

Filter Summary Report: TIA,simple,Z2,Z5

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Contents

1 Examined $H(z)$ for TIA simple **Z2 Z5:** $\frac{Z_2Z_5g_m-Z_2+Z_5}{2Z_2g_m+4}$

$$H(z)=\frac{Z_2Z_5g_m-Z_2+Z_5}{2Z_2g_m+4}$$

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 $Z(s)=(\infty, R_2, \infty, \infty, R_5, \infty)$

$$H(s)=\frac{Z_2Z_5g_m-Z_2+Z_5}{2\left(Z_2g_m+2\right)}$$

10.2 INVALID-ORDER-2 $Z(s)=\left(\infty, R_2, \infty, \infty, \frac{1}{C_5s}, \infty\right)$

$$H(s)=\frac{Z_2Z_5g_m-Z_2+Z_5}{2\left(Z_2g_m+2\right)}$$

10.3 INVALID-ORDER-3 $Z(s)=\left(\infty, R_2, \infty, \infty, \frac{R_5}{C_5R_5s+1}, \infty\right)$

$$H(s)=\frac{Z_2Z_5g_m-Z_2+Z_5}{2\left(Z_2g_m+2\right)}$$

10.4 INVALID-ORDER-4 $Z(s)=\left(\infty, R_2, \infty, \infty, R_5+\frac{1}{C_5s}, \infty\right)$

$$H(s)=\frac{Z_2Z_5g_m-Z_2+Z_5}{2\left(Z_2g_m+2\right)}$$

$$10.5 \quad \text{INVALID-ORDER-5} \quad Z(s) = \left(\infty, \quad R_2, \quad \infty, \quad \infty, \quad L_5 s + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{Z_2 Z_5 g_m - Z_2 + Z_5}{2 (Z_2 g_m + 2)}$$

$$10.6 \quad \text{INVALID-ORDER-6} \quad Z(s) = \left(\infty, \quad R_2, \quad \infty, \quad \infty, \quad \frac{L_5 s}{C_5 L_5 s^2 + 1}, \quad \infty \right)$$

$$H(s) = \frac{Z_2 Z_5 g_m - Z_2 + Z_5}{2 (Z_2 g_m + 2)}$$

$$10.7 \quad \text{INVALID-ORDER-7} \quad Z(s) = \left(\infty, \quad R_2, \quad \infty, \quad \infty, \quad L_5 s + R_5 + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{Z_2 Z_5 g_m - Z_2 + Z_5}{2 (Z_2 g_m + 2)}$$

$$10.8 \quad \text{INVALID-ORDER-8} \quad Z(s) = \left(\infty, \quad R_2, \quad \infty, \quad \infty, \quad \frac{L_5 R_5 s}{C_5 L_5 R_5 s^2 + L_5 s + R_5}, \quad \infty \right)$$

$$H(s) = \frac{Z_2 Z_5 g_m - Z_2 + Z_5}{2 (Z_2 g_m + 2)}$$

$$10.9 \quad \text{INVALID-ORDER-9} \quad Z(s) = \left(\infty, \quad R_2, \quad \infty, \quad \infty, \quad \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \quad \infty \right)$$

$$H(s) = \frac{Z_2 Z_5 g_m - Z_2 + Z_5}{2 (Z_2 g_m + 2)}$$

$$10.10 \quad \text{INVALID-ORDER-10} \quad Z(s) = \left(\infty, \quad R_2, \quad \infty, \quad \infty, \quad \frac{R_5 (C_5 L_5 s^2 + 1)}{C_5 L_5 s^2 + C_5 R_5 s + 1}, \quad \infty \right)$$

$$H(s) = \frac{Z_2 Z_5 g_m - Z_2 + Z_5}{2 (Z_2 g_m + 2)}$$

$$10.11 \quad \text{INVALID-ORDER-11} \quad Z(s) = \left(\infty, \quad \frac{1}{C_2 s}, \quad \infty, \quad \infty, \quad R_5, \quad \infty \right)$$

$$H(s) = \frac{Z_2 Z_5 g_m - Z_2 + Z_5}{2 (Z_2 g_m + 2)}$$

$$10.12 \quad \text{INVALID-ORDER-12} \quad Z(s) = \left(\infty, \quad \frac{1}{C_2 s}, \quad \infty, \quad \infty, \quad \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{Z_2 Z_5 g_m - Z_2 + Z_5}{2 (Z_2 g_m + 2)}$$

$$10.13 \quad \text{INVALID-ORDER-13} \quad Z(s) = \left(\infty, \quad \frac{1}{C_2 s}, \quad \infty, \quad \infty, \quad \frac{R_5}{C_5 R_5 s + 1}, \quad \infty \right)$$

$$H(s) = \frac{Z_2 Z_5 g_m - Z_2 + Z_5}{2 (Z_2 g_m + 2)}$$

$$10.14 \quad \text{INVALID-ORDER-14} \quad Z(s) = \left(\infty, \quad \frac{1}{C_2 s}, \quad \infty, \quad \infty, \quad R_5 + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{Z_2 Z_5 g_m - Z_2 + Z_5}{2 (Z_2 g_m + 2)}$$

$$10.15 \quad \text{INVALID-ORDER-15} \quad Z(s) = \left(\infty, \frac{1}{C_2 s}, \infty, \infty, L_5 s + \frac{1}{C_5 s}, \infty \right)$$

$$H(s) = \frac{Z_2 Z_5 g_m - Z_2 + Z_5}{2(Z_2 g_m + 2)}$$

$$10.16 \quad \text{INVALID-ORDER-16} \quad Z(s) = \left(\infty, \frac{1}{C_2 s}, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \infty \right)$$

$$H(s) = \frac{Z_2 Z_5 g_m - Z_2 + Z_5}{2(Z_2 g_m + 2)}$$

$$10.17 \quad \text{INVALID-ORDER-17} \quad Z(s) = \left(\infty, \frac{1}{C_2 s}, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, \infty \right)$$

$$H(s) = \frac{Z_2 Z_5 g_m - Z_2 + Z_5}{2(Z_2 g_m + 2)}$$

$$10.18 \quad \text{INVALID-ORDER-18} \quad Z(s) = \left(\infty, \frac{1}{C_2 s}, \infty, \infty, \frac{L_5 R_5 s}{C_5 L_5 R_5 s^2 + L_5 s + R_5}, \infty \right)$$

$$H(s) = \frac{Z_2 Z_5 g_m - Z_2 + Z_5}{2(Z_2 g_m + 2)}$$

$$10.19 \quad \text{INVALID-ORDER-19} \quad Z(s) = \left(\infty, \frac{1}{C_2 s}, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \infty \right)$$

$$H(s) = \frac{Z_2 Z_5 g_m - Z_2 + Z_5}{2(Z_2 g_m + 2)}$$

$$10.20 \quad \text{INVALID-ORDER-20} \quad Z(s) = \left(\infty, \frac{1}{C_2 s}, \infty, \infty, \frac{R_5 (C_5 L_5 s^2 + 1)}{C_5 L_5 s^2 + C_5 R_5 s + 1}, \infty \right)$$

$$H(s) = \frac{Z_2 Z_5 g_m - Z_2 + Z_5}{2(Z_2 g_m + 2)}$$

$$10.21 \quad \text{INVALID-ORDER-21} \quad Z(s) = \left(\infty, \frac{R_2}{C_2 R_2 s + 1}, \infty, \infty, R_5, \infty \right)$$

$$H(s) = \frac{Z_2 Z_5 g_m - Z_2 + Z_5}{2(Z_2 g_m + 2)}$$

$$10.22 \quad \text{INVALID-ORDER-22} \quad Z(s) = \left(\infty, \frac{R_2}{C_2 R_2 s + 1}, \infty, \infty, \frac{1}{C_5 s}, \infty \right)$$

$$H(s) = \frac{Z_2 Z_5 g_m - Z_2 + Z_5}{2(Z_2 g_m + 2)}$$

$$10.23 \quad \text{INVALID-ORDER-23} \quad Z(s) = \left(\infty, \frac{R_2}{C_2 R_2 s + 1}, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, \infty \right)$$

$$H(s) = \frac{Z_2 Z_5 g_m - Z_2 + Z_5}{2(Z_2 g_m + 2)}$$

$$10.24 \quad \text{INVALID-ORDER-24} \quad Z(s) = \left(\infty, \frac{R_2}{C_2 R_2 s + 1}, \infty, \infty, R_5 + \frac{1}{C_5 s}, \infty \right)$$

$$H(s) = \frac{Z_2 Z_5 g_m - Z_2 + Z_5}{2(Z_2 g_m + 2)}$$

$$10.25 \quad \text{INVALID-ORDER-25} \quad Z(s) = \left(\infty, \frac{R_2}{C_2 R_2 s + 1}, \infty, \infty, L_5 s + \frac{1}{C_5 s}, \infty \right)$$

$$H(s) = \frac{Z_2 Z_5 g_m - Z_2 + Z_5}{2(Z_2 g_m + 2)}$$

$$10.26 \quad \text{INVALID-ORDER-26} \quad Z(s) = \left(\infty, \frac{R_2}{C_2 R_2 s + 1}, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \infty \right)$$

$$H(s) = \frac{Z_2 Z_5 g_m - Z_2 + Z_5}{2(Z_2 g_m + 2)}$$

$$10.27 \quad \text{INVALID-ORDER-27} \quad Z(s) = \left(\infty, \frac{R_2}{C_2 R_2 s + 1}, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, \infty \right)$$

$$H(s) = \frac{Z_2 Z_5 g_m - Z_2 + Z_5}{2(Z_2 g_m + 2)}$$

$$10.28 \quad \text{INVALID-ORDER-28} \quad Z(s) = \left(\infty, \frac{R_2}{C_2 R_2 s + 1}, \infty, \infty, \frac{L_5 R_5 s}{C_5 L_5 R_5 s^2 + L_5 s + R_5}, \infty \right)$$

$$H(s) = \frac{Z_2 Z_5 g_m - Z_2 + Z_5}{2(Z_2 g_m + 2)}$$

$$10.29 \quad \text{INVALID-ORDER-29} \quad Z(s) = \left(\infty, \frac{R_2}{C_2 R_2 s + 1}, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \infty \right)$$

$$H(s) = \frac{Z_2 Z_5 g_m - Z_2 + Z_5}{2(Z_2 g_m + 2)}$$

$$10.30 \quad \text{INVALID-ORDER-30} \quad Z(s) = \left(\infty, \frac{R_2}{C_2 R_2 s + 1}, \infty, \infty, \frac{R_5 (C_5 L_5 s^2 + 1)}{C_5 L_5 s^2 + C_5 R_5 s + 1}, \infty \right)$$

$$H(s) = \frac{Z_2 Z_5 g_m - Z_2 + Z_5}{2(Z_2 g_m + 2)}$$

$$10.31 \quad \text{INVALID-ORDER-31} \quad Z(s) = \left(\infty, R_2 + \frac{1}{C_2 s}, \infty, \infty, R_5, \infty \right)$$

$$H(s) = \frac{Z_2 Z_5 g_m - Z_2 + Z_5}{2(Z_2 g_m + 2)}$$

$$10.32 \quad \text{INVALID-ORDER-32} \quad Z(s) = \left(\infty, R_2 + \frac{1}{C_2 s}, \infty, \infty, \frac{1}{C_5 s}, \infty \right)$$

$$H(s) = \frac{Z_2 Z_5 g_m - Z_2 + Z_5}{2(Z_2 g_m + 2)}$$

$$10.33 \quad \text{INVALID-ORDER-33} \quad Z(s) = \left(\infty, R_2 + \frac{1}{C_2 s}, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, \infty \right)$$

$$H(s) = \frac{Z_2 Z_5 g_m - Z_2 + Z_5}{2(Z_2 g_m + 2)}$$

$$10.34 \quad \text{INVALID-ORDER-34} \quad Z(s) = \left(\infty, R_2 + \frac{1}{C_2 s}, \infty, \infty, R_5 + \frac{1}{C_5 s}, \infty \right)$$

$$H(s) = \frac{Z_2 Z_5 g_m - Z_2 + Z_5}{2(Z_2 g_m + 2)}$$

$$10.35 \quad \text{INVALID-ORDER-35} \quad Z(s) = \left(\infty, \quad R_2 + \frac{1}{C_2 s}, \quad \infty, \quad \infty, \quad L_5 s + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{Z_2 Z_5 g_m - Z_2 + Z_5}{2(Z_2 g_m + 2)}$$

$$10.36 \quad \text{INVALID-ORDER-36} \quad Z(s) = \left(\infty, \quad R_2 + \frac{1}{C_2 s}, \quad \infty, \quad \infty, \quad \frac{L_5 s}{C_5 L_5 s^2 + 1}, \quad \infty \right)$$

$$H(s) = \frac{Z_2 Z_5 g_m - Z_2 + Z_5}{2(Z_2 g_m + 2)}$$

$$10.37 \quad \text{INVALID-ORDER-37} \quad Z(s) = \left(\infty, \quad R_2 + \frac{1}{C_2 s}, \quad \infty, \quad \infty, \quad L_5 s + R_5 + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{Z_2 Z_5 g_m - Z_2 + Z_5}{2(Z_2 g_m + 2)}$$

$$10.38 \quad \text{INVALID-ORDER-38} \quad Z(s) = \left(\infty, \quad R_2 + \frac{1}{C_2 s}, \quad \infty, \quad \infty, \quad \frac{L_5 R_5 s}{C_5 L_5 R_5 s^2 + L_5 s + R_5}, \quad \infty \right)$$

$$H(s) = \frac{Z_2 Z_5 g_m - Z_2 + Z_5}{2(Z_2 g_m + 2)}$$

$$10.39 \quad \text{INVALID-ORDER-39} \quad Z(s) = \left(\infty, \quad R_2 + \frac{1}{C_2 s}, \quad \infty, \quad \infty, \quad \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \quad \infty \right)$$

$$H(s) = \frac{Z_2 Z_5 g_m - Z_2 + Z_5}{2(Z_2 g_m + 2)}$$

$$10.40 \quad \text{INVALID-ORDER-40} \quad Z(s) = \left(\infty, \quad R_2 + \frac{1}{C_2 s}, \quad \infty, \quad \infty, \quad \frac{R_5 (C_5 L_5 s^2 + 1)}{C_5 L_5 s^2 + C_5 R_5 s + 1}, \quad \infty \right)$$

$$H(s) = \frac{Z_2 Z_5 g_m - Z_2 + Z_5}{2(Z_2 g_m + 2)}$$

$$10.41 \quad \text{INVALID-ORDER-41} \quad Z(s) = \left(\infty, \quad L_2 s + \frac{1}{C_2 s}, \quad \infty, \quad \infty, \quad R_5, \quad \infty \right)$$

$$H(s) = \frac{Z_2 Z_5 g_m - Z_2 + Z_5}{2(Z_2 g_m + 2)}$$

$$10.42 \quad \text{INVALID-ORDER-42} \quad Z(s) = \left(\infty, \quad L_2 s + \frac{1}{C_2 s}, \quad \infty, \quad \infty, \quad \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{Z_2 Z_5 g_m - Z_2 + Z_5}{2(Z_2 g_m + 2)}$$

$$10.43 \quad \text{INVALID-ORDER-43} \quad Z(s) = \left(\infty, \quad L_2 s + \frac{1}{C_2 s}, \quad \infty, \quad \infty, \quad \frac{R_5}{C_5 R_5 s + 1}, \quad \infty \right)$$

$$H(s) = \frac{Z_2 Z_5 g_m - Z_2 + Z_5}{2(Z_2 g_m + 2)}$$

$$10.44 \quad \text{INVALID-ORDER-44} \quad Z(s) = \left(\infty, \quad L_2 s + \frac{1}{C_2 s}, \quad \infty, \quad \infty, \quad R_5 + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{Z_2 Z_5 g_m - Z_2 + Z_5}{2(Z_2 g_m + 2)}$$

$$10.45 \quad \text{INVALID-ORDER-45} \quad Z(s) = \left(\infty, \quad L_2 s + \frac{1}{C_2 s}, \quad \infty, \quad \infty, \quad L_5 s + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{Z_2 Z_5 g_m - Z_2 + Z_5}{2 (Z_2 g_m + 2)}$$

$$10.46 \quad \text{INVALID-ORDER-46} \quad Z(s) = \left(\infty, \quad L_2 s + \frac{1}{C_2 s}, \quad \infty, \quad \infty, \quad \frac{L_5 s}{C_5 L_5 s^2 + 1}, \quad \infty \right)$$

$$H(s) = \frac{Z_2 Z_5 g_m - Z_2 + Z_5}{2 (Z_2 g_m + 2)}$$

$$10.47 \quad \text{INVALID-ORDER-47} \quad Z(s) = \left(\infty, \quad L_2 s + \frac{1}{C_2 s}, \quad \infty, \quad \infty, \quad L_5 s + R_5 + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{Z_2 Z_5 g_m - Z_2 + Z_5}{2 (Z_2 g_m + 2)}$$

$$10.48 \quad \text{INVALID-ORDER-48} \quad Z(s) = \left(\infty, \quad L_2 s + \frac{1}{C_2 s}, \quad \infty, \quad \infty, \quad \frac{L_5 R_5 s}{C_5 L_5 R_5 s^2 + L_5 s + R_5}, \quad \infty \right)$$

$$H(s) = \frac{Z_2 Z_5 g_m - Z_2 + Z_5}{2 (Z_2 g_m + 2)}$$

$$10.49 \quad \text{INVALID-ORDER-49} \quad Z(s) = \left(\infty, \quad L_2 s + \frac{1}{C_2 s}, \quad \infty, \quad \infty, \quad \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \quad \infty \right)$$

$$H(s) = \frac{Z_2 Z_5 g_m - Z_2 + Z_5}{2 (Z_2 g_m + 2)}$$

$$10.50 \quad \text{INVALID-ORDER-50} \quad Z(s) = \left(\infty, \quad L_2 s + \frac{1}{C_2 s}, \quad \infty, \quad \infty, \quad \frac{R_5 (C_5 L_5 s^2 + 1)}{C_5 L_5 s^2 + C_5 R_5 s + 1}, \quad \infty \right)$$

$$H(s) = \frac{Z_2 Z_5 g_m - Z_2 + Z_5}{2 (Z_2 g_m + 2)}$$

$$10.51 \quad \text{INVALID-ORDER-51} \quad Z(s) = \left(\infty, \quad L_2 s + R_2 + \frac{1}{C_2 s}, \quad \infty, \quad \infty, \quad R_5, \quad \infty \right)$$

$$H(s) = \frac{Z_2 Z_5 g_m - Z_2 + Z_5}{2 (Z_2 g_m + 2)}$$

$$10.52 \quad \text{INVALID-ORDER-52} \quad Z(s) = \left(\infty, \quad L_2 s + R_2 + \frac{1}{C_2 s}, \quad \infty, \quad \infty, \quad \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{Z_2 Z_5 g_m - Z_2 + Z_5}{2 (Z_2 g_m + 2)}$$

$$10.53 \quad \text{INVALID-ORDER-53} \quad Z(s) = \left(\infty, \quad L_2 s + R_2 + \frac{1}{C_2 s}, \quad \infty, \quad \infty, \quad \frac{R_5}{C_5 R_5 s + 1}, \quad \infty \right)$$

$$H(s) = \frac{Z_2 Z_5 g_m - Z_2 + Z_5}{2 (Z_2 g_m + 2)}$$

$$10.54 \quad \text{INVALID-ORDER-54} \quad Z(s) = \left(\infty, \quad L_2 s + R_2 + \frac{1}{C_2 s}, \quad \infty, \quad \infty, \quad R_5 + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{Z_2 Z_5 g_m - Z_2 + Z_5}{2 (Z_2 g_m + 2)}$$

$$10.55 \quad \text{INVALID-ORDER-55} \quad Z(s) = \left(\infty, \quad L_2 s + R_2 + \frac{1}{C_2 s}, \quad \infty, \quad \infty, \quad L_5 s + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{Z_2 Z_5 g_m - Z_2 + Z_5}{2(Z_2 g_m + 2)}$$

$$10.56 \quad \text{INVALID-ORDER-56} \quad Z(s) = \left(\infty, \quad L_2 s + R_2 + \frac{1}{C_2 s}, \quad \infty, \quad \infty, \quad \frac{L_5 s}{C_5 L_5 s^2 + 1}, \quad \infty \right)$$

$$H(s) = \frac{Z_2 Z_5 g_m - Z_2 + Z_5}{2(Z_2 g_m + 2)}$$

$$10.57 \quad \text{INVALID-ORDER-57} \quad Z(s) = \left(\infty, \quad L_2 s + R_2 + \frac{1}{C_2 s}, \quad \infty, \quad \infty, \quad L_5 s + R_5 + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{Z_2 Z_5 g_m - Z_2 + Z_5}{2(Z_2 g_m + 2)}$$

$$10.58 \quad \text{INVALID-ORDER-58} \quad Z(s) = \left(\infty, \quad L_2 s + R_2 + \frac{1}{C_2 s}, \quad \infty, \quad \infty, \quad \frac{L_5 R_5 s}{C_5 L_5 R_5 s^2 + L_5 s + R_5}, \quad \infty \right)$$

$$H(s) = \frac{Z_2 Z_5 g_m - Z_2 + Z_5}{2(Z_2 g_m + 2)}$$

$$10.59 \quad \text{INVALID-ORDER-59} \quad Z(s) = \left(\infty, \quad L_2 s + R_2 + \frac{1}{C_2 s}, \quad \infty, \quad \infty, \quad \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \quad \infty \right)$$

$$H(s) = \frac{Z_2 Z_5 g_m - Z_2 + Z_5}{2(Z_2 g_m + 2)}$$

$$10.60 \quad \text{INVALID-ORDER-60} \quad Z(s) = \left(\infty, \quad L_2 s + R_2 + \frac{1}{C_2 s}, \quad \infty, \quad \infty, \quad \frac{R_5(C_5 L_5 s^2 + 1)}{C_5 L_5 s^2 + C_5 R_5 s + 1}, \quad \infty \right)$$

$$H(s) = \frac{Z_2 Z_5 g_m - Z_2 + Z_5}{2(Z_2 g_m + 2)}$$

$$10.61 \quad \text{INVALID-ORDER-61} \quad Z(s) = \left(\infty, \quad \frac{L_2 s}{C_2 L_2 s^2 + 1} + R_2, \quad \infty, \quad \infty, \quad R_5, \quad \infty \right)$$

$$H(s) = \frac{Z_2 Z_5 g_m - Z_2 + Z_5}{2(Z_2 g_m + 2)}$$

$$10.62 \quad \text{INVALID-ORDER-62} \quad Z(s) = \left(\infty, \quad \frac{L_2 s}{C_2 L_2 s^2 + 1} + R_2, \quad \infty, \quad \infty, \quad \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{Z_2 Z_5 g_m - Z_2 + Z_5}{2(Z_2 g_m + 2)}$$

$$10.63 \quad \text{INVALID-ORDER-63} \quad Z(s) = \left(\infty, \quad \frac{L_2 s}{C_2 L_2 s^2 + 1} + R_2, \quad \infty, \quad \infty, \quad \frac{R_5}{C_5 R_5 s + 1}, \quad \infty \right)$$

$$H(s) = \frac{Z_2 Z_5 g_m - Z_2 + Z_5}{2(Z_2 g_m + 2)}$$

$$10.64 \quad \text{INVALID-ORDER-64} \quad Z(s) = \left(\infty, \quad \frac{L_2 s}{C_2 L_2 s^2 + 1} + R_2, \quad \infty, \quad \infty, \quad R_5 + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{Z_2 Z_5 g_m - Z_2 + Z_5}{2(Z_2 g_m + 2)}$$

10.65 INVALID-ORDER-65 $Z(s) = \left(\infty, \frac{L_2 s}{C_2 L_2 s^2 + 1} + R_2, \infty, \infty, L_5 s + \frac{1}{C_5 s}, \infty \right)$

$$H(s) = \frac{Z_2 Z_5 g_m - Z_2 + Z_5}{2(Z_2 g_m + 2)}$$

10.66 INVALID-ORDER-66 $Z(s) = \left(\infty, \frac{L_2 s}{C_2 L_2 s^2 + 1} + R_2, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \infty \right)$

$$H(s) = \frac{Z_2 Z_5 g_m - Z_2 + Z_5}{2(Z_2 g_m + 2)}$$

10.67 INVALID-ORDER-67 $Z(s) = \left(\infty, \frac{L_2 s}{C_2 L_2 s^2 + 1} + R_2, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, \infty \right)$

$$H(s) = \frac{Z_2 Z_5 g_m - Z_2 + Z_5}{2(Z_2 g_m + 2)}$$

10.68 INVALID-ORDER-68 $Z(s) = \left(\infty, \frac{L_2 s}{C_2 L_2 s^2 + 1} + R_2, \infty, \infty, \frac{L_5 R_5 s}{C_5 L_5 R_5 s^2 + L_5 s + R_5}, \infty \right)$

$$H(s) = \frac{Z_2 Z_5 g_m - Z_2 + Z_5}{2(Z_2 g_m + 2)}$$

10.69 INVALID-ORDER-69 $Z(s) = \left(\infty, \frac{L_2 s}{C_2 L_2 s^2 + 1} + R_2, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \infty \right)$

$$H(s) = \frac{Z_2 Z_5 g_m - Z_2 + Z_5}{2(Z_2 g_m + 2)}$$

10.70 INVALID-ORDER-70 $Z(s) = \left(\infty, \frac{L_2 s}{C_2 L_2 s^2 + 1} + R_2, \infty, \infty, \frac{R_5(C_5 L_5 s^2 + 1)}{C_5 L_5 s^2 + C_5 R_5 s + 1}, \infty \right)$

$$H(s) = \frac{Z_2 Z_5 g_m - Z_2 + Z_5}{2(Z_2 g_m + 2)}$$

10.71 INVALID-ORDER-71 $Z(s) = \left(\infty, \frac{R_2(C_2 L_2 s^2 + 1)}{C_2 L_2 s^2 + C_2 R_2 s + 1}, \infty, \infty, R_5, \infty \right)$

$$H(s) = \frac{Z_2 Z_5 g_m - Z_2 + Z_5}{2(Z_2 g_m + 2)}$$

10.72 INVALID-ORDER-72 $Z(s) = \left(\infty, \frac{R_2(C_2 L_2 s^2 + 1)}{C_2 L_2 s^2 + C_2 R_2 s + 1}, \infty, \infty, \frac{1}{C_5 s}, \infty \right)$

$$H(s) = \frac{Z_2 Z_5 g_m - Z_2 + Z_5}{2(Z_2 g_m + 2)}$$

10.73 INVALID-ORDER-73 $Z(s) = \left(\infty, \frac{R_2(C_2 L_2 s^2 + 1)}{C_2 L_2 s^2 + C_2 R_2 s + 1}, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, \infty \right)$

$$H(s) = \frac{Z_2 Z_5 g_m - Z_2 + Z_5}{2(Z_2 g_m + 2)}$$

$$10.74 \quad \text{INVALID-ORDER-74} \quad Z(s) = \left(\infty, \frac{R_2(C_2L_2s^2+1)}{C_2L_2s^2+C_2R_2s+1}, \infty, \infty, R_5 + \frac{1}{C_5s}, \infty \right)$$

$$H(s) = \frac{Z_2Z_5g_m - Z_2 + Z_5}{2(Z_2g_m + 2)}$$

$$10.75 \quad \text{INVALID-ORDER-75} \quad Z(s) = \left(\infty, \frac{R_2(C_2L_2s^2+1)}{C_2L_2s^2+C_2R_2s+1}, \infty, \infty, L_5s + \frac{1}{C_5s}, \infty \right)$$

$$H(s) = \frac{Z_2Z_5g_m - Z_2 + Z_5}{2(Z_2g_m + 2)}$$

$$10.76 \quad \text{INVALID-ORDER-76} \quad Z(s) = \left(\infty, \frac{R_2(C_2L_2s^2+1)}{C_2L_2s^2+C_2R_2s+1}, \infty, \infty, \frac{L_5s}{C_5L_5s^2+1}, \infty \right)$$

$$H(s) = \frac{Z_2Z_5g_m - Z_2 + Z_5}{2(Z_2g_m + 2)}$$

$$10.77 \quad \text{INVALID-ORDER-77} \quad Z(s) = \left(\infty, \frac{R_2(C_2L_2s^2+1)}{C_2L_2s^2+C_2R_2s+1}, \infty, \infty, L_5s + R_5 + \frac{1}{C_5s}, \infty \right)$$

$$H(s) = \frac{Z_2Z_5g_m - Z_2 + Z_5}{2(Z_2g_m + 2)}$$

$$10.78 \quad \text{INVALID-ORDER-78} \quad Z(s) = \left(\infty, \frac{R_2(C_2L_2s^2+1)}{C_2L_2s^2+C_2R_2s+1}, \infty, \infty, \frac{L_5R_5s}{C_5L_5R_5s^2+L_5s+R_5}, \infty \right)$$

$$H(s) = \frac{Z_2Z_5g_m - Z_2 + Z_5}{2(Z_2g_m + 2)}$$

$$10.79 \quad \text{INVALID-ORDER-79} \quad Z(s) = \left(\infty, \frac{R_2(C_2L_2s^2+1)}{C_2L_2s^2+C_2R_2s+1}, \infty, \infty, \frac{L_5s}{C_5L_5s^2+1} + R_5, \infty \right)$$

$$H(s) = \frac{Z_2Z_5g_m - Z_2 + Z_5}{2(Z_2g_m + 2)}$$

$$10.80 \quad \text{INVALID-ORDER-80} \quad Z(s) = \left(\infty, \frac{R_2(C_2L_2s^2+1)}{C_2L_2s^2+C_2R_2s+1}, \infty, \infty, \frac{R_5(C_5L_5s^2+1)}{C_5L_5s^2+C_5R_5s+1}, \infty \right)$$

$$H(s) = \frac{Z_2Z_5g_m - Z_2 + Z_5}{2(Z_2g_m + 2)}$$