Filter Summary Report: TIA,simple,Z1,Z2

Generated by MacAnalog-Symbolix

December 18, 2024

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10.57INVALID-ORDER-57 $Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s},\ \frac{R_2}{C_2 R_2 s+1},\ \infty,\ \infty,\ \infty,\ \infty\right)$ 12
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10.60INVALID-ORDER-60 $Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s},\ L_2 s + R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \infty\right)$ 13
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10.74INVALID-ORDER-74 $Z(s) = \left(\frac{R_1\left(C_1 L_1 s^2+1\right)}{C_1 L_1 s^2+C_1 R_1 s+1},\ \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \infty\right)$ 14
10.75INVALID-ORDER-75 $Z(s) = \left(\frac{R_1\left(C_1 L_1 s^2+1\right)}{C_1 L_1 s^2+C_1 R_1 s+1},\ \frac{R_2}{C_2 R_2 s+1},\ \infty,\ \infty,\ \infty,\ \infty\right)$ 14
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10.77INVALID-ORDER-77 $Z(s) = \left(\frac{R_1\left(C_1 L_1 s^2+1\right)}{C_1 L_1 s^2+C_1 R_1 s+1},\ L_2 s + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \infty\right)$ 15
10.78INVALID-ORDER-78 $Z(s) = \left(\frac{R_1\left(C_1 L_1 s^2+1\right)}{C_1 L_1 s^2+C_1 R_1 s+1},\ L_2 s + R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \infty\right)$ 15
10.79INVALID-ORDER-79 $Z(s) = \left(\frac{R_1\left(C_1 L_1 s^2+1\right)}{C_1 L_1 s^2+C_1 R_1 s+1},\ \frac{L_2 s}{C_2 L_2 s^2+1} + R_2,\ \infty,\ \infty,\ \infty,\ \infty\right)$ 15
10.80INVALID-ORDER-80 $Z(s) = \left(\frac{R_1\left(C_1 L_1 s^2+1\right)}{C_1 L_1 s^2+C_1 R_1 s+1},\ \frac{R_2\left(C_2 L_2 s^2+1\right)}{C_2 L_2 s^2+C_2 R_2 s+1},\ \infty,\ \infty,\ \infty,\ \infty\right)$ 15

11 PolynomialError **15**

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

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

2 HP

3 BP

3.1 BP-1 $Z(s)=\left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2+L_1 s+R_1},\ R_2,\ \infty,\ \infty,\ \infty,\ \infty\right)$

$$H(s)=\frac{s\left(L_1 R_1 R_2 g_m+L_1 R_1\right)}{C_1 L_1 R_1 s^2+L_1 s+R_1}$$

Parameters:

Q: $C_1 R_1 \sqrt{\frac{1}{C_1 L_1}}$
wo: $\sqrt{\frac{1}{C_1 L_1}}$
bandwidth: $\frac{1}{C_1 R_1}$
K-LP: 0
K-HP: 0
K-BP: $R_1\left(R_2 g_m+1\right)$
Qz: 0
Wz: None

4 LP

5 BS

5.1 BS-1 $Z(s)=\left(\frac{R_1\left(C_1 L_1 s^2+1\right)}{C_1 L_1 s^2+C_1 R_1 s+1},\ R_2,\ \infty,\ \infty,\ \infty,\ \infty\right)$

$$H(s)=\frac{R_1 R_2 g_m+R_1+s^2\left(C_1 L_1 R_1 R_2 g_m+C_1 L_1 R_1\right)}{C_1 L_1 s^2+C_1 R_1 s+1}$$

Parameters:

Q: $\frac{L_1 \sqrt{\frac{1}{C_1 L_1}}}{R_1}$
wo: $\sqrt{\frac{1}{C_1 L_1}}$
bandwidth: $\frac{R_1}{L_1}$
K-LP: $R_1\left(R_2 g_m+1\right)$
K-HP: $R_1\left(R_2 g_m+1\right)$
K-BP: 0
Qz: None
Wz: $\sqrt{\frac{1}{C_1 L_1}}$

6 GE

6.1 GE-1 $Z(s) = \left(R_1,\ \frac{R_2\left(C_2L_2s^2+1\right)}{C_2L_2s^2+C_2R_2s+1},\ \infty,\ \infty,\ \infty,\ \infty\right)$

$$H(s) = \frac{C_2R_1R_2s + R_1R_2g_m + R_1 + s^2\left(C_2L_2R_1R_2g_m + C_2L_2R_1\right)}{C_2L_2s^2 + C_2R_2s + 1}$$

Parameters:

Q: $\frac{L_2\sqrt{\frac{1}{C_2L_2}}}{R_2}$
wo: $\sqrt{\frac{1}{C_2L_2}}$
bandwidth: $\frac{R_2}{L_2}$
K-LP: $R_1\left(R_2g_m+1\right)$
K-HP: $R_1\left(R_2g_m+1\right)$
K-BP: R_1
Qz: $\frac{L_2\sqrt{\frac{1}{C_2L_2}}\left(R_2g_m+1\right)}{R_2}$
Wz: $\sqrt{\frac{1}{C_2L_2}}$

7 AP

8 INVALID-NUMER

8.1 INVALID-NUMER-1 $Z(s) = \left(\frac{R_1}{C_1R_1s+1},\ \frac{R_2}{C_2R_2s+1},\ \infty,\ \infty,\ \infty,\ \infty\right)$

$$H(s) = \frac{C_2R_1R_2s + R_1R_2g_m + R_1}{C_1C_2R_1R_2s^2 + s\left(C_1R_1 + C_2R_2\right) + 1}$$

Parameters:

Q: $\frac{C_1C_2R_1R_2\sqrt{\frac{1}{C_1C_2R_1R_2}}}{C_1R_1+C_2R_2}$
wo: $\sqrt{\frac{1}{C_1C_2R_1R_2}}$
bandwidth: $\frac{C_1R_1+C_2R_2}{C_1C_2R_1R_2}$
K-LP: $R_1\left(R_2g_m+1\right)$
K-HP: 0
K-BP: $\frac{C_2R_1R_2}{C_1R_1+C_2R_2}$
Qz: 0
Wz: None

8.2 INVALID-NUMER-2 $Z(s) = \left(\frac{L_1R_1s}{C_1L_1R_1s^2+L_1s+R_1},\ \frac{1}{C_2s},\ \infty,\ \infty,\ \infty,\ \infty\right)$

$$H(s) = \frac{C_2L_1R_1s + L_1R_1g_m}{C_1C_2L_1R_1s^2 + C_2L_1s + C_2R_1}$$

Parameters:

Q: $C_1R_1\sqrt{\frac{1}{C_1L_1}}$
wo: $\sqrt{\frac{1}{C_1L_1}}$
bandwidth: $\frac{1}{C_1R_1}$
K-LP: $\frac{L_1g_m}{C_2}$
K-HP: 0
K-BP: R_1
Qz: 0
Wz: None

8.3 INVALID-NUMER-3 $Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1},\ R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \infty\right)$

$$H(s) = \frac{L_1 R_1 g_m + s\left(C_2 L_1 R_1 R_2 g_m + C_2 L_1 R_1\right)}{C_1 C_2 L_1 R_1 s^2 + C_2 L_1 s + C_2 R_1}$$

Parameters:

Q: $C_1 R_1 \sqrt{\frac{1}{C_1 L_1}}$
wo: $\sqrt{\frac{1}{C_1 L_1}}$
bandwidth: $\frac{1}{C_1 R_1}$
K-LP: $\frac{L_1 g_m}{C_2}$
K-HP: 0
K-BP: $R_1\left(R_2 g_m + 1\right)$
Qz: 0
Wz: None

9 INVALID-WZ

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

$$H(s) = \frac{C_2 L_1 L_2 R_1 g_m s^2 + C_2 L_1 R_1 s + L_1 R_1 g_m}{C_1 C_2 L_1 R_1 s^2 + C_2 L_1 s + C_2 R_1}$$

Parameters:

Q: $C_1 R_1 \sqrt{\frac{1}{C_1 L_1}}$
wo: $\sqrt{\frac{1}{C_1 L_1}}$
bandwidth: $\frac{1}{C_1 R_1}$
K-LP: $\frac{L_1 g_m}{C_2}$
K-HP: $\frac{L_2 g_m}{C_1}$
K-BP: R_1
Qz: $L_2 g_m \sqrt{\frac{1}{C_1 L_1}}$
Wz: $\sqrt{\frac{1}{C_2 L_2}}$

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

$$H(s) = \frac{C_2 L_1 L_2 R_1 g_m s^2 + L_1 R_1 g_m + s\left(C_2 L_1 R_1 R_2 g_m + C_2 L_1 R_1\right)}{C_1 C_2 L_1 R_1 s^2 + C_2 L_1 s + C_2 R_1}$$

Parameters:

Q: $C_1 R_1 \sqrt{\frac{1}{C_1 L_1}}$
wo: $\sqrt{\frac{1}{C_1 L_1}}$
bandwidth: $\frac{1}{C_1 R_1}$
K-LP: $\frac{L_1 g_m}{C_2}$
K-HP: $\frac{L_2 g_m}{C_1}$
K-BP: $R_1\left(R_2 g_m + 1\right)$
Qz: $\frac{L_2 g_m \sqrt{\frac{1}{C_1 L_1}}}{R_2 g_m + 1}$
Wz: $\sqrt{\frac{1}{C_2 L_2}}$

10 INVALID-ORDER

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

$$H(s) = R_1 R_2 g_m + R_1$$

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

$$H(s) = \frac{C_2 R_1 s + R_1 g_m}{C_2 s}$$

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

$$H(s) = \frac{C_2 R_1 R_2 s + R_1 R_2 g_m + R_1}{C_2 R_2 s + 1}$$

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

$$H(s) = \frac{R_1 g_m + s\left(C_2 R_1 R_2 g_m + C_2 R_1\right)}{C_2 s}$$

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

$$H(s) = \frac{C_2 L_2 R_1 g_m s^2 + C_2 R_1 s + R_1 g_m}{C_2 s}$$

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

$$H(s) = \frac{C_2 L_2 R_1 g_m s^2 + R_1 g_m + s\left(C_2 R_1 R_2 g_m + C_2 R_1\right)}{C_2 s}$$

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

$$H(s) = \frac{L_2 R_1 g_m s + R_1 R_2 g_m + R_1 + s^2\left(C_2 L_2 R_1 R_2 g_m + C_2 L_2 R_1\right)}{C_2 L_2 s^2 + 1}$$

10.8 INVALID-ORDER-8 $Z(s) = (L_1 s,\ R_2,\ \infty,\ \infty,\ \infty,\ \infty)$

$$H(s) = s\left(L_1 R_2 g_m + L_1\right)$$

10.9 INVALID-ORDER-9 $Z(s) = \left(L_1 s,\ \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \infty\right)$

$$H(s) = \frac{C_2 L_1 s + L_1 g_m}{C_2}$$

10.10 INVALID-ORDER-10 $Z(s) = \left(L_1 s,\ \frac{R_2}{C_2 R_2 s+1},\ \infty,\ \infty,\ \infty,\ \infty\right)$

$$H(s) = \frac{C_2 L_1 R_2 s^2 + s\left(L_1 R_2 g_m + L_1\right)}{C_2 R_2 s + 1}$$

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

$$H(s) = \frac{L_1 g_m + s\left(C_2 L_1 R_2 g_m + C_2 L_1\right)}{C_2}$$

10.12 INVALID-ORDER-12 $Z(s) = \left(L_1 s,\ L_2 s + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \infty\right)$

$$H(s) = \frac{C_2 L_1 L_2 g_m s^2 + C_2 L_1 s + L_1 g_m}{C_2}$$

10.13 INVALID-ORDER-13 $Z(s) = \left(L_1 s,\ L_2 s + R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \infty\right)$

$$H(s) = \frac{C_2 L_1 L_2 g_m s^2 + L_1 g_m + s\left(C_2 L_1 R_2 g_m + C_2 L_1\right)}{C_2}$$

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

$$H(s) = \frac{L_1 L_2 g_m s^2 + s^3\left(C_2 L_1 L_2 R_2 g_m + C_2 L_1 L_2\right) + s\left(L_1 R_2 g_m + L_1\right)}{C_2 L_2 s^2 + 1}$$

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

$$H(s) = \frac{C_2 L_1 R_2 s^2 + s^3\left(C_2 L_1 L_2 R_2 g_m + C_2 L_1 L_2\right) + s\left(L_1 R_2 g_m + L_1\right)}{C_2 L_2 s^2 + C_2 R_2 s + 1}$$

10.16 INVALID-ORDER-16 $Z(s) = \left(\frac{1}{C_1 s},\ R_2,\ \infty,\ \infty,\ \infty,\ \infty\right)$

$$H(s) = \frac{R_2 g_m + 1}{C_1 s}$$

10.17 INVALID-ORDER-17 $Z(s) = \left(\frac{1}{C_1 s},\ \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \infty\right)$

$$H(s) = \frac{C_2 s + g_m}{C_1 C_2 s^2}$$

10.18 INVALID-ORDER-18 $Z(s) = \left(\frac{1}{C_1 s},\ \frac{R_2}{C_2 R_2 s + 1},\ \infty,\ \infty,\ \infty,\ \infty\right)$

$$H(s) = \frac{C_2 R_2 s + R_2 g_m + 1}{C_1 C_2 R_2 s^2 + C_1 s}$$

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

$$H(s) = \frac{g_m + s\left(C_2 R_2 g_m + C_2\right)}{C_1 C_2 s^2}$$

10.20 INVALID-ORDER-20 $Z(s) = \left(\frac{1}{C_1 s},\ L_2 s + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \infty\right)$

$$H(s) = \frac{C_2 L_2 g_m s^2 + C_2 s + g_m}{C_1 C_2 s^2}$$

10.21 INVALID-ORDER-21 $Z(s) = \left(\frac{1}{C_1 s},\ L_2 s + R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \infty\right)$

$$H(s) = \frac{C_2 L_2 g_m s^2 + g_m + s\left(C_2 R_2 g_m + C_2\right)}{C_1 C_2 s^2}$$

10.22 INVALID-ORDER-22 $Z(s) = \left(\frac{1}{C_1 s},\ \frac{L_2 s}{C_2 L_2 s^2+1} + R_2,\ \infty,\ \infty,\ \infty,\ \infty\right)$

$$H(s) = \frac{L_2 g_m s + R_2 g_m + s^2\left(C_2 L_2 R_2 g_m + C_2 L_2\right) + 1}{C_1 C_2 L_2 s^3 + C_1 s}$$

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

$$H(s) = \frac{C_2 R_2 s + R_2 g_m + s^2\left(C_2 L_2 R_2 g_m + C_2 L_2\right) + 1}{C_1 C_2 L_2 s^3 + C_1 C_2 R_2 s^2 + C_1 s}$$

10.24 INVALID-ORDER-24 $Z(s) = \left(\frac{R_1}{C_1 R_1 s+1},\ R_2,\ \infty,\ \infty,\ \infty,\ \infty\right)$

$$H(s) = \frac{R_1 R_2 g_m + R_1}{C_1 R_1 s + 1}$$

10.25 INVALID-ORDER-25 $Z(s) = \left(\frac{R_1}{C_1 R_1 s+1},\ \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \infty\right)$

$$H(s) = \frac{C_2 R_1 s + R_1 g_m}{C_1 C_2 R_1 s^2 + C_2 s}$$

10.26 INVALID-ORDER-26 $Z(s) = \left(\frac{R_1}{C_1 R_1 s+1},\ R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \infty\right)$

$$H(s) = \frac{R_1 g_m + s\left(C_2 R_1 R_2 g_m + C_2 R_1\right)}{C_1 C_2 R_1 s^2 + C_2 s}$$

10.27 INVALID-ORDER-27 $Z(s) = \left(\frac{R_1}{C_1 R_1 s+1},\ L_2 s + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \infty\right)$

$$H(s) = \frac{C_2 L_2 R_1 g_m s^2 + C_2 R_1 s + R_1 g_m}{C_1 C_2 R_1 s^2 + C_2 s}$$

10.28 INVALID-ORDER-28 $Z(s) = \left(\frac{R_1}{C_1 R_1 s+1},\ L_2 s + R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \infty\right)$

$$H(s) = \frac{C_2 L_2 R_1 g_m s^2 + R_1 g_m + s\left(C_2 R_1 R_2 g_m + C_2 R_1\right)}{C_1 C_2 R_1 s^2 + C_2 s}$$

10.29 INVALID-ORDER-29 $Z(s) = \left(\frac{R_1}{C_1 R_1 s+1},\ \frac{L_2 s}{C_2 L_2 s^2+1} + R_2,\ \infty,\ \infty,\ \infty,\ \infty\right)$

$$H(s) = \frac{L_2 R_1 g_m s + R_1 R_2 g_m + R_1 + s^2\left(C_2 L_2 R_1 R_2 g_m + C_2 L_2 R_1\right)}{C_1 C_2 L_2 R_1 s^3 + C_1 R_1 s + C_2 L_2 s^2 + 1}$$

10.30 INVALID-ORDER-30 $Z(s) = \left(\frac{R_1}{C_1 R_1 s+1},\ \frac{R_2\left(C_2 L_2 s^2+1\right)}{C_2 L_2 s^2+C_2 R_2 s+1},\ \infty,\ \infty,\ \infty,\ \infty\right)$

$$H(s) = \frac{C_2 R_1 R_2 s + R_1 R_2 g_m + R_1 + s^2 \left(C_2 L_2 R_1 R_2 g_m + C_2 L_2 R_1\right)}{C_1 C_2 L_2 R_1 s^3 + s^2 \left(C_1 C_2 R_1 R_2 + C_2 L_2\right) + s \left(C_1 R_1 + C_2 R_2\right) + 1}$$

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

$$H(s) = \frac{R_2 g_m + s \left(C_1 R_1 R_2 g_m + C_1 R_1\right) + 1}{C_1 s}$$

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

$$H(s) = \frac{C_1 C_2 R_1 s^2 + g_m + s \left(C_1 R_1 g_m + C_2\right)}{C_1 C_2 s^2}$$

10.33 INVALID-ORDER-33 $Z(s) = \left(R_1 + \frac{1}{C_1 s},\ \frac{R_2}{C_2 R_2 s+1},\ \infty,\ \infty,\ \infty,\ \infty\right)$

$$H(s) = \frac{C_1 C_2 R_1 R_2 s^2 + R_2 g_m + s \left(C_1 R_1 R_2 g_m + C_1 R_1 + C_2 R_2\right) + 1}{C_1 C_2 R_2 s^2 + C_1 s}$$

10.34 INVALID-ORDER-34 $Z(s) = \left(R_1 + \frac{1}{C_1 s},\ R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \infty\right)$

$$H(s) = \frac{g_m + s^2 \left(C_1 C_2 R_1 R_2 g_m + C_1 C_2 R_1\right) + s \left(C_1 R_1 g_m + C_2 R_2 g_m + C_2\right)}{C_1 C_2 s^2}$$

10.35 INVALID-ORDER-35 $Z(s) = \left(R_1 + \frac{1}{C_1 s},\ L_2 s + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \infty\right)$

$$H(s) = \frac{C_1 C_2 L_2 R_1 g_m s^3 + g_m + s^2 \left(C_1 C_2 R_1 + C_2 L_2 g_m\right) + s \left(C_1 R_1 g_m + C_2\right)}{C_1 C_2 s^2}$$

10.36 INVALID-ORDER-36 $Z(s) = \left(R_1 + \frac{1}{C_1 s},\ L_2 s + R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \infty\right)$

$$H(s) = \frac{C_1 C_2 L_2 R_1 g_m s^3 + g_m + s^2 \left(C_1 C_2 R_1 R_2 g_m + C_1 C_2 R_1 + C_2 L_2 g_m\right) + s \left(C_1 R_1 g_m + C_2 R_2 g_m + C_2\right)}{C_1 C_2 s^2}$$

10.37 INVALID-ORDER-37 $Z(s) = \left(R_1 + \frac{1}{C_1 s},\ \frac{L_2 s}{C_2 L_2 s^2+1} + R_2,\ \infty,\ \infty,\ \infty,\ \infty\right)$

$$H(s) = \frac{R_2 g_m + s^3 \left(C_1 C_2 L_2 R_1 R_2 g_m + C_1 C_2 L_2 R_1\right) + s^2 \left(C_1 L_2 R_1 g_m + C_2 L_2 R_2 g_m + C_2 L_2\right) + s \left(C_1 R_1 R_2 g_m + C_1 R_1 + L_2 g_m\right) + 1}{C_1 C_2 L_2 s^3 + C_1 s}$$

10.38 INVALID-ORDER-38 $Z(s) = \left(R_1 + \frac{1}{C_1 s},\ \frac{R_2\left(C_2 L_2 s^2+1\right)}{C_2 L_2 s^2+C_2 R_2 s+1},\ \infty,\ \infty,\ \infty,\ \infty\right)$

$$H(s) = \frac{R_2 g_m + s^3 \left(C_1 C_2 L_2 R_1 R_2 g_m + C_1 C_2 L_2 R_1\right) + s^2 \left(C_1 C_2 R_1 R_2 + C_2 L_2 R_2 g_m + C_2 L_2\right) + s \left(C_1 R_1 R_2 g_m + C_1 R_1 + C_2 R_2\right) + 1}{C_1 C_2 L_2 s^3 + C_1 C_2 R_2 s^2 + C_1 s}$$

10.39 INVALID-ORDER-39 $Z(s) = \left(L_1 s + \frac{1}{C_1 s},\ R_2,\ \infty,\ \infty,\ \infty,\ \infty\right)$

$$H(s) = \frac{R_2 g_m + s^2 \left(C_1 L_1 R_2 g_m + C_1 L_1\right) + 1}{C_1 s}$$

10.40 INVALID-ORDER-40 $Z(s) = \left(L_1 s + \frac{1}{C_1 s},\ \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \infty\right)$

$$H(s) = \frac{C_1 C_2 L_1 s^3 + C_1 L_1 g_m s^2 + C_2 s + g_m}{C_1 C_2 s^2}$$

10.41 INVALID-ORDER-41 $Z(s) = \left(L_1 s + \frac{1}{C_1 s},\ \frac{R_2}{C_2 R_2 s + 1},\ \infty,\ \infty,\ \infty,\ \infty\right)$

$$H(s) = \frac{C_1 C_2 L_1 R_2 s^3 + C_2 R_2 s + R_2 g_m + s^2 \left(C_1 L_1 R_2 g_m + C_1 L_1\right) + 1}{C_1 C_2 R_2 s^2 + C_1 s}$$

10.42 INVALID-ORDER-42 $Z(s) = \left(L_1 s + \frac{1}{C_1 s},\ R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \infty\right)$

$$H(s) = \frac{C_1 L_1 g_m s^2 + g_m + s^3 \left(C_1 C_2 L_1 R_2 g_m + C_1 C_2 L_1\right) + s \left(C_2 R_2 g_m + C_2\right)}{C_1 C_2 s^2}$$

10.43 INVALID-ORDER-43 $Z(s) = \left(L_1 s + \frac{1}{C_1 s},\ L_2 s + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \infty\right)$

$$H(s) = \frac{C_1 C_2 L_1 L_2 g_m s^4 + C_1 C_2 L_1 s^3 + C_2 s + g_m + s^2 \left(C_1 L_1 g_m + C_2 L_2 g_m\right)}{C_1 C_2 s^2}$$

10.44 INVALID-ORDER-44 $Z(s) = \left(L_1 s + \frac{1}{C_1 s},\ L_2 s + R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \infty\right)$

$$H(s) = \frac{C_1 C_2 L_1 L_2 g_m s^4 + g_m + s^3 \left(C_1 C_2 L_1 R_2 g_m + C_1 C_2 L_1\right) + s^2 \left(C_1 L_1 g_m + C_2 L_2 g_m\right) + s \left(C_2 R_2 g_m + C_2\right)}{C_1 C_2 s^2}$$

10.45 INVALID-ORDER-45 $Z(s) = \left(L_1 s + \frac{1}{C_1 s},\ \frac{L_2 s}{C_2 L_2 s^2 + 1} + R_2,\ \infty,\ \infty,\ \infty,\ \infty\right)$

$$H(s) = \frac{C_1 L_1 L_2 g_m s^3 + L_2 g_m s + R_2 g_m + s^4 \left(C_1 C_2 L_1 L_2 R_2 g_m + C_1 C_2 L_1 L_2\right) + s^2 \left(C_1 L_1 R_2 g_m + C_1 L_1 + C_2 L_2 R_2 g_m + C_2 L_2\right) + 1}{C_1 C_2 L_2 s^3 + C_1 s}$$

10.46 INVALID-ORDER-46 $Z(s) = \left(L_1 s + \frac{1}{C_1 s},\ \frac{R_2\left(C_2 L_2 s^2 + 1\right)}{C_2 L_2 s^2 + C_2 R_2 s + 1},\ \infty,\ \infty,\ \infty,\ \infty\right)$

$$H(s) = \frac{C_1 C_2 L_1 R_2 s^3 + C_2 R_2 s + R_2 g_m + s^4 \left(C_1 C_2 L_1 L_2 R_2 g_m + C_1 C_2 L_1 L_2\right) + s^2 \left(C_1 L_1 R_2 g_m + C_1 L_1 + C_2 L_2 R_2 g_m + C_2 L_2\right) + 1}{C_1 C_2 L_2 s^3 + C_1 C_2 R_2 s^2 + C_1 s}$$

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

$$H(s) = \frac{s \left(L_1 R_2 g_m + L_1\right)}{C_1 L_1 s^2 + 1}$$

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

$$H(s) = \frac{C_2 L_1 s + L_1 g_m}{C_1 C_2 L_1 s^2 + C_2}$$

10.49 INVALID-ORDER-49 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2+1},\ \frac{R_2}{C_2 R_2 s+1},\ \infty,\ \infty,\ \infty,\ \infty\right)$

$$H(s) = \frac{C_2 L_1 R_2 s^2 + s\left(L_1 R_2 g_m + L_1\right)}{C_1 C_2 L_1 R_2 s^3 + C_1 L_1 s^2 + C_2 R_2 s + 1}$$

10.50 INVALID-ORDER-50 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2+1},\ R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \infty\right)$

$$H(s) = \frac{L_1 g_m + s\left(C_2 L_1 R_2 g_m + C_2 L_1\right)}{C_1 C_2 L_1 s^2 + C_2}$$

10.51 INVALID-ORDER-51 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2+1},\ L_2 s + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \infty\right)$

$$H(s) = \frac{C_2 L_1 L_2 g_m s^2 + C_2 L_1 s + L_1 g_m}{C_1 C_2 L_1 s^2 + C_2}$$

10.52 INVALID-ORDER-52 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2+1},\ L_2 s + R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \infty\right)$

$$H(s) = \frac{C_2 L_1 L_2 g_m s^2 + L_1 g_m + s\left(C_2 L_1 R_2 g_m + C_2 L_1\right)}{C_1 C_2 L_1 s^2 + C_2}$$

10.53 INVALID-ORDER-53 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2+1},\ \frac{L_2 s}{C_2 L_2 s^2+1} + R_2,\ \infty,\ \infty,\ \infty,\ \infty\right)$

$$H(s) = \frac{L_1 L_2 g_m s^2 + s^3\left(C_2 L_1 L_2 R_2 g_m + C_2 L_1 L_2\right) + s\left(L_1 R_2 g_m + L_1\right)}{C_1 C_2 L_1 L_2 s^4 + s^2\left(C_1 L_1 + C_2 L_2\right) + 1}$$

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

$$H(s) = \frac{C_2 L_1 R_2 s^2 + s^3\left(C_2 L_1 L_2 R_2 g_m + C_2 L_1 L_2\right) + s\left(L_1 R_2 g_m + L_1\right)}{C_1 C_2 L_1 L_2 s^4 + C_1 C_2 L_1 R_2 s^3 + C_2 R_2 s + s^2\left(C_1 L_1 + C_2 L_2\right) + 1}$$

10.55 INVALID-ORDER-55 $Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s},\ R_2,\ \infty,\ \infty,\ \infty,\ \infty\right)$

$$H(s) = \frac{R_2 g_m + s^2\left(C_1 L_1 R_2 g_m + C_1 L_1\right) + s\left(C_1 R_1 R_2 g_m + C_1 R_1\right) + 1}{C_1 s}$$

10.56 INVALID-ORDER-56 $Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s},\ \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \infty\right)$

$$H(s) = \frac{C_1 C_2 L_1 s^3 + g_m + s^2\left(C_1 C_2 R_1 + C_1 L_1 g_m\right) + s\left(C_1 R_1 g_m + C_2\right)}{C_1 C_2 s^2}$$

10.57 INVALID-ORDER-57 $Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s},\ \frac{R_2}{C_2 R_2 s+1},\ \infty,\ \infty,\ \infty,\ \infty\right)$

$$H(s) = \frac{C_1 C_2 L_1 R_2 s^3 + R_2 g_m + s^2\left(C_1 C_2 R_1 R_2 + C_1 L_1 R_2 g_m + C_1 L_1\right) + s\left(C_1 R_1 R_2 g_m + C_1 R_1 + C_2 R_2\right) + 1}{C_1 C_2 R_2 s^2 + C_1 s}$$

10.58 INVALID-ORDER-58 $Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s},\ R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \infty\right)$

$$H(s) = \frac{g_m + s^3 \left(C_1 C_2 L_1 R_2 g_m + C_1 C_2 L_1\right) + s^2 \left(C_1 C_2 R_1 R_2 g_m + C_1 C_2 R_1 + C_1 L_1 g_m\right) + s \left(C_1 R_1 g_m + C_2 R_2 g_m + C_2\right)}{C_1 C_2 s^2}$$

10.59 INVALID-ORDER-59 $Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s},\ L_2 s + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \infty\right)$

$$H(s) = \frac{C_1 C_2 L_1 L_2 g_m s^4 + g_m + s^3 \left(C_1 C_2 L_1 + C_1 C_2 L_2 R_1 g_m\right) + s^2 \left(C_1 C_2 R_1 + C_1 L_1 g_m + C_2 L_2 g_m\right) + s \left(C_1 R_1 g_m + C_2\right)}{C_1 C_2 s^2}$$

10.60 INVALID-ORDER-60 $Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s},\ L_2 s + R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \infty\right)$

$$H(s) = \frac{C_1 C_2 L_1 L_2 g_m s^4 + g_m + s^3 \left(C_1 C_2 L_1 R_2 g_m + C_1 C_2 L_1 + C_1 C_2 L_2 R_1 g_m\right) + s^2 \left(C_1 C_2 R_1 R_2 g_m + C_1 C_2 R_1 + C_1 L_1 g_m + C_2 L_2 g_m\right) + s \left(C_1 R_1 g_m + C_2 R_2 g_m + C_2\right)}{C_1 C_2 s^2}$$

10.61 INVALID-ORDER-61 $Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s},\ \frac{L_2 s}{C_2 L_2 s^2 + 1} + R_2,\ \infty,\ \infty,\ \infty,\ \infty\right)$

$$H(s) = \frac{R_2 g_m + s^4 \left(C_1 C_2 L_1 L_2 R_2 g_m + C_1 C_2 L_1 L_2\right) + s^3 \left(C_1 C_2 L_2 R_1 R_2 g_m + C_1 C_2 L_2 R_1 + C_1 L_1 L_2 g_m\right) + s^2 \left(C_1 L_1 R_2 g_m + C_1 L_1 + C_1 L_2 R_1 g_m + C_2 L_2 R_2 g_m + C_2 L_2\right) + s \left(C_1 R_1 R_2 g_m + C_1 R_1 + L_2 g_m\right) + 1}{C_1 C_2 L_2 s^3 + C_1 s}$$

10.62 INVALID-ORDER-62 $Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s},\ \frac{R_2\left(C_2 L_2 s^2 + 1\right)}{C_2 L_2 s^2 + C_2 R_2 s + 1},\ \infty,\ \infty,\ \infty,\ \infty\right)$

$$H(s) = \frac{R_2 g_m + s^4 \left(C_1 C_2 L_1 L_2 R_2 g_m + C_1 C_2 L_1 L_2\right) + s^3 \left(C_1 C_2 L_1 R_2 + C_1 C_2 L_2 R_1 R_2 g_m + C_1 C_2 L_2 R_1\right) + s^2 \left(C_1 C_2 R_1 R_2 + C_1 L_1 R_2 g_m + C_1 L_1 + C_2 L_2 R_2 g_m + C_2 L_2\right) + s \left(C_1 R_1 R_2 g_m + C_1 R_1 + C_2 R_2\right) + 1}{C_1 C_2 L_2 s^3 + C_1 C_2 R_2 s^2 + C_1 s}$$

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

$$H(s) = \frac{C_2 L_1 R_1 R_2 s^2 + s \left(L_1 R_1 R_2 g_m + L_1 R_1\right)}{C_1 C_2 L_1 R_1 R_2 s^3 + R_1 + s^2 \left(C_1 L_1 R_1 + C_2 L_1 R_2\right) + s \left(C_2 R_1 R_2 + L_1\right)}$$

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

$$H(s) = \frac{L_1 L_2 R_1 g_m s^2 + s^3 \left(C_2 L_1 L_2 R_1 R_2 g_m + C_2 L_1 L_2 R_1\right) + s \left(L_1 R_1 R_2 g_m + L_1 R_1\right)}{C_1 C_2 L_1 L_2 R_1 s^4 + C_2 L_1 L_2 s^3 + L_1 s + R_1 + s^2 \left(C_1 L_1 R_1 + C_2 L_2 R_1\right)}$$

10.65 INVALID-ORDER-65 $Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1},\ \frac{R_2\left(C_2 L_2 s^2 + 1\right)}{C_2 L_2 s^2 + C_2 R_2 s + 1},\ \infty,\ \infty,\ \infty,\ \infty\right)$

$$H(s) = \frac{C_2 L_1 R_1 R_2 s^2 + s^3 \left(C_2 L_1 L_2 R_1 R_2 g_m + C_2 L_1 L_2 R_1\right) + s \left(L_1 R_1 R_2 g_m + L_1 R_1\right)}{C_1 C_2 L_1 L_2 R_1 s^4 + R_1 + s^3 \left(C_1 C_2 L_1 R_1 R_2 + C_2 L_1 L_2\right) + s^2 \left(C_1 L_1 R_1 + C_2 L_1 R_2 + C_2 L_2 R_1\right) + s \left(C_2 R_1 R_2 + L_1\right)}$$

10.66 INVALID-ORDER-66 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1,\ R_2,\ \infty,\ \infty,\ \infty,\ \infty\right)$

$$H(s) = \frac{R_1 R_2 g_m + R_1 + s^2 \left(C_1 L_1 R_1 R_2 g_m + C_1 L_1 R_1\right) + s \left(L_1 R_2 g_m + L_1\right)}{C_1 L_1 s^2 + 1}$$

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

$$H(s) = \frac{C_1 C_2 L_1 R_1 s^3 + R_1 g_m + s^2 (C_1 L_1 R_1 g_m + C_2 L_1) + s (C_2 R_1 + L_1 g_m)}{C_1 C_2 L_1 s^3 + C_2 s}$$

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

$$H(s) = \frac{C_1 C_2 L_1 R_1 R_2 s^3 + R_1 R_2 g_m + R_1 + s^2 (C_1 L_1 R_1 R_2 g_m + C_1 L_1 R_1 + C_2 L_1 R_2) + s (C_2 R_1 R_2 + L_1 R_2 g_m + L_1)}{C_1 C_2 L_1 R_2 s^3 + C_1 L_1 s^2 + C_2 R_2 s + 1}$$

10.69 INVALID-ORDER-69 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2+1} + R_1,\ R_2 + \frac{1}{C_2 s},\ \infty,\ \infty,\ \infty,\ \infty\right)$

$$H(s) = \frac{R_1 g_m + s^3 (C_1 C_2 L_1 R_1 R_2 g_m + C_1 C_2 L_1 R_1) + s^2 (C_1 L_1 R_1 g_m + C_2 L_1 R_2 g_m + C_2 L_1) + s (C_2 R_1 R_2 g_m + C_2 R_1 + L_1 g_m)}{C_1 C_2 L_1 s^3 + C_2 s}$$

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

$$H(s) = \frac{C_1 C_2 L_1 L_2 R_1 g_m s^4 + R_1 g_m + s^3 (C_1 C_2 L_1 R_1 + C_2 L_1 L_2 g_m) + s^2 (C_1 L_1 R_1 g_m + C_2 L_1 + C_2 L_2 R_1 g_m) + s (C_2 R_1 + L_1 g_m)}{C_1 C_2 L_1 s^3 + C_2 s}$$

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

$$H(s) = \frac{C_1 C_2 L_1 L_2 R_1 g_m s^4 + R_1 g_m + s^3 (C_1 C_2 L_1 R_1 R_2 g_m + C_1 C_2 L_1 R_1 + C_2 L_1 L_2 g_m) + s^2 (C_1 L_1 R_1 g_m + C_2 L_1 R_2 g_m + C_2 L_1 + C_2 L_2 R_1 g_m) + s (C_2 R_1 R_2 g_m + C_2 R_1 + L_1 g_m)}{C_1 C_2 L_1 s^3 + C_2 s}$$

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

$$H(s) = \frac{R_1 R_2 g_m + R_1 + s^4 (C_1 C_2 L_1 L_2 R_1 R_2 g_m + C_1 C_2 L_1 L_2 R_1) + s^3 (C_1 L_1 L_2 R_1 g_m + C_2 L_1 L_2 R_2 g_m + C_2 L_1 L_2) + s^2 (C_1 L_1 R_1 R_2 g_m + C_1 L_1 R_1 + C_2 L_2 R_1 R_2 g_m + C_2 L_2 R_1 + L_1 L_2 g_m) + s (L_1 R_2 g_m + L_1 + L_2 R_1 g_m)}{C_1 C_2 L_1 L_2 s^4 + s^2 (C_1 L_1 + C_2 L_2) + 1}$$

10.73 INVALID-ORDER-73 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2+1} + R_1,\ \frac{R_2\left(C_2 L_2 s^2+1\right)}{C_2 L_2 s^2+C_2 R_2 s+1},\ \infty,\ \infty,\ \infty,\ \infty\right)$

$$H(s) = \frac{R_1 R_2 g_m + R_1 + s^4 (C_1 C_2 L_1 L_2 R_1 R_2 g_m + C_1 C_2 L_1 L_2 R_1) + s^3 (C_1 C_2 L_1 R_1 R_2 + C_2 L_1 L_2 R_2 g_m + C_2 L_1 L_2) + s^2 (C_1 L_1 R_1 R_2 g_m + C_1 L_1 R_1 + C_2 L_1 R_2 + C_2 L_2 R_1 R_2 g_m + C_2 L_2 R_1) + s (C_2 R_1 R_2 + L_1 R_2 g_m + L_1)}{C_1 C_2 L_1 L_2 s^4 + C_1 C_2 L_1 R_2 s^3 + C_2 R_2 s + s^2 (C_1 L_1 + C_2 L_2) + 1}$$

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

$$H(s) = \frac{C_1 C_2 L_1 R_1 s^3 + C_1 L_1 R_1 g_m s^2 + C_2 R_1 s + R_1 g_m}{C_1 C_2 L_1 s^3 + C_1 C_2 R_1 s^2 + C_2 s}$$

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

$$H(s) = \frac{C_1 C_2 L_1 R_1 R_2 s^3 + C_2 R_1 R_2 s + R_1 R_2 g_m + R_1 + s^2 (C_1 L_1 R_1 R_2 g_m + C_1 L_1 R_1)}{C_1 C_2 L_1 R_2 s^3 + s^2 (C_1 C_2 R_1 R_2 + C_1 L_1) + s (C_1 R_1 + C_2 R_2) + 1}$$

10.76 INVALID-ORDER-76 $Z(s) = \left(\frac{R_1\left(C_1L_1s^2+1\right)}{C_1L_1s^2+C_1R_1s+1},\ R_2+\frac{1}{C_2s},\ \infty,\ \infty,\ \infty,\ \infty\right)$

$$H(s) = \frac{C_1L_1R_1g_ms^2 + R_1g_m + s^3\left(C_1C_2L_1R_1R_2g_m + C_1C_2L_1R_1\right) + s\left(C_2R_1R_2g_m + C_2R_1\right)}{C_1C_2L_1s^3 + C_1C_2R_1s^2 + C_2s}$$

10.77 INVALID-ORDER-77 $Z(s) = \left(\frac{R_1\left(C_1L_1s^2+1\right)}{C_1L_1s^2+C_1R_1s+1},\ L_2s+\frac{1}{C_2s},\ \infty,\ \infty,\ \infty,\ \infty\right)$

$$H(s) = \frac{C_1C_2L_1L_2R_1g_ms^4 + C_1C_2L_1R_1s^3 + C_2R_1s + R_1g_m + s^2\left(C_1L_1R_1g_m + C_2L_2R_1g_m\right)}{C_1C_2L_1s^3 + C_1C_2R_1s^2 + C_2s}$$

10.78 INVALID-ORDER-78 $Z(s) = \left(\frac{R_1\left(C_1L_1s^2+1\right)}{C_1L_1s^2+C_1R_1s+1},\ L_2s+R_2+\frac{1}{C_2s},\ \infty,\ \infty,\ \infty,\ \infty\right)$

$$H(s) = \frac{C_1C_2L_1L_2R_1g_ms^4 + R_1g_m + s^3\left(C_1C_2L_1R_1R_2g_m + C_1C_2L_1R_1\right) + s^2\left(C_1L_1R_1g_m + C_2L_2R_1g_m\right) + s\left(C_2R_1R_2g_m + C_2R_1\right)}{C_1C_2L_1s^3 + C_1C_2R_1s^2 + C_2s}$$

10.79 INVALID-ORDER-79 $Z(s) = \left(\frac{R_1\left(C_1L_1s^2+1\right)}{C_1L_1s^2+C_1R_1s+1},\ \frac{L_2s}{C_2L_2s^2+1}+R_2,\ \infty,\ \infty,\ \infty,\ \infty\right)$

$$H(s) = \frac{C_1L_1L_2R_1g_ms^3 + L_2R_1g_ms + R_1R_2g_m + R_1 + s^4\left(C_1C_2L_1L_2R_1R_2g_m + C_1C_2L_1L_2R_1\right) + s^2\left(C_1L_1R_1R_2g_m + C_1L_1R_1 + C_2L_2R_1R_2g_m + C_2L_2R_1\right)}{C_1C_2L_1L_2s^4 + C_1C_2L_2R_1s^3 + C_1R_1s + s^2\left(C_1L_1 + C_2L_2\right) + 1}$$

10.80 INVALID-ORDER-80 $Z(s) = \left(\frac{R_1\left(C_1L_1s^2+1\right)}{C_1L_1s^2+C_1R_1s+1},\ \frac{R_2\left(C_2L_2s^2+1\right)}{C_2L_2s^2+C_2R_2s+1},\ \infty,\ \infty,\ \infty,\ \infty\right)$

$$H(s) = \frac{C_1C_2L_1R_1R_2s^3 + C_2R_1R_2s + R_1R_2g_m + R_1 + s^4\left(C_1C_2L_1L_2R_1R_2g_m + C_1C_2L_1L_2R_1\right) + s^2\left(C_1L_1R_1R_2g_m + C_1L_1R_1 + C_2L_2R_1R_2g_m + C_2L_2R_1\right)}{C_1C_2L_1L_2s^4 + s^3\left(C_1C_2L_1R_2 + C_1C_2L_2R_1\right) + s^2\left(C_1C_2R_1R_2 + C_1L_1 + C_2L_2\right) + s\left(C_1R_1 + C_2R_2\right) + 1}$$

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