5 s},  \frac{R_L \left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)  \dots $	78
10.18#NVALID-ORDER-184 $Z(s) =$	$\left(\infty,  \infty,  \infty,  \frac{R_4}{C_4 R_4 s + 1},  \frac{R_5}{C_5 R_5 s + 1},  R_L + \frac{1}{C_L s}\right)$	78

10.18 INVALID-ORDER-185 $Z(s) = \left(\infty, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, \frac{R_5}{C_5 R_5 s + 1}, L_L s + \frac{1}{C_L s}\right)$	78
$10.18 \text{ 6} \text{NVALID-ORDER-186 } Z(s) = \left(\infty, \ \infty, \ \infty, \ \frac{R_4}{C_4 R_4 s + 1}, \ \frac{R_5}{C_5 R_5 s + 1}, \ \frac{L_L s}{C_L L_L s^2 + 1}\right) \\ \dots $	78
10.18 INVALID-ORDER-187 $Z(s) = \left(\infty, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, \frac{R_5}{C_5 R_5 s + 1}, L_L s + R_L + \frac{1}{C_L s}\right)$	78
10.18 NVALID-ORDER-188 $Z(s) = \left(\infty, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, \frac{R_5}{C_5 R_5 s + 1}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$	79
10.18 INVALID-ORDER-189 $Z(s) = \left( \infty, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, \frac{R_5}{C_5 R_5 s + 1}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$	79
$10.19 \text{ @NVALID-ORDER-190 } Z(s) = \left( \infty, \ \infty, \ \infty, \ \frac{R_4}{C_4 R_4 s + 1}, \ \frac{R_5}{C_5 R_5 s + 1}, \ \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right) \ . \ . \ . \ . \ . \ . \ . \ . \ . \ $	79
10.19INVALID-ORDER-191 $Z(s) = \left(\infty, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, R_5 + \frac{1}{C_5 s}, R_L + \frac{1}{C_L s}\right)$	79
10.192NVALID-ORDER-192 $Z(s) = \left(\infty, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, R_5 + \frac{1}{C_5 s}, L_L s + \frac{1}{C_L s}\right)$	79
$10.19 \text{ xnvalid-order-} 193 \ Z(s) = \left(\infty, \ \infty, \ \infty, \ \frac{R_4}{C_4 R_4 s + 1}, \ R_5 + \frac{1}{C_5 s}, \ \frac{L_L s}{C_L L_L s^2 + 1}\right) \ \dots $	79
10.19 INVALID-ORDER-194 $Z(s) = \left(\infty, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, R_5 + \frac{1}{C_5 s}, L_L s + R_L + \frac{1}{C_L s}\right)$	79
10.19 INVALID-ORDER-195 $Z(s) = \left(\infty, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, R_5 + \frac{1}{C_5 s}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$	79
$10.19 \text{ 6NVALID-ORDER-196 } Z(s) = \left(\infty, \ \infty, \ \infty, \ \frac{R_4}{C_4 R_4 s + 1}, \ R_5 + \frac{1}{C_5 s}, \ \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right) \ \dots $	80
10.19 <b>T</b> NVALID-ORDER-197 $Z(s) = \left(\infty, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, R_5 + \frac{1}{C_5 s}, \frac{R_L \left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$	80
10.19 NVALID-ORDER-198 $Z(s) = \left(\infty, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, L_5 s + \frac{1}{C_5 s}, R_L\right)$	80
10.19 <b>9</b> NVALID-ORDER-199 $Z(s) = \left(\infty, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, L_5 s + \frac{1}{C_5 s}, \frac{1}{C_L s}\right)$	80
10.20 INVALID-ORDER-200 $Z(s) = \left(\infty, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, L_5 s + \frac{1}{C_5 s}, \frac{R_L}{C_L R_L s + 1}\right)$	80
10.20INVALID-ORDER-201 $Z(s) = \left(\infty, \ \infty, \ \infty, \ \frac{R_4}{C_4 R_4 s + 1}, \ L_5 s + \frac{1}{C_5 s}, \ R_L + \frac{1}{C_L s}\right)$	80
10.20 2NVALID-ORDER-202 $Z(s) = \left(\infty, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, L_5 s + \frac{1}{C_5 s}, L_L s + \frac{1}{C_L s}\right)$	80
10.20 INVALID-ORDER-203 $Z(s) = \left(\infty, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, L_5 s + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1}\right)^2$	80
10.20 INVALID-ORDER-204 $Z(s) = \left(\infty, \infty, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, L_5 s + \frac{1}{C_5 s}, L_L s + R_L + \frac{1}{C_L s}\right)$	81
10.20 <b>5</b> NVALID-ORDER-205 $Z(s) = \left(\infty, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, L_5 s + \frac{1}{C_5 s}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$	81
10.206NVALID-ORDER-206 $Z(s) = \left(\infty, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, L_5 s + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$	81
$ \begin{array}{l} 10.20 \text{Invalid-order} & \mathcal{C}(s) & \mathcal{C}_{s} R_{s} R_{L} L_{s} s^{+} + \mathcal{C}_{b} s^{-} \mathcal{C}_{b} L_{L} s^{+} + \mathcal{C}_{b} \\ 10.20 \text{Invalid-order} & \mathcal{C}(s) = \left( \infty, \infty, \infty, \frac{R_{4}}{C_{4} R_{4} s + 1}, \frac{L_{5} s}{L_{L} s + \frac{1}{C_{L} s}} \right) \\ 10.20 \text{Invalid-order} & \mathcal{C}(s) = \left( \infty, \infty, \infty, \frac{R_{4}}{C_{4} R_{4} s + 1}, \frac{L_{5} s}{C_{5} L_{5} s^{2} + 1}, \frac{R_{L}}{C_{L} s} \right) \\ 10.20 \text{Invalid-order} & \mathcal{C}(s) = \left( \infty, \infty, \infty, \frac{R_{4}}{C_{4} R_{4} s + 1}, \frac{L_{5} s}{C_{5} L_{5} s^{2} + 1}, \frac{L_{5} s}{C_{L} s} \right) \\ 10.21 \text{Invalid-order} & \mathcal{C}(s) = \left( \infty, \infty, \infty, \frac{R_{4}}{C_{4} R_{4} s + 1}, \frac{L_{5} s}{C_{5} L_{5} s^{2} + 1}, \frac{R_{L}}{C_{L} s + 1} \right) \\ 10.21 \text{Invalid-order} & \mathcal{C}(s) = \left( \infty, \infty, \infty, \frac{R_{4}}{C_{4} R_{4} s + 1}, \frac{L_{5} s}{C_{5} L_{5} s^{2} + 1}, R_{L} + \frac{1}{C_{L} s} \right) \\ 10.21 \text{Invalid-order} & \mathcal{C}(s) = \left( \infty, \infty, \infty, \frac{R_{4}}{C_{4} R_{4} s + 1}, \frac{L_{5} s}{C_{5} L_{5} s^{2} + 1}, L_{L} s + \frac{1}{C_{L} s} \right) \\ 10.21 \text{Invalid-order} & \mathcal{C}(s) = \left( \infty, \infty, \infty, \frac{R_{4}}{C_{4} R_{4} s + 1}, \frac{L_{5} s}{C_{5} L_{5} s^{2} + 1}, L_{L} s + \frac{1}{C_{L} s} \right) \\ 10.21 \text{Invalid-order} & \mathcal{C}(s) = \left( \infty, \infty, \infty, \frac{R_{4}}{C_{4} R_{4} s + 1}, \frac{L_{5} s}{C_{5} L_{5} s^{2} + 1}, L_{L} s + \frac{1}{C_{L} s} \right) \\ 10.21 \text{Invalid-order} & \mathcal{C}(s) = \left( \infty, \infty, \infty, \frac{R_{4}}{C_{4} R_{4} s + 1}, \frac{L_{5} s}{C_{5} L_{5} s^{2} + 1}, L_{L} s + \frac{1}{C_{L} s} \right) \\ 10.21 \text{Invalid-order} & \mathcal{C}(s) = \left( \infty, \infty, \infty, \frac{R_{4}}{C_{4} R_{4} s + 1}, \frac{L_{5} s}{C_{5} L_{5} s^{2} + 1}, L_{L} s + \frac{1}{C_{L} s} \right) \\ 10.21 \text{Invalid-order} & \mathcal{C}(s) = \left( \infty, \infty, \infty, \frac{R_{4}}{C_{4} R_{4} s + 1}, \frac{L_{5} s}{C_{5} L_{5} s^{2} + 1}, L_{5} s + \frac{1}{C_{L} s} \right) \\ 10.21 \text{Invalid-order} & \mathcal{C}(s) = \left( \infty, \infty, \infty, \frac{R_{4}}{C_{4} R_{4} s + 1}, \frac{L_{5} s}{C_{5} L_{5} s^{2} + 1}, L_{5} s + \frac{1}{C_{L} s} \right) \\ 10.21 \text{Invalid-order} & \mathcal{C}(s) = \left( \infty, \infty, \infty, \frac{R_{4}}{C_{4} R_{4} s + 1}, \frac{L_{5} s}{C_{5} L_{5} s^{2} + 1}, L_{5} s + \frac{1}{C_{5} L_{5} s + \frac{1}{C_{5} R_{5} s + 1}, L_{5$	81
10.20 NVALID-ORDER-208 $Z(s) = \left(\infty, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, \frac{L_5 s}{C_5 L_5 s^2 + 1}, R_L\right)$	81
10.20 <b>9</b> NVALID-ORDER-209 $Z(s) = \left(\infty, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{1}{C_L s}\right)$	81
10.21 INVALID-ORDER-210 $Z(s) = \left(\infty, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{R_L}{C_L R_L s + 1}\right)$	81
10.21INVALID-ORDER-211 $Z(s) = \left(\infty, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, \frac{L_5 s}{C_5 L_5 s^2 + 1}, R_L + \frac{1}{C_L s}\right)$	81
10.21 <b>2</b> NVALID-ORDER-212 $Z(s) = \left(\infty, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, \frac{L_5 s}{C_5 L_5 s^2 + 1}, L_L s + \frac{1}{C_L s}\right)$	82
$10.21 \text{BNVALID-ORDER-} 213 \ Z(s) = \left(\infty, \ \infty, \ \infty, \ \frac{C_{AR}}{C_{AR}} \frac{Z_{BS}}{R_{AS}+1}, \ \frac{Z_{BS}}{C_{B}} \frac{Z_{BS}}{L_{BS}} \frac{Z_{BS}}{L_{BS}}\right) \ \dots $	82
10.21 INVALID-ORDER-214 $Z(s) = \left(\infty, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, \frac{L_5 s}{C_5 L_5 s^2 + 1}, L_L s + R_L + \frac{1}{C_L s}\right)$	82
$10.21 \text{5NVALID-ORDER-} 215 \ Z(s) = \left( \infty, \ \infty, \ \infty, \ \frac{R_4}{C_4 R_4 s + 1}, \ \frac{L_5 s}{C_5 L_5 s^2 + 1}, \ \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right) .$ $10.21 \text{6NVALID-ORDER-} 216 \ Z(s) = \left( \infty, \ \infty, \ \infty, \ \frac{R_4}{C_4 R_4 s + 1}, \ \frac{L_5 s}{C_5 L_5 s^2 + 1}, \ \frac{L_L s}{C_5 L_5 s^2 + 1} + R_L \right) .$	82
$10.21 \text{ 6NVALID-ORDER-} 216 \ Z(s) = \left(\infty, \ \infty, \ \infty, \ \frac{R_4}{C_4 R_4 s + 1}, \ \frac{L_5 s}{C_5 L_5 s^2 + 1}, \ \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right) \ \dots $	82
$10.21 \text{ENVALID-ORDER-} 217 \ Z(s) = \left( \infty, \ \infty, \ \infty, \ \frac{R_4}{C_4 R_4 s + 1}, \ \frac{L_5 s}{C_5 L_5 s^2 + 1}, \ \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right) \\ 10.21 \text{ENVALID-ORDER-} 218 \ Z(s) = \left( \infty, \ \infty, \ \infty, \ \frac{R_4}{C_4 R_4 s + 1}, \ L_5 s + R_5 + \frac{1}{C_5 s}, \ R_L \right) \\ \dots $	82
10.21 SNVALID-ORDER-218 $Z(s) = \left(\infty, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, L_5 s + R_5 + \frac{1}{C_5 s}, R_L\right)^{-1}$	82

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10.219NVALID-ORDER-219 Z(s) = \left(\infty, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{1}{C_L s}\right) . . . . .
10.22@NVALID-ORDER-220 Z(s) = \left(\infty, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{R_L}{C_L R_L s + 1}\right) \dots \dots
10.22INVALID-ORDER-221 Z(s) = \left(\infty, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, L_5 s + R_5 + \frac{1}{C_5 s}, R_L + \frac{1}{C_L s}\right) . . . . .
10.222NVALID-ORDER-222 Z(s) = \left(\infty, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, L_5 s + R_5 + \frac{1}{C_5 s}, L_L s + \frac{1}{C_4 s}\right) \dots
10.22\( \text{NVALID-ORDER-223} \( Z(s) = \left( \infty, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, \ L_5 s + R_5 + \frac{1}{C_5 s}, \ \frac{L_L s}{C_L L_L s^2 + 1} \right) \quad \tag{2.5}
10.224NVALID-ORDER-224 Z(s) = \left(\infty, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, L_5 s + R_5 + \frac{1}{C_5 s}, L_L s + R_L + \frac{1}{C_L s}\right) . . . .
10.22\( \text{INVALID-ORDER-225} \) Z(s) = \left( \infty, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{1}{C_L s + \frac{1}{R_I} + \frac{1}{L_L s}} \right)
10.226NVALID-ORDER-226 Z(s) = \left(\infty, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right) . . . . . . . .
10.22TNVALID-ORDER-227 Z(s) = \left(\infty, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{R_L \left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_T s}}\right). . . . . . . .
10.229NVALID-ORDER-229 Z(s) = \left(\infty, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, \frac{1}{C_5 s + \frac{1}{R_c} + \frac{1}{L_c s}}, \frac{1}{C_L s}\right) \dots \dots \dots
10.23@NVALID-ORDER-230 Z(s) = \left(\infty, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{R_L}{C_L R_L s + 1}\right) \dots
10.232NVALID-ORDER-232 Z(s) = \left(\infty, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, \frac{1}{C_5 s + \frac{1}{R_{\varepsilon}} + \frac{1}{L_{\varepsilon} s}}, L_L s + \frac{1}{C_L s}\right) . . . . . . . . . . . .
10.23\(\text{2NVALID-ORDER-233}\(Z(s) = \left(\infty, \infty, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, \frac{1}{C_5 s + \frac{1}{R_x} + \frac{1}{L_x s}}, \frac{L_L s}{C_L L_L s^2 + 1}\right) \\ \tag{2.5}\(\text{1.5}\)
10.23\(\text{INVALID-ORDER-234}\(Z(s) = \left(\infty, \infty, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, \frac{1}{C_5 s + \frac{1}{R_c} + \frac{1}{L_c s}}, \L_L s + R_L + \frac{1}{C_L s}\right) \quad \tag{84}
10.23 INVALID-ORDER-235 Z(s) = \left(\infty, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{1}{C_L s + \frac{1}{R_5} + \frac{1}{L_5 s}}\right)
10.236NVALID-ORDER-236 Z(s) = \left(\infty, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)
10.23 INVALID-ORDER-237 Z(s) = \left(\infty, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{R_L \left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_5 s}}\right)
10.239NVALID-ORDER-239 Z(s) = \left(\infty, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{1}{C_{L_5}}\right) \dots \dots \dots
10.24 INVALID-ORDER-240 Z(s) = \left(\infty, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{R_L}{C_L R_L s + 1}\right)
10.24INVALID-ORDER-241 Z(s) = \left(\infty, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, R_L + \frac{1}{C_L s}\right) \dots
10.242NVALID-ORDER-242 Z(s) = \left(\infty, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, L_L s + \frac{1}{C_L s}\right)
10.24\(\text{NVALID-ORDER-243}\) Z(s) = \left(\infty, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{L_L s}{C_L L_L s^2 + 1}\right)
10.24 INVALID-ORDER-244 Z(s) = \left(\infty, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, L_L s + R_L + \frac{1}{C_L s}\right) \dots \dots
10.24 INVALID-ORDER-245 Z(s) = \left(\infty, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{1}{C_L s + \frac{1}{R_2} + \frac{1}{L_5 s}}\right)
10.24 INVALID-ORDER-246 Z(s) = \left(\infty, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right) \dots \dots \dots
10.24 INVALID-ORDER-247 Z(s) = \left(\infty, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{R_L \left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)
10.24\( \text{NVALID-ORDER-248} \( Z(s) = \left( \infty, \infty, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \ R_L \right) \quad \tag{2.5}
10.249NVALID-ORDER-249 Z(s) = \left(\infty, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, \frac{R_5 \left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{1}{C_L s}\right)
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10.25 <b>0</b> NVALID-ORDER-250 $Z(s) =$	$\left(\infty, \ \infty, \ \infty, \ \frac{R_4}{C_4 R_4 s + 1}, \ \frac{R_5 \left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \ \frac{R_L}{C_L R_L s + 1}\right)  \dots $	. 86
10.25INVALID-ORDER-251 $Z(s) =$	$\left(\infty, \ \infty, \ \infty, \ \frac{R_4}{C_4 R_4 s + 1}, \ \frac{R_5 \left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \ R_L + \frac{1}{C_L s}\right)  \dots $	. 86
	$\left(\infty, \ \infty, \ \infty, \ \frac{R_4}{C_4 R_4 s + 1}, \ \frac{R_5 \left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \ L_L s + \frac{1}{C_L s}\right)  \dots $	. 87
10.25 <b>&amp;</b> NVALID-ORDER-253 $Z(s) =$	$\left(\infty, \ \infty, \ \infty, \ \frac{R_4}{C_4 R_4 s + 1}, \ \frac{R_5 \left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \ \frac{L_L s}{C_L L_L s^2 + 1}\right)'$	. 87
	$\left(\infty, \ \infty, \ \infty, \ \frac{R_4}{C_4 R_4 s + 1}, \ \frac{R_5 \left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \ L_L s + R_L + \frac{1}{C_L s}\right) \ \dots \ $	. 87
	$\left(\infty, \ \infty, \ \infty, \ \frac{R_4}{C_4 R_4 s + 1}, \ \frac{R_5 \left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{L_5 s}}, \ \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right) \right)' - \dots $	. 87
	$\left(\infty, \ \infty, \ \infty, \ \frac{R_4}{C_4 R_4 s + 1}, \ \frac{R_5 \left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \ \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)  \dots $	. 87
10.25 <b>T</b> NVALID-ORDER-257 $Z(s) =$	$\left(\infty, \ \infty, \ \infty, \ \frac{R_4}{C_4 R_4 s + 1}, \ \frac{R_5 \left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \ \frac{R_L \left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right) \right. \dots $	. 87
10.25 NVALID-ORDER-258 $Z(s)=$	$\left(\infty,\ \infty,\ \infty,\ R_4+rac{1}{C_4s},\ R_5,\ R_L ight)$	. 87
10.25 <b>9</b> NVALID-ORDER-259 $Z(s) =$	$(\infty, \infty, \infty, R_4 + \frac{1}{C_4 s}, R_5, L_L s + \frac{1}{C_L s})$	. 87
	$\left(\infty,  \infty,  \infty,  R_4 + \frac{1}{C_4 s},  R_5,  \frac{L_L s}{C_L L_L s^2 + 1}\right)$	. 88
	$\left(\infty,  \infty,  \infty,  R_4 + \frac{1}{C_4 s},  R_5,  L_L s + R_L + \frac{1}{C_L s}\right)$	. 88
10.26 <b>2</b> NVALID-ORDER-262 $Z(s) =$	$\left(\infty, \ \infty, \ \infty, \ R_4 + \frac{1}{C_4 s}, \ R_5, \ \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)'$	. 88
10.26\%NVALID-ORDER-263 $Z(s) =$	$(\infty, \infty, \infty, R_4 + \frac{1}{C_4 s}, R_5, \frac{L_L s}{C_L L_L s^2 + 1} + R_L)$	. 88
10.26 <b>4</b> NVALID-ORDER-264 $Z(s)=$	$\left(\infty,  \infty,  \infty,  R_4 + \frac{1}{C_4 s},  R_5,  \frac{R_L \left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$	. 88
10.26 $5$ NVALID-ORDER-265 $Z(s)=$		. 88
10.26 <b>6</b> NVALID-ORDER-266 $Z(s) =$	$\left(\infty, \infty, \infty, R_4 + \frac{1}{C_4 s}, \frac{1}{C_5 s}, \frac{R_L}{C_L R_L s + 1}\right)$	. 88
	$\left(\infty,  \infty,  \infty,  R_4 + \frac{1}{C_{4}s},  \frac{1}{C_{5}s},  R_L + \frac{1}{C_{L}s}\right)$	. 88
	$\left(\infty,\infty,\infty,R_4+\frac{1}{C_{ts}},\frac{1}{C_{\taus}},L_Ls+\frac{1}{C_{ts}}\right)\ldots\qquad\ldots\qquad\ldots\qquad\ldots\qquad\ldots\qquad\ldots$	. 88
	$\left(\infty,  \infty,  \infty,  R_4 + \frac{1}{C_4 s},  \frac{1}{C_5 s},  \frac{L_L s}{C_L L_L s^2 + 1}\right)$	. 89
10.270NVALID-ORDER-270 $Z(s) =$	$\left(\infty, \ \infty, \ \infty, \ \frac{1}{C_4 s}, \ \frac{1}{C_5 s}, \ \frac{1}{C_L L_L s^2 + 1}\right) \ . \ . \ . \ . \ . \ . \ . \ . \ . \ $	. 89
10.27INVALID ODDED 271 7(c)	$\left(\infty,  \infty,  \infty,  \frac{1}{C_4 s},  \frac{1}{C_5 s},  \frac{1}{C_L s + \frac{1}{D_c} + \frac{1}{C_L s}}\right)  \dots $	. 00
10.21 IN VALID-ORDER-211 $Z(s) =$	$\left(\infty,  \infty,  \infty,  \frac{1}{C_4 s},  \frac{1}{C_5 s},  \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$	. 09
10.272NVALID-ORDER-272 $Z(s) =$	$\left(\infty,  \infty,  \infty,  R_4 + \frac{1}{C_4 s},  \frac{1}{C_5 s},  \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)  \dots  \dots  \dots  \dots  \dots  \dots  \dots  \dots  \dots  $	. 89
10.27\$NVALID-ORDER-273 $Z(s) =$	$\left(\infty,  \infty,  \infty,  R_4 + \frac{1}{C_4 s},  \frac{1}{C_5 s},  \frac{R_L \left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)  \dots $	. 89
10.27#NVALID-ORDER-274 $Z(s) =$	$(\infty, \infty, \infty, R_4 + \frac{1}{C_4 s}, \frac{R_5}{C_5 R_5 s + 1}, \frac{1}{C_L s})$	. 89
10.27 <b>5</b> NVALID-ORDER-275 $Z(s) =$	$(\infty, \infty, \infty, R_4 + \frac{1}{C_{48}}, \frac{R_5}{C_5R_5s+1}, \frac{R_L}{C_LR_Ls+1})$	. 89
10.276NVALID-ORDER-276 $Z(s) =$	$\left(\infty, \infty, \infty, R_4 + \frac{1}{C_{s,s}}, \frac{R_5}{C_{tr}R_{r,s+1}}, R_L + \frac{1}{C_{tr,s}}\right)$	. 89
10.27 NVALID-ORDER-277 $Z(s) =$	$\left(\infty,  \infty,  \infty,  R_4 + \frac{1}{C_4 s},  \frac{R_5}{C_5 R_5 s + 1},  \frac{1}{C_L s}\right) \\ \left(\infty,  \infty,  \infty,  R_4 + \frac{1}{C_4 s},  \frac{R_5}{C_5 R_5 s + 1},  \frac{1}{C_L s}\right) \\ \left(\infty,  \infty,  \infty,  R_4 + \frac{1}{C_4 s},  \frac{R_5}{C_5 R_5 s + 1},  \frac{R_L}{C_L R_L s + 1}\right) \\ \left(\infty,  \infty,  \infty,  R_4 + \frac{1}{C_4 s},  \frac{R_5}{C_5 R_5 s + 1},  R_L + \frac{1}{C_L s}\right) \\ \left(\infty,  \infty,  \infty,  R_4 + \frac{1}{C_4 s},  \frac{R_5}{C_5 R_5 s + 1},  L_L s + \frac{1}{C_L s}\right) \\ \left(\infty,  \infty,  \infty,  R_4 + \frac{1}{C_4 s},  \frac{R_5}{C_5 R_5 s + 1},  L_L s + \frac{1}{C_L s}\right) \\ \left(\infty,  \infty,  \infty,  R_4 + \frac{1}{C_4 s},  \frac{R_5}{C_5 R_5 s + 1},  L_L s + \frac{1}{C_L s}\right) \\ \left(\infty,  \infty,  \infty,  R_4 + \frac{1}{C_4 s},  \frac{R_5}{C_5 R_5 s + 1},  L_L s + \frac{1}{C_L s}\right) \\ \left(\infty,  \infty,  \infty,  R_4 + \frac{1}{C_4 s},  \frac{R_5}{C_5 R_5 s + 1},  L_L s + \frac{1}{C_L s}\right) \\ \left(\infty,  \infty,  \infty,  R_4 + \frac{1}{C_4 s},  \frac{R_5}{C_5 R_5 s + 1},  L_L s + \frac{1}{C_L s}\right) \\ \left(\infty,  \infty,  \infty,  R_4 + \frac{1}{C_4 s},  \frac{R_5}{C_5 R_5 s + 1},  L_L s + \frac{1}{C_L s}\right) \\ \left(\infty,  \infty,  \infty,  R_4 + \frac{1}{C_4 s},  \frac{R_5}{C_5 R_5 s + 1},  L_L s + \frac{1}{C_L s}\right) \\ \left(\infty,  \infty,  \infty,  R_4 + \frac{1}{C_4 s},  \frac{R_5}{C_5 R_5 s + 1},  L_L s + \frac{1}{C_L s}\right) \\ \left(\infty,  \infty,  \infty,  R_4 + \frac{1}{C_4 s},  \frac{R_5}{C_5 R_5 s + 1},  L_L s + \frac{1}{C_L s}\right) \\ \left(\infty,  \infty,  \infty,  R_4 + \frac{1}{C_4 s},  \frac{R_5}{C_5 R_5 s + 1},  L_L s + \frac{1}{C_L s}\right) \\ \left(\infty,  \infty,  \infty,  R_4 + \frac{1}{C_4 s},  \frac{R_5}{C_5 R_5 s + 1},  L_L s + \frac{1}{C_L s}\right) \\ \left(\infty,  \infty,  \infty,  R_4 + \frac{1}{C_4 s},  \frac{R_5}{C_5 R_5 s + 1},  L_L s + \frac{1}{C_L s}\right) \\ \left(\infty,  \infty,  \infty,  R_4 + \frac{1}{C_4 s},  \frac{R_5}{C_5 R_5 s + 1},  L_L s + \frac{1}{C_L s}\right) \\ \left(\infty,  \infty,  \infty,  R_4 + \frac{1}{C_4 s},  \frac{R_5}{C_5 R_5 s + 1},  L_L s + \frac{1}{C_L s}\right) \right) $	. 89
10.278NVALID-ORDER-278 $Z(s) =$	$\left(\infty, \infty, \infty, R_4 + \frac{1}{C_{s,s}}, \frac{R_5}{C_{tr}R_{r,s+1}}, \frac{L_L s}{C_{tr}L_{tr}s^2+1}\right)$	. 90
10.279NVALID-ORDER-279 $Z(s) =$	$ \begin{pmatrix} \infty,  \infty,  \infty,  R_4 + \frac{1}{C_4 s},  \frac{R_5}{C_5 R_5 s + 1},  \frac{L_L s}{C_L L_L s^2 + 1} \end{pmatrix} \dots \dots$	. 90
10.28 <b>0</b> NVALID-ORDER-280 $Z(s) =$	$\left(\infty,  \infty,  \infty,  R_4 + \frac{1}{C_4 s},  \frac{R_5}{C_5 R_5 s + 1},  \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right) \\ \left(\infty,  \infty,  \infty,  R_4 + \frac{1}{C_4 s},  \frac{R_5}{C_5 R_5 s + 1},  \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right) \\ \ldots \\ \left(\infty,  \infty,  \infty,  R_4 + \frac{1}{C_4 s},  \frac{R_5}{C_5 R_5 s + 1},  \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right) \\ \ldots \\ \ldots \\ \ldots $	. 90
10.28INVALID-ORDER-281 $Z(s) =$	$(\infty, \infty, \infty, R_4 + \frac{1}{C_4 s}, \frac{R_5}{C_5 R_5 s + 1}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L)$	. 90

10 980NWALID ODDED 989 7(a) —	$=\left(\infty,\ \infty,\ \infty,\ R_4+rac{1}{C_4s},\ rac{R_5}{C_5R_5s+1},\ rac{R_L\left(L_Ls+rac{1}{C_Ls} ight)}{L_Ls+R_L+rac{1}{C_Ls}} ight)$	00
		90
	$\left(\infty, \ \infty, \ \infty, \ R_4 + \frac{1}{C_4 s}, \ R_5 + \frac{1}{C_5 s}, \ \frac{1}{C_L s}\right)$	90
	$=\left(\infty,\;\infty,\;\infty,\;R_4+rac{1}{C_4s},\;R_5+rac{1}{C_5s},\;rac{R_L}{C_LR_Ls+1} ight)$	90
	$=\left(\infty,\;\infty,\;\infty,\;R_4+rac{1}{C_4s},\;R_5+rac{1}{C_5s},\;R_L+rac{1}{C_Ls} ight)$	90
10.286NVALID-ORDER-286 $Z(s) =$	$=\left(\infty,\;\infty,\;\infty,\;R_4+rac{1}{C_4s},\;R_5+rac{1}{C_5s},\;L_Ls+rac{1}{C_Ls} ight)\;\;\ldots\;\;\ldots\;\;\ldots\;\;\ldots\;\;\ldots\;\;\ldots\;\;\ldots\;\;\ldots\;\;\ldots\;\;\ldots\;\;\ldots\;\;\ldots\;\;\ldots$	90
10.28 TNVALID-ORDER-287 $Z(s) =$	$=\left(\infty,\;\infty,\;\infty,\;R_4+rac{1}{C_4s},\;R_5+rac{1}{C_5s},\;rac{L_Ls}{C_LL_Ls^2+1} ight)$	91
10.28\NVALID-ORDER-288 $Z(s) =$	$=\left(\infty,\ \infty,\ \infty,\ R_4+rac{1}{C_4s},\ R_5+rac{1}{C_5s},\ L_Ls+R_L+rac{1}{C_Ls} ight)$	91
10.28 <b>9</b> NVALID-ORDER-289 $Z(s) =$	$=\left(\infty,\ \infty,\ \infty,\ R_4+rac{1}{C_4s},\ R_5+rac{1}{C_5s},\ rac{1}{C_Ls+rac{1}{R_L}+rac{1}{L_Ls}} ight)$	91
10.29 <b>0</b> NVALID-ORDER-290 $Z(s) =$	$=\left(\infty,\ \infty,\ \infty,\ R_4+rac{1}{C_4s},\ R_5+rac{1}{C_5s},\ rac{L_Ls}{C_LL_Ls^2+1}+R_L ight)$	91
10.29INVALID-ORDER-291 $Z(s) =$	$= \left( \infty, \ \infty, \ \infty, \ R_4 + \frac{1}{C_4 s}, \ R_5 + \frac{1}{C_5 s}, \ \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right) \ \dots $	91
10.29 <b>2</b> NVALID-ORDER-292 $Z(s) =$	$=\left(\infty,\;\infty,\;\infty,\;R_4+rac{1}{C_4s},\;L_5s+rac{1}{C_5s},\;R_L ight)\;\ldots\;\ldots\;\ldots\;\ldots\;\ldots\;\ldots\;\ldots\;\ldots\;\ldots\;\ldots\;\ldots\;\ldots\;\ldots\;\ldots\;\ldots\;\ldots\;\ldots\;\ldots\;\ldots$	91
10.29 SNVALID-ORDER-293 $Z(s) =$	$=\left(\infty,\;\infty,\;\infty,\;R_4+rac{1}{C_4s},\;L_5s+rac{1}{C_5s},\;rac{1}{C_Ls} ight)$	91
10.29#NVALID-ORDER-294 $Z(s)=$	$=\left(\infty,\;\infty,\;\infty,\;R_4+rac{1}{C_4s},\;L_5s+rac{1}{C_5s},\;rac{R_L}{C_LR_Ls+1} ight)$	91
10.295 NVALID-ORDER-295 $Z(s) = \displaystyle$	$=\left(\infty,\;\infty,\;\infty,\;R_4+rac{1}{C_4s},\;L_5s+rac{1}{C_5s},\;R_L+rac{1}{C_Ls} ight)\;\;\ldots\;\;\ldots\;\;\ldots\;\;\ldots\;\;\ldots\;\;\ldots\;\;\ldots\;\;\ldots\;\;\ldots\;\;\ldots\;\;\ldots\;\;\ldots\;\;\ldots$	92
10.296NVALID-ORDER-296 $Z(s) =$	$=\left(\infty,\;\infty,\;\infty,\;R_4+rac{1}{C_4s},\;L_5s+rac{1}{C_5s},\;L_Ls+rac{1}{C_Ls} ight)$	92
10.29 <b>T</b> NVALID-ORDER-297 $Z(s) =$	$=\left(\infty,\;\infty,\;\infty,\;R_4+rac{1}{C_4s},\;L_5s+rac{1}{C_5s},\;rac{L_Ls}{C_LL_Ls^2+1} ight)$	92
10.29&NVALID-ORDER-298 $Z(s)=$	$=\left(\infty,\;\infty,\;\infty,\;R_4+rac{1}{C_4s},\;L_5s+rac{1}{C_5s},\;L_Ls+R_L+rac{1}{C_Ls} ight)$	92
10.29 <b>9</b> NVALID-ORDER-299 $Z(s) =$	$= \left( \infty, \ \infty, \ \infty, \ R_4 + \frac{1}{C_4 s}, \ L_5 s + \frac{1}{C_5 s}, \ \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right). $	92
10.30 <b>0</b> NVALID-ORDER-300 $Z(s) =$	$=\left(\infty,\ \infty,\ \infty,\ R_4+rac{1}{C_4s},\ L_5s+rac{1}{C_5s},\ rac{L_Ls}{C_LL_Ls^2+1}+R_L ight)\ \dots \dots$	92
10.30INVALID-ORDER-301 $Z(s) = \displaystyle$	$= \left( \infty, \ \infty, \ \infty, \ R_4 + \frac{1}{C_4 s}, \ L_5 s + \frac{1}{C_5 s}, \ \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)  \dots $	92
10.30 <b>2</b> NVALID-ORDER-302 $Z(s) =$	$=\left(\infty,\;\infty,\;\infty,\;R_4+rac{1}{C_4s},\;rac{L_5s}{C_5L_5s^2+1},\;R_L ight)$	92
10.30\$NVALID-ORDER-303 $Z(s) =$	$=\left(\infty,\;\infty,\;\infty,\;R_4+rac{1}{C_4s},\;rac{L_5s}{C_5L_5s^2+1},\;rac{1}{C_Ls} ight)\;\ldots$	93
10.30#NVALID-ORDER-304 $Z(s)=$	$\left(\infty, \ \infty, \ \infty, \ R_4 + \frac{1}{C_4 s}, \ \frac{L_5 s}{C_5 L_5 s^2 + 1}, \ \frac{R_L}{C_L R_L s + 1}\right)$	93
10.305NVALID-ORDER-305 $Z(s) =$	$\left(\infty, \ \infty, \ \infty, \ R_4 + \frac{1}{C_4 s}, \ \frac{L_5 s}{C_5 L_5 s^2 + 1}, \ R_L + \frac{1}{C_L s}\right)$	93
10.306NVALID-ORDER-306 $Z(s) =$	$\begin{array}{c} (\infty,  \infty,  \infty,  R_4 + \frac{1}{C_4 s},  \frac{L_5 s}{C_5 L_5 s^2 + 1},  \frac{C_L s}{C_L R_L s + 1}) \\ = (\infty,  \infty,  \infty,  R_4 + \frac{1}{C_4 s},  \frac{L_5 s}{C_5 L_5 s^2 + 1},  \frac{R_L}{C_L R_L s + 1}) \\ = (\infty,  \infty,  \infty,  R_4 + \frac{1}{C_4 s},  \frac{L_5 s}{C_5 L_5 s^2 + 1},  R_L + \frac{1}{C_L s}) \\ = (\infty,  \infty,  \infty,  R_4 + \frac{1}{C_4 s},  \frac{L_5 s}{C_5 L_5 s^2 + 1},  L_L s + \frac{1}{C_L s}) \end{array}$	93
10.30TNVALID-ORDER- $307 Z(s) =$	$=(\infty,\infty,\infty,R_4+rac{1}{C_{AS}},rac{L_{LS}}{C_LL_Ls^2+1},rac{L_LS}{C_LL_Ls^2+1})$	93
10.30&NVALID-ORDER-308 $Z(s) =$	$\left(\infty, \ \infty, \ \infty, \ R_4 + \frac{1}{C_4 s}, \ \frac{L_5 s}{C_5 L_5 s^2 + 1}, \ L_L s + R_L + \frac{1}{C_L s}\right) \ \dots \ $	93
10.30 <b>9</b> NVALID-ORDER-309 $Z(s) =$	$\left(\infty, \ \infty, \ \infty, \ R_4 + \frac{1}{C_4 s}, \ \frac{L_5 s}{C_5 L_5 s^2 + 1}, \ \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)^{-1} \right)$	93
10.31 <b>@</b> NVALID-ORDER-310 $Z(s) =$	$=\left(\infty,\ \infty,\ \infty,\ R_4+rac{1}{C_4s},\ rac{L_5s}{C_5L_5s^2+1},\ rac{L_Ls}{C_LL_Ls^2+1}+R_L ight)$	93
10.31 INVALID-ORDER-311 $Z(s)=$	$= \left( \infty, \ \infty, \ R_4 + \frac{1}{C_4 s}, \ \frac{L_5 s}{C_5 L_5 s^2 + 1}, \ \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right) \ . $	94
10.312NVALID-ORDER-312 $Z(s) =$	$\left(\infty, \ \infty, \ \infty, \ R_4 + rac{1}{C_4 s}, \ L_5 s + R_5 + rac{1}{C_5 s}, \ R_L ight)$	94
10.31BNVALID-ORDER- $313 Z(s) =$	$=\left(\infty, \infty, \infty, R_4 + \frac{1}{C_{12}}, L_5 s + R_5 + \frac{1}{C_{12}}, \frac{1}{C_{12}}\right)$	94
10.31#NVALID-ORDER-314 $Z(s)=$	$\begin{array}{c} \left(\infty, \ \infty, \ \infty, \ R_4 + \frac{1}{C_4 s}, \ L_5 s + R_5 + \frac{1}{C_5 s}, \ \frac{R_L}{C_L R_L s + 1}\right) \\ = \left(\infty, \ \infty, \ \infty, \ R_4 + \frac{1}{C_4 s}, \ L_5 s + R_5 + \frac{1}{C_5 s}, \ R_L + \frac{1}{C_L s}\right) \end{array}$	94
10.315NVALID-ORDER-315 $Z(s) =$	$\left(\infty, \ \infty, \ \infty, \ R_4 + \frac{1}{C_4 s}, \ L_5 s + R_5 + \frac{1}{C_5 s}, \ R_L + \frac{1}{C_L s}\right)$	94

10.316NVALID-ORDER-316 $Z(s) =$	$\left(\infty, \ \infty, \ \infty, \ R_4 + \frac{1}{C_4 s}, \ L_5 s + R_5 + \frac{1}{C_5 s}, \ L_L s + \frac{1}{C_L s}\right)$	94
10.31 <b>T</b> NVALID-ORDER-317 $Z(s) =$	$\left(\infty, \ \infty, \ \infty, \ R_4 + \frac{1}{C_4 s}, \ L_5 s + R_5 + \frac{1}{C_5 s}, \ \frac{L_L s}{C_L L_L s^2 + 1}\right)$	94
10.31&NVALID-ORDER-318 $Z(s) =$	$\left(\infty, \ \infty, \ \infty, \ R_4 + \frac{1}{C_{4s}}, \ L_5s + R_5 + \frac{1}{C_{5s}}, \ L_Ls + R_L + \frac{1}{C_{Ls}}\right)$	94
10.31 <b>9</b> NVALID-ORDER-319 $Z(s)=$	$\left(\infty, \ \infty, \ \infty, \ R_4 + \frac{1}{C_4 s}, \ L_5 s + R_5 + \frac{1}{C_5 s}, \ \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)  \dots $	95
	$\left(\infty,  \infty,  \infty,  R_4 + \frac{1}{C_4 s},  L_5 s + R_5 + \frac{1}{C_5 s},  \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$	95
10.32INVALID-ORDER-321 $Z(s) = \displaystyle$	$\left(\infty, \ \infty, \ \infty, \ R_4 + \frac{1}{C_4 s}, \ L_5 s + R_5 + \frac{1}{C_5 s}, \ \frac{R_L \left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)  \dots $	95
10.322NVALID-ORDER-322 $Z(s) =$	$\left(\infty, \ \infty, \ \infty, \ R_4 + \frac{1}{C_4 s}, \ \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \ R_L\right)$	95
10.32 <b>%</b> NVALID-ORDER-323 $Z(s)=$	$\left(\infty,  \infty,  \infty,  R_4 + \frac{1}{C_4 s},  \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}},  \frac{1}{C_L s}\right)$	95
10.32#NVALID-ORDER-324 $Z(s)=$	$\left(\infty, \ \infty, \ \infty, \ R_4 + \frac{1}{C_4 s}, \ \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \ \frac{R_L}{C_L R_L s + 1}\right) \ \dots $	95
10.32 <b>Б</b> NVALID-ORDER-325 $Z(s)=$	$\left(\infty, \ \infty, \ \infty, \ R_4 + \frac{1}{C_4 s}, \ \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \ R_L + \frac{1}{C_L s}\right) $	95
10.326 NVALID-ORDER-326 $Z(s)=$	$\left(\infty,  \infty,  \infty,  R_4 + \frac{1}{C_4 s},  \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}},  L_L s + \frac{1}{C_L s}\right)$	95
	$\left(\infty, \ \infty, \ \infty, \ R_4 + \frac{1}{C_4 s}, \ \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \ \frac{L_L s}{C_L L_L s^2 + 1}\right)  \dots $	96
10.32&NVALID-ORDER-328 $Z(s)=$	$\left(\infty, \ \infty, \ \infty, \ R_4 + \frac{1}{C_4 s}, \ \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \ L_L s + R_L + \frac{1}{C_L s}\right)  \dots $	96
10.32¶NVALID-ORDER-329 $Z(s) =$	$\left(\infty, \ \infty, \ \infty, \ R_4 + \frac{1}{C_4 s}, \ \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \ \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)  \dots $	96
10.33©NVALID-ORDER-330 $Z(s) =$	$\left(\infty,  \infty,  \infty,  R_4 + \frac{1}{C_4 s},  \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}},  \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)  \dots $	96
10.33INVALID-ORDER-331 $Z(s) =$	$\left(\infty, \ \infty, \ \infty, \ R_4 + \frac{1}{C_4 s}, \ \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \ \frac{R_L \left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right) \ \dots $	96
	$\left(\infty, \ \infty, \ \infty, \ R_4 + \frac{1}{C_4 s}, \ \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \ R_L\right)$	96
10.33\$NVALID-ORDER-333 $Z(s) =$	$\left(\infty, \ \infty, \ \infty, \ R_4 + \frac{1}{C_4 s}, \ \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \ \frac{1}{C_L s}\right)$	96
10.334NVALID-ORDER-334 $Z(s)=$	$\left(\infty, \ \infty, \ \infty, \ R_4 + \frac{1}{C_4 s}, \ \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \ \frac{R_L}{C_L R_L s + 1}\right)$	96
10.33 <b>5</b> NVALID-ORDER-335 $Z(s) =$	$\left(\infty, \ \infty, \ \infty, \ R_4 + \frac{1}{C_4 s}, \ \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \ R_L + \frac{1}{C_L s}\right)$	97
10.336NVALID-ORDER-336 $Z(s) =$	$\left(\infty, \ \infty, \ \infty, \ R_4 + \frac{1}{C_4 s}, \ \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \ L_L s + \frac{1}{C_L s}\right)$	97
10.33 <b>T</b> NVALID-ORDER-337 $Z(s) =$	$\left(\infty, \ \infty, \ \infty, \ R_4 + \frac{1}{C_4 s}, \ \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \ \frac{L_L s}{C_L L_L s^2 + 1}\right)$	97
10.33&NVALID-ORDER-338 $Z(s) =$	$ \begin{pmatrix} \infty, \ \infty, \ \infty, \ R_4 + \frac{1}{C_4 s}, \ \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \ L_L s + \frac{1}{C_L s} \end{pmatrix} $ $ \begin{pmatrix} \infty, \ \infty, \ \infty, \ R_4 + \frac{1}{C_4 s}, \ \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \ L_L s + \frac{1}{C_L s} \end{pmatrix} $ $ \begin{pmatrix} \infty, \ \infty, \ \infty, \ R_4 + \frac{1}{C_4 s}, \ \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \ \frac{L_L s}{C_L L_L s^2 + 1} \end{pmatrix} $ $ \begin{pmatrix} \infty, \ \infty, \ \infty, \ R_4 + \frac{1}{C_4 s}, \ \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \ L_L s + R_L + \frac{1}{C_L s} \end{pmatrix} $ $ \begin{pmatrix} \infty, \ \infty, \ \infty, \ R_4 + \frac{1}{C_4 s}, \ \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \ L_L s + R_L + \frac{1}{C_L s} \end{pmatrix} $	97
10.33 <b>9</b> NVALID-ORDER-339 $Z(s)=$	$\left(\infty, \ \infty, \ \infty, \ R_4 + \frac{1}{C_4 s}, \ \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \ \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)  \dots $	97
10.34 <b>0</b> NVALID-ORDER-340 $Z(s) =$	$(\infty, \infty, \infty, R_4 + \frac{1}{C_4 s}, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{L_L s}{C_L L_L s^2 + 1} + R_L)$	97
10.34 INVALID-ORDER-341 $Z(s)=$	$ \begin{pmatrix} \infty,  \infty,  \infty,  R_4 + \frac{1}{C_4 s},  \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5,  \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \end{pmatrix} \\ (\infty,  \infty,  \infty,  R_4 + \frac{1}{C_4 s},  \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5,  \frac{L_L s}{C_L L_L s^2 + 1} + R_L \end{pmatrix} \\ (\infty,  \infty,  \infty,  R_4 + \frac{1}{C_4 s},  \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5,  \frac{R_L \left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}} \end{pmatrix} \\ (\infty,  \infty,  \infty,  R_4 + \frac{1}{C_4 s},  \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5,  \frac{R_L \left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}} \end{pmatrix} . $	97
10.342NVALID-ORDER-342 $Z(s) =$	$\left(\infty, \ \infty, \ \infty, \ R_4 + \frac{1}{C_4 s}, \ \frac{R_5 \left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \ R_L\right) \ \dots \ $	97
10.34\( \mathbb{E}\)NVALID-ORDER-343 $Z(s) =$	$\left(\infty, \ \infty, \ \infty, \ R_4 + \frac{1}{C_4 s}, \ \frac{R_5 \left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \ \frac{1}{C_L s}\right)  \dots $	98
10.34#NVALID-ORDER-344 $Z(s)=$	$ \left(\infty,  \infty,  \infty,  R_4 + \frac{1}{C_4 s},  \frac{R_5 \left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}},  \frac{1}{C_L s}\right) \\ \left(\infty,  \infty,  \infty,  R_4 + \frac{1}{C_4 s},  \frac{R_5 \left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}},  \frac{R_L}{C_L R_L s + 1}\right) \\ $	98
10.34Б NVALID-ORDER-345 $Z(s)=$	$\left(\infty, \ \infty, \ \infty, \ R_4 + \frac{1}{C_4 s}, \ \frac{R_5 \left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \ R_L + \frac{1}{C_L s}\right) \ \dots $	98

10.346NVALID-ORDER-346 $Z(s) = 1$	$\left(\infty,\ \infty,\ \infty,\ R_4 + rac{1}{C_4 s},\ rac{R_5 \left(L_5 s + rac{1}{C_5 s} ight)}{L_5 s + R_5 + rac{1}{C_5 s}},\ L_L s + rac{1}{C_L s} ight)$	98
10.34¶NVALID-ORDER-347 $Z(s) = 1$	$\left(\infty, \ \infty, \ \infty, \ R_4 + \frac{1}{C_4 s}, \ \frac{R_5 \left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \ \frac{L_L s}{C_L L_L s^2 + 1}\right)  \dots $	98
	$\left(\infty, \ \infty, \ \infty, \ R_4 + \frac{1}{C_4 s}, \ \frac{R_5 \left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \ L_L s + R_L + \frac{1}{C_L s}\right)  \dots $	98
	$\left(\infty, \ \infty, \ \infty, \ R_4 + \frac{1}{C_4 s}, \ \frac{R_5 \left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \ \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right) \right) \ . \ . \ . \ . \ . \ . \ . \ . \ . \ $	98
	$\left(\infty, \ \infty, \ \infty, \ R_4 + \frac{1}{C_4 s}, \ \frac{R_5 \left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \ \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right) \ \dots \ $	98
	$\left(\infty, \ \infty, \ \infty, \ R_4 + \frac{1}{C_4 s}, \ \frac{R_5 \left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \ \frac{R_L \left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right) \ \dots $	99
10.35 <b>2</b> NVALID-ORDER- $352 Z(s) = ($	$\left(\infty,\ \infty,\ \infty,\ L_4s+rac{1}{C_4s},\ R_5,\ rac{1}{C_Ls} ight)$	99
10.35 <b>&amp;</b> NVALID-ORDER-353 $Z(s) = ($	$\left(\infty,\;\infty,\;\infty,\;L_4s+rac{1}{C_4s},\;R_5,\;rac{R_L}{C_LR_Ls+1} ight)$	99
10.354NVALID-ORDER-354 $Z(s) = ($	$\left(\infty,\;\infty,\;\infty,\;L_4s+rac{1}{C_4s},\;R_5,\;R_L+rac{1}{C_Ls} ight)$	99
10.35 INVALID-ORDER-355 $Z(s) = ($	$\left(\infty,\;\infty,\;\infty,\;L_4s+rac{1}{C_4s},\;R_5,\;L_Ls+rac{1}{C_Ls} ight)$	99
10.356NVALID-ORDER-356 $Z(s) = ($	$\left(\infty,\;\infty,\;\infty,\;L_4s+rac{1}{C_4s},\;R_5,\;rac{L_Ls}{C_LL_Ls^2+1} ight)^{'}$	99
	$\left(\infty, \ \infty, \ \infty, \ L_4s + rac{1}{C_4s}, \ R_5, \ L_Ls + R_L + rac{1}{C_Ls} ight) \ \ldots \ $	99
10.35&NVALID-ORDER-358 $Z(s) = $	$\left(\infty, \ \infty, \ \infty, \ L_4s + \frac{1}{C_4s}, \ R_5, \ \frac{1}{C_Ls + \frac{1}{R_L} + \frac{1}{L_Ls}}\right)$	99
	$\left(\infty, \infty, \infty, L_4s + \frac{1}{C_4s}, R_5, \frac{L_Ls}{C_LL_Ls^2 + 1} + R_L\right)$	.00
10.36 <b>0</b> NVALID-ORDER-360 $Z(s) = $	$\left(\infty, \ \infty, \ \infty, \ L_4s + \frac{1}{C_4s}, \ R_5, \ \frac{R_L\left(L_Ls + \frac{1}{C_Ls}\right)}{L_Ls + R_L + \frac{1}{C_Ls}}\right) \ \dots \ $	00
	$(\infty, \infty, \infty, L_4s + \frac{1}{C_4s}, \frac{1}{C_5s}, R_L)$	.00
10.36 <b>2</b> NVALID-ORDER-362 $Z(s) = ($	$(\infty, \infty, \infty, L_4s + \frac{1}{C_4s}, \frac{1}{C_5s}, \frac{1}{C_Ls})$	.00
10.36 <b>B</b> NVALID-ORDER-363 $Z(s) = ($	$(\infty, \infty, \infty, L_4s + \frac{1}{C_4s}, \frac{1}{C_5s}, \frac{R_L}{C_LR_Ls + 1})$	00
10.36#NVALID-ORDER-364 $Z(s) = ($	$\left(\infty, \infty, \infty, L_4s + \frac{1}{C_{4s}}, \frac{1}{C_{5s}}, R_L + \frac{1}{C_{Ls}}\right)$	00
10.36 <b>5</b> NVALID-ORDER-365 $Z(s) = ($	$\left(\infty, \infty, \infty, L_4s + \frac{1}{C_4s}, \frac{1}{C_5s}, L_Ls + \frac{1}{C_Ls}\right)$	.00
10.366NVALID-ORDER-366 $Z(s) = 0$	$(\infty, \infty, \infty, L_{dS} + \frac{1}{2}, \frac{1}{2}, \frac{L_{LS}}{2})'$	00
10.367NVALID-ORDER-367 $Z(s) = ($	$\left(\infty,  \infty,  \infty,  L_{4}s + \frac{1}{C_{4}s},  \frac{1}{C_{5}s},  L_{L}s + R_{L} + \frac{1}{C_{L}s}\right)$	.01
10.36&NVALID-ORDER-368 $Z(s) = \begin{pmatrix} 1 & 1 & 1 \\ 1 & 1 & 1 \end{pmatrix}$	$\left(\infty, \ \infty, \ \infty, \ L_{4}s + \frac{1}{C_{4}s}, \ \frac{1}{C_{5}s}, \ L_{L}s + R_{L} + \frac{1}{C_{L}s}\right) \qquad \qquad$	01
10.36 <b>9</b> NVALID-ORDER- $369 Z(s) = ($	$\left(\infty, \infty, \infty, L_4s + \frac{1}{C_{cs}}, \frac{1}{C_{cs}}, \frac{L_Ls}{C_{cL_cs^2+1}} + R_L\right)$	.01
10.370NVALID-ORDER-370 $Z(s) = 1$	$\left(\infty,  \infty,  \infty,  L_4 s + \frac{1}{C_4 s},  \frac{1}{C_5 s},  \frac{R_L \left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right) \qquad \qquad$	01
10.37 <b>I</b> NVALID-ORDER-371 $Z(s) = ($	$\left(\infty, \ \infty, \ \infty, \ L_4s + \frac{1}{C_4s}, \ \frac{R_5}{C_5R_5s+1}, \ R_L\right)$	01
10.379NVALID-ORDER-372 $Z(s) = 1$	$\left( \infty, \infty, \infty, L_{4}s + \frac{1}{1}, \frac{R_{5}}{1}, \frac{1}{1} \right)$	01
10.37 <b>E</b> NVALID-ORDER-373 $Z(s) = ($	$(\infty, \infty, \infty, L_4s + \frac{1}{C_4s}, \frac{R_5}{C_5R_5s+1}, \frac{R_L}{C_LR_Ls+1})$	.01
10.37#NVALID-ORDER-374 $Z(s) = ($	$(\infty, \infty, \infty, L_4s + \frac{1}{C_4s}, \frac{R_5}{C_5R_5s+1}, R_L + \frac{1}{C_Ls})$	.01
10.375NVALID-ORDER-375 $Z(s) = ($	$\left(\infty, \ \infty, \ \infty, \ L_4s + \frac{1}{C_4s}, \ \frac{R_5}{C_5R_5s+1}, \ L_Ls + \frac{1}{C_Ls}\right)$	02
10.376NVALID-ORDER-376 $Z(s) = ($	$(\infty, \infty, \infty, L_4s + \frac{1}{C_4s}, \frac{R_5}{C_5R_5s+1}, \frac{L_Ls}{C_LL_s^2+1})'$	.02
10.37¶NVALID-ORDER-377 $Z(s) = ($	$ \begin{pmatrix} \infty,  \infty,  \infty,  L_{4}s + \frac{C_{4}s}{C_{4}s},  \frac{C_{5}R_{5}s+1}{C_{L}R_{L}s+1} \end{pmatrix} $ $ \begin{pmatrix} \infty,  \infty,  \infty,  L_{4}s + \frac{1}{C_{4}s},  \frac{R_{5}}{C_{5}R_{5}s+1},  \frac{R_{L}}{C_{L}R_{L}s+1} \end{pmatrix} $ $ \begin{pmatrix} \infty,  \infty,  \infty,  L_{4}s + \frac{1}{C_{4}s},  \frac{R_{5}}{C_{5}R_{5}s+1},  R_{L} + \frac{1}{C_{L}s} \end{pmatrix} $ $ \begin{pmatrix} \infty,  \infty,  \infty,  L_{4}s + \frac{1}{C_{4}s},  \frac{R_{5}}{C_{5}R_{5}s+1},  L_{L}s + \frac{1}{C_{L}s} \end{pmatrix} $ $ \begin{pmatrix} \infty,  \infty,  \infty,  L_{4}s + \frac{1}{C_{4}s},  \frac{R_{5}}{C_{5}R_{5}s+1},  \frac{L_{L}s}{C_{L}L_{L}s^{2}+1} \end{pmatrix} $ $ \begin{pmatrix} \infty,  \infty,  \infty,  L_{4}s + \frac{1}{C_{4}s},  \frac{R_{5}}{C_{5}R_{5}s+1},  L_{L}s + R_{L} + \frac{1}{C_{L}s} \end{pmatrix} $ $ \begin{pmatrix} \infty,  \infty,  L_{4}s + \frac{1}{C_{4}s},  \frac{R_{5}}{C_{5}R_{5}s+1},  L_{L}s + R_{L} + \frac{1}{C_{L}s} \end{pmatrix} $ $ \begin{pmatrix} \infty,  \infty,  L_{4}s + \frac{1}{C_{4}s},  \frac{R_{5}}{C_{5}R_{5}s+1},  L_{L}s + R_{L} + \frac{1}{C_{L}s} \end{pmatrix} $ $ \begin{pmatrix} \infty,  \infty,  L_{4}s + \frac{1}{C_{4}s},  \frac{R_{5}}{C_{5}R_{5}s+1},  L_{L}s + R_{L} + \frac{1}{C_{L}s} \end{pmatrix} $	02
10.37&NVALID-ORDER-378 $Z(s) = ($	$\left(\infty,  \infty,  \infty,  L_4 s + \frac{1}{C_4 s},  \frac{R_5}{C_5 R_5 s + 1},  \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)  \dots  \dots  \dots  \dots  \dots  \dots  \dots  \dots  \dots  $	02

10.37 <b>9</b> NVALID-ORDER-379 $Z(s) = \left(\infty, \infty, \infty, L_4 s + \frac{1}{C_4 s}, \frac{R_5}{C_5 R_5 s + 1}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$	102
$10.38 \text{ @NVALID-ORDER-380 } Z(s) = \left( \infty, \ \infty, \ \infty, \ L_4 s + \frac{1}{C_4 s}, \ \frac{R_5}{C_5 R_5 s + 1}, \ \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right) \ . \ . \ . \ . \ . \ . \ . \ . \ . \ $	102
10.38INVALID-ORDER-381 $Z(s) = \left(\infty, \infty, \infty, L_4 s + \frac{1}{C_4 s}, R_5 + \frac{1}{C_5 s}, R_L\right)$	102
10.382NVALID-ORDER-382 $Z(s) = \left(\infty, \ \infty, \ \infty, \ L_4s + \frac{1}{C_4s}, \ R_5 + \frac{1}{C_5s}, \ \frac{1}{C_Ls}\right)$	102
10.38\( \text{ENVALID-ORDER-383} \( Z(s) = \left( \infty, \infty, \infty, \infty, \infty, \left( L_4 s + \frac{1}{C_5 s}, \infty, \frac{R_L}{C_L R_L s + 1} \right) \] \qquad \tag{2.5}	103
10.38\(\text{anvalid-Order-384}\(Z(s) = \left(\infty, \infty,	103
10.38 INVALID-ORDER-385 $Z(s) = \left(\infty, \infty, \infty, L_4 s + \frac{1}{C_4 s}, R_5 + \frac{1}{C_5 s}, L_L s + \frac{1}{C_L s}\right)$	103
10.386NVALID-ORDER-386 $Z(s) = \left(\infty, \infty, \infty, L_4 s + \frac{1}{C_4 s}, R_5 + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1}\right)$	103
10.38 INVALID-ORDER-387 $Z(s) = \left(\infty, \infty, \infty, L_4 s + \frac{1}{C_4 s}, R_5 + \frac{1}{C_5 s}, L_L s + R_L + \frac{1}{C_L s}\right)$	103
10.38\( \text{NVALID-ORDER-388} \( Z(s) = \left( \infty, \infty, \infty, \infty, \infty, \left( L_4 s + \frac{1}{C_4 s}, \ R_5 + \frac{1}{C_5 s}, \ \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)  \tag{\text{.}}  \tag{\text{.}}	103
10.389NVALID-ORDER-389 $Z(s) = \left(\infty, \infty, \infty, L_4 s + \frac{1}{C_4 s}, R_5 + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$	103
$10.39 \text{@NVALID-ORDER-390 } Z(s) = \left(\infty, \ \infty, \ \infty, \ L_4 s + \frac{1}{C_4 s}, \ R_5 + \frac{1}{C_5 s}, \ \frac{R_L \left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)  \dots $	103
10.39INVALID-ORDER-391 $Z(s) = \left(\infty, \infty, \infty, L_4 s + \frac{1}{C_4 s}, L_5 s + \frac{1}{C_5 s}, R_L\right)$	104
10.392NVALID-ORDER-392 $Z(s) = \left(\infty, \infty, \infty, L_4 s + \frac{1}{C_4 s}, L_5 s + \frac{1}{C_5 s}, \frac{1}{C_L s}\right)$	104
10.39\( \text{ENVALID-ORDER-393} \( Z(s) = \left( \infty, \infty, \infty, \infty, \infty, \left( L_4s + \frac{1}{C_4s}, \ L_5s + \frac{1}{C_5s}, \ \frac{R_L}{C_LR_Ls+1} \right) \] \qquad \qqqq \qqq \qqqq \qqq \qqqq \qqq \qqqq \qqq \qqqq \qqq	104
10.39\(\text{4NVALID-ORDER-394}\(Z(s) = \left(\infty, \infty, \infty, \infty, \infty, \left(L_4s + \frac{1}{C_4s}\), \(L_5s + \frac{1}{C_5s}\), \(R_L + \frac{1}{C_Ls}\)\)	104
10.39 INVALID-ORDER-395 $Z(s) = \left(\infty, \infty, \infty, L_4 s + \frac{1}{C_4 s}, L_5 s + \frac{1}{C_5 s}, L_L s + \frac{1}{C_L s}\right)$	104
10.396NVALID-ORDER-396 $Z(s) = \left(\infty, \infty, \infty, L_4 s + \frac{1}{C_4 s}, L_5 s + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1}\right)$	104
10.39 INVALID-ORDER-397 $Z(s) = \left(\infty, \infty, \infty, L_4 s + \frac{1}{C_4 s}, L_5 s + \frac{1}{C_5 s}, L_L s + R_L + \frac{1}{C_L s}\right)$	104
10.39 NVALID-ORDER-398 $Z(s) = \left(\infty, \infty, \infty, L_4 s + \frac{1}{C_4 s}, L_5 s + \frac{1}{C_5 s}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$	104
10.39 <b>9</b> NVALID-ORDER-399 $Z(s) = \left(\infty, \infty, \infty, L_4 s + \frac{1}{C_4 s}, L_5 s + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$	105
$10.40\text{@NVALID-ORDER-400 } Z(s) = \left(\infty, \ \infty, \ \infty, \ L_4s + \frac{1}{C_4s}, \ L_5s + \frac{1}{C_5s}, \ \frac{R_L\left(L_Ls + \frac{1}{C_Ls}\right)}{L_Ls + R_L + \frac{1}{C_Ls}}\right) \ \dots \ $	105
10.40INVALID-ORDER-401 $Z(s) = \left(\infty, \infty, \infty, L_4 s + \frac{1}{C_4 s}, \frac{L_5 s}{C_5 L_5 s^2 + 1}, R_L\right)$	105
10.402NVALID-ORDER-402 $Z(s) = \left(\infty, \infty, \infty, L_4 s + \frac{1}{C_4 s}, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{1}{C_L s}\right)$	105
$10.40 \text{INVALID-ORDER-}401 \ Z(s) = \left(\infty, \ \infty, \ \infty, \ L_4s + \frac{1}{C_4s}, \ \frac{L_5s}{C_5L_5s^2+1}, \ R_L\right) $ $10.40 \text{INVALID-ORDER-}402 \ Z(s) = \left(\infty, \ \infty, \ \infty, \ L_4s + \frac{1}{C_4s}, \ \frac{L_5s}{C_5L_5s^2+1}, \ \frac{1}{C_Ls}\right) $ $10.40 \text{INVALID-ORDER-}403 \ Z(s) = \left(\infty, \ \infty, \ \infty, \ L_4s + \frac{1}{C_4s}, \ \frac{L_5s}{C_5L_5s^2+1}, \ \frac{R_L}{C_LR_Ls+1}\right) $ $10.40 \text{INVALID-ORDER-}403 \ Z(s) = \left(\infty, \ \infty, \ \infty, \ L_4s + \frac{1}{C_4s}, \ \frac{L_5s}{C_5L_5s^2+1}, \ \frac{R_L}{C_LR_Ls+1}\right) $	105
$10.40 \text{INVALID-ORDER-} 404 \ Z(s) = \left( \infty, \ \infty, \ \infty, \ L_4 s + \frac{1}{C_4 s}, \ \frac{L_5 s}{C_5 L_5 s^2 + 1}, \ R_L + \frac{1}{C_L s} \right) \ . \ . \ . \ . \ . \ . \ . \ . \ . \ $	105
10.40 <b>5</b> NVALID-ORDER-405 $Z(s) = \left(\infty, \infty, \infty, L_4 s + \frac{1}{C_4 s}, \frac{L_5 s}{C_5 L_5 s^2 + 1}, L_L s + \frac{1}{C_L s}\right)$	105
$10.40 \text{ 6NVALID-ORDER-406 } Z(s) = \left(\infty, \ \infty, \ \infty, \ L_4 s + \frac{1}{C_4 s}, \ \frac{L_5 s}{C_5 L_5 s^2 + 1}, \ \frac{L_L s}{C_L L_L s^2 + 1}\right)  .  .  .  .  .  .  .  .  .  $	105
$10.40 \text{INVALID-ORDER-407 } Z(s) = \left(\infty, \infty, \infty, L_4 s + \frac{1}{C_L s}, \frac{L_5 s}{C_L L_5 e^2 + 1}, L_L s + R_L + \frac{1}{C_L s}\right) \dots \dots$	106
$10.40 \text{ NVALID-ORDER-} 408 \ Z(s) = \left( \infty, \ \infty, \ \infty, \ L_4 s + \frac{1}{C_4 s}, \ \frac{L_5 s}{C_5 L_5 s^2 + 1}, \ \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right). $ $10.40 \text{ NVALID-ORDER-} 409 \ Z(s) = \left( \infty, \ \infty, \ \infty, \ L_4 s + \frac{1}{C_4 s}, \ \frac{L_5 s}{C_5 L_5 s^2 + 1}, \ \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right). $ $110.40 \text{ NVALID-ORDER-} 409 \ Z(s) = \left( \infty, \ \infty, \ \infty, \ L_4 s + \frac{1}{C_4 s}, \ \frac{L_5 s}{C_5 L_5 s^2 + 1}, \ \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right). $	106
10.40 <b>9</b> NVALID-ORDER-409 $Z(s) = \left(\infty, \infty, \infty, L_4 s + \frac{1}{C_4 s}, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$	106
$10.41 \text{@NVALID-ORDER-}410 \ Z(s) = \left(\infty, \ \infty, \ \infty, \ L_4 s + \frac{1}{C_4 s}, \ \frac{L_5 s}{C_5 L_5 s^2 + 1}, \ \frac{R_L \left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)' \qquad . \qquad $	106
$10.41 \text{INVALID-ORDER-}411 \ Z(s) = \left(\infty, \ \infty, \ \infty, \ L_4s + \frac{1}{C_4s}, \ L_5s + R_5 + \frac{1}{C_5s}, \ R_L\right) $ $10.41 \text{INVALID-ORDER-}412 \ Z(s) = \left(\infty, \ \infty, \ \infty, \ L_4s + \frac{1}{C_4s}, \ L_5s + R_5 + \frac{1}{C_5s}, \ \frac{1}{C_Ls}\right) $	106
10.41 2NVALID-ORDER-412 $Z(s) = \left(\infty, \infty, \infty, L_4 s + \frac{1}{C_4 s}, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{1}{C_L s}\right)$	106

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10.41 INVALID-ORDER-413 Z(s) = \left(\infty, \infty, \infty, L_4 s + \frac{1}{C_{48}}, L_5 s + R_5 + \frac{1}{C_{58}}, \frac{R_L}{C_{4}R_{4}s + 1}\right)
 10.41 INVALID-ORDER-414 Z(s) = \left(\infty, \infty, \infty, L_4 s + \frac{1}{C_4 s}, L_5 s + R_5 + \frac{1}{C_5 s}, R_L + \frac{1}{C_4 s}\right) \dots \dots
10.41 INVALID-ORDER-415 Z(s) = \left(\infty, \infty, \infty, L_4 s + \frac{1}{C_{48}}, L_5 s + R_5 + \frac{1}{C_{58}}, L_L s + \frac{1}{C_{48}}\right) \dots
10.416NVALID-ORDER-416 Z(s) = \left(\infty, \infty, \infty, L_4 s + \frac{1}{C_4 s}, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1}\right) . . . . . .
10.41 INVALID-ORDER-417 Z(s) = (\infty, \infty, \infty, L_4 s + \frac{1}{C_4 s}, L_5 s + R_5 + \frac{1}{C_5 s}, L_L s + R_L + \frac{1}{C_L s}) . . . . . .
10.41\( \text{NVALID-ORDER-418} \( Z(s) = \left( \infty, \infty, \infty, \infty, \infty, \left( L_4 s + \frac{1}{C_4 s}, \ L_5 s + R_5 + \frac{1}{C_5 s}, \ \frac{1}{C_L s + \frac{1}{R_T} + \frac{1}{L_T s}} \right) \\ \tag{\cdots} \quad \tag{\cdots} \quad \tag{\cdots} \\ \tag{\cdots} \quad \quad \tag{\cdots} \quad \tag{\cdots} \quad \tag{\cdots} \quad \quad \tag{\cdots} \quad \tag{\cdots} \quad \quad \tag{\cdots} \quad \quad \tag{\cdots} \quad \quad \tag{\cdots} \quad \quad \quad \quad \quad \quad \tag{\cdots} \quad \qua
10.419NVALID-ORDER-419 Z(s) = (\infty, \infty, \infty, L_4 s + \frac{1}{C_4 s}, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L) . . . . . . .
10.420NVALID-ORDER-420 Z(s) = \left(\infty, \infty, \infty, L_4 s + \frac{1}{C_4 s}, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{R_L \left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_5 s}}\right)
10.42INVALID-ORDER-421 Z(s) = \left(\infty, \infty, \infty, L_4 s + \frac{1}{C_4 s}, \frac{1}{C_5 s + \frac{1}{R_c} + \frac{1}{L_c s}}, R_L\right) .....
10.422NVALID-ORDER-422 Z(s) = \left(\infty, \infty, \infty, L_4 s + \frac{1}{C_4 s}, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{1}{C_L s}\right) \dots \dots \dots
10.424NVALID-ORDER-424 Z(s) = \left(\infty, \infty, \infty, L_4 s + \frac{1}{C_4 s}, \frac{1}{C_5 s + \frac{1}{R_r} + \frac{1}{L_r s}}, R_L + \frac{1}{C_L s}\right) \dots \dots
10.42 INVALID-ORDER-425 Z(s) = \left(\infty, \infty, \infty, L_4 s + \frac{1}{C_4 s}, \frac{1}{C_5 s + \frac{1}{D_5} + \frac{1}{T_5 s}}, L_L s + \frac{1}{C_L s}\right) ......
10.42\( \text{NVALID-ORDER-428} \( Z(s) = \left( \infty, \infty, \infty, \infty, \frac{1}{C_5 s + \frac{1}{h_c + 1}}, \frac{1}{C_L s + \frac{1}{h_c + 1}} \right) \]. \tag{10.42\( \text{NVALID-ORDER-428} \) \( Z(s) = \left( \infty, \infty, \infty, \frac{1}{C_L s + \frac{1}{h_c + 1}}, \frac{1}{C_L s + \frac{1}{h_c + 1}} \right) \]. \tag{10.42\( \text{NVALID-ORDER-428} \) \( Z(s) = \left( \infty, \infty, \infty, \frac{1}{C_L s + \frac{1}{h_c + 1}}, \frac{1}{C_L s + \frac{1}{h_c + 1}} \right) \].
10.429NVALID-ORDER-429 Z(s) = \left(\infty, \infty, \infty, L_4 s + \frac{1}{C_4 s}, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right) . . . . . . . . .
10.43 INVALID-ORDER-430 Z(s) = \left(\infty, \infty, \infty, L_4 s + \frac{1}{C_4 s}, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{R_L \left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)
10.43INVALID-ORDER-431 Z(s) = \left(\infty, \infty, \infty, L_4 s + \frac{1}{C_4 s}, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, R_L\right) \dots \dots
10.432NVALID-ORDER-432 Z(s) = \left(\infty, \infty, \infty, L_4 s + \frac{1}{C_4 s}, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{1}{C_4 s}\right) \dots \dots
10.43 INVALID-ORDER-433 Z(s) = \left(\infty, \infty, \infty, L_4 s + \frac{1}{C_4 s}, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{R_L}{C_L R_L s + 1}\right) . . . .
10.43\(\text{ANVALID-ORDER-434}\(Z(s) = \left(\infty, \infty, \infty, \infty, \left(L_4s + \frac{1}{C_4s}\right), \frac{L_5s}{C_5L_5s^2+1} + R_5, R_L + \frac{1}{C_4s}\right)
10.43 INVALID-ORDER-435 Z(s) = \left(\infty, \infty, \infty, L_4 s + \frac{1}{C_4 s}, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, L_L s + \frac{1}{C_L s}\right)
10.436NVALID-ORDER-436 Z(s) = \left(\infty, \infty, \infty, L_4 s + \frac{1}{C_4 s}, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{L_L s}{C_L L_L s^2 + 1}\right) \dots
10.43 INVALID-ORDER-437 Z(s) = (\infty, \infty, \infty, L_4 s + \frac{1}{C_4 s}, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, L_L s + R_L + \frac{1}{C_L s}) . . . .
10.43\(\text{NVALID-ORDER-438}\) Z(s) = \left(\infty, \infty, \infty, L_4 s + \frac{1}{C_4 s}, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{1}{C_L s + \frac{1}{R_7} + \frac{1}{L_7 s}}\right)
10.439NVALID-ORDER-439 Z(s) = \left(\infty, \infty, \infty, L_4 s + \frac{1}{C_4 s}, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{L_L s}{C_L L_1 s^2 + 1} + R_L\right) \dots \dots \dots
10.44 INVALID-ORDER-440 Z(s) = \left(\infty, \infty, \infty, L_4 s + \frac{1}{C_4 s}, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{R_L \left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)
10.44INVALID-ORDER-441 Z(s) = \left(\infty, \ \infty, \ \infty, \ L_4 s + \frac{1}{C_4 s}, \ \frac{R_5 \left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \ R_L\right) \quad \dots \quad \dots
10.442NVALID-ORDER-442 Z(s) = \left(\infty, \infty, \infty, L_4 s + \frac{1}{C_4 s}, \frac{R_5 \left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{1}{C_L s}\right) \dots
10.44BNVALID-ORDER-443 Z(s) = \left(\infty, \infty, \infty, L_4 s + \frac{1}{C_4 s}, \frac{R_5 \left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{R_L}{C_L R_L s + 1}\right).
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$10.44 \text{INVALID-ORDER-} 444 \ Z(s) = \left(\infty, \ \infty, \ \infty, \ L_4 s + \frac{1}{C_4 s}, \ \frac{R_5 \left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \ R_L + \frac{1}{C_L s}\right)  \dots  \dots  \dots  \dots  \dots  \dots  \dots  \dots  \dots  $
$10.44 \text{INVALID-ORDER-} 445 \ Z(s) = \left(\infty, \ \infty, \ \infty, \ L_4 s + \frac{1}{C_4 s}, \ \frac{R_5 \left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \ L_L s + \frac{1}{C_L s}\right) \ \dots $
$10.44 \text{ INVALID-ORDER-446 } Z(s) = \left(\infty, \ \infty, \ \infty, \ L_4 s + \frac{1}{C_4 s}, \ \frac{R_5 \left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \ \frac{L_L s}{C_L L_L s^2 + 1}\right) $
$10.44\text{TNVALID-ORDER-}447 \ Z(s) = \left(\infty, \ \infty, \ \infty, \ L_4s + \frac{1}{C_4s}, \ \frac{R_5\left(L_5s + \frac{1}{C_5s}\right)}{L_5s + R_5 + \frac{1}{C_5s}}, \ L_Ls + R_L + \frac{1}{C_Ls}\right) \ . \ . \ . \ . \ . \ . \ . \ . \ . \ $
$10.44 \text{NVALID-ORDER-} 448 \ Z(s) = \left( \infty, \ \infty, \ \infty, \ L_4 s + \frac{1}{C_4 s}, \ \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \ \frac{1}{C_L s + \frac{1}{L_L s}} \right)^{-1} . $
10.449NVALID-ORDER-449 $Z(s) = \left(\infty, \infty, \infty, L_4 s + \frac{1}{C_4 s}, \frac{R_5 \left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$
$10.45 \text{ @NVALID-ORDER-450 } Z(s) = \left( \infty, \ \infty, \ \infty, \ L_4 s + \frac{1}{C_4 s}, \ \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \ \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right) \right)  \dots $
10.45INVALID-ORDER-451 $Z(s) = \left(\infty, \infty, \infty, \frac{L_4 s}{C_4 L_4 s^2 + 1}, R_5, R_L + \frac{1}{C_L s}\right)$
$10.45 \text{2NVALID-ORDER-} 452 \ Z(s) = \left(\infty, \ \infty, \ \infty, \ \frac{L_4s}{C_4L_4s^2+1}, \ R_5, \ L_Ls + \frac{1}{C_Ls}\right) $
10.45 <b>R</b> NVALID-ORDER-453 $Z(s) = \left(\infty, \infty, \infty, \frac{L_4s}{C_4L_4s^2+1}, R_5, L_Ls + R_L + \frac{1}{C_Ls}\right)$
$10.45 \text{ INVALID-ORDER-} 454 \ Z(s) = \left(\infty, \ \infty, \ \infty, \ \frac{L_4 s}{C_4 L_4 s^2 + 1}, \ R_5, \ \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)  \dots  \dots  \dots  \dots  \dots  \dots  \dots  \dots  \dots  $
$10.45 \text{INVALID-ORDER-} 455 \ Z(s) = \left( \infty, \ \infty, \ \infty, \ \frac{L_4 s}{C_4 L_4 s^2 + 1}, \ R_5, \ \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)  \dots $
$10.45 \text{ (INVALID-ORDER-456 } Z(s) = \left(\infty, \ \infty, \ \infty, \ \frac{L_4s}{C_4L_4s^2+1}, \ \frac{1}{C_5s}, \ R_L\right) $
$10.45 \text{INVALID-ORDER-} 457 \ Z(s) = \left(\infty, \ \infty, \ \infty, \ \frac{L_4 s}{C_4 L_4 s^2 + 1}, \ \frac{1}{C_5 s}, \ \frac{1}{C_L s}\right) \ \dots $
$10.45 \text{\&NVALID-ORDER-} 458 \ Z(s) = \left(\infty, \ \infty, \ \infty, \ \frac{L_4s}{C_4L_4s^2+1}, \ \frac{1}{C_5s}, \ \frac{R_L}{C_LR_Ls+1}\right)  \dots $
10.45 <b>Q</b> NVALID-ORDER-459 $Z(s) = \left(\infty, \infty, \infty, \frac{L_4 s}{C_4 L_4 s^2 + 1}, \frac{1}{C_5 s}, R_L + \frac{1}{C_L s}\right)$
$10.46 \text{ ONVALID-ORDER-} 460 \ Z(s) = \left(\infty, \ \infty, \ \infty, \ \frac{L_4 s}{C_4 L_4 s^2 + 1}, \ \frac{1}{C_5 s}, \ L_L s + \frac{1}{C_L s}\right) \ \dots $
$10.46 \text{INVALID-ORDER-} 461 \ Z(s) = \left(\infty, \ \infty, \ \infty, \ \frac{L_4 s}{C_4 L_4 s^2 + 1}, \ \frac{1}{C_5 s}, \ \frac{L_L s}{C_L L_L s^2 + 1}\right) \ \dots $
10.462NVALID-ORDER-462 $Z(s) = \left(\infty, \infty, \infty, \frac{L_{4s}}{C_{4}L_{4}s^{2}+1}, \frac{1}{C_{5}s}, L_{L}s + R_{L} + \frac{1}{C_{L}s}\right)$
$10.46 \text{ 2NVALID-ORDER-} 463 \ Z(s) = \left(\infty, \ \infty, \ \infty, \ \frac{L_4 s}{C_4 L_4 s^2 + 1}, \ \frac{1}{C_5 s}, \ \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)  \dots $
10.46\(\text{INVALID-ORDER-464}\(Z(s) = \left(\infty, \infty, \infty, \infty, \frac{L_4s}{C_4L_4s^2+1}, \frac{1}{C_5s}, \frac{L_Ls}{C_LL_Ls^2+1} + R_L\right)  \tag{113}
$10.46 \text{Invalid-order} + 65 \times C_{LL} + 7 \times$
$10.46 \text{ NVALID-ORDER-} 466 \ Z(s) = \left(\infty, \ \infty, \ \infty, \ \frac{L_4 s}{C_4 L_4 s^2 + 1}, \ \frac{R_5}{C_5 R_5 s + 1}, \ R_L\right) \ \dots $
$10.46 \text{INVALID-ORDER-} 467 \ Z(s) = \left(\infty, \ \infty, \ \infty, \ \frac{L_4 s}{C_4 L_4 s^2 + 1}, \ \frac{R_5}{C_5 R_5 s + 1}, \ \frac{1}{C_L s}\right)  \dots $
$10.46 \$ \text{NVALID-ORDER-} 468 \ Z(s) = \left( \infty, \ \infty, \ \infty, \ \frac{L_4 s}{C_4 L_4 s^2 + 1}, \ \frac{R_5}{C_5 R_5 s + 1}, \ \frac{R_L}{C_L R_L s + 1} \right) $ $10.46 \$ \text{NVALID-ORDER-} 469 \ Z(s) = \left( \infty, \ \infty, \ \infty, \ \frac{L_4 s}{C_4 L_4 s^2 + 1}, \ \frac{R_5}{C_5 R_5 s + 1}, \ R_L + \frac{1}{C_L s} \right) $ $10.47 \$ \text{NVALID-ORDER-} 470 \ Z(s) = \left( \infty, \ \infty, \ \infty, \ \frac{L_4 s}{C_4 L_4 s^2 + 1}, \ \frac{R_5}{C_5 R_5 s + 1}, \ L_L s + \frac{1}{C_L s} \right) $ $113$
$10.46 \text{ @NVALID-ORDER-} 469 \ Z(s) = \left(\infty, \ \infty, \ \infty, \ \frac{L_4 s}{C_4 L_4 s^2 + 1}, \ \frac{R_5}{C_5 R_5 s + 1}, \ R_L + \frac{1}{C_L s}\right) \ \dots $
$10.470 \text{NVALID-ORDER-} 470 \ Z(s) = \left(\infty, \ \infty, \ \infty, \ \frac{L_4 s}{C_4 L_4 s^2 + 1}, \ \frac{R_5}{C_5 R_5 s + 1}, \ L_L s + \frac{1}{C_L s}\right)  \dots  \dots  \dots  \dots  \dots  \dots  \dots  \dots  \dots  $
$10.47 \text{INVALID-ORDER-471 } Z(s) = \left(\infty, \ \infty, \ \infty, \ \frac{L_4 s}{C_4 L_4 s^2 + 1}, \ \frac{R_5}{C_5 R_5 s + 1}, \ \frac{L_L s}{C_L L_L s^2 + 1}\right)  \dots $
$10.472\text{NVALID-ORDER-}472\ Z(s) = \left(\infty,\ \infty,\ \infty,\ \frac{L_4s}{C_LL_4s^2+1},\ \frac{R_5}{C_2R_2s^2+1},\ L_Ls + R_L + \frac{1}{C_Ls}\right) \ \dots $
$10.478\text{NVALID-ORDER-}473 \ Z(s) = \left(\infty, \ \infty, \ \infty, \ \frac{L_4s}{C_4L_4s^2+1}, \ \frac{R_5}{C_5R_5s+1}, \ \frac{1}{C_Ls + \frac{1}{R_L} + \frac{1}{L_Ls}}\right) \ . $ $10.474\text{NVALID-ORDER-}474 \ Z(s) = \left(\infty, \ \infty, \ \infty, \ \frac{L_4s}{C_4L_4s^2+1}, \ \frac{R_5}{C_5R_5s+1}, \ \frac{L_Ls}{C_LL_Ls^2+1} + R_L\right) \ . $ $114$
$10.474\text{NVALID-ORDER-}474\ Z(s) = \left(\infty,\ \infty,\ \infty,\ \frac{L_4s}{C_4L_4s^2+1},\ \frac{R_5}{C_5R_5s+1},\ \frac{L_Ls}{C_LL_Ls^2+1} + R_L\right)\ \dots \qquad $
10.47 INVALID-ORDER-475 $Z(s) = \left(\infty, \infty, \infty, \frac{L_{4s}}{C_{4}L_{4s}^{2}+1}, \frac{R_{5}}{C_{5}R_{5s}+1}, \frac{R_{L}\left(L_{L}s+\frac{1}{C_{L}s}\right)}{L_{L}s+R_{L}+\frac{1}{C_{L}s}}\right)^{2}$

10.476NVALID-ORDER-476 $Z(s) = \left(\infty, \infty, \infty, \frac{L_{4s}}{C_4L_4s^2+1}, R_5 + \frac{1}{C_5s}, R_L\right)$
10.47 INVALID-ORDER-477 $Z(s) = \left(\infty, \infty, \infty, \frac{L_4 s}{C_4 L_4 s^2 + 1}, R_5 + \frac{1}{C_5 s}, \frac{1}{C_L s}\right)$
10.47 NVALID-ORDER-478 $Z(s) = \left(\infty, \infty, \infty, \frac{L_{4s}}{C_4L_4s^2+1}, R_5 + \frac{1}{C_5s}, \frac{R_L}{C_LR_Ls+1}\right)$
10.47 <b>9</b> NVALID-ORDER-479 $Z(s) = \left(\infty, \infty, \infty, \frac{L_4s}{C_4L_4s^2+1}, R_5 + \frac{1}{C_5s}, R_L + \frac{1}{C_Ls}\right)$
10.48 INVALID-ORDER-480 $Z(s) = \left(\infty, \infty, \infty, \frac{L_{48}}{C_4L_4s^2+1}, R_5 + \frac{1}{C_5s}, L_Ls + \frac{1}{C_Ls}\right)$
10.48INVALID-ORDER-481 $Z(s) = \left(\infty, \infty, \infty, \frac{L_4 s}{C_4 L_4 s^2 + 1}, R_5 + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1}\right)$
10.482NVALID-ORDER-482 $Z(s) = \left(\infty, \infty, \infty, \frac{L_{48}}{C_4L_4s^2+1}, R_5 + \frac{1}{C_5s}, L_Ls + R_L + \frac{1}{C_Ls}\right)$
10.48\( \text{2NVALID-ORDER-483} \( Z(s) = \left( \infty, \infty, \infty, \infty, \frac{L_4s}{C_4L_4s^2 + 1}, R_5 + \frac{1}{C_5s}, \frac{1}{C_Ls + \frac{1}{R_L} + \frac{1}{L_Ls}} \right) \\  \tag{1.5}
10.484NVALID-ORDER-484 $Z(s) = \left(\infty, \infty, \infty, \frac{L_4s}{C_4L_4s^2+1}, R_5 + \frac{1}{C_5s}, \frac{L_Ls}{C_LL_Ls^2+1} + R_L\right)$
10.48 INVALID-ORDER-485 $Z(s) = \left(\infty, \infty, \infty, \frac{L_4 s}{C_4 L_4 s^2 + 1}, R_5 + \frac{1}{C_5 s}, \frac{R_L \left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$
10.486NVALID-ORDER-486 $Z(s) = \left(\infty, \infty, \infty, \frac{L_{4s}}{C_4L_4s^2+1}, L_5s + \frac{1}{C_5s}, R_L\right)$
10.48 <b>T</b> NVALID-ORDER-487 $Z(s) = \left(\infty, \infty, \infty, \frac{L_4 s}{C_4 L_4 s^2 + 1}, L_5 s + \frac{1}{C_5 s}, \frac{1}{C_L s}\right)$
10.48 NVALID-ORDER-488 $Z(s) = \left(\infty, \infty, \infty, \frac{L_4 s}{C_4 L_4 s^2 + 1}, L_5 s + \frac{1}{C_5 s}, \frac{R_L}{C_L R_L s + 1}\right)$
10.48 <b>9</b> NVALID-ORDER-489 $Z(s) = \left(\infty, \infty, \infty, \frac{L_{4}s}{C_4L_4s^2+1}, L_5s + \frac{1}{C_5s}, R_L + \frac{1}{C_Ls}\right)$
10.49@NVALID-ORDER-490 $Z(s) = \left(\infty, \infty, \infty, \frac{L_{4s}}{C_4L_4s^2+1}, L_5s + \frac{1}{C_5s}, L_Ls + \frac{1}{C_Ls}\right)$
10.49INVALID-ORDER-491 $Z(s) = \left(\infty, \infty, \infty, \frac{L_4 s}{C_4 L_4 s^2 + 1}, L_5 s + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1}\right)$
10.492NVALID-ORDER-492 $Z(s) = \left(\infty, \infty, \infty, \frac{L_{4}s}{C_4L_4s^2+1}, L_5s + \frac{1}{C_5s}, L_Ls + R_L + \frac{1}{C_Ls}\right)$
10.49\(\mathbb{B}\)\(\text{NVALID-ORDER-493}\(Z(s) = \left(\infty, \infty, \infty, \infty, \frac{L_4s}{C_4L_4s^2+1}, L_5s + \frac{1}{C_5s}, \frac{1}{C_Ls + \frac{1}{R_L} + \frac{1}{L_Ls}}\right) \\ \tag{1.}\]
10.49\(\text{4NVALID-ORDER-494}\) $Z(s) = \left(\infty, \infty, \infty, \frac{L_4 s}{C_4 L_4 s^2 + 1}, L_5 s + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$
10.49 INVALID-ORDER-495 $Z(s) = \left(\infty, \infty, \infty, \frac{L_4 s}{C_4 L_4 s^2 + 1}, L_5 s + \frac{1}{C_5 s}, \frac{R_L \left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$
10.496NVALID-ORDER-496 $Z(s) = \left(\infty, \infty, \infty, \frac{L_4s}{C_4L_4s^2+1}, \frac{L_5s}{C_5L_5s^2+1}, R_L\right)$
$10.49 \text{INVALID-ORDER-} 497 \ Z(s) = \left(\infty, \ \infty, \ \infty, \ \frac{L_4s}{C_4L_4s^2+1}, \ \frac{L_5s}{C_5L_5s^2+1}, \ \frac{1}{C_Ls}\right) \ \dots $
10.49 NVALID-ORDER-498 $Z(s) = \left(\infty, \infty, \infty, \frac{L_4 s}{C_4 L_4 s^2 + 1}, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{R_L}{C_L R_L s + 1}\right)$
$10.49 \text{ @NVALID-ORDER-499 } Z(s) = \left(\infty, \ \infty, \ \infty, \ \frac{L_4 s}{C_4 L_4 s^2 + 1}, \ \frac{L_5 s}{C_5 L_5 s^2 + 1}, \ R_L + \frac{1}{C_L s}\right) $
$10.50 \text{ (INVALID-ORDER-500 } Z(s) = \left(\infty, \ \infty, \ \infty, \ \frac{L_4s}{C_4L_4s^2+1}, \ \frac{L_5s}{C_5L_5s^2+1}, \ L_Ls + \frac{1}{C_Ls}\right) \ \dots $
$10.50 \text{INVALID-ORDER-501 } Z(s) = \left( \infty, \ \infty, \ \infty, \ \frac{L_4 s}{C_4 L_4 s^2 + 1}, \ \frac{L_5 s}{C_5 L_5 s^2 + 1}, \ \frac{L_L s}{C_L L_L s^2 + 1} \right)' \dots \dots$
10.50 <b>2</b> NVALID-ORDER-502 $Z(s) = \left(\infty, \infty, \infty, \frac{L_4s}{C_4L_4s^2+1}, \frac{L_5s}{C_5L_5s^2+1}, L_Ls + R_L + \frac{1}{C_Ls}\right)$
$ \begin{array}{c} \text{10.502NVALID-ORDER-502} \ Z(s) = \left( \infty, \ \infty, \ \infty, \ \frac{L_{4s}}{C_4 L_4 s^2 + 1}, \ \frac{L_5 s}{C_5 L_5 s^2 + 1}, \ L_L s + R_L + \frac{1}{C_L s} \right) \\ \text{10.502NVALID-ORDER-503} \ Z(s) = \left( \infty, \ \infty, \ \infty, \ \frac{L_{4s}}{C_4 L_4 s^2 + 1}, \ \frac{L_5 s}{C_5 L_5 s^2 + 1}, \ \frac{L_5 s}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right) \\ \text{111} \end{array} $
10.50\(\text{4NVALID-ORDER-504}\(Z(s) = \left(\infty, \infty, \infty, \frac{L_4s}{C_4L_4s^2+1}, \frac{L_5s}{C_5L_5s^2+1}, \frac{L_Ls}{C_LL_Ls^2+1} + R_L\right)  \tag{10.50}\(\text{4NVALID-ORDER-504}\(Z(s) = \left(\infty, \infty, \infty, \frac{L_4s}{C_4L_4s^2+1}, \frac{L_5s}{C_5L_5s^2+1}, \frac{L_Ls}{C_LL_Ls^2+1} + R_L\right)  \tag{10.50}\(\text{4NVALID-ORDER-504}\(Z(s) = \left(\infty, \infty, \infty, \infty, \frac{L_4s}{C_4L_4s^2+1}, \frac{L_Ls}{C_5L_5s^2+1}, \frac{L_Ls}{C_LL_Ls^2+1} + R_L\right)  \tag{10.50}\(\text{4NVALID-ORDER-504}\(Z(s) = \left(\infty, \infty, \infty, \infty, \frac{L_4s}{C_4L_4s^2+1}, \frac{L_Ls}{C_5L_5s^2+1}, \frac{L_Ls}{C_5L_5s^2+1} + R_L\right)  \tag{10.50}\(\text{4NVALID-ORDER-504}\(Z(s) = \left(\infty, \infty, \infty, \infty, \frac{L_4s}{C_5L_5s^2+1}, \frac{L_Ls}{C_5L_5s^2+1} + R_L\right)  \tag{10.50}\(\text{4NVALID-ORDER-504}\(Z(s) = \left(\infty, \infty, \infty, \infty, \frac{L_5s}{C_5L_5s^2+1}, \frac{L_5s}{C_5L_5s^2+1} + R_L\right)  \tag{10.50}\(\text{4NVALID-ORDER-504}\(4NVALI
$10.50 \text{ 5NVALID-ORDER-505 } Z(s) = \left(\infty, \ \infty, \ \infty, \ \frac{L_{4s}}{C_4 L_4 s^2 + 1}, \ \frac{L_{5s}}{C_5 L_5 s^2 + 1}, \ \frac{R_L \left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right) \ \dots $
10.506NVALID-ORDER-506 $Z(s) = \left(\infty, \infty, \infty, \frac{L_4s}{C_4L_4s^2+1}, L_5s + R_5 + \frac{1}{C_5s}, R_L\right)^{C_Ls}$
10.50 <b>T</b> NVALID-ORDER-507 $Z(s) = \left(\infty, \infty, \infty, \frac{L_4s}{C_4L_4s^2+1}, L_5s + R_5 + \frac{1}{C_5s}, \frac{1}{C_Ls}\right)$
$10.50 \text{ ENVALID-ORDER-} 508 \ Z(s) = \left(\infty, \ \infty, \ \infty, \ \frac{L_4 s}{C_4 L_4 s^2 + 1}, \ L_5 s + R_5 + \frac{1}{C_5 s}, \ \frac{R_L}{C_L R_L s + 1}\right)  \dots $
10.50 <b>9</b> NVALID-ORDER-509 $Z(s) = \left(\infty, \infty, \infty, \frac{L_{4s}}{C_4L_4s^2+1}, L_5s + R_5 + \frac{1}{C_5s}, R_L + \frac{1}{C_Ls}\right)$
10.51 INVALID-ORDER-510 $Z(s) = (\infty, \infty, \infty, \frac{L_4s}{C_4L_4s^2+1}, L_5s + R_5 + \frac{1}{C_5s}, L_Ls + \frac{1}{C_Ls})$

10.51INVALID-ORDER-511 $Z(s) =$	$\left(\infty, \infty, \infty, \frac{L_4s}{C_4L_4s^2+1}, L_5s + R_5 + \frac{1}{C_5s}, \frac{L_Ls}{C_LL_Ls^2+1}\right)$	18
10.512NVALID-ORDER-512 $Z(s) =$	$\left(\infty,  \infty,  \infty,  \frac{L_4s}{C_4L_4s^2+1},  L_5s + R_5 + \frac{1}{C_5s},  L_Ls + R_L + \frac{1}{C_Ls}\right)$	18
10.51 <b>B</b> NVALID-ORDER-513 $Z(s)=$	$\left(\infty,  \infty,  \infty,  \frac{L_{4s}}{C_4L_4s^2+1},  L_5s + R_5 + \frac{1}{C_5s},  \frac{1}{C_Ls + \frac{1}{R_L} + \frac{1}{L_Ls}}\right)  \dots  \dots  \dots  \dots  \dots  \dots  \dots  \dots  \dots  $	18
10.514NVALID-ORDER-514 $Z(s) =$	$(\infty, \infty, \infty, \frac{L_4s}{C_4L_4s^2+1}, L_5s + R_5 + \frac{1}{C_5s}, \frac{L_Ls}{C_LL_Ls^2+1} + R_L)$	19
10.515NVALID-ORDER-515 $Z(s) =$	$\left(\infty, \ \infty, \ \infty, \ \frac{L_4s}{C_4L_4s^2+1}, \ L_5s + R_5 + \frac{1}{C_5s}, \ \frac{R_L\left(L_Ls + \frac{1}{C_Ls}\right)}{L_Ls + R_L + \frac{1}{C_Ls}}\right) \ \dots \ $	19
10.51 <b>6</b> NVALID-ORDER-516 $Z(s) =$	$\left(\infty,  \infty,  \infty,  \frac{L_4s}{C_4L_4s^2+1},  \frac{1}{C_5s+\frac{1}{R_5}+\frac{1}{L_5s}},  R_L\right)$	19
10.51 <b>T</b> NVALID-ORDER-517 $Z(s) =$	$\left(\infty,  \infty,  \infty,  \frac{L_{48}}{C_4 L_{48}^2 + 1},  \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}},  \frac{1}{C_L s}\right)  \dots  \dots  \dots  \dots  \dots  \dots  \dots  \dots  \dots  $	19
10.51&NVALID-ORDER-518 $Z(s) =$	$\left(\infty,  \infty,  \infty,  \frac{L_4s}{C_4L_4s^2+1},  \frac{1}{C_5s+\frac{1}{R_5}+\frac{1}{L_5s}},  \frac{R_L}{C_LR_Ls+1}\right)  \dots  \dots  \dots  \dots  \dots  \dots  \dots  \dots  \dots  $	19
10.51 <b>9</b> NVALID-ORDER-519 $Z(s) =$	$\left(\infty,  \infty,  \infty,  \frac{L_{4s}}{C_4 L_{4s}^2 + 1},  \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}},  R_L + \frac{1}{C_L s}\right)  \dots  \dots  \dots  \dots  \dots  \dots  \dots  \dots  \dots  $	19
10.52 <b>0</b> NVALID-ORDER-520 $Z(s) =$	$\left(\infty,  \infty,  \infty,  \frac{L_{4}s}{C_{4}L_{4}s^{2}+1},  \frac{1}{C_{5}s+\frac{1}{R_{5}}+\frac{1}{L_{5}s}},  L_{L}s+\frac{1}{C_{L}s}\right)  \dots  \dots  \dots  \dots  \dots  \dots  \dots  \dots  \dots  $	19
10.52 <b>I</b> NVALID-ORDER-521 $Z(s) =$	$\left(\infty,  \infty,  \infty,  \frac{L_{4s}}{C_4 L_4 s^2 + 1},  \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}},  \frac{L_L s}{C_L L_L s^2 + 1}\right)  \dots  \dots  \dots  \dots  \dots  \dots  \dots  \dots  \dots  $	19
	$\left(\infty,  \infty,  \infty,  \frac{L_4s}{C_4L_4s^2+1},  \frac{1}{C_5s+\frac{1}{R_5}+\frac{1}{L_5s}},  L_Ls+R_L+\frac{1}{C_Ls}\right)  \dots $	20
10.52 <b>B</b> NVALID-ORDER-523 $Z(s)=$	$\left(\infty,  \infty,  \infty,  \frac{L_4s}{C_4L_4s^2+1},  \frac{1}{C_5s+\frac{1}{R_5}+\frac{1}{L_5s}},  \frac{1}{C_Ls+\frac{1}{R_L}+\frac{1}{L_Ls}}\right)\right) \qquad \qquad$	20
	$\left(\infty,  \infty,  \infty,  \frac{L_4s}{C_4L_4s^2+1},  \frac{1}{C_5s+\frac{1}{R_5}+\frac{1}{L_5s}},  \frac{L_Ls}{C_LL_Ls^2+1} + R_L\right)  \dots $	20
10.52 <b>5</b> NVALID-ORDER-525 $Z(s)=$	$\left(\infty, \ \infty, \ \infty, \ \frac{L_4s}{C_4L_4s^2+1}, \ \frac{1}{C_5s+\frac{1}{R_5}+\frac{1}{L_5s}}, \ \frac{R_L\left(L_Ls+\frac{1}{C_Ls}\right)}{L_Ls+R_L+\frac{1}{C_Ls}}\right) \ \dots \ $	20
10.52 <b>6</b> NVALID-ORDER-526 $Z(s) =$	$\left(\infty,  \infty,  \infty,  \frac{L_4s}{C_4L_4s^2+1},  \frac{L_5s}{C_5L_5s^2+1} + R_5,  R_L\right)$	20
	$\left(\infty, \ \infty, \ \infty, \ \frac{L_4s}{C_4L_4s^2+1}, \ \frac{L_5s}{C_5L_5s^2+1} + R_5, \ \frac{1}{C_Ls}\right)$	20
	$\left(\infty, \ \infty, \ \infty, \ \frac{L_4s}{C_4L_4s^2+1}, \ \frac{L_5s}{C_5L_5s^2+1} + R_5, \ \frac{R_L}{C_LR_Ls+1}\right)$	20
10.529NVALID-ORDER-529 $Z(s) =$	$\left(\infty, \ \infty, \ \infty, \ \frac{L_4s}{C_4L_4s^2+1}, \ \frac{L_5s}{C_5L_5s^2+1} + R_5, \ R_L + \frac{1}{C_Ls}\right)$	20
10.530NVALID-ORDER-530 $Z(s) =$	$\left(\infty, \ \infty, \ \infty, \ \frac{L_4s}{C_4L_4s^2+1}, \ \frac{L_5s}{C_5L_5s^2+1} + R_5, \ L_Ls + \frac{1}{C_Ls}\right)$	21
10.53INVALID-ORDER-531 $Z(s) =$	$\left(\infty,  \infty,  \infty,  \frac{L_4s}{C_4L_4s^2+1},  \frac{L_5s}{C_5L_5s^2+1} + R_5,  \frac{L_Ls}{C_LL_Ls^2+1}\right)$	21
10.532NVALID-ORDER-532 $Z(s) =$	$\left(\infty, \ \infty, \ \infty, \ \frac{L_4s}{C_4L_4s^2+1}, \ \frac{L_5s}{C_5L_5s^2+1} + R_5, \ L_Ls + R_L + \frac{1}{C_Ls}\right)$	21
10.53 <b>&amp;</b> NVALID-ORDER-533 $Z(s)=$	$\left(\infty,  \infty,  \infty,  \frac{L_4s}{C_4L_4s^2+1},  \frac{L_5s}{C_5L_5s^2+1} + R_5,  \frac{1}{C_Ls + \frac{1}{R_L} + \frac{1}{L_Ls}}\right)  \dots  \dots  \dots  \dots  \dots  \dots  \dots  \dots  \dots  $	21
10.534NVALID-ORDER-534 $Z(s)=$	$\begin{pmatrix} \infty, \infty, \infty, \frac{L_4s}{C_4L_4s^2+1}, \frac{L_5s}{C_5L_5s^2+1} + R_5, L_Ls + \frac{1}{C_Ls} \end{pmatrix} $ $\begin{pmatrix} \infty, \infty, \infty, \frac{L_4s}{C_4L_4s^2+1}, \frac{L_5s}{C_5L_5s^2+1} + R_5, \frac{L_Ls}{C_LL_s^2+1} \end{pmatrix} $ $\begin{pmatrix} \infty, \infty, \infty, \frac{L_4s}{C_4L_4s^2+1}, \frac{L_5s}{C_5L_5s^2+1} + R_5, L_Ls + R_L + \frac{1}{C_Ls} \end{pmatrix} $ $\begin{pmatrix} \infty, \infty, \infty, \frac{L_4s}{C_4L_4s^2+1}, \frac{L_5s}{C_5L_5s^2+1} + R_5, \frac{1}{C_Ls + \frac{1}{R_L} + \frac{1}{L_Ls}} \end{pmatrix} $ $\begin{pmatrix} \infty, \infty, \infty, \frac{L_4s}{C_4L_4s^2+1}, \frac{L_5s}{C_5L_5s^2+1} + R_5, \frac{1}{C_Ls + \frac{1}{R_L} + \frac{1}{L_Ls}} \end{pmatrix} $ $\begin{pmatrix} \infty, \infty, \infty, \frac{L_4s}{C_4L_4s^2+1}, \frac{L_5s}{C_5L_5s^2+1} + R_5, \frac{L_Ls}{C_5L_5s^2+1} + R_L \end{pmatrix} $ $\begin{pmatrix} \infty, \infty, \infty, \frac{L_4s}{C_4L_4s^2+1}, \frac{L_5s}{C_5L_5s^2+1} + R_5, \frac{L_Ls}{C_5L_5s^2+1} + R_L \end{pmatrix} $ $\begin{pmatrix} \infty, \infty, \infty, \frac{L_4s}{C_4L_4s^2+1}, \frac{L_5s}{C_5L_5s^2+1} + R_5, \frac{L_Ls}{C_5L_5s^2+1} + R_L \end{pmatrix} $ $\begin{pmatrix} \infty, \infty, \infty, \frac{L_4s}{C_4L_4s^2+1}, \frac{L_5s}{C_5L_5s^2+1} + R_5, \frac{L_Ls}{C_5L_5s^2+1} + R_L \end{pmatrix} $	21
10.53 NVALID-ORDER-535 $Z(s) =$	$\left(\infty,  \infty,  \infty,  \frac{L_4s}{C_4L_4s^2+1},  \frac{L_5s}{C_5L_5s^2+1} + R_5,  \frac{R_L\left(\frac{L_Ls}{C_Ls}\right)}{L_Ls+R_L+\frac{1}{C_L}}\right)$	21
10.53 <b>6</b> NVALID-ORDER-536 $Z(s) =$	$\left(\infty, \infty, \infty, \frac{L_4s}{C_4L_4s^2+1}, \frac{R_5\left(L_5s+\frac{1}{C_5s}\right)}{L_rs+R_r+\frac{1}{L_r}}, R_L\right)$	21
10.53 INVALID-ORDER- $537$ $Z(s) =$	$\left(\infty, \infty, \infty, \frac{L_4s}{GL^2 \cdot 1}, \frac{R_5\left(L_5s + \frac{1}{C_5s}\right)}{L_4 \cdot 1}, \frac{1}{GL^2 \cdot 1}, \frac{1}{GL^2 \cdot 1}\right)$	21
10.53&NVALID-ORDER-538 $Z(s)=$	$\left(\infty,  \infty,  \infty,  \frac{L_{4s}}{C_{4}L_{4}s^{2}+1},  \frac{R_{5}\left(L_{5}s+\frac{1}{C_{5}s}\right)}{L_{5}s+R_{5}+\frac{1}{C_{5}s}},  \frac{R_{L}}{C_{L}R_{L}s+1}\right)  \dots  \dots  \dots  \dots  \dots  \dots  \dots  \dots  \dots  $	22
10.53 <b>9</b> NVALID-ORDER-539 $Z(s) =$	$\left(\infty,  \infty,  \infty,  \frac{L_4s}{C_4L_4s^2+1},  \frac{R_5\left(L_5s+\frac{1}{C_5s}\right)}{L_5s+R_5+\frac{1}{C_5s}},  R_L+\frac{1}{C_Ls}\right)$	22
10.540NVALID-ORDER-540 $Z(s)=$	$\left(\infty,  \infty,  \infty,  \frac{L_{48}}{C_4 L_{48}^2 + 1},  \frac{R_5 \left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}},  L_L s + \frac{1}{C_L s}\right)  \dots  \dots  \dots  \dots  \dots  \dots  \dots  \dots  \dots  $	22

10.54INVALID-ORDER-541 $Z(s) = 1$	$\left(\infty,\ \infty,\ \infty,\ \frac{L_4s}{C_4L_4s^2+1},\ \frac{R_5\left(L_5s+\frac{1}{C_5s}\right)}{L_5s+R_5+\frac{1}{C_5s}},\ \frac{L_Ls}{C_LL_Ls^2+1}\right)  \dots $	122
10.542NVALID-ORDER-542 $Z(s) = 1$	$\left(\infty, \ \infty, \ \infty, \ \frac{L_{4}s}{C_{4}L_{4}s^{2}+1}, \ \frac{R_{5}\left(L_{5}s+\frac{1}{C_{5}s}\right)}{L_{5}s+R_{5}+\frac{1}{C_{5}s}}, \ L_{L}s+R_{L}+\frac{1}{C_{L}s}\right) \right.$	122
10.54 <b>B</b> NVALID-ORDER-543 $Z(s) = 1$	$\left(\infty, \ \infty, \ \infty, \ \frac{L_{4}s}{C_{4}L_{4}s^{2}+1}, \ \frac{R_{5}\left(L_{5}s+\frac{1}{C_{5}s}\right)}{L_{5}s+R_{5}+\frac{1}{C_{5}s}}, \ \frac{1}{C_{L}s+\frac{1}{R_{L}}+\frac{1}{L_{L}s}}\right) \right) \ . \ . \ . \ . \ . \ . \ . \ . \ . \ $	122
	$\left(\begin{array}{cccccccccccccccccccccccccccccccccccc$	122
10.545NVALID-ORDER-545 $Z(s) = 1$	$\left(\infty, \ \infty, \ \infty, \ \frac{L_{4}s}{C_{4}L_{4}s^{2}+1}, \ \frac{R_{5}\left(L_{5}s+\frac{1}{C_{5}s}\right)}{L_{5}s+R_{5}+\frac{1}{C_{5}s}}, \ \frac{R_{L}\left(L_{L}s+\frac{1}{C_{L}s}\right)}{L_{L}s+R_{L}+\frac{1}{C_{L}s}}\right) \ \dots \ $	122
10.54 <b>6</b> NVALID-ORDER- $546$ $Z(s) = 0$	$\left(\infty, \infty, \infty, L_4s + R_4 + \frac{1}{C_4s}, R_5, \frac{1}{C_Ls}\right)$	123
10.54¶NVALID-ORDER-547 $Z(s) = 0$	$\left(\infty, \ \infty, \ \infty, \ L_4s + R_4 + \frac{1}{C_4s}, \ R_5, \ \frac{R_L}{C_LR_Ls + 1}\right)$	123
10.54&NVALID-ORDER-548 $Z(s) = 0$	$(\infty, \infty, \infty, L_4s + R_4 + \frac{1}{C_4s}, R_5, R_L + \frac{1}{C_Ls})$	123
10.549NVALID-ORDER-549 $Z(s) = 0$	$(\infty, \infty, \infty, L_4s + R_4 + \frac{1}{C_4s}, R_5, L_Ls + \frac{1}{C_Ls})$	123
10.550NVALID-ORDER-550 $Z(s) = 0$	$(\infty, \infty, \infty, L_4s + R_4 + \frac{1}{C_4s}, R_5, \frac{L_Ls}{C_LL_Ls^2 + 1})'$	123
10.55 <b>I</b> NVALID-ORDER-551 $Z(s) = ($	$(\infty, \infty, \infty, L_4s + R_4 + \frac{1}{C_4s}, R_5, L_Ls + R_L + \frac{1}{C_Ls})$	123
10.55 <b>2</b> NVALID-ORDER-552 $Z(s) = 1$	$(\infty, \infty, \infty, L_4s + R_4 + \frac{1}{C_4s}, R_5, \frac{1}{C_Ls + \frac{1}{R_L} + \frac{1}{L_Ls}})$	123
10.55 <b>B</b> NVALID-ORDER-553 $Z(s) = 0$	$(\infty, \infty, \infty, L_4s + R_4 + \frac{1}{C_4s}, R_5, \frac{L_Ls}{C_LL_Ls^2 + 1} + R_L)$	123
10.55#NVALID-ORDER-554 $Z(s) = 1$	$\left(\infty, \ \infty, \ \infty, \ L_4s + R_4 + \frac{1}{C_4s}, \ R_5, \ \frac{R_L\left(L_Ls + \frac{1}{C_Ls}\right)}{L_Ls + R_L + \frac{1}{C_Ls}}\right)'$	124
10.55 <b>5</b> NVALID-ORDER-555 $Z(s) = 0$	$(\infty, \infty, \infty, L_4s + R_4 + \frac{1}{C_4s}, \frac{1}{C_5s}, R_L)$	124
10.556NVALID-ORDER-556 $Z(s) = 0$	$\left(\infty, \infty, \infty, L_{4}s + R_{4} + \frac{1}{C_{4}s}, \frac{1}{C_{5}s}, \frac{1}{C_{t}s}\right)$	124
10.55 TNVALID-ORDER- $557$ $Z(s) = ($	$(\infty, \infty, \infty, L_4s + R_4 + \frac{1}{C_{4s}}, \frac{1}{C_{5s}}, \frac{R_L}{C_L R_L s + 1})$	124
	$\left(\infty, \infty, \infty, L_4s + R_4 + \frac{1}{C_4s}, \frac{1}{C_5s}, R_L + \frac{1}{C_Ls}\right)$	124
		124
10.56 <b>0</b> NVALID-ORDER- $560$ $Z(s) = 0$	$\left(\infty,  \infty,  \infty,  L_4s + R_4 + \frac{1}{C_4s},  \frac{1}{C_5s},  \frac{L_Ls}{C_LL_1s^2+1}\right)$	124
10.56INVALID-ORDER- $561$ $Z(s) = ($	$\left(\infty, \infty, \infty, L_4s + R_4 + \frac{1}{C_{1c}}, \frac{1}{C_{7c}}, L_Ls + R_L + \frac{1}{C_{7c}}\right)$	
10.56 <b>2</b> NVALID-ORDER-562 $Z(s) = 1$	$\left(\infty,  \infty,  \infty,  L_4 s + R_4 + \frac{1}{C_4 s},  \frac{1}{C_5 s},  \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right) \right)$	125
10.56\mathbb{B}\mathbb{N}\mathbb{V}\mathbb{A}\mathbb{L}\mathbb{I}\mathbb{D}\mathbb{C}\mathbb{R}\mathbb{D}\mathbb{E}\mathbb{R}\mathbb{C}\mathbb{E}\mathbb{D}\mathbb{E}\mathbb{R}\mathbb{O}\mathbb{E}\mathbb{D}\mathbb{E}\mathbb{R}\mathbb{O}\mathbb{E}\mathbb{D}\mathbb{E}\mathbb{R}\mathbb{O}\mathbb{E}\mathbb{D}\mathbb{E}\mathbb{E}\mathbb{O}\mathbb{E}\mathbb{D}\mathbb{E}\mathbb{E}\mathbb{O}\mathbb{E}\mathbb{D}\mathbb{E}\mathbb{E}\mathbb{O}\mathbb{E}\mathbb{D}\mathbb{E}\mathbb{E}\mathbb{O}\mathbb{E}\mathbb{D}\mathbb{E}\mathbb{E}\mathbb{O}\mathbb{E}\mathbb{D}\mathbb{E}\mathbb{E}\mathbb{O}\mathbb{E}\mathbb{D}\mathbb{E}\mathbb{E}\mathbb{O}\mathbb{E}\mathbb{D}\mathbb{E}\mathbb{E}\mathbb{O}\mathbb{E}\mathbb{D}\mathbb{E}\mathbb{E}\mathbb{O}\mathbb{E}\mathbb{D}\mathbb{E}\mathbb{E}\mathbb{O}\mathbb{E}\mathbb{D}\mathbb{E}\mathbb{E}\mathbb{O}\mathbb{E}\mathbb{D}\mathbb{E}\mathbb{E}\mathbb{O}\mathbb{E}\mathbb{D}\mathbb{E}\mathbb{E}\mathbb{O}\mathbb{E}\mathbb{D}\mathbb{E}\mathbb{E}\mathbb{O}\mathbb{E}\mathbb{D}\mathbb{E}\mathbb{E}\mathbb{O}\mathbb{E}\mathbb{D}\mathbb{E}\mathbb{E}\mathbb{O}\mathbb{E}\mathbb{D}\mathbb{E}\mathbb{E}\mathbb{O}\mathbb{E}\mathbb{D}\mathbb{E}\mathbb{D}\mathbb{E}\mathbb{E}\mathbb{D}\mathbb{E}\mathbb{E}\mathbb{D}\mathbb{E}\mathbb{D}\mathbb{E}\mathbb{D}\mathbb{D}\mathbb{E}\mathbb{D}\mathbb{E}\mathbb{D}\mathbb{E}\mathbb{D}\mathbb{E}\mathbb{D}\mathbb{E}\mathbb{D}\mathbb{E}\mathbb{D}\mathbb{D}\mathbb{E}\mathbb{D}\mathbb{D}\mathbb{D}\mathbb{E}\mathbb{D}\mathbb{D}\mathbb{D}\mathbb{D}\mathbb{D}\mathbb{D}\mathbb{D}\mathbb{E}\mathbb{D}	$\left(\infty,  \infty,  \infty,  L_{4}s + R_{4} + \frac{1}{C_{4}s},  \frac{1}{C_{5}s},  \frac{1}{C_{L}s + \frac{1}{R_{L}} + \frac{1}{L_{L}s}}\right) \right) $ $\left(\infty,  \infty,  \infty,  L_{4}s + R_{4} + \frac{1}{C_{4}s},  \frac{1}{C_{5}s},  \frac{L_{L}s}{C_{L}L_{L}s^{2} + 1} + R_{L}\right) $ $\left(\infty,  \infty,  \infty,  L_{4}s + R_{4} + \frac{1}{C_{4}s},  \frac{1}{C_{5}s},  \frac{R_{L}\left(L_{L}s + \frac{1}{C_{L}s}\right)}{L_{L}s + R_{L} + \frac{1}{C_{L}s}}\right) $ $\left(\infty,  \infty,  \infty,  L_{4}s + R_{4} + \frac{1}{C_{4}s},  \frac{1}{C_{5}s},  \frac{R_{L}\left(L_{L}s + \frac{1}{C_{L}s}\right)}{L_{L}s + R_{L} + \frac{1}{C_{L}s}}\right) $	125
10.564NVALID-ORDER-564 $Z(s) = 1$	$\left(\infty, \ \infty, \ \infty, \ L_4s + R_4 + \frac{1}{C_4s}, \ \frac{1}{C_5s}, \ \frac{R_L\left(L_Ls + \frac{1}{C_Ls}\right)}{L_Ls + R_L + \frac{1}{C_Ls}}\right)$	125
10.56 <b>Б</b> NVALID-ORDER-565 $Z(s)=($	$ \left( \infty,  \infty,  \infty,  L_{4}s + R_{4} + \frac{1}{C_{4}s},  \frac{R_{5}}{C_{5}R_{5}s+1},  R_{L} \right) $ $ \left( \infty,  \infty,  \infty,  L_{4}s + R_{4} + \frac{1}{C_{4}s},  \frac{R_{5}}{C_{5}R_{5}s+1},  \frac{1}{C_{L}s} \right) $ $ \ldots \qquad $	125
10.566NVALID-ORDER- $566$ $Z(s) = ($	$(\infty, \infty, \infty, L_4s + R_4 + \frac{1}{C_4s}, \frac{R_5}{C_5R_5s+1}, \frac{1}{C_Ls})$	125
10.56TNVALID-ORDER- $567 Z(s) = 0$	$\left(\infty,  \infty,  \infty,  L_4s + R_4 + \frac{1}{C_{4s}},  \frac{R_5}{C_5R_5s+1},  \frac{R_L}{C_LR_Ls+1}\right)$	125
10.56&NVALID-ORDER-568 $Z(s) = 0$	$(\infty, \infty, \infty, L_4s + R_4 + \frac{1}{C_4s}, \frac{R_5}{C_5R_5s+1}, R_L + \frac{1}{C_Ls})$	125
10.569NVALID-ORDER-569 $Z(s) = 0$	$\left(\infty,  \infty,  \infty,  L_4 s + R_4 + \frac{1}{C_4 s},  \frac{R_5}{C_5 R_5 s + 1},  L_L s + \frac{1}{C_L s}\right)$	125
10.570NVALID-ORDER- $570 Z(s) = 0$	$(\infty, \infty, \infty, L_A s + R_A + \frac{1}{G}, \frac{R_5}{GR_2}, \frac{L_L s}{GL_2 s})$	126
10.57INVALID-ORDER-571 $Z(s) = 0$	$(\infty, \infty, \infty, L_4s + R_4 + \frac{1}{C_4s}, \frac{R_5}{C_5R_5s+1}, L_Ls + R_L + \frac{1}{C_Ls})$	126
10.572NVALID-ORDER-572 $Z(s) = 1$	$\left(\infty,  \infty,  \infty,  L_4 s + R_4 + \frac{1}{C_4 s},  \frac{R_5}{C_5 R_5 s + 1},  \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)' \dots \dots$	126
10.57 <b>B</b> NVALID-ORDER-573 $Z(s) = 0$	$\left(\infty, \ \infty, \ \infty, \ L_4s + R_4 + \frac{1}{C_4s}, \ \frac{R_5}{C_5R_5s+1}, \ \frac{L_Ls}{C_LL_Ls^2+1} + R_L\right)$	126

10.57#NVALID-ORDER-574 $Z(s) =$	$= \left( \infty, \ \infty, \ \infty, \ L_4 s + R_4 + \frac{1}{C_4 s}, \ \frac{R_5}{C_5 R_5 s + 1}, \ \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right) \ \dots \ $	126
10.575NVALID-ORDER-575 $Z(s) =$	$= \left( \infty, \ \infty, \ \infty, \ L_4s + R_4 + \frac{1}{C_4s}, \ R_5 + \frac{1}{C_5s}, \ R_L \right) \qquad \dots \qquad \dots \qquad \dots \qquad \dots$	126
10.576NVALID-ORDER-576 $Z(s) =$	$= \left( \infty, \ \infty, \ \infty, \ L_4s + R_4 + \frac{1}{C_4s}, \ R_5 + \frac{1}{C_5s}, \ \frac{1}{C_Ls} \right)  \dots  \dots  \dots  \dots  \dots  \dots  \dots  \dots  \dots  $	126
10.57 <b>T</b> NVALID-ORDER-577 $Z(s) =$	$=\left(\infty,\ \infty,\ \infty,\ L_{4}s+R_{4}+rac{1}{C_{4}s},\ R_{5}+rac{1}{C_{5}s},\ rac{R_{L}}{C_{L}R_{L}s+1} ight)$	126
10.57&NVALID-ORDER-578 $Z(s) =$	$=\left(\infty,\;\infty,\;\infty,\;L_{4}s+R_{4}+rac{1}{C_{4}s},\;R_{5}+rac{1}{C_{5}s},\;R_{L}+rac{1}{C_{L}s} ight)\;\ldots\;\ldots\;\ldots\;\ldots\;\ldots\;\ldots\;\ldots\;\ldots\;\ldots\;\ldots\;\ldots\;\ldots\;\ldots\;\ldots\;\ldots\;\ldots\;\ldots\;\ldots\;\ldots$	127
10.57 <b>9</b> NVALID-ORDER-579 $Z(s) =$	$=\left(\infty, \ \infty, \ \infty, \ L_{4}s+R_{4}+rac{1}{C_{4}s}, \ R_{5}+rac{1}{C_{5}s}, \ L_{L}s+rac{1}{C_{L}s} ight)$	127
10.58 <b>0</b> NVALID-ORDER-580 $Z(s) =$	$=\left(\infty,\ \infty,\ \infty,\ L_{4}s+R_{4}+rac{1}{C_{4}s},\ R_{5}+rac{1}{C_{5}s},\ rac{L_{L}s}{C_{L}L_{L}s^{2}+1} ight)^{2}$	127
10.58INVALID-ORDER-581 $Z(s) =$	$= \left( \infty, \ \infty, \ \infty, \ L_4 s + R_4 + \frac{1}{C_4 s}, \ R_5 + \frac{1}{C_5 s}, \ L_L s + R_L + \frac{1}{C_L s} \right)  \dots $	127
10.582NVALID-ORDER-582 $Z(s) =$	$= \left( \infty, \ \infty, \ \infty, \ L_4 s + R_4 + \frac{1}{C_4 s}, \ R_5 + \frac{1}{C_5 s}, \ \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)  \dots $	127
	$= \left( \infty, \ \infty, \ \infty, \ L_4 s + R_4 + \frac{1}{C_4 s}, \ R_5 + \frac{1}{C_5 s}, \ \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right) \qquad \dots $	127
10.58#NVALID-ORDER-584 $Z(s)=$	$= \left( \infty, \ \infty, \ \infty, \ L_4 s + R_4 + \frac{1}{C_4 s}, \ R_5 + \frac{1}{C_5 s}, \ \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)  \dots $	127
10.58 NVALID-ORDER-585 $Z(s) =$	$=\left(\infty,\ \infty,\ \infty,\ L_4s+R_4+rac{1}{C_4s},\ L_5s+rac{1}{C_5s},\ R_L ight)$	127
	$=\left(\infty,\ \infty,\ \infty,\ L_{4}s+R_{4}+rac{1}{C_{4}s},\ L_{5}s+rac{1}{C_{5}s},\ rac{1}{C_{L}s} ight)$	128
10.58TNVALID-ORDER- $587$ $Z(s) =$	$=\left(\infty,\ \infty,\ \infty,\ L_{4}s+R_{4}+rac{1}{C_{4}s},\ L_{5}s+rac{1}{C_{5}s},\ rac{R_{L}}{C_{L}R_{L}s+1} ight)$	128
10.58\ndlandrame{8}\ndlandrame{NVALID-ORDER-588} $Z(s) =$	$= \left( \infty, \ \infty, \ \infty, \ L_4 s + R_4 + \frac{1}{C_4 s}, \ L_5 s + \frac{1}{C_5 s}, \ R_L + \frac{1}{C_L s} \right) $	128
10.58 <b>9</b> NVALID-ORDER-589 $Z(s) =$	$=\left(\infty,\ \infty,\ \infty,\ L_{4}s+R_{4}+\frac{1}{C_{4}s},\ L_{5}s+\frac{1}{C_{5}s},\ L_{L}s+\frac{1}{C_{L}s}\right)$	128
10.59 ONVALID-ORDER- $590 Z(s) =$	$= \left( \infty, \ \infty, \ \infty, \ L_4s + R_4 + \frac{1}{C_4s}, \ L_5s + \frac{1}{C_5s}, \ \frac{L_Ls}{C_LL_Ls^2 + 1} \right)  \dots $	128
10.59 <b>I</b> NVALID-ORDER-591 $Z(s) =$	$= \left( \infty, \ \infty, \ \infty, \ L_4 s + R_4 + \frac{1}{C_4 s}, \ L_5 s + \frac{1}{C_5 s}, \ L_L s + R_L + \frac{1}{C_L s} \right)  \dots $	128
10.59 <b>2</b> NVALID-ORDER-592 $Z(s) =$	$= \left( \infty, \ \infty, \ \infty, \ L_4 s + R_4 + \frac{1}{C_4 s}, \ L_5 s + \frac{1}{C_5 s}, \ \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right) \ \dots $	128
	$= \left( \infty, \ \infty, \ \infty, \ L_4 s + R_4 + \frac{1}{C_4 s}, \ L_5 s + \frac{1}{C_5 s}, \ \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)  \dots $	128
10.59#NVALID-ORDER-594 $Z(s)=$	$= \left( \infty, \ \infty, \ \infty, \ L_4 s + R_4 + \frac{1}{C_4 s}, \ L_5 s + \frac{1}{C_5 s}, \ \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right) \ \dots \ $	129
10.59 NVALID-ORDER-595 $Z(s) =$	$=\left(\infty,\;\infty,\;\infty,\;L_{4}s+R_{4}+rac{1}{C_{4}s},\;rac{L_{5}s}{C_{5}L_{5}s^{2}+1},\;R_{L} ight)\;\ldots\;\ldots\;\ldots\;\ldots\;\ldots\;\ldots\;\ldots\;\ldots\;\ldots\;\ldots\;\ldots\;\ldots\;\ldots\;\ldots\;\ldots\;\ldots\;\ldots\;\ldots\;\ldots$	129
10.596NVALID-ORDER-596 $Z(s) =$	$= \left( \infty, \ \infty, \ \infty, \ L_{4}s + R_{4} + \frac{1}{C_{4}s}, \ \frac{L_{5}s}{C_{5}L_{5}s^{2}+1}, \ \frac{1}{C_{L}s} \right) $ $= \left( \infty, \ \infty, \ \infty, \ L_{4}s + R_{4} + \frac{1}{C_{4}s}, \ \frac{L_{5}s}{C_{5}L_{5}s^{2}+1}, \ \frac{R_{L}}{C_{L}R_{L}s+1} \right) $ $= \left( \infty, \ \infty, \ \infty, \ L_{4}s + R_{4} + \frac{1}{C_{4}s}, \ \frac{L_{5}s}{C_{5}L_{5}s^{2}+1}, \ R_{L} + \frac{1}{C_{L}s} \right) $ $= \left( \infty, \ \infty, \ \infty, \ L_{4}s + R_{4} + \frac{1}{C_{4}s}, \ \frac{L_{5}s}{C_{5}L_{5}s^{2}+1}, \ R_{L} + \frac{1}{C_{L}s} \right) $	129
10.59 <b>T</b> NVALID-ORDER-597 $Z(s) =$	$= \left( \infty, \ \infty, \ \infty, \ L_4 s + R_4 + \frac{1}{C_4 s}, \ \frac{L_5 s}{C_5 L_5 s^2 + 1}, \ \frac{R_L}{C_L R_L s + 1} \right) $	129
10.59&NVALID-ORDER-598 $Z(s) =$	$= \left( \infty, \ \infty, \ \infty, \ L_4 s + R_4 + \frac{1}{C_4 s}, \ \frac{L_5 s}{C_5 L_5 s^2 + 1}, \ R_L + \frac{1}{C_L s} \right) \ \dots $	129
10.599NVALID-ORDER- $599 Z(s) =$	$=\left(\infty,\ \infty,\ \infty,\ L_{4}s+R_{4}+rac{1}{C_{4}s},\ rac{L_{5}s}{C_{5}L_{5}s^{2}+1},\ L_{L}s+rac{1}{C_{L}s} ight)$	129
10.60 <b>0</b> NVALID-ORDER- $600 Z(s) =$	$= \left( \infty, \ \infty, \ \infty, \ L_4s + R_4 + \frac{1}{C_4s}, \ \frac{L_5s}{C_5L_5s^2 + 1}, \ \frac{L_Ls}{C_LL_Ls^2 + 1} \right)' \ \dots \ $	129
10.60 <b>I</b> NVALID-ORDER-601 $Z(s) =$	$= \left( \infty, \ \infty, \ \infty, \ L_4s + R_4 + \frac{1}{C_4s}, \ \frac{L_5s}{C_5L_5s^2 + 1}, \ L_Ls + R_L + \frac{1}{C_Ls} \right)  \dots $	129
10.60 <b>2</b> NVALID-ORDER-602 $Z(s) =$	$= \left( \infty, \ \infty, \ \infty, \ L_4 s + R_4 + \frac{1}{C_4 s}, \ \frac{L_5 s}{C_5 L_5 s^2 + 1}, \ \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)^{\prime} $ $= \left( \infty, \ \infty, \ \infty, \ L_4 s + R_4 + \frac{1}{C_4 s}, \ \frac{L_5 s}{C_5 L_5 s^2 + 1}, \ \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right) $	130
10.60 <b>B</b> NVALID-ORDER-603 $Z(s) =$	$= \left( \infty, \ \infty, \ \infty, \ L_4s + R_4 + \frac{1}{C_4s}, \ \frac{L_5s}{C_5L_5s^2 + 1}, \ \frac{L_Ls}{C_LL_Ls^2 + 1} + R_L \right) \ \dots $	130
10.60#NVALID-ORDER-604 $Z(s)=$	$= \left( \infty, \ \infty, \ \infty, \ L_4 s + R_4 + \frac{1}{C_4 s}, \ \frac{L_5 s}{C_5 L_5 s^2 + 1}, \ \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)  \dots $	130
10.60 NVALID-ORDER-605 $Z(s) =$	$= \left( \infty, \ \infty, \ \infty, \ L_4 s + R_4 + \frac{1}{C_4 s}, \ L_5 s + R_5 + \frac{1}{C_5 s}, \ R_L \right)^{C_L s'}$	130
10.60 <b>6</b> NVALID-ORDER-606 $Z(s) =$	$=\left(\infty,\ \infty,\ \infty,\ L_4s+R_4+rac{1}{C_{1s}},\ L_5s+R_5+rac{1}{C_{1s}},\ rac{1}{C_{1s}} ight)$	130
10.60 <b>T</b> NVALID-ORDER-607 $Z(s) =$	$= \left( \infty, \ \infty, \ \infty, \ L_4s + R_4 + \frac{1}{C_4s}, \ L_5s + R_5 + \frac{1}{C_5s}, \ \frac{R_L}{C_LR_Ls + 1} \right) \ \dots $	130

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10.60 NVALID-ORDER-608 Z(s) = \left(\infty, \infty, \infty, L_4 s + R_4 + \frac{1}{C_4 s}, L_5 s + R_5 + \frac{1}{C_5 s}, R_L + \frac{1}{C_5 s}\right) \dots
10.609NVALID-ORDER-609 Z(s) = (\infty, \infty, \infty, L_4 s + R_4 + \frac{1}{C_A s}, L_5 s + R_5 + \frac{1}{C_5 s}, L_L s + \frac{1}{C_L s}) . . . . . . . .
10.61 INVALID-ORDER-610 Z(s) = \left(\infty, \infty, \infty, L_4 s + R_4 + \frac{1}{C_4 s}, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1}\right) . . . . . . . .
10.61INVALID-ORDER-611 Z(s) = \left(\infty, \infty, \infty, L_4 s + R_4 + \frac{1}{C_4 s}, L_5 s + R_5 + \frac{1}{C_5 s}, L_L s + R_L + \frac{1}{C_4 s}\right) . . . .
10.612NVALID-ORDER-612 Z(s) = \left(\infty, \infty, \infty, L_4 s + R_4 + \frac{1}{C_4 s}, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right) \dots \dots
10.61 INVALID-ORDER-614 Z(s) = \left(\infty, \infty, \infty, L_4 s + R_4 + \frac{1}{C_4 s}, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{R_L \left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_5 s}}\right)^{-1}
10.61 INVALID-ORDER-615 Z(s) = \left(\infty, \infty, \infty, L_4 s + R_4 + \frac{1}{C_4 s}, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, R_L\right) . . . . . . . . . .
10.616NVALID-ORDER-616 Z(s) = \left(\infty, \infty, \infty, L_4 s + R_4 + \frac{1}{C_4 s}, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{1}{C_L s}\right) \dots \dots
10.61TNVALID-ORDER-617 Z(s) = \left(\infty, \infty, \infty, L_4 s + R_4 + \frac{1}{C_4 s}, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{R_L}{C_L R_L s + 1}\right) \dots
10.61\( \text{NVALID-ORDER-618} \( Z(s) = \left( \infty, \infty, \infty, \infty, \infty, \left( L_4 s + R_4 + \frac{1}{C_4 s}, \infty, \frac{1}{C_5 s + \frac{1}{R_s} + \frac{1}{L_5 s}}, \infty R_L + \frac{1}{C_L s} \right) \end{array}
10.619NVALID-ORDER-619 Z(s) = \left(\infty, \infty, \infty, L_4 s + R_4 + \frac{1}{C_4 s}, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, L_L s + \frac{1}{C_L s}\right)
10.62 \text{INVALID-ORDER-621 } Z(s) = \left( \infty, \ \infty, \ \infty, \ L_4 s + R_4 + \frac{1}{C_4 s}, \ \frac{1}{C_5 s + \frac{1}{R_\kappa} + \frac{1}{L_\pi s}}, \ L_L s + R_L + \frac{1}{C_L s} \right) \ \dots 
10.62\( \text{NVALID-ORDER-623} \( Z(s) = \left( \infty, \infty, \infty, \infty, \left( \left( L_4 s + R_4 + \frac{1}{C_4 s}, \\ \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{R_5}}, \\ \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right) \end{array}
10.624NVALID-ORDER-624 Z(s) = \left(\infty, \infty, \infty, L_4 s + R_4 + \frac{1}{C_4 s}, \frac{1}{C_5 s + \frac{1}{B_c} + \frac{1}{L_2 s}}, \frac{R_L \left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_2 s}}\right)
10.62 INVALID-ORDER-625 Z(s) = \left(\infty, \infty, \infty, L_4 s + R_4 + \frac{1}{C_4 s}, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, R_L\right) . . . . . . . . . . . .
10.626NVALID-ORDER-626 Z(s) = \left(\infty, \infty, \infty, L_4 s + R_4 + \frac{1}{C_4 s}, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{1}{C_{L_5} s}\right).
10.62 INVALID-ORDER-627 Z(s) = \left(\infty, \infty, \infty, L_4 s + R_4 + \frac{1}{C_4 s}, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{R_L}{C_L R_L s + 1}\right)...
10.62\( \text{NVALID-ORDER-628} \( Z(s) = \left( \infty, \infty, \infty, \infty, \lambda_{4} s + R_4 + \frac{1}{C_{4}s}, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \ R_L + \frac{1}{C_{Ls}} \)
10.629NVALID-ORDER-629 Z(s) = \left(\infty, \infty, \infty, L_4 s + R_4 + \frac{1}{C_4 s}, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, L_L s + \frac{1}{C_L s}\right)
10.63QNVALID-ORDER-630 Z(s) = \left(\infty, \infty, \infty, L_4 s + R_4 + \frac{1}{C_4 s}, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{L_L s}{C_L L_L s^2 + 1}\right) \dots
10.63INVALID-ORDER-631 Z(s) = \left(\infty, \infty, \infty, L_4 s + R_4 + \frac{1}{C_4 s}, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, L_L s + R_L + \frac{1}{C_L s}\right) \dots
10.632NVALID-ORDER-632 Z(s) = \left(\infty, \infty, \infty, L_4 s + R_4 + \frac{1}{C_4 s}, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{1}{C_L s + \frac{1}{R_T} + \frac{1}{L_T s}}\right)
10.63\( \text{NVALID-ORDER-633} \( Z(s) = \left( \infty, \infty, \infty, \infty, \left( \left( L_4 s + R_4 + \frac{1}{C_4 s}, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{L_L s}{C_1 L_1 s^2 + 1} + R_L \right) \)
10.634NVALID-ORDER-634 Z(s) = \left(\infty, \infty, \infty, L_4 s + R_4 + \frac{1}{C_4 s}, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{R_L \left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)
10.63 INVALID-ORDER-635 Z(s) = \left(\infty, \infty, \infty, L_4 s + R_4 + \frac{1}{C_4 s}, \frac{R_5 \left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, R_L\right).
10.636NVALID-ORDER-636 Z(s) = \left(\infty, \infty, \infty, L_4 s + R_4 + \frac{1}{C_4 s}, \frac{R_5 \left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{1}{C_L s}\right).
10.63TNVALID-ORDER-637 Z(s) = \left(\infty, \infty, \infty, L_4 s + R_4 + \frac{1}{C_4 s}, \frac{R_5 \left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{R_L}{C_L R_L s + 1}\right) \dots
10.63\( \text{NVALID-ORDER-638} \( Z(s) = \left( \infty, \infty, \infty, \infty, \left( \left( L_4 s + R_4 + \frac{1}{C_4 s}, \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \ R_L + \frac{1}{C_{L.s}} \right) \)
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10.63 <b>9</b> NVALID-ORDER-639 $Z(s) =$	$\left(\infty, \ \infty, \ \infty, \ L_4s + R_4 + \frac{1}{C_4s}, \ \frac{R_5\left(L_5s + \frac{1}{C_5s}\right)}{L_5s + R_5 + \frac{1}{C_5s}}, \ L_Ls + \frac{1}{C_Ls}\right) \ \dots \ $
10.64©NVALID-ORDER-640 $Z(s) =$	$\left(\infty, \ \infty, \ \infty, \ L_4s + R_4 + \frac{1}{C_4s}, \ \frac{R_5\left(L_5s + \frac{1}{C_5s}\right)}{L_5s + R_5 + \frac{1}{C_5s}}, \ \frac{L_Ls}{C_LL_Ls^2 + 1}\right) $
	$\left(\infty, \ \infty, \ \infty, \ L_4s + R_4 + \frac{1}{C_4s}, \ \frac{R_5\left(L_5s + \frac{1}{C_5s}\right)}{L_5s + R_5 + \frac{1}{C_5s}}, \ L_Ls + R_L + \frac{1}{C_Ls}\right)  \dots  \dots  \dots  \dots  \dots  \dots  \dots  \dots  \dots  $
10.642NVALID-ORDER-642 $Z(s) =$	$\left(\infty,  \infty,  \infty,  L_4 s + R_4 + \frac{1}{C_4 s},  \frac{R_5 \left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}},  \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right) \right) $
10.64 <b>&amp;</b> NVALID-ORDER-643 $Z(s) =$	$\left(\infty, \ \infty, \ \infty, \ L_4s + R_4 + \frac{1}{C_4s}, \ \frac{R_5\left(L_5s + \frac{1}{C_5s}\right)}{L_5s + R_5 + \frac{1}{C_5s}}, \ \frac{L_Ls}{C_LL_Ls^2 + 1} + R_L\right)  \dots $ 135
10.64#NVALID-ORDER-644 $Z(s) =$	$\left(\infty, \ \infty, \ \infty, \ L_4s + R_4 + \frac{1}{C_4s}, \ \frac{R_5\left(L_5s + \frac{1}{C_5s}\right)}{L_5s + R_5 + \frac{1}{C_5s}}, \ \frac{R_L\left(L_Ls + \frac{1}{C_Ls}\right)}{L_Ls + R_L + \frac{1}{C_Ls}}\right) \ \dots \ $
10.64 <b>5</b> NVALID-ORDER-645 $Z(s) =$	$\left(\infty,  \infty,  \infty,  \frac{1}{C_4 s + \frac{1}{R_4} + \frac{1}{L_4 s}},  R_5,  R_L + \frac{1}{C_L s}\right)$
10.64 <b>6</b> NVALID-ORDER-646 $Z(s) =$	$\left(\infty,  \infty,  \infty,  \frac{1}{C_4 s + \frac{1}{R_4} + \frac{1}{L_4 s}},  R_5,  L_L s + \frac{1}{C_L s}\right)$
10.64 NVALID-ORDER-647 $Z(s) =$	$\left(\infty,  \infty,  \infty,  \frac{1}{C_4 s + \frac{1}{R_4} + \frac{1}{L_4 s}},  R_5,  L_L s + R_L + \frac{1}{C_L s}\right)  \dots  \dots  \dots  \dots  \dots  \dots  \dots  \dots  \dots  $
	$\left(\infty,  \infty,  \infty,  \frac{1}{C_4 s + \frac{1}{R_4} + \frac{1}{L_4 s}},  R_5,  \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$
	$\left(\infty,  \infty,  \infty,  \frac{1}{C_4 s + \frac{1}{R_4} + \frac{1}{L_4 s}},  R_5,  \frac{R_L \left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)  \dots  \dots  \dots  \dots  \dots  \dots  \dots  \dots  \dots  $
	$\left(\infty,  \infty,  \infty,  \frac{1}{C_4 s + \frac{1}{R_4} + \frac{1}{L_4 s}},  \frac{1}{C_5 s},  R_L\right)$
	$\left(\infty, \ \infty, \ \infty, \ \frac{1}{C_4 s + \frac{1}{R_4} + \frac{1}{L_4 s}}, \ \frac{1}{C_5 s}, \ \frac{1}{C_L s}\right) \ \dots \ $
	$\left(\infty,  \infty,  \infty,  \frac{1}{C_4 s + \frac{1}{R_4} + \frac{1}{L_4 s}},  \frac{1}{C_5 s},  \frac{R_L}{C_L R_L s + 1}\right)  \dots  \dots  \dots  \dots  \dots  \dots  \dots  \dots  \dots  $
	$\left(\infty, \ \infty, \ \infty, \ \frac{1}{C_4 s + \frac{1}{R_4} + \frac{1}{L_4 s}}, \ \frac{1}{C_5 s}, \ R_L + \frac{1}{C_L s}\right) $
	$\left(\infty, \ \infty, \ \infty, \ \frac{1}{C_4 s + \frac{1}{R_4} + \frac{1}{L_4 s}}, \ \frac{1}{C_5 s}, \ L_L s + \frac{1}{C_L s}\right) \ \dots \ $
	$\left( \infty, \ \infty, \ \infty, \ \frac{1}{C_4 s + \frac{1}{R_4} + \frac{1}{L_4 s}}, \ \frac{1}{C_5 s}, \ \frac{L_L s}{C_L L_L s^2 + 1} \right)  \dots  \dots  \dots  \dots  \dots  \dots  \dots  \dots  \dots  $
10.656NVALID-ORDER- $656$ $Z(s) =$	$\left(\infty, \ \infty, \ \infty, \ \frac{1}{C_4 s + \frac{1}{L_4 s}}, \ \frac{1}{C_5 s}, \ L_L s + R_L + \frac{1}{C_L s}\right)  \dots  \dots  \dots  \dots  \dots  \dots  \dots  \dots  \dots  $
10.65TNVALID-ORDER- $657$ $Z(s) =$	$\left(\infty,  \infty,  \infty,  \frac{1}{C_4 s + \frac{1}{R_4} + \frac{1}{L_4 s}},  \frac{1}{C_5 s},  \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right) \right) $
10.65&NVALID-ORDER-658 $Z(s) =$	$\left(\infty,  \infty,  \infty,  \frac{1}{C_4 s + \frac{1}{R_4} + \frac{1}{L_4 s}},  \frac{1}{C_5 s},  \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)  .  .  .  .  .  .  .  .  .  $
10.65 <b>9</b> NVALID-ORDER-659 $Z(s) =$	$\left(\infty,  \infty,  \infty,  \frac{1}{C_4 s + \frac{1}{R_4} + \frac{1}{L_4 s}},  \frac{1}{C_5 s},  \frac{R_L \left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)  \dots $
10.66 ONVALID-ORDER- $660$ $Z(s) =$	$\left(\infty,  \infty,  \infty,  \frac{1}{C_4 s + \frac{1}{L_4 s}},  \frac{R_5}{C_5 R_5 s + 1},  R_L\right) $ $\left(\infty,  \infty,  \infty,  \frac{1}{C_4 s + \frac{1}{L_4 s}},  \frac{R_5}{C_5 R_5 s + 1},  \frac{1}{C_L s}\right) $ $\left(\infty,  \infty,  \infty,  \frac{1}{C_4 s + \frac{1}{L_4 s}},  \frac{R_5}{C_5 R_5 s + 1},  \frac{1}{C_L s}\right) $ $\left(\infty,  \infty,  \infty,  \frac{1}{C_4 s + \frac{1}{L_4 s}},  \frac{R_5}{C_5 R_5 s + 1},  \frac{1}{C_L s}\right) $ $\left(\infty,  \infty,  \infty,  \frac{1}{C_4 s + \frac{1}{L_4 s}},  \frac{1}{C_5 R_5 s + 1},  \frac{1}{C_L s}\right) $ $\left(\infty,  \infty,  \infty,  \frac{1}{C_4 s + \frac{1}{L_4 s}},  \frac{1}{C_5 R_5 s + 1},  \frac{1}{C_L s}\right) $ $\left(\infty,  \infty,  \infty,  \frac{1}{C_4 s + \frac{1}{L_4 s}},  \frac{1}{C_5 R_5 s + 1},  \frac{1}{C_L s}\right) $
10.66INVALID-ORDER-661 $Z(s) =$	$\left(\infty, \infty, \infty, \frac{1}{C_4 s + \frac{1}{R_4} + \frac{1}{L_4 s}}, \frac{R_5}{C_5 R_5 s + 1}, \frac{1}{C_L s}\right)$
10.662NVALID-ORDER- $662 Z(s) =$	$\left(\infty,  \infty,  \infty,  \frac{1}{C_4 s + \frac{1}{R_4} + \frac{1}{L_4 s}},  \frac{R_5}{C_5 R_5 s + 1},  \frac{R_L}{C_L R_L s + 1}\right)  \dots  \dots  \dots  \dots  \dots  \dots  \dots  \dots  \dots  $
10.66 NVALID-ORDER-663 $Z(s) =$	$\left(\infty,  \infty,  \infty,  \frac{1}{C_4 s + \frac{1}{R_4} + \frac{1}{L_4 s}},  \frac{R_5}{C_5 R_5 s + 1},  R_L + \frac{1}{C_L s}\right) $ $\left(\infty,  \infty,  \infty,  \frac{1}{C_4 s + \frac{1}{R_4} + \frac{1}{L_4 s}},  \frac{R_5}{C_5 R_5 s + 1},  R_L + \frac{1}{C_L s}\right) $ $\left(\infty,  \infty,  \infty,  \frac{1}{C_4 s + \frac{1}{R_4} + \frac{1}{L_4 s}},  \frac{R_5}{C_5 R_5 s + 1},  L_L s + \frac{1}{C_L s}\right) $ $137$
10.00 $\pm$ N VALID-ORDER cor $Z(s) =$	$\left(\infty,  \infty,  \infty,  \frac{1}{C_4 s + \frac{1}{R_4} + \frac{1}{L_4 s}},  \frac{R_5}{C_5 R_5 s + 1},  L_L s + \frac{1}{C_L s}\right)  \dots  \dots  \dots  \dots  \dots  \dots  \dots  \dots  \dots  $
10.000N VALID-UKDEK-005 $Z(s) =$	$\left(\begin{array}{cccccccccccccccccccccccccccccccccccc$

10.66&NVALID-ORDER-666 $Z(s) =$	$\left(\infty, \ \infty, \ \infty, \ \frac{1}{C_4 s + \frac{1}{R_4} + \frac{1}{L_4 s}}\right)$	$\frac{R_5}{C_5R_5s+1},$	$L_L s + R_L + \frac{1}{C_L s}$	)	 	 	 	 	138
10.66¶NVALID-ORDER-667 $Z(s) =$	$\left(\infty, \ \infty, \ \infty, \ \frac{1}{C_4 s + \frac{1}{R_4} + \frac{1}{L_4 s}}\right)$	$\frac{R_5}{C_5R_5s+1},$	$\frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \bigg)  .$		 	 	 	 	138
10.66&NVALID-ORDER-668 $Z(s)=$	$\left(\infty, \ \infty, \ \infty, \ \frac{1}{C_4 s + \frac{1}{R_4} + \frac{1}{L_4 s}}\right)$	$\frac{R_5}{C_5R_5s+1},$	$\frac{L_L s}{C_L L_L s^2 + 1} + R_L \bigg)$		 	 	 	 	138
10.66 <b>9</b> NVALID-ORDER-669 $Z(s) =$	$\left(\infty, \ \infty, \ \infty, \ \frac{1}{C_4 s + \frac{1}{R_4} + \frac{1}{L_4 s}}\right)$	$\frac{R_5}{C_5R_5s+1},$	$\frac{R_L\left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}$		 	 	 	 	138
10.670NVALID-ORDER-670 $Z(s) =$			\		 	 	 	 	138
10.67 <b>I</b> NVALID-ORDER-671 $Z(s) =$	$\left(\infty, \ \infty, \ \infty, \ \frac{1}{C_4 s + \frac{1}{R_4} + \frac{1}{L_4 s}}\right)$	$R_5 + \frac{1}{C_5 s}$	$\left(\frac{1}{C_L s}\right)$		 	 	 	 	138
10.672NVALID-ORDER-672 $Z(s) = \displaystyle$	$\left(\infty, \ \infty, \ \infty, \ \frac{1}{C_4 s + \frac{1}{R_4} + \frac{1}{L_4 s}}\right)$	$R_5 + \frac{1}{C_5 s}$	$\frac{R_L}{C_L R_L s + 1}$		 	 	 	 	138
10.67&NVALID-ORDER-673 $Z(s)=$	$\left(\infty, \ \infty, \ \infty, \ \frac{1}{C_4 s + \frac{1}{R_4} + \frac{1}{L_4 s}}\right)$	$+, R_5 + \frac{1}{C_5 s},$	$R_L + \frac{1}{C_L s}$		 	 	 	 	138
10.67#NVALID-ORDER-674 $Z(s) = $	$\left(\infty, \ \infty, \ \infty, \ \frac{1}{C_4 s + \frac{1}{R_4} + \frac{1}{L_4 s}}\right)$	$+, R_5 + \frac{1}{C_5 s},$	$L_L s + \frac{1}{C_L s}$		 	 	 	 	139
10.675 NVALID-ORDER-675 $Z(s) = \displaystyle$	$\left(\infty, \ \infty, \ \infty, \ \frac{1}{C_4 s + \frac{1}{R_4} + \frac{1}{L_4 s}}\right)$	$R_5 + \frac{1}{C_5 s}$	$\frac{L_L s}{C_L L_L s^2 + 1} $		 	 	 	 	139
10.676NVALID-ORDER-676 $Z(s) = \\$	$\left(\infty, \ \infty, \ \infty, \ \frac{1}{C_4 s + \frac{1}{R_4} + \frac{1}{L_4 s}}\right)$	$+, R_5 + \frac{1}{C_5 s},$	$L_L s + R_L + \frac{1}{C_L s}$		 	 	 	 	139
10.67¶NVALID-ORDER-677 $Z(s) = \\$	$\left(\infty, \ \infty, \ \infty, \ \frac{1}{C_4 s + \frac{1}{R_4} + \frac{1}{L_4 s}}\right)$	$R_5 + \frac{1}{C_5 s}$	$\frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$		 	 	 	 	139
10.67&NVALID-ORDER-678 $Z(s) =$	`		/	)	 	 	 	 	139
10.679NVALID-ORDER-679 $Z(s) = \displaystyle$	$\left(\infty, \ \infty, \ \infty, \ \frac{1}{C_4 s + \frac{1}{R_4} + \frac{1}{L_4 s}}\right)$	$R_5 + \frac{1}{C_5 s}$	$\frac{R_L\left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}$		 	 	 	 	139
10.68 <b>0</b> NVALID-ORDER-680 $Z(s) =$	$\left(\infty, \ \infty, \ \infty, \ \frac{1}{C_4 s + \frac{1}{R_4} + \frac{1}{L_4 s}}\right)$	$L_5s + \frac{1}{C_5s}$	$(R_L)$		 	 	 	 	139
10.68INVALID-ORDER-681 $Z(s) =$	$\left(\infty, \ \infty, \ \infty, \ \frac{1}{C_4 s + \frac{1}{R_4} + \frac{1}{L_4 s}}\right)$	$L_5s + \frac{1}{C_5s}$	$\left(\frac{1}{C_L s}\right)  \cdots  \cdot$		 	 	 	 	139
10.682NVALID-ORDER-682 $Z(s) =$	$\left(\infty, \ \infty, \ \infty, \ \frac{1}{C_4 s + \frac{1}{R_4} + \frac{1}{L_4 s}}\right)$	$+, L_5 s + \frac{1}{C_5 s}$	$\left(\frac{R_L}{C_L R_L s + 1}\right)$		 	 	 	 	140
10.682NVALID-ORDER-683 $Z(s) =$	\		/		 	 	 	 	140
10.68#NVALID-ORDER-684 $Z(s)=$									
10.68 <b>5</b> NVALID-ORDER-685 $Z(s) =$									
10.68©NVALID-ORDER-686 $Z(s) =$	( 4 4								
10.68 TNVALID-ORDER-687 $Z(s) =$	\		L L'	`					140
10.68&NVALID-ORDER-688 $Z(s) =$	\4			/					140
10.68 9 NVALID-ORDER-689 $Z(s) = \displaystyle$	>		`						140
10.69 <b>0</b> NVALID-ORDER-690 $Z(s) =$	(		/						
10.69INVALID-ORDER-691 $Z(s) = % {\textstyle\int\limits_{s=0}^{s}} \left( {{S_{s}}} \right) \left( {S_{s}} $	, 4 4		/						141
10.692NVALID-ORDER-692 $Z(s) = \\$	\		/						141
10.69 <b>&amp;</b> NVALID-ORDER-693 $Z(s) =$	$\left(\infty, \infty, \infty, \frac{1}{C_4 s + \frac{1}{R_4} + \frac{1}{L_4 s}}\right)$	$\frac{L_5 s}{C_5 L_5 s^2 + 1}$ ,	$R_L + \frac{1}{C_L s}$		 	 	 	 	141

10.69#NVALID-ORDER-694 $Z(s)=$	$\left(\infty, \ \infty, \ \infty, \ \frac{1}{C_4 s + \frac{1}{R_4} + \frac{1}{L_4 s}}, \ \frac{L_5 s}{C_5 L_5 s^2 + 1}, \ L_L s + \frac{1}{C_L s}\right) \ \dots \ $
10.69 NVALID-ORDER-695 $Z(s)=$	$\left(\infty,  \infty,  \infty,  \frac{1}{C_4 s + \frac{1}{R_4} + \frac{1}{L_4 s}},  \frac{L_5 s}{C_5 L_5 s^2 + 1},  \frac{L_L s}{C_L L_L s^2 + 1}\right)$
10.696NVALID-ORDER-696 $Z(s) = \displaystyle$	$\left(\infty,  \infty,  \infty,  \frac{1}{C_4 s + \frac{1}{R_4} + \frac{1}{L_4 s}},  \frac{L_5 s}{C_5 L_5 s^2 + 1},  L_L s + R_L + \frac{1}{C_L s}\right)  \dots  \dots  \dots  \dots  \dots  \dots  \dots  \dots  \dots  $
10.69¶NVALID-ORDER-697 $Z(s) = \\$	$\left(\infty, \ \infty, \ \infty, \ \frac{1}{C_4 s + \frac{1}{R_4} + \frac{1}{L_4 s}}, \ \frac{L_5 s}{C_5 L_5 s^2 + 1}, \ \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)\right]  \dots $
10.69&NVALID-ORDER-698 $Z(s) =$	$\left(\infty,  \infty,  \infty,  \frac{1}{C_4 s + \frac{1}{R_4} + \frac{1}{L_4 s}},  \frac{L_5 s}{C_5 L_5 s^2 + 1},  \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)  \dots \qquad 1$
10.69 <b>9</b> NVALID-ORDER-699 $Z(s)=$	$\left(\infty,  \infty,  \infty,  \frac{1}{C_4 s + \frac{1}{R_4} + \frac{1}{L_4 s}},  \frac{L_5 s}{C_5 L_5 s^2 + 1},  \frac{R_L \left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)  \dots  \dots  \dots  \dots  \dots  \dots  \dots  \dots  \dots  $
10.70@NVALID-ORDER-700 $Z(s) =$	$\left(\infty,  \infty,  \infty,  \frac{1}{C_4 s + \frac{1}{R_4} + \frac{1}{L_4 s}},  L_5 s + R_5 + \frac{1}{C_5 s},  R_L\right)$
10.70INVALID-ORDER-701 $Z(s) = % {\textstyle\int\limits_{s=0}^{\infty} {{\left  {{D_{s}} \right }}} ds} = {\textstyle\int\limits_{s=0}^{\infty} {{\left  {{D_{s}} \right }} ds} = {\textstyle\int\limits_{s=0}^{\infty} {{\left  {{D_{s}} \right }}} ds} = {\textstyle\int\limits_{s=0}^{\infty} {{\left  {{D_{s}} \right }} ds} = {\textstyle\int\limits_{s=0}^{\infty} {{\left  {{D_{$	$\left(\infty,  \infty,  \infty,  \frac{1}{C_4 s + \frac{1}{R_4} + \frac{1}{L_4 s}},  L_5 s + R_5 + \frac{1}{C_5 s},  \frac{1}{C_L s}\right)$
10.702NVALID-ORDER-702 $Z(s) =$	$\left(\infty,  \infty,  \infty,  \frac{1}{C_4 s + \frac{1}{R_4} + \frac{1}{L_4 s}},  L_5 s + R_5 + \frac{1}{C_5 s},  \frac{R_L}{C_L R_L s + 1}\right)  \dots $
10.70%NVALID-ORDER-703 $Z(s) =$	$\left(\infty,  \infty,  \infty,  \frac{1}{C_4 s + \frac{1}{R_4} + \frac{1}{L_4 s}},  L_5 s + R_5 + \frac{1}{C_5 s},  R_L + \frac{1}{C_L s}\right)  \dots $
	$\left(\infty,  \infty,  \infty,  \frac{1}{C_4 s + \frac{1}{R_4} + \frac{1}{L_4 s}},  L_5 s + R_5 + \frac{1}{C_5 s},  L_L s + \frac{1}{C_L s}\right)$
10.70 NVALID-ORDER-705 $Z(s) =$	$\left(\infty,  \infty,  \infty,  \frac{1}{C_4 s + \frac{1}{R_4} + \frac{1}{L_4 s}},  L_5 s + R_5 + \frac{1}{C_5 s},  \frac{L_L s}{C_L L_L s^2 + 1}\right)  \dots  \dots  \dots  \dots  \dots  \dots  \dots  \dots  \dots  $
10.706NVALID-ORDER-706 $Z(s) =$	$\left(\infty,  \infty,  \infty,  \frac{1}{C_4 s + \frac{1}{R_4} + \frac{1}{L_4 s}},  L_5 s + R_5 + \frac{1}{C_5 s},  L_L s + R_L + \frac{1}{C_L s}\right)  \dots  \dots  \dots  \dots  \dots  \dots  \dots  \dots  \dots  $
	$\left(\infty,  \infty,  \infty,  \frac{1}{C_4 s + \frac{1}{R_4} + \frac{1}{L_4 s}},  L_5 s + R_5 + \frac{1}{C_5 s},  \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right) \dots \dots$
	$\left(\infty,  \infty,  \infty,  \frac{1}{C_4 s + \frac{1}{R_4} + \frac{1}{L_4 s}},  L_5 s + R_5 + \frac{1}{C_5 s},  \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right) $
	$\left(\infty,  \infty,  \infty,  \frac{1}{C_4 s + \frac{1}{R_4} + \frac{1}{L_4 s}},  L_5 s + R_5 + \frac{1}{C_5 s},  \frac{R_L \left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right) \right)  \dots $
	$\left(\infty,  \infty,  \infty,  \frac{1}{C_4 s + \frac{1}{R_4} + \frac{1}{L_4 s}},  \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}},  R_L\right)$
10.71INVALID-ORDER-711 $Z(s) =$	$\left(\infty,  \infty,  \infty,  \frac{1}{C_4 s + \frac{1}{R_4} + \frac{1}{L_4 s}},  \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}},  \frac{1}{C_L s}\right)  \dots  \dots  \dots  \dots  \dots  \dots  \dots  \dots  \dots  $
10.712NVALID-ORDER-712 $Z(s) =$	$\left(\infty,  \infty,  \infty,  \frac{1}{C_4 s + \frac{1}{R_4} + \frac{1}{L_4 s}},  \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}},  \frac{R_L}{C_L R_L s + 1}\right) \dots \dots$
10.718NVALID-ORDER-713 $Z(s) =$	$\left(\infty,  \infty,  \infty,  \frac{1}{C_4 s + \frac{1}{R_4} + \frac{1}{L_4 s}},  \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}},  R_L + \frac{1}{C_L s}\right)  \dots  \dots  \dots  \dots  \dots  \dots  \dots  \dots  \dots  $
10.71#NVALID-ORDER-714 $Z(s) =$	$\left(\infty,  \infty,  \infty,  \frac{1}{C_4 s + \frac{1}{R_4} + \frac{1}{L_4 s}},  \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}},  L_L s + \frac{1}{C_L s}\right)  \dots $
	$\left(\infty,  \infty,  \infty,  \frac{1}{C_4 s + \frac{1}{R_4} + \frac{1}{L_4 s}},  \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}},  \frac{L_L s}{C_L L_L s^2 + 1}\right)  \dots \qquad 1$
	$\left(\infty,  \infty,  \infty,  \frac{1}{C_4 s + \frac{1}{R_4} + \frac{1}{L_4 s}},  \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}},  L_L s + R_L + \frac{1}{C_L s}\right)  \dots  \dots  \dots  \dots  \dots  \dots  \dots  \dots  \dots  $
	$\left(\infty,  \infty,  \infty,  \frac{1}{C_4 s + \frac{1}{R_4} + \frac{1}{L_4 s}},  \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}},  \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right) \right) $
	$\left(\infty,  \infty,  \infty,  \frac{1}{C_4 s + \frac{1}{R_4} + \frac{1}{L_4 s}},  \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}},  \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)  \dots  \dots  \dots  \dots  \dots  \dots  \dots  \dots  \dots  $
10.719NVALID-ORDER-719 $Z(s) =$	$\left(\infty,  \infty,  \infty,  \frac{1}{C_4 s + \frac{1}{R_4} + \frac{1}{L_4 s}},  \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}},  \frac{R_L \left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)'  \dots  \dots  \dots  \dots  \dots  \dots  \dots  \dots  \dots  $
10.720NVALID-ORDER-720 $Z(s) =$	$\left(\infty,  \infty,  \infty,  \frac{1}{C_4 s + \frac{1}{R_4} + \frac{1}{L_4 s}},  \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5,  R_L\right)  \dots  \dots  \dots  \dots  \dots  \dots  \dots  \dots  \dots  $
10.72INVALID-ORDER-721 $Z(s) =$	$\left(\infty,  \infty,  \infty,  \frac{1}{C_4 s + \frac{1}{R_4} + \frac{1}{L_4 s}},  \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5,  \frac{1}{C_L s}\right)  \dots  \dots  \dots  \dots  \dots  \dots  \dots  \dots  \dots  $

40 F0WHALID ODDED F00 G()	$\begin{pmatrix} 1 & L_{rs} & P & R_{r} \end{pmatrix}$	
10.722NVALID-ORDER- $722 Z(s) =$	$\left(\infty,  \infty,  \infty,  \frac{1}{C_4 s + \frac{1}{R_4} + \frac{1}{L_4 s}},  \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5,  \frac{R_L}{C_L R_L s + 1}\right)$	145
10.72\$NVALID-ORDER-723 $Z(s) =$	$\left(\infty,  \infty,  \infty,  \frac{1}{C_4 s + \frac{1}{R_4} + \frac{1}{L_4 s}},  \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5,  R_L + \frac{1}{C_L s}\right)  \dots $	145
10.72#NVALID-ORDER-724 $Z(s)=$	$\left(\infty,  \infty,  \infty,  \frac{1}{C_4 s + \frac{1}{R_4} + \frac{1}{L_4 s}},  \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5,  L_L s + \frac{1}{C_L s}\right)$	145
10.72\$NVALID-ORDER-725 $Z(s) =$	$\left(\infty,  \infty,  \infty,  \frac{1}{C_4 s + \frac{1}{R_4} + \frac{1}{L_4 s}},  \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5,  \frac{L_L s}{C_L L_L s^2 + 1}\right)  \dots $	145
10.726NVALID-ORDER-726 $Z(s) =$	$\left(\infty, \ \infty, \ \infty, \ \frac{1}{C_4 s + \frac{1}{R_4} + \frac{1}{L_4 s}}, \ \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \ L_L s + R_L + \frac{1}{C_L s}\right)  \dots $	145
10.72¶NVALID-ORDER-727 $Z(s) =$	$\left(\infty,  \infty,  \infty,  \frac{1}{C_4 s + \frac{1}{R_4} + \frac{1}{L_4 s}},  \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5,  \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right) \right)  \dots $	145
10.72&NVALID-ORDER-728 $Z(s) =$	$\left(\infty,  \infty,  \infty,  \frac{1}{C_4 s + \frac{1}{R_4} + \frac{1}{L_4 s}},  \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5,  \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)  \dots $	145
	$\left(\infty, \ \infty, \ \infty, \ \frac{1}{C_4 s + \frac{1}{R_4} + \frac{1}{L_4 s}}, \ \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \ \frac{R_L \left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right) \ \dots $	145
10.73©NVALID-ORDER-730 $Z(s) =$	$\left(\infty, \ \infty, \ \infty, \ \frac{1}{C_4 s + \frac{1}{R_4} + \frac{1}{L_4 s}}, \ \frac{R_5 \left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \ R_L\right) \ \dots $	146
10.73INVALID-ORDER-731 $Z(s) =$	$\left(\infty, \ \infty, \ \infty, \ \frac{1}{C_4 s + \frac{1}{R_4} + \frac{1}{L_4 s}}, \ \frac{R_5 \left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \ \frac{1}{C_L s}\right)  \dots $	146
10.732NVALID-ORDER-732 $Z(s) =$	$\left(\infty, \ \infty, \ \infty, \ \frac{1}{C_4 s + \frac{1}{R_4} + \frac{1}{L_4 s}}, \ \frac{R_5 \left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \ \frac{R_L}{C_L R_L s + 1}\right) \ \dots $	146
10.73 <b>&amp;</b> NVALID-ORDER-733 $Z(s)=$	$\left(\infty, \ \infty, \ \infty, \ \frac{1}{C_4 s + \frac{1}{R_4} + \frac{1}{L_4 s}}, \ \frac{R_5 \left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \ R_L + \frac{1}{C_L s}\right)  \dots $	146
10.734NVALID-ORDER-734 $Z(s)=$	$\left(\infty, \ \infty, \ \infty, \ \frac{1}{C_4 s + \frac{1}{R_4} + \frac{1}{L_4 s}}, \ \frac{R_5 \left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \ L_L s + \frac{1}{C_L s}\right) \ \dots \ $	146
10.73 <b>Б</b> NVALID-ORDER-735 $Z(s)=$	$\begin{pmatrix} & & & & & & & & & & & & & & & & & & &$	146
10.736NVALID-ORDER-736 $Z(s) =$	$\left(\infty, \ \infty, \ \infty, \ \frac{1}{C_4 s + \frac{1}{R_4} + \frac{1}{L_4 s}}, \ \frac{R_5 \left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \ L_L s + R_L + \frac{1}{C_L s}\right)  \dots $	146
10.73 <b>T</b> NVALID-ORDER-737 $Z(s) =$	$\begin{pmatrix} C_{40} + R_4 + L_{4s} & L_{5s} + C_{5s} & C_{L0} + R_L + L_{Ls} \end{pmatrix}$	146
10.73&NVALID-ORDER-738 $Z(s) =$	$\left(\infty, \ \infty, \ \infty, \ \frac{1}{C_4 s + \frac{1}{R_4} + \frac{1}{L_4 s}}, \ \frac{R_5 \left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \ \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)  \dots $	147
10.73 <b>9</b> NVALID-ORDER-739 $Z(s) =$	$\left(\infty,  \infty,  \infty,  \frac{1}{C_4 s + \frac{1}{R_4} + \frac{1}{L_4 s}},  \frac{R_5 \left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}},  \frac{R_L \left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right) \right) \\ \left(\infty,  \infty,  \infty,  \frac{L_4 s}{C_4 L_4 s^2 + 1} + R_4,  R_5,  \frac{1}{C_L s}\right) \\ \left(\infty,  \infty,  \infty,  \frac{L_4 s}{C_4 L_4 s^2 + 1} + R_4,  R_5,  \frac{R_L}{C_L R_L s + 1}\right) \\ \left(\infty,  \infty,  \infty,  \frac{L_4 s}{C_4 L_4 s^2 + 1} + R_4,  R_5,  \frac{R_L}{C_L R_L s + 1}\right) \\ \ldots \right)$	147
10.74 <b>0</b> NVALID-ORDER-740 $Z(s)=$	$\left(\infty, \ \infty, \ \infty, \ \frac{L_4s}{C_4L_4s^2+1} + R_4, \ R_5, \ \frac{1}{C_Ls}\right)$	147
10.74 INVALID-ORDER-741 $Z(s)=$	$(\infty, \infty, \infty, \frac{L_4s}{C_4L_4s^2+1} + R_4, R_5, \frac{R_L}{C_LR_Ls+1})$	147
10.74 <b>2</b> NVALID-ORDER-742 $Z(s) =$	$\left(\infty, \infty, \infty, \frac{L_4s}{C_4L_4s^2+1} + R_4, R_5, R_L + \frac{1}{C_Ls}\right)$	147
10.74 <b>%</b> NVALID-ORDER-743 $Z(s) =$	$\left(\infty,  \infty,  \infty,  \frac{L_4s}{C_4L_4s^2+1} + R_4,  R_5,  L_Ls + \frac{1}{C_Ls}\right)$	147
10.74#NVALID-ORDER-744 $Z(s) =$	$\left(\infty, \infty, \infty, \frac{L_4s}{C_4L_4s^2+1} + R_4, R_5, \frac{L_Ls}{C_LL_1s^2+1}\right)'$	147
10.745NVALID-ORDER-745 $Z(s) =$	$\left(\infty,  \infty,  \infty,  \frac{L_4s}{C_4L_4s^2+1} + R_4,  R_5,  L_Ls + R_L + \frac{1}{C_Ls}\right)  \dots $	147
10.746NVALID-ORDER-746 $Z(s) =$	$\left(\infty,  \infty,  \infty,  \frac{L_4s}{C_4L_4s^2+1} + R_4,  R_5,  \frac{1}{C_7s^{\frac{1}{2}-\frac{1}{2}+\frac{1}{2}}}\right) \dots \dots$	148
10.74 <b>T</b> NVALID-ORDER-747 $Z(s) =$	$\left(\infty,  \infty,  \infty,  \frac{L_{48}}{C_4 L_4 s^2 + 1} + R_4,  R_5,  \frac{L_{L8}}{C_L L_L s^2 + 1} + R_L\right)  \dots $	148
10.74&NVALID-ORDER-748 $Z(s) =$	$\left(\infty,  \infty,  \infty,  \frac{L_4s}{C_4L_4s^2+1} + R_4,  R_5,  \frac{R_L\left(L_Ls + \frac{1}{C_Ls}\right)}{L_Ls + R_L + \frac{1}{C_Ls}}\right)  \dots $	148
10.74 <b>9</b> NVALID-ORDER-749 $Z(s) =$	$\left(\infty, \infty, \infty, \frac{L_4s}{C_4L_4s^2+1} + R_4, \frac{1}{C_5s}, R_L\right)$	148
10.75 <b>0</b> NVALID-ORDER-750 $Z(s) =$	$(\infty, \infty, \infty, \frac{L_{4s}}{C_4L_{4s}^2+1} + R_4, \frac{1}{C_5s}, \frac{1}{C_Ls})$	148
10.75INVALID-ORDER-751 $Z(s) =$	$\left(\infty,  \infty,  \infty,  \frac{C_4 L_4 s^2 + 1}{C_4 L_4 s^2 + 1} + R_4,  \frac{1}{C_5 s},  \frac{1}{C_L s}\right) \qquad \qquad$	148

10.752NVALID-ORDER-752 $Z(s) = 0$	$\left(\infty, \ \infty, \ \infty, \ \frac{L_4s}{C_4L_4s^2+1} + R_4, \ \frac{1}{C_5s}, \ R_L + \frac{1}{C_Ls}\right)$	148
10.75%NVALID-ORDER-753 $Z(s) = 0$	$(\infty, \infty, \infty, \frac{L_4 s}{C_4 L_4 s^2 + 1} + R_4, \frac{1}{C_5 s}, L_L s + \frac{1}{C_L s})$	148
10.754NVALID-ORDER-754 $Z(s) = 0$	$\left(\infty, \ \infty, \ \infty, \ \frac{L_{4}s}{C_{4}L_{4}s^{2}+1} + R_{4}, \ \frac{1}{C_{5}s}, \ \frac{L_{L}s}{C_{L}L_{L}s^{2}+1}\right)^{-}$	149
10.755NVALID-ORDER-755 $Z(s) = 0$	$\left(\infty, \ \infty, \ \infty, \ \frac{L_4s}{C_4L_4s^2+1} + R_4, \ \frac{1}{C_5s}, \ L_Ls + R_L + \frac{1}{C_Ls}\right)$	149
10.756NVALID-ORDER-756 $Z(s) = 1$	$\left(\infty,  \infty,  \infty,  \frac{L_{48}}{C_4 L_{48}^2 + 1} + R_4,  \frac{1}{C_5 s},  \frac{1}{C_L s + \frac{1}{L_f} + \frac{1}{L_f s}}\right)$	149
10.75 NVALID-ORDER-757 $Z(s) = 1$	$\left(\infty,  \infty,  \infty,  \frac{L_4s}{C_4L_4s^2+1} + R_4,  \frac{1}{C_5s},  \frac{L_Ls}{C_LL_Ls^2+1} + R_L\right)$	149
10.75&NVALID-ORDER-758 $Z(s) = 1$	$\left(\infty, \ \infty, \ \infty, \ \frac{L_4s}{C_4L_4s^2+1} + R_4, \ \frac{1}{C_5s}, \ \frac{R_L\left(L_Ls + \frac{1}{C_Ls}\right)}{L_Ls + R_L + \frac{1}{C_Ls}}\right) \ \dots $	149
	$\left(\infty,  \infty,  \infty,  \frac{L_4s}{C_4L_4s^2+1} + R_4,  \frac{R_5}{C_5R_5s+1},  R_L\right)$	149
10.76 <b>0</b> NVALID-ORDER-760 $Z(s) = 0$	$(\infty, \infty, \infty, \frac{L_4s}{C_4L_4s^2+1} + R_4, \frac{R_5}{C_5R_5s+1}, \frac{1}{C_Ls})$	149
10.76INVALID-ORDER-761 $Z(s) = 0$	$(\infty, \infty, \infty, \frac{L_4s}{C_4L_4s^2+1} + R_4, \frac{R_5}{C_5R_5s+1}, \frac{R_L}{C_LR_Ls+1})$	149
10.762NVALID-ORDER-762 $Z(s) = 0$	$(\infty, \infty, \infty, \frac{L_4s}{C_4L_4s^2+1} + R_4, \frac{R_5}{C_5R_5s+1}, R_L + \frac{1}{C_Ls})$	150
10.76%NVALID-ORDER-763 $Z(s) = 0$	$\left(\infty,\ \infty,\ \infty,\ \frac{L_4s}{C_4L_4s^2+1}+R_4,\ \frac{R_5}{C_5R_5s+1},\ L_Ls+\frac{1}{C_Ls}\right)$	150
10.764NVALID-ORDER-764 $Z(s) = 0$	$\left(\infty, \ \infty, \ \infty, \ \frac{L_4s}{C_4L_4s^2+1} + R_4, \ \frac{R_5}{C_5R_5s+1}, \ \frac{L_Ls}{C_LL_Ls^2+1}\right)'$	150
10.76 NVALID-ORDER-765 $Z(s) = 0$	$\left(\infty, \ \infty, \ \infty, \ \frac{L_4s}{C_4L_4s^2+1} + R_4, \ \frac{R_5}{C_5R_5s+1}, \ L_Ls + R_L + \frac{1}{C_Ls}\right)$	150
10.76 NVALID-ORDER-766 $Z(s) = 1$	$\left(\infty,  \infty,  \infty,  \frac{L_4s}{C_4L_4s^2+1} + R_4,  \frac{R_5}{C_5R_5s+1},  \frac{1}{C_Ls + \frac{1}{R_L} + \frac{1}{L_Ls}}\right)  \dots $	150
	$(\infty, \infty, \infty, \frac{L_4s}{C_4L_4s^2+1} + R_4, \frac{R_5}{C_5R_5s+1}, \frac{L_Ls}{C_LL_Ls^2+1} + R_L)$	150
10.76&NVALID-ORDER-768 $Z(s) = 1$	$\left(\infty,  \infty,  \infty,  \frac{L_4s}{C_4L_4s^2+1} + R_4,  \frac{R_5}{C_5R_5s+1},  \frac{R_L\left(L_Ls + \frac{1}{C_Ls}\right)}{L_Ls + R_L + \frac{1}{C_Ls}}\right)  \dots $	150
	$(\infty, \infty, \infty, \frac{L_4s}{C_4L_4s^2+1} + R_4, R_5 + \frac{1}{C_5s}, R_L)$	150
10.770NVALID-ORDER-770 $Z(s) = 0$	$\left(\infty, \ \infty, \ \infty, \ \frac{L_4 s}{C_4 L_4 s^2 + 1} + R_4, \ R_5 + \frac{1}{C_5 s}, \ \frac{1}{C_L s}\right)$	151
10.77 <b>I</b> NVALID-ORDER-771 $Z(s) = 0$	$\left(\infty, \ \infty, \ \infty, \ \frac{L_4 s}{C_4 L_4 s^2 + 1} + R_4, \ R_5 + \frac{1}{C_5 s}, \ \frac{R_L}{C_L R_L s + 1}\right)$	151
10.772NVALID-ORDER-772 $Z(s) = 0$	$\left(\infty, \ \infty, \ \infty, \ \frac{L_4s}{C_4L_4s^2+1} + R_4, \ R_5 + \frac{1}{C_5s}, \ R_L + \frac{1}{C_Ls}\right)$	151
10.77\$NVALID-ORDER-773 $Z(s) = 0$	$\left(\infty, \ \infty, \ \infty, \ \frac{L_4s}{C_4L_4s^2+1} + R_4, \ R_5 + \frac{1}{C_5s}, \ L_Ls + \frac{1}{C_Ls}\right)$	151
10.774NVALID-ORDER-774 $Z(s) = 0$	$\left(\infty, \ \infty, \ \infty, \ \frac{L_4s}{C_4L_4s^2+1} + R_4, \ R_5 + \frac{1}{C_5s}, \ \frac{L_Ls}{C_LL_Ls^2+1}\right)$	151
10.775NVALID-ORDER-775 $Z(s) = 0$	$\left(\infty,  \infty,  \infty,  \frac{L_4 s}{C_4 L_4 s^2 + 1} + R_4,  R_5 + \frac{1}{C_5 s},  \frac{L_L s}{C_L L_L s^2 + 1}\right) \qquad \qquad$	151
10.776NVALID-ORDER-776 $Z(s) = 1$	$(\infty, \infty, \infty, \frac{L_4s}{C_4L_4s^2+1} + R_4, R_5 + \frac{1}{C_5s}, \frac{1}{C_Ls + \frac{1}{R_L} + \frac{1}{L_Ls}})$	151
10.77 <b>T</b> NVALID-ORDER-777 $Z(s) = 0$	$\left(\infty,  \infty,  \infty,  \frac{L_4s}{C_4L_4s^2+1} + R_4,  R_5 + \frac{1}{C_5s},  \frac{L_Ls}{C_LL_Ls^2+1} + R_L\right)$	151
10.77\nablaNVALID-ORDER-778 $Z(s) = 1$	$(\infty, \infty, \infty, \frac{L_{4s}}{C_4L_4s^2+1} + R_4, R_5 + \frac{1}{C_5s}, \frac{R_L(L_Ls + \frac{1}{C_Ls})}{L_Ls + R_L + \frac{1}{C_Ls}})'$	152
10.77 <b>9</b> NVALID-ORDER-779 $Z(s) = 0$	$\left(\infty,  \infty,  \infty,  \frac{L_4s}{C_4L_4s^2+1} + R_4,  L_5s + \frac{1}{C_5s},  R_L\right) \qquad \qquad$	152
10.780NVALID-ORDER-780 $Z(s) = 0$	$\left(\infty, \ \infty, \ \infty, \ \frac{L_4s}{C_4L_4s^2+1} + R_4, \ L_5s + \frac{1}{C_5s}, \ \frac{1}{C_Ls}\right)$	152
10.78INVALID-ORDER-781 $Z(s) = 0$	$\left(\infty, \ \infty, \ \infty, \ \frac{L_4s}{C_4L_4s^2+1} + R_4, \ L_5s + \frac{1}{C_5s}, \ \frac{R_L}{C_LR_Ls+1}\right)$	152
10.78\mathbb{2}\mathbb{N}\mathbb{V}\mathbb{A}\mathbb{L}\mathbb{I}\mathbb{O}\mathbb{R}\mathbb{D}\mathbb{E}\mathbb{R}-782 ~ Z(s) = 0	$\left(\infty, \ \infty, \ \infty, \ \frac{L_4s}{C_4L_4s^2+1} + R_4, \ L_5s + \frac{1}{C_5s}, \ \frac{R_L}{C_LR_Ls+1}\right) $ $\left(\infty, \ \infty, \ \infty, \ \frac{L_4s}{C_4L_4s^2+1} + R_4, \ L_5s + \frac{1}{C_5s}, \ R_L + \frac{1}{C_Ls}\right) $	152
10.78BNVALID-ORDER- $783$ $Z(s) = ($	$\left(\infty, \infty, \infty, \frac{L_4s}{C_1L_2s^2+1} + R_4, L_5s + \frac{1}{C_{10}}, L_Ls + \frac{1}{C_{10}}\right)$	152
10.78#NVALID-ORDER-784 $Z(s) = 0$	$ \left( \infty,  \infty,  \infty,  \frac{L_{4s}}{C_4 L_4 s^2 + 1} + R_4,  L_5 s + \frac{1}{C_5 s},  \frac{L_L s}{C_L L_L s^2 + 1} \right)  \dots  \dots  \dots  \dots  \dots  \dots  \dots  \dots  \dots  $	152
10.78 NVALID-ORDER-785 $Z(s) = 0$	$\left(\infty, \ \infty, \ \infty, \ \frac{L_4s}{C_4L_4s^2+1} + R_4, \ L_5s + \frac{1}{C_5s}, \ L_Ls + R_L + \frac{1}{C_Ls}\right)$	152

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10.786NVALID-ORDER-786 Z(s) = \left(\infty, \infty, \infty, \frac{L_4s}{C_4L_4s^2+1} + R_4, L_5s + \frac{1}{C_5s}, \frac{1}{C_Ls + \frac{1}{R_T} + \frac{1}{L_Ts}}\right) ......
10.78TNVALID-ORDER-787 Z(s) = \left(\infty, \infty, \infty, \frac{L_4 s}{C_4 L_4 s^2 + 1} + R_4, L_5 s + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right) \dots \dots
10.78\( \text{NVALID-ORDER-788} \( Z(s) = \int(\infty, \infty, \infty, \infty, \infty, \infty, \frac{L_4s}{C_4L_4s^2 + 1} + R_4, \ L_5s + \frac{1}{C_5s}, \ \frac{R_L\left(L_Ls + \frac{1}{C_Ls}\right)}{L_Ls + R_L + \frac{1}{C_5s}} \right) \] \qquad \qqquad \qqqq \qqq \qqqq \qqq \qqqq \qqqq
10.79 INVALID-ORDER-790 Z(s) = \left(\infty, \infty, \infty, \frac{L_4s}{C_4L_4s^2+1} + R_4, \frac{L_5s}{C_5L_5s^2+1}, \frac{1}{C_4s}\right) \dots \dots \dots
10.79INVALID-ORDER-791 Z(s) = \left(\infty, \infty, \infty, \frac{L_{4s}}{C_4L_4s^2+1} + R_4, \frac{L_5s}{C_5L_5s^2+1}, \frac{R_L}{C_LR_Ls+1}\right) . . . .
10.792NVALID-ORDER-792 Z(s) = \left(\infty, \infty, \infty, \frac{L_4s}{C_4L_4s^2+1} + R_4, \frac{L_5s}{C_5L_5s^2+1}, R_L + \frac{1}{C_Ls}\right) . . . . . .
10.79BNVALID-ORDER-793 Z(s) = \left(\infty, \infty, \infty, \frac{L_4 s}{C_4 L_5 s^2 + 1} + R_4, \frac{L_5 s}{C_5 L_5 s^2 + 1}, L_L s + \frac{1}{C_L s}\right) \dots
10.79\(\text{INVALID-ORDER-794}\) Z(s) = \left(\infty, \infty, \infty, \frac{L_4 s}{C_4 L_4 s^2 + 1} + R_4, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{L_L s}{C_4 L_4 s^2 + 1}\right) \dots
10.79 INVALID-ORDER-795 Z(s) = \left(\infty, \infty, \infty, \frac{L_4 s}{C_4 L_4 s^2 + 1} + R_4, \frac{L_5 s}{C_5 L_5 s^2 + 1}, L_L s + R_L + \frac{1}{C_L s}\right) \dots \dots \dots
10.79 \text{ @NVALID-ORDER-796 } Z(s) = \left(\infty, \ \infty, \ \infty, \ \frac{L_4 s}{C_4 L_4 s^2 + 1} + R_4, \ \frac{L_5 s}{C_5 L_5 s^2 + 1}, \ \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right) \quad \dots 
10.799NVALID-ORDER-799 Z(s) = \left(\infty, \infty, \infty, \frac{L_4 s}{C_4 L_4 s^2 + 1} + R_4, L_5 s + R_5 + \frac{1}{C_5 s}, R_L\right) . . . . . . . . . . . . . . . .
10.80 INVALID-ORDER-800 Z(s) = \left(\infty, \infty, \infty, \frac{L_4 s}{C_4 L_4 s^2 + 1} + R_4, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{1}{C_5 s}\right) \dots
10.80INVALID-ORDER-801 Z(s) = \left(\infty, \infty, \infty, \frac{L_4s}{C_4L_4s^2+1} + R_4, L_5s + R_5 + \frac{1}{C_5s}, \frac{R_L}{C_LR_Ls+1}\right) . . . .
10.802NVALID-ORDER-802 Z(s) = \left(\infty, \infty, \infty, \frac{L_4s}{C_4L_4s^2+1} + R_4, L_5s + R_5 + \frac{1}{C_5s}, R_L + \frac{1}{C_5s}\right) \dots \dots
10.80BNVALID-ORDER-803 Z(s) = \left(\infty, \infty, \infty, \frac{L_4 s}{C_4 L_4 s^2 + 1} + R_4, L_5 s + R_5 + \frac{1}{C_5 s}, L_L s + \frac{1}{C_L s}\right) . . . . .
10.804NVALID-ORDER-804 Z(s) = \left(\infty, \infty, \infty, \frac{L_4s}{C_4L_4s^2+1} + R_4, L_5s + R_5 + \frac{1}{C_5s}, \frac{L_Ls}{C_4L_4s^2+1}\right) \dots \dots \dots
10.81\(\text{2NVALID-ORDER-812}\(Z(s) = \left( \infty, \infty, \infty, \infty, \frac{L_4s}{C_4L_4s^2+1} + R_4, \frac{1}{C_5s + \frac{1}{R_c} + \frac{1}{L_2s}}, \ R_L + \frac{1}{C_Ls} \right) \quad \tag{5.5}
10.816NVALID-ORDER-816 Z(s) = \left(\infty, \infty, \infty, \frac{L_{4s}}{C_4 L_4 s^2 + 1} + R_4, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)
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10.81 NVALID-ORDER-818 $Z(s) =$	$\left(\infty, \ \infty, \ \infty, \ \frac{L_4s}{C_4L_4s^2+1} + R_4, \ \frac{1}{C_5s + \frac{1}{R_5} + \frac{1}{L_5s}}, \ \frac{R_L\left(L_Ls + \frac{1}{C_Ls}\right)}{L_Ls + R_L + \frac{1}{C_Ls}}\right) \ \dots $	157
10.819NVALID-ORDER-819 $Z(s) =$	$(\infty, \infty, \infty, \frac{L_4s}{C_4L_4s^2+1} + R_4, \frac{L_5s}{C_5L_5s^2+1} + R_5, R_L)$	157
10.820NVALID-ORDER-820 $Z(s) =$	$(\infty, \infty, \infty, \frac{L_4s}{C_4L_4s^2+1} + R_4, \frac{L_5s}{C_5L_5s^2+1} + R_5, \frac{1}{C_Ls})$	157
10.82 <b>I</b> NVALID-ORDER-821 $Z(s) =$	$(\infty, \infty, \infty, \frac{L_4s}{C_4L_4s^2+1} + R_4, \frac{L_5s}{C_5L_5s^2+1} + R_5, \frac{R_L}{C_LR_Ls+1})$	157
	$\left(\infty, \ \infty, \ \infty, \ \frac{L_4s}{C_4L_4s^2+1} + R_4, \ \frac{L_5s}{C_5L_5s^2+1} + R_5, \ R_L + \frac{1}{C_Ls}\right)$	157
$10.82 \hbox{\tt B} \hbox{\scriptsize NVALID-ORDER-823} \ Z(s) =$	$(\infty, \infty, \infty, \frac{L_4s}{C_4L_4s^2+1} + R_4, \frac{L_5s}{C_5L_5s^2+1} + R_5, L_Ls + \frac{1}{C_Ls})$	157
	$\left(\infty, \ \infty, \ \infty, \ \frac{L_4s}{C_4L_4s^2+1} + R_4, \ \frac{L_5s}{C_5L_5s^2+1} + R_5, \ \frac{L_Ls}{C_LL_Ls^2+1}\right)$	157
10.825NVALID-ORDER-825 $Z(s) =$	$(\infty, \infty, \infty, \frac{L_4s}{C_4L_4s^2+1} + R_4, \frac{L_5s}{C_5L_5s^2+1} + R_5, L_Ls + R_L + \frac{1}{C_Ls})$	
10.826NVALID-ORDER-826 $Z(s) =$	$\left(\infty,  \infty,  \infty,  \frac{L_4s}{C_4L_4s^2+1} + R_4,  \frac{L_5s}{C_5L_5s^2+1} + R_5,  \frac{1}{C_Ls + \frac{1}{R_L} + \frac{1}{L_Ls}}\right)  \dots  \dots  \dots  \dots  \dots  \dots  \dots  \dots  \dots  $	158
	$\left(\infty,  \infty,  \infty,  \frac{L_4s}{C_4L_4s^2+1} + R_4,  \frac{L_5s}{C_5L_5s^2+1} + R_5,  \frac{L_Ls}{C_LL_Ls^2+1} + R_L\right)$	158
10.82\NVALID-ORDER-828 $Z(s) =$	$\left(\infty, \ \infty, \ \infty, \ \frac{L_4s}{C_4L_4s^2+1} + R_4, \ \frac{L_5s}{C_5L_5s^2+1} + R_5, \ \frac{R_L\left(L_Ls + \frac{1}{C_Ls}\right)}{L_Ls + R_L + \frac{1}{C_Ls}}\right)\right) \ . \ . \ . \ . \ . \ . \ . \ . \ . \ $	158
	$\left(\infty, \ \infty, \ \infty, \ \frac{L_4s}{C_4L_4s^2+1} + R_4, \ \frac{R_5\left(L_5s + \frac{1}{C_5s}\right)}{L_5s + R_5 + \frac{1}{C_5s}}, \ R_L\right) \ \dots $	158
10.83 <b>0</b> NVALID-ORDER-830 $Z(s) =$	$\left(\infty, \ \infty, \ \infty, \ \frac{L_4s}{C_4L_4s^2+1} + R_4, \ \frac{R_5\left(L_5s + \frac{1}{C_5s}\right)}{L_5s + R_5 + \frac{1}{C_5s}}, \ \frac{1}{C_Ls}\right)  \dots $	158
	$\left(\infty, \ \infty, \ \infty, \ \frac{L_4s}{C_4L_4s^2+1} + R_4, \ \frac{R_5\left(L_5s + \frac{1}{C_5s}\right)}{L_5s + R_5 + \frac{1}{C_5s}}, \ \frac{R_L}{C_LR_Ls + 1}\right)  \dots $	158
	$\left(\infty, \ \infty, \ \infty, \ \frac{L_{4}s}{C_{4}L_{4}s^{2}+1} + R_{4}, \ \frac{R_{5}\left(L_{5}s + \frac{1}{C_{5}s}\right)}{L_{5}s + R_{5} + \frac{1}{C_{5}s}}, \ R_{L} + \frac{1}{C_{L}s}\right) \ \dots $	158
	$\left(\infty, \ \infty, \ \infty, \ \frac{L_4s}{C_4L_4s^2+1} + R_4, \ \frac{R_5\left(L_5s + \frac{1}{C_5s}\right)}{L_5s + R_5 + \frac{1}{C_5s}}, \ L_Ls + \frac{1}{C_Ls}\right)  \dots $	158
	$\left(\infty, \ \infty, \ \infty, \ \frac{L_4s}{C_4L_4s^2+1} + R_4, \ \frac{R_5\left(L_5s + \frac{1}{C_5s}\right)}{L_5s + R_5 + \frac{1}{C_5s}}, \ \frac{L_Ls}{C_LL_Ls^2+1}\right)  \dots $	159
	$\left(\infty, \ \infty, \ \infty, \ \frac{L_4s}{C_4L_4s^2+1} + R_4, \ \frac{R_5\left(L_5s + \frac{1}{C_5s}\right)}{L_5s + R_5 + \frac{1}{C_5s}}, \ L_Ls + R_L + \frac{1}{C_Ls}\right)  \dots $	159
10.836NVALID-ORDER-836 $Z(s) =$	$\left(\infty, \ \infty, \ \infty, \ \frac{L_4s}{C_4L_4s^2+1} + R_4, \ \frac{R_5\left(L_5s + \frac{1}{C_5s}\right)}{L_5s + R_5 + \frac{1}{C_5s}}, \ \frac{1}{C_Ls + \frac{1}{R_L} + \frac{1}{L_Ls}}\right)\right) \ . \ . \ . \ . \ . \ . \ . \ . \ . \ $	159
10.83 <b>T</b> NVALID-ORDER-837 $Z(s) =$	$\left(\infty,  \infty,  \infty,  \frac{L_{4s}}{C_4 L_4 s^2 + 1} + R_4,  \frac{R_5 \left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}},  \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)  \dots $	159
10.83\( \text{NVALID-ORDER-838} \) $Z(s) =$	$\left(\infty, \ \infty, \ \infty, \ \frac{L_{4}s}{C_{4}L_{4}s^{2}+1} + R_{4}, \ \frac{R_{5}\left(L_{5}s + \frac{1}{C_{5}s}\right)}{L_{5}s + R_{5} + \frac{1}{C_{5}s}}, \ \frac{R_{L}\left(L_{L}s + \frac{1}{C_{L}s}\right)}{L_{L}s + R_{L} + \frac{1}{C_{L}s}}\right) \ \dots $	159
10.83 <b>9</b> NVALID-ORDER-839 $Z(s)=$	$\left( \infty, \infty, \infty, \frac{L_{48}}{C_4 L_4 s^2 + 1} + R_4, \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{L_{L8}}{C_L L_L s^2 + 1} + R_L \right) $ $\left( \infty, \infty, \infty, \frac{L_{48}}{C_4 L_4 s^2 + 1} + R_4, \frac{R_5 \left( L_5 s + \frac{1}{C_5 s} \right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right) $ $\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}}, R_5, \frac{1}{C_L s} \right) $ $\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}}, R_5, \frac{R_L}{C_L R_L s + 1} \right) $ $\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}}, R_5, \frac{R_L}{C_L R_L s + 1} \right) $	159
10.84 <b>0</b> NVALID-ORDER-840 $Z(s) =$	$\left(\infty,  \infty,  \infty,  \frac{R_4\left(L_4s + \frac{1}{C_4s}\right)}{L_4s + R_4 + \frac{1}{C_4s}},  R_5,  \frac{R_L}{C_L R_L s + 1}\right)  \dots $	159
10.84INVALID-ORDER-841 $Z(s) =$	$\left(\infty, \infty, \infty, \frac{R_4 \left(\frac{L_4 + l_1 + l_2}{C_4 s}\right)}{L_4 s + R_4 + \frac{1}{2}}, R_5, R_L + \frac{1}{C_L s}\right)$	159
10.842NVALID-ORDER-842 $Z(s) =$	$\left(\infty, \ \infty, \ \infty, \ \frac{R_4\left(L_4s + \frac{1}{C_4s}\right)}{L_4s + R_4 + \frac{1}{C_4s}}, \ R_5, \ L_Ls + \frac{1}{C_Ls}\right) \ \dots $	160
10.84 <b>3</b> NVALID-ORDER-843 $Z(s)=$	$\left(\infty, \ \infty, \ \infty, \ \frac{L_4 s + R_4 + \frac{1}{C_4 s}}{L_4 s + R_4 + \frac{1}{C_4 s}}, \ R_5, \ \frac{L_L s}{C_L L_L s^2 + 1}\right) \ . \ . \ . \ . \ . \ . \ . \ . \ . \ $	160
10.84 #NVALID-ORDER-844 $Z(s)=$	$\left(\infty,  \infty,  \infty,  \frac{R_4 \left(L_4 s + \frac{1}{C_4 s}\right)}{L_4 s + R_4 + \frac{1}{C_4 s}},  R_5,  L_L s + R_L + \frac{1}{C_L s}\right) \\ \left(\infty,  \infty,  \infty,  \frac{R_4 \left(L_4 s + \frac{1}{C_4 s}\right)}{L_4 s + R_4 + \frac{1}{C_4 s}},  R_5,  \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right) \\ \left(\infty,  \infty,  \infty,  \frac{R_4 \left(L_4 s + \frac{1}{C_4 s}\right)}{L_4 s + R_4 + \frac{1}{C_4 s}},  R_5,  \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right) \\ \left(\infty,  \infty,  \infty,  \frac{R_4 \left(L_4 s + \frac{1}{C_4 s}\right)}{L_4 s + R_4 + \frac{1}{C_4 s}},  R_5,  \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right) \\ \right)$	160
10.84 <b>5</b> NVALID-ORDER-845 $Z(s) =$	$\left(\infty, \ \infty, \ \infty, \ \frac{R_4\left(L_4s + \frac{1}{C_4s}\right)}{L_4s + R_4 + \frac{1}{C_4s}}, \ R_5, \ \frac{1}{C_Ls + \frac{1}{R_L} + \frac{1}{L_Ls}}\right) \right] \dots $	160
10.846NVALID-ORDER-846 $Z(s) =$	$\left(\infty, \ \infty, \ \infty, \ \frac{R_4\left(L_4s + \frac{1}{C_4s}\right)}{L_4s + R_4 + \frac{1}{C_4s}}, \ R_5, \ \frac{L_Ls}{C_LL_Ls^2 + 1} + R_L\right)$	160

10.84¶NVALID-ORDER-847 $Z(s) =$			$R_5, R_5, R_L(L_L s + L_L $	$\left(\frac{\frac{1}{C_L s}}{\frac{1}{C_L s}}\right)$		 	 	 	 	 	 . 160
10.84&NVALID-ORDER-848 $Z(s) =$		,	/			 	 	 	 	 	 . 160
10.84 <b>9</b> NVALID-ORDER-849 $Z(s) =$	(	$\frac{R_4 \left( L_4 s + \frac{1}{C_4 s} \right)}{L_4 s + R_4 + \frac{1}{C_4 s}}$	/			 	 	 	 	 	 . 160
10.85©NVALID-ORDER-850 $Z(s) =$	`		$\frac{1}{C_5 s}, \frac{R_L}{C_L R_L s + 1}$	,		 	 	 	 	 	 . 161
10.85 INVALID-ORDER-851 $Z(s) = \displaystyle$	\	, *	$\frac{1}{C_5 s}$ , $R_L + \frac{1}{C_1}$	/		 	 	 	 	 	 . 161
10.852NVALID-ORDER-852 $Z(s) =$		043	$\frac{1}{C_5 s}, \ L_L s + \frac{1}{C_5 s}$	/		 	 	 	 	 	 . 161
10.85\$NVALID-ORDER-853 $Z(s) =$	`	, -,	$\frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2} +$	/		 	 	 	 	 	 . 161
10.85#NVALID-ORDER-854 $Z(s)=$						 	 	 	 	 	 . 161
10.85 <b>\$</b> NVALID-ORDER-855 $Z(s) =$	$\left(\infty, \infty, \infty, \infty\right)$	$\frac{R_4\left(L_4s + \frac{1}{C_4s}\right)}{L_4s + R_4 + \frac{1}{C_4s}}$	$, \frac{1}{C_5 s}, \frac{1}{C_L s + \frac{1}{R_L}}$	$\frac{1}{+\frac{1}{L_L s}}$		 	 	 	 	 	 . 161
10.85 <b>6</b> NVALID-ORDER-856 $Z(s) =$	$\left(\infty, \infty, \infty, \infty\right)$	$\frac{R_4\left(L_4s + \frac{1}{C_4s}\right)}{L_4s + R_4 + \frac{1}{C_4s}}$	$\frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2} +$	$\frac{1}{1} + R_L$		 	 	 	 	 	 . 161
10.85 <b>T</b> NVALID-ORDER-857 $Z(s) =$	\	-	$\frac{1}{C_5 s}$ , $\frac{R_L \left(L_L s + \frac{1}{L_L s + R_L}\right)}{L_L s + R_L}$	L /		 	 	 	 	 	 . 161
10.85&NVALID-ORDER-858 $Z(s) =$			$\frac{R_5}{C_5 R_5 s + 1}, \ R_L$			 	 	 	 	 	 . 162
10.85 <b>9</b> NVALID-ORDER-859 $Z(s) =$	$\left(\infty, \infty, \infty, \infty\right)$	$\frac{R_4\left(L_4s + \frac{1}{C_4s}\right)}{L_4s + R_4 + \frac{1}{C_4s}}$	$\frac{R_5}{C_5 R_5 s + 1}, \frac{1}{C_L s}$	$\bar{s}$ $\cdots$		 	 	 	 	 	 . 162
10.86 <b>0</b> NVALID-ORDER-860 $Z(s) =$	$\left(\infty, \infty, \infty, \infty\right)$	$\frac{R_4\left(L_4s + \frac{1}{C_4s}\right)}{L_4s + R_4 + \frac{1}{C_4s}}$	$\frac{R_5}{C_5R_5s+1}, \ \frac{R_5}{C_LR_5s+1}$	$\frac{R_L}{R_L s+1}$ .		 	 	 	 	 	 . 162
10.86INVALID-ORDER-861 $Z(s) =$	$\left(\infty, \infty, \infty, \infty\right)$	$\frac{R_4\left(L_4s + \frac{1}{C_4s}\right)}{L_4s + R_4 + \frac{1}{C_4s}}$	$\frac{R_5}{C_5 R_5 s + 1}, \ R_L$	$+\frac{1}{C_L s}$		 	 	 	 	 	 . 162
10.862NVALID-ORDER-862 $Z(s) =$	/	D(r+1)	$\frac{R_5}{C_5 R_5 s + 1}, \ L_L s$	\		 	 	 	 	 	 . 162
10.86 <b>B</b> NVALID-ORDER-863 $Z(s) =$	$(\infty, \infty, \infty, \infty, \infty, \infty)$	$\frac{R_4\left(L_4s + \frac{1}{C_4s}\right)}{L_4s + R_4 + \frac{1}{C_4s}}$	$\frac{R_5}{C_5 R_5 s+1}, \ \frac{R_5}{C_L R_5}$	$\frac{L_L s}{L_L s^2 + 1}$ .		 	 	 	 	 	 
$10.86 \text{ LNVALID-ORDER-}864 \ Z(s) =$ $10.86 \text{ LNVALID-ORDER-}865 \ Z(s) =$ $10.86 \text{ LNVALID-ORDER-}866 \ Z(s) =$	$(\infty, \infty, \infty, \infty, -1)$	$\frac{R_4\left(L_4s + \frac{1}{C_4s}\right)}{L_4s + R_4 + \frac{1}{C_4s}}$ $R_4\left(L_4s + \frac{1}{C_4s}\right)$	$, \frac{R_5}{C_5 R_5 s + 1}, L_L s$	$s + R_L + \overline{c}$	$\left(\frac{1}{C_L s}\right) \cdot \cdot$	 	 	 	 	 	 . 162
10.86 INVALID-ORDER-865 $Z(s) =$	$(\infty, \infty, \infty, 1)$	$\frac{R_4(L_4s + C_4s)}{L_4s + R_4 + \frac{1}{C_4s}}$ $R_4(L_4s + \frac{1}{C_4s})$	$, \frac{R_5}{C_5 R_5 s + 1}, \frac{R_5}{C_L s}$	$\frac{1}{s + \frac{1}{R_L} + \frac{1}{L_L s}}$	)	 	 	 	 	 	 . 162
10.86 <b>6</b> NVALID-ORDER-866 $Z(s) =$	$(\infty, \infty, \infty, 1)$	$\frac{L_{4}s + R_{4} + \frac{1}{C_{4}s}}{L_{4}s + R_{4} + \frac{1}{C_{4}s}}$	$, \frac{R_5}{C_5 R_5 s + 1}, \frac{1}{C_L R_5}$	$\frac{L_L s}{L_L s^2 + 1} + R$	$R_L$ )	 	 	 	 	 	 . 163
10.86 <b>T</b> NVALID-ORDER-867 $Z(s) =$	$(\infty, \infty, \infty, 1)$	$\frac{L_{4}s + R_{4} + \frac{1}{C_{4}s}}{L_{4}s + R_{4} + \frac{1}{C_{4}s}}$ $R_{4}\left(L_{4}s + \frac{1}{C_{4}s}\right)$	$, \frac{R_5}{C_5 R_5 s+1}, \frac{R_L}{L_L}$	$s+R_L+\frac{1}{C_Ls}$	)	 	 	 	 	 	 . 163
10.86&NVALID-ORDER-868 $Z(s) =$	$(\infty, \infty, \infty, 1)$	$\frac{L_{4}s + R_{4} + \frac{1}{C_{4}s}}{L_{4}s + R_{4} + \frac{1}{C_{4}s}}$ $R_{4}\left(L_{4}s + \frac{1}{s}\right)$	$, R_5 + \frac{1}{C_5 s}, R_I$	L)		 	 	 	 	 	 . 163
10.86 <b>9</b> NVALID-ORDER-869 $Z(s) =$	$(\infty, \infty, \infty, \infty)$	$\frac{L_{4}s + R_{4} + \frac{1}{C_{4}s}}{L_{4}s + R_{4} + \frac{1}{C_{4}s}}$ $R_{4} \left( L_{4}s + \frac{1}{s} \right)$	$, R_5 + \frac{1}{C_5 s}, \frac{1}{C_L}$	$\left(\frac{1}{\sqrt{s}}\right)$		 	 	 	 	 	 . 163
10.866NVALID-ORDER-866 $Z(s) =$ 10.866NVALID-ORDER-867 $Z(s) =$ 10.866NVALID-ORDER-868 $Z(s) =$ 10.866NVALID-ORDER-869 $Z(s) =$ 10.876NVALID-ORDER-870 $Z(s) =$ 10.876NVALID-ORDER-871 $Z(s) =$ 10.876NVALID-ORDER-872 $Z(s) =$	$(\infty, \infty, \infty, 1)$	$\frac{L_4s + R_4 + \frac{1}{C_4s}}{L_4s + R_4 + \frac{1}{C_4s}}$ $R_4\left(L_4s + \frac{1}{s}\right)$	$, R_5 + \frac{1}{C_5 s}, \overline{C_I}$	$\left(\frac{R_L}{R_L s+1}\right)$		 	 	 	 	 	 . 163
10.87INVALID-ORDER-871 $Z(s) =$	$(\infty, \infty, \infty, 1)$	$\frac{L_4s + R_4 + \frac{1}{C_4s}}{L_4s + R_4 + \frac{1}{C_4s}}$ $R_4 \left( L_4s + \frac{1}{C_4s} \right)$	$, R_5 + \frac{1}{C_5 s}, R_I$	$L + \frac{1}{C_L s}$		 	 	 	 	 	 . 163
10.872NVALID-ORDER-872 $Z(s) =$	$(\infty, \infty, \infty, \infty, \frac{1}{2})$	$\frac{L_4s + R_4 + \frac{1}{C_4s}}{L_4s + R_4 + \frac{1}{C_4s}}$	$, R_5 + \frac{1}{C_5 s}, L_I$	$Ls + \frac{1}{C_L s}$		 	 	 	 	 	 . 163

	$\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}}, \ R_5 + \frac{1}{C_5 s}, \ \frac{L_L s}{C_L L_L s^2 + 1}\right)  \dots $	163
10.87#NVALID-ORDER-874 $Z(s) =$	$\left(\infty, \ \infty, \ \infty, \ \frac{R_4\left(L_4s + \frac{1}{C_4s}\right)}{L_4s + R_4 + \frac{1}{C_4s}}, \ R_5 + \frac{1}{C_5s}, \ L_Ls + R_L + \frac{1}{C_Ls}\right)  \dots $	164
10.87 NVALID-ORDER-875 $Z(s) =$	$\left(\infty,  \infty,  \infty,  \frac{R_4\left(L_4s + \frac{1}{C_4s}\right)}{L_4s + R_4 + \frac{1}{C_4s}},  R_5 + \frac{1}{C_5s},  \frac{1}{C_Ls + \frac{1}{R_L} + \frac{1}{L_Ls}}\right) \right.$	164
	$\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}}, \ R_5 + \frac{1}{C_5 s}, \ \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right) \ \dots $	164
	$\left(\infty, \ \infty, \ \infty, \ \frac{R_4\left(L_4s + \frac{1}{C_4s}\right)}{L_4s + R_4 + \frac{1}{C_4s}}, \ R_5 + \frac{1}{C_5s}, \ \frac{R_L\left(L_Ls + \frac{1}{C_Ls}\right)}{L_Ls + R_L + \frac{1}{C_Ls}}\right) \ \dots \ $	164
	$\left(\infty, \ \infty, \ \infty, \ \frac{R_4\left(L_4s + \frac{1}{C_4s}\right)}{L_4s + R_4 + \frac{1}{C_4s}}, \ L_5s + \frac{1}{C_5s}, \ R_L\right)$	164
	$\left(\infty,  \infty,  \infty,  \frac{R_4\left(L_4s + \frac{1}{C_4s}\right)}{L_4s + R_4 + \frac{1}{C_4s}},  L_5s + \frac{1}{C_5s},  \frac{1}{C_Ls}\right)$	164
	$\left(\infty, \ \infty, \ \infty, \ \frac{R_4\left(L_4s + \frac{1}{C_4s}\right)}{L_4s + R_4 + \frac{1}{C_4s}}, \ L_5s + \frac{1}{C_5s}, \ \frac{R_L}{C_L R_L s + 1}\right)  \dots $	164
	$\left(\infty, \ \infty, \ \infty, \ \frac{R_4\left(L_4s + \frac{1}{C_4s}\right)}{L_4s + R_4 + \frac{1}{C_4s}}, \ L_5s + \frac{1}{C_5s}, \ R_L + \frac{1}{C_Ls}\right)$	164
	$\left(\infty, \ \infty, \ \infty, \ \frac{R_4\left(L_4s + \frac{1}{C_4s}\right)}{L_4s + R_4 + \frac{1}{C_4s}}, \ L_5s + \frac{1}{C_5s}, \ L_Ls + \frac{1}{C_Ls}\right)$	165
	$\left(\infty,  \infty,  \infty,  \frac{R_4\left(L_4s + \frac{1}{C_4s}\right)}{L_4s + R_4 + \frac{1}{C_4s}},  L_5s + \frac{1}{C_5s},  \frac{L_Ls}{C_LL_Ls^2 + 1}\right)  \dots $	165
10.88&NVALID-ORDER-884 $Z(s) =$	$\left(\infty,  \infty,  \infty,  \frac{R_4\left(L_4s + \frac{1}{C_4s}\right)}{L_4s + R_4 + \frac{1}{C_4s}},  L_5s + \frac{1}{C_5s},  L_Ls + R_L + \frac{1}{C_Ls}\right)$	165
	$\left(\infty, \ \infty, \ \infty, \ \frac{R_4\left(L_4s + \frac{1}{C_4s}\right)}{L_4s + R_4 + \frac{1}{C_4s}}, \ L_5s + \frac{1}{C_5s}, \ \frac{1}{C_Ls + \frac{1}{L_Ls}}\right) \right) $	165
	$\left(\infty,  \infty,  \infty,  \frac{R_4\left(L_4s + \frac{1}{C_4s}\right)}{L_4s + R_4 + \frac{1}{C_4s}},  L_5s + \frac{1}{C_5s},  \frac{L_Ls}{C_LL_s^2 + 1} + R_L\right)$	165
	$\left(\infty,  \infty,  \infty,  \frac{R_4\left(L_4s + \frac{1}{C_4s}\right)}{L_4s + R_4 + \frac{1}{C_4s}},  L_5s + \frac{1}{C_5s},  \frac{R_L\left(L_Ls + \frac{1}{C_Ls}\right)}{L_Ls + R_L + \frac{1}{C_Ls}}\right)  \dots $	165
	$\left(\infty,  \infty,  \infty,  \frac{R_4\left(L_4s + \frac{1}{C_4s}\right)}{L_4s + R_4 + \frac{1}{C_4s}},  \frac{L_5s}{C_5L_5s^2 + 1},  R_L\right)  \dots $	165
10.88 <b>9</b> NVALID-ORDER-889 $Z(s) =$	$148 + 14 + \frac{1}{C_{10}} = 000 + 1 = 000$	165
10.890NVALID-ORDER-890 $Z(s) =$	$\left(\infty,  \infty,  \infty,  \frac{R_4 \left(L_4 s + \frac{1}{C_4 s}\right)}{L_4 s + R_4 + \frac{1}{C_4 s}},  \frac{L_5 s}{C_5 L_5 s^2 + 1},  \frac{R_L}{C_L R_L s + 1}\right) \right.$ $\left(\infty,  \infty,  \infty,  \frac{R_4 \left(L_4 s + \frac{1}{C_4 s}\right)}{L_4 s + R_4 + \frac{1}{C_4 s}},  \frac{L_5 s}{C_5 L_5 s^2 + 1},  R_L + \frac{1}{C_L s}\right) \right.$ $\left(\infty,  \infty,  \infty,  \frac{R_4 \left(L_4 s + \frac{1}{C_4 s}\right)}{L_4 s + R_4 + \frac{1}{C_4 s}},  \frac{L_5 s}{C_5 L_5 s^2 + 1},  L_L s + \frac{1}{C_L s}\right) \right.$	166
10.89INVALID-ORDER-891 $Z(s) =$	$\left(\infty,  \infty,  \infty,  \frac{R_4\left(\lambda_4 s + \frac{1}{C_4 s}\right)}{L_4 s + R_4 + \frac{1}{C_4 s}},  \frac{L_5 s}{C_5 L_5 s^2 + 1},  R_L + \frac{1}{C_L s}\right)$	166
10.892NVALID-ORDER-892 $Z(s) =$	$\left(\infty,  \infty,  \infty,  \frac{R_4\left(2a3 + C_{4s}\right)}{L_{4s} + R_4 + \frac{1}{C_{4s}}},  \frac{L_{5s}}{C_5 L_5 s^2 + 1},  L_L s + \frac{1}{C_L s}\right)$	166
10.89\textbf{x}\text{NVALID-ORDER-893} $Z(s) =$	$ \left(\infty,  \infty,  \infty,  \frac{R_4\left(L_4s + \frac{1}{C_4s}\right)}{L_4s + R_4 + \frac{1}{C_4s}},  \frac{L_5s}{C_5L_5s^2 + 1},  \frac{L_Ls}{C_LL_s^2 + 1}\right) \\ \left(\infty,  \infty,  \infty,  \frac{R_4\left(L_4s + \frac{1}{C_4s}\right)}{L_4s + R_4 + \frac{1}{C_4s}},  \frac{L_5s}{C_5L_5s^2 + 1},  L_Ls + R_L + \frac{1}{C_Ls}\right) \\ \dots \\ \dots$	166
10.89anvalid-Order-894 $Z(s) =$	$\left(\infty,  \infty,  \infty,  \frac{C_4s}{L_4s + R_4 + \frac{1}{C_4s}},  \frac{L_5s}{C_5L_5s^2 + 1},  L_Ls + R_L + \frac{1}{C_Ls}\right)$	166
10.89 INVALID-ORDER-895 $Z(s) =$	$\left(\infty,  \infty,  \infty,  \frac{\frac{1}{C_1} \frac{C_4 s}{C_5 L_5 s^2},  \frac{L_5 s}{C_5 L_5 s^2 + 1},  \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)  \dots \right)$	166
10.896NVALID-ORDER-896 $Z(s) =$	$\left( \infty, \infty, \infty, \frac{R_4 \left( L_4 s + \frac{1}{C_4 s} \right)}{L_4 s + R_4 + \frac{1}{C_4 s}}, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right) \\ \left( \infty, \infty, \infty, \frac{R_4 \left( L_4 s + \frac{1}{C_4 s} \right)}{L_4 s + R_4 + \frac{1}{C_4 s}}, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{L_L s}{C_L L s^2 + 1} + R_L \right) \\ \left( \infty, \infty, \infty, \frac{R_4 \left( L_4 s + \frac{1}{C_4 s} \right)}{L_4 s + R_4 + \frac{1}{C_4 s}}, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right) \\ \left( \infty, \infty, \infty, \frac{R_4 \left( L_4 s + \frac{1}{C_4 s} \right)}{L_4 s + R_4 + \frac{1}{C_4 s}}, L_5 s + R_5 + \frac{1}{C_5 s}, R_L \right) \\ \left( \infty, \infty, \infty, \frac{R_4 \left( L_4 s + \frac{1}{C_4 s} \right)}{L_4 s + R_4 + \frac{1}{C_4 s}}, L_5 s + R_5 + \frac{1}{C_5 s}, R_L \right) \\ \right)$	166
10.89 <b>T</b> NVALID-ORDER-897 $Z(s) =$	$\left( \infty, \ \infty, \ \frac{\left( \begin{array}{c} C_4 s_f \\ L_4 s_f + R_4 + \frac{1}{C_4 s_f} \end{array}\right)}{L_4 s_f + \frac{1}{C_4 s_f}}, \ \frac{L_5 s}{C_5 L_5 s_2^2 + 1}, \ \frac{\left( \begin{array}{c} C_1 c_L s_f \\ L_L s_f + L_1 - \frac{1}{C_L s_f} \end{array}\right)}{L_L s_f + \frac{1}{C_L s_f}} \right) \ \dots \ $	166
10.89&NVALID-ORDER-898 $Z(s) =$	$\left(\infty, \ \infty, \ \infty, \ \frac{\sqrt{-\sqrt{4s}}}{L_{4}s + R_{4} + \frac{1}{C_{4}s}}, \ L_{5}s + R_{5} + \frac{1}{C_{5}s}, \ R_{L}\right)$	167

10.89 <b>9</b> NVALID-ORDER-899 $Z(s) =$	$\left( \begin{array}{cccccccccccccccccccccccccccccccccccc$	$\frac{R_4\left(L_4s + \frac{1}{C_4s}\right)}{1}$	$L_{\varepsilon}s + R_{\varepsilon} + \frac{1}{\varepsilon}$	1 1							167
						 	 	 	 	 	. 101
10.90 <b>0</b> NVALID-ORDER-900 $Z(s)=$				/		 	 	 	 	 	. 167
10.90INVALID-ORDER-901 $Z(s)=$	\	040			/	 	 	 	 	 	. 167
10.902NVALID-ORDER-902 $Z(s) =$	\				/	 	 	 	 	 	. 167
10.90%NVALID-ORDER-903 $Z(s)=$	$\left(\infty, \ \infty, \ \infty, \ \right)$	$\frac{R_4\left(L_4s + \frac{1}{C_4s}\right)}{L_4s + R_4 + \frac{1}{C_4s}},  I$	$L_5s + R_5 + \frac{1}{C_5}$	$\frac{1}{c_5s}$ , $\frac{L_Ls}{C_LL_Ls^2+1}$	)	 	 	 	 	 	. 167
10.904NVALID-ORDER-904 $Z(s)=$	\	$c_4$ s			/	 	 	 	 	 	. 167
10.90 <b>5</b> NVALID-ORDER-905 $Z(s) =$	$(\infty, \infty, \infty, \infty, \infty)$	$\frac{R_4 \left(L_4 s + \frac{1}{C_4 s}\right)}{L_4 s + R_4 + \frac{1}{C_4 s}},  I$	$L_5s + R_5 + \frac{1}{C_5}$	$\frac{1}{5s}$ , $\frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{2}}$	$\left(\frac{1}{L_L s}\right)$ .	 	 	 	 	 	. 167
10.90 <b>6</b> NVALID-ORDER-906 $Z(s) =$	$(\infty, \infty, \infty, \infty, \infty)$	$\frac{R_4 \left(L_4 s + \frac{1}{C_4 s}\right)}{L_4 s + R_4 + \frac{1}{C_4 s}},  I$	$L_5s + R_5 + \frac{1}{C_5}$	$\frac{1}{c_5 s}$ , $\frac{L_L s}{C_L L_L s^2 + 1}$	$+R_L$	 	 	 	 	 	. 168
10.90 TNVALID-ORDER-907 $Z(s) =$					$\left(\frac{1}{C_L s}\right)$	 	 	 	 	 	. 168
10.90&NVALID-ORDER-908 $Z(s) =$	$\left(\infty, \infty, \infty, \infty\right)$	$\frac{R_4\left(L_4 s + \frac{1}{C_4 s}\right)}{L_4 s + R_4 + \frac{1}{C_4 s}},  C$	$\frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}},$	$R_L$ )		 	 	 	 	 	. 168
10.90 <b>9</b> NVALID-ORDER-909 $Z(s) =$	$\left(\infty, \infty, \infty, \right)$	$\frac{R_4\left(L_4s + \frac{1}{C_4s}\right)}{L_4s + R_4 + \frac{1}{C_4s}},  C_4s + \frac{1}{C_4s}$	$\frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}},$	$\frac{1}{C_L s}$ $\cdots$		 	 	 	 	 	. 168
10.91 <b>0</b> NVALID-ORDER-910 $Z(s)=$	$(\infty, \infty, \infty, \infty, \infty)$	$\frac{R_4\left(L_4 s + \frac{1}{C_4 s}\right)}{L_4 s + R_4 + \frac{1}{C_4 s}},  c$	$\frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}},$	$\frac{R_L}{C_L R_L s + 1}$ .		 	 	 	 	 	. 168
10.91 INVALID-ORDER-911 $Z(s) = \displaystyle$	$\left(\infty, \infty, \infty, \infty\right)$	$\frac{R_4\left(L_4 s + \frac{1}{C_4 s}\right)}{L_4 s + R_4 + \frac{1}{C_4 s}},  c$	$\frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}},$	$R_L + \frac{1}{C_L s}$		 	 	 	 	 	. 168
10.912NVALID-ORDER-912 $Z(s) =$	$\left(\infty, \ \infty, \ \infty, \ \right)$	$\frac{R_4\left(L_4s + \frac{1}{C_4s}\right)}{L_4s + R_4 + \frac{1}{C_4s}},  C_4s + \frac{1}{C_4s}$	$\frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}},$	$L_L s + \frac{1}{C_L s}$		 	 	 	 	 	. 168
10.912NVALID-ORDER-913 $Z(s)=$	$(\infty, \infty, \infty, \infty, \infty)$	$\frac{R_4\left(L_4s + \frac{1}{C_4s}\right)}{L_4s + R_4 + \frac{1}{C_4s}},  ($	$\frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}},$	$\frac{L_L s}{C_L L_L s^2 + 1}$		 	 	 	 	 	. 168
10.914NVALID-ORDER-914 $Z(s)=$	$\left(\infty, \infty, \infty, \infty\right)$	$\frac{R_4\left(L_4s + \frac{1}{C_4s}\right)}{L_4s + R_4 + \frac{1}{C_4s}},$	$\frac{1}{C_5 s + \frac{1}{R_2} + \frac{1}{L_{2,0}}},$	$L_L s + R_L + \frac{1}{2}$	$\left(\frac{1}{C_L s}\right)$ .	 	 	 	 	 	. 169
10.915 NVALID-ORDER-915 $Z(s) =$	$\left(\infty, \ \infty, \ \infty, \ \right)$	$\frac{R_4\left(L_4s + \frac{1}{C_4s}\right)}{L_4s + R_4 + \frac{1}{C_4s}},  e$	$\frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}},$	$\frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}$	)	 	 	 	 		. 169
10.91 <b>6</b> NVALID-ORDER-916 $Z(s) =$	$\left(\infty, \infty, \infty, \infty\right)$	$\frac{R_4\left(L_4s + \frac{1}{C_4s}\right)}{L_4s + R_4 + \frac{1}{C_4s}},  c$	$\frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}},$	$\frac{L_L s}{C_L L_L s^2 + 1} + I$	$R_L$	 	 	 	 	 	. 169
10.91 <b>6</b> NVALID-ORDER-916 $Z(s) =$ 10.91 <b>7</b> NVALID-ORDER-917 $Z(s) =$	$\left(\infty, \ \infty, \ \infty, \ \right)$	$\frac{R_4\left(L_4s + \frac{1}{C_4s}\right)}{L_4s + R_4 + \frac{1}{C_4s}},  c$	$\frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}},$	$\frac{R_L\left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}$		 	 	 	 	 	. 169
10.01DUIALID ODDED 010.7( )		$R_4\left(L_4s+\frac{1}{C_4s}\right)$	Les	D )							1.00
10.91 <b>9</b> NVALID-ORDER-919 $Z(s) =$	$\left(\infty, \infty, \infty, \infty\right)$	$\frac{R_4\left(L_4s + \frac{1}{C_4s}\right)}{L_4s + R_4 + \frac{1}{C_4s}},  c$	$\frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5$	$5, \frac{1}{C_L s}$		 	 	 	 	 	. 169
10.92 <b>0</b> NVALID-ORDER-920 $Z(s) =$	$\left(\infty, \ \infty, \ \infty, \ \right)$	$\frac{R_4\left(L_4s + \frac{1}{C_4s}\right)}{L_4s + R_4 + \frac{1}{C_4s}},  c$	$\frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5$	$\frac{R_L}{C_L R_L s + 1}$		 	 	 	 	 	. 169
10.91\( \text{NVALID-ORDER-918} \) $Z(s) = 10.91\( \text{NVALID-ORDER-919} \) Z(s) = 10.92\( \text{NVALID-ORDER-920} \) Z(s) = 10.92\( \text{NVALID-ORDER-921} \) Z(s) = 10.92\( \text{NVALID-ORDER-922} \) Z(s) = 10.92\( \text{NVALID-ORDER-923} \) Z(s) = 10.92\( \text{NVALID-ORDER-924} \) Z(s) = 10.92\( NVALID-ORDER-9$	$\left(\infty, \ \infty, \ \infty, \ \right)$	$\frac{R_4\left(L_4s + \frac{1}{C_4s}\right)}{L_4s + R_4 + \frac{1}{C_4s}},  c$	$\frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5$	$_5, R_L + \frac{1}{C_L s}$		 	 	 	 	 	. 169
10.92 <b>½</b> NVALID-ORDER-922 $Z(s) =$	$\left(\infty, \ \infty, \ \infty, \ \right)$	$\frac{R_4\left(L_4 s + \frac{1}{C_4 s}\right)}{L_4 s + R_4 + \frac{1}{C_4 s}},  c$	$\frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5$	$_5, L_L s + \frac{1}{C_L s}$	)	 	 	 	 	 	. 170
10.92 <b>%</b> NVALID-ORDER-923 $Z(s)=$	$\left(\infty, \ \infty, \ \infty, \ \right)$	$\frac{R_4\left(L_4s + \frac{1}{C_4s}\right)}{L_4s + R_4 + \frac{1}{C_4s}},  c$	$\frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5$	$5, \frac{L_L s}{C_L L_L s^2 + 1} $		 	 	 	 	 	. 170
10.924NVALID-ORDER-924 $Z(s)=$	$\left(\infty, \ \infty, \ \infty, \ \right)$	$\frac{R_4\left(L_4 s + \frac{1}{C_4 s}\right)}{L_4 s + R_4 + \frac{1}{C_4 s}},  c$	$\frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5$	$_5, L_L s + R_L -$	$+\frac{1}{C_L s}$	 	 	 	 	 	. 170

10.92 NVALID-ORDER-925 $Z(s) = 1$	$(\infty, \infty, \infty, \frac{R_4}{L_4})$	$\frac{4\left(L_4s + \frac{1}{C_4s}\right)}{4s + R_4 + \frac{1}{C_4s}},$	$\frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5$	$, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}$	$\cdot$ )	 	 	 	 	 	17
10.92 <b>6</b> NVALID-ORDER-926 $Z(s) = 1$	$(\infty, \infty, \infty, \frac{R_4}{L_4})$	$\frac{4\left(L_{4}s + \frac{1}{C_{4}s}\right)}{4s + R_{4} + \frac{1}{C_{4}s}},$	$\frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5$	$, \frac{L_L s}{C_L L_L s^2 + 1} + 1$	$R_L$ )	 	 	 	 	 	17
10.92 TNVALID-ORDER-927 $Z(s) = 1$	$(\infty, \infty, \infty, \frac{R_4}{L_4})$	$\frac{4\left(L_{4}s + \frac{1}{C_{4}s}\right)}{4s + R_{4} + \frac{1}{C_{4}s}},$	$\frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5$	$, \frac{R_L \left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}$	$\left(\frac{1}{2}\right)$	 	 	 	 	 	17
10.92\newline NVALID-ORDER-928 $Z(s) = 1$											
10.92 <b>9</b> NVALID-ORDER-929 $Z(s) = 1$	$(\infty, \infty, \infty, \frac{R_4}{L_4})$	$\frac{4\left(L_{4}s + \frac{1}{C_{4}s}\right)}{4s + R_{4} + \frac{1}{C_{4}s}},$	$\frac{R_5 \left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}},$	$\frac{1}{C_L s}$ $\cdots$		 	 	 	 	 	17
10.93@NVALID-ORDER-930 $Z(s)=1$	$(\infty, \infty, \infty, \frac{R_4}{L_4})$	$\frac{_{4}\left(L_{4}s+\frac{1}{C_{4}s}\right)}{_{4}s+R_{4}+\frac{1}{C_{4}s}},$	$\frac{R_5\left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}},$	$\frac{R_L}{C_L R_L s + 1}$		 	 	 	 	 	17
10.93INVALID-ORDER-931 $Z(s) = 1$	$\stackrel{\sim}{\infty}, \infty, \infty, \frac{R_4}{L_4}$	$\frac{4\left(L_{4}s + \frac{1}{C_{4}s}\right)}{4s + R_{4} + \frac{1}{C_{4}s}},$	$\frac{R_5\left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}},$	$R_L + \frac{1}{C_L s}$ .		 	 	 	 	 	17
10.932NVALID-ORDER-932 $Z(s) = 1$	$(\infty, \infty, \infty, \frac{R_4}{L_4})$	$\frac{4\left(L_{4}s + \frac{1}{C_{4}s}\right)}{4s + R_{4} + \frac{1}{C_{4}s}},$	$\frac{R_5\left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}},$	$L_L s + \frac{1}{C_L s}$		 	 	 	 	 	17
10.932NVALID-ORDER-933 $Z(s) = 1$	$\stackrel{?}{\propto}$ , $\infty$ , $\infty$ , $\frac{R_4}{L_4}$	$\frac{4\left(L_{4}s + \frac{1}{C_{4}s}\right)}{4s + R_{4} + \frac{1}{C_{4}s}},$	$\frac{R_5\left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}},$	$\frac{L_L s}{C_L L_L s^2 + 1}$		 	 	 	 	 	17
10.934NVALID-ORDER-934 $Z(s)=1$	$(\infty, \infty, \infty, \frac{R_4}{L_4})$	$\frac{4\left(L_{4}s + \frac{1}{C_{4}s}\right)}{4s + R_{4} + \frac{1}{C_{4}s}},$	$\frac{R_5\left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}},$	$L_L s + R_L + \frac{1}{C_L}$	$\left(\frac{1}{Ls}\right)$	 	 	 	 	 	17
10.93 NVALID-ORDER-935 $Z(s) = 1$	$\stackrel{\searrow}{\infty}$ , $\infty$ , $\infty$ , $\frac{R_4}{L_4}$	$\frac{4\left(L_{4}s+\frac{1}{C_{4}s}\right)}{4s+R_{4}+\frac{1}{C_{4}s}},$	$\frac{R_5\left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}},$	$\frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$		 	 	 	 	 	17
10.936NVALID-ORDER-936 $Z(s) = 1$	$\stackrel{\sim}{\infty}, \infty, \infty, \frac{R_4}{L_4}$	$\frac{4\left(L_{4}s+\frac{1}{C_{4}s}\right)}{4s+R_{4}+\frac{1}{C_{4}s}},$	$\frac{R_5\left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}},$	$\frac{L_L s}{C_L L_L s^2 + 1} + R_I$	$_{L}$ )	 	 	 	 	 	17
10.93 INVALID-ORDER-937 $Z(s) = 1$	$(\infty, \infty, \infty, \frac{R_4}{L_4})$	$\frac{\frac{4\left(L_{4}s + \frac{1}{C_{4}s}\right)}{4s + R_{4} + \frac{1}{C_{4}s}},$	$\frac{R_5\left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}},$	$\frac{R_L\left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}$	, 	 	 	 	 	 	17

 $\textbf{1} \quad \textbf{Examined} \ \ H(z) \ \ \textbf{for TIA some parasitic Z4 Z5 ZL:} \ \ \frac{Z_4Z_5g_mr_o + Z_4Z_1(Z_5g_mr_o + Z_5 - r_o)}{Z_4Z_5g_mr_o + 4Z_4Z_1 + Z_4r_o + 2Z_5Z_1g_mr_o + 2Z_5Z_1 + 2Z_1r_o}$ 

$$H(z) = \frac{Z_4 Z_L \left( Z_5 g_m r_o + Z_5 - r_o \right)}{Z_4 Z_5 g_m r_o + Z_4 Z_5 + 2 Z_4 Z_L g_m r_o + 4 Z_4 Z_L + Z_4 r_o + 2 Z_5 Z_L g_m r_o + 2 Z_5 Z_L + 2 Z_L r_o}$$

- 2 HP
- 3 BP
- **3.1** BP-1  $Z(s) = \left(\infty, \infty, \infty, R_4, R_5, \frac{L_L s}{C_L L_L s^2 + 1}\right)$

$$H(s) = \frac{L_L R_4 s \left(R_5 g_m r_o + R_5 - r_o\right)}{C_L L_L R_4 R_5 g_m r_o s^2 + C_L L_L R_4 R_5 s^2 + C_L L_L R_4 r_o s^2 + 2 L_L R_4 g_m r_o s + 4 L_L R_4 s + 2 L_L R_5 g_m r_o s + 2 L_L R_5 s + 2 L_L r_o s + R_4 R_5 g_m r_o + R_4 R_5 + R_4 r_o}$$

#### Parameters:

$$\begin{array}{l} \text{Q:} \ \frac{C_L R_4 \sqrt{\frac{1}{C_L L_L}} (R_5 g_m r_o + R_5 + r_o)}{2(R_4 g_m r_o + 2R_4 + R_5 g_m r_o + R_5 + r_o)} \\ \text{wo:} \ \sqrt{\frac{1}{C_L L_L}} \\ \text{bandwidth:} \ \frac{2(R_4 g_m r_o + 2R_4 + R_5 g_m r_o + R_5 + r_o)}{C_L R_4 (R_5 g_m r_o + R_5 + r_o)} \\ \text{K-LP:} \ 0 \\ \text{K-HP:} \ 0 \\ \text{K-BP:} \ \frac{R_4 (R_5 g_m r_o + R_5 - r_o)}{2(R_4 g_m r_o + 2R_4 + R_5 g_m r_o + R_5 + r_o)} \\ \text{Qz:} \ 0 \\ \text{Wz:} \ \text{None} \end{array}$$

**3.2** BP-2 
$$Z(s) = \left(\infty, \infty, \infty, R_4, R_5, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$$

$$H(s) = \frac{L_L R_4 R_L s \left(R_5 g_m r_o + R_5 - r_o\right)}{C_L L_L R_4 R_5 R_L g_m r_o s^2 + C_L L_L R_4 R_5 r_o s^2 + L_L R_4 R_5 g_m r_o s + L_L R_4 R_5 r_o s + 4 L_L R_4 R_L s + L_L R_4 r_o s + 2 L_L R_5 R_L g_m r_o s + 2 L_L R_$$

#### Parameters:

$$\begin{array}{c} C_L R_4 R_L \sqrt{\frac{1}{C_L L_L}} (R_5 g_m r_o + R_5 + r_o) \\ \text{Q: } \frac{1}{R_4 R_5 g_m r_o + R_4 R_5 + 2 R_4 R_L g_m r_o + 4 R_4 R_L + R_4 r_o + 2 R_5 R_L g_m r_o + 2 R_5 R_L + 2 R_L r_o} \\ \text{wo: } \sqrt{\frac{1}{C_L L_L}} \\ \text{bandwidth: } \frac{R_4 R_5 g_m r_o + R_4 R_5 + 2 R_4 R_L g_m r_o + 4 R_4 R_L + R_4 r_o + 2 R_5 R_L g_m r_o + 2 R_5 R_L + 2 R_L r_o}{C_L R_4 R_L (R_5 g_m r_o + R_5 + r_o)} \\ \text{K-LP: 0} \\ \text{K-HP: 0} \\ \text{K-BP: } \frac{R_4 R_L (R_5 g_m r_o + R_5 - r_o)}{R_4 R_5 g_m r_o + R_4 R_5 + 2 R_4 R_L g_m r_o + 4 R_4 R_L + R_4 r_o + 2 R_5 R_L g_m r_o + 2 R_5 R_L + 2 R_L r_o} \\ \text{Qz: 0} \\ \text{Wz: None} \end{array}$$

**3.3** BP-3 
$$Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s}, R_5, \frac{L_L s}{C_L L_L s^2 + 1}\right)$$

$$H(s) = \frac{L_L s \left(R_5 g_m r_o + R_5 - r_o\right)}{2 C_4 L_L R_5 g_m r_o s^2 + 2 C_4 L_L R_5 s^2 + 2 C_4 L_L r_o s^2 + C_L L_L R_5 g_m r_o s^2 + C_L L_L R_5 s^2 + C_L L_L R_5 s^2 + 2 L_L g_m r_o s + 4 L_L s + R_5 g_m r_o + R_5 + r_o}$$

#### Parameters:

$$\text{Q: } \frac{\sqrt{\frac{1}{L_L\left(2C_4+C_L\right)}}\left(C_4R_5g_mr_o + C_4R_5 + C_4r_o + \frac{C_LR_5g_mr_o}{2} + \frac{C_LR_5}{2} + \frac{C_Lr_o}{2}\right)}{g_mr_o + 2}$$

wo: 
$$\sqrt{\frac{1}{L_L(2C_4+C_L)}}$$
 bandwidth:  $\frac{g_m r_o + 2}{C_4 R_5 g_m r_o + C_4 R_5 + C_4 r_o + \frac{C_L R_5 g_m r_o}{2} + \frac{C_L R_5}{2} + \frac{C_L r_o}{2}}$  K-LP: 0 K-HP: 0 K-BP:  $\frac{R_5 g_m r_o + R_5 - r_o}{2(g_m r_o + 2)}$  Qz: 0 Wz: None

**3.4** BP-4 
$$Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s}, R_5, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$$

$$H(s) = \frac{L_L R_L s \left( R_5 g_m r_o + R_5 - r_o \right)}{2 C_4 L_L R_5 R_L g_m r_o s^2 + 2 C_4 L_L R_5 R_L s^2 + 2 C_4 L_L R_5 R_L g_m r_o s^2 + C_L L_L R_5 R_L s^2 + C_L L_L R_5 R_L s^2 + C_L L_L R_5 g_m r_o s + L_L R_5 g_m r_o s + 4 L_L R_5 g_m r_o s + 4 L_L R_5 g_m r_o s + R_5 R_L g_m r_$$

### Parameters:

$$\begin{array}{l} \text{Q:} \ \frac{R_L\sqrt{\frac{1}{L_L(2C_4+C_L)}}(2C_4R_5g_mr_o+2C_4R_5+2C_4r_o+C_LR_5g_mr_o+C_LR_5+C_Lr_o)}{R_5g_mr_o+R_5+2R_Lg_mr_o+4R_L+r_o} \\ \text{wo:} \ \sqrt{\frac{1}{L_L(2C_4+C_L)}} \\ \text{bandwidth:} \ \frac{R_5g_mr_o+R_5+2R_Lg_mr_o+4R_L+r_o}{R_L(2C_4R_5g_mr_o+2C_4R_5+2C_4r_o+C_LR_5g_mr_o+C_LR_5+C_Lr_o)} \\ \text{K-LP:} \ 0 \\ \text{K-HP:} \ 0 \\ \text{K-BP:} \ \frac{R_L(R_5g_mr_o+R_5-r_o)}{R_5g_mr_o+R_5+2R_Lg_mr_o+4R_L+r_o} \\ \text{Qz:} \ 0 \\ \text{Wz:} \ \text{None} \end{array}$$

**3.5 BP-5** 
$$Z(s) = \left(\infty, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, R_5, \frac{L_L s}{C_L L_L s^2 + 1}\right)$$

$$H(s) = \frac{L_L R_4 s \left(R_5 g_m r_o + R_5 - r_o\right)}{2 C_4 L_L R_4 R_5 g_m r_o s^2 + 2 C_4 L_L R_4 R_5 s^2 + C_L L_L R_4 R_5 g_m r_o s^2 + C_L L_L R_4 R_5 s^2 + C_L L_L R_4 R_5 s^2 + C_L L_L R_4 r_o s^2 + 2 L_L R_4 g_m r_o s + 4 L_L R_4 s + 2 L_L R_5 g_m r_o s + 2 L_L R_5 s + 2 L_L r_o s + R_4 R_5 g_m r_o + R_4 R_5 r_o + R_$$

### Parameters:

$$\begin{array}{l} \text{Q:} \ \frac{R_4\sqrt{\frac{1}{L_L(2C_4+C_L)}}(2C_4R_5g_mr_o+2C_4R_5+2C_4r_o+C_LR_5g_mr_o+C_LR_5+C_Lr_o)}{2(R_4g_mr_o+2R_4+R_5g_mr_o+R_5+r_o)} \\ \text{wo:} \ \sqrt{\frac{1}{L_L(2C_4+C_L)}} \\ \text{bandwidth:} \ \frac{2(R_4g_mr_o+2R_4+R_5g_mr_o+R_5+r_o)}{R_4(2C_4R_5g_mr_o+2C_4R_5+2C_4r_o+C_LR_5g_mr_o+C_LR_5+C_Lr_o)} \\ \text{K-LP:} \ 0 \\ \text{K-HP:} \ 0 \\ \text{K-BP:} \ \frac{R_4(R_5g_mr_o+R_5-r_o)}{2(R_4g_mr_o+2R_4+R_5g_mr_o+R_5+r_o)} \\ \text{Qz:} \ 0 \\ \text{Wz:} \ \text{None} \end{array}$$

**3.6** BP-6 
$$Z(s) = \left(\infty, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, R_5, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$$

$$H(s) = \frac{L_L R_4 R_L s \left(R_5 g_m r_o + R_5 - r_o\right)}{2 C_4 L_L R_4 R_5 R_L g_m r_o s^2 + 2 C_4 L_L R_4 R_5 R_L g_m r_o s^2 + C_L L_L R_4 R_5 R_L g_m r_o s^2 + C_L L_L R_4 R_5 R_L g_m r_o s^2 + L_L R_4 R_5 g_m r_o s + L_L R_4 R_5 g_m r_o s + 4 L_L R_4 R_5 g_m r_o s + 2 L_L R_5 R_L g_m r_o s + 2 L_L R_5$$

#### Parameters:

$$\begin{array}{l} \text{Q:} \ \, \frac{R_4R_L\sqrt{\frac{1}{L_L(2C_4+C_L)}}(2C_4R_5g_mr_o + 2C_4R_5 + 2C_4r_o + C_LR_5g_mr_o + C_LR_5 + C_Lr_o)}{R_4R_5g_mr_o + R_4R_5 + 2R_4R_Lg_mr_o + 4R_4R_L + R_4r_o + 2R_5R_Lg_mr_o + 2R_5R_L + 2R_Lr_o} \\ \text{wo:} \ \, \sqrt{\frac{1}{L_L(2C_4+C_L)}} \end{array}$$

3.7 BP-7  $Z(s) = \left(\infty, \infty, \infty, \frac{L_4 s}{C_4 L_4 s^2 + 1}, R_5, R_L\right)$ 

$$H(s) = \frac{L_4 R_L s \left(R_5 g_m r_o + R_5 - r_o\right)}{2 C_4 L_4 R_5 R_L g_m r_o s^2 + 2 C_4 L_4 R_5 R_L s^2 + 2 C_4 L_4 R_L r_o s^2 + L_4 R_5 g_m r_o s + L_4 R_5 s + 2 L_4 R_L g_m r_o s + 4 L_4 R_L s + L_4 r_o s + 2 R_5 R_L g_m r_o + 2 R_5 R_L + 2 R_L r_o s + 2 R_5 R_L g_m r_o s + 2 R_5 R_$$

### Parameters:

$$\begin{array}{l} \text{Q:} \ \frac{2C_4R_L\sqrt{\frac{1}{C_4L_4}}(R_5g_mr_o + R_5 + r_o)}{R_5g_mr_o + R_5 + 2R_Lg_mr_o + 4R_L + r_o} \\ \text{wo:} \ \sqrt{\frac{1}{C_4L_4}} \\ \text{bandwidth:} \ \frac{R_5g_mr_o + R_5 + 2R_Lg_mr_o + 4R_L + r_o}{2C_4R_L(R_5g_mr_o + R_5 + r_o)} \\ \text{K-LP:} \ 0 \\ \text{K-HP:} \ 0 \\ \text{K-BP:} \ \frac{R_L(R_5g_mr_o + R_5 - r_o)}{R_5g_mr_o + R_5 + 2R_Lg_mr_o + 4R_L + r_o} \\ \text{Qz:} \ 0 \\ \text{Wz:} \ \text{None} \end{array}$$

**3.8** BP-8  $Z(s) = \left(\infty, \infty, \infty, \frac{L_{4s}}{C_4L_4s^2+1}, R_5, \frac{1}{C_Ls}\right)$ 

$$H(s) = \frac{L_4 s \left(R_5 g_m r_o + R_5 - r_o\right)}{2 C_4 L_4 R_5 g_m r_o s^2 + 2 C_4 L_4 R_5 s^2 + 2 C_4 L_4 r_o s^2 + C_L L_4 R_5 g_m r_o s^2 + C_L L_4 R_5 s^2 + C_L L_4 r_o s^2 + 2 L_4 g_m r_o s + 4 L_4 s + 2 R_5 g_m r_o + 2 R_5 + 2 r_o}$$

#### Parameters:

$$\begin{array}{c} \text{Q:} \ \frac{\sqrt{2}\sqrt{\frac{1}{L_4(2C_4+C_L)}}\left(C_4R_5g_mr_o + C_4R_5 + C_4r_o + \frac{C_LR_5g_mr_o}{2} + \frac{C_LR_5}{2} + \frac{C_Lr_o}{2}\right)}{g_mr_o + 2} \\ \text{wo:} \ \sqrt{2}\sqrt{\frac{1}{L_4(2C_4+C_L)}} \\ \text{bandwidth:} \ \frac{g_mr_o + 2}{C_4R_5g_mr_o + C_4R_5 + C_4r_o + \frac{C_LR_5g_mr_o}{2} + \frac{C_LR_5}{2} + \frac{C_Lr_o}{2}} \\ \text{K-LP:} \ 0 \\ \text{K-HP:} \ 0 \\ \text{K-BP:} \ \frac{R_5g_mr_o + R_5 - r_o}{2(g_mr_o + 2)} \\ \text{Qz:} \ 0 \\ \text{Wz:} \ \text{None} \end{array}$$

**3.9 BP-9** 
$$Z(s) = \left(\infty, \infty, \infty, \frac{L_4 s}{C_4 L_4 s^2 + 1}, R_5, \frac{R_L}{C_L R_L s + 1}\right)$$

$$H(s) = \frac{L_4 R_L s \left(R_5 g_m r_o + R_5 - r_o\right)}{2 C_4 L_4 R_5 R_L g_m r_o s^2 + 2 C_4 L_4 R_5 R_L s^2 + 2 C_4 L_4 R_5 R_L g_m r_o s^2 + C_L L_4 R_5 R_L g_m r_o s^2 + C_L L_4 R_5 R_L s^2 + C_L L_4$$

### Parameters:

$$\begin{aligned} &\text{Q:} & \frac{\sqrt{2}R_L\sqrt{\frac{1}{L_4(2C_4+C_L)}}(2C_4R_5g_mr_o + 2C_4R_5 + 2C_4r_o + C_LR_5g_mr_o + C_LR_5 + C_Lr_o)}{R_5g_mr_o + R_5 + 2R_Lg_mr_o + 4R_L + r_o} \\ &\text{wo:} & \sqrt{2}\sqrt{\frac{1}{L_4(2C_4+C_L)}} \\ &\text{bandwidth:} & \frac{R_5g_mr_o + R_5 + 2R_Lg_mr_o + 4R_L + r_o}{R_L(2C_4R_5g_mr_o + 2C_4R_5 + 2C_4r_o + C_LR_5g_mr_o + C_LR_5 + C_Lr_o)} \\ &\text{K-LP:} & 0 \\ &\text{K-HP:} & 0 \end{aligned}$$

K-BP: 
$$\frac{R_L(R_5g_mr_o + R_5 - r_o)}{R_5g_mr_o + R_5 + 2R_Lg_mr_o + 4R_L + r_o}$$
 Qz: 0 Wz: None

**3.10** BP-10 
$$Z(s) = \left(\infty, \infty, \infty, \frac{L_4s}{C_4L_4s^2+1}, R_5, \frac{L_Ls}{C_LL_Ls^2+1}\right)$$

$$H(s) = \frac{L_4 L_L s \left(R_5 g_m r_o + R_5 - r_o\right)}{2 C_4 L_4 L_L R_5 g_m r_o s^2 + 2 C_4 L_4 L_L R_5 s^2 + C_L L_4 L_L R_5 g_m r_o s^2 + C_L L_4 L_L R_5 s^2 + C_L L_4 L_L R_5 s^2 + C_L L_4 L_L r_o s^2 + 2 L_4 L_L g_m r_o s + 4 L_4 L_L s + L_4 R_5 g_m r_o + L_4 R_5 + L_4 r_o + 2 L_L R_5 g_m r_o + 2 L_L R_5$$

### Parameters:

Q: 
$$\frac{\sqrt{\frac{L_4+2L_L}{L_4L_L(2C_4+C_L)}}\left(C_4R_5g_mr_o+C_4R_5+C_4r_o+\frac{C_LR_5g_mr_o}{2}+\frac{C_LR_5}{2}+\frac{C_Lr_o}{2}\right)}{g_mr_o+2}}{g_mr_o+2}$$
 wo: 
$$\sqrt{\frac{L_4+2L_L}{L_4L_L(2C_4+C_L)}}$$
 bandwidth: 
$$\frac{g_mr_o+2}{C_4R_5g_mr_o+C_4R_5+C_4r_o+\frac{C_LR_5g_mr_o}{2}+\frac{C_LR_5}{2}+\frac{C_Lr_o}{2}}$$
 K-LP: 0 K-HP: 0 K-BP: 
$$\frac{R_5g_mr_o+R_5-r_o}{2(g_mr_o+2)}$$
 Qz: 0 Wz: None

**3.11** BP-11 
$$Z(s) = \left(\infty, \infty, \infty, \frac{L_4 s}{C_4 L_4 s^2 + 1}, R_5, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$$

 $H(s) = \frac{L_4L_LR_LS(R_5g_mr_o + R_5 - r_o)}{2C_4L_4L_LR_5R_Lg_mr_os^2 + 2C_4L_4L_LR_5R_Ls^2 + 2C_4L_4L_LR_5R_Lg_mr_os^2 + C_LL_4L_LR_5R_Ls^2 + C_LL_4L_LR_5R_Ls^2 + C_LL_4L_LR_5g_mr_os + L_4L_LR_5s +$ 

### Parameters:

$$\begin{array}{l} \text{Q:} & \frac{R_L\sqrt{\frac{L_4+2L_L}{L_4L_L(2C_4+C_L)}}}{R_5g_mr_o+R_5+2R_Lg_mr_o+4R_L+r_o} \\ \text{Q:} & \frac{R_5g_mr_o+R_5+2R_Lg_mr_o+4R_L+r_o}{R_5g_mr_o+R_5+2R_Lg_mr_o+4R_L+r_o} \\ \text{wo:} & \sqrt{\frac{L_4+2L_L}{L_4L_L(2C_4+C_L)}} \\ \text{bandwidth:} & \frac{R_5g_mr_o+R_5+2R_Lg_mr_o+4R_L+r_o}{R_L(2C_4R_5g_mr_o+2C_4R_5+2C_4r_o+C_LR_5g_mr_o+C_LR_5+C_Lr_o)} \\ \text{K-LP:} & 0 \\ \text{K-HP:} & 0 \\ \text{K-BP:} & \frac{R_L(R_5g_mr_o+R_5-r_o)}{R_5g_mr_o+R_5+2R_Lg_mr_o+4R_L+r_o} \\ \text{Qz:} & 0 \\ \text{Wz:} & \text{None} \end{array}$$

**3.12 BP-12** 
$$Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s + \frac{1}{R_4} + \frac{1}{L_4 s}}, R_5, R_L\right)$$

 $H(s) = \frac{L_4 R_4 R_L s \left(R_5 g_m r_o + R_5 - r_o\right)}{2 C_4 L_4 R_4 R_5 R_L g_m r_o s^2 + 2 C_4 L_4 R_4 R_5 R_L s^2 + 2 C_4 L_4 R_4 R_5 g_m r_o s + L_4 R_4 R_5 s + 2 L_4 R_4 R_L s + L_4 R_4 r_o s + 2 L_4 R_5 R_L g_m r_o s + 2 L_4 R_5 R_L s + 2 L_4 R_5 R_L g_m r_o s + 2 R_4 R_5$ 

$$\begin{array}{c} \text{Q:} & \frac{2C_4R_4R_L\sqrt{\frac{1}{C_4L_4}}(R_5g_mr_o + R_5 + r_o)}{R_4R_5g_mr_o + R_4R_5 + 2R_4R_Lg_mr_o + 4R_4R_L + R_4r_o + 2R_5R_Lg_mr_o + 2R_5R_L + 2R_Lr_o} \\ \text{wo:} & \sqrt{\frac{1}{C_4L_4}} \\ \text{bandwidth:} & \frac{R_4R_5g_mr_o + R_4R_5 + 2R_4R_Lg_mr_o + 4R_4R_L + R_4r_o + 2R_5R_Lg_mr_o + 2R_5R_L + 2R_Lr_o}{2C_4R_4R_L(R_5g_mr_o + R_5 + r_o)} \\ \text{K-LP:} & 0 \\ \text{K-HP:} & 0 \\ \text{K-BP:} & \frac{R_4R_L(R_5g_mr_o + R_5 - r_o)}{R_4R_5g_mr_o + R_4R_5 + 2R_4R_Lg_mr_o + 4R_4R_L + R_4r_o + 2R_5R_Lg_mr_o + 2R_5R_L + 2R_Lr_o} \end{array}$$

Qz: 0 Wz: None

3.13 BP-13 
$$Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s + \frac{1}{R_4} + \frac{1}{L_4 s}}, R_5, \frac{1}{C_L s}\right)$$

$$L_4 R_4 s \left(R_5 g_m r_o + R_5 - r_o\right)$$

 $H(s) = \frac{L_4 R_4 s \left(R_5 g_m r_o + R_5 - r_o\right)}{2 C_4 L_4 R_4 R_5 g_m r_o s^2 + 2 C_4 L_4 R_4 R_5 s^2 + C_L L_4 R_4 R_5 g_m r_o s^2 + C_L L_4 R_4 R_5 s^2 + C_L L_4 R_4 R_5 s^2 + 2 L_4 R_4 g_m r_o s + 4 L_4 R_4 s + 2 L_4 R_5 g_m r_o s + 2 L_4 R_5 g_m r_o + 2 R_4 R_$ 

### Parameters:

$$\begin{array}{l} \text{Q:} & \frac{\sqrt{2}R_4\sqrt{\frac{1}{L_4(2C_4+C_L)}}(2C_4R_5g_mr_o+2C_4R_5+2C_4r_o+C_LR_5g_mr_o+C_LR_5+C_Lr_o)}{2(R_4g_mr_o+2R_4+R_5g_mr_o+R_5+r_o)} \\ \text{wo:} & \sqrt{2}\sqrt{\frac{1}{L_4(2C_4+C_L)}} \\ \text{bandwidth:} & \frac{2(R_4g_mr_o+2R_4+R_5g_mr_o+R_5+r_o)}{R_4(2C_4R_5g_mr_o+2C_4R_5+2C_4r_o+C_LR_5g_mr_o+C_LR_5+C_Lr_o)} \\ \text{K-LP:} & 0 \\ \text{K-HP:} & 0 \\ \text{K-BP:} & \frac{R_4(R_5g_mr_o+R_5-r_o)}{2(R_4g_mr_o+2R_4+R_5g_mr_o+R_5+r_o)} \\ \text{Qz:} & 0 \\ \text{Wz:} & \text{None} \end{array}$$

**3.14** BP-14 
$$Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s + \frac{1}{R_4} + \frac{1}{L_4 s}}, R_5, \frac{R_L}{C_L R_L s + 1}\right)$$

 $L_4 R_4 R_L s \left( R_5 g_m r_o + R_5 - r_o \right)$  $\frac{2C_4L_4R_4R_5R_Lq_mr_os^2 + 2C_4L_4R_4R_5R_Ls^2 + 2C_4L_4R_4R_5R_Ls^2 + C_LL_4R_4R_5R_Ls^2 + C_LL_4R_5R_Ls^2 + C_LL_4R_$ 

**3.15 BP-15** 
$$Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s + \frac{1}{R_4} + \frac{1}{L_4 s}}, R_5, \frac{L_L s}{C_L L_L s^2 + 1}\right)$$

 $\frac{L_{4}L_{L}R_{4}s\left(R_{5}g_{m}r_{o}+R_{5}-r_{o}\right)}{2C_{4}L_{4}L_{L}R_{4}R_{5}g_{m}r_{o}s^{2}+2C_{4}L_{4}L_{L}R_{4}r_{o}s^{2}+C_{L}L_{4}L_{L}R_{4}R_{5}g_{m}r_{o}s^{2}+C_{L}L_{4}L_{L}R_{4}r_{o}s^{2}+C_{L}L_{4}L_{L}R_{$ 

$$\begin{array}{l} \text{Q:} & \frac{R_4\sqrt{\frac{L_4+2L_L}{L_4L_L(2C_4+C_L)}}}{2(2C_4R_5g_mr_o+2C_4R_5+2C_4r_o+C_LR_5g_mr_o+C_LR_5+C_Lr_o)} \\ \text{Wo:} & \frac{2(R_4g_mr_o+2R_4+R_5g_mr_o+R_5+r_o)}{2(R_4g_mr_o+2R_4+R_5g_mr_o+R_5+r_o)} \\ \text{bandwidth:} & \frac{2(R_4g_mr_o+2R_4+R_5g_mr_o+R_5+r_o)}{R_4(2C_4R_5g_mr_o+2C_4R_5+2C_4r_o+C_LR_5g_mr_o+C_LR_5+C_Lr_o)} \\ \text{K-LP:} & 0 \\ \text{K-HP:} & 0 \\ \text{K-BP:} & \frac{R_4(R_5g_mr_o+R_5-r_o)}{2(R_4g_mr_o+2R_4+R_5g_mr_o+R_5+r_o)} \\ \text{Qz:} & 0 \end{array}$$

Wz: None

**3.16** BP-16 
$$Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s + \frac{1}{R_4} + \frac{1}{L_4 s}}, R_5, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$$

 $L_4L_LR_4R_Ls\left(R_5g_mr_o+R_5-r_o\right)$ 

 $II(\cdot)$ 

 $\frac{1}{2C_{4}L_{4}L_{L}R_{4}R_{5}R_{L}g_{m}r_{o}s^{2}+2C_{4}L_{4}L_{L}R_{4}R_{5}R_{L}s^{2}+2C_{4}L_{4}L_{L}R_{4}R_{5}R_{L}g_{m}r_{o}s^{2}+C_{L}L_{4}L_{L}R_{4}R_$ 

### Parameters:

$$\begin{array}{l} \text{Q:} \ \, \frac{R_4R_L\sqrt{\frac{L_4+2L_L}{L_4L_L(2C_4+C_L)}}}{R_4R_5g_mr_o+R_4R_5+2R_4R_Lg_mr_o+4R_4R_L+R_4r_o+2R_5R_Lg_mr_o+2R_5R_L+2R_Lr_o} \\ \text{Wo:} \ \, \frac{L_4+2L_L}{L_4L_L(2C_4+C_L)} \\ \text{bandwidth:} \ \, \frac{L_4+2L_L}{R_4R_5g_mr_o+R_4R_5+2R_4R_Lg_mr_o+4R_4R_L+R_4r_o+2R_5R_Lg_mr_o+2R_5R_L+2R_Lr_o} \\ \text{K-LP:} \ \, 0 \\ \text{K-HP:} \ \, 0 \\ \text{K-BP:} \ \, \frac{R_4R_L(2C_4R_5g_mr_o+R_5+2C_4R_5+C_4r_o+C_LR_5g_mr_o+2R_5R_L+2R_Lr_o)}{R_4R_5g_mr_o+R_4R_5+2R_4R_Lg_mr_o+R_5-r_o)} \\ \text{Qz:} \ \, 0 \\ \text{Wz:} \ \, \text{None} \end{array}$$

4 LP

5 BS

**5.1** BS-1 
$$Z(s) = \left(\infty, \infty, \infty, R_4, R_5, L_L s + \frac{1}{C_L s}\right)$$

Parameters:

$$\begin{aligned} & \text{Q:} \ \frac{2L_L\sqrt{\frac{1}{C_LL_L}}(R_4g_mr_o + 2R_4 + R_5g_mr_o + R_5 + r_o)}{R_4(R_5g_mr_o + R_5 + r_o)} \\ & \text{wo:} \ \sqrt{\frac{1}{C_LL_L}} \\ & \text{bandwidth:} \ \frac{R_4(R_5g_mr_o + R_5 + r_o)}{2L_L(R_4g_mr_o + 2R_4 + R_5g_mr_o + R_5 + r_o)} \\ & \text{K-LP:} \ \frac{R_4(R_5g_mr_o + 2R_4 + R_5g_mr_o + R_5 + r_o)}{2(R_4g_mr_o + 2R_4 + R_5g_mr_o + R_5 + r_o)} \\ & \text{K-HP:} \ \frac{R_4(R_5g_mr_o + 2R_4 + R_5g_mr_o + R_5 + r_o)}{2(R_4g_mr_o + 2R_4 + R_5g_mr_o + R_5 + r_o)} \\ & \text{K-BP:} \ 0 \\ & \text{Qz:} \ \text{None} \\ & \text{Wz:} \ \sqrt{\frac{1}{C_LL_L}} \end{aligned}$$

**5.2 BS-2** 
$$Z(s) = \left(\infty, \infty, \infty, R_4, R_5, \frac{R_L\left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$$

$$R_4 R_L \left( C_L L_L s^2 + 1 \right) \left( R_5 g_m r_o + R_5 - r_o \right)$$

 $H(s) = \frac{1}{C_L L_L R_4 R_5 g_m r_o s^2 + C_L L_L R_4 R_5 s^2 + 2 C_L L_L R_4 R_L g_m r_o s^2 + 4 C_L L_L R_4 R_L s^2 + C_L L_L R_4 r_o s^2 + 2 C_L L_L R_5 R_L g_m r_o s^2 + 2 C_L L_L R_4 R_5 R_L g_m r_o s + C_L R_4 R_5 R_L$ 

$$\text{Q: } \frac{L_L\sqrt{\frac{1}{C_LL_L}}(R_4R_5g_mr_o + R_4R_5 + 2R_4R_Lg_mr_o + 4R_4R_L + R_4r_o + 2R_5R_Lg_mr_o + 2R_5R_L + 2R_Lr_o)}{R_4R_L(R_5g_mr_o + R_5 + r_o)}$$

```
wo: \sqrt{\frac{1}{C_L L_L}} bandwidth: \frac{R_4 R_L (R_5 g_m r_o + R_5 + r_o)}{L_L (R_4 R_5 g_m r_o + R_4 R_5 + 2 R_4 R_L g_m r_o + 4 R_4 R_L + R_4 r_o + 2 R_5 R_L g_m r_o + 2 R_5 R_L + 2 R_L r_o)} K-LP: \frac{R_4 R_L (R_5 g_m r_o + R_5 - r_o)}{R_4 R_5 g_m r_o + R_4 R_5 + 2 R_4 R_L g_m r_o + 4 R_4 R_L + R_4 r_o + 2 R_5 R_L g_m r_o + 2 R_5 R_L + 2 R_L r_o} K-HP: \frac{R_4 R_L (R_5 g_m r_o + R_5 - r_o)}{R_4 R_5 g_m r_o + R_4 R_5 + 2 R_4 R_L g_m r_o + 4 R_4 R_L + R_4 r_o + 2 R_5 R_L g_m r_o + 2 R_5 R_L + 2 R_L r_o} K-BP: 0 Qz: None Wz: \sqrt{\frac{1}{C_L L_L}}
```

**5.3** BS-3  $Z(s) = \left(\infty, \infty, \infty, L_4 s + \frac{1}{C_4 s}, R_5, R_L\right)$ 

### Parameters:

Q: 
$$\frac{L_4\sqrt{\frac{1}{C_4L_4}}(R_5g_mr_o + R_5 + 2R_Lg_mr_o + 4R_L + r_o)}{2R_L(R_5g_mr_o + R_5 + r_o)}$$
 wo: 
$$\sqrt{\frac{1}{C_4L_4}}$$
 bandwidth: 
$$\frac{2R_L(R_5g_mr_o + R_5 + r_o)}{L_4(R_5g_mr_o + R_5 + 2R_Lg_mr_o + 4R_L + r_o)}$$
 K-LP: 
$$\frac{R_L(R_5g_mr_o + R_5 - r_o)}{R_5g_mr_o + R_5 + 2R_Lg_mr_o + 4R_L + r_o}$$
 K-HP: 
$$\frac{R_L(R_5g_mr_o + R_5 - r_o)}{R_5g_mr_o + R_5 + 2R_Lg_mr_o + 4R_L + r_o}$$
 K-BP: 0 Qz: None Wz: 
$$\sqrt{\frac{1}{C_4L_4}}$$

**5.4** BS-4 
$$Z(s) = \left(\infty, \infty, \infty, \frac{R_4\left(L_4s + \frac{1}{C_4s}\right)}{L_4s + R_4 + \frac{1}{C_4s}}, R_5, R_L\right)$$

 $R_4 R_L \left( C_4 L_4 s^2 + 1 \right) \left( R_5 g_m r_o + R_5 - r_o \right)$ 

 $H(s) = \frac{1}{C_4 L_4 R_4 R_5 g_m r_o s^2 + C_4 L_4 R_4 R_5 s^2 + 2 C_4 L_4 R_4 R_L g_m r_o s^2 + 4 C_4 L_4 R_4 R_L s^2 + C_4 L_4 R_4 r_o s^2 + 2 C_4 L_4 R_5 R_L g_m r_o s^2 + 2 C_4 L_4 R_5 R_L g_m r_o s^2 + 2 C_4 L_4 R_5 R_L g_m r_o s^2 + 2 C_4 L_4 R_5 R_L g_m r_o s^2 + 2 C_4 L_4 R_5 R_L g_m r_o s^2 + 2 C_4 L_4 R_5 R_L g_m r_o s^2 + 2 C_4 L_4 R_5 R_L g_m r_o s^2 + 2 C_4 L_4 R_5 R_L g_m r_o s^2 + 2 C_4 L_4 R_5 R_L g_m r_o s^2 + 2 C_4 L_4 R_5 R_L g_m r_o s^2 + 2 C_4 L_4 R_5 R_L g_m r_o s^2 + 2 C_4 R_4 R_5$ 

### Parameters:

$$\begin{array}{c} \text{Q:} \ \frac{L_4\sqrt{\frac{1}{C_4L_4}}(R_4R_5g_mr_o + R_4R_5 + 2R_4R_Lg_mr_o + 4R_4R_L + R_4r_o + 2R_5R_Lg_mr_o + 2R_5R_L + 2R_Lr_o)}{2R_4R_L(R_5g_mr_o + R_5 + r_o)} \\ \text{wo:} \ \sqrt{\frac{1}{C_4L_4}} \\ \text{bandwidth:} \ \frac{2R_4R_L(R_5g_mr_o + R_5 + r_o)}{L_4(R_4R_5g_mr_o + R_4R_5 + 2R_4R_Lg_mr_o + 4R_4R_L + R_4r_o + 2R_5R_Lg_mr_o + 2R_5R_L + 2R_Lr_o)}{R_4R_L(R_5g_mr_o + R_5 - r_o)} \\ \text{K-LP:} \ \frac{R_4R_5g_mr_o + R_4R_5 + 2R_4R_Lg_mr_o + 4R_4R_L + R_4r_o + 2R_5R_Lg_mr_o + 2R_5R_L + 2R_Lr_o}{R_4R_L(R_5g_mr_o + R_5 - r_o)} \\ \text{K-HP:} \ \frac{R_4R_5g_mr_o + R_4R_5 + 2R_4R_Lg_mr_o + 4R_4R_L + R_4r_o + 2R_5R_Lg_mr_o + 2R_5R_L + 2R_Lr_o}{R_4R_5g_mr_o + R_4R_5 + 2R_4R_Lg_mr_o + 4R_4R_L + R_4r_o + 2R_5R_Lg_mr_o + 2R_5R_L + 2R_Lr_o} \\ \text{K-BP:} \ 0 \\ \text{Qz:} \ \text{None} \\ \text{Wz:} \ \sqrt{\frac{1}{C_4L_4}} \end{array}$$

### 6 **GE**

**6.1** GE-1 
$$Z(s) = \left(\infty, \infty, \infty, R_4, R_5, L_L s + R_L + \frac{1}{C_L s}\right)$$

$$R_4 \left( C_L L_L s^2 + C_L R_L s + 1 \right) \left( R_5 g_m r_o + R_5 - r_o \right)$$

 $\frac{R_4 \left(C_L L_L s^2 + C_L R_L s + 1\right) \left(R_5 g_m r_o + R_5 - r_o\right)}{2C_L L_L R_4 g_m r_o s^2 + 4C_L L_L R_5 g_m r_o s^2 + 2C_L L_L R_5 s^2 + 2C_L L_L r_o s^2 + C_L R_4 R_5 g_m r_o s + C_L R_4 R_5 g_m r_o s + 4C_L R_4 R_L s + C_L R_4 r_o s + 2C_L R_5 R_L g_m r_o s + 2C_L R_5 R_L s + 2C_L R_5 R_$ 

### Parameters:

$$\begin{array}{c} \mathrm{Q:} \ \frac{2L_L\sqrt{\frac{1}{C_LL_L}}(R_4g_mr_o + 2R_4 + R_5g_mr_o + R_5 + r_o)}{R_4R_5g_mr_o + R_4R_5 + 2R_4R_Lg_mr_o + 4R_4R_L + R_4r_o + 2R_5R_Lg_mr_o + 2R_5R_L + 2R_Lr_o} \\ \mathrm{wo:} \ \sqrt{\frac{1}{C_LL_L}} \\ \mathrm{bandwidth:} \ \frac{R_4R_5g_mr_o + R_4R_5 + 2R_4R_Lg_mr_o + 4R_4R_L + R_4r_o + 2R_5R_Lg_mr_o + 2R_5R_L + 2R_Lr_o}{2L_L(R_4g_mr_o + 2R_4 + R_5g_mr_o + R_5 + r_o)} \\ \mathrm{K-LP:} \ \frac{R_4(R_5g_mr_o + R_5 - r_o)}{2(R_4g_mr_o + 2R_4 + R_5g_mr_o + R_5 + r_o)} \\ \mathrm{K-HP:} \ \frac{R_4(R_5g_mr_o + R_5 - r_o)}{2(R_4g_mr_o + 2R_4 + R_5g_mr_o + R_5 + r_o)} \\ \mathrm{K-BP:} \ \frac{R_4R_L(R_5g_mr_o + R_5 - r_o)}{R_4R_5g_mr_o + R_4R_5 + 2R_4R_Lg_mr_o + 4R_4R_L + R_4r_o + 2R_5R_Lg_mr_o + 2R_5R_L + 2R_Lr_o} \\ \mathrm{Qz:} \ \frac{L_L\sqrt{\frac{1}{C_LL_L}}}{R_L} \\ \mathrm{Wz:} \ \sqrt{\frac{1}{C_LL_L}} \\ \end{array}$$

**6.2** GE-2 
$$Z(s) = \left(\infty, \infty, \infty, R_4, R_5, \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$$

 $R_4 (R_5 g_m r_o + R_5 - r_o) (C_L L_L R_L s^2 + L_L s + R_L)$  $\frac{164 \left(165 gm r_o + 165 - r_o\right) \left(C_L L_L R_4 R_5 gm r$ 

### Parameters:

$$Q \colon \frac{C_L \sqrt{\frac{1}{C_L L_L}} (R_4 R_5 g_m r_o + R_4 R_5 + 2 R_4 R_L g_m r_o + 4 R_4 R_L + R_4 r_o + 2 R_5 R_L g_m r_o + 2 R_5 R_L + 2 R_L r_o)}{2 (R_4 g_m r_o + 2 R_4 + R_5 g_m r_o + R_5 + r_o)}$$

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

$$\text{bandwidth: } \frac{2 (R_4 g_m r_o + 2 R_4 + R_5 g_m r_o + R_5 + r_o)}{C_L (R_4 R_5 g_m r_o + R_4 R_5 + 2 R_4 R_L g_m r_o + 4 R_4 R_L + R_4 r_o + 2 R_5 R_L g_m r_o + 2 R_5 R_L + 2 R_L r_o)}$$

$$\text{K-LP: } \frac{R_4 R_L (R_5 g_m r_o + R_4 R_5 + 2 R_4 R_L g_m r_o + 4 R_4 R_L + R_4 r_o + 2 R_5 R_L g_m r_o + 2 R_5 R_L + 2 R_L r_o)}{R_4 R_L (R_5 g_m r_o + R_4 R_L + R_4 r_o + 2 R_5 R_L g_m r_o + 2 R_5 R_L + 2 R_L r_o)}$$

$$\text{K-HP: } \frac{R_4 R_5 g_m r_o + R_4 R_5 + 2 R_4 R_L g_m r_o + 4 R_4 R_L + R_4 r_o + 2 R_5 R_L g_m r_o + 2 R_5 R_L + 2 R_L r_o)}{2 (R_4 g_m r_o + 2 R_4 R_4 R_5 + 2 R_4 R_5 g_m r_o + 4 R_4 R_4 R_4 + R_4 r_o + 2 R_5 R_L g_m r_o + 2 R_5 R_L + 2 R_L r_o)}$$

$$\text{Cz: } C_L R_L \sqrt{\frac{1}{C_L L_L}}$$

$$\text{Wz: } \sqrt{\frac{1}{C_L L_L}}$$

**6.3** GE-3 
$$Z(s) = \left(\infty, \infty, \infty, R_4, L_5 s + \frac{1}{C_5 s}, R_L\right)$$

$$H(s) = \frac{R_4 R_L \left( C_5 L_5 g_m r_o s^2 + C_5 L_5 s^2 - C_5 r_o s + g_m r_o + 1 \right)}{C_5 L_5 R_4 g_m r_o s^2 + C_5 L_5 R_4 s^2 + 2 C_5 L_5 R_4 g_m r_o s^2 + 2 C_5 L_5 R_4 g_m r_o s^2 + 2 C_5 L_5 R_4 g_m r_o s^2 + 2 C_5 R_4 R_4 g_m r_o s + 4 C_5 R_4 R_4 s + C_5 R_4 r_o s + 2 C_5 R_4 r_o s + R_4 g_m r_o + R_4 + 2 R_4 g_m r_o + 2 R_4 g_m r_o s^2 + 2 C_5 R_4 g_m r_o$$

$$\begin{aligned} & \text{Q:} \ \, \frac{L_5\sqrt{\frac{1}{C_5L_5}}(R_4g_mr_o + R_4 + 2R_Lg_mr_o + 2R_L)}{2R_4R_Lg_mr_o + 4R_4R_L + R_4r_o + 2R_Lr_o} \\ & \text{wo:} \, \sqrt{\frac{1}{C_5L_5}} \\ & \text{bandwidth:} \ \, \frac{2R_4R_Lg_mr_o + 4R_4R_L + R_4r_o + 2R_Lr_o}{L_5(R_4g_mr_o + R_4 + 2R_Lg_mr_o + 2R_L)} \\ & \text{K-LP:} \, \, \frac{R_4R_L}{R_4 + 2R_L} \\ & \text{K-HP:} \, \, \frac{R_4R_L}{R_4 + 2R_L} \\ & \text{K-BP:} \, \, -\frac{R_4R_Lr_o}{2R_4R_Lg_mr_o + 4R_4R_L + R_4r_o + 2R_Lr_o} \\ & \text{Qz:} \, \, \frac{L_5\sqrt{\frac{1}{C_5L_5}}(-g_mr_o - 1)}{r_o} \end{aligned}$$

Wz: 
$$\sqrt{\frac{1}{C_5 L_5}}$$

**6.4** GE-4 
$$Z(s) = \left(\infty, \infty, \infty, R_4, \frac{L_5 s}{C_5 L_5 s^2 + 1}, R_L\right)$$

$$H(s) = \frac{R_4 R_L \left( -C_5 L_5 r_o s^2 + L_5 g_m r_o s + L_5 s - r_o \right)}{2 C_5 L_5 R_4 R_L g_m r_o s^2 + 4 C_5 L_5 R_4 R_L s^2 + C_5 L_5 R_4 r_o s^2 + 2 C_5 L_5 R_L r_o s^2 + L_5 R_4 g_m r_o s + L_5 R_4 s + 2 L_5 R_L g_m r_o s + 2 L_5 R_L s + 2 R_4 R_L g_m r_o + 4 R_4 R_L + R_4 r_o + 2 R_L r_o + 2 R_4 R_L g_m r_o s + 2 R_4 R_L g$$

### Parameters:

$$\begin{aligned} & \text{Q:} \ \frac{C_5\sqrt{\frac{1}{C_5L_5}}}{R_4g_mr_o + R_4 + 2R_Lg_mr_o + 2R_Lr_o)}{R_4g_mr_o + R_4 + 2R_Lg_mr_o + 2R_L} \\ & \text{wo:} \ \sqrt{\frac{1}{C_5L_5}} \\ & \text{bandwidth:} \ \frac{R_4g_mr_o + R_4 + 2R_Lg_mr_o + 2R_L}{C_5(2R_4R_Lg_mr_o + 4R_4R_L + R_4r_o + 2R_Lr_o)} \\ & \text{K-LP:} \ -\frac{R_4R_Lr_o}{2R_4R_Lg_mr_o + 4R_4R_L + R_4r_o + 2R_Lr_o} \\ & \text{K-HP:} \ -\frac{R_4R_Lr_o}{2R_4R_Lg_mr_o + 4R_4R_L + R_4r_o + 2R_Lr_o} \\ & \text{K-BP:} \ \frac{R_4R_L}{R_4 + 2R_L} \\ & \text{Qz:} \ -\frac{C_5r_o\sqrt{\frac{1}{C_5L_5}}}{g_mr_o + 1} \\ & \text{Wz:} \ \sqrt{\frac{1}{C_5L_5}} \end{aligned}$$

**6.5** GE-5 
$$Z(s) = \left(\infty, \infty, \infty, R_4, L_5 s + R_5 + \frac{1}{C_5 s}, R_L\right)$$

$$H(s) = \frac{R_4 R_L \left( C_5 L_5 g_m r_o s^2 + C_5 L_5 s^2 + C_5 R_5 g_m r_o s + C_5 R_5 s - C_5 r_o s + g_m r_o + 1 \right)}{C_5 L_5 R_4 g_m r_o s^2 + C_5 L_5 R_4 g^2 + 2 C_5 L_5 R_L g_m r_o s^2 + 2 C_5 L_5 R_L g_m r_o s + C_5 R_4 R_5 g_m r_o s + 4 C_5 R_4 R_L g_m r_o s + 4 C_5 R_4 r_o s + 2 C_5 R_5 R_L g_m r_$$

### Parameters:

Q: 
$$\frac{L_5\sqrt{\frac{1}{C_5L_5}}(R_4g_mr_o + R_4 + 2R_Lg_mr_o + 2R_L)}{R_4R_5g_mr_o + R_4R_5 + 2R_4R_Lg_mr_o + 4R_4R_L + R_4r_o + 2R_5R_Lg_mr_o + 2R_5R_L + 2R_Lr_o}$$
wo: 
$$\sqrt{\frac{1}{C_5L_5}}$$
bandwidth: 
$$\frac{R_4R_5g_mr_o + R_4R_5 + 2R_4R_Lg_mr_o + 4R_4R_L + R_4r_o + 2R_5R_Lg_mr_o + 2R_5R_L + 2R_Lr_o}{L_5(R_4g_mr_o + R_4 + 2R_Lg_mr_o + 2R_L)}$$
K-LP: 
$$\frac{R_4R_L}{R_4 + 2R_L}$$
K-HP: 
$$\frac{R_4R_L}{R_4 + 2R_L}$$
K-BP: 
$$\frac{R_4R_L}{R_4R_5g_mr_o + R_4R_5 + 2R_4R_Lg_mr_o + 4R_4R_L + R_4r_o + 2R_5R_Lg_mr_o + 2R_5R_L + 2R_Lr_o}{R_4R_5g_mr_o + R_4R_5 + 2R_4R_Lg_mr_o + 4R_4R_L + R_4r_o + 2R_5R_Lg_mr_o + 2R_5R_L + 2R_Lr_o}$$
Qz: 
$$\frac{L_5\sqrt{\frac{1}{C_5L_5}}(g_mr_o + 1)}{R_5g_mr_o + R_5 - r_o}$$
Wz: 
$$\sqrt{\frac{1}{C_5L_5}}$$

**6.6 GE-6** 
$$Z(s) = \left(\infty, \infty, \infty, R_4, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, R_L\right)$$

$$R_4 R_L \left( -C_5 L_5 R_5 r_o s^2 + L_5 R_5 g_m r_o s + L_5 R_5 s - L_5 r_o s - R_5 r_o \right)$$

 $H(s) = \frac{1}{2C_5L_5R_4R_5R_Lg_mr_os^2 + 4C_5L_5R_4R_5R_Ls^2 + C_5L_5R_4R_5r_os^2 + 2C_5L_5R_4R_5g_mr_os + L_5R_4R_5g_mr_os + 4L_5R_4R_Ls + L_5R_4r_os + 2L_5R_5R_Lg_mr_os + 2L_5R_5R_Ls + 2L_5R_5R_L$ 

$$\begin{array}{c} C_5R_5\sqrt{\frac{1}{C_5L_5}}(2R_4R_Lg_mr_o+4R_4R_L+R_4r_o+2R_Lr_o)\\ \hline \text{Q: } \frac{C_5R_5\sqrt{\frac{1}{C_5L_5}}(2R_4R_Lg_mr_o+4R_4R_L+R_4r_o+2R_5R_Lg_mr_o+2R_5R_L+2R_Lr_o)\\ \hline \text{wo: } \sqrt{\frac{1}{C_5L_5}}\\ \\ \text{bandwidth: } \frac{R_4R_5g_mr_o+R_4R_5+2R_4R_Lg_mr_o+4R_4R_L+R_4r_o+2R_5R_Lg_mr_o+2R_5R_L+2R_Lr_o}{C_5R_5(2R_4R_Lg_mr_o+4R_4R_L+R_4r_o+2R_Lr_o)}\\ \hline \text{K-LP: } -\frac{R_4R_Lr_o}{2R_4R_Lg_mr_o+4R_4R_L+R_4r_o+2R_Lr_o}\\ \hline \text{K-HP: } -\frac{R_4R_Lr_o}{2R_4R_Lg_mr_o+4R_4R_L+R_4r_o+2R_Lr_o} \end{array}$$

$$\text{K-BP:} \ \frac{R_4 R_L (R_5 g_m r_o + R_5 - r_o)}{R_4 R_5 g_m r_o + R_4} \\ \text{Qz:} \ -\frac{C_5 R_5 r_o \sqrt{\frac{1}{C_5 L_5}}}{R_5 g_m r_o + R_5 - r_o} \\ \text{Wz:} \ \sqrt{\frac{1}{C_5 L_5}}$$

**6.7** GE-7 
$$Z(s) = \left(\infty, \infty, \infty, R_4, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, R_L\right)$$

 $H(s) = \frac{R_4 R_L \left( C_5 L_5 R_5 g_m r_o s^2 + C_5 L_5 R_5 s^2 - C_5 L_5 r_o s^2 + L_5 g_m r_o s + L_5 s + R_5 g_m r_o + R_5 - r_o \right)}{C_5 L_5 R_4 R_5 g_m r_o s^2 + C_5 L_5 R_4 R_5 g_m r_o s^2 + 2 C_5 L_5 R_4 R_L g_m r_o s^2 + 2 C_5 L_5 R_5 R_L g_m r_o$ 

#### Parameters:

$$Q\colon \frac{C_5\sqrt{\frac{1}{C_5L_5}}(R_4R_5g_mr_o + R_4R_5 + 2R_4R_Lg_mr_o + 4R_4R_L + R_4r_o + 2R_5R_Lg_mr_o + 2R_5R_L + 2R_Lr_o)}{R_4g_mr_o + R_4 + 2R_Lg_mr_o + 2R_L}$$

$$\text{W0: } \sqrt{\frac{1}{C_5L_5}}$$

$$\text{bandwidth: } \frac{R_4g_mr_o + R_4 + 2R_Lg_mr_o + 2R_L}{C_5(R_4R_5g_mr_o + R_4R_5 + 2R_4R_Lg_mr_o + 4R_4R_L + R_4r_o + 2R_5R_Lg_mr_o + 2R_5R_L + 2R_Lr_o)}$$

$$\text{K-LP: } \frac{R_4R_L(R_5g_mr_o + R_5 - r_o)}{R_4R_5g_mr_o + R_4R_5 + 2R_4R_Lg_mr_o + 4R_4R_L + R_4r_o + 2R_5R_Lg_mr_o + 2R_5R_L + 2R_Lr_o}$$

$$\text{K-HP: } \frac{R_4R_L(R_5g_mr_o + R_5 - r_o)}{R_4R_5g_mr_o + R_4R_5 + 2R_4R_Lg_mr_o + 4R_4R_L + R_4r_o + 2R_5R_Lg_mr_o + 2R_5R_L + 2R_Lr_o}$$

$$\text{K-BP: } \frac{R_4R_L}{R_4 + 2R_L}$$

$$\text{Qz: } \frac{C_5\sqrt{\frac{1}{C_5L_5}}(R_5g_mr_o + R_5 - r_o)}{g_mr_o + 1}$$

$$\text{Wz: } \sqrt{\frac{1}{C_5L_5}}$$

**6.8 GE-8** 
$$Z(s) = \left(\infty, \infty, \infty, R_4, \frac{R_5\left(L_5s + \frac{1}{C_5s}\right)}{L_5s + R_5 + \frac{1}{C_5s}}, R_L\right)$$

### Parameters:

$$\begin{array}{l} \text{Q:} \ \, \frac{L_5\sqrt{\frac{1}{C_5L_5}}(R_4R_5g_mr_o + R_4R_5 + 2R_4R_Lg_mr_o + 4R_4R_L + R_4r_o + 2R_5R_Lg_mr_o + 2R_5R_L + 2R_Lr_o)}{R_5(2R_4R_Lg_mr_o + 4R_4R_L + R_4r_o + 2R_Lr_o)} \\ \text{W0:} \ \, \sqrt{\frac{1}{C_5L_5}} \\ \text{bandwidth:} \ \, \frac{R_5(2R_4R_Lg_mr_o + 4R_4R_L + R_4r_o + 2R_Lr_o)}{L_5(R_4R_5g_mr_o + R_4R_5 + 2R_4R_Lg_mr_o + 4R_4R_L + R_4r_o + 2R_5R_Lg_mr_o + 2R_5R_L + 2R_Lr_o)} \\ \text{K-LP:} \ \, \frac{R_4R_L(R_5g_mr_o + R_4R_5 + 2R_4R_Lg_mr_o + 4R_4R_L + R_4r_o + 2R_5R_Lg_mr_o + 2R_5R_L + 2R_Lr_o)}{R_4R_L(R_5g_mr_o + 4R_4R_L + R_4r_o + 2R_5R_Lg_mr_o + 2R_5R_L + 2R_Lr_o)} \\ \text{K-HP:} \ \, \frac{R_4R_5g_mr_o + R_4R_5 + 2R_4R_Lg_mr_o + 4R_4R_L + R_4r_o + 2R_5R_Lg_mr_o + 2R_5R_L + 2R_Lr_o}{R_4R_Lr_o} \\ \text{K-BP:} \ \, -\frac{R_4R_Lr_o}{2R_4R_Lg_mr_o + 4R_4R_L + R_4r_o + 2R_5R_Lg_mr_o + 2R_5R_L + 2R_Lr_o}{R_5r_o} \\ \text{Wz:} \ \, \sqrt{\frac{1}{C_5L_5}} \\ \end{array}$$

**6.9** GE-9 
$$Z(s) = \left(\infty, \infty, \infty, L_4 s + R_4 + \frac{1}{C_4 s}, R_5, R_L\right)$$

 $H(s) = \frac{R_L \left( C_4 L_4 s^2 + C_4 R_4 s + 1 \right) \left( R_5 g_m r_o + R_5 - r_o \right)}{C_4 L_4 R_5 g_m r_o s^2 + C_4 L_4 R_5 g^2 + 2 C_4 L_4 R_L g_m r_o s^2 + 4 C_4 L_4 R_L g^2 + C_4 R_4 R_5 g_m r_o s + C_4 R_4 R_L g_m r_o s + 4 C_4 R_4 R_L g_m r_o s + 2 C_4 R_5 R_L g_m r_o s + 2 C_4$ 

$$\begin{aligned} & \text{Q: } \frac{L_4\sqrt{\frac{1}{C_4L_4}}(R_5g_mr_o + R_5 + 2R_Lg_mr_o + 4R_L + r_o)}{R_4R_5g_mr_o + R_4R_5 + 2R_4R_Lg_mr_o + 4R_4R_L + R_4r_o + 2R_5R_Lg_mr_o + 2R_5R_L + 2R_Lr_o} \\ & \text{wo: } \sqrt{\frac{1}{C_4L_4}} \end{aligned}$$

```
bandwidth: \frac{R_4R_5g_mr_o + R_4R_5 + 2R_4R_Lg_mr_o + 4R_4R_L + R_4r_o + 2R_5R_Lg_mr_o + 2R_5R_L + 2R_Lr_o}{L_4(R_5g_mr_o + R_5 + 2R_Lg_mr_o + 4R_L + r_o)}
K-LP: \frac{R_L(R_5g_mr_o + R_5 - r_o)}{R_5g_mr_o + R_5 + 2R_Lg_mr_o + 4R_L + r_o}
K-HP: \frac{R_L(R_5g_mr_o + R_5 - r_o)}{R_5g_mr_o + R_5 + 2R_Lg_mr_o + 4R_L + r_o}
K-BP: \frac{R_4R_L(R_5g_mr_o + R_5 - r_o)}{R_4R_5g_mr_o + R_4R_5 + 2R_4R_Lg_mr_o + 4R_4R_L + R_4r_o + 2R_5R_Lg_mr_o + 2R_5R_L + 2R_Lr_o}
Qz: \frac{L_4\sqrt{\frac{1}{C_4L_4}}}{R_4}
Wz: \sqrt{\frac{1}{C_4L_4}}
```

**6.10** GE-10  $Z(s) = \left(\infty, \infty, \infty, \frac{L_4s}{C_4L_4s^2+1} + R_4, R_5, R_L\right)$ 

$$H(s) = \frac{R_L \left( R_5 g_m r_o + R_5 - r_o \right) \left( C_4 L_4 R_4 s^2 + L_4 s + R_4 \right)}{C_4 L_4 R_4 R_5 g_m r_o s^2 + C_4 L_4 R_4 R_5 g^2 + 2 C_4 L_4 R_4 R_L g^2 + C_4 L_4 R_4 R_L s^2 + 2 C_4 L_4 R_5 R_L g_m r_o s^2 + 2 C_4 L_4 R_5 g_m r_o s^2 + 2 C_4 L_4 R_4 r_o s^2 + 2 C_4 L_4 R_4 r_o s^2 + 2 C_4 L_4 R_5 g_m r_o s + L_4 R_5 g_m$$

### Parameters:

$$Q \colon \frac{C_4 \sqrt{\frac{1}{C_4 L_4}} (R_4 R_5 g_m r_o + R_4 R_5 + 2 R_4 R_L g_m r_o + 4 R_4 R_L + R_4 r_o + 2 R_5 R_L g_m r_o + 2 R_5 R_L + 2 R_L r_o)}{R_5 g_m r_o + R_5 + 2 R_L g_m r_o + 4 R_L + r_o}$$
 wo: 
$$\sqrt{\frac{1}{C_4 L_4}}$$
 bandwidth: 
$$\frac{R_5 g_m r_o + R_5 + 2 R_L g_m r_o + 4 R_L + r_o}{C_4 (R_4 R_5 g_m r_o + R_4 R_5 + 2 R_4 R_L g_m r_o + 4 R_4 R_L + R_4 r_o + 2 R_5 R_L g_m r_o + 2 R_5 R_L + 2 R_L r_o)}$$
 K-LP: 
$$\frac{R_4 R_L (R_5 g_m r_o + R_5 - r_o)}{R_4 R_5 g_m r_o + R_4 R_5 + 2 R_4 R_L g_m r_o + 4 R_4 R_L + R_4 r_o + 2 R_5 R_L g_m r_o + 2 R_5 R_L + 2 R_L r_o}$$
 K-HP: 
$$\frac{R_4 R_5 g_m r_o + R_4 R_5 + 2 R_4 R_L g_m r_o + 4 R_4 R_L + R_4 r_o + 2 R_5 R_L g_m r_o + 2 R_5 R_L + 2 R_L r_o}{R_5 g_m r_o + R_4 R_5 + 2 R_4 R_L g_m r_o + 4 R_4 R_L + R_4 r_o + 2 R_5 R_L g_m r_o + 2 R_5 R_L + 2 R_L r_o}$$
 K-BP: 
$$\frac{R_L (R_5 g_m r_o + R_5 - r_o)}{R_5 g_m r_o + R_5 + 2 R_L g_m r_o + 4 R_L + r_o}$$
 Qz: 
$$C_4 R_4 \sqrt{\frac{1}{C_4 L_4}}$$
 Wz: 
$$\sqrt{\frac{1}{C_4 L_4}}$$

### 7 AP

### 8 INVALID-NUMER

8.1 INVALID-NUMER-1  $Z(s) = \left(\infty, \infty, \infty, R_4, \frac{1}{C_5 s}, \frac{1}{C_L s}\right)$ 

$$H(s) = \frac{R_4 \left( -C_5 r_o s + g_m r_o + 1 \right)}{C_5 C_L R_4 r_o s^2 + 2 C_5 R_4 g_m r_o s + 4 C_5 R_4 s + 2 C_5 r_o s + C_L R_4 g_m r_o s + C_L R_4 s + 2 g_m r_o + 2}$$

### 8.2 INVALID-NUMER-2 $Z(s) = \left(\infty, \infty, \infty, R_4, \frac{1}{C_5 s}, \frac{R_L}{C_L R_L s + 1}\right)$

$$H(s) = \frac{R_4 R_L \left( -C_5 r_o s + g_m r_o + 1 \right)}{C_5 C_L R_4 R_L r_o s^2 + 2 C_5 R_4 R_L g_m r_o s + 4 C_5 R_4 R_L s + C_5 R_4 r_o s + 2 C_5 R_L r_o s + C_L R_4 R_L g_m r_o s + C_L R_4 R_L s + R_4 g_m r_o + R_4 + 2 R_L g_m r_o + 2 R_L r_o s + 2 R_4 R_L g_m r_o s$$

### Parameters:

### 8.3 INVALID-NUMER-3 $Z(s) = \left(\infty, \infty, \infty, R_4, \frac{R_5}{C_5 R_5 s + 1}, \frac{1}{C_L s}\right)$

### Parameters:

Q: 
$$\frac{\sqrt{2}C_5C_LR_4R_5r_o\sqrt{\frac{R_4g_mr_o+2R_4+R_5g_mr_o+R_5+r_o}{C_5C_LR_4R_5r_o}}}{\frac{2C_5R_4R_5g_mr_o+4C_5R_4R_5+2C_5R_5r_o+C_LR_4R_5g_mr_o+C_LR_4R_5+C_LR_4r_o}{C_5C_LR_4R_5r_o}}$$
 wo: 
$$\sqrt{2}\sqrt{\frac{R_4g_mr_o+2R_4+R_5g_mr_o+R_5+r_o}{C_5C_LR_4R_5r_o}}}$$
 bandwidth: 
$$\frac{2C_5R_4R_5g_mr_o+4C_5R_4R_5+2C_5R_5r_o+C_LR_4R_5g_mr_o+C_LR_4R_5+C_LR_4r_o}{C_5C_LR_4R_5r_o}}{\frac{2C_5R_4R_5g_mr_o+R_5-r_o}{(2R_4g_mr_o+2R_4+R_5g_mr_o+R_5+r_o)}}}$$
 K-HP: 
$$0$$
 K-BP: 
$$-\frac{C_5R_4R_5r_o}{2C_5R_4R_5g_mr_o+4C_5R_4R_5+2C_5R_5r_o+C_LR_4R_5g_mr_o+C_LR_4R_5+C_LR_4r_o}}{C_5C_LR_4R_5g_mr_o+C_LR_4R_5+C_LR_4r_o}}$$
 Qz: 
$$0$$
 Wz: None

## 8.4 INVALID-NUMER-4 $Z(s) = \left(\infty, \infty, \infty, R_4, \frac{R_5}{C_5R_5s+1}, \frac{R_L}{C_LR_Ls+1}\right)$

$$\begin{array}{l} \text{Q:} \ \, \frac{C_5C_LR_4R_5R_Lr_o\sqrt{\frac{R_4R_5g_mr_o+R_4R_5+2R_4R_Lg_mr_o+4R_4R_L+R_4r_o+2R_5R_Lg_mr_o+2R_5R_L+2R_Lr_o}{C_5C_LR_4R_5R_Lr_o}}{C_5C_LR_4R_5R_Lr_o}} \\ \text{Wo:} \ \, \sqrt{\frac{R_4R_5g_mr_o+4C_5R_4R_5R_L+C_5R_4R_5r_o+2C_5R_5R_Lr_o+C_LR_4R_5R_L+2R_Lr_o}{C_5C_LR_4R_5R_Lr_o}}} \\ \text{bandwidth:} \ \, \frac{2C_5R_4R_5R_Lg_mr_o+4C_5R_4R_5R_L+C_5R_4R_5r_o+2C_5R_5R_Lr_o+C_LR_4R_5R_Lg_mr_o+C_LR_4R_5R_L+C_LR_4R_Lr_o}{C_5C_LR_4R_5R_Lr_o}} \\ \text{K-LP:} \ \, \frac{R_4R_L(R_5g_mr_o+4C_5R_4R_5R_L+C_5R_4R_5r_o+2C_5R_5R_Lr_o+C_LR_4R_5R_Lg_mr_o+C_LR_4R_5R_L+C_LR_4R_Lr_o}{C_5C_LR_4R_5R_Lr_o}} \\ \text{K-HP:} \ \, 0 \\ \text{K-BP:} \ \, -\frac{C_5R_4R_5R_Lg_mr_o+4C_5R_4R_5R_L+C_5R_4R_5r_o+2C_5R_5R_Lr_o}{2C_5R_4R_5R_Lr_o}} \\ \text{Wz:} \ \, \text{None} \end{array}$$

## 8.5 INVALID-NUMER-5 $Z(s) = \left(\infty, \infty, \infty, R_4, R_5 + \frac{1}{C_5 s}, \frac{1}{C_L s}\right)$

$$H(s) = \frac{R_4 \left( C_5 R_5 g_m r_o s + C_5 R_5 s - C_5 r_o s + g_m r_o + 1 \right)}{C_5 C_L R_4 R_5 g_m r_o s^2 + C_5 C_L R_4 R_5 s^2 + C_5 C_L R_4 r_o s^2 + 2 C_5 R_4 g_m r_o s + 4 C_5 R_4 s + 2 C_5 R_5 g_m r_o s + 2 C_5 R_5 s + 2 C_5 r_o s + C_L R_4 g_m r_o s + C_L R_4 s + 2 g_m r_o + 2 C_5 R_5 g_m r_o s + 2 C_5 R_5 g_m r_o s + 2 C_5 R_5 g_m r_o s + C_5 R_5 g_m r_o s$$

### Parameters:

Q:  $\frac{\sqrt{2}C_5C_LR_4\sqrt{\frac{g_mr_o+1}{C_5C_LR_4(R_5g_mr_o+R_5+r_o)}}(R_5g_mr_o+R_5+r_o)}{2C_5R_4g_mr_o+4C_5R_4+2C_5R_5g_mr_o+2C_5R_5+2C_5r_o+C_LR_4g_mr_o+C_LR_4}$  wo:  $\sqrt{2}\sqrt{\frac{g_mr_o+1}{C_5C_LR_4(R_5g_mr_o+R_5+r_o)}}$  bandwidth:  $\frac{2C_5R_4g_mr_o+4C_5R_4+2C_5R_5g_mr_o+2C_5R_5+2C_5r_o+C_LR_4g_mr_o+C_LR_4}{C_5C_LR_4(R_5g_mr_o+R_5+r_o)}$  K-LP:  $\frac{R_4}{2}$  K-HP: 0 K-BP:  $\frac{C_5R_4(R_5g_mr_o+R_5-r_o)}{2C_5R_4g_mr_o+4C_5R_4+2C_5R_5g_mr_o+2C_5R_5+2C_5r_o+C_LR_4g_mr_o+C_LR_4}$  Qz: 0 Wz: None

### 8.6 INVALID-NUMER-6 $Z(s) = \left(\infty, \infty, \infty, R_4, R_5 + \frac{1}{C_5 s}, \frac{R_L}{C_L R_L s + 1}\right)$

 $H(s) = \frac{R_4 R_L \left( C_5 R_5 g_m r_o s + C_5 R_5 s - C_5 r_o s + g_m r_o + 1 \right)}{C_5 C_L R_4 R_5 R_L g_m r_o s^2 + C_5 C_L R_4 R_5 R_L s^2 + C_5 C_L R_4 R_L r_o s^2 + C_5 R_4 R_5 g_m r_o s + C_5 R_4 R_5 g_m r_o s + 2 C_5 R_4 R_L g_m r_o s + 2 C_5 R_5 R_L g_m r_o s + 2 C_5 R_5 R_L g_m r_o s + C_L R_4 R_L g_m r_o s + C_L R_4 R_L g_m r_o s + C_L R_4 R_L g_m r_o s + 2 C_5 R_5 R_L g_m r_o s + 2 C_5 R_5 R_L g_m r_o s + C_L R_4 R_L g_m r_o$ 

### Parameters:

Q: 
$$\frac{C_5C_LR_4R_L\sqrt{\frac{R_4g_mr_o+R_4+2R_Lg_mr_o+2R_L}{C_5C_LR_4R_L(R_5g_mr_o+R_5+r_o)}}(R_5g_mr_o+R_5+r_o)}{C_5R_4R_5g_mr_o+C_5R_4R_5+2C_5R_4R_Lg_mr_o+4C_5R_4R_L+C_5R_4r_o+2C_5R_5R_Lg_mr_o+2C_5R_5R_L+2C_5R_Lr_o+C_LR_4R_Lg_mr_o+C_LR_4R_L}}$$
wo: 
$$\sqrt{\frac{R_4g_mr_o+R_4+2R_Lg_mr_o+2R_L}{C_5C_LR_4R_L(R_5g_mr_o+R_5+r_o)}}$$
bandwidth: 
$$\frac{C_5R_4R_5g_mr_o+C_5R_4R_5+2C_5R_4R_Lg_mr_o+4C_5R_4R_L+C_5R_4r_o+2C_5R_5R_Lg_mr_o+2C_5R_5R_L+2C_5R_Lr_o+C_LR_4R_Lg_mr_o+C_LR_4R_L}{C_5C_LR_4R_L(R_5g_mr_o+R_5+r_o)}}$$
K-LP: 
$$\frac{R_4R_L}{R_4+2R_L}$$
K-HP: 0

K-BP: 
$$\frac{C_5R_4R_5g_mr_o+C_5R_4R_5+2C_5R_4R_Lg_mr_o+4C_5R_4R_L+C_5R_4r_o+2C_5R_5R_Lg_mr_o+2C_5R_5R_L+2C_5R_Lr_o+C_LR_4R_Lg_mr_o+C_LR_4R_L}{C_5R_4R_5g_mr_o+R_5-r_o)}$$
Wz: None

## 8.7 INVALID-NUMER-7 $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s}, R_5, R_L + \frac{1}{C_L s}\right)$

 $H(s) = \frac{\left(C_{L}R_{L}s+1\right)\left(R_{5}g_{m}r_{o}+R_{5}-r_{o}\right)}{2C_{4}C_{L}R_{5}R_{L}g_{m}r_{o}s^{2}+2C_{4}C_{L}R_{5}r_{c}s^{2}+2C_{4}R_{5}g_{m}r_{o}s+2C_{4}R_{5}s+2C_{4}r_{o}s+C_{L}R_{5}g_{m}r_{o}s+C_{L}R_{5}s+2C_{L}R_{L}g_{m}r_{o}s+4C_{L}R_{L}s+C_{L}r_{o}s+2g_{m}r_{o}+4r_{o}s+2C_{L}R_{5}g_{m}r_{o}s+C_{L}R_{5}g_{m}r_{o}s+C_{L}R_{5}g_{m}r_{o}s+4C_{L}R_{L}s+C_{L}r_{o}s+2g_{m}r_{o}+4r_{o}s+2c_{L}R_{5}g_{m}r_{o}s+2c$ 

## 8.8 INVALID-NUMER-8 $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s}, \frac{1}{C_5 s}, R_L\right)$

$$H(s) = \frac{R_L \left( -C_5 r_o s + g_m r_o + 1 \right)}{2C_4 C_5 R_L r_o s^2 + 2C_4 R_L g_m r_o s + 2C_4 R_L s + 2C_5 R_L g_m r_o s + 4C_5 R_L s + C_5 r_o s + g_m r_o + 1}$$

### Parameters:

 $\begin{array}{c} \text{Q:} \ \frac{\sqrt{2}C_4C_5R_Lr_o\sqrt{\frac{g_mr_o+1}{C_4C_5R_Lr_o}}}{2C_4R_Lg_mr_o+2C_4R_L+2C_5R_Lg_mr_o+4C_5R_L+C_5r_o}\\ \text{wo:} \ \frac{\sqrt{2}\sqrt{\frac{g_mr_o+1}{C_4C_5R_Lr_o}}}{2}\\ \text{bandwidth:} \ \frac{2C_4R_Lg_mr_o+2C_4R_L+2C_5R_Lg_mr_o+4C_5R_L+C_5r_o}{2C_4C_5R_Lr_o}\\ \text{K-LP:} \ R_L\\ \text{K-HP:} \ 0\\ \text{K-BP:} \ -\frac{C_5R_Lr_o}{2C_4R_Lg_mr_o+2C_4R_L+2C_5R_Lg_mr_o+4C_5R_L+C_5r_o}\\ \text{Qz:} \ 0\\ \text{Wz:} \ \text{None} \end{array}$ 

## 8.9 INVALID-NUMER-9 $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s}, \frac{1}{C_5 s}, \frac{R_L}{C_L R_L s + 1}\right)$

$$H(s) = \frac{R_L \left( -C_5 r_o s + g_m r_o + 1 \right)}{2C_4 C_5 R_L r_o s^2 + 2C_4 R_L g_m r_o s + 2C_4 R_L s + C_5 C_L R_L r_o s^2 + 2C_5 R_L g_m r_o s + 4C_5 R_L s + C_5 r_o s + C_L R_L g_m r_o s + C_L R_L s + g_m r_o + 1}$$

### Parameters:

$$C_5R_Lr_o\sqrt{\frac{g_mr_o+1}{C_5R_Lr_o(2C_4+C_L)}}(2C_4+C_L)}$$
 Q: 
$$\frac{2C_4R_Lg_mr_o+2C_4R_L+2C_5R_Lg_mr_o+4C_5R_L+C_5r_o+C_LR_Lg_mr_o+C_LR_L}{C_5R_Lr_o(2C_4+C_L)}$$
 wo: 
$$\sqrt{\frac{g_mr_o+1}{C_5R_Lr_o(2C_4+C_L)}}$$
 bandwidth: 
$$\frac{2C_4R_Lg_mr_o+2C_4R_L+2C_5R_Lg_mr_o+4C_5R_L+C_5r_o+C_LR_Lg_mr_o+C_LR_L}{C_5R_Lr_o(2C_4+C_L)}$$
 K-LP: 
$$R_L$$
 K-HP: 
$$0$$
 K-BP: 
$$-\frac{C_5R_Lr_o}{2C_4R_Lg_mr_o+2C_4R_L+2C_5R_Lg_mr_o+4C_5R_L+C_5r_o+C_LR_Lg_mr_o+C_LR_L}{C_5R_Lr_o}$$
 Qz: 
$$0$$
 Wz: None

## 8.10 INVALID-NUMER-10 $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s}, \frac{R_5}{C_5 R_5 s + 1}, R_L\right)$

Q: 
$$\frac{\sqrt{2}C_4C_5R_5R_Lr_o\sqrt{\frac{R_5g_mr_o+R_5+2R_Lg_mr_o+4R_L+r_o}{C_4C_5R_5R_Lr_o}}}{\frac{\sqrt{2}C_4R_5R_Lg_mr_o+2C_4R_5R_L+2C_4R_Lr_o+2C_5R_5R_Lg_mr_o+4C_5R_5R_L+C_5R_5r_o}}{\frac{\sqrt{2}\sqrt{\frac{R_5g_mr_o+R_5+2R_Lg_mr_o+4R_L+r_o}{C_4C_5R_5R_Lr_o}}}}{\frac{2}{C_4C_5R_5R_Lr_o}}}$$
 bandwidth: 
$$\frac{2C_4R_5R_Lg_mr_o+2C_4R_5R_L+2C_4R_Lr_o+2C_5R_5R_Lg_mr_o+4C_5R_5R_L+C_5R_5r_o}{2C_4C_5R_5R_Lr_o}}{\frac{2C_4C_5R_5R_Lr_o}{R_5g_mr_o+R_5+2R_Lg_mr_o+4R_L+r_o}}}$$
 K-HP: 
$$0$$
 K-BP: 
$$-\frac{C_5R_5R_Lr_o}{2C_4R_5R_Lg_mr_o+2C_4R_5R_L+2C_4R_Lr_o+2C_5R_5R_Lg_mr_o+4C_5R_5R_L+C_5R_5r_o}}{Qz: 0}$$
 Wz: None

**8.11** INVALID-NUMER-11 
$$Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s}, \frac{R_5}{C_5 R_5 s + 1}, \frac{1}{C_L s}\right)$$

$$H(s) = \frac{-C_5R_5r_os + R_5g_mr_o + R_5 - r_o}{2C_4C_5R_5r_os^2 + 2C_4R_5g_mr_os + 2C_4R_5s + 2C_4r_os + C_5C_LR_5r_os^2 + 2C_5R_5g_mr_os + 4C_5R_5s + C_LR_5g_mr_os + C_LR_5s + C_Lr_os + 2g_mr_o + 4C_5R_5s + C_LR_5g_mr_os + C_LR_5s + C$$

### Parameters:

 $\begin{array}{c} \sqrt{2}C_5R_5r_o\sqrt{\frac{g_mr_o+2}{C_5R_5r_o(2C_4+C_L)}}(2C_4+C_L)}\\ \text{Q:} \ \frac{\sqrt{2}C_4R_5g_mr_o+2C_4R_5+2C_4r_o+2C_5R_5g_mr_o+4C_5R_5+C_LR_5g_mr_o+C_LR_5+C_Lr_o}}{2C_4R_5g_mr_o+2C_5R_5r_o(2C_4+C_L)}\\ \text{wo:} \ \sqrt{2}\sqrt{\frac{g_mr_o+2}{C_5R_5r_o(2C_4+C_L)}}\\ \text{bandwidth:} \ \frac{2C_4R_5g_mr_o+2C_4R_5+2C_4r_o+2C_5R_5g_mr_o+4C_5R_5+C_LR_5g_mr_o+C_LR_5+C_Lr_o}{C_5R_5r_o(2C_4+C_L)}\\ \text{K-LP:} \ \frac{R_5g_mr_o+R_5-r_o}{2(g_mr_o+2)}\\ \text{K-HP:} \ 0\\ \text{K-BP:} \ -\frac{C_5R_5r_o}{2C_4R_5g_mr_o+2C_4R_5+2C_4r_o+2C_5R_5g_mr_o+4C_5R_5+C_LR_5g_mr_o+C_LR_5+C_Lr_o}}\\ \text{Qz:} \ 0\\ \text{Wz:} \ \text{None} \end{array}$ 

# 8.12 INVALID-NUMER-12 $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s}, \frac{R_5}{C_5 R_5 s+1}, \frac{R_L}{C_L R_L s+1}\right)$

### Parameters:

$$Q\colon \frac{C_5R_5R_Lr_o\sqrt{\frac{R_5g_mr_o+R_5+2R_Lg_mr_o+4R_L+r_o}{C_5R_5R_Lr_o(2C_4+C_L)}}}{2C_4R_5R_Lg_mr_o+2C_4R_5R_L+2C_4R_Lr_o+2C_5R_5R_Lg_mr_o+4C_5R_5R_L+C_5R_5r_o+C_LR_5R_Lg_mr_o+C_LR_5R_L+C_LR_Lr_o}$$
 wo: 
$$\sqrt{\frac{R_5g_mr_o+R_5+2R_Lg_mr_o+4R_L+r_o}{C_5R_5R_Lr_o(2C_4+C_L)}}$$
 bandwidth: 
$$\frac{2C_4R_5R_Lg_mr_o+2C_4R_5R_L+2C_4R_Lr_o+2C_5R_5R_Lg_mr_o+4C_5R_5R_L+C_5R_5r_o+C_LR_5R_Lg_mr_o+C_LR_5R_L+C_LR_Lr_o}{C_5R_5R_Lr_o(2C_4+C_L)}}$$
 K-LP: 
$$\frac{R_L(R_5g_mr_o+R_5-r_o)}{R_5g_mr_o+R_5+2R_Lg_mr_o+4R_L+r_o}$$
 K-HP: 
$$0$$
 K-BP: 
$$-\frac{C_5R_5R_Lr_o}{2C_4R_5R_Lg_mr_o+2C_4R_5R_L+2C_4R_Lr_o+2C_5R_5R_Lg_mr_o+4C_5R_5r_o+C_LR_5R_Lg_mr_o+C_LR_5R_L+C_LR_Lr_o}{C_5R_5R_Lg_mr_o+4C_5R_5R_L+C_5R_5r_o+C_LR_5R_Lg_mr_o+C_LR_5R_L+C_LR_Lr_o}$$
 Qz: 
$$0$$
 Wz: None

## 8.13 INVALID-NUMER-13 $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s}, R_5 + \frac{1}{C_5 s}, R_L\right)$

$$H(s) = \frac{R_L \left( C_5 R_5 g_m r_o s + C_5 R_5 s - C_5 r_o s + g_m r_o + 1 \right)}{2 C_4 C_5 R_5 R_L g_m r_o s^2 + 2 C_4 C_5 R_L s^2 + 2 C_4 C_5 R_L r_o s^2 + 2 C_4 R_L g_m r_o s + 2 C_4 R_L s + C_5 R_5 g_m r_o s + C_5 R_5 s + 2 C_5 R_L g_m r_o s + 4 C_5 R_L s + C_5 r_o s + g_m r_o + 1}$$

Q: 
$$\frac{\sqrt{2}C_{4}C_{5}R_{L}\sqrt{\frac{g_{m}r_{o}+1}{C_{4}C_{5}R_{L}(R_{5}g_{m}r_{o}+R_{5}+r_{o})}}(R_{5}g_{m}r_{o}+R_{5}+r_{o})}{2C_{4}R_{L}g_{m}r_{o}+2C_{4}R_{L}+C_{5}R_{5}g_{m}r_{o}+C_{5}R_{5}+2C_{5}R_{L}g_{m}r_{o}+4C_{5}R_{L}+C_{5}r_{o}}}{\sqrt{2}\sqrt{\frac{g_{m}r_{o}+1}{C_{4}C_{5}R_{L}(R_{5}g_{m}r_{o}+R_{5}+r_{o})}}}}$$
bandwidth: 
$$\frac{2C_{4}R_{L}g_{m}r_{o}+2C_{4}R_{L}+C_{5}R_{5}g_{m}r_{o}+C_{5}R_{5}+2C_{5}R_{L}g_{m}r_{o}+4C_{5}R_{L}+C_{5}r_{o}}{2C_{4}C_{5}R_{L}(R_{5}g_{m}r_{o}+R_{5}+r_{o})}}$$
K-LP:  $R_{L}$ 
K-HP: 0

K-BP: 
$$\frac{C_{5}R_{L}(R_{5}g_{m}r_{o}+R_{5}-r_{o})}{2C_{4}R_{L}g_{m}r_{o}+2C_{4}R_{L}+C_{5}R_{5}g_{m}r_{o}+C_{5}R_{5}+2C_{5}R_{L}g_{m}r_{o}+4C_{5}R_{L}+C_{5}r_{o}}}$$
Qz: 0
Wz: None

## 8.14 INVALID-NUMER-14 $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s}, R_5 + \frac{1}{C_5 s}, \frac{R_L}{C_L R_L s + 1}\right)$

 $H(s) = \frac{R_L \left( C_5 R_5 g_m r_o s + C_5 R_5 s - C_5 r_o s + g_m r_o + 1 \right)}{2 C_4 C_5 R_5 R_L g_m r_o s^2 + 2 C_4 C_5 R_L r_o s^2 + 2 C_4 R_L g_m r_o s + 2 C_4 R_L g_m r_o s + 2 C_4 R_L g_m r_o s^2 + C_5 C_L R_5 R_L g^2 + C_5 C_L R_5 R_L g^2 + C_5 C_L R_5 r_o s + C_5 R_5 g_m r_o s +$ 

### Parameters:

 $\begin{array}{l} \mathbf{Q}: \frac{C_5R_L\sqrt{\frac{g_mr_o+1}{C_5R_L(2C_4R_5g_mr_o+2C_4R_5+2C_4r_o+C_LR_5g_mr_o+C_LR_5+C_Lr_o)}}}{2C_4R_Lg_mr_o+2C_4R_5+2C_4r_o+C_LR_5g_mr_o+C_LR_5+C_Lr_o)} \\ (2C_4R_5g_mr_o+2C_4R_L+C_5R_5g_mr_o+C_5R_5+2C_5R_Lg_mr_o+4C_5R_L+C_5r_o+C_LR_Lg_mr_o+C_LR_L} \\ \mathbf{W0}: \sqrt{\frac{g_mr_o+1}{C_5R_L(2C_4R_5g_mr_o+2C_4R_5+2C_4r_o+C_LR_5g_mr_o+C_LR_5+C_Lr_o)}}} \\ \mathbf{bandwidth}: \frac{2C_4R_Lg_mr_o+2C_4R_L+C_5R_5g_mr_o+C_5R_5+2C_5R_Lg_mr_o+4C_5R_L+C_5r_o+C_LR_Lg_mr_o+C_LR_L}{C_5R_L(2C_4R_5g_mr_o+2C_4R_5+2C_4r_o+C_LR_5g_mr_o+C_LR_5+C_Lr_o)}} \\ \mathbf{K-LP}: R_L \\ \mathbf{K-HP}: 0 \\ \mathbf{K-BP}: \frac{C_5R_L(R_5g_mr_o+2C_4R_L+C_5R_5g_mr_o+C_5R_5+2C_5R_Lg_mr_o+4C_5R_L+C_5r_o+C_LR_Lg_mr_o+C_LR_L}{C_5R_L(R_5g_mr_o+C_5R_5+2C_5R_Lg_mr_o+4C_5R_L+C_5r_o+C_LR_Lg_mr_o+C_LR_L)}} \\ \mathbf{Wz}: \ \mathbf{None} \end{array}$ 

## 8.15 INVALID-NUMER-15 $Z(s) = \left(\infty, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, R_5, R_L + \frac{1}{C_L s}\right)$

 $H(s) = \frac{R_4 \left( C_L R_L s + 1 \right) \left( R_5 g_m r_o + R_5 - r_o \right)}{2 C_4 C_L R_4 R_5 R_L g_m r_o s^2 + 2 C_4 C_L R_4 R_5 R_L s^2 + 2 C_4 C_L R_4 R_5 g_m r_o s + 2 C_4 R_4 R_5 g_m r_o s + 2 C_4 R_4 R_5 g_m r_o s + C_L R_4 R_5 g_m r_o s + C_L R_4 R_5 g_m r_o s + 2 C_L R_5 R_L g_m$ 

### Parameters:

 $Q: \frac{2C_4C_LR_4R_L\sqrt{\frac{R_4g_mr_o+2R_4+R_5g_mr_o+R_5+r_o}{C_4C_LR_4R_L(R_5g_mr_o+R_5+r_o)}}(R_5g_mr_o+R_5+r_o)}{2C_4R_4R_5g_mr_o+2C_4R_4R_5+2C_LR_4R_5g_mr_o+C_LR_4R_5+2C_LR_4R_Lg_mr_o+4C_LR_4R_L+C_LR_4r_o+2C_LR_5R_Lg_mr_o+2C_LR_5R_L+2C_LR_Lr_o}}\\ \text{wo: } \sqrt{\frac{R_4g_mr_o+2R_4+R_5g_mr_o+R_5+r_o}{C_4C_LR_4R_L(R_5g_mr_o+R_5+r_o)}}}\\ \text{bandwidth: } \frac{2C_4R_4R_5g_mr_o+R_5+r_o}{2C_4R_4R_5g_mr_o+2C_4R_4R_5+2C_4R_4r_o+C_LR_4R_5g_mr_o+4C_LR_4R_L+C_LR_4r_o+2C_LR_5R_Lg_mr_o+2C_LR_5R_L+2C_LR_Lr_o}}{2C_4C_LR_4R_L(R_5g_mr_o+R_5+r_o)}}\\ \text{K-LP: } \frac{R_4(R_5g_mr_o+R_5-r_o)}{2(R_4g_mr_o+2R_4+R_5g_mr_o+R_5+r_o)}}{2C_4R_4R_5g_mr_o+R_5+r_o)}\\ \text{K-HP: 0}\\ \text{K-BP: } \frac{C_LR_4R_L(R_5g_mr_o+R_5-r_o)}{2C_4R_4R_5g_mr_o+2C_4R_4R_5+2C_4R_4r_o+C_LR_4R_5g_mr_o+4C_LR_4R_L+C_LR_4r_o+2C_LR_5R_L+2C_LR_Lr_o}}{2C_4R_4R_5g_mr_o+2C_4R_4R_5+2C_4R_4r_o+C_LR_4R_5g_mr_o+4C_LR_4R_L+C_LR_4r_o+2C_LR_5R_L+2C_LR_Lr_o}}\\ \text{Wz: None}$ 

## 8.16 INVALID-NUMER-16 $Z(s) = \left(\infty, \infty, \infty, \frac{R_4}{C_4R_4s+1}, \frac{1}{C_5s}, R_L\right)$

 $H(s) = \frac{R_4 R_L \left( -C_5 r_o s + g_m r_o + 1 \right)}{2 C_4 C_5 R_4 R_L r_o s^2 + 2 C_4 R_4 R_L g_m r_o s + 2 C_4 R_4 R_L g_m r_o s + 4 C_5 R_4 R_L g_m r_o s + 4 C_5 R_4 R_L s + C_5 R_4 r_o s + 2 C_5 R_L r_o s + R_4 g_m r_o + R_4 + 2 R_L g_m r_o + 2 R_L g_m r_o + 2 R_L g_m r_o s + 2 R_2 g_m r_o s + 2 R$ 

8.17 INVALID-NUMER-17 
$$Z(s) = \left(\infty, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, \frac{1}{C_5 s}, \frac{1}{C_L s}\right)$$

$$H(s) = \frac{R_4 \left( -C_5 r_o s + g_m r_o + 1 \right)}{2C_4 C_5 R_4 r_o s^2 + 2C_4 R_4 g_m r_o s + 2C_4 R_4 s + C_5 C_L R_4 r_o s^2 + 2C_5 R_4 g_m r_o s + 4C_5 R_4 s + 2C_5 r_o s + C_L R_4 g_m r_o s + C_L R_4 s + 2g_m r_o + 2C_4 R_4 g_m r_o s + C_4 R_4 g_m r_o s + C_5 R_5 g_m r_o s + C_5 R_5 g_m r_o s + C_5 R_5 g$$

Parameters:

## **8.18** INVALID-NUMER-18 $Z(s) = \left(\infty, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, \frac{1}{C_5 s}, \frac{R_L}{C_L R_L s + 1}\right)$

$$H(s) = \frac{R_4 R_L \left( -C_5 r_o s + g_m r_o + 1 \right)}{2 C_4 C_5 R_4 R_L r_o s^2 + 2 C_4 R_4 R_L g_m r_o s + 2 C_4 R_4 R_L s + C_5 C_L R_4 R_L r_o s^2 + 2 C_5 R_4 R_L g_m r_o s + 4 C_5 R_4 R_L s + C_5 R_4 r_o s + 2 C_5 R_L r_o s + C_L R_4 R_L g_m r_o s + C_L R_4 R_L g_m r_o + R_4 + 2 R_L g_m r_o + 2 R_L g_m r_o s + 2 C_5 R_4 R_L g_m$$

### Parameters:

$$\begin{array}{c} C_5R_4R_Lr_o\sqrt{\frac{R_4g_mr_o+R_4+2R_Lg_mr_o+2R_L}{C_5R_4R_Lr_o(2C_4+C_L)}}(2C_4+C_L)}\\ Q\colon \frac{1}{2C_4R_4R_Lg_mr_o+2C_4R_4R_L+2C_5R_4R_Lg_mr_o+4C_5R_4R_L+C_5R_4r_o+2C_5R_Lr_o+C_LR_4R_Lg_mr_o+C_LR_4R_L}\\ \text{wo: } \sqrt{\frac{R_4g_mr_o+R_4+2R_Lg_mr_o+2R_L}{C_5R_4R_Lr_o(2C_4+C_L)}}\\ \text{bandwidth: } \frac{2C_4R_4R_Lg_mr_o+2C_4R_4R_L+2C_5R_4R_Lg_mr_o+4C_5R_4R_L+C_5R_4r_o+2C_5R_Lr_o+C_LR_4R_Lg_mr_o+C_LR_4R_L}{C_5R_4R_Lr_o(2C_4+C_L)}\\ \text{K-LP: } \frac{R_4R_L}{R_4+2R_L}\\ \text{K-HP: 0}\\ \text{K-BP: } -\frac{C_5R_4R_Lr_o}{2C_4R_4R_Lg_mr_o+2C_4R_4R_L+2C_5R_4R_Lg_mr_o+4C_5R_4R_L+C_5R_4r_o+2C_5R_Lr_o+C_LR_4R_Lg_mr_o+C_LR_4R_L}\\ \text{Qz: 0}\\ \text{Wz: None} \end{array}$$

## 8.19 INVALID-NUMER-19 $Z(s) = \left(\infty, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, \frac{R_5}{C_5 R_5 s + 1}, R_L\right)$

 $H(s) = \frac{R_4 R_L \left(-C_5 R_5 r_o s + R_5 g_m r_o + R_5 - r_o\right)}{2 C_4 C_5 R_4 R_5 R_L r_o s^2 + 2 C_4 R_4 R_5 R_L g_m r_o s + 2 C_4 R_4 R_5 R_L s + 2 C_4 R_4 R_5 R_L g_m r_o s + 4 C_5 R_4 R_5 R_L s + C_5 R_4 R_5 r_o s + 2 C_5 R_5 R_L r_o s + R_4 R_5 g_m r_o + R_4 R_5 + 2 R_4 R_L g_m r_o + 4 R_4 R_L + R_4 r_o + 2 R_5 R_L g_m r_o + 2 R_5 R_L + 2 R_L r_o r_o + 2 R_5 R_L r_o s + 2 R_5 R_L r$ 

$$\begin{aligned} & \text{Q:} \ \frac{\sqrt{2}C_4C_5R_4R_5R_Lr_o\sqrt{\frac{R_4R_5g_mr_o + R_4R_5 + 2R_4R_Lg_mr_o + 4R_4R_L + R_4r_o + 2R_5R_Lg_mr_o + 2R_5R_L + 2R_Lr_o}}{C_4C_5R_4R_5R_Lg_mr_o + 4C_5R_4R_5R_Lr_o} \\ & \text{Wo:} \ \sqrt{\frac{\frac{R_4R_5g_mr_o}{2} + \frac{R_4R_5}{2} + R_4R_Lg_mr_o + 2R_4R_L + \frac{R_4r_o}{2} + R_5R_Lg_mr_o + R_5R_L + R_Lr_o}}{C_4C_5R_4R_5R_Lr_o}} \\ & \text{bandwidth:} \ \frac{\sqrt{2}\sqrt{\frac{\frac{R_4R_5g_mr_o}{2} + \frac{R_4R_5}{2} + R_4R_Lg_mr_o + 2R_4R_L + \frac{R_4r_o}{2} + R_5R_Lg_mr_o + R_5R_L + R_Lr_o}}{C_4C_5R_4R_5R_Lr_o}}{C_4C_5R_4R_5R_Lr_o} \\ & \text{bandwidth:} \ \frac{\sqrt{2}\sqrt{\frac{\frac{R_4R_5g_mr_o}{2} + \frac{R_4R_5}{2} + R_4R_Lg_mr_o + 2R_4R_L + \frac{R_4r_o}{2} + R_5R_Lg_mr_o + R_5R_L + R_Lr_o}}{C_4C_5R_4R_5R_Lr_o}}{C_4C_5R_4R_5R_Lr_o} \\ & \text{bandwidth:} \ \frac{\sqrt{2}\sqrt{\frac{R_4R_5g_mr_o}{2} + \frac{R_4R_5}{2} + R_4R_Lg_mr_o + 2R_4R_L + \frac{R_4r_o}{2} + R_5R_Lg_mr_o + R_5R_L + R_Lr_o}}{C_4C_5R_4R_5R_Lr_o}} \\ & \text{bandwidth:} \ \frac{\sqrt{2}\sqrt{\frac{R_4R_5g_mr_o}{2} + \frac{R_4R_5g_mr_o}{2} + \frac{R_4R_5g_mr_o + 2R_4R_L + \frac{R_4r_o}{2} + R_5R_Lg_mr_o + R_5R_L + R_Lr_o}}{C_4C_5R_4R_5R_Lr_o}} \\ & \text{bandwidth:} \ \frac{\sqrt{2}\sqrt{\frac{R_4R_5g_mr_o}{2} + \frac{R_4R_5g_mr_o}{2} + \frac{R_4R_5g_mr_o + 2R_4R_Lg_mr_o + R_4R_5R_L + 2C_4R_4R_5R_L + 2C_4R_4R_5R_L + C_5R_4R_5R_L + C_5R_4R_5r_o + 2C_5R_5R_L + C_5R_4R_5R_L + C_5R_$$

### **8.20** INVALID-NUMER-20 $Z(s) = \left(\infty, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, \frac{R_5}{C_5 R_5 s + 1}, \frac{1}{C_L s}\right)$

### Parameters:

 $\frac{\sqrt{2}C_5R_4R_5r_o\sqrt{\frac{R_4g_mr_o+2R_4+R_5g_mr_o+R_5+r_o}{C_5R_4R_5r_o(2C_4+C_L)}}}{2C_4R_4R_5g_mr_o+2C_4R_4R_5+2C_4R_4r_o+2C_5R_4R_5g_mr_o+4C_5R_4R_5+2C_5R_5r_o+C_LR_4R_5g_mr_o+C_LR_4R_5+C_LR_4r_o} \\ \text{wo: } \sqrt{2}\sqrt{\frac{R_4g_mr_o+2R_4+R_5g_mr_o+R_5+r_o}{C_5R_4R_5r_o(2C_4+C_L)}} \\ \text{bandwidth: } \frac{2C_4R_4R_5g_mr_o+2C_4R_4R_5+2C_4R_4r_o+2C_5R_4R_5g_mr_o+4C_5R_4R_5+2C_5R_5r_o+C_LR_4R_5g_mr_o+C_LR_4R_5+C_LR_4r_o}{C_5R_4R_5r_o(2C_4+C_L)} \\ \text{K-LP: } \frac{R_4(R_5g_mr_o+2C_4R_4R_5+2C_4R_4r_o+2C_5R_4R_5g_mr_o+4C_5R_4R_5+2C_5R_5r_o+C_LR_4R_5g_mr_o+C_LR_4R_5+C_LR_4r_o}{2(R_4g_mr_o+2R_4+R_5g_mr_o+R_5+r_o)} \\ \text{K-BP: } 0 \\ \text{K-BP: } -\frac{C_5R_4R_5r_o}{2C_4R_4R_5g_mr_o+2C_4R_4R_5+2C_4R_4r_o+2C_5R_4R_5g_mr_o+4C_5R_4R_5+2C_5R_5r_o+C_LR_4R_5g_mr_o+C_LR_4R_5+C_LR_4r_o}{2C_5R_4R_5g_mr_o+4C_5R_4R_5+2C_5R_5r_o+C_LR_4R_5g_mr_o+C_LR_4R_5+C_LR_4r_o} \\ \text{Wz: None} \\ \end{aligned}$ 

## 8.21 INVALID-NUMER-21 $Z(s) = \left(\infty, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, \frac{R_5}{C_5 R_5 s + 1}, \frac{R_L}{C_L R_L s + 1}\right)$

 $H(s) = \frac{R_4 R_L \left( -C_5 R_5 r_o s + R_5 g_m r_o + R_5 - r_o \right)}{2 C_4 C_5 R_4 R_5 R_L r_o s^2 + 2 C_4 R_4 R_5 R_L g_m r_o s + 2 C_4 R_4 R_5 R_L s + 2 C_4 R_4 R_5 R_L r_o s^2 + 2 C_5 R_4 R_5 R_L g_m r_o s + 4 C_5 R_4 R_5 R_L r_o s + 2 C_5 R_5 R_L r_o s + C_L R_4 R_5 R_L g_m r_o s$ 

### Parameters:

$$C_{5}R_{4}R_{5}R_{L}r_{o}\sqrt{\frac{R_{4}R_{5}gmr_{o}+R_{4}R_{5}+2R_{4}R_{L}gmr_{o}+4R_{4}R_{L}+R_{4}r_{o}+2R_{5}R_{L}gmr_{o}+2R_{5}R_{L}+2r_{c}}{C_{5}R_{4}R_{5}R_{L}r_{o}}(2C_{4}+C_{L})}}}$$
Q: 
$$\frac{C_{5}R_{4}R_{5}R_{L}r_{o}+2C_{4}R_{4}R_{5}R_{L}+2C_{4}R_{4}R_{L}r_{o}+2C_{5}R_{4}R_{5}R_{L}+C_{5}R_{4}R_{5}R_{L}+C_{5}R_{4}R_{5}r_{o}+2C_{5}R_{5}R_{L}r_{o}+C_{L}R_{4}R_{5}R_{L}+C_{L}R_{4}R_{5}R_{L}+C_{L}R_{4}R_{L}r_{o}}}{C_{5}R_{4}R_{5}R_{L}r_{o}+2C_{5}R_{4}R_{5}R_{L}+2C_{4}R_{4}R_{L}r_{o}+2R_{5}R_{L}gmr_{o}+4C_{5}R_{4}R_{5}r_{o}+2C_{5}R_{5}R_{L}r_{o}+C_{L}R_{4}R_{5}R_{L}+C_{L}R_{4}R_{L}r_{o}}}$$
wo: 
$$\sqrt{\frac{R_{4}R_{5}gmr_{o}+R_{4}R_{5}+2R_{4}R_{L}gmr_{o}+4R_{4}R_{L}+R_{4}r_{o}+2R_{5}R_{L}gmr_{o}+4C_{5}R_{4}R_{5}r_{c}+2C_{5}R_{5}R_{L}r_{o}+C_{L}R_{4}R_{5}R_{L}+C_{L}R_{4}R_{L}r_{o}}}{C_{5}R_{4}R_{5}R_{L}+2C_{4}R_{4}R_{L}r_{o}+2C_{5}R_{4}R_{5}R_{L}+2C_{4}R_{4}R_{5}r_{c}+2C_{5}R_{5}R_{L}+C_{5}R_{4}R_{5}r_{o}+2C_{5}R_{5}R_{L}r_{o}+C_{L}R_{4}R_{5}R_{L}+C_{L}R_{4}R_{L}r_{o}}}$$
K-LP: 
$$\frac{R_{4}R_{L}(R_{5}gmr_{o}+R_{4}R_{c}+2R_{5}R_{L}gmr_{o}+2R_{5}R_{L}+2R_{L}r_{o}}}{R_{4}R_{4}R_{5}R_{L}+2R_{4}R_{4}R_{c}+2R_{5}R_{L}gmr_{o}+2R_{5}R_{L}+2R_{L}r_{o}}}}$$
K-BP: 
$$-\frac{C_{5}R_{4}R_{5}R_{L}r_{o}}{2C_{4}R_{4}R_{5}R_{L}+2C_{4}R_{4}R_{L}r_{o}+2C_{5}R_{4}R_{5}R_{L}+2C_{5}R_{4}R_{5}R_{L}+C_{5}R_{4}R_{5}r_{o}+2C_{5}R_{5}R_{L}r_{o}+C_{L}R_{4}R_{5}R_{L}+C_{L}R_{4}R_{L}r_{o}}}{2C_{5}R_{4}R_{5}R_{L}+2C_{4}R_{4}R_{L}r_{o}+2C_{5}R_{4}R_{5}R_{L}+2C_{4}R_{4}R_{5}R_{L}+2C_{5}R_$$

## **8.22** INVALID-NUMER-22 $Z(s) = \left(\infty, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, R_5 + \frac{1}{C_5 s}, R_L\right)$

 $H(s) = \frac{R_4 R_L \left( C_5 R_5 g_m r_o s + C_5 R_5 s - C_5 r_o s + g_m r_o + 1 \right)}{2 C_4 C_5 R_4 R_5 R_L g_m r_o s^2 + 2 C_4 C_5 R_4 R_5 R_L s^2 + 2 C_4 C_5 R_4 R_L g_m r_o s + 2 C_4 R_4 R_L g_m r_o s + 2 C_5 R_4 R_5 g_m r_o s + 2 C_5 R_4 R_L g_m r_o s + 2 C_5 R_4 R_L g_m r_o s + 2 C_5 R_4 R_L g_m r_o s + 2 C_5 R_5 R_L g_m r_o s$ 

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 \begin{array}{c} \sqrt{2}C_{4}C_{5}R_{4}R_{L}\sqrt{\frac{R_{4}g_{m}r_{o}+R_{4}+2R_{L}g_{m}r_{o}+2R_{L}}{C_{4}C_{5}R_{4}R_{L}}(R_{5}g_{m}r_{o}+R_{5}+r_{o})}}(R_{5}g_{m}r_{o}+R_{5}+r_{o})} \\ Q: \frac{2C_{4}R_{4}R_{L}g_{m}r_{o}+2C_{4}R_{4}R_{L}+C_{5}R_{4}R_{5}g_{m}r_{o}+C_{5}R_{4}R_{5}+2C_{5}R_{4}R_{L}}{C_{4}C_{5}R_{4}R_{L}}(R_{5}g_{m}r_{o}+AC_{5}R_{4}R_{L}+C_{5}R_{4}r_{o}+2C_{5}R_{5}R_{L}+2C_{5}R_{5}R_{L}+2C_{5}R_{L}+2C_{5}R_{L}+2C_{5}R_{L}+2C_{5}R_{L}+2C_{5}R_{L}+2C_{5}R_{L}+2C_{5}R_{L}+2C_{5}R_{L}+2C_{5}R_{L}+2C_{5}R_{L}+2C_{5}R_{L}+2C_{5}R_{L}+2C_{5}R_{L}+2C_{5}R_{L}+2C_{5}R_{L}+2C_{5}R_{L}+2C_{5}R_{L}+2C_{5}R_{L}+2C_{5}R_{L}+2C_{5}R_{L}+2C_{5}R_{L}+2C_{5}R_{L}+2C_{5}R_{L}+2C_{5}R_{L}+2C_{5}R_{L}+2C_{5}R_{L}+2C_{5}R_{L}+2C_{5}R_{L}+2C_{5}R_{L}+2C_{5}R_{L}+2C_{5}R_{L}+2C_{5}R_{L}+2C_{5}R_{L}+2C_{5}R_{L}+2C_{5}R_{L}+2C_{5}R_{L}+2C_{5}R_{L}+2C_{5}R_{L}+2C_{5}R_{L}+2C_{5}R_{L}+2C_{5}R_{L}+2C_{5}R_{L}+2C_{5}R_{L}+2C_{5}R_{L}+2C_{5}R_{L}+2C_{5}R_{L}+2C_{5}R_{L}+2C_{5}R_{L}+2C_{5}R_{L}+2C_{5}R_{L}+2C_{5}R_{L}+2C_{5}R_{L}+2C_{5}R_{L}+2C_{5}R_{L}+2C_{5}R_{L}+2C_{5}R_{L}+2C_{5}R_{L}+2C_{5}R_{L}+2C_{5}R_{L}+2C_{5}R_{L}+2C_{5}R_{L}+2C_{5}R_{L}+2C_{5}R_{L}+2C_{5}R_{L}+2C_{5}R_{L}+2C_{5}R_{L}+2C_{5}R_{L}+2C_{5}R_{L}+2C_{5}R_{L}+2C_{5}R_{L}+2C_{5}R_{L}+2C_{5}R_{L}+2C_{5}R_{L}+2C_{5}R_{L}+2C_{5}R_{L}+2C_{5}R_{L}+2C_{5}R_{L}+2C_{5}R_{L}+2C_{5}R_{L}+2C_{5}R_{L}+2C_{5}R_{L}+2C_{5}R_{L}+2C_{5}R_{L}+2C_{5}R_{L}+2C_{5}R_{L}+2C_{5}R_{L}+2C_{5}R_{L}+2C_{5}R_{L}+2C_{5}R_{L}+2C_{5}R_{L}+2C_{5}R_{L}+2C_{5}R_{L}+2C_{5}R_{L}+2C_{5}R_{L}+2C_{5}R_{L}+2C_{5}R_{L}+2C_{5}R_{L}+2C_{5}R_{L}+2C_{5}R_{L}+2C_{5}R_{L}+2C_{5}R_{L}+2C_{5}R_{L}+2C_{5}R_{L}+2C_{5}R_{L}+2C_{5}R_{L}+2C_{5}R_{L}+2C_{5}R_{L}+2C_{5}R_{L}+2C_{5}R_{L}+2C_{5}R_{L}+2C_{5}R_{L}+2C_{5}R_{L}+2C_{5}R_{L}+2C_{5}R_{L}+2C_{5}R_{L}+2C_{5}R_{L}+2C_{5}R_{L}+2C_{5}R_{L}+2C_{5}R_{L}+2C_{5}R_{L}+2C_{5}R_{L}+2C_{5}R_{L}+2C_{5}R_{L}+2C_{5}R_{L}+2C_{5}R_{L}+2C_{5}R_{L}+2C_{5}R_{L}+2C_{5}R_{L}+2C_{5}R_{L}+2C_{5}R_{L}+2C_{5}R_{L}+2C_{5}R_{L}+2C_{5}R_{L}+2C_{5}R_{L}+2C_{5}R_{L}+2C_{5}R_{L}+2C_{5}R_{L}+2C_{5}R_{L}+2C_{5}R_
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8.23 INVALID-NUMER-23 Z(s) = \left(\infty, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, R_5 + \frac{1}{C_5 s}, \frac{1}{C_L s}\right)
```

 $H(s) = \frac{R_4 \left( C_5 R_5 g_m r_o s + C_5 R_5 s - C_5 r_o s + g_m r_o + 1 \right)}{2 C_4 C_5 R_4 R_5 g_m r_o s^2 + 2 C_4 C_5 R_4 R_5 s^2 + 2 C_4 C_5 R_4 r_o s^2 + 2 C_4 R_4 g_m r_o s + 2 C_4 R_4 g_m r_o s^2 + C_5 C_L R_4 R_5 g_m r_o s^2 + C_5 C_L R_4 r_o s^2 + 2 C_5 R_5 g_m r_o s + C_L R_4 g_m r_o s + C_$ 

### Parameters:

 $\begin{array}{c} \sqrt{2}C_{5}R_{4}\sqrt{\frac{g_{m}r_{o}+1}{C_{5}R_{4}(2C_{4}R_{5}g_{m}r_{o}+2C_{4}R_{5}+2C_{4}r_{o}+C_{L}R_{5}g_{m}r_{o}+C_{L}R_{5}+C_{L}r_{o})}}(2C_{4}R_{5}g_{m}r_{o}+2C_{4}R_{5}+2C_{4}r_{o}+C_{L}R_{5}g_{m}r_{o}+C_{L}R_{5}+C_{L}r_{o})}\\ \frac{2C_{4}R_{4}g_{m}r_{o}+2C_{4}R_{4}+2C_{5}R_{4}g_{m}r_{o}+4C_{5}R_{4}+2C_{5}R_{5}g_{m}r_{o}+2C_{5}R_{5}+2C_{5}r_{o}+C_{L}R_{4}g_{m}r_{o}+C_{L}R_{4}}{2(C_{4}R_{5}g_{m}r_{o}+2C_{4}R_{5}+2C_{4}r_{o}+C_{L}R_{5}g_{m}r_{o}+C_{L}R_{5}+C_{L}r_{o})}\\ \text{bandwidth:} & \frac{g_{m}r_{o}+1}{C_{5}R_{4}(2C_{4}R_{5}g_{m}r_{o}+2C_{4}R_{5}+2C_{4}r_{o}+C_{L}R_{5}g_{m}r_{o}+C_{L}R_{5}+C_{L}r_{o})}{C_{5}R_{4}(2C_{4}R_{5}g_{m}r_{o}+2C_{4}R_{4}+2C_{5}R_{4}g_{m}r_{o}+4C_{5}R_{4}+2C_{5}R_{5}g_{m}r_{o}+2C_{5}R_{5}+2C_{5}r_{o}+C_{L}R_{4}g_{m}r_{o}+C_{L}R_{4}}\\ \text{K-LP:} & \frac{R_{4}}{2}\\ \text{K-HP:} & 0\\ \text{K-BP:} & \frac{C_{5}R_{4}(R_{5}g_{m}r_{o}+R_{5}-r_{o})}{2C_{4}R_{4}g_{m}r_{o}+2C_{4}R_{4}+2C_{5}R_{4}g_{m}r_{o}+4C_{5}R_{4}+2C_{5}R_{5}g_{m}r_{o}+2C_{5}R_{5}+2C_{5}r_{o}+C_{L}R_{4}g_{m}r_{o}+C_{L}R_{4}}\\ \text{Wz:} & \text{None} \end{array}$ 

## 8.24 INVALID-NUMER-24 $Z(s) = \left(\infty, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, R_5 + \frac{1}{C_5 s}, \frac{R_L}{C_L R_L s + 1}\right)$

 $H(s) = \frac{R_4 R_L \left( C_5 R_5 g_m r_o s + C_5 R_5 s - C_5 r_o s + g_m r_o + 1 \right)}{2 C_4 C_5 R_4 R_5 R_L g_m r_o s^2 + 2 C_4 C_5 R_4 R_L r_o s^2 + 2 C_4 R_4 R_L r_o s^2 + 2 C_4 R_4 R_L r_o s^2 + C_5 C_L R_4 R_5 R_L g_m r_o s^2 + C_5 R_4 R_5 g_m r_o s + C_5 R_4 R_5 g_m r_o s + 4 C_5 R_4 R_L g_m r_o s + 4 C_5 R_4 R_L g_m r_o s + 2 C_5 R_4 R_L g_m r_o s + 2$ 

### Parameters:

$$\begin{array}{c} C_{5}R_{4}R_{L}\sqrt{\frac{R_{4}g_{m}r_{o}+R_{4}+2R_{L}g_{m}r_{o}+2R_{L}}{C_{5}R_{4}R_{L}(2C_{4}R_{5}g_{m}r_{o}+2C_{4}R_{5}+2C_{4}r_{o}+C_{L}R_{5}g_{m}r_{o}+2C_{4}R_{5}+C_{L}r_{o})}}}(2C_{4}R_{5}g_{m}r_{o}+2C_{4}R_{5}+2C_{4}r_{o}+C_{L}R_{5}g_{m}r_{o}+C_{L}R_{5}+C_{L}r_{o}})}\\ Q: \frac{2C_{4}R_{4}R_{L}g_{m}r_{o}+2C_{4}R_{4}R_{L}+C_{5}R_{4}R_{5}g_{m}r_{o}+C_{5}R_{4}R_{5}+2C_{5}R_{4}R_{L}g_{m}r_{o}+4C_{5}R_{4}R_{L}+C_{5}R_{4}r_{o}+2C_{5}R_{5}R_{L}g_{m}r_{o}+2C_{5}R_{5}R_{L}+2C_{5}R_{L}r_{o}+C_{L}R_{4}R_{L}g_{m}r_{o}+C_{L}R_{4}R_{L}}}{C_{5}R_{4}R_{L}(2C_{4}R_{5}g_{m}r_{o}+2C_{4}R_{5}+2C_{4}r_{o}+C_{L}R_{5}g_{m}r_{o}+C_{L}R_{5}R_{L}+C_{5}R_{4}R_{L}+C_{5}R_{5}R_{L}+2C_{5}R_{5}R_{L}+2C_{5}R_{L}+C_{5}R_{L}+C_{L}$$

## 8.25 INVALID-NUMER-25 $Z(s) = \left(\infty, \infty, \infty, R_4 + \frac{1}{C_4 s}, R_5, \frac{1}{C_L s}\right)$

 $H(s) = \frac{(C_4 R_4 s + 1)(R_5 g_m r_o + R_5 - r_o)}{C_4 C_L R_4 R_5 q_m r_o s^2 + C_4 C_L R_4 R_5 s^2 + C_4 C_L R_4 r_o s^2 + 2C_4 R_4 q_m r_o s + 4C_4 R_4 s + 2C_4 R_5 q_m r_o s + 2C_4 R_5 s + 2C_4 r_o s + C_L R_5 q_m r_o s + C_L R_5 s + C_L r_o s + 2q_m r_o s + 2C_4 R_5 q_m r_o s + 2C_4 R_5 q_m r_o s + C_4 R_5 q_m r_o s +$ 

8.26 INVALID-NUMER-26  $Z(s) = \left(\infty, \infty, \infty, R_4 + \frac{1}{C_4 s}, R_5, \frac{R_L}{C_L R_L s + 1}\right)$ 

 $H(s) = \frac{R_L \left( C_4 R_4 s + 1 \right) \left( R_5 g_m r_o + R_5 - r_o \right)}{C_4 C_L R_4 R_5 R_L g_m r_o s^2 + C_4 C_L R_4 R_5 R_L s^2 + C_4 C_L R_4 R_5 g_m r_o s + C_4 R_4 R_5 g_m r_o s + 4 C_4 R_4 R_5 g_m r_o s + 2 C_4 R_5 R_L g_m r_o s + 2 C_4 R_5 R_L g_m r_o s + C_L R_5 R_L g_m r_o s + C_L R_5 R_L g_m r_o s + C_L R_5 R_L g_m r_o s + R_5 g_m r_o + R_5 + 2 R_L g_m r_o s + 2 C_4 R_5 R_L g_m r_o s + 2 C_4 R_5 R_L g_m r_o s + C_4 R_5 R_L g_m r_o$ 

### Parameters:

 $Q: \frac{C_4C_LR_4R_L\sqrt{\frac{R_5g_mr_o+R_5+2R_Lg_mr_o+4R_L+r_o}{C_4C_LR_4R_L(R_5g_mr_o+R_5+r_o)}}}{C_4R_4R_5g_mr_o+C_4R_4R_5+2C_4R_4R_Lg_mr_o+4C_4R_4R_L+C_4R_4r_o+2C_4R_5R_Lg_mr_o+2C_4R_5R_L+2C_4R_Lr_o+C_LR_5R_Lg_mr_o+C_LR_5R_L+C_LR_Lr_o}}{V(R_5g_mr_o+R_5+2R_Lg_mr_o+4R_L+r_o)}$   $Wo: \sqrt{\frac{R_5g_mr_o+R_5+2R_Lg_mr_o+4R_L+r_o}{C_4C_LR_4R_L(R_5g_mr_o+R_5+r_o)}}}$   $bandwidth: \frac{C_4R_4R_5g_mr_o+C_4R_4R_5+2C_4R_4R_Lg_mr_o+4C_4R_4R_L+C_4R_4r_o+2C_4R_5R_Lg_mr_o+2C_4R_5R_L+2C_4R_Lr_o+C_LR_5R_Lg_mr_o+C_LR_5R_L+C_LR_Lr_o}{C_4C_LR_4R_L(R_5g_mr_o+R_5+r_o)}}$   $K-LP: \frac{R_L(R_5g_mr_o+R_5-r_o)}{R_5g_mr_o+R_5+2R_Lg_mr_o+4R_L+r_o}}{K-HP: 0}$   $K-BP: \frac{C_4R_4R_L(R_5g_mr_o+R_5-r_o)}{C_4R_4R_4R_5g_mr_o+C_4R_4R_4R_L+C_4R_4r_o+2C_4R_5R_Lg_mr_o+2C_4R_5R_L+2C_4R_Lr_o+C_LR_5R_Lg_mr_o+C_LR_5R_L+C_LR_Lr_o}{C_4R_4R_L(R_5g_mr_o+R_5-r_o)}}$  Wz: None

### 9 INVALID-WZ

9.1 INVALID-WZ-1  $Z(s) = \left(\infty, \infty, \infty, R_4, \frac{1}{C_5 s}, R_L + \frac{1}{C_L s}\right)$ 

$$H(s) = \frac{R_4 \left( C_L R_L s + 1 \right) \left( -C_5 r_o s + g_m r_o + 1 \right)}{2 C_5 C_L R_4 R_L g_m r_o s^2 + 4 C_5 C_L R_4 r_o s^2 + 2 C_5 C_L R_4 r_o s^2 + 2 C_5 R_4 g_m r_o s + 4 C_5 R_4 s + 2 C_5 r_o s + C_L R_4 g_m r_o s + C_L R_4 g_m r_o s + 2 C_L R_L g_m r_o s + 2 C_L$$

#### Parameters:

$$Q \colon \frac{\sqrt{2}C_{5}C_{L}\sqrt{\frac{g_{m}r_{o}+1}{C_{5}C_{L}(2R_{4}R_{L}g_{m}r_{o}+4R_{4}R_{L}+R_{4}r_{o}+2R_{L}r_{o})}}}(2R_{4}R_{L}g_{m}r_{o}+4R_{4}R_{L}+R_{4}r_{o}+2R_{L}r_{o})}}{2C_{5}R_{4}g_{m}r_{o}+4C_{5}R_{4}+2C_{5}r_{o}+C_{L}R_{4}g_{m}r_{o}+C_{L}R_{4}+2C_{L}R_{L}g_{m}r_{o}+2C_{L}R_{L}}}$$

$$\text{wo: } \sqrt{2}\sqrt{\frac{g_{m}r_{o}+1}}{C_{5}C_{L}(2R_{4}R_{L}g_{m}r_{o}+4R_{4}R_{L}+R_{4}r_{o}+2R_{L}r_{o})}}$$

$$\text{bandwidth: } \frac{2C_{5}R_{4}g_{m}r_{o}+4C_{5}R_{4}+2C_{5}r_{o}+C_{L}R_{4}g_{m}r_{o}+C_{L}R_{4}+2C_{L}R_{L}g_{m}r_{o}+2C_{L}R_{L}}}{C_{5}C_{L}(2R_{4}R_{L}g_{m}r_{o}+4R_{4}R_{L}+R_{4}r_{o}+2R_{L}r_{o})}}$$

$$\text{K-LP: } \frac{R_{4}}{2}$$

$$\text{K-HP: } -\frac{R_{4}R_{L}r_{o}}{2R_{4}R_{L}g_{m}r_{o}+4R_{4}R_{L}+R_{4}r_{o}+2R_{L}r_{o}}}{R_{4}(-C_{5}r_{o}+C_{L}R_{L}g_{m}r_{o}+C_{L}R_{L}})}$$

$$\text{K-BP: } \frac{R_{4}(-C_{5}r_{o}+C_{L}R_{L}g_{m}r_{o}+C_{L}R_{L}})}{2C_{5}R_{4}g_{m}r_{o}+4C_{5}R_{4}+2C_{5}r_{o}+C_{L}R_{4}g_{m}r_{o}+C_{L}R_{L}}}$$

$$Q_{2}: \frac{\sqrt{2}C_{5}C_{L}R_{L}r_{o}}{C_{5}C_{L}(2R_{4}R_{L}g_{m}r_{o}+4R_{4}R_{L}+R_{4}r_{o}+2R_{L}r_{o})}}$$

$$C_{5}r_{o}-C_{L}R_{L}g_{m}r_{o}-C_{L}R_{L}}$$

$$W_{2}: \sqrt{\frac{-g_{m}r_{o}-1}{C_{5}C_{L}R_{L}r_{o}}}}$$

**9.2** INVALID-WZ-2  $Z(s) = \left(\infty, \infty, \infty, R_4, \frac{R_5}{C_5 R_5 s + 1}, R_L + \frac{1}{C_L s}\right)$ 

$$H(s) = -\frac{R_4 \left( C_L R_L s + 1 \right) \left( C_5 R_5 r_o s - R_5 g_m r_o - R_5 + r_o \right)}{2 C_5 C_L R_4 R_5 R_L g_m r_o s^2 + 4 C_5 C_L R_4 R_5 r_o s^2 + 2 C_5 C_L R_5 R_L r_o s^2 + 2 C_5 R_4 R_5 g_m r_o s + 4 C_5 R_4 R_5 s + 2 C_5 R_5 r_o s + C_L R_4 R_5 g_m r_o s + 4 C_L R_4 R_5 g_m r_o s + 2 C_L R_5 R_L g_m$$

$$\begin{array}{c} \sqrt{2}C_{5}C_{L}R_{5}\sqrt{\frac{R_{4}g_{m}r_{o}+2R_{4}+R_{5}g_{m}r_{o}+R_{5}+r_{o}}{C_{5}C_{L}R_{5}(2R_{4}R_{L}g_{m}r_{o}+4R_{4}R_{L}+R_{4}r_{o}+2R_{L}r_{o})}}}(2R_{4}R_{L}g_{m}r_{o}+4R_{4}R_{L}+R_{4}r_{o}+2R_{L}r_{o}})\\ Q: \frac{2C_{5}R_{4}R_{5}g_{m}r_{o}+4C_{5}R_{4}R_{5}+2C_{5}R_{5}r_{o}+C_{L}R_{4}R_{5}g_{m}r_{o}+C_{L}R_{4}R_{5}+2C_{L}R_{4}R_{L}g_{m}r_{o}+4C_{L}R_{4}R_{L}+C_{L}R_{4}r_{o}+2C_{L}R_{5}R_{L}g_{m}r_{o}+2C_{L}R_{5}R_{L}+2C_{L}R_{L}r_{o}}{C_{5}C_{L}R_{5}(2R_{4}R_{L}g_{m}r_{o}+4R_{4}R_{L}+R_{4}r_{o}+2R_{L}r_{o})}\\ \text{bandwidth:} \frac{2C_{5}R_{4}R_{5}g_{m}r_{o}+4C_{5}R_{4}R_{5}+2C_{5}R_{5}r_{o}+C_{L}R_{4}R_{5}g_{m}r_{o}+C_{L}R_{4}R_{5}+2C_{L}R_{4}R_{L}g_{m}r_{o}+4C_{L}R_{4}R_{L}+C_{L}R_{4}r_{o}+2C_{L}R_{5}R_{L}g_{m}r_{o}+2C_{L}R_{5}R_{L}+2C_{L}R_{5}R_{L}+2C_{L}R_{4}R_{L}g_{m}r_{o}+4R_{4}R_{L}+R_{4}r_{o}+2R_{L}r_{o}}\\ \text{K-LP:} \frac{R_{4}(R_{5}g_{m}r_{o}+R_{5}-r_{o})}{2(R_{4}g_{m}r_{o}+2R_{4}+R_{5}g_{m}r_{o}+R_{5}+r_{o})}\\ \text{K-HP:} -\frac{R_{4}R_{L}r_{o}}{2R_{4}R_{L}g_{m}r_{o}+4R_{4}R_{L}+R_{4}r_{o}+2R_{L}r_{o}}\\ \end{array}$$

```
 \text{K-BP:} \  \frac{R_4(-C_5R_5r_o + C_LR_5R_Lg_mr_o + C_LR_5R_L - C_LR_Lr_o)}{2C_5R_4R_5g_mr_o + 4C_5R_4R_5 + 2C_5R_5r_o + C_LR_4R_5g_mr_o + C_LR_4} \\ \text{Qz:} \  \frac{\sqrt{2}C_5C_LR_5R_Lr_o\sqrt{\frac{R_4g_mr_o + 2R_4 + R_5g_mr_o + R_5 + r_o}{C_5C_LR_5(2R_4R_Lg_mr_o + 4R_4R_L + R_4r_o + 2R_Lr_o)}}{C_5R_5r_o - C_LR_5R_Lg_mr_o - C_LR_5R_L + C_LR_Lr_o} \\ \text{Wz:} \  \sqrt{\frac{-R_5g_mr_o - R_5 + r_o}{C_5C_LR_5R_Lr_o}} \\
```

**9.3** INVALID-WZ-3  $Z(s) = \left(\infty, \infty, \infty, R_4, R_5 + \frac{1}{C_5 s}, R_L + \frac{1}{C_L s}\right)$ 

 $H(s) = \frac{R_4 \left( C_L R_L s + 1 \right) \left( C_5 R_5 g_m r_o s + C_5 R_5 s - C_5 r_o s + g_m r_o + 1 \right)}{C_5 C_L R_4 R_5 g_m r_o s^2 + C_5 C_L R_4 R_L g_m r_o s^2 + 4 C_5 C_L R_4 R_L s^2 + C_5 C_L R_5 R_L g_m r_o s^2 + 2 C_5 C_L R_5 R_L s^2 + 2 C_5 C_L R_4 r_o s^2 + 2 C_5 R_4 g_m r_o s + 4 C_5 R_4 g_m r_o s + 4 C_5 R_5 g_m r_o s + 2 C_$ 

### Parameters:

$$\begin{array}{c} \sqrt{2}C_{5}C_{L}\sqrt{\frac{g_{m}r_{o}+1}{C_{5}C_{L}(R_{4}R_{5}g_{m}r_{o}+R_{4}R_{5}+2R_{4}R_{L}g_{m}r_{o}+4R_{4}R_{L}+R_{4}r_{o}+2R_{5}R_{L}g_{m}r_{o}+2R_{5}R_{L}+2R_{L}r_{o})}}(R_{4}R_{5}g_{m}r_{o}+R_{4}R_{5}+2R_{4}R_{L}g_{m}r_{o}+4R_{4}R_{L}+R_{4}r_{o}+2R_{5}R_{L}g_{m}r_{o}+2R_{5}R_{L}+2R_{L}r_{o})}\\ 2C_{5}R_{4}g_{m}r_{o}+4C_{5}R_{4}+2C_{5}R_{5}g_{m}r_{o}+2C_{5}R_{5}+2C_{5}r_{o}+C_{L}R_{4}g_{m}r_{o}+C_{L}R_{4}+2C_{L}R_{L}g_{m}r_{o}+2C_{L}R_{L}}\\ we: \sqrt{2}\sqrt{\frac{g_{m}r_{o}+1}{C_{5}C_{L}(R_{4}R_{5}g_{m}r_{o}+R_{4}R_{5}+2R_{4}R_{L}g_{m}r_{o}+4R_{4}R_{L}+R_{4}r_{o}+2R_{5}R_{L}g_{m}r_{o}+2R_{5}R_{L}+2R_{L}r_{o}})}\\ bandwidth: \frac{2C_{5}R_{4}g_{m}r_{o}+4C_{5}R_{4}+2C_{5}R_{5}g_{m}r_{o}+2C_{5}R_{5}+2C_{5}r_{o}+C_{L}R_{4}g_{m}r_{o}+2R_{5}R_{L}+2R_{L}r_{o}}}{C_{5}C_{L}(R_{4}R_{5}g_{m}r_{o}+R_{4}R_{5}+2R_{4}R_{L}g_{m}r_{o}+4R_{4}R_{L}+R_{4}r_{o}+2R_{5}R_{L}g_{m}r_{o}+2R_{5}R_{L}+2R_{L}r_{o}})}\\ K-LP: \frac{R_{4}}{2}\\ K-HP: \frac{R_{4}R_{L}(R_{5}g_{m}r_{o}+R_{4}R_{5}+2R_{4}R_{L}g_{m}r_{o}+2R_{5}R_{L}g_{m}r_{o}+2R_{5}R_{L}+2R_{L}r_{o}}}{R_{4}R_{5}g_{m}r_{o}+4R_{4}R_{L}+R_{4}r_{o}+2R_{5}R_{L}g_{m}r_{o}+2R_{5}R_{L}+2R_{L}r_{o}}}\\ K-gp: \frac{R_{4}R_{L}(R_{5}g_{m}r_{o}+R_{4}R_{5}+2R_{4}R_{L}g_{m}r_{o}+2R_{5}R_{L}g_{m}r_{o}+2R_{5}R_{L}+2R_{L}r_{o}}}{R_{4}G_{5}G_{5}G_{m}r_{o}+2C_{5}R_{5}+C_{5}R_{5}+C_{5}r_{o}+C_{L}R_{4}g_{m}r_{o}+2R_{5}R_{L}+2R_{L}r_{o}}}\\ Qz: \frac{\sqrt{2}C_{5}C_{L}R_{L}\sqrt{C_{5}C_{L}(R_{4}R_{5}g_{m}r_{o}+2R_{5}R_{L}+2R_{L}r_{o}}(R_{5}g_{m}r_{o}+2R_{5}R_{L}+2R_{L}r_{o}})}{C_{5}R_{5}G_{m}r_{o}+2C_{5}R_{5}+C_{5}r_{o}+C_{L}R_{4}g_{m}r_{o}+2R_{5}R_{L}+2R_{L}r_{o}}}(R_{5}g_{m}r_{o}+R_{5}-r_{o})}\\ Wz: \sqrt{\frac{g_{m}r_{o}+1}{C_{5}C_{L}R_{L}(R_{5}g_{m}r_{o}+R_{4}R_{5}+2R_{4}R_{L}g_{m}r_{o}+2R_{5}R_{L}g_{m}r_{o}+2R_{5}R_{L}+2R_{L}r_{o}}}{C_{5}R_{5}C_{L}R_{L}(R_{5}g_{m}r_{o}+R_{5}+2R_{4}R_{L}g_{m}r_{o}+2R_{5}R_{L}+2R_{L}r_{o}})}}\\ + \frac{C_{5}R_{5}G_{m}r_{o}+2R_{5}R_{m}r_{o}+2R_{5}R_{m}r_{o}+2R_{5}R_{m}r_{o}+2R_{5}R_{m}r_{o}+2R_{5}R_{m}r_{o}+2R_{5}R_{m}r_{o}+2R_{5}R_{m}r_{o}+2R_{5}R_{m}r_{o}+2R_{5}R_{m}r_{o}+2R_{5}R_{m}r_{o}+2R_{5}R_{m}r_{o}+2R_{5}R_{m}r$$

**9.4** INVALID-WZ-4  $Z(s) = \left(\infty, \infty, \infty, R_4 + \frac{1}{C_4 s}, R_5, R_L + \frac{1}{C_L s}\right)$ 

 $H(s) = \frac{\left(C_4 R_4 s + 1\right) \left(C_L R_L s + 1\right) \left(R_5 g_m r_o + R_5 - r_o\right)}{C_4 C_L R_4 R_5 g_m r_o s^2 + C_4 C_L R_4 R_5 g^2 + 2 C_4 C_L R_4 R_L g^2 + C_4 C_L R_4 r_o s^2 + 2 C_4 C_L R_5 R_L g_m r_o s^2 + 2 C_4 C_L R_5 R_L g^2 + 2 C_4 C_L R_5 R_L g^2 + 2 C_4 C_L R_5 g_m r_o s + 4 C_4 R_4 g_m r_o s + 4 C_4 R_5 g_m r_o s + 2 C_4 R_5 g_m r_o s + C_L R_5 g_m r_o s +$ 

### Parameters:

$$\begin{array}{c} \sqrt{2}C_4C_L\sqrt{\frac{g_mr_o+2}{C_4C_L(R_4R_5g_mr_o+R_4R_5+2R_4R_Lg_mr_o+4R_4R_L+R_4r_o+2R_5R_Lg_mr_o+2R_5R_L+2R_Lr_o)}}}(R_4R_5g_mr_o+R_4R_5+2R_4R_Lg_mr_o+4R_4R_L+R_4r_o+2R_5R_Lg_mr_o+2R_5R_L+2R_Lr_o)}\\ Q: & \frac{2C_4R_4g_mr_o+4C_4R_4+2C_4R_5g_mr_o+2C_4R_5+2C_4r_o+C_LR_5g_mr_o+C_LR_5+2C_LR_Lg_mr_o+4C_LR_L+C_Lr_o}}{2G_mr_o+2C_4R_5+2C_4R_5+2C_4r_o+C_LR_5g_mr_o+2C_4R_5+2C_LR_Lg_mr_o+4C_LR_L+C_Lr_o}\\ wo: & \sqrt{2}\sqrt{\frac{g_mr_o+2}{C_4C_L(R_4R_5g_mr_o+R_4R_5+2R_4R_Lg_mr_o+4R_5R_L+g_mr_o+2R_5R_L+2R_Lr_o)}}}\\ bandwidth: & \frac{2C_4R_4g_mr_o+4C_4R_4+2C_4R_5g_mr_o+2C_4R_5+2C_4r_o+C_LR_5g_mr_o+2R_5R_L+2R_Lr_o)}{C_4C_L(R_4R_5g_mr_o+R_4R_5+2R_4R_Lg_mr_o+4R_4R_L+R_4r_o+2R_5R_Lg_mr_o+2R_5R_L+2R_Lr_o)}\\ K-LP: & \frac{R_5g_mr_o+R_5-r_o}{2(g_mr_o+2)}\\ K-HP: & \frac{R_4R_L(R_5g_mr_o+R_5-r_o)}{2(g_mr_o+2)}\\ K-BP: & \frac{C_4R_4R_5g_mr_o+4R_4R_1+R_4r_o+2R_5R_Lg_mr_o+2R_5R_L+2R_Lr_o}{2C_4R_4g_mr_o+4C_4R_4+2C_4R_5g_mr_o+2C_4R_5R_Lg_mr_o+2C_4R_5R_L-C_LR_Lr_o}\\ Q_Z: & \frac{\sqrt{2}C_4C_LR_4R_L}{C_4C_L(R_4R_5g_mr_o+R_4R_5+2R_4R_Lg_mr_o+4R_4R_L+R_4r_o+2R_5R_Lg_mr_o+2R_5R_L+2R_Lr_o)}\\ C_4R_4+C_LR_L}\\ Wz: & \sqrt{\frac{1}{C_4C_L(R_4R_5g_mr_o+R_4R_5+2R_4R_Lg_mr_o+4R_4R_L+R_4r_o+2R_5R_Lg_mr_o+2R_5R_L+2R_Lr_o)}}\\ C_4R_4+C_LR_L}\\ \end{array}$$

9.5 INVALID-WZ-5  $Z(s) = \left(\infty, \infty, \infty, R_4 + \frac{1}{C_4 s}, \frac{1}{C_5 s}, R_L\right)$ 

$$H(s) = \frac{R_L \left( C_4 R_4 s + 1 \right) \left( -C_5 r_o s + g_m r_o + 1 \right)}{2 C_4 C_5 R_4 R_L g_m r_o s^2 + 4 C_4 C_5 R_4 R_L s^2 + C_4 C_5 R_4 r_o s^2 + 2 C_4 C_5 R_L r_o s^2 + C_4 R_4 g_m r_o s + C_4 R_4 s + 2 C_4 R_L g_m r_o s + 2 C_4 R_L s + 2 C_5 R_L g_m r_o s + 4 C_5 R_L s + C_5 r_o s + g_m r_o + 1}$$

$$\mathbf{Q} \colon \frac{C_4 C_5 \sqrt{\frac{g_m r_o + 1}{C_4 C_5 \left(2R_4 R_L g_m r_o + 4R_4 R_L + R_4 r_o + 2R_L r_o\right)}}}{C_4 R_4 g_m r_o + C_4 R_4 + 2C_4 R_L g_m r_o + 2C_4 R_L + 2C_5 R_L g_m r_o + 4C_5 R_L + C_5 r_o}}$$

```
WO: \sqrt{\frac{g_m r_o + 1}{C_4 C_5 (2R_4 R_L g_m r_o + 4R_4 R_L + R_4 r_o + 2R_L r_o)}}
       bandwidth: \frac{C_4R_4g_mr_o + C_4R_4 + 2C_4R_Lg_mr_o + 2C_4R_L + 2C_5R_Lg_mr_o + 4C_5R_L + C_5r_o}{C_4C_5(2R_4R_Lg_mr_o + 4R_4R_L + R_4r_o + 2R_Lr_o)}
     K-B1: R_L

K-HP: -\frac{R_4R_Lr_o}{2R_4R_Lg_mr_o+4R_4R_L+R_4r_o+2R_Lr_o}

K-BP: \frac{R_L(C_4R_4g_mr_o+C_4R_4-C_5r_o)}{C_4R_4g_mr_o+C_4R_4+2C_4R_Lg_mr_o+2C_4R_L+2C_5R_Lg_mr_o+4C_5R_L+C_5r_o}
                     \frac{C_4C_5R_4r_o\sqrt{\frac{g_mr_o+1}{C_4C_5\left(2R_4R_Lg_mr_o+4R_4R_L+R_4r_o+2R_Lr_o\right)}}}{C_4R_4g_mr_o+C_4R_4-C_5r_o}
9.6 INVALID-WZ-6 Z(s) = \left(\infty, \infty, \infty, R_4 + \frac{1}{C_4 s}, \frac{R_5}{C_5 R_5 s + 1}, R_L\right)
```

 $R_L (C_4 R_4 s + 1) (C_5 R_5 r_o s - R_5 g_m r_o - R_5 + r_o)$  $\overline{2C_{4}C_{5}R_{4}R_{5}R_{L}g_{m}r_{o}s^{2}+4C_{4}C_{5}R_{4}R_{5}R_{L}s^{2}+C_{4}C_{5}R_{4}R_{5}r_{o}s^{2}+2C_{4}C_{5}R_{5}R_{L}r_{o}s^{2}+C_{4}R_{4}R_{5}g_{m}r_{o}s+4C_{4}R_{4}R_{L}g_{m}r_{o}s+4C_{4}R_{4}R_{L}s+C_{4}R_{4}r_{o}s+2C_{4}R_{5}R_{L}s+2C_{4}R_{L}r_{o}s+2C_{5}R_{5}R_{L}g_{m}r_{o}s+4C_{5}R_{5}R_{L}s+2C_{4}R_{4}R_{5}r_{o}s+2C_{4}R_{5}R_{L}s+2C_{4}R_{5}R_{L}s+2C_{4}R_{5}R_{L}s+2C_{4}R_{5}R_{L}s+2C_{4}R_{5}R_{L}s+2C_{4}R_{5}R_{L}s+2C_{4}R_{5}R_{L}s+2C_{5}R_{5}R_{L}s+$ 

### Parameters:

```
Q\colon \frac{C_4C_5R_5\sqrt{\frac{R_5g_mr_o+R_5+2R_Lg_mr_o+4R_L+r_o}{C_4C_5R_5(2R_4R_Lg_mr_o+4R_4R_L+R_4r_o+2R_Lr_o)}}(2R_4R_Lg_mr_o+4R_4R_L+R_4r_o+2R_Lr_o)}{C_4R_4R_5g_mr_o+C_4R_4R_5+2C_4R_4R_Lg_mr_o+4C_4R_4R_L+C_4R_4r_o+2C_4R_5R_Lg_mr_o+2C_4R_5R_L+2C_4R_Lr_o+2C_5R_5R_Lg_mr_o+4C_5R_5R_L+C_5R_5r_o}
    Wo: \sqrt{\frac{R_5 g_m r_o + R_5 + 2 R_L g_m r_o + 4 R_L + r_o}{C_4 C_5 R_5 (2 R_4 R_L g_m r_o + 4 R_4 R_L + R_4 r_o + 2 R_L r_o)}}
    \begin{array}{c} \text{bandwidth: } \frac{C_4 R_4 R_5 g_m r_o + C_4 R_4 R_5 + 2 C_4 R_4 R_L g_m r_o + 4 C_4 R_4 R_L + C_4 R_4 r_o + 2 C_4 R_5 R_L g_m r_o + 2 C_4 R_5 R_L + 2 C_4 R_L r_o + 2 C_5 R_5 R_L g_m r_o + 4 C_5 R_5 R_L + C_5 R_5 r_o + 2 C_5 R_5 R_L g_m r_o
 \begin{array}{l} \text{K-LP: } \frac{R_L(R_5g_mr_o + R_5 - r_o)}{R_5g_mr_o + R_5 + 2R_Lg_mr_o + 4R_L + r_o} \\ \text{K-HP: } -\frac{R_4R_Lr_o}{2R_4R_Lg_mr_o + 4R_4R_L + R_4r_o + 2R_Lr_o} \end{array} 
  \text{K-BP:} \ \frac{R_L(C_4R_4R_5g_mr_o + C_4R_4R_5 - C_4R_4r_o - C_5R_5r_o)}{C_4R_4R_5g_mr_o + C_4R_4R_5 + 2C_4R_4R_1r_o + 4C_4R_4R_1 + C_4R_4r_o + 2C_4R_5R_Lg_mr_o + 2C_4R_5R_L + 2C_4R_Lr_o + 2C_5R_5R_Lg_mr_o + 4C_5R_5R_L + C_5R_5r_o}
                                            \frac{C_4 C_5 R_4 R_5 r_o \sqrt{\frac{R_5 g_m r_o + R_5 + 2 R_L g_m r_o + 4 R_L + r_o}{C_4 C_5 R_5 (2 R_4 R_L g_m r_o + 4 R_4 R_L + R_4 r_o + 2 R_L r_o)}}{\frac{C_4 R_4 R_5 g_m r_o + C_4 R_4 R_5 - C_4 R_4 r_o - C_5 R_5 r_o}{C_5 R_5 r_o}}
    Wz: \sqrt{\frac{-R_5 g_m r_o - R_5 + r_o}{C_4 C_5 R_4 R_5 r_o}}
```

## **9.7** INVALID-WZ-7 $Z(s) = \left(\infty, \infty, \infty, R_4 + \frac{1}{C_4 s}, R_5 + \frac{1}{C_5 s}, R_L\right)$

 $R_L (C_4 R_4 s + 1) (C_5 R_5 g_m r_o s + C_5 R_5 s - C_5 r_o s + g_m r_o + 1)$ 

 $H(s) = \frac{1}{C_4 C_5 R_4 R_5 g_m r_o s^2 + C_4 C_5 R_4 R_5 g^2 + 2 C_4 C_5 R_4 R_L g_m r_o s^2 + 4 C_4 C_5 R_4 R_L g^2 + C_4 C_5 R_4 R_L g^2 + 2 C_4 C_5 R_5 R_L g^2 + 2 C_4 C_5 R_L g^2 + 2 C_4 C_5$ 

### Parameters:

```
\frac{g_m r_o + 1}{C_4 C_5 \left(R_4 R_5 g_m r_o + R_4 R_5 + 2 R_4 R_L g_m r_o + 4 R_4 R_L + R_4 r_o + 2 R_5 R_L g_m r_o + 2 R_5 R_L
   wo: \sqrt{\frac{g_m r_o + 1}{C_4 C_5 (R_4 R_5 g_m r_o + R_4 R_5 + 2 R_4 R_L g_m r_o + 4 R_4 R_L + R_4 r_o + 2 R_5 R_L g_m r_o + 2 R_5 R_L + 2 R_L r_o)}} bandwidth: \frac{C_4 R_4 g_m r_o + C_4 R_4 + 2 C_4 R_L g_m r_o + 2 C_4 R_L + C_5 R_5 g_m r_o + C_5 R_5 + 2 C_5 R_L g_m r_o + 4 C_5 R_L + C_5 r_o}{C_4 C_5 (R_4 R_5 g_m r_o + R_4 R_5 + 2 R_4 R_L g_m r_o + 4 R_4 R_L + R_4 r_o + 2 R_5 R_L g_m r_o + 2 R_5 R_L + 2 R_L r_o)}
        K-LP: R_L
 \begin{array}{l} \text{K-LP: } R_L \\ \text{K-HP: } \frac{R_4R_L(R_5g_mr_o + R_5 - r_o)}{R_4R_5g_mr_o + R_4R_5 + 2R_4R_Lg_mr_o + 4R_4R_L + R_4r_o + 2R_5R_Lg_mr_o + 2R_5R_L + 2R_Lr_o} \\ \text{K-BP: } \frac{R_L(C_4R_4g_mr_o + C_4R_4 + C_5R_5g_mr_o + C_5R_5 - C_5r_o)}{C_4R_4g_mr_o + C_4R_4 + 2C_4R_Lg_mr_o + 2C_4R_L + C_5R_5g_mr_o + C_5R_5 + 2C_5R_Lg_mr_o + 4C_5R_L + C_5r_o} \\ \text{Qz: } \frac{C_4C_5R_4\sqrt{\frac{g_mr_o + R_4R_5g_mr_o + R_4R_5 + 2R_4R_Lg_mr_o + 4R_4R_4r_o + 2R_5R_Lg_mr_o + 2R_5R_L + 2R_Lr_o)}}{C_4R_4g_mr_o + C_4R_4g_mr_o + C_4R_4r_o + 2R_5R_Lg_mr_o + 2R_5R_L + 2R_Lr_o)} (R_5g_mr_o + R_5 - r_o)} \\ \text{Qz: } \frac{C_4R_4g_mr_o + C_4R_4 + C_5R_5g_mr_o + C_5R_5 - C_5r_o}}{C_4R_4g_mr_o + C_4R_4r_o + 2R_5R_5g_mr_o + C_5R_5 - C_5r_o} \\ \end{array} 
        Wz: \sqrt{\frac{g_m r_o + 1}{C_4 C_5 R_4 (R_5 g_m r_o + R_5 - r_o)}}
```

### INVALID-ORDER

10.1 INVALID-ORDER-1  $Z(s) = (\infty, \infty, \infty, R_4, R_5, R_L)$ 

$$H(s) = \frac{R_4 R_L \left( R_5 g_m r_o + R_5 - r_o \right)}{R_4 R_5 g_m r_o + R_4 R_5 + 2 R_4 R_L g_m r_o + 4 R_4 R_L + R_4 r_o + 2 R_5 R_L g_m r_o + 2 R_5 R_L + 2 R_L r_o}$$

10.2 INVALID-ORDER-2  $Z(s) = \left(\infty, \infty, \infty, R_4, R_5, \frac{1}{C_{Ls}}\right)$ 

$$H(s) = \frac{R_4 \left( R_5 g_m r_o + R_5 - r_o \right)}{C_L R_4 R_5 g_m r_o s + C_L R_4 R_5 s + C_L R_4 r_o s + 2R_4 q_m r_o + 4R_4 + 2R_5 q_m r_o + 2R_5 + 2r_o}$$

10.3 INVALID-ORDER-3  $Z(s) = \left(\infty, \infty, \infty, R_4, R_5, \frac{R_L}{C_L R_L s + 1}\right)$ 

$$H(s) = \frac{R_4 R_L \left( R_5 g_m r_o + R_5 - r_o \right)}{C_L R_4 R_5 R_L g_m r_o + C_L R_4 R_5 R_L s + C_L R_4 R_L r_o s + R_4 R_5 g_m r_o + R_4 R_5 + 2 R_4 R_L g_m r_o + 4 R_4 R_L + R_4 r_o + 2 R_5 R_L g_m r_o + 2 R_5 R_L + 2 R_L r_o}$$

10.4 INVALID-ORDER-4  $Z(s) = \left(\infty, \infty, \infty, R_4, R_5, R_L + \frac{1}{C_L s}\right)$ 

10.5 INVALID-ORDER-5  $Z(s) = \left(\infty, \infty, \infty, R_4, \frac{1}{C_5 s}, R_L\right)$ 

$$H(s) = \frac{R_4 R_L \left( -C_5 r_o s + g_m r_o + 1 \right)}{2C_5 R_4 R_L g_m r_o s + 4C_5 R_4 R_L s + C_5 R_4 r_o s + 2C_5 R_L r_o s + R_4 g_m r_o + R_4 + 2R_L g_m r_o + 2R_L r_o s + 2R_4 g_m r_o + 2R_4 g_m r_o + 2R_L r_o s + 2R_4 g_m r_o + 2R_4$$

10.6 INVALID-ORDER-6  $Z(s) = \left(\infty, \infty, \infty, R_4, \frac{1}{C_5 s}, L_L s + \frac{1}{C_L s}\right)$ 

$$H(s) = \frac{R_4 \left(C_L L_L s^2 + 1\right) \left(-C_5 r_o s + g_m r_o + 1\right)}{2C_5 C_L L_L R_4 g_m r_o s^3 + 4C_5 C_L L_L R_4 s^3 + 2C_5 C_L L_L r_o s^3 + C_5 C_L R_4 r_o s^2 + 2C_5 R_4 g_m r_o s + 4C_5 R_4 s + 2C_5 r_o s + 2C_L L_L g_m r_o s^2 + 2C_L L_L s^2 + C_L R_4 g_m r_o s + C_L R_4 s + 2g_m r_o + 2c_L R_4 g_m r_o s^2 + 2C_L R$$

10.7 INVALID-ORDER-7  $Z(s) = \left(\infty, \infty, \infty, R_4, \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1}\right)$ 

$$H(s) = \frac{L_L R_4 s \left(-C_5 r_o s + g_m r_o + 1\right)}{C_5 C_L L_L R_4 r_o s^3 + 2 C_5 L_L R_4 g_m r_o s^2 + 4 C_5 L_L R_4 s^2 + 2 C_5 L_L r_o s^2 + C_5 R_4 r_o s + C_L L_L R_4 g_m r_o s^2 + C_L L_L R_4 s^2 + 2 L_L g_m r_o s + 2 L_L s + R_4 g_m r_o + R_4 r_o s^2 + C_4 r_o s^2 + C_5 r_o$$

10.8 INVALID-ORDER-8  $Z(s) = \left(\infty, \infty, \infty, R_4, \frac{1}{C_5 s}, L_L s + R_L + \frac{1}{C_L s}\right)$ 

$$(s) = \frac{R_4 \left( -C_5 r_o s + g_m r_o + 1 \right) \left( C_L L_L s^2 + C_L R_L s + 1 \right)}{2C_5 C_L L_L R_4 g_m r_o s^3 + 4C_5 C_L L_L r_o s^3 + 2C_5 C_L R_4 R_L g_m r_o s^2 + 4C_5 C_L R_4 R_L s^2 + C_5 C_L R_4 r_o s^2 + 2C_5 C_L R_4 r_o s^2 + 2C_5 R_4 g_m r_o s + 4C_5 R_4 s + 2C_5 r_o s + 2C_L L_L g_m r_o s^2 + 2C_L L_L s^2 + C_L R_4 g_m r_o s + C_L R_4 g_m r_o s + 2C_L R_4$$

10.9 INVALID-ORDER-9  $Z(s) = \left(\infty, \infty, \infty, R_4, \frac{1}{C_5 s}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$ 

$$H(s) = \frac{L_L R_4 R_L s \left(-C_5 r_o s + g_m r_o + 1\right)}{C_5 C_L L_L R_4 R_L r_o s^3 + 2 C_5 L_L R_4 R_L g_m r_o s^2 + 4 C_5 L_L R_4 R_L s^2 + C_5 L_L R_4 r_o s^2 + 2 C_5 L_L R_4 r_o s^2 + C_L L_L R_4 R_L g_m r_o s^2 + C_L L_L R_4 R_L g_m r_o s + L_L R_4 g_m r_o s + 2 L_L R_4 g_m r_o s +$$

**10.10** INVALID-ORDER-10  $Z(s) = \left(\infty, \infty, \infty, R_4, \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$ 

 $H(s) = \frac{R_4 \left( -C_5 r_o s + g_m r_o + 1 \right) \left( C_L L_L R_L s^2 + L_L s + R_L \right)}{2C_5 C_L L_L R_4 q_m r_o s^3 + 4C_5 C_L L_L R_4 r_o s^3 + 2C_5 C_L L_L R_4 r_o s^3 + 2C_5 L_L R_4 g_m r_o s^2 + 4C_5 L_L R_4 s^2 + 2C_5 L_L R_4 r_o s^3 + 2C_5 L_L R_4 q_m r_o s^2 + 4C_5 L_L R_4 r_o s^3 + 2C_5 L_L R_4 q_m r_o s^2 + 2C_5 L_L R_4 r_o s^3 + 2C_5 L_L R_4 q_m r_o s^2 + 2C_5 L_L R_4 r_o s^3 + 2C_5 L_L R_4 q_m r_o s^2 + 2C_5 L_L R_4 r_o s^3 + 2C_5 L_L R_5 r_o s^3 +$ 

10.11 INVALID-ORDER-11  $Z(s) = \left( \infty, \ \infty, \ \infty, \ R_4, \ \frac{1}{C_5 s}, \ \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$ 

 $H(s) = \frac{R_4 R_L \left(C_L L_L s^2 + 1\right) \left(-C_5 r_o s + g_m r_o + 1\right)}{2 C_5 C_L L_L R_4 R_L g_m r_o s^3 + 4 C_5 C_L L_L R_4 r_o s^3 + 2 C_5 C_L L_L R_4 r_o s^3 + 2 C_5 C_L L_L R_4 r_o s^3 + 2 C_5 R_4 R_L g_m r_o s + 4 C_5 R_4 r_o s + 2 C_5 R_5 r_o$ 

10.12 INVALID-ORDER-12  $Z(s) = \left(\infty, \infty, \infty, R_4, \frac{R_5}{C_5 R_5 s + 1}, R_L\right)$ 

 $H(s) = \frac{R_4 R_L \left( -C_5 R_5 r_o s + R_5 g_m r_o + R_5 - r_o \right)}{2 C_5 R_4 R_5 R_L g_m r_o s + 4 C_5 R_4 R_5 R_L s + C_5 R_4 R_5 r_o s + 2 C_5 R_5 R_L r_o s + R_4 R_5 g_m r_o + R_4 R_5 + 2 R_4 R_L g_m r_o + 4 R_4 R_L + R_4 r_o + 2 R_5 R_L g_m r_o + 2 R_5 R_L + 2 R_L r_o}$ 

10.13 INVALID-ORDER-13  $Z(s) = \left(\infty, \infty, \infty, R_4, \frac{R_5}{C_5 R_5 s + 1}, L_L s + \frac{1}{C_L s}\right)$ 

 $H(s) = -\frac{R_4 \left(C_L L_L s^2 + 1\right) \left(C_5 R_5 r_o s - R_5 g_m r_o - R_5 + r_o\right)}{2C_5 C_L L_L R_4 R_5 g_m r_o s^3 + 4C_5 C_L L_L R_5 r_o s^3 + C_5 C_L L_L R_5 r_o s^2 + 2C_5 R_4 R_5 g_m r_o s + 4C_5 R_4 R_5 s + 2C_5 R_5 r_o s + 2C_L L_L R_4 g_m r_o s^2 + 4C_L L_L R_5 g_m r_o s^2 + 2C_L R_5 g_m r$ 

10.14 INVALID-ORDER-14  $Z(s) = \left(\infty, \infty, \infty, R_4, \frac{R_5}{C_5 R_5 s + 1}, \frac{L_L s}{C_L L_L s^2 + 1}\right)$ 

 $H(s) = \frac{L_L R_4 s \left(-C_5 R_5 r_o s + R_5 g_m r_o + R_5 - r_o\right)}{C_5 C_L L_L R_4 R_5 r_o s^3 + 2 C_5 L_L R_4 R_5 g_m r_o s^2 + 4 C_5 L_L R_4 R_5 s^2 + 2 C_5 L_L R_5 r_o s^2 + C_5 R_4 R_5 r_o s + C_L L_L R_4 R_5 g_m r_o s^2 + C_L L_L R_4 r_o s^2 + 2 L_L R_4 g_m r_o s + 4 L_L R_4 s + 2 L_L R_5 g_m r_o s + 2 L_L R_5 g_m r_o + R_4 R_5 g_m r_o + R_4 R_5 r_o s^2 + C_4 R_5 r_o s^2 + C_5 R_4 R_5 r_o s^2 + C_5 R_5$ 

10.15 INVALID-ORDER-15  $Z(s) = \left(\infty, \infty, \infty, R_4, \frac{R_5}{C_5 R_5 s + 1}, L_L s + R_L + \frac{1}{C_L s}\right)$ 

 $H(s) = -\frac{R_4 \left(C_L L_L s^2 + C_L R_L s + 1\right) \left(C_5 R_5 r_o s - R_5 g_m r_o - R_5 + r_o\right)}{2 C_5 C_L L_L R_4 R_5 g_m r_o s^3 + 4 C_5 C_L L_L R_4 r_o s^3 + 2 C_5 C_L L_L R_5 r_o s^3 + 2 C_5 C_L R_4 R_5 R_L s^2 + C_5 C_L R_4 R_5 R_L s^2 + C_5 C_L R_4 R_5 R_L s^2 + 2 C_5 C_L R_5 R_L r_o s^2 + 2 C_5 R_4 R_5 g_m r_o s + 4 C_5 R_4 R_5 g_m r_o s^2 + 4 C_L L_L R_4 g_m r_o s^2 + 4 C_L L_L R_4 g_m r_o s^2 + 2 C_5 L_L R_4 R_5 g_m r_o s^2 + 2 C_5 R_5 g_m r_o s$ 

10.16 INVALID-ORDER-16  $Z(s) = \left(\infty, \infty, \infty, R_4, \frac{R_5}{C_5 R_5 s + 1}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$ 

 $H(s) = \frac{L_L R_4 R_L s \left(-C_5 R_5 r_o s + R_5 g_m r_o + R_5 - r_o\right)}{C_5 C_L L_L R_4 R_5 R_L r_o s^3 + 2 C_5 L_L R_4 R_5 R_L g_m r_o s^2 + 4 C_5 L_L R_4 R_5 R_L s^2 + C_5 L_L R_4 R_5 R_L r_o s^2 + L_L R_4 R_5 r_o s^2 + L_L R_4 R_5$ 

10.17 INVALID-ORDER-17  $Z(s) = \left(\infty, \infty, \infty, R_4, \frac{R_5}{C_5 R_5 s + 1}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$ 

 $H(s) = -\frac{R_4 \left( C_L L_L R_L s^2 + R_2 r_o s^3 + 4 C_5 C_L L_L R_4 R_5 R_L s^3 + C_5 C_L L_L R_4 R_5 r_o s^3 + 2 C_5 L_L R_4 R_5 g_m r_o s^2 + 4 C_5 L_L R_4 R_5 r_o s^2 + 2 C_5 L_L R_4 R_5 r_o s^2 + 2 C_5 L_L R_4 R_5 r_o s^2 + 2 C_5 R_4 R_5 R_L r_o s^2$ 

10.18 INVALID-ORDER-18  $Z(s) = \left( \infty, \infty, \infty, R_4, \frac{R_5}{C_5 R_5 s + 1}, \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$ 

 $-\frac{R_4R_L\left(C_LL_Ls^2+1\right)\left(C_5R_5r_os-R_5g_{colored}\right)}{2C_5C_LL_LR_4R_5R_Lg_mr_os^3+4C_5C_LL_LR_4R_5R_Ls^3+C_5C_LL_LR_4R_5r_os^3+2C_5C_LL_Rs_Rr_os^3+2C_5C_LL_Rs_Rr_os^3+2C_5C_LL_Rs_Rr_os^3+2C_5R_4R_5R_Lg_mr_os+4C_5R_4R_5r_os+2C_5R_5R_Lr_os+2C_5R_5R_Lr_os+2C_5R_5R_Lr_os+2C_5R_4R_5r_os^2+2C_5R_4R_5R_Lg_mr_os^2+4C_5R_4R_5r_os^2+2C_5R_4R_5r_os^2+2C_5R_4R_5R_Lg_mr_os^2+4C_5R_4R_5r_os+2C_5R_4R_5r_os+2C_5R_4R_5r_os+2C_5R_4R_5r_os+2C_5R_4R_5r_os^2+2C_5R_4R_5R_Lg_mr_os^2+4C_5R_4R_5r_os+2C_5R_4R_5r_os+2C_5R_4R_5r_os^2+2C_5R_4R_5r_os^2+2C_5R_4R_5r_os^2+2C_5R_4R_5r_os+2C_5R_5R_5r_os+2C_5R_5R_5r$ 

10.19 INVALID-ORDER-19  $Z(s) = \left(\infty, \infty, \infty, R_4, R_5 + \frac{1}{C_5 s}, R_L\right)$ 

 $H(s) = \frac{R_4 R_L \left( C_5 R_5 g_m r_o s + C_5 R_5 s - C_5 r_o s + g_m r_o + 1 \right)}{C_5 R_4 R_5 g_m r_o s + C_5 R_4 R_5 s + 2 C_5 R_4 R_L g_m r_o s + 4 C_5 R_4 R_L s + C_5 R_4 r_o s + 2 C_5 R_5 R_L g_m r_o s + 2 C_5 R_5 R_L s + 2 C_5 R_L r_o s + R_4 g_m r_o + R_4 + 2 R_L g_m r_o + 2 R_L g_m r_o s + 2 C_5 R_5 R_L g_m r_o s + 2 C_5$ 

**10.20** INVALID-ORDER-20  $Z(s) = \left(\infty, \infty, \infty, R_4, R_5 + \frac{1}{C_5 s}, L_L s + \frac{1}{C_L s}\right)$ 

 $H(s) = \frac{R_4 \left( C_L L_L s^2 + 1 \right) \left( C_5 R_5 g_m r_o s + C_5 R_5 s - C_5 r_o s + g_m r_o + 1 \right)}{2 C_5 C_L L_L R_4 g_m r_o s^3 + 4 C_5 C_L L_L R_5 g_m r_o s^3 + 2 C_5 C_L L_L R_5 s^3 + 2 C_5 C_L L_L R_5 g_m r_o s^2 + C_5 C_L R_4 R_5 g_m r_o s^2 + C_5 C_L R_4 R_5 g_m r_o s^2 + 2 C_5 R_4 g_m r_o s + 4 C_5 R_4 s + 2 C_5 R_5 g_m r_o s + 2 C_5 R_5 s + 2 C_5 r_o s + 2 C_L L_L g_m r_o s^2 + 2 C_L R_4 g_m r_o s^2 +$ 

10.21 INVALID-ORDER-21  $Z(s) = \left(\infty, \infty, \infty, R_4, R_5 + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1}\right)$ 

 $H(s) = \frac{L_L R_4 s \left(C_5 R_5 g_m r_o s + C_5 R_5 s - C_5 r_o s + g_m r_o + 1\right)}{C_5 C_L L_L R_4 R_5 g_m r_o s^3 + C_5 C_L L_L R_4 r_o s^3 + 2 C_5 L_L R_4 g_m r_o s^2 + 4 C_5 L_L R_4 s^2 + 2 C_5 L_L R_5 g_m r_o s^2 + 2 C_5 L_L R_5 g_m r_o s + C_5 R_4 R_5 g_m r_o s + C_5 R_4 r_o s + C_L L_L R_4 g_m r_o s^2 + C_L L_L R_4 g_m r_o s + 2 L_L s + R_4 g_m r_o s + R_4 g_$ 

10.22 INVALID-ORDER-22  $Z(s) = \left(\infty, \infty, \infty, R_4, R_5 + \frac{1}{C_5 s}, L_L s + R_L + \frac{1}{C_L s}\right)$ 

 $H(s) = \frac{R_4 \left( C_L L_L s^2 + C_L R_L s + 1 \right) \left( C_5 R_5 g_m r_o s + C_5 R_5 s - C_5 r_o s + g_m r_o + 1 \right)}{2 C_5 C_L L_L R_4 g_m r_o s^3 + 4 C_5 C_L L_L R_5 g_m r_o s^3 + 2 C_5 C_L L_L R_5 s^3 + 2 C_5 C_L L_L R_5 g_m r_o s^2 + C_5 C_L R_4 R_5 g_m r_o s^2 + 2 C_5 C_L R_4 R_L g_m r_o s^2 + 2 C_5 C_L R_4 R_L g_m r_o s^2 + 2 C_5 C_L R_5 R_L g_m r_$ 

10.23 INVALID-ORDER-23  $Z(s) = \left( \infty, \infty, \infty, R_4, R_5 + \frac{1}{C_5 s}, \frac{1}{C_L s + \frac{1}{R_F} + \frac{1}{L_L s}} \right)$ 

 $H(s) = \frac{L_L R_4 R_L s \left(C_5 R_5 g_m r_o s + C_5 R_5 s - C_5 r_o s + g_m r_o + 1\right)}{C_5 C_L L_L R_4 R_5 R_L g_m r_o s^3 + C_5 C_L L_L R_4 R_5 g_m r_o s^2 + C_5 L_L R_4 R_5 g_m r_o s^2 + 2 C_5 L_L R_4 R_5 g_m r_o s^2 + 2 C_5 L_L R_5 R_L g_m r_o s^2 + 2$ 

10.24 INVALID-ORDER-24  $Z(s) = \left(\infty, \infty, \infty, R_4, R_5 + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$ 

 $\frac{R_4 \left(C_L L_L R_L s^2 + L_L s + R_L\right) \left(C_5 R_5 g_m r_0 s^3 + C_5 C_L L_L R_4 R_5 g_m r_0 s^3 + 2 C_5 C_L L_L R_4 R_5 g_m r_0 s^3 + 2 C_5 C_L L_L R_4 R_5 g_m r_0 s^3 + 2 C_5 C_L L_L R_4 R_5 g_m r_0 s^3 + 2 C_5 C_L L_L R_4 R_5 g_m r_0 s^3 + 2 C_5 C_L L_L R_4 R_5 g_m r_0 s^3 + 2 C_5 C_L L_L R_4 R_5 g_m r_0 s^3 + 2 C_5 C_L L_L R_4 R_5 g_m r_0 s^3 + 2 C_5 C_L L_L R_4 R_5 g_m r_0 s^3 + 2 C_5 C_L L_L R_4 R_5 g_m r_0 s^3 + 2 C_5 C_L L_L R_4 R_5 g_m r_0 s^3 + 2 C_5 C_L L_L R_4 R_5 g_m r_0 s^3 + 2 C_5 C_L L_L R_4 R_5 g_m r_0 s^3 + 2 C_5 C_L L_L R_4 R_5 g_m r_0 s^3 + 2 C_5 C_L L_L R_4 R_5 g_m r_0 s^3 + 2 C_5 C_L L_L R_4 R_5 g_m r_0 s^3 + 2 C_5 C_L L_L R_4 R_5 g_m r_0 s^3 + 2 C_5 C_L L_L R_5 R_5 g_m r_0 s^3 + 2 C_5 C_L L_L R_5 g_m$ 

10.25 INVALID-ORDER-25  $Z(s) = \left(\infty, \infty, \infty, R_4, R_5 + \frac{1}{C_5 s}, \frac{R_L \left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$ 

 $R_4R_L\left(C_LL_Ls^2+1\right)\left(C_5R_5g_mr_os+C_5R_$  $H(s) = \frac{1}{C_5C_LL_LR_4R_5g_mr_os^3 + C_5C_LL_LR_4R_5g_mr_os^3 + C_5C_LL_LR_4R_5g_mr_os^3 + 2C_5C_LL_LR_4R_5g_mr_os^3 + 2C_5C_LL_Rr_os^3 +$  **10.26** INVALID-ORDER-26  $Z(s) = \left(\infty, \infty, \infty, R_4, L_5 s + \frac{1}{C_5 s}, \frac{1}{C_L s}\right)$ 

$$H(s) = \frac{R_4 \left( C_5 L_5 g_m r_o s^2 + C_5 L_5 s^2 - C_5 r_o s + g_m r_o + 1 \right)}{C_5 C_L L_5 R_4 g_m r_o s^3 + C_5 C_L L_5 R_4 s^3 + C_5 C_L R_4 r_o s^2 + 2 C_5 L_5 g_m r_o s^2 + 2 C_5 L_5 s^2 + 2 C_5 R_4 g_m r_o s + 4 C_5 R_4 s + 2 C_5 r_o s + C_L R_4 g_m r_o s + C_L R_4 s + 2 g_m r_o + 2 C_5 R_4 g_m r_o s^2 + C_5 R_5 g_m r_o$$

10.27 INVALID-ORDER-27  $Z(s) = \left(\infty, \infty, \infty, R_4, L_5 s + \frac{1}{C_5 s}, \frac{R_L}{C_L R_L s + 1}\right)$ 

$$H(s) = \frac{R_4 R_L \left( C_5 L_5 g_m r_o s^2 + C_5 L_5 s^2 - C_5 r_o s + g_m r_o + 1 \right)}{C_5 C_L L_5 R_4 R_L g_m r_o s^3 + C_5 C_L L_5 R_4 R_L s^3 + C_5 C_L R_4 R_L r_o s^2 + C_5 L_5 R_4 g_m r_o s^2 + 2 C_5 L_5 R_L g_m r_o s^2 + 2 C_5 L_5 R_4 R_L g_m r_o s + 4 C_5 R_4 R_L g_m r_o s + 4 C_5 R_4 R_L g_m r_o s + C_L R_4 R_$$

**10.28** INVALID-ORDER-28  $Z(s) = \left(\infty, \infty, \infty, R_4, L_5 s + \frac{1}{C_5 s}, R_L + \frac{1}{C_L s}\right)$ 

$$H(s) = \frac{R_4 \left( C_L R_L s + 1 \right) \left( C_5 L_5 g_m r_o s^2 + C_5 L_5 s^2 - C_5 r_o s + g_m r_o + 1 \right)}{C_5 C_L L_5 R_4 g_m r_o s^3 + C_5 C_L L_5 R_L g_m r_o s^3 + 2 C_5 C_L L_5 R_L g_m r_o s^2 + 2 C_5 C_L R_4 R_L g_m r_o s^2 + 2 C_5 C_L R_4 R_L g_m r_o s^2 + 2 C_5 L_5 g_$$

**10.29** INVALID-ORDER-29  $Z(s) = \left(\infty, \infty, \infty, R_4, L_5 s + \frac{1}{C_5 s}, L_L s + \frac{1}{C_L s}\right)$ 

$$H(s) = \frac{R_4 \left( C_L L_L s^2 + 1 \right) \left( C_5 L_5 g_m r_o s^2 + C_5 L_5 s^2 - C_5 r_o s + g_m r_o + 1 \right)}{2 C_5 C_L L_5 L_L g_m r_o s^4 + 2 C_5 C_L L_5 L_4 s^4 + C_5 C_L L_5 R_4 g_m r_o s^3 + C_5 C_L L_4 R_4 g_m r_o s^3 + 4 C_5 C_L L_4 R_4 g_m r_o s^3 + 2 C_5 C_L L_4 r_o s^3 + 2 C_5 L_4 r_o s^2 + 2 C_5 L_5 g_m r_o s^2 + 2 C_5 g_m r_o s^2 + 2 G_5 g_m r_o s^2$$

**10.30** INVALID-ORDER-30  $Z(s) = \left(\infty, \infty, \infty, R_4, L_5 s + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1}\right)$ 

$$H(s) = \frac{L_L R_4 s \left(C_5 L_5 g_m r_o s^2 + C_5 L_5 s^2 - C_5 r_o s + g_m r_o + 1\right)}{C_5 C_L L_5 L_L R_4 g_m r_o s^4 + C_5 C_L L_5 L_L R_4 s^4 + C_5 C_L L_L R_4 r_o s^3 + 2 C_5 L_5 L_L g_m r_o s^3 + 2 C_5 L_5 L_L s^3 + C_5 L_5 R_4 g_m r_o s^2 + C_5 L_5 R_4 g_m r_o s^2 + 4 C_5 L_L R_4 g_m r_o s^2 + C_5 L_L R_4 g_m r_o s^2 + C_L L_L R_4 g_m r_o s^2 + C_L$$

10.31 INVALID-ORDER-31  $Z(s) = \left(\infty, \infty, \infty, R_4, L_5 s + \frac{1}{C_5 s}, L_L s + R_L + \frac{1}{C_L s}\right)$ 

$$H(s) = \frac{R_4 \left( C_L L_L s^2 + C_L R_L s + 1 \right) \left( C_5 L_5 g_m r_o s^2 + C_5 L_5 s^2 - C_5 r_o s + g_m r_o + 1 \right)}{2 C_5 C_L L_5 L_L g_m r_o s^4 + 2 C_5 C_L L_5 L_L g_m r_o s^4 + 2 C_5 C_L L_5 R_4 g_m r_o s^3 + 2 C_5 C_L L_5 R_5 g_m r_o s^3 + 2 C_5 C_L L_5 R_5 g_m r_o s^3 + 2 C_5 C_L L_5 R_5 g_m r_o s^3 + 2 C_5 C_L L_5 R_5 g_m r_o s^3 + 2 C_5 C_L L_5 R_5 g_m r_o s^3 + 2 C_5 C_L L_5 R_5 g_m r_o s^3 + 2 C_5 C_L L_5 R_5 g_m r_o s^3 + 2 C_5 C_L L_5 R_5 g_m r_o s^3 + 2 C_5 C_L L_5 R_5 g_m r_o s^3 + 2 C_5 C_L L_5 R_5 g_m r_o s^3 + 2 C_5 C_L$$

10.32 INVALID-ORDER-32  $Z(s) = \left(\infty, \infty, \infty, R_4, L_5 s + \frac{1}{C_5 s}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$ 

$$H(s) = \frac{L_L R_4 R_L s \left(C_5 L_5 g_m r_o s^2 + C_5 L_5 s^2 - C_5 r_o s + g_m r_o + 1\right)}{C_5 C_L L_5 L_L R_4 R_L g_m r_o s^4 + C_5 C_L L_5 L_L R_4 R_L r_o s^3 + C_5 L_5 L_L R_4 g_m r_o s^3 + 2 C_5 L_5 L_L R_4 g_m r_o s^3 + 2 C_5 L_5 L_L R_4 R_L g_m r_o s^3 + 2 C_5 L_5 L_L R_4 R_L g_m r_o s^3 + 2 C_5 L_5 R_4 R_L g_m r_o s^2 + C_5 L_5 R_4 R_L g_m r_o s^2 + 4 C_5 L_L R_4 R_L g_m r_o s^2 + 2 C_5 L_L R_4 R_L g_m r_$$

**10.33** INVALID-ORDER-33  $Z(s) = \left(\infty, \infty, \infty, R_4, L_5 s + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$ 

**10.34** INVALID-ORDER-34 
$$Z(s) = \left(\infty, \infty, \infty, R_4, L_5 s + \frac{1}{C_5 s}, \frac{R_L \left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$$

 $H(s) = \frac{R_4 R_L \left(C_L L_L s^2 + 1\right) \left(C_5 L_5 g_m r_o s^2 + C_5 L_L L_R L_R g_m r_o s^4 + C_5 C_L L_5 L_L R_4 g_m r_o s^4 + C_5 C_L L_5 L_L R_4 g_m r_o s^3 + C_5 C_L L_5 R_4 R_L g_m r_o s^3 + C_5 C_L L_L R_4 R_L g_m r_o s^3 + C_5 C_L R_4 R_L g_m r_o s^3 +$ 

**10.35** INVALID-ORDER-35  $Z(s) = \left(\infty, \infty, \infty, R_4, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{1}{C_L s}\right)$ 

**10.36** INVALID-ORDER-36  $Z(s) = \left(\infty, \infty, \infty, R_4, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{R_L}{C_L R_L s + 1}\right)$ 

$$H(s) = \frac{R_4 R_L \left( -C_5 L_5 r_o s^2 + L_5 g_m r_o s + L_5 s - r_o \right)}{C_5 C_L L_5 R_4 R_L r_o s^3 + 2 C_5 L_5 R_4 R_L g_m r_o s^2 + 4 C_5 L_5 R_4 R_L s^2 + C_5 L_5 R_4 r_o s^2 + 2 C_5 L_5 R_4 R_L g_m r_o s^2 + C_L L_5 R_4 R_L g_m r_o s^2 + C_L L_5 R_4 R_L r_o s + L_5 R_4 g_m r_o s + L_5 R_4 g_m r_o s + L_5 R_4 g_m r_o s + 2 L_5 R_L g_m r_o s + 2 L$$

10.37 INVALID-ORDER-37  $Z(s) = \left(\infty, \infty, \infty, R_4, \frac{L_5 s}{C_5 L_5 s^2 + 1}, R_L + \frac{1}{C_L s}\right)$ 

$$H(s) = -\frac{R_4 \left(C_L R_L s + 1\right) \left(C_5 L_5 r_o s^2 - L_5 g_m r_o s - L_5 s + r_o\right)}{2 C_5 C_L L_5 R_4 R_L g_m r_o s^3 + 4 C_5 C_L L_5 R_4 r_o s^3 + 2 C_5 C_L L_5 R_4 r_o s^3 + 2 C_5 L_5 R_4 g_m r_o s^2 + 4 C_5 L_5 R_4 g_m r_o s^2 + C_L L_5 R_4 g_m r_o s^2 + 2 C_L L_5 R_L g_m r_o s^2 + 2 C_L L_5 R_4 g_m r_o s$$

**10.38** INVALID-ORDER-38  $Z(s) = \left(\infty, \infty, \infty, R_4, \frac{L_5 s}{C_5 L_5 s^2 + 1}, L_L s + \frac{1}{C_L s}\right)$ 

$$H(s) = -\frac{R_4 \left( C_L L_L s^2 + 1 \right) \left( C_5 L_5 r_o s^2 - L_5 g_m r_o s - L_5 s + r_o \right)}{2 C_5 C_L L_5 L_L R_4 g_m r_o s^4 + 4 C_5 C_L L_5 L_L r_o s^4 + C_5 C_L L_5 R_4 r_o s^3 + 2 C_5 L_5 R_4 g_m r_o s^2 + 4 C_5 L_5 R_4 g_m r_o s^3 + 2 C_L L_5 L_L g_m r_o s^3 + 2 C_L L_5 R_4 g_m r_o s^2 + C_L L_5 R_4 g_m r_o s^2 + C_L L_5 R_4 g_m r_o s^2 + 4 C_L L_L R_4 g_m r_o s^2 + 4 C_L L_L R_4 g_m r_o s^2 + C_L L_5 R_4 g_m r_o s^2 + C_L L_5$$

10.39 INVALID-ORDER-39  $Z(s) = \left(\infty, \infty, \infty, R_4, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{L_L s}{C_L L_L s^2 + 1}\right)$ 

$$H(s) = \frac{L_L R_4 s \left(-C_5 L_5 r_o s^2 + L_5 g_m r_o s + L_5 s - r_o\right)}{C_5 C_L L_5 L_L R_4 r_o s^4 + 2 C_5 L_5 L_L R_4 g_m r_o s^3 + 4 C_5 L_5 L_L R_4 s^3 + 2 C_5 L_5 L_L R_4 g_m r_o s^3 + C_L L_5 L_L R_4 g_m r_o s^3 + C_L L_5 L_L R_4 r_o s^2 + 2 L_5 L_L g_m r_o s^2 + 2 L_5 L_L g_m r_o s^2 + 2 L_5 L_L g_m r_o s + L_5 R_4 g_m r_o s + L_5 R_4 g_m r_o s + 4 L_L R_4 s + 2 L_L R_4 g_m r_o s + 4 L$$

**10.40** INVALID-ORDER-40  $Z(s) = \left(\infty, \infty, \infty, R_4, \frac{L_5 s}{C_5 L_5 s^2 + 1}, L_L s + R_L + \frac{1}{C_L s}\right)$ 

$$H(s) = -\frac{R_4 \left(C_L L_L s^2 + C_L R_L s + 1\right) \left(C_5 L_5 r_o s^2 - L_5 g_m r_o s - L_5 s + 2C_5 L_5 L_L R_4 g_m r_o s^4 + 4C_5 C_L L_5 L_L R_4 s^4 + 2C_5 C_L L_5 L_L r_o s^4 + 2C_5 C_L L_5 R_4 R_L g_m r_o s^3 + 4C_5 C_L L_5 R_4 r_o s^3 + 2C_5 L_5 R_4 g_m r_o s^2 + 4C_5 L_5 R_4 g_m r_o s^2 + 4C_5 L_5 R_4 g_m r_o s^3 + 2C_L L_5 L_L g_m r_o s^3 + 2C_L L_5 L_L g_m r_o s^3 + 2C_L L_5 L_L g_m r_o s^3 + 2C_L L_5 R_4 g_m r_o s^2 + 4C_5 L_5 R_4 g_m r_o s^3 + 2C_L L_5 L_L g_m r_o s^3 + 2C_L L_5 R_4 g_m r_o s^3 + 2C_L R_5 R_5 g_m r_o s^3$$

10.41 INVALID-ORDER-41  $Z(s) = \left(\infty, \infty, \infty, R_4, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{1}{C_L s + \frac{1}{R_5} + \frac{1}{L_5 s}}\right)$ 

$$H(s) = \frac{L_L R_4 R_L s \left(-C_5 L_5 r_o s^2 + L_5 g_m r_o s + L_5 s - r_o\right)}{C_5 C_L L_5 L_L R_4 R_L r_o s^4 + 2 C_5 L_5 L_L R_4 R_L g_m r_o s^3 + 4 C_5 L_5 L_L R_4 R_L s^3 + C_5 L_5 L_L R_4 R_L r_o s^3 + C_5 L_5 L_L$$

10.42 INVALID-ORDER-42  $Z(s) = \left(\infty, \infty, \infty, R_4, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$ 

 $H(s) = -\frac{R_4 \left( C_L L_L L_L R_d R_L g_m r_o s^4 + 4 C_5 C_L L_5 L_L R_4 R_L s^4 + C_5 C_L L_5 L_L R_4 r_o s^4 + 2 C_5 L_5 L_L R_4 g_m r_o s^3 + 4 C_5 L_5 L_L R_4 g_m r_o s^3 + 4 C_5 L_5 L_L R_4 g_m r_o s^3 + 2 C_5 L_5 R_4 R_L g_m r_o s^3 + 2 C_5 L_5 R$ 

10.43 INVALID-ORDER-43  $Z(s) = \left(\infty, \infty, \infty, R_4, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{R_L \left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$ 

 $H(s) = -\frac{10416L}{2C_5C_LL_5L_LR_4R_Lg_mr_os^4 + 4C_5C_LL_5L_LR_4R_Ls^4 + C_5C_LL_5L_LR_4r_os^4 + 2C_5C_LL_5L_LR_4r_os^4 + C_5C_LL_5R_4R_Lr_os^3 + 2C_5L_5R_4R_Lg_mr_os^2 + 4C_5L_5R_4R_Ls^2 + C_5L_5R_4r_os^2 + 2C_5L_5R_4r_os^2 + C_LL_5L_LR_4g_mr_os^3 + C_LL_5L_LR_4g_mr_os^3 + C_LL_5L_LR_4g_mr_os^3 + C_LL_5L_LR_4g_mr_os^3 + C_LL_5L_LR_4g_mr_os^3 + C_LL_5L_Rg_mr_os^3 + C_LL_5L_Rg_mr_os$ 

**10.44** INVALID-ORDER-44  $Z(s) = \left(\infty, \infty, \infty, R_4, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{1}{C_L s}\right)$ 

 $H(s) = \frac{R_4 \left( C_5 L_5 g_m r_o s^2 + C_5 L_5 s^2 + C_5 R_5 g_m r_o s + C_5 R_5 s - C_5 r_o s + g_m r_o + 1 \right)}{C_5 C_L L_5 R_4 g_m r_o s^3 + C_5 C_L L_5 R_4 s^3 + C_5 C_L R_4 R_5 g_m r_o s^2 + C_5 C_L R_4 r_o s^2 + 2 C_5 L_5 g_m r_o s^2 + 2 C_5 L_5 g_m r_o s + 4 C_5 R_4 g_m r_o s + 2 C_5 R_5 g_m r_o s +$ 

10.45 INVALID-ORDER-45  $Z(s) = \left(\infty, \infty, \infty, R_4, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{R_L}{C_L R_L s + 1}\right)$ 

 $H(s) = \frac{R_4 R_L \left( C_5 L_5 g_m r_o s^2 + C_5 L_5 s^2 + C_5 R_5 g_m r_o s + C_5 R_5 s - C_5 r_o s + g_m r_o + 1 \right)}{C_5 C_L L_5 R_4 R_L g_m r_o s^3 + C_5 C_L L_5 R_4 R_L g_m r_o s^2 + C_5 L_5 R_4 g_m r_o s^2 + C_5 R_4 R_5 g_m r_o s + C_5 R_$ 

10.46 INVALID-ORDER-46  $Z(s) = \left(\infty, \infty, \infty, R_4, L_5 s + R_5 + \frac{1}{C_5 s}, R_L + \frac{1}{C_5 s}\right)$ 

 $H(s) = \frac{R_4 \left( C_L R_L s + 1 \right) \left( C_5 L_5 g_m r_o s^2 + C_5 L_5 s^2 + C_5 R_5 g_m r_o s + C_5 R_5 s - C_5 r_o s + g_m r_o + 1 \right)}{C_5 C_L L_5 R_4 g_m r_o s^3 + C_5 C_L L_5 R_4 g_m r_o s^3 + 2 C_5 C_L L_5 R_L g_m r_o s^3 + 2 C_5 C_L L_5 R_L g_m r_o s^2 + 2 C_5 C_L R_4 R_5 g_m r_o s^2 + 2 C_5 C_L R_4 R_5 g_m r_o s^2 + 2 C_5 C_L R_4 R_5 g_m r_o s^2 + 2 C_5 C_L R_4 R_5 g_m r_o s^2 + 2 C_5 C_L R_4 R_5 g_m r_o s^2 + 2 C_5 C_L R_4 R_5 g_m r_o s^2 + 2 C_5 C_L R_4 R_5 g_m r_o s^2 + 2 C_5 C_L R_4 R_5 g_m r_o s^2 + 2 C_5 C_L R_4 R_5 g_m r_o s^2 + 2 C_5 C_L R_4 R_5 g_m r_o s^2 + 2 C_5 C_L R_4 R_5 g_m r_o s^2 + 2 C_5 C_L R_5 R_4 g_m r_o s^2 + 2 C_5 C_L R_5 R_5 g_m r_o s^2 + 2 C_5 C_L R_5 R_5 g_m r_o s^2 + 2 C_5 C_L R_5 R_5 g_m r_o s^2 + 2 C_5 C_L R_5 R_5 g_m r_o s^2 + 2 C_5 C_L R_5 R_5 g_m r_o s^2 + 2 C_5 C_L R_5 R_5 g_m r_o s^2 + 2 C_5 C_L R_5 R_5 g_m r_o s^2 + 2 C_5 C_L R_5 R_5 g_m r_o s^2 + 2 C_5 C_L R_5 R_5 g_m r_o s^2 + 2 C_5 C_L R_5 R_5 g_m r_o s^2 + 2 C_5 C_L R_5 R_5 g_m r_o s^2 + 2 C_5 C_L R_5 R_5 g_m r_o s^2 + 2 C_5 C_L R_5 R_5 g_m r_o s^2 + 2 C_5 C_L R_5 R_5 g_m r_o s^2 + 2 C_5 C_L R_5 R_5 g_m r_o s^2 + 2 C_5 C_L R_5 R_5 g_m r_o s^2 + 2 C_5 C_L R_5 R_5 g_m r_o s^2 + 2 C_5 C_L R_5 g_m r_$ 

10.47 INVALID-ORDER-47  $Z(s) = \left(\infty, \infty, \infty, R_4, L_5 s + R_5 + \frac{1}{C_5 s}, L_L s + \frac{1}{C_L s}\right)$ 

 $H(s) = \frac{R_4 \left( C_L L_L s^2 + 1 \right) \left( C_5 L_5 g_m r_o s^2 + C_5 L_5 s^2 + C_5 R_5 g_m r_o s + C_5 R_5 s - C_5 r_o s + g_m r_o + 1 \right)}{2 C_5 C_L L_5 L_L g_m r_o s^4 + 2 C_5 C_L L_5 L_5 s^4 + C_5 C_L L_5 R_4 g_m r_o s^3 + 2 C_5 C_L L_L R_4 g_m r_o s^3 + 2 C_5 C_L L_L R_5 g_m r_o s^3 + 2 C_5 C_L L_L R_5 g_m r_o s^3 + 2 C_5 C_L L_L R_5 g_m r_o s^3 + C_5 C_L L_L R_5 g_m r_o s^3 + 2 C_5 C_L L_L R_5 g_m r_o s^3 + 2 C_5 C_L L_L R_5 g_m r_o s^3 + 2 C_5 C_L L_L R_5 g_m r_o s^3 + 2 C_5 C_L L_L R_5 g_m r_o s^3 + 2 C_5 C_L L_L R_5 g_m r_o s^3 + 2 C_5 C_L L_L R_5 g_m r_o s^3 + 2 C_5 C_L L_L R_5 g_m r_o s^3 + 2 C_5 C_L L_L R_5 g_m r_o s^3 + 2 C_5 C_L L_L R_5 g_m r_o s^3 + 2 C_5 C_L L_L R_5 g_m r_o s^3 + 2 C_5 C_L L_L R_5 g_m r_o s^3 + 2 C_5 C_L L_L R_5 g_m r_o s^3 + 2 C_5 C_L L_L R_5 g_m r_o s^3 + 2 C_5 C_L L_L R_5 g_m r_o s^3 + 2 C_5 C_L L_L R_5 g_m r_o s^3 + 2 C_5 C_L L_L R_5 g_m r_o s^3 + 2 C_5 C_L R_4 R_5 g_m r_o s^3 + 2 C_5 C_L R_5$ 

**10.48** INVALID-ORDER-48  $Z(s) = \left(\infty, \infty, \infty, R_4, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1}\right)$ 

 $H(s) = \frac{L_L R_4 s \left(C_5 L_5 g_m r_o s^2 + C_5 L_5 s^2 + C_5 R_5 g_m r_o s + C_5 R_5 s - C_5 r_o s + g_m r_o + 1\right)}{C_5 C_L L_5 L_L R_4 g_m r_o s^4 + C_5 C_L L_L R_4 R_5 g_m r_o s^3 + C_5 C_L L_L R_4 R_5 s^3 + C_5 C_L L_L R_4 r_o s^3 + 2 C_5 L_5 L_L s^3 + C_5 L_5 L_L s^3 + C_5 L_5 L_L s^3 + C_5 L_5 L_L R_4 g_m r_o s^2 + 2 C_5 L_L R_4$ 

10.49 INVALID-ORDER-49  $Z(s) = \left(\infty, \infty, \infty, R_4, L_5 s + R_5 + \frac{1}{C_5 s}, L_L s + R_L + \frac{1}{C_L s}\right)$ 

 $H(s) = \frac{R_4 \left( C_L L_L s^2 + C_L R_L s + 1 \right)}{2 C_5 C_L L_5 L_L g_m r_o s^4 + 2 C_5 C_L L_5 R_4 g_m r_o s^3 + C_5 C_L L_5 R_4 g_m r_o s^3 + 2 C_5 C_L L_5 R_L g_m r_o s^3 + 2 C_5 C_L L_L R_4 g_m r_o s^3 + 2 C_5 C_L L_L R_5 g_m r_o s^3 + 2 C_5 C_L L_L$ 

**10.50** INVALID-ORDER-50 
$$Z(s) = \left(\infty, \infty, \infty, R_4, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$$

 $H(s) = \frac{L_L R_4 R_L s}{C_5 C_L L_5 L_L R_4 R_L q_m r_o s^4 + C_5 C_L L_L R_4 R_L s^4 + C_5 C_L L_L R_4 R_5 R_L q_m r_o s^3 + C_5 L_L L_R R_4 R_L r_o s^3 + C_5 L_L R_4 R_L r_o s^3 + C_5$ 

10.51 INVALID-ORDER-51  $Z(s) = \left(\infty, \infty, \infty, R_4, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$ 

 $H(s) = \frac{1}{C_5C_LL_5L_LR_4g_mr_os^4 + C_5C_LL_5L_LR_4s^4 + 2C_5C_LL_5L_LR_4g_mr_os^4 + 2C_5C_LL_5L_LR_4s^4 + C_5C_LL_LR_4R_5g_mr_os^3 + C_5C_LL_LR_4R_5g_mr_os^3 + 2C_5C_LL_LR_4R_5g_mr_os^3 + 2C_5C_LLR_4R_5g_mr_os^3 + 2C_5C_LLR_5g_mr_os^3 + 2C_5$ 

10.52 INVALID-ORDER-52  $Z(s) = \left(\infty, \infty, \infty, R_4, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{R_L \left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_5 s}}\right)$ 

 $H(s) = \frac{1}{C_5C_LL_5L_LR_4g_mr_os^4 + C_5C_LL_5L_LR_4s^4 + 2C_5C_LL_5L_LR_Lg_mr_os^4 + 2C_5C_LL_5R_4R_Lg_mr_os^3 + C_5C_LL_5R_4R_Lg_mr_os^3 + C_5C_LL_LR_4R_5g_mr_os^3 + C_5C_LL_5R_5g_mr_os^3 + C_5C_LL_5R_$ 

**10.53** INVALID-ORDER-53  $Z(s) = \left( \infty, \infty, \infty, R_4, \frac{1}{C_5 s + \frac{1}{R_F} + \frac{1}{L_E s}}, \frac{1}{C_L s} \right)$ 

 $H(s) = \frac{R_4 \left( -C_5 L_5 R_5 r_o s^2 + L_5 R_5 g_m r_o s + L_5 R_5 s - L_5 r_o s - R_5 r_o \right)}{C_5 C_L L_5 R_4 R_5 r_o s^3 + 2 C_5 L_5 R_4 R_5 g_m r_o s^2 + 4 C_5 L_5 R_4 R_5 s^2 + C_L L_5 R_4 R_5 g_m r_o s^2 + C_L L_5 R_4 R_5 r_o s^2 + C_L L_5 R_4 R_5 r_o s + 2 L_5 R_4 g_m r_o s + 4 L_5 R_4 s + 2 L_5 R_5 g_m r_o s + 2 L_5 R_5$ 

10.54 INVALID-ORDER-54  $Z(s) = \left(\infty, \infty, \infty, R_4, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{R_L}{C_L R_L s + 1}\right)$ 

 $H(s) = \frac{K_4 R_L \left( -C_5 L_5 R_5 r_o s^2 + L_5 R_5 g_m r_o s + L_5 R_5 g_m r_o s + L_5 R_5 s - L_5 r_o s - R_5 r_o \right)}{C_5 C_L L_5 R_4 R_5 R_L r_o s^3 + 2 C_5 L_5 R_4 R_5 R_L g_m r_o s^2 + 4 C_5 L_5 R_4 R_5 r_o s^2 + 2 C_5 L_5 R_4 R_5 R_L r_o s^2 + C_L L_5 R_4 R_5 R_L r_o s$ 

10.55 INVALID-ORDER-55  $Z(s) = \left(\infty, \infty, \infty, R_4, \frac{1}{C_5 s + \frac{1}{R_E} + \frac{1}{L_E s}}, R_L + \frac{1}{C_L s}\right)$ 

 $R_4 \left( C_L R_L s + 1 \right) \left( C_5 L_5 R_5 r_o s^2 - L_5 R_5 g_m r_o s - L_5 R_5 s \right)$ 

 $\frac{1}{2C_5C_LL_5R_4R_5R_Lg_mr_os^3 + 4C_5C_LL_5R_4R_5R_Ls^3 + C_5C_LL_5R_4R_5r_os^3 + 2C_5L_Lf_8R_4R_5g_mr_os^2 + 4C_5L_5R_4R_5g_mr_os^2 + 4C_5L_5R_5g_mr_os^2 + 4C_5L_5R_5g_mr_os^2 + 4C_5L_5R_5g_$ 

10.56 INVALID-ORDER-56  $Z(s) = \left(\infty, \infty, \infty, R_4, \frac{1}{C_5 s + \frac{1}{R_E} + \frac{1}{L_E s}}, L_L s + \frac{1}{C_L s}\right)$ 

 $R_4 \left( C_L L_L s^2 + 1 \right) \left( C_5 L_5 R_5 r_o s^2 - L_5 R_5 g_m r_o s - L_5 R_5 g_m r$ 

 $\frac{R_4\left(C_LL_Ls + 1\right)\left(C_5L_5R_5r_os - L_5R_5g_mr_os - L_5R_5$ 

10.57 INVALID-ORDER-57  $Z(s) = \left(\infty, \infty, \infty, R_4, \frac{1}{C_5 s + \frac{1}{R_r} + \frac{1}{L_r s}}, \frac{L_L s}{C_L L_L s^2 + 1}\right)$ 

 $H(s) = \frac{L_L R_4 s \left(-C_5 L_5 R_5 r_o s^2 + L_5 R_5 g_m r_o s + L_5 R_5 s - L_5 r_o s - R_5 r_o\right)}{C_5 C_L L_5 L_L R_4 R_5 r_o s^4 + 2 C_5 L_5 L_L R_4 R_5 g_m r_o s^3 + 4 C_5 L_5 L_L R_4 R_5 r_o s^3 + C_5 L_5 L_L R_4 R_5 g_m r_o s^3 + C_L L_5 L_L R_4 R_5 r_o s^3 + C_L L_5 L_L R_5 r_o s^3 + C_L$ 

- **10.58** INVALID-ORDER-58  $Z(s) = \left(\infty, \infty, \infty, R_4, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, L_L s + R_L + \frac{1}{C_L s}\right)$
- $H(s) = -\frac{1}{2C_5C_LL_5L_LR_4R_5g_mr_os^4 + 4C_5C_LL_5L_LR_4R_5s^4 + 2C_5C_LL_5L_LR_5r_os^4 + 2C_5C_LL_5R_4R_5R_Lg_mr_os^3 + 4C_5C_LL_5R_4R_5r_os^3 + 2C_5C_LL_5R_4R_5g_mr_os^3 + 2C_5L_LR_4R_5g_mr_os^3 + 2C_5L_LR_4g_mr_os^3 + 2C_5L$
- 10.59 INVALID-ORDER-59  $Z(s) = \left(\infty, \infty, \infty, R_4, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$
- $H(s) = \frac{L_L R_4 R_L s \left(-C_5 L_5 R_6 r_o s^2 + C_L L_5 L_L R_4 R_5 R_L r_o s^4 + 2 C_5 L_5 L_L R_4 R_5 R_L g_m r_o s^3 + 4 C_5 L_5 L_L R_4 R_5 R_L s^3 + C_5 L_5 L_L R_4 R_5 R_L r_o s^3 + C_5 L_5 R_4 R_5 R_L r_o s^$
- 10.60 INVALID-ORDER-60  $Z(s) = \left(\infty, \infty, \infty, R_4, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$
- 10.61 INVALID-ORDER-61  $Z(s) = \left(\infty, \infty, \infty, R_4, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{R_L \left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$
- $H(s) = -\frac{1}{2C_5C_LL_5L_LR_4R_5R_Lg_mr_os^4 + 4C_5C_LL_5L_LR_4R_5r_os^4 + 2C_5C_LL_5L_LR_4R_5r_os^4 + 2C_5C_LL_5L_LR_4R_5R_Lr_os^4 + 2C_5C_LL_5L_LR_5R_Lr_os^4 + 2C_5C_LL_5L_LR_5R_Lr_os^4 + 2C_5C_LL_5L_LR_5R_Lr_os^4 + 2C_5C_LL_5L_LR_5R_Lr_os^4 + 2C_5C_LL_5L_LR_5R_Lr_os^4 + 2C_$
- 10.62 INVALID-ORDER-62  $Z(s) = \left(\infty, \infty, \infty, R_4, \frac{L_5s}{C_5L_5s^2+1} + R_5, \frac{1}{C_Ls}\right)$
- $H(s) = \frac{R_4 \left( C_5 L_5 R_5 g_m r_o s^2 + C_5 L_5 R_5 s^2 C_5 L_5 r_o s^2 + L_5 g_m r_o s + L_5 s + R_5 g_m r_o + R_5 r_o \right)}{C_5 C_L L_5 R_4 R_5 g_m r_o s^3 + C_5 C_L L_5 R_4 r_o s^3 + 2 C_5 L_5 R_4 g_m r_o s^2 + 4 C_5 L_5 R_4 s^2 + 2 C_5 L_5 R_5 g_m r_o s^2 + 2 C_5 L_5 R_5 s^2 + 2 C_5 L_5 R_4 g_m r_o s^2 + C_L L_5 R_4 g_m r_o s + C_L R_4 R_5 g_m r_o s + C_L R_4 R_5 g_m r_o s + 2 L_5 g_m r_o s + 2$
- **10.63** INVALID-ORDER-63  $Z(s) = \left(\infty, \infty, \infty, R_4, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{R_L}{C_L R_L s + 1}\right)$
- $H(s) = \frac{R_4 R_L \left( C_5 L_5 R_5 g_m r_o s^2 + C_5 L_5 R_5 s^2 C_5 L_5 r_o s^2 + L_5 g_m r_o s + L_5 s + R_5 g_m r_o s^2 + C_5 L_5 R_4 R_5 g_m r_o s^2 + C_5 L_5 R_5 R_5 g_m r_o s^2 + C_5 L_5 R_5 g_m r_o s^$
- **10.64** INVALID-ORDER-64  $Z(s) = \left(\infty, \infty, \infty, R_4, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, R_L + \frac{1}{C_L s}\right)$
- $H(s) = \frac{R_4 \left( C_L R_L s + 1 \right) \left( C_5 L_5 R_5 g_m r_o s^2 + C_5 L_$
- **10.65** INVALID-ORDER-65  $Z(s) = \left(\infty, \infty, \infty, R_4, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, L_L s + \frac{1}{C_L s}\right)$
- $H(s) = \frac{R_4 \left( C_L L_L s^2 + 1 \right) \left( C_5 L_5 R_5 g_m r_o s^2 + C_5 L_5 R_5 s^2 C_5 L_5 L_1 R_4 g_m r_o s^4 + 4 C_5 C_L L_5 L_1 R_4 s^4 + 2 C_5 C_L L_5 L_1 R_5 s^4 + 2 C_5 L_1 R_4 R_5 g_m r_o s^3 + C_5 C_L L_5 R_4 R_5 g_m r_o s^3 + C_5 C_L L_5 R_4 R_5 g_m r_o s^3 + 2 C_5 L_5 R_4 g_m r_o s^3 + 2 C_5 L_5 R_4 g_m r_o s^2 + 2 C_5 L_5 R_5 g_m r_o s^2 + 2 C_5 L_5 R_$

**10.66** INVALID-ORDER-66  $Z(s) = \left(\infty, \infty, \infty, R_4, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{L_L s}{C_L L_L s^2 + 1}\right)$ 

 $L_L R_4 s \left(C_5 L_5 R_5 g_m r_o s^2 + C_5 L_5 R_5 s^2 - C_5 L_5 r_o s^2 + L_5 g_m r_o s + L_5 s + R_5 r_o s^2 + L_5 r_o s^2 +$ 

 $H(s) = \frac{L_L R_4 s \left(C_5 L_5 R_5 g_m r_o s^2 + C_5 L_5 R_5 s^2 - C_5 L_5 r_o s^2 + L_5 g_m r_o s + L_5 s + R_5 r_o s^2 + C_5 L_5 R_5 r_o s^2 + L_5 g_m r_o s + L_5 s + R_5 r_o s^2 + C_5 L_5 L_4 R_5 r_o s^3 + C_5 L_5 R_4 R_5 r_o s^3 + C_5 L_5 R_5 r_o s^3 +$ 

10.67 INVALID-ORDER-67  $Z(s) = \left(\infty, \infty, \infty, R_4, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, L_L s + R_L + \frac{1}{C_L s}\right)$ 

 $H(s) = \frac{1}{2C_5C_LL_5L_LR_4g_mr_os^4 + 4C_5C_LL_5L_LR_4s^4 + 2C_5C_LL_5L_LR_5g_mr_os^4 + 2C_5C_LL_5L_LR_5s^4 + 2C_5C_LL_5L_Lr_os^4 + C_5C_LL_5R_4R_5g_mr_os^3 + C_5C_LL_5R_4R_5g_mr_os^3 + 4C_5C_LL_5R_4R_Lg_mr_os^3 + 4C_5C_LL_5R_4R_Lg_mr_os^3 + 2C_5C_LL_5R_4R_5g_mr_os^3 + 2C_5C_LL_5R_5R_5g_mr_os^3 + 2C_5C_LL_5R_5g_mr_os^3 + 2$ 

10.68 INVALID-ORDER-68  $Z(s) = \left(\infty, \infty, \infty, R_4, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{1}{C_L s + \frac{1}{R_s} + \frac{1}{L_s s}}\right)$ 

 $H(s) = \frac{1}{C_5C_LL_5L_LR_4R_5R_Lg_mr_os^4 + C_5C_LL_5L_LR_4R_5R_Ls^4 + C_5C_LL_5L_LR_4R_Lr_os^4 + C_5L_5L_LR_4R_5g_mr_os^3 + C_5L_5L_LR_4R_5s^3 + 2C_5L_5L_LR_4R_Lg_mr_os^3 + 4C_5L_5L_LR_4r_os^3 + 2C_5L_5L_LR_4r_os^3 + 2C_5L_5L_Rr_os^3 + 2C_5L_5L_Rr_os^$ 

**10.69** INVALID-ORDER-69  $Z(s) = \left(\infty, \infty, \infty, R_4, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$ 

 $H(s) = \frac{1}{C_5C_LL_5L_LR_4R_5q_mr_os^4 + C_5C_LL_5L_LR_4R_5s^4 + 2C_5C_LL_5L_LR_4R_Lq_mr_os^4 + 4C_5C_LL_5L_LR_4r_os^4 + 2C_5C_LL_5L_LR_5R_Lq_mr_os^4 + 2C_5C_LL_5L_LR_4r_os^4 + 2C_5C_LL_5L_Rr_os^4 + 2C_5$ 

10.70 INVALID-ORDER-70  $Z(s) = \left(\infty, \infty, \infty, R_4, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{R_L \left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$ 

 $H(s) = \frac{1}{C_5 C_L L_5 L_L R_4 R_5 g_m r_o s^4 + C_5 C_L L_5 L_L R_4 R_5 s^4 + 2 C_5 C_L L_5 L_L R_4 R_L g_m r_o s^4 + 4 C_5 C_L L_5 L_L R_4 R_L s^4 + C_5 C_L L_5 L_L R_4 R_5 r_o s^4 + 2 C_5 C_L L_5 L_L R_5 R_L g_m r_o s^4 + 2 C_5 C_L L_5 L_L R_4 R_5 R_L g_m r_o s^4 + 2 C_5 C_L L_5 L_L R_4 R_5 R_L g_m r_o s^4 + 2 C_5 C_L L_5 L_L R_4 R_5 R_L g_m r_o s^4 + 2 C_5 C_L L_5 L_L R_4 R_5 R_L g_m r_o s^4 + 2 C_5 C_L L_5 L_L R_4 R_5 R_L g_m r_o s^4 + 2 C_5 C_L L_5 L_L R_4 R_5 R_L g_m r_o s^4 + 2 C_5 C_L L_5 L_L R_4 R_5 R_L g_m r_o s^4 + 2 C_5 C_L L_5 L_L R_4 R_5 R_L g_m r_o s^4 + 2 C_5 C_L L_5 L_L R_4 R_5 R_L g_m r_o s^4 + 2 C_5 C_L L_5 L_L R_4 R_5 R_L g_m r_o s^4 + 2 C_5 C_L L_5 L_L R_4 R_5 R_L g_m r_o s^4 + 2 C_5 C_L L_5 L_L R_4 R_5 R_L g_m r_o s^4 + 2 C_5 C_L L_5 L_L R_4 R_5 R_L g_m r_o s^4 + 2 C_5 C_L L_5 L_L R_4 R_5 R_L g_m r_o s^4 + 2 C_5 C_L L_5 L_L R_4 R_5 R_L g_m r_o s^4 + 2 C_5 C_L L_5 L_L R_4 R_5 R_L g_m r_o s^4 + 2 C_5 C_L L_5 L_L R_4 R_5 R_L g_m r_o s^4 + 2 C_5 C_L L_5 L_L R_5 R_L g_m$ 

10.71 INVALID-ORDER-71  $Z(s) = \left(\infty, \infty, \infty, R_4, \frac{R_5\left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{1}{C_L s}\right)$ 

 $H(s) = \frac{R_4 \left( C_5 L_5 R_5 g_m r_o s^2 + C_5 L_5 R_5 s^2 - C_5 L_5 r_o s^2 - C_5 R_5 r_o s + R_5 g_m r_o + R_5 - r_o \right)}{C_5 C_L L_5 R_4 R_5 g_m r_o s^3 + C_5 C_L L_5 R_4 R_5 s^3 + C_5 C_L L_5 R_4 r_o s^3 + C_5 C_L R_4 R_5 r_o s^2 + 2 C_5 L_5 R_4 g_m r_o s^2 + 2 C_5 L_5 R_5 g_m r_o s^2 + 2 C_5 L_5 R_5 g_m r_o s^2 + 2 C_5 R_4 R_5 g_m r_o s + C_L R_4 R_5 g_m r_o$ 

10.72 INVALID-ORDER-72  $Z(s) = \left(\infty, \infty, \infty, R_4, \frac{R_5\left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{R_L}{C_L R_L s + 1}\right)$ 

 $R_4R_L\left(C_5L_5R_5g_mr_os^2 + C_5L_5R_5s^2 - C_5L_5r_os^2 - C_5R_5r_os + R_5g_mr_os^2\right)$ 

 $H(s) = \frac{R_4R_L\left(C_5L_5R_5g_mr_os^3 + C_5L_5R_5s - C_5L_5r_os - C_5R_5r_os + C_5L_5r_os - C_5R_5r_os + R_5g_mr_os}{C_5C_LL_5R_4R_5R_Lg_mr_os^3 + C_5L_5R_4R_5g_mr_os^2 + C_5L_5R_4g_mr_os^2 +$ 

10.73 INVALID-ORDER-73  $Z(s) = \left(\infty, \infty, \infty, R_4, \frac{R_5\left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, R_L + \frac{1}{C_L s}\right)$ 

 $H(s) = \frac{1}{C_5C_LL_5R_4R_5q_mr_os^3 + C_5C_LL_5R_4R_5q_mr_os^3 + 2C_5C_LL_5R_4R_Lq_mr_os^3 + 4C_5C_LL_5R_4R_Lq_mr_os^3 + 4C_5C_LL_5R_4R_Lq_mr_os^3 + 2C_5C_LL_5R_4R_5q_mr_os^3 + 2C_5C_LL_5R_5q_mr_os^3 + 2C_5C_LL_5R_5q_mr_os^3 + 2C_5C_LL_5R_5q_mr_os^3 + 2C_5C_LL_5R_5q_mr_os^3 + 2C_5C_LL_5R_5q_mr_os^3 + 2C_5C_LL_5R_5q_mr_os^3 + 2C_5C_LL_5q_mr_os^3 + 2C_5C_LL$ 

10.74 INVALID-ORDER-74 
$$Z(s) = \left(\infty, \infty, \infty, R_4, \frac{R_5\left(L_5s + \frac{1}{C_5s}\right)}{L_5s + R_5 + \frac{1}{C_5s}}, L_Ls + \frac{1}{C_Ls}\right)$$

 $H(s) = \frac{R_4 \left( C_L L_L R_4 g_m r_o s^4 + 4 C_5 C_L L_5 L_L R_4 g_m r_o s^4 + 2 C_5 C_L L_5 L_L R_5 g_m r_o s^4 + 2 C_5 C_L L_5 L_L R_5 g_m r_o s^4 + 2 C_5 C_L L_5 L_L R_5 g_m r_o s^4 + 2 C_5 C_L L_5 L_L R_5 g_m r_o s^4 + 2 C_5 C_L L_5 L_L R_5 g_m r_o s^4 + 2 C_5 C_L L_5 L_L R_5 g_m r_o s^4 + 2 C_5 C_L L_5 R_4 R_5 g_m r_o s^3 + 2 C_5 C_L L_5 R_4 R_5 g_m r_o s^3 + 2 C_5 C_L L_5 R_4 R_5 g_m r_o s^3 + 2 C_5 C_L L_5 R_4 R_5 g_m r_o s^3 + 2 C_5 C_L L_5 R_4 R_5 g_m r_o s^3 + 2 C_5 C_L L_5 R_4 R_5 g_m r_o s^3 + 2 C_5 C_L L_5 R_4 R_5 g_m r_o s^3 + 2 C_5 C_L L_5 R_4 R_5 g_m r_o s^3 + 2 C_5 C_L L_5 R_4 R_5 g_m r_o s^3 + 2 C_5 C_L L_5 R_4 R_5 g_m r_o s^3 + 2 C_5 C_L L_5 R_4 R_5 g_m r_o s^3 + 2 C_5 C_L L_5 R_4 R_5 g_m r_o s^3 + 2 C_5 C_L L_5 R_4 R_5 g_m r_o s^3 + 2 C_5 C_L L_5 R_4 R_5 g_m r_o s^3 + 2 C_5 C_L L_5 R_4 R_5 g_m r_o s^3 + 2 C_5 C_L L_5 R_4 R_5 g_m r_o s^3 + 2 C_5 C_L L_5 R_4 R_5 g_m r_o s^3 + 2 C_5 C_L L_5 R_4 R_5 g_m r_o s^3 + 2 C_5 C_L L_5 R_4 R_5 g_m r_o s^3 + 2 C_5 C_L L_5 R_5 g_m r_o s^3 + 2 C_5 C_L$ 

10.75 INVALID-ORDER-75 
$$Z(s) = \left(\infty, \infty, \infty, R_4, \frac{R_5\left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{L_L s}{C_L L_L s^2 + 1}\right)$$

 $\frac{L_L R_4 s \left(C_5 L_5 R_5 g_m r_o s^2 + C_5 L_5 R_5 s^2 - C_5 L_5 r_o s^2 - C_5 R_5 r_o s + R_5 g_m r_o s^2 + C_5 L_5 R_4 R_5 g_m r_o s^2 + C_5 L_5 L_4 R_4 R_5 r_o s^3 + 2 C_5 L_5 L_4 R_4 r_o s^4 + C_5 C_L L_5 L_4 R_4 R_5 r_o s^3 + 2 C_5 L_5 L_4 R_5 g_m r_o s^3 + 2 C_5 L_5 L_4 R_5 g_m r_o s^3 + 2 C_5 L_5 L_4 R_5 g_m r_o s^3 + 2 C_5 L_5 L_4 R_5 g_m r_o s^3 + 2 C_5 L_5 L_4 R_5 g_m r_o s^3 + 2 C_5 L_5 L_4 R_5 g_m r_o s^3 + 2 C_5 L_5 L_4 R_5 g_m r_o s^3 + 2 C_5 L_5 L_4 R_5 g_m r_o s^3 + 2 C_5 L_5 L_4 R_5 g_m r_o s^3 + 2 C_5 L_5 L_4 R_5 g_m r_o s^3 + 2 C_5 L_5 L_4 R_5 g_m r_o s^3 + 2 C_5 L_5 L_4 R_5 g_m r_o s^3 + 2 C_5 L_5 L_4 R_5 g_m r_o s^3 + 2 C_5 L_5 L_4 R_5 g_m r_o s^3 + 2 C_5 L_5 L_4 R_5 g_m r_o s^3 + 2 C_5 L_5 L_4 R_5 g_m r_o s^3 + 2 C_5 L_5 L_5 R_4 R_5 g_m r_o s^3 + 2 C_5 L_5 L_4 R_5 g_m r_o s^3 + 2 C_5 L_5 L_4 R_5 g_m r_o s^3 + 2 C_5 L_5 L_4 R_5 g_m r_o s^3 + 2 C_5 L_5 R_5 g_m r_o s^3 +$ 

10.76 INVALID-ORDER-76 
$$Z(s) = \left(\infty, \infty, \infty, R_4, \frac{R_5\left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, L_L s + R_L + \frac{1}{C_L s}\right)$$

 $H(s) = \frac{1}{2C_5C_LL_5L_LR_4g_mr_os^4 + 4C_5C_LL_5L_LR_4s^4 + 2C_5C_LL_5L_LR_5g_mr_os^4 + 2C_5C_LL_5L_LR_5s^4 + 2C_5C_LL_5L_LR_5g_mr_os^4 + C_5C_LL_5R_4R_5g_mr_os^3 + C_5C_LL_5R_4R_5g_mr_os^3 + 4C_5C_LL_5R_4R_Lg_mr_os^3 + 4C_5C_LL_5R_4R_Lg_mr_os^3 + 2C_5C_LL_5R_4R_Lg_mr_os^3 + 2C$ 

10.77 INVALID-ORDER-77 
$$Z(s) = \left(\infty, \infty, \infty, R_4, \frac{R_5\left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$$

 $H(s) = \frac{1}{C_5C_LL_5L_LR_4R_5R_Lg_mr_os^4 + C_5C_LL_5L_LR_4R_5R_Ls^4 + C_5C_LL_5L_LR_4R_5r_os^4 + C_5C_LL_5L_LR_4R_5g_mr_os^3 + C_5L_5L_LR_4R_5g_mr_os^3 + C_5L_5L_RR_4R_5g_mr_os^3 + C_5L_5L_RR_4R_5g_mr_os^3 + C_5L_5L_RR_4R_5g_mr_os^3 + C_5L_5L_RR_4g_mr_os^3 + C_5L_5L_RR$ 

10.78 INVALID-ORDER-78 
$$Z(s) = \left(\infty, \infty, \infty, R_4, \frac{R_5\left(L_5s + \frac{1}{C_5s}\right)}{L_5s + R_5 + \frac{1}{C_5s}}, \frac{L_Ls}{C_LL_Ls^2 + 1} + R_L\right)$$

10.79 INVALID-ORDER-79 
$$Z(s) = \left(\infty, \infty, \infty, R_4, \frac{R_5\left(L_5s + \frac{1}{C_5s}\right)}{L_5s + R_5 + \frac{1}{C_5s}}, \frac{R_L\left(L_Ls + \frac{1}{C_Ls}\right)}{L_Ls + R_L + \frac{1}{C_Ls}}\right)$$

 $\overline{C_5C_LL_5L_LR_4R_5g_mr_os^4 + C_5C_LL_5L_LR_4R_5s^4 + 2C_5C_LL_5L_LR_4R_Lg_mr_os^4 + 4C_5C_LL_5L_LR_4R_Ls^4 + C_5C_LL_5L_LR_4R_cs^4 + 2C_5C_LL_5L_LR_4R_5s^4 + 2C_5C_LL_5L_RR_4R_5s^4 + 2C_5C_LL_5L_RR_5s^4 + 2C_5C_LL_5L_RR_5s^4 + 2C_5C_LL_5L_RR_5s^4 + 2C_5C_LL_5L_RR_5s^4 + 2C_5C_LL_5L_RR_5s^4 + 2C_5C_LL_5L_RR_5s^4 + 2$ 

10.80 INVALID-ORDER-80 
$$Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s}, R_5, R_L\right)$$

$$H(s) = \frac{R_L \left( R_5 g_m r_o + R_5 - r_o \right)}{2C_4 R_5 R_L g_m r_o s + 2C_4 R_5 R_L s + 2C_4 R_L r_o s + R_5 g_m r_o + R_5 + 2R_L g_m r_o + 4R_L + r_o}$$

10.81 INVALID-ORDER-81 
$$Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s}, R_5, \frac{1}{C_L s}\right)$$

$$H(s) = \frac{R_5 g_m r_o + R_5 - r_o}{2C_4 R_5 q_m r_o s + 2C_4 R_5 s + 2C_4 r_o s + C_L R_5 q_m r_o s + C_L R_5 s + C_L r_o s + 2q_m r_o + 4}$$

10.82 INVALID-ORDER-82  $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s}, R_5, \frac{R_L}{C_L R_L s + 1}\right)$ 

$$H(s) = \frac{R_L \left( R_5 g_m r_o + R_5 - r_o \right)}{2 C_4 R_5 R_L g_m r_o s + 2 C_4 R_5 R_L s + 2 C_4 R_L r_o s + C_L R_5 R_L g_m r_o s + C_L R_5 R_L s + C_L R_L r_o s + R_5 g_m r_o + R_5 + 2 R_L g_m r_o + 4 R_L + r_o r_o}$$

10.83 INVALID-ORDER-83  $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s}, R_5, L_L s + \frac{1}{C_L s}\right)$ 

$$H(s) = \frac{\left(C_{L}L_{L}s^{2} + 1\right)\left(R_{5}g_{m}r_{o} + R_{5} - r_{o}\right)}{2C_{4}C_{L}L_{L}R_{5}g_{m}r_{o}s^{3} + 2C_{4}C_{L}L_{L}r_{o}s^{3} + 2C_{4}R_{5}g_{m}r_{o}s + 2C_{4}R_{5}s + 2C_{4}r_{o}s + 2C_{L}L_{L}g_{m}r_{o}s^{2} + 4C_{L}L_{L}s^{2} + C_{L}R_{5}g_{m}r_{o}s + C_{L}R_{5}s + C_{L}r_{o}s + 2g_{m}r_{o} + 4C_{L}R_{5}g_{m}r_{o}s + C_{L}R_{5}g_{m}r_{o}s + C_{L}R_{5$$

10.84 INVALID-ORDER-84  $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s}, R_5, L_L s + R_L + \frac{1}{C_L s}\right)$ 

$$H(s) = \frac{\left(C_{L}L_{L}s^{2} + C_{L}R_{L}s + 1\right)\left(R_{5}g_{m}r_{o} + R_{5} - r_{o}\right)}{2C_{4}C_{L}L_{L}R_{5}g_{m}r_{o}s^{3} + 2C_{4}C_{L}L_{L}r_{o}s^{3} + 2C_{4}C_{L}R_{5}R_{L}g_{m}r_{o}s^{2} + 2C_{4}C_{L}R_{5}R_{L}s^{2} + 2C_{4}C_{L}R_{5}r_{o}s^{2} + 2C_{4}C_{L}R_{5}r_{o}s^{2} + 2C_{4}R_{5}g_{m}r_{o}s + 2C_{L}L_{L}g_{m}r_{o}s^{2} + 4C_{L}L_{L}s^{2} + C_{L}R_{5}g_{m}r_{o}s + C_{L}R_{5}s + 2C_{L}R_{L}g_{m}r_{o}s + 4C_{L}R_{L}s + C_{L}r_{o}s + 2C_{L}R_{L}g_{m}r_{o}s + 4C_{L}R_{L}s + C_{L}R_{L}s + C_$$

10.85 INVALID-ORDER-85  $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s}, R_5, \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$ 

$$H(s) = \frac{\left(R_{5}g_{m}r_{o} + R_{5} - r_{o}\right)\left(C_{L}L_{L}R_{L}s^{2} + L_{L}s + R_{L}\right)}{2C_{4}C_{L}L_{L}R_{5}R_{L}g_{m}r_{o}s^{3} + 2C_{4}C_{L}L_{L}R_{5}g_{m}r_{o}s^{2} + 2C_{4}L_{L}R_{5}g^{2} + 2C_{4}L_{L}R_{5}s^{2} + 2C_{4}L_{L}R_{5}s^{2} + 2C_{4}L_{L}R_{5}s^{2} + 2C_{4}L_{L}R_{5}s^{2} + 2C_{4}L_{L}R_{5}s^{2} + 2C_{L}L_{L}R_{5}g_{m}r_{o}s^{2} + 2C_{L}L_{L}R_{5}g_{m}r_{o}s^{2$$

10.86 INVALID-ORDER-86  $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s}, R_5, \frac{R_L\left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$ 

$$H(s) = \frac{R_L \left( C_L L_L s^2 + 1 \right) \left( R_5 g_m r_o + R_5 - r_o \right)}{2 C_4 C_L L_L R_5 R_L g_m r_o s^3 + 2 C_4 C_L L_L R_5 R_L g_m r_o s + 2 C_4 R_5 R_L g_m r_o s + 2 C_4 R_5 R_L g_m r_o s^2 + C_L L_L R_5 g_m r_o s^2 + 4 C_L L_L R_5 g_m r_o s^2 + C_L R_5 R_L g_m r_o s +$$

10.87 INVALID-ORDER-87  $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s}, \frac{1}{C_5 s}, \frac{1}{C_L s}\right)$ 

$$H(s) = \frac{-C_5 r_o s + g_m r_o + 1}{s \left(2 C_4 C_5 r_o s + 2 C_4 g_m r_o + 2 C_4 + C_5 C_L r_o s + 2 C_5 g_m r_o + 4 C_5 + C_L g_m r_o + C_L\right)}$$

10.88 INVALID-ORDER-88  $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s}, \frac{1}{C_5 s}, R_L + \frac{1}{C_L s}\right)$ 

$$H(s) = \frac{\left(C_L R_L s + 1\right) \left(-C_5 r_o s + g_m r_o + 1\right)}{s \left(2C_4 C_5 C_L R_L r_o s^2 + 2C_4 C_5 r_o s + 2C_4 C_L R_L g_m r_o s + 2C_4 C_L R_L g_m r_o + 2C_4 + 2C_5 C_L R_L g_m r_o s + 4C_5 C_L R_L s + C_5 C_L r_o s + 2C_5 g_m r_o + 4C_5 + C_L g_m r_o + C_L\right)}$$

**10.89** INVALID-ORDER-89  $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s}, \frac{1}{C_5 s}, L_L s + \frac{1}{C_L s}\right)$ 

$$H(s) = \frac{\left(C_L L_L s^2 + 1\right) \left(-C_5 r_o s + g_m r_o + 1\right)}{s \left(2C_4 C_5 C_L L_L r_o s^3 + 2C_4 C_5 r_o s + 2C_4 C_L L_L g_m r_o s^2 + 2C_4 C_L L_L s^2 + 2C_4 g_m r_o + 2C_4 + 2C_5 C_L L_L g_m r_o s^2 + 4C_5 C_L L_L s^2 + C_5 C_L r_o s + 2C_5 g_m r_o + 4C_5 + C_L g_m r_o + C_L\right)}$$

10.90 INVALID-ORDER-90  $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s}, \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1}\right)$ 

$$H(s) = \frac{L_L s \left(-C_5 r_o s + g_m r_o + 1\right)}{2 C_4 C_5 L_L r_o s^3 + 2 C_4 L_L g_m r_o s^2 + 2 C_4 L_L s^2 + C_5 C_L L_L r_o s^3 + 2 C_5 L_L g_m r_o s^2 + 4 C_5 L_L s^2 + C_5 r_o s + C_L L_L g_m r_o s^2 + C_L L_L s^2 + g_m r_o + 1}$$

**10.91** INVALID-ORDER-91  $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s}, \frac{1}{C_5 s}, L_L s + R_L + \frac{1}{C_L s}\right)$ 

 $H(s) = \frac{\left(-C_5 r_o s + g_m r_o + 1\right) \left(C_L L_L s^2 + C_L R_L s + 1\right)}{s \left(2C_4 C_5 C_L L_L r_o s^3 + 2C_4 C_5 C_L R_L r_o s^2 + 2C_4 C_L L_L g_m r_o s^2 + 2C_4 C_L L_L g_m r_o s^2 + 2C_4 C_L L_L g_m r_o s + 2C_4 C_L R_L g_m r_o s + 2C_4 C_L R_L g_m r_o s^2 + 4C_5 C_L L_L g_m r_o s^2 + 4C_5 C_L L_L g_m r_o s^2 + 4C_5 C_L R_L g_m r_o s + 4C_5 C_L R_L g_m r_o s^2 + 4C_5 C_L R_L g$ 

10.92 INVALID-ORDER-92  $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s}, \frac{1}{C_5 s}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$ 

 $H(s) = \frac{L_L R_L s \left(-C_5 r_o s + g_m r_o + 1\right)}{2 C_4 C_5 L_L R_L r_o s^3 + 2 C_4 L_L R_L g_m r_o s^2 + 2 C_4 L_L R_L s^2 + C_5 C_L L_L R_L r_o s^3 + 2 C_5 L_L R_L g_m r_o s^2 + 4 C_5 L_L R_L s^2 + C_5 L_L r_o s^2 + C_5 R_L r_o s + C_L L_L R_L g_m r_o s^2 + C_L L_L R_L g_m r_o s + L_L s + R$ 

**10.93** INVALID-ORDER-93  $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s}, \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$ 

 $H(s) = \frac{\left(-C_5 r_o s + g_m r_o + 1\right) \left(C_L L_L R_L s^2 + L_L s + R_L\right)}{2C_4 C_5 C_L L_L R_L r_o s^4 + 2C_4 C_5 L_L r_o s^3 + 2C_4 C_5 L_L R_L g_m r_o s^3 + 2C_4 C_L L_L R_L g_m r_o s^3 + 2C_4 L_L g_m r_o s^2 + 2C_4 L_L g_m r_o s^2 + 2C_4 L_L g_m r_o s^3 + 2C_5 L_L R_L g_m r_o s^3 + 2C_5$ 

10.94 INVALID-ORDER-94  $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s}, \frac{1}{C_5 s}, \frac{R_L \left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_T s}}\right)$ 

 $H(s) = \frac{R_L \left( C_L L_L s^2 + 1 \right) \left( -C_5 r_o s + g_m r_o + 1 \right)}{2 C_4 C_5 C_L L_L R_L r_o s^4 + 2 C_4 C_5 R_L r_o s^2 + 2 C_4 C_L L_L R_L g_m r_o s^3 + 2 C_4 R_L g_m r_o s + 2 C_4 R_L g_m r_o s^3 + 4 C_5 C_L L_L R_L g^3 + C_5 C_L L_L R_L g^3 + C_5 C_L L_L R_L g_m r_o s^3 + 4 C_5 C_L L_L R_L g_m r_o s^3 + 4 C_5 C_L L_L R_L g_m r_o s^3 + 2 C_4 R_L g_m r_o s^3 + 2 C_4 R_L g_m r_o s^3 + 2 C_4 R_L g_m r_o s^3 + 2 C_5 R_L g_m r_o s^3 +$ 

**10.95** INVALID-ORDER-95  $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s}, \frac{R_5}{C_5 R_5 s + 1}, R_L + \frac{1}{C_L s}\right)$ 

 $H(s) = -\frac{\left(C_L R_L s + 1\right) \left(C_5 R_5 r_o s - R_5 g_m r_o - R_5 + r_o\right)}{2 C_4 C_5 C_L R_5 R_L r_o s^3 + 2 C_4 C_5 R_5 r_o s^2 + 2 C_4 C_L R_5 R_L g_m r_o s^2 + 2 C_4 C_L R_5 R_L s^2 + 2 C_4 R_5 g_m r_o s + 2 C_4 R_5 g_m r_o s^2 + 2 C_5 R_5 g_m r_o s + 2 C_5 R_5 g_m r_o s + 2 C_4 R_5$ 

**10.96** INVALID-ORDER-96  $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s}, \frac{R_5}{C_5 R_5 s + 1}, L_L s + \frac{1}{C_L s}\right)$ 

 $H(s) = -\frac{\left(C_{L}L_{s}^{2}+1\right)\left(C_{5}R_{5}r_{o}s-R_{5}g_{m}r_{o}-R_{5}+r_{o}\right)}{2C_{4}C_{5}C_{L}L_{L}R_{5}r_{o}s^{4}+2C_{4}C_{5}R_{5}r_{o}s^{2}+2C_{4}C_{L}L_{L}R_{5}g_{m}r_{o}s^{3}+2C_{4}C_{L}L_{L}R_{5}s^{3}+2C_{4}C_{L}L_{L}R_{5}g_{m}r_{o}s^{3}+2C_{4}C_{L}L_{L}R_{5}g_{m}r_{o}s^{2}+2C_{5}C_{L}L_{L}R_{5}g_{m}r_{o}s^{3}+4C_{5}C_{L}L_{L}R_{5}r_{o}s^{2}+2C_{5}R_{5}g_{m}r_{o}s^{2}+2C_{5}R_{5}g_{m}r_{o}s^{2}+4C_{L}L_{L}s^{2}+C_{L}R_{5}g_{m}r_{o}s^{2}+2C_{5}R_{5}g_{m}r_{o}s^{2}+2C_$ 

10.97 INVALID-ORDER-97  $Z(s) = \left(\infty, \ \infty, \ \infty, \ \frac{1}{C_4 s}, \ \frac{R_5}{C_5 R_5 s + 1}, \ \frac{L_L s}{C_L L_L s^2 + 1}\right)$ 

 $H(s) = \frac{L_L s \left(-C_5 R_5 r_o s + R_5 g_m r_o + R_5 - r_o\right)}{2 C_4 C_5 L_L R_5 r_o s^3 + 2 C_4 L_L R_5 g_m r_o s^2 + 2 C_4 L_L R_5 s^2 + 2 C_4 L_L R_5 s^2 + C_5 C_L L_L R_5 r_o s^3 + 2 C_5 L_L R_5 g_m r_o s^2 + 4 C_5 L_L R_5 g_m r_o s^2 + C_L L_L R_5 g_m r_o s^2 + C_L L_L R_5 g_m r_o s^2 + 2 L_L g_m r_o s + 4 L_L s + R_5 g_m r_o + R_5 + r_o}$ 

10.98 INVALID-ORDER-98  $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s}, \frac{R_5}{C_5 R_5 s + 1}, L_L s + R_L + \frac{1}{C_L s}\right)$ 

 $H(s) = -\frac{\left(C_L L_L s^2 + C_L R_L s + 1\right) \left(C_5 R_5 r_o s - R_5 g_m r_o - R_5 + r_o\right)}{2C_4 C_5 C_L L_L R_5 r_o s^4 + 2C_4 C_5 L_L R_5 r_o s^3 + 2C_4 C_L L_L R_5 g_m r_o s^3 + 2C_4 C_L R_5 R_L g_m r_o s^3 + 2C_4 C_L$ 

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10.99 INVALID-ORDER-99 Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s}, \frac{R_5}{C_5 R_5 s + 1}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)
H(s) = \frac{L_L R_L s \left(-C_5 R_5 r_o s + R_5 g_m r_o + R_5 - r_o\right)}{2 C_4 C_5 L_L R_5 R_L r_o s^3 + 2 C_4 L_L R_5 R_L g_m r_o s^2 + 2 C_4 L_L R_5 R_L s^2 + 2 C_4 L_L R_5 R_L r_o s^3 + 2 C_5 L_L R_5 R_L g_m r_o s^2 + 4 C_5 L_L R_5 R_L g_m r_o s^2 + C_5 L_L R_5 R_L g_m r_o s^2 +
10.100 INVALID-ORDER-100 Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s}, \frac{R_5}{C_5 R_5 s + 1}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)
                                                10.101 INVALID-ORDER-101 Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s}, \frac{R_5}{C_5 R_5 s + 1}, \frac{R_L \left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    R_L (C_L L_L s^2 + 1) (C_5 R_5 r_o s - R_5 g_m r_o - R_5 + r_o)
                                                \frac{1}{2C_4C_5C_LL_LR_5R_Lr_os^4 + 2C_4C_5R_5R_Lr_os^2 + 2C_4C_LL_LR_5R_Lq_mr_os^3 + 2C_4C_LL_LR_5R_Lq_mr_os^3 + 2C_4R_5R_Lq_mr_os + 2C_4R_5R_Lq_mr_os^3 + 4C_5C_LL_LR_5R_Lq_mr_os^3 + 4C_5C_LLq_mr_os^3 + 4C_5C_L
10.102 INVALID-ORDER-102 Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s}, R_5 + \frac{1}{C_5 s}, \frac{1}{C_L s}\right)
                                                                                                                                                                                                                                         H(s) = \frac{C_5 R_5 g_m r_o s + C_5 R_5 s - C_5 r_o s + g_m r_o + 1}{s \left(2 C_4 C_5 R_5 q_m r_o s + 2 C_4 C_5 R_5 s + 2 C_4 C_5 r_o s + 2 C_4 q_m r_o + 2 C_4 + C_5 C_L R_5 q_m r_o s + C_5 C_L R_5 s + C_5 C_L r_o s + 2 C_5 q_m r_o + 4 C_5 + C_L q_m r_o + C_L \right)}
10.103 INVALID-ORDER-103 Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s}, R_5 + \frac{1}{C_5 s}, R_L + \frac{1}{C_L s}\right)
H(s) = \frac{\left(C_{L}R_{L}s+1\right)\left(C_{5}R_{5}g_{m}r_{o}s+C_{5}R_{5}s-C_{5}r_{o}s+g_{m}r_{o}+1\right)}{s\left(2C_{4}C_{5}C_{L}R_{5}R_{L}g_{m}r_{o}s^{2}+2C_{4}C_{5}C_{L}R_{L}r_{o}s^{2}+2C_{4}C_{5}R_{5}g_{m}r_{o}s+2C_{4}C_{5}R_{5}s+2C_{4}C_{5}R_{5}g_{m}r_{o}s+2C_{4}C_{L}R_{L}g_{m}r_{o}s+2C_{4}C_{L}R_{L}g_{m}r_{o}s+2C_{4}C_{L}R_{L}g_{m}r_{o}s+2C_{4}C_{5}C_{L}R_{5}g_{m}r_{o}s+2C_{5}C_{L}R_{5}g_{m}r_{o}s+2C_{5}C_{L}R_{5}g_{m}r_{o}s+2C_{5}C_{L}R_{5}g_{m}r_{o}s+2C_{5}C_{L}R_{5}g_{m}r_{o}s+2C_{5}C_{L}R_{5}g_{m}r_{o}s+2C_{5}C_{L}R_{5}g_{m}r_{o}s+2C_{5}C_{L}R_{5}g_{m}r_{o}s+2C_{5}C_{L}R_{5}g_{m}r_{o}s+2C_{5}C_{L}R_{5}g_{m}r_{o}s+2C_{5}C_{L}R_{5}g_{m}r_{o}s+2C_{5}C_{L}R_{5}g_{m}r_{o}s+2C_{5}C_{L}R_{5}g_{m}r_{o}s+2C_{5}C_{L}R_{5}g_{m}r_{o}s+2C_{5}C_{L}R_{5}g_{m}r_{o}s+2C_{5}C_{L}R_{5}g_{m}r_{o}s+2C_{5}C_{L}R_{5}g_{m}r_{o}s+2C_{5}C_{L}R_{5}g_{m}r_{o}s+2C_{5}C_{L}R_{5}g_{m}r_{o}s+2C_{5}C_{L}R_{5}g_{m}r_{o}s+2C_{5}C_{L}R_{5}g_{m}r_{o}s+2C_{5}C_{L}R_{5}g_{m}r_{o}s+2C_{5}C_{L}R_{5}g_{m}r_{o}s+2C_{5}C_{L}R_{5}g_{m}r_{o}s+2C_{5}C_{L}R_{5}g_{m}r_{o}s+2C_{5}C_{L}R_{5}g_{m}r_{o}s+2C_{5}C_{L}R_{5}g_{m}r_{o}s+2C_{5}C_{L}R_{5}g_{m}r_{o}s+2C_{5}C_{L}R_{5}g_{m}r_{o}s+2C_{5}C_{L}R_{5}g_{m}r_{o}s+2C_{5}C_{L}R_{5}g_{m}r_{o}s+2C_{5}C_{L}R_{5}g_{m}r_{o}s+2C_{5}C_{L}R_{5}g_{m}r_{o}s+2C_{5}C_{L}R_{5}g_{m}r_{o}s+2C_{5}C_{L}R_{5}g_{m}r_{o}s+2C_{5}C_{L}R_{5}g_{m}r_{o}s+2C_{5}C_{L}R_{5}g_{m}r_{o}s+2C_{5}C_{L}R_{5}g_{m}r_{o}s+2C_{5}C_{L}R_{5}g_{m}r_{o}s+2C_{5}C_{L}R_{5}g_{m}r_{o}s+2C_{5}C_{L}R_{5}g_{m}r_{o}s+2C_{5}C_{L}R_{5}g_{m}r_{o}s+2C_{5}C_{L}R_{5}g_{m}r_{o}s+2C_{5}C_{L}R_{5}g_{m}r_{o}s+2C_{5}C_{L}R_{5}g_{m}r_{o}s+2C_{5}C_{L}R_{5}g_{m}r_{o}s+2C_{5}C_{L}R_{5}g_{m}r_{o}s+2C_{5}C_{L}R_{5}g_{m}r_{o}s+2C_{5}C_{L}R_{5}g_{m}r_{o}s+2C_{5}C_{L}R_{5}g_{m}r_{o}s+2C_{5}C_{L}R_{5}g_{m}r_{o}s+2C_{5}C_{L}R_{5}g_{m}r_{o}s+2C_{5}C_{L}R_{5}g_{m}r_{o}s+2C_{5}C_{L}R_{5}g_{m}r_{o}s+2C_{5}C_{L}R_{5}g_{m}r_{o}s+2C_{5}C_{L}R_{5}g_{m}r_{o}s+2C_{5}C_{L}R_{5}g_{m}r_{o}s+2C_{5}C_{L}R_{5}g_{m}r_{o}s+2C_{5}C_{L}R_{5}g_{m}r_{o}s+2C_{5}C_{L}R_{5}g_{m}r_{o}s+2C_{5}C_{L}R_{5}g_{m}r_{o}s+2C_{5}
10.104 INVALID-ORDER-104 Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s}, R_5 + \frac{1}{C_5 s}, L_L s + \frac{1}{C_L s}\right)
H(s) = \frac{\left(C_L L_L s^2 + 1\right) \left(C_5 R_5 g_m r_o s + C_5 R_5 s - C_5 r_o s + g_m r_o + 1\right)}{s \left(2 C_4 C_5 C_L L_L R_5 g_m r_o s^3 + 2 C_4 C_5 C_L L_L r_o s^3 + 2 C_4 C_5 R_5 g_m r_o s + 2 C_4 C_5 R_5 g_m r_o s + 2 C_4 C_5 R_5 g_m r_o s^2 + 2 C_4 C_L L_L g_m r_o s^2 + 2 C_4 C_L L_L g_m r_o s^2 + 2 C_4 C_L L_L g_m r_o s^2 + 4 C_5 C_L L_L g_m r_o s^2 + 4 C_5 C_L L_L g_m r_o s^2 + 2 C_5 C_L R_5 g_m r_o s + C_5 C_L 
10.105 INVALID-ORDER-105 Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s}, R_5 + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1}\right)
H(s) = \frac{L_L s \left(C_5 R_5 g_m r_o s + C_5 R_5 s - C_5 r_o s + g_m r_o + 1\right)}{2 C_4 C_5 L_L R_5 g_m r_o s^3 + 2 C_4 C_5 L_L R_5 s^3 + 2 C_4 C_5 L_L r_o s^3 + 2 C_4 L_L g_m r_o s^2 + 2 C_4 L_L s^2 + C_5 C_L L_L R_5 g_m r_o s^3 + C_5 C_L L_L R_5 s^3 + C_5 C_L L_L R_
10.106 INVALID-ORDER-106 Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s}, R_5 + \frac{1}{C_5 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_5 R_5 g_m r_o s + C_5 R_5 s - C_5 r_o s + g_m r_o + 1\right)}{s \left(2 C_4 C_5 C_L L_L R_5 g_m r_o s^3 + 2 C_4 C_5 C_L L_L R_5 s^3 + 2 C_4 C_5 C_L L_L r_o s^3 + 2 C_4 C_5 C_L R_5 R_L g_m r_o s^2 + 2 C_4 C_5 C_L R_5 R_L g_m r_o s^2 + 2 C_4 C_5 R_5 g_m r_o s + 2 C_4 C_5 R_5 g_m r_o s + 2 C_4 C_5 R_5 g_m r_o s^2 + 2 C_5 R_5 g_m r_o s^2 + 2 C_5 R_5 g_m r_o
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10.107 INVALID-ORDER-107  $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s}, R_5 + \frac{1}{C_5 s}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$ 

 $H(s) = \frac{L_L R_L s \left(C_5 R_5 g_m r_o s + C_5 R_5 s - C_5 r_o s + g_m r_o + 1\right)}{2 C_4 C_5 L_L R_5 R_L g_m r_o s^3 + 2 C_4 C_5 L_L R_5 R_L g_m r_o s^3 + 2 C_4 C_5 L_L R_5 R_L g_m r_o s^3 + 2 C_4 L_L R_L g_m r_o s^2 + 2 C_4 L_L R_L g_m r_o s^3 + C_5 C_L L_L R_5 R_L g_m r_o s^3 + C_5 C_L L_L R_5 g_m r_o s^3 + C_5 L_L R_5 g_m r_o s^2 + C_5 L_L R_5 g_m r_o s^2 + 2 C_5 L_L R_5 g_m r_o s^2 + C_5 L_L R_5 g_m r_$ 

10.108 INVALID-ORDER-108  $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s}, R_5 + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$ 

 $\left(C_L L_L R_L s^2 + L_L s + R_L\right) \left(C_5 R_5 g_m\right)$ 

 $H(s) = \frac{(CL_{BL}C_{S})}{2C_{4}C_{5}C_{L}L_{L}R_{5}R_{L}g_{m}r_{o}s^{4} + 2C_{4}C_{5}C_{L}L_{L}R_{5}r_{o}s^{4} + 2C_{4}C_{5}L_{L}R_{5}r_{o}s^{3} + 2C_{4}C_{5}L_{L}R_{5}s^{3} + 2C_{4}C_{5}L$ 

10.109 INVALID-ORDER-109  $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s}, R_5 + \frac{1}{C_5 s}, \frac{R_L \left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$ 

 $R_L (C_L L_L s^2 + 1) (C_5 R_5 g_m r_o s + C_5 R_5 s - C_5 r_o s)$ 

 $H(s) = \frac{10L_1(\sim L_2L_3) + 1L_2(\sim L_3L_3) + 1L_3(\sim L_3L$ 

**10.110** INVALID-ORDER-110  $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s}, L_5 s + \frac{1}{C_5 s}, R_L\right)$ 

 $H(s) = \frac{R_L \left( C_5 L_5 g_m r_o s^2 + C_5 L_5 s^2 - C_5 r_o s + g_m r_o + 1 \right)}{2 C_4 C_5 L_5 g_m r_o s^3 + 2 C_4 C_5 L_5 g_L s^3 + 2 C_4 C_5 R_L r_o s^2 + 2 C_4 R_L g_m r_o s + 2 C_4 R_L s + C_5 L_5 g_m r_o s^2 + C_5 L_5 s^2 + 2 C_5 R_L g_m r_o s + 4 C_5 R_L s + C_5 r_o s + g_m r_o + 1}$ 

**10.111** INVALID-ORDER-111  $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_{4s}}, L_5 s + \frac{1}{C_{5s}}, \frac{1}{C_{Ls}}\right)$ 

 $H(s) = \frac{C_5L_5g_mr_os^2 + C_5L_5s^2 - C_5r_os + g_mr_o + 1}{s\left(2C_4C_5L_5g_mr_os^2 + 2C_4C_5L_5s^2 + 2C_4C_5r_os + 2C_4g_mr_o + 2C_4 + C_5C_LL_5g_mr_os^2 + C_5C_LL_5s^2 + C_5C_Lr_os + 2C_5g_mr_o + 4C_5 + C_Lg_mr_o + C_L\right)}$ 

**10.112** INVALID-ORDER-112  $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s}, L_5 s + \frac{1}{C_5 s}, \frac{R_L}{C_L R_L s + 1}\right)$ 

 $H(s) = \frac{R_L \left( C_5 L_5 g_m r_o s^2 + C_5 L_5 s^2 - C_5 r_o s + g_m r_o + 1 \right)}{2 C_4 C_5 L_5 R_L g_m r_o s^3 + 2 C_4 C_5 L_5 R_L r_o s^2 + 2 C_4 R_L g_m r_o s + 2 C_4 R_L s + C_5 C_L L_5 R_L g_m r_o s^3 + C_5 C_L L_5 R_L r_o s^2 + C_5 L_5 g_m r_o s^2 + C_5 L_5$ 

**10.113** INVALID-ORDER-113  $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s}, L_5 s + \frac{1}{C_5 s}, R_L + \frac{1}{C_L s}\right)$ 

 $H(s) = \frac{\left(C_L R_L s + 1\right) \left(C_5 L_5 g_m r_o s^2 + C_5 L_5 s^2 - C_5 r_o s + g_m r_o + 1\right)}{s \left(2 C_4 C_5 C_L L_5 R_L g_m r_o s^3 + 2 C_4 C_5 L_L g_m r_o s^2 + 2 C_4 C_5 L_5 g_m r_o s^2 + 2 C_5 C_L L_5 g_m r_o s^2 + 2 C_5 C_$ 

**10.114** INVALID-ORDER-114  $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s}, L_5 s + \frac{1}{C_5 s}, L_L s + \frac{1}{C_L s}\right)$ 

 $H(s) = \frac{\left(C_L L_L s^2 + 1\right) \left(C_5 L_5 g_m r_o s^2 + C_5 L_5 s^2 - C_5 r_o s + g_m r_o + 1\right)}{s \left(2C_4 C_5 C_L L_5 L_L g_m r_o s^4 + 2C_4 C_5 L_L L_s s^4 + 2C_4 C_5 L_L L_s r_o s^3 + 2C_4 C_5 L_5 s^2 + 2C_4 C_5 L_L g_m r_o s^2 + 2C_4 C_L L_L g_m r_o s^2 + 2C_4 C_L L_L g_m r_o s^2 + 2C_4 C_L L_L g_m r_o s^2 + 2C_5 C_L L_5 g_m r_o s^2 + 2C_5 C$ 

**10.115** INVALID-ORDER-115  $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s}, L_5 s + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1}\right)$ 

 $H(s) = \frac{L_L s \left(C_5 L_5 g_m r_o s^2 + C_5 L_5 s^2 - C_5 r_o s + g_m r_o + 1\right)}{2 C_4 C_5 L_5 L_L g_m r_o s^4 + 2 C_4 C_5 L_L s^4 + 2 C_4 C_5 L_L r_o s^3 + 2 C_4 L_L g_m r_o s^2 + 2 C_4 L_L s^2 + C_5 C_L L_5 L_L g_m r_o s^4 + C_5 C_L L_L r_o s^3 + C_5 L_5 g_m r_o s^2 + C_5 L_5 g_m r_$ 

**10.116** INVALID-ORDER-116  $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s}, L_5 s + \frac{1}{C_5 s}, L_L s + R_L + \frac{1}{C_L s}\right)$ 

 $H(s) = \frac{\left(C_{L}L_{L}s^{2} + C_{L}R_{L}s + 1\right)\left(C_{5}L_{5}g_{m}r_{o}s^{2} + C_{5}L_{5}s^{2} - C_{5}r_{o}s + g_{m}r_{o} + 1\right)}{s\left(2C_{4}C_{5}C_{L}L_{5}L_{L}g_{m}r_{o}s^{4} + 2C_{4}C_{5}L_{L}L_{5}s^{4} + 2C_{4}C_{5}L_{L}L_{5}s^{2} + 2C_{4}C_{5}L_{5}L_{5}s^{2} + 2C_{5}L_{5}L_{5}s^{2} + 2C_{5}L_{5}L_$ 

10.117 INVALID-ORDER-117  $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s}, L_5 s + \frac{1}{C_5 s}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$ 

 $H(s) = \frac{L_L R_L s \left(C_5 L_5 g_m r_o s^2 + C_5 L_5 s^2 - C_5 r_o s + g_m r_o + 1\right)}{2 C_4 C_5 L_5 L_L R_L g_m r_o s^4 + 2 C_4 C_5 L_L R_L r_o s^3 + 2 C_4 L_L R_L g_m r_o s^2 + 2 C_4 L_L R_L g_m r_o s^4 + C_5 C_L L_5 L_L R_L r_o s^3 + C_5 L_5 L_L g_m r_o s^3 + C_5 L_5 L_L g_m r_o s^2 + C_5 L_5 R_L g_m r_o s^2 + 2 C_5 L_L R_L g_m r_o s^2 + 2 C_5 L_L R_L g_m r_o s^2 + 2 C_5 L_L R_L g_m r_o s^3 + C_5 L_5 L_L g_m r_o s^3 + C_5 L_5 L_L g_m r_o s^2 + C_5 L_5 R_L g_m r_o s^2 + 2 C_5 L_L R_L g_m r_o s^2 + 2$ 

10.118 INVALID-ORDER-118  $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s}, L_5 s + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$ 

 $H(s) = \frac{\left(C_L L_L R_L s^2 + L_L s + R_L\right) \left(C_5 L_5 g_m r_{colored} + 2C_4 C_5 L_L L_L R_L g_m r_o s^5 + 2C_4 C_5 L_L L_L R_L g_m r_o s^4 + 2C_4 C_5 L_L L_L R_L g_m r_o s^4 + 2C_4 C_5 L_L L_L R_L g_m r_o s^4 + 2C_4 C_5 L_L L_L R_L g_m r_o s^4 + 2C_4 C_5 L_L L_L R_L g_m r_o s^4 + 2C_4 C_5 L_L g_m r_o s^4 + 2C_4 C_5 L_L$ 

10.119 INVALID-ORDER-119  $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s}, L_5 s + \frac{1}{C_5 s}, \frac{R_L \left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$ 

**10.120** INVALID-ORDER-120  $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s}, \frac{L_5 s}{C_5 L_5 s^2 + 1}, R_L\right)$ 

10.121 INVALID-ORDER-121  $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s}, \frac{L_{5s}}{C_5 L_5 s^2 + 1}, \frac{1}{C_L s}\right)$ 

 $H(s) = \frac{-C_5L_5r_os^2 + L_5g_mr_os + L_5s - r_o}{2C_4C_5L_5r_os^3 + 2C_4L_5g_mr_os^2 + 2C_4L_5s^2 + 2C_4r_os + C_5C_LL_5r_os^3 + 2C_5L_5g_mr_os^2 + 4C_5L_5s^2 + C_LL_5g_mr_os^2 + C_LL_5s^2 + C_Lr_os + 2g_mr_o + 4C_5L_5s^2 + C_LL_5g_mr_os^2 + C_LL_5s^2 + C$ 

10.122 INVALID-ORDER-122  $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s}, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{R_L}{C_L R_L s + 1}\right)$ 

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10.123 INVALID-ORDER-123 Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s}, \frac{L_5 s}{C_5 L_5 s^2 + 1}, R_L + \frac{1}{C_L s}\right)
```

$$H(s) = -\frac{\left(C_{L}R_{L}s+1\right)\left(C_{5}L_{5}r_{o}s^{2}-L_{5}g_{m}r_{o}s-L_{5}s+r_{o}\right)}{2C_{4}C_{5}C_{L}L_{5}R_{L}r_{o}s^{4}+2C_{4}C_{5}L_{5}r_{o}s^{3}+2C_{4}C_{L}L_{5}R_{L}s^{3}+2C_{4}C_{L}L_{5}R_{L}s^{3}+2C_{4}L_{5}g_{m}r_{o}s^{2}+2C_{4}L_{5}s^{$$

**10.124** INVALID-ORDER-124 
$$Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s}, \frac{L_5 s}{C_5 L_5 s^2 + 1}, L_L s + \frac{1}{C_L s}\right)$$

$$H(s) = -\frac{\left(C_{L}L_{L}s^{2}+1\right)\left(C_{5}L_{5}r_{o}s^{2}-L_{5}g_{m}r_{o}s-L_{5}s+r_{o}\right)}{2C_{4}C_{5}C_{L}L_{5}L_{L}r_{o}s^{5}+2C_{4}C_{5}L_{5}r_{o}s^{3}+2C_{4}L_{5}L_{L}s^{4}+2C_{4}L_{L}L_{5}s^{4}+2C_{4}L_{L}L_{5}s^{4}+2C_{4}L_{L}L_{5}s^{2}+2C_{4}L_{5}s^{2}+2C_{4}L_{5}s^{2}+2C_{4}L_{5}s^{2}+2C_{4}L_{5}L_{5}r_{o}s^{3}+2C_{5}L_{5}g_{m}r_{o}s^{2}+4C_{5}L_{5}s^{2}+C_{L}L_{5}g_{m}r_{o}s^{2}+2C_{L}L_{5}s^{2}+2C_{L}L_{5}L_{L}s^{4}+C_{5}C_{L}L_{5}L_{L}s^{4}+C_{5}C_{L}L_{5}L_{c}s^{3}+2C_{5}L_{5}g_{m}r_{o}s^{2}+4C_{5}L_{5}s^{2}+2C_{L}L_{$$

10.125 INVALID-ORDER-125 
$$Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s}, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{L_L s}{C_L L_L s^2 + 1}\right)$$

$$H(s) = \frac{L_L s \left(-C_5 L_5 r_o s^2 + L_5 g_m r_o s + L_5 s - r_o\right)}{2 C_4 C_5 L_5 L_L r_o s^4 + 2 C_4 L_5 L_L g_m r_o s^3 + 2 C_4 L_5 L_L s^3 + 2 C_4 L_L r_o s^2 + C_5 C_L L_5 L_L r_o s^4 + 2 C_5 L_5 L_L g_m r_o s^3 + 4 C_5 L_5 L_L g_m r_o s^3 + C_L L$$

10.126 INVALID-ORDER-126 
$$Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s}, \frac{L_5 s}{C_5 L_5 s^2 + 1}, L_L s + R_L + \frac{1}{C_L s}\right)$$

$$H(s) = -\frac{\left(C_{L}L_{L}s^{2} + C_{L}R_{L}s + 1\right)\left(C_{5}L_{5}r_{o}s^{2} - L_{5}g_{m}r_{o}s - L_{5}s + r_{o}\right)}{2C_{4}C_{5}C_{L}L_{5}L_{L}r_{o}s^{5} + 2C_{4}C_{5}L_{5}L_{c}s^{4} + 2C_{4}C_{L}L_{5}L_{L}g_{m}r_{o}s^{4} + 2C_{4}C_{L}L_{5}L_{L}g_{m}r_{o}s^{$$

10.127 INVALID-ORDER-127 
$$Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s}, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$$

$$L_{L}R_{L}s\left(-C_{5}L_{5}r_{o}s^{2}+L_{5}g_{m}r_{o}s+L_{5}s-r_{o}\right) \\ = \frac{L_{L}R_{L}s\left(-C_{5}L_{5}r_{o}s^{2}+L_{5}g_{m}r_{o}s+L_{5}s-r_{o}\right)}{2C_{4}C_{5}L_{L}R_{L}r_{o}s^{4}+2C_{4}L_{5}L_{L}R_{L}s^{3}+2C_{4}L_{5}L_{L}R_{L}s^{3}+2C_{4}L_{5}L_{L}R_{L}r_{o}s^{2}+C_{5}L_{5}L_{L}R_{L}r_{o}s^{3}+4C_{5}L_{5}L_{L}R_{L}s^{3}+C_{5}L_{5}L_{L}R_{L}s^{3}+C_{4}L_{5}L_{L}R_{L}s^{3}+C_{4}L_{5}L_{L}R_{L}s^{3}+2C_{4}L_{5}L_{L}R_{L}s^{3}+2C_{4}L_{5}L_{L}R_{L}s^{3}+2C_{4}L_{5}L_{L}R_{L}r_{o}s^{2}+L_{5}L_{L}R_{L}s^{3}+C_{5}L_{$$

10.128 INVALID-ORDER-128 
$$Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s}, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$$

10.129 INVALID-ORDER-129 
$$Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s}, \frac{L_{5s}}{C_5 L_{5s}^2 + 1}, \frac{R_L \left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$$

$$H(s) = -\frac{R_L \left(C_L L_L s^2 + 1\right) \left(C_5 L_5 r_o s^2 - L_5 g_m r_o s - L_5 s + r_o s^2 - L_5 g_m r_o s - L_5 s + r_o s^2 - L_5 g_m r_o s - L_5 s + r_o s^2 + 2 C_4 C_5 L_5 L_L R_L r_o s^3 + 2 C_4 C_5 L_5 L_L R_L r_o s^3 + 2 C_4 L_5 L_L R_L r_o s^3 + 2 C_5 L_5 L_L r_o s^3 + 2 C_$$

10.130 INVALID-ORDER-130 
$$Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s}, L_5 s + R_5 + \frac{1}{C_5 s}, R_L\right)$$

$$H(s) = \frac{R_L \left( C_5 L_5 g_m r_o s^2 + C_5 L_5 s^2 + C_5 R_5 g_m r_o s + C_5 R_5 s - C_5 r_o s + g_m r_o + 1 \right)}{2 C_4 C_5 L_5 R_L g_m r_o s^3 + 2 C_4 C_5 R_5 R_L g_m r_o s^2 + 2 C_4 C_5 R_5 R_L r_o s^2 + 2 C_4 R_L g_m r_o s + 2 C_4 R_L g_m r_o s^2 + C_5 L_5 g_m r_o s^2 + C_5 R_5 g_m r_o s + C_5 R_5 g_m$$

10.131 INVALID-ORDER-131  $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s}, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{1}{C_L s}\right)$   $E(s) = \frac{C_5 L_5 g_m r_o s^2 + C_5 L_5 s^2 + C_5 R_5 g_m r_o s + C_5 R_5 s - C_5 r_o s + g_m r_o + 1}{s \left(2 C_4 C_5 L_5 g_m r_o s^2 + 2 C_4 C_5 R_5 g_m r_o s + 2 C_4 C_5 R_5 s + 2 C_4 G_5 r_o s + 2 C_4 g_m r_o + 2 C_4 + C_5 C_L L_5 g_m r_o s^2 + C_5 C_L R_5 g_m r_o s + C_5 C_L R_5 g_m r_o$ 

 $H(s) = \frac{R_L \left( C_5 L_5 g_m r_o s^2 + C_5 L_5 s^2 + C_5 R_5 g_m r_o s + C_5 R_5 s - C_5 r_o s + g_m r_o + 1 \right)}{2 C_4 C_5 L_5 R_L g_m r_o s^3 + 2 C_4 C_5 R_5 R_L g_m r_o s^2 + 2 C_4 C_5 R_5 R_L g_m r_o s^2 + 2 C_4 C_5 R_L g_m r_o s^2 + 2 C_4 R_L g_m r_o s^3 + C_5 C_L L_5 R_L g_m r_o s^3 + C_5 C_L R_5 R_L g_m r_o s^2 + C_5 C_L R_5 R_L g_m r_o s^2 + C_5 L_5 g_m r_o s^2 +$ 

10.133 INVALID-ORDER-133  $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s}, L_5 s + R_5 + \frac{1}{C_5 s}, R_L + \frac{1}{C_L s}\right)$ 

 $H(s) = \frac{\left(C_L R_L s + 1\right) \left(C_5 L_5 g_m r_o s^2 + C_5 L_5 s^2 + C_5 R_5 g_m r_o s + C_5 R_5 s - C_5 r_o s + g_m r_o + 1\right)}{s \left(2 C_4 C_5 C_L L_5 R_L g_m r_o s^3 + 2 C_4 C_5 C_L R_5 R_L g^3 + 2 C_4 C_5 R_5 R_L g^3 + 2 C_4 C_5 R_5 R_L g^3 + 2 C_4 C_5 R_L g^3 +$ 

10.134 INVALID-ORDER-134  $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s}, L_5 s + R_5 + \frac{1}{C_5 s}, L_L s + \frac{1}{C_L s}\right)$ 

 $H(s) = \frac{\left(C_L L_L s^2 + 1\right) \left(C_5 L_5 g_m r_o s^2 + C_5 L_5 s^2 + C_5 R_5 g_m r_o s + C_5 R_5 s - C_5 r_o s + g_m r_o + 1\right)}{s \left(2 C_4 C_5 C_L L_5 L_L g_m r_o s^4 + 2 C_4 C_5 C_L L_L R_5 g_m r_o s^3 + 2 C_4 C_5 C_L L_L R_5 g_m r_o s^3 + 2 C_4 C_5 L_L L_S s^3 + 2 C_4 C_5 L_L r_o s^3 + 2 C_4 C_5 L_5 g_m r_o s^2 + 2 C_4 C_5 R_5 g_m r_o s + 2 C_4 C_5 R_5 g_m r_o s^2 + 2 C_4 C_5 L_L g_m r_o s^2 + 2 C_4 C_5 L_L L_L g_m r_o s^2 + 2 C_4 C_5 L_$ 

10.135 INVALID-ORDER-135  $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s}, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1}\right)$ 

 $H(s) = \frac{L_L s \left(C_5 L_5 g_m r_o s^2 + C_5 L_5 s^2 + C_5 R_5 g_m r_o s + C_5 R_5 s - C_5 r_o s + g_m r_o + 1\right)}{2 C_4 C_5 L_5 L_2 g_m r_o s^4 + 2 C_4 C_5 L_L R_5 g_m r_o s^3 + 2 C_4 C_5 L_L R_5 s^3 + 2 C_4 C_5 L_L r_o s^3 + 2 C_4 L_L g_m r_o s^2 + 2 C_4 L_L g_m r_o s^4 + C_5 C_L L_L R_5 g_m r_o s^3 + C_5 C_L L_L R_5 g_m r_o s^3 + C_5 L_L r_o s^3 + C_5 L_L g_m r_o s^2 + 2 C_5 L_L g_m r_o s^4 + C_5 C_L L_L R_5 g_m r_o s^3 + C_5 C_L L_L R_5 g_m r_o s^3 + C_5 L_L r_o s^3 + C_5 L_L g_m r_o s^4 + C_5 C_L r_o s^3 + C_5 L_L r_o s^3 +$ 

**10.136** INVALID-ORDER-136  $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s}, L_5 s + R_5 + \frac{1}{C_5 s}, L_L s + R_L + \frac{1}{C_L s}\right)$ 

 $H(s) = \frac{(C_L L_L s^2 + C_L R_L)}{s \left(2 C_4 C_5 C_L L_5 L_L g_m r_o s^4 + 2 C_4 C_5 C_L L_5 R_L g_m r_o s^3 + 2 C_4 C_5 C_L L_L R_5 g_m r_o s^3 + 2 C_4 C_5 C_L R_5 R_L g_m$ 

10.137 INVALID-ORDER-137  $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s}, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$ 

 $H(s) = \frac{L_L R_L s \left(C_5 L_5 g_m r_o s^2 + C_5 L_5 s^2 + C_5 R_5 R_5 r_o s^2 + C_5 L_5 R_5 r_o s^2 + C_5 R_5 R_5 r_o s^2 + C_5 R_5$ 

10.138 INVALID-ORDER-138  $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s}, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$ 

 $H(s) = \frac{1}{2C_4C_5C_LL_5L_LR_Lg_mr_os^5 + 2C_4C_5C_LL_5L_LR_Ls^5 + 2C_4C_5C_LL_LR_5R_Lg_mr_os^4 + 2C_4C_5C_LL_LR_5R_Ls^4 + 2C_4C_5L_LL_Rs^4 + 2$ 

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10.139 INVALID-ORDER-139 Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s}, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{R_L \left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)
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 $H(s) = \frac{1}{2C_{4}C_{5}C_{L}L_{5}L_{L}R_{L}g_{m}r_{o}s^{5} + 2C_{4}C_{5}C_{L}L_{5}L_{L}R_{5}s^{4} + 2C_{4}C_{5}C_{L}L_{L}R_{5}R_{L}g_{m}r_{o}s^{4} + 2C_{4}C_{5}C_{L}L_{L}R_{5}R_{L}g_{m}r_{o}s^{4} + 2C_{4}C_{5}L_{L}R_{L}g_{m}r_{o}s^{4} + 2C_{4}C_{5}R_{L}g_{m}r_{o}s^{4} + 2C_{4}C_{5}R_{L}g_{m}r_$ 

**10.140** INVALID-ORDER-140 
$$Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s}, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, R_L\right)$$

 $H(s) = \frac{R_L \left( -C_5 L_5 R_5 r_o s^2 + L_5 R_5 g_m r_o s + L_5 R_5 s - L_5 r_o s - R_5 r_o \right)}{2 C_4 C_5 L_5 R_5 R_L r_o s^3 + 2 C_4 L_5 R_5 R_L g_m r_o s^2 + 2 C_4 L_5 R_L r_o s^2 + 2 C_4 R_5 R_L r_o s + 2 C_5 L_5 R_5 R_L g_m r_o s^2 + 4 C_5 L_5 R_5 R_L s^2 + C_5 L_5 R_5 r_o s^2 + L_5 R_5 g_m r_o s + L_5 R_5 s + 2 L_5 R_L g_m r_o s + 4 L_5 R_L s + L_5 r_o s + 2 R_5 R_L g_m r_o s + 4 R_5 R_L r_o s + 2 R_5 R_L g_m r_o s + 2 R_5 R_L g_m$ 

**10.141** INVALID-ORDER-141  $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s}, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{1}{C_L s}\right)$ 

 $H(s) = \frac{-C_5L_5R_5r_os^2 + L_5R_5g_mr_os + L_5R_5s - L_5r_os - R_5r_o}{2C_4C_5L_5R_5r_os^3 + 2C_4L_5R_5g_mr_os^2 + 2C_4L_5R_5s^2 + 2C_4L_5r_os^2 + 2C_4L_5r_os^2 + 2C_4L_5r_os^3 + 2C_5L_5R_5g_mr_os^2 + 4C_5L_5R_5g_mr_os^2 + C_LL_5R_5g_mr_os^2 + C_LL_5r_os^2 +$ 

10.142 INVALID-ORDER-142  $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s}, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{R_L}{C_L R_L s + 1}\right)$ 

 $H(s) = \frac{R_L \left( -C_5 L_5 R_5 r_o s^2 + L_5 R_5 g_m r_o s + L_5 R_5 s - L_5 r_o s - R_5 r_o \right)}{2 C_4 C_5 L_5 R_5 R_L r_o s^3 + 2 C_4 L_5 R_5 R_L r_o s^2 + 2 C_4 L_5 R_5 R_L r_o s^2 + 2 C_4 L_5 R_5 R_L r_o s^3 + 2 C_5 L_5 R_5 R_L g_m r_o s^2 + 4 C_5 L_5 R_5 R_L g_m r_o s^2 + C_L L_5 R_5 R_L g_m r_o s^2 + C_L L_5 R_5 R_L r_o s^2 + C_L L_5 R_L r_o s^2 + C_L L_5 R_L r_o s^2 + C_L L$ 

**10.143** INVALID-ORDER-143  $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s}, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, R_L + \frac{1}{C_L s}\right)$ 

 $H(s) = -\frac{\left(C_L R_L s + 1\right) \left(C_5 L_5 R_5 r_o s^2 - L_5 R_5 g_m r_o s - L_5 R_5 s + L_5 r_o s^2 - L_5 R_5 g_m r_o s - L_5 R_5 s + L_5 r_o s^2 - L_5 R_5 g_m r_o s^2 + 2 C_4 C_5 L_5 R_5 r_o s^3 + 2 C_4 C_L L_5 R_5 R_L r_o$ 

10.144 INVALID-ORDER-144  $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s}, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, L_L s + \frac{1}{C_L s}\right)$ 

 $H(s) = -\frac{(C_L L_S^2 + 1)(C_5 L_5 R_5 r_o s^2 - L_5 R_5 g_m r_o s - L_5 R_5 s + L_5 r_o s^2 - L_5 R_5 g_m r_o s - L_5 R_5 s + L_5 r_o s^2}{2C_4 C_5 C_L L_5 L_L R_5 r_o s^3 + 2C_4 C_5 L_5 L_L R_5 r_o s^3 + 2C_4 L_5 R_5 r_o s^3 + 2C_4 R_5$ 

**10.145** INVALID-ORDER-145  $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s}, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{L_L s}{C_L L_L s^2 + 1}\right)$ 

 $H(s) = \frac{L_L s \left(-C_5 L_5 R_5 r_o s^2 + L_5 R_5 g_m r_o s + L_5 R_5 s - L_5 r_o s - R_5 r_o\right)}{2 C_4 C_5 L_5 L_L R_5 r_o s^4 + 2 C_4 L_5 L_L R_5 g_m r_o s^3 + 2 C_4 L_5 L_L R_5 r_o s^2 + C_5 C_L L_5 L_L R_5 r_o s^4 + 2 C_5 L_5 L_L R_5 g_m r_o s^3 + 4 C_5 L_5 L_L R_5 g_m r_o s^3 + 4 C_5 L_5 L_L R_5 g_m r_o s^3 + C_L L_5 L_L R_5 g_m r_o s^3 + C_L L_5 L_L R_5 r_o s^2 + 2 L_5 L_L R_5 r_o s^2 + 2 L_5 L_L R_5 r_o s^2 + 2 L_5 L_L R_5 r_o s^3 + 2 C_4 L$ 

**10.146** INVALID-ORDER-146  $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s}, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, L_L s + R_L + \frac{1}{C_L s}\right)$ 

 $H(s) = -\frac{1}{2C_4C_5C_LL_5L_LR_5r_os^5 + 2C_4C_5C_LL_5R_5R_Lr_os^4 + 2C_4C_5L_5R_5r_os^3 + 2C_4C_LL_5L_LR_5g_mr_os^4 + 2C_4C_LL_5L_LR_5s^4 + 2C_4C_LL_5L_Lr_os^4 + 2C_4C_LL_5R_5R_Lg_mr_os^3 + 2C_4C_LL_5R_5R_Ls^3 + 2C_4C_LL_5R_5r_os^3 + 2C_4C$ 

10.147 INVALID-ORDER-147  $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s}, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$ 

 $L_L R_L s \left( -C_5 L_5 R_5 r_o s^2 + L_5 R_5 g_m r_o s + L_5 R_5 s - C_5 R_5 r_o s^2 + L_5 R_5 r_o s^$ 

 $H(s) = \frac{L_L R_L s \left(-C_5 L_5 R_5 r_o s^2 + L_5 R_5 g_m r_o s^4 + L_5 R_5 g_m r_o s^4$ 

- 10.148 INVALID-ORDER-148  $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s}, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$
- $-\frac{1}{2C_{4}C_{5}C_{L}L_{5}L_{L}R_{5}R_{L}r_{o}s^{5}+2C_{4}C_{5}L_{5}L_{L}R_{5}r_{o}s^{4}+2C_{4}C_{5}L_{5}R_{5}R_{L}r_{o}s^{3}+2C_{4}L_{5}L_{L}R_{5}R_{L}g_{m}r_{o}s^{4}+2C_{4}C_{L}L_{5}L_{L}R_{5}R_{L}g_{m}r_{o}s^{4}+2C_{4}C_{L}L_{5}L_{L}R_{5}R_{L}r_{o}s^{4}+2C_{4}C_{L}L_{5}L_{L}R_{5}R_{L}r_{o}s^{4}+2C_{4}C_{L}L_{5}L_{L}R_{5}R_{L}r_{o}s^{4}+2C_{4}L_{5}L_{L}R_{5}r_{o}s^{4}+2C_{4}$
- 10.149 INVALID-ORDER-149  $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s}, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{R_L \left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_T s}}\right)$
- $\frac{1}{2C_{4}C_{5}C_{L}L_{5}L_{L}R_{5}R_{L}r_{o}s^{5}+2C_{4}C_{5}L_{5}R_{5}R_{L}r_{o}s^{3}+2C_{4}C_{L}L_{5}L_{L}R_{5}R_{L}g_{m}r_{o}s^{4}+2C_{4}C_{L}L_{5}L_{L}R_{5}R_{L}g_{m}r_{o}s^{4}+2C_{4}C_{L}L_{5}L_{L}R_{5}R_{L}g_{m}r_{o}s^{4}+2C_{4}L_{5}R_{L}g_{m}r$
- 10.150 INVALID-ORDER-150  $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s}, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, R_L\right)$
- $H(s) = \frac{R_L \left( C_5 L_5 R_5 g_m r_o s^2 + C_5 L_5 R_5 s^2 C_5 L_5 r_o s^2 + L_5 g_m r_o s + L_5 s + R_5 g_m r_o + R_5 r_o \right)}{2 C_4 C_5 L_5 R_5 g_m r_o s^3 + 2 C_4 C_5 L_5 R_5 g_m r_o s^3 + 2 C_4 C_5 L_5 R_5 g_m r_o s^2 + 2 C_4 L_5 R_L g_m r_o s^2 + 2 C_4 R_5 R_L g_m r_o s^2 + 2 C_4 R_5 R_L g_m r_o s^2 + C_5 L_5 R_5 g_m r_o s^2 + C_5 L_5 R_5 g_m r_o s^2 + 2 C_5 L_5 R_5 g_m r_o s^2 + 2$
- 10.151 INVALID-ORDER-151  $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s}, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{1}{C_L s}\right)$
- $H(s) = \frac{C_5L_5R_5g_mr_os^2 + C_5L_5R_5s^2 C_5L_5r_os^2 + L_5g_mr_os + L_5s + R_5g_mr_o + R_5 r_o}{2C_4C_5L_5R_5g_mr_os^3 + 2C_4C_5L_5R_5s^3 + 2C_4C_5L_5r_os^3 + 2C_4L_5g_mr_os^2 + 2C_4L_5s^2 + 2C_4R_5g_mr_os + 2C_4R_5s + 2C_4r_os + C_5C_LL_5R_5g_mr_os^3 + C_5C_LL_5r_os^3 + 2C_5L_5g_mr_os^2 + 4C_5L_5s^2 + C_LL_5g_mr_os^2 + C_LL_5s^2 + C_LR_5g_mr_os + C_LR_5s + C_LR_5s^2 + C_LR_5s^2$
- **10.152** INVALID-ORDER-152  $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s}, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{R_L}{C_L R_L s + 1}\right)$
- $H(s) = \frac{R_L \left( C_5 L_5 R_5 g_m r_o s^2 + C_5 L_5 R_5 s^2 C_5 L_5 r_o s^2 + L_5 g_m r_o s + L_5 s + R_5 g_m r_o + R_5 r_o \right)}{2 C_4 C_5 L_5 R_5 R_L g_m r_o s^3 + 2 C_4 C_5 L_5 R_5 R_L s^3 + 2 C_4 C_5 L_5 R_5 R_L r_o s^3 + 2 C_4 L_5 R_L g_m r_o s^2 + 2 C_4 L_5 R_L g_m r_o s^2 + 2 C_4 L_5 R_L g_m r_o s^3 + 2 C_4 L_5 R_L g_m r_o s^3 + C_5 L_L g_m$
- **10.153** INVALID-ORDER-153  $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s}, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, R_L + \frac{1}{C_L s}\right)$
- $H(s) = \frac{(CL^{3}LS + 1) + (CS^{3}LS^{3} + 2C_{4}C_{5}L_{5}R_{5}R_{L}s^{4} + 2C_{4}C_{5}L_{5}R_{5}R_{L}s^{4} + 2C_{4}C_{5}L_{5}R_{5}s^{3} + 2C_{4}C_{5}L_{5}R_{5}s^{3} + 2C_{4}C_{L}L_{5}R_{L}s^{3} + 2C_{4}C_{L}L_{5}R_{L$
- **10.154** INVALID-ORDER-154  $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s}, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, L_L s + \frac{1}{C_L s}\right)$
- $(C_L L_L s^2 + 1) (C_5 L_5 R_5 g_m r_o s^2 + C_5 L_5 R_5 s^2 \frac{CLL_{L}C_{1} + I_{1}(C_{2}L_{3}S_{m}r_{o}s^{5} + 2C_{4}C_{5}L_{L}L_{5}S_{m}r_{o}s^{5} + 2C_{4}C_{5}L_{L}L_{5}L_{c}s^{5} + 2C_{4}C_{5}L_{5}L_{c}s^{5} + 2C_{4}$

10.155 INVALID-ORDER-155  $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_{4}s}, \frac{L_{5}s}{C_{5}L_{5}s^{2}+1} + R_{5}, \frac{L_{L}s}{C_{1}L_{1}s^{2}+1}\right)$ 

**10.156** INVALID-ORDER-156  $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s}, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, L_1 s + R_1 + \frac{1}{C_1 s}\right)$ 

 $H(s) = \frac{1}{2C_4C_5C_LL_5L_LR_5g_mr_os^5 + 2C_4C_5C_LL_5L_LR_5s^5 + 2C_4C_5C_LL_5L_Lr_os^5 + 2C_4C_5C_LL_5R_5R_Lg_mr_os^4 + 2C_4C_5C_LL_5R_5R_Ls^4 + 2C_4C_5C_LL_5R_5R_Ls^4 + 2C_4C_5L_LS^4R_5s^3 + 2C_4C_5L_5R_5s^3 + 2C_4C_5L_5L_Ls^4 + 2C_4C_5L_Ls^4R_5s^3 + 2C_4C_$ 

10.157 INVALID-ORDER-157  $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s}, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{1}{C_L s + \frac{1}{R_I} + \frac{1}{L_I s}}\right)$ 

 $H(s) = \frac{1}{2C_4C_5L_5L_LR_5R_Lg_mr_os^4 + 2C_4C_5L_5L_LR_5R_Ls^4 + 2C_4C_5L_5L_LR_Lr_os^4 + 2C_4L_5L_LR_Lg_mr_os^3 + 2C_4L_LR_5R_Lg_mr_os^2 + 2C_4L_LR_5R_Lg_mr_os^2 + 2C_4L_LR_5R_Lg_mr_os^4 + 2C_4L_5L_LR_5R_Lg_mr_os^4 + 2C_$ 

**10.158** INVALID-ORDER-158  $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s}, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$ 

 $H(s) = \frac{1}{2C_4C_5C_LL_5L_LR_5R_Lg_mr_os^5 + 2C_4C_5C_LL_5L_LR_5g_mr_os^5 + 2C_4C_5L_5L_LR_5g_mr_os^4 + 2C_4C_5L_5L_LR_5g_mr_os^4 + 2C_4C_5L_5L_LR_5g_mr_os^4 + 2C_4C_5L_5R_Lg_mr_os^4 + 2C_4C_5R_Lg_mr_os^4 + 2C_4C_5R_$ 

10.159 INVALID-ORDER-159  $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s}, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{R_L \left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$ 

 $H(s) = \frac{1}{2C_4C_5C_LL_5L_LR_5R_Lg_mr_os^5 + 2C_4C_5C_LL_5L_LR_5R_Ls^5 + 2C_4C_5C_LL_5L_LR_Lr_os^5 + 2C_4C_5L_5R_5R_Lg_mr_os^3 + 2C_4C_5L_5R_Ls^3 + 2C_4C_5L_5R_Lr_os^3 + 2C_4C_5L_5R_Lg_mr_os^4 + 2C_4C_LL_5L_LR_Ls^4 + 2C_4C_LL_LR_5R_Lg_mr_os^3 + 2C_4C_LL_LR_5R_Lg_mr_os^3 + 2C_4C_5L_5R_Ls^3 + 2C_$ 

10.160 INVALID-ORDER-160  $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s}, \frac{R_5 \left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, R_L\right)$ 

 $H(s) = \frac{R_L \left( C_5 L_5 R_5 g_m r_o s^2 + C_5 L_5 R_5 s^2 - C_5 L_5 r_o s^2 - C_5 R_5 r_o s + R_5 g_m r_o + R_5 - r_o \right)}{2 C_4 C_5 L_5 R_5 R_L g_m r_o s^3 + 2 C_4 C_5 L_5 R_L g_m r_o s^3 + 2 C_4 C_5 L_5 R_L g_m r_o s^2 + 2 C_4 R_5 R_L g_m r_o s^2 + 2 C_4 R_5 R_L g_m r_o s^2 + 2 C_4 R_5 R_L g_m r_o s^2 + 2 C_5 L_5 R_5 g_m r_o s^2 + 2 C_5 R_5 R_L g_m r_o s^2 + 2$ 

10.161 INVALID-ORDER-161  $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s}, \frac{R_5 \left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{1}{C_L s}\right)$ 

 $H(s) = \frac{C_5L_5R_5g_mr_os^2 + C_5L_5R_5s^2 - C_5L_5r_os^2 - C_5R_5r_os + R_5g_mr_o + R_5 - r_o}{2C_4C_5L_5R_5g_mr_os^3 + 2C_4C_5L_5r_os^3 + 2C_4C_5L_5r_os^3 + 2C_4C_5R_5r_os^2 + 2C_4R_5g_mr_os + 2C_4R_5s + 2C_4r_os + C_5C_LL_5R_5g_mr_os^3 + C_5C_LL_5r_os^3 + C_5C_LL_5r_os^3 + C_5C_LL_5r_os^3 + 2C_5L_5g_mr_os^2 + 2C_5R_5g_mr_os + 4C_5R_5s + C_LR_5g_mr_os + C_LR_5g_mr_os^3 + C_5C_LL_5r_os^3 + C_5C_LL_5r_o$ 

10.162 INVALID-ORDER-162  $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s}, \frac{R_5 \left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{R_L}{C_L R_L s + 1}\right)$ 

 $H(s) = \frac{R_L \left( C_5 L_5 R_5 g_m r_o s^2 + C_5 L_5 R_5 s^2 - C_5 L_5 r_o s^2 - C_5 R_5 r_o s + R_5 g_m r_o + R_5 - r_o \right)}{2 C_4 C_5 L_5 R_5 R_L g_m r_o s^3 + 2 C_4 C_5 L_5 R_5 R_L r_o s^3 + 2 C_4 C_5 L_5 R_L r_o s^3 + 2 C_4$ 

10.163 INVALID-ORDER-163 
$$Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s}, \frac{R_5 \left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, R_L + \frac{1}{C_L s}\right)$$

 $H(s) = \frac{(C_L R_L s + 1) \left(C_5 L_5 R_5 g_m r_o s + 2 C_4 C_5 L_5 R_5 R_L g_m r_o s^4 + 2 C_4 C_5 L_L F_0 R_5 R_L r_o s^4 + 2 C_4 C_5 L_L F_0 R_L r_o s^4 + 2 C_4 C_5 L_L F_0 R_L r_o s^4 + 2 C_4 C_5 L_L F_0 R_L r_o s^4 + 2 C_4 C_5 L_L F_0 R_L r_o s^4 + 2 C_4 C_5 L_L F_0 R_L r_o s^4 + 2 C_4 C_5 L_L F_0 R_L r_o s^4 + 2 C_4 C_5 L_L F_0 R_L r_o s^4 + 2 C_4 C_5 L_L F_0 R_L r_o s^4 + 2 C_4 C_5 L_L F_0 R_L r_o s^4 + 2 C_4 C_5 L_L F_0 R_L r_o s^4 + 2 C_4 C_5 L_L F_0 R_L r_o s^4 + 2 C_4 C_5 L_L F_0 R_L r_o s^4 + 2 C_4 C_5 L_L r_o s^4 + 2 C_4 L_L r_o s^4 + 2 C_4 L_L r_o s^4 + 2 C_4 L_L r_o s^4 + 2$ 

**10.164** INVALID-ORDER-164 
$$Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s}, \frac{R_5 \left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, L_L s + \frac{1}{C_L s}\right)$$

 $\frac{\left(C_{L}L_{s}^{2}+1\right)\left(C_{5}L_{5}R_{5}g_{m}r_{o}s^{5}+2C_{4}C_{5}L_{L}L_{L}R_{5}s^{5}+2C_{4}C_{5}L_{L}L_{L}R_{5}r_{o}s^{4}+2C_{4}C_{5}L_{L}R_{5}r_{o}s^{3}+2C_{4}C_{5}L_{5}R_{5}g_{m}r_{o}s^{3}+2C_{4}C_{5}L_{L}L_{R}S^{3}+2C_{4}C_{5}L_{L$ 

10.165 INVALID-ORDER-165 
$$Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s}, \frac{R_5 \left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{L_L s}{C_L L_L s^2 + 1}\right)$$

 $H(s) = \frac{L_L s \left(C_5 L_5 R_5 g_m r_o s^2 + C_5 L_5 R_5 s^2 - C_5 L_5 r_o s^2 - C_5 R_5 r_o s + R_5 g_m r_o + R_5 - r_o\right)}{2 C_4 C_5 L_5 L_L R_5 g_m r_o s^4 + 2 C_4 C_5 L_L L_R s^4 + 2 C_4 C_5 L_L R_5 r_o s^3 + 2 C_4 L_L R_5 r_o s^3 + 2 C_5 L_L L_R s^3 + C_5 L_L$ 

**10.166** INVALID-ORDER-166 
$$Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s}, \frac{R_5 \left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, L_L s + R_L + \frac{1}{C_L s}\right)$$

$$H(s) = \frac{1}{2C_4C_5C_LL_5L_LR_5g_mr_os^5 + 2C_4C_5C_LL_5L_LR_5s^5 + 2C_4C_5C_LL_5L_Lr_os^5 + 2C_4C_5C_LL_5R_5R_Lg_mr_os^4 + 2C_4C_5C_LL_5R_5R_Ls^4 + 2C_4C_5C_LL_5R_Lr_os^4 + 2C_4C_5C_LL_5R_5r_os^4 + 2C_4C_5C_LL_5R_5r_os$$

**10.167** INVALID-ORDER-167 
$$Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s}, \frac{R_5 \left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$$

$$H(s) = \frac{1}{2C_4C_5L_5L_LR_5R_Lg_mr_os^4 + 2C_4C_5L_5L_LR_5R_Ls^4 + 2C_4C_5L_5L_LR_5r_os^4 + 2C_4C_5L_LR_5R_Lr_os^4 + 2C_4C_5L_LR_5R_Lg_mr_os^2 + 2C_4L_LR_5R_Lg_mr_os^2 + 2C_4L_LR_5R_Lg_mr_os^4 + C_5C_LL_5L_LR_5R_Ls^4 + C_5C_LL_5L_LR_5R_Lr_os^4 + C_5C_LL_5L_Rr_os^4 + C_5C_LL_5L_Rr_os^4$$

10.168 INVALID-ORDER-168 
$$Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s}, \frac{R_5 \left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$$

10.169 INVALID-ORDER-169 
$$Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s}, \frac{R_5 \left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{R_L \left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$$

$$H(s) = \frac{1}{2C_4C_5C_LL_5L_LR_5R_Lg_mr_os^5 + 2C_4C_5C_LL_5L_LR_5R_Ls^5 + 2C_4C_5C_LL_5L_LR_5r_cs^5 + 2C_4C_5C_LL_LR_5R_Lr_os^4 + 2C_4C_5L_5R_5R_Lg_mr_os^3 + 2C_4C_5L_5R_5R_Ls^3 + 2C_4C_5L_5R_5R_Lr_os^3 + 2C_4C_5R_5R_Lr_os^3 + 2C_4C_5R_Lr_os^3 + 2C_4$$

**10.170** INVALID-ORDER-170 
$$Z(s) = \left(\infty, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, R_5, R_L\right)$$

$$H(s) = \frac{R_4 R_L \left(R_5 g_m r_o + R_5 - r_o\right)}{2 C_4 R_4 R_5 R_L g_m r_o s + 2 C_4 R_4 R_5 R_L s + 2 C_4 R_4 R_L r_o s + R_4 R_5 g_m r_o + R_4 R_5 + 2 R_4 R_L g_m r_o + 4 R_4 R_L + R_4 r_o + 2 R_5 R_L g_m r_o + 2 R_5 R_L + 2 R_L r_o}$$

10.172 INVALID-ORDER-172  $Z(s) = \left(\infty, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, R_5, \frac{R_L}{C_L R_L s + 1}\right)$  $H(s) = \frac{R_4 R_L \left(R_5 g_m r_o + R_5 - r_o\right)}{2 C_4 R_4 R_5 R_L g_m r_o s + 2 C_4 R_4 R_5 R_L s + 2 C_4 R_4 R_5 R_L g_m r_o s + C_L R_4 R_5 R_L s + C_L R_4 R_5 R_L s + C_L R_4 R_5 g_m r_o + R_4 R_5 + 2 R_4 R_L g_m r_o + 4 R_4 R_L + R_4 r_o + 2 R_5 R_L g_m r_o + 2 R_5 R_L + 2 R_L r_o}$ 10.173 INVALID-ORDER-173  $Z(s) = \left(\infty, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, R_5, L_L s + \frac{1}{C_L s}\right)$  $H(s) = \frac{R_4 \left( C_L L_L s^2 + 1 \right) \left( R_5 g_m r_o + R_5 - r_o \right)}{2 C_4 C_L L_L R_4 R_5 g_m r_o s^3 + 2 C_4 C_L L_L R_4 r_o s^3 + 2 C_4 R_4 R_5 g_m r_o s + 2 C_4 R_4 R_5 g_m r_o s^2 + 2 C_L L_L R_5 g_m r_o s^2 + 2 C_L L_L R_5 g_m r_o s^2 + 2 C_L L_L R_5 g_m r_o s + C_L R_4 R_5 g_m r_o s + C_$ 10.174 INVALID-ORDER-174  $Z(s) = \left(\infty, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, R_5, L_L s + R_L + \frac{1}{C_L s}\right)$  $H(s) = \frac{R_4 \left( C_L L_L s^2 + C_L R_L s + 1 \right) \left( R_5 g_m r_o + R_5 - r_o \right)}{2 C_4 C_L L_L R_4 R_5 g_m r_o s^3 + 2 C_4 C_L L_L R_4 r_o s^3 + 2 C_4 C_L L_L R_4 r_o s^2 + 2 C_4 C_L R_4 R_5 R_L s^2 + 2 C_4 C_L R_4 R_5 r_o s^2 + 2 C_4 L_L R_4 r_o$ 10.175 INVALID-ORDER-175  $Z(s) = \left(\infty, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, R_5, \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$  $H(s) = \frac{\frac{1.44 \cdot 11.59 mr_o s^3 + 2.C_4 C_L L_L R_4 R_5 R_L g_m r_o s^3 + 2.C_4 C_L L_L R_4 R_5 R_L s^3 + 2.C_4 C_L L_L R_4 R_5 g_m r_o s^2 + 2.C_4 L_L R_4$ 10.176 INVALID-ORDER-176  $Z(s) = \left(\infty, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, R_5, \frac{R_L \left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$  $\frac{R_{4}R_{L}\left(C_{L}L_{L}s^{2}+1\right)\left(R_{5}g_{m}r_{o}+R_{5}-r_{o}\right)}{2C_{4}C_{L}L_{L}R_{4}R_{5}R_{L}g_{m}r_{o}s^{3}+2C_{4}C_{L}L_{L}R_{4}R_{5}R_{L}g_{m}r_{o}s^{2}+2C_{L}L_{L}R_{4}R_{5}g_{m}r_{o}s^{2}+2C_{L}L_{L}R_{4}R_{5}s^{2}+2C_{L}L_{L}$ 10.177 INVALID-ORDER-177  $Z(s) = \left(\infty, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, \frac{1}{C_5 s}, R_L + \frac{1}{C_L s}\right)$  $H(s) = \frac{R_4 \left( C_L R_L s + 1 \right) \left( -C_5 r_o s + g_m r_o + 1 \right)}{2 C_4 C_5 C_L R_4 R_L r_o s^3 + 2 C_4 C_5 R_4 r_o s^2 + 2 C_4 C_L R_4 R_L g_m r_o s^2 + 2 C_4 R_4 g_m r_o s + 2 C_4 R_4 g_m r_o s^2 + 2 C_5 C_L R_4 R_L g_m r_o s^2 + 2 C_5 C_L R_4 r_o s^2 + 2 C_5 R_4 g_m r_o s + 4 C_5 R_4 g_m r_o s + 4 C_5 R_4 g_m r_o s + C_L R_4 g_m r_o s + C_L R_4 g_m r_o s + C_L R_4 g_m r_o s^2 + 2 C_5 C_L R_4 r_o s^2 + 2 C_5 C_L R_4 r_o s^2 + 2 C_5 R_4 g_m r_o s + 4 C_5 R_4 g_m r_o s + C_L R_4 g$ **10.178** INVALID-ORDER-178  $Z(s) = \left(\infty, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, \frac{1}{C_5 s}, L_L s + \frac{1}{C_L s}\right)$  $\frac{R_4 \left(C_L L_L s^2+1\right) \left(-C_5 r_o s+g_m r_o+1\right)}{2 C_4 C_5 C_L L_L R_4 r_o s^4+2 C_4 C_5 R_4 r_o s^2+2 C_4 C_L L_L R_4 g_m r_o s^3+2 C_4 C_L L_L R_4 g_m r_o s^3+2 C_4 R_4 g_m r_o s^3+4 C_5 C_L L_L R_4 g_m r_o s^3+4 C_5 C_L L_L R_4 g_m r_o s^3+2 C_5 C_L R_4 g_m r_o s^3+2 C_5 C_$ 

**10.171** INVALID-ORDER-171  $Z(s) = \left(\infty, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, R_5, \frac{1}{C_L s}\right)$ 

10.179 INVALID-ORDER-179  $Z(s) = \left(\infty, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1}\right)$ 

 $H(s) = \frac{L_L R_4 s \left(-C_5 r_o s + g_m r_o + 1\right)}{2 C_4 C_5 L_L R_4 r_o s^3 + 2 C_4 L_L R_4 g_m r_o s^2 + 2 C_4 L_L R_4 s^2 + C_5 C_L L_L R_4 r_o s^3 + 2 C_5 L_L R_4 g_m r_o s^2 + 4 C_5 L_L R_4 s^2 + 2 C_5 L_L r_o s^2 + C_5 R_4 r_o s + C_L L_L R_4 g_m r_o s^2 + C_L L_L R_4 s^2 + 2 L_L g_m r_o s + 2 L_L s + R_4 g_m r_o + R_4 r_o s^2 + C_4 r_o s^2 + C_5 r_o s^2 + C$ 

**10.180** INVALID-ORDER-180  $Z(s) = \left(\infty, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, \frac{1}{C_5 s}, L_L s + R_L + \frac{1}{C_L s}\right)$ 

 $H(s) = \frac{R_4 \left(-C_5 r_o s + g_m r_o + 1\right) \left(C_L L_L s^2 + C_L R_L s + 1\right)}{2 C_4 C_5 C_L L_L R_4 r_o s^4 + 2 C_4 C_5 C_L R_4 R_L r_o s^3 + 2 C_4 C_5 L_L R_4 g_m r_o s^3 + 2 C_4 C_L L_L R_4 g_m r_o s^3 + 2 C_4 C_L L_L R_4 g_m r_o s^3 + 2 C_4 C_L L_L R_4 g_m r_o s^3 + 2 C_4 C_L L_L R_4 g_m r_o s^3 + 2 C_5 C_L L_L R_4 g_m r_o s^3 + 2 C_5 C_L L_L R_4 g_m r_o s^3 + 2 C_5 C_L L_L R_4 g_m r_o s^3 + 2 C_5 C_L L_L R_4 g_m r_o s^3 + 2 C_5 C_L R_4 R_L$ 

10.181 INVALID-ORDER-181  $Z(s) = \left(\infty, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, \frac{1}{C_5 s}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$ 

 $\frac{L_L R_4 R_L s \left(-C_5 r_o s + g_m r_o + 1\right)}{2 C_4 C_5 L_L R_4 R_L g_m r_o s^2 + 2 C_4 L_L R_4 R_L g_m r_o s^2 + 2 C_5 L_L R_4 R_L g_m r_o s^2 + 4 C_5 L_L R_4 R_L g_m r_o s^2 + 4 C_5 L_L R_4 R_L g_m r_o s^2 + 2 C_5 L_L$ 

10.182 INVALID-ORDER-182  $Z(s) = \left(\infty, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$ 

 $H(s) = \frac{1.64 \left( -\frac{C_5 r_o s}{c_o s} + \frac{gm r_o$ 

10.183 INVALID-ORDER-183  $Z(s) = \left(\infty, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, \frac{1}{C_5 s}, \frac{R_L \left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$ 

 $H(s) = \frac{R_4 R_L \left(C_L L_L s^2 + 1\right) \left(-C_5 r_o s + g_m r_o + 1\right)}{2 C_4 C_5 C_L L_L R_4 R_L r_o s^4 + 2 C_4 C_5 R_4 R_L r_o s^3 + 2 C_4 C_L L_L R_4 R_L g_m r_o s^3 + 2 C_4 R_4 R_L g_m r_o s^3 + 2 C_5 C_L L_L R_4 R_L g_m r_o s^3 + 2 C_5 C_L L_L R_4 R_L r_o s^3 + 2 C_5 C_L L_L R_4 R_L r_o s^3 + 2 C_5 C_L L_L R_4 R_L r_o s^3 + 2 C_5 C_L L_L R_4 R_L r_o s^3 + 2 C_5 C_L L_L R_4 R_L r_o s^3 + 2 C_5 C_L L_L R_4 R_L r_o s^3 + 2 C_5 C_L L_L R_4 R_L r_o s^3 + 2 C_5 C_L L_L R_4 R_L r_o s^3 + 2 C_5 C_L L_L R_4 R_L r_o s^3 + 2 C_5 C_L L_L R_4 R_L r_o s^3 + 2 C_5 C_L L_L R_4 R_L r_o s^3 + 2 C_5 C_L L_L R_4 R_L r_o s^3 + 2 C_5 C_L L_L R_4 R_L r_o s^3 + 2 C_5 C_L L_L R_4 R_L r_o s^3 + 2 C_5 C_L L_L R_4 R_L r_o s^3 + 2 C_5 C_L L_L R_4 R_L r_o s^3 + 2 C_5 C_L L_L R_4 R_L r_o s^3 + 2 C_5 C_L L_L R_4 R_L r_o s^3 + 2 C_5 C_L L_L R_4 R_L r_o s^3 + 2 C_5 C_L R_4 R_L r_o s^3 + 2$ 

**10.184** INVALID-ORDER-184  $Z(s) = \left(\infty, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, \frac{R_5}{C_5 R_5 s + 1}, R_L + \frac{1}{C_L s}\right)$ 

 $R_4 (C_L R_L s + 1) (C_5 R_5 r_o s - R_5 g_m r_o - R_5 + r_o)$  $\frac{n_4 \left( \cup_{L} n_L s + 1 \right) \left( \cup_{5} n_5 r_o s - n_5 g_m r_o - n_5 + r_o \right)}{2 C_4 C_5 C_L R_4 R_5 R_L r_o s^3 + 2 C_4 C_5 R_4 R_5 r_o s^2 + 2 C_4 C_L R_4 R_5 R_L s^2 + 2 C_4 C_L R_4 R_5 R_L s^2 + 2 C_4 C_L R_4 R_5 r_o s^2 + 2 C_5 C_L R_4 R_5 R_L s^2 + 2 C_5 C_L R_4 R_5 r_o s^2 + 2 C_5 C_L R_4 R_5 R_L s^2 + 2 C_5 C_L R_5 R_L s^2 + 2 C$ 

**10.185** INVALID-ORDER-185  $Z(s) = \left(\infty, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, \frac{R_5}{C_5 R_5 s + 1}, L_L s + \frac{1}{C_L s}\right)$ 

 $H(s) = -\frac{1.24 \left( C_L L_L R_4 R_5 r_o s^4 + 2 C_4 C_5 L_L R_4 R_5 r_o s^4 + 2 C_4 C_5 L_L R_4 R_5 r_o s^4 + 2 C_4 C_5 L_L R_4 R_5 r_o s^4 + 2 C_4 C_4 L_L R_4 R_5 r_o s^3 + 2 C_4 C_L L_L R_$ 

**10.186** INVALID-ORDER-186  $Z(s) = \left(\infty, \infty, \infty, \frac{R_4}{C_4R_4s+1}, \frac{R_5}{C_5R_5s+1}, \frac{L_Ls}{C_LL_Ls^2+1}\right)$ 

 $\frac{L_L R_4 s \left(-C_5 R_5 r_o s + R_5 g_m r_o + R_5 - r_o\right)}{2 C_4 C_5 L_L R_4 R_5 r_o s^3 + 2 C_4 L_L R_4 R_5 g_m r_o s^2 + 2 C_4 L_L R_4 R_5 s^2 + 2 C_4 L_L R_4 R_5 r_o s^3 + 2 C_5 L_L R_4 R_5 g_m r_o s^2 + 4 C_5 L_L R_4 R_5 r_o s^2 + C_5 L_L R_4 R_5 g_m r_o s^2 + C_L L_L R_4 R_5 g_m r_o s^2 + 2 L_L R_4 R_5$ 

10.187 INVALID-ORDER-187  $Z(s) = \left(\infty, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, \frac{R_5}{C_5 R_5 s + 1}, L_L s + R_L + \frac{1}{C_L s}\right)$ 

 $H(s) = -\frac{1}{2C_4C_5C_LL_LR_4R_5r_os^4 + 2C_4C_5C_LR_4R_5R_Lr_os^3 + 2C_4C_5R_4R_5r_os^2 + 2C_4C_LL_LR_4R_5g_mr_os^3 + 2C_4C_LL_LR_4r_os^3 + 2C_4C_LL_LR_4r_os^3 + 2C_4C_LR_4R_5R_Lg_mr_os^2 + 2C_4C_LR_4R_5R_Ls^2 + 2C_4C_LR_4R_5r_os^2 + 2C_4R_4R_5g_mr_os^2 + 2C_4R_4R_5g_mr_os^2 + 2C_4C_LR_4R_5r_os^2 + 2C_4C_LR_4R_5r_os^2 + 2C_4C_LR_4R_5r_os^2 + 2C_4C_LR_4R_5r_os^2 + 2C_4C_LR_4r_os^2 + 2C_4C$ 

10.188 INVALID-ORDER-188  $Z(s) = \left(\infty, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, \frac{R_5}{C_5 R_5 s + 1}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$ 

 $H(s) = \frac{L_L R_4 R_L s \left(-C_5 R_5 r_o s + R_5 g_m r_o + R_5 - r_o\right)}{2 C_4 C_5 L_L R_4 R_5 R_L r_o s^3 + 2 C_4 L_L R_4 R_5 R_L s^2 + 2 C_4 L_L R_4 R_5 R_L r_o s^2 + C_5 L_L R_4 R_5 R_L r_o s^2 + 2 C_5 L_L R_5$ 

- **10.189** INVALID-ORDER-189  $Z(s) = \left(\infty, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, \frac{R_5}{C_5 R_5 s + 1}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$
- $-\frac{1}{2C_{4}C_{5}C_{L}L_{L}R_{4}R_{5}R_{L}r_{o}s^{4}+2C_{4}C_{5}L_{L}R_{4}R_{5}r_{o}s^{3}+2C_{4}C_{5}R_{4}R_{5}R_{L}r_{o}s^{2}+2C_{4}C_{L}L_{L}R_{4}R_{5}R_{L}g_{m}r_{o}s^{3}+2C_{4}C_{L}L_{L}R_{4}R_{5}R_{L}g_{m}r_{o}s^{3}+2C_{4}L_{L}R_{4}R_{5}g_{m}r_{o}s^{2}+2C_{4}L_{L$
- 10.190 INVALID-ORDER-190  $Z(s) = \left(\infty, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, \frac{R_5}{C_5 R_5 s + 1}, \frac{R_L \left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$
- $H(s) = -\frac{1}{2C_4C_5C_LL_LR_4R_5R_Lr_os^4 + 2C_4C_5R_4R_5R_Lr_os^2 + 2C_4C_LL_LR_4R_5R_Lg_mr_os^3 + 2C_4C_LL_LR_4R_5R_Ls^3 + 2C_4C_LL_RR_4R_5R_Ls^3 + 2C_4C_LL_RR_4R_5R_L$
- **10.191** INVALID-ORDER-191  $Z(s) = \left(\infty, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, R_5 + \frac{1}{C_5 s}, R_L + \frac{1}{C_L s}\right)$
- $R_4 (C_L R_L s + 1) (C_5 R_5 g_m r_o s + C_5 R_5 s C_5 r_o r_o s)$  $H(s) = \frac{R_4 \left( C_L R_L s + 1 \right) \left( C_5 R_5 g_m r_o s + C_5 R_5 s - C_5 r_c r_o s + C_5 R_5 r_o s + C_5 R_5$
- 10.192 INVALID-ORDER-192  $Z(s) = \left(\infty, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, R_5 + \frac{1}{C_5 s}, L_L s + \frac{1}{C_L s}\right)$
- $R_4 \left( C_L L_L s^2 + 1 \right) \left( C_5 R_5 g_m r_o s + C_5 R_5 s C_5 r_o r_o s \right)$
- **10.193** INVALID-ORDER-193  $Z(s) = \left(\infty, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, R_5 + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1}\right)$
- $H(s) = \frac{L_L R_4 s \left(C_5 R_5 g_m r_o s + C_5 R_5 s C_5 r_o s + g_m r_o + 1\right)}{2 C_4 C_5 L_L R_4 R_5 g_m r_o s^3 + 2 C_4 C_5 L_L R_4 r_o s^3 + 2 C_4 L_L R_4 g_m r_o s^2 + 2 C_4 L_L R_4 g_m r_o s^3 + C_5 C_L L_L R_4 R_5 g_m r_o s^3 + C_5 C_L L_L R_4 g_m r_o s^2 + 2 C_5 L_L R_5 g_$
- 10.194 INVALID-ORDER-194  $Z(s) = \left(\infty, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, R_5 + \frac{1}{C_5 s}, L_L s + R_L + \frac{1}{C_L s}\right)$
- $\frac{2C_{4}C_{5}C_{L}L_{L}R_{4}R_{5}g_{m}r_{o}s^{4}+2C_{4}C_{5}C_{L}L_{L}R_{4}R_{5}s^{4}+2C_{4}C_{5}C_{L}L_{L}R_{4}r_{o}s^{4}+2C_{4}C_{5}C_{L}R_{4}R_{5}R_{L}g_{m}r_{o}s^{3}+2C_{4}C_{5}C_{L}R_{4}R_{5}R_{L}s^{3}+2C_{4}C_{5}C_{L}R_{4}R_{5}r_{o}s^{2}+2C_{4}C_{5}R_{4}R_{5}R_{5}s^{2}+2C_{4}C_{5}R_{4}R_{5}s^{2}+2C_{4}C_{5}R_{4}R_{5}s^{2}+2C_{4}C_{5}R_{4}R_{5}s^{2}+2C_{4}C_{5}R_{4}R_{5}s^{2}+2C_{4}C_{5}R_{4}R_{5}s^{2}+2C_{4}C_{5}R_{4}R_{5}s^{2}+2C_{4}C_{5}R_{4}R_{5}s^{2}+2C_{4}C_{5}R_{4}R_{5}s^{2}+2C_{4}C_{5}R_{4}R_{5}s^{2}+2C_{4}C_{5}R_{4}R_{5}s^{2}+2C_{4}C_{5}R_{4}R_{5}s^{2}+2C_{4}C_{5}R_$
- 10.195 INVALID-ORDER-195  $Z(s) = \left(\infty, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, R_5 + \frac{1}{C_5 s}, \frac{1}{C_L s + \frac{1}{R_5} + \frac{1}{L_5 s}}\right)$
- $H(s) = \frac{2LL_{4}R_{5}R_{L}}{2C_{4}C_{5}L_{L}R_{4}R_{5}R_{L}q_{m}r_{o}s^{3} + 2C_{4}C_{5}L_{L}R_{4}R_{5}R_{L}s^{3} + 2C_{4}C_{5}L_{L}R_{4}R_{5}r_{o}s^{3} + 2C_{4}L_{L}R_{4}R_{L}r_{o}s^{3} + 2C_{4}L_{L}R_{4}R_{$

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10.196 INVALID-ORDER-196 Z(s) = \left(\infty, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, R_5 + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)
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$$H(s) = \frac{1}{2C_4C_5C_LL_LR_4R_5R_Lg_mr_os^4 + 2C_4C_5C_LL_LR_4R_5R_Ls^4 + 2C_4C_5L_LR_4R_5g_mr_os^3 + 2C_4C_5L_LR_4R_5s^3 + 2C_4C_$$

10.197 INVALID-ORDER-197 
$$Z(s) = \left(\infty, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, R_5 + \frac{1}{C_5 s}, \frac{R_L \left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$$

$$H(s) = \frac{1}{2C_4C_5C_LL_LR_4R_5R_Lg_mr_os^4 + 2C_4C_5C_LL_LR_4R_5R_Ls^4 + 2C_4C_5C_LL_LR_4R_Lr_os^4 + 2C_4C_5R_4R_5R_Lg^2 + 2C_4C_5R_4R_Lr_os^2 + 2C_4C_5R_4R_Lr_os^2 + 2C_4C_LL_LR_4R_Lg_mr_os^3 + 2C_4C_LLR_4R_Lg_mr_os^3 + 2C_4C_LLR_4R_Lg_mr_os^3 + 2C_4C_LLR_4R_Lg_mr_os^3 + 2C_4C_$$

**10.198** INVALID-ORDER-198  $Z(s) = \left(\infty, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, L_5 s + \frac{1}{C_5 s}, R_L\right)$ 

$$H(s) = \frac{R_4 R_L \left( C_5 L_5 g_m r_o s^2 + C_5 L_5 s^2 - C_5 r_o s + g_m r_o + 1 \right)}{2 C_4 C_5 L_5 R_4 R_L g_m r_o s^3 + 2 C_4 C_5 L_5 R_4 R_L r_o s^2 + 2 C_4 R_4 R_L g_m r_o s + 2 C_4 R_4 R_L g_m r_o s^2 + C_5 L_5 R_4 g_m r_o s^2 + 2 C_5 L_5 R_L g_m r_o s^2 + 2 C_5 L_5 R_L g_m r_o s^2 + 2 C_5 L_5 R_L g_m r_o s^2 + 2 C_5 R_4 R_L g_m r_o s + 4 C_5 R_4 R_L g_m r_o s + 2 C_5 R_4 R_$$

**10.199** INVALID-ORDER-199  $Z(s) = \left(\infty, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, L_5 s + \frac{1}{C_5 s}, \frac{1}{C_L s}\right)$ 

$$H(s) = \frac{R_4 \left( C_5 L_5 g_m r_o s^2 + C_5 L_5 s^2 - C_5 r_o s + g_m r_o + 1 \right)}{2 C_4 C_5 L_5 R_4 g_m r_o s^3 + 2 C_4 C_5 L_5 R_4 s^3 + 2 C_4 C_5 R_4 r_o s^2 + 2 C_4 R_4 g_m r_o s + 2 C_4 R_4 g_m r_o s + 2 C_4 R_4 g_m r_o s^3 + C_5 C_L L_5 R_4 g_m r_o s^3 + C_5 C_L L_5 R_4 g_m r_o s^2 + 2 C_5 L_5 g_m r_o s^2 + 2 C_$$

10.200 INVALID-ORDER-200  $Z(s) = \left(\infty, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, L_5 s + \frac{1}{C_5 s}, \frac{R_L}{C_L R_L s + 1}\right)$ 

$$H(s) = \frac{R_4 R_L \left( C_5 L_5 g_m r_o s^2 + C_5 L_5 s^2 - C_5 r_o s + g_m r_o + 1 \right)}{2 C_4 C_5 L_5 R_4 R_L g_m r_o s^3 + 2 C_4 C_5 L_5 R_4 R_L r_o s^2 + 2 C_4 R_4 R_L r_o s^2 + 2 C_4 R_4 R_L g_m r_o s^3 + C_5 C_L L_5 R_4 R_L g_m r_o s^3 + C_5 C_L L_5 R_4 R_L g_m r_o s^3 + C_5 C_L L_5 R_4 R_L g_m r_o s^3 + C_5 C_L L_5 R_4 R_L g_m r_o s^2 + C_5 L_5 R_4 g_m r_o s^2 + 2 C_5 L_5 R_5 g_m r_o s^2$$

10.201 INVALID-ORDER-201  $Z(s) = \left(\infty, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, L_5 s + \frac{1}{C_5 s}, R_L + \frac{1}{C_L s}\right)$ 

$$H(s) = \frac{R_4 \left( C_L R_L s + 1 \right) \left( C_5 L_5 g_m r_o s^2 + C_5 L_5 s^2 - C_5 r_o r_o s^2 + C_5 L_5 r_$$

10.202 INVALID-ORDER-202  $Z(s) = \left(\infty, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, L_5 s + \frac{1}{C_5 s}, L_L s + \frac{1}{C_L s}\right)$ 

$$H(s) = \frac{R_4 \left( C_L L_L s^2 + 1 \right) \left( C_5 L_5 g_m r_o s^2 + C_5 L_5 s^2 - C_5 L_5 r_o s^2 + C_5 r_o s^2$$

10.203 INVALID-ORDER-203  $Z(s) = \left(\infty, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, L_5 s + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1}\right)$ 

$$H(s) = \frac{L_L R_4 s \left(C_5 L_5 g_m r_o s^2 + C_5 L_5 s^2 - C_5 r_o s + g_m r_o + 1\right)}{2 C_4 C_5 L_5 L_L R_4 g_m r_o s^4 + 2 C_4 C_5 L_L R_4 r_o s^3 + 2 C_4 L_L R_4 g_m r_o s^2 + 2 C_4 L_L R_4 g_m r_o s^4 + C_5 C_L L_5 L_L R_4 g_m r_o s^4 + C_5 C_L L_5 L_L R_4 g_m r_o s^3 + 2 C_5 L_5 L_L g_m r_o s^3 + 2 C_5 L_5 L_L g_m r_o s^3 + 2 C_5 L_5 L_L g_m r_o s^3 + 2 C_5 L_5 R_4 g_m r_o s^2 + C_5 L_5 R_5 g_m r_o s^$$

**10.204** INVALID-ORDER-204  $Z(s) = \left(\infty, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, L_5 s + \frac{1}{C_5 s}, L_L s + R_L + \frac{1}{C_L s}\right)$ 

 $H(s) = \frac{1}{2C_4C_5C_LL_5L_LR_4g_mr_os^5 + 2C_4C_5C_LL_5L_LR_4s^5 + 2C_4C_5C_LL_5R_4R_Lg_mr_os^4 + 2C_4C_5C_LL_5R_4R_Ls^4 + 2C_4C_5C_LL_5R_4R_Lr_os^4 + 2C_4C_5C_LR_4R_Lr_os^3 + 2C_4C_5L_5R_4g_mr_os^3 + 2C_4C_5L_5R_4s^3 + 2C_4C_5L_4R_4s^3 +$ 

10.205 INVALID-ORDER-205  $Z(s) = \left(\infty, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, L_5 s + \frac{1}{C_5 s}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$ 

 $H(s) = \frac{L_L R_4 R_L g_m r_o s^4 + 2 C_4 C_5 L_5 L_L R_4 R_L g_m r_o s^5 + C_5 L_L}{2 C_4 C_5 L_5 L_L R_4 R_L g_m r_o s^4 + 2 C_4 C_5 L_L R_4 R_L r_o s^3 + 2 C_4 L_L R_4 R_L g_m r_o s^2 + 2 C_4 L_L R_4 R_L g_m r_o s^4 + C_5 C_L L_5 L_L R_4 R_L r_o s^3 + C_5 L_5 L_L R_4 g_m r_o s^3 + C_5 L_5 L_L R_4 g_m r_o s^3 + 2$ 

10.206 INVALID-ORDER-206  $Z(s) = \left(\infty, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, L_5 s + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$ 

 $H(s) = \frac{1}{2C_4C_5C_LL_5L_LR_4R_Lg_mr_os^5 + 2C_4C_5C_LL_5L_LR_4R_Ls^5 + 2C_4C_5C_LL_LR_4R_Lr_os^4 + 2C_4C_5L_5L_LR_4s^4 + 2C_4C_5L_5L_LR_4s^4 + 2C_4C_5L_5R_4R_Ls^3 + 2C_4C_5L_LR_4r_os^3 + 2C_4C_$ 

10.207 INVALID-ORDER-207  $Z(s) = \left(\infty, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, L_5 s + \frac{1}{C_5 s}, \frac{R_L \left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$ 

 $H(s) = \frac{1}{2C_4C_5C_LL_5L_LR_4R_Lg_mr_os^5 + 2C_4C_5C_LL_5L_LR_4R_Ls^5 + 2C_4C_5C_LL_LR_4R_Lr_os^4 + 2C_4C_5L_5R_4R_Lg_mr_os^3 + 2C_4C_5L_5R_4R_Lr_os^2 + 2C_4C_LL_LR_4R_Lg_mr_os^3 + 2C_4C_LL_LR_4$ 

10.208 INVALID-ORDER-208  $Z(s) = \left(\infty, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, \frac{L_5 s}{C_5 L_5 s^2 + 1}, R_L\right)$ 

 $H(s) = \frac{R_4 R_L \left( -C_5 L_5 r_o s^2 + L_5 g_m r_o s + L_5 s - r_o \right)}{2 C_4 C_5 L_5 R_4 R_L r_o s^3 + 2 C_4 L_5 R_4 R_L g_m r_o s^2 + 2 C_4 L_5 R_4 R_L g_m r_o s^2 + 2 C_5 L_5 R_4 R_L g_m r_o s^2 + 4 C_5 L_5 R_4 R_L s^2 + C_5 L_5 R_4 r_o s^2 + 2 C_5 L_5 R_5 r_o s^2 + 2 C_5 L_5 r$ 

**10.209** INVALID-ORDER-209  $Z(s) = \left(\infty, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{1}{C_L s}\right)$ 

 $H(s) = \frac{R_4 \left( -C_5 L_5 r_o s^2 + L_5 g_m r_o s + L_5 s - r_o \right)}{2 C_4 C_5 L_5 R_4 r_o s^3 + 2 C_4 L_5 R_4 g_m r_o s^2 + 2 C_4 L_5 R_4 s^2 + 2 C_4 L_5 R_4 r_o s^3 + 2 C_5 L_5 R_4 g_m r_o s^2 + 4 C_5 L_5 R_4 s^2 + 2 C_5 L_5 r_o s^2 + C_L L_5 R_4 g_m r_o s^2 + C_L L_5 R_4 r_o s + 2 L_5 g_m r_o s +$ 

10.210 INVALID-ORDER-210  $Z(s) = \left(\infty, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{R_L}{C_L R_L s + 1}\right)$ 

 $H(s) = \frac{R_4 R_L \left( -C_5 L_5 r_o s^2 + L_5 g_m r_o s + L_5 s - r_o \right)}{2 C_4 C_5 L_5 R_4 R_L r_o s^3 + 2 C_4 L_5 R_4 R_L g_m r_o s^2 + 2 C_4 L_5 R_4 R_L r_o s + C_5 C_L L_5 R_4 R_L g_m r_o s^2 + 2 C_5 L_5 R_4 R_L g_m r_o s^2 + 2 C_5 L_5 R_4 R_L g_m r_o s^2 + C_L L_5 R_4 R_L$ 

10.211 INVALID-ORDER-211  $Z(s) = \left(\infty, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, \frac{L_5 s}{C_5 L_5 s^2 + 1}, R_L + \frac{1}{C_L s}\right)$ 

 $H(s) = -\frac{R_4 \left( C_L R_L s + 1 \right) \left( C_5 L_5 r_o s^2 - L_5 g_m r_o s - L_5 s + r_o s^2 - L_5 g_m r_o s - L_5 s + r_o s^2 - L_5 g_m r_o s - L_5 s + r_o s^2 + 2 C_4 L_5 R_4 R_L r_o s^4 + 2 C_4 C_5 L_5 R_4 r_o s^3 + 2 C_4 L_5 R_4 R_L r_o s^3 + 2 C_5 L_5 R_4 r_o s^3 + 2 C_5 L_5 R_5 r$ 

10.212 INVALID-ORDER-212  $Z(s) = \left(\infty, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, \frac{L_5 s}{C_5 L_5 s^2 + 1}, L_L s + \frac{1}{C_L s}\right)$ 

 $R_4 \left( C_L L_L s^2 + 1 \right) \left( C_5 L_5 r_o s^2 - L_5 g_m r_o s - L_5 s + 1 \right)$ 

 $\frac{R_4 \left( C_L L_L s^2 + 1 \right) \left( C_5 L_5 r_o s^2 - L_5 g_m r_o s - L_5 s + 2 C_4 C_5 L_5 L_L R_4 r_o s^3 + 2 C_4 C_L L_5 L_L R_4 r_o s^3 + 2 C_4 L_5 L_L R_4 r_o s^3 + 2 C_5 L_L R_5 r_o s^3 + 2 C_5 L$ 

**10.213** INVALID-ORDER-213  $Z(s) = \left(\infty, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{L_L s}{C_L L_L s^2 + 1}\right)$ 

 $H(s) = \frac{L_L R_4 s \left(-C_5 L_5 r_o s^2 + L_5 g_m r_o s + L_5 s - r_o\right)}{2 C_4 C_5 L_5 L_L R_4 r_o s^4 + 2 C_4 L_5 L_L R_4 g_m r_o s^3 + 2 C_4 L_5 L_L R_4 r_o s^2 + C_5 C_L L_5 L_L R_4 r_o s^4 + 2 C_5 L_5 L_L R_4 g_m r_o s^3 + 4 C_5 L_5 L_L R_4 g_m r_o s^3 + C_5 L_5 L_L R_4 g$ 

**10.214** INVALID-ORDER-214  $Z(s) = \left(\infty, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, \frac{L_5 s}{C_5 L_5 s^2 + 1}, L_L s + R_L + \frac{1}{C_L s}\right)$ 

 $H(s) = -\frac{1}{2C_4C_5C_LL_5L_LR_4r_os^5 + 2C_4C_5C_LL_5R_4R_Lr_os^4 + 2C_4C_5L_5R_4r_os^3 + 2C_4C_LL_5L_LR_4g_mr_os^4 + 2C_4C_LL_5L_LR_4g^4 + 2C_4C_LL_5R_4R_Lg_mr_os^3 + 2C_4C_LL_5R_4R_Ls^3 + 2C_4C_LL_5R_4R_Lr_os^3 + 2C_4C_LR_4R_Lr_os^3 + 2C$ 

10.215 INVALID-ORDER-215  $Z(s) = \left(\infty, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{1}{C_L s + \frac{1}{R_I} + \frac{1}{L_I s}}\right)$ 

 $H(s) = \frac{L_L R_4 R_L s \left(-C_5 L_5 r_o s^2 + L_5 g_m r_o s + L_5 s - r_o\right)}{2 C_4 C_5 L_5 L_L R_4 R_L r_o s^4 + 2 C_4 L_5 L_L R_4 R_L r_o s^3 + 2 C_4 L_5 L_L R_4 R_L r_o s^3 + 2 C_5 L_5 L_L R_5 R_L r_o s^3 + 2 C_5 L_5 L_L R_5 R_L r_o s^3 + 2 C_5 L_5 L_L R_5 R_L r_o s^3 + 2 C_5 L_5 L_L$ 

10.216 INVALID-ORDER-216  $Z(s) = \left(\infty, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$ 

10.217 INVALID-ORDER-217  $Z(s) = \left(\infty, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{R_L \left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_T s}}\right)$ 

 $H(s) = -\frac{1}{2C_4C_5C_LL_5L_LR_4R_Lr_os^5 + 2C_4C_5L_5R_4R_Lr_os^3 + 2C_4C_LL_5L_LR_4R_Lg_mr_os^4 + 2C_4C_LL_5L_Rg_mr_os^4 + 2C_4$ 

10.218 INVALID-ORDER-218  $Z(s) = \left(\infty, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, L_5 s + R_5 + \frac{1}{C_5 s}, R_L\right)$ 

 $H(s) = \frac{R_4 R_L \left( C_5 L_5 g_m r_o s^2 + C_5 L_5 s^2 + C_5 R_5 g_m r_o s + C_5 R_5 s - C_5 r_o s + g_m r_o + 1 \right)}{2 C_4 C_5 L_5 R_4 R_L g_m r_o s^3 + 2 C_4 C_5 R_4 R_5 R_L g_m r_o s^2 + 2 C_4 C_5 R_4 R_5 R_L g_m r_o s^2 + 2 C_4 R_4 R_L g_m r_o s^2 + 2 C_4 R_4 R_L g_m r_o s^2 + 2 C_5 L_5 R_4 g_m r_o s^2 + 2 C_5 L_5 R_4 g_m r_o s^2 + 2 C_5 L_5 R_4 g_m r_o s^2 + 2 C_5 R_4 R_5 g_m r_o s^2 + 2 C_5 R_5 g_m r_o s^2 +$ 

10.219 INVALID-ORDER-219  $Z(s) = \left(\infty, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{1}{C_L s}\right)$ 

 $R_4\left(C_5L_5g_mr_os^2 + C_5L_5s^2 + C_5R_5g_mr_os + C_5R_5s - C_5r_os + g_mr_o + 1\right)$ 

 $\frac{1}{2C_{4}C_{5}L_{5}R_{4}g_{m}r_{o}s^{3}+2C_{4}C_{5}L_{5}R_{4}g_{m}r_{o}s^{2}+2C_{4}C_{5}R_{4}R_{5}g_{m}r_{o}s^{2}+2C_{4}C_{5}R_{4}r_{o}s^{2}+2C_{4}C_{5}R_{4}r_{o}s^{2}+2C_{4}C_{5}R_{4}r_{o}s^{2}+2C_{5}L_{5}g_{m}r_{o}s^{2}+2C_{5}L_{5}$ 

- 10.220 INVALID-ORDER-220  $Z(s) = \left(\infty, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{R_L}{C_L R_L s + 1}\right)$
- 10.221 INVALID-ORDER-221  $Z(s) = \left(\infty, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, L_5 s + R_5 + \frac{1}{C_5 s}, R_L + \frac{1}{C_L s}\right)$
- $H(s) = \frac{1}{2C_4C_5C_LL_5R_4R_Lg_mr_os^4 + 2C_4C_5C_LL_5R_4R_Ls^4 + 2C_4C_5C_LR_4R_5R_Lg_mr_os^3 + 2C_4C_5C_LR_4R_5R_Ls^3 + 2C_4C_5C_LR_4R_5R_Ls^3 + 2C_4C_5L_5R_4g_mr_os^3 + 2C_4C_5L_5R_4g_mr_os^3 + 2C_4C_5R_4R_5g_mr_os^2 + 2C_4C_5R_4R_5s^2 + 2C_4C_5R_4R_5s^$
- 10.222 INVALID-ORDER-222  $Z(s) = \left(\infty, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, L_5 s + R_5 + \frac{1}{C_5 s}, L_L s + \frac{1}{C_L s}\right)$
- $H(s) = \frac{1}{2C_4C_5C_LL_5L_LR_4g_mr_os^5 + 2C_4C_5C_LL_5L_LR_4s^5 + 2C_4C_5C_LL_LR_4R_5g_mr_os^4 + 2C_4C_5C_LL_LR_4R_5s^4 + 2C_4C_5C_LL_LR_4r_os^4 + 2C_4C_5L_LR_4r_os^4 + 2C_$
- 10.223 INVALID-ORDER-223  $Z(s) = \left(\infty, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1}\right)$
- $H(s) = \frac{L_L R_4 s \left(C_5 L_5 g_m r_o s^2 + C_5 L_5 s^2 + C_5 R_2 R_4 r_o s^3 + C_5 L_5 L_4 R_4 r_o s^3 + C_5 L_5 R_4 r_o s^3 + C_5 R_5 R_5 r_o s^3 + C_5$
- 10.224 INVALID-ORDER-224  $Z(s) = \left(\infty, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, L_5 s + R_5 + \frac{1}{C_5 s}, L_L s + R_L + \frac{1}{C_L s}\right)$
- $H(s) = \frac{1}{2C_4C_5C_LL_5L_LR_4g_mr_os^5 + 2C_4C_5C_LL_5L_LR_4s^5 + 2C_4C_5C_LL_5R_4R_Lg_mr_os^4 + 2C_4C_5C_LL_5R_4R_Ls^4 + 2C_4C_5C_LL_LR_4R_5g_mr_os^4 + 2C_4C_5C_LL_LR_4R_5s^4 + 2C_4C_5C_LR_4R_5s^4 + 2C_4C_5C_LR_5s^4 + 2C_4C_5C_LR_5s^4 + 2C_4C_5C_LR_5s^4 + 2C_4C_5C_LR_5s$
- 10.225 INVALID-ORDER-225  $Z(s) = \left(\infty, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$
- $H(s) = \frac{1}{2C_4C_5L_5L_4R_4R_Lg_mr_os^4 + 2C_4C_5L_5L_4R_4R_Ls^4 + 2C_4C_5L_LR_4R_5R_Lg_mr_os^3 + 2C_4C_5L_LR_4R_Lr_os^3 + 2C_4L_LR_4R_Lg_mr_os^2 + 2C_4L_LR_4R_Lg_mr_os^4 + C_5C_LL_5L_LR_4R_Ls^4 + C_5C_LL_5L_LR_4R_5R_Lg_mr_os^3 + C_5C_LL_5L_Rg_mr_os^3 + C_5C_LL_5L_Rg$
- 10.226 INVALID-ORDER-226  $Z(s) = \left(\infty, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$
- 10.227 INVALID-ORDER-227  $Z(s) = \left(\infty, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{R_L \left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$
- $H(s) = \frac{1}{2C_4C_5C_LL_5L_LR_4R_Lg_mr_os^5 + 2C_4C_5C_LL_5L_LR_4R_Ls^5 + 2C_4C_5C_LL_LR_4R_5R_Lg_mr_os^4 + 2C_4C_5C_LL_LR_4R_Lr_os^4 + 2C_4C_5L_LR_4R_Lg_mr_os^3 + 2C_4C_5L_LR_4R_Ls^3 + 2C_4C_5R_4R_Lg_mr_os^3 + 2C_4C_5R_4R_Lg_mr_os^4 + 2C_4C_5R_4R_Lg_mr_os^4 + 2C_4C_5C_LL_Rg_mr_os^4 + 2C_4C_5C$

10.228 INVALID-ORDER-228  $Z(s) = \left(\infty, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, R_L\right)$ 

 $H(s) = \frac{R_4 R_L \left( -C_5 L_5 R_5 r_o s^2 + L_5 R_5 g_m r_o s + L_5 R_5 s - L_5 r_o s - R_5 r_o \right)}{2 C_4 C_5 L_5 R_4 R_5 R_L r_o s^3 + 2 C_4 L_5 R_4 R_5 R_L g_m r_o s^2 + 2 C_4 L_5 R_4 R_5 R_L r_o s^2 + 2 C_4 L_5 R_4 R_5 R_L r_o s^2 + 2 C_4 L_5 R_4 R_5 R_L r_o s^2 + 2 C_4 L_5 R_4 R_5 R_L r_o s^2 + 2 C_5 L_5 R_5 R_L r_o s^2 + 2$ 

10.229 INVALID-ORDER-229  $Z(s) = \left(\infty, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{1}{C_L s}\right)$ 

 $\frac{R_4 \left(-C_5 L_5 R_5 r_o s^2 + L_5 R_5 g_m r_o s + L_5 R_5 s - L_5 r_o s - R_5 r_o\right)}{2 C_4 C_5 L_5 R_4 R_5 r_o s^3 + 2 C_4 L_5 R_4 R_5 g_m r_o s^2 + 2 C_4 L_5 R_4 R_5 r_o s^2 + 2 C_4 L_5 R_4 R_5 r_o s^3 + 2 C_5 L_5 R_4 R_5 g_m r_o s^2 + 2 C_4 L_5 R_4 R_5 g_m r_o s^2 + 2 C_4 L_5 R_4 R_5 g_m r_o s^2 + 2 C_4 L_5 R_4 R_5 r_o s^2 + 2 C_4 L_5 R_4 R_5 r_o s^2 + 2 C_5 L_5 R_5 r_o s^2 + 2$ 

**10.230** INVALID-ORDER-230  $Z(s) = \left(\infty, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{R_L}{C_L R_L s + 1}\right)$ 

 $\frac{R_4R_L\left(-C_5L_5R_5r_os^2 + L_5R_5g_mr_os + L_5R_5s - L_5r_os^2 + L_5R_5g_mr_os + L_5R_5s - L_5r_os^2 + L_5R_5g_mr_os^2 + L_5R_5g_mr_os^2 + L_5R_4R_5R_Lr_os^3 + 2C_4L_5R_4R_5R_Lr_os^3 + 2C_5L_5R_4R_5R_Lr_os^3 + 2C_5L_5R_4R_5R_Lr_os^3 + 2C_5L_5R_4R_5R_Lr_os^2 + 2C_4L_5R_4R_5R_Lr_os^2 + 2C_4L_5R_4R_5R_Lr_os^3 + 2C_5L_5R_4R_5R_Lr_os^3 + 2C_5L_5R_5R_Lr_os^3 + 2C_5L_5R_5R_Lr_os^3 + 2C_5L_5R_5R_Lr_os^3 + 2C_5L_5R_5R_Lr_os^3 + 2C_5L_5R_5R_Lr_os^3$ 

10.231 INVALID-ORDER-231  $Z(s) = \left(\infty, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, R_L + \frac{1}{C_L s}\right)$ 

 $\frac{1}{2C_{4}C_{5}C_{L}L_{5}R_{4}R_{5}R_{L}r_{o}s^{4}+2C_{4}C_{5}L_{5}R_{4}R_{5}r_{o}s^{3}+2C_{4}C_{L}L_{5}R_{4}R_{5}R_{L}g_{m}r_{o}s^{3}+2C_{4}C_{L}L_{5}R_{4}R_{5}R_{L}s^{3}+2C_{4}C_{L}L_{5}R_{4}R_{5}R_{L}r_{o}s^{2}+2C_{4}L_{5}R_{4}R_{5}s^{2}+2C_{4}L_{5}R_{4}R_{5}r_{o}s^{2}+2C_{4}L_{5$ 

10.232 INVALID-ORDER-232  $Z(s) = \left(\infty, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, L_L s + \frac{1}{C_L s}\right)$ 

 $H(s) = -\frac{1}{2C_4C_5C_LL_5L_LR_4R_5r_os^5 + 2C_4C_5L_5R_4R_5r_os^3 + 2C_4C_LL_5L_LR_4R_5g_mr_os^4 + 2C_4C_LL_5L_LR_4R_5r_os^4 + 2C_4C_LL_5L_LR_4R_5r_os^3 + 2C_4L_5R_4R_5r_os^3 + 2C_4R_4R_5r_os^3 + 2C_4R_5R_5r_os^3 +$ 

10.233 INVALID-ORDER-233  $Z(s) = \left(\infty, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{L_L s}{C_L L_L s^2 + 1}\right)$ 

 $H(s) = \frac{L_L R_4 R_5 r_o s^4 + 2 C_4 L_5 L_L R_4 R_5 r_o s^4 + 2 C_4 L_5 L_L R_4 R_5 r_o s^5 + L_5 R_5 r_o s^5 + L_5 R_5 r_o s^5 + L_5 R_5 r_o s^4 + L_5 R_5 r_o s^4 + L_5 R_5 r_o s^4 + 2 C_5 L_5 L_L R_4 R_5 r_o s^4 + 2 C_5 L_5 L_L R_4 R_5 r_o s^3 + 2 C_4 L_5 L_L R_4 R_5 r_o s^3 + 2 C_4 L_5 L_L R_4 R_5 r_o s^3 + 2 C_4 L_5 L_L R_4 R_5 r_o s^3 + 2 C_4 L_5 L_L R_4 R_5 r_o s^3 + 2 C_4 L_5 L_L R_4 R_5 r_o s^3 + 2 C_5 L_5 L_L R_5 r_o s^3 + 2 C_5 L$ 

**10.234** INVALID-ORDER-234  $Z(s) = \left(\infty, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, L_L s + R_L + \frac{1}{C_L s}\right)$ 

 $\overline{2C_4C_5C_LL_5L_LR_4R_5r_os^5 + 2C_4C_5C_LL_5R_4R_5R_Lr_os^4 + 2C_4C_5L_5R_4R_5r_os^3 + 2C_4C_LL_5L_LR_4R_5g_mr_os^4 + 2C_4C_LL_5L_LR_4R_5s^4 + 2C_4C_LL_5R_4R_5R_Lg_mr_os^3 + 2C_4C_LL_5R_4R_5R_Ls^3 + 2C_4C_LL_5R_4R_5r_os^3 + 2C_4C_LL_5R_4R_5r_$ 

10.235 INVALID-ORDER-235  $Z(s) = \left(\infty, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$ 

 $\overline{2C_4C_5L_5L_LR_4R_5R_Lr_os^4 + 2C_4L_5L_LR_4R_5R_Lg_mr_os^3 + 2C_4L_5L_LR_4R_5R_Ls^3 + 2C_4L_5L_LR_4R_5R_Lr_os^3 + 2C_4L_5L_LR_4R_5R_Lr_os^3 + 2C_4L_5L_LR_4R_5R_Lr_os^3 + 2C_5L_5L_LR_4R_5R_Lr_os^3 + 2C_5L_5L_Rr_os^3 + 2C_5L_5$ 

- 10.236 INVALID-ORDER-236  $Z(s) = \left(\infty, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$
- $H(s) = -\frac{1}{2C_4C_5C_LL_5L_LR_4R_5R_Lr_os^5 + 2C_4C_5L_5L_LR_4R_5r_os^4 + 2C_4C_5L_5L_LR_4R_5R_Lr_os^4 + 2C_4C_LL_5L_LR_4R_5R_Lr_os^4 + 2C_4C_LL_5L_LR_4$
- 10.237 INVALID-ORDER-237  $Z(s) = \left(\infty, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{R_L \left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$
- $H(s) = -\frac{1}{2C_4C_5C_LL_5L_LR_4R_5R_Lr_os^5 + 2C_4C_5L_5R_4R_5R_Lr_os^3 + 2C_4C_LL_5L_LR_4R_5R_Ls^4 + 2C_4C_LL_5L_LR_4R_5R_Lr_os^4 + 2C_4C_LL_5L_RR_4R_5R_Lr_os^4 + 2C_4C_LL_5L_RR_4R_5$
- 10.238 INVALID-ORDER-238  $Z(s) = \left(\infty, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, R_L\right)$
- $H(s) = \frac{R_4 R_L \left( C_5 L_5 R_5 g_m r_o s^2 + C_5 L_5 R_5 s^2 C_5 L_5 r_o s^2 + L_5 g_m r_o s + L_5 s + R_5 r_o s^2 + L_5 g_m r_o s^2 + C_5 L_5 R_4 R_5 g_m r_o s^2 + C_5 L_5 R_$
- 10.239 INVALID-ORDER-239  $Z(s) = \left(\infty, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{1}{C_L s}\right)$
- $H(s) = \frac{R_4 \left( C_5 L_5 R_5 g_m r_o s^2 + C_5 L_5 R_5 s^2 C_5 L_5 r_o s^2 + L_5 g_m r_o s + L_5 s + R_5 g_m r_o + R_5 r_o \right)}{2 C_4 C_5 L_5 R_4 R_5 g_m r_o s^3 + 2 C_4 C_5 L_5 R_4 R_5 g_m r_o s^3 + 2 C_4 L_5 R_4 g_m r_o s^2 + 2 C_5 L_5 R_4 g_m r_o s^3 + C_5 C_L L_5 R_4 R_5 g_m r_o s^3 + C_5 C_L L_5 R_4 R_5 g_m r_o s^3 + 2 C_5 L_5 R_4 g_m r_o s^2 + 2 C_5 L_5 R_5 g_m r_o s^2 + 2 C_5 L_5$
- 10.240 INVALID-ORDER-240  $Z(s) = \left(\infty, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{R_L}{C_L R_L s + 1}\right)$
- $H(s) = \frac{1}{2C_4C_5L_5R_4R_5R_Lg_mr_os^3 + 2C_4C_5L_5R_4R_5R_Ls^3 + 2C_4C_5L_5R_4R_Lr_os^3 + 2C_4L_5R_4R_Lg_mr_os^2 + 2C_4L_5R_4R_Ls^2 + 2C_4R_4R_5R_Lg_mr_os + 2C_4R_4R_5R_Ls + 2C_4R_4R_5R_Lg_mr_os^3 + C_5C_LL_5R_4R_5R_Ls^3 + C_5C_LL_5R_4R_Ls^3 + C_5C_LL_5R_4R_Ls^3 + C_5C_LL_5R_4R_Ls^3 + C_5$
- 10.241 INVALID-ORDER-241  $Z(s) = \left(\infty, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, R_L + \frac{1}{C_L s}\right)$
- $H(s) = \frac{1}{2C_4C_5C_LL_5R_4R_5R_Lg_mr_os^4 + 2C_4C_5C_LL_5R_4R_5R_Ls^4 + 2C_4C_5C_LL_5R_4R_Lr_os^4 + 2C_4C_5L_5R_4R_5g_mr_os^3 + 2C_4C_5L_5R_4R_5s^3 + 2C_4C_LL_5R_4R_Lg_mr_os^3 + 2C_4C_LR_4R_5R_Lg_mr_os^3 + 2C_4C_LR_4R_5R_L$
- 10.242 INVALID-ORDER-242  $Z(s) = \left(\infty, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, L_L s + \frac{1}{C_L s}\right)$
- 10.243 INVALID-ORDER-243  $Z(s) = \left(\infty, \infty, \infty, \frac{R_4}{C_4R_4s+1}, \frac{L_5s}{C_5L_5s^2+1} + R_5, \frac{L_Ls}{C_LL_Ls^2+1}\right)$
- $H(s) = \frac{1}{2C_4C_5L_5L_LR_4R_5q_mr_os^4 + 2C_4C_5L_5L_LR_4R_5s^4 + 2C_4C_5L_5L_LR_4r_os^4 + 2C_4L_5L_LR_4g_mr_os^3 + 2C_4L_LR_4s^3 + 2C_4L_LR_4r_os^2 + 2C_4L_LR_4$

- **10.244** INVALID-ORDER-244  $Z(s) = \left(\infty, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, L_L s + R_L + \frac{1}{C_L s}\right)$
- $H(s) = \frac{1}{2C_4C_5C_LL_5L_LR_4R_5g_mr_os^5 + 2C_4C_5C_LL_5L_LR_4R_5s^5 + 2C_4C_5C_LL_5L_LR_4r_os^5 + 2C_4C_5C_LL_5R_4R_5R_Lg_mr_os^4 + 2C_4C_5C_LL_5R_4R_5R_Ls^4 + 2C_4C_5C_LL_5R_4R_5g_mr_os^3 + 2C_4C_5L_5R_4R_5s^3 + 2C_4C_5L_5R_4R_5R_5s^3 + 2C_4C_5L_5R_4R_5s^3 + 2C_4C_5L_5R_4R_5R_5s^3 + 2C_4C_5L_5R_4R_5R_5s^3 + 2C_4C_5L_5R_4R_5R_5s^3 + 2C_4C_5L_5R_4R_5s^3 + 2C_4C_5L_5R_5R_5s^3 + 2C_4C_5L_5R_5R_5s^3 + 2C_4C_5L_5R_5R_5s^3 + 2C_4C_5L_5R$
- 10.245 INVALID-ORDER-245  $Z(s) = \left(\infty, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$
- $H(s) = \frac{1}{2C_4C_5L_5L_LR_4R_5R_Lg_mr_os^4 + 2C_4C_5L_5L_LR_4R_5R_Ls^4 + 2C_4C_5L_5L_LR_4R_Lr_os^4 + 2C_4L_5L_LR_4R_Lg_mr_os^3 + 2C_4L_LR_4R_5R_Lg_mr_os^2 + 2C_4L_LR_4R_5R_Ls^2 + 2C_4L_LR_4R_5R_L$
- **10.246** INVALID-ORDER-246  $Z(s) = \left(\infty, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$
- $\textbf{10.247} \quad \textbf{INVALID-ORDER-247} \ \ Z(s) = \left( \infty, \ \infty, \ \infty, \ \frac{R_4}{C_4 R_4 s + 1}, \ \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \ \frac{R_L \left( L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$
- 10.248 INVALID-ORDER-248  $Z(s) = \left(\infty, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, \frac{R_5 \left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, R_L\right)$
- $H(s) = \frac{R_4 R_L \left( C_5 L_5 R_5 g_m r_o s^2 + C_5 L_5 R_5 s^2 C_5 L_5 r_o s^2 C_5 R_5 r_o s + R_5 g_m r_o s^2 + C_5 L_5 R_4 R_5 r_o s^2 + C_5 L_5 R_4 r_o s^2 + C_5 L_5 r_o s^2 +$
- 10.249 INVALID-ORDER-249  $Z(s) = \left(\infty, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, \frac{R_5 \left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{1}{C_L s}\right)$
- $H(s) = \frac{R_4 \left( C_5 L_5 R_5 g_m r_o s^2 + C_5 L_5 R_5 s^2 C_5 L_5 r_o s^2 C_5 R_5 r_o s + R_5 g_m r_o + R_5 r_o \right)}{2 C_4 C_5 L_5 R_4 R_5 g_m r_o s^3 + 2 C_4 C_5 L_5 R_4 R_5 s^3 + 2 C_4 C_5 L_5 R_4 R_5 r_o s^2 + 2 C_4 L_5 R_4 R_5 g_m r_o s^3 + 2 C_4 L_5 R_4 R_5 r_o s^3 + 2 C_5 L_5 R_5 r_o s^3 + 2 C_5 L_5$
- 10.250 INVALID-ORDER-250  $Z(s) = \left(\infty, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, \frac{R_5 \left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{R_L}{C_L R_L s + 1}\right)$
- $H(s) = \frac{1}{2C_4C_5L_5R_4R_5R_Lg_mr_os^3 + 2C_4C_5L_5R_4R_5R_Ls^3 + 2C_4C_5L_5R_4R_Lr_os^3 + 2C_4C_5R_4R_5R_Lr_os^2 + 2C_4R_4R_5R_Lg_mr_os + 2C_4R_4R_5R_Ls + 2C_4R_4R_5R_Lg_mr_os^3 + C_5C_LL_5R_4R_5R_Ls^3 + C_5C_LL_5R_4R_5R_Lr_os^3 + C$
- 10.251 INVALID-ORDER-251  $Z(s) = \left(\infty, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, \frac{R_5 \left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, R_L + \frac{1}{C_L s}\right)$
- $H(s) = \frac{1}{2C_4C_5C_LL_5R_4R_5R_Lg_mr_os^4 + 2C_4C_5C_LL_5R_4R_5R_Ls^4 + 2C_4C_5C_LL_5R_4R_Lr_os^4 + 2C_4C_5C_LR_4R_5R_Lr_os^3 + 2C_4C_5L_5R_4R_5g_mr_os^3 + 2C_4C_5L_5R_4R_5s^3 + 2C_4C_5L_5R_4R_5r_os^3 + 2C_4C_5L_5R_5R_5r_os^3 + 2C_4C_5L_5R_5R_5r_os^3 + 2C_4C_5L_5R_5R_5r_os^3 + 2C_4C_5L_5R_5R_5r_os^3 + 2C_4C_5L_5R_5R$

10.252 INVALID-ORDER-252  $Z(s) = \left(\infty, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, \frac{R_5 \left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, L_L s + \frac{1}{C_L s}\right)$ 

 $H(s) = \frac{1}{2C_4C_5C_LL_5L_LR_4R_5g_mr_os^5 + 2C_4C_5C_LL_5L_LR_4R_5s^5 + 2C_4C_5C_LL_5L_LR_4r_os^5 + 2C_4C_5L_5L_RR_4r_os^4 + 2C_4C_5L_5R_4R_5g_mr_os^3 + 2C_4C_5L_5R_4R_5s^3 + 2C_4C_5R_4R_5s^3 + 2C_4C_5R_5R_5R_5s^3 + 2C_4C_5R_$ 

10.253 INVALID-ORDER-253  $Z(s) = \left(\infty, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, \frac{R_5 \left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{L_L s}{C_L L_L s^2 + 1}\right)$ 

 $H(s) = \frac{1}{2C_4C_5L_5L_LR_4R_5g_mr_os^4 + 2C_4C_5L_5L_LR_4R_5s^4 + 2C_4C_5L_LR_4R_5r_os^3 + 2C_4L_LR_4R_5g_mr_os^2 + 2C_4L_LR_4R_5s^2 + 2C_4L_LR_4R_5g_mr_os^4 + C_5C_LL_5L_LR_4R_5s^4 + C_5C_LL_5L_LR_4R_5s^4 + C_5C_LL_5L_LR_4R_5s^3 + 2C_4L_LR_4R_5s^3 + 2C_4L$ 

10.254 INVALID-ORDER-254  $Z(s) = \left(\infty, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, \frac{R_5 \left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, L_L s + R_L + \frac{1}{C_L s}\right)$ 

 $H(s) = \frac{1}{2C_4C_5C_LL_5L_LR_4R_5g_mr_os^5 + 2C_4C_5C_LL_5L_LR_4R_5s^5 + 2C_4C_5C_LL_5L_LR_4r_os^5 + 2C_4C_5C_LL_5R_4R_5R_Lg_mr_os^4 + 2C_4C_5C_LL_5R_4R_5R_Ls^4 + 2C_4C_5C_LL_5R_4R_5r_os^4 + 2C_4C_5C_LL_5R_5r_os^4 + 2C_4C_5C_LL_5R_5r_os^4 + 2C_4C_5C_LL_5R_5r_os^4 + 2C_4C_5C_LL_5R_5r_os^4 + 2C_4C_5C_LL_5R_5r_os^4 + 2C_4C_5C_LL_5R_5r_os^4 + 2C_4C_5C_LL_5R_5r_os^4$ 

10.255 INVALID-ORDER-255  $Z(s) = \left(\infty, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, \frac{R_5 \left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$ 

 $H(s) = \frac{1}{2C_4C_5L_5L_LR_4R_5R_Lg_mr_os^4 + 2C_4C_5L_5L_LR_4R_5R_Ls^4 + 2C_4C_5L_5L_LR_4R_5R_Lr_os^4 + 2C_4C_5L_LR_4R_5R_Lr_os^3 + 2C_4L_LR_4R_5R_Lg_mr_os^2 + 2C_4L_LR_4R_5R_Ls^2 + 2C_4L_LR_4R_5R_Lg_mr_os^4 + C_5C_LL_5L_LR_4R_5R_Ls^4 + C_5C_LL_5L_LR_4R_5R_Lr_os^4 + 2C_4C_5L_5L_LR_4R_5R_Lr_os^4 + 2C_4C_5L_5L_LR_4R_5R_Lr_os^4 + 2C_4C_5L_5L_LR_4R_5R_Lr_os^4 + 2C_4C_5L_5L_LR_4R_5R_Lr_os^4 + 2C_4C_5L_5L_LR_4R_5R_Lr_os^4 + 2C_4C_5L_5L_LR_4R_5R_Lr_os^4 + 2C_4C_5L_5L_Rr_os^4 + 2C_4C_$ 

10.256 INVALID-ORDER-256  $Z(s) = \left(\infty, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, \frac{R_5 \left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$ 

10.257 INVALID-ORDER-257  $Z(s) = \left(\infty, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, \frac{R_5 \left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{R_L \left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$ 

 $H(s) = \frac{1}{2C_4C_5C_LL_5L_LR_4R_5R_Lg_mr_os^5 + 2C_4C_5C_LL_5L_LR_4R_5R_Ls^5 + 2C_4C_5C_LL_5L_LR_4R_5R_Lr_os^5 + 2C_4C_5L_LL_R4R_5R_Lr_os^4 + 2C_4C_5L_5R_4R_5R_Lg_mr_os^3 + 2C_4C_5L_5R_4R_5R_Ls^3 + 2C_4C_5L_5R_4R_5R_Lr_os^3 + 2C_4C_5R_4R_5R_Lr_os^3 + 2C_4C_5R_4R_5R_Lr_os^$ 

**10.258** INVALID-ORDER-258  $Z(s) = \left(\infty, \infty, \infty, R_4 + \frac{1}{C_4 s}, R_5, R_L\right)$ 

10.259 INVALID-ORDER-259  $Z(s) = \left(\infty, \infty, \infty, R_4 + \frac{1}{C_4 s}, R_5, L_L s + \frac{1}{C_L s}\right)$ 

$$H(s) = \frac{\left(C_4 R_4 s + 1\right) \left(C_L L_L s^2 + 1\right) \left(R_5 g_m r_o + R_5 - r_o\right)}{2 C_4 C_L L_L R_4 g_m r_o s^3 + 4 C_4 C_L L_L R_5 g_m r_o s^3 + 2 C_4 C_L L_L R_5 s^3 + 2 C_4 C_L L_L r_o s^3 + C_4 C_L R_4 R_5 g_m r_o s^2 + C_4 C_L R_4 r_o s^2 + 2 C_4 R_4 g_m r_o s + 4 C_4 R_4 s + 2 C_4 R_5 g_m r_o s + 2 C_4 R_5 g_m r_o s^2 + 4 C_L L_L s^2 + C_L R_5 g_m r_o s^2 + C_4 C_L R_4 r_o s^2 + 2 C_4 R_4 g_m r_o s + 4 C_4 R_5 g_m r_o s + 2 C_4 R_5 g_m r_o s^2 + 2 C_4 R_5$$

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H(s) = \frac{\left(C_{4}R_{4}s+1\right)\left(C_{L}L_{L}s^{2}+C_{L}R_{L}s+1\right)\left(R_{5}g_{m}r_{o}+R_{5}-r_{o}\right)}{2C_{4}C_{L}L_{L}R_{4}g_{m}r_{o}s^{3}+4C_{4}C_{L}L_{L}R_{5}g_{m}r_{o}s^{3}+2C_{4}C_{L}L_{L}R_{5}s^{3}+2C_{4}C_{L}L_{L}R_{5}s^{3}+2C_{4}C_{L}L_{L}R_{5}s^{3}+2C_{4}C_{L}L_{L}R_{5}s^{3}+2C_{4}C_{L}L_{L}R_{5}s^{2}+2C_{4}C_{L}R_{4}R_{5}g_{m}r_{o}s^{2}+4C_{4}C_{L}R_{4}R_{5}s^{2}+2C_{4}C_{L}R_{5}R_{L}g_{m}r_{o}s^{2}+2C_{4}C_{L}R_{5}R_{L}s^{2}+2C_{4}C_{L}R_{5}R_{L}s^{2}+2C_{4}C_{L}R_{5}R_{L}s^{2}+2C_{4}C_{L}R_{5}R_{L}s^{2}+2C_{4}C_{L}R_{5}R_{L}s^{2}+2C_{4}C_{L}R_{5}R_{L}s^{2}+2C_{4}C_{L}R_{5}R_{L}s^{2}+2C_{4}C_{L}R_{5}R_{L}s^{2}+2C_{4}C_{L}R_{5}R_{L}s^{2}+2C_{4}C_{L}R_{5}R_{L}s^{2}+2C_{4}C_{L}R_{5}R_{L}s^{2}+2C_{4}C_{L}R_{5}R_{L}s^{2}+2C_{4}C_{L}R_{5}R_{L}s^{2}+2C_{4}C_{L}R_{5}R_{L}s^{2}+2C_{4}C_{L}R_{5}R_{L}s^{2}+2C_{4}C_{L}R_{5}R_{L}s^{2}+2C_{4}C_{L}R_{5}R_{L}s^{2}+2C_{4}C_{L}R_{5}R_{L}s^{2}+2C_{4}C_{L}R_{5}R_{L}s^{2}+2C_{4}C_{L}R_{5}R_{L}s^{2}+2C_{4}C_{L}R_{5}R_{L}s^{2}+2C_{4}C_{L}R_{5}R_{L}s^{2}+2C_{4}C_{L}R_{5}R_{L}s^{2}+2C_{4}C_{L}R_{5}R_{L}s^{2}+2C_{4}C_{L}R_{5}R_{L}s^{2}+2C_{4}C_{L}R_{5}R_{L}s^{2}+2C_{4}C_{L}R_{5}R_{L}s^{2}+2C_{4}C_{L}R_{5}R_{L}s^{2}+2C_{4}C_{L}R_{5}R_{L}s^{2}+2C_{4}C_{L}R_{5}R_{L}s^{2}+2C_{4}C_{L}R_{5}R_{L}s^{2}+2C_{4}C_{L}R_{5}R_{L}s^{2}+2C_{4}C_{L}R_{5}R_{L}s^{2}+2C_{4}C_{L}R_{5}R_{L}s^{2}+2C_{4}C_{L}R_{5}R_{L}s^{2}+2C_{4}C_{L}R_{5}R_{L}s^{2}+2C_{4}C_{L}R_{5}R_{L}s^{2}+2C_{4}C_{L}R_{5}R_{L}s^{2}+2C_{4}C_{L}R_{5}R_{L}s^{2}+2C_{4}C_{L}R_{5}R_{L}s^{2}+2C_{4}C_{L}R_{5}R_{L}s^{2}+2C_{4}C_{L}R_{5}R_{L}s^{2}+2C_{4}C_{L}R_{5}R_{L}s^{2}+2C_{4}C_{L}R_{5}R_{L}s^{2}+2C_{4}C_{L}R_{5}R_{L}s^{2}+2C_{4}C_{L}R_{5}R_{L}s^{2}+2C_{4}C_{L}R_{5}R_{L}s^{2}+2C_{4}C_{L}R_{5}R_{L}s^{2}+2C_{4}C_{L}R_{5}R_{L}s^{2}+2C_{4}C_{L}R_{5}R_{L}s^{2}+2C_{4}C_{L}R_{5}R_{L}s^{2}+2C_{4}C_{L}R_{5}R_{L}s^{2}+2C_{4}C_{L}R_{5}R_{L}s^{2}+2C_{4}C_{L}R_{5}R_{L}s^{2}+2C_{4}C_{L}R_{5}R_{L}s^{2}+2C_{4}C_{L}R_{5}R_{L}s^{2}+2C_{4}C_{L}R_{5}R_{L}s^{2}+2C_{4}C_{L}R_{5}R_{L}s^{2}+2C_{4}C_{L}R_{5}R_{L}s^{2}+2C_{4}C_{L}R_{5}R_{L}s^{2}+2C_{4}C_{L}R_{5}R_{L}s
10.262 INVALID-ORDER-262 Z(s) = \left(\infty, \infty, \infty, R_4 + \frac{1}{C_4 s}, R_5, \frac{1}{C_L s + \frac{1}{R_I} + \frac{1}{L_L s}}\right)
H(s) = \frac{L_L R_L s \left(C_4 R_4 s + 1\right) \left(R_5 g_m r_o + R_5 - r_o\right)}{C_4 C_L L_L R_4 R_5 R_L g_m r_o s^3 + C_4 C_L L_L R_4 R_5 g_m r_o s^2 + C_4 L_L R_4 R_5 g_m r_o s^2 + 2 C_4 L_L R_4 R_5 g_m r_o s^2 + 2 C_4 L_L R_5 R_L g_m r_o s^2 + 2 C_4 L_L R_5 R_L g_m r_o s^2 + 2 C_4 L_L R_5 R_L g_m r_o s^2 + 2 C_4 L_L R_5 R_L g_m r_o s^2 + 2 C_4 L_L R_5 R_L g_m r_o s^2 + 2 C_4 L_L R_5 R_L g_m r_o s^2 + 2 C_4 L_L R_5 R_L g_m r_o s^2 + 2 C_4 L_L R_5 R_L g_m r_o s^2 + 2 C_4 L_L R_5 R_L g_m r_o s^2 + 2 C_4 L_L R_5 R_L g_m r_o s^2 + 2 C_4 L_L R_5 R_L g_m r_o s^2 + 2 C_4 L_L R_5 R_L g_m r_o s^2 + 2 C_4 L_L R_5 R_L g_m r_o s^2 + 2 C_4 L_L R_5 R_L g_m r_o s^2 + 2 C_4 L_L R_5 R_L g_m r_o s^2 + 2 C_4 L_L R_5 R_L g_m r_o s^2 + 2 C_4 L_L R_5 R_L g_m r_o s^2 + 2 C_4 L_L R_5 R_L g_m r_o s^2 + 2 C_4 L_L R_5 R_L g_m r_o s^2 + 2 C_4 L_L R_5 R_L g_m r_o s^2 + 2 C_4 L_L R_5 R_L g_m r_o s^2 + 2 C_4 L_L R_5 R_L g_m r_o s^2 + 2 C_4 L_L R_5 R_L g_m r_o s^2 + 2 C_4 L_L R_5 R_L g_m r_o s^2 + 2 C_4 L_L R_5 R_L g_m r_o s^2 + 2 C_4 L_L R_5 R_L g_m r_o s^2 + 2 C_4 L_L R_5 R_L g_m r_o s^2 + 2 C_4 L_L R_5 R_L g_m r_o s^2 + 2 C_4 L_L R_5 R_L g_m r_o s^2 + 2 C_4 L_L R_5 R_L g_m r_o s^2 + 2 C_4 L_L R_5 R_L g_m r_o s^2 + 2 C_4 L_L R_5 R_L g_m r_o s^2 + 2 C_4 L_L R_5 R_L g_m r_o s^2 + 2 C_4 L_L R_5 R_L g_m r_o s^2 + 2 C_4 L_L R_5 R_L g_m r_o s^2 + 2 C_4 L_L R_5 R_L g_m r_o s^2 + 2 C_4 L_L R_5 R_L g_m r_o s^2 + 2 C_4 L_L R_5 R_L g_m r_o s^2 + 2 C_4 L_L R_5 R_L g_m r_o s^2 + 2 C_4 L_L R_5 R_L g_m r_o s^2 + 2 C_4 L_L R_5 R_L g_m r_o s^2 + 2 C_4 L_L R_5 R_L g_m r_o s^2 + 2 C_4 L_L R_5 R_L g_m r_o s^2 + 2 C_4 L_L R_5 R_L g_m r_o s^2 + 2 C_4 L_L R_5 R_L g_m r_o s^2 + 2 C_4 L_L R_5 R_L g_m r_o s^2 + 2 C_4 L_L R_5 R_L g_m r_o s^2 + 2 C_4 L_L R_5 R_L g_m r_o s^2 + 2 C_4 L_L R_5 R_L g_m r_o s^2 + 2 C_4 L_L R_5 R_L g_m r_o s^2 + 2 C_4 L_L R_5 R_L g_m r_o s^2 + 2 C_4 L_L R_5 R_L g_m r_o s^2 + 2 C_4 L_L R_5 R_L g_m r_o s^2 + 2 C_4 L_L R_5 R_L g_m r_o s^2 + 2 C_4 L_L R_5 R_L g_m r_o s^2 + 2 C_4 L_L R_5 R_L g_m r_o s^2 + 2 C_4 L_L R_5 R_L g_m r_o s^2 + 2 C_4 L_L R_5 R_L g_
10.263 INVALID-ORDER-263 Z(s) = \left(\infty, \infty, \infty, R_4 + \frac{1}{C_4 s}, R_5, \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)
H(s) = \frac{\left(C_4 R_4 s + 1\right) \left(R_5 g_m r_o + \frac{\left(C_4 R_4 s + 1\right) \left(R_5 g_m r_o + \frac{\left(C_4 R_4 s + 1\right) \left(R_5 g_m r_o + \frac{\left(C_4 R_4 s + 1\right) \left(R_5 g_m r_o + \frac{\left(C_4 R_4 s + 1\right) \left(R_5 g_m r_o + \frac{\left(C_4 R_4 s + 1\right) \left(R_5 g_m r_o + \frac{\left(C_4 R_4 r_o s + \frac{1}{2} C_4 C_4 L_L R_4 R_5 g_m r_o s + \frac{1}{2} C_4 C_4 L_L R_4 R_5 g_m r_o s + \frac{1}{2} C_4 L_L R_4 R_5 g_m r_o s + \frac{1}{2} C_4 L_L R_4 R_5 g_m r_o s + \frac{1}{2} C_4 L_L R_4 R_5 g_m r_o s + \frac{1}{2} C_4 L_L R_4 R_5 g_m r_o s + \frac{1}{2} C_4 L_L R_4 R_5 g_m r_o s + \frac{1}{2} C_4 L_L R_4 R_5 g_m r_o s + \frac{1}{2} C_4 L_L R_4 R_5 g_m r_o s + \frac{1}{2} C_4 L_L R_4 R_5 g_m r_o s + \frac{1}{2} C_4 L_L R_4 R_5 g_m r_o s + \frac{1}{2} C_4 L_L R_4 R_5 g_m r_o s + \frac{1}{2} C_4 L_L R_4 R_5 g_m r_o s + \frac{1}{2} C_4 L_L R_4 R_5 g_m r_o s + \frac{1}{2} C_4 L_L R_4 R_5 g_m r_o s + \frac{1}{2} C_4 L_L R_4 R_5 g_m r_o s + \frac{1}{2} C_4 R_5 g_m r_o s + \frac{1}{2} C_4 R_4 R_5 g_m r_o s + \frac{1}{2} C_4 R_4 R_5 g_m r_o s + \frac{1}{2} C_4 R_5 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (C_4R_4s+1)(R_5g_mr_o+
10.264 INVALID-ORDER-264 Z(s) = \left(\infty, \infty, \infty, R_4 + \frac{1}{C_4 s}, R_5, \frac{R_L \left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)
H(s) = \frac{10L_1 \left( \sum_{i=1}^{2} L_{i} L_{i} R_{i} R_{5} g_{m} r_{o} s^{3} + C_{4} C_{L} L_{L} R_{4} R_{5} g_{m} r_{o} s^{3} + 2 C_{4} C_{L} L_{L} R_{4} R_{5} g_{m} r_{o} s^{3} + 2 C_{4} C_{L} L_{L} R_{4} R_{5} g_{m} r_{o} s^{3} + 2 C_{4} C_{L} L_{L} R_{4} R_{5} g_{m} r_{o} s^{3} + 2 C_{4} C_{L} L_{L} R_{4} R_{5} g_{m} r_{o} s^{3} + 2 C_{4} C_{L} L_{L} R_{4} R_{5} g_{m} r_{o} s^{3} + 2 C_{4} C_{L} L_{L} R_{4} R_{5} g_{m} r_{o} s^{3} + 2 C_{4} C_{L} L_{L} R_{4} R_{5} g_{m} r_{o} s^{3} + 2 C_{4} C_{L} L_{L} R_{4} R_{5} g_{m} r_{o} s^{3} + 2 C_{4} C_{L} L_{L} R_{4} R_{5} g_{m} r_{o} s^{3} + 2 C_{4} C_{L} L_{L} R_{4} R_{5} g_{m} r_{o} s^{3} + 2 C_{4} C_{L} L_{L} R_{4} R_{5} g_{m} r_{o} s^{3} + 2 C_{4} C_{L} L_{L} R_{4} R_{5} g_{m} r_{o} s^{3} + 2 C_{4} C_{L} L_{L} R_{4} R_{5} g_{m} r_{o} s^{3} + 2 C_{4} C_{L} L_{L} R_{4} R_{5} g_{m} r_{o} s^{3} + 2 C_{4} C_{L} L_{L} R_{4} R_{5} g_{m} r_{o} s^{3} + 2 C_{4} C_{L} L_{L} R_{4} R_{5} g_{m} r_{o} s^{3} + 2 C_{4} C_{L} L_{L} R_{4} R_{5} g_{m} r_{o} s^{3} + 2 C_{4} C_{L} L_{L} R_{4} R_{5} g_{m} r_{o} s^{3} + 2 C_{4} C_{L} L_{L} R_{4} R_{5} g_{m} r_{o} s^{3} + 2 C_{4} C_{L} L_{L} R_{4} R_{5} g_{m} r_{o} s^{3} + 2 C_{4} C_{L} L_{L} R_{4} R_{5} g_{m} r_{o} s^{3} + 2 C_{4} C_{L} L_{L} R_{4} R_{5} g_{m} r_{o} s^{3} + 2 C_{4} C_{L} L_{L} R_{4} R_{5} g_{m} r_{o} s^{3} + 2 C_{4} C_{L} L_{L} R_{4} R_{5} g_{m} r_{o} s^{3} + 2 C_{4} C_{L} L_{L} R_{4} R_{5} g_{m} r_{o} s^{3} + 2 C_{4} C_{L} L_{L} R_{4} R_{5} g_{m} r_{o} s^{3} + 2 C_{4} C_{L} L_{L} R_{4} R_{5} g_{m} r_{o} s^{3} + 2 C_{4} C_{L} L_{L} R_{4} R_{5} g_{m} r_{o} s^{3} + 2 C_{4} C_{L} L_{L} R_{4} R_{5} g_{m} r_{o} s^{3} + 2 C_{4} C_{L} L_{L} R_{4} R_{5} g_{m} r_{o} s^{3} + 2 C_{4} C_{L} L_{L} R_{4} R_{5} g_{m} r_{o} s^{3} + 2 C_{4} C_{L} L_{L} R_{4} R_{5} g_{m} r_{o} s^{3} + 2 C_{4} C_{L} L_{L} R_{4} R_{5} g_{m} r_{o} s^{3} + 2 C_{4} C_{L} L_{L} R_{4} R_{5} g_{m} r_{o} s^{3} + 2 C_{4} C_{L} L_{L} R_{4} R_{5} g_{m} r_{o} s^{3} + 2 C_{4} C_{L} L_{L} R_{4} R_{5} g_{m} r_{o} s^{3} + 2 C_{4} C_{L} L_{L} R_{4} R_{5} g_{m} r_{o} s^{3
10.265 INVALID-ORDER-265 Z(s) = \left(\infty, \infty, \infty, R_4 + \frac{1}{C_4 s}, \frac{1}{C_5 s}, \frac{1}{C_L s}\right)
                                                                                                                                                                                                                               H(s) = \frac{\left(C_4 R_4 s + 1\right) \left(-C_5 r_o s + g_m r_o + 1\right)}{s \left(C_4 C_5 C_L R_4 r_o s^2 + 2 C_4 C_5 R_4 g_m r_o s + 4 C_4 C_5 R_4 s + 2 C_4 C_5 r_o s + C_4 C_L R_4 g_m r_o s + C_4 C_L R_4 s + 2 C_4 g_m r_o + 2 C_4 + C_5 C_L r_o s + 2 C_5 g_m r_o + 4 C_5 + C_L g_m r_o + C_L\right)}
10.266 INVALID-ORDER-266 Z(s) = \left(\infty, \infty, \infty, R_4 + \frac{1}{C_4 s}, \frac{1}{C_5 s}, \frac{R_L}{C_L R_L s + 1}\right)
H(s) = \frac{R_L \left( C_4 R_4 s + 1 \right) \left( -C_5 r_o s + g_m r_o + 1 \right)}{C_4 C_5 C_L R_4 R_L r_o s^3 + 2 C_4 C_5 R_4 R_L g_m r_o s^2 + 4 C_4 C_5 R_4 R_L s^2 + C_4 C_5 R_4 r_o s^2 + 2 C_4 C_5 R_L r_o s^2 + 2 C_4 C_5 R_L r_o s^2 + 2 C_4 R_L g_m r_o s + C_4 R_4 g_m r_o s + 2 C_4 R_L g_m r_o s + 2 C_4 R_L g_m r_o s + 2 C_4 R_L g_m r_o s + 2 C_5 R_L g_m r_o s + 4 C_5 R_L s + C_5 r_o s + C_L R_L g_m r_o s + C_L R_L
10.267 INVALID-ORDER-267 Z(s) = \left(\infty, \infty, \infty, R_4 + \frac{1}{C_4 s}, \frac{1}{C_5 s}, R_L + \frac{1}{C_L s}\right)
H(s) = \frac{\left(C_4 R_4 s + 1\right) \left(C_L R_L s + 1\right) \left(-C_5 r_o s + g_m r_o + 1\right)}{s \left(2C_4 C_5 C_L R_4 R_L g_m r_o s^2 + 4C_4 C_5 C_L R_4 r_o s^2 + 2C_4 C_5 C_L R_L r_o s^2 + 2C_4 C_5 R_4 g_m r_o s + 4C_4 C_5 R_4 s + 2C_4 C_5 r_o s + C_4 C_L R_4 g_m r_o s + 2C_4 C_L R_L g_m r_o s + 2C_4 C_L R_L g_m r_o s + 2C_4 C_L R_L g_m r_o s + 4C_5 C_L R_L g_m r_o s + 4C_5 C_L R_L g_m r_o s + 4C_5 C_L R_L g_m r_o s + 2C_4 C_L R_L g_m r_o s + 2C_4 C_L R_L g_m r_o s + 2C_4 C_L R_L g_m r_o s + 4C_5 C_L R_L g_m r
10.268 INVALID-ORDER-268 Z(s) = \left(\infty, \infty, \infty, R_4 + \frac{1}{C_{4s}}, \frac{1}{C_{5s}}, L_L s + \frac{1}{C_{Ls}}\right)
H(s) = \frac{\left(C_4 R_4 s + 1\right) \left(C_L L_L s^2 + 1\right) \left(-C_5 r_o s + g_m r_o + 1\right)}{s \left(2C_4 C_5 C_L L_L R_4 g_m r_o s^3 + 4C_4 C_5 C_L L_L r_o s^3 + C_4 C_5 C_L R_4 r_o s^2 + 2C_4 C_5 R_4 g_m r_o s + 4C_4 C_5 R_4 s + 2C_4 C_5 R_4 s + 2C_4 C_L L_L g^2 + C_4 C_L L_L g^2
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 $H(s) = \frac{L_L s \left(C_4 R_4 s + 1\right) \left(R_5 g_m r_o + R_5 - r_o\right)}{C_4 C_L L_L R_4 R_5 g_m r_o s^3 + C_4 C_L L_L R_4 r_o s^3 + 2 C_4 L_L R_4 g_m r_o s^2 + 4 C_4 L_L R_5 g_m r_o s^2 + 2 C_4 L_L R_5 g_m r_o s^2 + 2 C_4 L_L R_5 g_m r_o s + C_4 R_4 R_5 g_m r_o s + C_4 R_4 R_5 g_m r_o s^2 + C_L L_L R_5 g_m r_o s^2 + C_L L_L R_5 g_m r_o s^2 + 2 C_L L_L R_5 g_m r_o s^2 + 2$ 

10.260 INVALID-ORDER-260  $Z(s) = \left(\infty, \infty, \infty, R_4 + \frac{1}{C_4 s}, R_5, \frac{L_L s}{C_L L_L s^2 + 1}\right)$ 

**10.261** INVALID-ORDER-261  $Z(s) = \left(\infty, \infty, \infty, R_4 + \frac{1}{C_4 s}, R_5, L_L s + R_L + \frac{1}{C_L s}\right)$ 

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10.271 INVALID-ORDER-271 Z(s) = \left(\infty, \infty, \infty, R_4 + \frac{1}{C_4 s}, \frac{1}{C_5 s}, \frac{1}{C_L s + \frac{1}{R_I} + \frac{1}{L_I s}}\right)
H(s) = \frac{L_L R_L s \left(C_4 R_4 s + 1\right) \left(-C_5 r_o s + g_m r_o + 1\right)}{C_4 C_5 C_L L_L R_4 R_L r_o s^4 + 2 C_4 C_5 L_L R_4 R_L g_m r_o s^3 + 4 C_4 C_5 L_L R_4 r_o s^3 + 2 C_4 C_5 L_L R_4 r_o s^3 + 2 C_4 C_5 L_L R_4 r_o s^3 + 2 C_4 C_5 L_L R_4 R_L r_o s^3 + 2 C_4 C_5 L_L R_4 R_L r_o s^3 + 2 C_4 C_5 L_L R_4 R_L r_o s^3 + 2 C_4 L_L R_4 R_L r
10.272 INVALID-ORDER-272 Z(s) = \left(\infty, \infty, \infty, R_4 + \frac{1}{C_4 s}, \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)
H(s) = \frac{(C_4R_4s + 1)}{2C_4C_5C_LL_LR_4R_Lg_mr_os^4 + 4C_4C_5C_LL_LR_4r_os^4 + 2C_4C_5C_LL_LR_4r_os^4 + 2C_4C_5L_LR_4g_mr_os^3 + 4C_4C_5L_LR_4s^3 + 2C_4C_5L_LR_4s^3 + 2C_4C_5R_4R_Lg_mr_os^2 + 4C_4C_5R_4R_Lg_mr_os^2 + 4C_4C_5R_4r_os^2 + 2C_4C_5R_Lr_os^3 + 2C_4C_5R_4R_Lg_mr_os^3 + 4C_4C_5R_4R_Lg_mr_os^3 + 4C_4C_5R_4R_L
10.273 INVALID-ORDER-273 Z(s) = \left(\infty, \infty, \infty, R_4 + \frac{1}{C_4 s}, \frac{1}{C_5 s}, \frac{R_L \left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)
H(s) = \frac{1}{2C_4C_5C_LL_LR_4R_Lg_mr_os^4 + 4C_4C_5C_LL_LR_4r_os^4 + 2C_4C_5C_LL_LR_4r_os^4 + 2C_4C_5C_LL_LR_4r_os^4 + 2C_4C_5C_LL_RL_Rr_os^4 + 2C_4C_5C_LL_Rr_os^4 + 2C_4C_5R_4R_Lg_mr_os^2 + 4C_4C_5R_4R_Lg^2 + 2C_4C_5R_4r_os^2 + 2C_4C_5R_Lr_os^2 + 2C_4C_5R_Lr_os^3 + 2C_4C_5R_Lr
10.274 INVALID-ORDER-274 Z(s) = \left(\infty, \infty, \infty, R_4 + \frac{1}{C_4 s}, \frac{R_5}{C_5 R_5 s + 1}, \frac{1}{C_L s}\right)
                                                          \frac{\left(C_{4}R_{4}s+1\right)\left(C_{5}R_{5}r_{o}s-R_{5}g_{m}r_{o}-R_{5}+r_{o}\right)}{C_{4}C_{5}C_{L}R_{4}R_{5}r_{o}s^{3}+2C_{4}C_{5}R_{4}R_{5}g_{m}r_{o}s^{2}+4C_{4}C_{5}R_{4}R_{5}s^{2}+2C_{4}C_{5}R_{5}r_{o}s^{2}+C_{4}C_{L}R_{4}R_{5}g^{2}+C_{4}C_{L}R_{4}R_{5}s^{2}+2C_{4}R_{5}g_{m}r_{o}s+4C_{4}R_{5}g_{m}r_{o}s+4C_{4}R_{5}g_{m}r_{o}s+4C_{5}R_{5}r_{o}s^{2}+2C_{5}R_{5}g_{m}r_{o}s+4C_{5}R_{5}r_{o}s^{2}+2C_{4}R_{5}g_{m}r_{o}s+4C_{5}R_{5}r_{o}s^{2}+2C_{4}R_{5}g_{m}r_{o}s+4C_{5}R_{5}r_{o}s^{2}+2C_{5}R_{5}g_{m}r_{o}s+4C_{5}R_{5}r_{o}s^{2}+2C_{5}R_{5}g_{m}r_{o}s+4C_{5}R_{5}r_{o}s^{2}+2C_{5}R_{5}g_{m}r_{o}s+4C_{5}R_{5}r_{o}s^{2}+2C_{5}R_{5}r_{o}s^{2}+2C_{5}R_{5}r_{o}s^{2}+2C_{5}R_{5}r_{o}s^{2}+2C_{5}R_{5}r_{o}s^{2}+2C_{5}R_{5}r_{o}s^{2}+2C_{5}R_{5}r_{o}s^{2}+2C_{5}R_{5}r_{o}s^{2}+2C_{5}R_{5}r_{o}s^{2}+2C_{5}R_{5}r_{o}s^{2}+2C_{5}R_{5}r_{o}s^{2}+2C_{5}R_{5}r_{o}s^{2}+2C_{5}R_{5}r_{o}s^{2}+2C_{5}R_{5}r_{o}s^{2}+2C_{5}R_{5}r_{o}s^{2}+2C_{5}R_{5}r_{o}s^{2}+2C_{5}R_{5}r_{o}s^{2}+2C_{5}R_{5}r_{o}s^{2}+2C_{5}R_{5}r_{o}s^{2}+2C_{5}R_{5}r_{o}s^{2}+2C_{5}R_{5}r_{o}s^{2}+2C_{5}R_{5}r_{o}s^{2}+2C_{5}R_{5}r_{o}s^{2}+2C_{5}R_{5}r_{o}s^{2}+2C_{5}R_{5}r_{o}s^{2}+2C_{5}R_{5}r_{o}s^{2}+2C_{5}R_{5}r_{o}s^{2}+2C_{5}R_{5}r_{o}s^{2}+2C_{5}R_{5}r_{o}s^{2}+2C_{5}R_{5}r_{o}s^{2}+2C_{5}R_{5}r_{o}s^{2}+2C_{5}R_{5}r_{o}s^{2}+2C_{5}R_{5}r_{o}s^{2}+2C_{5}R_{5}r_{o}s^{2}+2C_{5}R_{5}r_{o}s^{2}+2C_{5}R_{5}r_{o}s^{2}+2C_{5}R_{5}r_{o}s^{2}+2C_{5}R_{5}r_{o}s^{2}+2C_{5}R_{5}r_{o}s^{2}+2C_{5}R_{5}r_{o}s^{2}+2C_{5}R_{5}r_{o}s^{2}+2C_{5}R_{5}r_{o}s^{2}+2C_{5}R_{5}r_{o}s^{2}+2C_{5}R_{5}r_{o}s^{2}+2C_{5}R_{5}r_{o}s^{2}+2C_{5}R_{5}r_{o}s^{2}+2C_{5}R_{5}r_{o}s^{2}+2C_{5}R_{5}r_{o}s^{2}+2C_{5}R_{5}r_{o}s^{2}+2C_{5}R_{5}r_{o}s^{2}+2C_{5}R_{5}r_{o}s^{2}+2C_{5}R_{5}r_{o}s^{2}+2C_{5}R_{5}r_{o}s^{2}+2C_{5}R_{5}r_{o}s^{2}+2C_{5}R_{5}r_{o}s^{2}+2C_{5}R_{5}r_{o}s^{2}+2C_{5}R_{5}r_{o}s^{2}+2C_{5}R_{5}r_{o}s^{2}+2C_{5}R_{5}r_{o}s^{2}+2C_{5}R_{5}r_{o}s^{2}+2C_{5}R_{5}r_{o}s^{2}+2C_{5}R_{5}r_{o}s^{2}+2C_{5}R_{5}r_{o}s^{2}+2C_{5}R_{5}r_{o}s^{2}+2C_{5}R_{5}r_{o}s^{2}+2C_{5}R_{5}r_{o}s^{2}+2C_{5
10.275 INVALID-ORDER-275 Z(s) = \left(\infty, \infty, \infty, R_4 + \frac{1}{C_4 s}, \frac{R_5}{C_5 R_5 s + 1}, \frac{R_L}{C_L R_L s + 1}\right)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              R_L (C_4 R_4 s + 1) (C_5 R_5 r_o s - R_5 g_m r_o - R_5 + r_o)
H(s) = -\frac{1}{C_4 C_5 C_L R_4 R_5 R_L r_o s^3 + 2 C_4 C_5 R_4 R_5 R_L g_m r_o s^2 + 4 C_4 C_5 R_4 R_5 R_L s^2 + C_4 C_5 R_4 R_5 r_o s^2 + 2 C_4 C_5 R_5 R_L r_o s^2 + C_4 C_L R_4 R_5 R_L g_m r_o s^2 + C_4 C_L R_4 R_5 R_L g_m r_o s^2 + C_4 C_L R_4 R_5 R_L r_o s^2 + C_4 C_L R_4
10.276 INVALID-ORDER-276 Z(s) = \left(\infty, \infty, \infty, R_4 + \frac{1}{C_4 s}, \frac{R_5}{C_5 R_5 s + 1}, R_L + \frac{1}{C_L s}\right)
                                                          \frac{(C_4R_4S_7)(C_LR_4R_5R_Lg_mr_os^3 + 4C_4C_5C_LR_4R_5R_Ls^3 + C_4C_5C_LR_4R_5r_os^3 + 2C_4C_5R_4R_5g_mr_os^2 + 4C_4C_5R_4R_5s^2 + 2C_4C_5R_4R_5g_mr_os^2 + 4C_4C_LR_4R_5g_mr_os^2 + 4C_4C_LR_4R_5
10.277 INVALID-ORDER-277 Z(s) = \left(\infty, \infty, \infty, R_4 + \frac{1}{C_{4s}}, \frac{R_5}{C_5 R_{5s} + 1}, L_L s + \frac{1}{C_{Ls}}\right)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (C_4R_4s+1)(C_LL_Ls)
H(s) = -\frac{1}{2C_4C_5C_LL_LR_4R_5g_mr_os^4 + 4C_4C_5C_LL_LR_4g_s^3 + 2C_4C_5C_LL_LR_5g_mr_os^4 + 4C_4C_5C_LL_LR_5g_mr_os^4 + 4C_4C_5C_LR_5g_mr_os^4 + 4C_4C_5C_LR_5g_mr_os^
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 $H(s) = \frac{L_{L}s\left(C_{4}R_{4}s+1\right)\left(-C_{5}r_{o}s+g_{m}r_{o}+1\right)}{C_{4}C_{5}C_{L}L_{L}R_{4}r_{o}s^{4}+2C_{4}C_{5}L_{L}R_{4}s^{3}+2C_{4}C_{5}L_{L}r_{o}s^{3}+C_{4}C_{5}L_{L}r_{o}s^{3}+C_{4}C_{5}L_{L}R_{4}g_{m}r_{o}s^{2}+C_{4}C_{L}L_{L}R_{4}g_{m}r_{o}s^{2}+2C_{4}L_{L}g_{m}r_{o}s^{2}+2C_{4}L_{L}s^{2}+C_{4}R_{4}g_{m}r_{o}s^{2}+2C_{5}L_{L}r_{o}s^{3}+2C_{5}L_{L}g_{m}r_{o}s^{2}+4C_{5}L_{L}s^{2}+C_{5}r_{o}s+C_{L}L_{L}g_{m}r_{o}s^{2}+2C_{4}L_{L}s^{2}+C_{5}r_{o}s+C_{4}L_{L}g_{m}r_{o}s^{2}+2C_{5}L_{L}r_{o}s^{3}+2C$ 

 $H(s) = \frac{(C_4R_4S + 1)(-C_5r_os + g_mr_o + 1)(C_LR_LS + C_LR_LS + 1)}{s(2C_4C_5C_LL_LR_4g_mr_os^3 + 4C_4C_5C_LL_LR_4s^3 + 2C_4C_5C_LR_4R_Lg_mr_os^2 + 4C_4C_5C_LR_4R_Ls^2 + C_4C_5C_LR_4R_Ls^2 + 2C_4C_5C_LR_4R_Ls^2 + 2C_$ 

 $(C_4R_4s+1)(-C_5r_os+g_mr_o+1)(C_LL_Ls^2+C_LR_Ls+1)$ 

**10.269** INVALID-ORDER-269  $Z(s) = \left(\infty, \infty, \infty, R_4 + \frac{1}{C_4 s}, \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1}\right)$ 

10.270 INVALID-ORDER-270  $Z(s) = \left(\infty, \infty, \infty, R_4 + \frac{1}{C_4 s}, \frac{1}{C_5 s}, L_L s + R_L + \frac{1}{C_L s}\right)$ 

10.278 INVALID-ORDER-278  $Z(s) = \left(\infty, \infty, \infty, R_4 + \frac{1}{C_4 s}, \frac{R_5}{C_5 R_5 s + 1}, \frac{L_L s}{C_L L_L s^2 + 1}\right)$ 

$$H(s) = -\frac{L_L s \left(C_4 R_4 s + 1\right) \left(C_5 R_5 r_o s - R_5 g_m r_o - R_5 + r_o\right)}{C_4 C_5 C_L L_L R_4 R_5 r_o s^4 + 2 C_4 C_5 L_L R_4 R_5 g_m r_o s^3 + 4 C_4 C_5 L_L R_4 R_5 r_o s^3 + 2 C_4 C_5 L_L R_4 R_5 r_o s^3 + 2 C_4 L_L R$$

10.279 INVALID-ORDER-279  $Z(s) = \left(\infty, \infty, \infty, R_4 + \frac{1}{C_4 s}, \frac{R_5}{C_5 R_5 s + 1}, L_L s + R_L + \frac{1}{C_L s}\right)$ 

$$H(s) = -\frac{1}{2C_{4}C_{5}C_{L}L_{L}R_{4}R_{5}g_{m}r_{o}s^{4} + 4C_{4}C_{5}C_{L}L_{L}R_{4}R_{5}s^{4} + 2C_{4}C_{5}C_{L}L_{L}R_{5}r_{o}s^{4} + 2C_{4}C_{5}C_{L}R_{4}R_{5}R_{L}g_{m}r_{o}s^{3} + 4C_{4}C_{5}C_{L}R_{4}R_{5}r_{o}s^{3} + 2C_{4}C_{5}C_{L}R_{4}R_{5}r_{o}s^{3} + 2C_{4}C_{5}C_{L}R_{4}R_{5}r_{o}s^{3} + 2C_{4}C_{5}C_{L}R_{4}R_{5}r_{o}s^{3} + 2C_{4}C_{5}R_{4}R_{5}r_{o}s^{3} + 2C_{4}C_{5}R_{5}r_{o}s^{3} + 2C_{4}C_{5}R_{5}r_{o}s^{3} + 2C_{4}C_{$$

**10.280** INVALID-ORDER-280  $Z(s) = \left(\infty, \infty, \infty, R_4 + \frac{1}{C_4 s}, \frac{R_5}{C_5 R_5 s + 1}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$ 

$$H(s) = -\frac{1}{C_4C_5C_LL_LR_4R_5R_Lr_os^4 + 2C_4C_5L_LR_4R_5R_Lg_mr_os^3 + 4C_4C_5L_LR_4R_5R_Ls^3 + C_4C_5L_LR_4R_5r_os^3 + 2C_4C_5L_LR_4R_5R_Lr_os^3 + C_4C_LL_LR_4R_5R_Lg_mr_os^3 + C_4C_LLR_4R_5R_Lg_mr_os^3 + C_4C_LLR_4R_5R_Lg_m$$

10.281 INVALID-ORDER-281  $Z(s) = \left(\infty, \infty, \infty, R_4 + \frac{1}{C_4 s}, \frac{R_5}{C_5 R_5 s + 1}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$ 

$$H(s) = -\frac{1}{2C_4C_5C_LL_LR_4R_5R_Lg_mr_os^4 + 4C_4C_5C_LL_LR_4R_5r_os^4 + 2C_4C_5C_LL_LR_4R_5r_os^4 + 2C_4C_5L_LR_4R_5g_mr_os^3 + 4C_4C_5L_LR_4R_5s^3 + 2C_4C_5L_LR_4R_5r_os^3 + 2C_4C_5R_4R_5R_Lg_mr_os^2 + 4C_4C_5R_4R_5R_Ls^2 + C_4C_5R_4R_5r_os^2 + 2C_4C_5R_4R_5r_os^3 + 2C_4C_5L_LR_4R_5r_os^3 + 2C_4C_5L_LR_4R_5r_os^3 + 2C_4C_5R_4R_5R_Lg_mr_os^2 + 4C_4C_5R_4R_5r_os^2 + 2C_4C_5R_4R_5r_os^3 + 2C_4C_5R_5R_5r_os^3 + 2C_4C_5R_5R_5r_os^3 + 2$$

10.282 INVALID-ORDER-282  $Z(s) = \left(\infty, \infty, \infty, R_4 + \frac{1}{C_4 s}, \frac{R_5}{C_5 R_5 s + 1}, \frac{R_L \left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$ 

$$H(s) = -\frac{1}{2C_4C_5C_LL_LR_4R_5R_Lg_mr_os^4 + 4C_4C_5C_LL_LR_4R_5R_Ls^4 + C_4C_5C_LL_LR_4R_5r_os^4 + 2C_4C_5C_LL_LR_4R_5R_Lr_os^4 + 2C_4C_5R_4R_5R_Lr_os^3 + 2C_4C_5R_4R_5R_Lg_mr_os^2 + 4C_4C_5R_4R_5R_Ls^2 + 2C_4C_5R_4R_5R_Ls^2 + 2C_4C_5R_4$$

10.283 INVALID-ORDER-283  $Z(s) = \left(\infty, \infty, \infty, R_4 + \frac{1}{C_4 s}, R_5 + \frac{1}{C_5 s}, \frac{1}{C_L s}\right)$ 

$$H(s) = \frac{\left(C_4 R_4 s + 1\right) \left(C_5 R_5 g_m r_o s + C_5 R_5 s - C_5 r_o s + g_m r_o + 1\right)}{s \left(C_4 C_5 C_L R_4 R_5 g_m r_o s^2 + C_4 C_5 C_L R_4 R_5 s^2 + C_4 C_5 R_4 g_m r_o s + 4 C_4 C_5 R_4 g_m r_o s + 2 C_4 C_5 R_5 g_m r_o s + C_4 C_L R_4 g_m r_o s + C_5 C_L R_5 g_m r_o s + C_5 C_L R_5 g_m r_o s + 2 C_5 g_m$$

**10.284** INVALID-ORDER-284  $Z(s) = \left(\infty, \infty, \infty, R_4 + \frac{1}{C_4 s}, R_5 + \frac{1}{C_5 s}, \frac{R_L}{C_L R_L s + 1}\right)$ 

$$H(s) = \frac{R_L \left( C_4 R_4 s + 1 \right) \left( C_5 R_5 g_m r_o s + C_5 R_5 s - C_5 r_o s + g_m r_o s + C_5 R_5 r_o s +$$

10.285 INVALID-ORDER-285  $Z(s) = \left(\infty, \infty, \infty, R_4 + \frac{1}{C_4 s}, R_5 + \frac{1}{C_5 s}, R_L + \frac{1}{C_L s}\right)$ 

$$H(s) = \frac{\left(C_4 R_4 s + 1\right) \left(C_L R_L s + 1\right) \left(C_5 R_5 g_m r_o s + C_5 R_5 s - C_5 r_o s + g_m r_o s + C_5 R_5 s - C_5 r_o s + g_m r_o s + C_5 R_5 g_m r_o s + C_5 R$$

**10.286** INVALID-ORDER-286  $Z(s) = \left(\infty, \infty, \infty, R_4 + \frac{1}{C_4 s}, R_5 + \frac{1}{C_5 s}, L_L s + \frac{1}{C_L s}\right)$ 

$$H(s) = \frac{\left(C_4 R_4 s + 1\right) \left(C_L L_L s^2 + 1\right) \left(C_5 R_5 g_m r_o s + C_5 R_5 s - C_5 r_o s + g_m r_o s + C_5 R_5 s - C_5 r_o s + g_m r_o s + C_5 R_5 g_m r_o s + C_5$$

10.287 INVALID-ORDER-287  $Z(s) = \left(\infty, \infty, \infty, R_4 + \frac{1}{C_4 s}, R_5 + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1}\right)$ 

 $L_{LS}(C_4R_4s+1)(C_5R_5g_mr_os+C_5R_5s-C_5r_os+g_mr_os+C_5R_5s-C_5r_os+g_mr_os+C_5R_5s-C_5r_os+g_mr_os+C_5R_5s-C_5r_os+g_mr_os+C_5R_5s-C_5r_os+g_mr_os+C_5R_5s-C_5r_os+g_mr_os+C_5R_5s-C_5r_os+g_mr_os+C_5R_5s-C_5r_os+g_mr_os+C_5R_5s-C_5r_os+g_mr_os+C_5R_5s-C_5r_os+g_mr_os+C_5R_5s-C_5r_os+g_mr_os+C_5R_5s-C_5r_os+g_mr_os+C_5R_5s-C_5r_os+g_mr_os+c_5R_5s-C_5r_os+g_mr_os+c_5R_5s-C_5r_os+g_mr_os+c_5R_5s-C_5r_os+g_mr_os+c_5R_5s-C_5r_os+g_mr_os+c_5R_5s-C_5r_os+g_mr_os+c_5R_5s-c_5R$ 

 $H(s) = \frac{L_L s \left( \cup_4 \mathbf{n}_4 s + 1 \right) \left( \cup_5 \mathbf{n}_5 g_m r_o s + \cup_5 \mathbf{n}_5 s - \cup_5 r_o s + g_m r_o s + \cup_5 r_o s + g_m r_o s + U_d r_o s$ 

10.288 INVALID-ORDER-288  $Z(s) = \left(\infty, \infty, \infty, R_4 + \frac{1}{C_4 s}, R_5 + \frac{1}{C_5 s}, L_L s + R_L + \frac{1}{C_L s}\right)$ 

 $H(s) = \frac{1}{s\left(2 C_4 C_5 C_L L_L R_4 g_m r_o s^3 + 4 C_4 C_5 C_L L_L R_4 s^3 + 2 C_4 C_5 C_L L_L R_5 g_m r_o s^3 + 2 C_4 C_5 C_L L_L R_5 s^3 + 2 C_4 C_5 C_L L_L R_5 g_m r_o s^2 + 2 C_4 C_5 C_L R_4 R_5 g_m r_o s^2 + 2 C_4 C_5 C_L R_5 R_5 g_m r_o s^2 + 2 C_4 C_5 C_L R_5 R_5 g_m r_o s^2 + 2 C_4 C_5 C_L$ 

10.289 INVALID-ORDER-289  $Z(s) = \left(\infty, \infty, \infty, R_4 + \frac{1}{C_4 s}, R_5 + \frac{1}{C_5 s}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$ 

 $H(s) = \frac{1}{C_4 C_5 C_L L_L R_4 R_5 R_L g_m r_o s^4 + C_4 C_5 L_L L_R R_4 R_5 R_L s^4 + C_4 C_5 L_L R_4 R_L r_o s^4 + C_4 C_5 L_L R_4 R_5 g_m r_o s^3 + 2 C_4 C_5 L_L R_4 R_L g_m r_o s^3 + 2 C_4 C_5 L_L R_4 R_$ 

10.290 INVALID-ORDER-290  $Z(s) = \left(\infty, \infty, \infty, R_4 + \frac{1}{C_4 s}, R_5 + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$ 

 $H(s) = \frac{1}{C_4 C_5 C_L L_L R_4 R_5 g_m r_o s^4 + C_4 C_5 C_L L_L R_4 R_5 s^4 + 2 C_4 C_5 C_L L_L R_4 R_L g_m r_o s^4 + 4 C_4 C_5 C_L L_L R_4 R_L s^4 + 2 C_4 C_5 C_L L_L R_5 R_L g_m r_o s^4 + 2 C_4 C_5 C_L L_L R_5 R_L g_m r_o s^4 + 2 C_4 C_5 C_L L_L R_4 R_5 g_m r_o s^4 + 2 C_4 C_5 C_L L_L R_4 R_5 g_m r_o s^4 + 2 C_4 C_5 C_L L_L R_4 R_5 g_m r_o s^4 + 2 C_4 C_5 C_L L_L R_4 R_5 g_m r_o s^4 + 2 C_4 C_5 C_L L_L R_5 R_L g_m r_o s^4 + 2 C_4 C_5 C_L L_L R_4 R_5 g_m r_o s^4 + 2 C_4 C_5 C_L L_L R_5 R_L g_m r_o s^4 + 2 C_4 C_5 C_L L_L R_4 R_5 g_m r_o s^4 + 2 C_4 C_5 C_L L_L R_4 R_5 g_m r_o s^4 + 2 C_4 C_5 C_L L_L R_4 R_5 g_m r_o s^4 + 2 C_4 C_5 C_L L_L R_4 R_5 g_m r_o s^4 + 2 C_4 C_5 C_L L_L R_5 R_L g_m r_o s^4 + 2 C_4 C_5 C_$ 

10.291 INVALID-ORDER-291  $Z(s) = \left(\infty, \infty, \infty, R_4 + \frac{1}{C_4 s}, R_5 + \frac{1}{C_5 s}, \frac{R_L \left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_5 s}}\right)$ 

 $H(s) = \frac{1}{C_4 C_5 C_L L_L R_4 R_5 g_m r_o s^4 + C_4 C_5 C_L L_L R_4 R_5 s^4 + 2 C_4 C_5 C_L L_L R_4 R_L g_m r_o s^4 + 4 C_4 C_5 C_L L_L R_4 R_L s^4 + C_4 C_5 C_L L_L R_4 R_L s^4 + 2 C_4 C_5 C_L L_L R_5 R_L g_m r_o s^4 + 2 C_4 C_5 C_L L_L R_4 R_5 R_L g_m r_o s^4 + 2 C_4 C_5 C_L L_L R_4 R_5 R_L g_m r_o s^4 + 2 C_4 C_5 C_L L_L R_4 R_5 R_L g_m r_o s^4 + 2 C_4 C_5 C_L L_L R_4 R_5 R_L g_m r_o s^4 + 2 C_4 C_5 C_L L_L R_4 R_5 R_L g_m r_o s^4 + 2 C_4 C_5 C_L L_L R_4 R_5 R_L g_m r_o s^4 + 2 C_4 C_5 C_L L_L R_5 R_L g_m r_o s^4 + 2 C_4 C_5 C_L L_L R_4 R_5 R_L g_m r_o s^4 + 2 C_4 C_5 C_L L_L R_5 R_L g_m r_o s^4 + 2 C_4 C_5 C_L L_L R_4 R_5 R_L g_m r_o s^4 + 2 C_4 C_5 C_L L_L R_5 R_L g_m r_o s^4 + 2 C_4 C_5 C_L L_L R_5 R_L g_m r_o s^4 + 2 C_4 C_5 C_L L_L R_5 R_L g_m r_o s^4 + 2 C_4 C_5 C_L L_L R_5 R_L g_m r_o s^4 + 2 C_4 C_5 C_L L_L R_5 R_L g_m r_o s^4 + 2 C_4 C_5 C_L L_L R_5 R_L g_m r_o s^4 + 2 C_4 C_5 C_L L_L R_5 R_L g_m r_o s^4 + 2 C_4 C_5 C_L L_L R_5 R_L g_m r_o s^4 + 2 C_4 C_5 C_L L_L R_5 R_L g_m r_o s^4 + 2 C_4 C_5 C_L R_5 R_L g_m r_o s^4 + 2 C_4 C_5 C_L R_5 R_L g_m r_o s^4 + 2 C_4 C_5 C_L R_5 R_L g_m r_o s^4 + 2 C_5 C_L R_5 R_L g_m r_o$ 

**10.292** INVALID-ORDER-292  $Z(s) = \left(\infty, \infty, \infty, R_4 + \frac{1}{C_4 s}, L_5 s + \frac{1}{C_5 s}, R_L\right)$ 

 $H(s) = \frac{R_L \left( C_4 R_4 s + 1 \right) \left( C_5 L_5 g_m r_o s^2 + C_5 L_5 s^2 - C_5 r_o s + g_m r_o + 1 \right)}{C_4 C_5 L_5 R_4 g_m r_o s^3 + C_4 C_5 L_5 R_4 g^3 + 2 C_4 C_5 L_5 R_L g^3 + 2 C_4 C_5 R_4 R_L g_m r_o s^2 + 4 C_4 C_5 R_4 R_L g^2 + C_4 C_5 R_4 r_o s^2 + 2 C_4 C_5 R_L r_o s^2 + C_4 R_4 g_m r_o s + 2 C_4 R_L g_m r_o s + 2 C_4 R_L g_m r_o s^2 + C_5 L_5 g^2 + 2 C_5 R_L g_m r_o s + 4 C_5 R_L g_m r_o s^2 + C_5 R_L g_m$ 

**10.293** INVALID-ORDER-293  $Z(s) = \left(\infty, \infty, \infty, R_4 + \frac{1}{C_4 s}, L_5 s + \frac{1}{C_5 s}, \frac{1}{C_L s}\right)$ 

 $H(s) = \frac{\left(C_4R_4s + 1\right)\left(C_5L_5g_mr_os^2 + C_5L_5s^2 - C_5r_os + g_mr_o + 1\right)}{s\left(C_4C_5C_LL_5R_4g_mr_os^3 + C_4C_5C_LL_5R_4s^3 + C_4C_5C_LR_4r_os^2 + 2C_4C_5L_5g_mr_os^2 + 2C_4C_5L_5s^2 + 2C_4C_5R_4g_mr_os + 4C_4C_5r_os + C_4C_LR_4g_mr_os + C_4C_LR_4s + 2C_4g_mr_os^2 + C_5C_LL_5g_mr_os^2 + C_5C_LL_5s^2 + C_5C_Lr_os + 2C_5g_mr_o + 4C_5 + C_5C_Lr_os + 2C_5g_mr_os^2 + 2C_5g_mr_os^$ 

10.294 INVALID-ORDER-294  $Z(s) = \left(\infty, \infty, \infty, R_4 + \frac{1}{C_4 s}, L_5 s + \frac{1}{C_5 s}, \frac{R_L}{C_L R_L s + 1}\right)$ 

 $R_L (C_4 R_4 s + 1) (C_5 L_5 g_m r_o s^2 + C_5 L_5 s^2 - C_5 r_o s + g_m$  $H(s) = \frac{R_L \left( C_4 R_4 s + 1 \right) \left( C_5 L_5 g_m r_o s^2 + C_5 L_5 s^2 - C_5 r_o s + g_m r_o s^2 + C_5 L_5 r_o s^2 + C_4 C_5 R_4 R_L r_o s^3 + C_4 C_5 L_5 R_4 r_o s^3 + C_4 C_5 L_$  10.295 INVALID-ORDER-295  $Z(s) = \left(\infty, \infty, \infty, R_4 + \frac{1}{C_4 s}, L_5 s + \frac{1}{C_5 s}, R_L + \frac{1}{C_L s}\right)$ 

 $H(s) = \frac{\left(C_4 R_4 s + 1\right) \left(C_L R_L s + 1\right) \left(C_5 L_5 g_m r_o s^2 + C_5 L_5 s^2 - C_5 r_o s + g_m r_o s^2 + C_5 L_5 s^2 - C_5 r_o s + g_m r_o s^2 + 2C_4 C_5 C_L L_5 R_4 g_m r_o s^3 + 2C_4$ 

**10.296** INVALID-ORDER-296  $Z(s) = \left(\infty, \infty, \infty, R_4 + \frac{1}{C_4 s}, L_5 s + \frac{1}{C_5 s}, L_L s + \frac{1}{C_L s}\right)$ 

10.297 INVALID-ORDER-297  $Z(s) = \left(\infty, \infty, \infty, R_4 + \frac{1}{C_4 s}, L_5 s + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1}\right)$ 

 $H(s) = \frac{L_L s \left(C_4 R_4 s + 1\right) \left(C_5 L_5 g_m r_o s^2 + C_5 L_5 s^2 - C_5 r_o s + g_a r_o s^2 + C_5 L_5 r_o s^2 + C_5 r_o$ 

10.298 INVALID-ORDER-298  $Z(s) = \left(\infty, \infty, \infty, R_4 + \frac{1}{C_4 s}, L_5 s + \frac{1}{C_5 s}, L_L s + R_L + \frac{1}{C_L s}\right)$ 

 $H(s) = \frac{1}{s\left(2C_{4}C_{5}C_{L}L_{5}L_{L}g_{m}r_{o}s^{4} + 2C_{4}C_{5}C_{L}L_{5}L_{L}s^{4} + C_{4}C_{5}C_{L}L_{5}R_{4}g_{m}r_{o}s^{3} + 2C_{4}C_{5}C_{L}L_{5}R_{L}g_{m}r_{o}s^{3} + 2C_{4}C_{5}C_{L}L_{5}R_{L}g_{m}r_{o}s^{3} + 2C_{4}C_{5}C_{L}L_{5}R_{4}g_{m}r_{o}s^{3} + 2C_{4}C_{5}C_{L}L_{5}R_{4}g_{m}r_{o}s^{3} + 2C_{4}C_{5}C_{L}L_{5}R_{4}g_{m}r_{o}s^{3} + 2C_{4}C_{5}C_{L}L_{5}R_{L}g_{m}r_{o}s^{3} + 2C_{4}C_{5}C_{L}$ 

10.299 INVALID-ORDER-299  $Z(s) = \left(\infty, \infty, \infty, R_4 + \frac{1}{C_4 s}, L_5 s + \frac{1}{C_5 s}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$ 

 $H(s) = \frac{1}{C_4 C_5 C_L L_5 L_L R_4 R_L g_m r_o s^5 + C_4 C_5 C_L L_5 L_L R_4 R_L s^5 + C_4 C_5 C_L L_L R_4 R_L r_o s^4 + C_4 C_5 L_5 L_L R_4 g_m r_o s^4 + C_4 C_5 L_5 L_L R_4 g_m r_o s^4 + 2 C_4 C_5 L_5 L_L R_4 g_m r_o s^4 + 2 C_4 C_5 L_5 L_L R_4 g_m r_o s^4 + 2 C_4 C_5 L_5 L_L R_4 g_m r_o s^4 + 2 C_4 C_5 L_5 L_L R_4 g_m r_o s^4 + 2 C_4 C_5 L_5 L_L R_4 g_m r_o s^4 + 2 C_4 C_5 L_5 L_L R_4 g_m r_o s^4 + 2 C_4 C_5 L_5 R_4 R_L g_m r_o s^4 + 2 C_4 C_5 L_5 R_4$ 

10.300 INVALID-ORDER-300  $Z(s) = \left(\infty, \infty, \infty, R_4 + \frac{1}{C_4 s}, L_5 s + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$ 

 $H(s) = \frac{1}{C_4 C_5 C_L L_5 L_L R_4 g_m r_o s^5 + C_4 C_5 C_L L_5 L_L R_4 s^5 + 2 C_4 C_5 C_L L_5 L_L R_4 g_m r_o s^5 + 2 C_4 C_5 C_L L_L R_4 R_L g_m r_o s^4 + 4 C_4 C_5 C_L L_L R_4 R_L g_m r_o s^4 + 2 C_4 C_5 C_L L_L R_4 r_o s^4 + 2 C_4 C_5 L_L R_4 r_$ 

10.301 INVALID-ORDER-301  $Z(s) = \left(\infty, \infty, \infty, R_4 + \frac{1}{C_4 s}, L_5 s + \frac{1}{C_5 s}, \frac{R_L \left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$ 

10.302 INVALID-ORDER-302  $Z(s) = \left(\infty, \infty, \infty, R_4 + \frac{1}{C_4 s}, \frac{L_5 s}{C_5 L_5 s^2 + 1}, R_L\right)$ 

 $H(s) = -\frac{R_L \left( C_4 R_4 s + 1 \right) \left( C_5 L_5 r_o s^2 - L_5 g_m r_o s - L_5 s + r_o \right)}{2 C_4 C_5 L_5 R_4 R_L g_m r_o s^3 + 4 C_4 C_5 L_5 R_4 r_o s^3 + 2 C_4 C_5 L_5 R_L r_o s^3 + 2 C_4 C_5 L_5 R_L g_m r_o s^2 + 2 C_4 L_5 R_4 g_m r_o s^2 + 2 C_4 L_5 R_L g_m r_o s^2 + 2 C_4 L_5 R_L g_m r_o s^2 + 2 C_4 L_5 R_L g_m r_o s^2 + 2 C_4 R_4 R_L g_m r_o s^2 + 2 C_5 R_L g_m r_o s^2$ 

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10.303 INVALID-ORDER-303 Z(s) = \left(\infty, \infty, \infty, R_4 + \frac{1}{C_4 s}, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{1}{C_L s}\right)
```

$$H(s) = -\frac{\left(C_4 R_4 s + 1\right) \left(C_5 L_5 r_o s^2 - L_5 g_m r_o s - L_5 s + r_o\right)}{C_4 C_5 C_L L_5 R_4 r_o s^4 + 2 C_4 C_5 L_5 R_4 g_m r_o s^3 + 4 C_4 C_5 L_5 r_o s^3 + 2 C_4 L_5 R_4 g_m r_o s^3 + 2 C_4 L_5 g_m r_o s^2 + 2 C$$

**10.304** INVALID-ORDER-304 
$$Z(s) = \left(\infty, \infty, \infty, R_4 + \frac{1}{C_4 s}, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{R_L}{C_L R_L s + 1}\right)$$

$$H(s) = -\frac{R_L \left( C_4 R_4 s + 1 \right) \left( C_5 L_5 r_o s^2 - L_5 g_m r_o s - L_5 s + r_o \right)}{C_4 C_5 C_L L_5 R_4 R_L r_o s^4 + 2 C_4 C_5 L_5 R_4 R_L g_m r_o s^3 + 4 C_4 C_5 L_5 R_4 R_L s^3 + C_4 C_L L_5 R_4 R_L g_m r_o s^3 + C_4 C_L R_4 R_L g_m r$$

**10.305** INVALID-ORDER-305 
$$Z(s) = \left(\infty, \infty, \infty, R_4 + \frac{1}{C_4 s}, \frac{L_5 s}{C_5 L_5 s^2 + 1}, R_L + \frac{1}{C_L s}\right)$$

$$H(s) = -\frac{(C_4R_4s + 1)(C_LR_Ls)}{2C_4C_5C_LL_5R_4R_Lg_mr_os^4 + 4C_4C_5C_LL_5R_4r_os^4 + 2C_4C_5C_LL_5R_4r_os^4 + 2C_4C_5L_5R_4g_mr_os^3 + 4C_4C_5L_5R_4g_mr_os^3 + 4C_4C_5L_5R_4g_mr_os^3 + 4C_4C_5L_5R_4g_mr_os^3 + 4C_4C_5L_5R_4g_mr_os^3 + 2C_4C_LL_5R_4g_mr_os^3 + 2C_4$$

**10.306** INVALID-ORDER-306 
$$Z(s) = \left(\infty, \infty, \infty, R_4 + \frac{1}{C_4 s}, \frac{L_5 s}{C_5 L_5 s^2 + 1}, L_L s + \frac{1}{C_L s}\right)$$

$$H(s) = -\frac{(C_4R_4s + 1)(C_LL_s)}{2C_4C_5C_LL_5L_LR_4g_mr_os^5 + 4C_4C_5C_LL_5L_LR_4s^5 + 2C_4C_5C_LL_5L_Lr_os^5 + C_4C_5C_LL_5R_4g_mr_os^3 + 4C_4C_5L_5R_4s^3 + 2C_4C_5L_5R_4s^3 + 2C_4C_LL_5L_Lg_mr_os^4 + 2C_4C_LL_5L_Ls^4 + C_4C_LL_5R_4g_mr_os^3 + 4C_4C_LL_5R_4g_mr_os^3 + 4C_4C_5L_5R_4g_mr_os^3 + 4C_4C_5L_5R_4g_mr_os^3$$

10.307 INVALID-ORDER-307 
$$Z(s) = \left(\infty, \infty, \infty, R_4 + \frac{1}{C_4 s}, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{L_L s}{C_L L_L s^2 + 1}\right)$$

$$H(s) = -\frac{L_{L}s\left(C_{4}R_{4}s+1\right)\left(C_{5}L_{5}r_{o}s^{2}-L_{5}g_{m}r_{o}s-L_{5}s+r_{o}\right)}{C_{4}C_{5}C_{L}L_{5}L_{L}R_{4}r_{o}s^{5}+2C_{4}C_{5}L_{5}L_{L}R_{4}s^{4}+2C_{4}C_{5}L_{5}L_{L}R_{4}s^{4}+2C_{4}C_{5}L_{5}L_{L}R_{4}s^{4}+2C_{4}C_{5}L_{5}L_{L}R_{4}s^{4}+2C_{4}C_{5}L_{5}L_{L}R_{4}s^{4}+2C_{4}C_{5}L_{5}L_{L}R_{4}s^{4}+2C_{4}L_{5}L_{L}R_{4}s^{4}+2C_{4}L_{5}L_{L}R_{4}r_{o}s^{3}$$

**10.308** INVALID-ORDER-308 
$$Z(s) = \left(\infty, \infty, \infty, R_4 + \frac{1}{C_4 s}, \frac{L_5 s}{C_5 L_5 s^2 + 1}, L_L s + R_L + \frac{1}{C_L s}\right)$$

$$H(s) = -\frac{1}{2C_4C_5C_LL_5L_LR_4g_mr_os^5 + 4C_4C_5C_LL_5L_LR_4s^5 + 2C_4C_5C_LL_5L_Lr_os^5 + 2C_4C_5C_LL_5R_4R_Lg_mr_os^4 + 4C_4C_5C_LL_5R_4r_os^4 + 2C_4C_5C_LL_5R_4r_os^4 + 2C_4C_5L_5R_4g_mr_os^3 + 4C_4C_5L_5R_4s^3 + 2C_4C_5L_5R_4s^3 + 2C_4C_5L_5R_4r_os^4 + 2C_4C_5L_5R_5r_os^4 + 2C_4C_5L_5R_5r_os^4 + 2C_5C_5L_5R_5r_os^4 + 2C_5C_5L_5R_5r_os^4 + 2C_5C_5L_5R_5r_os^4 + 2C$$

10.309 INVALID-ORDER-309 
$$Z(s) = \left(\infty, \infty, \infty, R_4 + \frac{1}{C_4 s}, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$$

$$H(s) = -\frac{1}{C_4 C_5 C_L L_5 L_L R_4 R_L r_o s^5 + 2 C_4 C_5 L_5 L_L R_4 R_L g_m r_o s^4 + 4 C_4 C_5 L_5 L_L R_4 R_L s^4 + C_4 C_5 L_5 L_L R_4 r_o s^4 + 2 C_4 C_5 L_5 L_L R_4 r_o s^4 + 2 C_4 C_5 L_5 L_L R_4 R_L r_o s^4 + C_4 C_L L_5 L_L R_4 R_L r_o s^4 + C_4 C_L L_5 L_L R_4 R_L r_o s^4 + C_4 C_L L_5 L_L R_4 R_L r_o s^4 + C_4 C_L L_5 L_L R_4 R_L r_o s^4 + C_4 C_5 L_5 L_L R_4 R$$

10.310 INVALID-ORDER-310 
$$Z(s) = \left(\infty, \infty, \infty, R_4 + \frac{1}{C_4 s}, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$$

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10.311 INVALID-ORDER-311 Z(s) = \left(\infty, \infty, \infty, R_4 + \frac{1}{C_4 s}, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{R_L \left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)
```

$$H(s) = -\frac{1}{2C_4C_5C_LL_5L_LR_4R_Lg_mr_os^5 + 4C_4C_5C_LL_5L_LR_4r_os^5 + 2C_4C_5C_LL_5L_LR_4r_os^5 + 2C_4C_5C_LL_5L_LR_4r_os^5 + 2C_4C_5C_LL_5L_LR_4r_os^5 + 2C_4C_5L_5R_4R_Lg_mr_os^3 + 4C_4C_5L_5R_4R_Lg_mr_os^3 + 4C_4C_5R_4R_Lg_mr_os^3 + 4C_4C_5R$$

**10.312** INVALID-ORDER-312 
$$Z(s) = \left(\infty, \infty, \infty, R_4 + \frac{1}{C_4 s}, L_5 s + R_5 + \frac{1}{C_5 s}, R_L\right)$$

$$H(s) = \frac{R_L \left( C_4 R_4 s + 1 \right) \left( C_5 L_5 g_m r_o s^2 + C_5 L_5 s^2 + C_5 R_5 g_m r_o s + C_5 R_5 s - C_5 r_o s + g_m r_o + 1 \right)}{C_4 C_5 L_5 R_4 g_m r_o s^3 + C_4 C_5 L_5 R_4 g^3 + 2 C_4 C_5 L_5 R_L g_m r_o s^3 + 2 C_4 C_5 R_4 R_5 g_m r_o s^2 + 2 C_4 C_5 R_4 R_5 g^2 + 2 C_4 C_5 R_5 R_4 g^2 + 2 C_4 C_5 R_5 R_5 g^2 + 2 C_4 C_5 R_5 g^2 + 2 C_4 C_5 R_5 R_5 g^2 + 2 C_5 R_5 g^2 +$$

10.313 INVALID-ORDER-313 
$$Z(s) = \left(\infty, \infty, \infty, R_4 + \frac{1}{C_4 s}, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{1}{C_L s}\right)$$

$$H(s) = \frac{\left(C_4 R_4 s + 1\right) \left(C_5 L_5 g_m r_o s^2 + C_5 L_5 s^2 + C_5 R_5 g_m r_o s + C_5 R_5 s - C_5 r_o s + g_m r_o + 1\right)}{s \left(C_4 C_5 C_L L_5 R_4 g_m r_o s^3 + C_4 C_5 C_L L_5 R_4 g_m r_o s^2 + C_4 C_5 C_L R_4 R_5 g_m r_o s^2 + 2 C_4 C_5 L_5 g_m r_o s^2 + 2 C_4 C_5 R_4 g_m r_o s + 4 C_4 C_5 R_4 g_m r_o s + 2 C_4 C_5 R_5 g_m$$

10.314 INVALID-ORDER-314 
$$Z(s) = \left(\infty, \infty, \infty, R_4 + \frac{1}{C_4 s}, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{R_L}{C_L R_L s + 1}\right)$$

$$H(s) = \frac{1}{C_4 C_5 C_L L_5 R_4 R_L g_m r_o s^4 + C_4 C_5 C_L L_5 R_4 R_L s^4 + C_4 C_5 C_L R_4 R_5 R_L g_m r_o s^3 + C_4 C_5 C_L R_4 R_5 R_L s^3 + C_4 C_5 C_L R_4 R_5 R_L s^3 + C_4 C_5 L_5 R_4 g_m r_o s^3 + C_4 C_$$

**10.315** INVALID-ORDER-315 
$$Z(s) = \left(\infty, \infty, \infty, R_4 + \frac{1}{C_4 s}, L_5 s + R_5 + \frac{1}{C_5 s}, R_L + \frac{1}{C_L s}\right)$$

$$H(s) = \frac{(C_{1})^{2}}{s\left(C_{4}C_{5}C_{L}L_{5}R_{4}g_{m}r_{o}s^{3} + C_{4}C_{5}C_{L}L_{5}R_{4}s^{3} + 2C_{4}C_{5}C_{L}L_{5}R_{L}g_{m}r_{o}s^{3} + 2C_{4}C_{5}C_{L}L_{5}R_{L}s^{3} + 2C_{4}C_{5}C_{L}L_{5}R_{L}s^{$$

**10.316** INVALID-ORDER-316 
$$Z(s) = \left(\infty, \infty, \infty, R_4 + \frac{1}{C_4 s}, L_5 s + R_5 + \frac{1}{C_5 s}, L_L s + \frac{1}{C_L s}\right)$$

$$H(s) = \frac{(C_{CL} + C_{CL} +$$

10.317 INVALID-ORDER-317 
$$Z(s) = \left(\infty, \infty, \infty, R_4 + \frac{1}{C_4 s}, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1}\right)$$

$$H(s) = \frac{1}{C_4 C_5 C_L L_5 L_L R_4 g_m r_o s^5 + C_4 C_5 C_L L_5 L_L R_4 s^5 + C_4 C_5 C_L L_L R_4 R_5 g_m r_o s^4 + C_4 C_5 C_L L_L R_4 R_5 s^4 + C_4 C_5 C_L L_L R_4 r_o s^4 + 2 C_4 C_5 L_L g_m r_o s^4 + 2 C_4 C_5 L_L S^4 + C_4 C_5 L_L S^4 + C_4 C_5 L_L R_4 g_m r_o s^3 + 2 C_4 C_5 L_L R_5 g_m r_o s^3 + 2 C_4 C_5 L_L R_5 g_m r_o s^3 + 2 C_4 C_5$$

**10.318** INVALID-ORDER-318 
$$Z(s) = \left(\infty, \infty, \infty, R_4 + \frac{1}{C_4 s}, L_5 s + R_5 + \frac{1}{C_5 s}, L_L s + R_L + \frac{1}{C_L s}\right)$$

$$H(s) = \frac{1}{s\left(2C_{4}C_{5}C_{L}L_{5}L_{L}g_{m}r_{o}s^{4} + 2C_{4}C_{5}C_{L}L_{5}L_{L}s^{4} + C_{4}C_{5}C_{L}L_{5}R_{4}g_{m}r_{o}s^{3} + 2C_{4}C_{5}C_{L}L_{5}R_{L}g_{m}r_{o}s^{3} + 2C_{4}C_{5}C_{L}L_{5}R_{L}g_{m}r_{o}s^{3} + 2C_{4}C_{5}C_{L}L_{L}R_{4}g_{m}r_{o}s^{3} + 2C_{4}C_{5}C_{L}L_{L}R_{4}g_{m}r_{o}s^{3} + 2C_{4}C_{5}C_{L}L_{L}R_{5}g_{m}r_{o}s^{3} + 2C_{4}C_{5}C_{L}$$

- 10.319 INVALID-ORDER-319  $Z(s) = \left(\infty, \infty, \infty, R_4 + \frac{1}{C_4 s}, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$
- 10.320 INVALID-ORDER-320  $Z(s) = \left(\infty, \infty, \infty, R_4 + \frac{1}{C_4 s}, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$
- $H(s) = \frac{1}{C_4 C_5 C_L L_5 L_L R_4 g_m r_o s^5 + C_4 C_5 C_L L_5 L_L R_4 s^5 + 2 C_4 C_5 C_L L_5 L_L R_4 g_m r_o s^5 + 2 C_4 C_5 C_L L_L R_4 R_5 g_m r_o s^4 + 2 C_4 C_5 C_L L_L R_5 R_5 g_m r_o s^4 + 2 C_4 C_5 C_L L_L R_5 R_5 g_m r_o s^4 + 2 C_4 C_5 C_L L_L R_5 g_m r_o s^4 + 2 C_4 C_5 C_L L_L R_5 g_m r_o s^4 + 2 C_4 C_5 C_$
- 10.321 INVALID-ORDER-321  $Z(s) = \left(\infty, \infty, \infty, R_4 + \frac{1}{C_4 s}, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{R_L \left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$
- $H(s) = \frac{1}{C_4 C_5 C_L L_5 L_L R_4 g_m r_o s^5 + C_4 C_5 C_L L_5 L_L R_4 s^5 + 2 C_4 C_5 C_L L_5 L_L R_4 g_m r_o s^5 + 2 C_4 C_5 C_L L_5 L_L R_4 g_m r_o s^5 + 2 C_4 C_5 C_L L_5 R_4 R_L g_m r_o s^4 + C_4 C_5 C_L L_5 R_4 R_L g_m r_o s^4 + C_4 C_5 C_L L_L R_4 R_5 g_m r_o s^4 + C_4 C_5 C_L L_L R_4 R_5 g_m r_o s^4 + 2 C_4 C_5$
- 10.322 INVALID-ORDER-322  $Z(s) = \left(\infty, \infty, \infty, R_4 + \frac{1}{C_4 s}, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, R_L\right)$
- $H(s) = -\frac{R_L \left(C_4 R_4 s + 1\right) \left(C_5 L_5 R_5 r_o s^2 L_5 R_5 g_m r_o s L_5 R_5 s + L_5 R_5 r_o s^2 L_5 R_5 g_m r_o s L_5 R_5 s + L_5 R_5 r_o s^2 L_5 R_5 r_o s^2$
- 10.323 INVALID-ORDER-323  $Z(s) = \left(\infty, \infty, \infty, R_4 + \frac{1}{C_4 s}, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{1}{C_L s}\right)$
- $H(s) = -\frac{(C_4R_4s + 1)\left(C_5L_5R_5r_os^2 L_5R_5g_mr_os L_5R_5s + L_5r_os + R_5r_os + L_5R_5s + L_5r_os + R_5r_os + L_5R_5s + L_5r_os + R_5r_os + L_5R_5s + L_5r_os + L_5R_5s + L_5R_$
- 10.324 INVALID-ORDER-324  $Z(s) = \left(\infty, \infty, \infty, R_4 + \frac{1}{C_4 s}, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{R_L}{C_L R_L s + 1}\right)$
- $H(s) = -\frac{1}{C_4C_5C_LL_5R_4R_5R_Lr_os^4 + 2C_4C_5L_5R_4R_5R_Lg_mr_os^3 + 4C_4C_5L_5R_4R_5R_Ls^3 + C_4C_5L_5R_4R_5R_Lr_os^3 + C_4C_LL_5R_4R_5R_Lg_mr_os^3 + C_4C_LL_5R_4R_5R_Lr_os^3 + C_4C_LL_5R_4R_5R_Lr_os^3$
- 10.325 INVALID-ORDER-325  $Z(s) = \left(\infty, \infty, \infty, R_4 + \frac{1}{C_4 s}, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, R_L + \frac{1}{C_L s}\right)$
- 10.326 INVALID-ORDER-326  $Z(s) = \left(\infty, \infty, \infty, R_4 + \frac{1}{C_4 s}, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, L_L s + \frac{1}{C_L s}\right)$
- $H(s) = -\frac{1}{2C_4C_5C_LL_5L_LR_4R_5g_mr_os^5 + 4C_4C_5C_LL_5L_LR_4g_s^5 + 2C_4C_5C_LL_5L_LR_5r_os^5 + C_4C_5C_LL_5R_4R_5r_os^4 + 2C_4C_5L_5R_4R_5g_mr_os^3 + 4C_4C_5L_5R_4R_5g_mr_os^3 + 4C_4C_5R_5R_5R_5g_mr_os^3 + 4C_4R_5R_5g_mr_os^3 + 4C_4R_5R_5g_mr_os^3 + 4C_4R_5R_5g_mr_os^3 + 4C_4R_5R_5g_mr_os^3 + 4C_4R_5$

- 10.327 INVALID-ORDER-327  $Z(s) = \left(\infty, \infty, \infty, R_4 + \frac{1}{C_4 s}, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{L_L s}{C_L L_L s^2 + 1}\right)$
- $H(s) = -\frac{1}{C_4 C_5 C_L L_5 L_L R_4 R_5 r_o s^5 + 2 C_4 C_5 L_5 L_L R_4 R_5 g_m r_o s^4 + 4 C_4 C_5 L_5 L_L R_4 R_5 s^4 + 2 C_4 C_5 L_5 L_L R_4 R_5 r_o s^3 + C_4 C_L L_5 L_L R_4 R_5 g_m r_o s^4 + C_4 C_L L_5 L_L R_4 R_5 r_o s^3 + 2 C_4 L_5 L_L R_5 r_o s^3 + 2 C_4 L_5 L_L R_5 r_o s^3$
- 10.328 INVALID-ORDER-328  $Z(s) = \left(\infty, \infty, \infty, R_4 + \frac{1}{C_4 s}, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, L_L s + R_L + \frac{1}{C_L s}\right)$
- $H(s) = -\frac{1}{2C_4C_5C_LL_5L_LR_4R_5g_mr_os^5 + 4C_4C_5C_LL_5L_LR_4R_5s^5 + 2C_4C_5C_LL_5L_LR_5r_os^5 + 2C_4C_5C_LL_5R_4R_5R_Lg_mr_os^4 + 4C_4C_5C_LL_5R_4R_5r_os^4 + 2C_4C_5C_LL_5R_4R_5g_mr_os^4 + 4C_4C_5C_LL_5R_4R_5r_os^4 + 2C_4C_5C_LL_5R_4R_5g_mr_os^3 + 4C_4C_5C_LL_5R_4R_5s^3 + 2C_4C_5C_LL_5R_4R_5r_os^4 + 2C_4C_5C_LL_5R_5r_os^4 + 2C_4C_5C_LL_5R_5r_os^4 + 2C_4C_5C_LL_5R_5r_os^4 + 2C_4C_5C_LL_5R_5r_os^4 + 2C_4C_5C_LL_$
- 10.329 INVALID-ORDER-329  $Z(s) = \left(\infty, \infty, \infty, R_4 + \frac{1}{C_4 s}, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$
- $H(s) = -\frac{1}{C_4C_5C_LL_5L_LR_4R_5R_Lr_os^5 + 2C_4C_5L_5L_LR_4R_5R_Lg_mr_os^4 + 4C_4C_5L_5L_LR_4R_5R_Ls^4 + C_4C_5L_5L_LR_4R_5r_os^4 + 2C_4C_5L_5L_LR_4R_5R_Lr_os^4 + C_4C_LL_5L_LR_4R_5R_Lr_os^4 + C_4C_LL_5L_LR_4R_5$
- 10.330 INVALID-ORDER-330  $Z(s) = \left(\infty, \infty, \infty, R_4 + \frac{1}{C_4 s}, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$
- $H(s) = -\frac{1}{2C_4C_5C_LL_5L_LR_4R_5R_Lg_mr_os^5 + 4C_4C_5C_LL_5L_LR_4R_5R_Ls^5 + C_4C_5C_LL_5L_LR_4R_5r_os^5 + 2C_4C_5L_LL_RL_4R_5g_mr_os^4 + 4C_4C_5L_5L_LR_4R_5s^4 + 2C_4C_5L_5L_LR_4R_5r_os^4 + 2C_4C_5L_5L_RR_4R_5r_os^4 + 2C_4C_5L_5L_RR_5r_os^4 + 2C_4$
- 10.331 INVALID-ORDER-331  $Z(s) = \left(\infty, \infty, \infty, R_4 + \frac{1}{C_4 s}, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{R_L \left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$
- $H(s) = -\frac{1}{2C_4C_5C_LL_5L_LR_4R_5R_Lg_mr_os^5 + 4C_4C_5C_LL_5L_LR_4R_5R_Ls^5 + C_4C_5C_LL_5L_LR_4R_5r_os^5 + 2C_4C_5C_LL_5L_LR_5R_Lr_os^5 + C_4C_5C_LL_5R_4R_5R_Lr_os^4 + 2C_4C_5L_5R_4R_5R_Lg_mr_os^3 + 4C_4C_5L_5R_4R_5R_Ls^3 + C_4C_5L_5R_4R_5R_Ls^3 + 2C_4C_5L_5R_4R_5R_Lr_os^4 + 2C_4C_5L_5R_4R_5R_Lr_os^4 + 2C_4C_5L_5R_4R_5R_Ls^3 + C_4C_5L_5R_4R_5R_Ls^3 + 2C_4C_5L_5R_4R_5R_Lr_os^4 + 2C_4C_5L_5R_4R_5R_Ls^3 + 2C_4C_5R_4R_5R_Ls^3 + 2C_4$
- 10.332 INVALID-ORDER-332  $Z(s) = \left(\infty, \infty, \infty, R_4 + \frac{1}{C_4 s}, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, R_L\right)$
- $H(s) = \frac{R_L \left( C_4 R_4 s + 1 \right) \left( C_5 L_5 R_5 g_m r_o s^2 + C_5 L_5 R_5 s^2 C_5 L_5 r_o s^2 + C_5 L_5 R_5 r_o s^2 + C_5 L_5 R_4 R_5 g_m r_o s^3 + C_4 C_5 L_5 R_4 R_5 g_m r_o s^3 + 2 C_4 C_5 L_5 R_5 R_5 g_m r_o s^3 + 2 C_4 C_5 L_5 R_5 R_5 g_m r_o s^3 + 2 C_4 C_5 L_5 R_5 R_5 g_m r_o s^3 + 2 C_4 C_5 L_5 R_5 R_5 g_m r_o s^3 + 2 C_4 C_5 L_5 R_5 g_$
- 10.333 INVALID-ORDER-333  $Z(s) = \left(\infty, \infty, \infty, R_4 + \frac{1}{C_4 s}, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{1}{C_L s}\right)$
- $H(s) = \frac{(C_4R_4s + 1)\left(C_5L_5R_5g_mr_os^2 + C_5L_5R_5s^2 C_5L_5r_os^2 + C_5L_5R_5s^2 C_5L_5r_os^3 + C_4C_LL_5R_4R_5g_mr_os^4 + C_4C_5L_LL_5R_4R_5s^4 + C_4C_5L_5R_4s^3 + 2C_4C_5L_5R_4s^3 + 2C_4C_5L_5R_5s^3 + 2C_4C_5L_5R_4s^3 + 2C_4C_5L_5R_5s^3 + 2C_4C_5L$
- 10.334 INVALID-ORDER-334  $Z(s) = \left(\infty, \infty, \infty, R_4 + \frac{1}{C_4 s}, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{R_L}{C_L R_L s + 1}\right)$
- $H(s) = \frac{1}{C_4C_5C_LL_5R_4R_5R_Lg_mr_os^4 + C_4C_5C_LL_5R_4R_5R_Ls^4 + C_4C_5C_LL_5R_4R_Lr_os^4 + C_4C_5L_5R_4R_5g_mr_os^3 + 2C_4C_5L_5R_4R_Lg_mr_os^3 + 4C_4C_5L_5R_4R_Lg_mr_os^3 + 4C_4C_5L_5R_4R_Lg_mr_os^3 + 4C_4C_5L_5R_4R_Lg_mr_os^3 + 2C_4C_5L_5R_4R_Lg_mr_os^3 + 2C_4C_5L_5R_4R$

- 10.335 INVALID-ORDER-335  $Z(s) = \left(\infty, \infty, \infty, R_4 + \frac{1}{C_4 s}, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, R_L + \frac{1}{C_L s}\right)$
- $H(s) = \frac{1}{C_4 C_5 C_L L_5 R_4 R_5 g_m r_o s^4 + C_4 C_5 C_L L_5 R_4 R_5 s^4 + 2 C_4 C_5 C_L L_5 R_4 R_L g_m r_o s^4 + 4 C_4 C_5 C_L L_5 R_4 R_L s^4 + C_4 C_5 C_L L_5 R_4 R_L s^4 + 2 C_4 C_5 C_L L_5 R_5 R_L g_m r_o s^4 + 2 C_4 C_5 C_L L_5 R_4 R_L s^4$
- **10.336** INVALID-ORDER-336  $Z(s) = \left(\infty, \infty, \infty, R_4 + \frac{1}{C_4 s}, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, L_L s + \frac{1}{C_L s}\right)$
- $H(s) = \frac{1}{2C_4C_5C_LL_5L_LR_4g_mr_os^5 + 4C_4C_5C_LL_5L_LR_4s^5 + 2C_4C_5C_LL_5L_LR_5g_mr_os^5 + 2C_4C_5C_LL_5L_LR_5s^5 + 2C_4C_5C_LL_5C_LL_5L_LR_5s^5 + 2C_4C_5C_LL_5L_LR_5s^5 + 2C_4C_5C_LL_5C$
- 10.337 INVALID-ORDER-337  $Z(s) = \left(\infty, \infty, \infty, R_4 + \frac{1}{C_4 s}, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{L_L s}{C_L L_L s^2 + 1}\right)$
- $H(s) = \frac{1}{C_4 C_5 C_L L_5 L_L R_4 R_5 g_m r_o s^5 + C_4 C_5 C_L L_5 L_L R_4 R_5 s^5 + C_4 C_5 L_L L_L R_4 g_m r_o s^4 + 4 C_4 C_5 L_5 L_L R_4 s^4 + 2 C_4 C_5 L_5 L_L R_5 g_m r_o s^4 + 2 C_4 C_5 L_5 R_4 R_5 g_m r_o s^4 + 2 C_4 C_5 L_5 R_4 R_5$
- 10.338 INVALID-ORDER-338  $Z(s) = \left(\infty, \infty, \infty, R_4 + \frac{1}{C_4 s}, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, L_1 s + R_1 + \frac{1}{C_L s}\right)$
- $H(s) = \frac{1}{2C_4C_5C_LL_5L_LR_4g_mr_os^5 + 4C_4C_5C_LL_5L_LR_4s^5 + 2C_4C_5C_LL_5L_LR_5g_mr_os^5 + 2C_4C_5C_LL_5L_LR_5s^5 + 2C_4C_5C_LL_5L_LR_5s^5 + 2C_4C_5C_LL_5R_4R_5g_mr_os^4 + C_4C_5C_LL_5R_4R_5s^4 + 2C_4C_5C_LL_5R_4R_5g_mr_os^4 + 4C_4C_5C_LL_5R_4R_5s^4 + 2C_4C_5C_LL_5R_4R_5s^4 + 2C_4C_5C_LL_5R_5s^4 + 2C_4C$
- 10.339 INVALID-ORDER-339  $Z(s) = \left(\infty, \infty, \infty, R_4 + \frac{1}{C_4 s}, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$
- $H(s) = \frac{1}{C_4 C_5 C_L L_5 L_L R_4 R_5 R_L g_m r_o s^5 + C_4 C_5 C_L L_5 L_L R_4 R_5 R_L s^5 + C_4 C_5 L_5 L_L R_4 R_5 g_m r_o s^4 + C_4 C_5 L_5 L_L R_5 R_5 g_m r_o s^4 + C_4 C_5 L_5 L_L R_5 R_5 g_m r_o s^4 + C_4 C_5 L_5 L_L R_5 R_5 g_m r_o s^4 + C_4 C_5 L_5 L_L R_5 R_5 g_m r_o s^4 + C_4 C_5 L_5 L_L R_5 g_m r_o s^4 + C_4 C_5 L_5 L_$
- 10.340 INVALID-ORDER-340  $Z(s) = \left(\infty, \infty, \infty, R_4 + \frac{1}{C_4 s}, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$
- $H(s) = \frac{1}{C_4 C_5 C_L L_5 L_L R_4 R_5 g_m r_o s^5 + C_4 C_5 C_L L_5 L_L R_4 R_5 s^5 + 2 C_4 C_5 C_L L_5 L_L R_4 R_L g_m r_o s^5 + 4 C_4 C_5 C_L L_5 L_L R_4 R_L s^5 + C_4 C_5 C_L L_5 L_L R_4 R_L s^5 + 2 C_4 C_5 C_L L_5 L_L R_5 R_L g_m r_o s^5 + 2 C_4 C_5 C_L L_5 L_L R_4 R_L g_m r_o s^5 + 2 C_4 C_5 C_L L_5 L_L R_5 R_L g_m r_o s^5 + 2 C_4 C_5 C_L L_5 L_L R_4 R_L g_m r_o s^5 + 2 C_4 C_5 C_L L_5 L_L R_4 R_L g_m r_o s^5 + 2 C_4 C_5 C_L L_5 L_L R_4 R_L g_m r_o s^5 + 2 C_4 C_5 C_L L_5 L_L R_4 R_L g_m r_o s^5 + 2 C_4 C_5 C_L L_5 L_L R_4 R_L g_m r_o s^5 + 2 C_4 C_5 C_L L_5 L_L R_4 R_L g_m r_o s^5 + 2 C_4 C_5 C_L L_5 L_L R_4 R_L g_m r_o s^5 + 2 C_4 C_5 C_L L_5 L_L R_4 R_L g_m r_o s^5 + 2 C_4 C_5 C_L L_5 L_L R_5 R_L g_m r_o s^5 + 2 C_4 C_5 C_L L_5 L_L R_4 R_L g_m r_o s^5 + 2 C_4 C_5 C_L L_5 L_L R_4 R_L g_m r_o s^5 + 2 C_4 C_5 C_L L_5 L_L R_4 R_L g_m r_o s^5 + 2 C_4 C_5 C_L L_5 L_L R_4 R_L g_m r_o s^5 + 2 C_4 C_5 C_L L_5 L_L R_4 R_L g_m r_o s^5 + 2 C_4 C_5 C_L L_5 L_L R_4 R_L g_m r_o s^5 + 2 C_4 C_5 C_L L_5 L_L R_4 R_L g_m r_o s^5 + 2 C_4 C_5 C_L L_5 L_L R_4 R_L g_m r_o s^5 + 2 C_4 C_5 C_L L_5 L_L R_4 R_L g_m r_o s^5 + 2 C_4 C_5 C_L L_5 L_L R_4 R_L g_m r_o s^5 + 2 C_4 C_5 C_L L_5 L_L R_4 R_L g_m r_o s^5 + 2 C_4 C_5 C_L L_5 L_L R_4 R_L g_m r_o s^5 + 2 C_4 C_5 C_L L_5 L_L R_5 R_L g_m r_o s^5 + 2 C_4 C_5 C_L L_5 L_L R_5 R_L g_m r_o s^5 + 2 C_4 C_5 C_L L_5 L_L R_5 R_L g_m r_o s^5 + 2 C_4 C_5 C_L L_5 L_L R_5 R_L g_m r_o s^5 + 2 C_4 C_5 C_L L_5 L_L R_5 R_L g_m r_o s^5 + 2 C_4 C_5 C_L L_5 L_L R_5 R_L g_m r_o s^5 + 2 C_4 C_5 C_L L_5 L_L R_5 R_L g_m r_o s^5 + 2 C_4 C_5 C_L L_5 L_L R_5 R_L g_m r_o s^5 + 2 C_4 C_5 C_L L_5 L_L R_5 R_L g_m r_o s^5 + 2 C_4 C_5 C_L L_5 L_L R_5 R_L g_m r_o s^5 + 2 C_4 C_5 C_L L_5 L_L R_5 R_L g_m r_o s^5 + 2 C_4 C_5 C_L L_5 L_L R_5 R_L g_m r_o s^5 + 2 C_4 C_5 C_L L_5 L_L R_5 R_L g_m r_o s^5 + 2 C_4 C_5 C_L L_5 L_L R_5 R_L g_m r_o s^5 + 2 C_4 C_5 C_L L_5 L_L R_5 R_L g_m r_o s^5 + 2 C_4 C_5 C_L L_5 L_L R_5 R_L g_m r_o s^5 + 2 C_4 C_5 C_L L_5 L_L R_5 R_L g_m r_o s^5 + 2 C_4 C_5 C_L L_5 L_L R_5 R_L g_m r_o$
- 10.341 INVALID-ORDER-341  $Z(s) = \left(\infty, \infty, \infty, R_4 + \frac{1}{C_4 s}, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{R_L \left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$
- $H(s) = \frac{1}{C_4 C_5 C_L L_5 L_L R_4 R_5 g_m r_o s^5 + C_4 C_5 C_L L_5 L_L R_4 R_5 s^5 + 2 C_4 C_5 C_L L_5 L_L R_4 R_L g_m r_o s^5 + 4 C_4 C_5 C_L L_5 L_L R_4 R_L g_m r_o s^5 + 2 C_4 C_5 C_L L_5 L_L R_5 R_L g_m r_o s^5 + 2 C_5 C_L L_5 L_L R_5 R_L g_m r_o s^5 + 2 C_5 C_L L_5 L_L R_5 R_$
- 10.342 INVALID-ORDER-342  $Z(s) = \left(\infty, \infty, \infty, R_4 + \frac{1}{C_4 s}, \frac{R_5 \left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, R_L\right)$
- $H(s) = \frac{R_L \left( C_4 R_4 s + 1 \right) \left( C_5 L_5 R_5 g_m r_o s^2 + 2 C_4 C_5 L_5 R_4 R_5 g_m r_o s^3 + 2 C_4 C_5 R_4 R_5 g_m r_o s^3 + 2 C_4 C_5 R_4 R_5 g_m r_o s^3 + 2 C_4 C_5 R_4 R_5 g_m r_o s^3 + 2 C_4 C_5 R_4 R_5 g_m r_o s^3 + 2 C_4 C_5 R_4 R_5 g_m r_o s^3 + 2 C_4 C_5 R_4 R_5 g_m r_o s^3 + 2 C_4 C_5 R_4 R_5 g_m r_o s^3 + 2 C_4 C_5 R_4 R_5 g_m r_o s^3 + 2 C_4 C_5 R_4 R_5 g_m r_o s^3 + 2 C_4 C_5 R_4 R_5 g_m r_o s^3 + 2 C_4 C_5 R_4 R_5 g_m r_o s^3 + 2 C_4 C_5 R_4 g_m r_o s^3 + 2 C_4 C_5 R_5 g_m r_o s^3 + 2 C_5$

10.343 INVALID-ORDER-343  $Z(s) = \left(\infty, \infty, \infty, R_4 + \frac{1}{C_4 s}, \frac{R_5 \left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{1}{C_L s}\right)$ 

 $H(s) = \frac{(C_4R_4s + 1)\left(C_5L_5R_5g_mr_os^2 + C_5L_5R_4R_5g_mr_os^2 + C_5L_5R_4g_mr_os^2 + C_5L_5R_4g_mr_os^2 + C_5L_5R_4g_mr_os^2 + C_5L_5R_4g_mr_os^2 + C_4C_5L_5R_4g_mr_os^2 + C_4C_5L_5R_4g_mr_os$ 

- 10.344 INVALID-ORDER-344  $Z(s) = \left(\infty, \infty, \infty, R_4 + \frac{1}{C_4 s}, \frac{R_5 \left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{R_L}{C_L R_L s + 1}\right)$
- $H(s) = \frac{1}{C_4 C_5 C_L L_5 R_4 R_5 R_L g_m r_o s^4 + C_4 C_5 C_L L_5 R_4 R_5 R_L s^4 + C_4 C_5 C_L L_5 R_4 R_5 R_L r_o s^4 + C_4 C_5 L_5 R_4 R_5 g_m r_o s^3 + C_4 C_5 L_5 R_5 g_m r_o s^3 + C_5 L_5 R_5 g_m r_o s^3 + C_5 L_5 R_5 g_m r_o s^3 + C_5 L_5 R_5 g_m r_o s^$
- 10.345 INVALID-ORDER-345  $Z(s) = \left(\infty, \infty, \infty, R_4 + \frac{1}{C_4 s}, \frac{R_5 \left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, R_L + \frac{1}{C_L s}\right)$
- $H(s) = \frac{1}{C_4 C_5 C_L L_5 R_4 R_5 g_m r_o s^4 + C_4 C_5 C_L L_5 R_4 R_5 s^4 + 2 C_4 C_5 C_L L_5 R_4 R_L g_m r_o s^4 + 4 C_4 C_5 C_L L_5 R_4 R_L s^4 + C_4 C_5 C_L L_5 R_4 R_L s^4 + 2 C_4 C_5 C_L L_5 R_5 R_L g_m r_o s^4 + 2 C_4 C_5 C_L L_5 R_4 R_5 R_L g_m r_o s^4 + 2 C_4 C_5 C_L L_5$
- **10.346** INVALID-ORDER-346  $Z(s) = \left(\infty, \infty, \infty, R_4 + \frac{1}{C_4 s}, \frac{R_5 \left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, L_L s + \frac{1}{C_L s}\right)$
- $H(s) = \frac{1}{2C_4C_5C_LL_5L_LR_4g_mr_os^5 + 4C_4C_5C_LL_5L_LR_4s^5 + 2C_4C_5C_LL_5L_LR_5g_mr_os^5 + 2C_4C_5C_LL_5L_LR_5s^5 + 2C_4C_5C_LL_5L_LR_5s^5 + 2C_4C_5C_LL_5R_4R_5g_mr_os^4 + C_4C_5C_LL_5R_4R_5s^4 + C_4C_5C_LL_5R_4R_5s^4 + 2C_4C_5C_LL_5R_4R_5s^4 + 2C_4C_5C_LL_5R_5s^4 + 2C_$
- 10.347 INVALID-ORDER-347  $Z(s) = \left(\infty, \infty, \infty, R_4 + \frac{1}{C_4 s}, \frac{R_5 \left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{L_L s}{C_L L_L s^2 + 1}\right)$
- $H(s) = \frac{1}{C_4 C_5 C_L L_5 L_L R_4 R_5 g_m r_o s^5 + C_4 C_5 C_L L_5 L_L R_4 R_5 s^5 + C_4 C_5 C_L L_5 L_L R_4 r_o s^5 + C_4 C_5 L_L L_R R_4 r_o s^4 + 2 C_4 C_5 L_5 L_L R_4 g_m r_o s^4 + 2 C_4 C_5 L_5 L_L R_5 g_m r_o s^4 + 2 C_5 L_5 L_L R_5 g_m r_o s^4 + 2 C_5 L_5 L_L R_5 g_m r_$
- **10.348** INVALID-ORDER-348  $Z(s) = \left(\infty, \infty, \infty, R_4 + \frac{1}{C_4 s}, \frac{R_5 \left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, L_L s + R_L + \frac{1}{C_L s}\right)$
- $H(s) = \frac{1}{2C_4C_5C_LL_5L_LR_4g_mr_os^5 + 4C_4C_5C_LL_5L_LR_4s^5 + 2C_4C_5C_LL_5L_LR_5g_mr_os^5 + 2C_4C_5C_LL_5L_LR_5s^5 + 2C_4C_5C_LL_5L_LR_5s^5 + 2C_4C_5C_LL_5R_4R_5g_mr_os^4 + C_4C_5C_LL_5R_4R_5g_mr_os^4 + 2C_4C_5C_LL_5R_4R_5g_mr_os^4 + 2C_4C_5C_LL_5R_4g_mr_os^4 + 2C_4C_5C_LL_5R_4g_mr_os^4 + 2C_4C_5C_LL$
- 10.349 INVALID-ORDER-349  $Z(s) = \left(\infty, \infty, \infty, R_4 + \frac{1}{C_4 s}, \frac{R_5 \left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{1}{C_L s + \frac{1}{R_I} + \frac{1}{L_I s}}\right)$
- $H(s) = \frac{1}{C_4 C_5 C_L L_5 L_L R_4 R_5 R_L g_m r_o s^5 + C_4 C_5 C_L L_5 L_L R_4 R_5 R_L s^5 + C_4 C_5 C_L L_5 L_L R_4 R_5 R_L r_o s^4 + C_4 C_5 L_5 L_L R_4 R_5 g_m r_o s^4 + C_4 C_$
- 10.350 INVALID-ORDER-350  $Z(s) = \left(\infty, \infty, \infty, R_4 + \frac{1}{C_4 s}, \frac{R_5 \left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$
- $H(s) = \frac{1}{C_4 C_5 C_L L_5 L_L R_4 R_5 q_m r_o s^5 + C_4 C_5 C_L L_5 L_L R_4 R_5 s^5 + 2 C_4 C_5 C_L L_5 L_L R_4 R_L q_m r_o s^5 + 4 C_4 C_5 C_L L_5 L_L R_4 R_L s^5 + C_4 C_5 C_L L_5 L_L R_4 r_o s^5 + 2 C_4 C_5 C_L L_5 L_L R_5 R_L q_m r_o s^5 + 2 C_4 C_5 C_L L_5 L_L R_4 R_5 r_o s^5 + 2 C_4 C_5 C_L L_5 L_L R_5 R_5 r_o s^5 + 2 C_4 C_5 C_L L_5 L_L R_5 R_5 r_o s^5 + 2 C_4 C_5 C_L L_5 L_L R_5 R_5 r_o s^5 + 2 C_4 C_5 C_L L_5 L_L R_5 R_5 r_o s^5 + 2 C_4 C_5 C_L L_5 L_L R_5 R_5 r_o s^5 + 2 C_4 C_5 C_L L_5 L_L R_5 R_5 r_o s^5 + 2 C_4 C_5 C_L L_5 L_L R_5 R_5 r_o s^5 + 2 C_4 C_5 C_L L_5 L_L R_5 R_5 r_o s^5 + 2 C_4 C_5 C_L L_5 L_L R_5 R_5 r_o s^5 + 2 C_4 C_5 C_L L_5 L_L R_5 R_5 r_o s^5 + 2 C_4 C_5 C_L L_5 L_L R_5 R_5 r_o s^5 + 2 C_4 C_5 C_L L_5 L_L R_5 R_5 r_o s^5 + 2 C_4 C_5 C_L L_5 L_L R_5 R_5 r_o s^5 + 2 C_4 C_5 C_L L_5 L_L R_5 R_5 r_o s^5 + 2 C_4 C_5 C_L L_5 L_L R_5 R_5 r_o s^5 + 2 C_4 C_5 C_L L_5 L_L R_5 R_5 r_o s^5 + 2 C_4 C_5 C_L L_5 L_L R_5 R_5 r_o s^5$

10.351 INVALID-ORDER-351  $Z(s) = \left(\infty, \ \infty, \ \infty, \ R_4 + \frac{1}{C_4 s}, \ \frac{R_5 \left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \ \frac{R_L \left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$ 

 $H(s) = \frac{1}{C_4C_5C_LL_5L_LR_4R_5g_mr_os^5 + C_4C_5C_LL_5L_LR_4R_5s^5 + 2C_4C_5C_LL_5L_LR_4R_Lg_mr_os^5 + 4C_4C_5C_LL_5L_LR_4R_Ls^5 + C_4C_5C_LL_5L_LR_4R_Ls^5 + 2C_4C_5C_LL_5L_LR_4R_Ls^5 + 2C_4C_5$ 

**10.352** INVALID-ORDER-352  $Z(s) = \left(\infty, \infty, \infty, L_4 s + \frac{1}{C_4 s}, R_5, \frac{1}{C_L s}\right)$ 

 $H(s) = \frac{\left(C_4 L_4 s^2 + 1\right) \left(R_5 g_m r_o + R_5 - r_o\right)}{C_4 C_L L_4 R_5 g_m r_o s^3 + C_4 C_L L_4 R_5 s^3 + C_4 C_L L_4 r_o s^3 + 2C_4 L_4 g_m r_o s^2 + 4C_4 L_4 s^2 + 2C_4 R_5 g_m r_o s + 2C_4 R_5 s + 2C_4 r_o s + C_L R_5 g_m r_o s + C_L R_5 s + C_L r_o s + 2g_m r_o + 4C_4 L_4 r_o s^3 + 2C_4 r_o s^3 + 2C_4 L_4 r_o s^3 + 2C_4 L_4$ 

10.353 INVALID-ORDER-353  $Z(s) = \left(\infty, \infty, \infty, L_4 s + \frac{1}{C_4 s}, R_5, \frac{R_L}{C_L R_L s + 1}\right)$ 

 $H(s) = \frac{R_L \left( C_4 L_4 s^2 + 1 \right) \left( R_5 g_m r_o + R_5 - r_o \right)}{C_4 C_L L_4 R_5 R_L g_m r_o s^3 + C_4 C_L L_4 R_5 r_o s^3 + C_4 L_4 R_5 g_m r_o s^2 + C_4 L_4 R_5 g_m r_o s^2 + 2 C_4 L_4 R_5 g_m r_o s^2 + 2 C_4 R_5 R_L g_m r_o s + 2 C_4 R_5 R_L g_m r_o s + C_L R_5 R_$ 

**10.354** INVALID-ORDER-354  $Z(s) = \left(\infty, \infty, \infty, L_4 s + \frac{1}{C_4 s}, R_5, R_L + \frac{1}{C_L s}\right)$ 

 $H(s) = \frac{\left(C_4 L_4 s^2 + 1\right) \left(C_L R_L s + 1\right) \left(R_5 g_m r_o + R_5 - r_o\right)}{C_4 C_L L_4 R_5 g_m r_o s^3 + C_4 C_L L_4 R_L g_m r_o s^3 + 4 C_4 C_L L_4 R_L s^3 + C_4 C_L L_4 r_o s^3 + 2 C_4 C_L R_5 R_L g_m r_o s^2 + 2 C_4 C_L R_5 R_L s^2 + 2 C_4 C_L R_5 r_o s^2 + 2 C_4 L_4 g_m r_o s^2 + 2 C_4 R_5 g_m r_o s + 2 C_4 R_5 g_m r_o s + C_L R_5 g_m r_o s^2 + 2 C_4 C_L R_5 R_L g_m r_o s^2 + 2 C_4 C_L R_5 R_L g_m r_o s^2 + 2 C_4 R_5 g_m r_o s + 2 C_4 R_5 g_m r_o s + C_L R_5 g_m r_o s^2 + 2 C_4 R_5 g_m r_o s^2 + 2$ 

**10.355** INVALID-ORDER-355  $Z(s) = \left(\infty, \infty, \infty, L_4 s + \frac{1}{C_4 s}, R_5, L_L s + \frac{1}{C_L s}\right)$ 

 $H(s) = \frac{\left(C_{4}L_{4}s^{2}+1\right)\left(C_{L}L_{L}s^{2}+1\right)\left(R_{5}g_{m}r_{o}+R_{5}-r_{o}\right)}{2C_{4}C_{L}L_{4}L_{L}g_{m}r_{o}s^{4}+4C_{4}L_{L}L_{4}S_{5}g_{m}r_{o}s^{3}+C_{4}C_{L}L_{4}R_{5}s^{3}+2C_{4}C_{L}L_{L}R_{5}g_{m}r_{o}s^{3}+2C_{4}C_{L}L_{L}R_{5}s^{3}+2C_{4}C_{L}L_{L}R_{5}s^{3}+2C_{4}C_{L}L_{L}R_{5}s^{3}+2C_{4}L_{L}L_{5}s^{3}+2C_{$ 

**10.356** INVALID-ORDER-356  $Z(s) = \left(\infty, \infty, \infty, L_4 s + \frac{1}{C_4 s}, R_5, \frac{L_L s}{C_L L_L s^2 + 1}\right)$ 

 $H(s) = \frac{L_L s \left(C_4 L_4 s^2 + 1\right) \left(R_5 g_m r_o + R_5 - r_o\right)}{C_4 C_L L_4 L_L R_5 g_m r_o s^4 + C_4 C_L L_4 L_L r_o s^4 + 2 C_4 L_4 L_L g_m r_o s^3 + 4 C_4 L_4 L_L s^3 + C_4 L_4 R_5 g_m r_o s^2 + 2 C_4 L_L R_5 g_m r_o s^2 + 2 C_4 L_L R_5 g_m r_o s^2 + C_L R_5 g_m r_o$ 

**10.357** INVALID-ORDER-357  $Z(s) = \left(\infty, \infty, \infty, L_4 s + \frac{1}{C_4 s}, R_5, L_L s + R_L + \frac{1}{C_L s}\right)$ 

 $H(s) = \frac{\left(C_{4}L_{4}s^{2} + 1\right)\left(C_{L}L_{L}s^{2} + C_{L}R_{L}s + 1\right)\left(R_{5}g_{m}r_{o} + R_{5} - r_{o}\right)}{2C_{4}C_{L}L_{4}L_{2}g_{m}r_{o}s^{4} + 4C_{4}C_{L}L_{4}R_{5}g_{m}r_{o}s^{3} + 2C_{4}C_{L}L_{4}R_{5}g_{m}r_{o}s^{3} + 2C_{4}C_{L}L_{4}R_{5}g_{m}r$ 

**10.358** INVALID-ORDER-358  $Z(s) = \left(\infty, \infty, \infty, L_4 s + \frac{1}{C_4 s}, R_5, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$ 

 $H(s) = \frac{L_L R_L s \left(C_4 L_4 s^2 + 1\right) \left(R_5 g_m r_o + R_5 - r_o\right)}{C_4 C_L L_4 L_L R_5 R_L g_m r_o s^4 + C_4 C_L L_4 L_L R_5 g_m r_o s^3 + C_4 L_4 L_L R_5 g_m r_o s^3 + 4 C_4 L_4 R_5 g_m r_o s^3 + 4 C_4$ 

**10.359** INVALID-ORDER-359  $Z(s) = \left(\infty, \infty, \infty, L_4 s + \frac{1}{C_4 s}, R_5, \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$ 

 $(C_4L_4s^2+1)(R_5g_mr_o)$ 

 $H(s) = \frac{\left(C_4 L_4 s^2 + 1\right) \left(R_5 g_m r_o s^4 + C_4 C_L L_4 L_L R_5 g_m r_o s^4 + C_4 C_L L_4 R_5 g_m r_o s^4 + C_4 C_L R_5 g_m$ 

10.360 INVALID-ORDER-360  $Z(s) = \left(\infty, \infty, \infty, L_4 s + \frac{1}{C_4 s}, R_5, \frac{R_L \left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$ 

**10.361** INVALID-ORDER-361  $Z(s) = \left(\infty, \infty, \infty, L_4 s + \frac{1}{C_4 s}, \frac{1}{C_5 s}, R_L\right)$ 

 $H(s) = \frac{R_L \left( C_4 L_4 s^2 + 1 \right) \left( -C_5 r_o s + g_m r_o + 1 \right)}{2 C_4 C_5 L_4 R_L g_m r_o s^3 + 4 C_4 C_5 L_4 R_L s^3 + C_4 C_5 L_4 r_o s^3 + 2 C_4 C_5 R_L r_o s^2 + C_4 L_4 g_m r_o s^2 + C_4 L_4 s^2 + 2 C_4 R_L g_m r_o s + 2 C_4 R_L s + 2 C_5 R_L g_m r_o s + 4 C_5 R_L s + C_5 r_o s + g_m r_o + 1}$ 

10.362 INVALID-ORDER-362  $Z(s) = \left(\infty, \infty, \infty, L_4 s + \frac{1}{C_{4s}}, \frac{1}{C_{5s}}, \frac{1}{C_{Ls}}\right)$ 

 $H(s) = \frac{\left(C_4 L_4 s^2 + 1\right) \left(-C_5 r_o s + g_m r_o + 1\right)}{s \left(C_4 C_5 C_L L_4 r_o s^3 + 2 C_4 C_5 L_4 g_m r_o s^2 + 4 C_4 C_5 L_4 s^2 + 2 C_4 C_5 r_o s + C_4 C_L L_4 g_m r_o s^2 + C_4 C_L L_4 s^2 + 2 C_4 g_m r_o + 2 C_4 + C_5 C_L r_o s + 2 C_5 g_m r_o + 4 C_5 + C_L g_m r_o + C_L\right)}$ 

**10.363** INVALID-ORDER-363  $Z(s) = \left(\infty, \infty, \infty, L_4 s + \frac{1}{C_4 s}, \frac{1}{C_5 s}, \frac{R_L}{C_L R_L s + 1}\right)$ 

 $H(s) = \frac{R_L \left( C_4 L_4 s^2 + 1 \right) \left( -C_5 r_o s + g_m r_o + 1 \right)}{C_4 C_5 C_L L_4 R_L r_o s^4 + 2 C_4 C_5 L_4 R_L g_m r_o s^3 + 4 C_4 C_5 L_4 R_L s^3 + C_4 C_5 L_4 r_o s^3 + 2 C_4 C_5 R_L r_o s^2 + C_4 C_L L_4 R_L g_m r_o s^3 + C_4 C_L R_L g_m r_o s^3$ 

**10.364** INVALID-ORDER-364  $Z(s) = \left(\infty, \infty, \infty, L_4 s + \frac{1}{C_4 s}, \frac{1}{C_5 s}, R_L + \frac{1}{C_L s}\right)$ 

 $H(s) = \frac{\left(C_4L_4s^2 + 1\right)\left(C_LR_Ls + 1\right)\left(-C_5r_os + g_mr_o + 1\right)}{s\left(2C_4C_5C_LL_4R_Lg_mr_os^3 + 4C_4C_5L_Lt_4r_os^3 + 2C_4C_5L_Lt_ros^2 + 2C_4C_5L_4g_mr_os^2 + 4C_4C_5L_4s^2 + 2C_4C_5t_ros + C_4C_Lt_4g_mr_os^2 + C_4C_Lt_4g_mr_os^2 + 2C_4C_Lt_Lt_s + 2C_4g_mr_o + 2C_4C_Lt_Lt_s + 2C_4g_mr_os + 4C_5C_Lt_Lt_s + C_5C_Lt_t + 2C_4g_mr_os^2 + 2C_4C_Lt_t + 2C_4g_mr_os^2 + 2C_4G_Lt_t + 2C_4g_mr_os^2 + 2C_4g_mr_os^2 + 2C_4G_Lt_t + 2C_4g_mr_os^2 + 2C_4G_L$ 

**10.365** INVALID-ORDER-365  $Z(s) = \left(\infty, \infty, \infty, L_4 s + \frac{1}{C_4 s}, \frac{1}{C_5 s}, L_L s + \frac{1}{C_L s}\right)$ 

 $H(s) = \frac{\left(C_4L_4s^2 + 1\right)\left(C_LL_Ls^2 + 1\right)\left(-C_5r_os + g_mr_o + 1\right)}{s\left(2C_4C_5C_LL_4L_Lg_mr_os^4 + 4C_4C_5L_LL_ros^3 + 2C_4C_5L_LL_ros^3 + 2C_4C_5L_4g_mr_os^2 + 4C_4C_5L_4s^2 + 2C_4C_5r_os + C_4C_LL_4g_mr_os^2 + 2C_4C_LL_Lg_mr_os^2 + 2C_4C_LL_Lg_mr_os^2 + 2C_4C_LL_Lg_mr_os^2 + 2C_4C_LL_Lg_mr_os^2 + 2C_4C_LL_Lg_mr_os^2 + 2C_4C_LL_Lg_mr_os^2 + 4C_5C_LL_Lg_mr_os^2 + 4C_5$ 

10.366 INVALID-ORDER-366  $Z(s) = \left(\infty, \infty, \infty, L_4 s + \frac{1}{C_4 s}, \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1}\right)$ 

 $H(s) = \frac{L_L s \left(C_4 L_4 s^2 + 1\right) \left(-C_5 r_o s + g_m r_o + 1\right)}{C_4 C_5 C_L L_4 L_L r_o s^5 + 2 C_4 C_5 L_4 L_L g_m r_o s^4 + 4 C_4 C_5 L_4 r_o s^3 + 2 C_4 C_5 L_L r_o s^3 + 2 C_4 C_4 L_L g_m r_o s^4 + C_4 C_L L_4 L_L g_m r_o s^4 + C_4 L_4 g_m r_o s^2 + 2 C_4 L_L g_m r_o s^2 + 2 C_4 L_L g_m r_o s^2 + 2 C_4 L_L g_m r_o s^2 + 2 C_5 L_L g_m r_o s^2 + 4 C_5 L_L g_m r_o s^2 + 4 C_5 L_L g_m r_o s^2 + 2 C_4 L_L g_m r_o s^2 + 2 C_4 L_L g_m r_o s^2 + 2 C_4 L_L g_m r_o s^2 + 2 C_5 L_L g_m$ 

**10.367** INVALID-ORDER-367  $Z(s) = \left(\infty, \infty, \infty, L_4 s + \frac{1}{C_4 s}, \frac{1}{C_5 s}, L_L s + R_L + \frac{1}{C_L s}\right)$ 

 $H(s) = \frac{\left(C_4 L_4 s^2 + 1\right) \left(-C_5 r_o s + g_m r_o + 1\right) \left(C_L L_L s^2 + C_L R_L s + 1\right)}{s \left(2C_4 C_5 C_L L_4 L_L g_m r_o s^4 + 4C_4 C_5 C_L L_4 L_L g^4 + 2C_4 C_5 C_L L_4 R_L g_m r_o s^3 + 4C_4 C_5 C_L L_4 r_o s^3 + 2C_4 C_5 C_L L_4$ 

10.368 INVALID-ORDER-368  $Z(s) = \left(\infty, \infty, \infty, L_4 s + \frac{1}{C_4 s}, \frac{1}{C_5 s}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$ 

 $H(s) = \frac{L_L R_L s \left(C_4 L_4 s^2 + 1\right) \left(-C_5 r_o s + g_m r_o + 1\right)}{C_4 C_5 C_L L_4 L_L R_L r_o s^5 + 2 C_4 C_5 L_4 L_L R_L g_m r_o s^4 + 4 C_4 C_5 L_4 L_L R_L s^4 + C_4 C_5 L_4 L_L R_L s^3 + 2 C_4 C_5 L_4 L_L R_L g_m r_o s^4 + C_4 C_4 L_4 L_L R_L g_m r_o s^4 + C_4 L_4 R_L g_m r_o s^4 + C_4$ 

10.369 INVALID-ORDER-369  $Z(s) = \left(\infty, \infty, \infty, L_4 s + \frac{1}{C_4 s}, \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$ 

 $H(s) = \frac{(C_4L_4s^2 + 1)}{2C_4C_5C_LL_4L_LR_Lg_mr_os^5 + 4C_4C_5L_LL_LR_Ls^5 + C_4C_5C_LL_LR_Lr_os^4 + 2C_4C_5L_LL_Rg_mr_os^4 + 4C_4C_5L_4L_Ls^4 + 2C_4C_5L_4R_Lg_mr_os^3 + 4C_4C_5L_4r_os^3 + 2C_4C_5L_Lr_os^3 + 2C_4C_5R_Lr_os^2 + C_4C_LL_LR_Lr_os^4 + 2C_4C_5L_LL_Rg_mr_os^4 + 4C_4C_5L_4R_Lg_mr_os^3 + 4C_4C_5L_4R_Ls^3 + C_4C_5L_4R_Ls^3 + 2C_4C_5L_Lr_os^3 + 2C_4C_5R_Lr_os^3 + 2C_4C_5R_Lr_os^3$ 

10.370 INVALID-ORDER-370  $Z(s) = \left(\infty, \infty, \infty, L_4 s + \frac{1}{C_4 s}, \frac{1}{C_5 s}, \frac{R_L \left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$ 

 $H(s) = \frac{1}{2C_4C_5C_LL_4L_LR_Lg_mr_os^5 + 4C_4C_5L_LL_LR_Ls^5 + C_4C_5C_LL_4L_Lr_os^5 + C_4C_5C_LL_4R_Lr_os^4 + 2C_4C_5L_LR_Lr_os^4 + 2C_4C_5L_4R_Lg_mr_os^3 + 4C_4C_5L_4R_Ls^3 + C_4C_5L_4R_Lg_mr_os^3 + 2C_4C_5R_Lr_os^3 + 2C_4C_5R_Lr_os^4 + 2C_4C_5L_4L_Lg_mr_os^4 + 2C_4C_5L_4R_Lg_mr_os^3 + 4C_4C_5L_4R_Lg_mr_os^3 + 2C_4C_5R_Lr_os^4 + 2C_4C_5L_4R_Lg_mr_os^3 + 2C_4C_5R_Lr_os^4 + 2C_4R_Lr_os^4 + 2C_4C_5R_Lr_os^4 + 2C_4C_5R_Lr_os^4 + 2C_4C_5R_Lr_os^$ 

10.371 INVALID-ORDER-371  $Z(s) = \left(\infty, \infty, \infty, L_4 s + \frac{1}{C_4 s}, \frac{R_5}{C_5 R_5 s + 1}, R_L\right)$ 

 $H(s) = -\frac{R_L \left(C_4 L_4 s^2 + 1\right) \left(C_5 R_5 r_o s - R_5 g_m r_o - R_5 + r_o\right)}{2 C_4 C_5 L_4 R_5 R_L g_m r_o s^3 + 4 C_4 C_5 L_4 R_5 r_o s^3 + 2 C_4 C_5 R_5 R_L r_o s^2 + C_4 L_4 R_5 g_m r_o s^2 + 2 C_4 L_4 R_5 g_m r_o s^2 + 2 C_4 R_5 R_L g_m r_o s^2 + 2 C_4 R_5 R_L g_m r_o s + 2 C_4 R_5 R_L g_m r_o s + 2 C_5 R_5 R_L g_m r_o s + 4 C_5 R_5 R_L g_m r_o s + 4 C_5 R_5 R_L g_m r_o s^2 + 2 C_4 R_5 R_L g_m r_o s^2 + 2 C_4 R_5 R_L g_m r_o s^2 + 2 C_4 R_5 R_L g_m r_o s + 2 C_5 R_5 R_L g_m r_o s^2 + 2 C_5 R_5 R_L g$ 

10.372 INVALID-ORDER-372  $Z(s) = \left(\infty, \infty, \infty, L_4 s + \frac{1}{C_4 s}, \frac{R_5}{C_5 R_5 s + 1}, \frac{1}{C_L s}\right)$ 

 $H(s) = -\frac{\left(C_4L_4s^2 + 1\right)\left(C_5R_5r_os - R_5g_mr_o - R_5 + r_o\right)}{C_4C_5C_LL_4R_5r_os^4 + 2C_4C_5L_4R_5g_mr_os^3 + 4C_4C_5L_4R_5g_mr_os^3 + 2C_4C_5R_5r_os^2 + C_4C_LL_4R_5g_mr_os^3 + 2C_4L_4g_mr_os^2 + 4C_4L_4s^3 + 2C_4R_5g_mr_os + 2C_4R_5s + 2C_4r_os + C_5C_LR_5r_os^2 + 2C_5R_5g_mr_os + 4C_5R_5s + C_LR_5g_mr_os + 2C_4R_5s + 2C_4r_os + 2C_4R_5s +$ 

**10.373** INVALID-ORDER-373  $Z(s) = \left(\infty, \infty, \infty, L_4 s + \frac{1}{C_4 s}, \frac{R_5}{C_5 R_5 s + 1}, \frac{R_L}{C_L R_L s + 1}\right)$ 

 $H(s) = -\frac{R_L \left(C_4 L_4 s^2 + 1\right) \left(C_5 R_5 r_o s - R_5 g_m r_o - R_5 + r_o\right)}{C_4 C_5 C_L L_4 R_5 R_L r_o s^4 + 2 C_4 C_5 L_4 R_5 R_L g_m r_o s^3 + 4 C_4 C_5 L_4 R_5 R_L r_o s^3 + 2 C_4 C_5 R_5 R_L r_o s^3 + 2 C_4 R_5 R_L r_o s^3 + 2 C$ 

10.374 INVALID-ORDER-374  $Z(s) = \left(\infty, \infty, \infty, L_4 s + \frac{1}{C_4 s}, \frac{R_5}{C_5 R_5 s + 1}, R_L + \frac{1}{C_L s}\right)$ 

 $-\frac{1}{2C_{4}C_{5}C_{L}L_{4}R_{5}R_{L}g_{m}r_{o}s^{4}+4C_{4}C_{5}C_{L}L_{4}R_{5}R_{L}s^{4}+C_{4}C_{5}C_{L}L_{4}R_{5}r_{o}s^{4}+2C_{4}C_{5}L_{4}R_{5}g_{m}r_{o}s^{3}+4C_{4}C_{5}L_{4}R_{5}g_{m}r_{o}s^{3}+4C_{4}C_{L}L_{4}R_{5}g_{m}r_{o}$ 

10.375 INVALID-ORDER-375  $Z(s) = \left(\infty, \infty, \infty, L_4 s + \frac{1}{C_4 s}, \frac{R_5}{C_5 R_5 s + 1}, L_L s + \frac{1}{C_L s}\right)$ 

 $\left(C_4L_4s^2+1\right)\left(C_LL_L\right)$ 

 $H(s) = -\frac{(C_4 L L_4 L_5 g_m r_o s^5 + 4 C_4 C_5 L_4 L_4 R_5 g_m r_o s^5 + 4 C_4 C_5 L_4 L_4 R_5 r_o s^4 + 2 C_4 C_5 L_4 L_4 R_5 g_m r_o s^3 + 4 C_4 C_5 L_4 R_5 g_m r_o s^3 + 4 C_4 C_5 L_4 R_5 g_m r_o s^3 + 2 C_4 C_5 L_4 L_4 L_5 g_m r_o s^4 + 4 C_4 L_4 L_4 R_5 g_m r_o s^3 + 2 C_4 C_5 L_4 L_4 R_5 g_m r_o s^3 + 2 C_4 C_5 L_4 L_4 R_5 g_m r_o s^3 + 2 C_4 C_5 L_4 L_4 R_5 g_m r_o s^3 + 2 C_4 C_5 L_4 R_5 g_m r_o s^3 + 2 C_4 C_5 L_4 L_4 R_5 g_m r_o s^3 + 2 C_4 C_5 L_5 R_5 g_m r_o s^3 + 2 C_4 C_5 L_5 R_5 g_m r_o$ 

**10.376** INVALID-ORDER-376  $Z(s) = \left(\infty, \infty, \infty, L_4 s + \frac{1}{C_4 s}, \frac{R_5}{C_5 R_5 s + 1}, \frac{L_L s}{C_L L_L s^2 + 1}\right)$ 

 $H(s) = -\frac{L_L s \left(C_4 L_4 s^2 + 1\right) \left(C_5 R_5 r_o s - R_5 g_m r_o - R_5 + r_o\right)}{C_4 C_5 C_L L_4 L_L R_5 r_o s^5 + 2 C_4 C_5 L_4 L_L R_5 g_m r_o s^4 + 4 C_4 C_5 L_4 L_L R_5 r_o s^3 + 2 C_4 C_5 L_4 L_L R_5 g_m r_o s^4 + C_4 C_L L_4 L_L R_5 g_m r_o s^4 + C_4 C_L L_4 L_L R_5 g_m r_o s^4 + C_4 C_L L_4 L_L R_5 g_m r_o s^3 + 4 C_4 L_4 L_L R_5 g_m r_o s^2 + C_4 L_4 R_5 g_m r_o s^2 + C$ 

10.377 INVALID-ORDER-377  $Z(s) = \left(\infty, \infty, \infty, L_4 s + \frac{1}{C_4 s}, \frac{R_5}{C_5 R_5 s + 1}, L_L s + R_L + \frac{1}{C_L s}\right)$ 

 $H(s) = -\frac{1}{2C_4C_5C_LL_4L_LR_5g_mr_os^5 + 4C_4C_5C_LL_4L_LR_5s^5 + 2C_4C_5C_LL_4R_5R_Lg_mr_os^4 + 4C_4C_5C_LL_4R_5R_Ls^4 + C_4C_5C_LL_4R_5r_os^4 + 2C_4C_5C_LL_4R_5r_os^4 + 2C_4C_5L_4R_5g_mr_os^3 + 4C_4C_5L_4R_5g_mr_os^3 + 4C_4C_5L_4R_5g_mr_os^4 + 4C_4C_5C_LL_4R_5r_os^4 + 2C_4C_5C_LL_4R_5r_os^4 + 2C_4C_5C_LL_4R_5r_os$ 

10.378 INVALID-ORDER-378  $Z(s) = \left(\infty, \infty, \infty, L_4 s + \frac{1}{C_4 s}, \frac{R_5}{C_5 R_5 s + 1}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$ 

 $H(s) = -\frac{1}{C_4C_5C_LL_4L_LR_5R_Lr_os^5 + 2C_4C_5L_4L_LR_5R_Lg_mr_os^4 + 4C_4C_5L_4L_LR_5R_Ls^4 + C_4C_5L_4L_LR_5r_os^4 + C_4C_5L_4R_5R_Lr_os^3 + 2C_4C_5L_LR_5R_Lr_os^3 + C_4C_LL_4L_LR_5R_Lg_mr_os^4 + C_4C_LL_4L_L$ 

10.379 INVALID-ORDER-379  $Z(s) = \left(\infty, \infty, \infty, L_4 s + \frac{1}{C_4 s}, \frac{R_5}{C_5 R_5 s + 1}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$ 

 $H(s) = -\frac{1}{2C_4C_5C_LL_4L_LR_5R_Lg_mr_os^5 + 4C_4C_5L_LL_4L_Rs_5r_os^5 + 2C_4C_5C_LL_4L_Rs_5r_os^5 + 2C_4C_5L_4L_Rs_5r_os^5 + 2C_4C_5L_4L_Rs_5r_os^4 + 2C_4C_5L_4L_Rs_5r_os^4 + 4C_4C_5L_4L_Rs_5r_os^3 + 4C_4C_5L_4R_5r_os^3 + 4C_4C_5L_4R_5r_os^3 + 2C_4C_5L_4R_5r_os^3 + 2C_4C_5L_4R_5r_$ 

10.380 INVALID-ORDER-380  $Z(s) = \left(\infty, \infty, \infty, L_4 s + \frac{1}{C_4 s}, \frac{R_5}{C_5 R_5 s + 1}, \frac{R_L \left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$ 

 $H(s) = -\frac{1}{2C_4C_5C_LL_4L_LR_5R_Lg_mr_os^5 + 4C_4C_5C_LL_4L_LR_5R_Ls^5 + C_4C_5C_LL_4L_Rs_Rl_ss^5 + C_4C_5C_LL_4R_5R_Lr_os^4 + 2C_4C_5L_4R_5R_Lr_os^4 + 2C_4C_5L_4R_5R_Lg_mr_os^3 + 4C_4C_5L_4R_5R_Ls^3 + C_4C_5L_4R_5R_Lr_os^4 + 2C_4C_5L_4L_Rs_Rl_ss^3 + C_4C_5L_4R_5R_Ls^3 + C_4C_5$ 

**10.381** INVALID-ORDER-381  $Z(s) = \left(\infty, \infty, \infty, L_4 s + \frac{1}{C_4 s}, R_5 + \frac{1}{C_5 s}, R_L\right)$ 

 $H(s) = \frac{R_L \left( C_4 L_4 s^2 + 1 \right) \left( C_5 R_5 g_m r_o s + C_5 R_5 s - C_5 r_o s + g_m r_o + 1 \right)}{C_4 C_5 L_4 R_5 g_m r_o s^3 + C_4 C_5 L_4 R_5 g_m r_o s^3 + 4 C_4 C_5 L_4 R_L g_m r_o s^3 + 2 C_4 C_5 R_5 R_L g_m r_o s^2 + 2 C_4 C_5 R_5 R_L g^2 + 2 C_4 C_5 R_L r_o s^2 + C_4 L_4 g_m r_o s^2 + 2 C_4 R_L g_m r_o s + 2 C_4 R_L g_m r_o s + C_5 R_5 g_m r_o s + C_5 R_5 g_m r_o s + 4 C_5 R_L g_m r_o s + 4 C_5 R_L g_m r_o s^2 + 2 C_4 R_L g_m r_o s^2 + 2$ 

**10.382** INVALID-ORDER-382  $Z(s) = \left(\infty, \infty, \infty, L_4 s + \frac{1}{C_4 s}, R_5 + \frac{1}{C_5 s}, \frac{1}{C_L s}\right)$ 

 $H(s) = \frac{\left(C_4L_4s^2 + 1\right)\left(C_5R_5g_mr_os + C_5R_5s - C_5r_os + g_mr_o + 1\right)}{s\left(C_4C_5C_LL_4R_5g_mr_os^3 + C_4C_5L_L4R_5s^3 + C_4C_5L_L4r_os^3 + 2C_4C_5L_4g_mr_os^2 + 4C_4C_5L_4s^2 + 2C_4C_5R_5g_mr_os + 2C_4C_5r_os + C_4C_LL_4g_mr_os^2 + C_4C_LL_4s^2 + 2C_4g_mr_o + 2C_4 + C_5C_LR_5g_mr_os + C_5C_LR_5s + C_5C_Lr_os + 2C_5g_mr_o + 4C_5 + C_5C_LR_5g_mr_os + 2C_4C_5R_5g_mr_os + 2C_4C_$ 

10.383 INVALID-ORDER-383  $Z(s) = \left(\infty, \infty, \infty, L_4 s + \frac{1}{C_{48}}, R_5 + \frac{1}{C_{58}}, \frac{R_L}{C_{LR_L s + 1}}\right)$ 

 $R_L \left( C_4 L_4 s^2 + 1 \right) \left( C_5 R_5 g_m r_o s + C_5 R_5 s - C_5 r_o s + g_m r_o s + G_5 R_5 s - C_5 r_o s + g_m r_o s + G_5 R_5 s - G_5 R_5 R_5 R_5 s - G_5 R_5 R_5 R_5 R_5 R_5 R_5 R_5 R_5$  $H(s) = \frac{R_L \left( C_4 L_4 s^2 + 1 \right) \left( C_5 R_5 g_m r_o s + C_5 R_5 s - C_5 r_o s + g_m r_o s + C_5 R_5 r_o s$ 

10.384 INVALID-ORDER-384  $Z(s) = \left(\infty, \infty, \infty, L_4 s + \frac{1}{C_4 s}, R_5 + \frac{1}{C_5 s}, R_L + \frac{1}{C_L s}\right)$ 

 $H(s) = \frac{\left(C_4 L_4 s^2 + 1\right) \left(C_L R_L s + 1\right) \left(C_5 R_5 g_m r_o s + C_5 R_5 s - C_5 r_o s + g_m r_o s + C_5 R_5 s - C_5 r_o s + g_m r_o s + C_5 R_5 g_m r_o s + C_5$ 

10.385 INVALID-ORDER-385  $Z(s) = \left(\infty, \infty, \infty, L_4 s + \frac{1}{C_4 s}, R_5 + \frac{1}{C_5 s}, L_L s + \frac{1}{C_L s}\right)$ 

 $H(s) = \frac{(C_4L_4s^2 + 1)(C_LL_Ls^2 + 1)(C_5R_5g_mr_os + C_5R_5s - C_5r_os + g_mr_os + C_5R_5s - C_5r_os + g_mr_os + C_5R_5s - C_5r_os + g_mr_os + G_5R_5s - G_5r_os + G_5R_5s - G_5R_5s$ 

**10.386** INVALID-ORDER-386  $Z(s) = \left(\infty, \infty, \infty, L_4 s + \frac{1}{C_4 s}, R_5 + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1}\right)$ 

 $H(s) = \frac{L_L s \left(C_4 L_4 s^2 + 1\right) \left(C_5 R_5 g_m r_o s + C_5 R_5 s - C_5 r_o s + g_n r_o s^2 + C_4 C_5 L_L L_L R_5 g_m r_o s^3 + C_4 C_5 L_L R_5 g_m r_o s$ 

10.387 INVALID-ORDER-387  $Z(s) = \left(\infty, \infty, \infty, L_4 s + \frac{1}{C_4 s}, R_5 + \frac{1}{C_5 s}, L_L s + R_L + \frac{1}{C_L s}\right)$ 

 $H(s) = \frac{1}{s\left(2 C_4 C_5 C_L L_4 L_L g_m r_o s^4 + 4 C_4 C_5 C_L L_4 L_L s^4 + C_4 C_5 C_L L_4 R_5 g_m r_o s^3 + 2 C_4 C_5 C_L L_4 R_L g_m r_o s^3 + 4 C_4 C_5 C_L L_4 R_L g_m r_o s^3 + 2 C_4 C_5 C_L L_4 R_5 g_m r_o s^3 + 2 C_4 C_5 C_L L_5 R_5 g_m r_o s^3 + 2 C_4 C_5 C_L L_5 R_5 g_m r_o s^3 + 2 C_4 C_5 C_L L_5 R_5 g_m r_o s^3 + 2 C_4 C_5 C_L L_5 R_5 g_m r_o s^3 + 2 C_5 C_L L_5 R_5 g_m r_o s^3 + 2 C_5 C_L L_5 R_5 g_m r_o s$ 

10.388 INVALID-ORDER-388  $Z(s) = \left(\infty, \infty, \infty, L_4 s + \frac{1}{C_4 s}, R_5 + \frac{1}{C_5 s}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$ 

 $H(s) = \frac{1}{C_4 C_5 C_L L_4 L_L R_5 R_L g_m r_o s^5 + C_4 C_5 L_4 L_L R_5 R_L s^5 + C_4 C_5 L_4 L_L R_5 g_m r_o s^4 + C_4 C_5 L_4 R_5 g_m$ 

10.389 INVALID-ORDER-389  $Z(s) = \left(\infty, \infty, \infty, L_4 s + \frac{1}{C_4 s}, R_5 + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$ 

 $H(s) = \frac{1}{C_4 C_5 C_L L_4 L_L R_5 g_m r_o s^5 + C_4 C_5 C_L L_4 L_L R_5 s^5 + 2 C_4 C_5 C_L L_4 L_L R_L g_m r_o s^5 + 4 C_4 C_5 C_L L_4 L_L R_5 s^5 + 2 C_4 C_5 C_L L_4 L_4 L_5 s^5 + 2 C_4 C_5 C_L L_4 L_4 L_5 s^5 + 2 C_4 C_5 C_L L_4 L_4 L_5 s^5 + 2 C_4 C_5 C_L L_4 L_4 L_5 s^5 + 2 C_4 C_5 C_L L_4 L_5 r_5 s^5 + 2 C_4 C_5 C_L L_4 L_5 r_5 s^5 + 2 C_4 C_5 C_L L_5 r_5 s^5 + 2 C_5 C_$ 

10.390 INVALID-ORDER-390  $Z(s) = \left(\infty, \infty, \infty, L_4 s + \frac{1}{C_4 s}, R_5 + \frac{1}{C_5 s}, \frac{R_L \left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_5 s}}\right)$ 

 $\overline{C_4C_5C_LL_4L_LR_5g_mr_os^5 + C_4C_5C_LL_4L_LR_5s^5 + 2C_4C_5C_LL_4L_LR_Lg_mr_os^5 + 4C_4C_5C_LL_4L_Lr_os^5 + C_4C_5C_LL_4R_5R_Lg_mr_os^4 + C_4C_5C_LL_4R_5R_Ls^4 + C_4C_5C_LL_4R_5R_Ls^4 + C_4C_5C_LL_4R_5R_Ls^4 + 2C_4C_5C_LL_4R_5R_Ls^4 + 2C_4C$ 

$$H(s) = \frac{R_L \left( C_4 L_4 s^2 + 1 \right) \left( C_5 L_5 g_m r_o s^2 + C_5 L_5 s^2 - C_5 r_o s + g_m r_o + 1 \right)}{C_4 C_5 L_4 L_5 g_m r_o s^4 + C_4 C_5 L_4 R_L g_m r_o s^3 + 4 C_4 C_5 L_4 R_L s^3 + C_4 C_5 L_4 r_o s^3 + 2 C_4 C_5 L_5 R_L g_m r_o s^3 + 2 C_4 C_5 R_L g_m r_o s^3 + 2 C_4 C_5 R_L g_m r_o s^2 + C_4 L_4 g_m r_o s^2 + C_4 L_4 g_m r_o s^2 + C_5 L_5 g_$$

**10.392** INVALID-ORDER-392 
$$Z(s) = \left(\infty, \infty, \infty, L_4 s + \frac{1}{C_4 s}, L_5 s + \frac{1}{C_5 s}, \frac{1}{C_L s}\right)$$

$$H(s) = \frac{\left(C_4L_4s^2 + 1\right)\left(C_5L_5g_mr_os^2 + C_5L_5s^2 - C_5r_os + g_mr_o + 1\right)}{s\left(C_4C_5C_LL_4L_5g_mr_os^4 + C_4C_5L_Lt_4r_os^3 + 2C_4C_5L_4g_mr_os^2 + 4C_4C_5L_4s^2 + 2C_4C_5L_5s^2 + 2$$

10.393 INVALID-ORDER-393 
$$Z(s) = \left(\infty, \infty, \infty, L_4 s + \frac{1}{C_4 s}, L_5 s + \frac{1}{C_5 s}, \frac{R_L}{C_L R_L s + 1}\right)$$

$$H(s) = \frac{R_L \left( C_4 L_4 s^2 + 1 \right) \left( C_5 L_5 g_m r_o s^2 + C_5 L_5 s^2 - C_5 r_o s + g_m r_o s^2 + C_5 L_5 r_o s^2 + C_5 L_4 r_o s^3 + C_4 C_5 r_o s^3 + C_4 r_o s^$$

10.394 INVALID-ORDER-394 
$$Z(s) = \left(\infty, \infty, \infty, L_4 s + \frac{1}{C_4 s}, L_5 s + \frac{1}{C_5 s}, R_L + \frac{1}{C_L s}\right)$$

$$H(s) = \frac{\left(C_4 L_4 s^2 + 1\right) \left(C_L R_L s + 1\right) \left(C_5 L_5 g_m r_o s^2 + C_5 L_5 s^2 - C_5 r_o s + g_m r_o s^2 + C_5 L_5 r_o s^2 + C_5 L_5$$

10.395 INVALID-ORDER-395 
$$Z(s) = \left(\infty, \infty, \infty, L_4 s + \frac{1}{C_4 s}, L_5 s + \frac{1}{C_5 s}, L_L s + \frac{1}{C_L s}\right)$$

$$H(s) = \frac{\left(C_4 L_4 s^2 + 1\right) \left(C_L L_L s^2 + 1\right) \left(C_5 L_5 g_m r_o s^2 + C_5 L_5 s^2 - C_5 r_o s + g_1 r_o s^2 + C_5 L_5 r_o s^2 + 2 C_4 C_5 L_4 L_5 r_o s^4 + 2 C_4 C_5 L_5 L_5 r_o s^4 + 2 C_4 L_5 L_5 L_5 r_o s^4 + 2 C_4 L_5 L_5 r_o s^4 + 2 C_5 L_5 r_o$$

10.396 INVALID-ORDER-396 
$$Z(s) = \left(\infty, \infty, \infty, L_4 s + \frac{1}{C_4 s}, L_5 s + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1}\right)$$

$$H(s) = \frac{L_L s \left(C_4 L_4 s^2 + 1\right) \left(C_5 L_5 g_m r_o s^2 + C_5 L_5 s^2 - C_5 r_o s + g_a L_b r_o s^4 + 2 C_4 C_5 L_4 L_5 L_b r_o s^4 + 2 C_4 C_5 L_4 L_5 r_o s^4 + 2 C_4 C_5 L_5 L_5 r_o s^4 + 2 C_5 L_5 r_o s^4 + 2$$

10.397 INVALID-ORDER-397 
$$Z(s) = \left(\infty, \infty, \infty, L_4 s + \frac{1}{C_4 s}, L_5 s + \frac{1}{C_5 s}, L_L s + R_L + \frac{1}{C_L s}\right)$$

$$H(s) = \frac{1}{s\left(C_{4}C_{5}C_{L}L_{4}L_{5}g_{m}r_{o}s^{4} + C_{4}C_{5}C_{L}L_{4}L_{5}s^{4} + 2C_{4}C_{5}C_{L}L_{4}L_{L}g_{m}r_{o}s^{4} + 4C_{4}C_{5}C_{L}L_{4}L_{L}s^{4} + 2C_{4}C_{5}C_{L}L_{4}R_{L}g_{m}r_{o}s^{3} + 4C_{4}C_{5}C_{L}L_{4}R_{L}g_{m}r_{o}s^{3} + 2C_{4}C_{5}C_{L}L_{5}L_{L}g_{m}r_{o}s^{4} + 2C_{4}C_{5}C_{L}L_{5}L_{L}s^{4} + 2C_{4}C_{5}C_{L}L_{5}L_{5}L_{5}s^{4} + 2C_{4}C_{5}C_{L}L_{5}L_{5}L_{5}L_{5}s^{4} + 2C_{4}C_{5}C_{L}L_{5}L_{5}L_{5}L_{5}s^{4} + 2C_{4}C_{5}C_{L}L_{5}L_{5}L_{5}L_{5}s^{4} + 2C_{4}C_{5}C_{L}L_{5}L_{5}L_{5}L_{5}s^{4} + 2C_{4}C_{5}C_{L}L_{5}L_{5}L_{5}L_{5}L_{5}L_{5}s^{4} + 2C_{4}C_{5}C_{L}L_{5}L_{5}L_{5}L_{5}s^{4} + 2C_{4}C_{5}C_{L}L_{5}L_{5}L_{5}L_{5}$$

10.398 INVALID-ORDER-398 
$$Z(s) = \left(\infty, \infty, \infty, L_4 s + \frac{1}{C_4 s}, L_5 s + \frac{1}{C_5 s}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$$

$$H(s) = \frac{1}{C_4 C_5 C_L L_4 L_5 L_L R_L g_m r_o s^6 + C_4 C_5 C_L L_4 L_5 L_L R_L s^6 + C_4 C_5 L_4 L_5 L_L R_L r_o s^5 + C_4 C_5 L_4 L_5 L_L g_m r_o s^5 + C_4 C_5 L_4 L_5 L_L g_m r_o s^5 + C_4 C_5 L_4 L_5 R_L g_m r_o s^4 + C_4 C_5 L_4 L_4 L_4 R_L g_m r_o s^4 + C_4 C_5 L_4 L_4 L_4 R_L g_m r_o s^4 + C_4 C_5 L_4 L_4 L_4 R_L g_m r_o s^4 + C_4 C_5 L_4 L_4 L_4 R_L g_m r_o s^4 + C_4 C_5 L_4 L_5 R_L g_m r_o s^4 + C_4 C_5 L_4 R_L$$

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10.399 INVALID-ORDER-399 Z(s) = \left(\infty, \infty, \infty, L_4 s + \frac{1}{C_4 s}, L_5 s + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)
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$$H(s) = \frac{1}{C_4 C_5 C_L L_4 L_5 L_L g_m r_o s^6 + C_4 C_5 C_L L_4 L_L L_L g_m r_o s^5 + 4 C_4 C_5 C_L L_4 L_L R_L g_m r_o s^5 + 2 C_4 C_5 C_L R_L g_m r_o s^5 + 2 C_$$

10.400 INVALID-ORDER-400 
$$Z(s) = \left(\infty, \infty, \infty, L_4 s + \frac{1}{C_4 s}, L_5 s + \frac{1}{C_5 s}, \frac{R_L \left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$$

$$H(s) = \frac{1}{C_4 C_5 C_L L_4 L_5 L_L g_m r_o s^6 + C_4 C_5 C_L L_4 L_5 L_L s^6 + C_4 C_5 C_L L_4 L_5 R_L g_m r_o s^5 + C_4 C_5 C_L L_4 L_L R_L g_$$

**10.401** INVALID-ORDER-401 
$$Z(s) = \left(\infty, \infty, \infty, L_4 s + \frac{1}{C_4 s}, \frac{L_5 s}{C_5 L_5 s^2 + 1}, R_L\right)$$

$$H(s) = -\frac{R_L \left(C_4 L_4 s^2 + 1\right) \left(C_5 L_5 r_o s^2 - L_5 g_m r_o s - L_5 s + r_o\right)}{2 C_4 C_5 L_4 L_5 R_L g^n r_o s^4 + 4 C_4 C_5 L_4 L_5 r_o s^4 + 2 C_4 C_5 L_5 R_L r_o s^3 + C_4 L_4 L_5 g_m r_o s^3 + C_4 L_4 L_5 s^3 + 2 C_4 L_4 R_L g_m r_o s^2 + 4 C_4 L_4 R_L g^2 + C_4 L_4 r_o s^2 + 2 C_4 L_5 R_L g^2 + 2 C_4 L_5 R_L g^2 + 2 C_4 L_5 R_L g^2 + 2 C_5 L_5 R_L g_m r_o s^2 + 4 C_5 L_5 R_L g^2 + 2 C_5 L_5$$

**10.402** INVALID-ORDER-402 
$$Z(s) = \left(\infty, \infty, \infty, L_4 s + \frac{1}{C_4 s}, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{1}{C_L s}\right)$$

$$H(s) = -\frac{\left(C_4L_4s^2 + 1\right)\left(C_5L_5r_os^2 - L_5g_mr_os - L_5s + r_o\right)}{C_4C_5C_LL_4L_5r_os^5 + 2C_4C_5L_4L_5g_mr_os^4 + 4C_4C_5L_4L_5s^4 + 2C_4C_5L_5r_os^3 + C_4C_LL_4L_5g_mr_os^4 + C_4C_LL_4L_5s^4 + C_4C_LL_4r_os^3 + 2C_4L_4g_mr_os^2 + 4C_4L_4s^2 + 2C_4L_5g_mr_os^2 + 2C_4L_5s^2 + 2C_4L_5$$

**10.403** INVALID-ORDER-403 
$$Z(s) = \left(\infty, \infty, \infty, L_4 s + \frac{1}{C_4 s}, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{R_L}{C_L R_L s + 1}\right)$$

$$H(s) = -\frac{R_L \left( C_4 L_4 s^2 + 1 \right) \left( C_5 L_5 r_o s^2 - L_5 g_m r_o s - L_5 s + r_o \right)}{C_4 C_5 C_L L_4 L_5 R_L r_o s^5 + 2 C_4 C_5 L_4 L_5 R_L g_m r_o s^4 + 4 C_4 C_5 L_4 L_5 r_o s^4 + 2 C_4 C_5 L_4 L_5 R_L r_o s^3 + C_4 L_4 L_5 R_L g_m r_o s^4 + C_4 C_L L_4 R$$

**10.404** INVALID-ORDER-404 
$$Z(s) = \left(\infty, \infty, \infty, L_4 s + \frac{1}{C_4 s}, \frac{L_5 s}{C_5 L_5 s^2 + 1}, R_L + \frac{1}{C_L s}\right)$$

$$H(s) = -\frac{(C_4L_4s^2 + 1)(C_LR_Ls_1)}{2C_4C_5C_LL_4L_5R_Ls_1s_2s_1 + 4C_4C_5C_LL_4L_5s_1s_2s_2 + 4C_4C_5C_LL_4L_5s_1s_2s_1 + 4C_4C_5L_4L_5s_1s_2s_1 + 4C_4C_5L_4L_5s_1s_2s_1 + 4C_4C_5L_4L_5s_1s_1s_2s_1 + 4C_4C_5L_4L_5s_1s_1s_2s_1 + 4C_4C_5L_4L_5s_1s_1s_1s_1 + 4C_4C_5L_4L_5s_1s_1s_1s_1 + 4C_4C_5L_4L_5s_1s_1s_1s_1 + 4C_4C_5L_4L_5s_1s_1s_1 + 4C_4C_5L_4L_5s_1s_1s_1 + 4C_4C_5L_4L_5s_1s_1s_1 + 4C_4C_5L_4L_5s_1s_1s_1 + 4C_4C_5L_4L_5s_1s_1 + 4C_4C_5L_4L_5s_1s_1 + 4C_4C_5L_4L_5s_1s_1 + 4C_4C_5L_4L_5s_1s_1 + 4C_4C_5L_4L_5s_1s_1 + 4C_4C_5L_4L_5s_1 + 4C_4C_5L_4c_5L_5s_1 + 4C_4C_5L_5c_5L_5s_1 + 4C_5C_5L_5c_5L_5s_1 + 4C_5C_5L_5c_5L_5s_1 + 4C_5C_5L_5c_5L_5s_1 + 4C_5C_5L_5c_5L_5s_1 +$$

**10.405** INVALID-ORDER-405 
$$Z(s) = \left(\infty, \infty, \infty, L_4 s + \frac{1}{C_4 s}, \frac{L_5 s}{C_5 L_5 s^2 + 1}, L_L s + \frac{1}{C_L s}\right)$$

$$H(s) = -\frac{\left(C_4 L_4 s^2 + 1\right) \left(C_L L_4 s^2$$

10.406 INVALID-ORDER-406 
$$Z(s) = \left(\infty, \infty, \infty, L_4 s + \frac{1}{C_4 s}, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{L_L s}{C_L L_L s^2 + 1}\right)$$

$$H(s) = -\frac{L_L s \left(C_4 L_4 s^2 + 1\right) \left(C_5 L_5 r_o s^2 - L_5 g_m r_o s - L_5 s + r_o\right)}{C_4 C_5 C_L L_4 L_5 L_L r_o s^6 + 2 C_4 C_5 L_4 L_5 L_L g_m r_o s^5 + 4 C_4 C_5 L_4 L_5 L_L s^5 + C_4 C_L L_4 L_5 L_L g_m r_o s^5 + C_4 C_L L_4 L_5 L_L g_m$$

- **10.407** INVALID-ORDER-407  $Z(s) = \left(\infty, \infty, \infty, L_4 s + \frac{1}{C_4 s}, \frac{L_5 s}{C_5 L_5 s^2 + 1}, L_L s + R_L + \frac{1}{C_L s}\right)$
- $H(s) = -\frac{1}{2C_4C_5C_LL_4L_5L_Lg_mr_os^6 + 4C_4C_5C_LL_4L_5L_Ls^6 + 2C_4C_5C_LL_4L_5R_Lg_mr_os^5 + 4C_4C_5C_LL_4L_5R_Ls^5 + C_4C_5C_LL_4L_5r_os^5 + 2C_4C_5C_LL_4L_5R_Lr_os^5 + 2C_4C_5C_LL_5R_Lr_os^5 + 2C_4C_5C_LL_5R_Lr_os^5$
- 10.408 INVALID-ORDER-408  $Z(s) = \left(\infty, \infty, \infty, L_4 s + \frac{1}{C_4 s}, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$
- $H(s) = -\frac{1}{C_4C_5C_LL_4L_5L_LR_Lr_os^6 + 2C_4C_5L_4L_5L_LR_Lg_mr_os^5 + 4C_4C_5L_4L_5L_LR_Ls^5 + C_4C_5L_4L_5L_Lr_os^5 + C_4C_5L_4L_5L_LR_Lr_os^4 + 2C_4C_5L_4L_5L_LR_Lr_os^4 + C_4C_LL_4L_5L_LR_Lg_mr_os^5 + C_4C_LL_4L_5L_LR_Ls^5 + C_4C_LL_4L_5$
- 10.409 INVALID-ORDER-409  $Z(s) = \left(\infty, \infty, \infty, L_4 s + \frac{1}{C_4 s}, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$
- $H(s) = -\frac{1}{2C_4C_5C_LL_4L_5L_LR_Lg_mr_os^6 + 4C_4C_5C_LL_4L_5L_LR_Ls^6 + C_4C_5C_LL_4L_5L_Lr_os^6 + 2C_4C_5L_4L_5L_Lg_mr_os^5 + 4C_4C_5L_4L_5L_Ls^5 + 2C_4C_5L_4L_5L_Ls^5 + 2C_4C_5L_4L_5R_Lg_mr_os^4 + 4C_4C_5L_4L_5R_Ls^4 + C_4C_5L_4L_5r_os^4 + 2C_4C_5L_5L_Lr_os^4 + 2C_4C_5L_5L_Lr_os^4 + 2C_4C_5L_4L_5L_Ls^5 + 2C_4C_5L_4L_5L_Ls$
- 10.410 INVALID-ORDER-410  $Z(s) = \left(\infty, \ \infty, \ \infty, \ L_4 s + \frac{1}{C_4 s}, \ \frac{L_5 s}{C_5 L_5 s^2 + 1}, \ \frac{R_L \left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$
- $H(s) = -\frac{1}{2C_4C_5C_LL_4L_5L_LR_Lg_mr_os^6 + 4C_4C_5C_LL_4L_5L_LR_Ls^6 + C_4C_5C_LL_4L_5L_Lr_os^6 + C_4C_5C_LL_4L_5R_Lr_os^5 + 2C_4C_5C_LL_5L_LR_Lr_os^5 + 2C_4C_5L_4L_5R_Lg_mr_os^4 + 4C_4C_5L_4L_5R_Ls^4 + C_4C_5L_4L_5R_Lr_os^3 + C_4C_LL_4L_5L_Lg_mr_os^5 + C_4C_LL_4L_5L_Lg_mr_os^5 + 2C_4C_5L_4L_5R_Lg_mr_os^4 + 4C_4C_5L_4L_5R_Ls^4 + C_4C_5L_4L_5R_Lr_os^3 + C_4C_LL_4L_5L_Lg_mr_os^5 + C_4C_LL_4L_5L_Lg_mr_os^4 + C_4C_5L_4L_5R_Ls^4 + C_4C_5L_4L_5R_Lr_os^4 + C_4C_5L_4R_5R_Lr_os^4 + C_$
- 10.411 INVALID-ORDER-411  $Z(s) = \left(\infty, \infty, \infty, L_4 s + \frac{1}{C_4 s}, L_5 s + R_5 + \frac{1}{C_5 s}, R_L\right)$
- $H(s) = \frac{R_L \left( C_4 L_4 s^2 + 1 \right) \left( C_5 L_5 g_m r_o s^2 + C_5 L_5 s^2 + C_5 R_5 g_m r_o s + C_5 R_5 s C_5 r_o s + g_m r_o + 1 \right)}{C_4 C_5 L_4 L_5 g_m r_o s^4 + C_4 C_5 L_4 L_5 s^4 + C_4 C_5 L_4 R_5 g_m r_o s^3 + 2 C_4 C_5 L_4 R_5 g_m r_o s^3 + 2 C_4 C_5 L_4 R_5 g_m r_o s^3 + 2 C_4 C_5 L_4 R_5 g_m r_o s^3 + 2 C_4 C_5 R_5 R_L g_m r_o s^3 + 2 C_$
- 10.412 INVALID-ORDER-412  $Z(s) = \left(\infty, \infty, \infty, L_4 s + \frac{1}{C_4 s}, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{1}{C_L s}\right)$
- $H(s) = \frac{\left(C_4L_4s^2 + 1\right)\left(C_5L_5g_mr_os^2 + C_5L_5s^2 + C_5R_5g_mr_os + C_5R_5s C_5r_os + g_mr_o + 1\right)}{s\left(C_4C_5C_LL_4L_5g_mr_os^4 + C_4C_5C_LL_4R_5g_mr_os^3 + C_4C_5L_4g_mr_os^3 + 2C_4C_5L_4g_mr_os^2 + 4C_4C_5L_4s^2 + 2C_4C_5L_5s^2 + 2C_4C_5R_5g_mr_os + 2C_4C_5R_5g_mr_os + 2C_4C_5R_5g_mr_os^2 + 2C_4C_5R_5g_mr_os + 2C_4C_5R_5g_mr_os^2 + 2C_4C_$
- 10.413 INVALID-ORDER-413  $Z(s) = \left(\infty, \infty, \infty, L_4 s + \frac{1}{C_4 s}, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{R_L}{C_L R_L s + 1}\right)$
- $H(s) = \frac{1}{C_4 C_5 C_L L_4 L_5 R_L g_m r_o s^5 + C_4 C_5 C_L L_4 L_5 R_L s^5 + C_4 C_5 C_L L_4 R_5 R_L g_m r_o s^4 + C_4 C_5 C_L L_4 R_5 R_L s^4 + C_4 C_5 C_L L_4 R_5 R_L s^4 + C_4 C_5 L_4 L_5 g_m r_o s^4 + C_4 C_5 L_4 L_5 s^4 + C_4 C_5 L_4 R_5 g_m r_o s^3 + C_4 C_5 L_4 R_$
- 10.414 INVALID-ORDER-414  $Z(s) = \left(\infty, \infty, \infty, L_4 s + \frac{1}{C_4 s}, L_5 s + R_5 + \frac{1}{C_5 s}, R_L + \frac{1}{C_L s}\right)$
- $H(s) = \frac{(C_{4}C_{5}C_{L}L_{4}L_{5}g_{m}r_{o}s^{4} + C_{4}C_{5}C_{L}L_{4}L_{5}s^{4} + C_{4}C_{5}C_{L}L_{4}R_{5}g_{m}r_{o}s^{3} + C_{4}C_{5}C_{L}L_{4}R_{5}g_{m}r_{o}s^{3} + 4C_{4}C_{5}C_{L}L_{4}R_{L}g_{m}r_{o}s^{3} + 2C_{4}C_{5}C_{L}L_{4}R_{L}g_{m}r_{o}s^{3} + 2C_{4}C_{5}C_{L}L_{4}R_{L}g_{m}r_{o}s^{3} + 2C_{4}C_{5}C_{L}L_{5}R_{L}g_{m}r_{o}s^{3} + 2C_{4}C_{5}C_{L}L_{5}R_{$

**10.415** INVALID-ORDER-415  $Z(s) = \left(\infty, \infty, \infty, L_4 s + \frac{1}{C_4 s}, L_5 s + R_5 + \frac{1}{C_5 s}, L_L s + \frac{1}{C_L s}\right)$ 

 $H(s) = \frac{C_{1}}{s\left(C_{4}C_{5}C_{L}L_{4}L_{5}g_{m}r_{o}s^{4} + C_{4}C_{5}C_{L}L_{4}L_{5}s^{4} + 2C_{4}C_{5}C_{L}L_{4}L_{5}s^{4} + 2C_{4}C_{5}$ 

**10.416** INVALID-ORDER-416  $Z(s) = \left(\infty, \infty, \infty, L_4 s + \frac{1}{C_4 s}, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1}\right)$ 

 $H(s) = \frac{1}{C_4 C_5 C_L L_4 L_5 L_L g_m r_o s^6 + C_4 C_5 C_L L_4 L_L R_5 g_m r_o s^5 + C_4 C_5 C_L L_4 L_L R_5 g_m r_o s^5 + C_4 C_5 C_L L_4 L_L R_5 g_m r_o s^5 + C_4 C_5 L_4 L_L g_m r_o s^4 + C_4 C_5 L_4 L_L g_m$ 

10.417 INVALID-ORDER-417  $Z(s) = \left(\infty, \infty, \infty, L_4 s + \frac{1}{C_4 s}, L_5 s + R_5 + \frac{1}{C_5 s}, L_L s + R_L + \frac{1}{C_L s}\right)$ 

10.418 INVALID-ORDER-418  $Z(s) = \left(\infty, \infty, \infty, L_4 s + \frac{1}{C_4 s}, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$ 

 $H(s) = \frac{1}{C_4 C_5 C_L L_4 L_5 L_L R_L g_m r_o s^6 + C_4 C_5 C_L L_4 L_5 L_L R_L s^6 + C_4 C_5 C_L L_4 L_L R_5 R_L g_m r_o s^5 + C_4 C_5 L_4 L_L R_5 R_L s^5 + C_4 C_5 L_4 L_5 L_L R_5 R_L s^5 + C_4 C_5 L_4 L_L R_5$ 

10.419 INVALID-ORDER-419  $Z(s) = \left(\infty, \infty, \infty, L_4 s + \frac{1}{C_4 s}, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$ 

 $H(s) = \frac{1}{C_4 C_5 C_L L_4 L_5 L_L g_m r_o s^6 + C_4 C_5 C_L L_4 L_L R_5 g_m r_o s^5 + C_4 C_5 C_L L_4 L_L R_5 s^5 + 2 C_4 C_5 C_L L_5 L_L R_5 s^5 + 2 C_4$ 

10.420 INVALID-ORDER-420  $Z(s) = \left(\infty, \infty, \infty, L_4 s + \frac{1}{C_4 s}, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{R_L \left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_T s}}\right)$ 

 $H(s) = \frac{1}{C_4 C_5 C_L L_4 L_5 L_L g_m r_o s^6 + C_4 C_5 C_L L_4 L_5 L_L s^6 + C_4 C_5 C_L L_4 L_5 R_L g_m r_o s^5 + C_4 C_5 C_L L_4 L_L R_5 g_$ 

10.421 INVALID-ORDER-421  $Z(s) = \left(\infty, \infty, \infty, L_4 s + \frac{1}{C_4 s}, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, R_L\right)$ 

 $H(s) = -\frac{R_L \left( C_4 L_4 s^2 + 1 \right) \left( C_5 L_5 R_5 r_o s^2 - L_5 R_5 g_m r_o s - L_5 R_5 s + L_4 L_4 L_5 R_5 r_o s^2 - L_5 R_5 g_m r_o s - L_5 R_5 s + L_4 L_4 L_5 R_5 r_o s^2 + 4 C_4 L_4 L_5 R_5 r_o s^2 + 4 C_4 L_4 L_5 R_5 r_o s^3 + 2 C_4 L_4 R_5 R_L g_m r_o s^3 + 4 C_4 L_4 L_5 R_5 r_o s^3 + 2 C_4 L_4 L_5 R_5 r_o s^3 + 2 C_4 L_4 R_5 R_L g_m r_o s^3 + 2 C_4 L_5 R_5 R_L g_m r_o s^3 + 2 C_4 L$ 

10.422 INVALID-ORDER-422  $Z(s) = \left(\infty, \infty, \infty, L_4 s + \frac{1}{C_4 s}, \frac{1}{C_5 s + \frac{1}{B_c} + \frac{1}{L_c s}}, \frac{1}{C_L s}\right)$ 

 $H(s) = -\frac{\left(C_4L_4s^2 + 1\right)\left(C_5L_5R_5r_os^2 - L_5R_5g_mr_os - L_5R_5s + L_5r_os + R_5r_os - L_5R_5g_mr_os -$ 

- 10.423 INVALID-ORDER-423  $Z(s) = \left(\infty, \infty, \infty, L_4 s + \frac{1}{C_4 s}, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{R_L}{C_L R_L s + 1}\right)$
- $H(s) = -\frac{1}{C_4 C_5 C_L L_4 L_5 R_5 R_L r_o s^5 + 2 C_4 C_5 L_4 L_5 R_5 R_L g_m r_o s^4 + 4 C_4 C_5 L_4 L_5 R_5 R_L s^4 + C_4 C_5 L_4 L_5 R_5 R_L r_o s^3 + C_4 C_L L_4 L_5 R_5 R_L g_m r_o s^4 + C_4 C_L L_4 L_5 R_5 R_L r_o s^4 + C_4 C_L L_4 L_5 R_5 R_L r_o s^3 + C_4 L_4 L_5 R_5 R_L r_o s^3 + C_4 L_4 L_5 R_5 R_L r_o s^4 + C_4 C_L L_4 L_5 R_5 R$
- 10.424 INVALID-ORDER-424  $Z(s) = \left(\infty, \infty, \infty, L_4 s + \frac{1}{C_4 s}, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, R_L + \frac{1}{C_L s}\right)$
- $H(s) = -\frac{1}{2C_4C_5C_LL_4L_5R_5R_Lg_mr_os^5 + 4C_4C_5C_LL_4L_5R_5R_Ls^5 + C_4C_5C_LL_4L_5R_5r_os^5 + 2C_4C_5C_LL_5R_5R_Lr_os^4 + 2C_4C_5L_4L_5R_5g_mr_os^4 + 4C_4C_5L_4L_5R_5g_mr_os^4 + 4C_4C_5L_5L_5R_5g_mr_os^4 + 4C_4C_5L_5L_5R_5g_mr_os^4 + 4C_4C_5L_5$
- 10.425 INVALID-ORDER-425  $Z(s) = \left(\infty, \infty, \infty, L_4 s + \frac{1}{C_4 s}, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, L_L s + \frac{1}{C_L s}\right)$
- $H(s) = -\frac{1}{2C_4C_5C_LL_4L_5L_LR_5g_mr_os^6 + 4C_4C_5C_LL_4L_5L_LR_5s^6 + C_4C_5C_LL_4L_5R_5r_os^5 + 2C_4C_5L_4L_5R_5g_mr_os^4 + 4C_4C_5L_4L_5R_5r_os^3 + 2C_4C_5L_4L_5L_2g_mr_os^5 + 4C_4C_LL_4L_5L_Lg_mr_os^5 + 4C_4C_LL_4L_5L_Lg_mr_os^5 + 4C_4C_LL_4L_5L_Lg_mr_os^4 + 4C_4C_5L_4L_5R_5g_mr_os^4 + 4C_5C_5L_5R_5g_mr_os^4 + 4C_5C_5L_5R_5g_mr_os^4 + 4C_5C_5L_5R_5g_mr_o$
- 10.426 INVALID-ORDER-426  $Z(s) = \left(\infty, \infty, \infty, L_4 s + \frac{1}{C_4 s}, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{L_L s}{C_L L_L s^2 + 1}\right)$
- $H(s) = -\frac{1}{C_4C_5C_LL_4L_5L_LR_5r_os^6 + 2C_4C_5L_4L_5L_LR_5g_mr_os^5 + 4C_4C_5L_4L_5L_LR_5s^5 + C_4C_5L_4L_5L_Rs_fr_os^4 + 2C_4C_5L_4L_5L_LR_5g_mr_os^5 + C_4C_LL_4L_5L_LR_5s^5 + C_4C_LL_4L_5L_L$
- 10.427 INVALID-ORDER-427  $Z(s) = \left(\infty, \infty, \infty, L_4 s + \frac{1}{C_4 s}, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, L_L s + R_L + \frac{1}{C_L s}\right)$
- $H(s) = -\frac{1}{2C_4C_5C_LL_4L_5L_LR_5g_mr_os^6 + 4C_4C_5C_LL_4L_5L_LR_5s^6 + 2C_4C_5C_LL_4L_5R_5R_Lg_mr_os^5 + 4C_4C_5C_LL_4L_5R_5r_os^5 + 2C_4C_5C_LL_5L_LR_5r_os^5 + 2C_4C_5C_LL_5R_5R_Lr_os^4 + 2C_4C_5L_4L_5R_5g_mr_os^4 + 4C_4C_5L_4L_5R_5s^4 + 2C_4C_5L_4L_5R_5r_os^5 + 2C_4C_5C_LL_4L_5R_5r_os^5 + 2C_4C_5C_LL_5R_5R_Lr_os^4 + 2C_4C_5L_4L_5R_5g_mr_os^4 + 4C_4C_5L_4L_5R_5s^4 + 2C_4C_5L_4L_5R_5r_os^5 + 2C_4C_5C_LL_5R_5r_os^5 + 2C_4C_5C_LL_5R_5r_os$
- 10.428 INVALID-ORDER-428  $Z(s) = \left(\infty, \infty, \infty, L_4 s + \frac{1}{C_4 s}, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$
- $H(s) = -\frac{1}{C_4C_5C_LL_4L_5L_LR_5R_Lr_os^6 + 2C_4C_5L_4L_5L_LR_5R_Lg_mr_os^5 + 4C_4C_5L_4L_5L_LR_5r_os^5 + C_4C_5L_4L_5R_Lr_os^4 + 2C_4C_5L_4L_5L_LR_5R_Lr_os^4 + 2C_4C_5L_4L_5L_LR_5R_Lr_os^4 + C_4C_LL_4L_5L_LR_5R_Lg_mr_os^5 + C_4C_LL_4L_5L_LR_5R_Lr_os^5 + C_4C_LL_4L_5L_LR_5R_Lr_os^4 + 2C_4C_5L_4L_5L_LR_5R_Lr_os^4 + 2C_4C_5L_4L_5L_Rr_os^4 +$
- 10.429 INVALID-ORDER-429  $Z(s) = \left(\infty, \infty, \infty, L_4 s + \frac{1}{C_4 s}, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$
- 10.430 INVALID-ORDER-430  $Z(s) = \left(\infty, \infty, \infty, L_4 s + \frac{1}{C_4 s}, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{R_L \left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$
- $H(s) = -\frac{1}{2C_4C_5C_LL_4L_5L_LR_5R_Lg_mr_os^6 + 4C_4C_5C_LL_4L_5L_LR_5R_Ls^6 + C_4C_5C_LL_4L_5L_LR_5r_os^6 + C_4C_5C_LL_4L_5R_5R_Lr_os^5 + 2C_4C_5L_LL_5L_LR_5R_Lr_os^5 + 2C_4C_5L_4L_5R_5R_Lg_mr_os^4 + 4C_4C_5L_4L_5R_5R_Ls^4 + C_4C_5L_4L_5R_5R_Lr_os^3 + C_4C_LL_4L_5L_LR_5R_Lr_os^5 + 2C_4C_5L_4L_5R_5R_Lr_os^5 + 2C_4C_5L_4L_5R_5R_Lr_os$

- 10.431 INVALID-ORDER-431  $Z(s) = \left(\infty, \infty, \infty, L_4 s + \frac{1}{C_4 s}, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, R_L\right)$
- $H(s) = \frac{R_L \left( C_4 L_4 s^2 + 1 \right) \left( C_5 L_5 R_5 g_m r_o s^2 + C_5 L_5 R_5 s^2 C_5 L_5 r_o s^2 + C_5 L_5 R_5 s^2 C_5 L_5 r_o s^2 + C_5 L_5 R_5 g_m r_o s^2 + C_4 L_4 L_5 R_5 g_m r_o s^4 + C_4 C_5 L_4 R_5 g_m r_o s^4 + C_4 C_5 L_5 R_5 R_5 g_m r_o s^4 + C_4 C_5 L_5 R_5 g_m r_o s^4 + C_5 L_5 R_5 g_m r_o s^4$
- 10.432 INVALID-ORDER-432  $Z(s) = \left(\infty, \infty, \infty, L_4 s + \frac{1}{C_4 s}, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{1}{C_L s}\right)$
- $H(s) = \frac{\left(C_4 L_4 s^2 + 1\right) \left(C_5 L_5 R_5 g_m r_o s^2 + C_5 L_5 R_5 s^2 C_5 L_5 r_o s^2 + C_5 L_5 R_5 s^2 C_5 L_5 r_o s^3 + C_4 C_5 L_4 L_5 R_5 g_m r_o s^3 + C_4 C_5 L_4 L_5 r_o s^3 + C_4 C_5 L_5 r_o s^3 + C_5 L_5 r_o$
- 10.433 INVALID-ORDER-433  $Z(s) = \left(\infty, \infty, \infty, L_4 s + \frac{1}{C_4 s}, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{R_L}{C_L R_L s + 1}\right)$
- $H(s) = \frac{1}{C_4 C_5 C_L L_4 L_5 R_5 R_L g_m r_o s^5 + C_4 C_5 L_4 L_5 R_5 R_L s^5 + C_4 C_5 L_4 L_5 R_L r_o s^5 + C_4 C_5 L_4 L_5 R_5 g_m r_o s^4 + C_4 C_5 L_4 L_5 R_5 g_m r_o s^4 + C_4 C_5 L_4 L_5 R_L g_m r_$
- 10.434 INVALID-ORDER-434  $Z(s) = \left(\infty, \infty, \infty, L_4 s + \frac{1}{C_4 s}, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, R_L + \frac{1}{C_L s}\right)$
- $H(s) = \frac{1}{C_4 C_5 C_L L_4 L_5 R_5 g_m r_o s^5 + C_4 C_5 C_L L_4 L_5 R_5 s^5 + 2 C_4 C_5 C_L L_4 L_5 R_L g_m r_o s^5 + 4 C_4 C_5 C_L L_4 L_5 R_L g_m r_o s^5 + 2 C_4 C_5 C_L L_4 L_5 R_L g_m r_o s^4 + 2 C_4 C_5 C_L L_5 R_L g_m r_o s^4 + 2 C_4 C_5 C_L L_5 R_L g_m r_o s^4 + 2 C_4 C_5 C_L L_5 R_L g_m r_o s^4 + 2 C_4 C_5 C_L L_5 R_L g_m r_o s^4 + 2 C_4 C_5 C_L L_5 R_L g_m r_o s^4 + 2 C_4 C_5 C_L L_5 R_L g_m r_o s^4 + 2 C_4 C_5 C_L L_5 R_L g_m r_o s^4 + 2 C_4 C_5 C_L L_5 R_L g_m r_o s^$
- 10.435 INVALID-ORDER-435  $Z(s) = \left(\infty, \infty, \infty, L_4 s + \frac{1}{C_4 s}, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, L_L s + \frac{1}{C_L s}\right)$
- $H(s) = \frac{1}{2C_4C_5C_LL_4L_5L_Lg_mr_os^6 + 4C_4C_5C_LL_4L_5L_Ls^6 + C_4C_5C_LL_4L_5R_5g_mr_os^5 + C_4C_5C_LL_4L_5r_os^5 + 2C_4C_5C_LL_5L_LR_5g_mr_os^5 + 2C_4C_5C_LL_5L_LR_5s^5 + 2C_4C_5C_LL_5L_5C_LL_5L_5c_LL_5c_LR_5s^5 + 2C_4C_5C_LL_5c_LR_5s^5$
- 10.436 INVALID-ORDER-436  $Z(s) = \left(\infty, \infty, \infty, L_4 s + \frac{1}{C_4 s}, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{L_L s}{C_L L_L s^2 + 1}\right)$
- $H(s) = \frac{1}{C_4 C_5 C_L L_4 L_5 L_L R_5 g_m r_o s^6 + C_4 C_5 C_L L_4 L_5 L_L R_5 s^6 + C_4 C_5 L_4 L_5 L_L r_o s^6 + 2 C_4 C_5 L_4 L_5 L_L g_m r_o s^5 + 4 C_4 C_5 L_4 L_5 L_L s^5 + C_4 C_5 L_4 L_5 R_5 g_m r_o s^4 + C_4 C_5 L_4 L_5 R_5 g_m r_o s^4 + 2 C_4 C_5 L_5 L_L R_5 g_m r_o s^4 + 2 C_5 L_5 L_L R_5 g_m r_o s^4 + 2 C_5 L_5 L_L R_5 g_m r_o s^4 + 2 C_5 L_5 L_L R_5 g_m r_o s^4 + 2 C_5$
- 10.437 INVALID-ORDER-437  $Z(s) = \left(\infty, \infty, \infty, L_4 s + \frac{1}{C_4 s}, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, L_L s + R_L + \frac{1}{C_L s}\right)$
- $H(s) = \frac{1}{2C_4C_5C_LL_4L_5L_Lg_mr_os^6 + 4C_4C_5C_LL_4L_5L_Ls^6 + C_4C_5C_LL_4L_5R_5g_mr_os^5 + 2C_4C_5C_LL_4L_5R_Lg_mr_os^5 + 4C_4C_5C_LL_4L_5R_Lg_mr_os^5 + 4C_4C_5C_LL_4L_5R_Lg_mr_os^5 + 2C_4C_5C_LL_4L_5R_Lg_mr_os^5 + 2C_4C_5C_LL_4L_5R_Lg_mr_$
- 10.438 INVALID-ORDER-438  $Z(s) = \left(\infty, \infty, \infty, L_4 s + \frac{1}{C_4 s}, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$
- $H(s) = \frac{1}{C_4 C_5 C_{I.} L_4 L_5 L_{I.} R_5 R_{L} g_m r_o s^6 + C_4 C_5 C_L L_4 L_5 L_L R_5 R_L s^6 + C_4 C_5 L_4 L_5 L_L R_5 g_m r_o s^5 + C_$

- **10.439** INVALID-ORDER-439  $Z(s) = \left(\infty, \infty, \infty, L_4 s + \frac{1}{C_4 s}, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$
- $H(s) = \frac{1}{C_4 C_5 C_L L_4 L_5 L_L R_5 g_m r_o s^6 + C_4 C_5 C_L L_4 L_5 L_L R_5 s^6 + 2 C_4 C_5 C_L L_4 L_5 L_L R_L g_m r_o s^6 + 4 C_4 C_5 C_L L_4 L_5 L_L R_5 s^6 + 2 C_4 C_5 C_L L_4 L_5 L_L R_5 s^6 + 2 C_4 C_5 C_L L_5 L_L R_5 R_L g_m r_o s^5 + 2 C_4 C_5 C_L L_5 L_L R_5 R_L g_m r_$
- 10.440 INVALID-ORDER-440  $Z(s) = \left(\infty, \infty, \infty, L_4 s + \frac{1}{C_4 s}, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{R_L \left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$
- $H(s) = \frac{1}{C_4 C_5 C_L L_4 L_5 L_L R_5 g_m r_o s^6 + C_4 C_5 C_L L_4 L_5 L_L R_5 s^6 + 2 C_4 C_5 C_L L_4 L_5 L_L R_L g_m r_o s^6 + 4 C_4 C_5 C_L L_4 L_5 L_L R_5 s^6 + 2 C_4 C_5 C_L L_5 L_L R_5 s^6 + 2 C_4 C_5 C_L L_5 L_L R_5 s^6 + 2 C_4 C_5 C_$
- 10.441 INVALID-ORDER-441  $Z(s) = \left(\infty, \infty, \infty, L_4 s + \frac{1}{C_4 s}, \frac{R_5 \left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, R_L\right)$
- $H(s) = \frac{R_L \left( C_4 L_4 s^2 + 1 \right) \left( C_5 L_5 R_5 g_m r_o s^4 + C_4 C_5 L_4 L_5 R_5 g_m r_o s^4 + 2 C_4 C_5 L_4 L_5 R_5 g_m r_o s^4 + 2 C_4 C_5 L_4 L_5 R_L g_m r_o s^4 + 2 C_4 C_5 L_4 L_5 R_L g_m r_o s^3 + 2 C_4 C_5 L_4 R_5 R_L g_m r_o s^3 + 2 C_4 C_5 L_5 R_5 R_L g_m r_o s^3 + 2 C_5 L_5 R_5 R_L g_m r_o s^3 + 2 C_5 L_5 R_5 R_L g_m r_o s^3 + 2 C_5 L_5 R_5 R_L g_m r_o s^3 + 2 C_5 L_5 R_5$
- 10.442 INVALID-ORDER-442  $Z(s) = \left(\infty, \infty, \infty, L_4 s + \frac{1}{C_4 s}, \frac{R_5 \left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{1}{C_L s}\right)$
- $H(s) = \frac{\left(C_4 L_4 s^2 + 1\right) \left(C_5 L_5 R_5 g_m r_o s^2 + C_5 L_4 L_5 R_5 g_m r_o s^3 + 4 C_4 C_5 L_4 L_5 R_5 g_m r_o s^3 + 4 C_4 C_5 L_4 L_5 R_5 g_m r_o s^3 + 2 C_4 C_5 L_5 R_5 g_m r_o s^3 + 2 C$
- 10.443 INVALID-ORDER-443  $Z(s) = \left(\infty, \infty, \infty, L_4 s + \frac{1}{C_4 s}, \frac{R_5 \left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{R_L}{C_L R_L s + 1}\right)$
- $H(s) = \frac{1}{C_4 C_5 C_L L_4 L_5 R_5 R_L g_m r_o s^5 + C_4 C_5 C_L L_4 L_5 R_5 R_L s^5 + C_4 C_5 C_L L_4 L_5 R_L r_o s^5 + C_4 C_5 C_L L_4 R_5 R_L r_o s^4 + C_4 C_5 L_4 L_5 R_5 g_m r_o s^4 + C_4 C_5 L_4 L_5 R_5 g_m r_o s^4 + C_4 C_5 L_4 L_5 R_L g_m r_o s^4 + C_4 C_5 L_4 L_5 R_$
- 10.444 INVALID-ORDER-444  $Z(s) = \left(\infty, \infty, \infty, L_4 s + \frac{1}{C_4 s}, \frac{R_5 \left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, R_L + \frac{1}{C_L s}\right)$
- $H(s) = \frac{1}{C_4 C_5 C_L L_4 L_5 R_5 g_m r_o s^5 + C_4 C_5 C_L L_4 L_5 R_5 s^5 + 2 C_4 C_5 C_L L_4 L_5 R_L g_m r_o s^5 + 4 C_4 C_5 C_L L_4 L_5 R_L s^5 + 2 C_4 C_5 C_L L_4 L_5 R_L s^5 + 2 C_4 C_5 C_L L_4 L_5 R_L s^5 + 2 C_4 C_5 C_L L_4 R_5 R_L g_m r_o s^4 + 4 C_4 C_5 C_L L_4 R_5 R_L s^4 + 2 C_4 C_5 C_L L_5 R_$
- 10.445 INVALID-ORDER-445  $Z(s) = \left(\infty, \infty, \infty, L_4 s + \frac{1}{C_4 s}, \frac{R_5 \left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, L_L s + \frac{1}{C_L s}\right)$
- $H(s) = \frac{1}{2C_4C_5C_LL_4L_5L_Lg_mr_os^6 + 4C_4C_5C_LL_4L_5L_Ls^6 + C_4C_5C_LL_4L_5R_5g_mr_os^5 + C_4C_5C_LL_4L_5r_os^5 + 2C_4C_5C_LL_4L_LR_5g_mr_os^5 + 4C_4C_5C_LL_4L_LR_5g_mr_os^5 + 4C_4C_5C_LL_4L_LR_5g_mr_os^5 + 4C_4C_5C_LL_4L_LR_5g_mr_os^5 + 4C_4C_5C_LL_4L_LR_5g_mr_os^5 + 4C_4C_5C_LL_4L_LR_5g_mr_os^5 + 4C_4C_5C_LL_4L_LR_5g_mr_os^5 + 2C_4C_5C_LL_4L_LR_5g_mr_os^5 + 2C_4C_5C_LL_4L_LR_5g_mr_os^5 + 4C_4C_5C_LL_4L_LR_5g_mr_os^5 + 2C_4C_5C_LL_4L_LR_5g_mr_os^5 + 2C_4C_5C_LL_4L_4L_5G_mr_os^5 + 2C_4C_5C_LL_4L_5C_LR_5g_mr_os^5 + 2C_4C_5C_LL_5C_LR_5g_mr_os^5 + 2C_4C_5C_LL_5C_LR_5g_mr_os^5 + 2C_4C_5C_LR_5g_mr_os^5 + 2C_4C_5C_LR_5g_mr_os^5 + 2C_4C_5C_LR_5g_mr_os^5 + 2C_4C_5C_LR_5g_mr_os^5 + 2C_4C_5C_LR_5g_mr_os^5 + 2C_4C_5C_$
- 10.446 INVALID-ORDER-446  $Z(s) = \left(\infty, \infty, \infty, L_4 s + \frac{1}{C_4 s}, \frac{R_5 \left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{L_L s}{C_L L_L s^2 + 1}\right)$
- $H(s) = \frac{1}{C_4 C_5 C_L L_4 L_5 L_L R_5 g_m r_o s^6 + C_4 C_5 C_L L_4 L_5 L_L R_5 s^6 + C_4 C_5 C_L L_4 L_5 L_L r_o s^6 + C_4 C_5 L_4 L_5 L_L g_m r_o s^5 + 4 C_4 C_5 L_4 L_5 L_L s^5 + C_4 C_5 L_4 L_5 R_5 g_m r_o s^4 + C_4 C_5 L_4 L_5 R_5 g_m r_o s^4 + 2 C_4 C_5 L_4 L_5 R_5 g_m r_o s^4 + 4 C_5 L_4 L_5 R_5 g_m r_o s^4 + 4 C_5 L_4 L_5 R_5 g_m r_o s^4 + 4 C_5 L_4 L_5 R_5 g_m r_o s^4 + 4 C_5 L_4 L_5 R_5 g_m r_o s^4 + 4 C_5 L_4 L_5 R_5 g_m r_o s^4 + 4 C_5 L_4 L_5 R_5 g_m r_o s^4 + 4 C_5 L_4 L_5 R_5 g_m r_o s^4 + 4 C_5 L_4 L_5 R_5 g_m r_o s^4 + 4 C_5 L_4 R_5 g_$

10.447 INVALID-ORDER-447  $Z(s) = \left(\infty, \infty, \infty, L_4 s + \frac{1}{C_4 s}, \frac{R_5 \left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, L_L s + R_L + \frac{1}{C_L s}\right)$ 

 $H(s) = \frac{1}{2C_4C_5C_LL_4L_5L_Lg_mr_os^6 + 4C_4C_5C_LL_4L_5R_5g_mr_os^5 + 4C_4C_5C_LL_4L_5R_5g_mr_os^5 + 4C_4C_5C_LL_4L_5R_Lg_mr_os^5 + 4C_4C_5C_LL_4L_5R$ 

10.448 INVALID-ORDER-448  $Z(s) = \left(\infty, \infty, \infty, L_4 s + \frac{1}{C_4 s}, \frac{R_5 \left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$ 

 $H(s) = \frac{1}{C_4 C_5 C_L L_4 L_5 L_L R_5 R_L g_m r_o s^6 + C_4 C_5 C_L L_4 L_5 L_L R_5 R_L s^6 + C_4 C_5 C_L L_4 L_5 L_L R_5 r_o s^5 + C_4 C_5 L_4 L_5 L_L R_5 r_o s^5 + C_4 C_$ 

10.449 INVALID-ORDER-449  $Z(s) = \left(\infty, \infty, \infty, L_4 s + \frac{1}{C_4 s}, \frac{R_5 \left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$ 

 $H(s) = \frac{1}{C_4 C_5 C_L L_4 L_5 L_L R_5 g_m r_o s^6 + C_4 C_5 C_L L_4 L_5 L_L R_5 s^6 + 2 C_4 C_5 C_L L_4 L_5 L_L R_5 g_m r_o s^6 + 4 C_4 C_5 C_L L_4 L_5 L_L R_5 g_m r_o s^6 + 4 C_4 C_5 C_L L_4 L_5 L_L R_5 g_m r_o s^6 + 2 C_4 C_5 C_L L_4 L_5 L_L R_5 g_m r_o s^6 + 2 C_4 C_5 C_L L_4 L_5 L_L R_5 g_m r_o s^6 + 2 C_4 C_5 C_L L_4 L_5 L_L R_5 g_m r_o s^6 + 2 C_4 C_5 C_L L_4 L_5 L_L R_5 g_m r_o s^6 + 2 C_4 C_5 C_L L_4 L_5 L_L R_5 g_m r_o s^6 + 2 C_4 C_5 C_L L_4 L_5 L_L R_5 g_m r_o s^6 + 2 C_4 C_5 C_L L_4 L_5 L_L R_5 g_m r_o s^6 + 2 C_4 C_5 C_L L_4 L_5 L_L R_5 g_m r_o s^6 + 2 C_4 C_5 C_L L_4 L_5 L_L R_5 g_m r_o s^6 + 2 C_4 C_5 C_L L_4 L_5 L_L R_5 g_m r_o s^6 + 2 C_4 C_5 C_L L_4 L_5 L_L R_5 g_m r_o s^6 + 2 C_4 C_5 C_L L_4 L_5 L_L R_5 g_m r_o s^6 + 2 C_4 C_5 C_L L_4 L_5 L_L R_5 g_m r_o s^6 + 2 C_4 C_5 C_L L_4 L_5 L_L R_5 g_m r_o s^6 + 2 C_4 C_5 C_L L_4 L_5 L_L R_5 g_m r_o s^6 + 2 C_4 C_5 C_L L_5 L_L R_5 g_m r_o s^6 + 2 C_$ 

10.450 INVALID-ORDER-450  $Z(s) = \left(\infty, \infty, \infty, L_4 s + \frac{1}{C_4 s}, \frac{R_5 \left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{R_L \left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$ 

 $H(s) = \frac{1}{C_4 C_5 C_L L_4 L_5 L_L R_5 g_m r_o s^6 + C_4 C_5 C_L L_4 L_5 L_L R_5 s^6 + 2 C_4 C_5 C_L L_4 L_5 L_L R_L g_m r_o s^6 + 4 C_4 C_5 C_L L_4 L_5 L_L R_5 s^6 + C_4 C_5 C_L L_5 L_$ 

**10.451** INVALID-ORDER-451  $Z(s) = \left(\infty, \infty, \infty, \frac{L_4 s}{C_4 L_4 s^2 + 1}, R_5, R_L + \frac{1}{C_L s}\right)$ 

 $H(s) = \frac{L_{4}s\left(C_{L}R_{L}s+1\right)\left(R_{5}g_{m}r_{o}+R_{5}-r_{o}\right)}{2C_{4}C_{L}L_{4}R_{5}R_{L}g_{m}r_{o}s^{3}+2C_{4}L_{L}L_{4}R_{5}r_{o}s^{2}+2C_{4}L_{4}R_{5}g_{m}r_{o}s^{2}+2C_{4}L_{4}R_{5}g_{m}r_{o}s^{2}+2C_{L}L_{4}R_{5}g_{m}r_{o}s^{2}+4C_{L}L_{4}R_{5}s^{2}+2C_{L}R_{5}R_{L}g_{m}r_{o}s+2C_{L}R_{5}R_{L}g_{m}r_$ 

10.452 INVALID-ORDER-452  $Z(s) = \left(\infty, \infty, \infty, \frac{L_4s}{C_4L_4s^2+1}, R_5, L_Ls + \frac{1}{C_Ls}\right)$ 

 $H(s) = \frac{L_{4}s\left(C_{L}L_{L}s^{2}+1\right)\left(R_{5}g_{m}r_{o}+R_{5}-r_{o}\right)}{2C_{4}C_{L}L_{4}L_{L}R_{5}g_{m}r_{o}s^{4}+2C_{4}L_{L}L_{L}r_{o}s^{4}+2C_{4}L_{4}R_{5}g_{m}r_{o}s^{2}+2C_{4}L_{4}R_{5}s^{2}+2C_{$ 

10.453 INVALID-ORDER-453  $Z(s) = \left(\infty, \infty, \infty, \frac{L_4s}{C_4L_4s^2+1}, R_5, L_Ls + R_L + \frac{1}{C_Ls}\right)$ 

 $H(s) = \frac{L_{4}s\left(C_{L}L_{L}s^{2} + C_{L}R_{L}s + 1\right)\left(R_{5}g_{m}r_{o} + R_{5} - r_{o}\right)}{2C_{4}C_{L}L_{4}L_{L}R_{5}g_{m}r_{o}s^{4} + 2C_{4}C_{L}L_{4}L_{L}r_{o}s^{4} + 2C_{4}C_{L}L_{4}R_{5}R_{L}g_{m}r_{o}s^{3} + 2C_{4}L_{L}R_{5}s^{4} + 2C_{4}L_{$ 

10.454 INVALID-ORDER-454  $Z(s) = \left(\infty, \infty, \infty, \frac{L_4s}{C_4L_4s^2+1}, R_5, \frac{L_Ls}{C_LL_Ls^2+1} + R_L\right)$ 

 $H(s) = \frac{L_4 s \left(R_5 g_m r_o + R_5 - r_o\right) \left(C_L + C_L L_4 L_L R_5 R_L g_m r_o s^4 + 2 C_4 C_L L_4 L_L R_5 g_m r_o s^4 + 2 C_4 L_4 L_L R_5 g_m r_o s^3 + 2 C_4 L_4 R_5 g_m r_o s^3 +$ 

10.455 INVALID-ORDER-455  $Z(s) = \left(\infty, \infty, \infty, \frac{L_4 s}{C_4 L_4 s^2 + 1}, R_5, \frac{R_L \left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$ 

 $H(s) = \frac{L_4 R_L s \left(C_L L_L s^2 + 1\right) \left(R_5 g_m r_o + R_5 - r_o\right)}{2 C_4 C_L L_4 L_L R_5 R_L g_m r_o s^4 + 2 C_4 C_L L_4 L_L R_5 R_L g_m r_o s^2 + 2 C_4 L_4 R_5 R_L g_m r_o s^2 + 2 C_4 L_4 R_5 R_L g_m r_o s^3 + C_L L_4 L_L R_5 g_m r_o s^3 + C_L L_4 R_5 g_m r_o$ 

**10.456** INVALID-ORDER-456  $Z(s) = \left(\infty, \infty, \infty, \frac{L_{4s}}{C_4 L_4 s^2 + 1}, \frac{1}{C_5 s}, R_L\right)$ 

 $H(s) = \frac{L_4 R_L s \left(-C_5 r_o s + g_m r_o + 1\right)}{2 C_4 C_5 L_4 R_L r_o s^3 + 2 C_4 L_4 R_L g_m r_o s^2 + 2 C_5 L_4 R_L g_m r_o s^2 + 4 C_5 L_4 R_L s^2 + C_5 L_4 r_o s^2 + 2 C_5 R_L r_o s + L_4 g_m r_o s + L_4 s + 2 R_L g_m r_o + 2 R_L g_m r_o s^2 + 2 C_5 R_L r_o s^2 + 2 C_5 R_L r_o s + L_4 g_m r_o s + L_4 g_m r_o s + 2 R_L g_m r_o s + 2 R_L g_m r_o s^2 + 2 C_5 R_L r_o s + L_4 g_m r_o s + L_4 g_m r_o s + 2 R_L g_m r_o s +$ 

**10.457** INVALID-ORDER-457  $Z(s) = \left(\infty, \infty, \infty, \frac{L_{4}s}{C_4L_4s^2+1}, \frac{1}{C_5s}, \frac{1}{C_Ls}\right)$ 

 $H(s) = \frac{L_4 s \left(-C_5 r_o s + g_m r_o + 1\right)}{2 C_4 C_5 L_4 r_o s^3 + 2 C_4 L_4 q_m r_o s^2 + 2 C_4 L_4 s^2 + C_5 C_L L_4 r_o s^3 + 2 C_5 L_4 q_m r_o s^2 + 4 C_5 L_4 s^2 + 2 C_5 r_o s + C_L L_4 q_m r_o s^2 + C_L L_4 s^2 + 2 q_m r_o + 2 C_5 r_o s + C_4 L_4 r_o s^3 + 2 C_5 r_o s + C_4 r_o s^3 + 2 C_5 r_o s + C_5 r_o s$ 

**10.458** INVALID-ORDER-458  $Z(s) = \left(\infty, \infty, \infty, \frac{L_{4s}}{C_4 L_{4s}^2 + 1}, \frac{1}{C_{5s}}, \frac{R_L}{C_L R_L s + 1}\right)$ 

 $H(s) = \frac{L_4 R_L s \left(-C_5 r_o s + g_m r_o + 1\right)}{2 C_4 C_5 L_4 R_L r_o s^3 + 2 C_4 L_4 R_L g m r_o s^2 + 2 C_5 L_4 R_L r_o s^3 + 2 C_5 L_4 R_L g m r_o s^2 + 4 C_5 L_4 R_L s^2 + C_5 L_4 r_o s^2 + 2 C_5 R_L r_o s + C_L L_4 R_L g m r_o s^2 + C_L L_4 R_L g m r_o s + L_4 s + 2 R_L g m r_o + 2 R_L g m r_o s^2 + 2 C_5 R_L r_o s^2 + 2 C_5 R_L r_o s^2 + 2 C_5 R_L r_o s^2 + C_5$ 

**10.459** INVALID-ORDER-459  $Z(s) = \left(\infty, \infty, \infty, \frac{L_{4}s}{C_4L_4s^2+1}, \frac{1}{C_5s}, R_L + \frac{1}{C_Ls}\right)$ 

 $H(s) = \frac{L_4 s \left(C_L R_L s + 1\right) \left(-C_5 r_o s + g_m r_o + 1\right)}{2 C_4 C_5 C_L L_4 R_L r_o s^4 + 2 C_4 C_5 L_4 r_o s^3 + 2 C_4 C_L L_4 R_L g_m r_o s^3 + 2 C_4 L_4 R_L g_m r_o s^2 + 2 C_4 L_4 g_m r_o s^2 + 2 C_5 L_4 R_L g_m r_o s^3 + 2 C_5 C_L L_4 R_L g_m r_o s^3 + 2 C_5 C_L L_4 R_L g_m r_o s^3 + 2 C_5 C_L L_4 R_L g_m r_o s^3 + 2 C_5 C_L L_4 R_L g_m r_o s^3 + 2 C_5 C_L L_4 R_L g_m r_o s^3 + 2 C_5 C_L L_4 R_L g_m r_o s^3 + 2 C_5 C_L L_4 R_L g_m r_o s^3 + 2 C_5 C_L L_4 R_L g_m r_o s^3 + 2 C_5 C_L L_4 R_L g_m r_o s^3 + 2 C_5 C_L R_L r_o s^3 + 2 C_5 C_L R_L$ 

**10.460** INVALID-ORDER-460  $Z(s) = \left(\infty, \infty, \infty, \frac{L_4 s}{C_4 L_4 s^2 + 1}, \frac{1}{C_5 s}, L_L s + \frac{1}{C_L s}\right)$ 

 $H(s) = \frac{L_4s\left(C_LL_s^2 + 1\right)\left(-C_5r_os + g_mr_o + 1\right)}{2C_4C_5C_LL_4L_Lr_os^5 + 2C_4C_5L_4r_os^3 + 2C_4C_LL_4L_Lg_mr_os^4 + 2C_4L_4g_mr_os^2 + 2C_4L_4s^2 + 2C_5C_LL_4L_Lg_mr_os^4 + 4C_5C_LL_4L_Ls^4 + C_5C_LL_4r_os^3 + 2C_5C_LL_4r_os^3 + 2C_5L_4g_mr_os^2 + 4C_5L_4s^2 + 2C_5r_os + C_LL_4g_mr_os^2 + C_LL_4s^2 + 2C_LL_4g_mr_os^2 + C_LL_4s^2 + 2C_LL_4s^2 + 2$ 

10.461 INVALID-ORDER-461  $Z(s) = \left(\infty, \infty, \infty, \frac{L_{4s}}{C_4 L_4 s^2 + 1}, \frac{1}{C_5 s}, \frac{L_{Ls}}{C_L L_L s^2 + 1}\right)$ 

 $H(s) = \frac{L_4 L_L s \left(-C_5 r_o s + g_m r_o + 1\right)}{2 C_4 C_5 L_4 L_L r_o s^3 + 2 C_4 L_4 L_L g_m r_o s^2 + 2 C_4 L_4 L_L r_o s^3 + 2 C_5 L_4 L_L g_m r_o s^2 + 4 C_5 L_4 L_L s^2 + C_5 L_4 r_o s + 2 C_5 L_L r_o s + C_L L_4 L_L g_m r_o s^2 + C_L L_4 L_L s^2 + L_4 g_m r_o + L_4 + 2 L_L g_m r_o + 2 L_L r_o s^2 + 2 C_5 L_4 r_o s + 2 C_5 L_5 r_o s + 2 C_5 r_o s$ 

**10.462** INVALID-ORDER-462  $Z(s) = \left(\infty, \infty, \infty, \frac{L_{4s}}{C_4L_4s^2+1}, \frac{1}{C_5s}, L_Ls + R_L + \frac{1}{C_Ls}\right)$ 

 $H(s) = \frac{L_{4}s\left(-C_{5}r_{o}s + g_{m}r_{o} + 1\right)\left(C_{L}L_{L}s^{2} + C_{L}R_{L}s + 1\right)}{2C_{4}C_{5}C_{L}L_{4}L_{L}r_{o}s^{5} + 2C_{4}C_{5}L_{L}q_{L}r_{o}s^{4} + 2C_{4}C_{L}L_{4}L_{L}g_{m}r_{o}s^{4} + 2C_{4}C_{L}L_{4}L_{L}g_{m}r_{o}s^{4} + 2C_{4}C_{L}L_{4}L_{L}g_{m}r_{o}s^{4} + 2C_{4}C_{L}L_{4}L_{L}g_{m}r_{o}s^{4} + 2C_{5}C_{L}L_{4}L_{L}g_{m}r_{o}s^{4} + 2C_{5}C_{L}L$ 

10.463 INVALID-ORDER-463  $Z(s) = \left(\infty, \infty, \infty, \frac{L_4s}{C_4L_4s^2+1}, \frac{1}{C_5s}, \frac{1}{C_Ls+\frac{1}{R_L}+\frac{1}{L_Ls}}\right)$ 

 $H(s) = \frac{L_4 L_L R_L s \left(-C_5 r_o s + g_m r_o + 1\right)}{2 C_4 C_5 L_4 L_L R_L r_o s^3 + 2 C_4 L_4 L_L R_L g_m r_o s^2 + 2 C_4 L_4 L_L R_L g_m r_o s^2 + 2 C_5 L_4 L_L R_L g_m r_o s^2 + 4 C_5 L_4 L_L R_L g_m r_o s^2 + 4 C_5 L_4 L_L R_L g_m r_o s^2 + 2 C_5 L_4 L_L R_L g_m r_o s^2 + 2 C_5 L_4 L_L R_L g_m r_o s^2 + 2 C_5 L_4 L_L R_L g_m r_o s^2 + 2 C_5 L_4 L_L R_L g_m r_o s^2 + 2 C_5 L_4 L_L R_L g_m r_o s^2 + 2 C_5 L_4 L_L R_L g_m r_o s^2 + 2 C_5 L_4 L_L R_L g_m r_o s^2 + 2 C_5 L_4 L_L R_L g_m r_o s^2 + 2 C_5 L_4 R_L r_o s^2 + 2 C_5 R$ 

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10.464 INVALID-ORDER-464 Z(s) = \left(\infty, \infty, \infty, \frac{L_4s}{C_4L_4s^2+1}, \frac{1}{C_5s}, \frac{L_Ls}{C_LL_Ls^2+1} + R_L\right)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           L_4s\left(-C_5r_os+g_mr_o+1\right)\left(C_LL\right)
H(s) = \frac{L_4s \left(-C_5r_os + g_mr_o + 1\right)\left(C_LL_2\right)}{2C_4C_5C_LL_4L_LR_Lr_os^5 + 2C_4C_5L_4L_Lr_os^4 + 2C_4C_5L_4L_LR_Lg_mr_os^4 + 2C_4C_4L_4L_LR_Ls^4 + 2C_4L_4L_Lg_mr_os^3 + 2C_4L_4L_Lg_mr_os^3 + 2C_4L_4L_LR_Lg_mr_os^4 + 2C_5C_LL_4L_LR_Lg_mr_os^4 + 2C_4C_LL_4L_LR_Lg_mr_os^4 + 2C_4
10.465 INVALID-ORDER-465 Z(s) = \left(\infty, \infty, \infty, \frac{L_4 s}{C_4 L_4 s^2 + 1}, \frac{1}{C_5 s}, \frac{R_L \left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_T s}}\right)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 L_4 R_L s \left( C_L L_L s^2 + 1 \right) \left( -C_5 r_o s + g_m r_o + 1 \right)
10.466 INVALID-ORDER-466 Z(s) = \left(\infty, \infty, \infty, \frac{L_{4s}}{C_4 L_4 s^2 + 1}, \frac{R_5}{C_5 R_5 s + 1}, R_L\right)
H(s) = \frac{L_4 R_L s \left(-C_5 R_5 r_o s + R_5 g_m r_o + R_5 - r_o\right)}{2 C_4 C_5 L_4 R_5 R_L r_o s^3 + 2 C_4 L_4 R_5 R_L g_m r_o s^2 + 2 C_4 L_4 R_5 R_L s^2 + 2 C_5 L_4 R_5 R_L g_m r_o s^2 + 4 C_5 L_4 R_5 R_L s^2 + C_5 L_4 R_5 R_L r_o s + L_4 R_5 g_m r_o s + L_4 R_5 g_m r_o s + 4 L_4 R_L g_m r_o s + 4 L_4 R_L g_m r_o s + 4 L_4 R_L g_m r_o s + 2 R_5 R_L g
10.467 INVALID-ORDER-467 Z(s) = \left(\infty, \infty, \infty, \frac{L_4s}{C_4L_4s^2+1}, \frac{R_5}{C_5R_5s+1}, \frac{1}{C_Ls}\right)
                                            H(s) = \frac{L_4 s \left(-C_5 R_5 r_o s + R_5 g_m r_o + R_5 - r_o\right)}{2 C_4 C_5 L_4 R_5 r_o s^3 + 2 C_4 L_4 R_5 g_m r_o s^2 + 2 C_4 L_4 R_5 s^2 + 2 C_4 L_4 r_o s^2 + C_5 C_L L_4 R_5 r_o s^3 + 2 C_5 L_4 R_5 g_m r_o s^2 + 4 C_5 L_4 R_5 g_m r_o s^2 + 4 C_5 L_4 R_5 g_m r_o s^2 + C_L L_4 R_5 g_m r_o s^2 + 2 L_4 g_m r_o s + 4 L_4 s + 2 R_5 g_m r_o + 2 R_5 + 2 r_o r_o s^2 + 2 R_5 r_o s^2 + 2 R
10.468 INVALID-ORDER-468 Z(s) = \left(\infty, \infty, \infty, \frac{L_4s}{C_4L_4s^2+1}, \frac{R_5}{C_5R_5s+1}, \frac{R_L}{C_LR_Ls+1}\right)
H(s) = \frac{L_4 R_L s \left(-C_5 R_5 r_o s + R_5 g_m r_o + R_5 - r_o\right)}{2 C_4 C_5 L_4 R_5 R_L r_o s^3 + 2 C_4 L_4 R_5 R_L s^2 + 2 C_4 L_4 R_5 R_L s^2 + 2 C_5 L_4 R_5 R_L r_o s^3 + 2 C_5 L_4 R_5 R_L s^2 + C_5 L_5 R_5 R_L s^2 +
10.469 INVALID-ORDER-469 Z(s) = \left(\infty, \infty, \infty, \frac{L_{4s}}{C_4 L_4 s^2 + 1}, \frac{R_5}{C_5 R_5 s + 1}, R_L + \frac{1}{C_L s}\right)
                                              -\frac{L_{4}s\left(C_{L}R_{L}s+1\right)\left(C_{5}R_{5}r_{o}s-R_{5}g_{m}r_{o}-R_{5}+r_{o}s+C_{4}C_{L}L_{4}R_{5}R_{L}r_{o}s^{4}+2C_{4}C_{5}L_{4}R_{5}r_{o}s^{3}+2C_{4}C_{L}L_{4}R_{5}R_{L}s^{3}+2C_{4}C_{L}L_{4}R_{5}R_{L}s^{3}+2C_{4}L_{4}R_{5}g_{m}r_{o}s^{2}+2C_{4}L_{4}R_{5}s^{2}+2C_{4}L_{4}R_{5}s^{2}+2C_{5}L_{4}R_{5}R_{L}s^{3}+C_{5}C_{L}L_{4}R_{5}R_{L}s^{3}+2C_{5}C_{L}L_{4}R_{5}R_{L}s^{3}+2C_{5}C_{L}L_{4}R_{5}R_{L}s^{3}+2C_{5}C_{L}L_{4}R_{5}R_{L}s^{3}+2C_{5}C_{L}L_{4}R_{5}R_{L}s^{3}+2C_{5}C_{L}L_{4}R_{5}R_{L}s^{3}+2C_{5}C_{L}L_{4}R_{5}R_{L}s^{3}+2C_{5}C_{L}L_{4}R_{5}R_{L}s^{3}+2C_{5}C_{L}L_{4}R_{5}R_{L}s^{3}+2C_{5}C_{L}L_{4}R_{5}R_{L}s^{3}+2C_{5}C_{L}L_{4}R_{5}R_{L}s^{3}+2C_{5}C_{L}L_{4}R_{5}R_{L}s^{3}+2C_{5}C_{L}L_{4}R_{5}R_{L}s^{3}+2C_{5}C_{L}L_{4}R_{5}R_{L}s^{3}+2C_{5}C_{L}L_{4}R_{5}R_{L}s^{3}+2C_{5}C_{L}L_{4}R_{5}R_{L}s^{3}+2C_{5}C_{L}L_{4}R_{5}R_{L}s^{3}+2C_{5}C_{L}L_{4}R_{5}R_{L}s^{3}+2C_{5}C_{L}L_{4}R_{5}R_{L}s^{3}+2C_{5}C_{L}L_{4}R_{5}R_{L}s^{3}+2C_{5}C_{L}L_{4}R_{5}R_{L}s^{3}+2C_{5}C_{L}L_{4}R_{5}R_{L}s^{3}+2C_{5}C_{L}L_{4}R_{5}R_{L}s^{3}+2C_{5}C_{L}L_{4}R_{5}R_{L}s^{3}+2C_{5}C_{L}L_{4}R_{5}R_{L}s^{3}+2C_{5}C_{L}L_{4}R_{5}R_{L}s^{3}+2C_{5}C_{L}L_{4}R_{5}R_{L}s^{3}+2C_{5}C_{L}L_{4}R_{5}R_{L}s^{3}+2C_{5}C_{L}L_{4}R_{5}R_{L}s^{3}+2C_{5}C_{L}L_{4}R_{5}R_{L}s^{3}+2C_{5}C_{L}L_{4}R_{5}R_{L}s^{3}+2C_{5}C_{L}L_{4}R_{5}R_{L}s^{3}+2C_{5}C_{L}L_{4}R_{5}R_{L}s^{3}+2C_{5}C_{L}L_{4}R_{5}R_{L}s^{3}+2C_{5}C_{L}L_{4}R_{5}R_{L}s^{3}+2C_{5}C_{L}L_{4}R_{5}R_{L}s^{3}+2C_{5}C_{L}L_{4}R_{5}R_{L}s^{3}+2C_{5}C_{L}L_{4}R_{5}R_{L}s^{3}+2C_{5}C_{L}L_{4}R_{5}R_{L}s^{3}+2C_{5}C_{L}L_{4}R_{5}R_{L}s^{3}+2C_{5}C_{L}L_{5}R_{L}s^{3}+2C_{5}C_{L}L_{5}R_{L}s^{3}+2C_{5}C_{L}L_{5}R_{L}s^{3}+2C_{5}C_{L}L_{5}R_{L}s^{3}+2C_{5}C_{L}L_{5}R_{L}s^{3}+2C_{5}C_{L}L_{5}R_{L}s^{3}+2C_{5}C_{L}L_{5}R_{L}s^{3}+2C_{5}C_{L}L_{5}R_{L}s^{3}+2C_{5}C_{L}L_{5}R_{L}s^{3}+2C_{5}C_{L}L_{5}R_{L}s^{3}+2C_{5}C_{L}L_{5}R_{L}s^{3}+2C_{5}C_{L}L_{5}R_{L}s^{3}+2C_{5}C_{L}L_{5}R_{L}s^{3}+2C_{5}C_{L}L_{5}R_{L}s^{3}+2C_{5}C_{L}L_{5}R_{L}s^{3}+2C_{5}C_{L}L_{5}R_{L}s^{3}+2C_{5}C_{L}L_{5}R_{L}s^{
10.470 INVALID-ORDER-470 Z(s) = \left(\infty, \infty, \infty, \frac{L_4s}{C_4L_4s^2+1}, \frac{R_5}{C_5R_5s+1}, L_Ls + \frac{1}{C_Ls}\right)
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 $H(s) = -\frac{L_{4}s\left(C_{L}L_{L}s^{2}+1\right)\left(C_{5}R_{5}r_{o}s-R_{5}g_{m}r_{o}-R_{5}+R_{5}g_{m}r_{o}-R_{5}+R_{5}g_{m}r_{o}-R_{5}+R_{5}g_{m}r_{o}s^{2}+2C_{4}C_{L}L_{4}L_{L}R_{5}r_{o}s^{3}+2C_{4}C_{L}L_{4}L_{L}R_{5}g_{m}r_{o}s^{4}+2C_{4}L_{4}L_{L}R_{5}g_{m}r_{o}s^{2}+2C_{4}L_{4}R_{5}r_{o}s^{3}+2C_{5}L_{L}L_{4}L_{L}R_{5}g_{m}r_{o}s^{4}+2C_{4}L_{L}L_{$ 

10.471 INVALID-ORDER-471  $Z(s) = \left(\infty, \infty, \infty, \frac{L_4s}{C_4L_4s^2+1}, \frac{R_5}{C_5R_5s+1}, \frac{L_Ls}{C_LL_Ls^2+1}\right)$ 

 $H(s) = \frac{L_4 L_L s \left(-C_5 R_5 r_o s + R_5 g_m r_o + R_5 - r_o\right)}{2 C_4 C_5 L_4 L_L R_5 r_o s^3 + 2 C_4 L_4 L_L R_5 g_m r_o s^2 + 2 C_4 L_4 L_L R_5 s^2 + C_5 L_4 L_L R_5 g_m r_o s^2 + 4 C_5 L_4 L_L R_5 r_o s + 2 C_5 L_L R_5 r_o s + C_L L_4 L_L R_5 g_m r_o s^2 + C_L L_4 L_L R_5 s^2 + C_L L_4 L_L R_5 g_m r_o s^2 + 2 L_4 L_L R_5 g_m r_o s$ 

10.472 INVALID-ORDER-472  $Z(s) = \left(\infty, \infty, \infty, \frac{L_4 s}{C_4 L_4 s^2 + 1}, \frac{R_5}{C_5 R_5 s + 1}, L_L s + R_L + \frac{1}{C_L s}\right)$ 

 $H(s) = -\frac{1}{2C_4C_5C_LL_4L_LR_5r_os^5 + 2C_4C_5C_LL_4R_5R_Lr_os^4 + 2C_4C_5L_4R_5r_os^3 + 2C_4C_LL_4L_LR_5g_mr_os^4 + 2C_4C_LL_4L_LR_5s^4 + 2C_4C_LL_4L_LR_5s^4 + 2C_4C_LL_4R_5R_Lg_mr_os^3 + 2C_4C_LL_4R_5R_Ls^3 + 2C_4C_LL_4R_5r_os^3 + 2C_4L_4R_5g_mr_os^3 + 2C_4L_4R_5g_mr_os^3 + 2C_4C_LL_4R_5g_mr_os^3 + 2C_4C_LL_4R_5g_$ 

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10.473 INVALID-ORDER-473 Z(s) = \left(\infty, \infty, \infty, \frac{L_4s}{C_4L_4s^2+1}, \frac{R_5}{C_5R_5s+1}, \frac{1}{C_Ls+\frac{1}{R_L}+\frac{1}{L_Ls}}\right)
H(s) = \frac{L_4 L_L R_L s \left(-C_5 R_5 r_o s + R_5 g_m r_o + R_5 - r_o\right)}{2 C_4 C_5 L_4 L_L R_5 R_L r_o s^3 + 2 C_4 L_4 L_L R_5 R_L s^2 + 2 C_4 L_4 L_L R_5 R_L s^2 + 2 C_4 L_4 L_L R_5 R_L r_o s^3 + 2 C_5 L_4 L_L R_5 R_L r_o s^2 + 4 C_5 L_4 L_L R_5 R_L r_o s^2 + C_5 L_4 L_L R_5 R
10.474 INVALID-ORDER-474 Z(s) = \left(\infty, \infty, \infty, \frac{L_{4s}}{C_{4}L_{4s}^{2}+1}, \frac{R_{5}}{C_{5}R_{5}s+1}, \frac{L_{Ls}}{C_{4}L_{4s}^{2}+1} + R_{L}\right)
H(s) = -\frac{1}{2C_4C_5C_LL_4L_LR_5R_Lr_os^5 + 2C_4C_5L_4L_LR_5r_os^4 + 2C_4C_5L_4R_5R_Lr_os^3 + 2C_4C_LL_4L_LR_5R_Ls^4 + 2C_4C_LL_4L_LR_5R_Ls^4 + 2C_4C_LL_4L_LR_5s^3 + 2C_4L_4L_LR_5s^3 + 2C_4L_4L_4L_4L_4s^3 + 2C_4L_4L_4L_4t^3 + 2C_4L_4L_4L_4t^3 + 2C_4L_4L_4L_4t^3 + 2C_4L_4L_4L_4t^3 + 2C_4L_4L_4t^3 + 2C_4L_4L_4L_4t^3 + 2C_4L_4L_4t^3 + 2C_4L_4
10.475 INVALID-ORDER-475 Z(s) = \left(\infty, \infty, \infty, \frac{L_4 s}{C_4 L_4 s^2 + 1}, \frac{R_5}{C_5 R_5 s + 1}, \frac{R_L \left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)
H(s) = -\frac{1}{2C_4C_5C_LL_4L_LR_5R_Lr_os^5 + 2C_4C_5L_4R_5R_Lr_os^3 + 2C_4C_LL_4L_LR_5R_Lg_mr_os^4 + 2C_4L_4L_LR_5R_Lg_mr_os^4 + 2C_4L_4L_LR_5R_Lg_mr_os^4 + 2C_4L_4L_LR_5R_Lg_mr_os^4 + 2C_4L_4R_5R_Lg_mr_os^4 + 2C_4L_4R_5
10.476 INVALID-ORDER-476 Z(s) = \left(\infty, \infty, \infty, \frac{L_{4s}}{C_4L_{4s}^2+1}, R_5 + \frac{1}{C_5s}, R_L\right)
                                        \frac{L_4R_Ls\left(C_5R_5g_mr_os + C_5R_5s - C_5r_os + g_mr_o + 1\right)}{2C_4C_5L_4R_5R_Lg_mr_os^3 + 2C_4C_5L_4R_5R_Ls^3 + 2C_4C_5L_4R_Lg_mr_os^2 + 2C_4L_4R_Lg_mr_os^2 + 2C_5L_4R_5g_mr_os^2 + 4C_5L_4R_5s^2 + 2C_5L_4R_5g_mr_os^2 + 4C_5L_4R_5s^2 + 2C_5R_5R_Lg_mr_os + 2C_5R_5R_Ls + 2C_5R_Lr_os + L_4g_mr_os + L_4s + 2R_Lg_mr_os + L_4s +
10.477 INVALID-ORDER-477 Z(s) = \left(\infty, \infty, \infty, \frac{L_4 s}{C_4 L_4 s^2 + 1}, R_5 + \frac{1}{C_5 s}, \frac{1}{C_L s}\right)
H(s) = \frac{L_{4}s\left(C_{5}R_{5}g_{m}r_{o}s + C_{5}R_{5}s - C_{5}r_{o}s + g_{m}r_{o} + 1\right)}{2C_{4}C_{5}L_{4}R_{5}g_{m}r_{o}s^{3} + 2C_{4}C_{5}L_{4}r_{o}s^{3} + 2C_{4}L_{4}g_{m}r_{o}s^{2} + 2C_{4}L_{4}s^{2} + C_{5}C_{L}L_{4}R_{5}g_{m}r_{o}s^{3} + C_{5}C_{L}L_{4}r_{o}s^{3} + 2C_{5}L_{4}g_{m}r_{o}s^{2} + 4C_{5}L_{4}s^{2} + 2C_{5}R_{5}g_{m}r_{o}s + 2C_{5}R_{5}s + 2C_{5}r_{o}s + C_{L}L_{4}g_{m}r_{o}s^{2} + C_{L}L_{4}s^{2} + 2g_{m}r_{o}s + 2C_{5}L_{4}r_{o}s^{3} + 2C_{5}L_{4}r_{o}s^{2} + 2C_{5}R_{5}g_{m}r_{o}s + 2C_{5}R_{5}s + 2C_{5}r_{o}s + C_{L}L_{4}g_{m}r_{o}s^{2} + C_{L}L_{4}s^{2} + 2g_{m}r_{o}s + 2C_{5}R_{5}r_{o}s + 2C_{5}R_{5}s + 2C_{5}r_{o}s + 2C_{5}R_{5}r_{o}s + 2C_{5}R
10.478 INVALID-ORDER-478 Z(s) = \left(\infty, \infty, \infty, \frac{L_4s}{C_4L_4s^2+1}, R_5 + \frac{1}{C_5s}, \frac{R_L}{C_LR_Ls+1}\right)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 L_4R_Ls\left(C_5R_5g_mr_os + C_5R_5s - C_5r_os + g_mr_o + 1\right)
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10.479 INVALID-ORDER-479  $Z(s) = \left(\infty, \infty, \infty, \frac{L_4 s}{C_4 L_4 s^2 + 1}, R_5 + \frac{1}{C_5 s}, R_L + \frac{1}{C_L s}\right)$ 

 $L_4s(C_LR_Ls+1)(C_5R_5g_mr_os+C_5R_5s-C_5$  $H(s) = \frac{1}{2C_4C_5C_LL_4R_5R_Lg_mr_os^4 + 2C_4C_5C_LL_4R_5R_Ls^4 + 2C_4C_5C_LL_4R_5g_mr_os^3 + 2C_4C_5L_4R_5g_mr_os^3 + 2C_4C_5L_4R_5s^3 + 2C_5C_5L_4R_5s^3 + 2C_5C_5L_4R_5s^3 + 2C_5C_5L_5C$ 

**10.480** INVALID-ORDER-480  $Z(s) = \left(\infty, \infty, \infty, \frac{L_4 s}{C_4 L_4 s^2 + 1}, R_5 + \frac{1}{C_5 s}, L_L s + \frac{1}{C_L s}\right)$ 

 $L_4s\left(C_LL_Ls^2+1\right)\left(C_5R_5g_mr_os+C_5R_5s-C_5g_mr_os\right)$  $\frac{\mathcal{L}_{4}\mathcal{C}_{C}\mathcal{L}_{L}\mathcal{L}_{C}\mathcal{$ 

10.481 INVALID-ORDER-481  $Z(s) = \left(\infty, \infty, \infty, \frac{L_4s}{C_4L_4s^2+1}, R_5 + \frac{1}{C_5s}, \frac{L_Ls}{C_1L_1s^2+1}\right)$ 

 $L_4L_Ls\left(C_5R_5g_mr_os + C_5R_5s - C_5r_os + g_mr_o + 1\right)$  $H(s) = \frac{2C_4C_5L_4L_LR_5g_mr_os^3 + 2C_4C_5L_4L_LR_5s^3 + 2C_4C_5L_4L_Lr_os^3 + 2C_4L_4L_Lg_mr_os^2 + 2C_4L_4L_Lg_mr_os^3 + 2C_5L_4L_Lg_mr_os^3 + 2C_5L$ 

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10.482 INVALID-ORDER-482 Z(s) = \left(\infty, \infty, \infty, \frac{L_4 s}{C_4 L_4 s^2 + 1}, R_5 + \frac{1}{C_5 s}, L_L s + R_L + \frac{1}{C_L s}\right)
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 $H(s) = \frac{1}{2C_4C_5C_LL_4L_LR_5g_mr_os^5 + 2C_4C_5C_LL_4L_LR_5s^5 + 2C_4C_5C_LL_4L_Lr_os^5 + 2C_4C_5C_LL_4R_5R_Lg_mr_os^4 + 2C_4C_5C_LL_4R_5R_Ls^4 + 2C_4C_5C_LL_4R_5r_os^4 + 2C_4C_5L_4R_5g_mr_os^3 + 2C_4C_5L_4R_5s^3 + 2C_4C_5L_4L_Lg_mr_os^4 + 2C_4C_5L_LL_4L_Lg_mr_os^4 + 2C_4C_5L_LL_4R_5R_Ls^4 + 2C_4C_5L_LL_4R_5r_os^4 + 2C_4C_5L_4R_5r_os^4 + 2C_4C_5L_4R_5r_os$ 

10.483 INVALID-ORDER-483  $Z(s) = \left(\infty, \infty, \infty, \frac{L_4s}{C_4L_4s^2+1}, R_5 + \frac{1}{C_5s}, \frac{1}{C_Ls + \frac{1}{R_L} + \frac{1}{L_Ls}}\right)$ 

 $L_4L_LR_Ls\left(C_5R_5g_mr_os+C_5R_5s-\right)$  $\frac{L_4L_L\kappa_{L}s\left(C_5\kappa_{5}g_{m}r_{o}s+C_5\kappa_{5}s-C_5\kappa_{5}s-C_5\kappa_{5}s-C_5\kappa_{5}s-C_5\kappa_{5}s-C_5\kappa_{5}s+C_5\kappa_{5}s-C_5\kappa_{5}s-C_5\kappa_{5}s+C_5\kappa_{5}s-C_5\kappa_{5}s+C_5\kappa_{5}$ 

10.484 INVALID-ORDER-484  $Z(s) = \left(\infty, \infty, \infty, \frac{L_4s}{C_4L_4s^2+1}, R_5 + \frac{1}{C_5s}, \frac{L_Ls}{C_LL_Ls^2+1} + R_L\right)$ 

 $H(s) = \frac{1}{2C_4C_5C_LL_4L_LR_5R_Lg_mr_os^5 + 2C_4C_5C_LL_4L_LR_5R_Ls^5 + 2C_4C_5C_LL_4L_LR_5g_mr_os^4 + 2C_4C_5L_4L_LR_5s^4 + 2C_4C_5L_4L_Lr_os^4 + 2C_4C_5L_4R_5R_Lg_mr_os^3 + 2C_4C_5L_4R_5R_Ls^3 + 2C_4C_5L_4R_Lr_os^3 + 2C_4C_5L_4L_LR_5g_mr_os^4 + 2C_4C_5L_4L_LR_5g_mr_os^4 + 2C_4C_5L_4L_LR_5s^4 + 2C_4C_5$ 

10.485 INVALID-ORDER-485  $Z(s) = \left(\infty, \infty, \infty, \frac{L_{4s}}{C_4 L_4 s^2 + 1}, R_5 + \frac{1}{C_5 s}, \frac{R_L \left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$ 

 $H(s) = \frac{1}{2C_4C_5C_LL_4L_LR_5R_Lg_mr_os^5 + 2C_4C_5C_LL_4L_LR_5R_Ls^5 + 2C_4C_5L_4L_LR_Lr_os^5 + 2C_4C_5L_4R_5R_Lg_mr_os^3 + 2C_4C_5L_4R_Lr_os^3 + 2C_4C_5L_4L_LR_Lg_mr_os^4 + 2C_4L_4L_LR_Lg_mr_os^4 + 2C_4L_4R_Lg_mr_os^4 + 2C_4L_4R_Lg_mr_os^4$ 

**10.486** INVALID-ORDER-486  $Z(s) = \left(\infty, \infty, \infty, \frac{L_4 s}{C_4 L_4 s^2 + 1}, L_5 s + \frac{1}{C_5 s}, R_L\right)$ 

 $H(s) = \frac{L_4 R_L s \left(C_5 L_5 g_m r_o s^2 + C_5 L_5 s^2 - C_5 r_o s + g_m r_o + 1\right)}{2 C_4 C_5 L_4 L_5 R_L q_m r_o s^4 + 2 C_4 C_5 L_4 L_5 R_L s^4 + 2 C_4 C_5 L_4 R_L r_o s^3 + 2 C_4 L_4 R_L g_m r_o s^2 + 2 C_4 L_4 R_L g_m r_o s^3 + C_5 L_4 L_5 g_m r_o s^3 + C_5 L_4 L_5 g_m r_o s^2 + 2 C_5 L_5 R_L q_m r_o s^$ 

10.487 INVALID-ORDER-487  $Z(s) = \left(\infty, \infty, \infty, \frac{L_{4s}}{C_4 L_4 s^2 + 1}, L_5 s + \frac{1}{C_5 s}, \frac{1}{C_{Ls}}\right)$ 

 $H(s) = \frac{L_{4}s\left(C_{5}L_{5}g_{m}r_{o}s^{2} + C_{5}L_{5}s^{2} - C_{5}r_{o}s + g_{m}r_{o} + 1\right)}{2C_{4}C_{5}L_{4}L_{5}g_{m}r_{o}s^{4} + 2C_{4}C_{5}L_{4}r_{o}s^{3} + 2C_{4}L_{4}g_{m}r_{o}s^{2} + 2C_{4}L_{4}s^{2} + C_{5}C_{L}L_{4}L_{5}g_{m}r_{o}s^{4} + C_{5}C_{L}L_{4}L_{5}s^{4} + 2C_{5}L_{5}g_{m}r_{o}s^{2} + 2C_{5}L_{5}s^{2} + 2C_{5}L_{$ 

10.488 INVALID-ORDER-488  $Z(s) = \left(\infty, \infty, \infty, \frac{L_4s}{C_4L_4s^2+1}, L_5s + \frac{1}{C_5s}, \frac{R_L}{C_LR_Ls+1}\right)$ 

 $H(s) = \frac{L_4 R_L s \left(C_5 L_5 g_m r_o s^2 + C_5 L_5 s^2 - C_5 r_o s + g_m r_o + 1\right)}{2 C_4 C_5 L_4 L_5 R_L g_m r_o s^4 + 2 C_4 C_5 L_4 L_5 R_L g_m r_o s^4 + 2 C_4 C_5 L_4 R_L r_o s^3 + 2 C_4 L_4 R_L g_m r_o s^2 + 2 C_5 L_4 R_L g_m r_o s^4 + C_5 C_L L_4 L_5 R_L g_m r_o s^4 + C_5 C_L L_4 L_5 R_L g_m r_o s^3 + C_5 L_4 L_5 g_m r_o s^3 + C_5 L_4 L_5 g_m r_o s^3 + 2 C_5 L_4 R_L g_m r_o s^2 + 2 C_5 L_5 R_L g_m r_o s^4 + C_5 C_L L_4 L_5 R_L g_m r_o s^3 + C_5 L_4 L_5 g_m r_o s^3 + C_5 L_4 L_5 g_m r_o s^3 + 2 C_5 L_4 R_L g_m r_o s^2 + 2 C_5 L_5 R_L g_m r_o s^4 + C_5 C_L L_4 L_5 R_L g_m r_o s^3 + C_5 L_4 L_5 g_m r_o s^3 + C_5 L_4 L_5 g_m r_o s^3 + 2 C_5 L_4 R_L g_m r_o s^2 + 2 C_5 L_5 R_L g_m r_o s^3 + C_5 L_4 L_5 g_m r_o s^3 + C_5 L_4 L_5 g_m r_o s^3 + 2 C_5 L_4 R_L g_m r_o s^3 + 2 C_5 L_4 R_L g_m r_o s^3 + 2 C_5 L_4 R_L g_m r_o s^3 + 2 C_5 L_5 R_L g_m r_o s^3 + 2 C_$ 

**10.489** INVALID-ORDER-489  $Z(s) = \left(\infty, \infty, \infty, \frac{L_4 s}{C_4 L_4 s^2 + 1}, L_5 s + \frac{1}{C_5 s}, R_L + \frac{1}{C_L s}\right)$ 

 $L_4s\left(C_LR_Ls+1\right)\left(C_5L_5g_mr_os^2+C_5L_5s^2-C_5L_5s^2\right)$  $H(s) = \frac{L_{4}s\left(\bigcirc_{L}\kappa_{L}s+1\right)\left(\bigcirc_{5}L_{5}g_{m}r_{o}s^{-}+\bigcirc_{5}L_{5}s\right.-\bigcirc_{c}k_{5}r_{o}s^{-}+\bigcirc_{5}L_{5}s\right)}{2C_{4}C_{5}C_{L}L_{4}L_{5}R_{L}g_{m}r_{o}s^{5}+2C_{4}C_{5}L_{L}L_{4}L_{5}g_{m}r_{o}s^{4}+2C_{4}C_{5}L_{4}L_{5}g_{m}r_{o}s^{4}+2C_{4}C_{5}L_{4}L_{5}g_{m}r_{o}s^{4}+2C_{4}C_{5}L_{4}L_{5}g_{m}r_{o}s^{4}+2C_{4}C_{5}L_{4}L_{5}g_{m}r_{o}s^{4}+2C_{4}C_{5}L_{4}L_{5}g_{m}r_{o}s^{4}+2C_{4}C_{5}L_{4}L_{5}g_{m}r_{o}s^{4}+2C_{4}C_{5}L_{4}L_{5}g_{m}r_{o}s^{4}+2C_{4}C_{5}L_{4}L_{5}g_{m}r_{o}s^{4}+2C_{4}C_{5}L_{4}L_{5}g_{m}r_{o}s^{4}+2C_{4}C_{5}L_{4}L_{5}g_{m}r_{o}s^{4}+2C_{4}C_{5}L_{4}L_{5}g_{m}r_{o}s^{4}+2C_{5}C_{L}L_{5}g_{m}r_{o}s^{4}+2C_{5}C_{L}L_{5}g_{m}r_{o}s^{4}+2C_{5}C_{L}L_{5}g_{m}r_{o}s^{4}+2C_{5}C_{L}L_{5}g_{m}r_{o}s^{4}+2C_{5}C_{L}L_{5}g_{m}r_{o}s^{4}+2C_{5}C_{L}L_{5}g_{m}r_{o}s^{4}+2C_{5}C_{L}L_{5}g_{m}r_{o}s^{4}+2C_{5}C_{L}L_{5}g_{m}r_{o}s^{4}+2C_{5}C_{L}L_{5}g_{m}r_{o}s^{4}+2C_{5}C_{L}L_{5}g_{m}r_{o}s^{4}+2C_{5}C_{L}L_{5}g_{m}r_{o}s^{4}+2C_{5}C_{L}L_{5}g_{m}r_{o}s^{4}+2C_{5}C_{L}L_{5}g_{m}r_{o}s^{4}+2C_{5}C_{L}L_{5}g_{m}r_{o}s^{4}+2C_{5}C_{L}L_{5}g_{m}r_{o}s^{4}+2C_{5}C_{L}L_{5}g_{m}r_{o}s^{4}+2$  10.490 INVALID-ORDER-490  $Z(s) = \left(\infty, \infty, \infty, \frac{L_{4s}}{C_4 L_{4s}^2 + 1}, L_5 s + \frac{1}{C_{5s}}, L_L s + \frac{1}{C_{Ls}}\right)$ 

 $L_4s\left(C_LL_Ls^2+1\right)\left(C_5L_5g_mr_os^2+C_5L_5s^2-C_5L_5s^2\right)$ 

 $H(s) = \frac{L_{4}s \left( \bigcirc_{L} L_{L}s + 1 \right) \left( \bigcirc_{5} L_{5} g_{m} r_{o} s + 2 C_{4} C_{5} L_{4} L_{5} g_{m} r_{o} s + 2 C_{5} L_{5} L_{4} L_{5} g_{m} r_{o} s + 2 C_{5} L_{5} L_{5} L_{5} g_{m} r_{o} s + 2 C_{5} L_{5} L_{5} L_{5} g_{m} r_{o} s + 2 C_{5} L_{5} L_{5} L_{5} L_{5} L_{5} g_{m} r_{o} s + 2 C_{5} L_{5} L_{5} L_{5} L_{5} L_{5} g_{m} r_{o} s + 2 C_{5} L_{5} L_{5$ 

10.491 INVALID-ORDER-491  $Z(s) = \left(\infty, \infty, \infty, \frac{L_4s}{C_4L_4s^2+1}, L_5s + \frac{1}{C_5s}, \frac{L_Ls}{C_LL_Ls^2+1}\right)$ 

 $H(s) = \frac{L_4 L_L s \left(C_5 L_5 g_m r_o s^2 + C_5 L_5 s^2 - C_5 r_o s + g_m r_o + 1\right)}{2 C_4 C_5 L_4 L_5 L_L g_m r_o s^4 + 2 C_4 C_5 L_4 L_L L_S^4 + 2 C_4 C_5 L_4 L_L g_m r_o s^2 + 2 C_4 L_4 L_L g_m r_o s^4 + C_5 C_L L_4 L_5 L_L g_m r_o s^4 + C_5 C_L L_4 L_5 L_L g_m r_o s^4 + C_5 C_L L_4 L_5 L_L g_m r_o s^2 + C_5 L_4 L_5 g_m r_o s^2 + 2 C_5 L_4 L_L g_m r_o s^2 + 2$ 

**10.492** INVALID-ORDER-492  $Z(s) = \left(\infty, \infty, \infty, \frac{L_4s}{C_4L_4s^2+1}, L_5s + \frac{1}{C_5s}, L_Ls + R_L + \frac{1}{C_Ls}\right)$ 

 $H(s) = \frac{1}{2C_4C_5C_LL_4L_5L_Lg_mr_os^6 + 2C_4C_5C_LL_4L_5L_Ls^6 + 2C_4C_5C_LL_4L_5R_Lg_mr_os^5 + 2C_4C_5C_LL_4L_5R_Ls^5 + 2C_4C_5C_LL_4L_Lr_os^5 + 2C_4C_5C_LL_4L_5g_mr_os^4 + 2C_4C_5L_4L_5g_mr_os^4 + 2C_4C_5L_5L_5g_mr_os^4 + 2C_4C_5L_5g_mr_os^4 + 2C_4C_5L_5g_mr_os^4 + 2C_4C_5L_5g_mr_os^4 + 2$ 

10.493 INVALID-ORDER-493  $Z(s) = \left(\infty, \infty, \infty, \frac{L_4s}{C_4L_4s^2+1}, L_5s + \frac{1}{C_5s}, \frac{1}{C_Ls + \frac{1}{R_I} + \frac{1}{L_Ls}}\right)$ 

10.494 INVALID-ORDER-494  $Z(s) = \left(\infty, \infty, \infty, \frac{L_4s}{C_4L_4s^2+1}, L_5s + \frac{1}{C_5s}, \frac{L_Ls}{C_4L_4s^2+1} + R_L\right)$ 

 $H(s) = \frac{1}{2C_4C_5C_LL_4L_5L_LR_Lg_mr_os^6 + 2C_4C_5C_LL_4L_5L_LR_Ls^6 + 2C_4C_5C_LL_4L_LR_Lr_os^5 + 2C_4C_5L_4L_5L_Lg_mr_os^5 + 2C_4C_5L_4L_5L_Ls^5 + 2C_4C_5L_4L_5R_Lg_mr_os^4 + 2C_4C_5L_4L_5R_Ls^4 + 2C_4C_5L_4L_Lr_os^4 + 2C_4C_5L_4L_LR_Lr_os^3 + 2C_4C_LL_4L_LR_Lg_mr_os^4 + 2C_4C_5L_4L_5R_Ls^4 + 2C_4C_5L_4R_Ls^4 +$ 

10.495 INVALID-ORDER-495  $Z(s) = \left(\infty, \infty, \infty, \frac{L_4 s}{C_4 L_4 s^2 + 1}, L_5 s + \frac{1}{C_5 s}, \frac{R_L \left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$ 

 $H(s) = \frac{1}{2C_4C_5C_LL_4L_5L_LR_Lg_mr_os^6 + 2C_4C_5C_LL_4L_5L_LR_Ls^6 + 2C_4C_5L_4L_LR_Lr_os^5 + 2C_4C_5L_4L_5R_Lg_mr_os^4 + 2C_4C_5L_4R_Lg_mr_os^4 + 2C_4C_5L_4R_Lg_mr_os^4$ 

**10.496** INVALID-ORDER-496  $Z(s) = \left(\infty, \infty, \infty, \frac{L_{4s}}{C_4L_4s^2+1}, \frac{L_{5s}}{C_5L_5s^2+1}, R_L\right)$ 

 $H(s) = \frac{L_4 R_L s \left(-C_5 L_5 r_o s^2 + L_5 g_m r_o s + L_5 s - r_o\right)}{2 C_4 C_5 L_4 L_5 R_L r_o s^4 + 2 C_4 L_4 L_5 R_L g_m r_o s^3 + 2 C_4 L_4 R_L r_o s^2 + 2 C_5 L_4 L_5 R_L g_m r_o s^3 + 4 C_5 L_4 L_5 R_L s^3 + C_5 L_4 L_5 r_o s^3 + 2 C_5 L_5 R_L r_o s^2 + L_4 L_5 g_m r_o s^2 + L_4 L_5 g_m r_o s^2 + L_4 L_5 g_m r_o s + 4 L_4 R_L s + L_4 r_o s + 2 L_5 R_L g_m r_o s + 2 L_5 R_L r_o s^2 + 2 L_5 R_L r$ 

10.497 INVALID-ORDER-497  $Z(s) = \left(\infty, \infty, \infty, \frac{L_4s}{C_4L_4s^2+1}, \frac{L_5s}{C_5L_5s^2+1}, \frac{1}{C_Ls}\right)$ 

 $H(s) = \frac{L_4 s \left(-C_5 L_5 r_o s^2 + L_5 g_m r_o s + L_5 s - r_o\right)}{2 C_4 C_5 L_4 L_5 r_o s^4 + 2 C_4 L_4 L_5 g_m r_o s^3 + 2 C_4 L_4 L_5 s^3 + 2 C_4 L_4 r_o s^2 + C_5 C_L L_4 L_5 r_o s^4 + 2 C_5 L_4 L_5 g_m r_o s^3 + 4 C_5 L_4 L_5 g_m r_o s^3 + C_L L_4 L_5 g_m r_o s^3 + C_L L_4 L_5 g_m r_o s + 4 L_4 s + 2 L_5 g_m r_o s + 2 L_5 s + 2 r_o r_o s^2 + 2 L_5 g_m r_o s^3 + 2 C_5 L_5 r_o s^2 + 2 L_5 g_m r_o s^3 + 2 C_5 L_5 r_o s^2 + 2 L_5 g_m r_o s^3 + 2 L_5 g_m r_o s$ 

**10.498** INVALID-ORDER-498  $Z(s) = \left(\infty, \ \infty, \ \infty, \ \frac{L_4s}{C_4L_4s^2+1}, \ \frac{L_5s}{C_5L_5s^2+1}, \ \frac{R_L}{C_LR_Ls+1}\right)$ 

$$L_4R_Ls\left(-C_5L_5r_os^2 + L_5g_mr_os + L_5s - r_o\right)$$

 $H(s) = \frac{L_4 R_L s \left(-C_5 L_5 r_o s^2 + L_5 g_m r_o s + L_5 s - r_o\right)}{2 C_4 C_5 L_4 L_5 R_L r_o s^4 + 2 C_4 L_4 L_5 R_L g_m r_o s^3 + 2 C_4 L_4 L_5 R_L g_m r_o s^3 + 2 C_5 L_4 L_5 R_L g_m r_o s^3 + 4 C_5 L_4 L_5 R_L g_m r_o s^3 + 2 C_5 L_5 R_L r_o s^2 + C_5 L_4 L_5 R_L g_m r_o s^3 + 2 C_5 L_4 L_5 R_L g_m r_o s^3 + 2 C_5 L_4 L_5 R_L g_m r_o s^3 + C_5 L_5 R$ 

10.499 INVALID-ORDER-499  $Z(s) = \left(\infty, \infty, \infty, \frac{L_{4s}}{C_4L_4s^2+1}, \frac{L_{5s}}{C_5L_5s^2+1}, R_L + \frac{1}{C_Ls}\right)$ 

 $H(s) = -\frac{L_4 s \left(C_L R_L s + 1\right) \left(C_5 L_5 r_o s^2 - L_5 g_m r_o s - L_5 s + L_5 r_o s^4 + 2 C_4 C_L L_4 L_5 R_L r_o s^4 + 2 C_4 C_L L_4 L_5 R_L r_o s^3 + 2 C_4 L_4 L_5 r_o s^4 + 2 C_5 C_L L_4 L_5 R_L r_o s^3 + 2 C_4 L_4 L_5 r_o s^4 + 2 C_5 C_L L_4 L_5 R_L r_o s^3 + 2 C_4 L_4 L_5 r_o s^4 + 2 C_5 C_L L_4 L_5 R_L r_o s^3 + 2 C_4 L_4 L_5 r_o s^4 + 2 C_5 C_L L_4 L_5 R_L r_o s^3 + 2 C_4 L_4 L_5 r_o s^4 + 2 C_5 C_L L_4 L_5 R_L r_o s^3 + 2 C_4 L_4 L_5 r_o s^4 + 2 C_5 C_L L_4 L_5 R_L r_o s^3 + 2 C_5 R_L r_o s^3 + 2 C_$ 

10.500 INVALID-ORDER-500  $Z(s) = \left(\infty, \infty, \infty, \frac{L_4s}{C_4L_4s^2+1}, \frac{L_5s}{C_5L_5s^2+1}, L_Ls + \frac{1}{C_Ls}\right)$ 

 $H(s) = -\frac{L_4s \left(C_L L_L s + 1\right) \left(C_5 L_5 r_o s + 2C_4 C_L L_4 L_5 L_L g_m r_o s^5$ 

**10.501** INVALID-ORDER-501  $Z(s) = \left(\infty, \infty, \infty, \frac{L_4s}{C_4L_4s^2+1}, \frac{L_5s}{C_5L_5s^2+1}, \frac{L_Ls}{C_LL_Ls^2+1}\right)$ 

10.502 INVALID-ORDER-502  $Z(s) = \left(\infty, \infty, \infty, \frac{L_{4s}}{C_{4}L_{4}s^{2}+1}, \frac{L_{5s}}{C_{5}L_{5}s^{2}+1}, L_{L}s + R_{L} + \frac{1}{C_{Ls}}\right)$ 

 $H(s) = -\frac{1}{2C_4C_5C_LL_4L_5L_Lr_os^6 + 2C_4C_5L_LL_4L_5R_Lr_os^5 + 2C_4C_5L_4L_5r_os^4 + 2C_4C_LL_4L_5L_Lg_mr_os^5 + 2C_4C_LL_4L_5R_Lg_mr_os^4 + 2C_4C_LL_4L_5R_Lg_mr_os^4 + 2C_4C_LL_4L_5R_Lg_mr_os^4 + 2C_4C_LL_4L_5R_Lr_os^4 + 2C_4C_LL_4L_5R_Lr_os^3 + 2C_4L_4L_5r_os^4 + 2C_4C_LL_4L_5R_Lr_os^4 + 2C_4C_LL_4R_Lr_os^4 + 2C_4C_LL_$ 

10.503 INVALID-ORDER-503  $Z(s) = \left(\infty, \infty, \infty, \frac{L_{4s}}{C_4L_4s^2+1}, \frac{L_{5s}}{C_5L_5s^2+1}, \frac{1}{C_Ls+\frac{1}{R_L}+\frac{1}{L_{Ls}}}\right)$ 

 $H(s) = \frac{1}{2C_4C_5L_4L_5L_LR_Lr_os^4 + 2C_4L_4L_5L_LR_Lg_mr_os^3 + 2C_4L_4L_5L_LR_Ls^3 + 2C_4L_4L_5L_LR_Lg_mr_os^3 + 4C_5L_4L_5L_LR_Ls^3 + C_5L_4L_5L_LR_Ls^3 + C_5L_4L_5L_Rs^3 + C_5L_5L_5L_Rs^3 + C_5L_5L_5L_Rs^3 + C_5L_5L_5L_Rs^3 + C_5L_5L_5L_Rs^3 + C_5L_5L_5L_Rs^3 + C_5L_5L_5L_Rs^3 + C_5L_5L_$ 

10.504 INVALID-ORDER-504  $Z(s) = \left(\infty, \infty, \infty, \frac{L_{4S}}{C_{4}L_{4}s^{2}+1}, \frac{L_{5S}}{C_{5}L_{5}s^{2}+1}, \frac{L_{LS}}{C_{L}L_{L}s^{2}+1} + R_{L}\right)$ 

 $\frac{1}{2C_{4}C_{5}C_{L}L_{4}L_{5}L_{L}R_{L}r_{o}s^{6}+2C_{4}C_{5}L_{4}L_{5}L_{L}r_{o}s^{5}+2C_{4}C_{5}L_{4}L_{5}R_{L}r_{o}s^{4}+2C_{4}L_{4}L_{5}L_{L}R_{L}g_{m}r_{o}s^{5}+2C_{4}C_{L}L_{4}L_{5}L_{L}R_{L}s^{5}+2C_{4}C_{L}L_{4}L_{5}L_{L}R_{L}s^{5}+2C_{4}L_{4}L_{5}L_{L}S^{4}+2C_{4}L_{4}L_{5}L_{L}S^{4}+2C_{4}L_{4}L_{5}L_{L}S^{4}+2C_{4}L_{4}L_{5}R_{L}s^{3}+2C_{4}L_{4}L_{5}R_{L}s^{3}+2C_{4}L_{4}L_{5}L_{L}R_{L}s^{5}+2C_{4}L_{4}L_{5}L_{L}R_{L}s^{5}+2C_{4}L_{4}L_{5}L_{L}S^{4}+2C_{4}L_{4}L_{5}L_{L}S^{4}+2C_{4}L_{4}L_{5}L_{L}S^{4}+2C_{4}L_{4}L_{5}L_{L}S^{5}+2C_{4}L_{4$ 

10.505 INVALID-ORDER-505  $Z(s) = \left(\infty, \infty, \infty, \frac{L_4 s}{C_4 L_4 s^2 + 1}, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{R_L \left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$ 

 $-\frac{1}{2C_{4}C_{5}C_{L}L_{4}L_{5}L_{L}R_{L}r_{o}s^{6}+2C_{4}C_{5}L_{4}L_{5}R_{L}r_{o}s^{4}+2C_{4}C_{L}L_{4}L_{5}L_{L}R_{L}g_{m}r_{o}s^{5}+2C_{4}C_{L}L_{4}L_{5}L_{L}R_{L}s^{5}+2C_{4}C_{L}L_{4}L_{5}L_{L}R_{L}s^{5}+2C_{4}L_{4}L_{5}R_{L}g_{m}r_{o}s^{3}+2C_{4}L_{4}L_{5}R_{L}g_{m}r_{o}s^{3}+2C_{4}L_{4}L_{5}L_{L}R_{L}g_{m}r_{o}s^{5}+4C_{5}C_{L}L_{4}L_{5}L_{L}R_{L}s^{5}+C_{5}C_{L}L_{4}L_{5}L_{L}R_{L}s^{5}+2C_{4}C_{L}L_{4}$ 

**10.506** INVALID-ORDER-506  $Z(s) = \left(\infty, \infty, \infty, \frac{L_{4s}}{C_4L_4s^2+1}, L_5s + R_5 + \frac{1}{C_5s}, R_L\right)$ 

 $H(s) = \frac{L_4 R_L s \left(C_5 L_5 g_m r_o s^2 + C_5 L_5 s^2 + C_5 R_5 g_m r_o s + C_5 R_5 s - C_5 r_o s + g_m r_o + 1\right)}{2 C_4 C_5 L_4 L_5 R_L g_m r_o s^4 + 2 C_4 C_5 L_4 R_5 R_L g_m r_o s^3 + 2 C_4 C_5 L_4 R_5 R_L g_m r_o s^3 + 2 C_4 L_4 R_L g_m r_o s^2 + 2 C_4 L_4 R_L g_m r_o s^3 + C_5 L_4 R_5 g_m r_o s^3 + C_5 L_4 R_5 g_m r_o s^2 + C_5 L_4 R_5 g_m r_o s^2 + 2 C_5 L_5 g_m r_o s^2 + 2 C_5 L_5 g_m r_o s^2 + 2 C_5 L_5 g_m r_o s^2 + 2 C_5 g_m r_o s^2 + 2 G_5 g_m r_o s^2$ 

10.507 INVALID-ORDER-507  $Z(s) = \left(\infty, \infty, \infty, \frac{L_4s}{C_4L_4s^2+1}, L_5s + R_5 + \frac{1}{C_5s}, \frac{1}{C_Ls}\right)$ 

 $H(s) = \frac{L_{4}s\left(C_{5}L_{5}g_{m}r_{o}s^{2} + C_{5}L_{5}s^{2} + C_{5}R_{5}g_{m}r_{o}s + C_{5}R_{5}s - C_{5}r_{o}s + g_{m}r_{o} + 1\right)}{2C_{4}C_{5}L_{4}L_{5}g_{m}r_{o}s^{4} + 2C_{4}C_{5}L_{4}R_{5}s^{4} + 2C_{4}C_{5}L_{4}R_{5}s^{3} + 2C_{4}C_{5}L_{4}r_{o}s^{3} + 2C_{4}L_{4}g_{m}r_{o}s^{2} + 2C_{4}L_{4}s^{2} + C_{5}C_{L}L_{4}L_{5}g_{m}r_{o}s^{4} + C_{5}C_{L}L_{4}R_{5}s^{3} + C_{5}C_{L}L_{4}R_{5}s^{3} + 2C_{5}L_{4}g_{m}r_{o}s^{2} + 2C_{5}L_{5}g_{m}r_{o}s^{2} + 2C_{5}L_{5}g_{m}r_{o}s^{2} + C_{5}C_{L}L_{4}R_{5}s^{3} + C_{5}C_{L}L_{4}R_{5}s^{3} + C_{5}C_{L}L_{4}r_{o}s^{3} + 2C_{5}L_{4}g_{m}r_{o}s^{2} + 2C_{5}L_{5}g_{m}r_{o}s^{2} + 2C_{5}L_{5}g_{m}r_{o}s^{2} + C_{5}C_{L}L_{4}R_{5}s^{3} + C_{5}C_{L}L_{4}R_{5}s^{3} + C_{5}C_{L}L_{4}r_{o}s^{3} + 2C_{5}L_{4}g_{m}r_{o}s^{2} + 2C_{5}L_{5}g_{m}r_{o}s^{2} + 2C_{5}L_{5}g_{m}r_{o}s^{2$ 

10.508 INVALID-ORDER-508  $Z(s) = \left(\infty, \infty, \infty, \frac{L_4s}{C_4L_4s^2+1}, L_5s + R_5 + \frac{1}{C_5s}, \frac{R_L}{C_LR_Ls+1}\right)$ 

 $H(s) = \frac{L_4R_LS \left(C_5L_5gmr_os^4 + 2C_4C_5L_4R_5R_Lgmr_os^4 + 2C_4C_5L_4R_5R_Lgmr_os^3 + 2C_4C_5L_4R_5R_Ls^3 + 2C_4C_5L_4R_5R_Ls^3 + 2C_4C_5L_4R_5R_Lgmr_os^3 + 2C_4L_4R_Lgmr_os^3 + 2C_4L_4R_Lgmr_os^4 + 2C_4C_5L_4R_5R_Lgmr_os^3 + 2C_4L_4R_Lgmr_os^3 + 2C_4L_4R$ 

10.509 INVALID-ORDER-509  $Z(s) = \left(\infty, \infty, \infty, \frac{L_{4s}}{C_4 L_4 s^2 + 1}, L_5 s + R_5 + \frac{1}{C_5 s}, R_L + \frac{1}{C_5 s}\right)$ 

 $\overline{2C_{4}C_{5}C_{L}L_{4}L_{5}R_{L}g_{m}r_{o}s^{5}+2C_{4}C_{5}C_{L}L_{4}L_{5}R_{L}s^{5}+2C_{4}C_{5}C_{L}L_{4}R_{5}R_{L}g_{m}r_{o}s^{4}+2C_{4}C_{5}C_{L}L_{4}R_{5}R_{L}s^{4}+2C_{4}C_{5}L_{4}L_{5}g_{m}r_{o}s^{4}+2C_{4}C_{5}L_{4}L_{5}s^{4}+2C_{4}C_{5}L_{4}R_{5}g_{m}r_{o}s^{3}+2C_{4}C_{5}L_{4}R_{5}g_{m}r_{o}s^{$ 

10.510 INVALID-ORDER-510  $Z(s) = \left(\infty, \infty, \infty, \frac{L_4s}{C_4L_4s^2+1}, L_5s + R_5 + \frac{1}{C_5s}, L_Ls + \frac{1}{C_Ls}\right)$ 

 $H(s) = \frac{1}{2C_4C_5C_LL_4L_5L_Lg_mr_os^6 + 2C_4C_5C_LL_4L_5L_Ls^6 + 2C_4C_5C_LL_4L_LR_5g_mr_os^5 + 2C_4C_5C_LL_4L_LR_5s^5 + 2C_4C_5C_LL_4L_Lr_os^5 + 2C_4C_5L_4L_5s^4 + 2C_4C_5L_4L_5s^4 + 2C_4C_5L_4L_5s^4 + 2C_4C_5L_4L_5s^3 + 2C_4C_5L_5L_5s^3 + 2C_4C_5L_5c^3$ 

10.511 INVALID-ORDER-511  $Z(s) = \left(\infty, \infty, \infty, \frac{L_4s}{C_4L_4s^2+1}, L_5s + R_5 + \frac{1}{C_5s}, \frac{L_Ls}{C_LL_Ls^2+1}\right)$ 

 $H(s) = \frac{L_4L_Ls \left( C_5L_5g_mr_os^4 + C_5L_5s + C_5R_5g_mr_os^4 + C_5L_5s + C_5R_5g_mr_os^4 + C_5L_5s + C_5R_5g_mr_os^4 + C_5L_5g_mr_os^4 + C_5L_4L_LR_5g_mr_os^4 + C_5L_4L_4L_LR_5g_mr_os^4 + C_5L_4L_4L_4L_4R_5g_mr_os^4 + C_5L_4L_4L_4R_5g_mr_os^4 + C_5L_4L_4L_4R_5g_mr_os^$ 

10.512 INVALID-ORDER-512  $Z(s) = \left(\infty, \infty, \infty, \frac{L_4s}{C_4L_4s^2+1}, L_5s + R_5 + \frac{1}{C_5s}, L_Ls + R_L + \frac{1}{C_Ls}\right)$ 

 $H(s) = \frac{1}{2C_4C_5C_LL_4L_5L_Lg_mr_os^6 + 2C_4C_5C_LL_4L_5L_Ls^6 + 2C_4C_5C_LL_4L_5R_Lg_mr_os^5 + 2C_4C_5C_LL_4L_LR_5g_mr_os^5 + 2C_4C_5C_LL_4L_LR_5s^5 + 2C_4C_5C_LL_4L_5c_LR_5s^5 + 2C_4C_5C_LL_4L_5c_LR_5s^5 + 2C_4C_5C_LL_4L_5c_LR_5s^5 + 2C_4C_5C_LL_4L_5c_LR_5s^5 + 2C_4C_5C_LL_4c_LR_5s^5 + 2C$ 

10.513 INVALID-ORDER-513  $Z(s) = \left(\infty, \infty, \infty, \frac{L_4s}{C_4L_4s^2+1}, L_5s + R_5 + \frac{1}{C_5s}, \frac{1}{C_Ls + \frac{1}{R_I} + \frac{1}{L_Is}}\right)$ 

 $H(s) = \frac{1}{2C_4C_5L_4L_5L_1R_1q_mr_os^4 + 2C_4C_5L_4L_5L_1R_1s^4 + 2C_4C_5L_4L_1R_5R_Lgmr_os^3 + 2C_4C_5L_4L_1R_1r_os^3 + 2C_4L_4L_1R_1gmr_os^2 + 2C_4L_4L_1R_1gmr_os^4 + C_5C_LL_4L_5L_1R_1s^4 + C_5C_LL_4L_5R_1gmr_os^3 + 2C_4C_5L_4L_1R_1gmr_os^3 + 2C_4C_5L_4L_1gmr_os^3 + 2C_4C_5L_4L_1gmr_os^3 + 2C_4C_5L_4L_1gmr_os^3 + 2C_4C_5L_4L_1gmr_os^3 + 2C_4C_5L_4L_1gmr_os^3 + 2C_4C_5L_4L_1gmr_os^3 + 2C_4C$ 

- 10.514 INVALID-ORDER-514  $Z(s) = \left(\infty, \infty, \infty, \frac{L_{4s}}{C_s L_4 s^2 + 1}, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$
- $H(s) = \frac{1}{2C_4C_5C_LL_4L_5L_LR_Lg_mr_os^6 + 2C_4C_5C_LL_4L_5L_LR_Ls^6 + 2C_4C_5C_LL_4L_LR_5R_Lg_mr_os^5 + 2C_4C_5C_LL_4L_LR_5R_Ls^5 + 2C_4C_5L_4L_5L_Lg_mr_os^5 + 2C_4C_5L_4L_5L_2g_mr_os^5 + 2C_4C_5L_4L_5L_2g_mr_os^5 + 2C_4C_5L_4L_5L_3g_mr_os^5 + 2C_4$
- 10.515 INVALID-ORDER-515  $Z(s) = \left(\infty, \infty, \infty, \frac{L_4 s}{C_4 L_4 s^2 + 1}, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{R_L \left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$
- $H(s) = \frac{1}{2C_4C_5C_LL_4L_5L_LR_Lg_mr_os^6 + 2C_4C_5C_LL_4L_5L_LR_Ls^6 + 2C_4C_5C_LL_4L_LR_5R_Lg_mr_os^5 + 2C_4C_5C_LL_4L_LR_5R_Ls^5 + 2C_4C_5C_LL_4L_LR_5R_Ls^5 + 2C_4C_5L_4L_5R_Lg_mr_os^4 + 2C_4C_5L_4L_5R_Ls^4 + 2C_4C_5L_4R_5R_Lg_mr_os^3 + 2C_4C_5L_4R_5R_Ls^3 + 2C_4C_5L_4L_LR_5R_Ls^5 + 2C_4C$
- **10.516** INVALID-ORDER-516  $Z(s) = \left(\infty, \infty, \infty, \frac{L_4 s}{C_4 L_4 s^2 + 1}, \frac{1}{C_5 s + \frac{1}{R_r} + \frac{1}{L_r s}}, R_L\right)$
- $H(s) = \frac{L_4 R_L s \left(-C_5 L_5 R_5 r_o s^2 + L_5 R_5 g_m r_o s + L_5 R_5 s L_5 r_o s R_5 r_o\right)}{2 C_4 C_5 L_4 L_5 R_5 R_L r_o s^4 + 2 C_4 L_4 L_5 R_5 R_L g_m r_o s^3 + 2 C_4 L_4 L_5 R_5 R_L r_o s^2 + 2 C_5 L_4 L_5 R_5 R_L r_o s^3 + 2 C_5 L_4 L_5 R_5 R_L r_o s^3 + 2 C_4 L_4 L_5 R_5 R_L r_o s^3 + 2 C_4 L_4 L_5 R_5 r_o s^3 + 2 C_4 L_5 R_5 r_o s^3 + 2 C_5 L_5 R_5$
- 10.517 INVALID-ORDER-517  $Z(s) = \left(\infty, \infty, \infty, \frac{L_4 s}{C_4 L_4 s^2 + 1}, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{1}{C_L s}\right)$
- $H(s) = \frac{L_{4}s\left(-C_{5}L_{5}R_{5}r_{o}s^{2} + L_{5}R_{5}g_{m}r_{o}s + L_{5}R_{5}s L_{5}r_{o}s R_{5}r_{o}\right)}{2C_{4}C_{5}L_{4}L_{5}R_{5}r_{o}s^{4} + 2C_{4}L_{4}L_{5}R_{5}s^{3} + 2C_{4}L_{4}L_{5}R_{5}s^{3} + 2C_{4}L_{4}L_{5}r_{o}s^{3} + 2C_{4}L_{4}L_{5}r_{o}s^{3} + 2C_{4}L_{4}L_{5}r_{o}s^{3} + 2C_{4}L_{4}L_{5}R_{5}s^{3} + 2C_{5}L_{4}L_{5}R_{5}r_{o}s^{4} + 2C_{5}L_{4}L_{5}R_{5}r_{o}s^{2} + C_{L}L_{4}L_{5}R_{5}s^{3} + C_{L}L_{4}L_{5}r_{o}s^{3} + C_{L}L_{4}L_{5}r_{o}s^{3} + C_{L}L_{4}L_{5}r_{o}s^{2} + 2L_{4}L_{5}r_{o}s^{2} + 2L_$
- 10.518 INVALID-ORDER-518  $Z(s) = \left(\infty, \infty, \infty, \frac{L_4s}{C_4L_4s^2+1}, \frac{1}{C_5s+\frac{1}{R_5}+\frac{1}{L_5s}}, \frac{R_L}{C_LR_Ls+1}\right)$
- $H(s) = \frac{1}{2C_4C_5L_4L_5R_5R_Lr_os^4 + 2C_4L_4L_5R_5R_Lg_mr_os^3 + 2C_4L_4L_5R_5R_Ls^3 + 2C_4L_4L_5R_5R_Lr_os^3 + 2C_4L_4L_5R_Lr_os^3 + 2C_4L_4L_5R_Lr_os^3 + 2C_4L_4L_5R_Lr_os^3 + 2C_4L_4L_5R_L$
- 10.519 INVALID-ORDER-519  $Z(s) = \left(\infty, \infty, \infty, \frac{L_4 s}{C_4 L_4 s^2 + 1}, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, R_L + \frac{1}{C_L s}\right)$
- $H(s) = -\frac{1}{2C_4C_5C_LL_4L_5R_5R_Lr_os^5 + 2C_4C_5L_4L_5R_5r_os^4 + 2C_4C_LL_4L_5R_5R_Lg_mr_os^4 + 2C_4C_LL_4L_5R_5R_Ls^4 + 2C_4C_LL_4L_5R_5R_Lr_os^4 + 2C_4C_LL_4L_5R_5R_Lr_os^3 + 2C_4L_4L_5R_5s^3 + 2C_4L_5L_5R_5s^3 + 2C_4L_5L_5R_5s^3 + 2C_4L_5L_5R_5s^3 + 2C_4L_5L_5R_5s^3 + 2C_4L_5L_5R_5s^3 + 2$
- 10.520 INVALID-ORDER-520  $Z(s) = \left(\infty, \infty, \infty, \frac{L_4 s}{C_4 L_4 s^2 + 1}, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, L_L s + \frac{1}{C_L s}\right)$
- $\frac{1}{2C_{4}C_{5}C_{L}L_{4}L_{5}L_{L}R_{5}r_{o}s^{6}+2C_{4}C_{5}L_{4}L_{5}R_{5}r_{o}s^{4}+2C_{4}C_{L}L_{4}L_{5}L_{L}R_{5}g_{m}r_{o}s^{5}+2C_{4}C_{L}L_{4}L_{5}L_{L}R_{5}s^{5}+2C_{4}C_{L}L_{4}L_{5}L_{L}R_{5}r_{o}s^{4}+2C_{4}L_{4}L_{5}R_{5}r_{o}s^{4}+2C_{4}L_{4}L_{5}R_{5}r_{o}s^{4}+2C_{4}L_{4}L_{5}L_{L}R_{5}r_{o}s^{5}+2C_{4}C_{L}L_{4}L_{5}L_{L}R_{5}r_{o}s^{5}+2C_{4}C_{L}L_{4}L_{5}L_{L}R_{5}r_{o}s^{5}+2C_{4}C_{L}L_{4}L_{5}L_{L}R_{5}r_{o}s^{4}+2C_{4}L_{4}L_{5}R_{5}r_{o}s^{3}+2C_{4}L_{4}L_{5}r_{o}s^{5}+2C_{4}L_{4}L_{5}L_{L}R_{5}$
- 10.521 INVALID-ORDER-521  $Z(s) = \left(\infty, \infty, \infty, \frac{L_4 s}{C_4 L_4 s^2 + 1}, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{L_L s}{C_L L_L s^2 + 1}\right)$

- 10.522 INVALID-ORDER-522  $Z(s) = \left(\infty, \infty, \infty, \frac{L_4s}{C_4L_4s^2+1}, \frac{1}{C_5s+\frac{1}{R_5}+\frac{1}{L_5s}}, L_Ls + R_L + \frac{1}{C_Ls}\right)$
- $H(s) = -\frac{1}{2C_4C_5C_LL_4L_5L_LR_5r_os^6 + 2C_4C_5L_4L_5R_5R_Lr_os^5 + 2C_4C_5L_4L_5R_5r_os^4 + 2C_4C_LL_4L_5L_LR_5g_mr_os^5 + 2C_4C_LL_4L_5L_LR_5s^5 + 2C_4C_LL_4L_5L_LR_5s^5 + 2C_4C_LL_4L_5L_LR_5s^5 + 2C_4C_LL_4L_5R_5R_Lg_mr_os^4 + 2C_4C_LL_4L_5R_5R_Ls^4 + 2C_4C_LL_4L_5R_5r_os^4 + 2C_4C_LL_4R_5r_os^4 + 2C_4C_LL_4R_5r_os^4 + 2C_4C_LL_4R_5r_os^4 + 2C_4C_LL_4R_5r_os^4 + 2C_4C_LL_4R_5r_os^4 + 2C_4C_LL_4R_5r_os^4 + 2C_$
- 10.523 INVALID-ORDER-523  $Z(s) = \left(\infty, \infty, \infty, \frac{L_4s}{C_4L_4s^2+1}, \frac{1}{C_5s+\frac{1}{R_5}+\frac{1}{L_5s}}, \frac{1}{C_Ls+\frac{1}{R_L}+\frac{1}{L_Ls}}\right)$
- $H(s) = \frac{1}{2C_4C_5L_4L_5L_LR_5R_Lr_os^4 + 2C_4L_4L_5L_LR_5R_Lg_mr_os^3 + 2C_4L_4L_5L_LR_5R_Ls^3 + 2C_4L_4L_5L_LR_5R_Lr_os^3 + 2C_4L_4L_5L_LR_5R_Lr_os^2 + C_5C_LL_4L_5L_LR_5R_Lr_os^4 + 2C_5L_4L_5L_LR_5R_Lg_mr_os^3 + 4C_5L_4L_5L_LR_5R_Ls^3 + C_5L_4L_5L_LR_5R_Lr_os^3 + 2C_4L_4L_5L_LR_5R_Lr_os^3 + 2C_4L_5L_4L_5L_4L_5L_4L_5L_4L_5L_5L_5R_5R_Lr_os^3 + 2C_4L_4L_5L_5L_5$
- 10.524 INVALID-ORDER-524  $Z(s) = \left(\infty, \infty, \infty, \frac{L_4s}{C_4L_4s^2+1}, \frac{1}{C_5s+\frac{1}{R_5}+\frac{1}{L_5s}}, \frac{L_Ls}{C_LL_Ls^2+1} + R_L\right)$
- $H(s) = -\frac{1}{2C_4C_5C_LL_4L_5L_LR_5R_Lr_os^6 + 2C_4C_5L_4L_5L_LR_5r_os^5 + 2C_4C_5L_4L_5L_Rs_RL_ros^5 + 2C_4C_LL_4L_5L_LR_5R_Lr_os^5 + 2C_4C_LL_4L_5L_LR_$
- 10.525 INVALID-ORDER-525  $Z(s) = \left(\infty, \infty, \infty, \frac{L_4s}{C_4L_4s^2+1}, \frac{1}{C_5s+\frac{1}{R_5}+\frac{1}{L_5s}}, \frac{R_L\left(L_Ls+\frac{1}{C_Ls}\right)}{L_Ls+R_L+\frac{1}{C_Ls}}\right)$
- $H(s) = -\frac{1}{2C_4C_5C_LL_4L_5L_LR_5R_Lr_os^6 + 2C_4C_5L_4L_5R_5R_Lr_os^4 + 2C_4C_LL_4L_5L_LR_5R_Lg_mr_os^5 + 2C_4C_LL_4L_5L_LR_5R_Lr_os^5 + 2C_4C_LL_4L_5L_LR_5R_Lr_os^5 + 2C_4C_LL_4L_5R_LR_os^5 + 2C_4C_LL_4L_5R_Lr_os^5 + 2C_4L_4L_5R_5R_Lr_os^4 + 2C_4L_4L_5R_Lr_os^4 + 2C_4L_4L$
- 10.526 INVALID-ORDER-526  $Z(s) = \left(\infty, \infty, \infty, \frac{L_{4s}}{C_4L_4s^2+1}, \frac{L_5s}{C_5L_5s^2+1} + R_5, R_L\right)$
- $H(s) = \frac{L_4 R_L s \left(C_5 L_5 R_5 g_m r_o s^2 + C_5 L_5 R_5 s^2 C_5 L_5 r_o s^2 + L_5 g_m r_o s + L_5 s + L_5 g_m r_o s^2 + C_5 L_4 L_5 R_5 g_m r_o s^3 + 2 C_4 L_4 L_5 R_L g_m r_o s^3 + 2 C_4 L_4 R_5 R_L g_m r_o s^3 + 2 C_5 L_4 L_5 R_L g_m r_o s^3 + 2 C_5 L_4 L_5 R_L g_m r_o s^3 + 2 C_5 L_4 R_5 R_L g_m r_o s^3 + 2 C_5 L_4 R_5 R_L g_m r_o s^3 + 2 C_5 L_4 R_5 R_L g_m r_o s^3 + 2 C_5 L_4 R_5 R_L g_m r_o s^3 + 2 C_5 L_4 R_5 R_L g_m r_o s^3 + 2 C_5 L_4 R_5 R_L g_m r_o s^3 + 2 C_5 L_4 R_5 R_L g_m r_o s^3 + 2 C_5 L_4 R_5 R_L g_m r_o s^3 + 2 C_5 R_L g_m r_o s^3 + 2 C_5 R_L g_m r_o s^3 + 2 C_5 R_L g_m r_o s^3 + 2 C_5$
- 10.527 INVALID-ORDER-527  $Z(s) = \left(\infty, \infty, \infty, \frac{L_4s}{C_4L_4s^2+1}, \frac{L_5s}{C_5L_5s^2+1} + R_5, \frac{1}{C_Ls}\right)$
- $H(s) = \frac{L_{4}s\left(C_{5}L_{5}R_{5}g_{m}r_{o}s^{2} + C_{5}L_{5}R_{5}s^{2} C_{5}L_{5}r_{o}s^{2} + L_{5}g_{m}r_{o}s + L_{5}s + R_{5}g_{m}r_{o} + R_{5} r_{5}R_{5}s^{2} C_{5}L_{5}R_{5}s^{2} + C_{5}L_{4}L_{5}R_{5}s^{4} + 2C_{4}L_{4}L_{5}r_{o}s^{4} + 2C_{5}L_{4}L_{5}r_{o}s^{4} + 2C_{5}L_{5}R_{5}r_{o}r_{o}s^{4} + 2C_{5}L_{5}R$
- 10.528 INVALID-ORDER-528  $Z(s) = \left(\infty, \infty, \infty, \frac{L_4s}{C_4L_4s^2+1}, \frac{L_5s}{C_5L_5s^2+1} + R_5, \frac{R_L}{C_LR_Ls+1}\right)$
- $H(s) = \frac{1}{2C_4C_5L_4L_5R_5R_Lg_mr_os^4 + 2C_4C_5L_4L_5R_5R_Ls^4 + 2C_4C_5L_4L_5R_Lr_os^4 + 2C_4L_4L_5R_Lg_mr_os^3 + 2C_4L_4R_5R_Lg_mr_os^2 + 2C_4L_4R_5R_Lg_mr_os^2 + 2C_4L_4R_5R_Lg_mr_os^4 + C_5C_LL_4L_5R_5R_Lg_mr_os^4 + C_5C_LL_4L_5R_Lg_mr_os^4 + C_5C_LL_4L_5R_Lg_mr_os^4$
- 10.529 INVALID-ORDER-529  $Z(s) = \left(\infty, \infty, \infty, \frac{L_4s}{C_4L_4s^2+1}, \frac{L_5s}{C_5L_5s^2+1} + R_5, R_L + \frac{1}{C_Ls}\right)$
- $H(s) = \frac{1}{2C_4C_5C_LL_4L_5R_5R_Lg_mr_os^5 + 2C_4C_5C_LL_4L_5R_5R_Ls^5 + 2C_4C_5C_LL_4L_5R_Lg_mr_os^4 + 2C_4C_5L_4L_5R_5s^4 + 2C_4C_5L_4L_5R_Lg_mr_os^4 + 2C_4C_LL_4L_5R_Lg_mr_os^4 + 2C_4C_LL_4R_5R_Lg_mr_os^4 + 2C_4C_LL_4R_5$

- **10.530** INVALID-ORDER-530  $Z(s) = \left(\infty, \infty, \infty, \frac{L_4s}{C_4L_4s^2+1}, \frac{L_5s}{C_5L_5s^2+1} + R_5, L_Ls + \frac{1}{C_Ls}\right)$
- $H(s) = \frac{1}{2C_4C_5C_LL_4L_5L_LR_5g_mr_os^6 + 2C_4C_5C_LL_4L_5L_LR_5s^6 + 2C_4C_5C_LL_4L_5L_Lr_os^6 + 2C_4C_5L_4L_5R_5g_mr_os^4 + 2C_4C_5L_4L_5R_5s^4 + 2C_4C_5L_4L_5L_Lg_mr_os^5 + 2C_4C_LL_4L_5L_Ls^5 + 2C_4C_LL_4L_5L_LR_5g_mr_os^4 + 2C_4C_LL_4L_5L_Lr_os^4 + 2C_4C_5L_4L_5R_5g_mr_os^4 + 2C_4C_5L_4L_5L_Lg_mr_os^5 + 2C_4C_LL_4L_5L_Lg_mr_os^5 + 2C_4C_LL_4L_5L_Lg_mr_os^4 + 2C_4C_5L_4L_5L_Lg_mr_os^4 + 2C_4C_5L_4L_5L_2g_mr_os^4 + 2C_4C_5L_4L_5L_2g_mr_os^4 + 2C_4C_5L_4L_5L_2g_mr_os^4 + 2C_4C_5L_4L_5L_2g_mr_os^4 + 2C_4C_5L_4L_5L_3g_mr_os^4 + 2C_4C_5L_4L_5L_3g_mr_o$
- 10.531 INVALID-ORDER-531  $Z(s) = \left(\infty, \infty, \infty, \frac{L_4s}{C_4L_4s^2+1}, \frac{L_5s}{C_5L_5s^2+1} + R_5, \frac{L_Ls}{C_LL_Ls^2+1}\right)$
- 10.532 INVALID-ORDER-532  $Z(s) = \left(\infty, \infty, \infty, \frac{L_4s}{C_4L_4s^2+1}, \frac{L_5s}{C_5L_5s^2+1} + R_5, L_Ls + R_L + \frac{1}{C_Ls}\right)$
- $H(s) = \frac{1}{2C_4C_5C_LL_4L_5L_LR_5g_mr_os^6 + 2C_4C_5C_LL_4L_5L_LR_5s^6 + 2C_4C_5C_LL_4L_5L_Lr_os^6 + 2C_4C_5C_LL_4L_5R_5R_Lg_mr_os^5 + 2C_4C_5C_LL_4L_5R_Ls^5 + 2C_4C_5C_LL_4L_5R_5R_Ls^5 + 2C_4C_5C_LL_4L_5R_Ls^5 + 2C_4C_5C_LL_4L_5$
- 10.533 INVALID-ORDER-533  $Z(s) = \left(\infty, \infty, \infty, \frac{L_4s}{C_4L_4s^2+1}, \frac{L_5s}{C_5L_5s^2+1} + R_5, \frac{1}{C_Ls + \frac{1}{R_L} + \frac{1}{L_Ls}}\right)$
- $H(s) = \frac{1}{2C_4C_5L_4L_5L_LR_5R_Lg_mr_os^4 + 2C_4C_5L_4L_5L_LR_5R_Ls^4 + 2C_4C_5L_4L_5L_LR_Lg_mr_os^4 + 2C_4L_4L_5L_LR_Ls^3 + 2C_4L_4L_LR_Ls^3 + 2C_4L_4L_Ls^3 + 2C_4L_4L$
- 10.534 INVALID-ORDER-534  $Z(s) = \left(\infty, \infty, \infty, \frac{L_4s}{C_4L_4s^2+1}, \frac{L_5s}{C_5L_5s^2+1} + R_5, \frac{L_Ls}{C_LL_Ls^2+1} + R_L\right)$
- 10.535 INVALID-ORDER-535  $Z(s) = \left(\infty, \infty, \infty, \frac{L_4s}{C_4L_4s^2+1}, \frac{L_5s}{C_5L_5s^2+1} + R_5, \frac{R_L\left(L_Ls + \frac{1}{C_Ls}\right)}{L_Ls + R_L + \frac{1}{C_Ls}}\right)$
- **10.536** INVALID-ORDER-536  $Z(s) = \left(\infty, \infty, \infty, \frac{L_4s}{C_4L_4s^2+1}, \frac{R_5\left(L_5s+\frac{1}{C_5s}\right)}{L_5s+R_5+\frac{1}{C_5s}}, R_L\right)$
- $H(s) = \frac{L_4 R_L s \left(C_5 L_5 R_5 g_m r_o s^2 + C_5 L_5 R_5 s^2 C_5 L_5 r_o s^2 C_5 R_5 r_o s + C_5 L_4 R_5 R_L g_m r_o s^4 + 2 C_4 C_5 L_4 L_5 R_5 R_L g_m r_o s^4 + 2 C_4 C_5 L_4 L_5 R_L g_m r_o s^4 + 2 C_4 C_5 L_4 L_5 R_L g_m r_o s^4 + 2 C_4 C_5 L_4 L_5 R_L g_m r_o s^4 + 2 C_4 L_4 R_5 R_L g_m r_o s^3 + 2 C_4 L_4 R_5 R_L g_m r_o s^3 + 2 C_5 L_4 L_5 R_5 g_m r_o s^3 + 2 C_5 L_4 L_5 R_5 g_m r_o s^3 + 2 C_5 L_4 L_5 R_5 g_m r_o s^3 + 2 C_5 L_4 L_5 R_L g_m r_o s^3 + 2 C_5 L_4 R_5 R_L g_m r_o s^3 + 2 C_5 L_4 R_5 R_L g_m r_o s^3 + 2 C_5 L_4 R_5 R_L g_m r_o s^3 + 2 C_5 L_4 R_5 R_L g_m r_o s^3 + 2 C_5 L_4 R_5 R_L g_m r_o s^3 + 2 C_5 L_5 R_5 R_L g_m r_o s^3 + 2 C_5 L_5 R_5 R_L g_m r_o s^3 + 2 C_5 L_5 R_5 R_L g_m r_o s^3 + 2 C_5 L_5 R_5 R_L g_m r_o s^3 + 2 C_5 L_5 R_5 R_L g_m r_o s^3 + 2 C_5 L_5 R_5 R_L g_m r_o s^3 + 2 C_5 L_5 R_5 R_L g_m r_o s^3 + 2 C_5 L_5 R_5 R_L g_m r_o s^3 + 2 C_5 L_5 R_L g$
- 10.537 INVALID-ORDER-537  $Z(s) = \left(\infty, \infty, \infty, \frac{L_{48}}{C_4 L_4 s^2 + 1}, \frac{R_5 \left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{1}{C_L s}\right)$
- $H(s) = \frac{L_{4}s\left(C_{5}L_{5}R_{5}g_{m}r_{o}s^{2} + C_{5}L_{5}R_{5}s^{2} C_{5}L_{5}r_{o}s^{2} + C_{5}L_{5}r_{o}s^{2} C_{5}R_{5}r_{o}s + R_{5}g_{m}r_{o} + R_{5} r_{o}\right)}{2C_{4}C_{5}L_{4}L_{5}R_{5}g_{m}r_{o}s^{4} + 2C_{4}C_{5}L_{4}L_{5}r_{o}s^{4} + 2C_{4}C_{5}L_{4}L_{5}r_{o}s^{3} + 2C_{4}L_{4}R_{5}r_{o}s^{3} + 2C_{4}L_{4}R_{5}r_{o}s^{3} + 2C_{4}L_{4}R_{5}r_{o}s^{3} + 2C_{4}L_{4}R_{5}r_{o}s^{3} + 2C_{5}L_{4}L_{5}r_{o}s^{4} + C_{5}C_{L}L_{4}L_{5}R_{5}r_{o}s^{4} + C_{5}C_{L}L_{4}L_{5}r_{o}s^{4} + C_{5}C_{L}L_{4}L_{5}r_{o}s^{3} + 2C_{5}L_{4}L_{5}r_{o}s^{3} + 2C_{5}L_{5}L_{5}r_{o}s^{3} + 2C_{5}L_{5}L_{5}r_{o}s^{3} + 2C_{5}L_{5}L_{5}r_{o}s^{3} + 2C_{5}L_{5}L_{5}r_{o}s^{3} + 2C_{5}L_{5}r_{o}s^{3} + 2C_{5}L_{5}r_{o}s^$

- 10.538 INVALID-ORDER-538  $Z(s) = \left(\infty, \infty, \infty, \frac{L_4s}{C_4L_4s^2+1}, \frac{R_5\left(L_5s+\frac{1}{C_5s}\right)}{L_5s+R_5+\frac{1}{C_5s}}, \frac{R_L}{C_LR_Ls+1}\right)$
- $H(s) = \frac{1}{2C_4C_5L_4L_5R_5R_Lg_mr_os^4 + 2C_4C_5L_4L_5R_5R_Ls^4 + 2C_4C_5L_4L_5R_Lr_os^4 + 2C_4C_5L_4R_5R_Lr_os^3 + 2C_4L_4R_5R_Lg_mr_os^2 + 2C_4L_4R_5R_Lg_mr_os^2 + 2C_4L_4R_5R_Lg_mr_os^4 + C_5C_LL_4L_5R_5R_Lg_mr_os^4 + C_5C_LL_4R_5R_Lg_mr_os^4 + C_5C_LL_4R_5R_Lg_mr_os^4$
- 10.539 INVALID-ORDER-539  $Z(s) = \left(\infty, \infty, \infty, \frac{L_4s}{C_4L_4s^2+1}, \frac{R_5\left(L_5s+\frac{1}{C_5s}\right)}{L_5s+R_5+\frac{1}{C_5s}}, R_L + \frac{1}{C_Ls}\right)$
- $H(s) = \frac{1}{2C_4C_5C_LL_4L_5R_5R_Lg_mr_os^5 + 2C_4C_5C_LL_4L_5R_5R_Ls^5 + 2C_4C_5C_LL_4L_5R_Lr_os^5 + 2C_4C_5C_LL_4R_5R_Lr_os^4 + 2C_4C_5L_4L_5R_5g_mr_os^4 + 2C_4C_5L_4L_5R_5s^4 + 2C_4C_5L_4L_5r_os^4 + 2C_4C_5L_4R_5r_os^4 + 2C_4C_5L_4R_5r_o$
- **10.540** INVALID-ORDER-540  $Z(s) = \left(\infty, \infty, \infty, \frac{L_4s}{C_4L_4s^2+1}, \frac{R_5\left(L_5s+\frac{1}{C_5s}\right)}{L_5s+R_5+\frac{1}{C_5s}}, L_Ls + \frac{1}{C_Ls}\right)$
- $H(s) = \frac{1}{2C_4C_5C_LL_4L_5L_LR_5g_mr_os^6 + 2C_4C_5C_LL_4L_5L_LR_5s^6 + 2C_4C_5C_LL_4L_5L_Lr_os^6 + 2C_4C_5C_LL_4L_5R_5g_mr_os^4 + 2C_4C_5L_4L_5R_5s^4 + 2C_4C_5L_5L_5R_5s^4 + 2C_4C_5L_5L_5R_5s^4 + 2C_4C_5L_5L_5R_5s^4 + 2C_4C_5L_5R_5s^4 +$
- 10.541 INVALID-ORDER-541  $Z(s) = \left(\infty, \infty, \infty, \frac{L_4s}{C_4L_4s^2+1}, \frac{R_5\left(L_5s+\frac{1}{C_5s}\right)}{L_5s+R_5+\frac{1}{C_5s}}, \frac{L_Ls}{C_LL_Ls^2+1}\right)$
- $H(s) = \frac{1}{2C_4C_5L_4L_5L_LR_5g_mr_os^4 + 2C_4C_5L_4L_5L_LR_5s^4 + 2C_4C_5L_4L_5L_Lr_os^4 + 2C_4C_5L_4L_LR_5r_os^3 + 2C_4L_4L_LR_5g_mr_os^2 + 2C_4L_4L_LR_5s^2 + 2$
- 10.542 INVALID-ORDER-542  $Z(s) = \left(\infty, \infty, \infty, \frac{L_4s}{C_4L_4s^2+1}, \frac{R_5\left(L_5s+\frac{1}{C_5s}\right)}{L_5s+R_5+\frac{1}{C_5s}}, L_Ls + R_L + \frac{1}{C_Ls}\right)$
- $H(s) = \frac{1}{2C_4C_5C_LL_4L_5L_LR_5g_mr_os^6 + 2C_4C_5C_LL_4L_5L_LR_5s^6 + 2C_4C_5C_LL_4L_5L_Lr_os^6 + 2C_4C_5C_LL_4L_5R_5R_Lg_mr_os^5 + 2C_4C_5C_LL_4L_5R_Lr_os^5 + 2C_4C_5C_LL_4R_5R_Lr_os^5 + 2C_4$
- 10.543 INVALID-ORDER-543  $Z(s) = \left(\infty, \infty, \infty, \frac{L_4s}{C_4L_4s^2+1}, \frac{R_5\left(L_5s+\frac{1}{C_5s}\right)}{L_5s+R_5+\frac{1}{C_5s}}, \frac{1}{C_Ls+\frac{1}{R_L}+\frac{1}{L_Ls}}\right)$
- $H(s) = \frac{1}{2C_4C_5L_4L_5L_LR_5R_Lg_mr_os^4 + 2C_4C_5L_4L_5L_LR_5R_Ls^4 + 2C_4C_5L_4L_5L_LR_5R_Lr_os^4 + 2C_4C_5L_4L_LR_5R_Lr_os^3 + 2C_4L_4L_LR_5R_Lg_mr_os^2 + 2C_4L_4L_LR_5R_Ls^2 + 2C_4L_4L_LR_5R_Ls^2 + 2C_4L_4L_LR_5R_Lg_mr_os^4 + C_5C_LL_4L_5L_LR_5R_Ls^4 + C_5C_LL_4L_5L_LR_5R_Lr_os^4 + C_5C_LL_4L_5L_Rr_os^4 + C_5C_LL_4L_5L_$
- 10.544 INVALID-ORDER-544  $Z(s) = \left(\infty, \infty, \infty, \frac{L_4 s}{C_4 L_4 s^2 + 1}, \frac{R_5 \left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$
- $H(s) = \frac{1}{2C_4C_5C_LL_4L_5L_LR_5R_Lg_mr_os^6 + 2C_4C_5L_LL_4L_5L_LR_5R_Ls^6 + 2C_4C_5L_LL_4L_5L_LR_5r_os^6 + 2C_4C_5L_4L_5L_LR_5g_mr_os^5 + 2C_4C_5L_4L_5L_Rg_mr_os^5 +$
- 10.545 INVALID-ORDER-545  $Z(s) = \left(\infty, \infty, \infty, \frac{L_4s}{C_4L_4s^2+1}, \frac{R_5\left(L_5s+\frac{1}{C_5s}\right)}{L_5s+R_5+\frac{1}{C_5s}}, \frac{R_L\left(L_Ls+\frac{1}{C_Ls}\right)}{L_Ls+R_L+\frac{1}{C_Ls}}\right)$
- $H(s) = \frac{1}{2C_4C_5C_LL_4L_5L_LR_5R_Lg_mr_os^6 + 2C_4C_5C_LL_4L_5L_LR_5R_Ls^6 + 2C_4C_5C_LL_4L_5L_LR_5r_os^6 + 2C_4C_5C_LL_4L_LR_5R_Lr_os^5 + 2C_4C_5L_4L_5R_5R_Lg_mr_os^4 + 2C_4C_5L_4L_5R_5R_Ls^4 + 2C_4C_5L_4L_5R_Lr_os^4 + 2C_4C_5L_4L_5R_Lr_os^3 + 2C_4C_5L_4L_5R_Lr_os^4 + 2C_4C_5L_4R_5R_Lr_os^4 + 2C_4C_5L_4R_5R_Lr_os^$

**10.546** INVALID-ORDER-546  $Z(s) = \left(\infty, \infty, \infty, L_4 s + R_4 + \frac{1}{C_4 s}, R_5, \frac{1}{C_L s}\right)$ 

 $H(s) = \frac{\left(C_4L_4s^2 + C_4R_4s + 1\right)\left(R_5g_mr_o + R_5 - r_o\right)}{C_4C_LL_4R_5g_mr_os^3 + C_4C_LL_4R_5s^3 + C_4C_LL_4r_os^3 + C_4C_LR_4R_5g_mr_os^2 + C_4C_LR_4r_os^2 + 2C_4L_4g_mr_os^2 + 4C_4L_4s^2 + 2C_4R_4g_mr_os + 4C_4R_4s + 2C_4R_5g_mr_os + 2C_4R_5s + 2C_4r_os + C_LR_5g_mr_os + C_LR_5s + C_Lr_os + 2g_mr_o + 4C_4R_5s^2 + 2C_4R_5g_mr_os + 2C_4R_5s + 2C_4R_5g_mr_os + 2C_4R_5g_m$ 

10.547 INVALID-ORDER-547  $Z(s) = \left(\infty, \infty, \infty, L_4 s + R_4 + \frac{1}{C_4 s}, R_5, \frac{R_L}{C_L R_L s + 1}\right)$ 

 $H(s) = \frac{R_L \left( C_4 L_4 s^2 + C_4 R_4 s + 1 \right) \left( R_5 g_m r_o + R_5 - r_o \right)}{C_4 C_L L_4 R_5 R_L g_m r_o s^3 + C_4 C_L L_4 R_5 R_L g_m r_o s^2 + C_4 L_4 R_5 g_m r_o s^2 + C_4 R_5 g_m r_o s^2 + C_$ 

**10.548** INVALID-ORDER-548  $Z(s) = \left(\infty, \infty, \infty, L_4 s + R_4 + \frac{1}{C_4 s}, R_5, R_L + \frac{1}{C_L s}\right)$ 

 $H(s) = \frac{\left(C_{L}R_{L}s+1\right)\left(C_{4}L_{4}s^{2}+C_{4}R_{4}s+1\right)\left(R_{5}g_{m}r_{o}+R_{5}-r_{o}\right)}{C_{4}C_{L}L_{4}R_{5}g_{m}r_{o}s^{3}+C_{4}C_{L}L_{4}R_{5}g_{m}r_{o}s^{3}+C_{4}C_{L}L_{4}R_{5}g_{m}r_{o}s^{2}+C_{4}C_{L}R_{5}R_{L}g_{m}r_{o}s^{2}+C_{4}C_{L}R_{5}R_{L}g_{m}r_{o}s^{2}+C_{4}C_{$ 

**10.549** INVALID-ORDER-549  $Z(s) = \left(\infty, \infty, \infty, L_4 s + R_4 + \frac{1}{C_4 s}, R_5, L_L s + \frac{1}{C_L s}\right)$ 

 $H(s) = \frac{\left(C_{L}L_{L}s^{2} + 1\right)\left(C_{4}L_{4}s^{2} + C_{4}R_{4}s + 1\right)\left(R_{5}g_{m}r_{o} + R_{5} - r_{o}\right)}{2C_{4}C_{L}L_{4}L_{2}g_{m}r_{o}s^{4} + 4C_{4}C_{L}L_{4}R_{5}g_{m}r_{o}s^{3} + 2C_{4}C_{L}L_{4}R_{5}g_{m}r_{o}s^{3} + 2C_{4}C_{L}L_{4}R_{5}g_{m}r$ 

**10.550** INVALID-ORDER-550  $Z(s) = \left(\infty, \infty, \infty, L_4 s + R_4 + \frac{1}{C_4 s}, R_5, \frac{L_L s}{C_L L_L s^2 + 1}\right)$ 

 $H(s) = \frac{L_{L}s\left(C_{4}L_{4}s^{2} + C_{4}R_{4}s + 1\right)\left(R_{5}g_{m}r_{o} + R_{5} - r_{o}\right)}{C_{4}C_{L}L_{4}L_{L}R_{5}g_{m}r_{o}s^{4} + C_{4}C_{L}L_{4}L_{L}r_{o}s^{4} + C_{4}C_{L}L_{L}R_{4}R_{5}g_{m}r_{o}s^{3} + C_{4}C_{L}L_{L}R_{4}r_{o}s^{3} + 2C_{4}L_{L}R_{5}g_{m}r_{o}s^{3} + 4C_{4}L_{L}R_{5}g_{m}r_{o}s^{2} + C_{4}L_{4}R_{5}g_{m}r_{o}s^{2} + 2C_{4}L_{L}R_{4}g_{m}r_{o}s^{2} + 4C_{4}L_{L}R_{4}g_{m}r_{o}s^{2} + 4C$ 

**10.551** INVALID-ORDER-551  $Z(s) = \left(\infty, \infty, \infty, L_4 s + R_4 + \frac{1}{C_4 s}, R_5, L_L s + R_L + \frac{1}{C_L s}\right)$ 

 $H(s) = \frac{1}{2C_4C_LL_4L_4g_mr_os^4 + 4C_4C_LL_4R_5g_mr_os^3 + 4C_4C_L$ 

10.552 INVALID-ORDER-552  $Z(s) = \left(\infty, \infty, \infty, L_4 s + R_4 + \frac{1}{C_4 s}, R_5, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$ 

 $H(s) = \frac{1}{C_4 C_L L_4 L_L R_5 R_L g_m r_o s^4 + C_4 C_L L_4 L_L R_5 R_L s^4 + C_4 C_L L_4 L_L R_4 r_o s^4 + C_4 C_L L_L R_4 R_5 R_L g_m r_o s^3 + C_4 L_4 L_L R_5 g_m r_o s^3 + C_4 L_$ 

10.553 INVALID-ORDER-553  $Z(s) = \left(\infty, \infty, \infty, L_4 s + R_4 + \frac{1}{C_4 s}, R_5, \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$ 

 $H(s) = \frac{1}{C_4 C_L L_4 L_L R_5 a_m r_o s^4 + C_4 C_L L_4 L_L R_5 s^4 + 2 C_4 C_L L_4 L_L R_4 r_o s^4 + 4 C_4 C_L L_4 L_L R_5 a_m r_o s^4 + 4 C_4 C_L L_4 L_L R_4 R_5 a_m r_o s^3 + 2 C_4 C_L L_L R_4 R_5 a_m r_o s^3 + 4 C_4 C_L L_L R_4 R_5 a_m r_o s^3 + 2 C_4 C_L L_L R_5 a_m r_o s^3 + 2 C_4 C_L L_L R_5 a_m r_o s^3 + 2 C_4 C_L L_L R_5 a_m r_o s^3 + 2 C_4 C_L L_L R_5 a_m r_o s^3 + 2 C_4 C_L L_L R_5 a_m r_o s^3 + 2 C_4 C_L L_L R_5 a_m r_o s^3 + 2 C_4 C_L L_L R_5 a_m r_o s^3 + 2 C_4 C_L L_L R_5 a_m r_o s^3 + 2 C_4 C_L L_L R_5 a_m r_o s^3 + 2 C_4 C_L L_L R_5 a_m r_o s^3 + 2 C_4 C_L L_L R_5 a_m r_o s^3 + 2 C_4 C_L L_L R_5 a_m r_o s^3 + 2 C_4 C_L L_L R_5 a_m r_o s^3 + 2 C_4 C_L L_L R_5 a_m r_o s^3 + 2 C_4 C_L L_L R_5 a_m r_o s^3 + 2 C_4 C_L L_L R_5 a_m r_o s^3 + 2 C_4 C_L L_L R_5 a_m r_o s^3 + 2 C_4 C_L L_L R_5 a_m r_o s^3 + 2 C_4 C_L L_L R_5 a_m r_o s^3 + 2 C_4 C_L R_5 a_m r_o s^$ 

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10.554 INVALID-ORDER-554 Z(s) = \left(\infty, \infty, \infty, L_4 s + R_4 + \frac{1}{C_4 s}, R_5, \frac{R_L \left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)
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 $H(s) = \frac{1}{C_4 C_L L_4 L_L R_5 g_m r_o s^4 + C_4 C_L L_4 L_L R_5 s^4 + 2 C_4 C_L L_4 L_L R_L g_m r_o s^4 + 4 C_4 C_L L_4 L_L R_5 s^4 + 2 C_4 C_L L_4 R_5 R_L g_m r_o s^3 + C_$ 

**10.555** INVALID-ORDER-555  $Z(s) = \left(\infty, \infty, \infty, L_4 s + R_4 + \frac{1}{C_4 s}, \frac{1}{C_5 s}, R_L\right)$ 

 $H(s) = \frac{R_L \left( C_4 L_4 s^2 + C_4 R_4 s + 1 \right) \left( -C_5 r_o s + g_m r_o + 1 \right)}{2 C_4 C_5 L_4 R_L g_m r_o s^3 + 4 C_4 C_5 L_4 r_o s^3 + 2 C_4 C_5 R_4 R_L g_m r_o s^2 + 4 C_4 C_5 R_4 r_o s^2 + 2 C_4 C_5 R_L r_o s^2 + C_4 L_4 g_m r_o s^2 + C_4 L_4 g_m r_o s + C_4 R_4 g_m r_o s + 2 C_4 R_L g_m r_o s + 2 C_4 R_L g_m r_o s + 4 C_5 R_L g_m r_o s + 4 C_5 R_L g_m r_o s + 4 C_5 R_L g_m r_o s + 2 C_4 R$ 

**10.556** INVALID-ORDER-556  $Z(s) = \left(\infty, \infty, \infty, L_4 s + R_4 + \frac{1}{C_4 s}, \frac{1}{C_5 s}, \frac{1}{C_L s}\right)$ 

 $H(s) = \frac{\left(C_4L_4s^2 + C_4R_4s + 1\right)\left(-C_5r_os + g_mr_o + 1\right)}{s\left(C_4C_5C_LL_4r_os^3 + C_4C_5C_LR_4r_os^2 + 2C_4C_5L_4g_mr_os^2 + 4C_4C_5R_4g_mr_os + 4C_4C_5R_4s + 2C_4C_5r_os + C_4C_LL_4g_mr_os^2 + C_4C_LR_4s + 2C_4g_mr_o + 2C_4 + C_5C_Lr_os + 2C_5g_mr_o + 4C_5 + C_Lg_mr_o + C_L\right)}$ 

10.557 INVALID-ORDER-557  $Z(s) = \left(\infty, \infty, \infty, L_4 s + R_4 + \frac{1}{C_4 s}, \frac{1}{C_5 s}, \frac{R_L}{C_L R_L s + 1}\right)$ 

 $H(s) = \frac{R_L \left( C_4 L_4 s^2 + C_4 R_4 s + 1 \right) \left( -C_5 r_o s + g_m r_o + 1 \right)}{C_4 C_5 C_L L_4 R_L r_o s^4 + C_4 C_5 L_4 R_L r_o s^3 + 2 C_4 C_5 L_4 R_L g_m r_o s^3 + 4 C_4 C_5 L_4 R_L g_m r_o s^3 + 2 C_4 C_5 R_4 R_L g_m$ 

**10.558** INVALID-ORDER-558  $Z(s) = \left(\infty, \infty, \infty, L_4 s + R_4 + \frac{1}{C_4 s}, \frac{1}{C_5 s}, R_L + \frac{1}{C_L s}\right)$ 

 $H(s) = \frac{\left(C_L R_L s + 1\right) \left(C_4 L_4 s^2 + C_4 R_4 s + 1\right) \left(-C_5 r_o s + g_m r_o + 1\right)}{s \left(2C_4 C_5 C_L L_4 R_L g_m r_o s^3 + 4C_4 C_5 C_L L_4 R_L g_m r_o s^2 + 4C_4 C_5 C_L R_4 R_L g_m r$ 

**10.559** INVALID-ORDER-559  $Z(s) = \left(\infty, \infty, \infty, L_4 s + R_4 + \frac{1}{C_4 s}, \frac{1}{C_5 s}, L_L s + \frac{1}{C_L s}\right)$ 

 $H(s) = \frac{\left(C_{L}L_{s}^{2}+1\right)\left(C_{4}L_{4}s^{2}+C_{4}R_{4}s+1\right)\left(-C_{5}r_{o}s+g_{m}r_{o}+1\right)}{s\left(2C_{4}C_{5}C_{L}L_{4}L_{L}g_{m}r_{o}s^{4}+4C_{4}C_{5}C_{L}L_{4}R_{4}s^{3}+2C_{4}C_{5}C_{L}L_{L}R_{4}s^{3}+2C_{4}C_{5}C_{L}L_$ 

10.560 INVALID-ORDER-560  $Z(s) = \left(\infty, \infty, \infty, L_4 s + R_4 + \frac{1}{C_4 s}, \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1}\right)$ 

 $H(s) = \frac{L_L s \left(C_4 L_4 s^2 + C_4 R_4 s + 1\right) \left(-C_5 r_o s + g_m r_o + 1\right)}{C_4 C_5 C_L L_L L_L r_o s^5 + C_4 C_5 L_L L_L R_4 r_o s^4 + 2 C_4 C_5 L_L L_L R_4 r_o s^4 + 2 C_4 C_5 L_L L_R r_o s^3 + 2 C_4 C_5 L_L R_4 g_m r_o s^3 + 4 C_4 C_5 L_L R_4 g_m r_o s^3 + 2 C_4 C_5 L_L R_4 g_m r$ 

10.561 INVALID-ORDER-561  $Z(s) = \left(\infty, \infty, \infty, L_4 s + R_4 + \frac{1}{C_4 s}, \frac{1}{C_5 s}, L_L s + R_L + \frac{1}{C_L s}\right)$ 

 $H(s) = \frac{1}{s \cdot (2C_4C_5C_LL_4L_Ls^4 + 2C_4C_5C_LL_4R_Ls^3 + 2C_4C_5C_LL_4R_Ls^3 + 2C_4C_5C_LL_4R_Ls^3 + 2C_4C_5C_LL_4R_4s^3 + 2C_4C_5C_LL_4R_5c_LL_4C_5$ 

- 10.562 INVALID-ORDER-562  $Z(s) = \left(\infty, \infty, \infty, L_4 s + R_4 + \frac{1}{C_4 s}, \frac{1}{C_5 s}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$
- $H(s) = \frac{1}{C_4 C_5 C_L L_4 L_L R_L r_o s^5 + C_4 C_5 L_L L_R R_4 R_L r_o s^4 + 2 C_4 C_5 L_4 L_L R_L g_m r_o s^4 + 4 C_4 C_5 L_4 L_L R_L s^4 + C_4 C_5 L_4 L_L R_L s^4 + C_4 C_5 L_4 L_L R_L s^3 + 2 C_4 C_5 L_L R_4 R_L s^3 + 2 C_4 C_5 L_L R_4 R_L s^3 + 2 C_4 C_5 L_L R_4 R_L r_o s^3 +$
- 10.563 INVALID-ORDER-563  $Z(s) = \left(\infty, \infty, \infty, L_4 s + R_4 + \frac{1}{C_4 s}, \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$
- $H(s) = \frac{1}{2C_4C_5C_LL_4L_LR_Lg_mr_os^5 + 4C_4C_5C_LL_4L_LR_s^5 + C_4C_5C_LL_4L_Lr_os^5 + 2C_4C_5C_LL_LR_4R_Lg_mr_os^4 + 4C_4C_5C_LL_LR_4r_os^4 + 2C_4C_5C_LL_LR_4r_os^4 + 2C_4C_5L_4L_Lg_mr_os^4 + 4C_4C_5L_4L_Lg_mr_os^4 + 4C_4C_5L_4L_Lg_mr_os^4$
- 10.564 INVALID-ORDER-564  $Z(s) = \left(\infty, \ \infty, \ \infty, \ L_4s + R_4 + \frac{1}{C_4s}, \ \frac{1}{C_5s}, \ \frac{R_L\left(L_Ls + \frac{1}{C_Ls}\right)}{L_Ls + R_L + \frac{1}{C_Ls}}\right)$
- $H(s) = \frac{1}{2C_4C_5C_LL_4L_LR_Lg_mr_os^5 + 4C_4C_5C_LL_4L_LR_Ls^5 + C_4C_5C_LL_4L_Lr_os^5 + C_4C_5C_LL_4R_Lr_os^4 + 2C_4C_5C_LL_LR_4R_Lg_mr_os^4 + 4C_4C_5C_LL_LR_4R_Ls^4 + C_4C_5C_LL_LR_4r_os^4 + 2C_4C_5C_LL_LR_4r_os^4 + 2C_4C_5C_LL_4r_os^4 + 2C_4C_5C_LL_4$
- 10.565 INVALID-ORDER-565  $Z(s) = \left(\infty, \infty, \infty, L_4 s + R_4 + \frac{1}{C_4 s}, \frac{R_5}{C_5 R_5 s + 1}, R_L\right)$
- $H(s) = -\frac{R_L \left(C_4 L_4 s^2 + C_4 R_4 s + 1\right) \left(C_5 R_5 r_o s R_5 g_m r_o R_5 + r_o\right)}{2 C_4 C_5 L_4 R_5 R_L g_m r_o s^3 + 4 C_4 C_5 L_4 R_5 R_L g_m r_o s^2 + 4 C_4 C_5 R_4 R_5 R_L g_m r_o s^2 + 2 C_4 C_5 R_4 R_5 R_L g_m r_o s^2 + 2 C_4 L_4 R_5 g_m r_o s^2 + 4 C_4 L_4 R_5 g_m r_o s^2 + 2 C_4 L_5 R_5 g_m r_o s^2 + 2 C_4 L_5 R_5 g_m r_o s^2 + 2 C_4 L_5 R_5 g_m r_o s^2 + 2 C_5 R_5 g_m r_o s^2 + 2 C_5$
- **10.566** INVALID-ORDER-566  $Z(s) = \left(\infty, \infty, \infty, L_4 s + R_4 + \frac{1}{C_4 s}, \frac{R_5}{C_5 R_5 s + 1}, \frac{1}{C_L s}\right)$
- $H(s) = -\frac{\left(C_4L_4s^2 + C_4R_4s + 1\right)\left(C_5R_5r_os R_5g_mr_o R_5 + r_o\right)}{C_4C_5C_LL_4R_5r_os^4 + C_4C_5L_4R_5r_os^3 + 2C_4C_5L_4R_5g_mr_os^3 + 4C_4C_5L_4R_5g_mr_os^3 + 4C_4C_5L_4R_5g_mr_os^3 + 4C_4C_5L_4R_5g_mr_os^3 + 4C_4C_5L_4R_5g_mr_os^3 + 4C_4C_5R_4R_5g_mr_os^3 + 4C_4C_5R_4R_5g_mr_os^3$
- 10.567 INVALID-ORDER-567  $Z(s) = \left(\infty, \infty, \infty, L_4 s + R_4 + \frac{1}{C_4 s}, \frac{R_5}{C_5 R_5 s + 1}, \frac{R_L}{C_L R_L s + 1}\right)$
- $H(s) = -\frac{1}{C_4 C_5 C_L L_4 R_5 R_L r_o s^4 + C_4 C_5 C_L R_4 R_5 R_L r_o s^3 + 2 C_4 C_5 L_4 R_5 R_L g_m r_o s^3 + 4 C_4 C_5 L_4 R_5 R_L g_m r_o s^3 + 2 C_4 C_5 L_4 R_5 R_L g_m r_o s^3 + 2 C_4 C_5 R_4 R_5 R$
- **10.568** INVALID-ORDER-568  $Z(s) = \left(\infty, \infty, \infty, L_4 s + R_4 + \frac{1}{C_4 s}, \frac{R_5}{C_5 R_5 s + 1}, R_L + \frac{1}{C_L s}\right)$
- $H(s) = -\frac{1}{2C_4C_5C_LL_4R_5R_Lg_mr_os^4 + 4C_4C_5C_LL_4R_5R_Ls^4 + C_4C_5C_LL_4R_5r_os^4 + 2C_4C_5C_LR_4R_5R_Lg_mr_os^3 + 4C_4C_5C_LR_4R_5R_Ls^3 + C_4C_5C_LR_4R_5R_Ls^3 + 2C_4C_5C_LR_4R_5R_Ls^3 + 2C_4C_5C_LR_4R_5R_Ls^$
- 10.569 INVALID-ORDER-569  $Z(s) = \left(\infty, \infty, \infty, L_4 s + R_4 + \frac{1}{C_4 s}, \frac{R_5}{C_5 R_5 s + 1}, L_L s + \frac{1}{C_L s}\right)$
- $H(s) = -\frac{1}{2C_4C_5C_LL_4L_LR_5g_mr_os^5 + 4C_4C_5C_LL_4L_Rs_5s^5 + C_4C_5C_LL_4R_5r_os^4 + 2C_4C_5C_LL_4R_5s^6 + 2C_4C_5C_LL_4R_$

- 10.570 INVALID-ORDER-570  $Z(s) = \left(\infty, \infty, \infty, L_4 s + R_4 + \frac{1}{C_4 s}, \frac{R_5}{C_5 R_5 s + 1}, \frac{L_L s}{C_L L_L s^2 + 1}\right)$
- $H(s) = -\frac{1}{C_4 C_5 C_L L_4 L_L R_5 r_o s^5 + C_4 C_5 C_L L_L R_4 R_5 r_o s^4 + 2 C_4 C_5 L_4 L_L R_5 g_m r_o s^4 + 4 C_4 C_5 L_4 L_L R_5 s^4 + C_4 C_5 L_4 R_5 r_o s^3 + 2 C_4 C_5 L_L R_4 R_5 s^3 + 2 C_4 C_5 L_L R_4 R_5 r_o s^3 + C_4 C_5 L_L R_5 r_o s^3$
- 10.571 INVALID-ORDER-571  $Z(s) = \left(\infty, \infty, \infty, L_4 s + R_4 + \frac{1}{C_4 s}, \frac{R_5}{C_5 R_5 s + 1}, L_L s + R_L + \frac{1}{C_L s}\right)$
- $H(s) = -\frac{1}{2C_4C_5C_LL_4L_LR_5g_mr_os^5 + 4C_4C_5C_LL_4L_Rs^5 + 2C_4C_5C_LL_4R_5R_Lg_mr_os^4 + 4C_4C_5C_LL_4R_5r_os^4 + 2C_4C_5C_LL_4R_5r_os^4 + 2C_4C_5C_LL_4R_5r_os^4$
- 10.572 INVALID-ORDER-572  $Z(s) = \left(\infty, \infty, \infty, L_4 s + R_4 + \frac{1}{C_4 s}, \frac{R_5}{C_5 R_5 s + 1}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$
- $H(s) = -\frac{1}{C_4 C_5 C_L L_4 L_L R_5 R_L r_o s^5 + C_4 C_5 L_L L_R R_5 R_L r_o s^4 + 2 C_4 C_5 L_4 L_L R_5 R_L g_m r_o s^4 + 4 C_4 C_5 L_4 L_L R_5 R_L s^4 + C_4 C_5 L_4 L_L R_5 R_L r_o s^3 + 2 C_4 C_5 L_L R_4 R_5 R_L r_o s^3 + 2 C_4 C_5 L_L R_4 R_5 R_L r_o s^3 + 2 C_4 C_5 L_L R_4 R_5 R_L r_o s^3 + 2 C_4 C_5 L_L R_4 R_5 R_L r_o s^3 + 2 C_4 C_5 L_L R_4 R_5 R_L r_o s^3 + 2 C_4 C_5 L_L R_4 R_5 R_L r_o s^3 + 2 C_4 C_5 L_L R_4 R_5 R_L r_o s^3 + 2 C_4 C_5 L_L R_4 R_5 R_L r_o s^3 + 2 C_4 C_5 L_L R_4 R_5 R_L r_o s^3 + 2 C_4 C_5 L_L R_4 R_5 R_L r_o s^3 + 2 C_4 C_5 L_L R_4 R_5 R_L r_o s^3 + 2 C_4 C_5 L_L R_4 R_5 R_L r_o s^3 + 2 C_4 C_5 L_L R_4 R_5 R_L r_o s^3 + 2 C_4 C_5 L_L R_4 R_5 R_L r_o s^3 + 2 C_4 C_5 L_L R_4 R_5 R_L r_o s^3 + 2 C_4 C_5 L_L R_5 R_L r_o s^3 + 2$
- 10.573 INVALID-ORDER-573  $Z(s) = \left(\infty, \infty, \infty, L_4 s + R_4 + \frac{1}{C_4 s}, \frac{R_5}{C_5 R_5 s + 1}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$
- $H(s) = -\frac{1}{2C_4C_5C_LL_4L_LR_5R_Lg_mr_os^5 + 4C_4C_5C_LL_4L_LR_5r_os^5 + 2C_4C_5C_LL_LR_4R_5R_Lg_mr_os^4 + 4C_4C_5C_LL_LR_4R_5R_Ls^4 + C_4C_5C_LL_LR_4R_5R_Ls^4 + C_4C_5C_LL_LR_4R_5R_Ls^4 + 2C_4C_5C_LL_LR_4R_5R_Ls^4 + 2C_4C$
- 10.574 INVALID-ORDER-574  $Z(s) = \left(\infty, \infty, \infty, L_4 s + R_4 + \frac{1}{C_4 s}, \frac{R_5}{C_5 R_5 s + 1}, \frac{R_L \left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$
- $H(s) = -\frac{1}{2C_4C_5C_LL_4L_LR_5R_Lg_mr_os^5 + 4C_4C_5C_LL_4L_LR_5R_Ls^5 + C_4C_5C_LL_4L_Rs_5r_os^5 + C_4C_5C_LL_4R_5R_Lr_os^4 + 2C_4C_5C_LL_LR_4R_5R_Ls^4 + C_4C_5C_LL_LR_4R_5R_Ls^4 + C_4C_5C_LL_4R_5R_Ls^4 +$
- 10.575 INVALID-ORDER-575  $Z(s) = \left(\infty, \infty, \infty, L_4 s + R_4 + \frac{1}{C_4 s}, R_5 + \frac{1}{C_5 s}, R_L\right)$
- $H(s) = \frac{R_L \left( C_4 L_4 s^2 + C_4 R_4 s + 1 \right) \left( C_5 R_5 g_m r_o s + C_5 R_5 s C_5 r_o s + g_m r_o + 1 \right)}{C_4 C_5 L_4 R_5 g_m r_o s^3 + C_4 C_5 L_4 R_5 g_m r_o s^3 + C_4 C_5 L_4 R_5 g_m r_o s^2 + C_4 C_5 R_4 R_5 g_m r_o s^2 + 2 C_4 C_5 R_4 R_5 g_m r_o s^2 + 2 C_4 C_5 R_4 R_5 g_m r_o s^2 + 2 C_4 C_5 R_4 R_5 g_m r_o s^2 + 2 C_4 C_5 R_4 R_5 g_m r_o s^2 + 2 C_4 C_5 R_4 R_5 g_m r_o s^2 + 2 C_4 C_5 R_4 R_5 g_m r_o s^2 + 2 C_4 C_5 R_4 R_5 g_m r_o s^2 + 2 C_4 C_5 R_4 R_5 g_m r_o s^2 + 2 C_4 C_5 R_4 R_5 g_m r_o s^2 + 2 C_4 C_5 R_4 R_5 g_m r_o s^2 + 2 C_4 C_5 R_4 R_5 g_m r_o s^2 + 2 C_4 C_5 R_4 R_5 g_m r_o s^2 + 2 C_4 C_5 R_4 R_5 g_m r_o s^2 + 2 C_4 C_5 R_4 R_5 g_m r_o s^2 + 2 C_4 C_5 R_4 R_5 g_m r_o s^2 + 2 C_4 C_5 R_4 R_5 g_m r_o s^2 + 2 C_4 C_5 R_4 R_5 g_m r_o s^2 + 2 C_4 C_5 R_4 R_5 g_m r_o s^2 + 2 C_4 C_5 R_5 R_5 g_m r_o s^2 + 2 C_4 C_5 R_5 R_5 g_m r_o s^2 + 2 C_4 C_5 R_5 R_5 g_m r_o s^2 + 2 C_4 C_5 R_5 R_5 g_m r_o s^2 + 2 C_4 C_5 R_5 g_m r_o s^2 + 2 C_5 R_5 g_m r_o$
- 10.576 INVALID-ORDER-576  $Z(s) = \left(\infty, \infty, \infty, L_4 s + R_4 + \frac{1}{C_4 s}, R_5 + \frac{1}{C_5 s}, \frac{1}{C_L s}\right)$
- $H(s) = \frac{\left(C_4L_4s^2 + C_4R_4s + 1\right)\left(C_5R_5g_mr_os + C_5R_5s C_5r_os + g_mr_o + 1\right)}{s\left(C_4C_5C_LL_4R_5g_mr_os^3 + C_4C_5C_LL_4R_5s^3 + C_4C_5C_LR_4R_5g_mr_os^2 + C_4C_5C_LR_4R_5s^2 + C_4C_5C_LR_4R_5s^2 + C_4C_5C_LR_4r_os^2 + 2C_4C_5R_4g_mr_os^2 + 4C_4C_5R_4s + 2C_4C_5R_4g_mr_os + 4C_4C_5R_4s + 2C_4C_5R_5g_mr_os + 2C_4C_5r_os + C_4C_LL_4g_mr_os^2 + 2C_4C_5R_4g_mr_os^2 + 4C_4C_5R_4g_mr_os^2 + 4C_4C_5R_4g_mr_os^2 + 4C_4C_5R_4g_mr_os^2 + 2C_4C_5R_4g_mr_os^2 + 2C_4C_5R_4g_mr_os^$
- 10.577 INVALID-ORDER-577  $Z(s) = \left(\infty, \infty, \infty, L_4 s + R_4 + \frac{1}{C_4 s}, R_5 + \frac{1}{C_5 s}, \frac{R_L}{C_L R_L s + 1}\right)$
- $H(s) = \frac{1}{C_4 C_5 C_L L_4 R_5 R_L g_m r_o s^4 + C_4 C_5 C_L L_4 R_5 R_L s^4 + C_4 C_5 C_L L_4 R_L r_o s^4 + C_4 C_5 C_L R_4 R_5 R_L g_m r_o s^3 + C_4 C_5 L_4 R_5 R_L g_m r_o s^3 + C_4 C_5 L_4 R_5 g_m r_o s^3 + C_$

- 10.578 INVALID-ORDER-578  $Z(s) = \left(\infty, \infty, \infty, L_4 s + R_4 + \frac{1}{C_4 s}, R_5 + \frac{1}{C_5 s}, R_L + \frac{1}{C_L s}\right)$
- $H(s) = \frac{1}{s\left(C_{4}C_{5}C_{L}L_{4}R_{5}g_{m}r_{o}s^{3} + C_{4}C_{5}C_{L}L_{4}R_{5}s^{3} + 2C_{4}C_{5}C_{L}L_{4}R_{L}g_{m}r_{o}s^{3} + 4C_{4}C_{5}C_{L}L_{4}R_{L}s^{3} + C_{4}C_{5}C_{L}L_{4}R_{c}s^{3} + C_{4}C_{5}C_{L}L_{4}R_{5}s^{3} + 2C_{4}C_{5}C_{L}L_{4}R_{c}s^{3} + 2C_{4}C$
- 10.579 INVALID-ORDER-579  $Z(s) = \left(\infty, \infty, \infty, L_4 s + R_4 + \frac{1}{C_4 s}, R_5 + \frac{1}{C_5 s}, L_L s + \frac{1}{C_L s}\right)$
- $H(s) = \frac{1}{s\left(2C_{4}C_{5}C_{L}L_{4}L_{L}g_{m}r_{o}s^{4} + 4C_{4}C_{5}C_{L}L_{4}L_{5}s^{4} + C_{4}C_{5}C_{L}L_{4}R_{5}g_{m}r_{o}s^{3} + C_{4}C_{5}C_{L}L_{4}R_{5}s^{3} + C_{4}C_{5}C_{L}L_{4}R_{5}s^{3} + 2C_{4}C_{5}C_{L}L_{L}R_{4}g_{m}r_{o}s^{3} + 2C_{4}C_{5}C_{L}L_{L}R_{5}g_{m}r_{o}s^{3} + 2C_{4}C_{5}C_{L}L_{L}R_{5}g_{m}r_{o}s^$
- 10.580 INVALID-ORDER-580  $Z(s) = \left(\infty, \infty, \infty, L_4 s + R_4 + \frac{1}{C_4 s}, R_5 + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1}\right)$
- 10.581 INVALID-ORDER-581  $Z(s) = \left(\infty, \infty, \infty, L_4 s + R_4 + \frac{1}{C_4 s}, R_5 + \frac{1}{C_5 s}, L_L s + R_L + \frac{1}{C_L s}\right)$
- $H(s) = \frac{1}{s\left(2 C_4 C_5 C_L L_4 L_L g_m r_o s^4 + 4 C_4 C_5 C_L L_4 L_L s^4 + C_4 C_5 C_L L_4 R_5 g_m r_o s^3 + 2 C_4 C_5 C_L L_4 R_L g_m r_o s^3 + 4 C_4 C_5 C_L L_4 R_L g_m r_o s^3 + 4 C_4 C_5 C_L L_4 R_L g_m r_o s^3 + 4 C_4 C_5 C_L L_4 R_4 g_m r_o s^3 + 2 C_4 C_5 C_L L_4 R_5 g_m r_o s^3 + 2 C_4 C_5 C_L L_5 R_5 g_m r_o s^3 + 2 C_4 C_5 C_L L_5 R_5 g_m r_o s^3 + 2 C_4 C_5 C_L L_5 R_5 g_m r_o s^3 + 2 C_4 C_5 C_L L_5 R_5 g_m r_o s^3 + 2 C_4 C_5 C_L L_5 R_5 g_m r_o s^3 + 2 C_4 C_5 C_L L_5 R_5 g_m r_o s^3 + 2 C_4 C_5 C_L L_5 R_5 g_m r_o s^3 + 2 C_4 C_5 C_L L_5 R_5 g_m r_o s^3 + 2 C_4 C_5 C_L L_5 R_5 g_m r_o s^3 + 2 C_4 C_5 C_L L_5 R_5 g_m r_o s^3 + 2 C_4 C_5 C_L L_5 R_5 g_m r_o s^3 + 2 C_4 C_5 C_L L_5 R_5 g_m r_o s^3 + 2 C_5 C_L L_5 R_5 g_m r_o s^3 + 2 C_5 C_L L_5 R_5 g_m r_o s$
- 10.582 INVALID-ORDER-582  $Z(s) = \left(\infty, \infty, \infty, L_4 s + R_4 + \frac{1}{C_4 s}, R_5 + \frac{1}{C_5 s}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$
- $H(s) = \frac{1}{C_4 C_5 C_L L_4 L_L R_5 R_L g_m r_o s^5 + C_4 C_5 C_L L_4 L_L R_5 R_L s^5 + C_4 C_5 C_L L_4 L_L R_5 r_o s^4 + C_4 C_5 C_L L_L R_4 R_5 R_L g_m r_o s^4 + C_4 C_5 C_L L_L R_4 R_5 R_L s^4 + C_4 C_5 C_L L_L R_5 R_L s^4 + C_4$
- 10.583 INVALID-ORDER-583  $Z(s) = \left(\infty, \infty, \infty, L_4 s + R_4 + \frac{1}{C_4 s}, R_5 + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$
- $H(s) = \frac{1}{C_4 C_5 C_L L_4 L_L R_5 g_m r_o s^5 + C_4 C_5 C_L L_4 L_L R_5 s^5 + 2 C_4 C_5 C_L L_4 L_L R_L g_m r_o s^5 + 4 C_4 C_5 C_L L_4 L_L R_L s^5 + C_4 C_5 C_L L_4 L_L R_4 g_m r_o s^4 + C_4 C_5 C_L L_L R_4 R_5 g_m r_o s^4 + 2 C_4 C_5 C_L L_L R_4 R_L g_m r_o s^4 + 4 C_4 C_5 C_L L_L R_4 R_L g_m r_o s^4 + 4 C_4 C_5 C_L L_L R_4 R_L g_m r_o s^4 + 2 C_4 C_5 C_L L_L R_4 R_5 g_m r_o s^4 + 2 C_4 C_5 C_L L_L R_4 R_L g_m r_o s^4 + 2 C_4 C_5 C_L R_4 R_L g_m r_o s^4 + 2 C_4 C_5 C_L R_4 R_L g_m r_o s^4 + 2 C_4 C_5 C_L R_4 R_L g_m r_o s^4 + 2 C_4 C_5 C_L R_4 R_L g_m r_o s^4 + 2 C_4 C_5 C_L R_4 R_L g_m r_o s^4 + 2 C_4 C_5 C_L R_4 R_L g_m r_o s^4 + 2 C_4 C_5 C_L R_4 R_L g_m r_o s^4 + 2 C_$
- 10.584 INVALID-ORDER-584  $Z(s) = \left(\infty, \infty, \infty, L_4 s + R_4 + \frac{1}{C_4 s}, R_5 + \frac{1}{C_5 s}, \frac{R_L \left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$
- **10.585** INVALID-ORDER-585  $Z(s) = \left(\infty, \infty, \infty, L_4 s + R_4 + \frac{1}{C_4 s}, L_5 s + \frac{1}{C_5 s}, R_L\right)$
- $H(s) = \frac{R_L \left( C_4 L_4 s^2 + C_4 R_4 s + 1 \right) \left( C_5 L_5 g_m r_o s^2 + C_5 L_5 s^2 C_5 r_o s + g_m r_o + 1 \right)}{C_4 C_5 L_4 L_5 g_m r_o s^4 + C_4 C_5 L_4 R_L g_m r_o s^3 + 4 C_4 C_5 L_4 R_L g_m r_o s^3 + 4 C_4 C_5 L_4 R_L g_m r_o s^3 + 2 C_4 C_5 R_4 R_L g_m r_o s^3 + 2 C_4 C_5 R_4 R_L g_m r_o s^2 + 4 C_4 C_5 R_4 R_L g_m r_o s^2 + 2 C_4 C_5 R_4 r_o s^2 + 2 C_5 R_5 r_o s^2 + 2$

- **10.586** INVALID-ORDER-586  $Z(s) = \left(\infty, \infty, \infty, L_4 s + R_4 + \frac{1}{C_4 s}, L_5 s + \frac{1}{C_5 s}, \frac{1}{C_L s}\right)$
- $H(s) = \frac{\left(C_4L_4s^2 + C_4R_4s + 1\right)\left(C_5L_5g_mr_os^2 + C_5L_5s^2 C_5r_os + g_mr_o + 1\right)}{s\left(C_4C_5C_LL_4L_5g_mr_os^4 + C_4C_5C_LL_4r_os^3 + C_4C_5C_LL_5R_4g_mr_os^3 + C_4C_5C_LL_5R_4s^3 + C_4C_5C_LL_5R_4s^3 + C_4C_5C_LL_4s^2 + 2C_4C_5L_4s^2 + 2C_4C_5L_5g_mr_os^2 + 2C_4C_5L_5g_mr_os^2 + 2C_4C_5L_4g_mr_os^2 + 2C_4C_5L_4g_mr_o$
- 10.587 INVALID-ORDER-587  $Z(s) = \left(\infty, \infty, \infty, L_4 s + R_4 + \frac{1}{C_4 s}, L_5 s + \frac{1}{C_5 s}, \frac{R_L}{C_L R_L s + 1}\right)$
- $H(s) = \frac{1}{C_4 C_5 C_L L_4 L_5 R_L g_m r_o s^5 + C_4 C_5 C_L L_4 L_5 R_L s^5 + C_4 C_5 C_L L_4 R_L r_o s^4 + C_4 C_5 C_L L_5 R_4 R_L g_m r_o s^4 + C_4 C_5 C_L L_5 R_4 R_L s^4 + C_4 C_5 C_L L_5 R_4 R_L r_o s^3 + C_4 C_5 L_4 L_5 g_m r_o s^4 + C_4 C_5 L_4 R_L g_m r_o s^3 + C_4 C_5 L_4 R_L g_m r_o s^3 + C_4 C_5 L_4 R_L g_m r_o s^4 + C_$
- **10.588** INVALID-ORDER-588  $Z(s) = \left(\infty, \infty, \infty, L_4 s + R_4 + \frac{1}{C_4 s}, L_5 s + \frac{1}{C_5 s}, R_L + \frac{1}{C_L s}\right)$
- $H(s) = \frac{1}{s\left(C_{4}C_{5}C_{L}L_{4}L_{5}g_{m}r_{o}s^{4} + C_{4}C_{5}C_{L}L_{4}L_{5}s^{4} + 2C_{4}C_{5}C_{L}L_{4}R_{L}g_{m}r_{o}s^{3} + 4C_{4}C_{5}C_{L}L_{4}R_{L}s^{3} + C_{4}C_{5}C_{L}L_{5}R_{4}g_{m}r_{o}s^{3} + 2C_{4}C_{5}C_{L}L_{5}R_{L}g_{m}r_{o}s^{3} + 2C_{4}C_{5}C_{L}L_{5}R_{L}g_$
- **10.589** INVALID-ORDER-589  $Z(s) = \left(\infty, \infty, \infty, L_4 s + R_4 + \frac{1}{C_4 s}, L_5 s + \frac{1}{C_5 s}, L_L s + \frac{1}{C_L s}\right)$
- $H(s) = \frac{1}{s\left(C_{4}C_{5}C_{L}L_{4}L_{5}g_{m}r_{o}s^{4} + C_{4}C_{5}C_{L}L_{4}L_{5}s^{4} + 2C_{4}C_{5}C_{L}L_{4}L_{L}s^{4} + C_{4}C_{5}C_{L}L_{4}L_{c}s^{4} + 2C_{4}C_{5}C_{L}L_{5}L_{c}s^{4} + 2C_{4}C_{5}C_{L}$
- 10.590 INVALID-ORDER-590  $Z(s) = \left(\infty, \infty, \infty, L_4 s + R_4 + \frac{1}{C_4 s}, L_5 s + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1}\right)$
- $H(s) = \frac{1}{C_4 C_5 C_L L_4 L_5 L_L g_m r_o s^6 + C_4 C_5 C_L L_4 L_L s^6 + C_4 C_5 C_L L_4 L_L r_o s^5 + C_4 C_5 C_L L_5 L_L R_4 g_m r_o s^5 + C_4 C_5 C_L L_5 L_L R_4 g_m r_o s^5 + C_4 C_5 C_L L_5 L_L R_4 g_m r_o s^4 + C_4 C_5 L_4 L_5 g_m r_o s^4 + C_4 C_5 L_5 L_5 g_m r_o s^4 + C_5 L_5 L_5 g_$
- 10.591 INVALID-ORDER-591  $Z(s) = \left(\infty, \infty, \infty, L_4 s + R_4 + \frac{1}{C_4 s}, L_5 s + \frac{1}{C_5 s}, L_L s + R_L + \frac{1}{C_L s}\right)$
- $H(s) = \frac{1}{s\left(C_{4}C_{5}C_{L}L_{4}L_{5}g_{m}r_{o}s^{4} + C_{4}C_{5}C_{L}L_{4}L_{L}g_{m}r_{o}s^{4} + 4C_{4}C_{5}C_{L}L_{4}L_{L}g^{4} + 2C_{4}C_{5}C_{L}L_{4}R_{L}g_{m}r_{o}s^{3} + 4C_{4}C_{5}C_{L}L_{4}R_{L}g^{3} + 2C_{4}C_{5}C_{L}L_{5}L_{L}g^{4} + 2C_{4}C_{5}C_{L}L_{5}L_{4}g_{m}r_{o}s^{4} + 4C_{4}C_{5}C_{L}L_{4}L_{L}g^{4} + 2C_{4}C_{5}C_{L}L_{4}R_{L}g^{3} + 2C_{4}C_{5}C_{L}L_{4}R_{L}g^{3} + 2C_{4}C_{5}C_{L}L_{5}L_{2}g_{m}r_{o}s^{4} + 2C_{4}C_{5}C_{L}L_{5}L_{4}g_{m}r_{o}s^{3} + 4C_{4}C_{5}C_{L}L_{4}R_{L}g^{3} + 2C_{4}C_{5}C_{L}L_{4}R_{L}g^{3} + 2C_{4}C_{5}C_{L}L_{5}L_{5}g_{m}r_{o}s^{4} + 2C_{4}C_{5}C_{L}L_{5}g_{m}r_{o}s^{4} + 2C_{4}C_{5}C_{L}L_{5}L_{5}g_{m}r_{o}s^{4} + 2C_{4}C_{5}C_{L}L_{5}g_{m}r_{o}s^{4} + 2C_{4}C_{5}C_{L}L_{5}g_{m}r_{o}s^{4} + 2C_{4}C_{5}C_{L}L_{5}g_{m}r_{o}s^{4} + 2C_{4}C_{5}C_{L}L_{5}g_{m}r_{o}s^{4} + 2C_{4}C_{5}C_{L}L_{5}g_{$
- 10.592 INVALID-ORDER-592  $Z(s) = \left(\infty, \infty, \infty, L_4 s + R_4 + \frac{1}{C_4 s}, L_5 s + \frac{1}{C_5 s}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$
- $H(s) = \frac{1}{C_4 C_5 C_L L_4 L_5 L_L R_L g_m r_o s^6 + C_4 C_5 C_L L_4 L_5 L_L R_L s^6 + C_4 C_5 C_L L_4 L_L R_L r_o s^5 + C_4 C_5 C_L L_5 L_L R_4 R_L g_m r_o s^5 + C_4 C_5 C_L L_5 L_L R_4 R_L r_o s^4 + C_4 C_5 L_4 L_5 L_L g_m r_o s^5 + C_4 C_$
- 10.593 INVALID-ORDER-593  $Z(s) = \left(\infty, \infty, \infty, L_4 s + R_4 + \frac{1}{C_4 s}, L_5 s + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$
- $H(s) = \frac{1}{C_4 C_5 C_L L_4 L_5 L_L g_m r_o s^6 + C_4 C_5 C_L L_4 L_5 L_L s^6 + 2 C_4 C_5 C_L L_4 L_L R_L g_m r_o s^5 + 4 C_4 C_5 C_L L_4 L_L R_L s^5 + C_4 C_5 C_L L_4 L_L R_L s^5 + C_4 C_5 C_L L_5 L_L R_4 g_m r_o s^5 + C_4 C_5 C_L L_5 L_L R_4 g_m r_o s^5 + 2 C_4 C_5 C_L L_5 L_L R_5 g_m r_o s^5 + 2 C_4 C_5 C_L L_5 L_L R_5 g_m r_o s^5 + 2 C_4 C_5 C_L L_5 L_L R_5 g_m r_o s^5 + 2 C_4 C_5 C_L L_5 L_L R_5 g_m r_o s^5 + 2 C_4 C_5 C_L L_5 L_L R_5 g_m r_o s^5 + 2 C_4 C_5 C_L L_5 L_L R_5 g_m r_o s^5 + 2 C_4 C_5 C_L L_5 L_L R_5 g_m r_o s^5 + 2 C_4 C_5 C_L L_5 L_L R_5 g_m r_o s^5 + 2 C_4 C_5 C_L L_5 L_L R_5 g_m r_o s^5 + 2 C_4 C_5 C_L L_5 L_L R_5 g_m r_o s^5 + 2 C_4 C_5 C_L L_5 L_L R_5 g_m r_o s^5 + 2 C_4 C_5 C_L L_5 L_L R_5 g_m r_o s^5 + 2 C_4 C_5 C_L L_5 L_L R_5 g_m r_o s^5 + 2 C_4 C_5 C_L L_5 L_L R_5 g_m r_o s^5 + 2 C_4 C_5 C_L L_5 L_L R_5 g_m r_o s^5 + 2 C_4 C_5 C_L L_5 L_L R_5 g_m r_o s^5 + 2 C_4 C_5 C_L L_5 L_L R_5 g_m r_o s^5 + 2 C_4 C_5 C_L L_5 L_L R_5 g_m r_o s^5 + 2 C_4 C_5 C_L L_5 L_L R_5 g_m r_o s^5 + 2 C_4 C_5 C_L L_5 L_L R_5$

- 10.594 INVALID-ORDER-594  $Z(s) = \left(\infty, \infty, \infty, L_4 s + R_4 + \frac{1}{C_4 s}, L_5 s + \frac{1}{C_5 s}, \frac{R_L \left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$
- $H(s) = \frac{1}{C_4 C_5 C_L L_4 L_5 L_L g_m r_o s^6 + C_4 C_5 C_L L_4 L_5 L_L s^6 + C_4 C_5 C_L L_4 L_5 R_L g_m r_o s^5 + C_4 C_5 C_L L_4 L_L R_L g_$
- 10.595 INVALID-ORDER-595  $Z(s) = \left(\infty, \infty, \infty, L_4 s + R_4 + \frac{1}{C_4 s}, \frac{L_5 s}{C_5 L_5 s^2 + 1}, R_L\right)$
- $H(s) = -\frac{R_L \left( C_4 L_4 s^2 + C_4 R_4 s + 1 \right) \left( C_5 L_5 r_o s^2 L_5 g_m r_o s L_5 s + r_o \right)}{2 C_4 C_5 L_4 L_5 R_L g_m r_o s^4 + 4 C_4 C_5 L_4 L_5 R_L s^4 + C_4 C_5 L_5 R_4 R_L g_m r_o s^3 + 4 C_4 C_5 L_5 R_4 R_L s^3 + 2 C_4 C_5 L_5 R_4 r_o s^3 + 2 C_4 L_4 L_5 g_m r_o s^3 + 2 C_4 L_4 R_L g_m r_o s^2 + 4 C_4 L_4 R_L s^2 + C_4 L_4 R_L s^2 + C_4 L_4 R_L g_m r_o s^2 + C_4 L_5 R_4 g_m r_o s^2 + C_4 L_5 R_5 R_5 g_m r_o s^2 + C_4 L_5 R_5 g_m r_o s^2 + C_5 L_5 R_5 g_m r_o s^2 + C_5 L_5 R_5 g_m r_o s^2 + C$
- **10.596** INVALID-ORDER-596  $Z(s) = \left(\infty, \infty, \infty, L_4 s + R_4 + \frac{1}{C_4 s}, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{1}{C_L s}\right)$
- $H(s) = -\frac{\left(C_4L_4s^2 + C_4R_4s + 1\right)\left(C_5L_5r_os^2 L_5g_mr_os L_5s + r_o\right)}{C_4C_5C_LL_4L_5r_os^5 + C_4C_5L_LL_5R_4r_os^4 + 2C_4C_5L_4L_5g_mr_os^4 + 4C_4C_5L_4L_5s^4 + 2C_4C_5L_5R_4s^3 + 2C_4C_5L_5R_5R_5s^3 + 2C_4C_5L_5R_5s^3 + 2C_5C_$
- 10.597 INVALID-ORDER-597  $Z(s) = \left(\infty, \infty, \infty, L_4 s + R_4 + \frac{1}{C_4 s}, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{R_L}{C_L R_L s + 1}\right)$
- $H(s) = -\frac{1}{C_4C_5C_LL_4L_5R_Lr_os^5 + C_4C_5C_LL_5R_4R_Lr_os^4 + 2C_4C_5L_4L_5R_Lq_mr_os^4 + 4C_4C_5L_4L_5r_os^4 + 2C_4C_5L_4L_5r_os^4 + 2C_4C_5L_5R_4R_Lq_mr_os^3 + 4C_4C_5L_5R_4R_Ls^3 + C_4C_5L_5R_4r_os^3 + 2C_4C_5L_5R_Lr_os^3 + C_4C_LL_4L_5R_Lq_mr_os^4 + C_4C_LL_4L_5R_Ls^4 + C_4C_LL_4R_Ls^4 + C_4C_LL_4R_L$
- 10.598 INVALID-ORDER-598  $Z(s) = \left(\infty, \infty, \infty, L_4 s + R_4 + \frac{1}{C_4 s}, \frac{L_5 s}{C_5 L_5 s^2 + 1}, R_L + \frac{1}{C_L s}\right)$
- $H(s) = -\frac{1}{2C_4C_5C_LL_4L_5R_Lg_mr_os^5 + 4C_4C_5C_LL_4L_5R_Ls^5 + C_4C_5C_LL_4L_5r_os^5 + 2C_4C_5C_LL_5R_4R_Lg_mr_os^4 + 4C_4C_5C_LL_5R_4r_os^4 + 2C_4C_5C_LL_5R_4r_os^4 + 2C_4C_5L_4L_5g_mr_os^4 + 4C_4C_5L_4L_5s^4 + 2C_4C_5L_4L_5s^4 + 2C_4C_5L_5L_5s^4 + 2C_5L_5L_5s^4 + 2C_5L_5L_5s^4 + 2C_5L_5L_5s^4 + 2C_5L_5L_5s^4 + 2C_5L_5L_5s^4$
- 10.599 INVALID-ORDER-599  $Z(s) = \left(\infty, \infty, \infty, L_4 s + R_4 + \frac{1}{C_4 s}, \frac{L_5 s}{C_5 L_5 s^2 + 1}, L_L s + \frac{1}{C_L s}\right)$
- $H(s) = -\frac{1}{2C_4C_5C_LL_4L_5L_Lg_mr_os^6 + 4C_4C_5C_LL_4L_5L_cs^6 + C_4C_5C_LL_4L_5r_os^5 + 2C_4C_5C_LL_5L_LR_4g_mr_os^5 + 4C_4C_5C_LL_5L_LR_4s^5 + 2C_4C_5C_LL_5L_Lr_os^5 + C_4C_5C_LL_5L_Lr_os^5 + C_4C_5C_LL_5R_4r_os^4 + 2C_4C_5L_4L_5s^4 + 2C_4C_5L_5L_5s^4 + 2C_4C_5L_5s^4 + 2C_4C_5L_5s^4 + 2C_5L_5L_5s^4 + 2C_5L_5L_5s^4 + 2C_5L_5L_5s^4 + 2C_5L_5L_5s^4 + 2C_5L_5L_5s^4 +$
- 10.600 INVALID-ORDER-600  $Z(s) = \left(\infty, \infty, \infty, L_4 s + R_4 + \frac{1}{C_4 s}, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{L_L s}{C_L L_L s^2 + 1}\right)$
- $H(s) = -\frac{1}{C_4 C_5 C_L L_4 L_5 L_L r_o s^6 + C_4 C_5 C_L L_5 L_L R_4 r_o s^5 + 2 C_4 C_5 L_4 L_5 L_L g_m r_o s^5 + 4 C_4 C_5 L_4 L_5 L_L s^5 + C_4 C_5 L_4 L_5 L_L s^5 + C_4 C_5 L_4 L_5 L_L s^5 + C_4 C_5 L_4 L_5 L_L r_o s^4 + 2 C_4 C_5 L_5 L_L R_4 s^4 + 2 C_4 C_5 L_5 L_L r_o s^4 + C_5 L_5 L_L r_o s$
- 10.601 INVALID-ORDER-601  $Z(s) = \left(\infty, \infty, \infty, L_4 s + R_4 + \frac{1}{C_4 s}, \frac{L_5 s}{C_5 L_5 s^2 + 1}, L_L s + R_L + \frac{1}{C_L s}\right)$

- 10.602 INVALID-ORDER-602  $Z(s) = \left(\infty, \infty, \infty, L_4 s + R_4 + \frac{1}{C_4 s}, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$
- $H(s) = -\frac{1}{C_4C_5C_LL_4L_5L_LR_Lr_os^6 + C_4C_5C_LL_5L_LR_4R_Lr_os^5 + 2C_4C_5L_4L_5L_LR_Ls^5 + C_4C_5L_4L_5L_LR_os^5 + 2C_4C_5L_4L_5L_LR_os^5 + 2C_4C_5L_5L_LR_os^5 + 2C_4C_5L_5L_os^5 + 2C_4C_5L_os^5 + 2C_4C$
- **10.603** INVALID-ORDER-603  $Z(s) = \left(\infty, \infty, \infty, L_4 s + R_4 + \frac{1}{C_4 s}, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$
- $H(s) = -\frac{1}{2C_4C_5C_LL_4L_5L_LR_Lg_mr_os^6 + 4C_4C_5C_LL_4L_5L_LR_s^6 + C_4C_5C_LL_4L_5L_Lr_os^6 + 2C_4C_5C_LL_5L_LR_4R_Lg_mr_os^5 + 4C_4C_5C_LL_5L_LR_4R_Lg_mr_os^5 + 4C_4C_5C_LL_5L_Rg_mr_os^5 + 4C_4C_5C_LL_5L_$
- 10.604 INVALID-ORDER-604  $Z(s) = \left(\infty, \infty, \infty, L_4 s + R_4 + \frac{1}{C_4 s}, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{R_L \left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$
- $H(s) = -\frac{1}{2C_4C_5C_LL_4L_5L_LR_Lg_mr_os^6 + 4C_4C_5C_LL_4L_5L_LR_Ls^6 + C_4C_5C_LL_4L_5L_Lr_os^6 + C_4C_5C_LL_4L_5L_LR_ds^6 + C_4C_5C_LL_5L_LR_4R_Lg_mr_os^5 + 4C_4C_5C_LL_5L_LR_4R_Lg_mr_os^5 + 4C_4C_5C_LL_5L_Rg_mr_os^5 + 4C_4C_5C_LL_5L_Rg_mr_o$
- 10.605 INVALID-ORDER-605  $Z(s) = \left(\infty, \infty, \infty, L_4 s + R_4 + \frac{1}{C_4 s}, L_5 s + R_5 + \frac{1}{C_5 s}, R_L\right)$
- $H(s) = \frac{R_L \left( C_4 L_4 s^2 + C_4 R_4 s + 1 \right) \left( C_5 L_5 g_m r_o s^2 + C_4 C_5 L_4 R_5 g_m r_o s^3 + C_4 C_5 R_4 R_5 g_m r_$
- **10.606** INVALID-ORDER-606  $Z(s) = \left(\infty, \infty, \infty, L_4 s + R_4 + \frac{1}{C_4 s}, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{1}{C_L s}\right)$
- $H(s) = \frac{(C_4L_4s^5 + C_4R_4s + 1)(C_5L_5s^2 + C_4C_5C_LL_4L_5s^4 + C_4C_5C_LL_4R_5s^3 + C_4C_5C_LL_4R_5s^3 + C_4C_5C_LL_5R_4s^3 + C_4C_5C_LL_5R_4s^3 + C_4C_5C_LR_4R_5s^2 + C_$
- 10.607 INVALID-ORDER-607  $Z(s) = \left(\infty, \infty, \infty, L_4 s + R_4 + \frac{1}{C_4 s}, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{R_L}{C_L R_L s + 1}\right)$
- $H(s) = \frac{1}{C_4 C_5 C_L L_4 L_5 R_L g_m r_o s^5 + C_4 C_5 C_L L_4 L_5 R_L s^5 + C_4 C_5 C_L L_4 R_5 R_L g_m r_o s^4 + C_4 C_5 C_L L_4 R_5 R_L s^4 + C_4 C_5 C_L L_5 R_4 R_L s^4 + C_4 C_5 C_L L_5 R_$
- **10.608** INVALID-ORDER-608  $Z(s) = \left(\infty, \infty, \infty, L_4 s + R_4 + \frac{1}{C_4 s}, L_5 s + R_5 + \frac{1}{C_5 s}, R_L + \frac{1}{C_L s}\right)$
- $H(s) = \frac{1}{s\left(C_{4}C_{5}C_{L}L_{4}L_{5}g_{m}r_{o}s^{4} + C_{4}C_{5}C_{L}L_{4}R_{5}g_{m}r_{o}s^{3} + C_{4}C_{5}C_{L}L_{5}R_{4}g_{m}r_{o}s^{3} + C_{4}C_{5}C_{L}L_{5}R_{5}g_{m}r_{o}s^{3} + C_{4}C_{5}C_{L}L_{5}R_{5}g_{m}r_{o}s^{3} + C_{4}C_{5}C_{L}L_{5}R_{5}g_{m}r_{o}s^{3} + C_{4}C_{5}C_{L}L_{5}R_{5}g_{m}r_{o}s^{3} + C_{4}C_{$
- **10.609** INVALID-ORDER-609  $Z(s) = \left(\infty, \infty, \infty, L_4 s + R_4 + \frac{1}{C_4 s}, L_5 s + R_5 + \frac{1}{C_5 s}, L_L s + \frac{1}{C_L s}\right)$
- $H(s) = \frac{1}{s\left(C_{4}C_{5}C_{L}L_{4}L_{5}g_{m}r_{o}s^{4} + C_{4}C_{5}C_{L}L_{4}L_{5}s^{4} + 2C_{4}C_{5}C_{L}L_{4}L_{L}g_{m}r_{o}s^{4} + 4C_{4}C_{5}C_{L}L_{4}L_{5}s^{4} + C_{4}C_{5}C_{L}L_{4}R_{5}g_{m}r_{o}s^{3} + C_{4}C_{5}C_{L}L_{4}R_{5}s^{3} + 2C_{4}C_{5}C_{L}L_{4}R_{5}s^{3} + 2C_{4}C_{5}C_{L}L_{5}L_{L}g_{m}r_{o}s^{4} + 2C_{4}C_{5}C_{L}L_{5}L_{L}s^{4} + C_{4}C_{5}C_{L}L_{5}R_{4}g_{m}r_{o}s^{3} + 2C_{4}C_{5}C_{L}L_{5}L_{5}R_{4}g_{m}r_{o}s^{4} + 2C_{4}C_{5}C_{L}L_{5}R_{4}g_{m}r_{o}s^{4} + 2C_{4}C_{5}C_{L}L_{5}R_{5}g_{m}r_{o}s^{4} + 2C_{4}C_{5}$

- **10.610** INVALID-ORDER-610  $Z(s) = \left(\infty, \infty, \infty, L_4 s + R_4 + \frac{1}{C_4 s}, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1}\right)$
- $H(s) = \frac{1}{C_4 C_5 C_L L_4 L_5 L_L g_m r_o s^6 + C_4 C_5 C_L L_4 L_L R_5 g_m r_o s^5 + C_4 C_5 C_L L_4 L_L R_5 s^5 + C_4 C_5 C_L L_5 L_L R_4 s^5 + C_4 C_5 C_L L_4 L_4 R_5 s^6 + C_4 C_5 C_L L_4 L_4 R_5 s^6 + C_4 C_5 C_L L_5 L_4 L_5 R_5 s^5 + C_4 C_5 C_L L_5 L_4 L_5 R_5 s^5 + C_4 C_5 C_L L_5 L_5 L_5 R_5 s^5 + C_4 C_5 C_L L_5 R_5 s^5 + C_4$
- **10.611** INVALID-ORDER-611  $Z(s) = \left(\infty, \infty, \infty, L_4 s + R_4 + \frac{1}{C_4 s}, L_5 s + R_5 + \frac{1}{C_5 s}, L_L s + R_L + \frac{1}{C_L s}\right)$
- $H(s) = \frac{1}{s\left(C_{4}C_{5}C_{L}L_{4}L_{5}g_{m}r_{o}s^{4} + C_{4}C_{5}C_{L}L_{4}L_{5}s^{4} + 2C_{4}C_{5}C_{L}L_{4}L_{L}g_{m}r_{o}s^{4} + 4C_{4}C_{5}C_{L}L_{4}L_{5}s^{4} + 2C_{4}C_{5}C_{L}L_{4}R_{5}g_{m}r_{o}s^{3} + 4C_{4}C_{5}C_{L}L_{4}R_{L}g_{m}r_{o}s^{3} + 4C_{4}C_{5}C_{L}L_{4}R_{L}s^{3} + 2C_{4}C_{5}C_{L}L_{4}R_{L}s^{3} + 2C_{4}C_{5}C_{L}L_{5}R_{L}s^{3} + 2C_{4}C_{5}C_{L}L_{$
- 10.612 INVALID-ORDER-612  $Z(s) = \left(\infty, \infty, \infty, L_4 s + R_4 + \frac{1}{C_4 s}, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$
- $H(s) = \frac{1}{C_4 C_5 C_L L_4 L_5 L_L R_L g_m r_o s^6 + C_4 C_5 C_L L_4 L_L R_5 R_L g_m r_o s^5 + C_4 C_5 C_L L_4 L_L R_5 R_L g_m r_o s^5 + C_4 C_5 C_L L_4 L_L R_5 R_L g_m r_o s^5 + C_4 C_5 C_L L_4 L_L R_4 R_5 R_L g_m r_o s^5 + C_4 C_5 C_L L_4 L_L R_4 R_5 R_L g_m r_o s^5 + C_4 C_5 C_L L_4 L_L R_4 R_5 R_L g_m r_o s^5 + C_4 C_5 C_L L_4 L_4 R_5 R_L g_m r_o s^5 + C_4 C_5 C_L L_4 L_4 R_5 R_L g_m r_o s^5 + C_4 C_5 C_L L_4 L_4 R_5 R_L g_m r_o s^5 + C_4 C_5 C_L L_4 L_4 R_5 R_L g_m r_o s^5 + C_4 C_5 C_L L_4 L_4 R_5 R_L g_m r_o s^5 + C_4 C_5 C_L L_4 L_5 R_4 R_5 R_L g_m r_o s^5 + C_4 C_5 C_L L_5 L_4 R_4 R_5 R_L g_m r_o s^5 + C_4 C_5 C_L L_5 L_4 R_5 R_L g_m r_o s^5 + C_4 C_5 C_L L_5 L_5 R_4 R_5 R_L g_m r_o s^5 + C_4 C_5 C_L R_5 R_L g_m r_o s^5 + C_4 C_5 C_L R_5 R_L g_m r_o s^5 + C_4 C_5 C_L R_5 R_L g_m r_o s^5 + C_4 C_5 C_L R_5 R_L g_m r_o s^5 + C_4 C_5 C_L R_5 R_L g_m r_o s^5 + C_4 C_5 C_L R_5 R_L g_m r_o s^5 + C_4 C_5 C_L R_5 R_L g_m r_o s^5 + C_4 C_5 C_L R_5 R_L g_m r_o s^5 + C_4 C_5 C_L R_5 R_L g_m r_o s^5 + C_4 C_5 C_L R_5 R_L g_$
- 10.613 INVALID-ORDER-613  $Z(s) = \left(\infty, \infty, \infty, L_4 s + R_4 + \frac{1}{C_4 s}, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$
- $H(s) = \frac{1}{C_4 C_5 C_L L_4 L_5 L_L g_m r_o s^6 + C_4 C_5 C_L L_4 L_L R_5 g_m r_o s^5 + C_4 C_5 C_L L_4 L_L R_5 s^5 + 2 C_4 C_5 C_L L_4 L_L R_L g_m r_o s^5 + 4 C_4 C_5 C_L L_4 L_L R_L g_m r_o s^5 + 4 C_4 C_5 C_L L_4 L_L R_L g_m r_o s^5 + 2 C_4$
- 10.614 INVALID-ORDER-614  $Z(s) = \left(\infty, \infty, \infty, L_4 s + R_4 + \frac{1}{C_4 s}, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{R_L \left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$
- $H(s) = \frac{1}{C_4 C_5 C_L L_4 L_5 L_L g_m r_o s^6 + C_4 C_5 C_L L_4 L_5 L_L s^6 + C_4 C_5 C_L L_4 L_5 R_L g_m r_o s^5 + C_4 C_5 C_L L_4 L_L R_5 g_$
- 10.615 INVALID-ORDER-615  $Z(s) = \left(\infty, \infty, \infty, L_4 s + R_4 + \frac{1}{C_4 s}, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, R_L\right)$
- $H(s) = -\frac{1}{2C_4C_5L_4L_5R_5R_Lg_mr_os^4 + 4C_4C_5L_4L_5R_5R_Ls^4 + C_4C_5L_4L_5R_5r_os^4 + 2C_4C_5L_5R_4R_5R_Lg_mr_os^3 + 4C_4C_5L_5R_4R_5R_Ls^3 + C_4C_5L_5R_4R_5r_os^3 + 2C_4C_5L_5R_4R_5r_os^3 + 2C_4C_5L_5R_4R_5r_os^3 + 2C_4L_4L_5R_5g_mr_os^3 + 4C_4L_4L_5R_5g_mr_os^3 + 4C_4L_5L_5R_5g_mr_os^3 + 4C_4L_5L_5R_5g_mr_os^$
- **10.616** INVALID-ORDER-616  $Z(s) = \left(\infty, \infty, \infty, L_4 s + R_4 + \frac{1}{C_4 s}, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{1}{C_L s}\right)$
- $H(s) = -\frac{1}{C_4C_5C_LL_4L_5R_5r_os^5 + C_4C_5C_LL_5R_4R_5r_os^4 + 2C_4C_5L_4L_5R_5g_mr_os^4 + 4C_4C_5L_4L_5R_5g_mr_os^3 + 4C_4C_5L_5R_4R_5g_mr_os^3 + 4C_4C_5L_5R_4R_5g_mr_os^3 + 4C_4C_5L_5R_4R_5g_mr_os^4 + C_4C_LL_4L_5R_5g_mr_os^4 + C_4C_LL_4R_5r_os^4 + C_4C_LL_4R_5r_os$
- 10.617 INVALID-ORDER-617  $Z(s) = \left(\infty, \infty, \infty, L_4 s + R_4 + \frac{1}{C_4 s}, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{R_L}{C_L R_L s + 1}\right)$
- $H(s) = -\frac{1}{C_4 C_5 C_L L_4 L_5 R_5 R_L r_o s^5 + C_4 C_5 L_L L_5 R_4 R_5 R_L r_o s^4 + 2 C_4 C_5 L_4 L_5 R_5 R_L g_m r_o s^4 + 4 C_4 C_5 L_4 L_5 R_5 R_L s^4 + C_4 C_5 L_4 L_5 R_5 R_L g_m r_o s^4 + 4 C_4 C_5 L_4 L_5 R_5 R_L g_m r_o s^4 + 4 C_4 C_5 L_4 L_5 R_5 R_L g_m r_o s^4 + 4 C_4 C_5 L_5 R_4 R_5 R_L g_m r_o s^4 + 4 C_4 C_5 L_5 R_4 R_5 R_L g_m r_o s^4 + 4 C_4 C_5 L_5 R_4 R_5 R_L g_m r_o s^4 + 4 C_4 C_5 L_5 R_4 R_5 R_L g_m r_o s^4 + 4 C_4 C_5 L_5 R_4 R_5 R_L g_m r_o s^4 + 4 C_4 C_5 L_5 R_4 R_5 R_L g_m r_o s^4 + 4 C_4 C_5 L_5 R_4 R_5 R_L g_m r_o s^4 + 4 C_4 C_5 L_5 R_4 R_5 R_L g_m r_o s^4 + 4 C_4 C_5 L_5 R_4 R_5 R_L g_m r_o s^4 + 4 C_4 C_5 L_5 R_4 R_5 R_L g_m r_o s^4 + 4 C_4 C_5 L_5 R_4 R_5 R_L g_m r_o s^4 + 4 C_4 C_5 L_5 R_4 R_5 R_L g_m r_o s^4 + 4 C_4 C_5 L_5 R_4 R_5 R_L g_m r_o s^4 + 4 C_4 C_5 L_5 R_4 R_5 R_L g_m r_o s^4 + 4 C_4 C_5 L_5 R_4 R_5 R_L g_m r_o s^4 + 4 C_4 C_5 L_5 R_5 R_L g_m r_o s^4 + 4 C_4 C_5 L_5 R_5 R_L g_m r_o s^4 + 4 C_4 C_5 L_5 R_5 R_L g_m r_o s^4 + 4 C_4 C_5 L_5 R_5 R_L g_m r_o s^4 + 4 C_4 C_5 L_5 R_5 R_L g_m r_o s^4 + 4 C_4 C_5 L_5 R_5 R_L g_m r_o s^4 + 4 C_4 C_5 L_5 R_5 R_L g_m r_o s^4 + 4 C_4 C_5 L_5 R_5 R_L g_m r_o s^4 + 4 C_4 C_5 L_5 R_5 R_L g_m r_o s^4 + 4 C_4 C_5 L_5 R_5 R_L g_m r_o s^4 + 4 C_4 C_5 L_5 R_5 R_L g_m r_o s^4 + 4$

- **10.618** INVALID-ORDER-618  $Z(s) = \left(\infty, \infty, \infty, L_4 s + R_4 + \frac{1}{C_4 s}, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, R_L + \frac{1}{C_L s}\right)$
- $H(s) = -\frac{1}{2C_4C_5C_LL_4L_5R_5R_Lg_mr_os^5 + 4C_4C_5C_LL_4L_5R_5R_Ls^5 + C_4C_5C_LL_4L_5R_5r_os^5 + 2C_4C_5C_LL_5R_4R_5R_Lg_mr_os^4 + 4C_4C_5C_LL_5R_4R_5R_Ls^4 + C_4C_5C_LL_5R_4R_5r_os^4 + 2C_4C_5L_4L_5R_5R_Lr_os^4 + 2C_4C_5L_4L_5R_5g_mr_os^4 + 4C_4C_5L_4L_5R_5g_mr_os^4 + 4C_4C_5C_LL_5R_4R_5R_Ls^4 + C_4C_5C_LL_5R_4R_5R_Ls^4 + C_4C_5C_LL_5R_5R_5R_Ls^4 + C_4C_5C_LL_5R_5R_5R_Ls^4 + C_4C_5C_LL_5R_5R_5R_Ls^4 + C_4C_5C_LL_5R_5R_5R_Ls^4 + C_4C_5C_LL_5R_5R_5R_Ls^4 + C_4C_5C_LL_5R_5R_5R_Ls^4 + C_5C_LL_5R_5R_5R_Ls^4 + C_5C_LL_5R_5R_5R_Ls^4 + C_5C_LL_5R_5R_5R_Ls$
- **10.619** INVALID-ORDER-619  $Z(s) = \left(\infty, \infty, \infty, L_4 s + R_4 + \frac{1}{C_4 s}, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, L_L s + \frac{1}{C_L s}\right)$
- $H(s) = -\frac{1}{2C_4C_5C_LL_4L_5L_Rs_5g_mr_os^6 + 4C_4C_5C_LL_4L_5L_Rs_5s^6 + C_4C_5C_LL_4L_5R_5r_os^5 + 2C_4C_5C_LL_5L_Rs_5s^6 + 2C_4C_5C_LL_5C_LL_5L_Rs_5s^6 + 2C_4C_5C_LL_5C_L$
- 10.620 INVALID-ORDER-620  $Z(s) = \left(\infty, \infty, \infty, L_4 s + R_4 + \frac{1}{C_4 s}, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{L_L s}{C_L L_L s^2 + 1}\right)$
- $H(s) = -\frac{1}{C_4C_5C_LL_4L_5L_LR_5r_os^6 + C_4C_5L_LL_6L_Rs_os^5 + 2C_4C_5L_4L_5L_Rs_os^5 + 4C_4C_5L_4L_5L_Rs_os^5 + 4C_4C_5L_4L_5L_Rs_os^4 + 2C_4C_5L_5L_LR_4R_5s_os^4 + 4C_4C_5L_5L_LR_4s_os^4 + 2C_4C_5L_5L_LR_4s_os^4 + 2C_4C_5L_5L_Rs_os^4 + 2C_4C_5L_As_os^4 + 2C_4C_5L_As_os^4 + 2C_4C_5L_As_os^4 + 2C_4C_5L_As_os^4 + 2C_4C_5L_As_os^4 + 2C_4C_5L_As_os^4 + 2C_4C_5L_As_os^4$
- 10.621 INVALID-ORDER-621  $Z(s) = \left(\infty, \infty, \infty, L_4 s + R_4 + \frac{1}{C_4 s}, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, L_L s + R_L + \frac{1}{C_L s}\right)$
- $H(s) = -\frac{1}{2C_4C_5C_LL_4L_5L_LR_5g_mr_os^6 + 4C_4C_5C_LL_4L_5L_LR_5s^6 + 2C_4C_5C_LL_4L_5R_5R_Lg_mr_os^5 + 4C_4C_5C_LL_4L_5R_5r_os^5 + 2C_4C_5C_LL_4L_5R_5r_os^5 + 2C_4C_5C_LL_5R_5r_os^5 + 2C_4C_5C_LL_$
- 10.622 INVALID-ORDER-622  $Z(s) = \left(\infty, \infty, \infty, L_4 s + R_4 + \frac{1}{C_4 s}, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$
- $H(s) = -\frac{1}{C_4 C_5 C_L L_4 L_5 L_L R_5 R_L r_o s^6 + C_4 C_5 L_L L_L R_4 R_5 R_L r_o s^5 + 2 C_4 C_5 L_4 L_5 L_L R_5 R_L g_m r_o s^5 + 4 C_4 C_5 L_4 L_5 L_L R_5 R_L s^5 + C_4 C_5 L_4 L_5 L_L R_5 R_L r_o s^4 + 2 C_4 C_5 L_4 L_5 L_L R_4 R_5 R_L g_m r_o s^4 + 4 C_4 C_5 L_5 L_L R_4 R_5 R_L r_o s^4 + 2 C_4 C_5 L_4 L_5 L_L R_5 R_L r_o s^4 + 2 C_4 C_5 L_4 L_5 L_L R_5 R_L r_o s^4 + 2 C_4 C_5 L_4 L_5 L_L R_5 R_L r_o s^4 + 2 C_4 C_5 L_4 L_5 L_L R_5 R_L r_o s^4 + 2 C_4 C_5 L_4 L_5 L_L R_5 R_L r_o s^4 + 2 C_4 C_5 L_4 L_5 L_L R_5 R_L r_o s^4 + 2 C_4 C_5 L_4 L_5 L_L R_5 R_L r_o s^4 + 2 C_4 C_5 L_4 L_5 L_L R_5 R_L r_o s^4 + 2 C_4 C_5 L_4 L_5 L_L R_5 R_L r_o s^4 + 2 C_4 C_5 L_4 L_5 L_L R_5 R_L r_o s^4 + 2 C_4 C_5 L_5 L_L R_4 R_5 R_L r_o s^4 + 2 C_4 C_5 L_5 L_L R_4 R_5 R_L r_o s^4 + 2 C_4 C_5 L_5 L_L R_4 R_5 R_L r_o s^4 + 2 C_4 C_5 L_5 L_L R_4 R_5 R_L r_o s^4 + 2 C_4 C_5 L_5 L_L R_4 R_5 R_L r_o s^4 + 2 C_4 C_5 L_5 L_L R_4 R_5 R_L r_o s^4 + 2 C_4 C_5 L_5 L_L R_5 R_L r_o s^4 + 2 C_4 C_5 L_5 L_L R_5 R_L r_o s^4 + 2 C_4 C_5 L_5 L_L R_5 R_L r_o s^4 + 2 C_4 C_5 L_5 L_L R_5 R_L r_o s^4 + 2 C_4 C_5 L_5 L_L R_5 R_L r_o s^4 + 2 C_4 C_5 L_5 L_L R_5 R_L r_o s^4 + 2 C_4 C_5 L_5 L_L R_5 R_L r_o s^4 + 2 C_4 C_5 L_5 L_L R_5 R_L r_o s^4 + 2 C_4 C_5 L_5 L_L R_5 R_L r_o s^4 + 2 C_4 C_5 L_5 L_L R_5 R_L r_o s^4 + 2 C_4 C_5 L_5 L_L R_5 R_L r_o s^4 + 2 C_4 C_5 L_5 L_L R_5 R_L r_o s^4 + 2 C_4 C_5 L_5 L_L R_5 R_L r_o s^4 + 2 C_4 C_5 L_5 L_L R_5 R_L r_o s^4 + 2 C_4 C_5 L_5 L_L R_5 R_L r_o s^4 + 2 C_4 C_5 L_5 L_L R_5 R_L r_o s^4 + 2 C_4 C_5 L_5 L_L R_5 R_L r_o s^4 + 2 C_4 C_5 L_5 L_L R_5 R_L r_o s^4 + 2 C_5 L_5 L_L R_5 R_L r_o s^4 + 2 C_5 L_5 L_L R_5 R_L r_o s^4 + 2 C_5 L_5 L_L R_5 R_L r_o s^4 + 2 C_5 L_5 L_L R_5 R_L r_o s^4 + 2 C_5 L_5 L_L R_5 R_L r_o s^4 + 2 C_5 L_5 L_L R_5 R_L r_o s^4 + 2 C_5 L_5 L_L R_5 R_L r_o s^4 + 2 C_5 L_5 L_L R_5 R_L r_o s^4 + 2 C_5 L_5 L_L R_5 R_L r_o s^4 + 2 C_5 L_5 L_L R_5 R_L r_o s^4 + 2 C_5 L_5 L_L R_5 R_L r_o s^4 + 2 C_5 L_5 L_L R_5 R_L r_o s^4 + 2 C_5 L_5 L_L R_5 R_L r_o s^4 + 2 C_5 L_5 L_L R_5 R_L r_o s^4 + 2 C_5 L_5$
- 10.623 INVALID-ORDER-623  $Z(s) = \left(\infty, \infty, \infty, L_4 s + R_4 + \frac{1}{C_4 s}, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$
- $H(s) = -\frac{1}{2C_4C_5C_LL_4L_5L_LR_5R_Lg_mr_os^6 + 4C_4C_5C_LL_4L_5L_LR_5r_os^6 + 2C_4C_5C_LL_5L_LR_4R_5R_Lg_mr_os^5 + 4C_4C_5C_LL_5L_LR_4R_5R_Ls^5 + C_4C_5C_LL_5L_LR_4R_5r_os^5 + 2C_4C_5C_LL_5L_LR_5R_Lr_os^5 + 2C_4C_5L_4L_5L_LR_5g_mr_os^5 + 4C_4C_5L_4L_5L_LR_5g_mr_os^5 + 4C_4C_5C_LL_5L_LR_4R_5R_Ls^5 + C_4C_5C_LL_5L_LR_4R_5r_os^5 + 2C_4C_5C_LL_5L_LR_5g_mr_os^5 + 4C_4C_5C_LL_5L_LR_4R_5R_Ls^5 + C_4C_5C_LL_5L_LR_4R_5r_os^5 + 2C_4C_5C_LL_5L_LR_5g_mr_os^5 + 4C_4C_5C_LL_5L_LR_4R_5R_Ls^5 + C_4C_5C_LL_5L_LR_4R_5r_os^5 + 2C_4C_5C_LL_5L_LR_5g_mr_os^5 + 4C_4C_5C_LL_5L_LR_5g_mr_os^5 + 4C_4C_5C_LL_5L_LR_5g_mr_os^5 + 4C_4C_5C_LL_5L_Rs^2 + C_4C_5C_LL_5L_Rs^2 + C_4C_$
- 10.624 INVALID-ORDER-624  $Z(s) = \left(\infty, \infty, \infty, L_4 s + R_4 + \frac{1}{C_4 s}, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{R_L \left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$
- $H(s) = -\frac{1}{2C_4C_5C_LL_4L_5L_LR_5R_Lq_mr_os^6 + 4C_4C_5C_LL_4L_5L_LR_5R_Ls^6 + C_4C_5C_LL_4L_5L_LR_5r_os^6 + C_4C_5C_LL_4L_5R_Lq_mr_os^5 + 4C_4C_5C_LL_5L_LR_4R_5R_Lq_mr_os^5 + 4C_4C_5C_LL_5L_LR_4R_5R_Ls^5 + C_4C_5C_LL_5L_LR_4R_5R_Ls^5 + C_4C_5C_LL_5L_LR_5R_Ls^5 + C_4C_5C_$
- 10.625 INVALID-ORDER-625  $Z(s) = \left(\infty, \infty, \infty, L_4 s + R_4 + \frac{1}{C_4 s}, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, R_L\right)$
- $H(s) = \frac{1}{C_4 C_5 L_4 L_5 R_5 g_m r_o s^4 + C_4 C_5 L_4 L_5 R_5 s^4 + 2 C_4 C_5 L_4 L_5 R_L g_m r_o s^4 + 4 C_4 C_5 L_4 L_5 R_L s^4 + C_4 C_5 L_5 R_4 R_5 g_m r_o s^3 + 2 C_4 C_5 L_5 R_4 R_L g_m r_o s^3 + 4 C_4 C_5 L_5 R_4 R_L g_m r_o s^3 + 2 C_4 C_5 L_5 R_L g_m r_o s^3 + 2 C_4 C_5 L_5 R_L g_m r_o s^3 + 2 C_4 C_5$

- 10.626 INVALID-ORDER-626  $Z(s) = \left(\infty, \infty, \infty, L_4 s + R_4 + \frac{1}{C_4 s}, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{1}{C_L s}\right)$
- $H(s) = \frac{1}{C_4 C_5 C_L L_4 L_5 R_5 g_m r_o s^5 + C_4 C_5 C_L L_4 L_5 R_5 s^5 + C_4 C_5 C_L L_4 L_5 r_o s^5 + C_4 C_5 C_L L_5 R_4 R_5 g_m r_o s^4 + C_4 C_5 C_L L_5 R_4 R_5 s^4 + C_4 C_5 C_L L_5 R_4 r_o s^4 + 2 C_4 C_5 L_4 L_5 s^4 + 2 C_4 C_5 L_4 L_5 s^4 + 2 C_4 C_5 L_4 L_5 r_o s^5 + 2 C_4 C_5 L_5 R_4 r_o s^4 + 2 C_4 C_5 L_4 L_5 r_o s^5 + 2 C_4 C_5 L_5 R_4 r_o s^4 + 2 C_4 C_5 L_4 L_5 r_o s^5 + 2 C_4 C_5 L_5 R_4 r_o s^4 + 2 C_4 C_5 L_5 R_5 r_o s^4 + 2 C_5 L_5 R_5 r_o s^4 +$
- 10.627 INVALID-ORDER-627  $Z(s) = \left(\infty, \infty, \infty, L_4 s + R_4 + \frac{1}{C_4 s}, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{R_L}{C_L R_L s + 1}\right)$
- $H(s) = \frac{1}{C_4 C_5 C_L L_4 L_5 R_5 R_L g_m r_o s^5 + C_4 C_5 C_L L_4 L_5 R_L s^5 + C_4 C_5 C_L L_4 L_5 R_L r_o s^5 + C_4 C_5 C_L L_5 R_4 R_5 R_L g_m r_o s^4 + C_4 C_5 C_L L_5 R_4 R_5 R_L s^4 + C_4 C_5 C_L L_5 R_4 R_5 R_L s^4 + C_4 C_5 L_4 L_5 R_5 g_m r_o s^4 + C_4 C_5 L_5 R_$
- 10.628 INVALID-ORDER-628  $Z(s) = \left(\infty, \infty, \infty, L_4 s + R_4 + \frac{1}{C_4 s}, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, R_L + \frac{1}{C_L s}\right)$
- $H(s) = \frac{1}{C_4 C_5 C_L L_4 L_5 R_5 g_m r_o s^5 + C_4 C_5 C_L L_4 L_5 R_5 s^5 + 2 C_4 C_5 C_L L_4 L_5 R_L g_m r_o s^5 + 4 C_4 C_5 C_L L_4 L_5 R_L s^5 + C_4 C_5 C_L L_4 L_5 R_L s^5 + C_4 C_5 C_L L_5 R_4 R_5 g_m r_o s^4 + C_4 C_5 C_L L_5 R_4 R_5 g_m r_o s^4 + 4 C_4 C_5 C_L L_5 R_5 g_m r_o s^4 + 4 C_4 C_5 C_L L_5 R_5 g_m r_o s^4 + 4 C_4 C_5 C_L L_5 R_5 g_m r_o s^4 + 4 C_4 C_5 C_L L_5 R_5 g_m r_o s^4 + 4 C_5 C_L L_5 R_5 g_m r_o s^4 + 4 C_5 C_L L_5 R_5 g_m r_o s^4 + 4 C_5 C_L L_5 R_5 g_m r_o s^4 + 4 C_5 C_L L_5 R_5 g_m r_o s^4 + 4 C_5 C_L L_5 R_5 g_m r_o s^4 + 4 C_5 C_L L_5 R_5 g_m r_o s^4 + 4 C_5 C_L$
- 10.629 INVALID-ORDER-629  $Z(s) = \left(\infty, \infty, \infty, L_4 s + R_4 + \frac{1}{C_4 s}, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, L_L s + \frac{1}{C_L s}\right)$
- $H(s) = \frac{1}{2C_4C_5C_LL_4L_5L_Lg_mr_os^6 + 4C_4C_5C_LL_4L_5L_Ls^6 + C_4C_5C_LL_4L_5R_5g_mr_os^5 + C_4C_5C_LL_4L_5R_5s^5 + C_4C_5C_LL_4L_5r_os^5 + 2C_4C_5C_LL_5L_LR_4g_mr_os^5 + 4C_4C_5C_LL_5L_LR_4s^5 + 2C_4C_5C_LL_5L_LR_5g_mr_os^5 + 2C_4C_5C_LL_5L_LR_5s^5 + 2C_4C_5C_LL_5L_Rs^5 + 2C_4C_$
- 10.630 INVALID-ORDER-630  $Z(s) = \left(\infty, \infty, \infty, L_4 s + R_4 + \frac{1}{C_4 s}, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{L_L s}{C_L L_L s^2 + 1}\right)$
- $H(s) = \frac{1}{C_4 C_5 C_L L_4 L_5 L_L R_5 g_m r_o s^6 + C_4 C_5 C_L L_4 L_5 L_L R_5 s^6 + C_4 C_5 C_L L_4 L_5 L_L r_o s^6 + C_4 C_5 C_L L_5 L_L R_4 R_5 g_m r_o s^5 + C_4 C_5 C_L L_5 L_L R_4 R_5 s^5 + C_4 C_5 C_L L_5 L_L R_4 r_o s^5 + 2 C_4 C_5 L_4 L_5 L_L g_m r_o s^5 + 4 C_4 C_5 L_4 L_5 L_L s^5 + C_4 C_$
- 10.631 INVALID-ORDER-631  $Z(s) = \left(\infty, \infty, \infty, L_4 s + R_4 + \frac{1}{C_4 s}, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, L_L s + R_L + \frac{1}{C_L s}\right)$
- $H(s) = \frac{1}{2C_4C_5C_LL_4L_5L_Lg_mr_os^6 + 4C_4C_5C_LL_4L_5L_Ls^6 + C_4C_5C_LL_4L_5R_5g_mr_os^5 + 2C_4C_5C_LL_4L_5R_Lg_mr_os^5 + 4C_4C_5C_LL_4L_5R_Lg_mr_os^5 + 4C_4C_5C_LL_4L_5R_Lg_mr_$
- 10.632 INVALID-ORDER-632  $Z(s) = \left(\infty, \infty, \infty, L_4 s + R_4 + \frac{1}{C_4 s}, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$
- $H(s) = \frac{1}{C_4 C_5 C_L L_4 L_5 L_L R_5 R_L g_m r_o s^6 + C_4 C_5 C_L L_4 L_5 L_L R_5 R_L s^6 + C_4 C_5 C_L L_4 L_5 L_L R_4 R_5 R_L g_m r_o s^5 + C_4 C_5 C_L L_5 L_L R_4 R_5 R_L g_m r_o s^5 + C_4 C_5 C_L L_5 L_L R_4 R_5 R_L g_m r_o s^5 + C_4 C_5 L_4 L_5 L_L R_5 g_m r_o s^5 + C_4 C_5 L_4 L_5 L_L$
- 10.633 INVALID-ORDER-633  $Z(s) = \left(\infty, \infty, \infty, L_4 s + R_4 + \frac{1}{C_4 s}, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$
- $H(s) = \frac{1}{C_4 C_5 C_L L_4 L_5 L_L R_5 g_m r_o s^6 + C_4 C_5 C_L L_4 L_5 L_L R_5 s^6 + 2 C_4 C_5 C_L L_4 L_5 L_L R_4 g_m r_o s^6 + 4 C_4 C_5 C_L L_4 L_5 L_L R_4 R_5 g_m r_o s^5 + C_4 C_5 C_L L_5 L_L R_4 R_5 g_m r_o s^5 + 2 C_4 C_5 C_L L_5 L_L R_4 R_L g_m r_o s^5 + 4 C_4 C_5 C_L L_5 L_L R_4 R_L g_m r_o s^5 + 4 C_4 C_5 C_L L_5 L_L R_4 R_L g_m r_o s^5 + 4 C_4 C_5 C_L L_5 L_L R_4 R_L g_m r_o s^5 + 2 C_4 C_5 C_L L_5 L_L R_4 R_L g_m r_o s^5 + 4 C_4 C_5 C_L L_5 L_L R_4 R_L g_m r_o s^5 + 4 C_4 C_5 C_L L_5 L_L R_4 R_L g_m r_o s^5 + 4 C_4 C_5 C_L L_5 L_L R_4 R_L g_m r_o s^5 + 2 C_4 C_5 C_L L_5 L_L R_4 R_L g_m r_o s^5 + 4 C_4 C_5 C_L L_5$

- 10.634 INVALID-ORDER-634  $Z(s) = \left(\infty, \infty, \infty, L_4 s + R_4 + \frac{1}{C_4 s}, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{R_L \left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$
- $H(s) = \frac{1}{C_4 C_5 C_L L_4 L_5 L_L R_5 g_m r_o s^6 + C_4 C_5 C_L L_4 L_5 L_L R_5 s^6 + 2 C_4 C_5 C_L L_4 L_5 L_L R_L g_m r_o s^6 + 4 C_4 C_5 C_L L_4 L_5 L_L R_5 s^6 + C_4 C_5 C_L L_5 L_L R_5 s^6 + C_4 C_5$
- 10.635 INVALID-ORDER-635  $Z(s) = \left(\infty, \infty, \infty, L_4 s + R_4 + \frac{1}{C_4 s}, \frac{R_5 \left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, R_L\right)$
- $H(s) = \frac{1}{C_4 C_5 L_4 L_5 R_5 g_m r_o s^4 + C_4 C_5 L_4 L_5 R_5 s^4 + 2 C_4 C_5 L_4 L_5 R_L g_m r_o s^4 + 4 C_4 C_5 L_4 L_5 R_L s^4 + C_4 C_5 L_4 L_5 R_L g_m r_o s^3 + 4 C_4 C_5 L_4 R_5 R_L g_m r_o s^3 + 4 C_4 C_5 L_5 R_L g_m r_o s^3 + 4 C_4 C_5 L_5 R_L g_m r_o s^3 + 4 C_4 C_5 L_5 R_L g_m r_o s^3 + 4 C_4 C_5 L_5 R_L g_m r_o s^3 + 4 C_4 C_5 L_5 R_L g_m r_o s^3 + 4 C_4 C_5 L_5 R_L g_m r_o s^3 + 4 C_4 C_5 L_5 R_L g_m r_o s^3 + 4 C_4 C_5 L_5 R_L g_m r_o s^3 + 4 C_4 C_5 L_5 R_L g_m r_o s^3 + 4 C_4 C_5 L_5 R_L g_m r_o s^3 + 4 C_4 C_5 L_5 R_L g_m r_o s^3 + 4 C_4 C_5 L_5 R_L g_m r_o s^3 + 4 C_4 C_5 L_5 R_L g_m r_o s^3 + 4 C_4 C_5 L_5 R_L g_m r_o s^3 + 4 C_4 C_5 L_5 R_L g_m r_o s^3 + 4 C_4 C_5 L_5 R_L g_m r_o s^3 + 4 C_4 C_5 L_5 R_L g_m r_o s^3 + 4 C_5 L_5 R_L g_m$
- **10.636** INVALID-ORDER-636  $Z(s) = \left(\infty, \infty, \infty, L_4 s + R_4 + \frac{1}{C_4 s}, \frac{R_5 \left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{1}{C_L s}\right)$
- $H(s) = \frac{1}{C_4 C_5 C_L L_4 L_5 R_5 g_m r_o s^5 + C_4 C_5 C_L L_4 L_5 r_o s^5 + C_4 C_5 C_L L_4 R_5 r_o s^4 + C_4 C_5 C_L L_5 R_4 R_5 g_m r_o s^4 + C_4 C_5 C_L L_5 R_4 R_5 g_m r_o s^4 + C_4 C_5 C_L L_5 R_4 R_5 r_o s^4 + C_4 C_5 C_L L_5 R_5 r_o s^4 + C_5 C_L L_5 R_5 r_o s^4 + C_5 C_L L_5 R_5 r_o s^4 + C_5 C_L L_5 R_5$
- 10.637 INVALID-ORDER-637  $Z(s) = \left(\infty, \infty, \infty, L_4 s + R_4 + \frac{1}{C_4 s}, \frac{R_5 \left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{R_L}{C_L R_L s + 1}\right)$
- $H(s) = \frac{1}{C_4 C_5 C_L L_4 L_5 R_5 R_L g_m r_o s^5 + C_4 C_5 C_L L_4 L_5 R_5 R_L s^5 + C_4 C_5 C_L L_4 R_5 R_L r_o s^4 + C_4 C_5 C_L L_5 R_4 R_5 R_L g_m r_o s^4 + C_4 C_5 C_L L_5 R_4 R_5 R_L g_m r_o s^4 + C_4 C_5 C_L L_5 R_4 R_5 R_L r_o s^4 + C_4 C_5 C_L L_5 R_5 R_L r_o s^4 + C_4 C_5 C_L L_5 R_5 R_L r_o s^4 + C_4 C_5 C_L L_5 R_5 R_L r_o s^4 + C_4 C_5 C_L L_5 R_5 R_L r_o s^4 + C_4 C_5 C_L L_5 R_5 R_L r_o s^$
- 10.638 INVALID-ORDER-638  $Z(s) = \left(\infty, \infty, \infty, L_4 s + R_4 + \frac{1}{C_4 s}, \frac{R_5 \left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, R_L + \frac{1}{C_L s}\right)$
- $H(s) = \frac{1}{C_4 C_5 C_L L_4 L_5 R_5 g_m r_o s^5 + C_4 C_5 C_L L_4 L_5 R_5 s^5 + 2 C_4 C_5 C_L L_4 L_5 R_L g_m r_o s^5 + 4 C_4 C_5 C_L L_4 L_5 R_L s^5 + 2 C_4 C_5 C_L L_4 L_5 R_L s^5 + 2 C_4 C_5 C_L L_4 R_5 R_L g_m r_o s^4 + 4 C_4 C_5 C_L L_4 R_5 R_L s^4 + C_4 C_5 C_L L_5 R_L s^4 + C_4 C_5 C_$
- **10.639** INVALID-ORDER-639  $Z(s) = \left(\infty, \infty, \infty, L_4 s + R_4 + \frac{1}{C_4 s}, \frac{R_5 \left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, L_L s + \frac{1}{C_L s}\right)$
- $H(s) = \frac{1}{2C_4C_5C_LL_4L_5L_Lg_mr_os^6 + 4C_4C_5C_LL_4L_5L_Ls^6 + C_4C_5C_LL_4L_5R_5g_mr_os^5 + C_4C_5C_LL_4L_5R_5s^5 + C_4C_5C_LL_4L_LR_5g_mr_os^5 + 4C_4C_5C_LL_4L_LR_5s^5 + C_4C_5C_LL_4L_LR_5s^5 + C_4C_5C_LL_4L_4L_5c_LR_5s^5 + C_4C_5C_LL_4L_5c_LR_5s^5 + C_4C_5C_LL_4c_LR_5s^5 + C_4C_5C_LL_4c$
- 10.640 INVALID-ORDER-640  $Z(s) = \left(\infty, \infty, \infty, L_4 s + R_4 + \frac{1}{C_4 s}, \frac{R_5 \left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{L_L s}{C_L L_L s^2 + 1}\right)$
- $H(s) = \frac{1}{C_4 C_5 C_L L_4 L_5 L_L R_5 g_m r_o s^6 + C_4 C_5 C_L L_4 L_5 L_L R_5 s^6 + C_4 C_5 C_L L_4 L_5 L_L r_o s^6 + C_4 C_5 C_L L_4 L_4 L_5 r_o s^5 + C_4 C_5 C_L L_5 L_L R_4 R_5 g_m r_o s^5 + C_4 C_5 C_L L_5 L_L R_4 R_5 r_o s^4 + 2 C_4 C_5 L_4 L_5 L_L g_m r_o s^5 + 4 C_4 C_5 L_4 L_5 L_L r_o s^6 + C_4 C_5 C_L L_5 L_L R_4 R_5 r_o s^5 + C_4 C_5 C_L L_5 L_L R_4 R_5 r_o s^5 + C_4 C_5 C_L L_5 L_L R_4 R_5 r_o s^5 + C_4 C_5 C_L L_5 L_L R_4 R_5 r_o s^5 + C_4 C_5 C_L L_5 L_L R_4 R_5 r_o s^5 + C_4 C_5 C_L L_5 L_L R_4 R_5 r_o s^5 + C_4 C_5 C_L L_5 L_L R_4 R_5 r_o s^5 + C_4 C_5 C_L L_5 L_L R_4 R_5 r_o s^5 + C_4 C_5 C_L L_5 L_L R_4 R_5 r_o s^5 + C_4 C_5 C_L L_5 L_L R_4 R_5 r_o s^5 + C_4 C_5 C_L L_5 L_L R_4 R_5 r_o s^5 + C_4 C_5 C_L L_5 L_L R_4 R_5 r_o s^5 + C_4 C_5 C_L L_5 L_L R_4 R_5 r_o s^5 + C_4 C_5 C_L L_5 L_L R_4 R_5 r_o s^5 + C_4 C_5 C_L L_5 L_L R_4 R_5 r_o s^5 + C_4 C_5 C_L L_5 L_L R_4 R_5 r_o s^5 + C_4 C_5 C_L L_5 L_L R_5 r_o s^5 + C_4 C_5 C_$
- 10.641 INVALID-ORDER-641  $Z(s) = \left(\infty, \infty, \infty, L_4 s + R_4 + \frac{1}{C_4 s}, \frac{R_5 \left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, L_L s + R_L + \frac{1}{C_L s}\right)$
- $H(s) = \frac{1}{2C_4C_5C_LL_4L_5L_Lg_mr_os^6 + 4C_4C_5C_LL_4L_5L_Ls^6 + C_4C_5C_LL_4L_5R_5g_mr_os^5 + C_4C_5C_LL_4L_5R_Lg_mr_os^5 + 4C_4C_5C_LL_4L_5R_Ls^5 + C_4C_5C_LL_4L_5R_Lg_mr_os^5 + 4C_4C_5C_LL_4L_5R_Lg_mr_os^5 + 4$

- 10.642 INVALID-ORDER-642  $Z(s) = \left(\infty, \infty, \infty, L_4 s + R_4 + \frac{1}{C_4 s}, \frac{R_5 \left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$
- $H(s) = \frac{1}{C_4 C_5 C_L L_4 L_5 L_L R_5 R_L g_m r_o s^6 + C_4 C_5 C_L L_4 L_5 L_L R_5 R_L s^6 + C_4 C_5 C_L L_4 L_5 L_L R_5 R_L r_o s^6 + C_4 C_5 C_L L_4 L_5 L_L R_4 R_5 R_L r_o s^5 + C_4 C_5 C_L L_5 L_L R_4 R_5 R_L r_o s^5 + C_4 C_5 C_L L_5 L_L R_4 R_5 R_L r_o s^5 + C_4 C_5 C_L L_5 L_L R_4 R_5 R_L r_o s^5 + C_4 C_5 C_L L_5 L_L R_4 R_5 R_L r_o s^5 + C_4 C_5 C_L L_5 L_L R_4 R_5 R_L r_o s^5 + C_4 C_5 C_L L_5 L_L R_4 R_5 R_L r_o s^5 + C_4 C_5 C_L L_5 L_L R_4 R_5 R_L r_o s^5 + C_4 C_5 C_L L_5 L_L R_4 R_5 R_L r_o s^5 + C_4 C_5 C_L L_5 L_L R_4 R_5 R_L r_o s^5 + C_4 C_5 C_L L_5 L_L R_4 R_5 R_L r_o s^5 + C_4 C_5 C_L L_5 L_L R_4 R_5 R_L r_o s^5 + C_4 C_5 C_L L_5 L_L R_4 R_5 R_L r_o s^5 + C_4 C_5 C_L L_5 L_L R_4 R_5 R_L r_o s^5 + C_4 C_5 C_L L_5 L_L R_4 R_5 R_L r_o s^5 + C_4 C_5 C_L L_5 L_L R_4 R_5 R_L r_o s^5 + C_4 C_5 C_L L_5 L_L R_5 R_L r_o s^5 + C_4 C_5 C_L L_$
- 10.643 INVALID-ORDER-643  $Z(s) = \left(\infty, \infty, \infty, L_4 s + R_4 + \frac{1}{C_4 s}, \frac{R_5 \left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$
- $H(s) = \frac{1}{C_4 C_5 C_L L_4 L_5 L_L R_5 g_m r_o s^6 + C_4 C_5 C_L L_4 L_5 L_L R_5 s^6 + 2 C_4 C_5 C_L L_4 L_5 L_L R_4 g_m r_o s^6 + 4 C_4 C_5 C_L L_4 L_5 L_L R_5 g_m r_o s^6 + 2 C_4 C_5 C_L L_4 L_4 L_5 L_L R_5 g_m r_o s^6 + 2 C_4 C_5 C_L L_4 L_4 L_5 L_L R_5 g_m r_o s^6 + 2 C_4 C_5 C_L L_4 L_4 L_5 R_4 g_m r_o s^6 + 2 C_4 C_5 C_L L_4 L_5 L_4 R_5 g_m r_o s^6 + 2 C_4 C_5 C_L L_4 L_5 L_4 R_5 g_m r_o s^6 + 2 C_4 C_5 C_L L_4 L_5 L_4 R_5 g_m r_o s^6 + 2 C_4 C_5 C_L L_4 L_5 L_4 R_5 g_m r_o s^6 + 2 C_4 C_5 C_L L_4 L_5 L_4 R_5 g_m r_o s^6 + 2 C_4 C_5 C_L L_4 L_5 L_4 R_5 g_m r_o s^6 + 2 C_4 C_5 C_L L_4 L_5 L_4 R_5 g_m r_o s^6 + 2 C_4 C_5 C_L L_4 L_5 L_4 R_5 g_m r_o s^6 + 2 C_4 C_5 C_L L_4 L_5 L_5 R_5 g_m r_o s^6 + 2 C_4 C_5 C_L L_4 L_5 R_5 g_m r_o s^6 + 2 C_4 C_5 C_L L_5 L_5 R_5 g_m r_o s^6 + 2 C_4 C_5 C_L L_5 L_5 R_5 g_m r_o s^6 + 2 C_4 C_5 C_L L_5 L_5 R_5 g_m r_o s^6 + 2 C_4 C_5 C_L L_5 L_5 R_5 g_m r_o s^6 + 2 C_4 C_5 C_L L_5 L_5 R_5 g_m r_o s^6 + 2 C_4 C_5 C_L L_5 L_5 R_5 g_m r_o s^6 + 2 C_4 C_5 C_L L_5 L_5 R_5 g_m r_o s^6 + 2 C_5 C_L L_5 L_5 R_5 g_m r_o s^6 + 2 C_5 C_L L_5 L_5 R_5 g_m r_o s^6 + 2 C_5 C_L L_$
- 10.644 INVALID-ORDER-644  $Z(s) = \left(\infty, \infty, \infty, L_4 s + R_4 + \frac{1}{C_4 s}, \frac{R_5 \left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{R_L \left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$
- $H(s) = \frac{1}{C_4 C_5 C_L L_4 L_5 L_L R_5 g_m r_o s^6 + C_4 C_5 C_L L_4 L_5 L_L R_5 s^6 + 2 C_4 C_5 C_L L_4 L_5 L_L R_L g_m r_o s^6 + 4 C_4 C_5 C_L L_4 L_5 L_L R_5 s^6 + 2 C_4 C_5 C_L L_4 L_5 L_L R_5 s^6 + 4 C_4 C_5 C_L L_4 L_5 L_L R_5 s^6 + 2 C_4 C_5 C_L L_4 L_5 L_L R_5 s^6 + 4 C_4 C_5 C_L L_4 L_5 L_L R_5 s^6 + 2 C_$
- **10.645** INVALID-ORDER-645  $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s + \frac{1}{R_4} + \frac{1}{L_4 s}}, R_5, R_L + \frac{1}{C_L s}\right)$
- $H(s) = \frac{L_4 R_4 s \left(C_L R_L s + 1\right) \left(R_5 g_m r_o + R_5 r_o\right)}{2 C_4 C_L L_4 R_4 R_5 R_L g_m r_o s^3 + 2 C_4 C_L L_4 R_4 R_5 g_m r_o s^2 + 2 C_4 L_4 R_4 R_5 g_m r_o s^2 + 2 C_4 L_4 R_4 R_5 g_m r_o s^2 + 2 C_L L_4 R_5 g_m r_o s^2 + 2 C_L L_5 g_m r_o s^2 + 2 C_L L_5$
- **10.646** INVALID-ORDER-646  $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s + \frac{1}{R_4} + \frac{1}{L_4 s}}, R_5, L_L s + \frac{1}{C_L s}\right)$
- $H(s) = \frac{L_4 R_4 s \left(C_L L_L s^2 + 1\right) \left(R_5 g_m r_o + R_5 r_o\right)}{2 C_4 C_L L_4 L_L R_4 r_o s^4 + 2 C_4 C_L L_4 L_L R_4 r_o s^4 + 2 C_4 L_4 L_4 R_5 g_m r_o s^2 + 2 C_4 L_4 R_4 r_o s^2 + 2 C_4 L_4 L_4 R_5 g_m r_o s^3 + 4 C_L L_4 L_L R_5 g_m r_o s^3 + 2 C_L L_4 L_L R_5 g_m r_o s^3 +$
- 10.647 INVALID-ORDER-647  $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s + \frac{1}{R_4} + \frac{1}{L_4 s}}, R_5, L_L s + R_L + \frac{1}{C_L s}\right)$
- $H(s) = \frac{1}{2C_4C_LL_4L_LR_4R_5g_mr_os^4 + 2C_4C_LL_4L_LR_4r_os^4 + 2C_4C_LL_4L_RR_4r_os^4 + 2C_4C_LL_4R_4R_5R_Lg_mr_os^3 + 2C_4C_LL_4R_4R_5R_Ls^3 + 2C_4C_LL_4R_4R_5g_mr_os^2 + 2C_4L_4R_4R_5s^2 + 2C_4L_4R_4r_os^2 + 2C_4L_4R_4r_os^3 + 2C_4L$
- 10.648 INVALID-ORDER-648  $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s + \frac{1}{R_4} + \frac{1}{L_4 s}}, R_5, \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$
- 10.649 INVALID-ORDER-649  $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s + \frac{1}{R_4} + \frac{1}{L_4 s}}, R_5, \frac{R_L \left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$
- $H(s) = \frac{1}{2C_4C_LL_4L_LR_4R_5R_Lg_mr_os^4 + 2C_4C_LL_4L_LR_4R_5R_Ls^4 + 2C_4C_LL_4L_LR_4R_Lr_os^4 + 2C_4L_4R_4R_5R_Lg^2 + 2C_4L_4R_4R_5R_Ls^2 + 2C_4L_4R_4R_5R_Ls^2 + 2C_4L_4L_LR_4R_5s^3 + 2C_LL_4L_LR_4R_5s^3 + 2C_LL_4L_LR_4R_Lg_mr_os^3 + 4C_LL_4L_LR_4R_Ls^3 + C_LL_4L_LR_4R_5s^3 + 2C_LL_4L_LR_4R_5s^3 + 2C_LL_4L_4L_4R_5s^3 + 2$

**10.650** INVALID-ORDER-650  $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s + \frac{1}{R_4} + \frac{1}{L_4 s}}, \frac{1}{C_5 s}, R_L\right)$ 

 $H(s) = \frac{L_4 R_4 R_L s \left(-C_5 r_o s + g_m r_o + 1\right)}{2 C_4 C_5 L_4 R_4 R_L r_o s^3 + 2 C_4 L_4 R_4 R_L g_m r_o s^2 + 2 C_5 L_4 R_4 R_L g_m r_o s^2 + 4 C_5 L_4 R_4 R_L s^2 + C_5 L_4 R_4 r_o s^2 + 2 C_5 L_4 R_L r_o s^2 + 2 C_5 R_4 R_L r_o s + L_4 R_4 g_m r_o s + L_4 R_4 g_m r_o s + 2 L_4 R_L g_m r_o s + 2 L$ 

10.651 INVALID-ORDER-651  $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s + \frac{1}{R_A} + \frac{1}{L_A s}}, \frac{1}{C_5 s}, \frac{1}{C_L s}\right)$ 

 $H(s) = \frac{L_4 R_4 s \left(-C_5 r_o s + g_m r_o + 1\right)}{2 C_4 C_5 L_4 R_4 r_o s^3 + 2 C_4 L_4 R_4 g_m r_o s^2 + 2 C_4 L_4 R_4 s^2 + C_5 C_L L_4 R_4 r_o s^3 + 2 C_5 L_4 R_4 g_m r_o s^2 + 4 C_5 L_4 R_4 s^2 + 2 C_5 L_4 r_o s^2 + 2 C_5 R_4 r_o s + C_L L_4 R_4 g_m r_o s^2 + C_L L_4 R_4 s^2 + 2 L_4 g_m r_o s + 2 L_4 s + 2 R_4 g_m r_o s + 2 L_4 s + 2 R_4 g_m r_o s^2 + 2 C_5 R_4 r_o s + C_4 R_4 r_o s^2 + 2 C_5 R_4 r_o s + C_4 R_4 r_o s^2 + 2 C_5 R_4 r_o s + C_4 R_4 r_o s^2 + 2 C_5 R_4 r_o s + C_4 R_4 r_o s^2 + 2 C_5 R_4 r_o s + C_4 R_4 r_o s^2 + 2 C_5 R_4 r_o s + C_4 R_4 r_o s^2 + 2 C_5 R_4 r_o s + C_4 R_4 r_o s^2 + 2 C_5 R_4 r_o s + C_4 R_4 r_o s^2 + 2 C_5 R_4 r_o s + C_4 R_4 r_o s^2 + 2 C_5 R_4 r_o s + C_4 R_4 r_o s^2 + 2 C_5 R_4 r_o s + C_5 R_5 r_o s$ 

10.652 INVALID-ORDER-652  $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s + \frac{1}{R_A} + \frac{1}{L_A s}}, \frac{1}{C_5 s}, \frac{R_L}{C_L R_L s + 1}\right)$ 

 $H(s) = \frac{L_4 R_4 R_L s \left(-C_5 r_o s + g_m r_o + 1\right)}{2 C_4 C_5 L_4 R_4 R_L r_o s^3 + 2 C_4 L_4 R_4 R_L g_m r_o s^2 + 2 C_4 L_4 R_4 R_L s^2 + C_5 C_L L_4 R_4 R_L g_m r_o s^2 + 4 C_5 L_4 R_4 R_L s^2 + C_5 L_4 R_4 R_L r_o s^2 + 2 C_5 L_4 R_4 R_L r_o s^2 + C_L L_4 R_4 R_L r_o s^2 + 2 C_5 R_4 R_L r_o s^2 + 2 C_5 R_4 R_L r_o s^2 + C_L L_4 R_4 R_L r_o s^2 + 2 C_5 R_4 R_L r_o s^2 + 2 C_5 R_4 R_L r_o s^2 + C_L L_4 R_4 R_L r_o s^2 + L_4 R_4 R_L r_o s^2 + 2 C_5 R_4 R_L r_o s^2 + C_5 R_4 R_L r$ 

10.653 INVALID-ORDER-653  $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s + \frac{1}{R_A} + \frac{1}{L_A s}}, \frac{1}{C_5 s}, R_L + \frac{1}{C_L s}\right)$ 

 $H(s) = \frac{L_4 L_4 R_4 R_L r_o s^4 + 2 C_4 C_5 L_4 R_4 R_L r_o s^3 + 2 C_4 C_L L_4 R_4 R_L r_o s^3 + 2 C_4 C_L L_4 R_4 R_L r_o s^3 + 2 C_4 C_L L_4 R_4 R_L r_o s^3 + 2 C_5 C_L R_4 R_L r_o s^3 + 2 C_5 C_L$ 

10.654 INVALID-ORDER-654  $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s + \frac{1}{R_A} + \frac{1}{L_A s}}, \frac{1}{C_5 s}, L_L s + \frac{1}{C_L s}\right)$ 

 $H(s) = \frac{L_4 R_4 s \left(C_L L_L s^2 + 1\right) \left(-C_5 r_o s + g_m r_o + 1\right)}{2 C_4 C_5 C_L L_4 L_L R_4 r_o s^5 + 2 C_4 C_5 L_4 R_4 r_o s^3 + 2 C_4 C_L L_4 L_L R_4 g_m r_o s^4 + 2 C_4 C_L L_4 L_L R_4 g_m r_o s^4 + 2 C_5 C_L L_4 L_L R_4 g_m r_o s^4 + 2 C$ 

10.655 INVALID-ORDER-655  $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s + \frac{1}{R_A} + \frac{1}{L_A s}}, \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1}\right)$ 

 $\frac{L_4L_LR_4s\left(-C_5r_os+g_mr_o+1\right)}{2C_4C_5L_4L_LR_4g_or^3+2C_4L_4L_LR_4g^2+C_5C_LL_4L_LR_4g_or^3+2C_5L_4$ 

**10.656** INVALID-ORDER-656  $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s + \frac{1}{R_A} + \frac{1}{L_A s}}, \frac{1}{C_5 s}, L_L s + R_L + \frac{1}{C_L s}\right)$ 

 $H(s) = \frac{1}{2C_4C_5C_LL_4L_LR_4r_os^5 + 2C_4C_5C_LL_4R_4R_Lr_os^4 + 2C_4C_5L_4R_4r_os^3 + 2C_4C_LL_4L_LR_4g_mr_os^4 + 2C_4C_LL_4L_LR_4g_mr_os^4 + 2C_4C_LL_4R_4R_Lg_mr_os^3 + 2C_4C_LL_4R_4R_Lg_mr_os^3 + 2C_4C_LL_4R_4R_Lg_mr_os^3 + 2C_4L_4R_4g_mr_os^4 + 2C_5C_LL_4L_LR_4g_mr_os^4 + 2C_4C_LL_4R_4R_Lg_mr_os^4 +$ 

10.657 INVALID-ORDER-657  $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s + \frac{1}{R_A} + \frac{1}{L_A s}}, \frac{1}{C_5 s}, \frac{1}{C_L s + \frac{1}{R_I} + \frac{1}{L_L s}}\right)$ 

 $L_4L_LR_4R_Ls\left(-C_5r_os+g_mr_o+1\right)$  $H(s) = \frac{L_4L_LR_4R_Ls(s - C_5r_os + g_mr_o + 1)}{2C_4C_5L_4L_LR_4R_Lr_os^3 + 2C_4L_4L_LR_4R_Ls^2 + C_5L_4L_LR_4R_Ls^2 + C_5L_4L_LR_4$  10.658 INVALID-ORDER-658  $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s + \frac{1}{R_A} + \frac{1}{L_4 s}}, \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$ 

10.659 INVALID-ORDER-659  $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s + \frac{1}{R_A} + \frac{1}{L_A s}}, \frac{1}{C_5 s}, \frac{R_L \left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_T s}}\right)$ 

 $\overline{2C_4C_5C_LL_4L_LR_4R_Lr_os^5 + 2C_4C_5L_4R_4R_Lr_os^3 + 2C_4C_LL_4L_LR_4R_Lg_mr_os^4 + 2C_4C_LL_4L_LR_4R_Lg_mr_os^2 + 2C_4L_4R_4R_Lg_mr_os^2 + 2C_4L_4L_LR_4R_Lg_mr_os^4 + 4C_5C_LL_4L_LR_4R_Ls^4 + C_5C_LL_4L_LR_4R_Lg_mr_os^4 + 2C_5C_LL_4L_LR_4R_Lg_mr_os^4 + 2C_5C_LL_4R_4R_Lg_mr_os^4 + 2C_5C_LL_4R_4R_Lg_mr_$ 

10.660 INVALID-ORDER-660  $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s + \frac{1}{R_A} + \frac{1}{L_A s}}, \frac{R_5}{C_5 R_5 s + 1}, R_L\right)$ 

 $H(s) = \frac{L_4 R_4 R_L s \left(-C_5 R_5 r_o s + R_5 g_m r_o + R_5 - r_o\right)}{2 C_4 C_5 L_4 R_4 R_5 R_L r_o s^3 + 2 C_4 L_4 R_4 R_5 R_L s^2 + 2 C_4 L_4 R_4 R_5 R_L s^2 + 2 C_5 L_4 R_4 R_5 R_L s^2 + 2 C_5 L_4 R_4 R_5 R_L r_o s^2 + 2 C_5 L_4 R_5 R_L r_o s^2 + 2 C_5 R_4 R_5 R_L r_o s^2 + 2 C$ 

10.661 INVALID-ORDER-661  $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s + \frac{1}{R_A} + \frac{1}{L_4 s}}, \frac{R_5}{C_5 R_5 s + 1}, \frac{1}{C_L s}\right)$ 

 $H(s) = \frac{L_4 R_4 s \left(-C_5 R_5 r_o s + R_5 g_m r_o + R_5 - r_o\right)}{2 C_4 C_5 L_4 R_4 R_5 r_o s^3 + 2 C_4 L_4 R_4 R_5 g_m r_o s^2 + 2 C_4 L_4 R_4 R_5 g^2 + 2 C_5 L_4 R_4 R_5 g_m r_o s^2 + 4 C_5 L_4 R_4 R_5 g^2 + 2 C_5 L_4 R_4 R_5 g_m r_o s^2 + 2 C_5 L_4 R_4 R_5 g_m r_o s^2 + 2 C_5 L_4 R_4 R_5 g_m r_o s^2 + 2 C_5 L_4 R_4 R_5 g_m r_o s^2 + 2 C_4 L_4 R_4 R_5 g_m r_o s^2 + 2 C_4 L_4 R_4 R_5 g_m r_o s^2 + 2 C_5 L_4 R_5 g_m r_o s^2 + 2 C_5 L_5 R_5 g_m r_o s^2 + 2 C_5 R_5 g$ 

10.662 INVALID-ORDER-662  $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s + \frac{1}{R_A} + \frac{1}{L_A s}}, \frac{R_5}{C_5 R_5 s + 1}, \frac{R_L}{C_L R_L s + 1}\right)$ 

 $H(s) = \frac{1}{2C_4C_5L_4R_4R_5R_Lr_os^3 + 2C_4L_4R_4R_5R_Lg_mr_os^2 + 2C_4L_4R_4R_5R_Ls^2 + 2C_4L_4R_4R_5R_Lr_os^3 + 2C_5L_4R_4R_5R_Lg_mr_os^2 + 4C_5L_4R_4R_5R_Lg_mr_os^2 + 4C_5L_4R_4R_5R_Lr_os^2 + 2C_5L_4R_4R_5R_Lr_os^2 + 2C_5L_4R_5R_Lr_os^2 + 2C_5L_4R_5R_Lr_os^2 + 2C_5L_4R_5R_Lr_os^2 + 2C_5L_4R_5R_Lr_os^2 + 2C_5L_4R_5R_Lr_os^2 + 2C_5L_4R_5R_L$ 

10.663 INVALID-ORDER-663  $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s + \frac{1}{R_A} + \frac{1}{L_A s}}, \frac{R_5}{C_5 R_5 s + 1}, R_L + \frac{1}{C_L s}\right)$ 

 $-\frac{1}{2C_{4}C_{5}C_{L}L_{4}R_{4}R_{5}R_{L}r_{o}s^{4}+2C_{4}C_{5}L_{4}R_{4}R_{5}r_{o}s^{3}+2C_{4}C_{L}L_{4}R_{4}R_{5}R_{L}g_{m}r_{o}s^{3}+2C_{4}C_{L}L_{4}R_{4}R_{5}R_{L}s^{3}+2C_{4}C_{L}L_{4}R_{4}R_{5}r_{o}s^{3}+2C_{4}L_{4}R_{4}R_{5}r_{o}s^{2}+2C_{4}L_{4}R_{4}R_{5}r_{o}s^{2}+2C_{4}L_{4}R_{4}R_{5}r_{o}s^{3}+2C_{4}L_{$ 

10.664 INVALID-ORDER-664  $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s + \frac{1}{R_4} + \frac{1}{L_4 s}}, \frac{R_5}{C_5 R_5 s + 1}, L_L s + \frac{1}{C_L s}\right)$ 

 $-\frac{2C_4C_5C_LL_4L_LR_4R_5r_os^5 + 2C_4C_5L_4R_4R_5r_os^3 + 2C_4C_LL_4L_LR_4R_5g_mr_os^4 + 2C_4C_LL_4L_LR_4r_os^4 + 2C_4C_LL_4L_LR_4r_os^4 + 2C_4L_4R_4R_5g_mr_os^2 + 2C_4L_4R_4R_5s^2 + 2C_4L_4R_4R_5s^2$ 

10.665 INVALID-ORDER-665  $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s + \frac{1}{R_A} + \frac{1}{L_A s}}, \frac{R_5}{C_5 R_5 s + 1}, \frac{L_L s}{C_L L_L s^2 + 1}\right)$ 

 $L_4L_LR_4s(-C_5R_5r_os+R_5g_mr_o+R_5-r_o)$  $\frac{L_4L_LL_4G_5(-C_5L_6L_6L_7)s^3 + 2C_4L_4L_4R_5g_mr_os^2 + 2C_4L_4L_4R_4g_sr_os^3 + 2C_5L_4L_4R_4g_sr_os^3 + 2C_5L_4R_4g_sr_os^3 + 2C_5L_4R_4g_sr_$  **10.666** INVALID-ORDER-666  $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s + \frac{1}{R_A} + \frac{1}{L_A s}}, \frac{R_5}{C_5 R_5 s + 1}, L_L s + R_L + \frac{1}{C_L s}\right)$ 

 $H(s) = -\frac{1}{2C_4C_5C_LL_4L_LR_4R_5r_os^5 + 2C_4C_5C_LL_4R_4R_5R_Lr_os^4 + 2C_4C_5L_4R_4R_5r_os^3 + 2C_4C_LL_4L_LR_4R_5g_mr_os^4 + 2C_4C_LL_4L_LR_4R_5s^4 + 2C_4C_LL_4L_LR_4r_os^4 + 2C_4C_LL_4R_4R_5R_Lg_mr_os^3 + 2C_4C_LL_4R_4R_5R_Ls^3 + 2C_4C_LL_4R_4R_5g_mr_os^3 + 2C_4C_LL_4R_5g_mr_os^3 + 2C_4C_LL_4R_5g_mr_os^3 + 2C_4C_LL_4R_5g_mr_os^$ 

10.667 INVALID-ORDER-667  $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s + \frac{1}{R_4} + \frac{1}{L_4 s}}, \frac{R_5}{C_5 R_5 s + 1}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$ 

 $\frac{2C_{4}C_{5}L_{4}L_{L}R_{4}R_{5}R_{L}r_{o}s^{3}+2C_{4}L_{4}L_{L}R_{4}R_{5}R_{L}g_{m}r_{o}s^{2}+2C_{4}L_{4}L_{L}R_{4}R_{5}R_{L}r_{o}s^{2}+C_{5}L_{4}L_{L}R_{4}R_{5}R_{L}r_{o}s^{3}+2C_{5}L_{4}L_{L}R_{4}R_{5}R_{L}r_{o}s^{2}+2C_{5}L_{4}L_{L}R$ 

10.668 INVALID-ORDER-668  $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s + \frac{1}{R_4} + \frac{1}{L_4 s}}, \frac{R_5}{C_5 R_5 s + 1}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$ 

 $-\frac{1}{2C_{4}C_{5}C_{L}L_{4}L_{L}R_{4}R_{5}R_{L}r_{o}s^{5}+2C_{4}C_{5}L_{4}L_{L}R_{4}R_{5}r_{o}s^{4}+2C_{4}C_{L}L_{4}L_{L}R_{4}R_{5}R_{L}r_{o}s^{3}+2C_{4}L_{L}L_{L}R_{4}R_{5}R_{L}r_{o}s^{4}+2C_{4}C_{L}L_{4}L_{L}R_{4}R_{5}R_{L}r_{o}s^{4}+2C_{4}L_{L}L_{L}R_{4}R_{5}R_{L}r_{o}s^{4}+2C$ 

10.669 INVALID-ORDER-669  $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s + \frac{1}{R_A} + \frac{1}{L_A s}}, \frac{R_5}{C_5 R_5 s + 1}, \frac{R_L \left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{L_L s}}\right)$ 

 $H(s) = -\frac{1}{2C_4C_5C_LL_4L_LR_4R_5R_Lr_os^5 + 2C_4C_5L_4R_4R_5R_Lr_os^3 + 2C_4C_LL_4L_LR_4R_5R_Lg_mr_os^4 + 2C_4C_LL_4L_LR_4R_5R_Lg_mr_os^4 + 2C_4L_4R_4R_5R_Lg_mr_os^4 + 2C_4L_4R_4R_5R_Lg_mr_os^4$ 

10.670 INVALID-ORDER-670  $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s + \frac{1}{R_A} + \frac{1}{L_A s}}, R_5 + \frac{1}{C_5 s}, R_L\right)$ 

 $H(s) = \frac{L_4 R_4 R_L s \left(C_5 R_5 g_m r_o s + C_5 R_5 s - C_5 r_o s + g_m r_o + 1\right)}{2 C_4 C_5 L_4 R_4 R_5 R_L g_m r_o s^3 + 2 C_4 C_5 L_4 R_4 R_L g_m r_o s^2 + 2 C_4 L_4 R_4 R_L g_m r_o s^2 + 2 C_5 L_4 R_4 R_5 g_m r_o s^2 + 2 C_5 L_4 R_4 R_L g_m r_o s^$ 

10.671 INVALID-ORDER-671  $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s + \frac{1}{R_A} + \frac{1}{L_A s}}, R_5 + \frac{1}{C_5 s}, \frac{1}{C_L s}\right)$ 

 $H(s) = \frac{L_4 R_4 s \left(C_5 R_5 g_m r_o s + C_5 R_5 s - C_5 r_o s + g_m r_o + 1\right)}{2 C_4 C_5 L_4 R_4 R_5 g_m r_o s^3 + 2 C_4 C_5 L_4 R_4 R_5 s^3 + 2 C_4 C_5 L_4 R_4 r_o s^3 + 2 C_4 L_4 R_4 g_m r_o s^2 + 2 C_5 L_4 R_4 g_m r_o s^3 + 2 C_5 L_4 R_5 g_m r_o s^3 + 2 C_5 L_5 R_5 g_m r_o s^$ 

10.672 INVALID-ORDER-672  $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s + \frac{1}{R_A} + \frac{1}{L_A s}}, R_5 + \frac{1}{C_5 s}, \frac{R_L}{C_L R_L s + 1}\right)$ 

10.673 INVALID-ORDER-673  $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s + \frac{1}{R_A} + \frac{1}{L_A s}}, R_5 + \frac{1}{C_5 s}, R_L + \frac{1}{C_L s}\right)$ 

 $H(s) = \frac{1}{2C_{1}C_{5}C_{1}L_{1}R_{2}R_{5}R_{L}a_{m}r_{o}s^{4} + 2C_{4}C_{5}C_{L}L_{4}R_{4}R_{5}r_{o}s^{4} + 2C_{4}C_{5}L_{4}R_{4}R_{5}g_{m}r_{o}s^{3} + 2C_{4}C_{5}L_{4}R_{4}R_{5}s^{3} + 2C_{4}C_{5}L_{4}R_{4}R_{5}s^{3} + 2C_{4}C_{L}L_{4}R_{4}R_{L}s^{3} + 2C_{4}C_{L}L_{4}R_{4}R_{L}s^{3} + 2C_{4}C_{L}L_{4}R_{4}R_{L}s^{3} + 2C_{4}L_{4}R_{4}R_{5}s^{3} + 2C_{4}C_{L}L_{4}R_{4}R_{5}s^{3} + 2C_{4}C_{L}L_{4}R_{4}R_{L}s^{3} + 2C_{4}L_{4}R_{4}R_{L}s^{3} + 2C_{4}L_{4}R_{4}R_{5}s^{3} + 2C_{4}L_{5}R_{4}R_{5}s^{3} + 2C_{4}L_{5}R_{5}s^{3} + 2C_{4}L_{5}R_{5}$ 

10.674 INVALID-ORDER-674  $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s + \frac{1}{R_4} + \frac{1}{L_4 s}}, R_5 + \frac{1}{C_5 s}, L_L s + \frac{1}{C_L s}\right)$ 

 $H(s) = \frac{1}{2C_4C_5C_LL_4L_LR_4R_5g_mr_os^5 + 2C_4C_5C_LL_4L_LR_4R_5s^5 + 2C_4C_5C_LL_4L_LR_4r_os^5 + 2C_4C_5L_4R_4R_5g_mr_os^3 + 2C_4C_5L_4R_4R_5s^3 + 2C_4C_5L_4R_4r_os^3 + 2C_4C_5L_4L_LR_4g_mr_os^4 + 2C_4L_4L_LR_4s^4 + 2C_4L_4R_4g_mr_os^2 + 2C_4L_4R_4s^2 + 2C_5C_LL_4L_LR_4g_mr_os^4 + 2C_4C_5L_4R_4r_os^3 + 2C_4C_5L_4R_5r_os^3 + 2C_4C_5L_4R_5r_os^3 + 2C_4C_5L_4R_5r_os^3 + 2C_4C_5L_4R_5r_os^3 + 2C_4C_5L_4R_5r_os^3 + 2C_4C_5L_4R_5r_os^3 + 2C_4C_5L_4R_5r_os^3$ 

10.675 INVALID-ORDER-675  $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s + \frac{1}{R_4} + \frac{1}{L_4 s}}, R_5 + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1}\right)$ 

 $H(s) = \frac{L_4 L_L R_4 s \left(C_5 R_5 g_m r_o s + C_5 R_5 s - c_0 R_5 r_o s + C_5 R_5 r_o s + C_5$ 

10.676 INVALID-ORDER-676  $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s + \frac{1}{R_4} + \frac{1}{L_4 s}}, R_5 + \frac{1}{C_5 s}, L_L s + R_L + \frac{1}{C_L s}\right)$ 

 $H(s) = \frac{1}{2C_4C_5C_LL_4L_LR_4R_5g_mr_os^5 + 2C_4C_5C_LL_4L_LR_4r_os^5 + 2C_4C_5C_LL_4R_4R_5R_Lg_mr_os^4 + 2C_4C_5C_LL_4R_4R_5R_Ls^4 + 2C_4C_5C_LL_4R_4R_5g_mr_os^3 + 2C_4C_5L_4R_4R_5s^3 + 2C_4C_5L_4R_5s^3 + 2C_4C_5L_4R_5s^3 + 2C_4C_5L_4R_5s^3 + 2C_4C_5L_4R_5s^3$ 

10.677 INVALID-ORDER-677  $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s + \frac{1}{R_4} + \frac{1}{L_4 s}}, R_5 + \frac{1}{C_5 s}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$ 

10.678 INVALID-ORDER-678  $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s + \frac{1}{R_4} + \frac{1}{L_4 s}}, R_5 + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$ 

 $H(s) = \frac{1}{2C_4C_5C_LL_4L_LR_4R_5R_Lg_mr_os^5 + 2C_4C_5L_LL_4L_RR_4R_5R_Ls^5 + 2C_4C_5L_4L_LR_4R_5g_mr_os^4 + 2C_4C_5L_4L_LR_4R_5s^4 + 2C_4C_5L_4L_LR_4R_5R_Lg_mr_os^3 + 2C_4C_5L_4R_4R_5R_Ls^3 + 2C_4C_5L_4L_LR_4R_5R_Ls^3 + 2C_4C_5L_4L_LR_4R_5g_mr_os^4 + 2C_4C_5L_4L_LR_4R_5s^4 + 2C_4C_5L_4L_LR_4R_5s^4 + 2C_4C_5L_4L_LR_4R_5R_Lg_mr_os^3 + 2C_4C_5L_4R_4R_5R_Ls^3 + 2C_4C_5L_4L_LR_4R_5g_mr_os^4 + 2C_4C_5L_4R_4R_5g_mr_os^4 + 2C_4C_5L_4L_LR_4R_5g_mr_os^4 + 2C_4C_5L_4L_LR_4R_5g_mr_os^4 + 2C_4C_5L_4R_4R_5g_mr_os^4 + 2C_4C_5L_4R_5g_mr_os^4 + 2C_4C_5L_4R_5g_mr_os^4 + 2C_4C_5L_4R_5g_mr_os^4 + 2C_4C_5L$ 

10.679 INVALID-ORDER-679  $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s + \frac{1}{R_4} + \frac{1}{L_4 s}}, R_5 + \frac{1}{C_5 s}, \frac{R_L \left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$ 

 $H(s) = \frac{1}{2C_4C_5C_LL_4L_LR_4R_5R_Lg_mr_os^5 + 2C_4C_5C_LL_4L_LR_4R_5R_Ls^5 + 2C_4C_5L_4L_LR_4R_Lr_os^5 + 2C_4C_5L_4R_4R_5R_Lg_mr_os^3 + 2C_4C_5L_4R_4R_5R_Ls^3 + 2C_4C_5L_4R_4R_Lr_os^3 + 2C_4C_5L_4L_LR_4R_Lg_mr_os^4 + 2C_4L_4L_LR_4R_Ls^4 + 2C_4L_4L_LR_4R_Lg_mr_os^2 + 2C_4L_4R_4R_Lg_mr_os^4 + 2C_4C_5L_4L_LR_4R_Lg_mr_os^4 + 2C_4C_5L_4L_LR_4R_Lg_mr_os^4 + 2C_4C_5L_4R_4R_Lg_mr_os^4 + 2C_4C_5$ 

10.680 INVALID-ORDER-680  $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s + \frac{1}{R_4} + \frac{1}{L_4 s}}, L_5 s + \frac{1}{C_5 s}, R_L\right)$ 

 $H(s) = \frac{L_4 R_4 R_L s \left(C_5 L_5 g_m r_o s^2 + C_5 L_5 s^2 - C_5 r_o s + g_m r_o + 1\right)}{2 C_4 C_5 L_4 L_5 R_4 R_L g_m r_o s^4 + 2 C_4 C_5 L_4 L_5 R_4 R_L s^4 + 2 C_4 C_5 L_4 R_4 R_L r_o s^3 + 2 C_4 L_4 R_4 R_L g_m r_o s^3 + C_5 L_4 L_5 R_4 g_m r_o s^3 + 2 C_5 L_4 L_5 R_4 g_m r_o s^3 + 2 C_5 L_4 L_5 R_4 g_m r_o s^3 + 2 C_5 L_4 R_4 R_L g_m r_o s^2$ 

10.681 INVALID-ORDER-681  $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s + \frac{1}{R_A} + \frac{1}{L_A s}}, L_5 s + \frac{1}{C_5 s}, \frac{1}{C_L s}\right)$ 

 $H(s) = \frac{L_4 R_4 s \left(C_5 L_5 g_m r_o s^2 + C_5 L_5 s^2 - C_5 r_o s + g_m r_o + 1\right)}{2 C_4 C_5 L_4 L_5 R_4 g_m r_o s^4 + 2 C_4 C_5 L_4 L_5 R_4 g_m r_o s^4 + 2 C_5 L_4 L_5 R_4 g_m r_o s^4 + 2 C_5 L_4 L_5 R_4 g_m r_o s^4 + 2 C_5 L_4 L_5 g_m r_o s^3 + 2 C_5 L_4 R_4 g_m r_o s^2 + 2 C_5 L_4 R_4 g_m r_o s^2 + 2 C_5 L_4 R_4 g_m r_o s^3 + 2 C_5 L_4 R_5 g_m r_o s^3 + 2 C_5 L_4 R_5 g_m r_o s^3 + 2 C_5 L_4 R_5 g_m r_o s^3 + 2 C_5 L_5 R_5 g_m r_o s^3 + 2 C_$ 

10.682 INVALID-ORDER-682  $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s + \frac{1}{R_4} + \frac{1}{L_4 s}}, L_5 s + \frac{1}{C_5 s}, \frac{R_L}{C_L R_L s + 1}\right)$ 

 $H(s) = \frac{L_4 R_4 R_L s \left(C_5 L_5 g_m r_o s^2 + C_5 L_5 L_5 G_m r_o s^2 + C_5 L_5 L_5 G_m r_o s^2 + C_5 L_5 G_m r_o s^2 + C_5 L_5 G_m r_o s^2 + C_5 L_4 L_5 R_4 R_L g_m r_o s^4 + C_5 C_L L_4 L_5 R_4 R_L g_m r_o s^4 + C_5 C_L L_4 L_5 R_4 R_L g_m r_o s^3 + C_5 L_4 L_5 R_4 g_m r_o s^3 + C_5 L_5 R_4 g_m r_o s^3 + C_5 L_5 R_4 g_m r_o s^3 + C_5 L_5 R_5 g_m r_o s^3 + C_5 L_5 R$ 

10.683 INVALID-ORDER-683  $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s + \frac{1}{R_A} + \frac{1}{L_A s}}, L_5 s + \frac{1}{C_5 s}, R_L + \frac{1}{C_L s}\right)$ 

 $H(s) = \frac{1}{2C_4C_5C_LL_4L_5R_4R_Lg_mr_os^5 + 2C_4C_5C_LL_4L_5R_4R_Ls^5 + 2C_4C_5C_LL_4R_4R_Lr_os^4 + 2C_4C_5L_4L_5R_4g_mr_os^4 + 2C_4C_5L_4L_5R_4g_mr_os^3 + 2C_4C_LL_4R_4R_Lg_mr_os^3 + 2C_4C_LL_4$ 

10.684 INVALID-ORDER-684  $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s + \frac{1}{R_A} + \frac{1}{L_A s}}, L_5 s + \frac{1}{C_5 s}, L_L s + \frac{1}{C_L s}\right)$ 

 $H(s) = \frac{1}{2C_4C_5C_LL_4L_5L_LR_4g_mr_os^6 + 2C_4C_5C_LL_4L_5L_LR_4s^6 + 2C_4C_5L_4L_5R_4g_mr_os^4 + 2C_4C_5L_4L_5R_4g_mr_os^4 + 2C_4C_5L_4L_4L_4R_4g_mr_os^4 + 2C_4C_5L_4L_4R_4g_mr_os^4 + 2C_4C_5L_4L_4R_4g_mr_os^4 + 2C_4C_5L_4L_4R_4g_mr_os^4 + 2C_4C_5L_4L_4R_4g_mr_os^4 + 2C_4C_5L_4R_4g_mr_os^4 + 2C_4C_5L_4R_4g_mr_$ 

10.685 INVALID-ORDER-685  $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s + \frac{1}{R_A} + \frac{1}{L_A s}}, L_5 s + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1}\right)$ 

 $H(s) = \frac{L_4 L_L R_4 s \left(C_5 L_5 g_m r_o s^2 + C_5 L_5 s^2 + C_5 L_5 s^2 + C_5 L_4 L_5 L_L R_4 g_m r_o s^4 + 2 C_4 C_5 L_4 L_5 L_L R_4 s^4 + 2 C_4 C_5 L_4 L_5 L_L R_4 g_m r_o s^2 + 2 C_4 L_4 L_L R_4 g_m r_o s^4 + C_5 C_L L_4 L_5 L_L R_4 g_m r_o s^4 + C_5 C_L L_4 L_5 L_L R_4 g_m r_o s^4 + 2 C_5 L_4 L_5 L_L R_4 g_m r_o s^3 + 2 C_5 L_4 L_5 L_L R_4 g_m r$ 

**10.686** INVALID-ORDER-686  $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s + \frac{1}{R_A} + \frac{1}{L_A s}}, L_5 s + \frac{1}{C_5 s}, L_L s + R_L + \frac{1}{C_L s}\right)$ 

 $H(s) = \frac{1}{2C_4C_5C_LL_4L_5L_LR_4g_mr_os^6 + 2C_4C_5C_LL_4L_5L_LR_4s^6 + 2C_4C_5C_LL_4L_5R_4R_Lg_mr_os^5 + 2C_4C_5C_LL_4L_LR_4r_os^5 + 2C_4C_5C_LL_4L_5R_4g_mr_os^4 + 2C_4C_5L_4L_5R_4g_mr_os^4 + 2$ 

10.687 INVALID-ORDER-687  $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s + \frac{1}{R_A} + \frac{1}{L_A s}}, L_5 s + \frac{1}{C_5 s}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$ 

10.688 INVALID-ORDER-688  $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s + \frac{1}{R_A} + \frac{1}{L_A s}}, L_5 s + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$ 

 $H(s) = \frac{1}{2C_4C_5C_LL_4L_5L_LR_4R_Lg_mr_os^6 + 2C_4C_5L_LL_4L_5L_LR_4R_Ls^6 + 2C_4C_5L_4L_5L_LR_4g_mr_os^5 + 2C_4C_5L_4L_5L_LR_4g_mr_os^5 + 2C_4C_5L_4L_5L_LR_4g_mr_os^5 + 2C_4C_5L_4L_5L_LR_4g_mr_os^5 + 2C_4C_5L_4L_5R_4R_Lg_mr_os^4 + 2C_4C_5L_4L_5R_4R_Ls^4 + 2C_4C_5L_4R_4R_Ls^4 + 2C_4C_5L_4R_4R$ 

10.689 INVALID-ORDER-689  $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s + \frac{1}{R_A} + \frac{1}{L_A s}}, L_5 s + \frac{1}{C_5 s}, \frac{R_L \left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$ 

 $\overline{2C_4C_5C_LL_4L_5L_LR_4R_Lg_mr_os^6 + 2C_4C_5C_LL_4L_5L_LR_4R_Ls^6 + 2C_4C_5C_LL_4L_LR_4R_Lr_os^5 + 2C_4C_5L_4L_5R_4R_Lg_mr_os^4 + 2C_4C_5L_4L_5R_4R_Ls^4 + 2C_4C_5L_4R_4R_Ls^4 + 2$ 

**10.690** INVALID-ORDER-690  $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s + \frac{1}{R_4} + \frac{1}{L_4 s}}, \frac{L_5 s}{C_5 L_5 s^2 + 1}, R_L\right)$ 

10.691 INVALID-ORDER-691  $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s + \frac{1}{R_4} + \frac{1}{L_4 s}}, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{1}{C_L s}\right)$ 

 $H(s) = \frac{L_4 R_4 s \left(-C_5 L_5 r_o s^2 + L_5 g_m r_o s + L_5 s - r_o\right)}{2 C_4 C_5 L_4 L_5 R_4 r_o s^4 + 2 C_4 L_4 L_5 R_4 g_m r_o s^3 + 2 C_4 L_4 L_5 R_4 s^3 + 2 C_5 L_4 L_5 R_4 g_m r_o s^3 + 2 C_5 L_4 L_5 R_4 g_m r_o s^3 + 2 C_5 L_4 L_5 R_4 g_m r_o s^3 + 2 C_5 L_4 L_5 R_4 g_m r_o s^3 + 2 C_5 L_4 L_5 R_4 g_m r_o s^3 + 2 C_5 L_4 L_5 R_4 g_m r_o s^3 + 2 C_4 L_4 L_5 R_4 g_m r_o s^3 + 2 C_4 L_4 L_5 R_4 g_m r_o s^3 + 2 C_4 L_4 L_5 R_4 g_m r_o s^3 + 2 C_4 L_4 L_5 R_4 g_m r_o s^3 + 2 C_4 L_4 L_5 R_4 g_m r_o s^3 + 2 C_4 L_4 L_5 R_4 g_m r_o s^3 + 2 C_4 L_4 L_5 R_4 g_m r_o s^3 + 2 C_5 L_4 L_5 R_4 g_m r_o s^3 + 2 C_5 L_4 L_5 R_4 g_m r_o s^3 + 2 C_4 L_4 L_5 R_4 g_m r_o s^3 + 2 C_4 L_4 L_5 R_4 g_m r_o s^3 + 2 C_4 L_4 L_5 R_4 g_m r_o s^3 + 2 C_4 L_4 L_5 R_4 g_m r_o s^3 + 2 C_5 L_4 L_5 R_4 g_m r_o s^3 + 2 C_5 L_4 L_5 R_4 g_m r_o s^3 + 2 C_5 L_4 L_5 R_4 g_m r_o s^3 + 2 C_5 L_4 L_5 R_4 g_m r_o s^3 + 2 C_5 L_4 L_5 R_4 g_m r_o s^3 + 2 C_5 L_4 L_5 R_4 g_m r_o s^3 + 2 C_5 L_5 R_5 g_m r_o$ 

10.692 INVALID-ORDER-692  $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s + \frac{1}{R_4} + \frac{1}{L_4 s}}, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{R_L}{C_L R_L s + 1}\right)$ 

10.693 INVALID-ORDER-693  $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s + \frac{1}{R_4} + \frac{1}{L_4 s}}, \frac{L_5 s}{C_5 L_5 s^2 + 1}, R_L + \frac{1}{C_L s}\right)$ 

 $H(s) = -\frac{1}{2C_4C_5C_LL_4L_5R_4R_Lr_os^5 + 2C_4C_5L_4L_5R_4r_os^4 + 2C_4C_LL_4L_5R_4R_Lg_mr_os^4 + 2C_4C_LL_4L_5R_4R_Ls^4 + 2C_4C_LL_4L_5R_4R_Lr_os^3 + 2C_4L_4L_5R_4g_mr_os^3 + 2C_4L_4L_5R_4g_mr_os^3 + 2C_4L_4L_5R_4R_Lg_mr_os^4 + 4C_5C_LL_4L_5R_4R_Ls^4 + C_5C_LL_4L_5R_4R_Ls^4 + C_5C_LL_4L_5$ 

10.694 INVALID-ORDER-694  $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s + \frac{1}{R_4} + \frac{1}{L_4 s}}, \frac{L_5 s}{C_5 L_5 s^2 + 1}, L_L s + \frac{1}{C_L s}\right)$ 

 $H(s) = -\frac{1}{2C_4C_5C_LL_4L_5L_LR_4r_os^6 + 2C_4C_5L_4L_5R_4r_os^4 + 2C_4C_LL_4L_5L_LR_4g_mr_os^5 + 2C_4C_LL_4L_5L_LR_4s^5 + 2C_4C_LL_4L_5R_4g_mr_os^4 + 2C_4L_4L_5R_4g_mr_os^3 + 2C_4L_4L_5R_4g_mr_os^3 + 2C_4L_4L_5L_LR_4g_mr_os^5 + 4C_5C_LL_4L_5L_LR_4s^5 + 2C_5C_LL_4L_5L_LR_4s^5 + 2C_4C_LL_4L_5L_LR_4s^5 + 2C_4C_LL_4L_5L_4L_5L_4L_5L_4s^5 + 2C_4C_LL_4L_5L_4L_5L_4L_5L_4s^5 + 2C_4C_LL_4L_5L_4L_5L_4s^5 + 2C_4C_LL_4L_5L_4s^5 +$ 

10.695 INVALID-ORDER-695  $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s + \frac{1}{R_4} + \frac{1}{L_4 s}}, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{L_L s}{C_L L_L s^2 + 1}\right)$ 

 $H(s) = \frac{L_4 L_L R_4 s \left(-C_5 L_5 r_o s^2 + L_5 g_m r_o s + L_5 s - r_o\right)}{2 C_4 C_5 L_4 L_5 L_L R_4 r_o s^4 + 2 C_4 L_4 L_5 L_L R_4 s^3 + 2 C_4 L_4 L_5 L_L R_4 s^3 + 2 C_5 L_5 L_L R_5 L_L$ 

**10.696** INVALID-ORDER-696  $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s + \frac{1}{R_A} + \frac{1}{L_A s}}, \frac{L_5 s}{C_5 L_5 s^2 + 1}, L_L s + R_L + \frac{1}{C_L s}\right)$ 

 $H(s) = -\frac{1}{2C_4C_5C_LL_4L_5L_LR_4r_os^6 + 2C_4C_5C_LL_4L_5R_4R_Lr_os^5 + 2C_4C_5L_4L_5R_4r_os^4 + 2C_4C_LL_4L_5L_LR_4g_mr_os^5 + 2C_4C_LL_4L_5L_LR_4g_mr_os^5 + 2C_4C_LL_4L_5R_4R_Lg_mr_os^4 + 2C_4C_LL_4L_5R_4R_Ls^4 + 2C_4C_LL_4L_5R_4R_Lr_os^4 + 2C_4C_LL_4L_5R_4R_Lr_os^3 + 2C_4L_4L_5R_4g_mr_os^3 + 2C_4L_4L_5R_4g_mr_os^3 + 2C_4L_4L_5R_4g_mr_os^3 + 2C_4L_4L_5R_4g_mr_os^3 + 2C_4C_LL_4L_5R_4R_Lr_os^4 + 2C_4C_LL_4R_4R_Lr_os^4 +$ 

10.697 INVALID-ORDER-697  $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s + \frac{1}{R_4} + \frac{1}{L_4 s}}, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$ 

- 10.698 INVALID-ORDER-698  $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s + \frac{1}{R_4} + \frac{1}{L_4 s}}, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$
- $H(s) = -\frac{1}{2C_4C_5C_LL_4L_5L_LR_4R_Lr_os^6 + 2C_4C_5L_4L_5L_LR_4r_os^5 + 2C_4C_5L_4L_5R_4R_Lr_os^4 + 2C_4L_4L_5L_LR_4R_Lr_os^4 + 2C_4L_4L_5L_4R_Lr_os^4 + 2C_4L_$
- 10.699 INVALID-ORDER-699  $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s + \frac{1}{R_4} + \frac{1}{L_4 s}}, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{R_L \left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$
- $H(s) = -\frac{1}{2C_4C_5C_LL_4L_5L_LR_4R_Lr_os^6 + 2C_4C_5L_4L_5R_4R_Lr_os^4 + 2C_4C_LL_4L_5L_LR_4R_Lg_mr_os^5 + 2C_4C_LL_4L_5L_4R_Lg_mr_os^5 + 2C_4C_LL_4L_5L$
- 10.700 INVALID-ORDER-700  $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s + \frac{1}{R_4} + \frac{1}{L_4 s}}, L_5 s + R_5 + \frac{1}{C_5 s}, R_L\right)$
- $H(s) = \frac{L_4 R_4 R_L s \left(C_5 L_4 C_5 L_4 L_5 R_4 R_L g_m r_o s^4 + 2 C_4 C_5 L_4 L_5 R_4 R_L s^4 + 2 C_4 C_5 L_4 R_4 R_5 R_L g_m r_o s^3 + 2 C_4 L_5 R_4 R_L r_o s^3 + 2 C_4 L_4 R_4 R_L r_o s^3 + 2 C_4 L_4 R_4 R_L s^2 + C_5 L_4 L_5 R_4 g_m r_o s^3 + C_5 L_4 L_5 R_4 g_m r_o s^3 + 2 C_5 L_4 L_5 R_L g_m r_o s^3 + 2 C_5 L_5 L_5 R_L g_m r_o s^3 + 2 C_5 L_5$
- 10.701 INVALID-ORDER-701  $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s + \frac{1}{R_4} + \frac{1}{L_4 s}}, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{1}{C_L s}\right)$
- $H(s) = \frac{L_4 R_4 s \left(C_5 L_5 g_m r_o s^2 + C_5 L_5 s^2 + C_5 H_4 r_o s^3 + 2 C_4 C_5 L_4 R_4 r_o s^3 + 2 C_4 C_5 L_4 R_4 r_o s^3 + 2 C_4 L_4 R_4 r_o s^3 + 2 C_5 L_4 R_5 r_o s^3 + 2 C_5 L_5 R_5 r_o s^3 + 2 C_5 L_5 R_5 r_o s^3 + 2 C_5 R_5 r_o s^3 + 2 C_5$
- 10.702 INVALID-ORDER-702  $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s + \frac{1}{R_4} + \frac{1}{L_4 s}}, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{R_L}{C_L R_L s + 1}\right)$
- $H(s) = \frac{1}{2C_4C_5L_4L_5R_4R_Lg_mr_os^4 + 2C_4C_5L_4L_5R_4R_Ls^4 + 2C_4C_5L_4R_4R_5R_Lg_mr_os^3 + 2C_4C_5L_4R_4R_5R_Lg_mr_os^3 + 2C_4L_4R_4R_Lg_mr_os^2 + 2C_4L_4R_4R_Lg_mr_os^2 + 2C_4L_4R_4R_Lg_mr_os^4 + C_5C_LL_4L_5R_4R_Lg_mr_os^4 + C_5C_LL_4L_5R_4R_Lg_mr_os^3 + 2C_4C_5L_4R_4R_5R_Lg_mr_os^3 + 2C_4C_5L_4R_4R_Lg_mr_os^3 + 2C_4C_5L_4R_$
- 10.703 INVALID-ORDER-703  $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s + \frac{1}{R_4} + \frac{1}{L_4 s}}, L_5 s + R_5 + \frac{1}{C_5 s}, R_L + \frac{1}{C_L s}\right)$
- $H(s) = \frac{1}{2C_4C_5C_LL_4L_5R_4R_Lg_mr_os^5 + 2C_4C_5C_LL_4L_5R_4R_Ls^5 + 2C_4C_5C_LL_4R_4R_5R_Lg_mr_os^4 + 2C_4C_5C_LL_4R_4R_5R_Ls^4 + 2C_4C_5L_4L_5R_4g_mr_os^4 + 2C_4C_5L_4L_5R_4g_mr_os^4 + 2C_4C_5L_4L_5R_4g_mr_os^4 + 2C_4C_5L_4L_5R_4g_mr_os^4 + 2C_4C_5L_4R_4R_5g_mr_os^4 + 2C_4C_5L_4R_4g_mr_os^4 + 2C_4C_5L$
- 10.704 INVALID-ORDER-704  $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s + \frac{1}{R_4} + \frac{1}{L_4 s}}, L_5 s + R_5 + \frac{1}{C_5 s}, L_L s + \frac{1}{C_L s}\right)$
- $H(s) = \frac{1}{2C_4C_5C_LL_4L_5L_LR_4g_mr_os^6 + 2C_4C_5C_LL_4L_5L_LR_4s^6 + 2C_4C_5C_LL_4L_LR_4R_5g_mr_os^5 + 2C_4C_5C_LL_4L_LR_4r_os^5 + 2C_4C_5L_4L_5R_4g_mr_os^4 + 2C_4C_5L_4L_5R_4g_mr_os^4 + 2C_4C_5L_4R_4R_5g_mr_os^3 + 2C_4C_5L_4R_4R_5s^3 + 2C_4C_5L_4L_4R_4r_os^5 + 2C_4C_5L_4L_4R_4r_os^5 + 2C_4C_5L_4L_5R_4g_mr_os^4 + 2C_4C_5L_4R_4R_5g_mr_os^3 + 2C_4C_5L_4R_4r_os^3 + 2C_4C_5L_4R_5r_os^3 + 2C_4C_5L_4R_5r_os^3 + 2C_4C_5L_4R_5r_os^3 + 2C_4C_5L_4R_5r_os^3 + 2C$
- 10.705 INVALID-ORDER-705  $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s + \frac{1}{R_4} + \frac{1}{L_4 s}}, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1}\right)$
- $H(s) = \frac{1}{2C_4C_5L_4L_5L_LR_4g_mr_os^4 + 2C_4C_5L_4L_5L_LR_4s^4 + 2C_4C_5L_4L_LR_4g_mr_os^3 + 2C_4C_5L_4L_LR_4g_mr_os^3 + 2C_4L_4L_LR_4g_mr_os^2 + 2C_4L_4L_LR_4g_mr_os^4 + C_5C_LL_4L_5L_LR_4s^4 + C_5C_LL_4L_5L_LR_4g_mr_os^3 + 2C_4C_5L_4L_LR_4g_mr_os^3 + 2C_4C_5L_4L_LR_4g_mr_os^3 + 2C_4C_5L_4L_LR_4g_mr_os^4 + C_5C_LL_4L_5L_LR_4g_mr_os^4 + C_5C_LL_4L_5L_LR_4g_mr_os^4 + C_5C_LL_4L_5L_LR_4g_mr_os^4 + C_5C_LL_4L_5L_LR_4g_mr_os^4 + C_5C_LL_4L_5L_LR_4g_mr_os^4 + C_5C_LL_4L_5L_RR_4g_mr_os^4 + C_5C_LL_4L_5L_4R_4g_mr_os^4 + C_5C_LL_4L_5L_4R_5g_mr_os^4 + C_5C_LL_4L_5L_5L_5R_4g_mr_os^4 + C_5C_LL_4L_5L_5R_5g_mr_os^4 + C_5C_LL_5L_5R_5g_mr_os^4 + C_5C_LL_5L_5R_5g_mr_os^4 + C_5C_LL_5L_5R_5g_mr_os^4$

- 10.706 INVALID-ORDER-706  $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s + \frac{1}{R_4} + \frac{1}{L_4 s}}, L_5 s + R_5 + \frac{1}{C_5 s}, L_L s + R_L + \frac{1}{C_L s}\right)$
- $H(s) = \frac{1}{2C_4C_5C_LL_4L_5L_LR_4g_mr_os^6 + 2C_4C_5C_LL_4L_5L_LR_4s^6 + 2C_4C_5C_LL_4L_5R_4R_Lg_mr_os^5 + 2C_4C_5C_LL_4L_LR_4R_5g_mr_os^5 + 2C_4C_5C_LL_4R_4R_5g_mr_os^5 + 2C_4C_5C_LL_4R_4g_mr_os^5 + 2C_4C_5C_LL_4R_4g_mr_os^5 + 2C_4C_5C_LL_4R_4g_mr_os^5 + 2C_4C_5C_LL_4R_4g_mr_os^5 + 2C_4C_5C_LL_4R_4g_mr_os^5 + 2C_4C_5C_LL_4R_4g_mr_os^5 + 2C_4C_5C_$
- 10.707 INVALID-ORDER-707  $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s + \frac{1}{R_4} + \frac{1}{L_4 s}}, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$
- 10.708 INVALID-ORDER-708  $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s + \frac{1}{R_4} + \frac{1}{L_4 s}}, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$
- $H(s) = \frac{1}{2C_4C_5C_LL_4L_5L_LR_4R_Lg_mr_os^6 + 2C_4C_5C_LL_4L_5L_LR_4R_Ls^6 + 2C_4C_5C_LL_4L_LR_4R_5R_Lg_mr_os^5 + 2C_4C_5C_LL_4L_LR_4R_Lr_os^5 + 2C_4C_5L_4L_5L_LR_4g_mr_os^5 + 2C_4C_5L_4L_5L_RR_4g_mr_os^5 + 2C_4C_5L_4L_5L_4g_mr_os^5 + 2C_4C_5L_4L_$
- 10.709 INVALID-ORDER-709  $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s + \frac{1}{R_4} + \frac{1}{L_4 s}}, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{R_L \left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$
- $H(s) = \frac{1}{2C_4C_5C_LL_4L_5L_LR_4R_Lg_mr_os^6 + 2C_4C_5C_LL_4L_5L_LR_4R_Ls^6 + 2C_4C_5C_LL_4L_LR_4R_5R_Lg_mr_os^5 + 2C_4C_5C_LL_4L_LR_4R_5R_Ls^5 + 2C_4C_5L_4L_LR_4R_Lg_mr_os^5 + 2C_4C_5L_4R_Lg_mr_os^5 + 2C_4C_5L_4L_LR_4R_Lg_mr_os^5 + 2C_4C_5L_LR_4R_Lg_mr_os^5 + 2C_4C_5L_LR_4R_Lg_mr_os^5 + 2C_4C_5L_LR_4R_Lg$
- 10.710 INVALID-ORDER-710  $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s + \frac{1}{R_4} + \frac{1}{L_4 s}}, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, R_L\right)$
- $H(s) = \frac{L_4 R_4 R_L s \left(-C_5 L_5 R_5 r_o s^2 + C_5 L_4 L_5 R_4 R_5 R_L r_o s^3 + 2 C_4 L_4 L_5 R_4 R_5 R_L r_o s^3 + 2 C_4 L_4 L_5 R_4 R_5 R_L r_o s^3 + 2 C_4 L_4 L_5 R_4 R_5 R_L r_o s^3 + 2 C_5 L_4 L_5 R_4 R_5 R_L r_o s^3 + 2 C_5 L_4 L_5 R_4 R_5 R_L r_o s^3 + 2 C_4 L_4 L_5 R_4 R_5 R_L r_o s^3 + 2 C_5 L_4 L_5 R_4 R_5 R_L r_o s^3 + 2 C_5 L_4 L_5 R_4 R_5 R_L r_o s^3 + 2 C_5 L_4 L_5 R_4 R_5 R_L r_o s^3 + 2 C_5 L_4 L_5 R_4 R_5 R_L r_o s^3 + 2 C_5 L_4 L_5 R_4 R_5 R_L r_o s^3 + 2 C_5 L_4 L_5 R_4 R_5 R_L r_o s^3 + 2 C_5 L_4 L_5 R_4 R_5 R_L r_o s^3 + 2 C_5 L_4 L_5 R_4 R_5 R_L r_o s^3 + 2 C_5 L_4 L_5 R_4 R_5 R_L r_o s^3 + 2 C_5 L_4 L_5 R_4 R_5 R_L r_o s^3 + 2 C_5 L_4 L_5 R_4 R_5 R_L r_o s^3 + 2 C_5 L_4 L_5 R_4 R_5 R_L r_o s^3 + 2 C_5 L_5 R_4 R_5 R_L r_o s^3 + 2 C_5 L_5 R_4 R_5 R_L r_o s^3 + 2 C_5 L_5 R_4 R_5 R_L r_o s^3 + 2 C_5 L_5 R_4 R_5 R_L r_o s^3 + 2 C_5 L_5 R_4 R_5 R_L r_o s^3 + 2 C_5 L_5 R_4 R_5 R_L r_o s^3 + 2 C_5 L_5 R_4 R_5 R_L r_o s^3 + 2 C_5 L_5 R_4 R_5 R_L r_o s^3 + 2 C_5 L_5 R_4 R_5 R_L r_o s^3 + 2 C_5 L_5 R_4 R_5 R_L r_o s^3 + 2 C_5 L_5 R_4 R_5 R_L r_o s^3 + 2 C_5 L_5 R_4 R_5 R_L r_o s^3 + 2 C_5 L_5 R_4 R_5 R_L r_o s^3 + 2 C_5 L_5 R_4 R_5 R_L r_o s^3 + 2 C_5 L_5 R_4 R_5 R_L r_o s^3 + 2 C_5 L_5 R_5 R_L r_o$
- 10.711 INVALID-ORDER-711  $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s + \frac{1}{R_4} + \frac{1}{L_4 s}}, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{1}{C_L s}\right)$
- $H(s) = \frac{L_4 R_4 s \left(-C_5 L_5 R_5 r_o s^2 + L_5 R_5 g_m r_o s +$
- 10.712 INVALID-ORDER-712  $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s + \frac{1}{R_4} + \frac{1}{L_4 s}}, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{R_L}{C_L R_L s + 1}\right)$
- 10.713 INVALID-ORDER-713  $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s + \frac{1}{R_4} + \frac{1}{L_4 s}}, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, R_L + \frac{1}{C_L s}\right)$
- $H(s) = -\frac{1}{2C_4C_5C_LL_4L_5R_4R_5R_Lr_os^5 + 2C_4C_5L_4L_5R_4R_5r_os^4 + 2C_4C_LL_4L_5R_4R_5R_Lg_mr_os^4 + 2C_4C_LL_4L_5R_4R_5R_Lr_os^4 + 2C_4C_LL_4R_5R_4R_5R_Lr_os^4 + 2C_4C_LL_4R_5R_5R_Lr_os^4 + 2C_4C_LL_4R_5R_4R_5R_Lr_os^4 + 2C_4C_LL_4R_5R_4R_5R_$

- 10.714 INVALID-ORDER-714  $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s + \frac{1}{R_4} + \frac{1}{L_4 s}}, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, L_L s + \frac{1}{C_L s}\right)$
- $H(s) = -\frac{1}{2C_4C_5C_LL_4L_5L_LR_4R_5r_os^6 + 2C_4C_5L_4L_5R_4R_5r_os^4 + 2C_4C_LL_4L_5L_LR_4R_5g_mr_os^5 + 2C_4C_LL_4L_5L_LR_4r_os^5 + 2C_4C_LL_4L_5L_LR_4r_os^5 + 2C_4C_LL_4L_5R_4R_5r_os^4 + 2C_4L_4L_5R_4R_5r_os^4 + 2C_4L_4R_5R_5r_os^4 + 2C_4R_5R_5r_os^4 + 2C$
- 10.715 INVALID-ORDER-715  $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s + \frac{1}{R_4} + \frac{1}{L_4 s}}, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{L_L s}{C_L L_L s^2 + 1}\right)$
- $H(s) = \frac{1}{2C_4C_5L_4L_5L_LR_4R_5r_os^4 + 2C_4L_4L_5L_LR_4R_5g_mr_os^3 + 2C_4L_4L_5L_LR_4r_os^3 + 2C_4L_4L_5L_4r_os^3 + 2C_4L_4r_os^3 + 2C_4L_4r_o$
- **10.716** INVALID-ORDER-716  $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s + \frac{1}{R_4} + \frac{1}{L_4 s}}, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, L_L s + R_L + \frac{1}{C_L s}\right)$
- $H(s) = -\frac{1}{2C_4C_5C_LL_4L_5L_LR_4R_5r_os^6 + 2C_4C_5C_LL_4L_5R_4R_5R_Lr_os^5 + 2C_4C_5L_4L_5R_4R_5r_os^4 + 2C_4C_LL_4L_5L_LR_4R_5g_mr_os^5 + 2C_4C_LL_4L_5L_LR_4r_os^5 + 2C_4C_LL_4L_5R_4R_5r_os^4 + 2C_4C_LL_4R_5R_5r_os^4 + 2C_4C_LL_4R_5r_os^4 + 2C_4C_LL_4R_5r_os^4 + 2C_4C_LL_4R_5r_os^4 + 2C_4C_LL_4R_5r_os^4 + 2C_4C_LL_4R_5r_os^4 + 2C$
- 10.717 INVALID-ORDER-717  $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s + \frac{1}{R_4} + \frac{1}{L_4 s}}, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$
- $H(s) = \frac{1}{2C_4C_5L_4L_5L_LR_4R_5R_Lr_os^4 + 2C_4L_4L_5L_LR_4R_5R_Lg_mr_os^3 + 2C_4L_4L_5L_LR_4R_5R_Ls^3 + 2C_4L_4L_5L_LR_4R_5R_Lr_os^3 + 2C_4L_4L_5L_4R_5R_Lr_os^3 + 2C_4L_4L_5L_4R_5R$
- 10.718 INVALID-ORDER-718  $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s + \frac{1}{R_4} + \frac{1}{L_4 s}}, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$
- $H(s) = -\frac{1}{2C_4C_5C_LL_4L_5L_LR_4R_5R_Lr_os^6 + 2C_4C_5L_4L_5L_LR_4R_5r_os^5 + 2C_4C_5L_4L_5R_4R_5R_Lr_os^4 + 2C_4C_LL_4L_5L_LR_4R_5R_Lg_mr_os^5 + 2C_4C_LL_4L_5L_LR_4R_5R_Lr_os^5 + 2C_4C_LL_4L_5L_4R_5R_Lr_os^5 + 2C_4C$
- 10.719 INVALID-ORDER-719  $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s + \frac{1}{R_4} + \frac{1}{L_4 s}}, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{R_L \left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$
- $H(s) = -\frac{1}{2C_4C_5C_LL_4L_5L_LR_4R_5R_Lr_os^6 + 2C_4C_5L_4L_5R_4R_5R_Lr_os^4 + 2C_4C_LL_4L_5L_LR_4R_5R_Ls^5 + 2C_4C_LL_4L_5L_LR_4R_5R_Lr_os^5 + 2C_4C_LL_4L_5L_RR_4R_5R_Lr_os^5 + 2C_4C_LL_4L_5L_RR_4R_5R_Lr_os^5 + 2C_4C_LL_4L_5L_RR_4R_5R_Lr_os^5 + 2C_4C_LL_4L_5L_RR_4R_5R_Lr_os^5 + 2C_4C_LL_4L_5L_RR_4R_5R_Lr_os^5 + 2C_4C_LL_4L_5R_4R_5R_Lr_os^5 + 2C_4C_LL_4R_5R_Lr_os^5 + 2C_4C_LR_AR_5R_Lr_os^5 + 2C_4C_LR_AR_5R$
- 10.720 INVALID-ORDER-720  $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s + \frac{1}{R_4} + \frac{1}{L_4 s}}, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, R_L\right)$
- $H(s) = \frac{1}{2C_4C_5L_4L_5R_4R_5R_Lg_mr_os^4 + 2C_4C_5L_4L_5R_4R_5R_Ls^4 + 2C_4C_5L_4L_5R_4R_Lr_os^4 + 2C_4L_4L_5R_4R_Lg_mr_os^3 + 2C_4L_4R_4R_5R_Lg_mr_os^2 + 2C_4L_4R_4R_5R_Ls^2 + 2C_4L_4R_4R_5R_L$
- 10.721 INVALID-ORDER-721  $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s + \frac{1}{R_4} + \frac{1}{L_4 s}}, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{1}{C_L s}\right)$
- $H(s) = \frac{1}{2C_4C_5L_4L_5R_4R_5q_mr_os^4 + 2C_4C_5L_4L_5R_4R_5s^4 + 2C_4C_5L_4L_5R_4r_os^4 + 2C_4L_4L_5R_4g_mr_os^3 + 2C_4L_4L_5R_4s^3 + 2C_4L_4R_4R_5g_mr_os^2 + 2C_4L_4R_4r_os^2 + 2C_4L_4R_4r_os^2 + 2C_5L_4L_5R_4r_os^4 + 2C_5L_5L_5R_5r_os^4 + 2C_5L_5L_5R_5r_os^$

- 10.722 INVALID-ORDER-722  $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s + \frac{1}{R_4} + \frac{1}{L_4 s}}, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{R_L}{C_L R_L s + 1}\right)$
- $H(s) = \frac{1}{2C_4C_5L_4L_5R_4R_5R_Lg_mr_os^4 + 2C_4C_5L_4L_5R_4R_5R_Ls^4 + 2C_4C_5L_4L_5R_4R_Lr_os^4 + 2C_4L_4L_5R_4R_Lg_mr_os^3 + 2C_4L_4R_4R_5R_Lg_mr_os^2 + 2C_4L_4R_4R_5R_Ls^2 + 2C_4L_4R_5R_Ls^2 + 2C_4L_5R_5R_Ls^2 + 2C_4L_5R_5R_Ls^2 + 2C_4L_5R_5R_Ls^2 + 2C_4L_5R_Ls^2 + 2C_4L_5R_5R_Ls^2 + 2C_4L_5R_Ls^2 + 2C_4L_5R_Ls^2 + 2C_4L_$
- 10.723 INVALID-ORDER-723  $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s + \frac{1}{R_4} + \frac{1}{L_4 s}}, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, R_L + \frac{1}{C_L s}\right)$
- $H(s) = \frac{1}{2C_4C_5C_LL_4L_5R_4R_5R_Lg_mr_os^5 + 2C_4C_5C_LL_4L_5R_4R_5R_Ls^5 + 2C_4C_5C_LL_4L_5R_4R_Lr_os^5 + 2C_4C_5L_4L_5R_4R_5g_mr_os^4 + 2C_4C_5L_4L_5R_4R_5s^4 + 2C_4C_5L_4L_5R_4R_Lg_mr_os^4 + 2C_4C_LL_4L_5R_4R_Lg_mr_os^4 + 2C_4C_LL_4R_4R_Lg_mr_os^4 + 2C_$
- 10.724 INVALID-ORDER-724  $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s + \frac{1}{R_4} + \frac{1}{L_4 s}}, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, L_L s + \frac{1}{C_L s}\right)$
- $H(s) = \frac{1}{2C_4C_5C_LL_4L_5L_LR_4R_5g_mr_os^6 + 2C_4C_5C_LL_4L_5L_LR_4R_5s^6 + 2C_4C_5C_LL_4L_5L_LR_4r_os^6 + 2C_4C_5L_4L_5R_4R_5g_mr_os^4 + 2C_4C_5L_4L_5R_4R_5s^4 + 2C_4C_5L_4L_5L_LR_4g_mr_os^5 + 2C_4C_LL_4L_5L_LR_4s^5 + 2C_4C_LL_4L_5L_4L_5L_4s^5 + 2C_4C_LL_4L_5L_4L_5L_4s^5 + 2C_4C_LL_4L_5L_4L_5L_4s^5 + 2C_4C_LL_4L_5L_4s^5 + 2C_4C_LL_4L_5L_4s^$
- 10.725 INVALID-ORDER-725  $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s + \frac{1}{R_4} + \frac{1}{L_4 s}}, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{L_L s}{C_L L_L s^2 + 1}\right)$
- $H(s) = \frac{1}{2C_4C_5L_4L_5L_LR_4R_5g_mr_os^4 + 2C_4C_5L_4L_5L_LR_4R_5s^4 + 2C_4C_5L_4L_5L_LR_4g_mr_os^3 + 2C_4L_4L_5L_LR_4s^3 + 2C_4L_4L_LR_4R_5s^2 + 2C_4L_4L_LR_4r_os^2 + C_5C_LL_4L_5L_LR_4R_5g_mr_os^4 + C_5C_LL_4L_5L_LR_4r_os^4 + 2C_4C_5L_4L_5L_LR_4r_os^4 + 2C_4C_5L_4L_5L_4r_os^4 + 2C_4C_5L_4L_5L_4r_os^4 + 2C_4C_5L_4L_5L_4r_os^4 + 2C_4C_5L_4r_os^4 +$
- 10.726 INVALID-ORDER-726  $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s + \frac{1}{R_4} + \frac{1}{L_4 s}}, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, L_L s + R_L + \frac{1}{C_L s}\right)$
- $H(s) = \frac{1}{2C_4C_5C_LL_4L_5L_LR_4R_5g_mr_os^6 + 2C_4C_5C_LL_4L_5L_LR_4R_5s^6 + 2C_4C_5C_LL_4L_5L_LR_4r_os^6 + 2C_4C_5C_LL_4L_5R_4R_5R_Lg_mr_os^5 + 2C_4C_5C_LL_4L_5R_4R_5R_Ls^5 + 2C_4C_5C_LL_4L_5R_4R_5g_mr_os^4 + 2C_4C_5L_4L_5R_4R_5s^4 + 2C_4C_5L_4L_5R_4R_5s^4 + 2C_4C_5L_4L_5R_4R_5s^6 + 2C_4C_5C_LL_4L_5R_4R_5s^6 + 2C_4C_5C_LL_4L_5R_4R$
- 10.727 INVALID-ORDER-727  $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s + \frac{1}{R_4} + \frac{1}{L_4 s}}, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$
- 10.728 INVALID-ORDER-728  $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s + \frac{1}{R_4} + \frac{1}{L_4 s}}, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$
- $H(s) = \frac{1}{2C_4C_5C_LL_4L_5L_LR_4R_5R_Lg_mr_os^6 + 2C_4C_5L_LL_4L_5L_LR_4R_5R_Ls^6 + 2C_4C_5L_4L_5L_LR_4R_5g_mr_os^5 + 2C_4C_5L_4L_5L_LR_4R_5s^5 + 2C_4C_5L_4L_5L_LR_4r_os^5 + 2C_4C_5L_4L_5L_LR_4r_os^6 + 2C_4C_5L_4L_5L_LR_4r_os^6 + 2C_4C_5L_4L_5L_LR_4r_os^6 + 2C_4C_5L_4L_5L_LR_4r_os^6 + 2C_4C_5L_4L_5L_LR_4r_os^6 + 2C_4C_5L_4L_5L_Rr_os^6 + 2C_4C$
- 10.729 INVALID-ORDER-729  $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s + \frac{1}{R_4} + \frac{1}{L_4 s}}, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{R_L \left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$
- $H(s) = \frac{1}{2C_4C_5C_LL_4L_5L_LR_4R_5R_Lg_mr_os^6 + 2C_4C_5C_LL_4L_5L_LR_4R_5R_Ls^6 + 2C_4C_5L_4L_5L_LR_4R_Lr_os^6 + 2C_4C_5L_4L_5R_4R_5R_Lg_mr_os^4 + 2C_4C_5L_4L_5R_4R_5R_Ls^4 + 2C_4C_5L_4L_5R_4R_Lr_os^4 + 2C_4C_5L_4L_5L_LR_4R_Lg_mr_os^5 + 2C_4C_LL_4L_5L_LR_4R_Ls^5 + 2C_4C_LL_4L_5L_4R_Ls^5 + 2C_4C_$

- 10.730 INVALID-ORDER-730  $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s + \frac{1}{R_4} + \frac{1}{L_4 s}}, \frac{R_5 \left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, R_L\right)$
- $H(s) = \frac{1}{2C_4C_5L_4L_5R_4R_5R_Lg_mr_os^4 + 2C_4C_5L_4L_5R_4R_5R_Ls^4 + 2C_4C_5L_4L_5R_4R_Lr_os^4 + 2C_4C_5L_4R_4R_5R_Lr_os^3 + 2C_4L_4R_4R_5R_Ls^2 + 2C_4L_5R_4R_5R_Ls^2 +$
- 10.731 INVALID-ORDER-731  $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s + \frac{1}{R_4} + \frac{1}{L_4 s}}, \frac{R_5 \left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{1}{C_L s}\right)$
- $H(s) = \frac{1}{2C_4C_5L_4L_5R_4R_5g_mr_os^4 + 2C_4C_5L_4L_5R_4R_5s^4 + 2C_4C_5L_4L_5R_4r_os^4 + 2C_4C_5L_4R_4R_5r_os^3 + 2C_4L_4R_4R_5g_mr_os^2 + 2C_4L_4R_4R_5s^2 + 2$
- 10.732 INVALID-ORDER-732  $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s + \frac{1}{R_4} + \frac{1}{L_4 s}}, \frac{R_5 \left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{R_L}{C_L R_L s + 1}\right)$
- $H(s) = \frac{1}{2C_4C_5L_4L_5R_4R_5R_Lg_mr_os^4 + 2C_4C_5L_4L_5R_4R_5R_Ls^4 + 2C_4C_5L_4L_5R_4R_5R_Lr_os^4 + 2C_4C_5L_4R_4R_5R_Lr_os^3 + 2C_4L_4R_4R_5R_Lg_mr_os^2 + 2C_4L_4R_4R_5R_Ls^2 + 2C_4L_4R_4R_5R_Lg_mr_os^4 + C_5C_LL_4L_5R_4R_5R_Ls^4 + C_5C_LL_4L_5R_4R_5R_Ls^4$
- 10.733 INVALID-ORDER-733  $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s + \frac{1}{R_4} + \frac{1}{L_4 s}}, \frac{R_5 \left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, R_L + \frac{1}{C_L s}\right)$
- $H(s) = \frac{1}{2C_4C_5C_LL_4L_5R_4R_5R_Lg_mr_os^5 + 2C_4C_5C_LL_4L_5R_4R_5R_Ls^5 + 2C_4C_5C_LL_4L_5R_4R_Lr_os^5 + 2C_4C_5L_4L_5R_4R_5g_mr_os^4 + 2C_4C_5L_4L_5R_4R_5s^4 + 2C_4C_5L_4R_4R_5s^4 + 2C_4C_5L_4R_5s^4 + 2C_4C_$
- 10.734 INVALID-ORDER-734  $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s + \frac{1}{R_4} + \frac{1}{L_4 s}}, \frac{R_5 \left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, L_L s + \frac{1}{C_L s}\right)$
- $H(s) = \frac{1}{2C_4C_5C_LL_4L_5L_LR_4R_5g_mr_os^6 + 2C_4C_5C_LL_4L_5L_LR_4r_os^6 + 2C_4C_5C_LL_4L_5L_LR_4r_os^6 + 2C_4C_5L_4L_5R_4R_5g_mr_os^4 + 2C_4C_5L_4R_5R_5g_mr_os^4 + 2C_4C_5L_4R_5g_mr_os^4 + 2C_4C_5L_4R_5R_5g_mr_os^4 + 2C_4C_5L_4R_5g_mr_os^4 + 2C_4C_5L_4R_5g_mr_os^4 +$
- 10.735 INVALID-ORDER-735  $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s + \frac{1}{R_4} + \frac{1}{L_4 s}}, \frac{R_5 \left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{L_L s}{C_L L_L s^2 + 1}\right)$
- $H(s) = \frac{1}{2C_4C_5L_4L_5L_LR_4R_5g_mr_os^4 + 2C_4C_5L_4L_5L_LR_4R_5s^4 + 2C_4C_5L_4L_5L_LR_4r_os^4 + 2C_4C_5L_4L_5L_RR_4r_os^3 + 2C_4L_4L_LR_4R_5g_mr_os^2 + 2C_4L_4L_LR_4R_5s^2 + 2C_4L_4L_5L_LR_4R_5g_mr_os^4 + C_5C_LL_4L_5L_LR_4R_5s^4 + C_5C_LL_4L_5L_LR_4r_os^4 + C_5C_LL_4L_5L_LR_4r_os^4 + C_5C_LL_4L_5L_LR_4r_os^4 + C_5C_LL_4L_5L_LR_4r_os^4 + C_5C_LL_4L_5L_LR_4r_os^4 + C_5C_LL_4L_5L_LR_4r_os^4 + C_5C_LL_4L_5L_RR_4r_os^4 + C_5C_LL_4L_5L_4r_os^4 + C_5C_LL_4r_os^4 + C_5C_LL_4r_os^4 + C_5C_LL_4r_os^4 + C_5C_LL_4r_os^4 + C_5C_LL_4r_os^4 + C_5C_LL_4r_os^4 +$
- 10.736 INVALID-ORDER-736  $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s + \frac{1}{R_4} + \frac{1}{L_4 s}}, \frac{R_5 \left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, L_L s + R_L + \frac{1}{C_L s}\right)$
- $H(s) = \frac{1}{2C_4C_5C_LL_4L_5L_LR_4R_5g_mr_os^6 + 2C_4C_5C_LL_4L_5L_LR_4R_5s^6 + 2C_4C_5C_LL_4L_5L_LR_4r_os^6 + 2C_4C_5C_LL_4L_5R_4R_5R_Lg_mr_os^5 + 2C_4C_5C_LL_4L_5R_4R_5R_Ls^5 + 2C_4C_5C_LL_4L_5R_4R_5r_os^5 + 2C_4C_5C_LL_4R_5R_5r_os^5 + 2C_4C_5C_LR_5r_os^5 +$
- 10.737 INVALID-ORDER-737  $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s + \frac{1}{R_4} + \frac{1}{L_4 s}}, \frac{R_5 \left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$
- $H(s) = \frac{1}{2C_4C_5L_4L_5L_LR_4R_5R_Lg_mr_os^4 + 2C_4C_5L_4L_5L_LR_4R_5R_Ls^4 + 2C_4C_5L_4L_5L_LR_4R_5R_Lr_os^4 + 2C_4C_5L_4L_LR_4R_5R_Lr_os^3 + 2C_4L_4L_LR_4R_5R_Lg_mr_os^2 + 2C_4L_4L_LR_4R_5R_Ls^2 + 2C_4L_4L_LR_4R_5R_Lg_mr_os^4 + 2C_4C_5L_4L_5L_LR_4R_5R_Ls^4 + 2C_4C_5L_4L_5L_LR_4R_5R_Ls^4 + 2C_4C_5L_4L_5L_RR_4R_5R_Ls^4 + 2C_4C_5L_4L_5L_RR_5R_5R_5R_5R_5R_5R_5R_5R_5R_$

- 10.738 INVALID-ORDER-738  $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s + \frac{1}{R_4} + \frac{1}{L_4 s}}, \frac{R_5 \left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$
- $H(s) = \frac{1}{2C_4C_5C_LL_4L_5L_LR_4R_5R_Lg_mr_os^6 + 2C_4C_5C_LL_4L_5L_LR_4R_5R_Ls^6 + 2C_4C_5C_LL_4L_5L_LR_4R_5R_Lr_os^6 + 2C_4C_5L_4L_5L_LR_4R_5R_Lr_os^6 + 2C_4C_5L_4L_5L_Rr_os^6 + 2C_4C_5L_4L_5$
- 10.739 INVALID-ORDER-739  $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s + \frac{1}{R_4} + \frac{1}{L_4 s}}, \frac{R_5 \left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{R_L \left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$
- $H(s) = \frac{1}{2C_4C_5C_LL_4L_5L_LR_4R_5R_Lg_mr_os^6 + 2C_4C_5C_LL_4L_5L_LR_4R_5R_Ls^6 + 2C_4C_5C_LL_4L_5L_LR_4R_5R_Lr_os^6 + 2C_4C_5L_4L_5R_4R_5R_Lr_os^6 + 2C_4C_5L_4R_5R_5R_Lr_os^6 + 2C_4C_5L_4R_5R_Lr_os^6 + 2C_4C_5L_4R_5R_Lr_os^6 + 2C_4C_5L_4R_5R_Lr_os^6 + 2C_4C_5L_4R_5R_Lr_os^6 + 2C_4C_5L_4R_5R_Lr_os^6 + 2C_4C_5L_4R_5R_Lr_os^6 + 2C_4C_5$
- 10.740 INVALID-ORDER-740  $Z(s) = \left(\infty, \infty, \infty, \frac{L_4s}{C_4L_4s^2+1} + R_4, R_5, \frac{1}{C_Ls}\right)$
- $H(s) = \frac{\left(R_{5}g_{m}r_{o} + R_{5} r_{o}\right)\left(C_{4}L_{4}R_{4}s^{2} + L_{4}s + R_{4}\right)}{C_{4}C_{L}L_{4}R_{4}r_{o}s^{3} + C_{4}C_{L}L_{4}R_{4}r_{o}s^{3} + 2C_{4}L_{4}R_{5}g_{m}r_{o}s^{2} + 2C_{4}L_{4}R_{5}g_{m}r_{o}s^{2} + 2C_{4}L_{4}R_{5}g_{m}r_{o}s^{2} + C_{L}L_{4}R_{5}g_{m}r_{o}s^{2} + C_{L}L_$
- 10.741 INVALID-ORDER-741  $Z(s) = \left(\infty, \infty, \infty, \frac{L_4 s}{C_4 L_4 s^2 + 1} + R_4, R_5, \frac{R_L}{C_L R_L s + 1}\right)$
- $H(s) = \frac{R_L \left( R_5 g_m r_o + R_5 r_o \right) \left( C_4 L_4 R_4 s^2 + L_4 s + L_4$
- 10.742 INVALID-ORDER-742  $Z(s) = \left(\infty, \infty, \infty, \frac{L_{4s}}{C_4 L_4 s^2 + 1} + R_4, R_5, R_L + \frac{1}{C_L s}\right)$
- $H(s) = \frac{\left(C_L R_L s + 1\right) \left(R_5 g_m r_o + \frac{\left(C_L R_L s + 1\right) \left(R_5 g_m r_o + \frac{1}{2} C_L L_4 R_4 R_5 g_m r_o s^3 + 2 C_4 C_L L_4 R_4 R_5 g_m r_o s^3 + 2 C_4 C_L L_4 R_4 R_5 g_m r_o s^3 + 2 C_4 C_L L_4 R_4 R_5 g_m r_o s^3 + 2 C_4 C_L L_4 R_4 R_5 g_m r_o s^3 + 2 C_4 C_L L_4 R_4 R_5 g_m r_o s^3 + 2 C_4 C_L L_4 R_4 g_m r_o s^3 + 2 C_4 C_L L_4 R_4 g_m r_o s^3 + 2 C_4 C_L L_4 R_5 g_m r_o s^3 + 2 C_4 C_L L_4 R_5 g_m r_o s^3 + 2 C_4 C_L L_4 R_4 g_m r_o s^3 + 2 C_4 C_L L_4 R_5 g_m r_o s^3 + 2 C_4 C_L L_5 g_m r_o s^3 + 2 C_4 C_L L_5 g_m r_o s$
- 10.743 INVALID-ORDER-743  $Z(s) = \left(\infty, \infty, \infty, \frac{L_4 s}{C_4 L_4 s^2 + 1} + R_4, R_5, L_L s + \frac{1}{C_L s}\right)$
- $H(s) = \frac{\left(C_L L_L s^2 + 1\right) \left(R_5 g_m r_o s^4 + 4C_4 C_L L_4 L_L R_4 s^4 + 2C_4 C_L L_4 L_L R_5 g_m r_o s^4 + 2C_4 C_L L_4 R_4 R_5 g_m r_o s^4 + 2C_4 C_L L_4 R_5 g_m r_o$
- 10.744 INVALID-ORDER-744  $Z(s) = \left(\infty, \infty, \infty, \frac{L_4 s}{C_4 L_4 s^2 + 1} + R_4, R_5, \frac{L_L s}{C_L L_L s^2 + 1}\right)$
- $H(s) = \frac{L_L s \left(R_5 g_m r_o + R_5 r_o\right) \left(C_4 L_4 R_4 s^2 + C_4 C_L L_4 L_L R_4 r_o s^4 + C_4 C_L L_4 L_L R_4 r_o s^4 + 2 C_4 L_4 L_L R_4 g_m r_o s^3 + 2 C_4 L_4 L_L R_5 g_m r_o s^3 + 2 C_4 L_4 R_4 R_5 g_m r_o s^3 + 2 C_4 R_4 R_5$
- 10.745 INVALID-ORDER-745  $Z(s) = \left(\infty, \infty, \infty, \frac{L_4s}{C_4L_4s^2+1} + R_4, R_5, L_Ls + R_L + \frac{1}{C_Ls}\right)$
- $H(s) = \frac{1}{2C_4C_LL_4L_LR_4g_mr_os^4 + 4C_4C_LL_4L_LR_4s^4 + 2C_4C_LL_4L_LR_5g_mr_os^4 + 2C_4C_LL_4L_LR_5s^4 + 2C_4C_LL_4L_LR_5s^4 + 2C_4C_LL_4L_LR_5s^4 + 2C_4C_LL_4L_LR_5s^4 + 2C_4C_LL_4R_4R_5g_mr_os^3 + 2C_4C_LL_4R_4R_5s^3 + 2C_4C_LL_4R_5s^3 + 2C_4C_LL_4R$

- 10.746 INVALID-ORDER-746  $Z(s) = \left(\infty, \infty, \infty, \frac{L_4s}{C_4L_4s^2+1} + R_4, R_5, \frac{1}{C_Ls + \frac{1}{R_L} + \frac{1}{L_Ls}}\right)$
- $H(s) = \frac{1}{C_4 C_L L_4 L_L R_4 R_5 R_L g_m r_o s^4 + C_4 C_L L_4 L_L R_4 R_5 R_L s^4 + C_4 C_L L_4 L_L R_4 R_5 g_m r_o s^3 + C_4 L_4 L_L R_4 R_5 g_m r_o s^3 + 2 C_4 L_4 L_$
- 10.747 INVALID-ORDER-747  $Z(s) = \left(\infty, \infty, \infty, \frac{L_{4s}}{C_4L_4s^2+1} + R_4, R_5, \frac{L_{Ls}}{C_LL_Ls^2+1} + R_L\right)$
- $H(s) = \frac{1}{C_4 C_L L_4 L_L R_4 R_5 g_m r_o s^4 + C_4 C_L L_4 L_L R_4 R_5 s^4 + 2 C_4 C_L L_4 L_L R_4 R_L g_m r_o s^4 + 4 C_4 C_L L_4 L_L R_4 r_o s^4 + 2 C_4 C_L L_4 L_L R_5 R_L g_m r_o s^4 + 2 C_4 C_L L_4 L_L R_5 R_L g_m r_o s^4 + 2 C_4 C_L L_4 L_L R_4 r_o s^4 + 2 C_4 C_L L_4 L_L R_5 R_L g_m r_o s^4 + 2 C_4 C_L L_4 L_L R_5 R_L g_m r_o s^4 + 2 C_4 C_L L_4 L_L R_4 r_o s^4 + 2 C_4 C_L L_4 L_L R_5 R_L g_m r_o s^4 + 2 C_4 C_L L_4 L_L R_4 r_o s^4 + 2 C_4 C_L L_4 L_L R_4 r_o s^4 + 2 C_4 C_L L_4 L_L R_5 R_L g_m r_o s^4 + 2 C_4 C_L L_4 L_L R_4 r_o s^4 + 2 C_4 C_L L_4 L_L R_5 R_L g_m r_o s^4 + 2 C_4 C_L L_4 L_L R_4 r_o s^4 + 2 C_4 C_L L_4 L_L R_4 r_o s^4 + 2 C_4 C_L L_4 L_L R_5 R_L g_m r_o s^4 + 2 C_4 C_L L_4 L_L R_4 r_o s^4 + 2 C_4 C_L L_4 L_L R_4 r_o s^4 + 2 C_4 C_L L_4 L_L R_5 r_o s^4 + 2 C_4 C_L L_4 L_L R_4 r_o s^4 + 2 C_4 C_L L_4 L_L R_5 r_o s^4 + 2 C_$
- 10.748 INVALID-ORDER-748  $Z(s) = \left(\infty, \ \infty, \ \infty, \ \frac{L_4s}{C_4L_4s^2+1} + R_4, \ R_5, \ \frac{R_L\left(L_Ls + \frac{1}{C_Ls}\right)}{L_Ls + R_L + \frac{1}{C_Ls}}\right)$
- $H(s) = \frac{1}{C_4 C_L L_4 L_L R_4 R_5 g_m r_o s^4 + C_4 C_L L_4 L_L R_4 R_5 s^4 + 2 C_4 C_L L_4 L_L R_4 R_L g_m r_o s^4 + 4 C_4 C_L L_4 L_L R_4 R_5 s^4 + 2 C_4 C_L L_4 L_L R_5 R_L g_m r_o s^4 + 2 C_4 C_L L_4 L_L R_5 R_L g_m r_o s^4 + 2 C_4 C_L L_4 L_L R_4 R_5 R_L g_m r_o s^4 + 2 C_4 C_L L_4 L_L R_5 R_L g_m r_o s^4 + 2 C_4 C_L L_4 R_5 R_L g_m r_o s^4 + 2 C_4 C_L R_5 R_L g_m r_o s^4 + 2 C_4 C_L R_5 R_L g_m r_o s^4 + 2 C_4 C_L R_5 R_L g_m r_o s^4 + 2 C_4 C_$
- 10.749 INVALID-ORDER-749  $Z(s) = \left(\infty, \infty, \infty, \frac{L_4 s}{C_4 L_4 s^2 + 1} + R_4, \frac{1}{C_5 s}, R_L\right)$
- $H(s) = \frac{R_L \left( -C_5 r_o s + g_m r_o + 1 \right) \left( C_4 L_4 R_4 s^2 + L_4 s + R_4 \right)}{2 C_4 C_5 L_4 R_4 r_o s^3 + 4 C_4 C_5 L_4 R_4 r_o s^3 + 2 C_4 C_5 L_4 R_L r_o s^3 + C_4 L_4 R_4 g_m r_o s^2 + 2 C_4 L_4 R_L g_m r_o s^2 + 2 C_5 R_4 R_L g_m r_o s^2 + 2 C_5$
- 10.750 INVALID-ORDER-750  $Z(s) = \left(\infty, \infty, \infty, \frac{L_{4s}}{C_4 L_4 s^2 + 1} + R_4, \frac{1}{C_5 s}, \frac{1}{C_L s}\right)$
- $H(s) = \frac{\left(-C_5 r_o s + g_m r_o + 1\right) \left(C_4 L_4 R_4 s^2 + L_4 s + R_4\right)}{C_4 C_5 C_L L_4 R_4 r_o s^4 + 2 C_4 C_5 L_4 R_4 g_m r_o s^3 + 4 C_4 C_5 L_4 R_4 s^3 + 2 C_4 L_4 R_4 g_m r_o s^3 + C_4 C_L L_4 R_4 g_m r_o s^3 + C_4 C_L L_4 R_4 g_m r_o s^3 + C_5 C_L L_4 r_o s^3 + C_5 C_L L_5 r_o$
- 10.751 INVALID-ORDER-751  $Z(s) = \left(\infty, \infty, \infty, \frac{L_4s}{C_4L_4s^2+1} + R_4, \frac{1}{C_5s}, \frac{R_L}{C_LR_Ls+1}\right)$
- $H(s) = \frac{R_L \left( -C_5 r_o s + g_m r_o + 1 \right) \left( C_4 L_4 R_4 s^2 + L_4 R_4 r_o s^3 + 2 C_4 C_5 L_4 R_4 R_L r_o s^3 + 2 C_4 C_5 L_4 R_4 r_o s^3 + 2 C_4 C_5 L_4 r_o$
- 10.752 INVALID-ORDER-752  $Z(s) = \left(\infty, \infty, \infty, \frac{L_{4}s}{C_{4}L_{4}s^{2}+1} + R_{4}, \frac{1}{C_{5}s}, R_{L} + \frac{1}{C_{L}s}\right)$
- $H(s) = \frac{(C_L R_L s + 1)}{2C_4 C_5 C_L L_4 R_4 R_L g_m r_o s^4 + 4C_4 C_5 C_L L_4 R_4 R_L s^4 + C_4 C_5 C_L L_4 R_4 r_o s^4 + 2C_4 C_5 L_4 R_4 g_m r_o s^3 + 4C_4 C_5 L_4 R_4 g_m r_o s^3 + 4C_4 C_5 L_4 R_4 g_m r_o s^3 + 4C_4 C_5 L_4 R_4 g_m r_o s^3 + 2C_4 C_L L_4 R_4 g_m r_o s^$
- **10.753** INVALID-ORDER-753  $Z(s) = \left(\infty, \infty, \infty, \frac{L_4 s}{C_4 L_4 s^2 + 1} + R_4, \frac{1}{C_5 s}, L_L s + \frac{1}{C_L s}\right)$
- $H(s) = \frac{(C_L L_L s^2 + 1)}{2C_4 C_5 C_L L_4 L_L R_4 g_m r_o s^5 + 4C_4 C_5 C_L L_4 L_L R_4 s^5 + 2C_4 C_5 C_L L_4 L_L r_o s^5 + C_4 C_5 C_L L_4 R_4 g_m r_o s^3 + 4C_4 C_5 L_4 R_4 g_m r_o s^3 + 2C_4 C_5 L_4 L_L g_m r_o s^4 + 2C_4 C_L L_4 L_L g_m r_o s^4 + 2C_4 C_L L_4 L_L g_m r_o s^3 + 2C_4 C_L L_4 L_L g_m r_o s^4 + 2C_4 C_L L_4 L_L g_m r_o s^3 + 2C_4 C_L L_4 L_L g_m r_o s^4 + 2C_4 C_L L_4 L_L g_m$

10.754 INVALID-ORDER-754  $Z(s) = \left(\infty, \infty, \infty, \frac{L_4 s}{C_4 L_4 s^2 + 1} + R_4, \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1}\right)$ 

 $L_L s \left(-C_5 r_o s + g_m r_o + 1\right) \left(C_4 L_4 R_4 s^2 + 1\right)$ 

 $H(s) = \frac{L_L s \left(-C_5 r_o s + g_m r_o + 1\right) \left(C_4 L_4 R_4 s^2 + 2C_4 C_5 L_4 L_L R_4 g_m r_o s^4 + 4C_4 C_5 L_4 L_L R_4 g^3 + 2C_4 L_4$ 

- 10.755 INVALID-ORDER-755  $Z(s) = \left(\infty, \infty, \infty, \frac{L_4 s}{C_4 L_4 s^2 + 1} + R_4, \frac{1}{C_5 s}, L_L s + R_L + \frac{1}{C_L s}\right)$
- $H(s) = \frac{1}{2C_4C_5C_LL_4L_LR_4g_mr_os^5 + 4C_4C_5C_LL_4L_LR_4s^5 + 2C_4C_5C_LL_4L_Lr_os^5 + 2C_4C_5C_LL_4R_4R_Lg_mr_os^4 + 4C_4C_5C_LL_4R_4r_os^4 + 2C_4C_5C_LL_4R_4r_os^4 + 2C_4C_5L_4R_4g_mr_os^3 + 4C_4C_5L_4R_4s^3 + 2C_4C_5L_4L_Lr_os^3 + 2C_4C_5L_4L_Lr_os^4 + 2C_4C_5L_4R_4r_os^4 +$
- 10.756 INVALID-ORDER-756  $Z(s) = \left(\infty, \infty, \infty, \frac{L_4 s}{C_4 L_4 s^2 + 1} + R_4, \frac{1}{C_5 s}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$
- $H(s) = \frac{1}{C_4 C_5 C_L L_4 L_L R_4 R_L r_o s^5 + 2 C_4 C_5 L_4 L_L R_4 R_L g_m r_o s^4 + 4 C_4 C_5 L_4 L_L R_4 r_o s^4 + 2 C_4 C_5 L_4 L_L R_4 r_o s^4 + 2 C_4 C_5 L_4 L_L R_4 r_o s^4 + 2 C_4 C_5 L_4 L_L R_4 R_L r_o s^4 + 2 C_4 C_5 L_4 R_L$
- 10.757 INVALID-ORDER-757  $Z(s) = \left(\infty, \infty, \infty, \frac{L_4s}{C_4L_4s^2+1} + R_4, \frac{1}{C_5s}, \frac{L_Ls}{C_LL_Ls^2+1} + R_L\right)$
- $H(s) = \frac{1}{2C_4C_5C_LL_4L_LR_4R_Lg_mr_os^5 + 4C_4C_5C_LL_4L_LR_4r_os^5 + 2C_4C_5C_LL_4L_LR_4r_os^5 + 2C_4C_5L_4L_LR_4g_mr_os^4 + 4C_4C_5L_4L_LR_4s^4 + 2C_4C_5L_4L_LR_4s^4 + 2C_4C_5L_4L_LR_4g_mr_os^3 + 4C_4C_5L_4R_4R_Ls^3 + C_4C_5L_4R_4r_os^3 + 2C_4C_5L_4L_LR_4r_os^3 + 2C_4C_5L_4L_4L_4r_os^3 + 2C_4C_5L_4L_4r_os^3 + 2C_4C_5L_4r_os^3 +$
- 10.758 INVALID-ORDER-758  $Z(s) = \left(\infty, \infty, \infty, \frac{L_4 s}{C_4 L_4 s^2 + 1} + R_4, \frac{1}{C_5 s}, \frac{R_L \left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_I s}}\right)$
- $H(s) = \frac{1}{2C_4C_5C_LL_4L_LR_4R_Lg_mr_os^5 + 4C_4C_5C_LL_4L_LR_4r_os^5 + 2C_4C_5C_LL_4L_LR_4r_os^5 + 2C_4C_5C_LL_4L_LR_4r_os^5 + 2C_4C_5C_LL_4R_4R_Lr_os^4 + 2C_4C_5L_4R_4R_Lg_mr_os^3 + 4C_4C_5L_4R_4r_os^3 + 2C_4C_5L_4R_4r_os^3 + 2C_4C_5L_4$
- 10.759 INVALID-ORDER-759  $Z(s) = \left(\infty, \infty, \infty, \frac{L_4 s}{C_4 L_4 s^2 + 1} + R_4, \frac{R_5}{C_5 R_5 s + 1}, R_L\right)$
- $H(s) = -\frac{\frac{n_L \left( \cup_4 L_4 n_4 s + L_4 s + R_5 R_L g_m r_o s^3 + 4 C_4 C_5 L_4 R_4 R_5 R_L g_m r_o s^3 + 4 C_4 C_5 L_4 R_4 R_5 r_o s^3 + 2 C_4 C_5 L_4 R_4 R_5 r_o s^3 + 2 C_4 C_5 L_4 R_4 R_5 g_m r_o s^2 + 2 C_4 L_4 R_4 R_5 g_m r_o s^2 + 2 C_4 L_4 R_4 R_5 g_m r_o s^2 + 2 C_4 L_4 R_4 R_5 g_m r_o s^2 + 2 C_4 L_4 R_5 R_L g_m r_o s^2 + 2 C_4 L_4 R_5 R$
- 10.760 INVALID-ORDER-760  $Z(s) = \left(\infty, \infty, \infty, \frac{L_4s}{C_4L_4s^2+1} + R_4, \frac{R_5}{C_5R_5s+1}, \frac{1}{C_Ls}\right)$
- $H(s) = -\frac{\left(C_4 L_4 R_4 s^2 + L_4 s + R_4\right) \left(C_5 R_5 r_o s^2 + C_4 C_5 L_4 R_4 R_5 r_o s^3 + 2 C_4 L_4 R_4 r_o s^3 + 2 C_4 L_4 R_4 r_o s^3 + 2 C_4 L_4 R_5 r_o s^3 + 2 C_4 L_4 R_5 r_o s^3 + C_5 C_5 L_5 R_5 r_o s^3 + C_5 C_5 L_5 R_5 r_o s^3 + 2 C_5 R_5 r_o s^3 + 2$
- 10.761 INVALID-ORDER-761  $Z(s) = \left(\infty, \infty, \infty, \frac{L_{4s}}{C_4L_4s^2+1} + R_4, \frac{R_5}{C_5R_5s+1}, \frac{R_L}{C_LR_Ls+1}\right)$
- $\overline{C_4C_5C_LL_4R_4R_5R_Lr_os^4 + 2C_4C_5L_4R_4R_5R_Lg_mr_os^3 + 4C_4C_5L_4R_4R_5R_Ls^3 + C_4C_5L_4R_4R_5R_Lr_os^3 + 2C_4C_5L_4R_4R_5R_Lg_mr_os^3 + C_4C_LL_4R_4R_5R_Ls^3 + C_$

- 10.762 INVALID-ORDER-762  $Z(s) = \left(\infty, \infty, \infty, \frac{L_4 s}{C_4 L_4 s^2 + 1} + R_4, \frac{R_5}{C_5 R_5 s + 1}, R_L + \frac{1}{C_L s}\right)$
- $H(s) = -\frac{1}{2C_4C_5C_LL_4R_4R_5R_Lg_mr_os^4 + 4C_4C_5C_LL_4R_4R_5r_os^4 + 2C_4C_5C_LL_4R_4R_5g_mr_os^3 + 4C_4C_5L_4R_4R_5g_mr_os^3 + 4C_4C_5L_4R_5g_mr_os^3 + 4C_4C_5L_4R_5g_mr_os^3 + 4C_4C_5L_4R_5g_mr_os^3 + 4C_4C_5L_4R_5g_mr_os^3 + 4C_4C_5L_4R_5g_mr_os^3 + 4C_4C_5L_4R_5g_mr_os^$
- **10.763** INVALID-ORDER-763  $Z(s) = \left(\infty, \infty, \infty, \frac{L_4s}{C_4L_4s^2+1} + R_4, \frac{R_5}{C_5R_5s+1}, L_Ls + \frac{1}{C_Ls}\right)$
- $H(s) = -\frac{1}{2C_4C_5C_LL_4L_LR_4R_5g_mr_os^5 + 4C_4C_5C_LL_4L_LR_4g_s^5 + 2C_4C_5C_LL_4L_LR_5r_os^5 + C_4C_5C_LL_4R_4R_5r_os^4 + 2C_4C_5L_4R_4R_5g_mr_os^3 + 4C_4C_5L_4R_4R_5r_os^3 + 2C_4C_5L_4L_LR_4g_mr_os^4 + 4C_4C_LL_4L_LR_4g_mr_os^4 + 4C_4C_LL_4L_LR_4g_mr_os^4 + 2C_4C_LL_4L_LR_4g_mr_os^4 + 2C_4C_LL_4L_4L_4g_mr_os^4 + 2C_4C_LL_4L_4L_4g_mr_os^4 + 2C_4C_LL_4L_4g_mr_os^4 + 2C_4C_LL_4g_mr_os$
- 10.764 INVALID-ORDER-764  $Z(s) = \left(\infty, \infty, \infty, \frac{L_4s}{C_4L_4s^2+1} + R_4, \frac{R_5}{C_5R_5s+1}, \frac{L_Ls}{C_LL_Ls^2+1}\right)$
- $H(s) = -\frac{1}{C_4 C_5 C_L L_4 L_L R_4 R_5 r_o s^5 + 2 C_4 C_5 L_4 L_L R_4 R_5 g_m r_o s^4 + 4 C_4 C_5 L_4 L_L R_4 R_5 s^4 + 2 C_4 C_5 L_4 L_L R_4 R_5 r_o s^4 + C_4 C_L L_4 L_L R_4 R_5 g_m r_o s^4 + C_4 C_L L_4 L_L R_4 R_5 r_o s^4 + 2 C_4 L_4 L_L R_4 r_o$
- 10.765 INVALID-ORDER-765  $Z(s) = \left(\infty, \infty, \infty, \frac{L_{4s}}{C_4L_4s^2+1} + R_4, \frac{R_5}{C_5R_5s+1}, L_Ls + R_L + \frac{1}{C_Ls}\right)$
- $H(s) = -\frac{1}{2C_4C_5C_LL_4L_LR_4R_5g_mr_os^5 + 4C_4C_5C_LL_4L_LR_4R_5s^5 + 2C_4C_5C_LL_4L_LR_5r_os^5 + 2C_4C_5C_LL_4R_4R_5R_Lg_mr_os^4 + 4C_4C_5C_LL_4R_4R_5r_os^4 + 2C_4C_5C_LL_4R_4R_5r_os^4 + 2C_4C_5L_4R_4R_5g_mr_os^3 + 4C_4C_5L_4R_4R_5s^3 + 2C_4C_5L_4R_4R_5r_os^4 + 4C_4C_5C_LL_4R_4R_5r_os^4 + 2C_4C_5C_LL_4R_4R_5r_os^4 + 2C_4C_5L_4R_4R_5r_os^4 + 2C_4C_5L_4R_5r_os^4 + 2C_4C_5L_4R_5r_os^4 + 2C_4C_5L_4R_5r_os^4 + 2C_4C_5L_4R_5r_os^4 + 2C_4C_5L_4R_5r_os^4 + 2C_4C_5L_4$
- 10.766 INVALID-ORDER-766  $Z(s) = \left(\infty, \infty, \infty, \frac{L_4s}{C_4L_4s^2+1} + R_4, \frac{R_5}{C_5R_5s+1}, \frac{1}{C_Ls + \frac{1}{R_L} + \frac{1}{L_Ls}}\right)$
- $H(s) = -\frac{1}{C_4 C_5 C_L L_4 L_L R_4 R_5 R_L r_o s^5 + 2 C_4 C_5 L_4 L_L R_4 R_5 R_L g_m r_o s^4 + 4 C_4 C_5 L_4 L_L R_4 R_5 R_L s^4 + C_4 C_5 L_4 L_L R_4 R_5 R_L r_o s^4 + 2 C_4 C_5 L_4 L_L R_4 R_5 R_L r_o s^4 + C_4 C_5$
- 10.767 INVALID-ORDER-767  $Z(s) = \left(\infty, \infty, \infty, \frac{L_4s}{C_4L_4s^2+1} + R_4, \frac{R_5}{C_5R_5s+1}, \frac{L_Ls}{C_LL_Ls^2+1} + R_L\right)$
- $H(s) = -\frac{1}{2C_4C_5C_LL_4L_LR_4R_5R_Lg_mr_os^5 + 4C_4C_5L_4L_LR_4R_5R_Ls^5 + C_4C_5C_LL_4L_LR_4R_5r_os^5 + 2C_4C_5L_4L_LR_4R_5g_mr_os^4 + 4C_4C_5L_4L_LR_4R_5s^4 + 2C_4C_5L_4L_LR_5r_os^4 + 2C_4C_5L_4L_LR_5r_os^4 + 4C_4C_5L_4L_LR_5r_os^4 + 4C_4C_5L_4R_5r_os^4 + 4C_5L_4R_5r_os^4 + 4C_5L_4R_5r_os^4 + 4C_5L_4R_5r_os^4 + 4C_5L_4R_5r_os^4 +$
- 10.768 INVALID-ORDER-768  $Z(s) = \left(\infty, \infty, \infty, \frac{L_4s}{C_4L_4s^2+1} + R_4, \frac{R_5}{C_5R_5s+1}, \frac{R_L\left(L_Ls + \frac{1}{C_Ls}\right)}{L_Ls + R_L + \frac{1}{C_Ls}}\right)$
- $H(s) = -\frac{1}{2C_4C_5C_LL_4L_LR_4R_5R_Lg_mr_os^5 + 4C_4C_5C_LL_4L_LR_4R_5R_Ls^5 + C_4C_5C_LL_4L_LR_4R_5r_os^5 + 2C_4C_5C_LL_4L_LR_5R_Lr_os^5 + C_4C_5C_LL_4R_4R_5R_Lr_os^4 + 2C_4C_5L_4R_4R_5R_Lg_mr_os^3 + 4C_4C_5L_4R_4R_5R_Ls^3 + C_4C_5L_4R_4R_5R_Lr_os^3 + 2C_4C_5L_4L_LR_4R_5R_Lr_os^5 + C_4C_5L_4L_LR_4R_5R_Lr_os^5 + C_4C_5L_4R_4R_5R_Lr_os^5 + C_4C_5L_4R_5R_Lr_os^5 + C_4C_5L_4R_5R_Lr_os^5 + C_4C_5L_4R_5R_Lr_os^5 + C_4C_5L_4$
- **10.769** INVALID-ORDER-769  $Z(s) = \left(\infty, \infty, \infty, \frac{L_4 s}{C_4 L_4 s^2 + 1} + R_4, R_5 + \frac{1}{C_5 s}, R_L\right)$
- $H(s) = \frac{R_L \left( C_4 L_4 R_4 s^2 + L_4 s + R_4 \right) \left( C_5 R_5 g_m r_o s + C_5 R_5 g_m$

10.770 INVALID-ORDER-770  $Z(s) = \left(\infty, \infty, \infty, \frac{L_4 s}{C_4 L_4 s^2 + 1} + R_4, R_5 + \frac{1}{C_5 s}, \frac{1}{C_L s}\right)$ 

- $H(s) = \frac{\left(C_4 L_4 R_4 s^2 + L_4 s + R_4\right) \left(C_5 R_5 g_m r_o s + C_5 C_4 L_4 R_4 r_o s^4 + L_4 s + R_4\right) \left(C_5 R_5 g_m r_o s + C_5 C_4 L_4 R_4 r_o s^4 + L_4 s + R_4\right) \left(C_5 R_5 g_m r_o s + C_5 C_4 L_4 R_4 r_o s^4 + L_4 s + R_4\right) \left(C_5 R_5 g_m r_o s + C_5 C_4 L_4 R_4 r_o s^4 + L_4 s + R_4\right) \left(C_5 R_5 g_m r_o s + C_5 C_4 L_4 R_5 r_o s^4 + L_4 s + R_4\right) \left(C_5 R_5 g_m r_o s + C_5 C_4 L_4 R_5 r_o s^4 + L_4 s + R_4\right) \left(C_5 R_5 g_m r_o s + C_5 C_4 L_4 R_5 r_o s^4 + L_4 s + R_4\right) \left(C_5 R_5 g_m r_o s + C_5 C_4 L_4 R_5 r_o s^4 + L_4 s + R_4\right) \left(C_5 R_5 g_m r_o s + L_4 s + L_4 s + R_4\right) \left(C_5 R_5 g_m r_o s + L_4 s + L_4 s + R_4\right) \left(C_5 R_5 g_m r_o s + L_4 s + L_4$
- 10.771 INVALID-ORDER-771  $Z(s) = \left(\infty, \infty, \infty, \frac{L_4s}{C_4L_4s^2+1} + R_4, R_5 + \frac{1}{C_5s}, \frac{R_L}{C_LR_Ls+1}\right)$
- $H(s) = \frac{1}{C_4 C_5 C_L L_4 R_4 R_5 R_L g_m r_o s^4 + C_4 C_5 C_L L_4 R_4 R_5 R_L s^4 + C_4 C_5 L_4 R_4 R_L r_o s^4 + C_4 C_5 L_4 R_4 R_5 g_m r_o s^3 + 2 C_4 C_5 L_4 R_4 R_L g_m r_o s^3 + 2 C_4 C_5 L_4 R_L g_m r_o s^3 + 2 C_4 C_5 L_4 R_L g_m r_$
- 10.772 INVALID-ORDER-772  $Z(s) = \left(\infty, \infty, \infty, \frac{L_4s}{C_4L_4s^2+1} + R_4, R_5 + \frac{1}{C_5s}, R_L + \frac{1}{C_Ls}\right)$
- $H(s) = \frac{1}{C_4 C_5 C_L L_4 R_4 R_5 g_m r_o s^4 + C_4 C_5 C_L L_4 R_4 R_5 s^4 + 2 C_4 C_5 C_L L_4 R_4 R_L g_m r_o s^4 + 4 C_4 C_5 C_L L_4 R_4 R_L s^4 + C_4 C_5 C_L L_4 R_4 R_L s^4 + 2 C_4 C_5 C_L L_4 R_5 R_L g_m r_o s^4 + 2 C_4 C_5 C_L L_4 R_4 R_L g_m r_o s^4 + 2 C_4 C_5 C_L L_4 R_4 R_5 g_m r_o s^4 + 2 C_4 C_5 C_L L_4 R_4 R_5 g_m r_o s^4 + 2 C_4 C_5 C_L L_4 R_4 R_5 g_m r_o s^4 + 2 C_4 C_5 C_L L_4 R_4 R_5 g_m r_o s^4 + 2 C_4 C_5 C_L L_4 R_4 R_5 g_m r_o s^4 + 2 C_4 C_5 C_L L_4 R_5 R_L g_m r_o s^4 + 2 C_4 C_5 C_L L_4 R_4 R_5 g_m r_o s^4 + 2 C_4 C_5 C_L L_4 R_5 R_L g_m r_o s^4 + 2 C_4 C_5 C_L L_4 R_5$
- 10.773 INVALID-ORDER-773  $Z(s) = \left(\infty, \infty, \infty, \frac{L_4s}{C_4L_4s^2+1} + R_4, R_5 + \frac{1}{C_5s}, L_Ls + \frac{1}{C_Ls}\right)$
- $H(s) = \frac{1}{2C_4C_5C_LL_4L_LR_4g_mr_os^5 + 4C_4C_5C_LL_4L_LR_4s^5 + 2C_4C_5C_LL_4L_LR_5g_mr_os^5 + 2C_4C_5C_LL_4L_LR_5s^5 + 2C_4C_5C_LL_4L_LR_5s^5 + 2C_4C_5C_LL_4R_4R_5g_mr_os^4 + C_4C_5C_LL_4R_4R_5s^4 + C_4C_5C_LL_4R_4r_os^4 + 2C_4C_5L_4R_4g_mr_os^3 + 4C_4C_5L_4R_4s^3 + 2C_4C_5L_4R_4s^3 + 2C_4C$
- 10.774 INVALID-ORDER-774  $Z(s) = \left(\infty, \infty, \infty, \frac{L_4s}{C_4L_4s^2+1} + R_4, R_5 + \frac{1}{C_5s}, \frac{L_Ls}{C_LL_Ls^2+1}\right)$
- $H(s) = \frac{1}{C_4 C_5 C_L L_4 L_L R_4 R_5 g_m r_o s^5 + C_4 C_5 C_L L_4 L_L R_4 R_5 s^5 + C_4 C_5 L_4 L_L R_4 g_m r_o s^4 + 4 C_4 C_5 L_4 L_L R_4 s^4 + 2 C_4 C_5 L_4 L_L R_5 g_m r_o s^4 + 2 C_4 C_5 L_4 R_5 g_m r_o s^4 + 2 C_5 L_5 R_5 g_m$
- 10.775 INVALID-ORDER-775  $Z(s) = \left(\infty, \infty, \infty, \frac{L_{4s}}{C_4L_4s^2+1} + R_4, R_5 + \frac{1}{C_5s}, L_Ls + R_L + \frac{1}{C_Ls}\right)$
- $H(s) = \frac{1}{2C_4C_5C_LL_4L_LR_4g_mr_os^5 + 4C_4C_5C_LL_4L_LR_4s^5 + 2C_4C_5C_LL_4L_LR_5g_mr_os^5 + 2C_4C_5C_LL_4L_LR_5s^5 + 2C_4C_5C_LL_4R_4R_5g_mr_os^4 + C_4C_5C_LL_4R_4R_5s^4 + 2C_4C_5C_LL_4R_4R_5s^4 + 2C_4C_5C_LL_4R_$
- 10.776 INVALID-ORDER-776  $Z(s) = \left(\infty, \infty, \infty, \frac{L_4s}{C_4L_4s^2+1} + R_4, R_5 + \frac{1}{C_5s}, \frac{1}{C_Ls + \frac{1}{R_I} + \frac{1}{L_Is}}\right)$
- $\overline{C_4C_5C_LL_4L_LR_4R_5R_Lg_mr_os^5 + C_4C_5C_LL_4L_LR_4R_5R_Ls^5 + C_4C_5C_LL_4L_LR_4R_5g_mr_os^4 + C_4C_5L_4L_LR_4R_5g_mr_os^4 + 2C_4C_5L_4L_LR_4R_Lg_mr_os^4 + 2C_4C_5L_4L_LR_4R_Lg_m$
- 10.777 INVALID-ORDER-777  $Z(s) = \left(\infty, \infty, \infty, \frac{L_4s}{C_4L_4s^2+1} + R_4, R_5 + \frac{1}{C_5s}, \frac{L_Ls}{C_LL_Ls^2+1} + R_L\right)$
- $H(s) = \frac{1}{C_{1}C_{5}C_{1}L_{1}L_{1}R_{4}R_{5}q_{m}r_{o}s^{5} + 2C_{4}C_{5}C_{L}L_{4}L_{L}R_{4}R_{5}g^{5} + 2C_{4}C_{5}C_{L}L_{4}L_{L}R_{4}R_{L}g_{m}r_{o}s^{5} + 2C_{4}C_{5}C_{L}L_{4}L_{L}R_{4}R_{L}g^{5} + 2C_{4}C_{5}C_{L}L_{4}L_{L}R_{5}R_{L}g_{m}r_{o}s^{5} + 2C_{4}C_{5}C_{L}L_{4}L_{L}R_{4}R_{L}g_{m}r_{o}s^{5} + 2C_{4}C_{5}C_{L}L_{4}L_{L}R_{5}R_{L}g^{5} + 2C_{4}C_{5}C_{L}L_{4}L_{L}R_{5}R_{L}g_{m}r_{o}s^{5} + 2C_{4}C_{5}C_{L}L_{4}L_{L}R_{5}R_{L}g_{m}r_{o}s^{5} + 2C_{4}C_{5}C_{L}L_{4}L_{L}R_{5}R_{L}g_{m}r_{o}s^{5} + 2C_{4}C_{5}C_{L}L_{4}L_{L}R_{4}R_{5}g_{m}r_{o}s^{5} + 2C_{4}C_{5}C_{L}L_{4}L_{L}R_{5}R_{L}g_{m}r_{o}s^{5} + 2C_{4}C_{5}C_{L}L_{4}L_{L}R_{4}R_{5}g_{m}r_{o}s^{5} + 2C_{4}C_{5}C_{L}L_{4}L_{L}R_{5}R_{L}g_{m}r_{o}s^{5} + 2C_{4}C_{5}$

- 10.778 INVALID-ORDER-778  $Z(s) = \left(\infty, \infty, \infty, \frac{L_4 s}{C_4 L_4 s^2 + 1} + R_4, R_5 + \frac{1}{C_5 s}, \frac{R_L \left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$
- $H(s) = \frac{1}{C_4C_5C_LL_4L_LR_4R_5g_mr_os^5 + C_4C_5C_LL_4L_LR_4R_5s^5 + 2C_4C_5C_LL_4L_LR_4R_Lg_mr_os^5 + 4C_4C_5C_LL_4L_LR_4r_os^5 + 2C_4C_5C_LL_4L_LR_5R_Lg_mr_os^5 + 2C_4C_$
- 10.779 INVALID-ORDER-779  $Z(s) = \left(\infty, \infty, \infty, \frac{L_4s}{C_4L_4s^2+1} + R_4, L_5s + \frac{1}{C_5s}, R_L\right)$
- $H(s) = \frac{R_L \left( C_4 L_4 R_4 s^2 + L_4 s + R_4 \right) \left( C_5 L_5 g_m r_o s^2 + C_4 C_5 L_4 L_5 R_4 g_m r_o s^4 + C_4 C_5 L_4 L_5 R_L g_m r_o s^4 + 2 C_4 C_5 L_4 L_5 R_L g_m r_o s^3 + 4 C_4 C_5 L_4 R_4 R_L g_m r_o s^3 + 2 C_4 C_5 L_4 R_4 R_L g_m r_o s^3 + 2 C_4 L_4 R_4 g_m r_o s^3 + 2$
- 10.780 INVALID-ORDER-780  $Z(s) = \left(\infty, \infty, \infty, \frac{L_4 s}{C_4 L_4 s^2 + 1} + R_4, L_5 s + \frac{1}{C_5 s}, \frac{1}{C_L s}\right)$
- $H(s) = \frac{\left(C_4 L_4 R_4 s^2 + L_4 s + R_4\right) \left(C_5 L_5 g_m r_o s^2 + C_5 L_4 L_5 R_4 g_m r_o s^3 + C_4 C_5 L_4 L_5 R_4 g_m r_o s^3 + C_4 C_5 L_4 L_5 R_4 g_m r_o s^3 + C_4 C_5 L_4 L_5 g_m r_o s^4 + C_5 C_4 L_4 R_4 g_m r_o s^3 + C_4 C_5 L_4 L_5 g_m r_o s^4 + C_5 C_4 L_4 L_5 g_m r_o s^4 + C_5 C_5 L_5 L_5 g_m$
- 10.781 INVALID-ORDER-781  $Z(s) = \left(\infty, \infty, \infty, \frac{L_4s}{C_4L_4s^2+1} + R_4, L_5s + \frac{1}{C_5s}, \frac{R_L}{C_LR_Ls+1}\right)$
- $H(s) = \frac{1}{C_4 C_5 C_L L_4 L_5 R_4 R_L g_m r_o s^5 + C_4 C_5 C_L L_4 L_5 R_4 R_L s^5 + C_4 C_5 L_4 L_5 R_4 g_m r_o s^4 + C_4 C_5 L_4 L_5 R_4 g_m r_o s^4 + 2 C_4 C_5 L_4 L_5 R_L g_m r_o s^4 + 2 C_4 C_5 L_4 R_4 R_L g_m r_o s^3 + 4 C_4 C_5 L_4 R_4 R_L s^3 + C_4 C_5 L_4 R_4 R_L r_o s^3 + 2 C_4 C_5 L_4 R_4 R_L r_o s^3$
- 10.782 INVALID-ORDER-782  $Z(s) = \left(\infty, \infty, \infty, \frac{L_4s}{C_4L_4s^2+1} + R_4, L_5s + \frac{1}{C_5s}, R_L + \frac{1}{C_Ls}\right)$
- $H(s) = \frac{1}{C_4 C_5 C_L L_4 L_5 R_4 g_m r_o s^5 + C_4 C_5 C_L L_4 L_5 R_4 s^5 + 2 C_4 C_5 C_L L_4 L_5 R_L g_m r_o s^5 + 2 C_4 C_5 C_L L_4 R_4 R_L g_m r_o s^4 + 4 C_4 C_5 C_L L_4 R_4 R_L g^4 + C_4 C_5 C_L L_4 R_4 r_o s^4 + 2 C_4 C_5 L_4 L_5 g_m r_o s^4 + 2 C_4 C_5 L_4 L_5 g_m r_o s^4 + 2 C_4 C_5 L_4 L_5 g_m r_o s^4 + 2 C_4 C_5 L_4 L_5 g_m r_o s^4 + 2 C_4 C_5 L_4 L_5 g_m r_o s^4 + 2 C_4 C_5 L_4 R_4 g_m r_o s^4$
- 10.783 INVALID-ORDER-783  $Z(s) = \left(\infty, \infty, \infty, \frac{L_4 s}{C_4 L_4 s^2 + 1} + R_4, L_5 s + \frac{1}{C_5 s}, L_L s + \frac{1}{C_L s}\right)$
- $H(s) = \frac{1}{2C_4C_5C_LL_4L_5L_2g_mr_os^6 + 2C_4C_5C_LL_4L_5L_2s^6 + C_4C_5C_LL_4L_5R_4g_mr_os^5 + C_4C_5C_LL_4L_2R_4g_mr_os^5 + 4C_4C_5C_LL_4L_2R_4s^5 + 2C_4C_5C_LL_4L_2R_4s^5 + 2C_4C_5C_LL_4L_2$
- 10.784 INVALID-ORDER-784  $Z(s) = \left(\infty, \infty, \infty, \frac{L_4s}{C_4L_4s^2+1} + R_4, L_5s + \frac{1}{C_5s}, \frac{L_Ls}{C_LL_Ls^2+1}\right)$
- $H(s) = \frac{1}{C_4 C_5 C_L L_4 L_5 L_L R_4 g_m r_o s^6 + C_4 C_5 C_L L_4 L_5 L_L R_4 s^6 + C_4 C_5 C_L L_4 L_L R_4 r_o s^5 + 2 C_4 C_5 L_4 L_5 L_L g_m r_o s^5 + 2 C_4 C_5 L_4 L_5 L_L s^5 + C_4 C_5 L_4 L_5 R_4 g_m r_o s^4 + C_4 C_5 L_4 L_L R_4 g_m r_o s^4 + 2 C_4 C_5 L_4 L_L R_4 s^6 + C_4 C_5 L_4 L_L R_4 r_o s^5 + 2 C_4 C_5 L_4 L_5 L_L r_o s^4 + C_4 C_5 L_4 L_L R_4 r_o s^5 + 2 C_4 C_5 L_4 L_L$
- 10.785 INVALID-ORDER-785  $Z(s) = \left(\infty, \infty, \infty, \frac{L_4s}{C_4L_4s^2+1} + R_4, L_5s + \frac{1}{C_5s}, L_Ls + R_L + \frac{1}{C_Ls}\right)$
- $H(s) = \frac{1}{2C_4C_5C_LL_4L_5L_La_mr_os^6 + 2C_4C_5C_LL_4L_5L_Ls^6 + C_4C_5C_LL_4L_5R_4g_mr_os^5 + 2C_4C_5C_LL_4L_5R_Lg_mr_os^5 + 2C_4C_5C_LL_4L_5R_Ls^5 + 2C_4C_5C_LL_4L_5R_Lg_mr_os^5 + 2C_4C_5C_LL_4L_5R_Ls^5 + 2C_4C_5C_LL_4L_5R_Lg_mr_os^5 + 2C_4C_5C_LL_4R_Lg_mr_os^5 + 2C_4C_5C_LL_4R_Lg_mr_os^5 + 2C_4C_5C_LL$

- 10.786 INVALID-ORDER-786  $Z(s) = \left(\infty, \infty, \infty, \frac{L_4s}{C_4L_4s^2+1} + R_4, L_5s + \frac{1}{C_5s}, \frac{1}{C_Ls + \frac{1}{R_L} + \frac{1}{L_Ls}}\right)$
- $H(s) = \frac{1}{C_4 C_5 C_L L_4 L_5 L_L R_4 R_L g_m r_o s^6 + C_4 C_5 C_L L_4 L_5 L_L R_4 R_L s^6 + C_4 C_5 L_4 L_5 L_L R_4 g_m r_o s^5 + C_4 C_5 L_$
- 10.787 INVALID-ORDER-787  $Z(s) = \left(\infty, \infty, \infty, \frac{L_4s}{C_4L_4s^2+1} + R_4, L_5s + \frac{1}{C_5s}, \frac{L_Ls}{C_LL_Ls^2+1} + R_L\right)$
- $H(s) = \frac{1}{C_4 C_5 C_L L_4 L_5 L_L R_4 g_m r_o s^6 + C_4 C_5 C_L L_4 L_5 L_L R_4 s^6 + 2 C_4 C_5 C_L L_4 L_5 L_L R_L g_m r_o s^6 + 2 C_4 C_5 C_L L_4 L_5 L_L R_4 g_m r_o s^5 + 4 C_4 C_5 C_L L_4 L_L R_4 R_L g_m r_o s^5 + 2 C_4 C_5 C_L L_4 L_L R_4 r_o s^5 + 2 C_4 C_5 C_L L_4 L_L R_$
- 10.788 INVALID-ORDER-788  $Z(s) = \left(\infty, \infty, \infty, \frac{L_{4s}}{C_4L_4s^2+1} + R_4, L_5s + \frac{1}{C_5s}, \frac{R_L\left(L_Ls + \frac{1}{C_Ls}\right)}{L_Ls + R_L + \frac{1}{C_Ls}}\right)$
- $H(s) = \frac{1}{C_4 C_5 C_L L_4 L_5 L_L R_4 g_m r_o s^6 + C_4 C_5 C_L L_4 L_5 L_L R_4 s^6 + 2 C_4 C_5 C_L L_4 L_5 L_L R_L g_m r_o s^6 + 2 C_4 C_5 C_L L_4 L_5 L_L R_L g_m r_o s^6 + 2 C_4 C_5 C_L L_4 L_5 R_4 R_L g_m r_o s^5 + 2 C_4 C_5 C_L L_5 R_L g_m r_o s^5 + 2 C_4 C_5 C_L R_4 R_L g_m r_o s^5 + 2 C_4 C_5 C_L R_4 R_L g_m r_o s^5 +$
- 10.789 INVALID-ORDER-789  $Z(s) = \left(\infty, \infty, \infty, \frac{L_4s}{C_4L_4s^2+1} + R_4, \frac{L_5s}{C_5L_5s^2+1}, R_L\right)$
- $H(s) = -\frac{R_L \left( C_4 L_4 R_4 s^2 + L_4 s + L_4 s + L_4 s + L_4 L_5 R_4 R_L g_m r_o s^4 + 4 C_4 L_5 L_4 L_5 R_4 R_L g_m r_o s^4 + 4 C_4 L_5 L_4 L_5 R_4 r_o s^4 + 2 C_4 L_4 L_5 R_4 g_m r_o s^3 + 2 C_4 L_4 L_5 R_L g_m r_o s^3 + 2 C_4 L_4 R_4 R_L g_m r_o s^2 + 4 C_4 L_4 R_4 R_L g_m r_o s^2 + 2 C_4 L_4 R_4 R_L g_m r_o s$
- 10.790 INVALID-ORDER-790  $Z(s) = \left(\infty, \infty, \infty, \frac{L_4s}{C_4L_4s^2+1} + R_4, \frac{L_5s}{C_5L_5s^2+1}, \frac{1}{C_Ls}\right)$
- $H(s) = -\frac{\left(C_4 L_4 R_4 s^2 + L_4 s + R_4\right) \left(C_5 L_5 r_{obs} + C_4 C_5 L_4 L_5 R_4 r_{obs} + C_4 C_5 L_4 L_5 R_4 r_{obs} + C_4 C_4 L_4 R_4 r_{obs} + C_4 C_4 L_4 L_5 R_4 r_{obs} + C_4 C_4 L_4 R_4 r_{obs} + C_4 C_4 L_4 L_5 R_4 r_{obs} + C_4 C_4$
- 10.791 INVALID-ORDER-791  $Z(s) = \left(\infty, \infty, \infty, \frac{L_{4s}}{C_4L_4s^2+1} + R_4, \frac{L_{5s}}{C_5L_5s^2+1}, \frac{R_L}{C_LR_Ls+1}\right)$
- $H(s) = -\frac{1}{C_4C_5C_LL_4L_5R_4R_Lr_os^5 + 2C_4C_5L_4L_5R_4R_Lg_mr_os^4 + 4C_4C_5L_4L_5R_4r_os^4 + 2C_4C_5L_4L_5R_4r_os^4 + 2C_4C_5L_4L_5R_4R_Lg_mr_os^4 + C_4C_LL_4L_5R_4R_Lg_mr_os^4 +$
- 10.792 INVALID-ORDER-792  $Z(s) = \left(\infty, \infty, \infty, \frac{L_4s}{C_4L_4s^2+1} + R_4, \frac{L_5s}{C_5L_5s^2+1}, R_L + \frac{1}{C_Ls}\right)$
- $H(s) = -\frac{1}{2C_4C_5C_LL_4L_5R_4R_Lg_mr_os^5 + 4C_4C_5C_LL_4L_5R_4g_mr_os^5 + 2C_4C_5C_LL_4L_5R_4r_os^5 + 2C_4C_5L_4L_5R_4g_mr_os^4 + 4C_4C_5L_4L_5R_4g_mr_os^4 + 4C_4C_$
- 10.793 INVALID-ORDER-793  $Z(s) = \left(\infty, \infty, \infty, \frac{L_4s}{C_4L_4s^2+1} + R_4, \frac{L_5s}{C_5L_5s^2+1}, L_Ls + \frac{1}{C_Ls}\right)$
- $H(s) = -\frac{1}{2C_4C_5C_LL_4L_5L_LR_4g_mr_os^6 + 4C_4C_5C_LL_4L_5L_LR_4s^6 + 2C_4C_5C_LL_4L_5L_Lr_os^6 + C_4C_5C_LL_4L_5R_4g_mr_os^4 + 4C_4C_5L_4L_5R_4g_mr_os^4 + 2C_4C_5L_4L_5L_Lg_mr_os^5 + 2C_4C_LL_4L_5L_Lg_mr_os^5 + 2C_4C_LL_4L_5L_Lg_mr_os^4 + 2C_4C_L$

- 10.794 INVALID-ORDER-794  $Z(s) = \left(\infty, \infty, \infty, \frac{L_4s}{C_4L_4s^2+1} + R_4, \frac{L_5s}{C_5L_5s^2+1}, \frac{L_Ls}{C_LL_Ls^2+1}\right)$
- $H(s) = -\frac{1}{C_4 C_5 C_L L_4 L_5 L_L R_4 r_o s^6 + 2 C_4 C_5 L_4 L_5 L_L R_4 g_m r_o s^5 + 4 C_4 C_5 L_4 L_5 L_L R_4 s^5 + 2 C_4 C_5 L_4 L_5 L_L r_o s^5 + C_4 C_5 L_4 L_5 L_L R_4 g_m r_o s^5 + C_4 C_L L_4 L_5 L_L R_4 g_m$
- 10.795 INVALID-ORDER-795  $Z(s) = \left(\infty, \infty, \infty, \frac{L_4s}{C_4L_4s^2+1} + R_4, \frac{L_5s}{C_5L_5s^2+1}, L_Ls + R_L + \frac{1}{C_Ls}\right)$
- $H(s) = -\frac{1}{2C_4C_5C_LL_4L_5L_LR_4g_mr_os^6 + 4C_4C_5C_LL_4L_5L_LR_4s^6 + 2C_4C_5C_LL_4L_5L_Lr_os^6 + 2C_4C_5C_LL_4L_5R_4R_Lg_mr_os^5 + 4C_4C_5C_LL_4L_5R_4R_Ls^5 + C_4C_5C_LL_4L_5R_4r_os^5 + 2C_4C_5L_4L_5R_4r_os^5 + 2C_4C_5L_4L_5R_4g_mr_os^4 + 4C_4C_5L_4L_5R_4s^4 + 2C_4C_5L_4L_5R_4r_os^5 + 2C_4C_5C_LL_4L_5R_4r_os^5 + 2C_4C_5C_LL_4L_5$
- 10.796 INVALID-ORDER-796  $Z(s) = \left(\infty, \infty, \infty, \frac{L_4s}{C_4L_4s^2+1} + R_4, \frac{L_5s}{C_5L_5s^2+1}, \frac{1}{C_Ls + \frac{1}{R_L} + \frac{1}{L_Ls}}\right)$
- $H(s) = -\frac{1}{C_4C_5C_LL_4L_5L_LR_4R_Lr_os^6 + 2C_4C_5L_4L_5L_LR_4R_Lg_mr_os^5 + 4C_4C_5L_4L_5L_LR_4r_os^5 + 2C_4C_5L_4L_5L_LR_4r_os^5 + 2C_4C_5L_4L_5L_4r_os^5 + 2C_4C_5L_4r_os^5 + 2C_4C_5L_4r_os^5$
- 10.797 INVALID-ORDER-797  $Z(s) = \left(\infty, \infty, \infty, \frac{L_4s}{C_4L_4s^2+1} + R_4, \frac{L_5s}{C_5L_5s^2+1}, \frac{L_Ls}{C_LL_Ls^2+1} + R_L\right)$
- $H(s) = -\frac{1}{2C_4C_5C_LL_4L_5L_LR_4R_Lg_mr_os^6 + 4C_4C_5C_LL_4L_5L_LR_4r_os^6 + 2C_4C_5C_LL_4L_5L_LR_4r_os^6 + 2C_4C_5L_4L_5L_LR_4r_os^6 + 2C_4C_5L_4L_5L_4r_os^6 + 2C_4C_5L_4r_os^6 + 2C_4C_5L_$
- 10.798 INVALID-ORDER-798  $Z(s) = \left(\infty, \infty, \infty, \frac{L_4s}{C_4L_4s^2+1} + R_4, \frac{L_5s}{C_5L_5s^2+1}, \frac{R_L\left(L_Ls + \frac{1}{C_Ls}\right)}{L_Ls + R_L + \frac{1}{C_Ls}}\right)$
- $H(s) = -\frac{1}{2C_4C_5C_LL_4L_5L_LR_4R_Lg_mr_os^6 + 4C_4C_5C_LL_4L_5L_LR_4r_os^6 + 2C_4C_5C_LL_4L_5L_LR_4r_os^6 + 2C_4C_5C_LL_4L_5L_LR_4r_os^6 + 2C_4C_5C_LL_4L_5L_LR_4r_os^6 + 2C_4C_5L_4L_5R_4R_Lr_os^6 + 2C_4C_5L_4L_5R_4R_Lr_o$
- **10.799** INVALID-ORDER-799  $Z(s) = \left(\infty, \infty, \infty, \frac{L_4s}{C_4L_4s^2+1} + R_4, L_5s + R_5 + \frac{1}{C_5s}, R_L\right)$
- $H(s) = \frac{1}{C_4 C_5 L_4 L_5 R_4 g_m r_o s^4 + C_4 C_5 L_4 L_5 R_4 s^4 + 2 C_4 C_5 L_4 L_5 R_L g_m r_o s^4 + 2 C_4 C_5 L_4 L_5 R_L g_m r_o s^3 + 2 C_4 C_5 L_4 R_4 R_5 g_m r_o s^3 + 2 C_4 C_5 L_4 R_4 R_L g_m r_o s^3 + 2 C_4 C_5 L_4 R_4 R_L g_m r_o s^3 + 2 C_4 C_5 L_4 R_4 R_L g_m r_o s^3 + 2 C_4 C_5 L_4 R_4 R_L g_m r_o s^3 + 2 C_4 C_5 L_4 R_5 R_L g_m r_$
- 10.800 INVALID-ORDER-800  $Z(s) = \left(\infty, \infty, \infty, \frac{L_4s}{C_4L_4s^2+1} + R_4, L_5s + R_5 + \frac{1}{C_5s}, \frac{1}{C_Ls}\right)$
- $H(s) = \frac{1}{C_4 C_5 C_L L_4 L_5 R_4 g_m r_o s^5 + C_4 C_5 C_L L_4 L_5 R_4 s^5 + C_4 C_5 C_L L_4 R_4 R_5 g_m r_o s^4 + C_4 C_5 C_L L_4 R_4 R_5 s^4 + C_4 C_5 C_L L_4 R_4 r_o s^4 + 2 C_4 C_5 L_4 L_5 g_m r_o s^4 + 2 C_4 C_5 L_4 R_4 g_m r_o s^3 + 4 C_4 C_5 L_4 R_4 g_m r_o s^3 + 2 C_4 C_5 L_4 R_5 g_m r_o s^3 + 2 C_4 C_5 L_5 R_5 g_m r_o s^3 + 2 C_4 C_5 L_5 R_5 g_m r_o s^3 + 2 C_5 L_5 R_5 g_m r_o$
- **10.801** INVALID-ORDER-801  $Z(s) = \left(\infty, \infty, \infty, \frac{L_4 s}{C_4 L_4 s^2 + 1} + R_4, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{R_L}{C_L R_L s + 1}\right)$
- $H(s) = \frac{1}{C_4C_5C_LL_4L_5R_4R_Lg_mr_os^5 + C_4C_5C_LL_4L_5R_4R_Ls^5 + C_4C_5C_LL_4R_4R_5R_Lg_mr_os^4 + C_4C_5C_LL_4R_4R_5R_Ls^4 + C_4C_5L_4L_5R_4g_mr_os^4 + C_4C_5L_4L_5R_4g_mr_os$

- 10.802 INVALID-ORDER-802  $Z(s) = \left(\infty, \infty, \infty, \frac{L_4s}{C_4L_4s^2+1} + R_4, L_5s + R_5 + \frac{1}{C_5s}, R_L + \frac{1}{C_Ls}\right)$
- $H(s) = \frac{1}{C_4 C_5 C_L L_4 L_5 R_4 g_m r_o s^5 + C_4 C_5 C_L L_4 L_5 R_4 s^5 + 2 C_4 C_5 C_L L_4 L_5 R_L g_m r_o s^5 + 2 C_4 C_5 C_L L_4 R_4 R_5 g_m r_o s^4 + 2 C_4 C_5 C_L L_4 R_4 R_5 g_m r_o s^4 + 2 C_4 C_5 C_L L_4 R_4 R_L g_m r_o s^4 + 2 C_4 C_5 C_L L_4 R_L g_m r_o s^4 + 2 C_4 C_$
- 10.803 INVALID-ORDER-803  $Z(s) = \left(\infty, \infty, \infty, \frac{L_4s}{C_4L_4s^2+1} + R_4, L_5s + R_5 + \frac{1}{C_5s}, L_Ls + \frac{1}{C_Ls}\right)$
- $H(s) = \frac{1}{2C_4C_5C_LL_4L_5L_Lg_mr_os^6 + 2C_4C_5C_LL_4L_5R_4g_mr_os^5 + C_4C_5C_LL_4L_5R_4g_mr_os^5 + 4C_4C_5C_LL_4L_LR_4g_mr_os^5 + 4C_4C_5C_LL_4L_4L_4g_mr_os^5 + 4C_4C_5C_LL_4L_4g_mr_os^5 + 4C_4C_5C_LL_4L_4g_mr_os^5 + 4C_4C_5C_LL_4L_4g_mr_os^5 + 4C_4C_5C_LL_4g_mr_os^5 + 4C_4C_5C_LL_4g_mr_$
- 10.804 INVALID-ORDER-804  $Z(s) = \left(\infty, \infty, \infty, \frac{L_4s}{C_4L_4s^2+1} + R_4, L_5s + R_5 + \frac{1}{C_5s}, \frac{L_Ls}{C_LL_Ls^2+1}\right)$
- $H(s) = \frac{1}{C_4 C_5 C_L L_4 L_5 L_L R_4 g_m r_o s^6 + C_4 C_5 C_L L_4 L_5 L_L R_4 s^6 + C_4 C_5 C_L L_4 L_L R_4 R_5 g_m r_o s^5 + C_4 C_5 C_L L_4 L_L R_4 R_5 s^5 + C_4 C_5 C_L L_4 L_L R_4 r_o s^5 + 2 C_4 C_5 L_4 L_5 L_L g_m r_o s^5 + 2 C_4 C_5$
- 10.805 INVALID-ORDER-805  $Z(s) = \left(\infty, \infty, \infty, \frac{L_4s}{C_4L_4s^2+1} + R_4, L_5s + R_5 + \frac{1}{C_5s}, L_Ls + R_L + \frac{1}{C_Ls}\right)$
- $H(s) = \frac{1}{2C_4C_5C_LL_4L_5L_Lg_mr_os^6 + 2C_4C_5C_LL_4L_5L_Ls^6 + C_4C_5C_LL_4L_5R_4g_mr_os^5 + 2C_4C_5C_LL_4L_5R_Lg_mr_os^5 + 2C_4C_5C_LL_4L_5R_Lg_mr_$
- 10.806 INVALID-ORDER-806  $Z(s) = \left(\infty, \infty, \infty, \frac{L_4s}{C_4L_4s^2+1} + R_4, L_5s + R_5 + \frac{1}{C_5s}, \frac{1}{C_Ls + \frac{1}{R_L} + \frac{1}{L_Ls}}\right)$
- $H(s) = \frac{1}{C_4 C_5 C_L L_4 L_5 L_L R_4 R_L g_m r_o s^6 + C_4 C_5 C_L L_4 L_5 L_L R_4 R_L s^6 + C_4 C_5 C_L L_4 L_L R_4 R_5 R_L g_m r_o s^5 + C_4 C_5 L_L L_L R_4 R_5 R_L s^5 + C_4 C_5 L_L L_L R_4 R_5 R_L s^5 + C_4 C_5 L_L L_L R_4 R_L r_o s^5 + C_4 C_5 L_L L_L R_4 R_L r_o s^5 + C_4 C_5 L_L L_L R_4 R_L r_o s^5 + C_4 C_5 L_L L_L R_4 R_L r_o s^5 + C_4 C_5 L_L L_L R_4 R_L r_o s^5 + C_4 C_5 L_L L_L R_4 R_L r_o s^5 + C_4 C_5 L_L L_L R_4 R_L r_o s^5 + C_4 C_5 L_L L_L R_4 R_L r_o s^5 + C_4 C_5 L_L L_L R_4 R_L r_o s^5 + C_4 C_5 L_L L_L R_4 R_L r_o s^5 + C_4 C_5 L_L L_L R_4 R_L r_o s^5 + C_4 C_5 L_L L_L R_4 R_L r_o s^5 + C_4 C_5 L_L L_L R_4 R_L r_o s^5 + C_4 C_5 L_L L_L R_4 R_L r_o s^5 + C_4 C_5 L_L R_4 R_L r_o s^5 + C_4 C_5$
- 10.807 INVALID-ORDER-807  $Z(s) = \left(\infty, \infty, \infty, \frac{L_4s}{C_4L_4s^2+1} + R_4, L_5s + R_5 + \frac{1}{C_5s}, \frac{L_Ls}{C_LL_Ls^2+1} + R_L\right)$
- $H(s) = \frac{1}{C_4 C_5 C_L L_4 L_5 L_L R_4 g_m r_o s^6 + C_4 C_5 C_L L_4 L_5 L_L R_4 s^6 + 2 C_4 C_5 C_L L_4 L_5 L_L R_4 g_m r_o s^6 + 2 C_4 C_5 C_L L_4 L_5 L_L R_4 g_m r_o s^6 + 2 C_4 C_5 C_L L_4 L_L R_4 R_5 g_m r_o s^5 + 2 C_4 C_5 C_L L_4 L_$
- 10.808 INVALID-ORDER-808  $Z(s) = \left(\infty, \ \infty, \ \infty, \ \frac{L_4s}{C_4L_4s^2+1} + R_4, \ L_5s + R_5 + \frac{1}{C_5s}, \ \frac{R_L\left(L_Ls + \frac{1}{C_Ls}\right)}{L_Ls + R_L + \frac{1}{C_Ls}}\right)$
- $H(s) = \frac{1}{C_4 C_5 C_L L_4 L_5 L_L R_4 g_m r_o s^6 + C_4 C_5 C_L L_4 L_5 L_L R_4 s^6 + 2 C_4 C_5 C_L L_4 L_5 L_L R_L g_m r_o s^6 + 2 C_4 C_5 C_L L_4 L_5 L_L R_L g_m r_o s^5 + C_4 C_5 C_L L_4 L_5 R_4 R_L g_m r_o s^5 + C_4 C_5 C_L L_5 R_L g_m r_o s^5 + C_4 C_5 C_L L_5 R_L g_m r_o s^5 + C_4 C_5 C_L L_5 R_L g_m r_o s^5 + C_$
- **10.809** INVALID-ORDER-809  $Z(s) = \left(\infty, \infty, \infty, \frac{L_4s}{C_4L_4s^2+1} + R_4, \frac{1}{C_5s + \frac{1}{R_5} + \frac{1}{L_5s}}, R_L\right)$
- $H(s) = -\frac{1}{2C_4C_5L_4L_5R_4R_5R_Lg_mr_os^4 + 4C_4C_5L_4L_5R_4R_5r_os^4 + 2C_4C_5L_4L_5R_4R_5g_mr_os^3 + 2C_4L_4L_5R_4R_5g_mr_os^3 + 4C_4L_4L_5R_4R_Lg_mr_os^3 + 4C_4L_$

- **10.810** INVALID-ORDER-810  $Z(s) = \left(\infty, \infty, \infty, \frac{L_4 s}{C_4 L_4 s^2 + 1} + R_4, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{1}{C_L s}\right)$
- $H(s) = -\frac{1}{C_4 C_5 C_L L_4 L_5 R_4 R_5 r_o s^5 + 2 C_4 C_5 L_4 L_5 R_4 R_5 g_m r_o s^4 + 4 C_4 C_5 L_4 L_5 R_4 R_5 s^4 + 2 C_4 C_5 L_4 L_5 R_4 R_5 g_m r_o s^4 + C_4 C_L L_4 L_5 R_4 R_5 s^4 + C_4 C_L L_4 L_5 R_4 R_5 r_o s^4 + C_4 C_L L_4 L_5$
- 10.811 INVALID-ORDER-811  $Z(s) = \left(\infty, \infty, \infty, \frac{L_4s}{C_4L_4s^2+1} + R_4, \frac{1}{C_5s + \frac{1}{R_5} + \frac{1}{L_5s}}, \frac{R_L}{C_LR_Ls + 1}\right)$
- $H(s) = -\frac{1}{C_4 C_5 C_L L_4 L_5 R_4 R_5 R_L r_o s^5 + 2 C_4 C_5 L_4 L_5 R_4 R_5 R_L g_m r_o s^4 + 4 C_4 C_5 L_4 L_5 R_4 R_5 r_o s^4 + 2 C_4 C_5 L_4 L_5 R_4 R_5 R_L r_o s^4 + C_4 C_L$
- 10.812 INVALID-ORDER-812  $Z(s) = \left(\infty, \infty, \infty, \frac{L_4 s}{C_4 L_4 s^2 + 1} + R_4, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, R_L + \frac{1}{C_L s}\right)$
- $H(s) = -\frac{1}{2C_4C_5C_LL_4L_5R_4R_5R_Lg_mr_os^5 + 4C_4C_5C_LL_4L_5R_4R_5r_os^5 + 2C_4C_5C_LL_4L_5R_4R_5g_mr_os^4 + 4C_4C_5L_4L_5R_4R_5g_mr_os^4 + 4C_4C_5$
- **10.813** INVALID-ORDER-813  $Z(s) = \left(\infty, \infty, \infty, \frac{L_4 s}{C_4 L_4 s^2 + 1} + R_4, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, L_L s + \frac{1}{C_L s}\right)$
- $H(s) = -\frac{1}{2C_4C_5C_LL_4L_5L_LR_4R_5g_mr_os^6 + 4C_4C_5C_LL_4L_5L_LR_4r_os^6 + 2C_4C_5C_LL_4L_5L_LR_5r_os^6 + C_4C_5C_LL_4L_5R_4r_os^5 + 2C_4C_5L_4L_5R_4r_os^5 + 2C_4C_5L_4L_5R_5r_os^5 + 2C_4C_5L_4L_5R_5r_os^5 + 2C_4C_5L_4L_5R_5r_os^5 + 2C_4C_5L_4R_5r_os^5 + 2C_4C_5L$
- 10.814 INVALID-ORDER-814  $Z(s) = \left(\infty, \infty, \infty, \frac{L_4s}{C_4L_4s^2+1} + R_4, \frac{1}{C_5s + \frac{1}{R_5} + \frac{1}{L_5s}}, \frac{L_Ls}{C_LL_Ls^2+1}\right)$
- $H(s) = -\frac{1}{C_4C_5C_LL_4L_5L_LR_4R_5r_os^6 + 2C_4C_5L_4L_5L_LR_4R_5g_mr_os^5 + 4C_4C_5L_4L_5L_LR_4r_os^5 + 2C_4C_5L_4L_5L_LR_4r_os^5 + 2C_4C_5L_4L_5L_4r_os^5 + 2C_4C_5L_4r_os^5 + 2C_4C_5L_4r_os^5$
- 10.815 INVALID-ORDER-815  $Z(s) = \left(\infty, \infty, \infty, \frac{L_4 s}{C_4 L_4 s^2 + 1} + R_4, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, L_L s + R_L + \frac{1}{C_L s}\right)$
- $H(s) = -\frac{1}{2C_4C_5C_LL_4L_5L_LR_4R_5g_mr_os^6 + 4C_4C_5C_LL_4L_5L_LR_4s^6 + 2C_4C_5C_LL_4L_5L_LR_5r_os^6 + 2C_4C_5C_LL_4L_5R_4R_5R_Lg_mr_os^5 + 4C_4C_5C_LL_4L_5R_4R_5R_Ls^5 + C_4C_5C_LL_4L_5R_4R_5r_os^5 + 2C_4C_5C_LL_4L_5R_4R_5g_mr_os^4 + 4C_4C_5L_4L_5R_4R_5R_Ls^5 + C_4C_5C_LL_4L_5R_4R_5r_os^5 + 2C_4C_5C_LL_4L_5R_4R_5g_mr_os^4 + 4C_4C_5L_4L_5R_4R_5r_os^5 + 2C_4C_5C_LL_4L_5R_4R_5r_os^5 + 2C_4C_5C_LL_4L_5R_5r_os^5 + 2C_4C_5C_LL_5R_5r_os^5 + 2C_4C_5C_LL_5R_5r_os^5 + 2C_4C_5C_LL_5R_5r_os^5 + 2C_4C_5C_LL_5R_5r_os^5 + 2C_4C_5C_LL_5$
- **10.816** INVALID-ORDER-816  $Z(s) = \left(\infty, \infty, \infty, \frac{L_4 s}{C_4 L_4 s^2 + 1} + R_4, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$
- $H(s) = -\frac{1}{C_4C_5C_LL_4L_5L_LR_4R_5R_Lr_os^6 + 2C_4C_5L_4L_5L_LR_4R_5R_Lg_mr_os^5 + 4C_4C_5L_4L_5L_LR_4R_5r_os^5 + 2C_4C_5L_4L_5L_LR_4R_5R_Lr_os^5 + 2C_4C_5L_4L_5L_4R_5R_Lr_os^5 + 2C_4C_5L_4R_5R_Lr_os^5 + 2C_4C_5L_4R_5R_Lr_os^5 + 2C_4C_5L_4R_5R_Lr_os^5 + 2C_4C_5L_4R_5R_Lr_os^5 +$
- 10.817 INVALID-ORDER-817  $Z(s) = \left(\infty, \infty, \infty, \frac{L_4s}{C_4L_4s^2+1} + R_4, \frac{1}{C_5s + \frac{1}{R_5} + \frac{1}{L_5s}}, \frac{L_Ls}{C_LL_Ls^2+1} + R_L\right)$
- $H(s) = -\frac{1}{2C_4C_5C_LL_4L_5L_LR_4R_5R_Lg_mr_os^6 + 4C_4C_5C_LL_4L_5L_LR_4R_5R_Ls^6 + C_4C_5C_LL_4L_5L_LR_4R_5r_os^6 + 2C_4C_5L_4L_5L_LR_4R_5g_mr_os^5 + 4C_4C_5L_4L_5L_LR_4R_5s^5 + 2C_4C_5L_4L_5L_LR_4s^2r_os^5 + 2C_4C_5L_4L_5L_RR_4s^2r_os^6 + 2C_4C_5L_4L_5L_4s^2r_os^6 + 2C_4C_5L_4L_5L_4s^2r_os^6 + 2C_4C_5L_4L_5L_4s^2r_os^6 + 2C_4C_5L_4L_5L_4s^2r_os^6 + 2C_4C_5L_4s^2r_os^6 + 2C_4C_5L_4s^2r_os^6 + 2C_4C_5L_4s^2r_os^6 + 2C_4C_5L_4$

- 10.818 INVALID-ORDER-818  $Z(s) = \left(\infty, \ \infty, \ \infty, \ \frac{L_4s}{C_4L_4s^2+1} + R_4, \ \frac{1}{C_5s + \frac{1}{R_5} + \frac{1}{L_5s}}, \ \frac{R_L\left(L_Ls + \frac{1}{C_Ls}\right)}{L_Ls + R_L + \frac{1}{C_Ls}}\right)$
- $H(s) = -\frac{1}{2C_4C_5C_LL_4L_5L_LR_4R_5R_Lg_mr_os^6 + 4C_4C_5C_LL_4L_5L_LR_4R_5r_os^6 + 2C_4C_5C_LL_4L_5L_LR_5R_Lr_os^6 + 2C_4C_5L_4L_5R_4R_5R_Lr_os^6 + 2$
- 10.819 INVALID-ORDER-819  $Z(s) = \left(\infty, \infty, \infty, \frac{L_4s}{C_4L_4s^2+1} + R_4, \frac{L_5s}{C_5L_5s^2+1} + R_5, R_L\right)$
- $H(s) = \frac{1}{C_4 C_5 L_4 L_5 R_4 R_5 g_m r_o s^4 + C_4 C_5 L_4 L_5 R_4 R_5 s^4 + 2 C_4 C_5 L_4 L_5 R_4 R_L g_m r_o s^4 + 4 C_4 C_5 L_4 L_5 R_4 R_L s^4 + C_4 C_5 L_4 L_5 R_4 r_o s^4 + 2 C_4 C_5 L_4 L_5 R_5 R_L g_m r_o s^4 + 2 C_4 C_5 L_4 L_5 R_4 r_o s^4$
- 10.820 INVALID-ORDER-820  $Z(s) = \left(\infty, \infty, \infty, \frac{L_4s}{C_4L_4s^2+1} + R_4, \frac{L_5s}{C_5L_5s^2+1} + R_5, \frac{1}{C_Ls}\right)$
- $H(s) = \frac{1}{C_4 C_5 C_L L_4 L_5 R_4 R_5 g_m r_o s^5 + C_4 C_5 C_L L_4 L_5 R_4 R_5 s^5 + C_4 C_5 C_L L_4 L_5 R_4 r_o s^5 + 2 C_4 C_5 L_4 L_5 R_4 g_m r_o s^4 + 4 C_4 C_5 L_4 L_5 R_5 g_m r_o s^4 + 2 C_4 C_5 L_4 L_5 R_5 g_m r_o s^4 + 2 C_4 C_5 L_4 L_5 R_4 g_m r_o s^4 + C_4 C_L L_$
- 10.821 INVALID-ORDER-821  $Z(s) = \left(\infty, \infty, \infty, \frac{L_4s}{C_4L_4s^2+1} + R_4, \frac{L_5s}{C_5L_5s^2+1} + R_5, \frac{R_L}{C_LR_Ls+1}\right)$
- $H(s) = \frac{1}{C_4 C_5 C_L L_4 L_5 R_4 R_5 R_L g_m r_o s^5 + C_4 C_5 C_L L_4 L_5 R_4 R_5 R_L s^5 + C_4 C_5 L_4 L_5 R_4 R_5 g_m r_o s^4 + C_4 C_5 L_$
- 10.822 INVALID-ORDER-822  $Z(s) = \left(\infty, \infty, \infty, \frac{L_4s}{C_4L_4s^2+1} + R_4, \frac{L_5s}{C_5L_5s^2+1} + R_5, R_L + \frac{1}{C_Ls}\right)$
- $H(s) = \frac{1}{C_4 C_5 C_L L_4 L_5 R_4 R_5 g_m r_o s^5 + C_4 C_5 C_L L_4 L_5 R_4 R_5 s^5 + 2 C_4 C_5 C_L L_4 L_5 R_4 R_L g_m r_o s^5 + 4 C_4 C_5 C_L L_4 L_5 R_4 R_L g_m r_o s^5 + 2 C_4 C_5 C_L L_4 L_$
- 10.823 INVALID-ORDER-823  $Z(s) = \left(\infty, \infty, \infty, \frac{L_4s}{C_4L_4s^2+1} + R_4, \frac{L_5s}{C_5L_5s^2+1} + R_5, L_Ls + \frac{1}{C_Ls}\right)$
- $H(s) = \frac{1}{2C_4C_5C_LL_4L_5L_LR_4g_mr_os^6 + 4C_4C_5C_LL_4L_5L_LR_4s^6 + 2C_4C_5C_LL_4L_5L_Rs_gmr_os^6 + 2C_4C_5C_LL_4L_5L_LR_5s^6 + 2C_4C_5C_LL_4L_5L_Lr_os^6 + C_4C_5C_LL_4L_5R_4g_mr_os^5 + C_4C_5C_LL_4L_5R_4g_mr_os^5 + 2C_4C_5C_LL_4L_5R_4g_mr_os^6 + 2C_4C_5C_LL_4L_5L_Rs_gmr_os^6 +$
- 10.824 INVALID-ORDER-824  $Z(s) = \left(\infty, \infty, \infty, \frac{L_4s}{C_4L_4s^2+1} + R_4, \frac{L_5s}{C_5L_5s^2+1} + R_5, \frac{L_Ls}{C_LL_Ls^2+1}\right)$
- $H(s) = \frac{1}{C_4 C_5 C_L L_4 L_5 L_L R_4 R_5 g_m r_o s^6 + C_4 C_5 C_L L_4 L_5 L_L R_4 R_5 s^6 + C_4 C_5 L_4 L_5 L_L R_4 g_m r_o s^5 + 4 C_4 C_5 L_4 L_5 L_L R_4 s^5 + 2 C_4 C_5 L_4 L_5 L_L R_5 s^5 + 2 C_4 C_5 L_4 L_5 L_L$
- 10.825 INVALID-ORDER-825  $Z(s) = \left(\infty, \infty, \infty, \frac{L_4s}{C_4L_4s^2+1} + R_4, \frac{L_5s}{C_5L_5s^2+1} + R_5, L_Ls + R_L + \frac{1}{C_Ls}\right)$
- $H(s) = \frac{1}{2C_4C_5C_LL_4L_5L_LR_4q_mr_os^6 + 4C_4C_5C_LL_4L_5L_LR_4s^6 + 2C_4C_5C_LL_4L_5L_LR_5g_mr_os^6 + 2C_4C_5C_LL_4L_5L_LR_5s^6 + 2C_4C_5C_LL_4L_5L_Lr_os^6 + C_4C_5C_LL_4L_5R_4R_5g_mr_os^5 + C_4C_5C_LL_4L_5R_4R_5s^5 + 2C_4C_5C_LL_4L_5R_4R_Lg_mr_os^5 + 4C_4C_5C_LL_4L_5R_4R_Lg_mr_os^5 + 4C_4C_5C_LL_4L_5R_$

- 10.826 INVALID-ORDER-826  $Z(s) = \left(\infty, \infty, \infty, \frac{L_4s}{C_4L_4s^2+1} + R_4, \frac{L_5s}{C_5L_5s^2+1} + R_5, \frac{1}{C_Ls + \frac{1}{R_L} + \frac{1}{L_Ls}}\right)$
- $H(s) = \frac{1}{C_4 C_5 C_L L_4 L_5 L_L R_4 R_5 R_L g_m r_o s^6 + C_4 C_5 C_L L_4 L_5 L_L R_4 R_5 R_L s^6 + C_4 C_5 L_L L_4 L_5 L_L R_4 R_L r_o s^6 + C_4 C_5 L_4 L_5 L_L R_4 R_5 g_m r_o s^5 + C_4 C_5 L_4 L_5 L_L R_4 R_L g_m r_o s^5 + C_4 C_5$
- 10.827 INVALID-ORDER-827  $Z(s) = \left(\infty, \infty, \infty, \frac{L_4s}{C_4L_4s^2+1} + R_4, \frac{L_5s}{C_5L_5s^2+1} + R_5, \frac{L_Ls}{C_LL_Ls^2+1} + R_L\right)$
- $H(s) = \frac{1}{C_4 C_5 C_L L_4 L_5 L_L R_4 R_5 g_m r_o s^6 + C_4 C_5 C_L L_4 L_5 L_L R_4 R_5 s^6 + 2 C_4 C_5 C_L L_4 L_5 L_L R_4 R_L g_m r_o s^6 + 4 C_4 C_5 C_L L_4 L_5 L_L R_4 R_L s^6 + C_4 C_5 C_L L_4 L_5 L_L R_4 R_L s^6 + 2 C_4 C_5 C_L L_4 L_5 L_L R_5 R_L s^6 + 2 C_4 C_5 C_L L_5 L_L R_5 R_L s^6 + 2 C_4 C_5 C_L L_5 L_L R_5 R_L s^6 + 2 C_4 C_5 C_L L_5 L_L R_5 R_L s^6 + 2 C_4 C_5 C_L L_5 L_L r_5 R_L s^6 + 2 C_4 C_5 C_L L_5 L_L r_5 R_L s^6 + 2$
- 10.828 INVALID-ORDER-828  $Z(s) = \left(\infty, \ \infty, \ \infty, \ \frac{L_4s}{C_4L_4s^2+1} + R_4, \ \frac{L_5s}{C_5L_5s^2+1} + R_5, \ \frac{R_L\left(L_Ls + \frac{1}{C_Ls}\right)}{L_Ls + R_L + \frac{1}{C_Ls}}\right)$
- $H(s) = \frac{1}{C_4 C_5 C_L L_4 L_5 L_L R_4 R_5 g_m r_o s^6 + C_4 C_5 C_L L_4 L_5 L_L R_4 R_5 s^6 + 2 C_4 C_5 C_L L_4 L_5 L_L R_4 R_L g_m r_o s^6 + 4 C_4 C_5 C_L L_4 L_5 L_L R_4 R_L s^6 + C_4 C_5 C_L L_4 L_5 L_L R_4 R_L s^6 + 2 C_4 C_5 C_L L_4 L_5 L_L R_5 R_L s^6 + 2 C_4 C_5 C_L L_5 L_L R_5 R_L s^6 + 2 C_4 C_5 C_L L_5 L_L R_5 R_L s^6 + 2 C_4 C_5 C_L L_5 L_L R_5 R_L s^6 + 2 C_4 C_5 C_L L_5 L_L R_5 R_L s^6 + 2 C_4 C_5 C_L L_5 L_L R_5 R_L s^6 + 2$
- 10.829 INVALID-ORDER-829  $Z(s) = \left(\infty, \infty, \infty, \frac{L_4s}{C_4L_4s^2+1} + R_4, \frac{R_5\left(L_5s + \frac{1}{C_5s}\right)}{L_5s + R_5 + \frac{1}{C_5s}}, R_L\right)$
- $H(s) = \frac{1}{C_4 C_5 L_4 L_5 R_4 R_5 g_m r_o s^4 + C_4 C_5 L_4 L_5 R_4 R_5 g^4 + 2 C_4 C_5 L_4 L_5 R_4 R_L g^m r_o s^4 + 4 C_4 C_5 L_4 L_5 R_4 R_L s^4 + C_4 C_5 L_4 L_5 R_4 R_L s^4 + 2 C_4 C_5 L_4 L_5 R_5 R_L g_m r_o s^4 + 2 C_4 C_5 L_4 L_5 R_4 R_5 g_m r_o s^4 + 2 C_4 C_5 L_4 R_5 g_m r_o s^4 + 2 C_5 L_4 R_5 g_m r_o s^4 + 2 C_5 L_5 R_5 g_m r_o s^4 + 2 C_5 L_5 R_5 g_m r_o$
- 10.830 INVALID-ORDER-830  $Z(s) = \left(\infty, \infty, \infty, \frac{L_4s}{C_4L_4s^2+1} + R_4, \frac{R_5\left(L_5s + \frac{1}{C_5s}\right)}{L_5s + R_5 + \frac{1}{C_5s}}, \frac{1}{C_Ls}\right)$
- $H(s) = \frac{1}{C_4 C_5 C_L L_4 L_5 R_4 R_5 g_m r_o s^5 + C_4 C_5 C_L L_4 L_5 R_4 R_5 s^5 + C_4 C_5 C_L L_4 L_5 R_4 r_o s^5 + C_4 C_5 C_L L_4 R_4 R_5 r_o s^4 + 2 C_4 C_5 L_4 L_5 R_4 g_m r_o s^4 + 2 C_4 C_5 L_4 L_5 R_5 g_m r_o s^4 + 2 C_4 C_5 L_5 L_5 R_5 g_m r_o s^4 + 2 C_4 C_5 L_5 L_5 R_5 g_m r_o s^4 + 2 C_5 L_5 L_5 R_5 g_m r_o s^4 + 2 C_5 L_5 L_5 R_5 g_m r_o s^4 + 2 C_5 L_5 L_5 R_5 g_m r_o s^4 + 2 C_5 L_5 L_5 R_5 g_m r_o s^4 + 2 C_5 L_5 L_5 R_5 g_m r_o s^4 + 2 C_5 L_5 L_5 R_5 g_m r_o s^4 + 2 C_5 L_5 L_5 R_5 g_m r_o s^4 + 2 C_5 L_5 L_5 R_5 g_m r_o s^4 + 2 C_5 L_5 L_5 R_5 g_m r_o s^4 + 2 C_5 L_5 L_5 R_5 g_m r_o s^4 + 2 C_5 L_5 L_5 R_5 g_m r_o s^4 + 2 C_5 L_5 L_5 R_5 g_m r_$
- 10.831 INVALID-ORDER-831  $Z(s) = \left(\infty, \infty, \infty, \frac{L_4s}{C_4L_4s^2+1} + R_4, \frac{R_5\left(L_5s + \frac{1}{C_5s}\right)}{L_5s + R_5 + \frac{1}{C_5s}}, \frac{R_L}{C_LR_Ls + 1}\right)$
- $H(s) = \frac{1}{C_4 C_5 C_L L_4 L_5 R_4 R_5 R_L g_m r_o s^5 + C_4 C_5 C_L L_4 L_5 R_4 R_5 R_L s^5 + C_4 C_5 C_L L_4 L_5 R_4 R_5 R_L r_o s^4 + C_4 C_5 L_4 L_5 R_4 R_5 g_m r_o s^4 + C_4 C_$
- 10.832 INVALID-ORDER-832  $Z(s) = \left(\infty, \infty, \infty, \frac{L_{4s}}{C_4L_4s^2+1} + R_4, \frac{R_5\left(L_5s + \frac{1}{C_5s}\right)}{L_5s + R_5 + \frac{1}{C_5s}}, R_L + \frac{1}{C_Ls}\right)$
- $H(s) = \frac{1}{C_4 C_5 C_L L_4 L_5 R_4 R_5 g_m r_o s^5 + C_4 C_5 C_L L_4 L_5 R_4 R_5 s^5 + 2 C_4 C_5 C_L L_4 L_5 R_4 R_L g_m r_o s^5 + 4 C_4 C_5 C_L L_4 L_5 R_4 R_L s^5 + 2 C_4 C_5 C_L L_4 L_5 R_4 R_L g_m r_o s^5 + 2 C_4 C_5 C_L L_4 L_5 R_4 R_L g_m r_o s^5 + 2 C_4 C_5 C_L L_4 L_5 R_4 R_L g_m r_o s^5 + 2 C_4 C_5 C_L L_4 L_5 R_4 R_5 R_L g_m r_o s^5 + 2 C_4 C_5 C_L L_4 R_5 R_L g_m r_o s^5 + 2 C_4 C_5 C_L L_4 R_5 R_L g_m r_o s^5 + 2 C_4 C_5 C_L L_4 L_5 R_4 R_5 R_L g_m r_o s^5 + 2 C_4 C_5 C_L L_4 L_5 R_4 R_5 R_L g_m r_o s^5 + 2 C_4 C_5 C_L L_4 L_5 R_4 R_5 R_L g_m r_o s^5 + 2 C_4 C_5 C_L L_4 L_5 R_4 R_5 R_L g_m r_o s^5 + 2 C_4 C_5 C_L L_4 L_5 R_4 R_5 R_L g_m r_o s^5 + 2 C_4 C_5 C_L L_4 R_5 R_L g_m r_o s^5 + 2 C_4 C_5 C_L L_5 R_4 R_L g_m r_o s^5 +$
- 10.833 INVALID-ORDER-833  $Z(s) = \left(\infty, \infty, \infty, \frac{L_{4s}}{C_4L_4s^2+1} + R_4, \frac{R_5\left(L_5s + \frac{1}{C_5s}\right)}{L_5s + R_5 + \frac{1}{C_5s}}, L_Ls + \frac{1}{C_Ls}\right)$
- $H(s) = \frac{1}{2C_4C_5C_LL_4L_5L_LR_4g_mr_os^6 + 4C_4C_5C_LL_4L_5L_LR_4s^6 + 2C_4C_5C_LL_4L_5L_LR_5g_mr_os^6 + 2C_4C_5C_LL_4L_5L_LR_5s^6 + 2C_4C_5C_LL_4L_5L_Lr_os^6 + C_4C_5C_LL_4L_5R_4R_5g_mr_os^5 + C_4C_5C_LL_4L_5R_4R_5s^5 + C_4C_5C_LL_4L_5R_4r_os^5 + 2C_4C_5C_LL_4L_5L_Rr_os^6 + 2$

10.834 INVALID-ORDER-834  $Z(s) = \left(\infty, \infty, \infty, \frac{L_4s}{C_4L_4s^2+1} + R_4, \frac{R_5\left(L_5s + \frac{1}{C_5s}\right)}{L_5s + R_5 + \frac{1}{C_5s}}, \frac{L_Ls}{C_LL_Ls^2+1}\right)$ 

 $H(s) = \frac{1}{C_4 C_5 C_L L_4 L_5 L_L R_4 R_5 g_m r_o s^6 + C_4 C_5 C_L L_4 L_5 L_L R_4 R_5 s^6 + C_4 C_5 C_L L_4 L_5 L_L R_4 r_o s^6 + C_4 C_5 C_L L_4 L_5 L_L R_4 r_o s^5 + 2 C_4 C_5 L_4 L_5 L_L R_4 g_m r_o s^5 + 4 C_4 C_5 L_4 L_5 L_L R_4 g_m r_o s^5 + 2 C_4 C_5 L_4 L_5 L_L R_5 g_m r_$ 

10.835 INVALID-ORDER-835  $Z(s) = \left(\infty, \infty, \infty, \frac{L_4 s}{C_4 L_4 s^2 + 1} + R_4, \frac{R_5 \left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, L_L s + R_L + \frac{1}{C_L s}\right)$ 

10.836 INVALID-ORDER-836  $Z(s) = \left(\infty, \infty, \infty, \frac{L_4s}{C_4L_4s^2+1} + R_4, \frac{R_5\left(L_5s + \frac{1}{C_5s}\right)}{L_5s + R_5 + \frac{1}{C_5s}}, \frac{1}{C_Ls + \frac{1}{R_I} + \frac{1}{L_Is}}\right)$ 

 $H(s) = \frac{1}{C_4 C_5 C_L L_4 L_5 L_L R_4 R_5 R_L g_m r_o s^6 + C_4 C_5 C_L L_4 L_5 L_L R_4 R_5 R_L s^6 + C_4 C_5 C_L L_4 L_5 L_L R_4 R_5 R_L r_o s^6 + C_4 C_5 L_4 L_5 L_L R_4 R_5 g_m r_o s^5 + C_4$ 

10.837 INVALID-ORDER-837  $Z(s) = \left(\infty, \infty, \infty, \frac{L_4 s}{C_4 L_4 s^2 + 1} + R_4, \frac{R_5 \left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$ 

 $H(s) = \frac{1}{C_4 C_5 C_L L_4 L_5 L_L R_4 R_5 g_m r_o s^6 + C_4 C_5 C_L L_4 L_5 L_L R_4 R_5 s^6 + 2 C_4 C_5 C_L L_4 L_5 L_L R_4 R_L g_m r_o s^6 + 4 C_4 C_5 C_L L_4 L_5 L_L R_4 R_L s^6 + C_4 C_5 C_L L_4 L_5 L_L R_4 R_L s^6 + 2 C_4 C_5 C_L L_4 L_5 L_L R_5 R_L s^6 + 2 C_4 C_5 C_L L_5 L_L R_5 R_L s^6 + 2 C_4 C_5 C_L L_5 L_L R_5 R_L s^6 + 2 C_4 C_5 C_L L_5 L_L R_5 R_L s^6 + 2 C_4 C_5 C_L L_5 L_L R_5 R_L s^6 + 2 C_4 C_5 C_L L_5 L_L R_5 R_L s^6 + 2$ 

10.838 INVALID-ORDER-838  $Z(s) = \left(\infty, \infty, \infty, \frac{L_4s}{C_4L_4s^2+1} + R_4, \frac{R_5\left(L_5s + \frac{1}{C_5s}\right)}{L_5s + R_5 + \frac{1}{C_5s}}, \frac{R_L\left(L_Ls + \frac{1}{C_Ls}\right)}{L_Ls + R_L + \frac{1}{C_Ls}}\right)$ 

 $H(s) = \frac{1}{C_4 C_5 C_L L_4 L_5 L_L R_4 R_5 g_m r_o s^6 + C_4 C_5 C_L L_4 L_5 L_L R_4 R_5 s^6 + 2 C_4 C_5 C_L L_4 L_5 L_L R_4 R_L g_m r_o s^6 + 4 C_4 C_5 C_L L_4 L_5 L_L R_4 R_L s^6 + C_4 C_5 C_L L_4 L_5 L_L R_4 R_L s^6 + 2 C_4 C_5 C_L L_4 L_5 L_L R_5 R_L s^6 + 2 C_4 C_5 C_L L_5 L_L R_5 R_L s^6 + 2 C_4 C_5 C_L L_5 L_L R_5 R_L s^6 + 2 C_4 C_5 C_L L_5 L_L R_5 R_L s^6 + 2 C_4 C_5 C_L L_5 L_L R_5 R_L s^6$ 

10.839 INVALID-ORDER-839  $Z(s) = \left(\infty, \infty, \infty, \frac{R_4\left(L_4s + \frac{1}{C_4s}\right)}{L_4s + R_4 + \frac{1}{C_4s}}, R_5, \frac{1}{C_Ls}\right)$ 

 $H(s) = \frac{R_4 \left( C_4 L_4 s^2 + 1 \right) \left( R_5 g_m r_o + R_5 - r_o \right)}{C_4 C_L L_4 R_4 R_5 g_m r_o s^3 + C_4 C_L L_4 R_4 R_5 s^3 + C_4 C_L L_4 R_4 r_o s^3 + 2 C_4 L_4 R_4 g_m r_o s^2 + 4 C_4 L_4 R_5 g_m r_o s^2 + 2 C_4 L_4 R_5 g_m r_o s + 2 C_4 R_4 R_5 g_m r_o s + C_L R_4$ 

10.840 INVALID-ORDER-840  $Z(s) = \left(\infty, \infty, \infty, \frac{R_4\left(L_4s + \frac{1}{C_4s}\right)}{L_4s + R_4 + \frac{1}{C_4s}}, R_5, \frac{R_L}{C_L R_L s + 1}\right)$ 

 $H(s) = \frac{R_4 R_L \left( C_4 L_4 s^2 + 1 \right) \left( R_5 g_m r_o + R_5 - r_o \right)}{C_4 C_L L_4 R_4 R_5 R_L g_m r_o s^3 + C_4 C_L L_4 R_4 R_5 g_m r_o s^2 + C_4 L_4 R_4 R_5 g_m r_o s^2 + 2 C_4 L_4 R_4 R_1 g_m r_o s^2 + 2 C_4 L_4 R_5 R_L g_m r_o s^2 + 2 C_4 R_5 R_L g_m r_o s^2 + 2 C_5 R_L g_m r_o s^2 + 2 C_$ 

10.841 INVALID-ORDER-841  $Z(s) = \left(\infty, \infty, \infty, \frac{R_4\left(L_4s + \frac{1}{C_4s}\right)}{L_4s + R_4 + \frac{1}{C_4s}}, R_5, R_L + \frac{1}{C_Ls}\right)$ 

 $H(s) = \frac{R_4 \left( \bigcirc A L_4 R_5 q_m r_o s^3 + C_4 C_L L_4 R_4 R_5 q_m r_o s^3 + 2 C_4 C_L L_4 R_4 R_5 q_m r_o s^3 + 2 C_4 C_L L_4 R_4 R_5 q_m r_o s^3 + 2 C_4 C_L L_4 R_4 R_5 q_m r_o s^3 + 2 C_4 C_L L_4 R_4 R_5 q_m r_o s^3 + 2 C_4 C_L L_4 R_4 R_5 q_m r_o s^3 + 2 C_4 C_L L_4 R_4 R_5 q_m r_o s^3 + 2 C_4 C_L L_4 R_4 R_5 q_m r_o s^3 + 2 C_4 C_L L_4 R_4 R_5 q_m r_o s^3 + 2 C_4 C_L L_4 R_4 R_5 q_m r_o s^3 + 2 C_4 C_L L_4 R_4 R_5 q_m r_o s^3 + 2 C_4 C_L L_4 R_4 R_5 q_m r_o s^3 + 2 C_4 C_L L_5 q_m r_o s^3 +$ 

10.842 INVALID-ORDER-842 
$$Z(s) = \left(\infty, \infty, \infty, \frac{R_4\left(L_4s + \frac{1}{C_4s}\right)}{L_4s + R_4 + \frac{1}{C_4s}}\right), R_5, L_Ls + \frac{1}{C_Ls}\right)$$

 $H(s) = \frac{R_4 \left( C_4 L_4 s^2 + \frac{1}{2} C_4 C_L L_4 L_L R_4 g_m r_o s^4 + 4 C_4 C_L L_4 L_L R_5 g_m r_o s^4 + 2 C_4 C_L L_4 L_L R_5 g_m r_o s^4 + 2 C_4 C_L L_4 L_L R_5 g_m r_o s^4 + 2 C_4 C_L L_4 L_L R_5 g_m r_o s^4 + 2 C_4 C_L L_4 R_4 R_5 g_m r_o s^3 + 2 C_4 C_L L_4 R_4 R_5 g_m r_$ 

10.843 INVALID-ORDER-843 
$$Z(s) = \left(\infty, \infty, \infty, \frac{R_4\left(L_4s + \frac{1}{C_4s}\right)}{L_4s + R_4 + \frac{1}{C_4s}}, R_5, \frac{L_Ls}{C_LL_Ls^2 + 1}\right)$$

 $H(s) = \frac{L_L R_4 s \left(C_4 L_4 s^2 + 1\right) \left(R_5 g_m r_o + R_5 - r_o\right)}{C_4 C_L L_4 L_L R_4 r_o s^4 + C_4 L_4 L_L R_4 r_o s^4 + 2 C_4 L_4 L_L R_4 g_m r_o s^3 + 4 C_4 L_4 L_L R_5 g_m r_o s^3 + 2 C_4 L_4 L_L R_5 g_m r_o s^3 + 2 C_4 L_4 L_L R_5 g_m r_o s^3 + 2 C_4 L_4 R_4 R_5 g_m r_o s^3 + 2 C_4 R_5 g_$ 

10.844 INVALID-ORDER-844 
$$Z(s) = \left(\infty, \infty, \infty, \frac{R_4\left(L_4s + \frac{1}{C_4s}\right)}{L_4s + R_4 + \frac{1}{C_4s}}, R_5, L_Ls + R_L + \frac{1}{C_Ls}\right)$$

 $H(s) = \frac{1}{2C_4C_LL_4L_LR_4g_mr_os^4 + 4C_4C_LL_4L_Rs^4 + 2C_4C_LL_4L_Rs^4 + 2C_4C_LL_$ 

10.845 INVALID-ORDER-845 
$$Z(s) = \left(\infty, \infty, \infty, \frac{R_4\left(L_4s + \frac{1}{C_4s}\right)}{L_4s + R_4 + \frac{1}{C_4s}}, R_5, \frac{1}{C_Ls + \frac{1}{R_L} + \frac{1}{L_Ls}}\right)$$

 $H(s) = \frac{1}{C_4 C_L L_4 L_L R_4 R_5 R_L g_m r_o s^4 + C_4 C_L L_4 L_L R_4 R_5 R_L s^4 + C_4 C_L L_4 L_L R_4 R_5 g_m r_o s^3 + C_4 L_4 L_L R_4 R_5 g_m r_o s^3 + 2 C_4 L_4 L_$ 

10.846 INVALID-ORDER-846 
$$Z(s) = \left(\infty, \infty, \infty, \frac{R_4\left(L_4s + \frac{1}{C_4s}\right)}{L_4s + R_4 + \frac{1}{C_4s}}, R_5, \frac{L_Ls}{C_LL_Ls^2 + 1} + R_L\right)$$

 $H(s) = \frac{1}{C_4 C_L L_4 L_L R_4 R_5 g_m r_o s^4 + C_4 C_L L_4 L_L R_4 R_5 s^4 + 2 C_4 C_L L_4 L_L R_4 R_L g_m r_o s^4 + 4 C_4 C_L L_4 L_L R_4 R_5 s^4 + 2 C_4 C_L L_4 L_L R_4 R_5 r_o s^4 + 2 C_4 C_L L_4 L_L R_5 R_L g_m r_o s^4 + 2 C_4 C_L L_4 L_L R_4 R_5 R_L g_m r_o s^4 + 2 C_4 C_L L_4 R_5 R_L g_m r_o s^4 + 2 C_4 C_L L_4 R_5 R_L g_m r_o s^4 + 2 C_4 C_L L_4 R_5 R_L g_m r_o s^4 + 2 C_4 C_L L_4 R_5 R_L g_m r_o s^4 + 2 C_4 C_L L_4 R_5 R_L g_m r_o s^4 + 2 C_4 C_L L_4 R_5 R_L g_m r_o s^4 + 2 C_4 C_L L_4 R_5 R_L g_m r_o s^4 + 2 C_4 C_L L_4 R_5 R_L g_m r_o s^4 + 2 C_4 C_L L_4 R_5 R_L g_m r_o s^4 + 2 C_4 C_L L_4 R_5 R_L g_m r_o s^4 + 2 C_4 C_L L_4 R_5 R_L g_m r_o s^4 + 2 C_4 C_L R_5 R_L g_m r_o s^4 + 2 C_4 C_L R_5 R_L g_m r_o s^4 + 2 C_4 C_L R_5 R_L g_m r_o s^4 + 2 C_4 C_L R_5 R_L g_m r_o s^4 + 2 C_4 C_L R_5 R_L g_m r_o s^4 + 2 C_4 C_L R_5 R_L g_m r_o s^4 + 2 C_4 C_L R_5 R_L g_m r_o s^4 + 2 C_4 C_$ 

10.847 INVALID-ORDER-847 
$$Z(s) = \left(\infty, \infty, \infty, \frac{R_4\left(L_4s + \frac{1}{C_4s}\right)}{L_4s + R_4 + \frac{1}{C_4s}}, R_5, \frac{R_L\left(L_Ls + \frac{1}{C_Ls}\right)}{L_Ls + R_L + \frac{1}{C_Ls}}\right)$$

 $H(s) = \frac{1}{C_4 C_L L_4 L_L R_4 R_5 g_m r_o s^4 + C_4 C_L L_4 L_L R_4 R_5 s^4 + 2 C_4 C_L L_4 L_L R_4 R_L g_m r_o s^4 + 4 C_4 C_L L_4 L_L R_4 R_5 s^4 + 2 C_4 C_L L_4 L_L R_5 R_L g_m r_o s^4 + 2 C_4 C_L L_4 L_L R_5 R_L g_m r_o s^4 + 2 C_4 C_L L_4 L_L R_4 R_5 R_L g_m r_o s^4 + 2 C_4 C_L L_4 L_L R_5 R_L g_m r_o s^4 + 2 C_4 C_L L_4 R_5 R_L g_m r_o s^4 + 2 C_4 C_L R_5 R_L g_m r_o s^4 + 2 C_4 C_L R_5 R_L g_m r_o s^4 + 2 C_4 C_L R_5 R_L g_m r_o s^4 + 2 C_4 C_$ 

10.848 INVALID-ORDER-848 
$$Z(s) = \left(\infty, \infty, \infty, \frac{R_4\left(L_4s + \frac{1}{C_4s}\right)}{L_4s + R_4 + \frac{1}{C_4s}}, \frac{1}{C_5s}, R_L\right)$$

 $H(s) = \frac{R_4 R_L \left( C_4 L_4 s^2 + 1 \right) \left( -C_5 r_o s + g_m r_o + 1 \right)}{2 C_4 C_5 L_4 R_4 R_L g_m r_o s^3 + 4 C_4 C_5 L_4 R_4 r_o s^3 + 2 C_4 C_5 L_4 R_L r_o s^3 + 2 C_4 C_5 R_4 R_L r_o s^2 + C_4 L_4 R_4 g_m r_o s^2 + 2 C_4 L_4 R_L g_m r_o s^2 + 2 C_4 R_4 R_L g_m r_o s + 2 C_5 R_4 R_L g_m r_o s + 4 C_5 R_4 R_L g_m r_o s + 4 C_5 R_4 R_L g_m r_o s^2 + 2 C_4 R_4 R_L g_m r_o s^2 + 2 C_4 R_4 R_L g_m r_o s^2 + 2 C_4 R_4 R_L g_m r_o s + 2 C_5 R_4 R_L g_m r_o s^2 + 2 C_5 R_5 R_L g_m r_o$ 

10.849 INVALID-ORDER-849 
$$Z(s) = \left(\infty, \infty, \infty, \frac{R_4\left(L_4s + \frac{1}{C_4s}\right)}{L_4s + R_4 + \frac{1}{C_4s}}, \frac{1}{C_5s}, \frac{1}{C_Ls}\right)$$

$$R_4 \left( C_4 L_4 s^2 + 1 \right) \left( -C_5 r_o s + g_m r_o + 1 \right)$$

 $H(s) = \frac{R_4 \left( C_4 L_4 s^2 + 1 \right) \left( -C_5 r_o s + g_m r_o + 1 \right)}{C_4 C_5 C_L L_4 R_4 r_o s^4 + 2 C_4 C_5 L_4 R_4 g_m r_o s^3 + 4 C_4 C_5 L_4 R_4 s^3 + 2 C_4 C_5 L_4 r_o s^3 + 2 C_4 C_5 L_4 r_o s^3 + 2 C_4 L_4 R_4 g_m r_o s^3 + C_4 C_L L_4 R_4 g_m r_o s^3 + 2 C_4 L_4 g_m r_o s^2 + 2 C_4 L_4 g_m r_o s^2 + 2 C_4 R_4 g_m r_o s + 2 C_5 R_4 g_m r_o s + 4 C_5 R_4 s + 2 C_5 r_o s + C_L R_4 g_m r_o s + C_5 R_4 g_m r_o s^2 + 2 C_4 R_4 g_m r_o s^2 + 2 C_4 R_4 g_m r_o s^2 + 2 C_5 R_4 g_m r_o s + 2 C_5 R_5 g_m$ 

10.850 INVALID-ORDER-850  $Z(s) = \left(\infty, \infty, \infty, \frac{R_4\left(L_4s + \frac{1}{C_4s}\right)}{L_4s + R_4 + \frac{1}{C_4s}}, \frac{1}{C_5s}, \frac{R_L}{C_LR_Ls + 1}\right)$ 

 $H(s) = \frac{R_4 R_L \left( C_4 L_4 s^2 + 1 \right) \left( -C_5 r_o s + g_m r_o + 1 \right)}{C_4 C_5 C_L L_4 R_4 R_L r_o s^4 + 2 C_4 C_5 L_4 R_4 R_L g_m r_o s^3 + 4 C_4 C_5 L_4 R_4 R_L s^3 + C_4 C_5 L_4 R_4 R_L r_o s^3 + 2 C_4 C_5 L_4 R_L r_o s^3 + 2 C_4$ 

10.851 INVALID-ORDER-851  $Z(s) = \left(\infty, \infty, \infty, \frac{R_4\left(L_4s + \frac{1}{C_4s}\right)}{L_4s + R_4 + \frac{1}{C_4s}}, \frac{1}{C_5s}, R_L + \frac{1}{C_Ls}\right)$ 

 $H(s) = \frac{R_4 \left( C_4 L_4 s^2 + C_4 C_5 L_4 R_4 R_L g_m r_o s^4 + 4 C_4 C_5 C_L L_4 R_4 R_L s^4 + C_4 C_5 C_L L_4 R_4 r_o s^4 + 2 C_4 C_5 C_L L_4 R_4 r_o s^3 + 2 C_4 C_5 L_4 R_4 g_m r_o s^3 + 4 C_4 C_5 L_4 R_4 g_m r_o s^3 + 2 C_4 C_5 L_4 R_4 g_m r_o s^3$ 

10.852 INVALID-ORDER-852  $Z(s) = \left(\infty, \infty, \infty, \frac{R_4\left(L_4s + \frac{1}{C_4s}\right)}{L_4s + R_4 + \frac{1}{C_4s}}, \frac{1}{C_5s}, L_Ls + \frac{1}{C_Ls}\right)$ 

 $H(s) = \frac{R_4 \left( C_4 L_4 s^2 + C_4 C_5 L_4 L_4 R_4 g_m r_o s^5 + 4 C_4 C_5 L_4 L_4 L_4 r_o s^4 + 2 C_4 C_5 L_4 L_4 R_4 g_m r_o s^3 + 4 C_4 C_5 L_4 L_4 R_4 g_m r_o s^3 + 4 C_4 C_5 L_4 L_4 R_4 g_m r_o s^3 + 4 C_4 C_5 L_4 L_4 R_4 g_m r_o s^3 + 2 C_4 C_5 L_4 L_4 L_4 g_m r_o s^4 + 2 C_4 C_5 L_4 L_4 L_4 g_m r_o s^3 + 2 C_4 C_5 L_4 L_4 L_4 g_m r_o s^4 + 2 C_4 C_5 L_4 L_4 L_4 g_m r_o s^3 + 2 C_4 C_5 L_4 L_4 L_4 g_m r_o s^4 + 2 C_4 L_5 L_4 L_4 L_4 g_m r_o s^4 + 2 C_4 L_5 L_4 L_4 L_4 g_m r_o s^4 + 2 C_$ 

10.853 INVALID-ORDER-853  $Z(s) = \left(\infty, \infty, \infty, \frac{R_4\left(L_4s + \frac{1}{C_4s}\right)}{L_4s + R_4 + \frac{1}{C_4s}}, \frac{1}{C_5s}, \frac{L_Ls}{C_LL_Ls^2 + 1}\right)$ 

 $H(s) = \frac{L_L R_4 s \left(C_4 L_4 s^2 + 1\right) \left(-C_5 r_o s + g_m r_o + 1\right)}{C_4 C_5 C_L L_4 L_L R_4 r_o s^5 + 2 C_4 C_5 L_4 L_L R_4 g_m r_o s^4 + 4 C_4 C_5 L_4 L_L R_4 s^4 + 2 C_4 C_5 L_4 L_L R_4 r_o s^3 + 2 C_4 C_5 L_4 L_L R_4 r_o s^3 + 2 C_4 L_4 R_4 r_o s^3$ 

10.854 INVALID-ORDER-854  $Z(s) = \left(\infty, \infty, \infty, \frac{R_4\left(L_4s + \frac{1}{C_4s}\right)}{L_4s + R_4 + \frac{1}{C_4s}}, \frac{1}{C_5s}, L_Ls + R_L + \frac{1}{C_Ls}\right)$ 

 $H(s) = \frac{1}{2C_4C_5C_LL_4L_LR_4g_mr_os^5 + 4C_4C_5C_LL_4L_LR_4s^5 + 2C_4C_5C_LL_4L_Lr_os^5 + 2C_4C_5C_LL_4R_4R_Lg_mr_os^4 + 4C_4C_5C_LL_4R_4r_os^4 + 2C_4C_5C_LL_4R_4r_os^4 + 2C_4C_5C_LL_4R_4r_os$ 

10.855 INVALID-ORDER-855  $Z(s) = \left(\infty, \infty, \infty, \frac{R_4\left(L_4s + \frac{1}{C_4s}\right)}{L_4s + R_4 + \frac{1}{C_4s}}, \frac{1}{C_5s}, \frac{1}{C_Ls + \frac{1}{R_L} + \frac{1}{L_Ls}}\right)$ 

 $H(s) = \frac{1}{C_4 C_5 C_L L_4 L_L R_4 R_L r_o s^5 + 2 C_4 C_5 L_4 L_L R_4 R_L g_m r_o s^4 + 4 C_4 C_5 L_4 L_L R_4 R_L s^4 + C_4 C_5 L_4 L_L R_4 r_o s^4 + 2 C_4 C_5 L_4 L_L R_4 r_o s^4 + 2 C_4 C_5 L_4 R_4 R_L r_o s^3 + 2 C_4 C_5 L_L R_4 R_L r_o s^3 + 2 C_4 C_5 L_4 L_L R_4 R_L r_o s^4 + 2 C_4 C_5 L_4 L_L R_4 R_L r_o s^4 + 2 C_4 C_5 L_4 L_L R_4 R_L r_o s^4 + 2 C_4 C_5 L_4 L_L R_4 R_L r_o s^4 + 2 C_4 C_5 L_4 R_L r_$ 

10.856 INVALID-ORDER-856  $Z(s) = \left(\infty, \infty, \infty, \frac{R_4\left(L_4s + \frac{1}{C_4s}\right)}{L_4s + R_4 + \frac{1}{C_4s}}, \frac{1}{C_5s}, \frac{L_Ls}{C_LL_Ls^2 + 1} + R_L\right)$ 

 $H(s) = \frac{1}{2C_4C_5C_LL_4L_LR_4R_Lg_mr_os^5 + 4C_4C_5L_4L_LR_4R_Ls^5 + C_4C_5C_LL_4L_LR_4r_os^5 + 2C_4C_5C_LL_4L_LR_4r_os^5 + 2C_4C_5C_LL_4L_RR_4r_os^4 + 2C_4C_5L_4L_LR_4s^4 + 2C_4C_5L_4L_LR_4s^4$ 

10.857 INVALID-ORDER-857  $Z(s) = \left(\infty, \infty, \infty, \frac{R_4\left(L_4s + \frac{1}{C_4s}\right)}{L_4s + R_4 + \frac{1}{C_4s}}, \frac{1}{C_5s}, \frac{R_L\left(L_Ls + \frac{1}{C_Ls}\right)}{L_Ls + R_L + \frac{1}{C_Ls}}\right)$ 

 $H(s) = \frac{1}{2C_4C_5C_LL_4L_LR_4R_Lg_mr_os^5 + 4C_4C_5C_LL_4L_LR_4R_Ls^5 + C_4C_5C_LL_4L_LR_4r_os^5 + 2C_4C_5C_LL_4L_RR_Lr_os^5 + C_4C_5C_LL_4R_4R_Lr_os^4 + 2C_4C_5C_LL_4R_4R_Lg_mr_os^3 + 4C_4C_5L_4R_4R_Ls^3 + C_4C_5L_4R_4r_os^3 + 2C_4C_5L_4R_4R_Lr_os^4 + 2C_4C_5C_LL_4R_4R_Lr_os^4 + 2C_4C_5L_4R_4R_Lg_mr_os^3 + 4C_4C_5L_4R_4R_Ls^3 + C_4C_5L_4R_4r_os^3 + 2C_4C_5R_4R_Lr_os^4 + 2C_4C_5C_LL_4R_4R_Lr_os^4 + 2C_4C_5C_LL_4R_4$ 

10.858 INVALID-ORDER-858  $Z(s) = \left(\infty, \infty, \infty, \frac{R_4\left(L_4s + \frac{1}{C_4s}\right)}{L_4s + R_4 + \frac{1}{C_4s}}, \frac{R_5}{C_5R_5s + 1}, R_L\right)$ 

 $\frac{R_4R_L\left(C_4L_4s^2+1\right)\left(C_5R_5r_os-R_5g_mr_os^2+C_4L_4R_4R_5R_Lg_mr_os^3+4C_4C_5L_4R_4R_5R_Ls^3+C_4C_5L_4R_4R_5r_os^3+2C_4C_5R_4R_5R_Lr_os^2+C_4L_4R_4R_5g_mr_os^2+C_4L_4R_4R_5g_mr_os^2+4C_4L_4R_4R_Ls^2+C_4L_4R_4r_os^2+2C_4L_4R_5R_Lg_mr_os^2+2C_4L_4R_4R_5R_Lg_mr_os^2+2C_4L_4R_4R_5R_Lg_mr_os^2+2C_4L_4R_4R_5R_Lg_mr_os^2+2C_4L_4R_4R_5R_Lg_mr_os^2+2C_4L_4R_4R_5R_Lg_mr_os^2+2C_4L_4R_4R_5R_Lg_mr_os^2+2C_4L_4R_5R_Lg_mr_os^2+2C_4L_4R_5R_Lg_mr_os^2+2C_4L_4R_5R_Lg_mr_os^2+2C_4L_4R_5R_Lg_mr_os^2+2C_4L_4R_5R_Lg_mr_os^2+2C_4L_4R_5R_Lg_mr_os^2+2C_4L_4R_5R_Lg_mr_os^2+2C_4L_4R_5R_L$ 

10.859 INVALID-ORDER-859  $Z(s) = \left(\infty, \infty, \infty, \frac{R_4\left(L_4s + \frac{1}{C_4s}\right)}{L_4s + R_4 + \frac{1}{C_4s}}, \frac{R_5}{C_5R_5s + 1}, \frac{1}{C_Ls}\right)$ 

 $-\frac{R_4 \left(C_4 L_4 s^2+1\right) \left(C_5 R_5 r_o s-R_5 g_m r_o-R_5+r_o\right)}{C_4 C_5 C_L L_4 R_4 R_5 r_o s^4+2 C_4 C_5 L_4 R_4 R_5 g_m r_o s^3+4 C_4 C_5 L_4 R_4 R_5 r_o s^3+2 C_4 C_5 L_4 R_4 R_5 r_o s^3+2 C_4 L_4 R_4 R_5 g_m r_o s^3+2 C_4 L_4 R_4 r_o s^3+2 C_4 L_4 R_5 r_o s^2+2 C_4 L_4 R_5 r_o s^$ 

10.860 INVALID-ORDER-860  $Z(s) = \left(\infty, \infty, \infty, \frac{R_4\left(L_4s + \frac{1}{C_4s}\right)}{L_4s + R_4 + \frac{1}{C_4s}}, \frac{R_5}{C_5R_5s + 1}, \frac{R_L}{C_LR_Ls + 1}\right)$ 

 $H(s) = -\frac{1}{C_4C_5C_LL_4R_4R_5R_Lr_os^4 + 2C_4C_5L_4R_4R_5R_Lg_mr_os^3 + 4C_4C_5L_4R_4R_5R_Ls^3 + C_4C_5L_4R_4R_5R_Lr_os^3 + 2C_4C_5L_4R_4R_5R_Lr_os^3 + 2C_4C_5L_4R_5R_Lr_os^3 + 2C_4C_5L_4R_5R_Lr_os^3 + 2C_4C_5L_4R_5R_Lr_os$ 

10.861 INVALID-ORDER-861  $Z(s) = \left(\infty, \infty, \infty, \frac{R_4\left(L_4s + \frac{1}{C_4s}\right)}{L_4s + R_4 + \frac{1}{C_4s}}, \frac{R_5}{C_5R_5s + 1}, R_L + \frac{1}{C_Ls}\right)$ 

 $-\frac{1}{2C_{4}C_{5}C_{L}L_{4}R_{4}R_{5}R_{L}g_{m}r_{o}s^{4}+4C_{4}C_{5}L_{L}L_{4}R_{4}R_{5}R_{L}s^{4}+C_{4}C_{5}C_{L}L_{4}R_{4}R_{5}r_{o}s^{4}+2C_{4}C_{5}C_{L}L_{4}R_{5}R_{L}r_{o}s^{4}+2C_{4}C_{5}L_{L}R_{4}R_{5}R_{L}r_{o}s^{3}+2C_{4}C_{5}L_{4}R_{4}R_{5}g_{m}r_{o}s^{3}+4C_{4}C_{5}L_{4}R_{4}R_{5}r_{o}s^{3}+2C_{4}C_{5}L_{4}R_{5}r_{o}s^{3}+2C_{4}C_{5}L_{5}R_{4}R_{5}r_{o}s^{3}+2C_{4$ 

10.862 INVALID-ORDER-862  $Z(s) = \left(\infty, \infty, \infty, \frac{R_4\left(L_4s + \frac{1}{C_4s}\right)}{L_4s + R_4 + \frac{1}{C_4s}}, \frac{R_5}{C_5R_5s + 1}, L_Ls + \frac{1}{C_Ls}\right)$ 

 $H(s) = -\frac{1}{2C_4C_5C_LL_4L_LR_4R_5g_mr_os^5 + 4C_4C_5C_LL_4L_LR_4R_5s^5 + 2C_4C_5C_LL_4L_Rs_r_os^5 + 2C_4C_5C_LL_4R_4R_5r_os^4 + 2C_4C_5L_4R_4R_5r_os^4 + 2C_4C_5L_4R_4R_5s^3 + 2C_4C_5L_4R_4R_5s^3 + 2C_4C_5L_4R_4R_5r_os^4 + 2C_4C_5L_4L_Rs_r_os^4 + 2C_4C_5L_4R_4R_5r_os^4 + 2C_4C_5L_4R_4R_5s^3 + 2C_4C_5L_4R_5R_5s^3 + 2C_4C_5L_4R$ 

10.863 INVALID-ORDER-863  $Z(s) = \left(\infty, \infty, \infty, \frac{R_4\left(L_4s + \frac{1}{C_4s}\right)}{L_4s + R_4 + \frac{1}{C_4s}}, \frac{R_5}{C_5R_5s + 1}, \frac{L_Ls}{C_LL_Ls^2 + 1}\right)$ 

 $H(s) = -\frac{1}{C_4 C_5 C_L L_4 L_L R_4 R_5 r_o s^5 + 2 C_4 C_5 L_4 L_L R_4 R_5 g_m r_o s^4 + 4 C_4 C_5 L_4 L_L R_4 R_5 s^4 + 2 C_4 C_5 L_4 L_L R_5 r_o s^4 + 2 C_4 C_5 L_4 L_L R_4 R_5 r_o s^3 + 2 C_4 C_5 L_L R_5$ 

10.864 INVALID-ORDER-864  $Z(s) = \left(\infty, \infty, \infty, \frac{R_4\left(L_4s + \frac{1}{C_4s}\right)}{L_4s + R_4 + \frac{1}{C_Ls}}, \frac{R_5}{C_5R_5s + 1}, L_Ls + R_L + \frac{1}{C_Ls}\right)$ 

 $H(s) = -\frac{1}{2C_4C_5C_LL_4L_LR_4R_5g_mr_os^5 + 4C_4C_5C_LL_4L_LR_4R_5s^5 + 2C_4C_5C_LL_4L_Rs_5r_os^5 + 2C_4C_5C_LL_4R_4R_5R_Lg_mr_os^4 + 4C_4C_5C_LL_4R_4R_5r_os^4 + 2C_4C_5C_LL_4R_4R_5r_os^4 + 2C_4C_5C_LL_4R_5r_os^4 + 2C_4C_5C_LL_4R_5r_os^4 + 2C_4C_5C_LL_4R_5r_os^4 + 2C_4C_5C_LL_4R_5r_os^4 + 2C_4C_5C_LL_4R_5r_os^4 + 2C_4C_5C_LL_4R_5r_$ 

10.865 INVALID-ORDER-865  $Z(s) = \left(\infty, \infty, \infty, \frac{R_4\left(L_4s + \frac{1}{C_4s}\right)}{L_4s + R_4 + \frac{1}{C_4s}}, \frac{R_5}{C_5R_5s + 1}, \frac{1}{C_Ls + \frac{1}{R_L} + \frac{1}{L_Ls}}\right)$ 

 $H(s) = -\frac{1}{C_4C_5C_LL_4L_LR_4R_5R_Lr_os^5 + 2C_4C_5L_4L_LR_4R_5R_Lg_mr_os^4 + 4C_4C_5L_4L_LR_4R_5R_Ls^4 + C_4C_5L_4L_LR_4R_5R_Lr_os^4 + 2C_4C_5L_4L_LR_4R_5R_Lr_os^4 + 2C_4C_5L_4L_LR_5R_Lr_os^4 + 2C_4C_5L_4L_LR_5R_Lr_os^4 + 2C_4C_5L_4L_LR_5R_Lr_$ 

- 10.866 INVALID-ORDER-866  $Z(s) = \left(\infty, \infty, \infty, \frac{R_4\left(L_4s + \frac{1}{C_4s}\right)}{L_4s + R_4 + \frac{1}{C_4s}}, \frac{R_5}{C_5R_5s + 1}, \frac{L_Ls}{C_LL_Ls^2 + 1} + R_L\right)$
- $H(s) = -\frac{1}{2C_4C_5C_LL_4L_LR_4R_5R_Lg_mr_os^5 + 4C_4C_5C_LL_4L_LR_4R_5r_os^5 + 2C_4C_5C_LL_4L_LR_4R_5r_os^5 + 2C_4C_5C_LL_4L_RR_5R_Lr_os^4 + 2C_4C_5L_4L_LR_4R_5g_mr_os^4 + 4C_4C_5L_4L_LR_4R_5s^4 + 2C_4C_5L_4L_LR_4R_5r_os^4 + 2C_4C_5L_4L_LR_4R_5r_os^4$
- 10.867 INVALID-ORDER-867  $Z(s) = \left(\infty, \infty, \infty, \frac{R_4\left(L_4s + \frac{1}{C_4s}\right)}{L_4s + R_4 + \frac{1}{C_4s}}, \frac{R_5}{C_5R_5s + 1}, \frac{R_L\left(L_Ls + \frac{1}{C_Ls}\right)}{L_Ls + R_L + \frac{1}{C_Ls}}\right)$
- $H(s) = -\frac{1}{2C_4C_5C_LL_4L_LR_4R_5R_Lg_mr_os^5 + 4C_4C_5C_LL_4L_LR_4R_5R_Ls^5 + C_4C_5C_LL_4L_LR_4R_5r_os^5 + 2C_4C_5C_LL_4L_LR_5R_Lr_os^5 + C_4C_5C_LL_4R_4R_5R_Lr_os^4 + 2C_4C_5L_4L_RR_4R_5R_Lr_os^4 + 2C_4C_5L_4R_4R_5R_Lr_os^4 + 2C_4C_5L_4R_5R_5R_Lr_os^4 + 2C_4C_5L_4R_5R_5R_Lr_$
- 10.868 INVALID-ORDER-868  $Z(s) = \left(\infty, \infty, \infty, \frac{R_4\left(L_4s + \frac{1}{C_4s}\right)}{L_4s + R_4 + \frac{1}{C_4s}}, R_5 + \frac{1}{C_5s}, R_L\right)$
- $H(s) = \frac{R_4 R_L \left(C_4 L_4 s^2 + 1\right) \left(C_5 R_5 g_m r_o s + C_5 R_5 s_{colored} R_5 R_L r_o s^3 + 2 C_4 C_5 L_4 R_4 R_5 g_m r_o s^3 + 2 C_4 C_5 L_4 R_4 R_L g_m r_o s^3 + 2 C_4 C_5 L_4 R_4 R_L g_m r_o s^3 + 2 C_4 C_5 L_4 R_5 R_L g_m r_o s^3 + 2 C_4 C_5 R_4 R_L g_m r_o s^3 + 2 C_4 C_5 R_4 R_L g_m r_o s^3 + 2 C_4 C_5 R$
- 10.869 INVALID-ORDER-869  $Z(s) = \left(\infty, \infty, \infty, \frac{R_4\left(L_4s + \frac{1}{C_4s}\right)}{L_4s + R_4 + \frac{1}{C_4s}}, R_5 + \frac{1}{C_5s}, \frac{1}{C_Ls}\right)$
- $H(s) = \frac{R_4 \left( C_4 L_4 s^2 + 1 \right) \left( C_5 R_5 g_m r_o s + C_5 R_5 s C_5 r_o s + g_n r_o s^2 + 2 C_4 C_5 L_4 R_4 r_o s^4 + 2 C_4 C_5 L_4 R_4 r_o s^3 + 2 C_4 C_5 L_4 R_5 g_m r_o s^3 + 2 C_4 C_5 L_4 R_5 g_m r_o s^3 + 2 C_4 C_5 L_4 R_5 g_m r_o s^3 + 2 C_4 C_5 R_5 g_m r_o s^3 + 2 C_4 C_5 R_5 g_m r_o s^3 + 2 C_$
- 10.870 INVALID-ORDER-870  $Z(s) = \left(\infty, \infty, \infty, \frac{R_4\left(L_4s + \frac{1}{C_4s}\right)}{L_4s + R_4 + \frac{1}{C_4s}}, R_5 + \frac{1}{C_5s}, \frac{R_L}{C_L R_L s + 1}\right)$
- $H(s) = \frac{1}{C_4 C_5 C_L L_4 R_4 R_5 R_L g_m r_o s^4 + C_4 C_5 C_L L_4 R_4 R_5 R_L s^4 + C_4 C_5 L_4 R_4 R_1 r_o s^4 + C_4 C_5 L_4 R_4 R_5 g_m r_o s^3 + 2 C_4 C_5 L_4 R_4 R_1 g_m r_o s^3 + 2 C_4 C_5 L_4 R_1 g_m r_o s^3 + 2 C_4 C_$
- 10.871 INVALID-ORDER-871  $Z(s) = \left(\infty, \infty, \infty, \frac{R_4\left(L_4s + \frac{1}{C_4s}\right)}{L_4s + R_4 + \frac{1}{C_4s}}, R_5 + \frac{1}{C_5s}, R_L + \frac{1}{C_Ls}\right)$
- $H(s) = \frac{1}{C_4 C_5 C_L L_4 R_4 R_5 g_m r_o s^4 + C_4 C_5 C_L L_4 R_4 R_5 s^4 + 2 C_4 C_5 C_L L_4 R_4 R_L g_m r_o s^4 + 4 C_4 C_5 C_L L_4 R_4 R_L s^4 + C_4 C_5 C_L L_4 R_4 R_L s^4 + 2 C_4 C_5 C_L L_4 R_5 R_L g_m r_o s^4 + 2 C_4 C_5 C_L L_4 R_4 R_5 R_L g_m r_o s^4 + 2 C_4 C_5 C_L L_4 R_5 R_L g_m r_o s^4 + 2 C_4 C_5 C_L L_4 R_4 R_5 R_L g_m r_o s^4 + 2 C_4 C_5 C_L L_5 R_L g_m r_o s^4 + 2 C_4 C_5 C_L L_5$
- 10.872 INVALID-ORDER-872  $Z(s) = \left(\infty, \infty, \infty, \frac{R_4\left(L_4s + \frac{1}{C_4s}\right)}{L_4s + R_4 + \frac{1}{C_4s}}, R_5 + \frac{1}{C_5s}, L_Ls + \frac{1}{C_Ls}\right)$
- $H(s) = \frac{1}{2C_4C_5C_LL_4L_LR_4g_mr_os^5 + 4C_4C_5C_LL_4L_LR_4s^5 + 2C_4C_5C_LL_4L_LR_5g_mr_os^5 + 2C_4C_5C_LL_4L_LR_5s^5 + 2C_4C_5C_LL_4L_LR_5s^5 + 2C_4C_5C_LL_4R_4R_5g_mr_os^4 + C_4C_5C_LL_4R_4R_5s^4 + C_4C_5C_LL_4R_4R_5s^4 + 2C_4C_5C_LL_4R_4R_5s^4 + 2C_4C_5C_LL_4R_5s^4 + 2C_4C_5C_LL_4R_5s^4 + 2C_4C_5C_LL_4R_5s^4 + 2C_4C_5C_LL_4R_5s^4 + 2C_4C_5C_LL_4R_5s^4 + 2C_4C_5C_LL_4R_5s^4 + 2C_4C_5C_$
- 10.873 INVALID-ORDER-873  $Z(s) = \left(\infty, \infty, \infty, \frac{R_4\left(L_4s + \frac{1}{C_4s}\right)}{L_4s + R_4 + \frac{1}{C_4s}}, R_5 + \frac{1}{C_5s}, \frac{L_Ls}{C_LL_Ls^2 + 1}\right)$
- $H(s) = \frac{1}{C_4 C_5 C_L L_4 L_L R_4 R_5 q_m r_o s^5 + C_4 C_5 C_L L_4 L_L R_4 r_o s^5 + C_4 C_5 L_4 L_L R_4 q_m r_o s^4 + 4 C_4 C_5 L_4 L_L R_4 s^4 + 2 C_4 C_5 L_4 L_L R_5 q_m r_o s^4 + 2 C_4 C_5 L_4 L_L R_5 s^4 + 2 C_4 C_5 L_4 L_L R_5 q_m r_o s^3 + C_4 C_5 L_4 R_4 R_5 q_m r_o s^3 + C_4 C_5 L_4 R_4 R_5 q_m r_o s^3 + C_4 C_5 L_4 R_4 R_5 q_m r_o s^3 + C_4 C_5 L_4 R_4 R_5 q_m r_o s^4 + 2 C_4 C_5 L_4 L_L R_5 q_m r_o s^4 + 2 C_4 C_5 L_4 R_5 q_m r_o s^4 + 2 C_5 L_5 R_5 q_m r_o s^4 + 2 C_5 L_5 R_5 q_m r_o s^4 + 2 C_5 L_5 R_5 q_m$

- 10.874 INVALID-ORDER-874  $Z(s) = \left(\infty, \infty, \infty, \frac{R_4\left(L_4s + \frac{1}{C_4s}\right)}{L_4s + R_4 + \frac{1}{C_4s}}, R_5 + \frac{1}{C_5s}, L_Ls + R_L + \frac{1}{C_Ls}\right)$
- $H(s) = \frac{1}{2C_4C_5C_LL_4L_LR_4g_mr_os^5 + 4C_4C_5C_LL_4L_LR_4s^5 + 2C_4C_5C_LL_4L_LR_5g_mr_os^5 + 2C_4C_5C_LL_4L_LR_5s^5 + 2C_4C_5C_LL_4R_4R_5g_mr_os^4 + C_4C_5C_LL_4R_4R_5s^4 + 2C_4C_5C_LL_4R_4R_5s^4 + 2C_4C_5C_LL_4R_5c_LL_4R_5s^4 + 2C_4C_5C_LL_4R_5c_LL_4R_5s^4 + 2C_$
- 10.875 INVALID-ORDER-875  $Z(s) = \left(\infty, \infty, \infty, \frac{R_4\left(L_4s + \frac{1}{C_4s}\right)}{L_4s + R_4 + \frac{1}{C_4s}}, R_5 + \frac{1}{C_5s}, \frac{1}{C_Ls + \frac{1}{R_L} + \frac{1}{L_Ls}}\right)$
- $H(s) = \frac{1}{C_4 C_5 C_L L_4 L_L R_4 R_5 R_L g_m r_o s^5 + C_4 C_5 C_L L_4 L_L R_4 R_5 R_L s^5 + C_4 C_5 L_4 L_L R_4 R_5 g_m r_o s^4 + C_4 C_5 L_$
- 10.876 INVALID-ORDER-876  $Z(s) = \left(\infty, \infty, \infty, \frac{R_4\left(L_4s + \frac{1}{C_4s}\right)}{L_4s + R_4 + \frac{1}{C_4s}}, R_5 + \frac{1}{C_5s}, \frac{L_Ls}{C_LL_Ls^2 + 1} + R_L\right)$
- $H(s) = \frac{1}{C_4 C_5 C_L L_4 L_L R_4 R_5 g_m r_o s^5 + C_4 C_5 C_L L_4 L_L R_4 R_5 s^5 + 2 C_4 C_5 C_L L_4 L_L R_4 R_L g_m r_o s^5 + 2 C_4 C_5 C_L L_4 L_L R_4 R_L g_m r_o s^5 + 2 C_4 C_5 C_L L_4 L_L R_4 R_5 r_o s^5 + 2 C_4 C_5 C_L L_4 L_L R_4 R_5 r_o s^5 + 2 C_4 C_5 C_L L_4 L_L R_4 R_5 r_o s^5 + 2 C_4 C_5 C_L L_4 L_L R_5 R_L g_m r_o s^5 + 2 C_4 C_5 C_L L_4 L_L R_4 R_5 r_o s^5 + 2 C_4 C_5 C_L L_4 L_L R_5 R_L g_m r_o s^5 + 2 C_4 C_5 C_L L_5 R_L g_m r_o s^5 + 2 C_4 C_5 C_L L_5 R_L g_m r_o s^5 + 2 C_4 C_5 C_L L_5 R_L g_m r_o s^5 + 2 C_4 C_5 C_L L_5 R_L g_m r_o s^5 + 2 C_4 C_5 C_L L_5 R_L g_m r_o s^5 + 2 C_4 C_5 C_L L_5 R_L g_m r_o s^$
- 10.877 INVALID-ORDER-877  $Z(s) = \left(\infty, \infty, \infty, \frac{R_4\left(L_4s + \frac{1}{C_4s}\right)}{L_4s + R_4 + \frac{1}{C_4s}}, R_5 + \frac{1}{C_5s}, \frac{R_L\left(L_Ls + \frac{1}{C_Ls}\right)}{L_Ls + R_L + \frac{1}{C_Ls}}\right)$
- $H(s) = \frac{1}{C_4 C_5 C_L L_4 L_L R_4 R_5 g_m r_o s^5 + C_4 C_5 C_L L_4 L_L R_4 R_5 s^5 + 2 C_4 C_5 C_L L_4 L_L R_4 R_L g_m r_o s^5 + 4 C_4 C_5 C_L L_4 L_L R_4 R_L g_m r_o s^5 + 2 C_4 C_5 C_L L_4 L_L R_5 R_L g_m r_o s^5 + 2 C_4 C_5 C_L L_5 R_L g_m r_o s^5 + 2 C_4 C_5 C_L L_5 R_L g_m r_o s^5 + 2 C_4 C_5 C_L L_5 R_L g_m r_o s^5 + 2 C_4 C_5 C_L L_5 R_L g_m r_o s^5 + 2 C_4 C_$
- **10.878** INVALID-ORDER-878  $Z(s) = \left(\infty, \infty, \infty, \frac{R_4\left(L_4s + \frac{1}{C_4s}\right)}{L_4s + R_4 + \frac{1}{C_4s}}, L_5s + \frac{1}{C_5s}, R_L\right)$
- $H(s) = \frac{R_4 R_L \left(C_4 L_4 s^2 + 1\right) \left(C_5 L_5 g_m r_o s^2 + C_5 L_5 L_5 R_4 R_L g_m r_o s^4 + C_4 C_5 L_4 L_5 R_4 g_m r_o s^4 + C_4 C_5 L_4 L_5 R_L g_m r_o s^4 + C_4 C_5 L_4 R_4 R_L g_m r_o s^3 + 2 C_4 C_5 L_4 R_4 R_L g_m r_o s^3 + 2 C_4 C_5 L_4 R_4 R_L g_m r_o s^3 + 2 C_4 C_5 R_4 R$
- 10.879 INVALID-ORDER-879  $Z(s) = \left(\infty, \infty, \infty, \frac{R_4\left(L_4s + \frac{1}{C_4s}\right)}{L_4s + R_4 + \frac{1}{C_4s}}, L_5s + \frac{1}{C_5s}, \frac{1}{C_Ls}\right)$
- $H(s) = \frac{R_4 \left( C_4 L_4 s^2 + 1 \right) \left( C_5 L_5 g_m r_o s^2 + C_5 L_5 s^2 C_5 r_o s + g_a r_o s^2 + C_5 L_5 s^2 C_5 r_o s + g_a r_o s^2 + C_5 L_4 r_o s^3 + 2 C_4 r_o s^3$
- 10.880 INVALID-ORDER-880  $Z(s) = \left(\infty, \infty, \infty, \frac{R_4\left(L_4s + \frac{1}{C_4s}\right)}{L_4s + R_4 + \frac{1}{C_4s}}, L_5s + \frac{1}{C_5s}, \frac{R_L}{C_LR_Ls + 1}\right)$
- $H(s) = \frac{1}{C_4C_5C_LL_4L_5R_4R_Lg_mr_os^5 + C_4C_5C_LL_4L_5R_4R_Ls^5 + C_4C_5C_LL_4R_4R_Lr_os^4 + C_4C_5L_4L_5R_4g_mr_os^4 + C_4C_5L_4L_5R_Lg_mr_os^4 + 2C_4C_5L_4L_5R_Lg_mr_os^4 + 2C_4C_5L_4R_4R_Lg_mr_os^3 + 4C_4C_5L_4R_4R_Ls^3 + C_4C_5L_4R_4R_Ls^3 + 2C_4C_5L_4R_4R_Ls^3 + 2C_4C_5L_4$
- 10.881 INVALID-ORDER-881  $Z(s) = \left(\infty, \infty, \infty, \frac{R_4\left(L_4s + \frac{1}{C_4s}\right)}{L_4s + R_4 + \frac{1}{C_4s}}, L_5s + \frac{1}{C_5s}, R_L + \frac{1}{C_Ls}\right)$
- $H(s) = \frac{1}{C_4 C_5 C_L L_4 L_5 R_4 q_m r_o s^5 + C_4 C_5 C_L L_4 L_5 R_4 s^5 + 2 C_4 C_5 C_L L_4 L_5 R_L q_m r_o s^5 + 2 C_4 C_5 C_L L_4 R_4 R_L q_m r_o s^4 + 4 C_4 C_5 C_L L_4 R_4 R_L q_m r_o s^4 + 2 C_4 C_5 C_L L_4 R_4 R_L q_m r_o s^4 + 2 C_4 C_5 C_L L_4 R_4 R_L q_m r_o s^4 + 2 C_4 C_5 C_L L_4 R_4 R_L q_m r_o s^4 + 2 C_4 C_5 C_L L_4 R_4 R_L q_m r_o s^4 + 2 C_4 C_5 C_L L_4 R_4 R_L q_m r_o s^4 + 2 C_4 C_5 C_L L_4 R_4 R_L q_m r_o s^4 + 2 C_4 C_5 C_L L_4 R_4 R_L q_m r_o s^4 + 2 C_4 C_5 C_L L_4 R_4 R_L q_m r_o s^4 + 2 C_4 C_5 C_L L_4 R_4 R_L q_m r_o s^4 + 2 C_4 C_5 C_L L_4 R_4 R_L q_m r_o s^4 + 2 C_4 C_5 C_L L_4 R_4 R_L q_m r_o s^4 + 2 C_4 C_5 C_L L_4 R_4 R_L q_m r_o s^4 + 2 C_4 C_5 C_L L_4 R_4 R_L q_m r_o s^4 + 2 C_4 C_5 C_L L_4 R_4 R_L q_m r_o s^4 + 2 C_4 C_5 C_L L_4 R_4 R_L q_m r_o s^4 + 2 C_4 C_5 C_L L_4 R_4 R_L q_m r_o s^4 + 2 C_4 C_5 C_L L_4 R_4 R_L q_m r_o s^4 + 2 C_4 C_5 C_L L_5 R_L q_m r_o s^4 + 2 C_4 C_5 C_L L_5 R_L q_m r_o s^4 + 2 C_4 C_5 C_L L_5 R_L q_m r_o s^4 + 2 C_4 C_5 C_L L_5 R_L q_m r_o s^4 + 2 C_4 C_5 C_L L_5 R_L q_m r_o s^4 + 2 C_4 C_5 C_L L_5 R_L q_m r_o s^4 + 2 C_4 C_5 C_L L_5 R_L q_m r_o s^4 + 2 C_4 C_5 C_L L_5 R_L q_m r_o s^$

- 10.882 INVALID-ORDER-882  $Z(s) = \left(\infty, \infty, \infty, \frac{R_4\left(L_4s + \frac{1}{C_4s}\right)}{L_4s + R_4 + \frac{1}{C_4s}}, L_5s + \frac{1}{C_5s}, L_Ls + \frac{1}{C_Ls}\right)$
- $H(s) = \frac{1}{2C_4C_5C_LL_4L_5L_Lg_mr_os^6 + 2C_4C_5C_LL_4L_5L_Ls^6 + C_4C_5C_LL_4L_5R_4g_mr_os^5 + C_4C_5C_LL_4L_LR_4g_mr_os^5 + 4C_4C_5C_LL_4L_LR_4s^5 + 2C_4C_5C_LL_4L_LR_4s^5 + 2C_4C_5C_LL_4L_5C_LL_4L_5C_LL_4L_5C_LL_4L_5C_LL_4L_5C_LL_4L_5C_LL_4L_5C_LL_4L_5C_LL_5C$
- 10.883 INVALID-ORDER-883  $Z(s) = \left(\infty, \infty, \infty, \frac{R_4\left(L_4s + \frac{1}{C_4s}\right)}{L_4s + R_4 + \frac{1}{C_4s}}, L_5s + \frac{1}{C_5s}, \frac{L_Ls}{C_LL_Ls^2 + 1}\right)$
- $H(s) = \frac{1}{C_4 C_5 C_L L_4 L_5 L_L R_4 g_m r_o s^6 + C_4 C_5 C_L L_4 L_5 L_L R_4 s^6 + C_4 C_5 C_L L_4 L_L R_4 r_o s^5 + 2 C_4 C_5 L_4 L_5 L_L g_m r_o s^5 + 2 C_4 C_5 L_4 L_5 L_L s^5 + C_4 C_5 L_4 L_5 R_4 g_m r_o s^4 + C_4 C_5 L_4 L_L R_4 g_m r_o s^4 + 2 C_4 C_5 L_4 L_L R_4 s^6 + 2 C_4 C_5 L_4 L_L R_4 s^6$
- **10.884** INVALID-ORDER-884  $Z(s) = \left(\infty, \infty, \infty, \frac{R_4\left(L_4s + \frac{1}{C_4s}\right)}{L_4s + R_4 + \frac{1}{C_4s}}, L_5s + \frac{1}{C_5s}, L_Ls + R_L + \frac{1}{C_Ls}\right)$
- $H(s) = \frac{1}{2C_4C_5C_LL_4L_5L_Lg_mr_os^6 + 2C_4C_5C_LL_4L_5L_Ls^6 + C_4C_5C_LL_4L_5R_4g_mr_os^5 + 2C_4C_5C_LL_4L_5R_Lg_mr_os^5 + 2C_4C_5C_LL_4L_5R_Lg_mr_$
- 10.885 INVALID-ORDER-885  $Z(s) = \left(\infty, \infty, \infty, \frac{R_4\left(L_4s + \frac{1}{C_4s}\right)}{L_4s + R_4 + \frac{1}{C_4s}}, L_5s + \frac{1}{C_5s}, \frac{1}{C_Ls + \frac{1}{R_L} + \frac{1}{L_Ls}}\right)$
- $H(s) = \frac{1}{C_4 C_5 C_L L_4 L_5 L_L R_4 R_L g_m r_o s^6 + C_4 C_5 C_L L_4 L_5 L_L R_4 R_L s^6 + C_4 C_5 L_4 L_5 L_L R_4 g_m r_o s^5 + C_4 C_5 L_4 L_5 L_4 L_5 L_4 L_5 L_4 R_4 g_m r_o s^5 + C_4 C_5 L_4 L_5 L_4 R_4 g_m r_o s^5 + C_4 C_5 L_4 L_5 L_4 R_4 g_m r_o s^5 + C_4 C_5 L_4 L_5 L_4 R_4 g_m r_o s^5 + C_4 C_5 L_4 L_5 L_4 R_4 g_m r_o s^5 + C_4 C_5 L_4 L_5 L_4 R_4 g_m r_o$
- 10.886 INVALID-ORDER-886  $Z(s) = \left(\infty, \infty, \infty, \frac{R_4\left(L_4s + \frac{1}{C_4s}\right)}{L_4s + R_4 + \frac{1}{C_4s}}, L_5s + \frac{1}{C_5s}, \frac{L_Ls}{C_LL_Ls^2 + 1} + R_L\right)$
- $H(s) = \frac{1}{C_4 C_5 C_L L_4 L_5 L_L R_4 g_m r_o s^6 + C_4 C_5 C_L L_4 L_5 L_L R_4 s^6 + 2 C_4 C_5 C_L L_4 L_5 L_L R_L g_m r_o s^6 + 2 C_4 C_5 C_L L_4 L_5 L_L R_4 g_m r_o s^5 + 4 C_4 C_5 C_L L_4 L_L R_4 R_L g_m r_o s^5 + 2 C_4 C_5 C_L L_4 L_L R_4 r_o s^5 + 2 C_4 C_5 C_L L_4 L_L R_$
- 10.887 INVALID-ORDER-887  $Z(s) = \left(\infty, \infty, \infty, \frac{R_4\left(L_4s + \frac{1}{C_4s}\right)}{L_4s + R_4 + \frac{1}{C_4s}}, L_5s + \frac{1}{C_5s}, \frac{R_L\left(L_Ls + \frac{1}{C_Ls}\right)}{L_Ls + R_L + \frac{1}{C_Ls}}\right)$
- $H(s) = \frac{1}{C_4 C_5 C_L L_4 L_5 L_L R_4 g_m r_o s^6 + C_4 C_5 C_L L_4 L_5 L_L R_4 s^6 + 2 C_4 C_5 C_L L_4 L_5 L_L R_L g_m r_o s^6 + 2 C_4 C_5 C_L L_4 L_5 L_L R_L s^6 + C_4 C_5 C_L L_4 L_5 R_4 R_L g_m r_o s^5 + C_4 C_5 C_L L_4 L_5 R_4 R_L g_m r_o s^5 + 2 C_4 C_5 C_L L_4 L_5 R_L g_m r_o s^5 + 2 C_4 C_5 C_L L_4 L_5 R_L g_m r_o s^$
- 10.888 INVALID-ORDER-888  $Z(s) = \left(\infty, \infty, \infty, \frac{R_4\left(L_4s + \frac{1}{C_4s}\right)}{L_4s + R_4 + \frac{1}{C_4s}}, \frac{L_5s}{C_5L_5s^2 + 1}, R_L\right)$
- 10.889 INVALID-ORDER-889  $Z(s) = \left(\infty, \infty, \infty, \frac{R_4\left(L_4s + \frac{1}{C_4s}\right)}{L_4s + R_4 + \frac{1}{C_4s}}, \frac{L_5s}{C_5L_5s^2 + 1}, \frac{1}{C_Ls}\right)$
- $H(s) = -\frac{R_4 \left(C_4 L_4 s^2 + 1\right) \left(C_5 L_5 r_o s^2 L_5 g_m r_o s L_5 s + r_o\right)}{C_4 C_5 C_L L_4 L_5 R_4 r_o s^5 + 2 C_4 C_5 L_4 L_5 R_4 g_m r_o s^4 + 4 C_4 C_5 L_4 L_5 R_4 s^4 + 2 C_4 C_5 L_4 L_5 R_4 s^4 + C_4 C_L L_4 L_5 R_4 s^4 + C_4 C_L L_4 L_5 R_4 s^4 + 2 C_4 L_5 L_5 R_5 R_5 r_5 + 2 C_4 L_5 L_5 R_5 R_5 r_5 + 2 C_5 L_5 R_5 r_5$

- 10.890 INVALID-ORDER-890  $Z(s) = \left(\infty, \infty, \infty, \frac{R_4\left(L_4s + \frac{1}{C_4s}\right)}{L_4s + R_4 + \frac{1}{C_4s}}, \frac{L_5s}{C_5L_5s^2 + 1}, \frac{R_L}{C_LR_Ls + 1}\right)$
- $H(s) = -\frac{1}{C_4 C_5 C_L L_4 L_5 R_4 R_L r_o s^5 + 2 C_4 C_5 L_4 L_5 R_4 R_L g_m r_o s^4 + 4 C_4 C_5 L_4 L_5 R_4 R_L s^4 + C_4 C_5 L_4 L_5 R_4 r_o s^4 + 2 C_4 C_5 L_4 L_5 R_4 R_L r_o s^3 + C_4 C_L L_4 L_5 R_4 R_L g_m r_o s^4 + C_4 C_L L_4 L_5 R_4 R_L r_o s^3 + C_4 L_4 L_5 R$
- 10.891 INVALID-ORDER-891  $Z(s) = \left(\infty, \infty, \infty, \frac{R_4\left(L_4s + \frac{1}{C_4s}\right)}{L_4s + R_4 + \frac{1}{C_4s}}, \frac{L_5s}{C_5L_5s^2 + 1}, R_L + \frac{1}{C_Ls}\right)$
- $H(s) = -\frac{1}{2C_4C_5C_LL_4L_5R_4R_Lg_mr_os^5 + 4C_4C_5C_LL_4L_5R_4R_Ls^5 + C_4C_5C_LL_4L_5R_4r_os^5 + 2C_4C_5C_LL_4L_5R_4r_os^5 + 2C_4C_5C_LL_4L_5R_4r_os^4 + 2C_4C_5L_4L_5R_4g_mr_os^4 + 4C_4C_5L_4L_5R_4s^4 + 2C_4C_5L_4L_5R_4s^4 + 2C_4C_5L_4L_5R_4r_os^3 + C_4C_LL_4L_5R_4r_os^4 + 2C_4C_5L_4L_5R_4r_os^4 + 2C_4C_5L_4L_5R_$
- 10.892 INVALID-ORDER-892  $Z(s) = \left(\infty, \infty, \infty, \frac{R_4\left(L_4s + \frac{1}{C_4s}\right)}{L_4s + R_4 + \frac{1}{C_4s}}, \frac{L_5s}{C_5L_5s^2 + 1}, L_Ls + \frac{1}{C_Ls}\right)$
- $H(s) = -\frac{1}{2C_4C_5C_LL_4L_5L_LR_4g_mr_os^6 + 4C_4C_5C_LL_4L_5L_LR_4s^6 + 2C_4C_5C_LL_4L_5L_Lr_os^6 + C_4C_5C_LL_4L_5R_4r_os^5 + 2C_4C_5L_4L_5R_4g_mr_os^4 + 4C_4C_5L_4L_5R_4s^4 + 2C_4C_5L_4L_5r_os^4 + 2C_4C_5L_4L_5L_Rr_os^5 + 2C_4C_5L_4L_5L_Rr_os^5 + 2C_4C_5L_4L_5R_4r_os^5 + 2C_4C_5L_4L_5R_4r$
- 10.893 INVALID-ORDER-893  $Z(s) = \left(\infty, \infty, \infty, \frac{R_4\left(L_4s + \frac{1}{C_4s}\right)}{L_4s + R_4 + \frac{1}{C_4s}}, \frac{L_5s}{C_5L_5s^2 + 1}, \frac{L_Ls}{C_LL_Ls^2 + 1}\right)$
- $H(s) = -\frac{1}{C_4C_5C_LL_4L_5L_LR_4r_os^6 + 2C_4C_5L_4L_5L_LR_4g_mr_os^5 + 4C_4C_5L_4L_5L_LR_4s^5 + 2C_4C_5L_4L_5L_Lr_os^5 + C_4C_5L_4L_5R_4r_os^4 + 2C_4C_5L_5L_LR_4r_os^4 + C_4C_LL_4L_5L_LR_4g_mr_os^5 + C_4C_LL_4L_5L_LR_4s^5 + C_4C_LL_4L_5L_LR_4r_os^4 + 2C_4L_4L_5L_LR_4r_os^4 + 2C_4L_4L_5L_4r_os^4 + 2C_4L_5L_4r_os^4 + 2C_4L_5L_5L_5r_os^4 + 2C_4L_5L_5r_os^4 + 2C_4L_5L_5r_os^4 + 2C_4L_5L_5r_os^4 + 2C_4L_5L_5r_os^4 + 2C_4L_5L_5r_os^4 + 2C_5$
- 10.894 INVALID-ORDER-894  $Z(s) = \left(\infty, \infty, \infty, \frac{R_4\left(L_4s + \frac{1}{C_4s}\right)}{L_4s + R_4 + \frac{1}{C_4s}}, \frac{L_5s}{C_5L_5s^2 + 1}, L_Ls + R_L + \frac{1}{C_Ls}\right)$
- $H(s) = -\frac{1}{2C_4C_5C_LL_4L_5L_LR_4g_mr_os^6 + 4C_4C_5C_LL_4L_5L_LR_4s^6 + 2C_4C_5C_LL_4L_5L_Lr_os^6 + 2C_4C_5C_LL_4L_5R_4R_Lg_mr_os^5 + 4C_4C_5C_LL_4L_5R_4R_Ls^5 + C_4C_5C_LL_4L_5R_4r_os^5 + 2C_4C_5C_LL_4L_5R_4r_os^5 + 2C_4C_5C_LL_4R_5r_os^5 + 2C_4C_5C_LL_4R_5r_os^5 + 2C_4C_5C_LL_4R_5r_os^5 + 2C_4C_5C_LL_5$
- 10.895 INVALID-ORDER-895  $Z(s) = \left(\infty, \infty, \infty, \frac{R_4\left(L_4s + \frac{1}{C_4s}\right)}{L_4s + R_4 + \frac{1}{C_4s}}, \frac{L_5s}{C_5L_5s^2 + 1}, \frac{1}{C_Ls + \frac{1}{R_L} + \frac{1}{L_Ls}}\right)$
- $H(s) = -\frac{1}{C_4C_5C_LL_4L_5L_LR_4R_Lr_os^6 + 2C_4C_5L_4L_5L_LR_4R_Lg_mr_os^5 + 4C_4C_5L_4L_5L_LR_4r_os^5 + 2C_4C_5L_4L_5L_LR_4r_os^5 + 2C_4C_5L_4L_5L_4r_os^5 + 2C_4C_5L_4r_os^5 + 2$
- 10.896 INVALID-ORDER-896  $Z(s) = \left(\infty, \infty, \infty, \frac{R_4\left(L_4s + \frac{1}{C_4s}\right)}{L_4s + R_4 + \frac{1}{C_4s}}, \frac{L_5s}{C_5L_5s^2 + 1}, \frac{L_Ls}{C_LL_Ls^2 + 1} + R_L\right)$
- $H(s) = -\frac{1}{2C_4C_5C_LL_4L_5L_LR_4R_Lg_mr_os^6 + 4C_4C_5C_LL_4L_5L_LR_4r_os^6 + 2C_4C_5C_LL_4L_5L_LR_4r_os^6 + 2C_4C_5C_LL_4L_5L_Rr_os^6 + 2C_4C_5C_LL_$
- 10.897 INVALID-ORDER-897  $Z(s) = \left(\infty, \infty, \infty, \frac{R_4\left(L_4s + \frac{1}{C_4s}\right)}{L_4s + R_4 + \frac{1}{C_4s}}, \frac{L_5s}{C_5L_5s^2 + 1}, \frac{R_L\left(L_Ls + \frac{1}{C_Ls}\right)}{L_Ls + R_L + \frac{1}{C_Ls}}\right)$
- $H(s) = -\frac{1}{2C_4C_5C_LL_4L_5L_LR_4R_Lg_mr_os^6 + 4C_4C_5C_LL_4L_5L_LR_4r_os^6 + 2C_4C_5C_LL_4L_5L_LR_4r_os^6 + 2C_4C_5C_LL_4L_5L_RR_4r_os^6 + 2C_4C_5C_LL_4L_5L_4r_os^6 + 2C_4C_5C_LL_4L_5L_4r_os^6 + 2C_4C_5C_LL_4L_5L_4r_os^6 + 2C_4C_5C_LL_4r_os^6 + 2C_4C_5C_LL_4r_os^6 + 2C_4C_5C_LL_4r_os^6 + 2C_4C_5C_LL_4r_os^6 + 2C_4C_5C_LL_4r_os^6 + 2C_4C_5C_LL_4r_os^6 + 2C_4C_5C_LL$

- 10.898 INVALID-ORDER-898  $Z(s) = \left(\infty, \infty, \infty, \frac{R_4\left(L_4s + \frac{1}{C_4s}\right)}{L_4s + R_4 + \frac{1}{C_4s}}, L_5s + R_5 + \frac{1}{C_5s}, R_L\right)$
- $H(s) = \frac{1}{C_4 C_5 L_4 L_5 R_4 g_m r_o s^4 + C_4 C_5 L_4 L_5 R_4 s^4 + 2 C_4 C_5 L_4 L_5 R_L g_m r_o s^4 + 2 C_4 C_5 L_4 R_5 g_m r_o s^3 + 2 C_4 C_5 L_4 R_4 R_5 g_m r_o s^3 + 2 C_4 C_5 L_4 R_4 R_L g_m r_o s^3 + 2 C_4 C_5 L_4 R_4 R_L g_m r_o s^3 + 2 C_4 C_5 L_4 R_5 R_L g_m r_o s^$
- 10.899 INVALID-ORDER-899  $Z(s) = \left(\infty, \infty, \infty, \frac{R_4\left(L_4s + \frac{1}{C_4s}\right)}{L_4s + R_4 + \frac{1}{C_4s}}, L_5s + R_5 + \frac{1}{C_5s}, \frac{1}{C_Ls}\right)$
- $H(s) = \frac{1}{C_4 C_5 C_L L_4 L_5 R_4 g_m r_o s^5 + C_4 C_5 C_L L_4 L_5 R_4 s^5 + C_4 C_5 C_L L_4 R_4 R_5 g_m r_o s^4 + C_4 C_5 C_L L_4 R_4 R_5 s^4 + C_4 C_5 C_L L_4 R_4 r_o s^4 + 2 C_4 C_5 L_4 L_5 g_m r_o s^4 + 2 C_4 C_5 L_4 L_5 g_m r_o s^3 + 4 C_4 C_5 L_4 R_4 g_m r_o s^3 + 2 C_4 C_5 L_4 R_5 g_m r_o s^3 + 2 C_4 C_5 L_5 R_5 g_m r_o s^3 + 2 C_4 C_5 L_5 R_5 g_m r_o s^3 + 2 C_5 L_5 R_5 g_m r_o s^3 + 2$
- 10.900 INVALID-ORDER-900  $Z(s) = \left(\infty, \infty, \infty, \frac{R_4\left(L_4s + \frac{1}{C_4s}\right)}{L_4s + R_4 + \frac{1}{C_4s}}, L_5s + R_5 + \frac{1}{C_5s}, \frac{R_L}{C_LR_Ls + 1}\right)$
- $H(s) = \frac{1}{C_4 C_5 C_L L_4 L_5 R_4 R_L g_m r_o s^5 + C_4 C_5 C_L L_4 L_5 R_4 R_L s^5 + C_4 C_5 C_L L_4 R_4 R_5 R_L g_m r_o s^4 + C_4 C_5 C_L L_4 R_4 R_5 R_L s^4 + C_4 C_5 C_L L_4 R_5 R_L s^4 + C_4 C_5 C_L L_5 R_L s^4 + C_5 C_L$
- 10.901 INVALID-ORDER-901  $Z(s) = \left(\infty, \infty, \infty, \frac{R_4\left(L_4s + \frac{1}{C_4s}\right)}{L_4s + R_4 + \frac{1}{C_4s}}, L_5s + R_5 + \frac{1}{C_5s}, R_L + \frac{1}{C_Ls}\right)$
- $H(s) = \frac{1}{C_4 C_5 C_L L_4 L_5 R_4 g_m r_o s^5 + C_4 C_5 C_L L_4 L_5 R_4 s^5 + 2 C_4 C_5 C_L L_4 L_5 R_L g_m r_o s^5 + 2 C_4 C_5 C_L L_4 R_4 R_5 g_m r_o s^4 + 2 C_4 C_5 C_L L_4 R_4 R_5 g_m r_o s^4 + 2 C_4 C_5 C_L L_4 R_4 R_L g_m r_o s^4 + 2 C_4 C_5 C_L L_4 R_5 R_L g_m r_o s^4 + 2 C_4 C_5 C_L L_4 R_4 R_L g_m r_o s^4 + 2 C_$
- 10.902 INVALID-ORDER-902  $Z(s) = \left(\infty, \infty, \infty, \frac{R_4\left(L_4s + \frac{1}{C_4s}\right)}{L_4s + R_4 + \frac{1}{C_4s}}, L_5s + R_5 + \frac{1}{C_5s}, L_Ls + \frac{1}{C_Ls}\right)$
- $H(s) = \frac{1}{2C_4C_5C_LL_4L_5L_Lg_mr_os^6 + 2C_4C_5C_LL_4L_5L_Ls^6 + C_4C_5C_LL_4L_5R_4g_mr_os^5 + 2C_4C_5C_LL_4L_LR_4g_mr_os^5 + 4C_4C_5C_LL_4L_LR_4s^5 + 2C_4C_5C_LL_4L_LR_4s^5 + 2C_4C_5C_LL_4L_LR_4s^5 + 2C_4C_5C_LL_4L_LR_5s^5 + 2C_4C_5C_LL_4L_LR_5s^5 + 2C_4C_5C_LL_4L_LR_4s^5 + 2C_4C_5C_LL_4L_LR_4s^5 + 2C_4C_5C_LL_4L_LR_5s^5 + 2C_4C_5C_LL_4L_5C_LL_4L_5c_LL_4c_LR_5s^5 + 2C_4C_5C_LL_4L_5c_LL_4c_LR_5s^5 + 2C_4C_5C_LL_4c_LR_5s^5 + 2C_4C_5C_LL_4c_LR_5s^5 + 2C_4C_5C_LL_4c_LR_5s^5 + 2C_4C_5C_LL_4c_LR_5s^5 + 2C_4C_5C_LL_4$
- 10.903 INVALID-ORDER-903  $Z(s) = \left(\infty, \infty, \infty, \frac{R_4\left(L_4s + \frac{1}{C_4s}\right)}{L_4s + R_4 + \frac{1}{C_4s}}, L_5s + R_5 + \frac{1}{C_5s}, \frac{L_Ls}{C_LL_Ls^2 + 1}\right)$
- $H(s) = \frac{1}{C_4 C_5 C_L L_4 L_5 L_L R_4 g_m r_o s^6 + C_4 C_5 C_L L_4 L_5 L_L R_4 s^6 + C_4 C_5 C_L L_4 L_L R_4 R_5 g_m r_o s^5 + C_4 C_5 C_L L_4 L_L R_4 R_5 s^5 + C_4 C_5 L_4 L_L R_4 r_o s^5 + 2 C_4 C_5 L_4 L_5 L_L g_m r_o s^5 + 2 C_4 C_5 L_4 L_5 L_L g_m r_o s^5 + 2 C_4 C_5 L_4 L_5 L_L g_m r_o s^5 + 2 C_4 C_5 L_4 L_5 L_L g_m r_o s^5 + 2 C_4 C_5 L_4 L_5 R_4 g_m r_o s^4 + C_4 C_5 L_5 R_4 g_m r_o s^4 + C_4 C_5 L_5 R_5 g_m r_o s^4 + C_4 C_5 L_5 R_5 g_m r_o s^4 + C_4 C_5 L_5 R_5$
- 10.904 INVALID-ORDER-904  $Z(s) = \left(\infty, \infty, \infty, \frac{R_4\left(L_4s + \frac{1}{C_4s}\right)}{L_4s + R_4 + \frac{1}{C_4s}}, L_5s + R_5 + \frac{1}{C_5s}, L_Ls + R_L + \frac{1}{C_Ls}\right)$
- $H(s) = \frac{1}{2C_4C_5C_LL_4L_5L_Lg_mr_os^6 + 2C_4C_5C_LL_4L_5L_Ls^6 + C_4C_5C_LL_4L_5R_4g_mr_os^5 + 2C_4C_5C_LL_4L_5R_Lg_mr_os^5 + 2C_4C_5C_LL_4L_5R_Lg_mr_$
- 10.905 INVALID-ORDER-905  $Z(s) = \left(\infty, \infty, \infty, \frac{R_4\left(L_4s + \frac{1}{C_4s}\right)}{L_4s + R_4 + \frac{1}{C_4s}}, L_5s + R_5 + \frac{1}{C_5s}, \frac{1}{C_Ls + \frac{1}{R_L} + \frac{1}{L_Ls}}\right)$

- **10.906** INVALID-ORDER-906  $Z(s) = \left(\infty, \infty, \infty, \frac{R_4\left(L_4s + \frac{1}{C_4s}\right)}{L_4s + R_4 + \frac{1}{C_4s}}, L_5s + R_5 + \frac{1}{C_5s}, \frac{L_Ls}{C_LL_Ls^2 + 1} + R_L\right)$
- $H(s) = \frac{1}{C_4 C_5 C_L L_4 L_5 L_L R_4 g_m r_o s^6 + C_4 C_5 C_L L_4 L_5 L_L R_4 s^6 + 2 C_4 C_5 C_L L_4 L_5 L_L R_4 g_m r_o s^6 + 2 C_4 C_5 C_L L_4 L_5 L_L R_4 g_m r_o s^6 + 2 C_4 C_5 C_L L_4 L_L R_4 R_5 g_m r_o s^5 + 2 C_4 C_5 C_L L_4 L_$
- 10.907 INVALID-ORDER-907  $Z(s) = \left(\infty, \infty, \infty, \frac{R_4\left(L_4s + \frac{1}{C_4s}\right)}{L_4s + R_4 + \frac{1}{C_4s}}, L_5s + R_5 + \frac{1}{C_5s}, \frac{R_L\left(L_Ls + \frac{1}{C_Ls}\right)}{L_Ls + R_L + \frac{1}{C_Ls}}\right)$
- $H(s) = \frac{1}{C_4 C_5 C_L L_4 L_5 L_L R_4 g_m r_o s^6 + C_4 C_5 C_L L_4 L_5 L_L R_4 s^6 + 2 C_4 C_5 C_L L_4 L_5 L_L R_L g_m r_o s^6 + 2 C_4 C_5 C_L L_4 L_5 L_L R_L g_m r_o s^6 + 2 C_4 C_5 C_L L_4 L_5 L_L R_4 g_m r_o s^5 + C_4 C_5 C_L L_4 L_5 R_4 R_L g_m r_o s^5 + C_4 C_5 C_L L_5 R_L g_m r_o s^5 + C_4 C_5 C_L L_5 R_L g_m r_$
- **10.908** INVALID-ORDER-908  $Z(s) = \left(\infty, \infty, \infty, \frac{R_4\left(L_4s + \frac{1}{C_4s}\right)}{L_4s + R_4 + \frac{1}{C_4s}}, \frac{1}{C_5s + \frac{1}{R_5} + \frac{1}{L_5s}}, R_L\right)$
- $H(s) = -\frac{1}{2C_4C_5L_4L_5R_4R_5R_Lg_mr_os^4 + 4C_4C_5L_4L_5R_4R_5R_Ls^4 + C_4C_5L_4L_5R_4R_5r_os^4 + 2C_4C_5L_4L_5R_4R_5R_Lr_os^3 + C_4L_4L_5R_4R_5g_mr_os^3 + C_4L_4L_5R_4R_5g_mr_os^3 + 4C_4L_4L_5R_4R_5g_mr_os^3 + 4C_4L_5R_4R_5g_mr_os^3 + 4C_4L_4L_5R_4R_5g_mr_os^3 + 4C_4L_4L_5R_$
- 10.909 INVALID-ORDER-909  $Z(s) = \left(\infty, \infty, \infty, \frac{R_4\left(L_4s + \frac{1}{C_4s}\right)}{L_4s + R_4 + \frac{1}{C_4s}}, \frac{1}{C_5s + \frac{1}{R_5} + \frac{1}{L_5s}}, \frac{1}{C_Ls}\right)$
- $H(s) = -\frac{1}{C_4C_5C_LL_4L_5R_4R_5r_os^5 + 2C_4C_5L_4L_5R_4R_5g_mr_os^4 + 4C_4C_5L_4L_5R_4R_5s^4 + 2C_4C_5L_4L_5R_4R_5r_os^3 + C_4C_LL_4L_5R_4R_5g_mr_os^4 + C_4C_LL_4L_5R_4R_5s^4 + C_4C_LL_4L_5R_4R_5r_os^3 + 2C_4L_4L_5R_4R_5r_os^3 + 2C_4L_5L_5R_5r_os^3 + 2C_4L_5L_5R_5r_os^3 + 2C_4L_5L_5R_5r_os$
- 10.910 INVALID-ORDER-910  $Z(s) = \left(\infty, \infty, \infty, \frac{R_4\left(L_4s + \frac{1}{C_4s}\right)}{L_4s + R_4 + \frac{1}{C_4s}}, \frac{1}{C_5s + \frac{1}{R_5} + \frac{1}{L_5s}}, \frac{R_L}{C_LR_Ls + 1}\right)$
- $H(s) = -\frac{1}{C_4 C_5 C_L L_4 L_5 R_4 R_5 R_L r_o s^5 + 2 C_4 C_5 L_4 L_5 R_4 R_5 R_L g_m r_o s^4 + 4 C_4 C_5 L_4 L_5 R_4 R_5 R_L s^4 + C_4 C_5 L_4 L_5 R_4 R_5 R_L r_o s^4 + 2 C_4 C_5 L_5 R_4 R_5 R_L r_o s^4 + 2 C_5 L_5 R_5 R_L r_o s^4 + 2 C_5 L_5 R_5 R_L r_o s^4 + 2 C_5 L_5 R_5 R_L r$
- 10.911 INVALID-ORDER-911  $Z(s) = \left(\infty, \infty, \infty, \frac{R_4\left(L_4s + \frac{1}{C_4s}\right)}{L_4s + R_4 + \frac{1}{C_4s}}, \frac{1}{C_5s + \frac{1}{R_5} + \frac{1}{L_5s}}, R_L + \frac{1}{C_Ls}\right)$
- $H(s) = -\frac{1}{2C_4C_5C_LL_4L_5R_4R_5R_Lg_mr_os^5 + 4C_4C_5C_LL_4L_5R_4R_5R_Ls^5 + C_4C_5C_LL_4L_5R_4R_5r_os^5 + 2C_4C_5C_LL_4L_5R_4R_5R_Lr_os^5 + 2C_4C_5C_LL_5R_4R_5R_Lr_os^4 + 2C_4C_5L_4L_5R_4R_5g_mr_os^4 + 4C_4C_5L_4L_5R_4R_5s^4 + 2C_4C_5L_4L_5R_4R_5r_os^4 + 2C_4C_5L_4L_5R_5r_os^4 + 2C_4C_5L_5L_5R_5r_os^4 + 2C_4C_5L_5L_5R_5r_os^4 + 2C_4C_5L_5L_5R_5r_os^4 + 2C_5L_5L_5R_5r_os^4 + 2C_5L_5L_5R_5r_os^4 + 2C_5L_5L_5R_5r_os^4 + 2C_5L_5L_5R_5r_os^4 + 2C_5L_5L_5$
- 10.912 INVALID-ORDER-912  $Z(s) = \left(\infty, \infty, \infty, \frac{R_4\left(L_4s + \frac{1}{C_4s}\right)}{L_4s + R_4 + \frac{1}{C_4s}}, \frac{1}{C_5s + \frac{1}{R_5} + \frac{1}{L_5s}}, L_Ls + \frac{1}{C_Ls}\right)$
- $H(s) = -\frac{1}{2C_4C_5C_LL_4L_5L_LR_4R_5g_mr_os^6 + 4C_4C_5C_LL_4L_5L_LR_4R_5s^6 + 2C_4C_5C_LL_4L_5L_LR_5r_os^6 + C_4C_5C_LL_4L_5R_4R_5r_os^5 + 2C_4C_5L_4L_5R_4R_5r_os^5 + 2C_4C_5L_4L_5R_4R_5g_mr_os^4 + 4C_4C_5L_4L_5R_4R_5s^4 + 2C_4C_5L_4L_5R_4R_5r_os^3 + 2C_4C_5L_4L_5R_4R_5r_os^5 + 2C_4C_5L_4L_5R_5r_os^5 + 2C_4C_5L_4L_5R_5r_os^5 + 2C_4C_5L_5L_5R_5r_os^5 + 2C_4C_5L_5L_5R_5r_os^5 + 2C_4C_5L_5R_5r_os^5 + 2C_4C_5L_5R_5r_os^5 + 2C_4C_5L_5R_5r_os^5 + 2C_4C_5L_5R_5r_os^5 + 2C_4C_$
- 10.913 INVALID-ORDER-913  $Z(s) = \left(\infty, \infty, \infty, \frac{R_4\left(L_4s + \frac{1}{C_4s}\right)}{L_4s + R_4 + \frac{1}{C_4s}}, \frac{1}{C_5s + \frac{1}{R_5} + \frac{1}{L_5s}}, \frac{L_Ls}{C_LL_Ls^2 + 1}\right)$
- $H(s) = -\frac{1}{C_4 C_5 C_L L_4 L_5 L_L R_4 R_5 r_o s^6 + 2 C_4 C_5 L_4 L_5 L_L R_4 R_5 g_m r_o s^5 + 4 C_4 C_5 L_4 L_5 L_L R_4 R_5 s^5 + 2 C_4 C_5 L_4 L_5 L_L R_4 R_5 r_o s^4 + 2 C_4 C_5 L_4 L_5 L_4 R_5 r_o s^4 + 2 C_4 C_5 L_4 L_5 L_4 R_5 r_o s^4 + 2 C_4 C_5 L_4 L_5 L_4 R_5 r_o s^4 + 2 C_4 C_5 L_4 L_5 L_4 R_5 r_o s^4 + 2 C_4 C_5 L_4 L_5 L_4 R_5 r_o s^4 + 2 C_4 C_5 L_4 L_5 L_4 R_5 r_o s^4 + 2 C_4 C_5 L_4 L_5 L_4 R_5 r_o s^4 + 2 C_4 C_5 L_5 L_5 L_5 R_5 r_o s^4 + 2 C_4 C_5 L_5 L_5 L_5 R_5 r_o s^4 + 2 C_5 L_5 L_5 L_5 L_5 R_5 r_o s^4 + 2 C_5 L_5 L_5 L_5 R_5 r_o s^4 + 2 C_5 L_5 L_5 L_5 R_5 r_o s^4 + 2 C_5 L_5 L_5 L_5 R_5 r_o s^4 + 2 C_5 L_5 L_5$

- 10.914 INVALID-ORDER-914  $Z(s) = \left(\infty, \infty, \infty, \frac{R_4\left(L_4s + \frac{1}{C_4s}\right)}{L_4s + R_4 + \frac{1}{C_4s}}, \frac{1}{C_5s + \frac{1}{R_5} + \frac{1}{L_5s}}, L_Ls + R_L + \frac{1}{C_Ls}\right)$
- $H(s) = -\frac{1}{2C_4C_5C_LL_4L_5L_LR_4R_5g_mr_os^6 + 4C_4C_5C_LL_4L_5L_LR_4R_5s^6 + 2C_4C_5C_LL_4L_5L_LR_5r_os^6 + 2C_4C_5C_LL_4L_5R_4R_5R_Lg_mr_os^5 + 4C_4C_5C_LL_4L_5R_4R_5r_os^5 + 2C_4C_5C_LL_4L_5R_4R_5r_os^5 + 2C_4C_5C_LL_4L_5R_4R_5R_5r_os^5 + 2C_4C_5C_LL_4L_5R_4R_5R_5r_os^5 + 2C_4C_5C_LL_4L_5R_4R_5R_5r_os^5 + 2C_4C_5C_LL_4L_5R_4R_5R_5r_os^5 + 2C_4C_5C_LL_4L_5R_4R_5R_5r_os^5 + 2C_4C_5C_LL_4L_5R_5R_5R_5r_os^5 + 2C_4C_5C_LL_4L_5R_5R_5R_5r_os^5 + 2C_4C_5C_LL_4L_5R_5R_5R_5r_os^5 + 2C_4C_5C_LL_4L_5R_5R_5R_5r_os^5 + 2C_4C_5C_LL_4R_5R_5R_5R_5r_os^5 + 2C_4C_5C_LL_4R_5R_5R_5R_5r_os^5 + 2C_4C_5C_LL_4R_5R_5R_5R_5r_os^5 + 2C_4C_5C_LL_5R_5R_5R_5r_os^5 +$
- 10.915 INVALID-ORDER-915  $Z(s) = \left(\infty, \infty, \infty, \frac{R_4\left(L_4s + \frac{1}{C_4s}\right)}{L_4s + R_4 + \frac{1}{C_4s}}, \frac{1}{C_5s + \frac{1}{R_5} + \frac{1}{L_5s}}, \frac{1}{C_Ls + \frac{1}{L_Ls}}\right)$
- $H(s) = -\frac{1}{C_4C_5C_LL_4L_5L_LR_4R_5R_Lr_os^6 + 2C_4C_5L_4L_5L_LR_4R_5R_Lg_mr_os^5 + 4C_4C_5L_4L_5L_LR_4R_5R_Ls^5 + C_4C_5L_4L_5L_LR_4R_5R_Lr_os^5 + 2C_4C_5L_4L_5L_LR_4R_5R_Lr_os^5 + 2C_4C_5L_4L_5L_RR_4R_5R_Lr_os^5 + 2C_4C_5L_4L_5L_RR_5R_Lr_$
- 10.916 INVALID-ORDER-916  $Z(s) = \left(\infty, \infty, \infty, \frac{R_4\left(L_4s + \frac{1}{C_4s}\right)}{L_4s + R_4 + \frac{1}{C_4s}}, \frac{1}{C_5s + \frac{1}{R_5} + \frac{1}{L_5s}}, \frac{L_Ls}{C_LL_Ls^2 + 1} + R_L\right)$
- 10.917 INVALID-ORDER-917  $Z(s) = \left(\infty, \infty, \infty, \frac{R_4\left(L_4s + \frac{1}{C_4s}\right)}{L_4s + R_4 + \frac{1}{C_4s}}, \frac{1}{C_5s + \frac{1}{R_5} + \frac{1}{L_5s}}, \frac{R_L\left(L_Ls + \frac{1}{C_Ls}\right)}{L_Ls + R_L + \frac{1}{C_Ls}}\right)$
- $H(s) = -\frac{1}{2C_4C_5C_LL_4L_5L_LR_4R_5R_Lg_mr_os^6 + 4C_4C_5C_LL_4L_5L_LR_4R_5R_Ls^6 + C_4C_5C_LL_4L_5L_LR_4R_5r_os^6 + 2C_4C_5C_LL_4L_5L_LR_4R_5R_Lr_os^6 + 2C_4C_5C_LL_4L_5L_RR_4R_5R_Lr_os^6 + 2C_4C_5C_LL_4L_5L_RR_5R_Lr_os^6 + 2C_$
- 10.918 INVALID-ORDER-918  $Z(s) = \left(\infty, \infty, \infty, \frac{R_4\left(L_4s + \frac{1}{C_4s}\right)}{L_4s + R_4 + \frac{1}{C_4s}}, \frac{L_5s}{C_5L_5s^2 + 1} + R_5, R_L\right)$
- $H(s) = \frac{1}{C_4C_5L_4L_5R_4R_5g_mr_os^4 + C_4C_5L_4L_5R_4R_5s^4 + 2C_4C_5L_4L_5R_4R_Lg_mr_os^4 + 4C_4C_5L_4L_5R_4R_Lg_mr_os^4 + 2C_4C_5L_4L_5R_4R_Lg_mr_os^4 + 2C_4C_5L_4L_5R_4R_Lg_mr_o$
- 10.919 INVALID-ORDER-919  $Z(s) = \left(\infty, \infty, \infty, \frac{R_4\left(L_4s + \frac{1}{C_4s}\right)}{L_4s + R_4 + \frac{1}{C_4s}}, \frac{L_5s}{C_5L_5s^2 + 1} + R_5, \frac{1}{C_Ls}\right)$
- 10.920 INVALID-ORDER-920  $Z(s) = \left(\infty, \infty, \infty, \frac{R_4\left(L_4s + \frac{1}{C_4s}\right)}{L_4s + R_4 + \frac{1}{C_4s}}, \frac{L_5s}{C_5L_5s^2 + 1} + R_5, \frac{R_L}{C_LR_Ls + 1}\right)$
- $H(s) = \frac{1}{C_4 C_5 C_L L_4 L_5 R_4 R_5 R_L g_m r_o s^5 + C_4 C_5 C_L L_4 L_5 R_4 R_5 R_L s^5 + C_4 C_5 L_4 L_5 R_4 R_5 g_m r_o s^4 + C_4 C_5 L_$
- 10.921 INVALID-ORDER-921  $Z(s) = \left(\infty, \infty, \infty, \frac{R_4\left(L_4s + \frac{1}{C_4s}\right)}{L_4s + R_4 + \frac{1}{C_4s}}, \frac{L_5s}{C_5L_5s^2 + 1} + R_5, R_L + \frac{1}{C_Ls}\right)$
- $H(s) = \frac{1}{C_4 C_5 C_L L_4 L_5 R_4 R_5 q_m r_o s^5 + C_4 C_5 C_L L_4 L_5 R_4 R_5 s^5 + 2 C_4 C_5 C_L L_4 L_5 R_4 R_L s^5 + 2 C_4 C_5 C_L L_4 L_5 R_4 R_L s^5 + 2 C_4 C_5 C_L L_4 L_5 R_4 R_L s^5 + 2 C_4 C_5 C_L L_4 L_5 R_4 R_5 r_o s^5 + 2 C_4 C_5 C_L L_4 L_5 R_5 r_o s^5 + 2 C_4 C_5 C_L L_4 L_5 R_5 r_o s^5 + 2 C_4 C_5 C_L L_4 L_5 R_5 r_o s^5 + 2 C_4 C_5 C_L L_4 L_5 R_5 r_o s^5 + 2 C_4 C_5 C_L L_4 L_5 R_5 r_o s^5 + 2 C_4 C_5 C_L L_4 L_5 R_5 r_o s^5 + 2 C_4 C_5 C_L L_4 L_5 R_5 r_o s^5 + 2 C_4 C_5 C_L L_5 R_5 r_o s^5 + 2 C_4 C_5 C_L L_5 R_5 r_o s^5 + 2 C_4 C_5 C_L L_5 R_5 r_o s^5 + 2 C_4 C_5 C_L L_5 R_5 r_o s^5 + 2 C_4 C_5 C_L L_5 R_5 r_o s^5 + 2 C_4 C_5 C_L L_5 R_5 r_o s^5 + 2 C_4 C_5 C_L L_5 R_5 r_o s^5 + 2 C_4 C_5 C_L L_5 R_5 r_o s^5 + 2 C_4 C_5 C_L L_5 R_5 r_o s^5 + 2 C_4 C_5 C_L L_5 R_5 r_o s^5 + 2 C_4 C_5 C_L L_5 R_5 r_o s^5 + 2 C_4 C_5 C_L L_5 R_5 r_o s^5 + 2 C_4 C_5 C_L L_5 R_5 r_o s^5 + 2 C_4 C_5 C_L L_5 R_5 r_o s^5 + 2 C_4 C_5 C_L L_5 R_5 r_o s^5 + 2 C_4 C_5 C_L L_5 R_5 r_o s^5 + 2 C_4 C_5 C_L L_5 R_5 r_o s^5 + 2 C_4 C_5 C_$

- 10.922 INVALID-ORDER-922  $Z(s) = \left(\infty, \infty, \infty, \frac{R_4\left(L_4s + \frac{1}{C_4s}\right)}{L_4s + R_4 + \frac{1}{C_4s}}, \frac{L_5s}{C_5L_5s^2 + 1} + R_5, L_Ls + \frac{1}{C_Ls}\right)$
- 10.923 INVALID-ORDER-923  $Z(s) = \left(\infty, \infty, \infty, \frac{R_4\left(L_4s + \frac{1}{C_4s}\right)}{L_4s + R_4 + \frac{1}{C_4s}}, \frac{L_5s}{C_5L_5s^2 + 1} + R_5, \frac{L_Ls}{C_LL_Ls^2 + 1}\right)$
- $H(s) = \frac{1}{C_4 C_5 C_L L_4 L_5 L_L R_4 R_5 g_m r_o s^6 + C_4 C_5 C_L L_4 L_5 L_L R_4 r_o s^6 + 2 C_4 C_5 L_4 L_5 L_L R_4 g_m r_o s^5 + 4 C_4 C_5 L_4 L_5 L_L R_4 g_m r_o s^5 + 2 C_4 C_5 L_4 L_5 L_L R_5 g_$
- 10.924 INVALID-ORDER-924  $Z(s) = \left(\infty, \infty, \infty, \frac{R_4\left(L_4s + \frac{1}{C_4s}\right)}{L_4s + R_4 + \frac{1}{C_4s}}, \frac{L_5s}{C_5L_5s^2 + 1} + R_5, L_Ls + R_L + \frac{1}{C_Ls}\right)$
- $H(s) = \frac{1}{2C_4C_5C_LL_4L_5L_LR_4g_mr_os^6 + 4C_4C_5C_LL_4L_5L_LR_4s^6 + 2C_4C_5C_LL_4L_5L_LR_5g_mr_os^6 + 2C_4C_5C_LL_4L_5L_LR_5s^6 + 2C_4C_5C_LL_4L_5L_Lr_os^6 + C_4C_5C_LL_4L_5R_4R_5g_mr_os^5 + C_4C_5C_LL_4L_5R_4R_5g_mr_os^5 + 2C_4C_5C_LL_4L_5R_4R_5g_mr_os^5 + 2C_4C_5C_LL_4L_5R_4g_mr_os^5 + 2C_4C_5C_LL_4L_5R_4g_mr_os^$
- 10.925 INVALID-ORDER-925  $Z(s) = \left(\infty, \infty, \infty, \frac{R_4\left(L_4s + \frac{1}{C_4s}\right)}{L_4s + R_4 + \frac{1}{C_4s}}, \frac{L_5s}{C_5L_5s^2 + 1} + R_5, \frac{1}{C_Ls + \frac{1}{R_L} + \frac{1}{L_Ls}}\right)$
- $H(s) = \frac{1}{C_4 C_5 C_L L_4 L_5 L_L R_4 R_5 R_L g_m r_o s^6 + C_4 C_5 C_L L_4 L_5 L_L R_4 R_5 R_L s^6 + C_4 C_5 L_4 L_5 L_L R_4 R_5 g_m r_o s^5 + C_4 C_5$
- 10.926 INVALID-ORDER-926  $Z(s) = \left(\infty, \infty, \infty, \frac{R_4\left(L_4s + \frac{1}{C_4s}\right)}{L_4s + R_4 + \frac{1}{C_4s}}, \frac{L_5s}{C_5L_5s^2 + 1} + R_5, \frac{L_Ls}{C_LL_Ls^2 + 1} + R_L\right)$
- $H(s) = \frac{1}{C_4 C_5 C_L L_4 L_5 L_L R_4 R_5 g_m r_o s^6 + C_4 C_5 C_L L_4 L_5 L_L R_4 R_5 s^6 + 2 C_4 C_5 C_L L_4 L_5 L_L R_4 R_L g_m r_o s^6 + 4 C_4 C_5 C_L L_4 L_5 L_L R_4 R_L s^6 + C_4 C_5 C_L L_4 L_5 L_L R_4 R_L s^6 + 2 C_4 C_5 C_L L_4 L_5 L_L R_5 R_L s^6 + 2 C_4 C_5 C_L L_4 L_5 L_L R_5 R_L s^6 + 2 C_4 C_5 C_L L_4 L_5 L_L R_5 R_L s^6 + 2 C_4 C_5 C_L L_4 L_5 L_L R_5 R_L s^6 + 2 C_4 C_5 C_L L_4 L_5 L_L R_5 R_L s^6 + 2 C_4 C_5 C_L L_4 L_5 L_L R_5 R_L s^6 + 2 C_4 C_5 C_L L_4 L_5 L_L R_5 R_L s^6 + 2 C_4 C_5 C_L L_4 L_5 L_L R_5 R_L s^6 + 2 C_4 C_5 C_L L_5 L_L$
- 10.927 INVALID-ORDER-927  $Z(s) = \left(\infty, \infty, \infty, \frac{R_4\left(L_4s + \frac{1}{C_4s}\right)}{L_4s + R_4 + \frac{1}{C_4s}}, \frac{L_5s}{C_5L_5s^2 + 1} + R_5, \frac{R_L\left(L_Ls + \frac{1}{C_Ls}\right)}{L_Ls + R_L + \frac{1}{C_Ls}}\right)$
- $H(s) = \frac{1}{C_4 C_5 C_L L_4 L_5 L_L R_4 R_5 g_m r_o s^6 + C_4 C_5 C_L L_4 L_5 L_L R_4 R_5 s^6 + 2 C_4 C_5 C_L L_4 L_5 L_L R_4 R_L g_m r_o s^6 + 4 C_4 C_5 C_L L_4 L_5 L_L R_4 R_L s^6 + 2 C_4 C_5 C_L L_4 L_5 L_L R_5 R_L s^6 + 2 C_4 C_5 C_L L_5 L_L r_5 R_L s^6 + 2 C_4 C_5 C_L L_5 L_L r_5 R_L s^6 + 2 C_5 C_L L_5 L_L r_5 R_L s^6 + 2 C_5 C_L L_5 L_L r_5 R_L s^6 + 2 C_$
- 10.928 INVALID-ORDER-928  $Z(s) = \left(\infty, \infty, \infty, \frac{R_4\left(L_4s + \frac{1}{C_4s}\right)}{L_4s + R_4 + \frac{1}{C_4s}}, \frac{R_5\left(L_5s + \frac{1}{C_5s}\right)}{L_5s + R_5 + \frac{1}{C_5s}}, R_L\right)$
- $H(s) = \frac{1}{C_4 C_5 L_4 L_5 R_4 R_5 g_m r_o s^4 + C_4 C_5 L_4 L_5 R_4 R_5 s^4 + 2 C_4 C_5 L_4 L_5 R_4 R_L g_m r_o s^4 + 4 C_4 C_5 L_4 L_5 R_4 R_L s^4 + C_4 C_5 L_4 L_5 R_4 R_L g_m r_o s^4 + 2 C_4 C_5 L_4 L_5 R_5 R_L g_m r_o s^4 + 2 C_4 C_5 L_4 L_5 R_4 R_5 R_L g_m r_o s^4 + 2 C_4 C_5 L_4 L_5 R_4 R_5 R_L g_m r_o s^4 + 2 C_4 C_5 L_4 L_5 R_4 R_5 R_L g_m r_o s^4 + 2 C_4 C_5 L_4 L_5 R_4 R_5 R_L g_m r_o s^4 + 2 C_4 C_5 L_4 L_5 R_4 R_5 R_L g_m r_o s^4 + 2 C_4 C_5 L_4 L_5 R_4 R_5 R_L g_m r_o s^4 + 2 C_4 C_5 L_4 L_5 R_4 R_5 R_L g_m r_o s^4 + 2 C_4 C_5 L_4 L_5 R_4 R_5 R_L g_m r_o s^4 + 2 C_4 C_5 L_4 L_5 R_4 R_5 R_L g_m r_o s^4 + 2 C_4 C_5 L_4 L_5 R_4 R_5 R_L g_m r_o s^4 + 2 C_4 C_5 L_4 L_5 R_4 R_5 R_L g_m r_o s^4 + 2 C_4 C_5 L_4 L_5 R_4 R_5 R_L g_m r_o s^4 + 2 C_4 C_5 L_4 L_5 R_4 R_5 R_L g_m r_o s^4 + 2 C_4 C_5 L_4 R_5$
- 10.929 INVALID-ORDER-929  $Z(s) = \left(\infty, \infty, \infty, \frac{R_4\left(L_4s + \frac{1}{C_4s}\right)}{L_4s + R_4 + \frac{1}{C_4s}}, \frac{R_5\left(L_5s + \frac{1}{C_5s}\right)}{L_5s + R_5 + \frac{1}{C_5s}}, \frac{1}{C_Ls}\right)$
- $H(s) = \frac{1}{C_4 C_5 C_L L_4 L_5 R_4 R_5 q_m r_o s^5 + C_4 C_5 C_L L_4 L_5 R_4 R_5 s^5 + C_4 C_5 C_L L_4 L_5 R_4 r_o s^5 + C_4 C_5 C_L L_4 R_4 R_5 r_o s^4 + 2 C_4 C_5 L_4 L_5 R_4 q_m r_o s^4 + 4 C_4 C_5 L_4 L_5 R_5 q_m r_o s^4 + 2 C_4 C_5 L_5 L_5 R_5 q_m r_o s^4 + 2 C_4 C_5 L_5 L_5 R_5 q_m r_o s^4 + 2 C_5 L_5 L_5 R_5 q_m r_o s^4 + 2 C_5 L_5 L_5 R_5 q_m r_o s^4 + 2 C_5 L_5 L_5 R_5 q_m r_o s^4 + 2 C_5 L_5 L_5 R_5 q_m r_o s^4 + 2 C_5 L_5 L_5 R_5 q_m r_o s^4 + 2 C_5 L_5 L_5 R_5 q_m r_o s^4 + 2 C_5 L_5 L_5 R_5 q_m r_o s^4 + 2 C_5 L_5 L_5 R_5 q_m r_o s^4 + 2 C_5 L_5 L_$

- 10.930 INVALID-ORDER-930  $Z(s) = \left(\infty, \infty, \infty, \frac{R_4\left(L_4s + \frac{1}{C_4s}\right)}{L_4s + R_4 + \frac{1}{C_4s}}, \frac{R_5\left(L_5s + \frac{1}{C_5s}\right)}{L_5s + R_5 + \frac{1}{C_5s}}, \frac{R_L}{C_LR_Ls + 1}\right)$
- $H(s) = \frac{1}{C_4 C_5 C_L L_4 L_5 R_4 R_5 R_L g_m r_o s^5 + C_4 C_5 C_L L_4 L_5 R_4 R_5 R_L s^5 + C_4 C_5 C_L L_4 L_5 R_4 R_L r_o s^5 + C_4 C_5 C_L L_4 R_4 R_5 R_L r_o s^4 + C_4 C_5 L_4 L_5 R_4 R_5 g_m r_o s^4 + C_4 C_5 L_4 L_5 R_4 R_L g_m r_o s^4 + C_4 C_5 L_$
- 10.931 INVALID-ORDER-931  $Z(s) = \left(\infty, \infty, \infty, \frac{R_4\left(L_4s + \frac{1}{C_4s}\right)}{L_4s + R_4 + \frac{1}{C_4s}}, \frac{R_5\left(L_5s + \frac{1}{C_5s}\right)}{L_5s + R_5 + \frac{1}{C_5s}}, R_L + \frac{1}{C_Ls}\right)$
- $H(s) = \frac{1}{C_4 C_5 C_L L_4 L_5 R_4 R_5 g_m r_o s^5 + C_4 C_5 C_L L_4 L_5 R_4 R_5 s^5 + 2 C_4 C_5 C_L L_4 L_5 R_4 R_L g_m r_o s^5 + 4 C_4 C_5 C_L L_4 L_5 R_4 R_L s^5 + 2 C_4 C_5 C_L L_4 L_5 R_4 R_L s^5 + 2 C_4 C_5 C_L L_4 L_5 R_4 R_L s^5 + 2 C_4 C_5 C_L L_4 L_5 R_4 R_L s^5 + 2 C_4 C_5 C_L L_4 L_5 R_4 R_L s^5 + 2 C_4 C_5 C_L L_4 L_5 R_4 R_L s^5 + 2 C_4 C_5 C_L L_4 L_5 R_4 R_L s^5 + 2 C_4 C_5 C_L L_4 L_5 R_4 R_L s^5 + 2 C_4 C_5 C_L L_4 L_5 R_4 R_L s^5 + 2 C_4 C_5 C_L L_4 L_5 R_4 R_L s^5 + 2 C_4 C_5 C_L L_4 L_5 R_4 R_L s^5 + 2 C_4 C_5 C_L L_4 L_5 R_4 R_L s^5 + 2 C_4 C_5 C_L L_4 L_5 R_4 R_L s^5 + 2 C_4 C_5 C_L L_4 L_5 R_4 R_L s^5 + 2 C_4 C_5 C_L L_4 L_5 R_4 R_L s^5 + 2 C_4 C_5 C_L L_4 L_5 R_4 R_L s^5 + 2 C_4 C_5 C_L L_4 L_5 R_4 R_L s^5 + 2 C_4 C_5 C_L L_4 L_5 R_L s^5 + 2 C_4 C_5 C_L L_4 L_$
- 10.932 INVALID-ORDER-932  $Z(s) = \left(\infty, \infty, \infty, \frac{R_4\left(L_4s + \frac{1}{C_4s}\right)}{L_4s + R_4 + \frac{1}{C_4s}}, \frac{R_5\left(L_5s + \frac{1}{C_5s}\right)}{L_5s + R_5 + \frac{1}{C_5s}}, L_Ls + \frac{1}{C_Ls}\right)$
- 10.933 INVALID-ORDER-933  $Z(s) = \left(\infty, \infty, \infty, \frac{R_4\left(L_4s + \frac{1}{C_4s}\right)}{L_4s + R_4 + \frac{1}{C_4s}}, \frac{R_5\left(L_5s + \frac{1}{C_5s}\right)}{L_5s + R_5 + \frac{1}{C_5s}}, \frac{L_Ls}{C_LL_Ls^2 + 1}\right)$
- $H(s) = \frac{1}{C_4 C_5 C_L L_4 L_5 L_L R_4 R_5 g_m r_o s^6 + C_4 C_5 C_L L_4 L_5 L_L R_4 R_5 s^6 + C_4 C_5 C_L L_4 L_5 L_L R_4 r_o s^6 + C_4 C_5 C_L L_4 L_5 L_L R_4 r_o s^5 + 2 C_4 C_5 L_4 L_5 L_L R_4 g_m r_o s^5 + 4 C_4 C_5 L_4 L_5 L_L R_4 g_m r_o s^5 + 2 C_4 C_5 L_4 L_5 L_L R_5 g_m r_$
- 10.934 INVALID-ORDER-934  $Z(s) = \left(\infty, \infty, \infty, \frac{R_4\left(L_4s + \frac{1}{C_4s}\right)}{L_4s + R_4 + \frac{1}{C_4s}}, \frac{R_5\left(L_5s + \frac{1}{C_5s}\right)}{L_5s + R_5 + \frac{1}{C_5s}}, L_Ls + R_L + \frac{1}{C_Ls}\right)$
- 10.935 INVALID-ORDER-935  $Z(s) = \left(\infty, \infty, \infty, \frac{R_4\left(L_4s + \frac{1}{C_4s}\right)}{L_4s + R_4 + \frac{1}{C_4s}}, \frac{R_5\left(L_5s + \frac{1}{C_5s}\right)}{L_5s + R_5 + \frac{1}{C_5s}}, \frac{1}{C_Ls + \frac{1}{R_L} + \frac{1}{L_Ls}}\right)$
- $H(s) = \frac{1}{C_4 C_5 C_L L_4 L_5 L_L R_4 R_5 R_L g_m r_o s^6 + C_4 C_5 C_L L_4 L_5 L_L R_4 R_5 R_L s^6 + C_4 C_5 C_L L_4 L_5 L_L R_4 R_L r_o s^6 + C_4 C_5 C_L L_4 L_5 L_L R_4 R_5 R_L r_o s^5 + C_4 C_5 L_4 L_5 L_L R_4 R_5 g_m r_o s^5 + C_4$
- 10.936 INVALID-ORDER-936  $Z(s) = \left(\infty, \infty, \infty, \frac{R_4\left(L_4s + \frac{1}{C_4s}\right)}{L_4s + R_4 + \frac{1}{C_4s}}, \frac{R_5\left(L_5s + \frac{1}{C_5s}\right)}{L_5s + R_5 + \frac{1}{C_5s}}, \frac{L_Ls}{C_LL_Ls^2 + 1} + R_L\right)$
- $H(s) = \frac{1}{C_4C_5C_LL_4L_5L_LR_4R_5g_mr_os^6 + C_4C_5C_LL_4L_5L_LR_4R_5s^6 + 2C_4C_5C_LL_4L_5L_LR_4R_Lg_mr_os^6 + 4C_4C_5C_LL_4L_5L_LR_4R_Ls^6 + C_4C_5C_LL_4L_5L_LR_4R_ss^6 + 2C_4C_5C_LL_4L_5L_LR_4R_ss^6 + 2C_4C_5C_LL_4L_5L_RR_4R_ss^6 + 2C_4C_5C$
- 10.937 INVALID-ORDER-937  $Z(s) = \left(\infty, \infty, \infty, \frac{R_4\left(L_4s + \frac{1}{C_4s}\right)}{L_4s + R_4 + \frac{1}{C_4s}}, \frac{R_5\left(L_5s + \frac{1}{C_5s}\right)}{L_5s + R_5 + \frac{1}{C_5s}}, \frac{R_L\left(L_Ls + \frac{1}{C_Ls}\right)}{L_Ls + R_L + \frac{1}{C_Ls}}\right)$