

Filter Summary Report: TIA,simple,Z1,Z2

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1 Examined $H(z)$ for TIA simple **Z1 Z2:** $Z_1 (Z_2 g_m + 1)$

$$H(z) = Z_1 (Z_2 g_m + 1)$$

2 HP

3 BP

4 LP

5 BS

6 GE

7 AP

8 INVALID-NUMER

9 INVALID-WZ

10 INVALID-ORDER

10.1 INVALID-ORDER-1 $Z(s) = (R_1, \ R_2, \ \infty, \ \infty, \ \infty, \ \infty)$

$$H(s) = Z_1 (Z_2 g_m + 1)$$

10.2 INVALID-ORDER-2 $Z(s) = \left(R_1, \ \frac{1}{C_2 s}, \ \infty, \ \infty, \ \infty, \ \infty\right)$

$$H(s) = Z_1 (Z_2 g_m + 1)$$

10.3 INVALID-ORDER-3 $Z(s) = \left(R_1, \ \frac{R_2}{C_2 R_2 s + 1}, \ \infty, \ \infty, \ \infty, \ \infty\right)$

$$H(s) = Z_1 (Z_2 g_m + 1)$$

10.4 INVALID-ORDER-4 $Z(s) = \left(R_1, \ R_2 + \frac{1}{C_2 s}, \ \infty, \ \infty, \ \infty, \ \infty\right)$

$$H(s) = Z_1 (Z_2 g_m + 1)$$

$$\textbf{10.5 INVALID-ORDER-5 } Z(s) = \left(R_1, \ L_2 s + \frac{1}{C_2 s}, \ \infty, \ \infty, \ \infty, \ \infty \right)$$

$$H(s) = Z_1 \left(Z_2 g_m + 1 \right)$$

$$\textbf{10.6 INVALID-ORDER-6 } Z(s) = \left(R_1, \ L_2 s + R_2 + \frac{1}{C_2 s}, \ \infty, \ \infty, \ \infty, \ \infty \right)$$

$$H(s) = Z_1 \left(Z_2 g_m + 1 \right)$$

$$\textbf{10.7 INVALID-ORDER-7 } Z(s) = \left(R_1, \ \frac{L_2 s}{C_2 L_2 s^2 + 1} + R_2, \ \infty, \ \infty, \ \infty, \ \infty \right)$$

$$H(s) = Z_1 \left(Z_2 g_m + 1 \right)$$

$$\textbf{10.8 INVALID-ORDER-8 } Z(s) = \left(R_1, \ \frac{R_2 (C_2 L_2 s^2 + 1)}{C_2 L_2 s^2 + C_2 R_2 s + 1}, \ \infty, \ \infty, \ \infty, \ \infty \right)$$

$$H(s) = Z_1 \left(Z_2 g_m + 1 \right)$$

$$\textbf{10.9 INVALID-ORDER-9 } Z(s) = (L_1 s, \ R_2, \ \infty, \ \infty, \ \infty, \ \infty)$$

$$H(s) = Z_1 \left(Z_2 g_m + 1 \right)$$

$$\textbf{10.10 INVALID-ORDER-10 } Z(s) = \left(L_1 s, \ \frac{1}{C_2 s}, \ \infty, \ \infty, \ \infty, \ \infty \right)$$

$$H(s) = Z_1 \left(Z_2 g_m + 1 \right)$$

$$\textbf{10.11 INVALID-ORDER-11 } Z(s) = \left(L_1 s, \ \frac{R_2}{C_2 R_2 s + 1}, \ \infty, \ \infty, \ \infty, \ \infty \right)$$

$$H(s) = Z_1 \left(Z_2 g_m + 1 \right)$$

$$\textbf{10.12 INVALID-ORDER-12 } Z(s) = \left(L_1 s, \ R_2 + \frac{1}{C_2 s}, \ \infty, \ \infty, \ \infty, \ \infty \right)$$

$$H(s) = Z_1 \left(Z_2 g_m + 1 \right)$$

$$\textbf{10.13 INVALID-ORDER-13 } Z(s) = \left(L_1 s, \ L_2 s + \frac{1}{C_2 s}, \ \infty, \ \infty, \ \infty, \ \infty \right)$$

$$H(s) = Z_1 \left(Z_2 g_m + 1 \right)$$

$$\textbf{10.14 INVALID-ORDER-14 } Z(s) = \left(L_1 s, \ L_2 s + R_2 + \frac{1}{C_2 s}, \ \infty, \ \infty, \ \infty, \ \infty \right)$$

$$H(s) = Z_1 \left(Z_2 g_m + 1 \right)$$

$$\mathbf{10.15 \quad INVALID-ORDER-15} \quad Z(s) = \left(L_1 s, \frac{L_2 s}{C_2 L_2 s^2 + 1} + R_2, \infty, \infty, \infty, \infty \right)$$

$$H(s) = Z_1 (Z_2 g_m + 1)$$

$$\mathbf{10.16 \quad INVALID-ORDER-16} \quad Z(s) = \left(L_1 s, \frac{R_2 (C_2 L_2 s^2 + 1)}{C_2 L_2 s^2 + C_2 R_2 s + 1}, \infty, \infty, \infty, \infty \right)$$

$$H(s) = Z_1 (Z_2 g_m + 1)$$

$$\mathbf{10.17 \quad INVALID-ORDER-17} \quad Z(s) = \left(\frac{1}{C_1 s}, R_2, \infty, \infty, \infty, \infty \right)$$

$$H(s) = Z_1 (Z_2 g_m + 1)$$

$$\mathbf{10.18 \quad INVALID-ORDER-18} \quad Z(s) = \left(\frac{1}{C_1 s}, \frac{1}{C_2 s}, \infty, \infty, \infty, \infty \right)$$

$$H(s) = Z_1 (Z_2 g_m + 1)$$

$$\mathbf{10.19 \quad INVALID-ORDER-19} \quad Z(s) = \left(\frac{1}{C_1 s}, \frac{R_2}{C_2 R_2 s + 1}, \infty, \infty, \infty, \infty \right)$$

$$H(s) = Z_1 (Z_2 g_m + 1)$$

$$\mathbf{10.20 \quad INVALID-ORDER-20} \quad Z(s) = \left(\frac{1}{C_1 s}, R_2 + \frac{1}{C_2 s}, \infty, \infty, \infty, \infty \right)$$

$$H(s) = Z_1 (Z_2 g_m + 1)$$

$$\mathbf{10.21 \quad INVALID-ORDER-21} \quad Z(s) = \left(\frac{1}{C_1 s}, L_2 s + \frac{1}{C_2 s}, \infty, \infty, \infty, \infty \right)$$

$$H(s) = Z_1 (Z_2 g_m + 1)$$

$$\mathbf{10.22 \quad INVALID-ORDER-22} \quad Z(s) = \left(\frac{1}{C_1 s}, L_2 s + R_2 + \frac{1}{C_2 s}, \infty, \infty, \infty, \infty \right)$$

$$H(s) = Z_1 (Z_2 g_m + 1)$$

$$\mathbf{10.23 \quad INVALID-ORDER-23} \quad Z(s) = \left(\frac{1}{C_1 s}, \frac{L_2 s}{C_2 L_2 s^2 + 1} + R_2, \infty, \infty, \infty, \infty \right)$$

$$H(s) = Z_1 (Z_2 g_m + 1)$$

$$\mathbf{10.24 \quad INVALID-ORDER-24} \quad Z(s) = \left(\frac{1}{C_1 s}, \frac{R_2 (C_2 L_2 s^2 + 1)}{C_2 L_2 s^2 + C_2 R_2 s + 1}, \infty, \infty, \infty, \infty \right)$$

$$H(s) = Z_1 (Z_2 g_m + 1)$$

$$\textbf{10.25} \quad \textbf{INVALID-ORDER-25} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \quad R_2, \quad \infty, \quad \infty, \quad \infty, \quad \infty \right)$$

$$H(s) = Z_1 \left(Z_2 g_m + 1 \right)$$

$$\textbf{10.26} \quad \textbf{INVALID-ORDER-26} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \quad \frac{1}{C_2 s}, \quad \infty, \quad \infty, \quad \infty, \quad \infty \right)$$

$$H(s) = Z_1 \left(Z_2 g_m + 1 \right)$$

$$\textbf{10.27} \quad \textbf{INVALID-ORDER-27} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \quad \frac{R_2}{C_2 R_2 s + 1}, \quad \infty, \quad \infty, \quad \infty, \quad \infty \right)$$

$$H(s) = Z_1 \left(Z_2 g_m + 1 \right)$$

$$\textbf{10.28} \quad \textbf{INVALID-ORDER-28} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \quad R_2 + \frac{1}{C_2 s}, \quad \infty, \quad \infty, \quad \infty, \quad \infty \right)$$

$$H(s) = Z_1 \left(Z_2 g_m + 1 \right)$$

$$\textbf{10.29} \quad \textbf{INVALID-ORDER-29} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \quad L_2 s + \frac{1}{C_2 s}, \quad \infty, \quad \infty, \quad \infty, \quad \infty \right)$$

$$H(s) = Z_1 \left(Z_2 g_m + 1 \right)$$

$$\textbf{10.30} \quad \textbf{INVALID-ORDER-30} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \quad L_2 s + R_2 + \frac{1}{C_2 s}, \quad \infty, \quad \infty, \quad \infty, \quad \infty \right)$$

$$H(s) = Z_1 \left(Z_2 g_m + 1 \right)$$

$$\textbf{10.31} \quad \textbf{INVALID-ORDER-31} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \quad \frac{L_2 s}{C_2 L_2 s^2 + 1} + R_2, \quad \infty, \quad \infty, \quad \infty, \quad \infty \right)$$

$$H(s) = Z_1 \left(Z_2 g_m + 1 \right)$$

$$\textbf{10.32} \quad \textbf{INVALID-ORDER-32} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \quad \frac{R_2 (C_2 L_2 s^2 + 1)}{C_2 L_2 s^2 + C_2 R_2 s + 1}, \quad \infty, \quad \infty, \quad \infty, \quad \infty \right)$$

$$H(s) = Z_1 \left(Z_2 g_m + 1 \right)$$

$$\textbf{10.33} \quad \textbf{INVALID-ORDER-33} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \quad R_2, \quad \infty, \quad \infty, \quad \infty, \quad \infty \right)$$

$$H(s) = Z_1 \left(Z_2 g_m + 1 \right)$$

$$\textbf{10.34} \quad \textbf{INVALID-ORDER-34} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \quad \frac{1}{C_2 s}, \quad \infty, \quad \infty, \quad \infty, \quad \infty \right)$$

$$H(s) = Z_1 \left(Z_2 g_m + 1 \right)$$

10.35 INVALID-ORDER-35 $Z(s) = \left(R_1 + \frac{1}{C_1 s}, \frac{R_2}{C_2 R_2 s + 1}, \infty, \infty, \infty, \infty \right)$

$$H(s) = Z_1 (Z_2 g_m + 1)$$

10.36 INVALID-ORDER-36 $Z(s) = \left(R_1 + \frac{1}{C_1 s}, R_2 + \frac{1}{C_2 s}, \infty, \infty, \infty, \infty \right)$

$$H(s) = Z_1 (Z_2 g_m + 1)$$

10.37 INVALID-ORDER-37 $Z(s) = \left(R_1 + \frac{1}{C_1 s}, L_2 s + \frac{1}{C_2 s}, \infty, \infty, \infty, \infty \right)$

$$H(s) = Z_1 (Z_2 g_m + 1)$$

10.38 INVALID-ORDER-38 $Z(s) = \left(R_1 + \frac{1}{C_1 s}, L_2 s + R_2 + \frac{1}{C_2 s}, \infty, \infty, \infty, \infty \right)$

$$H(s) = Z_1 (Z_2 g_m + 1)$$

10.39 INVALID-ORDER-39 $Z(s) = \left(R_1 + \frac{1}{C_1 s}, \frac{L_2 s}{C_2 L_2 s^2 + 1} + R_2, \infty, \infty, \infty, \infty \right)$

$$H(s) = Z_1 (Z_2 g_m + 1)$$

10.40 INVALID-ORDER-40 $Z(s) = \left(R_1 + \frac{1}{C_1 s}, \frac{R_2 (C_2 L_2 s^2 + 1)}{C_2 L_2 s^2 + C_2 R_2 s + 1}, \infty, \infty, \infty, \infty \right)$

$$H(s) = Z_1 (Z_2 g_m + 1)$$

10.41 INVALID-ORDER-41 $Z(s) = \left(L_1 s + \frac{1}{C_1 s}, R_2, \infty, \infty, \infty, \infty \right)$

$$H(s) = Z_1 (Z_2 g_m + 1)$$

10.42 INVALID-ORDER-42 $Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \frac{1}{C_2 s}, \infty, \infty, \infty, \infty \right)$

$$H(s) = Z_1 (Z_2 g_m + 1)$$

10.43 INVALID-ORDER-43 $Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \frac{R_2}{C_2 R_2 s + 1}, \infty, \infty, \infty, \infty \right)$

$$H(s) = Z_1 (Z_2 g_m + 1)$$

10.44 INVALID-ORDER-44 $Z(s) = \left(L_1 s + \frac{1}{C_1 s}, R_2 + \frac{1}{C_2 s}, \infty, \infty, \infty, \infty \right)$

$$H(s) = Z_1 (Z_2 g_m + 1)$$

10.45 INVALID-ORDER-45 $Z(s) = \left(L_1 s + \frac{1}{C_1 s}, L_2 s + \frac{1}{C_2 s}, \infty, \infty, \infty, \infty \right)$

$$H(s) = Z_1 (Z_2 g_m + 1)$$

10.46 INVALID-ORDER-46 $Z(s) = \left(L_1 s + \frac{1}{C_1 s}, L_2 s + R_2 + \frac{1}{C_2 s}, \infty, \infty, \infty, \infty \right)$

$$H(s) = Z_1 (Z_2 g_m + 1)$$

10.47 INVALID-ORDER-47 $Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \frac{L_2 s}{C_2 L_2 s^2 + 1} + R_2, \infty, \infty, \infty, \infty \right)$

$$H(s) = Z_1 (Z_2 g_m + 1)$$

10.48 INVALID-ORDER-48 $Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \frac{R_2 (C_2 L_2 s^2 + 1)}{C_2 L_2 s^2 + C_2 R_2 s + 1}, \infty, \infty, \infty, \infty \right)$

$$H(s) = Z_1 (Z_2 g_m + 1)$$

10.49 INVALID-ORDER-49 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, R_2, \infty, \infty, \infty, \infty \right)$

$$H(s) = Z_1 (Z_2 g_m + 1)$$

10.50 INVALID-ORDER-50 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \frac{1}{C_2 s}, \infty, \infty, \infty, \infty \right)$

$$H(s) = Z_1 (Z_2 g_m + 1)$$

10.51 INVALID-ORDER-51 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \frac{R_2}{C_2 R_2 s + 1}, \infty, \infty, \infty, \infty \right)$

$$H(s) = Z_1 (Z_2 g_m + 1)$$

10.52 INVALID-ORDER-52 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, R_2 + \frac{1}{C_2 s}, \infty, \infty, \infty, \infty \right)$

$$H(s) = Z_1 (Z_2 g_m + 1)$$

10.53 INVALID-ORDER-53 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, L_2 s + \frac{1}{C_2 s}, \infty, \infty, \infty, \infty \right)$

$$H(s) = Z_1 (Z_2 g_m + 1)$$

10.54 INVALID-ORDER-54 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, L_2 s + R_2 + \frac{1}{C_2 s}, \infty, \infty, \infty, \infty \right)$

$$H(s) = Z_1 (Z_2 g_m + 1)$$

$$\textbf{10.55} \quad \textbf{INVALID-ORDER-55} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \frac{L_2 s}{C_2 L_2 s^2 + 1} + R_2, \infty, \infty, \infty, \infty \right)$$

$$H(s) = Z_1 (Z_2 g_m + 1)$$

$$\textbf{10.56} \quad \textbf{INVALID-ORDER-56} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \frac{R_2 (C_2 L_2 s^2 + 1)}{C_2 L_2 s^2 + C_2 R_2 s + 1}, \infty, \infty, \infty, \infty \right)$$

$$H(s) = Z_1 (Z_2 g_m + 1)$$

$$\textbf{10.57} \quad \textbf{INVALID-ORDER-57} \quad Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s}, R_2, \infty, \infty, \infty, \infty \right)$$

$$H(s) = Z_1 (Z_2 g_m + 1)$$

$$\textbf{10.58} \quad \textbf{INVALID-ORDER-58} \quad Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s}, \frac{1}{C_2 s}, \infty, \infty, \infty, \infty \right)$$

$$H(s) = Z_1 (Z_2 g_m + 1)$$

$$\textbf{10.59} \quad \textbf{INVALID-ORDER-59} \quad Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s}, \frac{R_2}{C_2 R_2 s + 1}, \infty, \infty, \infty, \infty \right)$$

$$H(s) = Z_1 (Z_2 g_m + 1)$$

$$\textbf{10.60} \quad \textbf{INVALID-ORDER-60} \quad Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s}, R_2 + \frac{1}{C_2 s}, \infty, \infty, \infty, \infty \right)$$

$$H(s) = Z_1 (Z_2 g_m + 1)$$

$$\textbf{10.61} \quad \textbf{INVALID-ORDER-61} \quad Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s}, L_2 s + \frac{1}{C_2 s}, \infty, \infty, \infty, \infty \right)$$

$$H(s) = Z_1 (Z_2 g_m + 1)$$

$$\textbf{10.62} \quad \textbf{INVALID-ORDER-62} \quad Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s}, L_2 s + R_2 + \frac{1}{C_2 s}, \infty, \infty, \infty, \infty \right)$$

$$H(s) = Z_1 (Z_2 g_m + 1)$$

$$\textbf{10.63} \quad \textbf{INVALID-ORDER-63} \quad Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s}, \frac{L_2 s}{C_2 L_2 s^2 + 1} + R_2, \infty, \infty, \infty, \infty \right)$$

$$H(s) = Z_1 (Z_2 g_m + 1)$$

$$\textbf{10.64} \quad \textbf{INVALID-ORDER-64} \quad Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s}, \frac{R_2 (C_2 L_2 s^2 + 1)}{C_2 L_2 s^2 + C_2 R_2 s + 1}, \infty, \infty, \infty, \infty \right)$$

$$H(s) = Z_1 (Z_2 g_m + 1)$$

10.65 INVALID-ORDER-65 $Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, R_2, \infty, \infty, \infty, \infty \right)$

$$H(s) = Z_1 (Z_2 g_m + 1)$$

10.66 INVALID-ORDER-66 $Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \frac{1}{C_2 s}, \infty, \infty, \infty, \infty \right)$

$$H(s) = Z_1 (Z_2 g_m + 1)$$

10.67 INVALID-ORDER-67 $Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \frac{R_2}{C_2 R_2 s + 1}, \infty, \infty, \infty, \infty \right)$

$$H(s) = Z_1 (Z_2 g_m + 1)$$

10.68 INVALID-ORDER-68 $Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, R_2 + \frac{1}{C_2 s}, \infty, \infty, \infty, \infty \right)$

$$H(s) = Z_1 (Z_2 g_m + 1)$$

10.69 INVALID-ORDER-69 $Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, L_2 s + \frac{1}{C_2 s}, \infty, \infty, \infty, \infty \right)$

$$H(s) = Z_1 (Z_2 g_m + 1)$$

10.70 INVALID-ORDER-70 $Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, L_2 s + R_2 + \frac{1}{C_2 s}, \infty, \infty, \infty, \infty \right)$

$$H(s) = Z_1 (Z_2 g_m + 1)$$

10.71 INVALID-ORDER-71 $Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \frac{L_2 s}{C_2 L_2 s^2 + 1} + R_2, \infty, \infty, \infty, \infty \right)$

$$H(s) = Z_1 (Z_2 g_m + 1)$$

10.72 INVALID-ORDER-72 $Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \frac{R_2 (C_2 L_2 s^2 + 1)}{C_2 L_2 s^2 + C_2 R_2 s + 1}, \infty, \infty, \infty, \infty \right)$

$$H(s) = Z_1 (Z_2 g_m + 1)$$

10.73 INVALID-ORDER-73 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, R_2, \infty, \infty, \infty, \infty \right)$

$$H(s) = Z_1 (Z_2 g_m + 1)$$

10.74 INVALID-ORDER-74 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \frac{1}{C_2 s}, \infty, \infty, \infty, \infty \right)$

$$H(s) = Z_1 (Z_2 g_m + 1)$$

$$\mathbf{10.75 \quad INVALID-ORDER-75} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \quad \frac{R_2}{C_2 R_2 s + 1}, \quad \infty, \quad \infty, \quad \infty, \quad \infty \right)$$

$$H(s) = Z_1 (Z_2 g_m + 1)$$

$$\mathbf{10.76 \quad INVALID-ORDER-76} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \quad R_2 + \frac{1}{C_2 s}, \quad \infty, \quad \infty, \quad \infty, \quad \infty \right)$$

$$H(s) = Z_1 (Z_2 g_m + 1)$$

$$\mathbf{10.77 \quad INVALID-ORDER-77} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \quad L_2 s + \frac{1}{C_2 s}, \quad \infty, \quad \infty, \quad \infty, \quad \infty \right)$$

$$H(s) = Z_1 (Z_2 g_m + 1)$$

$$\mathbf{10.78 \quad INVALID-ORDER-78} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \quad L_2 s + R_2 + \frac{1}{C_2 s}, \quad \infty, \quad \infty, \quad \infty, \quad \infty \right)$$

$$H(s) = Z_1 (Z_2 g_m + 1)$$

$$\mathbf{10.79 \quad INVALID-ORDER-79} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \quad \frac{L_2 s}{C_2 L_2 s^2 + 1} + R_2, \quad \infty, \quad \infty, \quad \infty, \quad \infty \right)$$

$$H(s) = Z_1 (Z_2 g_m + 1)$$

$$\mathbf{10.80 \quad INVALID-ORDER-80} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \quad \frac{R_2 (C_2 L_2 s^2 + 1)}{C_2 L_2 s^2 + C_2 R_2 s + 1}, \quad \infty, \quad \infty, \quad \infty, \quad \infty \right)$$

$$H(s) = Z_1 (Z_2 g_m + 1)$$

$$\mathbf{10.81 \quad INVALID-ORDER-81} \quad Z(s) = \left(\frac{R_1 (C_1 L_1 s^2 + 1)}{C_1 L_1 s^2 + C_1 R_1 s + 1}, \quad R_2, \quad \infty, \quad \infty, \quad \infty, \quad \infty \right)$$

$$H(s) = Z_1 (Z_2 g_m + 1)$$

$$\mathbf{10.82 \quad INVALID-ORDER-82} \quad Z(s) = \left(\frac{R_1 (C_1 L_1 s^2 + 1)}{C_1 L_1 s^2 + C_1 R_1 s + 1}, \quad \frac{1}{C_2 s}, \quad \infty, \quad \infty, \quad \infty, \quad \infty \right)$$

$$H(s) = Z_1 (Z_2 g_m + 1)$$

$$\mathbf{10.83 \quad INVALID-ORDER-83} \quad Z(s) = \left(\frac{R_1 (C_1 L_1 s^2 + 1)}{C_1 L_1 s^2 + C_1 R_1 s + 1}, \quad \frac{R_2}{C_2 R_2 s + 1}, \quad \infty, \quad \infty, \quad \infty, \quad \infty \right)$$

$$H(s) = Z_1 (Z_2 g_m + 1)$$

$$\mathbf{10.84 \quad INVALID-ORDER-84} \quad Z(s) = \left(\frac{R_1 (C_1 L_1 s^2 + 1)}{C_1 L_1 s^2 + C_1 R_1 s + 1}, \quad R_2 + \frac{1}{C_2 s}, \quad \infty, \quad \infty, \quad \infty, \quad \infty \right)$$

$$H(s) = Z_1 (Z_2 g_m + 1)$$

10.85 INVALID-ORDER-85 $Z(s) = \left(\frac{R_1(C_1L_1s^2+1)}{C_1L_1s^2+C_1R_1s+1}, L_2s + \frac{1}{C_2s}, \infty, \infty, \infty, \infty \right)$

$$H(s) = Z_1 \left(Z_2g_m + 1 \right)$$

10.86 INVALID-ORDER-86 $Z(s) = \left(\frac{R_1(C_1L_1s^2+1)}{C_1L_1s^2+C_1R_1s+1}, L_2s + R_2 + \frac{1}{C_2s}, \infty, \infty, \infty, \infty \right)$

$$H(s) = Z_1 \left(Z_2g_m + 1 \right)$$

10.87 INVALID-ORDER-87 $Z(s) = \left(\frac{R_1(C_1L_1s^2+1)}{C_1L_1s^2+C_1R_1s+1}, \frac{L_2s}{C_2L_2s^2+1} + R_2, \infty, \infty, \infty, \infty \right)$

$$H(s) = Z_1 \left(Z_2g_m + 1 \right)$$

10.88 INVALID-ORDER-88 $Z(s) = \left(\frac{R_1(C_1L_1s^2+1)}{C_1L_1s^2+C_1R_1s+1}, \frac{R_2(C_2L_2s^2+1)}{C_2L_2s^2+C_2R_2s+1}, \infty, \infty, \infty, \infty \right)$

$$H(s) = Z_1 \left(Z_2g_m + 1 \right)$$