

Filter Summary Report: CG,TIA,simple,Z1,Z4,Z5

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Contents

1 Examined $H(z)$ for CG TIA simple Z1 Z4 Z5: $\frac{Z_1 Z_4 Z_5 g_m - Z_1 Z_4}{2Z_1 Z_4 g_m + 2Z_1 Z_5 g_m + 2Z_1 + Z_4 + 2Z_5}$

$$H(z) = \frac{Z_1 Z_4 Z_5 g_m - Z_1 Z_4}{2Z_1 Z_4 g_m + 2Z_1 Z_5 g_m + 2Z_1 + Z_4 + 2Z_5}$$

2 HP

3 BP

3.1 BP-1 $Z(s) = \left(R_1, \infty, \infty, \frac{L_4 s}{C_4 L_4 s^2 + 1}, R_5, \infty \right)$

$$H(s) = \frac{s(L_4 R_1 R_5 g_m - L_4 R_1)}{2R_1 R_5 g_m + 2R_1 + 2R_5 + s^2(2C_4 L_4 R_1 R_5 g_m + 2C_4 L_4 R_1 + 2C_4 L_4 R_5) + s(2L_4 R_1 g_m + L_4)}$$

Parameters:

Q: $\frac{2C_4 R_1 R_5 g_m \sqrt{\frac{1}{C_4 L_4}} + 2C_4 R_1 \sqrt{\frac{1}{C_4 L_4}} + 2C_4 R_5 \sqrt{\frac{1}{C_4 L_4}}}{2R_1 g_m + 1}$

wo: $\sqrt{\frac{1}{C_4 L_4}}$

bandwidth: $\frac{\sqrt{\frac{1}{C_4 L_4}}(2R_1 g_m + 1)}{2C_4 R_1 R_5 g_m \sqrt{\frac{1}{C_4 L_4}} + 2C_4 R_1 \sqrt{\frac{1}{C_4 L_4}} + 2C_4 R_5 \sqrt{\frac{1}{C_4 L_4}}}$

K-LP: 0

K-HP: 0

K-BP: $\frac{R_1 R_5 g_m - R_1}{2R_1 g_m + 1}$

Qz: 0

Wz: None

3.2 BP-2 $Z(s) = \left(R_1, \infty, \infty, \frac{L_4 R_4 s}{C_4 L_4 R_4 s^2 + L_4 s + R_4}, R_5, \infty \right)$

$$H(s) = \frac{s(L_4 R_1 R_4 R_5 g_m - L_4 R_1 R_4)}{2R_1 R_4 R_5 g_m + 2R_1 R_4 + 2R_4 R_5 + s^2(2C_4 L_4 R_1 R_4 R_5 g_m + 2C_4 L_4 R_1 R_4 + 2C_4 L_4 R_4 R_5) + s(2L_4 R_1 R_4 g_m + 2L_4 R_1 R_5 g_m + 2L_4 R_1 + L_4 R_4 + 2L_4 R_5)}$$

Parameters:

Q: $\frac{2C_4 R_1 R_4 R_5 g_m \sqrt{\frac{1}{C_4 L_4}} + 2C_4 R_1 R_4 \sqrt{\frac{1}{C_4 L_4}} + 2C_4 R_4 R_5 \sqrt{\frac{1}{C_4 L_4}}}{2R_1 R_4 g_m + 2R_1 R_5 g_m + 2R_1 + R_4 + 2R_5}$

wo: $\sqrt{\frac{1}{C_4 L_4}}$

bandwidth: $\frac{\sqrt{\frac{1}{C_4 L_4}}(2R_1 R_4 g_m + 2R_1 R_5 g_m + 2R_1 + R_4 + 2R_5)}{2C_4 R_1 R_4 R_5 g_m \sqrt{\frac{1}{C_4 L_4}} + 2C_4 R_1 R_4 \sqrt{\frac{1}{C_4 L_4}} + 2C_4 R_4 R_5 \sqrt{\frac{1}{C_4 L_4}}}$

K-LP: 0

K-HP: 0

K-BP: $\frac{R_1 R_4 R_5 g_m - R_1 R_4}{2R_1 R_4 g_m + 2R_1 R_5 g_m + 2R_1 + R_4 + 2R_5}$

Qz: 0

Wz: None

3.3 BP-3 $Z(s) = \left(L_1 s, \infty, \infty, \frac{1}{C_4 s}, R_5, \infty \right)$

$$H(s) = \frac{s(L_1 R_5 g_m - L_1)}{s^2(2C_4 L_1 R_5 g_m + 2C_4 L_1) + s(2C_4 R_5 + 2L_1 g_m) + 1}$$

Parameters:

Q: $\frac{\sqrt{2}C_4 L_1 R_5 g_m \sqrt{\frac{1}{C_4 L_1 R_5 g_m + C_4 L_1}} + \sqrt{2}C_4 L_1 \sqrt{\frac{1}{C_4 L_1 R_5 g_m + C_4 L_1}}}{2C_4 R_5 + 2L_1 g_m}$

wo: $\sqrt{\frac{1}{2C_4 L_1 R_5 g_m + 2C_4 L_1}}$

bandwidth: $\frac{(2C_4 R_5 + 2L_1 g_m) \sqrt{\frac{1}{2C_4 L_1 R_5 g_m + 2C_4 L_1}}}{\sqrt{2}C_4 L_1 R_5 g_m \sqrt{\frac{1}{C_4 L_1 R_5 g_m + C_4 L_1}} + \sqrt{2}C_4 L_1 \sqrt{\frac{1}{C_4 L_1 R_5 g_m + C_4 L_1}}}$

K-LP: 0
 K-HP: 0
 K-BP: $\frac{L_1 R_5 g_m - L_1}{2C_4 R_5 + 2L_1 g_m}$
 Qz: 0
 Wz: None

$$\mathbf{3.4 \quad BP-4} \quad Z(s) = \left(L_1 s, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, R_5, \infty \right)$$

$$H(s) = \frac{s(L_1 R_4 R_5 g_m - L_1 R_4)}{R_4 + 2R_5 + s^2(2C_4 L_1 R_4 R_5 g_m + 2C_4 L_1 R_4) + s(2C_4 R_4 R_5 + 2L_1 R_4 g_m + 2L_1 R_5 g_m + 2L_1)}$$

Parameters:

$$\text{Q: } \frac{\sqrt{2}C_4 L_1 R_4 R_5 g_m \sqrt{\frac{R_4}{C_4 L_1 R_4 R_5 g_m + C_4 L_1 R_4} + \frac{2R_5}{C_4 L_1 R_4 R_5 g_m + C_4 L_1 R_4}} + \sqrt{2}C_4 L_1 R_4 \sqrt{\frac{R_4}{C_4 L_1 R_4 R_5 g_m + C_4 L_1 R_4} + \frac{2R_5}{C_4 L_1 R_4 R_5 g_m + C_4 L_1 R_4}}}{2C_4 R_4 R_5 + 2L_1 R_4 g_m + 2L_1 R_5 g_m + 2L_1}$$

$$\text{wo: } \sqrt{\frac{R_4 + 2R_5}{2C_4 L_1 R_4 R_5 g_m + 2C_4 L_1 R_4}}$$

$$\text{bandwidth: } \frac{\sqrt{\frac{R_4 + 2R_5}{2C_4 L_1 R_4 R_5 g_m + 2C_4 L_1 R_4}}(2C_4 R_4 R_5 + 2L_1 R_4 g_m + 2L_1 R_5 g_m + 2L_1)}{\sqrt{2}C_4 L_1 R_4 R_5 g_m \sqrt{\frac{R_4}{C_4 L_1 R_4 R_5 g_m + C_4 L_1 R_4} + \frac{2R_5}{C_4 L_1 R_4 R_5 g_m + C_4 L_1 R_4}} + \sqrt{2}C_4 L_1 R_4 \sqrt{\frac{R_4}{C_4 L_1 R_4 R_5 g_m + C_4 L_1 R_4} + \frac{2R_5}{C_4 L_1 R_4 R_5 g_m + C_4 L_1 R_4}}}$$

K-LP: 0

K-HP: 0

$$\text{K-BP: } \frac{L_1 R_4 R_5 g_m \sqrt{\frac{2R_5}{C_4 L_1 R_4 R_5 g_m + C_4 L_1 R_4} + \frac{1}{C_4 L_1 R_5 g_m + C_4 L_1}} - L_1 R_4 \sqrt{\frac{2R_5}{C_4 L_1 R_4 R_5 g_m + C_4 L_1 R_4} + \frac{1}{C_4 L_1 R_5 g_m + C_4 L_1}}}{2C_4 R_4 R_5 \sqrt{\frac{R_4}{C_4 L_1 R_4 R_5 g_m + C_4 L_1 R_4} + \frac{2R_5}{C_4 L_1 R_4 R_5 g_m + C_4 L_1 R_4}} + 2L_1 R_4 g_m \sqrt{\frac{R_4}{C_4 L_1 R_4 R_5 g_m + C_4 L_1 R_4} + \frac{2R_5}{C_4 L_1 R_4 R_5 g_m + C_4 L_1 R_4}} + 2L_1 R_5 g_m \sqrt{\frac{R_4}{C_4 L_1 R_4 R_5 g_m + C_4 L_1 R_4} + \frac{2R_5}{C_4 L_1 R_4 R_5 g_m + C_4 L_1 R_4}} + 2L_1 \sqrt{\frac{R_4}{C_4 L_1 R_4 R_5 g_m + C_4 L_1 R_4} + \frac{2R_5}{C_4 L_1 R_4 R_5 g_m + C_4 L_1 R_4}}}$$

Qz: 0

Wz: None

$$\mathbf{3.5 \quad BP-5} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, R_4, R_5, \infty \right)$$

$$H(s) = \frac{s(L_1 R_4 R_5 g_m - L_1 R_4)}{R_4 + 2R_5 + s^2(C_1 L_1 R_4 + 2C_1 L_1 R_5) + s(2L_1 R_4 g_m + 2L_1 R_5 g_m + 2L_1)}$$

Parameters:

$$\text{Q: } \frac{C_1 R_4 \sqrt{\frac{1}{C_1 L_1}} + 2C_1 R_5 \sqrt{\frac{1}{C_1 L_1}}}{2R_4 g_m + 2R_5 g_m + 2}$$

$$\text{wo: } \sqrt{\frac{1}{C_1 L_1}}$$

$$\text{bandwidth: } \frac{\sqrt{\frac{1}{C_1 L_1}}(2R_4 g_m + 2R_5 g_m + 2)}{C_1 R_4 \sqrt{\frac{1}{C_1 L_1}} + 2C_1 R_5 \sqrt{\frac{1}{C_1 L_1}}}$$

K-LP: 0

K-HP: 0

$$\text{K-BP: } \frac{R_4 R_5 g_m - R_4}{2R_4 g_m + 2R_5 g_m + 2}$$

Qz: 0

Wz: None

$$\mathbf{3.6 \quad BP-6} \quad Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \infty, \infty, R_4, R_5, \infty \right)$$

$$H(s) = \frac{s(L_1 R_1 R_4 R_5 g_m - L_1 R_1 R_4)}{R_1 R_4 + 2R_1 R_5 + s^2(C_1 L_1 R_1 R_4 + 2C_1 L_1 R_1 R_5) + s(2L_1 R_1 R_4 g_m + 2L_1 R_1 R_5 g_m + 2L_1 R_1 + L_1 R_4 + 2L_1 R_5)}$$

Parameters:

$$\text{Q: } \frac{C_1 R_1 R_4 \sqrt{\frac{1}{C_1 L_1}} + 2C_1 R_1 R_5 \sqrt{\frac{1}{C_1 L_1}}}{2R_1 R_4 g_m + 2R_1 R_5 g_m + 2R_1 + R_4 + 2R_5}$$

$$\text{wo: } \sqrt{\frac{1}{C_1 L_1}}$$

$$\text{bandwidth: } \frac{\sqrt{\frac{1}{C_1 L_1}}(2R_1 R_4 g_m + 2R_1 R_5 g_m + 2R_1 + R_4 + 2R_5)}{C_1 R_1 R_4 \sqrt{\frac{1}{C_1 L_1}} + 2C_1 R_1 R_5 \sqrt{\frac{1}{C_1 L_1}}}$$

K-LP: 0

K-HP: 0

$$\text{K-BP: } \frac{R_1 R_4 R_5 g_m - R_1 R_4}{2R_1 R_4 g_m + 2R_1 R_5 g_m + 2R_1 + R_4 + 2R_5}$$

Qz: 0

Wz: None

4 LP

4.1 LP-1 $Z(s) = \left(\frac{1}{C_1 s}, \infty, \infty, \frac{1}{C_4 s}, R_5, \infty \right)$

$$H(s) = \frac{R_5 g_m - 1}{2C_1 C_4 R_5 s^2 + 2g_m + s(C_1 + 2C_4 R_5 g_m + 2C_4)}$$

Parameters:

$$\begin{aligned} \text{Q: } & \frac{2C_1 C_4 R_5 \sqrt{\frac{g_m}{C_1 C_4 R_5}}}{C_1 + 2C_4 R_5 g_m + 2C_4} \\ \text{wo: } & \sqrt{\frac{g_m}{C_1 C_4 R_5}} \\ \text{bandwidth: } & \frac{C_1 + 2C_4 R_5 g_m + 2C_4}{2C_1 C_4 R_5} \\ \text{K-LP: } & \frac{R_5 g_m - 1}{2g_m} \\ \text{K-HP: } & 0 \\ \text{K-BP: } & 0 \\ \text{Qz: } & \text{None} \\ \text{Wz: } & \text{None} \end{aligned}$$

4.2 LP-2 $Z(s) = \left(\frac{1}{C_1 s}, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, R_5, \infty \right)$

$$H(s) = \frac{R_4 R_5 g_m - R_4}{2C_1 C_4 R_4 R_5 s^2 + 2R_4 g_m + 2R_5 g_m + s(C_1 R_4 + 2C_1 R_5 + 2C_4 R_4 R_5 g_m + 2C_4 R_4) + 2}$$

Parameters:

$$\begin{aligned} \text{Q: } & \frac{2C_1 C_4 R_4 R_5 \sqrt{\frac{g_m}{C_1 C_4 R_5} + \frac{g_m}{C_1 C_4 R_4} + \frac{1}{C_1 C_4 R_4 R_5}}}{C_1 R_4 + 2C_1 R_5 + 2C_4 R_4 R_5 g_m + 2C_4 R_4} \\ \text{wo: } & \sqrt{\frac{R_4 g_m + R_5 g_m + 1}{C_1 C_4 R_4 R_5}} \\ \text{bandwidth: } & \frac{\sqrt{\frac{R_4 g_m + R_5 g_m + 1}{C_1 C_4 R_4 R_5}} (C_1 R_4 + 2C_1 R_5 + 2C_4 R_4 R_5 g_m + 2C_4 R_4)}{2C_1 C_4 R_4 R_5 \sqrt{\frac{g_m}{C_1 C_4 R_5} + \frac{g_m}{C_1 C_4 R_4} + \frac{1}{C_1 C_4 R_4 R_5}}} \\ \text{K-LP: } & \frac{R_4 R_5 g_m - R_4}{2R_4 g_m + 2R_5 g_m + 2} \\ \text{K-HP: } & 0 \\ \text{K-BP: } & 0 \\ \text{Qz: } & \text{None} \\ \text{Wz: } & \text{None} \end{aligned}$$

4.3 LP-3 $Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \frac{1}{C_4 s}, R_5, \infty \right)$

$$H(s) = \frac{R_1 R_5 g_m - R_1}{2C_1 C_4 R_1 R_5 s^2 + 2R_1 g_m + s(C_1 R_1 + 2C_4 R_1 R_5 g_m + 2C_4 R_1 + 2C_4 R_5) + 1}$$

Parameters:

$$\begin{aligned} \text{Q: } & \frac{\sqrt{2} C_1 C_4 R_1 R_5 \sqrt{\frac{2g_m}{C_1 C_4 R_5} + \frac{1}{C_1 C_4 R_1 R_5}}}{C_1 R_1 + 2C_4 R_1 R_5 g_m + 2C_4 R_1 + 2C_4 R_5} \\ \text{wo: } & \frac{\sqrt{2} \sqrt{\frac{2R_1 g_m + 1}{C_1 C_4 R_1 R_5}}}{2} \\ \text{bandwidth: } & \frac{\sqrt{\frac{2R_1 g_m + 1}{C_1 C_4 R_1 R_5}} (C_1 R_1 + 2C_4 R_1 R_5 g_m + 2C_4 R_1 + 2C_4 R_5)}{2C_1 C_4 R_1 R_5 \sqrt{\frac{2g_m}{C_1 C_4 R_5} + \frac{1}{C_1 C_4 R_1 R_5}}} \\ \text{K-LP: } & \frac{R_1 R_5 g_m - R_1}{2R_1 g_m + 1} \\ \text{K-HP: } & 0 \\ \text{K-BP: } & 0 \\ \text{Qz: } & \text{None} \\ \text{Wz: } & \text{None} \end{aligned}$$

$$4.4 \quad \text{LP-4 } Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, R_5, \infty \right)$$

$$H(s) = \frac{R_1 R_4 R_5 g_m - R_1 R_4}{2C_1 C_4 R_1 R_4 R_5 s^2 + 2R_1 R_4 g_m + 2R_1 R_5 g_m + 2R_1 + R_4 + 2R_5 + s(C_1 R_1 R_4 + 2C_1 R_1 R_5 + 2C_4 R_1 R_4 R_5 g_m + 2C_4 R_1 R_4 + 2C_4 R_4 R_5)}$$

Parameters:

$$\begin{aligned} \text{Q: } & \frac{\sqrt{2} C_1 C_4 R_1 R_4 R_5 \sqrt{\frac{2g_m}{C_1 C_4 R_5} + \frac{2g_m}{C_1 C_4 R_4} + \frac{2}{C_1 C_4 R_4 R_5} + \frac{1}{C_1 C_4 R_1 R_5} + \frac{2}{C_1 C_4 R_1 R_4}}}{C_1 R_1 R_4 + 2C_1 R_1 R_5 + 2C_4 R_1 R_4 R_5 g_m + 2C_4 R_1 R_4 + 2C_4 R_4 R_5} \\ \text{wo: } & \frac{\sqrt{2} \sqrt{\frac{2R_1 R_4 g_m + 2R_1 R_5 g_m + 2R_1 + R_4 + 2R_5}{C_1 C_4 R_1 R_4 R_5}}}{2} \\ \text{bandwidth: } & \frac{2}{\sqrt{\frac{2R_1 R_4 g_m + 2R_1 R_5 g_m + 2R_1 + R_4 + 2R_5}{C_1 C_4 R_1 R_4 R_5} (C_1 R_1 R_4 + 2C_1 R_1 R_5 + 2C_4 R_1 R_4 R_5 g_m + 2C_4 R_1 R_4 + 2C_4 R_4 R_5)}} \\ \text{K-LP: } & \frac{R_1 R_4 R_5 g_m - R_1 R_4}{2R_1 R_4 g_m + 2R_1 R_5 g_m + 2R_1 + R_4 + 2R_5} \\ \text{K-HP: } & 0 \\ \text{K-BP: } & 0 \\ \text{Qz: } & \text{None} \\ \text{Wz: } & \text{None} \end{aligned}$$

5 BS

$$5.1 \quad \text{BS-1 } Z(s) = \left(R_1, \infty, \infty, L_4 s + \frac{1}{C_4 s}, R_5, \infty \right)$$

$$H(s) = \frac{R_1 R_5 g_m - R_1 + s^2 (C_4 L_4 R_1 R_5 g_m - C_4 L_4 R_1)}{2R_1 g_m + s^2 (2C_4 L_4 R_1 g_m + C_4 L_4) + s (2C_4 R_1 R_5 g_m + 2C_4 R_1 + 2C_4 R_5) + 1}$$

Parameters:

$$\begin{aligned} \text{Q: } & \frac{2L_4 R_1 g_m \sqrt{\frac{1}{C_4 L_4}} + L_4 \sqrt{\frac{1}{C_4 L_4}}}{2R_1 R_5 g_m + 2R_1 + 2R_5} \\ \text{wo: } & \sqrt{\frac{1}{C_4 L_4}} \\ \text{bandwidth: } & \frac{\sqrt{\frac{1}{C_4 L_4}} (2R_1 R_5 g_m + 2R_1 + 2R_5)}{2L_4 R_1 g_m \sqrt{\frac{1}{C_4 L_4}} + L_4 \sqrt{\frac{1}{C_4 L_4}}} \\ \text{K-LP: } & \frac{R_1 R_5 g_m - R_1}{2R_1 g_m + 1} \\ \text{K-HP: } & \frac{R_1 R_5 g_m - R_1}{2R_1 g_m + 1} \\ \text{K-BP: } & 0 \\ \text{Qz: } & \text{None} \\ \text{Wz: } & \sqrt{\frac{1}{C_4 L_4}} \end{aligned}$$

$$5.2 \quad \text{BS-2 } Z(s) = \left(R_1, \infty, \infty, \frac{R_4 (C_4 L_4 s^2 + 1)}{C_4 L_4 s^2 + C_4 R_4 s + 1}, R_5, \infty \right)$$

$$H(s) = \frac{R_1 R_4 R_5 g_m - R_1 R_4 + s^2 (C_4 L_4 R_1 R_4 R_5 g_m - C_4 L_4 R_1 R_4)}{2R_1 R_4 g_m + 2R_1 R_5 g_m + 2R_1 + R_4 + 2R_5 + s^2 (2C_4 L_4 R_1 R_4 g_m + 2C_4 L_4 R_1 R_5 g_m + 2C_4 L_4 R_1 + C_4 L_4 R_4 + 2C_4 L_4 R_5) + s (2C_4 R_1 R_4 R_5 g_m + 2C_4 R_1 R_4 + 2C_4 R_4 R_5)}$$

Parameters:

$$\begin{aligned} \text{Q: } & \frac{2L_4 R_1 R_4 g_m \sqrt{\frac{1}{C_4 L_4}} + 2L_4 R_1 R_5 g_m \sqrt{\frac{1}{C_4 L_4}} + 2L_4 R_1 \sqrt{\frac{1}{C_4 L_4}} + L_4 R_4 \sqrt{\frac{1}{C_4 L_4}} + 2L_4 R_5 \sqrt{\frac{1}{C_4 L_4}}}{2R_1 R_4 R_5 g_m + 2R_1 R_4 + 2R_4 R_5} \\ \text{wo: } & \sqrt{\frac{1}{C_4 L_4}} \\ \text{bandwidth: } & \frac{\sqrt{\frac{1}{C_4 L_4}} (2R_1 R_4 R_5 g_m + 2R_1 R_4 + 2R_4 R_5)}{2L_4 R_1 R_4 g_m \sqrt{\frac{1}{C_4 L_4}} + 2L_4 R_1 R_5 g_m \sqrt{\frac{1}{C_4 L_4}} + 2L_4 R_1 \sqrt{\frac{1}{C_4 L_4}} + L_4 R_4 \sqrt{\frac{1}{C_4 L_4}} + 2L_4 R_5 \sqrt{\frac{1}{C_4 L_4}}} \\ \text{K-LP: } & \frac{R_1 R_4 R_5 g_m - R_1 R_4}{2R_1 R_4 g_m + 2R_1 R_5 g_m + 2R_1 + R_4 + 2R_5} \\ \text{K-HP: } & \frac{R_1 R_4 R_5 g_m - R_1 R_4}{2R_1 R_4 g_m + 2R_1 R_5 g_m + 2R_1 + R_4 + 2R_5} \\ \text{K-BP: } & 0 \\ \text{Qz: } & \text{None} \\ \text{Wz: } & \sqrt{\frac{1}{C_4 L_4}} \end{aligned}$$

5.3 BS-3 $Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \infty, \infty, R_4, R_5, \infty \right)$

$$H(s) = \frac{R_4 R_5 g_m - R_4 + s^2 (C_1 L_1 R_4 R_5 g_m - C_1 L_1 R_4)}{2 R_4 g_m + 2 R_5 g_m + s^2 (2 C_1 L_1 R_4 g_m + 2 C_1 L_1 R_5 g_m + 2 C_1 L_1) + s (C_1 R_4 + 2 C_1 R_5) + 2}$$

Parameters:

Q: $\frac{2 L_1 R_4 g_m \sqrt{\frac{1}{C_1 L_1}} + 2 L_1 R_5 g_m \sqrt{\frac{1}{C_1 L_1}} + 2 L_1 \sqrt{\frac{1}{C_1 L_1}}}{R_4 + 2 R_5}$

wo: $\sqrt{\frac{1}{C_1 L_1}}$

bandwidth: $\frac{\sqrt{\frac{1}{C_1 L_1}} (R_4 + 2 R_5)}{2 L_1 R_4 g_m \sqrt{\frac{1}{C_1 L_1}} + 2 L_1 R_5 g_m \sqrt{\frac{1}{C_1 L_1}} + 2 L_1 \sqrt{\frac{1}{C_1 L_1}}}$

K-LP: $\frac{R_4 R_5 g_m - R_4}{2 R_4 g_m + 2 R_5 g_m + 2}$

K-HP: $\frac{R_4 R_5 g_m - R_4}{2 R_4 g_m + 2 R_5 g_m + 2}$

K-BP: 0

Qz: None

Wz: $\sqrt{\frac{1}{C_1 L_1}}$

5.4 BS-4 $Z(s) = \left(\frac{R_1 (C_1 L_1 s^2 + 1)}{C_1 L_1 s^2 + C_1 R_1 s + 1}, \infty, \infty, R_4, R_5, \infty \right)$

$$H(s) = \frac{R_1 R_4 R_5 g_m - R_1 R_4 + s^2 (C_1 L_1 R_1 R_4 R_5 g_m - C_1 L_1 R_1 R_4)}{2 R_1 R_4 g_m + 2 R_1 R_5 g_m + 2 R_1 + R_4 + 2 R_5 + s^2 (2 C_1 L_1 R_1 R_4 g_m + 2 C_1 L_1 R_1 R_5 g_m + 2 C_1 L_1 R_1 + C_1 L_1 R_4 + 2 C_1 L_1 R_5) + s (C_1 R_1 R_4 + 2 C_1 R_1 R_5)}$$

Parameters:

Q: $\frac{2 L_1 R_1 R_4 g_m \sqrt{\frac{1}{C_1 L_1}} + 2 L_1 R_1 R_5 g_m \sqrt{\frac{1}{C_1 L_1}} + 2 L_1 R_1 \sqrt{\frac{1}{C_1 L_1}} + L_1 R_4 \sqrt{\frac{1}{C_1 L_1}} + 2 L_1 R_5 \sqrt{\frac{1}{C_1 L_1}}}{R_1 R_4 + 2 R_1 R_5}$

wo: $\sqrt{\frac{1}{C_1 L_1}}$

bandwidth: $\frac{\sqrt{\frac{1}{C_1 L_1}} (R_1 R_4 + 2 R_1 R_5)}{2 L_1 R_1 R_4 g_m \sqrt{\frac{1}{C_1 L_1}} + 2 L_1 R_1 R_5 g_m \sqrt{\frac{1}{C_1 L_1}} + 2 L_1 R_1 \sqrt{\frac{1}{C_1 L_1}} + L_1 R_4 \sqrt{\frac{1}{C_1 L_1}} + 2 L_1 R_5 \sqrt{\frac{1}{C_1 L_1}}}$

K-LP: $\frac{R_1 R_4 R_5 g_m - R_1 R_4}{2 R_1 R_4 g_m + 2 R_1 R_5 g_m + 2 R_1 + R_4 + 2 R_5}$

K-HP: $\frac{R_1 R_4 R_5 g_m - R_1 R_4}{2 R_1 R_4 g_m + 2 R_1 R_5 g_m + 2 R_1 + R_4 + 2 R_5}$

K-BP: 0

Qz: None

Wz: $\sqrt{\frac{1}{C_1 L_1}}$

6 GE

6.1 GE-1 $Z(s) = \left(R_1, \infty, \infty, R_4, L_5 s + \frac{1}{C_5 s}, \infty \right)$

$$H(s) = \frac{C_5 L_5 R_1 R_4 g_m s^2 - C_5 R_1 R_4 s + R_1 R_4 g_m}{2 R_1 g_m + s^2 (2 C_5 L_5 R_1 g_m + 2 C_5 L_5) + s (2 C_5 R_1 R_4 g_m + 2 C_5 R_1 + C_5 R_4) + 2}$$

Parameters:

Q: $\frac{2 L_5 R_1 g_m \sqrt{\frac{1}{C_5 L_5}} + 2 L_5 \sqrt{\frac{1}{C_5 L_5}}}{2 R_1 R_4 g_m + 2 R_1 + R_4}$

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

bandwidth: $\frac{\sqrt{\frac{1}{C_5 L_5}} (2 R_1 R_4 g_m + 2 R_1 + R_4)}{2 L_5 R_1 g_m \sqrt{\frac{1}{C_5 L_5}} + 2 L_5 \sqrt{\frac{1}{C_5 L_5}}}$

K-LP: $\frac{R_1 R_4 g_m}{2 R_1 g_m + 2}$

K-HP: $\frac{R_1 R_4 g_m}{2 R_1 g_m + 2}$

K-BP: $-\frac{R_1 R_4}{2 R_1 R_4 g_m + 2 R_1 + R_4}$

Qz: $-L_5 g_m \sqrt{\frac{1}{C_5 L_5}}$

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

6.2 GE-2 $Z(s) = \left(R_1, \infty, \infty, R_4, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \infty \right)$

$$H(s) = \frac{-C_5 L_5 R_1 R_4 s^2 + L_5 R_1 R_4 g_m s - R_1 R_4}{2R_1 R_4 g_m + 2R_1 + R_4 + s^2 (2C_5 L_5 R_1 R_4 g_m + 2C_5 L_5 R_1 + C_5 L_5 R_4) + s (2L_5 R_1 g_m + 2L_5)}$$

Parameters:

Q: $\frac{2C_5 R_1 R_4 g_m \sqrt{\frac{1}{C_5 L_5}} + 2C_5 R_1 \sqrt{\frac{1}{C_5 L_5}} + C_5 R_4 \sqrt{\frac{1}{C_5 L_5}}}{2R_1 g_m + 2}$
 wo: $\sqrt{\frac{1}{C_5 L_5}}$
 bandwidth: $\frac{\sqrt{\frac{1}{C_5 L_5}} (2R_1 g_m + 2)}{2C_5 R_1 R_4 g_m \sqrt{\frac{1}{C_5 L_5}} + 2C_5 R_1 \sqrt{\frac{1}{C_5 L_5}} + C_5 R_4 \sqrt{\frac{1}{C_5 L_5}}}$
 K-LP: $-\frac{R_1 R_4}{2R_1 R_4 g_m + 2R_1 + R_4}$
 K-HP: $-\frac{R_1 R_4}{2R_1 R_4 g_m + 2R_1 + R_4}$
 K-BP: $\frac{R_1 R_4 g_m}{2R_1 g_m + 2}$
 QZ: $-\frac{C_5 \sqrt{\frac{1}{C_5 L_5}}}{g_m}$
 WZ: $\sqrt{\frac{1}{C_5 L_5}}$

6.3 GE-3 $Z(s) = \left(R_1, \infty, \infty, R_4, L_5 s + R_5 + \frac{1}{C_5 s}, \infty \right)$

$$H(s) = \frac{C_5 L_5 R_1 R_4 g_m s^2 + R_1 R_4 g_m + s (C_5 R_1 R_4 R_5 g_m - C_5 R_1 R_4)}{2R_1 g_m + s^2 (2C_5 L_5 R_1 g_m + 2C_5 L_5) + s (2C_5 R_1 R_4 g_m + 2C_5 R_1 R_5 g_m + 2C_5 R_1 + C_5 R_4 + 2C_5 R_5) + 2}$$

Parameters:

Q: $\frac{2L_5 R_1 g_m \sqrt{\frac{1}{C_5 L_5}} + 2L_5 \sqrt{\frac{1}{C_5 L_5}}}{2R_1 R_4 g_m + 2R_1 R_5 g_m + 2R_1 + R_4 + 2R_5}$
 wo: $\sqrt{\frac{1}{C_5 L_5}}$
 bandwidth: $\frac{\sqrt{\frac{1}{C_5 L_5}} (2R_1 R_4 g_m + 2R_1 R_5 g_m + 2R_1 + R_4 + 2R_5)}{2L_5 R_1 g_m \sqrt{\frac{1}{C_5 L_5}} + 2L_5 \sqrt{\frac{1}{C_5 L_5}}}$
 K-LP: $\frac{R_1 R_4 g_m}{2R_1 g_m + 2}$
 K-HP: $\frac{R_1 R_4 g_m}{2R_1 g_m + 2}$
 K-BP: $\frac{R_1 R_4 R_5 g_m - R_1 R_4}{2R_1 R_4 g_m + 2R_1 R_5 g_m + 2R_1 + R_4 + 2R_5}$
 QZ: $\frac{L_5 g_m \sqrt{\frac{1}{C_5 L_5}}}{R_5 g_m - 1}$
 WZ: $\sqrt{\frac{1}{C_5 L_5}}$

6.4 GE-4 $Z(s) = \left(R_1, \infty, \infty, R_4, \frac{L_5 R_5 s}{C_5 L_5 R_5 s^2 + L_5 s + R_5}, \infty \right)$

$$H(s) = \frac{-C_5 L_5 R_1 R_4 R_5 s^2 - R_1 R_4 R_5 + s (L_5 R_1 R_4 R_5 g_m - L_5 R_1 R_4)}{2R_1 R_4 R_5 g_m + 2R_1 R_5 + R_4 R_5 + s^2 (2C_5 L_5 R_1 R_4 R_5 g_m + 2C_5 L_5 R_1 R_5 + C_5 L_5 R_4 R_5) + s (2L_5 R_1 R_4 g_m + 2L_5 R_1 R_5 g_m + 2L_5 R_1 + L_5 R_4 + 2L_5 R_5)}$$

Parameters:

Q: $\frac{2C_5 R_1 R_4 R_5 g_m \sqrt{\frac{1}{C_5 L_5}} + 2C_5 R_1 R_5 \sqrt{\frac{1}{C_5 L_5}} + C_5 R_4 R_5 \sqrt{\frac{1}{C_5 L_5}}}{2R_1 R_4 g_m + 2R_1 R_5 g_m + 2R_1 + R_4 + 2R_5}$
 wo: $\sqrt{\frac{1}{C_5 L_5}}$
 bandwidth: $\frac{\sqrt{\frac{1}{C_5 L_5}} (2R_1 R_4 g_m + 2R_1 R_5 g_m + 2R_1 + R_4 + 2R_5)}{2C_5 R_1 R_4 R_5 g_m \sqrt{\frac{1}{C_5 L_5}} + 2C_5 R_1 R_5 \sqrt{\frac{1}{C_5 L_5}} + C_5 R_4 R_5 \sqrt{\frac{1}{C_5 L_5}}}$
 K-LP: $-\frac{R_1 R_4}{2R_1 R_4 g_m + 2R_1 + R_4}$
 K-HP: $-\frac{R_1 R_4}{2R_1 R_4 g_m + 2R_1 + R_4}$
 K-BP: $\frac{R_1 R_4 R_5 g_m - R_1 R_4}{2R_1 R_4 g_m + 2R_1 R_5 g_m + 2R_1 + R_4 + 2R_5}$
 QZ: $-\frac{C_5 R_5 \sqrt{\frac{1}{C_5 L_5}}}{R_5 g_m - 1}$
 WZ: $\sqrt{\frac{1}{C_5 L_5}}$

6.5 GE-5 $Z(s) = \left(R_1, \infty, \infty, R_4, \frac{C_5 L_5 R_5 s^2 + L_5 s + R_5}{C_5 L_5 s^2 + 1}, \infty \right)$

$$H(s) = \frac{L_5 R_1 R_4 g_m s + R_1 R_4 R_5 g_m - R_1 R_4 + s^2 (C_5 L_5 R_1 R_4 R_5 g_m - C_5 L_5 R_1 R_4)}{2R_1 R_4 g_m + 2R_1 R_5 g_m + 2R_1 + R_4 + 2R_5 + s^2 (2C_5 L_5 R_1 R_4 g_m + 2C_5 L_5 R_1 R_5 g_m + 2C_5 L_5 R_1 + C_5 L_5 R_4 + 2C_5 L_5 R_5) + s (2L_5 R_1 g_m + 2L_5)}$$

Parameters:

Q: $\frac{2C_5 R_1 R_4 g_m \sqrt{\frac{1}{C_5 L_5}} + 2C_5 R_1 R_5 g_m \sqrt{\frac{1}{C_5 L_5}} + 2C_5 R_1 \sqrt{\frac{1}{C_5 L_5}} + C_5 R_4 \sqrt{\frac{1}{C_5 L_5}} + 2C_5 R_5 \sqrt{\frac{1}{C_5 L_5}}}{2R_1 g_m + 2}$

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

bandwidth: $\frac{\sqrt{\frac{1}{C_5 L_5}} (2R_1 g_m + 2)}{2C_5 R_1 R_4 g_m \sqrt{\frac{1}{C_5 L_5}} + 2C_5 R_1 R_5 g_m \sqrt{\frac{1}{C_5 L_5}} + 2C_5 R_1 \sqrt{\frac{1}{C_5 L_5}} + C_5 R_4 \sqrt{\frac{1}{C_5 L_5}} + 2C_5 R_5 \sqrt{\frac{1}{C_5 L_5}}}$

K-LP: $\frac{R_1 R_4 R_5 g_m - R_1 R_4}{2R_1 R_4 g_m + 2R_1 R_5 g_m + 2R_1 + R_4 + 2R_5}$

K-HP: $\frac{R_1 R_4 R_5 g_m - R_1 R_4}{2R_1 R_4 g_m + 2R_1 R_5 g_m + 2R_1 + R_4 + 2R_5}$

K-BP: $\frac{R_1 R_4 g_m}{2R_1 g_m + 2}$

QZ: $\frac{C_5 R_5 g_m \sqrt{\frac{1}{C_5 L_5}} - C_5 \sqrt{\frac{1}{C_5 L_5}}}{g_m}$

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

6.6 GE-6 $Z(s) = \left(R_1, \infty, \infty, R_4, \frac{R_5 (C_5 L_5 s^2 + 1)}{C_5 L_5 s^2 + C_5 R_5 s + 1}, \infty \right)$

$$H(s) = \frac{-C_5 R_1 R_4 R_5 s + R_1 R_4 R_5 g_m - R_1 R_4 + s^2 (C_5 L_5 R_1 R_4 R_5 g_m - C_5 L_5 R_1 R_4)}{2R_1 R_4 g_m + 2R_1 R_5 g_m + 2R_1 + R_4 + 2R_5 + s^2 (2C_5 L_5 R_1 R_4 g_m + 2C_5 L_5 R_1 R_5 g_m + 2C_5 L_5 R_1 + C_5 L_5 R_4 + 2C_5 L_5 R_5) + s (2C_5 R_1 R_4 R_5 g_m + 2C_5 R_1 R_5 + C_5 R_4 R_5)}$$

Parameters:

Q: $\frac{2L_5 R_1 R_4 g_m \sqrt{\frac{1}{C_5 L_5}} + 2L_5 R_1 R_5 g_m \sqrt{\frac{1}{C_5 L_5}} + 2L_5 R_1 \sqrt{\frac{1}{C_5 L_5}} + L_5 R_4 \sqrt{\frac{1}{C_5 L_5}} + 2L_5 R_5 \sqrt{\frac{1}{C_5 L_5}}}{2R_1 R_4 R_5 g_m + 2R_1 R_5 + R_4 R_5}$

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

bandwidth: $\frac{\sqrt{\frac{1}{C_5 L_5}} (2R_1 R_4 R_5 g_m + 2R_1 R_5 + R_4 R_5)}{2L_5 R_1 R_4 g_m \sqrt{\frac{1}{C_5 L_5}} + 2L_5 R_1 R_5 g_m \sqrt{\frac{1}{C_5 L_5}} + 2L_5 R_1 \sqrt{\frac{1}{C_5 L_5}} + L_5 R_4 \sqrt{\frac{1}{C_5 L_5}} + 2L_5 R_5 \sqrt{\frac{1}{C_5 L_5}}}$

K-LP: $\frac{R_1 R_4 R_5 g_m - R_1 R_4}{2R_1 R_4 g_m + 2R_1 R_5 g_m + 2R_1 + R_4 + 2R_5}$

K-HP: $\frac{R_1 R_4 R_5 g_m - R_1 R_4}{2R_1 R_4 g_m + 2R_1 R_5 g_m + 2R_1 + R_4 + 2R_5}$

K-BP: $-\frac{R_1 R_4}{2R_1 R_4 g_m + 2R_1 + R_4}$

QZ: $\frac{-L_5 R_5 g_m \sqrt{\frac{1}{C_5 L_5}} + L_5 \sqrt{\frac{1}{C_5 L_5}}}{R_5}$

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

6.7 GE-7 $Z(s) = \left(R_1, \infty, \infty, L_4 s + R_4 + \frac{1}{C_4 s}, R_5, \infty \right)$

$$H(s) = \frac{R_1 R_5 g_m - R_1 + s^2 (C_4 L_4 R_1 R_5 g_m - C_4 L_4 R_1) + s (C_4 R_1 R_4 R_5 g_m - C_4 R_1 R_4)}{2R_1 g_m + s^2 (2C_4 L_4 R_1 g_m + C_4 L_4) + s (2C_4 R_1 R_4 g_m + 2C_4 R_1 R_5 g_m + 2C_4 R_1 + C_4 R_4 + 2C_4 R_5) + 1}$$

Parameters:

Q: $\frac{2L_4 R_1 g_m \sqrt{\frac{1}{C_4 L_4}} + L_4 \sqrt{\frac{1}{C_4 L_4}}}{2R_1 R_4 g_m + 2R_1 R_5 g_m + 2R_1 + R_4 + 2R_5}$

wo: $\sqrt{\frac{1}{C_4 L_4}}$

bandwidth: $\frac{\sqrt{\frac{1}{C_4 L_4}} (2R_1 R_4 g_m + 2R_1 R_5 g_m + 2R_1 + R_4 + 2R_5)}{2L_4 R_1 g_m \sqrt{\frac{1}{C_4 L_4}} + L_4 \sqrt{\frac{1}{C_4 L_4}}}$

K-LP: $\frac{R_1 R_5 g_m - R_1}{2R_1 g_m + 1}$

K-HP: $\frac{R_1 R_5 g_m - R_1}{2R_1 g_m + 1}$

K-BP: $\frac{R_1 R_4 R_5 g_m - R_1 R_4}{2R_1 R_4 g_m + 2R_1 R_5 g_m + 2R_1 + R_4 + 2R_5}$

QZ: $\frac{L_4 \sqrt{\frac{1}{C_4 L_4}}}{R_4}$

Wz: $\sqrt{\frac{1}{C_4 L_4}}$

6.8 GE-8 $Z(s) = \left(R_1, \infty, \infty, \frac{C_4 L_4 R_4 s^2 + L_4 s + R_4}{C_4 L_4 s^2 + 1}, R_5, \infty \right)$

$$H(s) = \frac{R_1 R_4 R_5 g_m - R_1 R_4 + s^2 (C_4 L_4 R_1 R_4 R_5 g_m - C_4 L_4 R_1 R_4) + s (L_4 R_1 R_5 g_m - L_4 R_1)}{2R_1 R_4 g_m + 2R_1 R_5 g_m + 2R_1 + R_4 + 2R_5 + s^2 (2C_4 L_4 R_1 R_4 g_m + 2C_4 L_4 R_1 R_5 g_m + 2C_4 L_4 R_1 + C_4 L_4 R_4 + 2C_4 L_4 R_5) + s (2L_4 R_1 g_m + L_4)}$$

Parameters:

Q: $\frac{2C_4 R_1 R_4 g_m \sqrt{\frac{1}{C_4 L_4}} + 2C_4 R_1 R_5 g_m \sqrt{\frac{1}{C_4 L_4}} + 2C_4 R_1 \sqrt{\frac{1}{C_4 L_4}} + C_4 R_4 \sqrt{\frac{1}{C_4 L_4}} + 2C_4 R_5 \sqrt{\frac{1}{C_4 L_4}}}{2R_1 g_m + 1}$

wo: $\sqrt{\frac{1}{C_4 L_4}}$

bandwidth: $\frac{\sqrt{\frac{1}{C_4 L_4}} (2R_1 g_m + 1)}{2C_4 R_1 R_4 g_m \sqrt{\frac{1}{C_4 L_4}} + 2C_4 R_1 R_5 g_m \sqrt{\frac{1}{C_4 L_4}} + 2C_4 R_1 \sqrt{\frac{1}{C_4 L_4}} + C_4 R_4 \sqrt{\frac{1}{C_4 L_4}} + 2C_4 R_5 \sqrt{\frac{1}{C_4 L_4}}}$

K-LP: $\frac{R_1 R_4 R_5 g_m - R_1 R_4}{2R_1 R_4 g_m + 2R_1 R_5 g_m + 2R_1 + R_4 + 2R_5}$

K-HP: $\frac{R_1 R_4 R_5 g_m - R_1 R_4}{2R_1 R_4 g_m + 2R_1 R_5 g_m + 2R_1 + R_4 + 2R_5}$

K-BP: $\frac{R_1 R_5 g_m - R_1}{2R_1 g_m + 1}$

Qz: $C_4 R_4 \sqrt{\frac{1}{C_4 L_4}}$

Wz: $\sqrt{\frac{1}{C_4 L_4}}$

6.9 GE-9 $Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s}, \infty, \infty, R_4, R_5, \infty \right)$

$$H(s) = \frac{R_4 R_5 g_m - R_4 + s^2 (C_1 L_1 R_4 R_5 g_m - C_1 L_1 R_4) + s (C_1 R_1 R_4 R_5 g_m - C_1 R_1 R_4)}{2R_4 g_m + 2R_5 g_m + s^2 (2C_1 L_1 R_4 g_m + 2C_1 L_1 R_5 g_m + 2C_1 L_1) + s (2C_1 R_1 R_4 g_m + 2C_1 R_1 R_5 g_m + 2C_1 R_1 + C_1 R_4 + 2C_1 R_5) + 2}$$

Parameters:

Q: $\frac{2L_1 R_4 g_m \sqrt{\frac{1}{C_1 L_1}} + 2L_1 R_5 g_m \sqrt{\frac{1}{C_1 L_1}} + 2L_1 \sqrt{\frac{1}{C_1 L_1}}}{2R_1 R_4 g_m + 2R_1 R_5 g_m + 2R_1 + R_4 + 2R_5}$

wo: $\sqrt{\frac{1}{C_1 L_1}}$

bandwidth: $\frac{\sqrt{\frac{1}{C_1 L_1}} (2R_1 R_4 g_m + 2R_1 R_5 g_m + 2R_1 + R_4 + 2R_5)}{2L_1 R_4 g_m \sqrt{\frac{1}{C_1 L_1}} + 2L_1 R_5 g_m \sqrt{\frac{1}{C_1 L_1}} + 2L_1 \sqrt{\frac{1}{C_1 L_1}}}$

K-LP: $\frac{R_4 R_5 g_m - R_4}{2R_4 g_m + 2R_5 g_m + 2}$

K-HP: $\frac{R_4 R_5 g_m - R_4}{2R_4 g_m + 2R_5 g_m + 2}$

K-BP: $\frac{R_1 R_4 R_5 g_m - R_1 R_4}{2R_1 R_4 g_m + 2R_1 R_5 g_m + 2R_1 + R_4 + 2R_5}$

Qz: $\frac{L_1 \sqrt{\frac{1}{C_1 L_1}}}{R_1}$

Wz: $\sqrt{\frac{1}{C_1 L_1}}$

6.10 GE-10 $Z(s) = \left(\frac{C_1 L_1 R_1 s^2 + L_1 s + R_1}{C_1 L_1 s^2 + 1}, \infty, \infty, R_4, R_5, \infty \right)$

$$H(s) = \frac{R_1 R_4 R_5 g_m - R_1 R_4 + s^2 (C_1 L_1 R_1 R_4 R_5 g_m - C_1 L_1 R_1 R_4) + s (L_1 R_4 R_5 g_m - L_1 R_4)}{2R_1 R_4 g_m + 2R_1 R_5 g_m + 2R_1 + R_4 + 2R_5 + s^2 (2C_1 L_1 R_1 R_4 g_m + 2C_1 L_1 R_1 R_5 g_m + 2C_1 L_1 R_1 + C_1 L_1 R_4 + 2C_1 L_1 R_5) + s (2L_1 R_4 g_m + 2L_1 R_5 g_m + 2L_1)}$$

Parameters:

Q: $\frac{2C_1 R_1 R_4 g_m \sqrt{\frac{1}{C_1 L_1}} + 2C_1 R_1 R_5 g_m \sqrt{\frac{1}{C_1 L_1}} + 2C_1 R_1 \sqrt{\frac{1}{C_1 L_1}} + C_1 R_4 \sqrt{\frac{1}{C_1 L_1}} + 2C_1 R_5 \sqrt{\frac{1}{C_1 L_1}}}{2R_4 g_m + 2R_5 g_m + 2}$

wo: $\sqrt{\frac{1}{C_1 L_1}}$

bandwidth: $\frac{\sqrt{\frac{1}{C_1 L_1}} (2R_4 g_m + 2R_5 g_m + 2)}{2C_1 R_1 R_4 g_m \sqrt{\frac{1}{C_1 L_1}} + 2C_1 R_1 R_5 g_m \sqrt{\frac{1}{C_1 L_1}} + 2C_1 R_1 \sqrt{\frac{1}{C_1 L_1}} + C_1 R_4 \sqrt{\frac{1}{C_1 L_1}} + 2C_1 R_5 \sqrt{\frac{1}{C_1 L_1}}}$

K-LP: $\frac{R_1 R_4 R_5 g_m - R_1 R_4}{2R_1 R_4 g_m + 2R_1 R_5 g_m + 2R_1 + R_4 + 2R_5}$

K-HP: $\frac{R_1 R_4 R_5 g_m - R_1 R_4}{2R_1 R_4 g_m + 2R_1 R_5 g_m + 2R_1 + R_4 + 2R_5}$

K-BP: $\frac{R_4 R_5 g_m - R_4}{2R_4 g_m + 2R_5 g_m + 2}$

Qz: $C_1 R_1 \sqrt{\frac{1}{C_1 L_1}}$

Wz: $\sqrt{\frac{1}{C_1 L_1}}$

7 AP

8 INVALID-NUMER

8.1 INVALID-NUMER-1 $Z(s) = \left(R_1, \infty, \infty, \frac{1}{C_4 s}, \frac{R_5}{C_5 R_5 s + 1}, \infty \right)$

$$H(s) = \frac{-C_5 R_1 R_5 s + R_1 R_5 g_m - R_1}{2C_4 C_5 R_1 R_5 s^2 + 2R_1 g_m + s(2C_4 R_1 R_5 g_m + 2C_4 R_1 + 2C_4 R_5 + 2C_5 R_1 R_5 g_m + C_5 R_5) + 1}$$

Parameters:

$$\begin{aligned} \text{Q: } & \frac{\sqrt{2} C_4 C_5 R_1 R_5 \sqrt{\frac{2g_m}{C_4 C_5 R_5} + \frac{1}{C_4 C_5 R_1 R_5}}}{2C_4 R_1 R_5 g_m + 2C_4 R_1 + 2C_4 R_5 + 2C_5 R_1 R_5 g_m + C_5 R_5} \\ \text{wo: } & \frac{\sqrt{2} \sqrt{\frac{2R_1 g_m + 1}{C_4 C_5 R_1 R_5}}}{2} \\ \text{bandwidth: } & \frac{\sqrt{\frac{2R_1 g_m + 1}{C_4 C_5 R_1 R_5}} (2C_4 R_1 R_5 g_m + 2C_4 R_1 + 2C_4 R_5 + 2C_5 R_1 R_5 g_m + C_5 R_5)}{2C_4 C_5 R_1 R_5 \sqrt{\frac{2g_m}{C_4 C_5 R_5} + \frac{1}{C_4 C_5 R_1 R_5}}} \\ \text{K-LP: } & \frac{R_1 R_5 g_m - R_1}{2R_1 g_m + 1} \\ \text{K-HP: } & 0 \\ \text{K-BP: } & -\frac{C_5 R_1 R_5}{2C_4 R_1 R_5 g_m + 2C_4 R_1 + 2C_4 R_5 + 2C_5 R_1 R_5 g_m + C_5 R_5} \\ \text{Qz: } & 0 \\ \text{Wz: } & \text{None} \end{aligned}$$

8.2 INVALID-NUMER-2 $Z(s) = \left(R_1, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, \frac{1}{C_5 s}, \infty \right)$

$$H(s) = \frac{-C_5 R_1 R_4 s + R_1 R_4 g_m}{2C_4 C_5 R_1 R_4 s^2 + 2R_1 g_m + s(2C_4 R_1 R_4 g_m + 2C_4 R_4 + 2C_5 R_1 R_4 g_m + 2C_5 R_1 + C_5 R_4) + 2}$$

Parameters:

$$\begin{aligned} \text{Q: } & \frac{2C_4 C_5 R_1 R_4 \sqrt{\frac{g_m}{C_4 C_5 R_4} + \frac{1}{C_4 C_5 R_1 R_4}}}{2C_4 R_1 R_4 g_m + 2C_4 R_4 + 2C_5 R_1 R_4 g_m + 2C_5 R_1 + C_5 R_4} \\ \text{wo: } & \sqrt{\frac{R_1 g_m + 1}{C_4 C_5 R_1 R_4}} \\ \text{bandwidth: } & \frac{\sqrt{\frac{R_1 g_m + 1}{C_4 C_5 R_1 R_4}} (2C_4 R_1 R_4 g_m + 2C_4 R_4 + 2C_5 R_1 R_4 g_m + 2C_5 R_1 + C_5 R_4)}{2C_4 C_5 R_1 R_4 \sqrt{\frac{g_m}{C_4 C_5 R_4} + \frac{1}{C_4 C_5 R_1 R_4}}} \\ \text{K-LP: } & \frac{R_1 R_4 g_m}{2R_1 g_m + 2} \\ \text{K-HP: } & 0 \\ \text{K-BP: } & -\frac{C_5 R_1 R_4}{2C_4 R_1 R_4 g_m + 2C_4 R_4 + 2C_5 R_1 R_4 g_m + 2C_5 R_1 + C_5 R_4} \\ \text{Qz: } & 0 \\ \text{Wz: } & \text{None} \end{aligned}$$

8.3 INVALID-NUMER-3 $Z(s) = \left(R_1, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, \frac{R_5}{C_5 R_5 s + 1}, \infty \right)$

$$H(s) = \frac{-C_5 R_1 R_4 R_5 s + R_1 R_4 R_5 g_m - R_1 R_4}{2C_4 C_5 R_1 R_4 R_5 s^2 + 2R_1 R_4 g_m + 2R_1 R_5 g_m + 2R_1 + R_4 + 2R_5 + s(2C_4 R_1 R_4 R_5 g_m + 2C_4 R_1 R_4 + 2C_4 R_4 R_5 + 2C_5 R_1 R_4 R_5 g_m + 2C_5 R_1 R_5 + C_5 R_4 R_5)}$$

Parameters:

$$\begin{aligned} \text{Q: } & \frac{\sqrt{2} C_4 C_5 R_1 R_4 R_5 \sqrt{\frac{2g_m}{C_4 C_5 R_5} + \frac{2g_m}{C_4 C_5 R_4} + \frac{2}{C_4 C_5 R_4 R_5} + \frac{1}{C_4 C_5 R_1 R_5} + \frac{2}{C_4 C_5 R_1 R_4}}}{2C_4 R_1 R_4 R_5 g_m + 2C_4 R_1 R_4 + 2C_4 R_4 R_5 + 2C_5 R_1 R_4 R_5 g_m + 2C_5 R_1 R_5 + C_5 R_4 R_5} \\ \text{wo: } & \frac{\sqrt{2} \sqrt{\frac{2R_1 R_4 g_m + 2R_1 R_5 g_m + 2R_1 + R_4 + 2R_5}{C_4 C_5 R_1 R_4 R_5}}}{2} \\ \text{bandwidth: } & \frac{\sqrt{\frac{2R_1 R_4 g_m + 2R_1 R_5 g_m + 2R_1 + R_4 + 2R_5}{C_4 C_5 R_1 R_4 R_5}} (2C_4 R_1 R_4 R_5 g_m + 2C_4 R_1 R_4 + 2C_4 R_4 R_5 + 2C_5 R_1 R_4 R_5 g_m + 2C_5 R_1 R_5 + C_5 R_4 R_5)}{2C_4 C_5 R_1 R_4 R_5 \sqrt{\frac{2g_m}{C_4 C_5 R_5} + \frac{2g_m}{C_4 C_5 R_4} + \frac{2}{C_4 C_5 R_4 R_5} + \frac{1}{C_4 C_5 R_1 R_5} + \frac{2}{C_4 C_5 R_1 R_4}}} \\ \text{K-LP: } & \frac{R_1 R_4 R_5 g_m - R_1 R_4}{2R_1 R_4 g_m + 2R_1 R_5 g_m + 2R_1 + R_4 + 2R_5} \\ \text{K-HP: } & 0 \\ \text{K-BP: } & -\frac{C_5 R_1 R_4 R_5}{2C_4 R_1 R_4 R_5 g_m + 2C_4 R_1 R_4 + 2C_4 R_4 R_5 + 2C_5 R_1 R_4 R_5 g_m + 2C_5 R_1 R_5 + C_5 R_4 R_5} \\ \text{Qz: } & 0 \\ \text{Wz: } & \text{None} \end{aligned}$$

8.4 INVALID-NUMER-4 $Z(s) = \left(R_1, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, R_5 + \frac{1}{C_5 s}, \infty \right)$

$$H(s) = \frac{R_1 R_4 g_m + s (C_5 R_1 R_4 R_5 g_m - C_5 R_1 R_4)}{2 R_1 g_m + s^2 (2 C_4 C_5 R_1 R_4 R_5 g_m + 2 C_4 C_5 R_1 R_4 + 2 C_4 C_5 R_4 R_5) + s (2 C_4 R_1 R_4 g_m + 2 C_4 R_4 + 2 C_5 R_1 R_4 g_m + 2 C_5 R_1 R_5 g_m + 2 C_5 R_1 + C_5 R_4 + 2 C_5 R_5) + 2}$$

Parameters:

$$\begin{aligned} \text{Q: } & \frac{2 C_4 C_5 R_1 R_4 R_5 g_m \sqrt{\frac{R_1 g_m}{C_4 C_5 R_1 R_4 R_5 g_m + C_4 C_5 R_1 R_4 + C_4 C_5 R_4 R_5} + \frac{1}{C_4 C_5 R_1 R_4 R_5 g_m + C_4 C_5 R_1 R_4 + C_4 C_5 R_4 R_5}} + 2 C_4 C_5 R_1 R_4 \sqrt{\frac{R_1 g_m}{C_4 C_5 R_1 R_4 R_5 g_m + C_4 C_5 R_1 R_4 + C_4 C_5 R_4 R_5} + \frac{1}{C_4 C_5 R_1 R_4 R_5 g_m + C_4 C_5 R_1 R_4 + C_4 C_5 R_4 R_5}} + 2 C_4 C_5 R_4 R_5 \sqrt{\frac{R_1 g_m}{C_4 C_5 R_1 R_4 R_5 g_m + C_4 C_5 R_1 R_4 + C_4 C_5 R_4 R_5} + \frac{1}{C_4 C_5 R_1 R_4 R_5 g_m + C_4 C_5 R_1 R_4 + C_4 C_5 R_4 R_5}}}{2 C_4 R_1 R_4 g_m + 2 C_4 R_4 + 2 C_5 R_1 R_4 g_m + 2 C_5 R_1 R_5 g_m + 2 C_5 R_1 + C_5 R_4 + 2 C_5 R_5} \\ \text{wo: } & \sqrt{\frac{R_1 g_m + 1}{C_4 C_5 R_1 R_4 R_5 g_m + C_4 C_5 R_1 R_4 + C_4 C_5 R_4 R_5}} \\ \text{bandwidth: } & \frac{\sqrt{\frac{R_1 g_m + 1}{C_4 C_5 R_1 R_4 R_5 g_m + C_4 C_5 R_1 R_4 + C_4 C_5 R_4 R_5}} (2 C_4 R_1 R_4 g_m + 2 C_4 R_4 + 2 C_5 R_1 R_4 g_m + 2 C_5 R_1 R_5 g_m + 2 C_5 R_1 + C_5 R_4 + 2 C_5 R_5)}{2 C_4 C_5 R_1 R_4 R_5 g_m \sqrt{\frac{R_1 g_m}{C_4 C_5 R_1 R_4 R_5 g_m + C_4 C_5 R_1 R_4 + C_4 C_5 R_4 R_5} + \frac{1}{C_4 C_5 R_1 R_4 R_5 g_m + C_4 C_5 R_1 R_4 + C_4 C_5 R_4 R_5}} + 2 C_4 C_5 R_1 R_4 \sqrt{\frac{R_1 g_m}{C_4 C_5 R_1 R_4 R_5 g_m + C_4 C_5 R_1 R_4 + C_4 C_5 R_4 R_5} + \frac{1}{C_4 C_5 R_1 R_4 R_5 g_m + C_4 C_5 R_1 R_4 + C_4 C_5 R_4 R_5}} + 2 C_4 C_5 R_4 R_5 \sqrt{\frac{R_1 g_m}{C_4 C_5 R_1 R_4 R_5 g_m + C_4 C_5 R_1 R_4 + C_4 C_5 R_4 R_5} + \frac{1}{C_4 C_5 R_1 R_4 R_5 g_m + C_4 C_5 R_1 R_4 + C_4 C_5 R_4 R_5}}} \\ \text{K-LP: } & \frac{R_1 R_4 g_m}{2 R_1 g_m + 2} \\ \text{K-HP: } & 0 \\ \text{K-BP: } & \frac{C_5 R_1 R_4 R_5 g_m - C_5 R_1 R_4}{2 C_4 R_1 R_4 g_m + 2 C_4 R_4 + 2 C_5 R_1 R_4 g_m + 2 C_5 R_1 R_5 g_m + 2 C_5 R_1 + C_5 R_4 + 2 C_5 R_5} \\ \text{QZ: } & 0 \\ \text{Wz: } & \text{None} \end{aligned}$$

8.5 INVALID-NUMER-5 $Z(s) = \left(L_1 s, \infty, \infty, R_4, \frac{1}{C_5 s}, \infty \right)$

$$H(s) = \frac{-C_5 L_1 R_4 s^2 + L_1 R_4 g_m s}{s^2 (2 C_5 L_1 R_4 g_m + 2 C_5 L_1) + s (C_5 R_4 + 2 L_1 g_m) + 2}$$

Parameters:

$$\begin{aligned} \text{Q: } & \frac{2 C_5 L_1 R_4 g_m \sqrt{\frac{1}{C_5 L_1 R_4 g_m + C_5 L_1}} + 2 C_5 L_1 \sqrt{\frac{1}{C_5 L_1 R_4 g_m + C_5 L_1}}}{C_5 R_4 + 2 L_1 g_m} \\ \text{wo: } & \sqrt{\frac{1}{C_5 L_1 R_4 g_m + C_5 L_1}} \\ \text{bandwidth: } & \frac{(C_5 R_4 + 2 L_1 g_m) \sqrt{\frac{1}{C_5 L_1 R_4 g_m + C_5 L_1}}}{2 C_5 L_1 R_4 g_m \sqrt{\frac{1}{C_5 L_1 R_4 g_m + C_5 L_1}} + 2 C_5 L_1 \sqrt{\frac{1}{C_5 L_1 R_4 g_m + C_5 L_1}}} \\ \text{K-LP: } & 0 \\ \text{K-HP: } & -\frac{R_4}{2 R_4 g_m + 2} \\ \text{K-BP: } & \frac{L_1 R_4 g_m}{C_5 R_4 + 2 L_1 g_m} \\ \text{QZ: } & -\frac{C_5 \sqrt{\frac{1}{C_5 L_1 R_4 g_m + C_5 L_1}}}{g_m} \\ \text{Wz: } & \text{None} \end{aligned}$$

8.6 INVALID-NUMER-6 $Z(s) = \left(L_1 s, \infty, \infty, R_4, \frac{R_5}{C_5 R_5 s + 1}, \infty \right)$

$$H(s) = \frac{-C_5 L_1 R_4 R_5 s^2 + s (L_1 R_4 R_5 g_m - L_1 R_4)}{R_4 + 2 R_5 + s^2 (2 C_5 L_1 R_4 R_5 g_m + 2 C_5 L_1 R_5) + s (C_5 R_4 R_5 + 2 L_1 R_4 g_m + 2 L_1 R_5 g_m + 2 L_1)}$$

Parameters:

$$\begin{aligned} \text{Q: } & \frac{\sqrt{2} C_5 L_1 R_4 R_5 g_m \sqrt{\frac{R_4}{C_5 L_1 R_4 R_5 g_m + C_5 L_1 R_5} + \frac{2 R_5}{C_5 L_1 R_4 R_5 g_m + C_5 L_1 R_5}} + \sqrt{2} C_5 L_1 R_5 \sqrt{\frac{R_4}{C_5 L_1 R_4 R_5 g_m + C_5 L_1 R_5} + \frac{2 R_5}{C_5 L_1 R_4 R_5 g_m + C_5 L_1 R_5}}}{C_5 R_4 R_5 + 2 L_1 R_4 g_m + 2 L_1 R_5 g_m + 2 L_1} \\ \text{wo: } & \sqrt{\frac{R_4 + 2 R_5}{2 C_5 L_1 R_4 R_5 g_m + 2 C_5 L_1 R_5}} \\ \text{bandwidth: } & \frac{\sqrt{\frac{R_4 + 2 R_5}{2 C_5 L_1 R_4 R_5 g_m + 2 C_5 L_1 R_5}} (C_5 R_4 R_5 + 2 L_1 R_4 g_m + 2 L_1 R_5 g_m + 2 L_1)}{\sqrt{2} C_5 L_1 R_4 R_5 g_m \sqrt{\frac{R_4}{C_5 L_1 R_4 R_5 g_m + C_5 L_1 R_5} + \frac{2 R_5}{C_5 L_1 R_4 R_5 g_m + C_5 L_1 R_5}} + \sqrt{2} C_5 L_1 R_5 \sqrt{\frac{R_4}{C_5 L_1 R_4 R_5 g_m + C_5 L_1 R_5} + \frac{2 R_5}{C_5 L_1 R_4 R_5 g_m + C_5 L_1 R_5}}} \\ \text{K-LP: } & 0 \\ \text{K-HP: } & -\frac{R_4}{2 R_4 g_m + 2} \\ \text{K-BP: } & \frac{L_1 R_4 R_5 g_m \sqrt{\frac{R_4}{C_5 L_1 R_4 R_5 g_m + C_5 L_1 R_5} + \frac{2 R_5}{C_5 L_1 R_4 R_5 g_m + C_5 L_1 R_5}} - L_1 R_4 \sqrt{\frac{R_4}{C_5 L_1 R_4 R_5 g_m + C_5 L_1 R_5} + \frac{2 R_5}{C_5 L_1 R_4 R_5 g_m + C_5 L_1 R_5}}}{C_5 R_4 R_5 \sqrt{\frac{R_4}{C_5 L_1 R_4 R_5 g_m + C_5 L_1 R_5} + \frac{2 R_5}{C_5 L_1 R_4 R_5 g_m + C_5 L_1 R_5}} + 2 L_1 R_4 g_m \sqrt{\frac{R_4}{C_5 L_1 R_4 R_5 g_m + C_5 L_1 R_5} + \frac{2 R_5}{C_5 L_1 R_4 R_5 g_m + C_5 L_1 R_5}} + 2 L_1 R_5 g_m \sqrt{\frac{R_4}{C_5 L_1 R_4 R_5 g_m + C_5 L_1 R_5} + \frac{2 R_5}{C_5 L_1 R_4 R_5 g_m + C_5 L_1 R_5}} + 2 L_1 \sqrt{\frac{R_4}{C_5 L_1 R_4 R_5 g_m + C_5 L_1 R_5} + \frac{2 R_5}{C_5 L_1 R_4 R_5 g_m + C_5 L_1 R_5}}} \\ \text{QZ: } & -\frac{\sqrt{2} C_5 R_5 \sqrt{\frac{R_4}{C_5 L_1 R_4 R_5 g_m + C_5 L_1 R_5} + \frac{2 R_5}{C_5 L_1 R_4 R_5 g_m + C_5 L_1 R_5}}}{2 R_5 g_m - 2} \\ \text{Wz: } & \text{None} \end{aligned}$$

8.7 INVALID-NUMER-7 $Z(s) = \left(L_1 s, \infty, \infty, R_4, R_5 + \frac{1}{C_5 s}, \infty \right)$

$$H(s) = \frac{L_1 R_4 g_m s + s^2 (C_5 L_1 R_4 R_5 g_m - C_5 L_1 R_4)}{s^2 (2C_5 L_1 R_4 g_m + 2C_5 L_1 R_5 g_m + 2C_5 L_1) + s (C_5 R_4 + 2C_5 R_5 + 2L_1 g_m) + 2}$$

Parameters:

$$\begin{aligned} \text{Q: } & \frac{2C_5 L_1 R_4 g_m \sqrt{\frac{1}{C_5 L_1 R_4 g_m + C_5 L_1 R_5 g_m + C_5 L_1}} + 2C_5 L_1 R_5 g_m \sqrt{\frac{1}{C_5 L_1 R_4 g_m + C_5 L_1 R_5 g_m + C_5 L_1}} + 2C_5 L_1 \sqrt{\frac{1}{C_5 L_1 R_4 g_m + C_5 L_1 R_5 g_m + C_5 L_1}}}{C_5 R_4 + 2C_5 R_5 + 2L_1 g_m} \\ \text{wo: } & \sqrt{\frac{1}{C_5 L_1 R_4 g_m + C_5 L_1 R_5 g_m + C_5 L_1}} \\ \text{bandwidth: } & \frac{(C_5 R_4 + 2C_5 R_5 + 2L_1 g_m) \sqrt{\frac{1}{C_5 L_1 R_4 g_m + C_5 L_1 R_5 g_m + C_5 L_1}}}{2C_5 L_1 R_4 g_m \sqrt{\frac{1}{C_5 L_1 R_4 g_m + C_5 L_1 R_5 g_m + C_5 L_1}} + 2C_5 L_1 R_5 g_m \sqrt{\frac{1}{C_5 L_1 R_4 g_m + C_5 L_1 R_5 g_m + C_5 L_1}} + 2C_5 L_1 \sqrt{\frac{1}{C_5 L_1 R_4 g_m + C_5 L_1 R_5 g_m + C_5 L_1}}} \\ \text{K-LP: } & 0 \\ \text{K-HP: } & \frac{R_4 R_5 g_m - R_4}{2R_4 g_m + 2R_5 g_m + 2} \\ \text{K-BP: } & \frac{L_1 R_4 g_m}{C_5 R_4 + 2C_5 R_5 + 2L_1 g_m} \\ \text{QZ: } & \frac{C_5 R_5 g_m \sqrt{\frac{1}{C_5 L_1 R_4 g_m + C_5 L_1 R_5 g_m + C_5 L_1}} - C_5 \sqrt{\frac{1}{C_5 L_1 R_4 g_m + C_5 L_1 R_5 g_m + C_5 L_1}}}{g_m} \\ \text{Wz: } & \text{None} \end{aligned}$$

8.8 INVALID-NUMER-8 $Z(s) = \left(L_1 s, \infty, \infty, \frac{1}{C_4 s}, \frac{1}{C_5 s}, \infty \right)$

$$H(s) = \frac{-C_5 L_1 s + L_1 g_m}{2C_4 C_5 L_1 s^2 + 2C_4 + C_5 + s (2C_4 L_1 g_m + 2C_5 L_1 g_m)}$$

Parameters:

$$\begin{aligned} \text{Q: } & \frac{\sqrt{2} C_4 C_5 \sqrt{\frac{2}{C_5 L_1} + \frac{1}{C_4 L_1}}}{2C_4 g_m + 2C_5 g_m} \\ \text{wo: } & \frac{\sqrt{2} \sqrt{\frac{2C_4 + C_5}{C_4 C_5 L_1}}}{2} \\ \text{bandwidth: } & \frac{\sqrt{\frac{2C_4 + C_5}{C_4 C_5 L_1}} (2C_4 g_m + 2C_5 g_m)}{2C_4 C_5 \sqrt{\frac{2}{C_5 L_1} + \frac{1}{C_4 L_1}}} \\ \text{K-LP: } & \frac{L_1 g_m}{2C_4 + C_5} \\ \text{K-HP: } & 0 \\ \text{K-BP: } & -\frac{C_5}{2C_4 g_m + 2C_5 g_m} \\ \text{QZ: } & 0 \\ \text{Wz: } & \text{None} \end{aligned}$$

8.9 INVALID-NUMER-9 $Z(s) = \left(L_1 s, \infty, \infty, \frac{1}{C_4 s}, R_5 + \frac{1}{C_5 s}, \infty \right)$

$$H(s) = \frac{L_1 g_m + s (C_5 L_1 R_5 g_m - C_5 L_1)}{2C_4 + C_5 + s^2 (2C_4 C_5 L_1 R_5 g_m + 2C_4 C_5 L_1) + s (2C_4 C_5 R_5 + 2C_4 L_1 g_m + 2C_5 L_1 g_m)}$$

Parameters:

$$\begin{aligned} \text{Q: } & \frac{\sqrt{2} C_4 C_5 L_1 R_5 g_m \sqrt{\frac{2C_4}{C_4 C_5 L_1 R_5 g_m + C_4 C_5 L_1} + \frac{C_5}{C_4 C_5 L_1 R_5 g_m + C_4 C_5 L_1}} + \sqrt{2} C_4 C_5 L_1 \sqrt{\frac{2C_4}{C_4 C_5 L_1 R_5 g_m + C_4 C_5 L_1} + \frac{C_5}{C_4 C_5 L_1 R_5 g_m + C_4 C_5 L_1}}}{2C_4 C_5 R_5 + 2C_4 L_1 g_m + 2C_5 L_1 g_m} \\ \text{wo: } & \sqrt{\frac{2C_4 + C_5}{2C_4 C_5 L_1 R_5 g_m + 2C_4 C_5 L_1}} \\ \text{bandwidth: } & \frac{\sqrt{\frac{2C_4 + C_5}{2C_4 C_5 L_1 R_5 g_m + 2C_4 C_5 L_1}} (2C_4 C_5 R_5 + 2C_4 L_1 g_m + 2C_5 L_1 g_m)}{\sqrt{2} C_4 C_5 L_1 R_5 g_m \sqrt{\frac{2C_4}{C_4 C_5 L_1 R_5 g_m + C_4 C_5 L_1} + \frac{C_5}{C_4 C_5 L_1 R_5 g_m + C_4 C_5 L_1}} + \sqrt{2} C_4 C_5 L_1 \sqrt{\frac{2C_4}{C_4 C_5 L_1 R_5 g_m + C_4 C_5 L_1} + \frac{C_5}{C_4 C_5 L_1 R_5 g_m + C_4 C_5 L_1}}} \\ \text{K-LP: } & \frac{L_1 g_m}{2C_4 + C_5} \\ \text{K-HP: } & 0 \\ \text{K-BP: } & \frac{C_5 L_1 R_5 g_m \sqrt{\frac{2}{C_5 L_1 R_5 g_m + C_5 L_1} + \frac{1}{C_4 L_1 R_5 g_m + C_4 L_1}} - C_5 L_1 \sqrt{\frac{2}{C_5 L_1 R_5 g_m + C_5 L_1} + \frac{1}{C_4 L_1 R_5 g_m + C_4 L_1}}}{2C_4 C_5 R_5 \sqrt{\frac{2C_4}{C_4 C_5 L_1 R_5 g_m + C_4 C_5 L_1} + \frac{C_5}{C_4 C_5 L_1 R_5 g_m + C_4 C_5 L_1}} + 2C_4 L_1 g_m \sqrt{\frac{2C_4}{C_4 C_5 L_1 R_5 g_m + C_4 C_5 L_1} + \frac{C_5}{C_4 C_5 L_1 R_5 g_m + C_4 C_5 L_1}} + 2C_5 L_1 g_m \sqrt{\frac{2C_4}{C_4 C_5 L_1 R_5 g_m + C_4 C_5 L_1} + \frac{C_5}{C_4 C_5 L_1 R_5 g_m + C_4 C_5 L_1}}} \\ \text{QZ: } & 0 \\ \text{Wz: } & \text{None} \end{aligned}$$

8.10 INVALID-NUMER-10 $Z(s) = \left(L_1 s, \infty, \infty, R_4 + \frac{1}{C_4 s}, R_5, \infty \right)$

$$H(s) = \frac{s^2 (C_4 L_1 R_4 R_5 g_m - C_4 L_1 R_4) + s (L_1 R_5 g_m - L_1)}{s^2 (2C_4 L_1 R_4 g_m + 2C_4 L_1 R_5 g_m + 2C_4 L_1) + s (C_4 R_4 + 2C_4 R_5 + 2L_1 g_m) + 1}$$

Parameters:

$$\begin{aligned} \text{Q: } & \frac{\sqrt{2}C_4 L_1 R_4 g_m \sqrt{\frac{1}{C_4 L_1 R_4 g_m + C_4 L_1 R_5 g_m + C_4 L_1}} + \sqrt{2}C_4 L_1 R_5 g_m \sqrt{\frac{1}{C_4 L_1 R_4 g_m + C_4 L_1 R_5 g_m + C_4 L_1}} + \sqrt{2}C_4 L_1 \sqrt{\frac{1}{C_4 L_1 R_4 g_m + C_4 L_1 R_5 g_m + C_4 L_1}}}{C_4 R_4 + 2C_4 R_5 + 2L_1 g_m} \\ \text{wo: } & \sqrt{\frac{1}{2C_4 L_1 R_4 g_m + 2C_4 L_1 R_5 g_m + 2C_4 L_1}} \\ \text{bandwidth: } & \frac{(C_4 R_4 + 2C_4 R_5 + 2L_1 g_m) \sqrt{\frac{1}{2C_4 L_1 R_4 g_m + 2C_4 L_1 R_5 g_m + 2C_4 L_1}}}{\sqrt{2}C_4 L_1 R_4 g_m \sqrt{\frac{1}{C_4 L_1 R_4 g_m + C_4 L_1 R_5 g_m + C_4 L_1}} + \sqrt{2}C_4 L_1 R_5 g_m \sqrt{\frac{1}{C_4 L_1 R_4 g_m + C_4 L_1 R_5 g_m + C_4 L_1}} + \sqrt{2}C_4 L_1 \sqrt{\frac{1}{C_4 L_1 R_4 g_m + C_4 L_1 R_5 g_m + C_4 L_1}}} \\ \text{K-LP: } & 0 \\ \text{K-HP: } & \frac{R_4 R_5 g_m - R_4}{2R_4 g_m + 2R_5 g_m + 2} \\ \text{K-BP: } & \frac{L_1 R_5 g_m - L_1}{C_4 R_4 + 2C_4 R_5 + 2L_1 g_m} \\ \text{Qz: } & \frac{\sqrt{2}C_4 R_4 \sqrt{\frac{1}{C_4 L_1 R_4 g_m + C_4 L_1 R_5 g_m + C_4 L_1}}}{2} \\ \text{Wz: } & \text{None} \end{aligned}$$

8.11 INVALID-NUMER-11 $Z(s) = \left(\frac{1}{C_1 s}, \infty, \infty, R_4, \frac{1}{C_5 s}, \infty \right)$

$$H(s) = \frac{-C_5 R_4 s + R_4 g_m}{C_1 C_5 R_4 s^2 + 2g_m + s(2C_1 + 2C_5 R_4 g_m + 2C_5)}$$

Parameters:

$$\begin{aligned} \text{Q: } & \frac{\sqrt{2}C_1 C_5 R_4 \sqrt{\frac{g_m}{C_1 C_5 R_4}}}{2C_1 + 2C_5 R_4 g_m + 2C_5} \\ \text{wo: } & \sqrt{2} \sqrt{\frac{g_m}{C_1 C_5 R_4}} \\ \text{bandwidth: } & \frac{2C_1 + 2C_5 R_4 g_m + 2C_5}{C_1 C_5 R_4} \\ \text{K-LP: } & \frac{R_4}{2} \\ \text{K-HP: } & 0 \\ \text{K-BP: } & -\frac{C_5 R_4}{2C_1 + 2C_5 R_4 g_m + 2C_5} \\ \text{Qz: } & 0 \\ \text{Wz: } & \text{None} \end{aligned}$$

8.12 INVALID-NUMER-12 $Z(s) = \left(\frac{1}{C_1 s}, \infty, \infty, R_4, \frac{R_5}{C_5 R_5 s + 1}, \infty \right)$

$$H(s) = \frac{-C_5 R_4 R_5 s + R_4 R_5 g_m - R_4}{C_1 C_5 R_4 R_5 s^2 + 2R_4 g_m + 2R_5 g_m + s(C_1 R_4 + 2C_1 R_5 + 2C_5 R_4 R_5 g_m + 2C_5 R_5) + 2}$$

Parameters:

$$\begin{aligned} \text{Q: } & \frac{\sqrt{2}C_1 C_5 R_4 R_5 \sqrt{\frac{g_m}{C_1 C_5 R_5} + \frac{g_m}{C_1 C_5 R_4} + \frac{1}{C_1 C_5 R_4 R_5}}}{C_1 R_4 + 2C_1 R_5 + 2C_5 R_4 R_5 g_m + 2C_5 R_5} \\ \text{wo: } & \sqrt{\frac{2R_4 g_m + 2R_5 g_m + 2}{C_1 C_5 R_4 R_5}} \\ \text{bandwidth: } & \frac{\sqrt{2} \sqrt{\frac{2R_4 g_m + 2R_5 g_m + 2}{C_1 C_5 R_4 R_5}} (C_1 R_4 + 2C_1 R_5 + 2C_5 R_4 R_5 g_m + 2C_5 R_5)}{2C_1 C_5 R_4 R_5 \sqrt{\frac{g_m}{C_1 C_5 R_5} + \frac{g_m}{C_1 C_5 R_4} + \frac{1}{C_1 C_5 R_4 R_5}}} \\ \text{K-LP: } & \frac{R_4 R_5 g_m - R_4}{2R_4 g_m + 2R_5 g_m + 2} \\ \text{K-HP: } & 0 \\ \text{K-BP: } & -\frac{C_5 R_4 R_5}{C_1 R_4 + 2C_1 R_5 + 2C_5 R_4 R_5 g_m + 2C_5 R_5} \\ \text{Qz: } & 0 \\ \text{Wz: } & \text{None} \end{aligned}$$

8.13 INVALID-NUMER-13 $Z(s) = \left(\frac{1}{C_1 s}, \infty, \infty, R_4, R_5 + \frac{1}{C_5 s}, \infty \right)$

$$H(s) = \frac{R_4 g_m + s (C_5 R_4 R_5 g_m - C_5 R_4)}{2g_m + s^2 (C_1 C_5 R_4 + 2C_1 C_5 R_5) + s (2C_1 + 2C_5 R_4 g_m + 2C_5 R_5 g_m + 2C_5)}$$

Parameters:

Q: $\frac{\sqrt{2}C_1 C_5 R_4 \sqrt{\frac{g_m}{C_1 C_5 R_4 + 2C_1 C_5 R_5}} + 2\sqrt{2}C_1 C_5 R_5 \sqrt{\frac{g_m}{C_1 C_5 R_4 + 2C_1 C_5 R_5}}}{2C_1 + 2C_5 R_4 g_m + 2C_5 R_5 g_m + 2C_5}$

wo: $\sqrt{2} \sqrt{\frac{g_m}{C_1 C_5 R_4 + 2C_1 C_5 R_5}}$

bandwidth: $\frac{\sqrt{2} \sqrt{\frac{g_m}{C_1 C_5 R_4 + 2C_1 C_5 R_5}} (2C_1 + 2C_5 R_4 g_m + 2C_5 R_5 g_m + 2C_5)}{\sqrt{2}C_1 C_5 R_4 \sqrt{\frac{g_m}{C_1 C_5 R_4 + 2C_1 C_5 R_5}} + 2\sqrt{2}C_1 C_5 R_5 \sqrt{\frac{g_m}{C_1 C_5 R_4 + 2C_1 C_5 R_5}}}$

K-LP: $\frac{R_4}{2}$

K-HP: 0

K-BP: $\frac{C_5 R_4 R_5 g_m - C_5 R_4}{2C_1 + 2C_5 R_4 g_m + 2C_5 R_5 g_m + 2C_5}$

Qz: 0

Wz: None

8.14 INVALID-NUMER-14 $Z(s) = \left(\frac{1}{C_1 s}, \infty, \infty, \frac{1}{C_4 s}, \frac{R_5}{C_5 R_5 s + 1}, \infty \right)$

$$H(s) = \frac{-C_5 R_5 s + R_5 g_m - 1}{2g_m + s^2 (2C_1 C_4 R_5 + C_1 C_5 R_5 + 2C_4 C_5 R_5) + s (C_1 + 2C_4 R_5 g_m + 2C_4 + 2C_5 R_5 g_m)}$$

Parameters:

Q: $\frac{2\sqrt{2}C_1 C_4 R_5 \sqrt{\frac{g_m}{2C_1 C_4 R_5 + C_1 C_5 R_5 + 2C_4 C_5 R_5}} + \sqrt{2}C_1 C_5 R_5 \sqrt{\frac{g_m}{2C_1 C_4 R_5 + C_1 C_5 R_5 + 2C_4 C_5 R_5}} + 2\sqrt{2}C_4 C_5 R_5 \sqrt{\frac{g_m}{2C_1 C_4 R_5 + C_1 C_5 R_5 + 2C_4 C_5 R_5}}}{C_1 + 2C_4 R_5 g_m + 2C_4 + 2C_5 R_5 g_m}$

wo: $\sqrt{2} \sqrt{\frac{g_m}{2C_1 C_4 R_5 + C_1 C_5 R_5 + 2C_4 C_5 R_5}}$

bandwidth: $\frac{\sqrt{2} \sqrt{\frac{g_m}{2C_1 C_4 R_5 + C_1 C_5 R_5 + 2C_4 C_5 R_5}} (C_1 + 2C_4 R_5 g_m + 2C_4 + 2C_5 R_5 g_m)}{2\sqrt{2}C_1 C_4 R_5 \sqrt{\frac{g_m}{2C_1 C_4 R_5 + C_1 C_5 R_5 + 2C_4 C_5 R_5}} + \sqrt{2}C_1 C_5 R_5 \sqrt{\frac{g_m}{2C_1 C_4 R_5 + C_1 C_5 R_5 + 2C_4 C_5 R_5}} + 2\sqrt{2}C_4 C_5 R_5 \sqrt{\frac{g_m}{2C_1 C_4 R_5 + C_1 C_5 R_5 + 2C_4 C_5 R_5}}}$

K-LP: $\frac{R_5 g_m - 1}{2g_m}$

K-HP: 0

K-BP: $-\frac{C_5 R_5}{C_1 + 2C_4 R_5 g_m + 2C_4 + 2C_5 R_5 g_m}$

Qz: 0

Wz: None

8.15 INVALID-NUMER-15 $Z(s) = \left(\frac{1}{C_1 s}, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, \frac{1}{C_5 s}, \infty \right)$

$$H(s) = \frac{-C_5 R_4 s + R_4 g_m}{2g_m + s^2 (2C_1 C_4 R_4 + C_1 C_5 R_4 + 2C_4 C_5 R_4) + s (2C_1 + 2C_4 R_4 g_m + 2C_5 R_4 g_m + 2C_5)}$$

Parameters:

Q: $\frac{2\sqrt{2}C_1 C_4 R_4 \sqrt{\frac{g_m}{2C_1 C_4 R_4 + C_1 C_5 R_4 + 2C_4 C_5 R_4}} + \sqrt{2}C_1 C_5 R_4 \sqrt{\frac{g_m}{2C_1 C_4 R_4 + C_1 C_5 R_4 + 2C_4 C_5 R_4}} + 2\sqrt{2}C_4 C_5 R_4 \sqrt{\frac{g_m}{2C_1 C_4 R_4 + C_1 C_5 R_4 + 2C_4 C_5 R_4}}}{2C_1 + 2C_4 R_4 g_m + 2C_5 R_4 g_m + 2C_5}$

wo: $\sqrt{2} \sqrt{\frac{g_m}{2C_1 C_4 R_4 + C_1 C_5 R_4 + 2C_4 C_5 R_4}}$

bandwidth: $\frac{\sqrt{2} \sqrt{\frac{g_m}{2C_1 C_4 R_4 + C_1 C_5 R_4 + 2C_4 C_5 R_4}} (2C_1 + 2C_4 R_4 g_m + 2C_5 R_4 g_m + 2C_5)}{2\sqrt{2}C_1 C_4 R_4 \sqrt{\frac{g_m}{2C_1 C_4 R_4 + C_1 C_5 R_4 + 2C_4 C_5 R_4}} + \sqrt{2}C_1 C_5 R_4 \sqrt{\frac{g_m}{2C_1 C_4 R_4 + C_1 C_5 R_4 + 2C_4 C_5 R_4}} + 2\sqrt{2}C_4 C_5 R_4 \sqrt{\frac{g_m}{2C_1 C_4 R_4 + C_1 C_5 R_4 + 2C_4 C_5 R_4}}}$

K-LP: $\frac{R_4}{2}$

K-HP: 0

K-BP: $-\frac{C_5 R_4}{2C_1 + 2C_4 R_4 g_m + 2C_5 R_4 g_m + 2C_5}$

Qz: 0

Wz: None

8.16 INVALID-NUMER-16 $Z(s) = \left(\frac{1}{C_1 s}, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, \frac{R_5}{C_5 R_5 s + 1}, \infty \right)$

$$H(s) = \frac{-C_5 R_4 R_5 s + R_4 R_5 g_m - R_4}{2R_4 g_m + 2R_5 g_m + s^2 (2C_1 C_4 R_4 R_5 + C_1 C_5 R_4 R_5 + 2C_4 C_5 R_4 R_5) + s (C_1 R_4 + 2C_1 R_5 + 2C_4 R_4 R_5 g_m + 2C_4 R_4 + 2C_5 R_4 R_5 g_m + 2C_5 R_5) + 2}$$

Parameters:

$$\text{Q: } \frac{2\sqrt{2}C_1 C_4 R_4 R_5 \sqrt{\frac{R_4 g_m}{2C_1 C_4 R_4 R_5 + C_1 C_5 R_4 R_5 + 2C_4 C_5 R_4 R_5} + \frac{R_5 g_m}{2C_1 C_4 R_4 R_5 + C_1 C_5 R_4 R_5 + 2C_4 C_5 R_4 R_5} + \frac{1}{2C_1 C_4 R_4 R_5 + C_1 C_5 R_4 R_5 + 2C_4 C_5 R_4 R_5}} + \sqrt{2}C_1 C_5 R_4 R_5 \sqrt{\frac{R_4 g_m}{2C_1 C_4 R_4 R_5 + C_1 C_5 R_4 R_5 + 2C_4 C_5 R_4 R_5} + \frac{R_5 g_m}{2C_1 C_4 R_4 R_5 + C_1 C_5 R_4 R_5 + 2C_4 C_5 R_4 R_5} + \frac{1}{2C_1 C_4 R_4 R_5 + C_1 C_5 R_4 R_5 + 2C_4 C_5 R_4 R_5}} + 2\sqrt{2}C_4 C_5 R_4 R_5 \sqrt{\frac{R_4 g_m}{2C_1 C_4 R_4 R_5 + C_1 C_5 R_4 R_5 + 2C_4 C_5 R_4 R_5} + \frac{R_5 g_m}{2C_1 C_4 R_4 R_5 + C_1 C_5 R_4 R_5 + 2C_4 C_5 R_4 R_5} + \frac{1}{2C_1 C_4 R_4 R_5 + C_1 C_5 R_4 R_5 + 2C_4 C_5 R_4 R_5}}}{C_1 R_4 + 2C_1 R_5 + 2C_4 R_4 R_5 g_m + 2C_4 R_4 + 2C_5 R_4 R_5 g_m + 2C_5 R_5}$$

$$\text{wo: } \sqrt{\frac{2R_4 g_m + 2R_5 g_m + 2}{2C_1 C_4 R_4 R_5 + C_1 C_5 R_4 R_5 + 2C_4 C_5 R_4 R_5}}$$

$$\text{bandwidth: } \frac{2\sqrt{2}C_1 C_4 R_4 R_5 \sqrt{\frac{R_4 g_m}{2C_1 C_4 R_4 R_5 + C_1 C_5 R_4 R_5 + 2C_4 C_5 R_4 R_5} + \frac{R_5 g_m}{2C_1 C_4 R_4 R_5 + C_1 C_5 R_4 R_5 + 2C_4 C_5 R_4 R_5} + \frac{1}{2C_1 C_4 R_4 R_5 + C_1 C_5 R_4 R_5 + 2C_4 C_5 R_4 R_5}} + \sqrt{2}C_1 C_5 R_4 R_5 \sqrt{\frac{R_4 g_m}{2C_1 C_4 R_4 R_5 + C_1 C_5 R_4 R_5 + 2C_4 C_5 R_4 R_5} + \frac{R_5 g_m}{2C_1 C_4 R_4 R_5 + C_1 C_5 R_4 R_5 + 2C_4 C_5 R_4 R_5} + \frac{1}{2C_1 C_4 R_4 R_5 + C_1 C_5 R_4 R_5 + 2C_4 C_5 R_4 R_5}} + 2\sqrt{2}C_4 C_5 R_4 R_5 \sqrt{\frac{R_4 g_m}{2C_1 C_4 R_4 R_5 + C_1 C_5 R_4 R_5 + 2C_4 C_5 R_4 R_5} + \frac{R_5 g_m}{2C_1 C_4 R_4 R_5 + C_1 C_5 R_4 R_5 + 2C_4 C_5 R_4 R_5} + \frac{1}{2C_1 C_4 R_4 R_5 + C_1 C_5 R_4 R_5 + 2C_4 C_5 R_4 R_5}}}{\sqrt{\frac{2R_4 g_m + 2R_5 g_m + 2}{2C_1 C_4 R_4 R_5 + C_1 C_5 R_4 R_5 + 2C_4 C_5 R_4 R_5}} (C_1 R_4 + 2C_1 R_5 + 2C_4 R_4 R_5 g_m + 2C_4 R_4 + 2C_5 R_4 R_5 g_m + 2C_5 R_5)}$$

$$\text{K-LP: } \frac{R_4 R_5 g_m - R_4}{2R_4 g_m + 2R_5 g_m + 2}$$

$$\text{K-HP: } 0$$

$$\text{K-BP: } -\frac{C_1 R_4 \sqrt{\frac{R_4 g_m}{2C_1 C_4 R_4 R_5 + C_1 C_5 R_4 R_5 + 2C_4 C_5 R_4 R_5} + \frac{R_5 g_m}{2C_1 C_4 R_4 R_5 + C_1 C_5 R_4 R_5 + 2C_4 C_5 R_4 R_5} + \frac{1}{2C_1 C_4 R_4 R_5 + C_1 C_5 R_4 R_5 + 2C_4 C_5 R_4 R_5}} + 2C_1 R_5 \sqrt{\frac{R_4 g_m}{2C_1 C_4 R_4 R_5 + C_1 C_5 R_4 R_5 + 2C_4 C_5 R_4 R_5} + \frac{R_5 g_m}{2C_1 C_4 R_4 R_5 + C_1 C_5 R_4 R_5 + 2C_4 C_5 R_4 R_5} + \frac{1}{2C_1 C_4 R_4 R_5 + C_1 C_5 R_4 R_5 + 2C_4 C_5 R_4 R_5}} + 2C_4 R_4 R_5 g_m \sqrt{\frac{R_4 g_m}{2C_1 C_4 R_4 R_5 + C_1 C_5 R_4 R_5 + 2C_4 C_5 R_4 R_5} + \frac{R_5 g_m}{2C_1 C_4 R_4 R_5 + C_1 C_5 R_4 R_5 + 2C_4 C_5 R_4 R_5} + \frac{1}{2C_1 C_4 R_4 R_5 + C_1 C_5 R_4 R_5 + 2C_4 C_5 R_4 R_5}}}{C_1 R_4 + 2C_1 R_5 + 2C_4 R_4 R_5 g_m + 2C_4 R_4 + 2C_5 R_4 R_5 g_m + 2C_5 R_5}$$

$$\text{QZ: } 0$$

$$\text{Wz: None}$$

8.17 INVALID-NUMER-17 $Z(s) = \left(\frac{1}{C_1 s}, \infty, \infty, R_4 + \frac{1}{C_4 s}, R_5, \infty \right)$

$$H(s) = \frac{R_5 g_m + s (C_4 R_4 R_5 g_m - C_4 R_4) - 1}{2g_m + s^2 (C_1 C_4 R_4 + 2C_1 C_4 R_5) + s (C_1 + 2C_4 R_4 g_m + 2C_4 R_5 g_m + 2C_4)}$$

Parameters:

$$\text{Q: } \frac{\sqrt{2}C_1 C_4 R_4 \sqrt{\frac{g_m}{C_1 C_4 R_4 + 2C_1 C_4 R_5} + 2\sqrt{2}C_1 C_4 R_5 \sqrt{\frac{g_m}{C_1 C_4 R_4 + 2C_1 C_4 R_5}}} + C_1 + 2C_4 R_4 g_m + 2C_4 R_5 g_m + 2C_4}{C_1 C_4 R_4 + 2C_1 C_4 R_5}$$

$$\text{wo: } \sqrt{2} \sqrt{\frac{g_m}{C_1 C_4 R_4 + 2C_1 C_4 R_5}}$$

$$\text{bandwidth: } \frac{\sqrt{2} \sqrt{\frac{g_m}{C_1 C_4 R_4 + 2C_1 C_4 R_5}} (C_1 + 2C_4 R_4 g_m + 2C_4 R_5 g_m + 2C_4)}{\sqrt{2}C_1 C_4 R_4 \sqrt{\frac{g_m}{C_1 C_4 R_4 + 2C_1 C_4 R_5} + 2\sqrt{2}C_1 C_4 R_5 \sqrt{\frac{g_m}{C_1 C_4 R_4 + 2C_1 C_4 R_5}}}}$$

$$\text{K-LP: } \frac{R_5 g_m - 1}{2g_m}$$

$$\text{K-HP: } 0$$

$$\text{K-BP: } \frac{C_4 R_4 R_5 g_m - C_4 R_4}{C_1 + 2C_4 R_4 g_m + 2C_4 R_5 g_m + 2C_4}$$

$$\text{QZ: } 0$$

$$\text{Wz: None}$$

8.18 INVALID-NUMER-18 $Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, R_4, \frac{1}{C_5 s}, \infty \right)$

$$H(s) = \frac{-C_5 R_1 R_4 s + R_1 R_4 g_m}{C_1 C_5 R_1 R_4 s^2 + 2R_1 g_m + s (2C_1 R_1 + 2C_5 R_1 R_4 g_m + 2C_5 R_1 + C_5 R_4) + 2}$$

Parameters:

$$\text{Q: } \frac{\sqrt{2}C_1 C_5 R_1 R_4 \sqrt{\frac{g_m}{C_1 C_5 R_4} + \frac{1}{C_1 C_5 R_1 R_4}}}{2C_1 R_1 + 2C_5 R_1 R_4 g_m + 2C_5 R_1 + C_5 R_4}$$

$$\text{wo: } \sqrt{\frac{2R_1 g_m + 2}{C_1 C_5 R_1 R_4}}$$

$$\text{bandwidth: } \frac{\sqrt{2} \sqrt{\frac{2R_1 g_m + 2}{C_1 C_5 R_1 R_4}} (2C_1 R_1 + 2C_5 R_1 R_4 g_m + 2C_5 R_1 + C_5 R_4)}{2C_1 C_5 R_1 R_4 \sqrt{\frac{g_m}{C_1 C_5 R_4} + \frac{1}{C_1 C_5 R_1 R_4}}}$$

$$\text{K-LP: } \frac{R_1 R_4 g_m}{2R_1 g_m + 2}$$

$$\text{K-HP: } 0$$

$$\text{K-BP: } -\frac{C_5 R_1 R_4}{2C_1 R_1 + 2C_5 R_1 R_4 g_m + 2C_5 R_1 + C_5 R_4}$$

$$\text{QZ: } 0$$

$$\text{Wz: None}$$

8.19 INVALID-NUMER-19 $Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, R_4, \frac{R_5}{C_5 R_5 s + 1}, \infty \right)$

$$H(s) = \frac{-C_5 R_1 R_4 R_5 s + R_1 R_4 R_5 g_m - R_1 R_4}{C_1 C_5 R_1 R_4 R_5 s^2 + 2R_1 R_4 g_m + 2R_1 R_5 g_m + 2R_1 + R_4 + 2R_5 + s(C_1 R_1 R_4 + 2C_1 R_1 R_5 + 2C_5 R_1 R_4 R_5 g_m + 2C_5 R_1 R_5 + C_5 R_4 R_5)}$$

Parameters:

Q: $\frac{C_1 C_5 R_1 R_4 R_5 \sqrt{\frac{2g_m}{C_1 C_5 R_5} + \frac{2g_m}{C_1 C_5 R_4} + \frac{2}{C_1 C_5 R_4 R_5} + \frac{1}{C_1 C_5 R_1 R_5} + \frac{2}{C_1 C_5 R_1 R_4}}}{C_1 R_1 R_4 + 2C_1 R_1 R_5 + 2C_5 R_1 R_4 R_5 g_m + 2C_5 R_1 R_5 + C_5 R_4 R_5}$
wo: $\sqrt{\frac{2R_1 R_4 g_m + 2R_1 R_5 g_m + 2R_1 + R_4 + 2R_5}{C_1 C_5 R_1 R_4 R_5}}$
bandwidth: $\sqrt{\frac{\frac{2R_1 R_4 g_m + 2R_1 R_5 g_m + 2R_1 + R_4 + 2R_5}{C_1 C_5 R_1 R_4 R_5} (C_1 R_1 R_4 + 2C_1 R_1 R_5 + 2C_5 R_1 R_4 R_5 g_m + 2C_5 R_1 R_5 + C_5 R_4 R_5)}{C_1 C_5 R_1 R_4 R_5 \sqrt{\frac{2g_m}{C_1 C_5 R_5} + \frac{2g_m}{C_1 C_5 R_4} + \frac{2}{C_1 C_5 R_4 R_5} + \frac{1}{C_1 C_5 R_1 R_5} + \frac{2}{C_1 C_5 R_1 R_4}}}}$
K-LP: $\frac{R_1 R_4 R_5 g_m - R_1 R_4}{2R_1 R_4 g_m + 2R_1 R_5 g_m + 2R_1 + R_4 + 2R_5}$
K-HP: 0
K-BP: $-\frac{C_5 R_1 R_4 R_5}{C_1 R_1 R_4 + 2C_1 R_1 R_5 + 2C_5 R_1 R_4 R_5 g_m + 2C_5 R_1 R_5 + C_5 R_4 R_5}$
Qz: 0
Wz: None

8.20 INVALID-NUMER-20 $Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, R_4, R_5 + \frac{1}{C_5 s}, \infty \right)$

$$H(s) = \frac{R_1 R_4 g_m + s(C_5 R_1 R_4 R_5 g_m - C_5 R_1 R_4)}{2R_1 g_m + s^2(C_1 C_5 R_1 R_4 + 2C_1 C_5 R_1 R_5) + s(2C_1 R_1 + 2C_5 R_1 R_4 g_m + 2C_5 R_1 R_5 g_m + 2C_5 R_1 + C_5 R_4 + 2C_5 R_5) + 2}$$

Parameters:

Q: $\frac{\sqrt{2}C_1 C_5 R_1 R_4 \sqrt{\frac{R_1 g_m}{C_1 C_5 R_1 R_4 + 2C_1 C_5 R_1 R_5} + \frac{1}{C_1 C_5 R_1 R_4 + 2C_1 C_5 R_1 R_5}} + 2\sqrt{2}C_1 C_5 R_1 R_5 \sqrt{\frac{R_1 g_m}{C_1 C_5 R_1 R_4 + 2C_1 C_5 R_1 R_5} + \frac{1}{C_1 C_5 R_1 R_4 + 2C_1 C_5 R_1 R_5}}}{2C_1 R_1 + 2C_5 R_1 R_4 g_m + 2C_5 R_1 R_5 g_m + 2C_5 R_1 + C_5 R_4 + 2C_5 R_5}$
wo: $\sqrt{\frac{2R_1 g_m + 2}{C_1 C_5 R_1 R_4 + 2C_1 C_5 R_1 R_5}}$
bandwidth: $\frac{\sqrt{\frac{2R_1 g_m + 2}{C_1 C_5 R_1 R_4 + 2C_1 C_5 R_1 R_5}} (2C_1 R_1 + 2C_5 R_1 R_4 g_m + 2C_5 R_1 R_5 g_m + 2C_5 R_1 + C_5 R_4 + 2C_5 R_5)}{\sqrt{2}C_1 C_5 R_1 R_4 \sqrt{\frac{R_1 g_m}{C_1 C_5 R_1 R_4 + 2C_1 C_5 R_1 R_5} + \frac{1}{C_1 C_5 R_1 R_4 + 2C_1 C_5 R_1 R_5}} + 2\sqrt{2}C_1 C_5 R_1 R_5 \sqrt{\frac{R_1 g_m}{C_1 C_5 R_1 R_4 + 2C_1 C_5 R_1 R_5} + \frac{1}{C_1 C_5 R_1 R_4 + 2C_1 C_5 R_1 R_5}}}$
K-LP: $\frac{R_1 R_4 g_m}{2R_1 g_m + 2}$
K-HP: 0
K-BP: $\frac{C_5 R_1 R_4 R_5 g_m \sqrt{\frac{g_m}{C_1 C_5 R_4 + 2C_1 C_5 R_5} + \frac{1}{C_1 C_5 R_1 R_4 + 2C_1 C_5 R_1 R_5}} - C_5 R_1 R_4 \sqrt{\frac{g_m}{C_1 C_5 R_4 + 2C_1 C_5 R_5} + \frac{1}{C_1 C_5 R_1 R_4 + 2C_1 C_5 R_1 R_5}}}{2C_1 R_1 \sqrt{\frac{R_1 g_m}{C_1 C_5 R_1 R_4 + 2C_1 C_5 R_1 R_5} + \frac{1}{C_1 C_5 R_1 R_4 + 2C_1 C_5 R_1 R_5}} + 2C_5 R_1 R_4 g_m \sqrt{\frac{R_1 g_m}{C_1 C_5 R_1 R_4 + 2C_1 C_5 R_1 R_5} + \frac{1}{C_1 C_5 R_1 R_4 + 2C_1 C_5 R_1 R_5}} + 2C_5 R_1 R_5 g_m \sqrt{\frac{R_1 g_m}{C_1 C_5 R_1 R_4 + 2C_1 C_5 R_1 R_5} + \frac{1}{C_1 C_5 R_1 R_4 + 2C_1 C_5 R_1 R_5}} + 2C_5 R_1 \sqrt{\frac{R_1 g_m}{C_1 C_5 R_1 R_4 + 2C_1 C_5 R_1 R_5} + \frac{1}{C_1 C_5 R_1 R_4 + 2C_1 C_5 R_1 R_5}} + C_5 R_4 \sqrt{\frac{R_1 g_m}{C_1 C_5 R_1 R_4 + 2C_1 C_5 R_1 R_5} + \frac{1}{C_1 C_5 R_1 R_4 + 2C_1 C_5 R_1 R_5}} + 2C_5 R_5 \sqrt{\frac{R_1 g_m}{C_1 C_5 R_1 R_4 + 2C_1 C_5 R_1 R_5} + \frac{1}{C_1 C_5 R_1 R_4 + 2C_1 C_5 R_1 R_5}}}$
Qz: 0
Wz: None

8.21 INVALID-NUMER-21 $Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \frac{1}{C_4 s}, \frac{R_5}{C_5 R_5 s + 1}, \infty \right)$

$$H(s) = \frac{-C_5 R_1 R_5 s + R_1 R_5 g_m - R_1}{2R_1 g_m + s^2(2C_1 C_4 R_1 R_5 + C_1 C_5 R_1 R_5 + 2C_4 C_5 R_1 R_5) + s(C_1 R_1 + 2C_4 R_1 R_5 g_m + 2C_4 R_1 + 2C_4 R_5 + 2C_5 R_1 R_5 g_m + C_5 R_5) + 1}$$

Parameters:

Q: $\frac{2C_1 C_4 R_1 R_5 \sqrt{\frac{2R_1 g_m}{2C_1 C_4 R_1 R_5 + C_1 C_5 R_1 R_5 + 2C_4 C_5 R_1 R_5} + \frac{1}{2C_1 C_4 R_1 R_5 + C_1 C_5 R_1 R_5 + 2C_4 C_5 R_1 R_5}} + C_1 C_5 R_1 R_5 \sqrt{\frac{2R_1 g_m}{2C_1 C_4 R_1 R_5 + C_1 C_5 R_1 R_5 + 2C_4 C_5 R_1 R_5} + \frac{1}{2C_1 C_4 R_1 R_5 + C_1 C_5 R_1 R_5 + 2C_4 C_5 R_1 R_5}} + 2C_4 C_5 R_1 R_5 \sqrt{\frac{2R_1 g_m}{2C_1 C_4 R_1 R_5 + C_1 C_5 R_1 R_5 + 2C_4 C_5 R_1 R_5} + \frac{1}{2C_1 C_4 R_1 R_5 + C_1 C_5 R_1 R_5 + 2C_4 C_5 R_1 R_5}}}{C_1 R_1 + 2C_4 R_1 R_5 g_m + 2C_4 R_1 + 2C_4 R_5 + 2C_5 R_1 R_5 g_m + C_5 R_5}$
wo: $\sqrt{\frac{2R_1 g_m + 1}{2C_1 C_4 R_1 R_5 + C_1 C_5 R_1 R_5 + 2C_4 C_5 R_1 R_5}}$
bandwidth: $\frac{\sqrt{\frac{2R_1 g_m + 1}{2C_1 C_4 R_1 R_5 + C_1 C_5 R_1 R_5 + 2C_4 C_5 R_1 R_5}} (C_1 R_1 + 2C_4 R_1 R_5 g_m + 2C_4 R_1 + 2C_4 R_5 + 2C_5 R_1 R_5 g_m + C_5 R_5)}{2C_1 C_4 R_1 R_5 \sqrt{\frac{2R_1 g_m}{2C_1 C_4 R_1 R_5 + C_1 C_5 R_1 R_5 + 2C_4 C_5 R_1 R_5} + \frac{1}{2C_1 C_4 R_1 R_5 + C_1 C_5 R_1 R_5 + 2C_4 C_5 R_1 R_5}} + C_1 C_5 R_1 R_5 \sqrt{\frac{2R_1 g_m}{2C_1 C_4 R_1 R_5 + C_1 C_5 R_1 R_5 + 2C_4 C_5 R_1 R_5} + \frac{1}{2C_1 C_4 R_1 R_5 + C_1 C_5 R_1 R_5 + 2C_4 C_5 R_1 R_5}} + 2C_4 C_5 R_1 R_5 \sqrt{\frac{2R_1 g_m}{2C_1 C_4 R_1 R_5 + C_1 C_5 R_1 R_5 + 2C_4 C_5 R_1 R_5} + \frac{1}{2C_1 C_4 R_1 R_5 + C_1 C_5 R_1 R_5 + 2C_4 C_5 R_1 R_5}}}$
K-LP: $\frac{R_1 R_5 g_m - R_1}{2R_1 g_m + 1}$
K-HP: 0
K-BP: $-\frac{C_5 R_1 R_5 \sqrt{\frac{2g_m}{2C_1 C_4 R_5 + C_1 C_5 R_5 + 2C_4 C_5 R_5} + \frac{1}{2C_1 C_4 R_1 R_5 + C_1 C_5 R_1 R_5 + 2C_4 C_5 R_1 R_5}}}{C_1 R_1 \sqrt{\frac{2R_1 g_m}{2C_1 C_4 R_1 R_5 + C_1 C_5 R_1 R_5 + 2C_4 C_5 R_1 R_5} + \frac{1}{2C_1 C_4 R_1 R_5 + C_1 C_5 R_1 R_5 + 2C_4 C_5 R_1 R_5}} + 2C_4 R_1 R_5 g_m \sqrt{\frac{2R_1 g_m}{2C_1 C_4 R_1 R_5 + C_1 C_5 R_1 R_5 + 2C_4 C_5 R_1 R_5} + \frac{1}{2C_1 C_4 R_1 R_5 + C_1 C_5 R_1 R_5 + 2C_4 C_5 R_1 R_5}} + 2C_4 R_1 \sqrt{\frac{2R_1 g_m}{2C_1 C_4 R_1 R_5 + C_1 C_5 R_1 R_5 + 2C_4 C_5 R_1 R_5} + \frac{1}{2C_1 C_4 R_1 R_5 + C_1 C_5 R_1 R_5 + 2C_4 C_5 R_1 R_5}} + 2C_4 R_5 \sqrt{\frac{2R_1 g_m}{2C_1 C_4 R_1 R_5 + C_1 C_5 R_1 R_5 + 2C_4 C_5 R_1 R_5} + \frac{1}{2C_1 C_4 R_1 R_5 + C_1 C_5 R_1 R_5 + 2C_4 C_5 R_1 R_5}}}$
Qz: 0
Wz: None

8.25 INVALID-NUMER-25 $Z(s) = \left(R_1 + \frac{1}{C_1 s}, \infty, \infty, \frac{1}{C_4 s}, R_5, \infty \right)$

$$H(s) = \frac{R_5 g_m + s(C_1 R_1 R_5 g_m - C_1 R_1) - 1}{2g_m + s^2(2C_1 C_4 R_1 R_5 g_m + 2C_1 C_4 R_1 + 2C_1 C_4 R_5) + s(2C_1 R_1 g_m + C_1 + 2C_4 R_5 g_m + 2C_4)}$$

Parameters:

Q: $\frac{2C_1 C_4 R_1 R_5 g_m \sqrt{\frac{g_m}{C_1 C_4 R_1 R_5 g_m + C_1 C_4 R_1 + C_1 C_4 R_5}} + 2C_1 C_4 R_1 \sqrt{\frac{g_m}{C_1 C_4 R_1 R_5 g_m + C_1 C_4 R_1 + C_1 C_4 R_5}} + 2C_1 C_4 R_5 \sqrt{\frac{g_m}{C_1 C_4 R_1 R_5 g_m + C_1 C_4 R_1 + C_1 C_4 R_5}}}{2C_1 R_1 g_m + C_1 + 2C_4 R_5 g_m + 2C_4}$

wo: $\sqrt{\frac{g_m}{C_1 C_4 R_1 R_5 g_m + C_1 C_4 R_1 + C_1 C_4 R_5}}$

bandwidth: $\frac{\sqrt{\frac{g_m}{C_1 C_4 R_1 R_5 g_m + C_1 C_4 R_1 + C_1 C_4 R_5}}(2C_1 R_1 g_m + C_1 + 2C_4 R_5 g_m + 2C_4)}{2C_1 C_4 R_1 R_5 g_m \sqrt{\frac{g_m}{C_1 C_4 R_1 R_5 g_m + C_1 C_4 R_1 + C_1 C_4 R_5}} + 2C_1 C_4 R_1 \sqrt{\frac{g_m}{C_1 C_4 R_1 R_5 g_m + C_1 C_4 R_1 + C_1 C_4 R_5}} + 2C_1 C_4 R_5 \sqrt{\frac{g_m}{C_1 C_4 R_1 R_5 g_m + C_1 C_4 R_1 + C_1 C_4 R_5}}}$

K-LP: $\frac{R_5 g_m - 1}{2g_m}$

K-HP: 0

K-BP: $\frac{C_1 R_1 R_5 g_m - C_1 R_1}{2C_1 R_1 g_m + C_1 + 2C_4 R_5 g_m + 2C_4}$

Qz: 0

Wz: None

8.26 INVALID-NUMER-26 $Z(s) = \left(R_1 + \frac{1}{C_1 s}, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, R_5, \infty \right)$

$$H(s) = \frac{R_4 R_5 g_m - R_4 + s(C_1 R_1 R_4 R_5 g_m - C_1 R_1 R_4)}{2R_4 g_m + 2R_5 g_m + s^2(2C_1 C_4 R_1 R_4 R_5 g_m + 2C_1 C_4 R_1 R_4 + 2C_1 C_4 R_4 R_5) + s(2C_1 R_1 R_4 g_m + 2C_1 R_1 R_5 g_m + 2C_1 R_1 + C_1 R_4 + 2C_1 R_5 + 2C_4 R_4 R_5 g_m + 2C_4 R_4) + 2}$$

Parameters:

Q: $\frac{2C_1 C_4 R_1 R_4 R_5 g_m \sqrt{\frac{R_4 g_m}{C_1 C_4 R_1 R_4 R_5 g_m + C_1 C_4 R_1 R_4 + C_1 C_4 R_4 R_5}} + \frac{R_5 g_m}{C_1 C_4 R_1 R_4 R_5 g_m + C_1 C_4 R_1 R_4 + C_1 C_4 R_4 R_5} + \frac{1}{C_1 C_4 R_1 R_4 R_5 g_m + C_1 C_4 R_1 R_4 + C_1 C_4 R_4 R_5} + 2C_1 C_4 R_1 R_4 \sqrt{\frac{R_4 g_m}{C_1 C_4 R_1 R_4 R_5 g_m + C_1 C_4 R_1 R_4 + C_1 C_4 R_4 R_5}} + \frac{R_5 g_m}{C_1 C_4 R_1 R_4 R_5 g_m + C_1 C_4 R_1 R_4 + C_1 C_4 R_4 R_5} + \frac{1}{C_1 C_4 R_1 R_4 R_5 g_m + C_1 C_4 R_1 R_4 + C_1 C_4 R_4 R_5} + 2C_1 C_4 R_4 R_5 \sqrt{\frac{R_4 g_m}{C_1 C_4 R_1 R_4 R_5 g_m + C_1 C_4 R_1 R_4 + C_1 C_4 R_4 R_5}}}{2C_1 R_1 R_4 g_m + 2C_1 R_1 R_5 g_m + 2C_1 R_1 + C_1 R_4 + 2C_1 R_5 + 2C_4 R_4 R_5 g_m + 2C_4 R_4}$

wo: $\sqrt{\frac{R_4 g_m + R_5 g_m + 1}{C_1 C_4 R_1 R_4 R_5 g_m + C_1 C_4 R_1 R_4 + C_1 C_4 R_4 R_5}}$

bandwidth: $\frac{\sqrt{\frac{R_4 g_m + R_5 g_m + 1}{C_1 C_4 R_1 R_4 R_5 g_m + C_1 C_4 R_1 R_4 + C_1 C_4 R_4 R_5}}(2C_1 R_1 R_4 g_m + 2C_1 R_1 R_5 g_m + 2C_1 R_1 + C_1 R_4 + 2C_1 R_5 + 2C_4 R_4 R_5 g_m + 2C_4 R_4)}{2C_1 C_4 R_1 R_4 R_5 g_m \sqrt{\frac{R_4 g_m}{C_1 C_4 R_1 R_4 R_5 g_m + C_1 C_4 R_1 R_4 + C_1 C_4 R_4 R_5}} + \frac{R_5 g_m}{C_1 C_4 R_1 R_4 R_5 g_m + C_1 C_4 R_1 R_4 + C_1 C_4 R_4 R_5} + \frac{1}{C_1 C_4 R_1 R_4 R_5 g_m + C_1 C_4 R_1 R_4 + C_1 C_4 R_4 R_5} + 2C_1 C_4 R_1 R_4 \sqrt{\frac{R_4 g_m}{C_1 C_4 R_1 R_4 R_5 g_m + C_1 C_4 R_1 R_4 + C_1 C_4 R_4 R_5}} + \frac{R_5 g_m}{C_1 C_4 R_1 R_4 R_5 g_m + C_1 C_4 R_1 R_4 + C_1 C_4 R_4 R_5} + \frac{1}{C_1 C_4 R_1 R_4 R_5 g_m + C_1 C_4 R_1 R_4 + C_1 C_4 R_4 R_5} + 2C_1 C_4 R_4 R_5 \sqrt{\frac{R_4 g_m}{C_1 C_4 R_1 R_4 R_5 g_m + C_1 C_4 R_1 R_4 + C_1 C_4 R_4 R_5}}}$

K-LP: $\frac{R_4 R_5 g_m - R_4}{2R_4 g_m + 2R_5 g_m + 2}$

K-HP: 0

K-BP: $\frac{R_4 g_m - R_4}{2C_1 R_1 R_4 g_m \sqrt{\frac{R_4 g_m}{C_1 C_4 R_1 R_4 R_5 g_m + C_1 C_4 R_1 R_4 + C_1 C_4 R_4 R_5}} + \frac{R_5 g_m}{C_1 C_4 R_1 R_4 R_5 g_m + C_1 C_4 R_1 R_4 + C_1 C_4 R_4 R_5} + \frac{1}{C_1 C_4 R_1 R_4 R_5 g_m + C_1 C_4 R_1 R_4 + C_1 C_4 R_4 R_5} + 2C_1 R_1 R_5 g_m \sqrt{\frac{R_4 g_m}{C_1 C_4 R_1 R_4 R_5 g_m + C_1 C_4 R_1 R_4 + C_1 C_4 R_4 R_5}} + \frac{R_5 g_m}{C_1 C_4 R_1 R_4 R_5 g_m + C_1 C_4 R_1 R_4 + C_1 C_4 R_4 R_5} + \frac{1}{C_1 C_4 R_1 R_4 R_5 g_m + C_1 C_4 R_1 R_4 + C_1 C_4 R_4 R_5} + 2C_1 R_1 \sqrt{\frac{R_4 g_m}{C_1 C_4 R_1 R_4 R_5 g_m + C_1 C_4 R_1 R_4 + C_1 C_4 R_4 R_5}}}$

Qz: 0

Wz: None

8.27 INVALID-NUMER-27 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \frac{1}{C_4 s}, \frac{1}{C_5 s}, \infty \right)$

$$H(s) = \frac{-C_5 L_1 s + L_1 g_m}{2C_4 + C_5 + s^2(2C_1 C_4 L_1 + C_1 C_5 L_1 + 2C_4 C_5 L_1) + s(2C_4 L_1 g_m + 2C_5 L_1 g_m)}$$

Parameters:

Q: $\frac{2C_1 C_4 \sqrt{\frac{2C_4}{2C_1 C_4 L_1 + C_1 C_5 L_1 + 2C_4 C_5 L_1}} + \frac{C_5}{2C_1 C_4 L_1 + C_1 C_5 L_1 + 2C_4 C_5 L_1} + C_1 C_5 \sqrt{\frac{2C_4}{2C_1 C_4 L_1 + C_1 C_5 L_1 + 2C_4 C_5 L_1}} + \frac{C_5}{2C_1 C_4 L_1 + C_1 C_5 L_1 + 2C_4 C_5 L_1} + 2C_4 C_5 \sqrt{\frac{2C_4}{2C_1 C_4 L_1 + C_1 C_5 L_1 + 2C_4 C_5 L_1}} + \frac{C_5}{2C_1 C_4 L_1 + C_1 C_5 L_1 + 2C_4 C_5 L_1}}{2C_4 g_m + 2C_5 g_m}$

wo: $\sqrt{\frac{2C_4 + C_5}{2C_1 C_4 L_1 + C_1 C_5 L_1 + 2C_4 C_5 L_1}}$

bandwidth: $\frac{\sqrt{\frac{2C_4 + C_5}{2C_1 C_4 L_1 + C_1 C_5 L_1 + 2C_4 C_5 L_1}}(2C_4 g_m + 2C_5 g_m)}{2C_1 C_4 \sqrt{\frac{2C_4}{2C_1 C_4 L_1 + C_1 C_5 L_1 + 2C_4 C_5 L_1}} + \frac{C_5}{2C_1 C_4 L_1 + C_1 C_5 L_1 + 2C_4 C_5 L_1} + C_1 C_5 \sqrt{\frac{2C_4}{2C_1 C_4 L_1 + C_1 C_5 L_1 + 2C_4 C_5 L_1}} + \frac{C_5}{2C_1 C_4 L_1 + C_1 C_5 L_1 + 2C_4 C_5 L_1} + 2C_4 C_5 \sqrt{\frac{2C_4}{2C_1 C_4 L_1 + C_1 C_5 L_1 + 2C_4 C_5 L_1}} + \frac{C_5}{2C_1 C_4 L_1 + C_1 C_5 L_1 + 2C_4 C_5 L_1}}$

K-LP: $\frac{L_1 g_m}{2C_4 + C_5}$

K-HP: 0

K-BP: $-\frac{C_5}{2C_4 g_m + 2C_5 g_m}$

Qz: 0

Wz: None

8.28 INVALID-NUMER-28 $Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \infty, \infty, \frac{1}{C_4 s}, \frac{1}{C_5 s}, \infty \right)$

$$H(s) = \frac{-C_5 L_1 R_1 s + L_1 R_1 g_m}{2C_4 R_1 + C_5 R_1 + s^2 (2C_1 C_4 L_1 R_1 + C_1 C_5 L_1 R_1 + 2C_4 C_5 L_1 R_1) + s (2C_4 L_1 R_1 g_m + 2C_4 L_1 + 2C_5 L_1 R_1 g_m + C_5 L_1)}$$

Parameters:

Q: $\frac{2C_1 C_4 R_1 \sqrt{\frac{2C_4}{2C_1 C_4 L_1 + C_1 C_5 L_1 + 2C_4 C_5 L_1} + \frac{C_5}{2C_1 C_4 L_1 + C_1 C_5 L_1 + 2C_4 C_5 L_1}} + C_1 C_5 R_1 \sqrt{\frac{2C_4}{2C_1 C_4 L_1 + C_1 C_5 L_1 + 2C_4 C_5 L_1} + \frac{C_5}{2C_1 C_4 L_1 + C_1 C_5 L_1 + 2C_4 C_5 L_1}} + 2C_4 C_5 R_1 \sqrt{\frac{2C_4}{2C_1 C_4 L_1 + C_1 C_5 L_1 + 2C_4 C_5 L_1} + \frac{C_5}{2C_1 C_4 L_1 + C_1 C_5 L_1 + 2C_4 C_5 L_1}}}{2C_4 R_1 g_m + 2C_4 + 2C_5 R_1 g_m + C_5}$

wo: $\sqrt{\frac{2C_4 + C_5}{2C_1 C_4 L_1 + C_1 C_5 L_1 + 2C_4 C_5 L_1}}$

bandwidth: $\frac{\sqrt{\frac{2C_4 + C_5}{2C_1 C_4 L_1 + C_1 C_5 L_1 + 2C_4 C_5 L_1}} (2C_4 R_1 g_m + 2C_4 + 2C_5 R_1 g_m + C_5)}{2C_1 C_4 R_1 \sqrt{\frac{2C_4}{2C_1 C_4 L_1 + C_1 C_5 L_1 + 2C_4 C_5 L_1} + \frac{C_5}{2C_1 C_4 L_1 + C_1 C_5 L_1 + 2C_4 C_5 L_1}} + C_1 C_5 R_1 \sqrt{\frac{2C_4}{2C_1 C_4 L_1 + C_1 C_5 L_1 + 2C_4 C_5 L_1} + \frac{C_5}{2C_1 C_4 L_1 + C_1 C_5 L_1 + 2C_4 C_5 L_1}} + 2C_4 C_5 R_1 \sqrt{\frac{2C_4}{2C_1 C_4 L_1 + C_1 C_5 L_1 + 2C_4 C_5 L_1} + \frac{C_5}{2C_1 C_4 L_1 + C_1 C_5 L_1 + 2C_4 C_5 L_1}}}$

K-LP: $\frac{L_1 g_m}{2C_4 + C_5}$

K-HP: 0

K-BP: $-\frac{C_5 R_1}{2C_4 R_1 g_m + 2C_4 + 2C_5 R_1 g_m + C_5}$

QZ: 0

Wz: None

9 INVALID-WZ

9.1 INVALID-WZ-1 $Z(s) = \left(R_1, \infty, \infty, R_4 + \frac{1}{C_4 s}, \frac{R_5}{C_5 R_5 s + 1}, \infty \right)$

$$H(s) = \frac{-C_4 C_5 R_1 R_4 R_5 s^2 + R_1 R_5 g_m - R_1 + s (C_4 R_1 R_4 R_5 g_m - C_4 R_1 R_4 - C_5 R_1 R_5)}{2R_1 g_m + s^2 (2C_4 C_5 R_1 R_4 R_5 g_m + 2C_4 C_5 R_1 R_5 + C_4 C_5 R_4 R_5) + s (2C_4 R_1 R_4 g_m + 2C_4 R_1 R_5 g_m + 2C_4 R_1 + C_4 R_4 + 2C_4 R_5 + 2C_5 R_1 R_5 g_m + C_5 R_5) + 1}$$

Parameters:

Q: $\frac{2C_4 C_5 R_1 R_4 R_5 g_m \sqrt{\frac{2R_1 g_m}{2C_4 C_5 R_1 R_4 R_5 g_m + 2C_4 C_5 R_1 R_5 + C_4 C_5 R_4 R_5} + \frac{1}{2C_4 C_5 R_1 R_4 R_5 g_m + 2C_4 C_5 R_1 R_5 + C_4 C_5 R_4 R_5}} + 2C_4 C_5 R_1 R_5 \sqrt{\frac{2R_1 g_m}{2C_4 C_5 R_1 R_4 R_5 g_m + 2C_4 C_5 R_1 R_5 + C_4 C_5 R_4 R_5} + \frac{1}{2C_4 C_5 R_1 R_4 R_5 g_m + 2C_4 C_5 R_1 R_5 + C_4 C_5 R_4 R_5}} + C_4 C_5 R_4 R_5 \sqrt{\frac{2R_1 g_m}{2C_4 C_5 R_1 R_4 R_5 g_m + 2C_4 C_5 R_1 R_5 + C_4 C_5 R_4 R_5} + \frac{1}{2C_4 C_5 R_1 R_4 R_5 g_m + 2C_4 C_5 R_1 R_5 + C_4 C_5 R_4 R_5}}}{2C_4 R_1 R_4 g_m + 2C_4 R_1 R_5 g_m + 2C_4 R_1 + C_4 R_4 + 2C_4 R_5 + 2C_5 R_1 R_5 g_m + C_5 R_5}$

wo: $\sqrt{\frac{2R_1 g_m + 1}{2C_4 C_5 R_1 R_4 R_5 g_m + 2C_4 C_5 R_1 R_5 + C_4 C_5 R_4 R_5}}$

bandwidth: $\frac{\sqrt{\frac{2R_1 g_m + 1}{2C_4 C_5 R_1 R_4 R_5 g_m + 2C_4 C_5 R_1 R_5 + C_4 C_5 R_4 R_5}} (2C_4 R_1 R_4 g_m + 2C_4 R_1 R_5 g_m + 2C_4 R_1 + C_4 R_4 + 2C_4 R_5 + 2C_5 R_1 R_5 g_m + C_5 R_5)}{2C_4 C_5 R_1 R_4 R_5 g_m \sqrt{\frac{2R_1 g_m}{2C_4 C_5 R_1 R_4 R_5 g_m + 2C_4 C_5 R_1 R_5 + C_4 C_5 R_4 R_5} + \frac{1}{2C_4 C_5 R_1 R_4 R_5 g_m + 2C_4 C_5 R_1 R_5 + C_4 C_5 R_4 R_5}} + 2C_4 C_5 R_1 R_5 \sqrt{\frac{2R_1 g_m}{2C_4 C_5 R_1 R_4 R_5 g_m + 2C_4 C_5 R_1 R_5 + C_4 C_5 R_4 R_5} + \frac{1}{2C_4 C_5 R_1 R_4 R_5 g_m + 2C_4 C_5 R_1 R_5 + C_4 C_5 R_4 R_5}} + C_4 C_5 R_4 R_5 \sqrt{\frac{2R_1 g_m}{2C_4 C_5 R_1 R_4 R_5 g_m + 2C_4 C_5 R_1 R_5 + C_4 C_5 R_4 R_5} + \frac{1}{2C_4 C_5 R_1 R_4 R_5 g_m + 2C_4 C_5 R_1 R_5 + C_4 C_5 R_4 R_5}}}$

K-LP: $\frac{R_1 R_5 g_m - R_1}{2R_1 g_m + 1}$

K-HP: $-\frac{R_1 R_4}{2R_1 R_4 g_m + 2R_1 + R_4}$

K-BP: $\frac{C_4 R_1 R_4 R_5 g_m - C_4 R_1 R_4 - C_5 R_1 R_5}{2C_4 R_1 R_4 g_m + 2C_4 R_1 R_5 g_m + 2C_4 R_1 + C_4 R_4 + 2C_4 R_5 + 2C_5 R_1 R_5 g_m + C_5 R_5}$

QZ: $-\frac{C_4 C_5 R_4 R_5 \sqrt{\frac{2R_1 g_m}{2C_4 C_5 R_1 R_4 R_5 g_m + 2C_4 C_5 R_1 R_5 + C_4 C_5 R_4 R_5} + \frac{1}{2C_4 C_5 R_1 R_4 R_5 g_m + 2C_4 C_5 R_1 R_5 + C_4 C_5 R_4 R_5}}}{C_4 R_4 R_5 g_m - C_4 R_4 - C_5 R_5}$

Wz: $\sqrt{\frac{-R_5 g_m + 1}{C_4 C_5 R_4 R_5}}$

9.2 INVALID-WZ-2 $Z(s) = \left(L_1 s, \infty, \infty, R_4 + \frac{1}{C_4 s}, \frac{1}{C_5 s}, \infty \right)$

$$H(s) = \frac{-C_4 C_5 L_1 R_4 s^2 + L_1 g_m + s (C_4 L_1 R_4 g_m - C_5 L_1)}{2C_4 + C_5 + s^2 (2C_4 C_5 L_1 R_4 g_m + 2C_4 C_5 L_1) + s (C_4 C_5 R_4 + 2C_4 L_1 g_m + 2C_5 L_1 g_m)}$$

Parameters:

Q: $\frac{\sqrt{2C_4 C_5 L_1 R_4 g_m} \sqrt{\frac{2C_4}{C_4 C_5 L_1 R_4 g_m + C_4 C_5 L_1} + \frac{C_5}{C_4 C_5 L_1 R_4 g_m + C_4 C_5 L_1}} + \sqrt{2C_4 C_5 L_1} \sqrt{\frac{2C_4}{C_4 C_5 L_1 R_4 g_m + C_4 C_5 L_1} + \frac{C_5}{C_4 C_5 L_1 R_4 g_m + C_4 C_5 L_1}}}{C_4 C_5 R_4 + 2C_4 L_1 g_m + 2C_5 L_1 g_m}$

wo: $\sqrt{\frac{2C_4 + C_5}{2C_4 C_5 L_1 R_4 g_m + 2C_4 C_5 L_1}}$

bandwidth: $\frac{\sqrt{\frac{2C_4 + C_5}{2C_4 C_5 L_1 R_4 g_m + 2C_4 C_5 L_1}} (C_4 C_5 R_4 + 2C_4 L_1 g_m + 2C_5 L_1 g_m)}{\sqrt{2C_4 C_5 L_1 R_4 g_m} \sqrt{\frac{2C_4}{C_4 C_5 L_1 R_4 g_m + C_4 C_5 L_1} + \frac{C_5}{C_4 C_5 L_1 R_4 g_m + C_4 C_5 L_1}} + \sqrt{2C_4 C_5 L_1} \sqrt{\frac{2C_4}{C_4 C_5 L_1 R_4 g_m + C_4 C_5 L_1} + \frac{C_5}{C_4 C_5 L_1 R_4 g_m + C_4 C_5 L_1}}}$

K-LP: $\frac{L_1 g_m}{2C_4 + C_5}$

K-HP: $-\frac{R_4}{2R_4 g_m + 2}$

K-BP: $\frac{C_4 L_1 R_4 g_m \sqrt{\frac{2}{C_5 L_1 R_4 g_m + C_5 L_1} + \frac{1}{C_4 L_1 R_4 g_m + C_4 L_1}} - C_5 L_1 \sqrt{\frac{2}{C_5 L_1 R_4 g_m + C_5 L_1} + \frac{1}{C_4 L_1 R_4 g_m + C_4 L_1}}}{C_4 C_5 R_4 \sqrt{\frac{2C_4}{C_4 C_5 L_1 R_4 g_m + C_4 C_5 L_1} + \frac{C_5}{C_4 C_5 L_1 R_4 g_m + C_4 C_5 L_1}} + 2C_4 L_1 g_m \sqrt{\frac{2C_4}{C_4 C_5 L_1 R_4 g_m + C_4 C_5 L_1} + \frac{C_5}{C_4 C_5 L_1 R_4 g_m + C_4 C_5 L_1}} + 2C_5 L_1 g_m \sqrt{\frac{2C_4}{C_4 C_5 L_1 R_4 g_m + C_4 C_5 L_1} + \frac{C_5}{C_4 C_5 L_1 R_4 g_m + C_4 C_5 L_1}}}$

QZ: $-\frac{\sqrt{2C_4 C_5 R_4} \sqrt{\frac{2C_4}{C_4 C_5 L_1 R_4 g_m + C_4 C_5 L_1} + \frac{C_5}{C_4 C_5 L_1 R_4 g_m + C_4 C_5 L_1}}}{2C_4 R_4 g_m - 2C_5}$

$$\text{Wz: } \sqrt{-\frac{g_m}{C_4 C_5 R_4}}$$

9.3 INVALID-WZ-3 $Z(s) = \left(L_1 s, \infty, \infty, R_4 + \frac{1}{C_4 s}, R_5 + \frac{1}{C_5 s}, \infty \right)$

$$H(s) = \frac{L_1 g_m + s^2 (C_4 C_5 L_1 R_4 R_5 g_m - C_4 C_5 L_1 R_4) + s (C_4 L_1 R_4 g_m + C_5 L_1 R_5 g_m - C_5 L_1)}{2C_4 + C_5 + s^2 (2C_4 C_5 L_1 R_4 g_m + 2C_4 C_5 L_1 R_5 g_m + 2C_4 C_5 L_1) + s (C_4 C_5 R_4 + 2C_4 C_5 R_5 + 2C_4 L_1 g_m + 2C_5 L_1 g_m)}$$

Parameters:

$$\begin{aligned} \text{Q: } & \frac{\sqrt{2C_4 C_5 L_1 R_4 g_m} \sqrt{\frac{2C_4}{C_4 C_5 L_1 R_4 g_m + C_4 C_5 L_1 R_5 g_m + C_4 C_5 L_1} + \frac{C_5}{C_4 C_5 L_1 R_4 g_m + C_4 C_5 L_1 R_5 g_m + C_4 C_5 L_1}} + \sqrt{2C_4 C_5 L_1 R_5 g_m} \sqrt{\frac{2C_4}{C_4 C_5 L_1 R_4 g_m + C_4 C_5 L_1 R_5 g_m + C_4 C_5 L_1} + \frac{C_5}{C_4 C_5 R_4 + 2C_4 C_5 R_5 + 2C_4 L_1 g_m + 2C_5 L_1 g_m}} + \sqrt{2C_4 C_5 L_1} \sqrt{\frac{2C_4}{C_4 C_5 L_1 R_4 g_m + C_4 C_5 L_1 R_5 g_m + C_4 C_5 L_1} + \frac{C_5}{C_4 C_5 L_1 R_4 g_m + C_4 C_5 L_1 R_5 g_m + C_4 C_5 L_1}}}{\sqrt{\frac{2C_4 + C_5}{2C_4 C_5 L_1 R_4 g_m + 2C_4 C_5 L_1 R_5 g_m + 2C_4 C_5 L_1}}} \\ \text{wo: } & \sqrt{\frac{2C_4 + C_5}{2C_4 C_5 L_1 R_4 g_m + 2C_4 C_5 L_1 R_5 g_m + 2C_4 C_5 L_1}} \\ \text{bandwidth: } & \frac{\sqrt{2C_4 C_5 L_1 R_4 g_m} \sqrt{\frac{2C_4}{C_4 C_5 L_1 R_4 g_m + C_4 C_5 L_1 R_5 g_m + C_4 C_5 L_1} + \frac{C_5}{C_4 C_5 L_1 R_4 g_m + C_4 C_5 L_1 R_5 g_m + C_4 C_5 L_1}} + \sqrt{2C_4 C_5 L_1 R_5 g_m} \sqrt{\frac{2C_4}{C_4 C_5 L_1 R_4 g_m + C_4 C_5 L_1 R_5 g_m + C_4 C_5 L_1} + \frac{C_5}{C_4 C_5 L_1 R_4 g_m + C_4 C_5 L_1 R_5 g_m + C_4 C_5 L_1}} + \sqrt{2C_4 C_5 L_1} \sqrt{\frac{2C_4}{C_4 C_5 L_1 R_4 g_m + C_4 C_5 L_1 R_5 g_m + C_4 C_5 L_1} + \frac{C_5}{C_4 C_5 L_1 R_4 g_m + C_4 C_5 L_1 R_5 g_m + C_4 C_5 L_1}}}{\sqrt{\frac{2C_4 + C_5}{2C_4 C_5 L_1 R_4 g_m + 2C_4 C_5 L_1 R_5 g_m + 2C_4 C_5 L_1}} (C_4 C_5 R_4 + 2C_4 C_5 R_5 + 2C_4 L_1 g_m + 2C_5 L_1 g_m)} \\ \text{K-LP: } & \frac{L_1 g_m}{2C_4 + C_5} \\ \text{K-HP: } & \frac{R_4 R_5 g_m - R_4}{2R_4 g_m + 2R_5 g_m + 2} \\ \text{K-BP: } & \frac{C_4 L_1 R_4 g_m \sqrt{\frac{2C_4}{C_5 L_1 R_4 g_m + C_5 L_1 R_5 g_m + C_5 L_1} + \frac{C_5}{C_4 L_1 R_4 g_m + C_4 L_1 R_5 g_m + C_4 L_1}} + C_5 L_1 R_5 g_m \sqrt{\frac{2C_4}{C_5 L_1 R_4 g_m + C_5 L_1 R_5 g_m + C_5 L_1} + \frac{C_5}{C_4 L_1 R_4 g_m + C_4 L_1 R_5 g_m + C_4 L_1}} - C_5 L_1 \sqrt{\frac{2C_4}{C_5 L_1 R_4 g_m + C_5 L_1 R_5 g_m + C_5 L_1} + \frac{C_5}{C_4 L_1 R_4 g_m + C_4 L_1 R_5 g_m + C_4 L_1}}}{C_4 C_5 R_4 \sqrt{\frac{2C_4}{C_4 C_5 L_1 R_4 g_m + C_4 C_5 L_1 R_5 g_m + C_4 C_5 L_1} + \frac{C_5}{C_4 C_5 L_1 R_4 g_m + C_4 C_5 L_1 R_5 g_m + C_4 C_5 L_1}} + 2C_4 C_5 R_5 \sqrt{\frac{2C_4}{C_4 C_5 L_1 R_4 g_m + C_4 C_5 L_1 R_5 g_m + C_4 C_5 L_1} + \frac{C_5}{C_4 C_5 L_1 R_4 g_m + C_4 C_5 L_1 R_5 g_m + C_4 C_5 L_1}} + 2C_4 L_1 g_m \sqrt{\frac{2C_4}{C_4 C_5 L_1 R_4 g_m + C_4 C_5 L_1 R_5 g_m + C_4 C_5 L_1} + \frac{C_5}{C_4 C_5 L_1 R_4 g_m + C_4 C_5 L_1 R_5 g_m + C_4 C_5 L_1}} + 2C_5 L_1 g_m \sqrt{\frac{2C_4}{C_4 C_5 L_1 R_4 g_m + C_4 C_5 L_1 R_5 g_m + C_4 C_5 L_1} + \frac{C_5}{C_4 C_5 L_1 R_4 g_m + C_4 C_5 L_1 R_5 g_m + C_4 C_5 L_1}}} \\ \text{QZ: } & \frac{\sqrt{2C_4 C_5 R_4 R_5 g_m} \sqrt{\frac{2C_4}{C_4 C_5 L_1 R_4 g_m + C_4 C_5 L_1 R_5 g_m + C_4 C_5 L_1} + \frac{C_5}{C_4 C_5 L_1 R_4 g_m + C_4 C_5 L_1 R_5 g_m + C_4 C_5 L_1}} - \sqrt{2C_4 C_5 R_4} \sqrt{\frac{2C_4}{C_4 C_5 L_1 R_4 g_m + C_4 C_5 L_1 R_5 g_m + C_4 C_5 L_1} + \frac{C_5}{C_4 C_5 L_1 R_4 g_m + C_4 C_5 L_1 R_5 g_m + C_4 C_5 L_1}}}{2C_4 R_4 g_m + 2C_5 R_5 g_m - 2C_5} \\ \text{Wz: } & \sqrt{\frac{g_m}{C_4 C_5 R_4 R_5 g_m - C_4 C_5 R_4}} \end{aligned}$$

9.4 INVALID-WZ-4 $Z(s) = \left(R_1 + \frac{1}{C_1 s}, \infty, \infty, R_4, \frac{1}{C_5 s}, \infty \right)$

$$H(s) = \frac{-C_1 C_5 R_1 R_4 s^2 + R_4 g_m + s (C_1 R_1 R_4 g_m - C_5 R_4)}{2g_m + s^2 (2C_1 C_5 R_1 R_4 g_m + 2C_1 C_5 R_1 + C_1 C_5 R_4) + s (2C_1 R_1 g_m + 2C_1 + 2C_5 R_4 g_m + 2C_5)}$$

Parameters:

$$\begin{aligned} \text{Q: } & \frac{2\sqrt{2}C_1 C_5 R_1 R_4 g_m \sqrt{\frac{g_m}{2C_1 C_5 R_1 R_4 g_m + 2C_1 C_5 R_1 + C_1 C_5 R_4}} + 2\sqrt{2}C_1 C_5 R_1 \sqrt{\frac{g_m}{2C_1 C_5 R_1 R_4 g_m + 2C_1 C_5 R_1 + C_1 C_5 R_4}} + \sqrt{2}C_1 C_5 R_4 \sqrt{\frac{g_m}{2C_1 C_5 R_1 R_4 g_m + 2C_1 C_5 R_1 + C_1 C_5 R_4}}}{2C_1 R_1 g_m + 2C_1 + 2C_5 R_4 g_m + 2C_5} \\ \text{wo: } & \sqrt{2} \sqrt{\frac{g_m}{2C_1 C_5 R_1 R_4 g_m + 2C_1 C_5 R_1 + C_1 C_5 R_4}} \\ \text{bandwidth: } & \frac{\sqrt{2} \sqrt{\frac{g_m}{2C_1 C_5 R_1 R_4 g_m + 2C_1 C_5 R_1 + C_1 C_5 R_4}} (2C_1 R_1 g_m + 2C_1 + 2C_5 R_4 g_m + 2C_5)}{2\sqrt{2}C_1 C_5 R_1 R_4 g_m \sqrt{\frac{g_m}{2C_1 C_5 R_1 R_4 g_m + 2C_1 C_5 R_1 + C_1 C_5 R_4}} + 2\sqrt{2}C_1 C_5 R_1 \sqrt{\frac{g_m}{2C_1 C_5 R_1 R_4 g_m + 2C_1 C_5 R_1 + C_1 C_5 R_4}} + \sqrt{2}C_1 C_5 R_4 \sqrt{\frac{g_m}{2C_1 C_5 R_1 R_4 g_m + 2C_1 C_5 R_1 + C_1 C_5 R_4}}} \\ \text{K-LP: } & \frac{R_4}{2} \\ \text{K-HP: } & -\frac{R_1 R_4}{2R_1 R_4 g_m + 2R_1 + R_4} \\ \text{K-BP: } & \frac{C_1 R_1 R_4 g_m - C_5 R_4}{2C_1 R_1 g_m + 2C_1 + 2C_5 R_4 g_m + 2C_5} \\ \text{QZ: } & -\frac{\sqrt{2}C_1 C_5 R_1 \sqrt{\frac{g_m}{2C_1 C_5 R_1 R_4 g_m + 2C_1 C_5 R_1 + C_1 C_5 R_4}}}{C_1 R_1 g_m - C_5} \\ \text{Wz: } & \sqrt{-\frac{g_m}{C_1 C_5 R_1}} \end{aligned}$$

9.5 INVALID-WZ-5 $Z(s) = \left(R_1 + \frac{1}{C_1 s}, \infty, \infty, R_4, \frac{R_5}{C_5 R_5 s + 1}, \infty \right)$

$$H(s) = \frac{-C_1 C_5 R_1 R_4 R_5 s^2 + R_4 R_5 g_m - R_4 + s (C_1 R_1 R_4 R_5 g_m - C_1 R_1 R_4 - C_5 R_4 R_5)}{2R_4 g_m + 2R_5 g_m + s^2 (2C_1 C_5 R_1 R_4 R_5 g_m + 2C_1 C_5 R_1 R_5 + C_1 C_5 R_4 R_5) + s (2C_1 R_1 R_4 g_m + 2C_1 R_1 R_5 g_m + 2C_1 R_1 + C_1 R_4 + 2C_1 R_5 + 2C_5 R_4 R_5 g_m + 2C_5 R_5) + 2}$$

Parameters:

$$\begin{aligned} \text{Q: } & \frac{2\sqrt{2}C_1 C_5 R_1 R_4 R_5 g_m \sqrt{\frac{R_4 g_m}{2C_1 C_5 R_1 R_4 R_5 g_m + 2C_1 C_5 R_1 R_5 + C_1 C_5 R_4 R_5} + \frac{R_5 g_m}{2C_1 C_5 R_1 R_4 R_5 g_m + 2C_1 C_5 R_1 R_5 + C_1 C_5 R_4 R_5}} + \frac{1}{2C_1 C_5 R_1 R_4 R_5 g_m + 2C_1 C_5 R_1 R_5 + C_1 C_5 R_4 R_5} + 2\sqrt{2}C_1 C_5 R_1 R_5 \sqrt{\frac{R_4 g_m}{2C_1 C_5 R_1 R_4 R_5 g_m + 2C_1 C_5 R_1 R_5 + C_1 C_5 R_4 R_5} + \frac{R_5 g_m}{2C_1 C_5 R_1 R_4 R_5 g_m + 2C_1 C_5 R_1 R_5 + C_1 C_5 R_4 R_5}} + \sqrt{2}C_1 C_5 R_4 R_5 \sqrt{\frac{R_4 g_m}{2C_1 C_5 R_1 R_4 R_5 g_m + 2C_1 C_5 R_1 R_5 + C_1 C_5 R_4 R_5} + \frac{R_5 g_m}{2C_1 C_5 R_1 R_4 R_5 g_m + 2C_1 C_5 R_1 R_5 + C_1 C_5 R_4 R_5}}}{2C_1 R_1 R_4 g_m + 2C_1 R_1 R_5 g_m + 2C_1 R_1 + C_1 R_4 + 2C_1 R_5 + 2C_5 R_4 R_5 g_m + 2C_5 R_5} \\ \text{wo: } & \sqrt{\frac{2R_4 g_m + 2R_5 g_m + 2}{2C_1 C_5 R_1 R_4 R_5 g_m + 2C_1 C_5 R_1 R_5 + C_1 C_5 R_4 R_5}} \\ \text{bandwidth: } & \frac{\sqrt{2} \sqrt{\frac{2R_4 g_m + 2R_5 g_m + 2}{2C_1 C_5 R_1 R_4 R_5 g_m + 2C_1 C_5 R_1 R_5 + C_1 C_5 R_4 R_5}} (2C_1 R_1 R_4 g_m + 2C_1 R_1 R_5 g_m + 2C_1 R_1 + C_1 R_4 + 2C_1 R_5 + 2C_5 R_4 R_5 g_m + 2C_5 R_5)}{2\sqrt{2}C_1 C_5 R_1 R_4 R_5 g_m \sqrt{\frac{R_4 g_m}{2C_1 C_5 R_1 R_4 R_5 g_m + 2C_1 C_5 R_1 R_5 + C_1 C_5 R_4 R_5} + \frac{R_5 g_m}{2C_1 C_5 R_1 R_4 R_5 g_m + 2C_1 C_5 R_1 R_5 + C_1 C_5 R_4 R_5}} + \frac{1}{2C_1 C_5 R_1 R_4 R_5 g_m + 2C_1 C_5 R_1 R_5 + C_1 C_5 R_4 R_5} + 2\sqrt{2}C_1 C_5 R_1 R_5 \sqrt{\frac{R_4 g_m}{2C_1 C_5 R_1 R_4 R_5 g_m + 2C_1 C_5 R_1 R_5 + C_1 C_5 R_4 R_5} + \frac{R_5 g_m}{2C_1 C_5 R_1 R_4 R_5 g_m + 2C_1 C_5 R_1 R_5 + C_1 C_5 R_4 R_5}} + \sqrt{2}C_1 C_5 R_4 R_5 \sqrt{\frac{R_4 g_m}{2C_1 C_5 R_1 R_4 R_5 g_m + 2C_1 C_5 R_1 R_5 + C_1 C_5 R_4 R_5} + \frac{R_5 g_m}{2C_1 C_5 R_1 R_4 R_5 g_m + 2C_1 C_5 R_1 R_5 + C_1 C_5 R_4 R_5}}} \\ \text{K-LP: } & \frac{R_4 R_5 g_m - R_4}{2R_4 g_m + 2R_5 g_m + 2} \\ \text{K-HP: } & -\frac{R_1 R_4}{2R_1 R_4 g_m + 2R_1 + R_4} \\ \text{K-BP: } & \frac{C_1 R_1 R_4 R_5 g_m \sqrt{\frac{R_4 g_m}{2C_1 C_5 R_1 R_4 R_5 g_m + 2C_1 C_5 R_1 R_5 + C_1 C_5 R_4 R_5} + \frac{R_5 g_m}{2C_1 C_5 R_1 R_4 R_5 g_m + 2C_1 C_5 R_1 R_5 + C_1 C_5 R_4 R_5}}}{2C_1 R_1 R_4 g_m \sqrt{\frac{R_4 g_m}{2C_1 C_5 R_1 R_4 R_5 g_m + 2C_1 C_5 R_1 R_5 + C_1 C_5 R_4 R_5} + \frac{R_5 g_m}{2C_1 C_5 R_1 R_4 R_5 g_m + 2C_1 C_5 R_1 R_5 + C_1 C_5 R_4 R_5}} + 2C_1 R_1 R_5 g_m \sqrt{\frac{R_4 g_m}{2C_1 C_5 R_1 R_4 R_5 g_m + 2C_1 C_5 R_1 R_5 + C_1 C_5 R_4 R_5} + \frac{R_5 g_m}{2C_1 C_5 R_1 R_4 R_5 g_m + 2C_1 C_5 R_1 R_5 + C_1 C_5 R_4 R_5}} + 2C_1 R_1 \sqrt{\frac{R_4 g_m}{2C_1 C_5 R_1 R_4 R_5 g_m + 2C_1 C_5 R_1 R_5 + C_1 C_5 R_4 R_5} + \frac{R_5 g_m}{2C_1 C_5 R_1 R_4 R_5 g_m + 2C_1 C_5 R_1 R_5 + C_1 C_5 R_4 R_5}} \end{aligned}$$

$$\text{Qz: } -\frac{\sqrt{2C_1C_5R_1R_5}\sqrt{\frac{R_4g_m}{2C_1C_5R_1R_4R_5g_m+2C_1C_5R_1R_5+C_1C_5R_4R_5}+\frac{R_5g_m}{2C_1C_5R_1R_4R_5g_m+2C_1C_5R_1R_5+C_1C_5R_4R_5}+\frac{1}{2C_1C_5R_1R_4R_5g_m+2C_1C_5R_1R_5+C_1C_5R_4R_5}}}{C_1R_1R_5g_m-C_1R_1-C_5R_5}$$

$$\text{Wz: } \sqrt{\frac{-R_5g_m+1}{C_1C_5R_1R_5}}$$

9.6 INVALID-WZ-6 $Z(s) = \left(R_1 + \frac{1}{C_1s}, \infty, \infty, R_4, R_5 + \frac{1}{C_5s}, \infty\right)$

$$H(s) = \frac{R_4g_m + s^2(C_1C_5R_1R_4R_5g_m - C_1C_5R_1R_4) + s(C_1R_1R_4g_m + C_5R_4R_5g_m - C_5R_4)}{2g_m + s^2(2C_1C_5R_1R_4g_m + 2C_1C_5R_1R_5g_m + 2C_1C_5R_1 + C_1C_5R_4 + 2C_1C_5R_5) + s(2C_1R_1g_m + 2C_1 + 2C_5R_4g_m + 2C_5R_5g_m + 2C_5)}$$

Parameters:

$$\text{Q: } \frac{2\sqrt{2}C_1C_5R_1R_4g_m\sqrt{\frac{g_m}{2C_1C_5R_1R_4g_m+2C_1C_5R_1R_5g_m+2C_1C_5R_1+C_1C_5R_4+2C_1C_5R_5}}+2\sqrt{2}C_1C_5R_1R_5g_m\sqrt{\frac{g_m}{2C_1C_5R_1R_4g_m+2C_1C_5R_1R_5g_m+2C_1C_5R_1+C_1C_5R_4+2C_1C_5R_5}}+2\sqrt{2}C_1C_5R_1\sqrt{\frac{g_m}{2C_1C_5R_1R_4g_m+2C_1C_5R_1R_5g_m+2C_1C_5R_1+C_1C_5R_4+2C_1C_5R_5}}+\sqrt{2}C_1C_5R_4\sqrt{\frac{g_m}{2C_1C_5R_1R_4g_m+2C_1C_5R_1R_5g_m+2C_1C_5R_1+C_1C_5R_4+2C_1C_5R_5}}+2\sqrt{2}C_1C_5R_5\sqrt{\frac{g_m}{2C_1C_5R_1R_4g_m+2C_1C_5R_1R_5g_m+2C_1C_5R_1+C_1C_5R_4+2C_1C_5R_5}}}{2C_1R_1g_m+2C_1+2C_5R_4g_m+2C_5R_5g_m+2C_5}$$

$$\text{wo: } \sqrt{2}\sqrt{\frac{g_m}{2C_1C_5R_1R_4g_m+2C_1C_5R_1R_5g_m+2C_1C_5R_1+C_1C_5R_4+2C_1C_5R_5}}$$

$$\text{bandwidth: } \frac{\sqrt{2}\sqrt{\frac{g_m}{2C_1C_5R_1R_4g_m+2C_1C_5R_1R_5g_m+2C_1C_5R_1+C_1C_5R_4+2C_1C_5R_5}}(2C_1R_1g_m+2C_1+2C_5R_4g_m+2C_5R_5g_m+2C_5)}{2\sqrt{2}C_1C_5R_1R_4g_m\sqrt{\frac{g_m}{2C_1C_5R_1R_4g_m+2C_1C_5R_1R_5g_m+2C_1C_5R_1+C_1C_5R_4+2C_1C_5R_5}}+2\sqrt{2}C_1C_5R_1R_5g_m\sqrt{\frac{g_m}{2C_1C_5R_1R_4g_m+2C_1C_5R_1R_5g_m+2C_1C_5R_1+C_1C_5R_4+2C_1C_5R_5}}+2\sqrt{2}C_1C_5R_1\sqrt{\frac{g_m}{2C_1C_5R_1R_4g_m+2C_1C_5R_1R_5g_m+2C_1C_5R_1+C_1C_5R_4+2C_1C_5R_5}}+\sqrt{2}C_1C_5R_4\sqrt{\frac{g_m}{2C_1C_5R_1R_4g_m+2C_1C_5R_1R_5g_m+2C_1C_5R_1+C_1C_5R_4+2C_1C_5R_5}}+2\sqrt{2}C_1C_5R_5\sqrt{\frac{g_m}{2C_1C_5R_1R_4g_m+2C_1C_5R_1R_5g_m+2C_1C_5R_1+C_1C_5R_4+2C_1C_5R_5}}}$$

$$\text{K-LP: } \frac{R_4}{2}$$

$$\text{K-HP: } \frac{R_1R_4R_5g_m-R_1R_4}{2R_1R_4g_m+2R_1R_5g_m+2R_1+R_4+2R_5}$$

$$\text{K-BP: } \frac{C_1R_1R_4g_m+C_5R_4R_5g_m-C_5R_4}{2C_1R_1g_m+2C_1+2C_5R_4g_m+2C_5R_5g_m+2C_5}$$

$$\text{Qz: } \frac{\sqrt{2}C_1C_5R_1R_5g_m\sqrt{\frac{g_m}{2C_1C_5R_1R_4g_m+2C_1C_5R_1R_5g_m+2C_1C_5R_1+C_1C_5R_4+2C_1C_5R_5}}-\sqrt{2}C_1C_5R_1\sqrt{\frac{g_m}{2C_1C_5R_1R_4g_m+2C_1C_5R_1R_5g_m+2C_1C_5R_1+C_1C_5R_4+2C_1C_5R_5}}}{C_1R_1g_m+C_5R_5g_m-C_5}$$

$$\text{Wz: } \sqrt{\frac{g_m}{C_1C_5R_1R_5g_m-C_1C_5R_1}}$$

9.7 INVALID-WZ-7 $Z(s) = \left(R_1 + \frac{1}{C_1s}, \infty, \infty, R_4 + \frac{1}{C_4s}, R_5, \infty\right)$

$$H(s) = \frac{R_5g_m + s^2(C_1C_4R_1R_4R_5g_m - C_1C_4R_1R_4) + s(C_1R_1R_5g_m - C_1R_1 + C_4R_4R_5g_m - C_4R_4) - 1}{2g_m + s^2(2C_1C_4R_1R_4g_m + 2C_1C_4R_1R_5g_m + 2C_1C_4R_1 + C_1C_4R_4 + 2C_1C_4R_5) + s(2C_1R_1g_m + C_1 + 2C_4R_4g_m + 2C_4R_5g_m + 2C_4)}$$

Parameters:

$$\text{Q: } \frac{2\sqrt{2}C_1C_4R_1R_4g_m\sqrt{\frac{g_m}{2C_1C_4R_1R_4g_m+2C_1C_4R_1R_5g_m+2C_1C_4R_1+C_1C_4R_4+2C_1C_4R_5}}+2\sqrt{2}C_1C_4R_1R_5g_m\sqrt{\frac{g_m}{2C_1C_4R_1R_4g_m+2C_1C_4R_1R_5g_m+2C_1C_4R_1+C_1C_4R_4+2C_1C_4R_5}}+2\sqrt{2}C_1C_4R_1\sqrt{\frac{g_m}{2C_1C_4R_1R_4g_m+2C_1C_4R_1R_5g_m+2C_1C_4R_1+C_1C_4R_4+2C_1C_4R_5}}+\sqrt{2}C_1C_4R_4\sqrt{\frac{g_m}{2C_1C_4R_1R_4g_m+2C_1C_4R_1R_5g_m+2C_1C_4R_1+C_1C_4R_4+2C_1C_4R_5}}+2\sqrt{2}C_1C_4R_5\sqrt{\frac{g_m}{2C_1C_4R_1R_4g_m+2C_1C_4R_1R_5g_m+2C_1C_4R_1+C_1C_4R_4+2C_1C_4R_5}}}{2C_1R_1g_m+C_1+2C_4R_4g_m+2C_4R_5g_m+2C_4}$$

$$\text{wo: } \sqrt{2}\sqrt{\frac{g_m}{2C_1C_4R_1R_4g_m+2C_1C_4R_1R_5g_m+2C_1C_4R_1+C_1C_4R_4+2C_1C_4R_5}}$$

$$\text{bandwidth: } \frac{\sqrt{2}\sqrt{\frac{g_m}{2C_1C_4R_1R_4g_m+2C_1C_4R_1R_5g_m+2C_1C_4R_1+C_1C_4R_4+2C_1C_4R_5}}(2C_1R_1g_m+C_1+2C_4R_4g_m+2C_4R_5g_m+2C_4)}{2\sqrt{2}C_1C_4R_1R_4g_m\sqrt{\frac{g_m}{2C_1C_4R_1R_4g_m+2C_1C_4R_1R_5g_m+2C_1C_4R_1+C_1C_4R_4+2C_1C_4R_5}}+2\sqrt{2}C_1C_4R_1R_5g_m\sqrt{\frac{g_m}{2C_1C_4R_1R_4g_m+2C_1C_4R_1R_5g_m+2C_1C_4R_1+C_1C_4R_4+2C_1C_4R_5}}+2\sqrt{2}C_1C_4R_1\sqrt{\frac{g_m}{2C_1C_4R_1R_4g_m+2C_1C_4R_1R_5g_m+2C_1C_4R_1+C_1C_4R_4+2C_1C_4R_5}}+\sqrt{2}C_1C_4R_4\sqrt{\frac{g_m}{2C_1C_4R_1R_4g_m+2C_1C_4R_1R_5g_m+2C_1C_4R_1+C_1C_4R_4+2C_1C_4R_5}}+2\sqrt{2}C_1C_4R_5\sqrt{\frac{g_m}{2C_1C_4R_1R_4g_m+2C_1C_4R_1R_5g_m+2C_1C_4R_1+C_1C_4R_4+2C_1C_4R_5}}}$$

$$\text{K-LP: } \frac{R_5g_m-1}{2g_m}$$

$$\text{K-HP: } \frac{R_1R_4R_5g_m-R_1R_4}{2R_1R_4g_m+2R_1R_5g_m+2R_1+R_4+2R_5}$$

$$\text{K-BP: } \frac{C_1R_1R_5g_m-C_1R_1+C_4R_4R_5g_m-C_4R_4}{2C_1R_1g_m+C_1+2C_4R_4g_m+2C_4R_5g_m+2C_4}$$

$$\text{Qz: } \frac{\sqrt{2}C_1C_4R_1R_4\sqrt{\frac{g_m}{2C_1C_4R_1R_4g_m+2C_1C_4R_1R_5g_m+2C_1C_4R_1+C_1C_4R_4+2C_1C_4R_5}}}{C_1R_1+C_4R_4}$$

$$\text{Wz: } \sqrt{\frac{1}{C_1C_4R_1R_4}}$$

10 INVALID-ORDER

10.1 INVALID-ORDER-1 $Z(s) = (R_1, \infty, \infty, R_4, R_5, \infty)$

$$H(s) = \frac{R_1R_4R_5g_m - R_1R_4}{2R_1R_4g_m + 2R_1R_5g_m + 2R_1 + R_4 + 2R_5}$$

10.2 INVALID-ORDER-2 $Z(s) = \left(R_1, \infty, \infty, R_4, \frac{1}{C_5s}, \infty\right)$

$$H(s) = \frac{-C_5R_1R_4s + R_1R_4g_m}{2R_1g_m + s(2C_5R_1R_4g_m + 2C_5R_1 + C_5R_4) + 2}$$

$$10.3 \quad \text{INVALID-ORDER-3} \quad Z(s) = \left(R_1, \infty, \infty, R_4, \frac{R_5}{C_5 R_5 s + 1}, \infty \right)$$

$$H(s) = \frac{-C_5 R_1 R_4 R_5 s + R_1 R_4 R_5 g_m - R_1 R_4}{2 R_1 R_4 g_m + 2 R_1 R_5 g_m + 2 R_1 + R_4 + 2 R_5 + s (2 C_5 R_1 R_4 R_5 g_m + 2 C_5 R_1 R_5 + C_5 R_4 R_5)}$$

$$10.4 \quad \text{INVALID-ORDER-4} \quad Z(s) = \left(R_1, \infty, \infty, R_4, R_5 + \frac{1}{C_5 s}, \infty \right)$$

$$H(s) = \frac{R_1 R_4 g_m + s (C_5 R_1 R_4 R_5 g_m - C_5 R_1 R_4)}{2 R_1 g_m + s (2 C_5 R_1 R_4 g_m + 2 C_5 R_1 R_5 g_m + 2 C_5 R_1 + C_5 R_4 + 2 C_5 R_5) + 2}$$

$$10.5 \quad \text{INVALID-ORDER-5} \quad Z(s) = \left(R_1, \infty, \infty, \frac{1}{C_4 s}, R_5, \infty \right)$$

$$H(s) = \frac{R_1 R_5 g_m - R_1}{2 R_1 g_m + s (2 C_4 R_1 R_5 g_m + 2 C_4 R_1 + 2 C_4 R_5) + 1}$$

$$10.6 \quad \text{INVALID-ORDER-6} \quad Z(s) = \left(R_1, \infty, \infty, \frac{1}{C_4 s}, \frac{1}{C_5 s}, \infty \right)$$

$$H(s) = \frac{-C_5 R_1 s + R_1 g_m}{2 C_4 C_5 R_1 s^2 + s (2 C_4 R_1 g_m + 2 C_4 + 2 C_5 R_1 g_m + C_5)}$$

$$10.7 \quad \text{INVALID-ORDER-7} \quad Z(s) = \left(R_1, \infty, \infty, \frac{1}{C_4 s}, R_5 + \frac{1}{C_5 s}, \infty \right)$$

$$H(s) = \frac{R_1 g_m + s (C_5 R_1 R_5 g_m - C_5 R_1)}{s^2 (2 C_4 C_5 R_1 R_5 g_m + 2 C_4 C_5 R_1 + 2 C_4 C_5 R_5) + s (2 C_4 R_1 g_m + 2 C_4 + 2 C_5 R_1 g_m + C_5)}$$

$$10.8 \quad \text{INVALID-ORDER-8} \quad Z(s) = \left(R_1, \infty, \infty, \frac{1}{C_4 s}, L_5 s + \frac{1}{C_5 s}, \infty \right)$$

$$H(s) = \frac{C_5 L_5 R_1 g_m s^2 - C_5 R_1 s + R_1 g_m}{2 C_4 C_5 R_1 s^2 + s^3 (2 C_4 C_5 L_5 R_1 g_m + 2 C_4 C_5 L_5) + s (2 C_4 R_1 g_m + 2 C_4 + 2 C_5 R_1 g_m + C_5)}$$

$$10.9 \quad \text{INVALID-ORDER-9} \quad Z(s) = \left(R_1, \infty, \infty, \frac{1}{C_4 s}, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \infty \right)$$

$$H(s) = \frac{-C_5 L_5 R_1 s^2 + L_5 R_1 g_m s - R_1}{2 C_4 C_5 L_5 R_1 s^3 + 2 C_4 R_1 s + 2 R_1 g_m + s^2 (2 C_4 L_5 R_1 g_m + 2 C_4 L_5 + 2 C_5 L_5 R_1 g_m + C_5 L_5) + 1}$$

$$10.10 \quad \text{INVALID-ORDER-10} \quad Z(s) = \left(R_1, \infty, \infty, \frac{1}{C_4 s}, L_5 s + R_5 + \frac{1}{C_5 s}, \infty \right)$$

$$H(s) = \frac{C_5 L_5 R_1 g_m s^2 + R_1 g_m + s (C_5 R_1 R_5 g_m - C_5 R_1)}{s^3 (2 C_4 C_5 L_5 R_1 g_m + 2 C_4 C_5 L_5) + s^2 (2 C_4 C_5 R_1 R_5 g_m + 2 C_4 C_5 R_1 + 2 C_4 C_5 R_5) + s (2 C_4 R_1 g_m + 2 C_4 + 2 C_5 R_1 g_m + C_5)}$$

$$10.11 \quad \text{INVALID-ORDER-11} \quad Z(s) = \left(R_1, \infty, \infty, \frac{1}{C_4 s}, \frac{L_5 R_5 s}{C_5 L_5 R_5 s^2 + L_5 s + R_5}, \infty \right)$$

$$H(s) = \frac{-C_5 L_5 R_1 R_5 s^2 - R_1 R_5 + s (L_5 R_1 R_5 g_m - L_5 R_1)}{2 C_4 C_5 L_5 R_1 R_5 s^3 + 2 R_1 R_5 g_m + R_5 + s^2 (2 C_4 L_5 R_1 R_5 g_m + 2 C_4 L_5 R_1 + 2 C_4 L_5 R_5 + 2 C_5 L_5 R_1 R_5 g_m + C_5 L_5 R_5) + s (2 C_4 R_1 R_5 + 2 L_5 R_1 g_m + L_5)}$$

$$10.12 \quad \text{INVALID-ORDER-12} \quad Z(s) = \left(R_1, \infty, \infty, \frac{1}{C_4 s}, \frac{C_5 L_5 R_5 s^2 + L_5 s + R_5}{C_5 L_5 s^2 + 1}, \infty \right)$$

$$H(s) = \frac{L_5 R_1 g_m s + R_1 R_5 g_m - R_1 + s^2 (C_5 L_5 R_1 R_5 g_m - C_5 L_5 R_1)}{2 R_1 g_m + s^3 (2 C_4 C_5 L_5 R_1 R_5 g_m + 2 C_4 C_5 L_5 R_1 + 2 C_4 C_5 L_5 R_5) + s^2 (2 C_4 L_5 R_1 g_m + 2 C_4 L_5 + 2 C_5 L_5 R_1 g_m + C_5 L_5) + s (2 C_4 R_1 R_5 g_m + 2 C_4 R_1 + 2 C_4 R_5) + 1}$$

$$10.13 \quad \text{INVALID-ORDER-13} \quad Z(s) = \left(R_1, \infty, \infty, \frac{1}{C_4 s}, \frac{R_5(C_5 L_5 s^2 + 1)}{C_5 L_5 s^2 + C_5 R_5 s + 1}, \infty \right)$$

$$H(s) = \frac{-C_5 R_1 R_5 s + R_1 R_5 g_m - R_1 + s^2 (C_5 L_5 R_1 R_5 g_m - C_5 L_5 R_1)}{2R_1 g_m + s^3 (2C_4 C_5 L_5 R_1 R_5 g_m + 2C_4 C_5 L_5 R_1 + 2C_4 C_5 L_5 R_5) + s^2 (2C_4 C_5 R_1 R_5 + 2C_5 L_5 R_1 g_m + C_5 L_5) + s (2C_4 R_1 R_5 g_m + 2C_4 R_1 + 2C_4 R_5 + 2C_5 R_1 R_5 g_m + C_5 R_5) + 1}$$

$$10.14 \quad \text{INVALID-ORDER-14} \quad Z(s) = \left(R_1, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, R_5, \infty \right)$$

$$H(s) = \frac{R_1 R_4 R_5 g_m - R_1 R_4}{2R_1 R_4 g_m + 2R_1 R_5 g_m + 2R_1 + R_4 + 2R_5 + s (2C_4 R_1 R_4 R_5 g_m + 2C_4 R_1 R_4 + 2C_4 R_4 R_5)}$$

$$10.15 \quad \text{INVALID-ORDER-15} \quad Z(s) = \left(R_1, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, L_5 s + \frac{1}{C_5 s}, \infty \right)$$

$$H(s) = \frac{C_5 L_5 R_1 R_4 g_m s^2 - C_5 R_1 R_4 s + R_1 R_4 g_m}{2R_1 g_m + s^3 (2C_4 C_5 L_5 R_1 R_4 g_m + 2C_4 C_5 L_5 R_4) + s^2 (2C_4 C_5 R_1 R_4 + 2C_5 L_5 R_1 g_m + 2C_5 L_5) + s (2C_4 R_1 R_4 g_m + 2C_4 R_4 + 2C_5 R_1 R_4 g_m + 2C_5 R_1 + C_5 R_4) + 2}$$

$$10.16 \quad \text{INVALID-ORDER-16} \quad Z(s) = \left(R_1, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \infty \right)$$

$$H(s) = \frac{-C_5 L_5 R_1 R_4 s^2 + L_5 R_1 R_4 g_m s - R_1 R_4}{2C_4 C_5 L_5 R_1 R_4 s^3 + 2R_1 R_4 g_m + 2R_1 + R_4 + s^2 (2C_4 L_5 R_1 R_4 g_m + 2C_4 L_5 R_4 + 2C_5 L_5 R_1 R_4 g_m + 2C_5 L_5 R_1 + C_5 L_5 R_4) + s (2C_4 R_1 R_4 + 2L_5 R_1 g_m + 2L_5)}$$

$$10.17 \quad \text{INVALID-ORDER-17} \quad Z(s) = \left(R_1, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, L_5 s + R_5 + \frac{1}{C_5 s}, \infty \right)$$

$$H(s) = \frac{C_5 L_5 R_1 R_4 g_m s^2 + R_1 R_4 g_m + s (C_5 R_1 R_4 R_5 g_m - C_5 R_1 R_4)}{2R_1 g_m + s^3 (2C_4 C_5 L_5 R_1 R_4 g_m + 2C_4 C_5 L_5 R_4) + s^2 (2C_4 C_5 R_1 R_4 R_5 g_m + 2C_4 C_5 R_1 R_4 + 2C_4 C_5 R_4 R_5 + 2C_5 L_5 R_1 g_m + 2C_5 L_5) + s (2C_4 R_1 R_4 g_m + 2C_4 R_4 + 2C_5 R_1 R_4 g_m + 2C_5 R_1 R_5 g_m + 2C_5 R_1 + C_5 R_4 + 2C_5 R_5) + 2}$$

$$10.18 \quad \text{INVALID-ORDER-18} \quad Z(s) = \left(R_1, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, \frac{L_5 R_5 s}{C_5 L_5 R_5 s^2 + L_5 s + R_5}, \infty \right)$$

$$H(s) = \frac{-C_5 L_5 R_1 R_4 R_5 s^2 - R_1 R_4 R_5 + s (L_5 R_1 R_4 R_5 g_m - L_5 R_1 R_4)}{2C_4 C_5 L_5 R_1 R_4 R_5 s^3 + 2R_1 R_4 R_5 g_m + 2R_1 R_5 + R_4 R_5 + s^2 (2C_4 L_5 R_1 R_4 R_5 g_m + 2C_4 L_5 R_1 R_4 + 2C_4 L_5 R_4 R_5 + 2C_5 L_5 R_1 R_4 R_5 g_m + 2C_5 L_5 R_1 R_5 + C_5 L_5 R_4 R_5) + s (2C_4 R_1 R_4 R_5 + 2L_5 R_1 R_4 g_m + 2L_5 R_1 R_5 g_m + 2L_5 R_1 + L_5 R_4 + 2L_5 R_5)}$$

$$10.19 \quad \text{INVALID-ORDER-19} \quad Z(s) = \left(R_1, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, \frac{C_5 L_5 R_5 s^2 + L_5 s + R_5}{C_5 L_5 s^2 + 1}, \infty \right)$$

$$H(s) = \frac{L_5 R_1 R_4 g_m s + R_1 R_4 R_5 g_m - R_1 R_4 + s^2 (C_5 L_5 R_1 R_4 R_5 g_m - C_5 L_5 R_1 R_4)}{2R_1 R_4 g_m + 2R_1 R_5 g_m + 2R_1 + R_4 + 2R_5 + s^3 (2C_4 C_5 L_5 R_1 R_4 R_5 g_m + 2C_4 C_5 L_5 R_1 R_4 + 2C_4 C_5 L_5 R_4 R_5) + s^2 (2C_4 L_5 R_1 R_4 g_m + 2C_4 L_5 R_4 + 2C_5 L_5 R_1 R_4 g_m + 2C_5 L_5 R_1 R_5 g_m + 2C_5 L_5 R_1 + C_5 L_5 R_4 + 2C_5 L_5 R_5) + s (2C_4 R_1 R_4 R_5 g_m + 2C_4 R_1 R_4 + 2C_4 R_4 R_5 + 2L_5 R_1 R_4 g_m + 2L_5 R_1 R_5 g_m + 2L_5 R_1 + L_5 R_4 + 2L_5 R_5)}$$

$$10.20 \quad \text{INVALID-ORDER-20} \quad Z(s) = \left(R_1, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, \frac{R_5(C_5 L_5 s^2 + 1)}{C_5 L_5 s^2 + C_5 R_5 s + 1}, \infty \right)$$

$$H(s) = \frac{-C_5 R_1 R_4 R_5 s + R_1 R_4 R_5 g_m - R_1 R_4 + s^2 (C_5 L_5 R_1 R_4 R_5 g_m - C_5 L_5 R_1 R_4)}{2R_1 R_4 g_m + 2R_1 R_5 g_m + 2R_1 + R_4 + 2R_5 + s^3 (2C_4 C_5 L_5 R_1 R_4 R_5 g_m + 2C_4 C_5 L_5 R_1 R_4 + 2C_4 C_5 L_5 R_4 R_5) + s^2 (2C_4 C_5 R_1 R_4 R_5 + 2C_5 L_5 R_1 R_4 g_m + 2C_5 L_5 R_1 R_5 g_m + 2C_5 L_5 R_1 + C_5 L_5 R_4 + 2C_5 L_5 R_5) + s (2C_4 R_1 R_4 R_5 g_m + 2C_4 R_1 R_4 + 2C_4 R_4 R_5 + 2C_5 R_1 R_4 R_5 g_m)}$$

$$10.21 \quad \text{INVALID-ORDER-21} \quad Z(s) = \left(R_1, \infty, \infty, R_4 + \frac{1}{C_4 s}, R_5, \infty \right)$$

$$H(s) = \frac{R_1 R_5 g_m - R_1 + s (C_4 R_1 R_4 R_5 g_m - C_4 R_1 R_4)}{2R_1 g_m + s (2C_4 R_1 R_4 g_m + 2C_4 R_1 R_5 g_m + 2C_4 R_1 + C_4 R_4 + 2C_4 R_5) + 1}$$

10.22 INVALID-ORDER-22 $Z(s) = \left(R_1, \infty, \infty, R_4 + \frac{1}{C_4 s}, \frac{1}{C_5 s}, \infty \right)$

$$H(s) = \frac{-C_4 C_5 R_1 R_4 s^2 + R_1 g_m + s (C_4 R_1 R_4 g_m - C_5 R_1)}{s^2 (2C_4 C_5 R_1 R_4 g_m + 2C_4 C_5 R_1 + C_4 C_5 R_4) + s (2C_4 R_1 g_m + 2C_4 + 2C_5 R_1 g_m + C_5)}$$

10.23 INVALID-ORDER-23 $Z(s) = \left(R_1, \infty, \infty, R_4 + \frac{1}{C_4 s}, R_5 + \frac{1}{C_5 s}, \infty \right)$

$$H(s) = \frac{R_1 g_m + s^2 (C_4 C_5 R_1 R_4 R_5 g_m - C_4 C_5 R_1 R_4) + s (C_4 R_1 R_4 g_m + C_5 R_1 R_5 g_m - C_5 R_1)}{s^2 (2C_4 C_5 R_1 R_4 g_m + 2C_4 C_5 R_1 R_5 g_m + 2C_4 C_5 R_1 + C_4 C_5 R_4 + 2C_4 C_5 R_5) + s (2C_4 R_1 g_m + 2C_4 + 2C_5 R_1 g_m + C_5)}$$

10.24 INVALID-ORDER-24 $Z(s) = \left(R_1, \infty, \infty, R_4 + \frac{1}{C_4 s}, L_5 s + \frac{1}{C_5 s}, \infty \right)$

$$H(s) = \frac{C_4 C_5 L_5 R_1 R_4 g_m s^3 + R_1 g_m + s^2 (-C_4 C_5 R_1 R_4 + C_5 L_5 R_1 g_m) + s (C_4 R_1 R_4 g_m - C_5 R_1)}{s^3 (2C_4 C_5 L_5 R_1 g_m + 2C_4 C_5 L_5) + s^2 (2C_4 C_5 R_1 R_4 g_m + 2C_4 C_5 R_1 + C_4 C_5 R_4) + s (2C_4 R_1 g_m + 2C_4 + 2C_5 R_1 g_m + C_5)}$$

10.25 INVALID-ORDER-25 $Z(s) = \left(R_1, \infty, \infty, R_4 + \frac{1}{C_4 s}, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \infty \right)$

$$H(s) = \frac{-C_4 C_5 L_5 R_1 R_4 s^3 - R_1 + s^2 (C_4 L_5 R_1 R_4 g_m - C_5 L_5 R_1) + s (-C_4 R_1 R_4 + L_5 R_1 g_m)}{2R_1 g_m + s^3 (2C_4 C_5 L_5 R_1 R_4 g_m + 2C_4 C_5 L_5 R_1 + C_4 C_5 L_5 R_4) + s^2 (2C_4 L_5 R_1 g_m + 2C_4 L_5 + 2C_5 L_5 R_1 g_m + C_5 L_5) + s (2C_4 R_1 R_4 g_m + 2C_4 R_1 + C_4 R_4) + 1}$$

10.26 INVALID-ORDER-26 $Z(s) = \left(R_1, \infty, \infty, R_4 + \frac{1}{C_4 s}, L_5 s + R_5 + \frac{1}{C_5 s}, \infty \right)$

$$H(s) = \frac{C_4 C_5 L_5 R_1 R_4 g_m s^3 + R_1 g_m + s^2 (C_4 C_5 R_1 R_4 R_5 g_m - C_4 C_5 R_1 R_4 + C_5 L_5 R_1 g_m) + s (C_4 R_1 R_4 g_m + C_5 R_1 R_5 g_m - C_5 R_1)}{s^3 (2C_4 C_5 L_5 R_1 g_m + 2C_4 C_5 L_5) + s^2 (2C_4 C_5 R_1 R_4 g_m + 2C_4 C_5 R_1 R_5 g_m + 2C_4 C_5 R_1 + C_4 C_5 R_4 + 2C_4 C_5 R_5) + s (2C_4 R_1 g_m + 2C_4 + 2C_5 R_1 g_m + C_5)}$$

10.27 INVALID-ORDER-27 $Z(s) = \left(R_1, \infty, \infty, R_4 + \frac{1}{C_4 s}, \frac{L_5 R_5 s}{C_5 L_5 R_5 s^2 + L_5 s + R_5}, \infty \right)$

$$H(s) = \frac{-C_4 C_5 L_5 R_1 R_4 R_5 s^3 - R_1 R_5 + s^2 (C_4 L_5 R_1 R_4 R_5 g_m - C_4 L_5 R_1 R_4 - C_5 L_5 R_1 R_5) + s (-C_4 R_1 R_4 R_5 + L_5 R_1 R_5 g_m - L_5 R_1)}{2R_1 R_5 g_m + R_5 + s^3 (2C_4 C_5 L_5 R_1 R_4 R_5 g_m + 2C_4 C_5 L_5 R_1 R_5 + C_4 C_5 L_5 R_4 R_5) + s^2 (2C_4 L_5 R_1 R_4 g_m + 2C_4 L_5 R_1 R_5 g_m + 2C_4 L_5 R_1 + C_4 L_5 R_4 + 2C_4 L_5 R_5 + 2C_5 L_5 R_1 R_5 g_m + C_5 L_5 R_5) + s (2C_4 R_1 R_4 R_5 g_m + 2C_4 R_1 R_5 + C_4 R_4 R_5 + 2L_5 R_1 g_m + L_5)}$$

10.28 INVALID-ORDER-28 $Z(s) = \left(R_1, \infty, \infty, R_4 + \frac{1}{C_4 s}, \frac{C_5 L_5 R_5 s^2 + L_5 s + R_5}{C_5 L_5 s^2 + 1}, \infty \right)$

$$H(s) = \frac{R_1 R_5 g_m - R_1 + s^3 (C_4 C_5 L_5 R_1 R_4 R_5 g_m - C_4 C_5 L_5 R_1 R_4) + s^2 (C_4 L_5 R_1 R_4 g_m + C_5 L_5 R_1 R_5 g_m - C_5 L_5 R_1) + s (C_4 R_1 R_4 R_5 g_m - C_4 R_1 R_4 + L_5 R_1 g_m)}{2R_1 g_m + s^3 (2C_4 C_5 L_5 R_1 R_4 g_m + 2C_4 C_5 L_5 R_1 R_5 g_m + 2C_4 C_5 L_5 R_1 + C_4 C_5 L_5 R_4 + 2C_4 C_5 L_5 R_5) + s^2 (2C_4 L_5 R_1 g_m + 2C_4 L_5 + 2C_5 L_5 R_1 g_m + C_5 L_5) + s (2C_4 R_1 R_4 g_m + 2C_4 R_1 R_5 g_m + 2C_4 R_1 + C_4 R_4 + 2C_4 R_5) + 1}$$

10.29 INVALID-ORDER-29 $Z(s) = \left(R_1, \infty, \infty, R_4 + \frac{1}{C_4 s}, \frac{R_5 (C_5 L_5 s^2 + 1)}{C_5 L_5 s^2 + C_5 R_5 s + 1}, \infty \right)$

$$H(s) = \frac{R_1 R_5 g_m - R_1 + s^3 (C_4 C_5 L_5 R_1 R_4 R_5 g_m - C_4 C_5 L_5 R_1 R_4) + s^2 (-C_4 C_5 R_1 R_4 R_5 + C_5 L_5 R_1 R_5 g_m - C_5 L_5 R_1) + s (C_4 R_1 R_4 R_5 g_m - C_4 R_1 R_4 - C_5 R_1 R_5)}{2R_1 g_m + s^3 (2C_4 C_5 L_5 R_1 R_4 g_m + 2C_4 C_5 L_5 R_1 R_5 g_m + 2C_4 C_5 L_5 R_1 + C_4 C_5 L_5 R_4 + 2C_4 C_5 L_5 R_5) + s^2 (2C_4 C_5 R_1 R_4 R_5 g_m + 2C_4 C_5 R_1 R_5 + C_4 C_5 R_4 R_5 + 2C_5 L_5 R_1 g_m + C_5 L_5) + s (2C_4 R_1 R_4 g_m + 2C_4 R_1 R_5 g_m + 2C_4 R_1 + C_4 R_4 + 2C_4 R_5 + 2C_5 R_1 R_5 g_m + C_5 R_5) + 1}$$

10.30 INVALID-ORDER-30 $Z(s) = \left(R_1, \infty, \infty, L_4 s + \frac{1}{C_4 s}, \frac{1}{C_5 s}, \infty \right)$

$$H(s) = \frac{-C_4 C_5 L_4 R_1 s^3 + C_4 L_4 R_1 g_m s^2 - C_5 R_1 s + R_1 g_m}{2C_4 C_5 R_1 s^2 + s^3 (2C_4 C_5 L_4 R_1 g_m + C_4 C_5 L_4) + s (2C_4 R_1 g_m + 2C_4 + 2C_5 R_1 g_m + C_5)}$$

10.31 INVALID-ORDER-31 $Z(s) = \left(R_1, \infty, \infty, L_4s + \frac{1}{C_4s}, \frac{R_5}{C_5R_5s+1}, \infty \right)$

$$H(s) = \frac{-C_4C_5L_4R_1R_5s^3 - C_5R_1R_5s + R_1R_5g_m - R_1 + s^2(C_4L_4R_1R_5g_m - C_4L_4R_1)}{2R_1g_m + s^3(2C_4C_5L_4R_1R_5g_m + C_4C_5L_4R_5) + s^2(2C_4C_5R_1R_5 + 2C_4L_4R_1g_m + C_4L_4) + s(2C_4R_1R_5g_m + 2C_4R_1 + 2C_4R_5 + 2C_5R_1R_5g_m + C_5R_5) + 1}$$

10.32 INVALID-ORDER-32 $Z(s) = \left(R_1, \infty, \infty, L_4s + \frac{1}{C_4s}, R_5 + \frac{1}{C_5s}, \infty \right)$

$$H(s) = \frac{C_4L_4R_1g_ms^2 + R_1g_m + s^3(C_4C_5L_4R_1R_5g_m - C_4C_5L_4R_1) + s(C_5R_1R_5g_m - C_5R_1)}{s^3(2C_4C_5L_4R_1g_m + C_4C_5L_4) + s^2(2C_4C_5R_1R_5g_m + 2C_4C_5R_1 + 2C_4C_5R_5) + s(2C_4R_1g_m + 2C_4 + 2C_5R_1g_m + C_5)}$$

10.33 INVALID-ORDER-33 $Z(s) = \left(R_1, \infty, \infty, L_4s + \frac{1}{C_4s}, L_5s + \frac{1}{C_5s}, \infty \right)$

$$H(s) = \frac{C_4C_5L_4L_5R_1g_ms^4 - C_4C_5L_4R_1s^3 - C_5R_1s + R_1g_m + s^2(C_4L_4R_1g_m + C_5L_5R_1g_m)}{2C_4C_5R_1s^2 + s^3(2C_4C_5L_4R_1g_m + C_4C_5L_4 + 2C_4C_5L_5R_1g_m + 2C_4C_5L_5) + s(2C_4R_1g_m + 2C_4 + 2C_5R_1g_m + C_5)}$$

10.34 INVALID-ORDER-34 $Z(s) = \left(R_1, \infty, \infty, L_4s + \frac{1}{C_4s}, \frac{L_5s}{C_5L_5s^2+1}, \infty \right)$

$$H(s) = \frac{-C_4C_5L_4L_5R_1s^4 + C_4L_4L_5R_1g_ms^3 + L_5R_1g_ms - R_1 + s^2(-C_4L_4R_1 - C_5L_5R_1)}{2C_4C_5L_5R_1s^3 + 2C_4R_1s + 2R_1g_m + s^4(2C_4C_5L_4L_5R_1g_m + C_4C_5L_4L_5) + s^2(2C_4L_4R_1g_m + C_4L_4 + 2C_4L_5R_1g_m + 2C_4L_5 + 2C_5L_5R_1g_m + C_5L_5) + 1}$$

10.35 INVALID-ORDER-35 $Z(s) = \left(R_1, \infty, \infty, L_4s + \frac{1}{C_4s}, L_5s + R_5 + \frac{1}{C_5s}, \infty \right)$

$$H(s) = \frac{C_4C_5L_4L_5R_1g_ms^4 + R_1g_m + s^3(C_4C_5L_4R_1R_5g_m - C_4C_5L_4R_1) + s^2(C_4L_4R_1g_m + C_5L_5R_1g_m) + s(C_5R_1R_5g_m - C_5R_1)}{s^3(2C_4C_5L_4R_1g_m + C_4C_5L_4 + 2C_4C_5L_5R_1g_m + 2C_4C_5L_5) + s^2(2C_4C_5R_1R_5g_m + 2C_4C_5R_1 + 2C_4C_5R_5) + s(2C_4R_1g_m + 2C_4 + 2C_5R_1g_m + C_5)}$$

10.36 INVALID-ORDER-36 $Z(s) = \left(R_1, \infty, \infty, L_4s + \frac{1}{C_4s}, \frac{L_5R_5s}{C_5L_5R_5s^2+L_5s+R_5}, \infty \right)$

$$H(s) = \frac{-C_4C_5L_4L_5R_1R_5s^4 - R_1R_5 + s^3(C_4L_4L_5R_1R_5g_m - C_4L_4L_5R_1) + s^2(-C_4L_4R_1R_5 - C_5L_5R_1R_5) + s(L_5R_1R_5g_m - L_5R_1)}{2R_1R_5g_m + R_5 + s^4(2C_4C_5L_4L_5R_1R_5g_m + C_4C_5L_4L_5R_5) + s^3(2C_4C_5L_5R_1R_5 + 2C_4L_4L_5R_1g_m + C_4L_4L_5) + s^2(2C_4L_4R_1R_5g_m + C_4L_4R_5 + 2C_4L_5R_1R_5g_m + 2C_4L_5R_1 + 2C_4L_5R_5 + 2C_5L_5R_1R_5g_m + C_5L_5R_5) + s(2C_4R_1R_5 + 2L_5R_1g_m + L_5)}$$

10.37 INVALID-ORDER-37 $Z(s) = \left(R_1, \infty, \infty, L_4s + \frac{1}{C_4s}, \frac{C_5L_5R_5s^2+L_5s+R_5}{C_5L_5s^2+1}, \infty \right)$

$$H(s) = \frac{C_4L_4L_5R_1g_ms^3 + L_5R_1g_ms + R_1R_5g_m - R_1 + s^4(C_4C_5L_4L_5R_1R_5g_m - C_4C_5L_4L_5R_1) + s^2(C_4L_4R_1R_5g_m - C_4L_4R_1 + C_5L_5R_1R_5g_m - C_5L_5R_1)}{2R_1g_m + s^4(2C_4C_5L_4L_5R_1g_m + C_4C_5L_4L_5) + s^3(2C_4C_5L_5R_1R_5g_m + 2C_4C_5L_5R_1 + 2C_4C_5L_5R_5) + s^2(2C_4L_4R_1g_m + C_4L_4 + 2C_4L_5R_1g_m + 2C_4L_5 + 2C_5L_5R_1g_m + C_5L_5) + s(2C_4R_1R_5g_m + 2C_4R_1 + 2C_4R_5) + 1}$$

10.38 INVALID-ORDER-38 $Z(s) = \left(R_1, \infty, \infty, L_4s + \frac{1}{C_4s}, \frac{R_5(C_5L_5s^2+1)}{C_5L_5s^2+C_5R_5s+1}, \infty \right)$

$$H(s) = \frac{-C_4C_5L_4R_1R_5s^3 - C_5R_1R_5s + R_1R_5g_m - R_1 + s^4(C_4C_5L_4L_5R_1R_5g_m - C_4C_5L_4L_5R_1) + s^2(C_4L_4R_1R_5g_m - C_4L_4R_1 + C_5L_5R_1R_5g_m - C_5L_5R_1)}{2R_1g_m + s^4(2C_4C_5L_4L_5R_1g_m + C_4C_5L_4L_5) + s^3(2C_4C_5L_4R_1R_5g_m + C_4C_5L_4R_5 + 2C_4C_5L_5R_1R_5g_m + 2C_4C_5L_5R_1 + 2C_4C_5L_5R_5) + s^2(2C_4C_5R_1R_5 + 2C_4L_4R_1g_m + C_4L_4 + 2C_5L_5R_1g_m + C_5L_5) + s(2C_4R_1R_5g_m + 2C_4R_1 + 2C_4R_5 + 2C_5R_1R_5g_m + C_5R_5)}$$

10.39 INVALID-ORDER-39 $Z(s) = \left(R_1, \infty, \infty, \frac{L_4s}{C_4L_4s^2+1}, \frac{1}{C_5s}, \infty \right)$

$$H(s) = \frac{-C_5L_4R_1s^2 + L_4R_1g_ms}{2C_4C_5L_4R_1s^3 + 2C_5R_1s + 2R_1g_m + s^2(2C_4L_4R_1g_m + 2C_4L_4 + 2C_5L_4R_1g_m + C_5L_4) + 2}$$

10.40 INVALID-ORDER-40 $Z(s) = \left(R_1, \infty, \infty, \frac{L_4 s}{C_4 L_4 s^2 + 1}, \frac{R_5}{C_5 R_5 s + 1}, \infty \right)$

$$H(s) = \frac{-C_5 L_4 R_1 R_5 s^2 + s(L_4 R_1 R_5 g_m - L_4 R_1)}{2C_4 C_5 L_4 R_1 R_5 s^3 + 2R_1 R_5 g_m + 2R_1 + 2R_5 + s^2(2C_4 L_4 R_1 R_5 g_m + 2C_4 L_4 R_1 + 2C_4 L_4 R_5 + 2C_5 L_4 R_1 R_5 g_m + C_5 L_4 R_5) + s(2C_5 R_1 R_5 + 2L_4 R_1 g_m + L_4)}$$

10.41 INVALID-ORDER-41 $Z(s) = \left(R_1, \infty, \infty, \frac{L_4 s}{C_4 L_4 s^2 + 1}, R_5 + \frac{1}{C_5 s}, \infty \right)$

$$H(s) = \frac{L_4 R_1 g_m s + s^2(C_5 L_4 R_1 R_5 g_m - C_5 L_4 R_1)}{2R_1 g_m + s^3(2C_4 C_5 L_4 R_1 R_5 g_m + 2C_4 C_5 L_4 R_1 + 2C_4 C_5 L_4 R_5) + s^2(2C_4 L_4 R_1 g_m + 2C_4 L_4 + 2C_5 L_4 R_1 g_m + C_5 L_4) + s(2C_5 R_1 R_5 g_m + 2C_5 R_1 + 2C_5 R_5) + 2}$$

10.42 INVALID-ORDER-42 $Z(s) = \left(R_1, \infty, \infty, \frac{L_4 s}{C_4 L_4 s^2 + 1}, L_5 s + \frac{1}{C_5 s}, \infty \right)$

$$H(s) = \frac{C_5 L_4 L_5 R_1 g_m s^3 - C_5 L_4 R_1 s^2 + L_4 R_1 g_m s}{2C_4 C_5 L_4 R_1 s^3 + 2C_5 R_1 s + 2R_1 g_m + s^4(2C_4 C_5 L_4 L_5 R_1 g_m + 2C_4 C_5 L_4 L_5) + s^2(2C_4 L_4 R_1 g_m + 2C_4 L_4 + 2C_5 L_4 R_1 g_m + C_5 L_4 + 2C_5 L_5 R_1 g_m + 2C_5 L_5) + 2}$$

10.43 INVALID-ORDER-43 $Z(s) = \left(R_1, \infty, \infty, \frac{L_4 s}{C_4 L_4 s^2 + 1}, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \infty \right)$

$$H(s) = \frac{-C_5 L_4 L_5 R_1 s^3 + L_4 L_5 R_1 g_m s^2 - L_4 R_1 s}{2C_4 C_5 L_4 L_5 R_1 s^4 + 2R_1 + s^3(2C_4 L_4 L_5 R_1 g_m + 2C_4 L_4 L_5 + 2C_5 L_4 L_5 R_1 g_m + C_5 L_4 L_5) + s^2(2C_4 L_4 R_1 + 2C_5 L_5 R_1) + s(2L_4 R_1 g_m + L_4 + 2L_5 R_1 g_m + 2L_5)}$$

10.44 INVALID-ORDER-44 $Z(s) = \left(R_1, \infty, \infty, \frac{L_4 s}{C_4 L_4 s^2 + 1}, L_5 s + R_5 + \frac{1}{C_5 s}, \infty \right)$

$$H(s) = \frac{C_5 L_4 L_5 R_1 g_m s^3 + L_4 R_1 g_m s + s^2(C_5 L_4 R_1 R_5 g_m - C_5 L_4 R_1)}{2R_1 g_m + s^4(2C_4 C_5 L_4 L_5 R_1 g_m + 2C_4 C_5 L_4 L_5) + s^3(2C_4 C_5 L_4 R_1 R_5 g_m + 2C_4 C_5 L_4 R_1 + 2C_4 C_5 L_4 R_5) + s^2(2C_4 L_4 R_1 g_m + 2C_4 L_4 + 2C_5 L_4 R_1 g_m + C_5 L_4 + 2C_5 L_5 R_1 g_m + 2C_5 L_5) + s(2C_5 R_1 R_5 g_m + 2C_5 R_1 + 2C_5 R_5) + 2}$$

10.45 INVALID-ORDER-45 $Z(s) = \left(R_1, \infty, \infty, \frac{L_4 s}{C_4 L_4 s^2 + 1}, \frac{L_5 R_5 s}{C_5 L_5 R_5 s^2 + L_5 s + R_5}, \infty \right)$

$$H(s) = \frac{-C_5 L_4 L_5 R_1 R_5 s^3 - L_4 R_1 R_5 s + s^2(L_4 L_5 R_1 R_5 g_m - L_4 L_5 R_1)}{2C_4 C_5 L_4 L_5 R_1 R_5 s^4 + 2R_1 R_5 + s^3(2C_4 L_4 L_5 R_1 R_5 g_m + 2C_4 L_4 L_5 R_1 + 2C_4 L_4 L_5 R_5 + 2C_5 L_4 L_5 R_1 R_5 g_m + C_5 L_4 L_5 R_5) + s^2(2C_4 L_4 R_1 R_5 + 2C_5 L_5 R_1 R_5 + 2L_4 L_5 R_1 g_m + L_4 L_5) + s(2L_4 R_1 R_5 g_m + L_4 R_5 + 2L_5 R_1 R_5 g_m + 2L_5 R_1 + 2L_5 R_5)}$$

10.46 INVALID-ORDER-46 $Z(s) = \left(R_1, \infty, \infty, \frac{L_4 s}{C_4 L_4 s^2 + 1}, \frac{C_5 L_5 R_5 s^2 + L_5 s + R_5}{C_5 L_5 s^2 + 1}, \infty \right)$

$$H(s) = \frac{L_4 L_5 R_1 g_m s^2 + s^3(C_5 L_4 L_5 R_1 R_5 g_m - C_5 L_4 L_5 R_1) + s(L_4 R_1 R_5 g_m - L_4 R_1)}{2R_1 R_5 g_m + 2R_1 + 2R_5 + s^4(2C_4 C_5 L_4 L_5 R_1 R_5 g_m + 2C_4 C_5 L_4 L_5 R_1 + 2C_4 C_5 L_4 L_5 R_5) + s^3(2C_4 L_4 L_5 R_1 g_m + 2C_4 L_4 L_5 + 2C_5 L_4 L_5 R_1 g_m + C_5 L_4 L_5) + s^2(2C_4 L_4 R_1 R_5 g_m + 2C_4 L_4 R_1 + 2C_4 L_4 R_5 + 2C_5 L_5 R_1 R_5 g_m + 2C_5 L_5 R_1 + 2C_5 L_5 R_5) + s(2L_4 R_1 g_m + L_4 + 2L_5 R_1 g_m + L_5)}$$

10.47 INVALID-ORDER-47 $Z(s) = \left(R_1, \infty, \infty, \frac{L_4 s}{C_4 L_4 s^2 + 1}, \frac{R_5(C_5 L_5 s^2 + 1)}{C_5 L_5 s^2 + C_5 R_5 s + 1}, \infty \right)$

$$H(s) = \frac{-C_5 L_4 R_1 R_5 s^2 + s^3(C_5 L_4 L_5 R_1 R_5 g_m - C_5 L_4 L_5 R_1) + s(L_4 R_1 R_5 g_m - L_4 R_1)}{2R_1 R_5 g_m + 2R_1 + 2R_5 + s^4(2C_4 C_5 L_4 L_5 R_1 R_5 g_m + 2C_4 C_5 L_4 L_5 R_1 + 2C_4 C_5 L_4 L_5 R_5) + s^3(2C_4 C_5 L_4 R_1 R_5 + 2C_5 L_4 L_5 R_1 g_m + C_5 L_4 L_5) + s^2(2C_4 L_4 R_1 R_5 g_m + 2C_4 L_4 R_1 + 2C_4 L_4 R_5 + 2C_5 L_4 R_1 R_5 g_m + C_5 L_4 R_5 + 2C_5 L_5 R_1 R_5 g_m + 2C_5 L_5 R_1 + 2C_5 L_5 R_5) + s(2C_5 R_1 R_5 g_m + 2C_5 R_1 + 2C_5 R_5)}$$

10.48 INVALID-ORDER-48 $Z(s) = \left(R_1, \infty, \infty, L_4 s + R_4 + \frac{1}{C_4 s}, \frac{1}{C_5 s}, \infty \right)$

$$H(s) = \frac{-C_4 C_5 L_4 R_1 s^3 + R_1 g_m + s^2(-C_4 C_5 R_1 R_4 + C_4 L_4 R_1 g_m) + s(C_4 R_1 R_4 g_m - C_5 R_1)}{s^3(2C_4 C_5 L_4 R_1 g_m + C_4 C_5 L_4) + s^2(2C_4 C_5 R_1 R_4 g_m + 2C_4 C_5 R_1 + C_4 C_5 R_4) + s(2C_4 R_1 g_m + 2C_4 + 2C_5 R_1 g_m + C_5)}$$

10.49 INVALID-ORDER-49 $Z(s) = \left(R_1, \infty, \infty, L_4s + R_4 + \frac{1}{C_4s}, \frac{R_5}{C_5R_5s+1}, \infty \right)$

$$H(s) = \frac{-C_4C_5L_4R_1R_5s^3 + R_1R_5g_m - R_1 + s^2(-C_4C_5R_1R_4R_5 + C_4L_4R_1R_5g_m - C_4L_4R_1) + s(C_4R_1R_4R_5g_m - C_4R_1R_4 - C_5R_1R_5)}{2R_1g_m + s^3(2C_4C_5L_4R_1R_5g_m + C_4C_5L_4R_5) + s^2(2C_4C_5R_1R_4R_5g_m + 2C_4C_5R_1R_5 + C_4C_5R_4R_5 + 2C_4L_4R_1g_m + C_4L_4) + s(2C_4R_1R_4g_m + 2C_4R_1R_5g_m + 2C_4R_1 + C_4R_4 + 2C_4R_5 + 2C_5R_1R_5g_m + C_5R_5) + 1}$$

10.50 INVALID-ORDER-50 $Z(s) = \left(R_1, \infty, \infty, L_4s + R_4 + \frac{1}{C_4s}, R_5 + \frac{1}{C_5s}, \infty \right)$

$$H(s) = \frac{R_1g_m + s^3(C_4C_5L_4R_1R_5g_m - C_4C_5L_4R_1) + s^2(C_4C_5R_1R_4R_5g_m - C_4C_5R_1R_4 + C_4L_4R_1g_m) + s(C_4R_1R_4g_m + C_5R_1R_5g_m - C_5R_1)}{s^3(2C_4C_5L_4R_1g_m + C_4C_5L_4) + s^2(2C_4C_5R_1R_4g_m + 2C_4C_5R_1R_5g_m + 2C_4C_5R_1 + C_4C_5R_4 + 2C_4C_5R_5) + s(2C_4R_1g_m + 2C_4 + 2C_5R_1g_m + C_5)}$$

10.51 INVALID-ORDER-51 $Z(s) = \left(R_1, \infty, \infty, L_4s + R_4 + \frac{1}{C_4s}, L_5s + \frac{1}{C_5s}, \infty \right)$

$$H(s) = \frac{C_4C_5L_4L_5R_1g_ms^4 + R_1g_m + s^3(-C_4C_5L_4R_1 + C_4C_5L_5R_1R_4g_m) + s^2(-C_4C_5R_1R_4 + C_4L_4R_1g_m + C_5L_5R_1g_m) + s(C_4R_1R_4g_m - C_5R_1)}{s^3(2C_4C_5L_4R_1g_m + C_4C_5L_4 + 2C_4C_5L_5R_1g_m + 2C_4C_5L_5) + s^2(2C_4C_5R_1R_4g_m + 2C_4C_5R_1 + C_4C_5R_4) + s(2C_4R_1g_m + 2C_4 + 2C_5R_1g_m + C_5)}$$

10.52 INVALID-ORDER-52 $Z(s) = \left(R_1, \infty, \infty, L_4s + R_4 + \frac{1}{C_4s}, \frac{L_5s}{C_5L_5s^2+1}, \infty \right)$

$$H(s) = \frac{-C_4C_5L_4L_5R_1s^4 - R_1 + s^3(-C_4C_5L_5R_1R_4 + C_4L_4L_5R_1g_m) + s^2(-C_4L_4R_1 + C_4L_5R_1R_4g_m - C_5L_5R_1) + s(-C_4R_1R_4 + L_5R_1g_m)}{2R_1g_m + s^4(2C_4C_5L_4L_5R_1g_m + C_4C_5L_4L_5) + s^3(2C_4C_5L_5R_1R_4g_m + 2C_4C_5L_5R_1 + C_4C_5L_5R_4) + s^2(2C_4L_4R_1g_m + C_4L_4 + 2C_4L_5R_1g_m + 2C_4L_5 + 2C_5L_5R_1g_m + C_5L_5) + s(2C_4R_1R_4g_m + 2C_4R_1 + C_4R_4) + 1}$$

10.53 INVALID-ORDER-53 $Z(s) = \left(R_1, \infty, \infty, L_4s + R_4 + \frac{1}{C_4s}, L_5s + R_5 + \frac{1}{C_5s}, \infty \right)$

$$H(s) = \frac{C_4C_5L_4L_5R_1g_ms^4 + R_1g_m + s^3(C_4C_5L_4R_1R_5g_m - C_4C_5L_4R_1 + C_4C_5L_5R_1R_4g_m) + s^2(C_4C_5R_1R_4R_5g_m - C_4C_5R_1R_4 + C_4L_4R_1g_m + C_5L_5R_1g_m) + s(C_4R_1R_4g_m + C_5R_1R_5g_m - C_5R_1)}{s^3(2C_4C_5L_4R_1g_m + C_4C_5L_4 + 2C_4C_5L_5R_1g_m + 2C_4C_5L_5) + s^2(2C_4C_5R_1R_4g_m + 2C_4C_5R_1R_5g_m + 2C_4C_5R_1 + C_4C_5R_4 + 2C_4C_5R_5) + s(2C_4R_1g_m + 2C_4 + 2C_5R_1g_m + C_5)}$$

10.54 INVALID-ORDER-54 $Z(s) = \left(R_1, \infty, \infty, L_4s + R_4 + \frac{1}{C_4s}, \frac{L_5R_5s}{C_5L_5R_5s^2+L_5s+R_5}, \infty \right)$

$$H(s) = \frac{-C_4C_5L_4L_5R_1R_5s^4 - R_1R_5 + s^3(-C_4C_5L_5R_1R_4R_5 + C_4L_4L_5R_1R_5g_m - C_4L_4L_5R_1) + s^2(-C_4L_4R_1R_5 + C_4L_5R_1R_4R_5g_m - C_4L_5R_1R_4 - C_5L_5R_1R_5) + s(-C_4R_1R_4R_5 + L_5R_1R_5g_m)}{2R_1R_5g_m + R_5 + s^4(2C_4C_5L_4L_5R_1R_5g_m + C_4C_5L_4L_5R_5) + s^3(2C_4C_5L_5R_1R_4R_5g_m + 2C_4C_5L_5R_1R_5 + C_4C_5L_5R_4R_5 + 2C_4L_4L_5R_1g_m + C_4L_4L_5) + s^2(2C_4L_4R_1R_5g_m + C_4L_4R_5 + 2C_4L_5R_1R_4g_m + 2C_4L_5R_1R_5g_m + 2C_4L_5R_1 + C_4L_5R_4 + 2C_4L_5R_5 + 2C_5L_5R_1R_5g_m + C_5R_5) + s(2C_4R_1R_4R_5 + L_5R_1R_5g_m + C_5R_5)}$$

10.55 INVALID-ORDER-55 $Z(s) = \left(R_1, \infty, \infty, L_4s + R_4 + \frac{1}{C_4s}, \frac{C_5L_5R_5s^2+L_5s+R_5}{C_5L_5s^2+1}, \infty \right)$

$$H(s) = \frac{R_1R_5g_m - R_1 + s^4(C_4C_5L_4L_5R_1R_5g_m - C_4C_5L_4L_5R_1) + s^3(C_4C_5L_5R_1R_4R_5g_m - C_4C_5L_5R_1R_4 + C_4L_4L_5R_1g_m) + s^2(C_4L_4R_1R_5g_m - C_4L_4R_1 + C_4L_5R_1R_4g_m + C_5L_5R_1R_5g_m - C_5L_5R_1) + s(C_4R_1R_4R_5g_m - C_4R_1R_4 + L_5R_1g_m)}{2R_1g_m + s^4(2C_4C_5L_4L_5R_1g_m + C_4C_5L_4L_5) + s^3(2C_4C_5L_5R_1R_4g_m + 2C_4C_5L_5R_1R_5g_m + 2C_4C_5L_5R_1 + C_4C_5L_5R_4 + 2C_4C_5L_5R_5) + s^2(2C_4L_4R_1g_m + C_4L_4 + 2C_4L_5R_1g_m + 2C_4L_5 + 2C_5L_5R_1g_m + C_5L_5) + s(2C_4R_1R_4g_m + 2C_4R_1R_5g_m + 2C_4R_1 + C_4R_4 + L_5R_1g_m)}$$

10.56 INVALID-ORDER-56 $Z(s) = \left(R_1, \infty, \infty, L_4s + R_4 + \frac{1}{C_4s}, \frac{R_5(C_5L_5s^2+1)}{C_5L_5s^2+C_5R_5s+1}, \infty \right)$

$$H(s) = \frac{R_1R_5g_m - R_1 + s^4(C_4C_5L_4L_5R_1R_5g_m - C_4C_5L_4L_5R_1) + s^3(-C_4C_5L_4R_1R_5 + C_4C_5L_5R_1R_4R_5g_m - C_4C_5L_5R_1R_4) + s^2(-C_4C_5R_1R_4R_5 + C_4L_4R_1R_5g_m - C_4L_4R_1 + C_5L_5R_1R_5g_m - C_5L_5R_1) + s(C_4R_1R_4R_5g_m - C_4R_1R_4 + L_5R_1g_m)}{2R_1g_m + s^4(2C_4C_5L_4L_5R_1g_m + C_4C_5L_4L_5) + s^3(2C_4C_5L_4R_1R_5g_m + C_4C_5L_4R_5 + 2C_4C_5L_5R_1R_4g_m + 2C_4C_5L_5R_1R_5g_m + 2C_4C_5L_5R_1 + C_4C_5L_5R_4 + 2C_4C_5L_5R_5) + s^2(2C_4C_5R_1R_4R_5g_m + 2C_4C_5R_1R_5 + C_4C_5R_4R_5 + 2C_4L_4R_1g_m + C_4L_4 + 2C_5L_5R_1g_m + C_5L_5) + s(2C_4R_1R_4R_5 + L_5R_1g_m + C_5R_5)}$$

10.57 INVALID-ORDER-57 $Z(s) = \left(R_1, \infty, \infty, \frac{L_4R_4s}{C_4L_4R_4s^2+L_4s+R_4}, \frac{1}{C_5s}, \infty \right)$

$$H(s) = \frac{-C_5L_4R_1R_4s^2 + L_4R_1R_4g_ms}{2C_4C_5L_4R_1R_4s^3 + 2R_1R_4g_m + 2R_4 + s^2(2C_4L_4R_1R_4g_m + 2C_4L_4R_4 + 2C_5L_4R_1R_4g_m + 2C_5L_4R_1 + C_5L_4R_4) + s(2C_5R_1R_4 + 2L_4R_1g_m + 2L_4)}$$

$$\mathbf{10.58 \quad INVALID-ORDER-58} \quad Z(s) = \left(R_1, \quad \infty, \quad \infty, \quad \frac{L_4 R_4 s}{C_4 L_4 R_4 s^2 + L_4 s + R_4}, \quad \frac{R_5}{C_5 R_5 s + 1}, \quad \infty \right)$$

$$H(s) = \frac{-C_5 L_4 R_1 R_4 R_5 s^2 + s (L_4 R_1 R_4 R_5 g_m - L_4 R_1 R_4)}{2C_4 C_5 L_4 R_1 R_4 R_5 s^3 + 2R_1 R_4 R_5 g_m + 2R_1 R_4 + 2R_4 R_5 + s^2 (2C_4 L_4 R_1 R_4 R_5 g_m + 2C_4 L_4 R_1 R_4 + 2C_4 L_4 R_4 R_5 + 2C_5 L_4 R_1 R_4 R_5 g_m + 2C_5 L_4 R_1 R_5 + C_5 L_4 R_4 R_5) + s (2C_5 R_1 R_4 R_5 + 2L_4 R_1 R_4 g_m + 2L_4 R_1 R_5 g_m + 2L_4 R_1 + L_4 R_4 + 2L_4 R_5)}$$

$$\mathbf{10.59 \quad INVALID-ORDER-59} \quad Z(s) = \left(R_1, \quad \infty, \quad \infty, \quad \frac{L_4 R_4 s}{C_4 L_4 R_4 s^2 + L_4 s + R_4}, \quad R_5 + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{L_4 R_1 R_4 g_m s + s^2 (C_5 L_4 R_1 R_4 R_5 g_m - C_5 L_4 R_1 R_4)}{2R_1 R_4 g_m + 2R_4 + s^3 (2C_4 C_5 L_4 R_1 R_4 R_5 g_m + 2C_4 C_5 L_4 R_1 R_4 + 2C_4 C_5 L_4 R_4 R_5) + s^2 (2C_4 L_4 R_1 R_4 g_m + 2C_4 L_4 R_4 + 2C_5 L_4 R_1 R_4 g_m + 2C_5 L_4 R_1 R_5 g_m + 2C_5 L_4 R_1 + C_5 L_4 R_4 + 2C_5 L_4 R_5) + s (2C_5 R_1 R_4 R_5 g_m + 2C_5 R_1 R_4 + 2C_5 R_4 R_5 + 2L_4 R_1 g_m + 2L_4)}$$

$$\mathbf{10.60 \quad INVALID-ORDER-60} \quad Z(s) = \left(R_1, \quad \infty, \quad \infty, \quad \frac{L_4 R_4 s}{C_4 L_4 R_4 s^2 + L_4 s + R_4}, \quad L_5 s + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{C_5 L_4 L_5 R_1 R_4 g_m s^3 - C_5 L_4 R_1 R_4 s^2 + L_4 R_1 R_4 g_m s}{2R_1 R_4 g_m + 2R_4 + s^4 (2C_4 C_5 L_4 L_5 R_1 R_4 g_m + 2C_4 C_5 L_4 L_5 R_4) + s^3 (2C_4 C_5 L_4 R_1 R_4 + 2C_5 L_4 L_5 R_1 g_m + 2C_5 L_4 L_5) + s^2 (2C_4 L_4 R_1 R_4 g_m + 2C_4 L_4 R_4 + 2C_5 L_4 R_1 R_4 g_m + 2C_5 L_4 R_1 + C_5 L_4 R_4 + 2C_5 L_5 R_1 R_4 g_m + 2C_5 L_5 R_4) + s (2C_5 R_1 R_4 + 2L_4 R_1 g_m + 2L_4)}$$

$$\mathbf{10.61 \quad INVALID-ORDER-61} \quad Z(s) = \left(R_1, \quad \infty, \quad \infty, \quad \frac{L_4 R_4 s}{C_4 L_4 R_4 s^2 + L_4 s + R_4}, \quad \frac{L_5 s}{C_5 L_5 s^2 + 1}, \quad \infty \right)$$

$$H(s) = \frac{-C_5 L_4 L_5 R_1 R_4 s^3 + L_4 L_5 R_1 R_4 g_m s^2 - L_4 R_1 R_4 s}{2C_4 C_5 L_4 L_5 R_1 R_4 s^4 + 2R_1 R_4 + s^3 (2C_4 L_4 L_5 R_1 R_4 g_m + 2C_4 L_4 L_5 R_4 + 2C_5 L_4 L_5 R_1 R_4 g_m + 2C_5 L_4 L_5 R_1 + C_5 L_4 L_5 R_4) + s^2 (2C_4 L_4 R_1 R_4 + 2C_5 L_5 R_1 R_4 + 2L_4 L_5 R_1 g_m + 2L_4 L_5) + s (2L_4 R_1 R_4 g_m + 2L_4 R_1 + L_4 R_4 + 2L_5 R_1 R_4 g_m + 2L_5 R_4)}$$

$$\mathbf{10.62 \quad INVALID-ORDER-62} \quad Z(s) = \left(R_1, \quad \infty, \quad \infty, \quad \frac{L_4 R_4 s}{C_4 L_4 R_4 s^2 + L_4 s + R_4}, \quad L_5 s + R_5 + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{C_5 L_4 L_5 R_1 R_4 g_m s^3 + L_4 R_1 R_4 g_m s + s^2 (C_5 L_4 R_1 R_4 R_5 g_m - C_5 L_4 R_1 R_4)}{2R_1 R_4 g_m + 2R_4 + s^4 (2C_4 C_5 L_4 L_5 R_1 R_4 g_m + 2C_4 C_5 L_4 L_5 R_4) + s^3 (2C_4 C_5 L_4 R_1 R_4 R_5 g_m + 2C_4 C_5 L_4 R_1 R_4 + 2C_4 C_5 L_4 R_4 R_5 + 2C_5 L_4 L_5 R_1 g_m + 2C_5 L_4 L_5) + s^2 (2C_4 L_4 R_1 R_4 g_m + 2C_4 L_4 R_4 + 2C_5 L_4 R_1 R_4 g_m + 2C_5 L_4 R_1 + C_5 L_4 R_4 + 2C_5 L_5 R_1 R_4 g_m + 2C_5 L_5 R_4) + s (2C_5 R_1 R_4 + 2L_4 R_1 g_m + 2L_4)}$$

$$\mathbf{10.63 \quad INVALID-ORDER-63} \quad Z(s) = \left(R_1, \quad \infty, \quad \infty, \quad \frac{L_4 R_4 s}{C_4 L_4 R_4 s^2 + L_4 s + R_4}, \quad \frac{L_5 R_5 s}{C_5 L_5 R_5 s^2 + L_5 s + R_5}, \quad \infty \right)$$

$$H(s) = \frac{-C_5 L_4 L_5 R_1 R_4 R_5 s^3 - L_4 R_1 R_4 R_5 s + s^2 (L_4 L_5 R_1 R_4 R_5 g_m - L_4 L_5 R_1 R_4)}{2C_4 C_5 L_4 L_5 R_1 R_4 R_5 s^4 + 2R_1 R_4 R_5 + s^3 (2C_4 L_4 L_5 R_1 R_4 R_5 g_m + 2C_4 L_4 L_5 R_1 R_4 + 2C_4 L_4 L_5 R_4 R_5 + 2C_5 L_4 L_5 R_1 R_4 R_5 g_m + 2C_5 L_4 L_5 R_1 R_5 + C_5 L_4 L_5 R_4 R_5) + s^2 (2C_4 L_4 R_1 R_4 R_5 + 2C_5 L_5 R_1 R_4 R_5 + 2L_4 L_5 R_1 R_4 g_m + 2L_4 L_5 R_1 R_5 g_m + 2L_4 L_5 R_1 + L_4 L_5 R_4 + 2L_4 L_5 R_5) + s (2C_5 R_1 R_4 R_5 + 2L_4 R_1 R_4 g_m + 2L_4 R_1 R_5 g_m + 2L_4 R_1 + L_4 R_4 + 2L_5 R_1 R_4 g_m + 2L_5 R_4)}$$

$$\mathbf{10.64 \quad INVALID-ORDER-64} \quad Z(s) = \left(R_1, \quad \infty, \quad \infty, \quad \frac{L_4 R_4 s}{C_4 L_4 R_4 s^2 + L_4 s + R_4}, \quad \frac{C_5 L_5 R_5 s^2 + L_5 s + R_5}{C_5 L_5 s^2 + 1}, \quad \infty \right)$$

$$H(s) = \frac{L_4 L_5 R_1 R_4 g_m s^2 + s^3 (C_5 L_4 L_5 R_1 R_4 R_5 g_m - C_5 L_4 L_5 R_1 R_4) + s (L_4 R_1 R_4 R_5 g_m - L_4 R_1 R_4)}{2R_1 R_4 R_5 g_m + 2R_1 R_4 + 2R_4 R_5 + s^4 (2C_4 C_5 L_4 L_5 R_1 R_4 R_5 g_m + 2C_4 C_5 L_4 L_5 R_1 R_4 + 2C_4 C_5 L_4 L_5 R_4 R_5) + s^3 (2C_4 L_4 L_5 R_1 R_4 g_m + 2C_4 L_4 L_5 R_4 + 2C_5 L_4 L_5 R_1 R_4 g_m + 2C_5 L_4 L_5 R_1 R_5 g_m + 2C_5 L_4 L_5 R_1 + C_5 L_4 L_5 R_4 + 2C_5 L_4 L_5 R_5) + s^2 (2C_4 L_4 R_1 R_4 R_5 g_m + 2C_4 L_4 R_1 R_4 + 2C_5 L_5 R_1 R_4 R_5 + 2L_4 L_5 R_1 R_4 g_m + 2L_4 L_5 R_1 R_5 g_m + 2L_4 L_5 R_1 + L_4 L_5 R_4 + 2L_4 L_5 R_5)}$$

$$\mathbf{10.65 \quad INVALID-ORDER-65} \quad Z(s) = \left(R_1, \quad \infty, \quad \infty, \quad \frac{L_4 R_4 s}{C_4 L_4 R_4 s^2 + L_4 s + R_4}, \quad \frac{R_5 (C_5 L_5 s^2 + 1)}{C_5 L_5 s^2 + C_5 R_5 s + 1}, \quad \infty \right)$$

$$H(s) = \frac{-C_5 L_4 R_1 R_4 R_5 s^2 + s^3 (C_5 L_4 L_5 R_1 R_4 R_5 g_m - C_5 L_4 L_5 R_1 R_4) + s (L_4 R_1 R_4 R_5 g_m - L_4 R_1 R_4)}{2R_1 R_4 R_5 g_m + 2R_1 R_4 + 2R_4 R_5 + s^4 (2C_4 C_5 L_4 L_5 R_1 R_4 R_5 g_m + 2C_4 C_5 L_4 L_5 R_1 R_4 + 2C_4 C_5 L_4 L_5 R_4 R_5) + s^3 (2C_4 C_5 L_4 R_1 R_4 R_5 + 2C_5 L_4 L_5 R_1 R_4 g_m + 2C_5 L_4 L_5 R_1 R_5 g_m + 2C_5 L_4 L_5 R_1 + C_5 L_4 L_5 R_4 + 2C_5 L_4 L_5 R_5) + s^2 (2C_4 L_4 R_1 R_4 R_5 g_m + 2C_4 L_4 R_1 R_4 + 2C_5 L_5 R_1 R_4 R_5 + 2L_4 L_5 R_1 R_4 g_m + 2L_4 L_5 R_1 R_5 g_m + 2L_4 L_5 R_1 + L_4 L_5 R_4 + 2L_4 L_5 R_5)}$$

$$\mathbf{10.66 \quad INVALID-ORDER-66} \quad Z(s) = \left(R_1, \quad \infty, \quad \infty, \quad \frac{C_4 L_4 R_4 s^2 + L_4 s + R_4}{C_4 L_4 s^2 + 1}, \quad \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{-C_4 C_5 L_4 R_1 R_4 s^3 + R_1 R_4 g_m + s^2 (C_4 L_4 R_1 R_4 g_m - C_5 L_4 R_1) + s (-C_5 R_1 R_4 + L_4 R_1 g_m)}{2R_1 g_m + s^3 (2C_4 C_5 L_4 R_1 R_4 g_m + 2C_4 C_5 L_4 R_1 + C_4 C_5 L_4 R_4) + s^2 (2C_4 L_4 R_1 g_m + 2C_4 L_4 + 2C_5 L_4 R_1 g_m + C_5 L_4) + s (2C_5 R_1 R_4 g_m + 2C_5 R_1 + C_5 R_4) + 2}$$

$$\mathbf{10.67 \quad INVALID-ORDER-67} \quad Z(s) = \left(R_1, \quad \infty, \quad \infty, \quad \frac{C_4 L_4 R_4 s^2 + L_4 s + R_4}{C_4 L_4 s^2 + 1}, \quad \frac{R_5}{C_5 R_5 s + 1}, \quad \infty \right)$$

$$H(s) = \frac{-C_4 C_5 L_4 R_1 R_4 R_5 s^3 + R_1 R_4 R_5 g_m - R_1 R_4 + s^2 (C_4 L_4 R_1 R_4 R_5 g_m - C_4 L_4 R_1 R_4 - C_5 L_4 R_1 R_5) + s (-C_5 R_1 R_4 R_5 + L_4 R_1 R_5 g_m - L_4 R_1)}{2 R_1 R_4 g_m + 2 R_1 R_5 g_m + 2 R_1 + R_4 + 2 R_5 + s^3 (2 C_4 C_5 L_4 R_1 R_4 R_5 g_m + 2 C_4 C_5 L_4 R_1 R_5 + C_4 C_5 L_4 R_4 R_5) + s^2 (2 C_4 L_4 R_1 R_4 g_m + 2 C_4 L_4 R_1 R_5 g_m + 2 C_4 L_4 R_1 + C_4 L_4 R_4 + 2 C_4 L_4 R_5 + 2 C_5 L_4 R_1 R_5 g_m + C_5 L_4 R_5) + s (2 C_5 R_1 R_4 R_5 g_m + 2 C_5 R_1 R_5 + C_5 R_4 R_5 + 2 L_4 R_1 R_5 g_m)}$$

$$\mathbf{10.68 \quad INVALID-ORDER-68} \quad Z(s) = \left(R_1, \quad \infty, \quad \infty, \quad \frac{C_4 L_4 R_4 s^2 + L_4 s + R_4}{C_4 L_4 s^2 + 1}, \quad R_5 + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{R_1 R_4 g_m + s^3 (C_4 C_5 L_4 R_1 R_4 R_5 g_m - C_4 C_5 L_4 R_1 R_4) + s^2 (C_4 L_4 R_1 R_4 g_m + C_5 L_4 R_1 R_5 g_m - C_5 L_4 R_1) + s (C_5 R_1 R_4 R_5 g_m - C_5 R_1 R_4 + L_4 R_1 g_m)}{2 R_1 g_m + s^3 (2 C_4 C_5 L_4 R_1 R_4 g_m + 2 C_4 C_5 L_4 R_1 R_5 g_m + 2 C_4 C_5 L_4 R_1 + C_4 C_5 L_4 R_4 + 2 C_4 C_5 L_4 R_5) + s^2 (2 C_4 L_4 R_1 g_m + 2 C_4 L_4 + 2 C_5 L_4 R_1 g_m + C_5 L_4) + s (2 C_5 R_1 R_4 g_m + 2 C_5 R_1 R_5 g_m + 2 C_5 R_1 + C_5 R_4 + 2 C_5 R_5) + 2}$$

$$\mathbf{10.69 \quad INVALID-ORDER-69} \quad Z(s) = \left(R_1, \quad \infty, \quad \infty, \quad \frac{C_4 L_4 R_4 s^2 + L_4 s + R_4}{C_4 L_4 s^2 + 1}, \quad L_5 s + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{C_4 C_5 L_4 L_5 R_1 R_4 g_m s^4 + R_1 R_4 g_m + s^3 (-C_4 C_5 L_4 R_1 R_4 + C_5 L_4 L_5 R_1 g_m) + s^2 (C_4 L_4 R_1 R_4 g_m - C_5 L_4 R_1 + C_5 L_5 R_1 R_4 g_m) + s (-C_5 R_1 R_4 + L_4 R_1 g_m)}{2 R_1 g_m + s^4 (2 C_4 C_5 L_4 L_5 R_1 g_m + 2 C_4 C_5 L_4 L_5) + s^3 (2 C_4 C_5 L_4 R_1 R_4 g_m + 2 C_4 C_5 L_4 R_1 + C_4 C_5 L_4 R_4) + s^2 (2 C_4 L_4 R_1 g_m + 2 C_4 L_4 + 2 C_5 L_4 R_1 g_m + C_5 L_4 + 2 C_5 L_5 R_1 g_m + 2 C_5 L_5) + s (2 C_5 R_1 R_4 g_m + 2 C_5 R_1 + C_5 R_4) + 2}$$

$$\mathbf{10.70 \quad INVALID-ORDER-70} \quad Z(s) = \left(R_1, \quad \infty, \quad \infty, \quad \frac{C_4 L_4 R_4 s^2 + L_4 s + R_4}{C_4 L_4 s^2 + 1}, \quad \frac{L_5 s}{C_5 L_5 s^2 + 1}, \quad \infty \right)$$

$$H(s) = \frac{-C_4 C_5 L_4 L_5 R_1 R_4 s^4 - R_1 R_4 + s^3 (C_4 L_4 L_5 R_1 R_4 g_m - C_5 L_4 L_5 R_1) + s^2 (-C_4 L_4 R_1 R_4 - C_5 L_5 R_1 R_4 + L_4 L_5 R_1 g_m) + s (-L_4 R_1 + L_5 R_1 R_4 g_m)}{2 R_1 R_4 g_m + 2 R_1 + R_4 + s^4 (2 C_4 C_5 L_4 L_5 R_1 R_4 g_m + 2 C_4 C_5 L_4 L_5 R_1 + C_4 C_5 L_4 L_5 R_4) + s^3 (2 C_4 L_4 L_5 R_1 g_m + 2 C_4 L_4 L_5 + 2 C_5 L_4 L_5 R_1 g_m + C_5 L_4 L_5) + s^2 (2 C_4 L_4 R_1 R_4 g_m + 2 C_4 L_4 R_1 + C_4 L_4 R_4 + 2 C_5 L_5 R_1 R_4 g_m + 2 C_5 L_5 R_1 + C_5 L_5 R_4) + s (2 L_4 R_1 g_m + L_4 + 2 L_5 R_1 R_4 g_m)}$$

$$\mathbf{10.71 \quad INVALID-ORDER-71} \quad Z(s) = \left(R_1, \quad \infty, \quad \infty, \quad \frac{C_4 L_4 R_4 s^2 + L_4 s + R_4}{C_4 L_4 s^2 + 1}, \quad L_5 s + R_5 + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{C_4 C_5 L_4 L_5 R_1 R_4 g_m s^4 + R_1 R_4 g_m + s^3 (C_4 C_5 L_4 R_1 R_4 R_5 g_m - C_4 C_5 L_4 R_1 R_4 + C_5 L_4 L_5 R_1 g_m) + s^2 (C_4 L_4 R_1 R_4 g_m + C_5 L_4 R_1 R_5 g_m - C_5 L_4 R_1 + C_5 L_5 R_1 R_4 g_m) + s (C_5 R_1 R_4 R_5 g_m - C_5 R_1 R_4 + L_4 R_1 g_m)}{2 R_1 g_m + s^4 (2 C_4 C_5 L_4 L_5 R_1 g_m + 2 C_4 C_5 L_4 L_5) + s^3 (2 C_4 C_5 L_4 R_1 R_4 g_m + 2 C_4 C_5 L_4 R_1 R_5 g_m + 2 C_4 C_5 L_4 R_1 + C_4 C_5 L_4 R_4 + 2 C_4 C_5 L_4 R_5) + s^2 (2 C_4 L_4 R_1 g_m + 2 C_4 L_4 + 2 C_5 L_4 R_1 g_m + C_5 L_4 + 2 C_5 L_5 R_1 g_m + 2 C_5 L_5) + s (2 C_5 R_1 R_4 g_m + 2 C_5 R_1 R_5 g_m + 2 C_5 R_1 + C_5 R_4)}$$

$$\mathbf{10.72 \quad INVALID-ORDER-72} \quad Z(s) = \left(R_1, \quad \infty, \quad \infty, \quad \frac{C_4 L_4 R_4 s^2 + L_4 s + R_4}{C_4 L_4 s^2 + 1}, \quad \frac{L_5 R_5 s}{C_5 L_5 R_5 s^2 + L_5 s + R_5}, \quad \infty \right)$$

$$H(s) = \frac{-C_4 C_5 L_4 L_5 R_1 R_4 R_5 s^4 - R_1 R_4 R_5 + s^3 (C_4 L_4 L_5 R_1 R_4 R_5 g_m - C_4 L_4 L_5 R_1 R_4 - C_5 L_4 L_5 R_1 R_5) + s^2 (-C_4 L_4 R_1 R_4 R_5 - C_5 L_5 R_1 R_4 R_5 + L_4 L_5 R_1 R_5 g_m)}{2 R_1 R_4 R_5 g_m + 2 R_1 R_5 + R_4 R_5 + s^4 (2 C_4 C_5 L_4 L_5 R_1 R_4 R_5 g_m + 2 C_4 C_5 L_4 L_5 R_1 R_5 + C_4 C_5 L_4 L_5 R_4 R_5) + s^3 (2 C_4 L_4 L_5 R_1 R_4 g_m + 2 C_4 L_4 L_5 R_1 R_5 g_m + 2 C_4 L_4 L_5 R_1 + C_4 L_4 L_5 R_4 + 2 C_4 L_4 L_5 R_5 + 2 C_5 L_4 L_5 R_1 R_5 g_m + C_5 L_4 L_5 R_5) + s^2 (2 C_4 L_4 R_1 R_4 R_5 g_m + 2 C_4 L_4 R_1 R_5 g_m + 2 C_4 L_4 R_1 R_4 R_5 + 2 C_5 L_5 R_1 R_4 R_5 g_m + 2 C_5 L_5 R_1 R_4 R_5 + L_4 L_5 R_1 R_5 g_m)}$$

$$\mathbf{10.73 \quad INVALID-ORDER-73} \quad Z(s) = \left(R_1, \quad \infty, \quad \infty, \quad \frac{C_4 L_4 R_4 s^2 + L_4 s + R_4}{C_4 L_4 s^2 + 1}, \quad \frac{C_5 L_5 R_5 s^2 + L_5 s + R_5}{C_5 L_5 s^2 + 1}, \quad \infty \right)$$

$$H(s) = \frac{R_1 R_4 R_5 g_m - R_1 R_4 + s^4 (C_4 C_5 L_4 L_5 R_1 R_4 R_5 g_m - C_4 C_5 L_4 L_5 R_1 R_4) + s^3 (C_4 L_4 L_5 R_1 R_4 g_m + C_5 L_4 L_5 R_1 R_5 g_m - C_5 L_4 L_5 R_1) + s^2 (C_4 L_4 R_1 R_4 R_5 g_m - C_4 L_4 R_1 R_4 + C_5 L_5 R_1 R_4 R_5 g_m - C_5 L_5 R_1 R_4 R_5) + s (C_5 R_1 R_4 R_5 g_m - C_5 R_1 R_4 + L_4 R_1 g_m)}{2 R_1 R_4 g_m + 2 R_1 R_5 g_m + 2 R_1 + R_4 + 2 R_5 + s^4 (2 C_4 C_5 L_4 L_5 R_1 R_4 g_m + 2 C_4 C_5 L_4 L_5 R_1 R_5 g_m + 2 C_4 C_5 L_4 L_5 R_1 + C_4 C_5 L_4 L_5 R_4 + 2 C_4 C_5 L_4 L_5 R_5) + s^3 (2 C_4 L_4 L_5 R_1 g_m + 2 C_4 L_4 L_5 + 2 C_5 L_4 L_5 R_1 g_m + C_5 L_4 L_5) + s^2 (2 C_4 L_4 R_1 R_4 g_m + 2 C_4 L_4 R_1 R_5 g_m + 2 C_4 L_4 R_1 + C_5 L_5 R_1 R_4 g_m + 2 C_5 L_5 R_1 R_4 R_5 + L_4 L_5 R_1 R_5 g_m)}$$

$$\mathbf{10.74 \quad INVALID-ORDER-74} \quad Z(s) = \left(R_1, \quad \infty, \quad \infty, \quad \frac{C_4 L_4 R_4 s^2 + L_4 s + R_4}{C_4 L_4 s^2 + 1}, \quad \frac{R_5 (C_5 L_5 s^2 + 1)}{C_5 L_5 s^2 + C_5 R_5 s + 1}, \quad \infty \right)$$

$$H(s) = \frac{R_1 R_4 R_5 g_m - R_1 R_4 + s^4 (C_4 C_5 L_4 L_5 R_1 R_4 R_5 g_m - C_4 C_5 L_4 L_5 R_1 R_4) + s^3 (-C_4 C_5 L_4 R_1 R_4 R_5 + C_5 L_4 L_5 R_1 R_5 g_m - C_5 L_4 L_5 R_1) + s^2 (C_4 L_4 R_1 R_4 R_5 g_m - C_4 L_4 R_1 R_4 R_5 + L_4 L_5 R_1 R_5 g_m - C_5 L_5 R_1 R_4 R_5 g_m + C_5 L_5 R_1 R_4 R_5) + s (C_5 R_1 R_4 R_5 g_m - C_5 R_1 R_4 + L_4 R_1 g_m)}{2 R_1 R_4 g_m + 2 R_1 R_5 g_m + 2 R_1 + R_4 + 2 R_5 + s^4 (2 C_4 C_5 L_4 L_5 R_1 R_4 g_m + 2 C_4 C_5 L_4 L_5 R_1 R_5 g_m + 2 C_4 C_5 L_4 L_5 R_1 + C_4 C_5 L_4 L_5 R_4 + 2 C_4 C_5 L_4 L_5 R_5) + s^3 (2 C_4 C_5 L_4 R_1 R_4 R_5 g_m + 2 C_4 C_5 L_4 R_1 R_5 + C_4 C_5 L_4 R_4 R_5 + 2 C_5 L_4 L_5 R_1 g_m + C_5 L_4 L_5) + s^2 (2 C_4 L_4 R_1 R_4 g_m + 2 C_4 L_4 R_1 R_5 g_m + 2 C_4 L_4 R_1 + C_5 L_5 R_1 R_4 g_m + 2 C_5 L_5 R_1 R_4 R_5 + L_4 L_5 R_1 R_5 g_m)}$$

$$\mathbf{10.75 \quad INVALID-ORDER-75} \quad Z(s) = \left(R_1, \quad \infty, \quad \infty, \quad \frac{R_4 (C_4 L_4 s^2 + 1)}{C_4 L_4 s^2 + C_4 R_4 s + 1}, \quad \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{-C_4 C_5 L_4 R_1 R_4 s^3 + C_4 L_4 R_1 R_4 g_m s^2 - C_5 R_1 R_4 s + R_1 R_4 g_m}{2 R_1 g_m + s^3 (2 C_4 C_5 L_4 R_1 R_4 g_m + 2 C_4 C_5 L_4 R_1 + C_4 C_5 L_4 R_4) + s^2 (2 C_4 C_5 R_1 R_4 + 2 C_4 L_4 R_1 g_m + 2 C_4 L_4) + s (2 C_4 R_1 R_4 g_m + 2 C_4 R_4 + 2 C_5 R_1 R_4 g_m + 2 C_5 R_1 + C_5 R_4) + 2}$$

$$\mathbf{10.76 \quad INVALID-ORDER-76} \quad Z(s) = \left(R_1, \quad \infty, \quad \infty, \quad \frac{R_4(C_4L_4s^2+1)}{C_4L_4s^2+C_4R_4s+1}, \quad \frac{R_5}{C_5R_5s+1}, \quad \infty \right)$$

$$H(s) = \frac{-C_4C_5L_4R_1R_4R_5s^3 - C_5R_1R_4R_5s + R_1R_4R_5g_m - R_1R_4 + s^2(C_4L_4R_1R_4R_5g_m - C_4L_4R_1R_4)}{2R_1R_4g_m + 2R_1R_5g_m + 2R_1 + R_4 + 2R_5 + s^3(2C_4C_5L_4R_1R_4R_5g_m + 2C_4C_5L_4R_1R_5 + C_4C_5L_4R_4R_5) + s^2(2C_4C_5R_1R_4R_5 + 2C_4L_4R_1R_4g_m + 2C_4L_4R_1R_5g_m + 2C_4L_4R_1 + C_4L_4R_4 + 2C_4L_4R_5) + s(2C_4R_1R_4R_5g_m + 2C_4R_1R_4 + 2C_4R_4R_5 + 2C_5R_1R_4R_5g_m + 2C_5R_1R_4 + 2C_5R_4R_5)}$$

$$\mathbf{10.77 \quad INVALID-ORDER-77} \quad Z(s) = \left(R_1, \quad \infty, \quad \infty, \quad \frac{R_4(C_4L_4s^2+1)}{C_4L_4s^2+C_4R_4s+1}, \quad R_5 + \frac{1}{C_5s}, \quad \infty \right)$$

$$H(s) = \frac{C_4L_4R_1R_4g_ms^2 + R_1R_4g_m + s^3(C_4C_5L_4R_1R_4R_5g_m - C_4C_5L_4R_1R_4) + s(C_5R_1R_4R_5g_m - C_5R_1R_4)}{2R_1g_m + s^3(2C_4C_5L_4R_1R_4g_m + 2C_4C_5L_4R_1R_5g_m + 2C_4C_5L_4R_1 + C_4C_5L_4R_4 + 2C_4C_5L_4R_5) + s^2(2C_4C_5R_1R_4R_5g_m + 2C_4C_5R_1R_4 + 2C_4C_5R_4R_5 + 2C_4L_4R_1g_m + 2C_4L_4) + s(2C_4R_1R_4g_m + 2C_4R_4 + 2C_5R_1R_4g_m + 2C_5R_1R_5g_m + 2C_5R_1 + C_5R_4 + 2C_5R_5)}$$

$$\mathbf{10.78 \quad INVALID-ORDER-78} \quad Z(s) = \left(R_1, \quad \infty, \quad \infty, \quad \frac{R_4(C_4L_4s^2+1)}{C_4L_4s^2+C_4R_4s+1}, \quad L_5s + \frac{1}{C_5s}, \quad \infty \right)$$

$$H(s) = \frac{C_4C_5L_4L_5R_1R_4g_ms^4 - C_4C_5L_4R_1R_4s^3 - C_5R_1R_4s + R_1R_4g_m + s^2(C_4L_4R_1R_4g_m + C_5L_5R_1R_4g_m)}{2R_1g_m + s^4(2C_4C_5L_4L_5R_1R_4g_m + 2C_4C_5L_4L_5) + s^3(2C_4C_5L_4R_1R_4g_m + 2C_4C_5L_4R_1 + C_4C_5L_4R_4 + 2C_4C_5L_5R_1R_4g_m + 2C_4C_5L_5R_4) + s^2(2C_4C_5R_1R_4 + 2C_4L_4R_1g_m + 2C_4L_4 + 2C_5L_5R_1g_m + 2C_5L_5) + s(2C_4R_1R_4g_m + 2C_4R_4 + 2C_5R_1R_4g_m + 2C_5R_1 + C_5R_4 + 2C_5R_5)}$$

$$\mathbf{10.79 \quad INVALID-ORDER-79} \quad Z(s) = \left(R_1, \quad \infty, \quad \infty, \quad \frac{R_4(C_4L_4s^2+1)}{C_4L_4s^2+C_4R_4s+1}, \quad \frac{L_5s}{C_5L_5s^2+1}, \quad \infty \right)$$

$$H(s) = \frac{-C_4C_5L_4L_5R_1R_4s^4 + C_4L_4L_5R_1R_4g_ms^3 + L_5R_1R_4g_ms - R_1R_4 + s^2(-C_4L_4R_1R_4 - C_5L_5R_1R_4)}{2R_1R_4g_m + 2R_1 + R_4 + s^4(2C_4C_5L_4L_5R_1R_4g_m + 2C_4C_5L_4L_5R_1 + C_4C_5L_4L_5R_4) + s^3(2C_4C_5L_5R_1R_4 + 2C_4L_4L_5R_1g_m + 2C_4L_4L_5) + s^2(2C_4L_4R_1R_4g_m + 2C_4L_4R_1 + C_4L_4R_4 + 2C_4L_5R_1R_4g_m + 2C_4L_5R_4 + 2C_5L_5R_1R_4g_m + 2C_5L_5R_1 + C_5L_5R_4) + s(2C_4R_1R_4g_m + 2C_4R_4 + 2C_5R_1R_4g_m + 2C_5R_1 + C_5R_4 + 2C_5R_5)}$$

$$\mathbf{10.80 \quad INVALID-ORDER-80} \quad Z(s) = \left(R_1, \quad \infty, \quad \infty, \quad \frac{R_4(C_4L_4s^2+1)}{C_4L_4s^2+C_4R_4s+1}, \quad L_5s + R_5 + \frac{1}{C_5s}, \quad \infty \right)$$

$$H(s) = \frac{C_4C_5L_4L_5R_1R_4g_ms^4 + R_1R_4g_m + s^3(C_4C_5L_4R_1R_4R_5g_m - C_4C_5L_4R_1R_4) + s^2(C_4L_4R_1R_4g_m + C_5L_5R_1R_4g_m) + s(C_5R_1R_4R_5g_m - C_5R_1R_4)}{2R_1g_m + s^4(2C_4C_5L_4L_5R_1R_4g_m + 2C_4C_5L_4L_5) + s^3(2C_4C_5L_4R_1R_4g_m + 2C_4C_5L_4R_1R_5g_m + 2C_4C_5L_4R_1 + C_4C_5L_4R_4 + 2C_4C_5L_4R_5 + 2C_4C_5L_5R_1R_4g_m + 2C_4C_5L_5R_4) + s^2(2C_4C_5R_1R_4R_5g_m + 2C_4C_5R_1R_4 + 2C_4C_5R_4R_5 + 2C_4L_4R_1g_m + 2C_4L_4 + 2C_5L_5R_1) + s(2C_4R_1R_4R_5g_m + 2C_4R_1R_4 + 2C_4R_4R_5 + 2C_5R_1R_4R_5g_m + 2C_5R_1R_4 + 2C_5R_4R_5)}$$

$$\mathbf{10.81 \quad INVALID-ORDER-81} \quad Z(s) = \left(R_1, \quad \infty, \quad \infty, \quad \frac{R_4(C_4L_4s^2+1)}{C_4L_4s^2+C_4R_4s+1}, \quad \frac{L_5R_5s}{C_5L_5R_5s^2+L_5s+R_5}, \quad \infty \right)$$

$$H(s) = \frac{-C_4C_5L_4L_5R_1R_4R_5s^4 - R_1R_4R_5 + s^3(C_4L_4L_5R_1R_4R_5g_m - C_4L_4L_5R_1R_4) + s^2(-C_4L_4R_1R_4R_5 - C_5L_5R_1R_4R_5)}{2R_1R_4R_5g_m + 2R_1R_5 + R_4R_5 + s^4(2C_4C_5L_4L_5R_1R_4R_5g_m + 2C_4C_5L_4L_5R_1R_5 + C_4C_5L_4L_5R_4R_5) + s^3(2C_4C_5L_5R_1R_4R_5 + 2C_4L_4L_5R_1R_4g_m + 2C_4L_4L_5R_1R_5g_m + 2C_4L_4L_5R_1 + C_4L_4L_5R_4 + 2C_4L_4L_5R_5) + s^2(2C_4L_4R_1R_4R_5g_m + 2C_4L_4R_1R_5 + C_4L_4R_4R_5) + s(2C_4R_1R_4R_5g_m + 2C_4R_1R_5 + 2C_4R_4R_5)}$$

$$\mathbf{10.82 \quad INVALID-ORDER-82} \quad Z(s) = \left(R_1, \quad \infty, \quad \infty, \quad \frac{R_4(C_4L_4s^2+1)}{C_4L_4s^2+C_4R_4s+1}, \quad \frac{C_5L_5R_5s^2+L_5s+R_5}{C_5L_5s^2+1}, \quad \infty \right)$$

$$H(s) = \frac{C_4L_4L_5R_1R_4g_ms^3 + L_5R_1R_4g_ms + R_1R_4R_5g_m - R_1R_4 + s^4(C_4C_5L_4L_5R_1R_4R_5g_m - C_4C_5L_4L_5R_1R_4) + s^2(C_4L_4R_1R_4R_5g_m + C_5L_5R_1R_4R_5g_m) + s(C_5R_1R_4R_5g_m - C_5R_1R_4)}{2R_1R_4g_m + 2R_1R_5g_m + 2R_1 + R_4 + 2R_5 + s^4(2C_4C_5L_4L_5R_1R_4g_m + 2C_4C_5L_4L_5R_1R_5g_m + 2C_4C_5L_4L_5R_1 + C_4C_5L_4L_5R_4 + 2C_4C_5L_4L_5R_5) + s^3(2C_4C_5L_5R_1R_4R_5g_m + 2C_4C_5L_5R_1R_4 + 2C_4C_5L_5R_4R_5 + 2C_4L_4L_5R_1g_m + 2C_4L_4L_5) + s^2(2C_4L_4R_1R_4R_5g_m + 2C_4L_4R_1R_5 + C_4L_4R_4R_5) + s(2C_4R_1R_4R_5g_m + 2C_4R_1R_5 + 2C_4R_4R_5)}$$

$$\mathbf{10.83 \quad INVALID-ORDER-83} \quad Z(s) = \left(R_1, \quad \infty, \quad \infty, \quad \frac{R_4(C_4L_4s^2+1)}{C_4L_4s^2+C_4R_4s+1}, \quad \frac{R_5(C_5L_5s^2+1)}{C_5L_5s^2+C_5R_5s+1}, \quad \infty \right)$$

$$H(s) = \frac{-C_4C_5L_4R_1R_4R_5s^3 - C_5R_1R_4R_5s + R_1R_4R_5g_m - R_1R_4 + s^4(C_4C_5L_4L_5R_1R_4R_5g_m - C_4C_5L_4L_5R_1R_4) + s^2(C_4L_4R_1R_4R_5g_m + C_5L_5R_1R_4R_5g_m) + s(C_5R_1R_4R_5g_m - C_5R_1R_4)}{2R_1R_4g_m + 2R_1R_5g_m + 2R_1 + R_4 + 2R_5 + s^4(2C_4C_5L_4L_5R_1R_4g_m + 2C_4C_5L_4L_5R_1R_5g_m + 2C_4C_5L_4L_5R_1 + C_4C_5L_4L_5R_4 + 2C_4C_5L_4L_5R_5) + s^3(2C_4C_5L_4R_1R_4R_5g_m + 2C_4C_5L_4R_1R_5 + C_4C_5L_4R_4R_5 + 2C_4C_5L_5R_1R_4R_5g_m + 2C_4C_5L_5R_1R_4 + 2C_4C_5L_5R_4R_5) + s^2(2C_4L_4R_1R_4R_5g_m + 2C_4L_4R_1R_5 + C_4L_4R_4R_5) + s(2C_4R_1R_4R_5g_m + 2C_4R_1R_5 + 2C_4R_4R_5)}$$

$$\mathbf{10.84 \quad INVALID-ORDER-84} \quad Z(s) = (L_1s, \quad \infty, \quad \infty, \quad R_4, \quad R_5, \quad \infty)$$

$$H(s) = \frac{s(L_1R_4R_5g_m - L_1R_4)}{R_4 + 2R_5 + s(2L_1R_4g_m + 2L_1R_5g_m + 2L_1)}$$

$$10.85 \quad \text{INVALID-ORDER-85} \quad Z(s) = \left(L_1 s, \quad \infty, \quad \infty, \quad R_4, \quad L_5 s + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{C_5 L_1 L_5 R_4 g_m s^3 - C_5 L_1 R_4 s^2 + L_1 R_4 g_m s}{2C_5 L_1 L_5 g_m s^3 + s^2 (2C_5 L_1 R_4 g_m + 2C_5 L_1 + 2C_5 L_5) + s (C_5 R_4 + 2L_1 g_m) + 2}$$

$$10.86 \quad \text{INVALID-ORDER-86} \quad Z(s) = \left(L_1 s, \quad \infty, \quad \infty, \quad R_4, \quad \frac{L_5 s}{C_5 L_5 s^2 + 1}, \quad \infty \right)$$

$$H(s) = \frac{-C_5 L_1 L_5 R_4 s^3 + L_1 L_5 R_4 g_m s^2 - L_1 R_4 s}{R_4 + s^3 (2C_5 L_1 L_5 R_4 g_m + 2C_5 L_1 L_5) + s^2 (C_5 L_5 R_4 + 2L_1 L_5 g_m) + s (2L_1 R_4 g_m + 2L_1 + 2L_5)}$$

$$10.87 \quad \text{INVALID-ORDER-87} \quad Z(s) = \left(L_1 s, \quad \infty, \quad \infty, \quad R_4, \quad L_5 s + R_5 + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{C_5 L_1 L_5 R_4 g_m s^3 + L_1 R_4 g_m s + s^2 (C_5 L_1 R_4 R_5 g_m - C_5 L_1 R_4)}{2C_5 L_1 L_5 g_m s^3 + s^2 (2C_5 L_1 R_4 g_m + 2C_5 L_1 R_5 g_m + 2C_5 L_1 + 2C_5 L_5) + s (C_5 R_4 + 2C_5 R_5 + 2L_1 g_m) + 2}$$

$$10.88 \quad \text{INVALID-ORDER-88} \quad Z(s) = \left(L_1 s, \quad \infty, \quad \infty, \quad R_4, \quad \frac{L_5 R_5 s}{C_5 L_5 R_5 s^2 + L_5 s + R_5}, \quad \infty \right)$$

$$H(s) = \frac{-C_5 L_1 L_5 R_4 R_5 s^3 - L_1 R_4 R_5 s + s^2 (L_1 L_5 R_4 R_5 g_m - L_1 L_5 R_4)}{R_4 R_5 + s^3 (2C_5 L_1 L_5 R_4 R_5 g_m + 2C_5 L_1 L_5 R_5) + s^2 (C_5 L_5 R_4 R_5 + 2L_1 L_5 R_4 g_m + 2L_1 L_5 R_5 g_m + 2L_1 L_5) + s (2L_1 R_4 R_5 g_m + 2L_1 R_5 + L_5 R_4 + 2L_5 R_5)}$$

$$10.89 \quad \text{INVALID-ORDER-89} \quad Z(s) = \left(L_1 s, \quad \infty, \quad \infty, \quad R_4, \quad \frac{C_5 L_5 R_5 s^2 + L_5 s + R_5}{C_5 L_5 s^2 + 1}, \quad \infty \right)$$

$$H(s) = \frac{L_1 L_5 R_4 g_m s^2 + s^3 (C_5 L_1 L_5 R_4 R_5 g_m - C_5 L_1 L_5 R_4) + s (L_1 R_4 R_5 g_m - L_1 R_4)}{R_4 + 2R_5 + s^3 (2C_5 L_1 L_5 R_4 g_m + 2C_5 L_1 L_5 R_5 g_m + 2C_5 L_1 L_5) + s^2 (C_5 L_5 R_4 + 2C_5 L_5 R_5 + 2L_1 L_5 g_m) + s (2L_1 R_4 g_m + 2L_1 R_5 g_m + 2L_1 + 2L_5)}$$

$$10.90 \quad \text{INVALID-ORDER-90} \quad Z(s) = \left(L_1 s, \quad \infty, \quad \infty, \quad R_4, \quad \frac{R_5 (C_5 L_5 s^2 + 1)}{C_5 L_5 s^2 + C_5 R_5 s + 1}, \quad \infty \right)$$

$$H(s) = \frac{-C_5 L_1 R_4 R_5 s^2 + s^3 (C_5 L_1 L_5 R_4 R_5 g_m - C_5 L_1 L_5 R_4) + s (L_1 R_4 R_5 g_m - L_1 R_4)}{R_4 + 2R_5 + s^3 (2C_5 L_1 L_5 R_4 g_m + 2C_5 L_1 L_5 R_5 g_m + 2C_5 L_1 L_5) + s^2 (2C_5 L_1 R_4 R_5 g_m + 2C_5 L_1 R_5 + C_5 L_5 R_4 + 2C_5 L_5 R_5) + s (C_5 R_4 R_5 + 2L_1 R_4 g_m + 2L_1 R_5 g_m + 2L_1)}$$

$$10.91 \quad \text{INVALID-ORDER-91} \quad Z(s) = \left(L_1 s, \quad \infty, \quad \infty, \quad \frac{1}{C_4 s}, \quad \frac{R_5}{C_5 R_5 s + 1}, \quad \infty \right)$$

$$H(s) = \frac{-C_5 L_1 R_5 s^2 + s (L_1 R_5 g_m - L_1)}{2C_4 C_5 L_1 R_5 s^3 + s^2 (2C_4 L_1 R_5 g_m + 2C_4 L_1 + 2C_5 L_1 R_5 g_m) + s (2C_4 R_5 + C_5 R_5 + 2L_1 g_m) + 1}$$

$$10.92 \quad \text{INVALID-ORDER-92} \quad Z(s) = \left(L_1 s, \quad \infty, \quad \infty, \quad \frac{1}{C_4 s}, \quad L_5 s + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{C_5 L_1 L_5 g_m s^2 - C_5 L_1 s + L_1 g_m}{2C_4 C_5 L_1 L_5 g_m s^3 + 2C_4 + C_5 + s^2 (2C_4 C_5 L_1 + 2C_4 C_5 L_5) + s (2C_4 L_1 g_m + 2C_5 L_1 g_m)}$$

$$10.93 \quad \text{INVALID-ORDER-93} \quad Z(s) = \left(L_1 s, \quad \infty, \quad \infty, \quad \frac{1}{C_4 s}, \quad \frac{L_5 s}{C_5 L_5 s^2 + 1}, \quad \infty \right)$$

$$H(s) = \frac{-C_5 L_1 L_5 s^3 + L_1 L_5 g_m s^2 - L_1 s}{2C_4 C_5 L_1 L_5 s^4 + 2L_1 g_m s + s^3 (2C_4 L_1 L_5 g_m + 2C_5 L_1 L_5 g_m) + s^2 (2C_4 L_1 + 2C_4 L_5 + C_5 L_5) + 1}$$

10.94 INVALID-ORDER-94 $Z(s) = \left(L_1 s, \infty, \infty, \frac{1}{C_4 s}, L_5 s + R_5 + \frac{1}{C_5 s}, \infty \right)$

$$H(s) = \frac{C_5 L_1 L_5 g_m s^2 + L_1 g_m + s (C_5 L_1 R_5 g_m - C_5 L_1)}{2 C_4 C_5 L_1 L_5 g_m s^3 + 2 C_4 + C_5 + s^2 (2 C_4 C_5 L_1 R_5 g_m + 2 C_4 C_5 L_1 + 2 C_4 C_5 L_5) + s (2 C_4 C_5 R_5 + 2 C_4 L_1 g_m + 2 C_5 L_1 g_m)}$$

10.95 INVALID-ORDER-95 $Z(s) = \left(L_1 s, \infty, \infty, \frac{1}{C_4 s}, \frac{L_5 R_5 s}{C_5 L_5 R_5 s^2 + L_5 s + R_5}, \infty \right)$

$$H(s) = \frac{-C_5 L_1 L_5 R_5 s^3 - L_1 R_5 s + s^2 (L_1 L_5 R_5 g_m - L_1 L_5)}{2 C_4 C_5 L_1 L_5 R_5 s^4 + R_5 + s^3 (2 C_4 L_1 L_5 R_5 g_m + 2 C_4 L_1 L_5 + 2 C_5 L_1 L_5 R_5 g_m) + s^2 (2 C_4 L_1 R_5 + 2 C_4 L_5 R_5 + C_5 L_5 R_5 + 2 L_1 L_5 g_m) + s (2 L_1 R_5 g_m + L_5)}$$

10.96 INVALID-ORDER-96 $Z(s) = \left(L_1 s, \infty, \infty, \frac{1}{C_4 s}, \frac{C_5 L_5 R_5 s^2 + L_5 s + R_5}{C_5 L_5 s^2 + 1}, \infty \right)$

$$H(s) = \frac{L_1 L_5 g_m s^2 + s^3 (C_5 L_1 L_5 R_5 g_m - C_5 L_1 L_5) + s (L_1 R_5 g_m - L_1)}{s^4 (2 C_4 C_5 L_1 L_5 R_5 g_m + 2 C_4 C_5 L_1 L_5) + s^3 (2 C_4 C_5 L_5 R_5 + 2 C_4 L_1 L_5 g_m + 2 C_5 L_1 L_5 g_m) + s^2 (2 C_4 L_1 R_5 g_m + 2 C_4 L_1 + 2 C_4 L_5 + C_5 L_5) + s (2 C_4 R_5 + 2 L_1 g_m) + 1}$$

10.97 INVALID-ORDER-97 $Z(s) = \left(L_1 s, \infty, \infty, \frac{1}{C_4 s}, \frac{R_5 (C_5 L_5 s^2 + 1)}{C_5 L_5 s^2 + C_5 R_5 s + 1}, \infty \right)$

$$H(s) = \frac{-C_5 L_1 R_5 s^2 + s^3 (C_5 L_1 L_5 R_5 g_m - C_5 L_1 L_5) + s (L_1 R_5 g_m - L_1)}{s^4 (2 C_4 C_5 L_1 L_5 R_5 g_m + 2 C_4 C_5 L_1 L_5) + s^3 (2 C_4 C_5 L_1 R_5 + 2 C_4 C_5 L_5 R_5 + 2 C_5 L_1 L_5 g_m) + s^2 (2 C_4 L_1 R_5 g_m + 2 C_4 L_1 + 2 C_5 L_1 R_5 g_m + C_5 L_5) + s (2 C_4 R_5 + C_5 R_5 + 2 L_1 g_m) + 1}$$

10.98 INVALID-ORDER-98 $Z(s) = \left(L_1 s, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, \frac{1}{C_5 s}, \infty \right)$

$$H(s) = \frac{-C_5 L_1 R_4 s^2 + L_1 R_4 g_m s}{2 C_4 C_5 L_1 R_4 s^3 + s^2 (2 C_4 L_1 R_4 g_m + 2 C_5 L_1 R_4 g_m + 2 C_5 L_1) + s (2 C_4 R_4 + C_5 R_4 + 2 L_1 g_m) + 2}$$

10.99 INVALID-ORDER-99 $Z(s) = \left(L_1 s, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, \frac{R_5}{C_5 R_5 s + 1}, \infty \right)$

$$H(s) = \frac{-C_5 L_1 R_4 R_5 s^2 + s (L_1 R_4 R_5 g_m - L_1 R_4)}{2 C_4 C_5 L_1 R_4 R_5 s^3 + R_4 + 2 R_5 + s^2 (2 C_4 L_1 R_4 R_5 g_m + 2 C_4 L_1 R_4 + 2 C_5 L_1 R_4 R_5 g_m + 2 C_5 L_1 R_5) + s (2 C_4 R_4 R_5 + C_5 R_4 R_5 + 2 L_1 R_4 g_m + 2 L_1 R_5 g_m + 2 L_1)}$$

10.100 INVALID-ORDER-100 $Z(s) = \left(L_1 s, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, R_5 + \frac{1}{C_5 s}, \infty \right)$

$$H(s) = \frac{L_1 R_4 g_m s + s^2 (C_5 L_1 R_4 R_5 g_m - C_5 L_1 R_4)}{s^3 (2 C_4 C_5 L_1 R_4 R_5 g_m + 2 C_4 C_5 L_1 R_4) + s^2 (2 C_4 C_5 R_4 R_5 + 2 C_4 L_1 R_4 g_m + 2 C_5 L_1 R_4 g_m + 2 C_5 L_1 R_5 g_m + 2 C_5 L_1) + s (2 C_4 R_4 + C_5 R_4 + 2 C_5 R_5 + 2 L_1 g_m) + 2}$$

10.101 INVALID-ORDER-101 $Z(s) = \left(L_1 s, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, L_5 s + \frac{1}{C_5 s}, \infty \right)$

$$H(s) = \frac{C_5 L_1 L_5 R_4 g_m s^3 - C_5 L_1 R_4 s^2 + L_1 R_4 g_m s}{2 C_4 C_5 L_1 L_5 R_4 g_m s^4 + s^3 (2 C_4 C_5 L_1 R_4 + 2 C_4 C_5 L_5 R_4 + 2 C_5 L_1 L_5 g_m) + s^2 (2 C_4 L_1 R_4 g_m + 2 C_5 L_1 R_4 g_m + 2 C_5 L_1 + 2 C_5 L_5) + s (2 C_4 R_4 + C_5 R_4 + 2 L_1 g_m) + 2}$$

10.102 INVALID-ORDER-102 $Z(s) = \left(L_1 s, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \infty \right)$

$$H(s) = \frac{-C_5 L_1 L_5 R_4 s^3 + L_1 L_5 R_4 g_m s^2 - L_1 R_4 s}{2 C_4 C_5 L_1 L_5 R_4 s^4 + R_4 + s^3 (2 C_4 L_1 L_5 R_4 g_m + 2 C_5 L_1 L_5 R_4 g_m + 2 C_5 L_1 L_5) + s^2 (2 C_4 L_1 R_4 + 2 C_4 L_5 R_4 + C_5 L_5 R_4 + 2 L_1 L_5 g_m) + s (2 L_1 R_4 g_m + 2 L_1 + 2 L_5)}$$

$$\mathbf{10.103 \quad INVALID-ORDER-103} \quad Z(s) = \left(L_1 s, \quad \infty, \quad \infty, \quad \frac{R_4}{C_4 R_4 s + 1}, \quad L_5 s + R_5 + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{C_5 L_1 L_5 R_4 g_m s^3 + L_1 R_4 g_m s + s^2 (C_5 L_1 R_4 R_5 g_m - C_5 L_1 R_4)}{2 C_4 C_5 L_1 L_5 R_4 g_m s^4 + s^3 (2 C_4 C_5 L_1 R_4 R_5 g_m + 2 C_4 C_5 L_1 R_4 + 2 C_4 C_5 L_5 R_4 + 2 C_5 L_1 L_5 g_m) + s^2 (2 C_4 C_5 R_4 R_5 + 2 C_4 L_1 R_4 g_m + 2 C_5 L_1 R_4 g_m + 2 C_5 L_1 R_5 g_m + 2 C_5 L_1 + 2 C_5 L_5) + s (2 C_4 R_4 + C_5 R_4 + 2 C_5 R_5 + 2 L_1 g_m) + 2}$$

$$\mathbf{10.104 \quad INVALID-ORDER-104} \quad Z(s) = \left(L_1 s, \quad \infty, \quad \infty, \quad \frac{R_4}{C_4 R_4 s + 1}, \quad \frac{L_5 R_5 s}{C_5 L_5 R_5 s^2 + L_5 s + R_5}, \quad \infty \right)$$

$$H(s) = \frac{-C_5 L_1 L_5 R_4 R_5 s^3 - L_1 R_4 R_5 s + s^2 (L_1 L_5 R_4 R_5 g_m - L_1 L_5 R_4)}{2 C_4 C_5 L_1 L_5 R_4 R_5 s^4 + R_4 R_5 + s^3 (2 C_4 L_1 L_5 R_4 R_5 g_m + 2 C_4 L_1 L_5 R_4 + 2 C_5 L_1 L_5 R_4 R_5 g_m + 2 C_5 L_1 L_5 R_5) + s^2 (2 C_4 L_1 R_4 R_5 + 2 C_4 L_5 R_4 R_5 + C_5 L_5 R_4 R_5 + 2 L_1 L_5 R_4 g_m + 2 L_1 L_5 R_5 g_m + 2 L_1 L_5) + s (2 L_1 R_4 R_5 g_m + 2 L_1 R_5 + L_5 R_4 + 2 L_5 R_5)}$$

$$\mathbf{10.105 \quad INVALID-ORDER-105} \quad Z(s) = \left(L_1 s, \quad \infty, \quad \infty, \quad \frac{R_4}{C_4 R_4 s + 1}, \quad \frac{C_5 L_5 R_5 s^2 + L_5 s + R_5}{C_5 L_5 s^2 + 1}, \quad \infty \right)$$

$$H(s) = \frac{L_1 L_5 R_4 g_m s^2 + s^3 (C_5 L_1 L_5 R_4 R_5 g_m - C_5 L_1 L_5 R_4) + s (L_1 R_4 R_5 g_m - L_1 R_4)}{R_4 + 2 R_5 + s^4 (2 C_4 C_5 L_1 L_5 R_4 R_5 g_m + 2 C_4 C_5 L_1 L_5 R_4) + s^3 (2 C_4 C_5 L_5 R_4 R_5 + 2 C_4 L_1 L_5 R_4 g_m + 2 C_5 L_1 L_5 R_4 g_m + 2 C_5 L_1 L_5 R_5 g_m + 2 C_5 L_1 L_5) + s^2 (2 C_4 L_1 R_4 R_5 g_m + 2 C_4 L_1 R_4 + 2 C_4 L_5 R_4 + C_5 L_5 R_4 + 2 C_5 L_5 R_5 + 2 L_1 L_5 g_m) + s (2 C_4 R_4 R_5 + 2 L_1 R_4 g_m + 2 L_1 R_5 g_m)}$$

$$\mathbf{10.106 \quad INVALID-ORDER-106} \quad Z(s) = \left(L_1 s, \quad \infty, \quad \infty, \quad \frac{R_4}{C_4 R_4 s + 1}, \quad \frac{R_5 (C_5 L_5 s^2 + 1)}{C_5 L_5 s^2 + C_5 R_5 s + 1}, \quad \infty \right)$$

$$H(s) = \frac{-C_5 L_1 R_4 R_5 s^2 + s^3 (C_5 L_1 L_5 R_4 R_5 g_m - C_5 L_1 L_5 R_4) + s (L_1 R_4 R_5 g_m - L_1 R_4)}{R_4 + 2 R_5 + s^4 (2 C_4 C_5 L_1 L_5 R_4 R_5 g_m + 2 C_4 C_5 L_1 L_5 R_4) + s^3 (2 C_4 C_5 L_1 R_4 R_5 + 2 C_4 C_5 L_5 R_4 R_5 + 2 C_5 L_1 L_5 R_4 g_m + 2 C_5 L_1 L_5 R_5 g_m + 2 C_5 L_1 L_5) + s^2 (2 C_4 L_1 R_4 R_5 g_m + 2 C_4 L_1 R_4 + 2 C_5 L_1 R_4 R_5 g_m + 2 C_5 L_1 R_5 + C_5 L_5 R_4 + 2 C_5 L_5 R_5) + s (2 C_4 R_4 R_5 + C_5 R_4 R_5 + 2 L_1 R_5 g_m)}$$

$$\mathbf{10.107 \quad INVALID-ORDER-107} \quad Z(s) = \left(L_1 s, \quad \infty, \quad \infty, \quad R_4 + \frac{1}{C_4 s}, \quad \frac{R_5}{C_5 R_5 s + 1}, \quad \infty \right)$$

$$H(s) = \frac{-C_4 C_5 L_1 R_4 R_5 s^3 + s^2 (C_4 L_1 R_4 R_5 g_m - C_4 L_1 R_4 - C_5 L_1 R_5) + s (L_1 R_5 g_m - L_1)}{s^3 (2 C_4 C_5 L_1 R_4 R_5 g_m + 2 C_4 C_5 L_1 R_5) + s^2 (C_4 C_5 R_4 R_5 + 2 C_4 L_1 R_4 g_m + 2 C_4 L_1 R_5 g_m + 2 C_4 L_1 + 2 C_5 L_1 R_5 g_m) + s (C_4 R_4 + 2 C_4 R_5 + C_5 R_5 + 2 L_1 g_m) + 1}$$

$$\mathbf{10.108 \quad INVALID-ORDER-108} \quad Z(s) = \left(L_1 s, \quad \infty, \quad \infty, \quad R_4 + \frac{1}{C_4 s}, \quad L_5 s + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{C_4 C_5 L_1 L_5 R_4 g_m s^3 + L_1 g_m + s^2 (-C_4 C_5 L_1 R_4 + C_5 L_1 L_5 g_m) + s (C_4 L_1 R_4 g_m - C_5 L_1)}{2 C_4 C_5 L_1 L_5 g_m s^3 + 2 C_4 + C_5 + s^2 (2 C_4 C_5 L_1 R_4 g_m + 2 C_4 C_5 L_1 + 2 C_4 C_5 L_5) + s (C_4 C_5 R_4 + 2 C_4 L_1 g_m + 2 C_5 L_1 g_m)}$$

$$\mathbf{10.109 \quad INVALID-ORDER-109} \quad Z(s) = \left(L_1 s, \quad \infty, \quad \infty, \quad R_4 + \frac{1}{C_4 s}, \quad \frac{L_5 s}{C_5 L_5 s^2 + 1}, \quad \infty \right)$$

$$H(s) = \frac{-C_4 C_5 L_1 L_5 R_4 s^4 - L_1 s + s^3 (C_4 L_1 L_5 R_4 g_m - C_5 L_1 L_5) + s^2 (-C_4 L_1 R_4 + L_1 L_5 g_m)}{s^4 (2 C_4 C_5 L_1 L_5 R_4 g_m + 2 C_4 C_5 L_1 L_5) + s^3 (C_4 C_5 L_5 R_4 + 2 C_4 L_1 L_5 g_m + 2 C_5 L_1 L_5 g_m) + s^2 (2 C_4 L_1 R_4 g_m + 2 C_4 L_1 + 2 C_4 L_5 + C_5 L_5) + s (C_4 R_4 + 2 L_1 g_m) + 1}$$

$$\mathbf{10.110 \quad INVALID-ORDER-110} \quad Z(s) = \left(L_1 s, \quad \infty, \quad \infty, \quad R_4 + \frac{1}{C_4 s}, \quad L_5 s + R_5 + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{C_4 C_5 L_1 L_5 R_4 g_m s^3 + L_1 g_m + s^2 (C_4 C_5 L_1 R_4 R_5 g_m - C_4 C_5 L_1 R_4 + C_5 L_1 L_5 g_m) + s (C_4 L_1 R_4 g_m + C_5 L_1 R_5 g_m - C_5 L_1)}{2 C_4 C_5 L_1 L_5 g_m s^3 + 2 C_4 + C_5 + s^2 (2 C_4 C_5 L_1 R_4 g_m + 2 C_4 C_5 L_1 R_5 g_m + 2 C_4 C_5 L_1 + 2 C_4 C_5 L_5) + s (C_4 C_5 R_4 + 2 C_4 C_5 R_5 + 2 C_4 L_1 g_m + 2 C_5 L_1 g_m)}$$

$$\mathbf{10.111 \quad INVALID-ORDER-111} \quad Z(s) = \left(L_1 s, \quad \infty, \quad \infty, \quad R_4 + \frac{1}{C_4 s}, \quad \frac{L_5 R_5 s}{C_5 L_5 R_5 s^2 + L_5 s + R_5}, \quad \infty \right)$$

$$H(s) = \frac{-C_4 C_5 L_1 L_5 R_4 R_5 s^4 - L_1 R_5 s + s^3 (C_4 L_1 L_5 R_4 R_5 g_m - C_4 L_1 L_5 R_4 - C_5 L_1 L_5 R_5) + s^2 (-C_4 L_1 R_4 R_5 + L_1 L_5 R_5 g_m - L_1 L_5)}{R_5 + s^4 (2 C_4 C_5 L_1 L_5 R_4 R_5 g_m + 2 C_4 C_5 L_1 L_5 R_5) + s^3 (C_4 C_5 L_5 R_4 R_5 + 2 C_4 L_1 L_5 R_4 g_m + 2 C_4 L_1 L_5 R_5 g_m + 2 C_4 L_1 L_5 + 2 C_5 L_1 L_5 R_5 g_m) + s^2 (2 C_4 L_1 R_4 R_5 g_m + 2 C_4 L_1 R_5 + C_4 L_5 R_4 + 2 C_4 L_5 R_5 + C_5 L_5 R_5 + 2 L_1 L_5 g_m) + s (C_4 R_4 R_5 + 2 L_1 R_5 g_m + L_5)}$$

$$10.112 \quad \text{INVALID-ORDER-112} \quad Z(s) = \left(L_1 s, \quad \infty, \quad \infty, \quad R_4 + \frac{1}{C_4 s}, \quad \frac{C_5 L_5 R_5 s^2 + L_5 s + R_5}{C_5 L_5 s^2 + 1}, \quad \infty \right)$$

$$H(s) = \frac{s^4 (C_4 C_5 L_1 L_5 R_4 R_5 g_m - C_4 C_5 L_1 L_5 R_4) + s^3 (C_4 L_1 L_5 R_4 g_m + C_5 L_1 L_5 R_5 g_m - C_5 L_1 L_5) + s^2 (C_4 L_1 R_4 R_5 g_m - C_4 L_1 R_4 + L_1 L_5 g_m) + s (L_1 R_5 g_m - L_1)}{s^4 (2C_4 C_5 L_1 L_5 R_4 g_m + 2C_4 C_5 L_1 L_5 R_5 g_m + 2C_4 C_5 L_1 L_5) + s^3 (C_4 C_5 L_5 R_4 + 2C_4 C_5 L_5 R_5 + 2C_4 L_1 L_5 g_m + 2C_5 L_1 L_5 g_m) + s^2 (2C_4 L_1 R_4 g_m + 2C_4 L_1 R_5 g_m + 2C_4 L_1 + 2C_4 L_5 + C_5 L_5) + s (C_4 R_4 + 2C_4 R_5 + 2L_1 g_m) + 1}$$

$$10.113 \quad \text{INVALID-ORDER-113} \quad Z(s) = \left(L_1 s, \quad \infty, \quad \infty, \quad R_4 + \frac{1}{C_4 s}, \quad \frac{R_5 (C_5 L_5 s^2 + 1)}{C_5 L_5 s^2 + C_5 R_5 s + 1}, \quad \infty \right)$$

$$H(s) = \frac{s^4 (C_4 C_5 L_1 L_5 R_4 R_5 g_m - C_4 C_5 L_1 L_5 R_4) + s^3 (-C_4 C_5 L_1 R_4 R_5 + C_5 L_1 L_5 R_5 g_m - C_5 L_1 L_5) + s^2 (C_4 L_1 R_4 R_5 g_m - C_4 L_1 R_4 - C_5 L_1 R_5) + s (L_1 R_5 g_m - L_1)}{s^4 (2C_4 C_5 L_1 L_5 R_4 g_m + 2C_4 C_5 L_1 L_5 R_5 g_m + 2C_4 C_5 L_1 L_5) + s^3 (2C_4 C_5 L_1 R_4 R_5 g_m + 2C_4 C_5 L_1 R_5 + C_4 C_5 L_5 R_4 + 2C_4 C_5 L_5 R_5 + 2C_5 L_1 L_5 g_m) + s^2 (C_4 C_5 R_4 R_5 + 2C_4 L_1 R_4 g_m + 2C_4 L_1 R_5 g_m + 2C_4 L_1 + 2C_5 L_1 R_5 g_m + C_5 L_5) + s (C_4 R_4 + 2C_4 R_5 + C_5 R_5 + 2L_1 g_m) + 1}$$

$$10.114 \quad \text{INVALID-ORDER-114} \quad Z(s) = \left(L_1 s, \quad \infty, \quad \infty, \quad L_4 s + \frac{1}{C_4 s}, \quad R_5, \quad \infty \right)$$

$$H(s) = \frac{s^3 (C_4 L_1 L_4 R_5 g_m - C_4 L_1 L_4) + s (L_1 R_5 g_m - L_1)}{2C_4 L_1 L_4 g_m s^3 + s^2 (2C_4 L_1 R_5 g_m + 2C_4 L_1 + C_4 L_4) + s (2C_4 R_5 + 2L_1 g_m) + 1}$$

$$10.115 \quad \text{INVALID-ORDER-115} \quad Z(s) = \left(L_1 s, \quad \infty, \quad \infty, \quad L_4 s + \frac{1}{C_4 s}, \quad \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{-C_4 C_5 L_1 L_4 s^3 + C_4 L_1 L_4 g_m s^2 - C_5 L_1 s + L_1 g_m}{2C_4 C_5 L_1 L_4 g_m s^3 + 2C_4 + C_5 + s^2 (2C_4 C_5 L_1 + C_4 C_5 L_4) + s (2C_4 L_1 g_m + 2C_5 L_1 g_m)}$$

$$10.116 \quad \text{INVALID-ORDER-116} \quad Z(s) = \left(L_1 s, \quad \infty, \quad \infty, \quad L_4 s + \frac{1}{C_4 s}, \quad \frac{R_5}{C_5 R_5 s + 1}, \quad \infty \right)$$

$$H(s) = \frac{-C_4 C_5 L_1 L_4 R_5 s^4 - C_5 L_1 R_5 s^2 + s^3 (C_4 L_1 L_4 R_5 g_m - C_4 L_1 L_4) + s (L_1 R_5 g_m - L_1)}{2C_4 C_5 L_1 L_4 R_5 g_m s^4 + s^3 (2C_4 C_5 L_1 R_5 + C_4 C_5 L_4 R_5 + 2C_4 L_1 L_4 g_m) + s^2 (2C_4 L_1 R_5 g_m + 2C_4 L_1 + C_4 L_4 + 2C_5 L_1 R_5 g_m) + s (2C_4 R_5 + C_5 R_5 + 2L_1 g_m) + 1}$$

$$10.117 \quad \text{INVALID-ORDER-117} \quad Z(s) = \left(L_1 s, \quad \infty, \quad \infty, \quad L_4 s + \frac{1}{C_4 s}, \quad R_5 + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{C_4 L_1 L_4 g_m s^2 + L_1 g_m + s^3 (C_4 C_5 L_1 L_4 R_5 g_m - C_4 C_5 L_1 L_4) + s (C_5 L_1 R_5 g_m - C_5 L_1)}{2C_4 C_5 L_1 L_4 g_m s^3 + 2C_4 + C_5 + s^2 (2C_4 C_5 L_1 R_5 g_m + 2C_4 C_5 L_1 + C_4 C_5 L_4) + s (2C_4 C_5 R_5 + 2C_4 L_1 g_m + 2C_5 L_1 g_m)}$$

$$10.118 \quad \text{INVALID-ORDER-118} \quad Z(s) = \left(L_1 s, \quad \infty, \quad \infty, \quad L_4 s + \frac{1}{C_4 s}, \quad L_5 s + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{C_4 C_5 L_1 L_4 L_5 g_m s^4 - C_4 C_5 L_1 L_4 s^3 - C_5 L_1 s + L_1 g_m + s^2 (C_4 L_1 L_4 g_m + C_5 L_1 L_5 g_m)}{2C_4 + C_5 + s^3 (2C_4 C_5 L_1 L_4 g_m + 2C_4 C_5 L_1 L_5 g_m) + s^2 (2C_4 C_5 L_1 + C_4 C_5 L_4 + 2C_4 C_5 L_5) + s (2C_4 L_1 g_m + 2C_5 L_1 g_m)}$$

$$10.119 \quad \text{INVALID-ORDER-119} \quad Z(s) = \left(L_1 s, \quad \infty, \quad \infty, \quad L_4 s + \frac{1}{C_4 s}, \quad \frac{L_5 s}{C_5 L_5 s^2 + 1}, \quad \infty \right)$$

$$H(s) = \frac{-C_4 C_5 L_1 L_4 L_5 s^5 + C_4 L_1 L_4 L_5 g_m s^4 + L_1 L_5 g_m s^2 - L_1 s + s^3 (-C_4 L_1 L_4 - C_5 L_1 L_5)}{2C_4 C_5 L_1 L_4 L_5 g_m s^5 + 2L_1 g_m s + s^4 (2C_4 C_5 L_1 L_5 + C_4 C_5 L_4 L_5) + s^3 (2C_4 L_1 L_4 g_m + 2C_4 L_1 L_5 g_m + 2C_5 L_1 L_5 g_m) + s^2 (2C_4 L_1 + C_4 L_4 + 2C_4 L_5 + C_5 L_5) + 1}$$

$$10.120 \quad \text{INVALID-ORDER-120} \quad Z(s) = \left(L_1 s, \quad \infty, \quad \infty, \quad L_4 s + \frac{1}{C_4 s}, \quad L_5 s + R_5 + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{C_4 C_5 L_1 L_4 L_5 g_m s^4 + L_1 g_m + s^3 (C_4 C_5 L_1 L_4 R_5 g_m - C_4 C_5 L_1 L_4) + s^2 (C_4 L_1 L_4 g_m + C_5 L_1 L_5 g_m) + s (C_5 L_1 R_5 g_m - C_5 L_1)}{2C_4 + C_5 + s^3 (2C_4 C_5 L_1 L_4 g_m + 2C_4 C_5 L_1 L_5 g_m) + s^2 (2C_4 C_5 L_1 R_5 g_m + 2C_4 C_5 L_1 + C_4 C_5 L_4 + 2C_4 C_5 L_5) + s (2C_4 C_5 R_5 + 2C_4 L_1 g_m + 2C_5 L_1 g_m)}$$

$$\mathbf{10.121 \quad INVALID-ORDER-121} \quad Z(s) = \left(L_1 s, \quad \infty, \quad \infty, \quad L_4 s + \frac{1}{C_4 s}, \quad \frac{L_5 R_5 s}{C_5 L_5 R_5 s^2 + L_5 s + R_5}, \quad \infty \right)$$

$$H(s) = \frac{-C_4 C_5 L_1 L_4 L_5 R_5 s^5 - L_1 R_5 s + s^4 (C_4 L_1 L_4 L_5 R_5 g_m - C_4 L_1 L_4 L_5) + s^3 (-C_4 L_1 L_4 R_5 - C_5 L_1 L_5 R_5) + s^2 (L_1 L_5 R_5 g_m - L_1 L_5)}{2C_4 C_5 L_1 L_4 L_5 R_5 g_m s^5 + R_5 + s^4 (2C_4 C_5 L_1 L_5 R_5 + C_4 C_5 L_4 L_5 R_5 + 2C_4 L_1 L_4 L_5 g_m) + s^3 (2C_4 L_1 L_4 R_5 g_m + 2C_4 L_1 L_5 R_5 g_m + 2C_4 L_1 L_5 + C_4 L_4 L_5 + 2C_5 L_1 L_5 R_5 g_m) + s^2 (2C_4 L_1 R_5 + C_4 L_4 R_5 + 2C_4 L_5 R_5 + C_5 L_5 R_5 + 2L_1 L_5 g_m) + s (2L_1 R_5 g_m + L_5)}$$

$$\mathbf{10.122 \quad INVALID-ORDER-122} \quad Z(s) = \left(L_1 s, \quad \infty, \quad \infty, \quad L_4 s + \frac{1}{C_4 s}, \quad \frac{C_5 L_5 R_5 s^2 + L_5 s + R_5}{C_5 L_5 s^2 + 1}, \quad \infty \right)$$

$$H(s) = \frac{C_4 L_1 L_4 L_5 g_m s^4 + L_1 L_5 g_m s^2 + s^5 (C_4 C_5 L_1 L_4 L_5 R_5 g_m - C_4 C_5 L_1 L_4 L_5) + s^3 (C_4 L_1 L_4 R_5 g_m - C_4 L_1 L_4 + C_5 L_1 L_5 R_5 g_m - C_5 L_1 L_5) + s (L_1 R_5 g_m - L_1)}{2C_4 C_5 L_1 L_4 L_5 g_m s^5 + s^4 (2C_4 C_5 L_1 L_5 R_5 g_m + 2C_4 C_5 L_1 L_5 + C_4 C_5 L_4 L_5) + s^3 (2C_4 C_5 L_5 R_5 + 2C_4 L_1 L_4 g_m + 2C_4 L_1 L_5 g_m + 2C_5 L_1 L_5 g_m) + s^2 (2C_4 L_1 R_5 g_m + 2C_4 L_1 + C_4 L_4 + 2C_4 L_5 + C_5 L_5) + s (2C_4 R_5 + 2L_1 g_m) + 1}$$

$$\mathbf{10.123 \quad INVALID-ORDER-123} \quad Z(s) = \left(L_1 s, \quad \infty, \quad \infty, \quad L_4 s + \frac{1}{C_4 s}, \quad \frac{R_5 (C_5 L_5 s^2 + 1)}{C_5 L_5 s^2 + C_5 R_5 s + 1}, \quad \infty \right)$$

$$H(s) = \frac{-C_4 C_5 L_1 L_4 R_5 s^4 - C_5 L_1 R_5 s^2 + s^5 (C_4 C_5 L_1 L_4 L_5 R_5 g_m - C_4 C_5 L_1 L_4 L_5) + s^3 (C_4 L_1 L_4 R_5 g_m - C_4 L_1 L_4 + C_5 L_1 L_5 R_5 g_m - C_5 L_1 L_5) + s (L_1 R_5 g_m - L_1)}{2C_4 C_5 L_1 L_4 L_5 g_m s^5 + s^4 (2C_4 C_5 L_1 L_4 R_5 g_m + 2C_4 C_5 L_1 L_5 R_5 g_m + 2C_4 C_5 L_1 L_5 + C_4 C_5 L_4 L_5) + s^3 (2C_4 C_5 L_1 R_5 + C_4 C_5 L_4 R_5 + 2C_4 C_5 L_5 R_5 + 2C_4 L_1 L_4 g_m + 2C_5 L_1 L_5 g_m) + s^2 (2C_4 L_1 R_5 g_m + 2C_4 L_1 + C_4 L_4 + 2C_5 L_1 R_5 g_m + C_5 L_5) + s (2C_4 R_5 + C_5 R_5 + 2L_1 g_m)}$$

$$\mathbf{10.124 \quad INVALID-ORDER-124} \quad Z(s) = \left(L_1 s, \quad \infty, \quad \infty, \quad \frac{L_4 s}{C_4 L_4 s^2 + 1}, \quad R_5, \quad \infty \right)$$

$$H(s) = \frac{s^2 (L_1 L_4 R_5 g_m - L_1 L_4)}{2R_5 + s^3 (2C_4 L_1 L_4 R_5 g_m + 2C_4 L_1 L_4) + s^2 (2C_4 L_4 R_5 + 2L_1 L_4 g_m) + s (2L_1 R_5 g_m + 2L_1 + L_4)}$$

$$\mathbf{10.125 \quad INVALID-ORDER-125} \quad Z(s) = \left(L_1 s, \quad \infty, \quad \infty, \quad \frac{L_4 s}{C_4 L_4 s^2 + 1}, \quad \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{-C_5 L_1 L_4 s^3 + L_1 L_4 g_m s^2}{2C_4 C_5 L_1 L_4 s^4 + 2L_1 g_m s + s^3 (2C_4 L_1 L_4 g_m + 2C_5 L_1 L_4 g_m) + s^2 (2C_4 L_4 + 2C_5 L_1 + C_5 L_4) + 2}$$

$$\mathbf{10.126 \quad INVALID-ORDER-126} \quad Z(s) = \left(L_1 s, \quad \infty, \quad \infty, \quad \frac{L_4 s}{C_4 L_4 s^2 + 1}, \quad \frac{R_5}{C_5 R_5 s + 1}, \quad \infty \right)$$

$$H(s) = \frac{-C_5 L_1 L_4 R_5 s^3 + s^2 (L_1 L_4 R_5 g_m - L_1 L_4)}{2C_4 C_5 L_1 L_4 R_5 s^4 + 2R_5 + s^3 (2C_4 L_1 L_4 R_5 g_m + 2C_4 L_1 L_4 + 2C_5 L_1 L_4 R_5 g_m) + s^2 (2C_4 L_4 R_5 + 2C_5 L_1 R_5 + C_5 L_4 R_5 + 2L_1 L_4 g_m) + s (2L_1 R_5 g_m + 2L_1 + L_4)}$$

$$\mathbf{10.127 \quad INVALID-ORDER-127} \quad Z(s) = \left(L_1 s, \quad \infty, \quad \infty, \quad \frac{L_4 s}{C_4 L_4 s^2 + 1}, \quad R_5 + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{L_1 L_4 g_m s^2 + s^3 (C_5 L_1 L_4 R_5 g_m - C_5 L_1 L_4)}{s^4 (2C_4 C_5 L_1 L_4 R_5 g_m + 2C_4 C_5 L_1 L_4) + s^3 (2C_4 C_5 L_4 R_5 + 2C_4 L_1 L_4 g_m + 2C_5 L_1 L_4 g_m) + s^2 (2C_4 L_4 + 2C_5 L_1 R_5 g_m + 2C_5 L_1 + C_5 L_4) + s (2C_5 R_5 + 2L_1 g_m) + 2}$$

$$\mathbf{10.128 \quad INVALID-ORDER-128} \quad Z(s) = \left(L_1 s, \quad \infty, \quad \infty, \quad \frac{L_4 s}{C_4 L_4 s^2 + 1}, \quad L_5 s + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{C_5 L_1 L_4 L_5 g_m s^4 - C_5 L_1 L_4 s^3 + L_1 L_4 g_m s^2}{2C_4 C_5 L_1 L_4 L_5 g_m s^5 + 2L_1 g_m s + s^4 (2C_4 C_5 L_1 L_4 + 2C_4 C_5 L_4 L_5) + s^3 (2C_4 L_1 L_4 g_m + 2C_5 L_1 L_4 g_m + 2C_5 L_1 L_5 g_m) + s^2 (2C_4 L_4 + 2C_5 L_1 + C_5 L_4 + 2C_5 L_5) + 2}$$

$$\mathbf{10.129 \quad INVALID-ORDER-129} \quad Z(s) = \left(L_1 s, \quad \infty, \quad \infty, \quad \frac{L_4 s}{C_4 L_4 s^2 + 1}, \quad \frac{L_5 s}{C_5 L_5 s^2 + 1}, \quad \infty \right)$$

$$H(s) = \frac{-C_5 L_1 L_4 L_5 s^3 + L_1 L_4 L_5 g_m s^2 - L_1 L_4 s}{2C_4 C_5 L_1 L_4 L_5 s^4 + 2L_1 + L_4 + 2L_5 + s^3 (2C_4 L_1 L_4 L_5 g_m + 2C_5 L_1 L_4 L_5 g_m) + s^2 (2C_4 L_1 L_4 + 2C_4 L_4 L_5 + 2C_5 L_1 L_5 + C_5 L_4 L_5) + s (2L_1 L_4 g_m + 2L_1 L_5 g_m)}$$

$$\mathbf{10.130 \quad INVALID-ORDER-130} \quad Z(s) = \left(L_1 s, \quad \infty, \quad \infty, \quad \frac{L_4 s}{C_4 L_4 s^2 + 1}, \quad L_5 s + R_5 + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{C_5 L_1 L_4 L_5 g_m s^4 + L_1 L_4 g_m s^2 + s^3 (C_5 L_1 L_4 R_5 g_m - C_5 L_1 L_4)}{2 C_4 C_5 L_1 L_4 L_5 g_m s^5 + s^4 (2 C_4 C_5 L_1 L_4 R_5 g_m + 2 C_4 C_5 L_1 L_4 + 2 C_4 C_5 L_4 L_5) + s^3 (2 C_4 C_5 L_4 R_5 + 2 C_4 L_1 L_4 g_m + 2 C_5 L_1 L_4 g_m + 2 C_5 L_1 L_5 g_m) + s^2 (2 C_4 L_4 + 2 C_5 L_1 R_5 g_m + 2 C_5 L_1 + C_5 L_4 + 2 C_5 L_5) + s (2 C_5 R_5 + 2 L_1 g_m) + 2}$$

$$\mathbf{10.131 \quad INVALID-ORDER-131} \quad Z(s) = \left(L_1 s, \quad \infty, \quad \infty, \quad \frac{L_4 s}{C_4 L_4 s^2 + 1}, \quad \frac{L_5 R_5 s}{C_5 L_5 R_5 s^2 + L_5 s + R_5}, \quad \infty \right)$$

$$H(s) = \frac{-C_5 L_1 L_4 L_5 R_5 s^3 - L_1 L_4 R_5 s + s^2 (L_1 L_4 L_5 R_5 g_m - L_1 L_4 L_5)}{2 C_4 C_5 L_1 L_4 L_5 R_5 s^4 + 2 L_1 R_5 + L_4 R_5 + 2 L_5 R_5 + s^3 (2 C_4 L_1 L_4 L_5 R_5 g_m + 2 C_4 L_1 L_4 L_5 + 2 C_5 L_1 L_4 L_5 R_5 g_m) + s^2 (2 C_4 L_1 L_4 R_5 + 2 C_4 L_4 L_5 R_5 + 2 C_5 L_1 L_5 R_5 + C_5 L_4 L_5 R_5 + 2 L_1 L_4 L_5 g_m) + s (2 L_1 L_4 R_5 g_m + 2 L_1 L_5 R_5 g_m + 2 L_1 L_5 + L_4 L_5)}$$

$$\mathbf{10.132 \quad INVALID-ORDER-132} \quad Z(s) = \left(L_1 s, \quad \infty, \quad \infty, \quad \frac{L_4 s}{C_4 L_4 s^2 + 1}, \quad \frac{C_5 L_5 R_5 s^2 + L_5 s + R_5}{C_5 L_5 s^2 + 1}, \quad \infty \right)$$

$$H(s) = \frac{L_1 L_4 L_5 g_m s^3 + s^4 (C_5 L_1 L_4 L_5 R_5 g_m - C_5 L_1 L_4 L_5) + s^2 (L_1 L_4 R_5 g_m - L_1 L_4)}{2 R_5 + s^5 (2 C_4 C_5 L_1 L_4 L_5 R_5 g_m + 2 C_4 C_5 L_1 L_4 L_5) + s^4 (2 C_4 C_5 L_4 L_5 R_5 + 2 C_4 L_1 L_4 L_5 g_m + 2 C_5 L_1 L_4 L_5 g_m) + s^3 (2 C_4 L_1 L_4 R_5 g_m + 2 C_4 L_1 L_4 + 2 C_4 L_4 L_5 + 2 C_5 L_1 L_5 R_5 g_m + 2 C_5 L_1 L_5 + C_5 L_4 L_5) + s^2 (2 C_4 L_4 R_5 + 2 C_5 L_5 R_5 + 2 L_1 L_4 g_m + 2 L_1 L_5 g_m) + s (2 L_1 R_5 g_m + 2 L_1 L_5 g_m)}$$

$$\mathbf{10.133 \quad INVALID-ORDER-133} \quad Z(s) = \left(L_1 s, \quad \infty, \quad \infty, \quad \frac{L_4 s}{C_4 L_4 s^2 + 1}, \quad \frac{R_5 (C_5 L_5 s^2 + 1)}{C_5 L_5 s^2 + C_5 R_5 s + 1}, \quad \infty \right)$$

$$H(s) = \frac{-C_5 L_1 L_4 R_5 s^3 + s^4 (C_5 L_1 L_4 L_5 R_5 g_m - C_5 L_1 L_4 L_5) + s^2 (L_1 L_4 R_5 g_m - L_1 L_4)}{2 R_5 + s^5 (2 C_4 C_5 L_1 L_4 L_5 R_5 g_m + 2 C_4 C_5 L_1 L_4 L_5) + s^4 (2 C_4 C_5 L_1 L_4 R_5 + 2 C_4 C_5 L_4 L_5 R_5 + 2 C_5 L_1 L_4 L_5 g_m) + s^3 (2 C_4 L_1 L_4 R_5 g_m + 2 C_4 L_1 L_4 + 2 C_5 L_1 L_4 R_5 g_m + 2 C_5 L_1 L_5 R_5 g_m + 2 C_5 L_1 L_5 + C_5 L_4 L_5) + s^2 (2 C_4 L_4 R_5 + 2 C_5 L_1 R_5 + C_5 L_4 R_5 + 2 C_5 L_5 R_5 + 2 L_1 L_4 g_m)}$$

$$\mathbf{10.134 \quad INVALID-ORDER-134} \quad Z(s) = \left(L_1 s, \quad \infty, \quad \infty, \quad L_4 s + R_4 + \frac{1}{C_4 s}, \quad R_5, \quad \infty \right)$$

$$H(s) = \frac{s^3 (C_4 L_1 L_4 R_5 g_m - C_4 L_1 L_4) + s^2 (C_4 L_1 R_4 R_5 g_m - C_4 L_1 R_4) + s (L_1 R_5 g_m - L_1)}{2 C_4 L_1 L_4 g_m s^3 + s^2 (2 C_4 L_1 R_4 g_m + 2 C_4 L_1 R_5 g_m + 2 C_4 L_1 + C_4 L_4) + s (C_4 R_4 + 2 C_4 R_5 + 2 L_1 g_m) + 1}$$

$$\mathbf{10.135 \quad INVALID-ORDER-135} \quad Z(s) = \left(L_1 s, \quad \infty, \quad \infty, \quad L_4 s + R_4 + \frac{1}{C_4 s}, \quad \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{-C_4 C_5 L_1 L_4 s^3 + L_1 g_m + s^2 (-C_4 C_5 L_1 R_4 + C_4 L_1 L_4 g_m) + s (C_4 L_1 R_4 g_m - C_5 L_1)}{2 C_4 C_5 L_1 L_4 g_m s^3 + 2 C_4 + C_5 + s^2 (2 C_4 C_5 L_1 R_4 g_m + 2 C_4 C_5 L_1 + C_4 C_5 L_4) + s (C_4 C_5 R_4 + 2 C_4 L_1 g_m + 2 C_5 L_1 g_m)}$$

$$\mathbf{10.136 \quad INVALID-ORDER-136} \quad Z(s) = \left(L_1 s, \quad \infty, \quad \infty, \quad L_4 s + R_4 + \frac{1}{C_4 s}, \quad \frac{R_5}{C_5 R_5 s + 1}, \quad \infty \right)$$

$$H(s) = \frac{-C_4 C_5 L_1 L_4 R_5 s^4 + s^3 (-C_4 C_5 L_1 R_4 R_5 + C_4 L_1 L_4 R_5 g_m - C_4 L_1 L_4) + s^2 (C_4 L_1 R_4 R_5 g_m - C_4 L_1 R_4 - C_5 L_1 R_5) + s (L_1 R_5 g_m - L_1)}{2 C_4 C_5 L_1 L_4 R_5 g_m s^4 + s^3 (2 C_4 C_5 L_1 R_4 R_5 g_m + 2 C_4 C_5 L_1 R_5 + C_4 C_5 L_4 R_5 + 2 C_4 L_1 L_4 g_m) + s^2 (C_4 C_5 R_4 R_5 + 2 C_4 L_1 R_4 g_m + 2 C_4 L_1 R_5 g_m + 2 C_4 L_1 + C_4 L_4 + 2 C_5 L_1 R_5 g_m) + s (C_4 R_4 + 2 C_4 R_5 + C_5 R_5 + 2 L_1 g_m) + 1}$$

$$\mathbf{10.137 \quad INVALID-ORDER-137} \quad Z(s) = \left(L_1 s, \quad \infty, \quad \infty, \quad L_4 s + R_4 + \frac{1}{C_4 s}, \quad R_5 + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{L_1 g_m + s^3 (C_4 C_5 L_1 L_4 R_5 g_m - C_4 C_5 L_1 L_4) + s^2 (C_4 C_5 L_1 R_4 R_5 g_m - C_4 C_5 L_1 R_4 + C_4 L_1 L_4 g_m) + s (C_4 L_1 R_4 g_m + C_5 L_1 R_5 g_m - C_5 L_1)}{2 C_4 C_5 L_1 L_4 g_m s^3 + 2 C_4 + C_5 + s^2 (2 C_4 C_5 L_1 R_4 g_m + 2 C_4 C_5 L_1 R_5 g_m + 2 C_4 C_5 L_1 + C_4 C_5 L_4) + s (C_4 C_5 R_4 + 2 C_4 C_5 R_5 + 2 C_4 L_1 g_m + 2 C_5 L_1 g_m)}$$

$$\mathbf{10.138 \quad INVALID-ORDER-138} \quad Z(s) = \left(L_1 s, \quad \infty, \quad \infty, \quad L_4 s + R_4 + \frac{1}{C_4 s}, \quad L_5 s + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{C_4 C_5 L_1 L_4 L_5 g_m s^4 + L_1 g_m + s^3 (-C_4 C_5 L_1 L_4 + C_4 C_5 L_1 L_5 R_4 g_m) + s^2 (-C_4 C_5 L_1 R_4 + C_4 L_1 L_4 g_m + C_5 L_1 L_5 g_m) + s (C_4 L_1 R_4 g_m - C_5 L_1)}{2 C_4 + C_5 + s^3 (2 C_4 C_5 L_1 L_4 g_m + 2 C_4 C_5 L_1 L_5 g_m) + s^2 (2 C_4 C_5 L_1 R_4 g_m + 2 C_4 C_5 L_1 + C_4 C_5 L_4 + 2 C_4 C_5 L_5) + s (C_4 C_5 R_4 + 2 C_4 L_1 g_m + 2 C_5 L_1 g_m)}$$

$$\mathbf{10.139 \quad INVALID-ORDER-139} \quad Z(s) = \left(L_1 s, \quad \infty, \quad \infty, \quad L_4 s + R_4 + \frac{1}{C_4 s}, \quad \frac{L_5 s}{C_5 L_5 s^2 + 1}, \quad \infty \right)$$

$$H(s) = \frac{-C_4 C_5 L_1 L_4 L_5 s^5 - L_1 s + s^4 (-C_4 C_5 L_1 L_5 R_4 + C_4 L_1 L_4 L_5 g_m) + s^3 (-C_4 L_1 L_4 + C_4 L_1 L_5 R_4 g_m - C_5 L_1 L_5) + s^2 (-C_4 L_1 R_4 + L_1 L_5 g_m)}{2C_4 C_5 L_1 L_4 L_5 g_m s^5 + s^4 (2C_4 C_5 L_1 L_5 R_4 g_m + 2C_4 C_5 L_1 L_5 + C_4 C_5 L_4 L_5) + s^3 (C_4 C_5 L_5 R_4 + 2C_4 L_1 L_4 g_m + 2C_4 L_1 L_5 g_m + 2C_5 L_1 L_5 g_m) + s^2 (2C_4 L_1 R_4 g_m + 2C_4 L_1 + C_4 L_4 + 2C_4 L_5 + C_5 L_5) + s (C_4 R_4 + 2L_1 g_m) + 1}$$

$$\mathbf{10.140 \quad INVALID-ORDER-140} \quad Z(s) = \left(L_1 s, \quad \infty, \quad \infty, \quad L_4 s + R_4 + \frac{1}{C_4 s}, \quad L_5 s + R_5 + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{C_4 C_5 L_1 L_4 L_5 g_m s^4 + L_1 g_m + s^3 (C_4 C_5 L_1 L_4 R_5 g_m - C_4 C_5 L_1 L_4 + C_4 C_5 L_1 L_5 R_4 g_m) + s^2 (C_4 C_5 L_1 R_4 R_5 g_m - C_4 C_5 L_1 R_4 + C_4 L_1 L_4 g_m + C_5 L_1 L_5 g_m) + s (C_4 L_1 R_4 g_m + C_5 L_1 R_5 g_m - C_5 L_1)}{2C_4 + C_5 + s^3 (2C_4 C_5 L_1 L_4 g_m + 2C_4 C_5 L_1 L_5 g_m) + s^2 (2C_4 C_5 L_1 R_4 g_m + 2C_4 C_5 L_1 R_5 g_m + 2C_4 C_5 L_1 + C_4 C_5 L_4 + 2C_4 C_5 L_5) + s (C_4 C_5 R_4 + 2C_4 C_5 R_5 + 2C_4 L_1 g_m + 2C_5 L_1 g_m)}$$

$$\mathbf{10.141 \quad INVALID-ORDER-141} \quad Z(s) = \left(L_1 s, \quad \infty, \quad \infty, \quad L_4 s + R_4 + \frac{1}{C_4 s}, \quad \frac{L_5 R_5 s}{C_5 L_5 R_5 s^2 + L_5 s + R_5}, \quad \infty \right)$$

$$H(s) = \frac{-C_4 C_5 L_1 L_4 L_5 R_5 s^5 - L_1 R_5 s + s^4 (-C_4 C_5 L_1 L_5 R_4 R_5 + C_4 L_1 L_4 L_5 R_5 g_m - C_4 L_1 L_4 L_5) + s^3 (-C_4 L_1 L_4 R_5 + C_4 L_1 L_5 R_4 R_5 g_m - C_4 L_1 L_5 R_4 - C_5 L_1 L_5 R_5) + s^2 (-C_4 L_1 R_4 R_5 + L_1 L_5 R_5 g_m)}{2C_4 C_5 L_1 L_4 L_5 R_5 g_m s^5 + R_5 + s^4 (2C_4 C_5 L_1 L_5 R_4 R_5 g_m + 2C_4 C_5 L_1 L_5 R_5 + C_4 C_5 L_4 L_5 R_5 + 2C_4 L_1 L_4 L_5 g_m) + s^3 (C_4 C_5 L_5 R_4 R_5 + 2C_4 L_1 L_4 R_5 g_m + 2C_4 L_1 L_5 R_4 g_m + 2C_4 L_1 L_5 R_5 g_m + 2C_4 L_1 L_5 + C_4 L_4 L_5 + 2C_5 L_1 L_5 R_5 g_m) + s^2 (2C_4 L_1 R_4 R_5 g_m + 2C_4 L_1 R_5 + C_4 L_4 R_5)}$$

$$\mathbf{10.142 \quad INVALID-ORDER-142} \quad Z(s) = \left(L_1 s, \quad \infty, \quad \infty, \quad L_4 s + R_4 + \frac{1}{C_4 s}, \quad \frac{C_5 L_5 R_5 s^2 + L_5 s + R_5}{C_5 L_5 s^2 + 1}, \quad \infty \right)$$

$$H(s) = \frac{s^5 (C_4 C_5 L_1 L_4 L_5 R_5 g_m - C_4 C_5 L_1 L_4 L_5) + s^4 (C_4 C_5 L_1 L_5 R_4 R_5 g_m - C_4 C_5 L_1 L_5 R_4 + C_4 L_1 L_4 L_5 g_m) + s^3 (C_4 L_1 L_4 R_5 g_m - C_4 L_1 L_4 + C_4 L_1 L_5 R_4 g_m + C_5 L_1 L_5 R_5 g_m - C_5 L_1 L_5) + s^2 (C_4 L_1 R_4 R_5 g_m - C_4 L_1 R_4 + L_1 L_5 g_m) + s (L_1 R_5 g_m - L_1)}{2C_4 C_5 L_1 L_4 L_5 g_m s^5 + s^4 (2C_4 C_5 L_1 L_5 R_4 g_m + 2C_4 C_5 L_1 L_5 R_5 g_m + 2C_4 C_5 L_1 L_5 + C_4 C_5 L_4 L_5) + s^3 (C_4 C_5 L_5 R_4 + 2C_4 C_5 L_5 R_5 + 2C_4 L_1 L_4 g_m + 2C_4 L_1 L_5 g_m + 2C_5 L_1 L_5 g_m) + s^2 (2C_4 L_1 R_4 g_m + 2C_4 L_1 R_5 g_m + 2C_4 L_1 + C_4 L_4 + 2C_4 L_5 + C_5 L_5) + s (C_4 R_4 + 2C_4 R_5 + 2L_1 g_m)}$$

$$\mathbf{10.143 \quad INVALID-ORDER-143} \quad Z(s) = \left(L_1 s, \quad \infty, \quad \infty, \quad L_4 s + R_4 + \frac{1}{C_4 s}, \quad \frac{R_5 (C_5 L_5 s^2 + 1)}{C_5 L_5 s^2 + C_5 R_5 s + 1}, \quad \infty \right)$$

$$H(s) = \frac{s^5 (C_4 C_5 L_1 L_4 L_5 R_5 g_m - C_4 C_5 L_1 L_4 L_5) + s^4 (-C_4 C_5 L_1 L_4 R_5 + C_4 C_5 L_1 L_5 R_4 R_5 g_m - C_4 C_5 L_1 L_5 R_4) + s^3 (-C_4 C_5 L_1 R_4 R_5 + C_4 L_1 L_4 R_5 g_m - C_4 L_1 L_4 + C_5 L_1 L_5 R_5 g_m - C_5 L_1 L_5) + s^2 (C_4 L_1 R_4 R_5 g_m - C_4 L_1 R_4 R_5 + L_1 L_5 R_5 g_m)}{2C_4 C_5 L_1 L_4 L_5 g_m s^5 + s^4 (2C_4 C_5 L_1 L_4 R_5 g_m + 2C_4 C_5 L_1 L_5 R_4 g_m + 2C_4 C_5 L_1 L_5 R_5 g_m + 2C_4 C_5 L_1 L_5 + C_4 C_5 L_4 L_5) + s^3 (2C_4 C_5 L_1 R_4 R_5 g_m + 2C_4 C_5 L_1 R_5 + C_4 C_5 L_4 R_5 + C_4 C_5 L_5 R_4 + 2C_4 C_5 L_5 R_5 + 2C_4 L_1 L_4 g_m + 2C_5 L_1 L_5 g_m) + s^2 (C_4 C_5 R_4 R_5 + 2C_4 L_1 R_4 g_m + 2C_4 L_1 R_5 g_m + 2C_4 L_1 + C_4 L_4 + 2C_4 L_5 + C_5 L_5) + s (C_4 R_4 + 2C_4 R_5 + 2L_1 g_m)}$$

$$\mathbf{10.144 \quad INVALID-ORDER-144} \quad Z(s) = \left(L_1 s, \quad \infty, \quad \infty, \quad \frac{L_4 R_4 s}{C_4 L_4 R_4 s^2 + L_4 s + R_4}, \quad R_5, \quad \infty \right)$$

$$H(s) = \frac{s^2 (L_1 L_4 R_4 R_5 g_m - L_1 L_4 R_4)}{2R_4 R_5 + s^3 (2C_4 L_1 L_4 R_4 R_5 g_m + 2C_4 L_1 L_4 R_4) + s^2 (2C_4 L_4 R_4 R_5 + 2L_1 L_4 R_4 g_m + 2L_1 L_4 R_5 g_m + 2L_1 L_4) + s (2L_1 R_4 R_5 g_m + 2L_1 R_4 + L_4 R_4 + 2L_4 R_5)}$$

$$\mathbf{10.145 \quad INVALID-ORDER-145} \quad Z(s) = \left(L_1 s, \quad \infty, \quad \infty, \quad \frac{L_4 R_4 s}{C_4 L_4 R_4 s^2 + L_4 s + R_4}, \quad \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{-C_5 L_1 L_4 R_4 s^3 + L_1 L_4 R_4 g_m s^2}{2C_4 C_5 L_1 L_4 R_4 s^4 + 2R_4 + s^3 (2C_4 L_1 L_4 R_4 g_m + 2C_5 L_1 L_4 R_4 g_m + 2C_5 L_1 L_4) + s^2 (2C_4 L_4 R_4 + 2C_5 L_1 R_4 + C_5 L_4 R_4 + 2L_1 L_4 g_m) + s (2L_1 R_4 g_m + 2L_4)}$$

$$\mathbf{10.146 \quad INVALID-ORDER-146} \quad Z(s) = \left(L_1 s, \quad \infty, \quad \infty, \quad \frac{L_4 R_4 s}{C_4 L_4 R_4 s^2 + L_4 s + R_4}, \quad \frac{R_5}{C_5 R_5 s + 1}, \quad \infty \right)$$

$$H(s) = \frac{-C_5 L_1 L_4 R_4 R_5 s^3 + s^2 (L_1 L_4 R_4 R_5 g_m - L_1 L_4 R_4)}{2C_4 C_5 L_1 L_4 R_4 R_5 s^4 + 2R_4 R_5 + s^3 (2C_4 L_1 L_4 R_4 R_5 g_m + 2C_4 L_1 L_4 R_4 + 2C_5 L_1 L_4 R_4 R_5 g_m + 2C_5 L_1 L_4 R_5) + s^2 (2C_4 L_4 R_4 R_5 + 2C_5 L_1 R_4 R_5 + C_5 L_4 R_4 R_5 + 2L_1 L_4 R_4 g_m + 2L_1 L_4 R_5 g_m + 2L_1 L_4) + s (2L_1 R_4 R_5 g_m + 2L_1 R_4 + L_4 R_4 + 2L_4 R_5)}$$

$$\mathbf{10.147 \quad INVALID-ORDER-147} \quad Z(s) = \left(L_1 s, \quad \infty, \quad \infty, \quad \frac{L_4 R_4 s}{C_4 L_4 R_4 s^2 + L_4 s + R_4}, \quad R_5 + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{L_1 L_4 R_4 g_m s^2 + s^3 (C_5 L_1 L_4 R_4 R_5 g_m - C_5 L_1 L_4 R_4)}{2R_4 + s^4 (2C_4 C_5 L_1 L_4 R_4 R_5 g_m + 2C_4 C_5 L_1 L_4 R_4) + s^3 (2C_4 C_5 L_4 R_4 R_5 + 2C_4 L_1 L_4 R_4 g_m + 2C_5 L_1 L_4 R_4 g_m + 2C_5 L_1 L_4 R_5 g_m + 2C_5 L_1 L_4) + s^2 (2C_4 L_4 R_4 + 2C_5 L_1 R_4 R_5 g_m + 2C_5 L_1 R_4 + C_5 L_4 R_4 + 2C_5 L_4 R_5 + 2L_1 L_4 g_m) + s (2C_5 R_4 R_5 + 2L_1 R_4 g_m + 2L_4)}$$

$$\mathbf{10.148 \quad INVALID-ORDER-148} \quad Z(s) = \left(L_1 s, \quad \infty, \quad \infty, \quad \frac{L_4 R_4 s}{C_4 L_4 R_4 s^2 + L_4 s + R_4}, \quad L_5 s + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{C_5 L_1 L_4 L_5 R_4 g_m s^4 - C_5 L_1 L_4 R_4 s^3 + L_1 L_4 R_4 g_m s^2}{2 C_4 C_5 L_1 L_4 L_5 R_4 g_m s^5 + 2 R_4 + s^4 (2 C_4 C_5 L_1 L_4 R_4 + 2 C_4 C_5 L_4 L_5 R_4 + 2 C_5 L_1 L_4 L_5 g_m) + s^3 (2 C_4 L_1 L_4 R_4 g_m + 2 C_5 L_1 L_4 R_4 g_m + 2 C_5 L_1 L_4 + 2 C_5 L_1 L_5 R_4 g_m + 2 C_5 L_4 L_5) + s^2 (2 C_4 L_4 R_4 + 2 C_5 L_1 R_4 + C_5 L_4 R_4 + 2 C_5 L_5 R_4 + 2 L_1 L_4 g_m) + s (2 L_1 R_4 g_m + 2 L_4)}$$

$$\mathbf{10.149 \quad INVALID-ORDER-149} \quad Z(s) = \left(L_1 s, \quad \infty, \quad \infty, \quad \frac{L_4 R_4 s}{C_4 L_4 R_4 s^2 + L_4 s + R_4}, \quad \frac{L_5 s}{C_5 L_5 s^2 + 1}, \quad \infty \right)$$

$$H(s) = \frac{-C_5 L_1 L_4 L_5 R_4 s^3 + L_1 L_4 L_5 R_4 g_m s^2 - L_1 L_4 R_4 s}{2 C_4 C_5 L_1 L_4 L_5 R_4 s^4 + 2 L_1 R_4 + L_4 R_4 + 2 L_5 R_4 + s^3 (2 C_4 L_1 L_4 L_5 R_4 g_m + 2 C_5 L_1 L_4 L_5 R_4 g_m + 2 C_5 L_1 L_4 L_5) + s^2 (2 C_4 L_1 L_4 R_4 + 2 C_4 L_4 L_5 R_4 + 2 C_5 L_1 L_5 R_4 + C_5 L_4 L_5 R_4 + 2 L_1 L_4 L_5 g_m) + s (2 L_1 L_4 R_4 g_m + 2 L_1 L_4 + 2 L_1 L_5 R_4 g_m + 2 L_4 L_5)}$$

$$\mathbf{10.150 \quad INVALID-ORDER-150} \quad Z(s) = \left(L_1 s, \quad \infty, \quad \infty, \quad \frac{L_4 R_4 s}{C_4 L_4 R_4 s^2 + L_4 s + R_4}, \quad L_5 s + R_5 + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{C_5 L_1 L_4 L_5 R_4 g_m s^4 + L_1 L_4 R_4 g_m s^2 + s^3 (C_5 L_1 L_4 R_4 R_5 g_m - C_5 L_1 L_4 R_4)}{2 C_4 C_5 L_1 L_4 L_5 R_4 g_m s^5 + 2 R_4 + s^4 (2 C_4 C_5 L_1 L_4 R_4 R_5 g_m + 2 C_4 C_5 L_1 L_4 R_4 + 2 C_4 C_5 L_4 L_5 R_4 + 2 C_5 L_1 L_4 L_5 g_m) + s^3 (2 C_4 C_5 L_4 R_4 R_5 + 2 C_4 L_1 L_4 R_4 g_m + 2 C_5 L_1 L_4 R_4 g_m + 2 C_5 L_1 L_4 R_5 g_m + 2 C_5 L_1 L_4 + 2 C_5 L_1 L_5 R_4 g_m + 2 C_5 L_4 L_5) + s^2 (2 C_4 L_4 R_4 + 2 C_5 L_1 R_4 R_5 g_m + 2 C_5 L_4 R_4 R_5) + s (2 L_1 R_4 R_5 g_m + 2 L_4 R_5)}$$

$$\mathbf{10.151 \quad INVALID-ORDER-151} \quad Z(s) = \left(L_1 s, \quad \infty, \quad \infty, \quad \frac{L_4 R_4 s}{C_4 L_4 R_4 s^2 + L_4 s + R_4}, \quad \frac{L_5 R_5 s}{C_5 L_5 R_5 s^2 + L_5 s + R_5}, \quad \infty \right)$$

$$H(s) = \frac{-C_5 L_1 L_4 L_5 R_4 R_5 s^3 - L_1 L_4 R_4 R_5 s + s^2 (L_1 L_4 L_5 R_4 R_5 g_m - L_1 L_4 L_5 R_4)}{2 C_4 C_5 L_1 L_4 L_5 R_4 R_5 s^4 + 2 L_1 R_4 R_5 + L_4 R_4 R_5 + 2 L_5 R_4 R_5 + s^3 (2 C_4 L_1 L_4 L_5 R_4 R_5 g_m + 2 C_4 L_1 L_4 L_5 R_4 + 2 C_5 L_1 L_4 L_5 R_4 R_5 g_m + 2 C_5 L_1 L_4 L_5 R_5) + s^2 (2 C_4 L_1 L_4 R_4 R_5 + 2 C_4 L_4 L_5 R_4 R_5 + 2 C_5 L_1 L_5 R_4 R_5 + C_5 L_4 L_5 R_4 R_5 + 2 L_1 L_4 L_5 R_4 g_m + 2 L_1 L_4 L_5 R_5 g_m + 2 L_1 L_4 L_5 R_5) + s (2 L_1 R_4 R_5 g_m + 2 L_4 R_5)}$$

$$\mathbf{10.152 \quad INVALID-ORDER-152} \quad Z(s) = \left(L_1 s, \quad \infty, \quad \infty, \quad \frac{L_4 R_4 s}{C_4 L_4 R_4 s^2 + L_4 s + R_4}, \quad \frac{C_5 L_5 R_5 s^2 + L_5 s + R_5}{C_5 L_5 s^2 + 1}, \quad \infty \right)$$

$$H(s) = \frac{L_1 L_4 L_5 R_4 g_m s^3 + s^4 (C_5 L_1 L_4 L_5 R_4 R_5 g_m - C_5 L_1 L_4 L_5 R_4) + s^2 (L_1 L_4 R_4 R_5 g_m - L_1 L_4 R_4 R_5)}{2 R_4 R_5 + s^5 (2 C_4 C_5 L_1 L_4 L_5 R_4 R_5 g_m + 2 C_4 C_5 L_1 L_4 L_5 R_4) + s^4 (2 C_4 C_5 L_4 L_5 R_4 R_5 + 2 C_4 L_1 L_4 L_5 R_4 g_m + 2 C_5 L_1 L_4 L_5 R_4 g_m + 2 C_5 L_1 L_4 L_5 R_5 g_m + 2 C_5 L_1 L_4 L_5) + s^3 (2 C_4 L_1 L_4 R_4 R_5 g_m + 2 C_4 L_1 L_4 R_4 + 2 C_4 L_4 L_5 R_4 + 2 C_5 L_1 L_5 R_4 R_5 g_m + 2 C_5 L_1 L_5 R_4 + C_5 L_4 L_5 R_4) + s^2 (2 C_4 L_4 R_4 R_5 g_m + 2 C_5 L_1 R_4 R_5 g_m + 2 C_5 L_4 R_4 R_5) + s (2 L_1 R_4 R_5 g_m + 2 L_4 R_5)}$$

$$\mathbf{10.153 \quad INVALID-ORDER-153} \quad Z(s) = \left(L_1 s, \quad \infty, \quad \infty, \quad \frac{L_4 R_4 s}{C_4 L_4 R_4 s^2 + L_4 s + R_4}, \quad \frac{R_5 (C_5 L_5 s^2 + 1)}{C_5 L_5 s^2 + C_5 R_5 s + 1}, \quad \infty \right)$$

$$H(s) = \frac{-C_5 L_1 L_4 R_4 R_5 s^3 + s^4 (C_5 L_1 L_4 L_5 R_4 R_5 g_m - C_5 L_1 L_4 L_5 R_4) + s^2 (L_1 L_4 R_4 R_5 g_m - L_1 L_4 R_4 R_5)}{2 R_4 R_5 + s^5 (2 C_4 C_5 L_1 L_4 L_5 R_4 R_5 g_m + 2 C_4 C_5 L_1 L_4 L_5 R_4) + s^4 (2 C_4 C_5 L_1 L_4 R_4 R_5 + 2 C_4 C_5 L_4 L_5 R_4 R_5 + 2 C_5 L_1 L_4 L_5 R_4 g_m + 2 C_5 L_1 L_4 L_5 R_5 g_m + 2 C_5 L_1 L_4 L_5) + s^3 (2 C_4 L_1 L_4 R_4 R_5 g_m + 2 C_4 L_1 L_4 R_4 + 2 C_5 L_1 L_4 R_4 R_5 g_m + 2 C_5 L_1 L_4 R_5 + 2 C_5 L_1 L_5 R_4 R_5 g_m + 2 C_5 L_1 L_5 R_4) + s^2 (2 C_4 L_4 R_4 R_5 g_m + 2 C_5 L_1 R_4 R_5 g_m + 2 C_5 L_4 R_4 R_5) + s (2 L_1 R_4 R_5 g_m + 2 L_4 R_5)}$$

$$\mathbf{10.154 \quad INVALID-ORDER-154} \quad Z(s) = \left(L_1 s, \quad \infty, \quad \infty, \quad \frac{C_4 L_4 R_4 s^2 + L_4 s + R_4}{C_4 L_4 s^2 + 1}, \quad R_5, \quad \infty \right)$$

$$H(s) = \frac{s^3 (C_4 L_1 L_4 R_4 R_5 g_m - C_4 L_1 L_4 R_4) + s^2 (L_1 L_4 R_5 g_m - L_1 L_4) + s (L_1 R_4 R_5 g_m - L_1 R_4)}{R_4 + 2 R_5 + s^3 (2 C_4 L_1 L_4 R_4 g_m + 2 C_4 L_1 L_4 R_5 g_m + 2 C_4 L_1 L_4) + s^2 (C_4 L_4 R_4 + 2 C_4 L_4 R_5 + 2 L_1 L_4 g_m) + s (2 L_1 R_4 g_m + 2 L_1 R_5 g_m + 2 L_1 + L_4)}$$

$$\mathbf{10.155 \quad INVALID-ORDER-155} \quad Z(s) = \left(L_1 s, \quad \infty, \quad \infty, \quad \frac{C_4 L_4 R_4 s^2 + L_4 s + R_4}{C_4 L_4 s^2 + 1}, \quad \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{-C_4 C_5 L_1 L_4 R_4 s^4 + L_1 R_4 g_m s + s^3 (C_4 L_1 L_4 R_4 g_m - C_5 L_1 L_4) + s^2 (-C_5 L_1 R_4 + L_1 L_4 g_m)}{s^4 (2 C_4 C_5 L_1 L_4 R_4 g_m + 2 C_4 C_5 L_1 L_4) + s^3 (C_4 C_5 L_4 R_4 + 2 C_4 L_1 L_4 g_m + 2 C_5 L_1 L_4 g_m) + s^2 (2 C_4 L_4 + 2 C_5 L_1 R_4 g_m + 2 C_5 L_1 + C_5 L_4) + s (C_5 R_4 + 2 L_1 g_m) + 2}$$

$$\mathbf{10.156 \quad INVALID-ORDER-156} \quad Z(s) = \left(L_1 s, \quad \infty, \quad \infty, \quad \frac{C_4 L_4 R_4 s^2 + L_4 s + R_4}{C_4 L_4 s^2 + 1}, \quad \frac{R_5}{C_5 R_5 s + 1}, \quad \infty \right)$$

$$H(s) = \frac{-C_4 C_5 L_1 L_4 R_4 R_5 s^4 + s^3 (C_4 L_1 L_4 R_4 R_5 g_m - C_4 L_1 L_4 R_4 - C_5 L_1 L_4 R_5) + s^2 (-C_5 L_1 R_4 R_5 + L_1 L_4 R_5 g_m - L_1 L_4) + s (L_1 R_4 R_5 g_m - L_1 R_4)}{R_4 + 2 R_5 + s^4 (2 C_4 C_5 L_1 L_4 R_4 R_5 g_m + 2 C_4 C_5 L_1 L_4 R_5) + s^3 (C_4 C_5 L_4 R_4 R_5 + 2 C_4 L_1 L_4 R_4 g_m + 2 C_4 L_1 L_4 R_5 g_m + 2 C_4 L_1 L_4 + 2 C_5 L_1 L_4 R_5 g_m) + s^2 (C_4 L_4 R_4 + 2 C_4 L_4 R_5 + 2 C_5 L_1 R_4 R_5 g_m + 2 C_5 L_1 R_5 + C_5 L_4 R_5 + 2 L_1 L_4 g_m) + s (C_5 R_4 R_5 + 2 L_1 R_4 g_m + 2 L_1 R_5 g_m + 2 L_1 + L_4)}$$

$$\mathbf{10.157 \quad INVALID-ORDER-157} \quad Z(s) = \left(L_1 s, \quad \infty, \quad \infty, \quad \frac{C_4 L_4 R_4 s^2 + L_4 s + R_4}{C_4 L_4 s^2 + 1}, \quad R_5 + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{L_1 R_4 g_m s + s^4 (C_4 C_5 L_1 L_4 R_4 R_5 g_m - C_4 C_5 L_1 L_4 R_4) + s^3 (C_4 L_1 L_4 R_4 g_m + C_5 L_1 L_4 R_5 g_m - C_5 L_1 L_4) + s^2 (C_5 L_1 R_4 R_5 g_m - C_5 L_1 R_4 + L_1 L_4 g_m)}{s^4 (2C_4 C_5 L_1 L_4 R_4 g_m + 2C_4 C_5 L_1 L_4 R_5 g_m + 2C_4 C_5 L_1 L_4) + s^3 (C_4 C_5 L_4 R_4 + 2C_4 C_5 L_4 R_5 + 2C_4 L_1 L_4 g_m + 2C_5 L_1 L_4 g_m) + s^2 (2C_4 L_4 + 2C_5 L_1 R_4 g_m + 2C_5 L_1 R_5 g_m + 2C_5 L_1 + C_5 L_4) + s (C_5 R_4 + 2C_5 R_5 + 2L_1 g_m) + 2}$$

$$\mathbf{10.158 \quad INVALID-ORDER-158} \quad Z(s) = \left(L_1 s, \quad \infty, \quad \infty, \quad \frac{C_4 L_4 R_4 s^2 + L_4 s + R_4}{C_4 L_4 s^2 + 1}, \quad L_5 s + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{C_4 C_5 L_1 L_4 L_5 R_4 g_m s^5 + L_1 R_4 g_m s + s^4 (-C_4 C_5 L_1 L_4 R_4 + C_5 L_1 L_4 L_5 g_m) + s^3 (C_4 L_1 L_4 R_4 g_m - C_5 L_1 L_4 + C_5 L_1 L_5 R_4 g_m) + s^2 (-C_5 L_1 R_4 + L_1 L_4 g_m)}{2C_4 C_5 L_1 L_4 L_5 g_m s^5 + s^4 (2C_4 C_5 L_1 L_4 R_4 g_m + 2C_4 C_5 L_1 L_4 + 2C_4 C_5 L_4 L_5) + s^3 (C_4 C_5 L_4 R_4 + 2C_4 L_1 L_4 g_m + 2C_5 L_1 L_4 g_m + 2C_5 L_1 L_5 g_m) + s^2 (2C_4 L_4 + 2C_5 L_1 R_4 g_m + 2C_5 L_1 + C_5 L_4 + 2C_5 L_5) + s (C_5 R_4 + 2L_1 g_m) + 2}$$

$$\mathbf{10.159 \quad INVALID-ORDER-159} \quad Z(s) = \left(L_1 s, \quad \infty, \quad \infty, \quad \frac{C_4 L_4 R_4 s^2 + L_4 s + R_4}{C_4 L_4 s^2 + 1}, \quad \frac{L_5 s}{C_5 L_5 s^2 + 1}, \quad \infty \right)$$

$$H(s) = \frac{-C_4 C_5 L_1 L_4 L_5 R_4 s^5 - L_1 R_4 s + s^4 (C_4 L_1 L_4 L_5 R_4 g_m - C_5 L_1 L_4 L_5) + s^3 (-C_4 L_1 L_4 R_4 - C_5 L_1 L_5 R_4 + L_1 L_4 L_5 g_m) + s^2 (-L_1 L_4 + L_1 L_5 R_4 g_m)}{R_4 + s^5 (2C_4 C_5 L_1 L_4 L_5 R_4 g_m + 2C_4 C_5 L_1 L_4 L_5) + s^4 (C_4 C_5 L_4 L_5 R_4 + 2C_4 L_1 L_4 L_5 g_m + 2C_5 L_1 L_4 L_5 g_m) + s^3 (2C_4 L_1 L_4 R_4 g_m + 2C_4 L_1 L_4 + 2C_4 L_4 L_5 + 2C_5 L_1 L_5 R_4 g_m + 2C_5 L_1 L_5 + C_5 L_4 L_5) + s^2 (C_4 L_4 R_4 + C_5 L_5 R_4 + 2L_1 L_4 g_m + 2L_1 L_5 g_m) + s (2L_1 R_4 g_m + 2L_1 L_5)}$$

$$\mathbf{10.160 \quad INVALID-ORDER-160} \quad Z(s) = \left(L_1 s, \quad \infty, \quad \infty, \quad \frac{C_4 L_4 R_4 s^2 + L_4 s + R_4}{C_4 L_4 s^2 + 1}, \quad L_5 s + R_5 + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{C_4 C_5 L_1 L_4 L_5 R_4 g_m s^5 + L_1 R_4 g_m s + s^4 (C_4 C_5 L_1 L_4 R_4 R_5 g_m - C_4 C_5 L_1 L_4 R_4 + C_5 L_1 L_4 L_5 g_m) + s^3 (C_4 L_1 L_4 R_4 g_m + C_5 L_1 L_4 R_5 g_m - C_5 L_1 L_4 + C_5 L_1 L_5 R_4 g_m) + s^2 (C_5 L_1 R_4 R_5 g_m - C_5 L_1 R_4 + L_1 L_4 g_m)}{2C_4 C_5 L_1 L_4 L_5 g_m s^5 + s^4 (2C_4 C_5 L_1 L_4 R_4 g_m + 2C_4 C_5 L_1 L_4 R_5 g_m + 2C_4 C_5 L_1 L_4 + 2C_4 C_5 L_4 L_5) + s^3 (C_4 C_5 L_4 R_4 + 2C_4 C_5 L_4 R_5 + 2C_4 L_1 L_4 g_m + 2C_5 L_1 L_4 g_m + 2C_5 L_1 L_5 g_m) + s^2 (2C_4 L_4 + 2C_5 L_1 R_4 g_m + 2C_5 L_1 R_5 g_m + 2C_5 L_1 + C_5 L_4 + 2C_5 L_5) + s (C_5 R_4 + 2C_5 R_5)}$$

$$\mathbf{10.161 \quad INVALID-ORDER-161} \quad Z(s) = \left(L_1 s, \quad \infty, \quad \infty, \quad \frac{C_4 L_4 R_4 s^2 + L_4 s + R_4}{C_4 L_4 s^2 + 1}, \quad \frac{L_5 R_5 s}{C_5 L_5 R_5 s^2 + L_5 s + R_5}, \quad \infty \right)$$

$$H(s) = \frac{-C_4 C_5 L_1 L_4 L_5 R_4 R_5 s^5 - L_1 R_4 R_5 s + s^4 (C_4 L_1 L_4 L_5 R_4 R_5 g_m - C_4 L_1 L_4 L_5 R_4 - C_5 L_1 L_4 L_5 R_5) + s^3 (-C_4 L_1 L_4 R_4 R_5 - C_5 L_1 L_5 R_4 R_5 + L_1 L_4 L_5 R_5 g_m)}{R_4 R_5 + s^5 (2C_4 C_5 L_1 L_4 L_5 R_4 R_5 g_m + 2C_4 C_5 L_1 L_4 L_5 R_5) + s^4 (C_4 C_5 L_4 L_5 R_4 R_5 + 2C_4 L_1 L_4 L_5 R_4 g_m + 2C_4 L_1 L_4 L_5 R_5 g_m + 2C_4 L_1 L_4 L_5 + 2C_5 L_1 L_4 L_5 R_5 g_m) + s^3 (2C_4 L_1 L_4 R_4 R_5 g_m + 2C_4 L_1 L_4 R_5 + C_4 L_4 L_5 R_4 + 2C_4 L_4 L_5 R_5 + 2C_5 L_1 L_5 R_4 R_5 g_m + 2C_5 L_1 L_5 R_5 + C_5 L_4 L_5)}$$

$$\mathbf{10.162 \quad INVALID-ORDER-162} \quad Z(s) = \left(L_1 s, \quad \infty, \quad \infty, \quad \frac{C_4 L_4 R_4 s^2 + L_4 s + R_4}{C_4 L_4 s^2 + 1}, \quad \frac{C_5 L_5 R_5 s^2 + L_5 s + R_5}{C_5 L_5 s^2 + 1}, \quad \infty \right)$$

$$H(s) = \frac{s^5 (C_4 C_5 L_1 L_4 L_5 R_4 R_5 g_m - C_4 C_5 L_1 L_4 L_5 R_4) + s^4 (C_4 L_1 L_4 L_5 R_4 g_m + C_5 L_1 L_4 L_5 R_5 g_m - C_5 L_1 L_4 L_5) + s^3 (C_4 L_1 L_4 R_4 R_5 g_m - C_4 L_1 L_4 R_4 + C_5 L_1 L_5 R_4 R_5 g_m - C_5 L_1 L_5 R_4 + L_1 L_4 L_5 g_m) + s^2 (C_5 L_1 R_4 R_5 g_m - C_5 L_1 R_4 + L_1 L_4 g_m)}{R_4 + 2R_5 + s^5 (2C_4 C_5 L_1 L_4 L_5 R_4 g_m + 2C_4 C_5 L_1 L_4 L_5 R_5 g_m + 2C_4 C_5 L_1 L_4 L_5) + s^4 (C_4 C_5 L_4 L_5 R_4 + 2C_4 C_5 L_4 L_5 R_5 + 2C_4 L_1 L_4 L_5 g_m + 2C_5 L_1 L_4 L_5 g_m) + s^3 (2C_4 L_1 L_4 R_4 g_m + 2C_4 L_1 L_4 R_5 g_m + 2C_4 L_1 L_4 + 2C_4 L_4 L_5 + 2C_5 L_1 L_5 R_4 g_m + 2C_5 L_1 L_5 R_5 g_m + 2C_5 L_1 L_5)}$$

$$\mathbf{10.163 \quad INVALID-ORDER-163} \quad Z(s) = \left(L_1 s, \quad \infty, \quad \infty, \quad \frac{C_4 L_4 R_4 s^2 + L_4 s + R_4}{C_4 L_4 s^2 + 1}, \quad \frac{R_5 (C_5 L_5 s^2 + 1)}{C_5 L_5 s^2 + C_5 R_5 s + 1}, \quad \infty \right)$$

$$H(s) = \frac{s^5 (C_4 C_5 L_1 L_4 L_5 R_4 R_5 g_m - C_4 C_5 L_1 L_4 L_5 R_4) + s^4 (-C_4 C_5 L_1 L_4 R_4 R_5 + C_5 L_1 L_4 L_5 R_5 g_m - C_5 L_1 L_4 L_5) + s^3 (C_4 L_1 L_4 R_4 R_5 g_m - C_4 L_1 L_4 R_4 - C_5 L_1 L_4 R_5) + s^2 (C_5 L_1 R_4 R_5 g_m - C_5 L_1 R_4 + L_1 L_4 g_m)}{R_4 + 2R_5 + s^5 (2C_4 C_5 L_1 L_4 L_5 R_4 g_m + 2C_4 C_5 L_1 L_4 L_5 R_5 g_m + 2C_4 C_5 L_1 L_4 L_5) + s^4 (2C_4 C_5 L_1 L_4 R_4 R_5 g_m + 2C_4 C_5 L_1 L_4 R_5 + C_4 C_5 L_4 L_5 R_4 + 2C_4 C_5 L_4 L_5 R_5 + 2C_5 L_1 L_4 L_5 g_m) + s^3 (C_4 C_5 L_4 R_4 R_5 + 2C_4 L_1 L_4 R_4 g_m + 2C_4 L_1 L_4 R_5 g_m + 2C_4 L_1 L_4 + 2C_5 L_1 L_4 R_5 g_m + 2C_5 L_1 L_4 R_5)}$$

$$\mathbf{10.164 \quad INVALID-ORDER-164} \quad Z(s) = \left(L_1 s, \quad \infty, \quad \infty, \quad \frac{R_4 (C_4 L_4 s^2 + 1)}{C_4 L_4 s^2 + C_4 R_4 s + 1}, \quad R_5, \quad \infty \right)$$

$$H(s) = \frac{s^3 (C_4 L_1 L_4 R_4 R_5 g_m - C_4 L_1 L_4 R_4) + s (L_1 R_4 R_5 g_m - L_1 R_4)}{R_4 + 2R_5 + s^3 (2C_4 L_1 L_4 R_4 g_m + 2C_4 L_1 L_4 R_5 g_m + 2C_4 L_1 L_4) + s^2 (2C_4 L_1 R_4 R_5 g_m + 2C_4 L_1 R_4 + C_4 L_4 R_4 + 2C_4 L_4 R_5) + s (2C_4 R_4 R_5 + 2L_1 R_4 g_m + 2L_1 R_5 g_m + 2L_1)}$$

$$\mathbf{10.165 \quad INVALID-ORDER-165} \quad Z(s) = \left(L_1 s, \quad \infty, \quad \infty, \quad \frac{R_4 (C_4 L_4 s^2 + 1)}{C_4 L_4 s^2 + C_4 R_4 s + 1}, \quad \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{-C_4 C_5 L_1 L_4 R_4 s^4 + C_4 L_1 L_4 R_4 g_m s^3 - C_5 L_1 R_4 s^2 + L_1 R_4 g_m s}{s^4 (2C_4 C_5 L_1 L_4 R_4 g_m + 2C_4 C_5 L_1 L_4) + s^3 (2C_4 C_5 L_1 R_4 + C_4 C_5 L_4 R_4 + 2C_4 L_1 L_4 g_m) + s^2 (2C_4 L_1 R_4 g_m + 2C_4 L_4 + 2C_5 L_1 R_4 g_m + 2C_5 L_1) + s (2C_4 R_4 + C_5 R_4 + 2L_1 g_m) + 2}$$

$$\mathbf{10.166 \quad INVALID-ORDER-166} \quad Z(s) = \left(L_1 s, \quad \infty, \quad \infty, \quad \frac{R_4(C_4 L_4 s^2 + 1)}{C_4 L_4 s^2 + C_4 R_4 s + 1}, \quad \frac{R_5}{C_5 R_5 s + 1}, \quad \infty \right)$$

$$H(s) = \frac{-C_4 C_5 L_1 L_4 R_4 R_5 s^4 - C_5 L_1 R_4 R_5 s^2 + s^3 (C_4 L_1 L_4 R_4 R_5 g_m - C_4 L_1 L_4 R_4) + s (L_1 R_4 R_5 g_m - L_1 R_4)}{R_4 + 2R_5 + s^4 (2C_4 C_5 L_1 L_4 R_4 R_5 g_m + 2C_4 C_5 L_1 L_4 R_5) + s^3 (2C_4 C_5 L_1 R_4 R_5 + C_4 C_5 L_4 R_4 R_5 + 2C_4 L_1 L_4 R_4 g_m + 2C_4 L_1 L_4 R_5 g_m + 2C_4 L_1 L_4) + s^2 (2C_4 L_1 R_4 R_5 g_m + 2C_4 L_1 R_4 + C_4 L_4 R_4 + 2C_4 L_4 R_5 + 2C_5 L_1 R_4 R_5 g_m + 2C_5 L_1 R_5) + s (2C_4 R_4 R_5 + C_5 R_4 R_5 + 2L_1 R_4)}$$

$$\mathbf{10.167 \quad INVALID-ORDER-167} \quad Z(s) = \left(L_1 s, \quad \infty, \quad \infty, \quad \frac{R_4(C_4 L_4 s^2 + 1)}{C_4 L_4 s^2 + C_4 R_4 s + 1}, \quad R_5 + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{C_4 L_1 L_4 R_4 g_m s^3 + L_1 R_4 g_m s + s^4 (C_4 C_5 L_1 L_4 R_4 R_5 g_m - C_4 C_5 L_1 L_4 R_4) + s^2 (C_5 L_1 R_4 R_5 g_m - C_5 L_1 R_4)}{s^4 (2C_4 C_5 L_1 L_4 R_4 g_m + 2C_4 C_5 L_1 L_4 R_5 g_m + 2C_4 C_5 L_1 L_4) + s^3 (2C_4 C_5 L_1 R_4 R_5 g_m + 2C_4 C_5 L_1 R_4 + C_4 C_5 L_4 R_4 + 2C_4 C_5 L_4 R_5 + 2C_4 L_1 L_4 g_m) + s^2 (2C_4 C_5 R_4 R_5 + 2C_4 L_1 R_4 g_m + 2C_4 L_4 + 2C_5 L_1 R_4 g_m + 2C_5 L_1 R_5 g_m + 2C_5 L_1) + s (2C_4 R_4 + C_5 R_4 + 2C_5 R_5 + 2L_1 R_4)}$$

$$\mathbf{10.168 \quad INVALID-ORDER-168} \quad Z(s) = \left(L_1 s, \quad \infty, \quad \infty, \quad \frac{R_4(C_4 L_4 s^2 + 1)}{C_4 L_4 s^2 + C_4 R_4 s + 1}, \quad L_5 s + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{C_4 C_5 L_1 L_4 L_5 R_4 g_m s^5 - C_4 C_5 L_1 L_4 R_4 s^4 - C_5 L_1 R_4 s^2 + L_1 R_4 g_m s + s^3 (C_4 L_1 L_4 R_4 g_m + C_5 L_1 L_5 R_4 g_m)}{2C_4 C_5 L_1 L_4 L_5 g_m s^5 + s^4 (2C_4 C_5 L_1 L_4 R_4 g_m + 2C_4 C_5 L_1 L_4 + 2C_4 C_5 L_1 L_5 R_4 g_m + 2C_4 C_5 L_4 L_5) + s^3 (2C_4 C_5 L_1 R_4 + C_4 C_5 L_4 R_4 + 2C_4 C_5 L_5 R_4 + 2C_4 L_1 L_4 g_m + 2C_5 L_1 L_5 g_m) + s^2 (2C_4 L_1 R_4 g_m + 2C_4 L_4 + 2C_5 L_1 R_4 g_m + 2C_5 L_1 + 2C_5 L_5) + s (2C_4 R_4 + C_5 R_4 + 2L_1 R_4)}$$

$$\mathbf{10.169 \quad INVALID-ORDER-169} \quad Z(s) = \left(L_1 s, \quad \infty, \quad \infty, \quad \frac{R_4(C_4 L_4 s^2 + 1)}{C_4 L_4 s^2 + C_4 R_4 s + 1}, \quad \frac{L_5 s}{C_5 L_5 s^2 + 1}, \quad \infty \right)$$

$$H(s) = \frac{-C_4 C_5 L_1 L_4 L_5 R_4 s^5 + C_4 L_1 L_4 L_5 R_4 g_m s^4 + L_1 L_5 R_4 g_m s^2 - L_1 R_4 s + s^3 (-C_4 L_1 L_4 R_4 - C_5 L_1 L_5 R_4)}{R_4 + s^5 (2C_4 C_5 L_1 L_4 L_5 R_4 g_m + 2C_4 C_5 L_1 L_4 L_5) + s^4 (2C_4 C_5 L_1 L_5 R_4 + C_4 C_5 L_4 L_5 R_4 + 2C_4 L_1 L_4 L_5 g_m) + s^3 (2C_4 L_1 L_4 R_4 g_m + 2C_4 L_1 L_4 + 2C_4 L_1 L_5 R_4 g_m + 2C_4 L_4 L_5 + 2C_5 L_1 L_5 R_4 g_m + 2C_5 L_1 L_5) + s^2 (2C_4 L_1 R_4 + C_4 L_4 R_4 + 2C_4 L_5 R_4 + C_5 L_5 R_4 + 2L_1 L_5 g_m) + s (2C_4 R_4 + C_5 R_4 + 2L_1 R_4)}$$

$$\mathbf{10.170 \quad INVALID-ORDER-170} \quad Z(s) = \left(L_1 s, \quad \infty, \quad \infty, \quad \frac{R_4(C_4 L_4 s^2 + 1)}{C_4 L_4 s^2 + C_4 R_4 s + 1}, \quad L_5 s + R_5 + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{C_4 C_5 L_1 L_4 L_5 R_4 g_m s^5 + L_1 R_4 g_m s + s^4 (C_4 C_5 L_1 L_4 R_4 R_5 g_m - C_4 C_5 L_1 L_4 R_4) + s^3 (C_4 L_1 L_4 R_4 g_m + C_5 L_1 L_5 R_4 g_m) + s^2 (C_5 L_1 R_4 R_5 g_m - C_5 L_1 R_4)}{2C_4 C_5 L_1 L_4 L_5 g_m s^5 + s^4 (2C_4 C_5 L_1 L_4 R_4 g_m + 2C_4 C_5 L_1 L_4 R_5 g_m + 2C_4 C_5 L_1 L_4 + 2C_4 C_5 L_1 L_5 R_4 g_m + 2C_4 C_5 L_4 L_5) + s^3 (2C_4 C_5 L_1 R_4 R_5 g_m + 2C_4 C_5 L_1 R_4 + C_4 C_5 L_4 R_4 + 2C_4 C_5 L_4 R_5 + 2C_4 L_1 L_4 g_m + 2C_5 L_1 L_5 g_m) + s^2 (2C_4 C_5 R_4 R_5 + 2C_4 L_1 R_4 g_m)}$$

$$\mathbf{10.171 \quad INVALID-ORDER-171} \quad Z(s) = \left(L_1 s, \quad \infty, \quad \infty, \quad \frac{R_4(C_4 L_4 s^2 + 1)}{C_4 L_4 s^2 + C_4 R_4 s + 1}, \quad \frac{L_5 R_5 s}{C_5 L_5 R_5 s^2 + L_5 s + R_5}, \quad \infty \right)$$

$$H(s) = \frac{-C_4 C_5 L_1 L_4 L_5 R_4 R_5 s^5 - L_1 R_4 R_5 s + s^4 (C_4 L_1 L_4 L_5 R_4 R_5 g_m - C_4 L_1 L_4 L_5 R_4) + s^3 (-C_4 L_1 L_4 R_4 R_5 - C_5 L_1 L_5 R_4 R_5)}{R_4 R_5 + s^5 (2C_4 C_5 L_1 L_4 L_5 R_4 R_5 g_m + 2C_4 C_5 L_1 L_4 L_5 R_5) + s^4 (2C_4 C_5 L_1 L_5 R_4 R_5 + C_4 C_5 L_4 L_5 R_4 R_5 + 2C_4 L_1 L_4 L_5 R_4 g_m + 2C_4 L_1 L_4 L_5 R_5 g_m + 2C_4 L_1 L_4 L_5) + s^3 (2C_4 L_1 L_4 R_4 R_5 g_m + 2C_4 L_1 L_4 R_5 + 2C_4 L_1 L_5 R_4 R_5 g_m + 2C_4 L_1 L_5 R_4 + C_4 L_4 L_5 R_4 + 2C_4 L_4 L_5 R_5 + 2C_5 L_1 L_5 R_4 R_5) + s^2 (2C_4 L_1 R_4 R_5 + C_4 L_4 R_4 R_5 + 2C_4 L_5 R_4 R_5 + C_5 L_5 R_4 R_5 + 2L_1 L_5 g_m) + s (2C_4 R_4 R_5 + C_5 R_4 R_5 + 2L_1 R_4 R_5)}$$

$$\mathbf{10.172 \quad INVALID-ORDER-172} \quad Z(s) = \left(L_1 s, \quad \infty, \quad \infty, \quad \frac{R_4(C_4 L_4 s^2 + 1)}{C_4 L_4 s^2 + C_4 R_4 s + 1}, \quad \frac{C_5 L_5 R_5 s^2 + L_5 s + R_5}{C_5 L_5 s^2 + 1}, \quad \infty \right)$$

$$H(s) = \frac{C_4 L_1 L_4 L_5 R_4 g_m s^4 + L_1 L_5 R_4 g_m s^2 + s^5 (C_4 C_5 L_1 L_4 L_5 R_4 R_5 g_m - C_4 C_5 L_1 L_4 L_5 R_4) + s^3 (C_4 L_1 L_4 R_4 R_5 g_m - C_4 L_1 L_4 R_4 R_5)}{R_4 + 2R_5 + s^5 (2C_4 C_5 L_1 L_4 L_5 R_4 g_m + 2C_4 C_5 L_1 L_4 L_5 R_5 g_m + 2C_4 C_5 L_1 L_4 L_5) + s^4 (2C_4 C_5 L_1 L_5 R_4 R_5 g_m + 2C_4 C_5 L_1 L_5 R_4 + C_4 C_5 L_4 L_5 R_4 + 2C_4 C_5 L_4 L_5 R_5 + 2C_4 L_1 L_4 L_5 g_m) + s^3 (2C_4 C_5 L_5 R_4 R_5 + 2C_4 L_1 L_4 R_4 g_m + 2C_4 L_1 L_4 R_5 g_m + 2C_4 L_1 L_4 + 2C_4 L_1 L_5 R_4 g_m + 2C_5 L_1 L_5 R_4 R_5) + s^2 (2C_4 L_1 R_4 R_5 + C_4 L_4 R_4 R_5 + 2C_4 L_5 R_4 R_5 + C_5 L_5 R_4 R_5 + 2L_1 L_5 g_m) + s (2C_4 R_4 R_5 + C_5 R_4 R_5 + 2L_1 R_4 R_5)}$$

$$\mathbf{10.173 \quad INVALID-ORDER-173} \quad Z(s) = \left(L_1 s, \quad \infty, \quad \infty, \quad \frac{R_4(C_4 L_4 s^2 + 1)}{C_4 L_4 s^2 + C_4 R_4 s + 1}, \quad \frac{R_5(C_5 L_5 s^2 + 1)}{C_5 L_5 s^2 + C_5 R_5 s + 1}, \quad \infty \right)$$

$$H(s) = \frac{-C_4 C_5 L_1 L_4 R_4 R_5 s^4 - C_5 L_1 R_4 R_5 s^2 + s^5 (C_4 C_5 L_1 L_4 L_5 R_4 R_5 g_m - C_4 C_5 L_1 L_4 L_5 R_4) + s^3 (C_4 C_5 L_1 L_4 L_5 R_4 R_5 g_m - C_4 C_5 L_1 L_4 L_5 R_4) + s^2 (C_5 L_1 R_4 R_5 g_m - C_5 L_1 R_4 R_5)}{R_4 + 2R_5 + s^5 (2C_4 C_5 L_1 L_4 L_5 R_4 g_m + 2C_4 C_5 L_1 L_4 L_5 R_5 g_m + 2C_4 C_5 L_1 L_4 L_5) + s^4 (2C_4 C_5 L_1 L_4 R_4 R_5 g_m + 2C_4 C_5 L_1 L_4 R_5 + 2C_4 C_5 L_1 L_5 R_4 R_5 g_m + 2C_4 C_5 L_1 L_5 R_4 + C_4 C_5 L_4 L_5 R_4 + 2C_4 C_5 L_4 L_5 R_5) + s^3 (2C_4 C_5 L_1 R_4 R_5 + C_4 C_5 L_4 R_4 R_5 + 2C_4 C_5 L_5 R_4 R_5 + 2C_4 L_1 L_4 R_4 R_5 g_m + 2C_4 L_1 L_4 R_5 g_m + 2C_4 L_1 L_5 R_4 R_5) + s^2 (2C_4 L_1 R_4 R_5 + C_4 L_4 R_4 R_5 + 2C_4 L_5 R_4 R_5 + C_5 L_5 R_4 R_5 + 2L_1 L_5 g_m) + s (2C_4 R_4 R_5 + C_5 R_4 R_5 + 2L_1 R_4 R_5)}$$

$$\mathbf{10.174 \quad INVALID-ORDER-174} \quad Z(s) = \left(\frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad R_4, \quad R_5, \quad \infty \right)$$

$$H(s) = \frac{R_4 R_5 g_m - R_4}{2R_4 g_m + 2R_5 g_m + s (C_1 R_4 + 2C_1 R_5) + 2}$$

$$10.175 \quad \text{INVALID-ORDER-175} \quad Z(s) = \left(\frac{1}{C_1 s}, \infty, \infty, R_4, L_5 s + \frac{1}{C_5 s}, \infty \right)$$

$$H(s) = \frac{C_5 L_5 R_4 g_m s^2 - C_5 R_4 s + R_4 g_m}{2C_1 C_5 L_5 s^3 + 2g_m + s^2 (C_1 C_5 R_4 + 2C_5 L_5 g_m) + s (2C_1 + 2C_5 R_4 g_m + 2C_5)}$$

$$10.176 \quad \text{INVALID-ORDER-176} \quad Z(s) = \left(\frac{1}{C_1 s}, \infty, \infty, R_4, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \infty \right)$$

$$H(s) = \frac{-C_5 L_5 R_4 s^2 + L_5 R_4 g_m s - R_4}{C_1 C_5 L_5 R_4 s^3 + 2R_4 g_m + s^2 (2C_1 L_5 + 2C_5 L_5 R_4 g_m + 2C_5 L_5) + s (C_1 R_4 + 2L_5 g_m) + 2}$$

$$10.177 \quad \text{INVALID-ORDER-177} \quad Z(s) = \left(\frac{1}{C_1 s}, \infty, \infty, R_4, L_5 s + R_5 + \frac{1}{C_5 s}, \infty \right)$$

$$H(s) = \frac{C_5 L_5 R_4 g_m s^2 + R_4 g_m + s (C_5 R_4 R_5 g_m - C_5 R_4)}{2C_1 C_5 L_5 s^3 + 2g_m + s^2 (C_1 C_5 R_4 + 2C_1 C_5 R_5 + 2C_5 L_5 g_m) + s (2C_1 + 2C_5 R_4 g_m + 2C_5 R_5 g_m + 2C_5)}$$

$$10.178 \quad \text{INVALID-ORDER-178} \quad Z(s) = \left(\frac{1}{C_1 s}, \infty, \infty, R_4, \frac{L_5 R_5 s}{C_5 L_5 R_5 s^2 + L_5 s + R_5}, \infty \right)$$

$$H(s) = \frac{-C_5 L_5 R_4 R_5 s^2 - R_4 R_5 + s (L_5 R_4 R_5 g_m - L_5 R_4)}{C_1 C_5 L_5 R_4 R_5 s^3 + 2R_4 R_5 g_m + 2R_5 + s^2 (C_1 L_5 R_4 + 2C_1 L_5 R_5 + 2C_5 L_5 R_4 R_5 g_m + 2C_5 L_5 R_5) + s (C_1 R_4 R_5 + 2L_5 R_4 g_m + 2L_5 R_5 g_m + 2L_5)}$$

$$10.179 \quad \text{INVALID-ORDER-179} \quad Z(s) = \left(\frac{1}{C_1 s}, \infty, \infty, R_4, \frac{C_5 L_5 R_5 s^2 + L_5 s + R_5}{C_5 L_5 s^2 + 1}, \infty \right)$$

$$H(s) = \frac{L_5 R_4 g_m s + R_4 R_5 g_m - R_4 + s^2 (C_5 L_5 R_4 R_5 g_m - C_5 L_5 R_4)}{2R_4 g_m + 2R_5 g_m + s^3 (C_1 C_5 L_5 R_4 + 2C_1 C_5 L_5 R_5) + s^2 (2C_1 L_5 + 2C_5 L_5 R_4 g_m + 2C_5 L_5 R_5 g_m + 2C_5 L_5) + s (C_1 R_4 + 2C_1 R_5 + 2L_5 g_m) + 2}$$

$$10.180 \quad \text{INVALID-ORDER-180} \quad Z(s) = \left(\frac{1}{C_1 s}, \infty, \infty, R_4, \frac{R_5 (C_5 L_5 s^2 + 1)}{C_5 L_5 s^2 + C_5 R_5 s + 1}, \infty \right)$$

$$H(s) = \frac{-C_5 R_4 R_5 s + R_4 R_5 g_m - R_4 + s^2 (C_5 L_5 R_4 R_5 g_m - C_5 L_5 R_4)}{2R_4 g_m + 2R_5 g_m + s^3 (C_1 C_5 L_5 R_4 + 2C_1 C_5 L_5 R_5) + s^2 (C_1 C_5 R_4 R_5 + 2C_5 L_5 R_4 g_m + 2C_5 L_5 R_5 g_m + 2C_5 L_5) + s (C_1 R_4 + 2C_1 R_5 + 2C_5 R_4 R_5 g_m + 2C_5 R_5) + 2}$$

$$10.181 \quad \text{INVALID-ORDER-181} \quad Z(s) = \left(\frac{1}{C_1 s}, \infty, \infty, \frac{1}{C_4 s}, \frac{1}{C_5 s}, \infty \right)$$

$$H(s) = \frac{-C_5 s + g_m}{s^2 (2C_1 C_4 + C_1 C_5 + 2C_4 C_5) + s (2C_4 g_m + 2C_5 g_m)}$$

$$10.182 \quad \text{INVALID-ORDER-182} \quad Z(s) = \left(\frac{1}{C_1 s}, \infty, \infty, \frac{1}{C_4 s}, R_5 + \frac{1}{C_5 s}, \infty \right)$$

$$H(s) = \frac{g_m + s (C_5 R_5 g_m - C_5)}{2C_1 C_4 C_5 R_5 s^3 + s^2 (2C_1 C_4 + C_1 C_5 + 2C_4 C_5 R_5 g_m + 2C_4 C_5) + s (2C_4 g_m + 2C_5 g_m)}$$

$$10.183 \quad \text{INVALID-ORDER-183} \quad Z(s) = \left(\frac{1}{C_1 s}, \infty, \infty, \frac{1}{C_4 s}, L_5 s + \frac{1}{C_5 s}, \infty \right)$$

$$H(s) = \frac{C_5 L_5 g_m s^2 - C_5 s + g_m}{2C_1 C_4 C_5 L_5 s^4 + 2C_4 C_5 L_5 g_m s^3 + s^2 (2C_1 C_4 + C_1 C_5 + 2C_4 C_5) + s (2C_4 g_m + 2C_5 g_m)}$$

$$10.184 \quad \text{INVALID-ORDER-184} \quad Z(s) = \left(\frac{1}{C_1 s}, \infty, \infty, \frac{1}{C_4 s}, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \infty \right)$$

$$H(s) = \frac{-C_5 L_5 s^2 + L_5 g_m s - 1}{2g_m + s^3 (2C_1 C_4 L_5 + C_1 C_5 L_5 + 2C_4 C_5 L_5) + s^2 (2C_4 L_5 g_m + 2C_5 L_5 g_m) + s (C_1 + 2C_4)}$$

$$10.185 \quad \text{INVALID-ORDER-185} \quad Z(s) = \left(\frac{1}{C_1 s}, \infty, \infty, \frac{1}{C_4 s}, L_5 s + R_5 + \frac{1}{C_5 s}, \infty \right)$$

$$H(s) = \frac{C_5 L_5 g_m s^2 + g_m + s (C_5 R_5 g_m - C_5)}{2C_1 C_4 C_5 L_5 s^4 + s^3 (2C_1 C_4 C_5 R_5 + 2C_4 C_5 L_5 g_m) + s^2 (2C_1 C_4 + C_1 C_5 + 2C_4 C_5 R_5 g_m + 2C_4 C_5) + s (2C_4 g_m + 2C_5 g_m)}$$

$$10.186 \quad \text{INVALID-ORDER-186} \quad Z(s) = \left(\frac{1}{C_1 s}, \infty, \infty, \frac{1}{C_4 s}, \frac{L_5 R_5 s}{C_5 L_5 R_5 s^2 + L_5 s + R_5}, \infty \right)$$

$$H(s) = \frac{-C_5 L_5 R_5 s^2 - R_5 + s (L_5 R_5 g_m - L_5)}{2R_5 g_m + s^3 (2C_1 C_4 L_5 R_5 + C_1 C_5 L_5 R_5 + 2C_4 C_5 L_5 R_5) + s^2 (C_1 L_5 + 2C_4 L_5 R_5 g_m + 2C_4 L_5 + 2C_5 L_5 R_5 g_m) + s (C_1 R_5 + 2C_4 R_5 + 2L_5 g_m)}$$

$$10.187 \quad \text{INVALID-ORDER-187} \quad Z(s) = \left(\frac{1}{C_1 s}, \infty, \infty, \frac{1}{C_4 s}, \frac{C_5 L_5 R_5 s^2 + L_5 s + R_5}{C_5 L_5 s^2 + 1}, \infty \right)$$

$$H(s) = \frac{L_5 g_m s + R_5 g_m + s^2 (C_5 L_5 R_5 g_m - C_5 L_5) - 1}{2C_1 C_4 C_5 L_5 R_5 s^4 + 2g_m + s^3 (2C_1 C_4 L_5 + C_1 C_5 L_5 + 2C_4 C_5 L_5 R_5 g_m + 2C_4 C_5 L_5) + s^2 (2C_1 C_4 R_5 + 2C_4 L_5 g_m + 2C_5 L_5 g_m) + s (C_1 + 2C_4 R_5 g_m + 2C_4)}$$

$$10.188 \quad \text{INVALID-ORDER-188} \quad Z(s) = \left(\frac{1}{C_1 s}, \infty, \infty, \frac{1}{C_4 s}, \frac{R_5 (C_5 L_5 s^2 + 1)}{C_5 L_5 s^2 + C_5 R_5 s + 1}, \infty \right)$$

$$H(s) = \frac{-C_5 R_5 s + R_5 g_m + s^2 (C_5 L_5 R_5 g_m - C_5 L_5) - 1}{2C_1 C_4 C_5 L_5 R_5 s^4 + 2g_m + s^3 (C_1 C_5 L_5 + 2C_4 C_5 L_5 R_5 g_m + 2C_4 C_5 L_5) + s^2 (2C_1 C_4 R_5 + C_1 C_5 R_5 + 2C_4 C_5 R_5 + 2C_5 L_5 g_m) + s (C_1 + 2C_4 R_5 g_m + 2C_4 + 2C_5 R_5 g_m)}$$

$$10.189 \quad \text{INVALID-ORDER-189} \quad Z(s) = \left(\frac{1}{C_1 s}, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, R_5 + \frac{1}{C_5 s}, \infty \right)$$

$$H(s) = \frac{R_4 g_m + s (C_5 R_4 R_5 g_m - C_5 R_4)}{2C_1 C_4 C_5 R_4 R_5 s^3 + 2g_m + s^2 (2C_1 C_4 R_4 + C_1 C_5 R_4 + 2C_1 C_5 R_5 + 2C_4 C_5 R_4 R_5 g_m + 2C_4 C_5 R_4) + s (2C_1 + 2C_4 R_4 g_m + 2C_5 R_4 g_m + 2C_5 R_5 g_m + 2C_5)}$$

$$10.190 \quad \text{INVALID-ORDER-190} \quad Z(s) = \left(\frac{1}{C_1 s}, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, L_5 s + \frac{1}{C_5 s}, \infty \right)$$

$$H(s) = \frac{C_5 L_5 R_4 g_m s^2 - C_5 R_4 s + R_4 g_m}{2C_1 C_4 C_5 L_5 R_4 s^4 + 2g_m + s^3 (2C_1 C_5 L_5 + 2C_4 C_5 L_5 R_4 g_m) + s^2 (2C_1 C_4 R_4 + C_1 C_5 R_4 + 2C_4 C_5 R_4 + 2C_5 L_5 g_m) + s (2C_1 + 2C_4 R_4 g_m + 2C_5 R_4 g_m + 2C_5)}$$

$$10.191 \quad \text{INVALID-ORDER-191} \quad Z(s) = \left(\frac{1}{C_1 s}, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \infty \right)$$

$$H(s) = \frac{-C_5 L_5 R_4 s^2 + L_5 R_4 g_m s - R_4}{2R_4 g_m + s^3 (2C_1 C_4 L_5 R_4 + C_1 C_5 L_5 R_4 + 2C_4 C_5 L_5 R_4) + s^2 (2C_1 L_5 + 2C_4 L_5 R_4 g_m + 2C_5 L_5 R_4 g_m + 2C_5 L_5) + s (C_1 R_4 + 2C_4 R_4 + 2L_5 g_m) + 2}$$

$$10.192 \quad \text{INVALID-ORDER-192} \quad Z(s) = \left(\frac{1}{C_1 s}, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, L_5 s + R_5 + \frac{1}{C_5 s}, \infty \right)$$

$$H(s) = \frac{C_5 L_5 R_4 g_m s^2 + R_4 g_m + s (C_5 R_4 R_5 g_m - C_5 R_4)}{2C_1 C_4 C_5 L_5 R_4 s^4 + 2g_m + s^3 (2C_1 C_4 C_5 R_4 R_5 + 2C_1 C_5 L_5 + 2C_4 C_5 L_5 R_4 g_m) + s^2 (2C_1 C_4 R_4 + C_1 C_5 R_4 + 2C_1 C_5 R_5 + 2C_4 C_5 R_4 R_5 g_m + 2C_4 C_5 R_4 + 2C_5 L_5 g_m) + s (2C_1 + 2C_4 R_4 g_m + 2C_5 R_4 g_m + 2C_5 R_5 g_m + 2C_5)}$$

$$10.193 \quad \text{INVALID-ORDER-193} \quad Z(s) = \left(\frac{1}{C_1 s}, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, \frac{L_5 R_5 s}{C_5 L_5 R_5 s^2 + L_5 s + R_5}, \infty \right)$$

$$H(s) = \frac{-C_5 L_5 R_4 R_5 s^2 - R_4 R_5 + s (L_5 R_4 R_5 g_m - L_5 R_4)}{2R_4 R_5 g_m + 2R_5 + s^3 (2C_1 C_4 L_5 R_4 R_5 + C_1 C_5 L_5 R_4 R_5 + 2C_4 C_5 L_5 R_4 R_5) + s^2 (C_1 L_5 R_4 + 2C_1 L_5 R_5 + 2C_4 L_5 R_4 R_5 g_m + 2C_4 L_5 R_4 + 2C_5 L_5 R_4 R_5 g_m + 2C_5 L_5 R_5) + s (C_1 R_4 R_5 + 2C_4 R_4 R_5 + 2L_5 R_4 g_m + 2L_5 R_5 g_m + 2L_5)}$$

$$\mathbf{10.194 \quad INVALID-ORDER-194} \quad Z(s) = \left(\frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \frac{R_4}{C_4 R_4 s + 1}, \quad \frac{C_5 L_5 R_5 s^2 + L_5 s + R_5}{C_5 L_5 s^2 + 1}, \quad \infty \right)$$

$$H(s) = \frac{L_5 R_4 g_m s + R_4 R_5 g_m - R_4 + s^2 (C_5 L_5 R_4 R_5 g_m - C_5 L_5 R_4)}{2C_1 C_4 C_5 L_5 R_4 R_5 s^4 + 2R_4 g_m + 2R_5 g_m + s^3 (2C_1 C_4 L_5 R_4 + C_1 C_5 L_5 R_4 + 2C_1 C_5 L_5 R_5 + 2C_4 C_5 L_5 R_4 R_5 g_m + 2C_4 C_5 L_5 R_4) + s^2 (2C_1 C_4 R_4 R_5 + 2C_1 L_5 + 2C_4 L_5 R_4 g_m + 2C_5 L_5 R_4 g_m + 2C_5 L_5 R_5 g_m + 2C_5 L_5) + s (C_1 R_4 + 2C_1 R_5 + 2C_4 R_4 R_5 g_m + 2C_4 R_4 + 2L_5 g_m)}$$

$$\mathbf{10.195 \quad INVALID-ORDER-195} \quad Z(s) = \left(\frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \frac{R_4}{C_4 R_4 s + 1}, \quad \frac{R_5 (C_5 L_5 s^2 + 1)}{C_5 L_5 s^2 + C_5 R_5 s + 1}, \quad \infty \right)$$

$$H(s) = \frac{-C_5 R_4 R_5 s + R_4 R_5 g_m - R_4 + s^2 (C_5 L_5 R_4 R_5 g_m - C_5 L_5 R_4)}{2C_1 C_4 C_5 L_5 R_4 R_5 s^4 + 2R_4 g_m + 2R_5 g_m + s^3 (C_1 C_5 L_5 R_4 + 2C_1 C_5 L_5 R_5 + 2C_4 C_5 L_5 R_4 R_5 g_m + 2C_4 C_5 L_5 R_4) + s^2 (2C_1 C_4 R_4 R_5 + C_1 C_5 R_4 R_5 + 2C_4 C_5 R_4 R_5 + 2C_5 L_5 R_4 g_m + 2C_5 L_5 R_5 g_m + 2C_5 L_5) + s (C_1 R_4 + 2C_1 R_5 + 2C_4 R_4 R_5 g_m + 2C_4 R_4 + 2C_5 R_4 R_5 g_m + 2C_5 R_4)}$$

$$\mathbf{10.196 \quad INVALID-ORDER-196} \quad Z(s) = \left(\frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad R_4 + \frac{1}{C_4 s}, \quad \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{-C_4 C_5 R_4 s^2 + g_m + s (C_4 R_4 g_m - C_5)}{C_1 C_4 C_5 R_4 s^3 + s^2 (2C_1 C_4 + C_1 C_5 + 2C_4 C_5 R_4 g_m + 2C_4 C_5) + s (2C_4 g_m + 2C_5 g_m)}$$

$$\mathbf{10.197 \quad INVALID-ORDER-197} \quad Z(s) = \left(\frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad R_4 + \frac{1}{C_4 s}, \quad \frac{R_5}{C_5 R_5 s + 1}, \quad \infty \right)$$

$$H(s) = \frac{-C_4 C_5 R_4 R_5 s^2 + R_5 g_m + s (C_4 R_4 R_5 g_m - C_4 R_4 - C_5 R_5) - 1}{C_1 C_4 C_5 R_4 R_5 s^3 + 2g_m + s^2 (C_1 C_4 R_4 + 2C_1 C_4 R_5 + C_1 C_5 R_5 + 2C_4 C_5 R_4 R_5 g_m + 2C_4 C_5 R_5) + s (C_1 + 2C_4 R_4 g_m + 2C_4 R_5 g_m + 2C_4 + 2C_5 R_5 g_m)}$$

$$\mathbf{10.198 \quad INVALID-ORDER-198} \quad Z(s) = \left(\frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad R_4 + \frac{1}{C_4 s}, \quad R_5 + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{g_m + s^2 (C_4 C_5 R_4 R_5 g_m - C_4 C_5 R_4) + s (C_4 R_4 g_m + C_5 R_5 g_m - C_5)}{s^3 (C_1 C_4 C_5 R_4 + 2C_1 C_4 C_5 R_5) + s^2 (2C_1 C_4 + C_1 C_5 + 2C_4 C_5 R_4 g_m + 2C_4 C_5 R_5 g_m + 2C_4 C_5) + s (2C_4 g_m + 2C_5 g_m)}$$

$$\mathbf{10.199 \quad INVALID-ORDER-199} \quad Z(s) = \left(\frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad R_4 + \frac{1}{C_4 s}, \quad L_5 s + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{C_4 C_5 L_5 R_4 g_m s^3 + g_m + s^2 (-C_4 C_5 R_4 + C_5 L_5 g_m) + s (C_4 R_4 g_m - C_5)}{2C_1 C_4 C_5 L_5 s^4 + s^3 (C_1 C_4 C_5 R_4 + 2C_4 C_5 L_5 g_m) + s^2 (2C_1 C_4 + C_1 C_5 + 2C_4 C_5 R_4 g_m + 2C_4 C_5) + s (2C_4 g_m + 2C_5 g_m)}$$

$$\mathbf{10.200 \quad INVALID-ORDER-200} \quad Z(s) = \left(\frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad R_4 + \frac{1}{C_4 s}, \quad \frac{L_5 s}{C_5 L_5 s^2 + 1}, \quad \infty \right)$$

$$H(s) = \frac{-C_4 C_5 L_5 R_4 s^3 + s^2 (C_4 L_5 R_4 g_m - C_5 L_5) + s (-C_4 R_4 + L_5 g_m) - 1}{C_1 C_4 C_5 L_5 R_4 s^4 + 2g_m + s^3 (2C_1 C_4 L_5 + C_1 C_5 L_5 + 2C_4 C_5 L_5 R_4 g_m + 2C_4 C_5 L_5) + s^2 (C_1 C_4 R_4 + 2C_4 L_5 g_m + 2C_5 L_5 g_m) + s (C_1 + 2C_4 R_4 g_m + 2C_4)}$$

$$\mathbf{10.201 \quad INVALID-ORDER-201} \quad Z(s) = \left(\frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad R_4 + \frac{1}{C_4 s}, \quad L_5 s + R_5 + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{C_4 C_5 L_5 R_4 g_m s^3 + g_m + s^2 (C_4 C_5 R_4 R_5 g_m - C_4 C_5 R_4 + C_5 L_5 g_m) + s (C_4 R_4 g_m + C_5 R_5 g_m - C_5)}{2C_1 C_4 C_5 L_5 s^4 + s^3 (C_1 C_4 C_5 R_4 + 2C_1 C_4 C_5 R_5 + 2C_4 C_5 L_5 g_m) + s^2 (2C_1 C_4 + C_1 C_5 + 2C_4 C_5 R_4 g_m + 2C_4 C_5 R_5 g_m + 2C_4 C_5) + s (2C_4 g_m + 2C_5 g_m)}$$

$$\mathbf{10.202 \quad INVALID-ORDER-202} \quad Z(s) = \left(\frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad R_4 + \frac{1}{C_4 s}, \quad \frac{L_5 R_5 s}{C_5 L_5 R_5 s^2 + L_5 s + R_5}, \quad \infty \right)$$

$$H(s) = \frac{-C_4 C_5 L_5 R_4 R_5 s^3 - R_5 + s^2 (C_4 L_5 R_4 R_5 g_m - C_4 L_5 R_4 - C_5 L_5 R_5) + s (-C_4 R_4 R_5 + L_5 R_5 g_m - L_5)}{C_1 C_4 C_5 L_5 R_4 R_5 s^4 + 2R_5 g_m + s^3 (C_1 C_4 L_5 R_4 + 2C_1 C_4 L_5 R_5 + C_1 C_5 L_5 R_5 + 2C_4 C_5 L_5 R_4 R_5 g_m + 2C_4 C_5 L_5 R_5) + s^2 (C_1 C_4 R_4 R_5 + C_1 L_5 + 2C_4 L_5 R_4 g_m + 2C_4 L_5 R_5 g_m + 2C_4 L_5 + 2C_5 L_5 R_5 g_m) + s (C_1 R_5 + 2C_4 R_4 R_5 g_m + 2C_4 R_5 + 2L_5 g_m)}$$

$$10.203 \quad \text{INVALID-ORDER-203} \quad Z(s) = \left(\frac{1}{C_1 s}, \infty, \infty, R_4 + \frac{1}{C_4 s}, \frac{C_5 L_5 R_5 s^2 + L_5 s + R_5}{C_5 L_5 s^2 + 1}, \infty \right)$$

$$H(s) = \frac{R_5 g_m + s^3 (C_4 C_5 L_5 R_4 R_5 g_m - C_4 C_5 L_5 R_4) + s^2 (C_4 L_5 R_4 g_m + C_5 L_5 R_5 g_m - C_5 L_5) + s (C_4 R_4 R_5 g_m - C_4 R_4 + L_5 g_m) - 1}{2g_m + s^4 (C_1 C_4 C_5 L_5 R_4 + 2C_1 C_4 C_5 L_5 R_5) + s^3 (2C_1 C_4 L_5 + C_1 C_5 L_5 + 2C_4 C_5 L_5 R_4 g_m + 2C_4 C_5 L_5 R_5 g_m + 2C_4 C_5 L_5) + s^2 (C_1 C_4 R_4 + 2C_1 C_4 R_5 + 2C_4 L_5 g_m + 2C_5 L_5 g_m) + s (C_1 + 2C_4 R_4 g_m + 2C_4 R_5 g_m + 2C_4)}$$

$$10.204 \quad \text{INVALID-ORDER-204} \quad Z(s) = \left(\frac{1}{C_1 s}, \infty, \infty, R_4 + \frac{1}{C_4 s}, \frac{R_5 (C_5 L_5 s^2 + 1)}{C_5 L_5 s^2 + C_5 R_5 s + 1}, \infty \right)$$

$$H(s) = \frac{R_5 g_m + s^3 (C_4 C_5 L_5 R_4 R_5 g_m - C_4 C_5 L_5 R_4) + s^2 (-C_4 C_5 R_4 R_5 + C_5 L_5 R_5 g_m - C_5 L_5) + s (C_4 R_4 R_5 g_m - C_4 R_4 - C_5 R_5) - 1}{2g_m + s^4 (C_1 C_4 C_5 L_5 R_4 + 2C_1 C_4 C_5 L_5 R_5) + s^3 (C_1 C_4 C_5 R_4 R_5 + C_1 C_5 L_5 + 2C_4 C_5 L_5 R_4 g_m + 2C_4 C_5 L_5 R_5 g_m + 2C_4 C_5 L_5) + s^2 (C_1 C_4 R_4 + 2C_1 C_4 R_5 + C_1 C_5 R_5 + 2C_4 C_5 R_4 R_5 g_m + 2C_4 C_5 R_5 + 2C_5 L_5 g_m) + s (C_1 + 2C_4 R_4 g_m + 2C_4 R_5 g_m + 2C_4 + 2C_5 R_5 g_m)}$$

$$10.205 \quad \text{INVALID-ORDER-205} \quad Z(s) = \left(\frac{1}{C_1 s}, \infty, \infty, L_4 s + \frac{1}{C_4 s}, R_5, \infty \right)$$

$$H(s) = \frac{R_5 g_m + s^2 (C_4 L_4 R_5 g_m - C_4 L_4) - 1}{C_1 C_4 L_4 s^3 + 2g_m + s^2 (2C_1 C_4 R_5 + 2C_4 L_4 g_m) + s (C_1 + 2C_4 R_5 g_m + 2C_4)}$$

$$10.206 \quad \text{INVALID-ORDER-206} \quad Z(s) = \left(\frac{1}{C_1 s}, \infty, \infty, L_4 s + \frac{1}{C_4 s}, \frac{1}{C_5 s}, \infty \right)$$

$$H(s) = \frac{-C_4 C_5 L_4 s^3 + C_4 L_4 g_m s^2 - C_5 s + g_m}{C_1 C_4 C_5 L_4 s^4 + 2C_4 C_5 L_4 g_m s^3 + s^2 (2C_1 C_4 + C_1 C_5 + 2C_4 C_5) + s (2C_4 g_m + 2C_5 g_m)}$$

$$10.207 \quad \text{INVALID-ORDER-207} \quad Z(s) = \left(\frac{1}{C_1 s}, \infty, \infty, L_4 s + \frac{1}{C_4 s}, \frac{R_5}{C_5 R_5 s + 1}, \infty \right)$$

$$H(s) = \frac{-C_4 C_5 L_4 R_5 s^3 - C_5 R_5 s + R_5 g_m + s^2 (C_4 L_4 R_5 g_m - C_4 L_4) - 1}{C_1 C_4 C_5 L_4 R_5 s^4 + 2g_m + s^3 (C_1 C_4 L_4 + 2C_4 C_5 L_4 R_5 g_m) + s^2 (2C_1 C_4 R_5 + C_1 C_5 R_5 + 2C_4 C_5 R_5 + 2C_4 L_4 g_m) + s (C_1 + 2C_4 R_5 g_m + 2C_4 + 2C_5 R_5 g_m)}$$

$$10.208 \quad \text{INVALID-ORDER-208} \quad Z(s) = \left(\frac{1}{C_1 s}, \infty, \infty, L_4 s + \frac{1}{C_4 s}, R_5 + \frac{1}{C_5 s}, \infty \right)$$

$$H(s) = \frac{C_4 L_4 g_m s^2 + g_m + s^3 (C_4 C_5 L_4 R_5 g_m - C_4 C_5 L_4) + s (C_5 R_5 g_m - C_5)}{C_1 C_4 C_5 L_4 s^4 + s^3 (2C_1 C_4 C_5 R_5 + 2C_4 C_5 L_4 g_m) + s^2 (2C_1 C_4 + C_1 C_5 + 2C_4 C_5 R_5 g_m + 2C_4 C_5) + s (2C_4 g_m + 2C_5 g_m)}$$

$$10.209 \quad \text{INVALID-ORDER-209} \quad Z(s) = \left(\frac{1}{C_1 s}, \infty, \infty, L_4 s + \frac{1}{C_4 s}, L_5 s + \frac{1}{C_5 s}, \infty \right)$$

$$H(s) = \frac{C_4 C_5 L_4 L_5 g_m s^4 - C_4 C_5 L_4 s^3 - C_5 s + g_m + s^2 (C_4 L_4 g_m + C_5 L_5 g_m)}{s^4 (C_1 C_4 C_5 L_4 + 2C_1 C_4 C_5 L_5) + s^3 (2C_4 C_5 L_4 g_m + 2C_4 C_5 L_5 g_m) + s^2 (2C_1 C_4 + C_1 C_5 + 2C_4 C_5) + s (2C_4 g_m + 2C_5 g_m)}$$

$$10.210 \quad \text{INVALID-ORDER-210} \quad Z(s) = \left(\frac{1}{C_1 s}, \infty, \infty, L_4 s + \frac{1}{C_4 s}, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \infty \right)$$

$$H(s) = \frac{-C_4 C_5 L_4 L_5 s^4 + C_4 L_4 L_5 g_m s^3 + L_5 g_m s + s^2 (-C_4 L_4 - C_5 L_5) - 1}{C_1 C_4 C_5 L_4 L_5 s^5 + 2C_4 C_5 L_4 L_5 g_m s^4 + 2g_m + s^3 (C_1 C_4 L_4 + 2C_1 C_4 L_5 + C_1 C_5 L_5 + 2C_4 C_5 L_5) + s^2 (2C_4 L_4 g_m + 2C_4 L_5 g_m + 2C_5 L_5 g_m) + s (C_1 + 2C_4)}$$

$$10.211 \quad \text{INVALID-ORDER-211} \quad Z(s) = \left(\frac{1}{C_1 s}, \infty, \infty, L_4 s + \frac{1}{C_4 s}, L_5 s + R_5 + \frac{1}{C_5 s}, \infty \right)$$

$$H(s) = \frac{C_4 C_5 L_4 L_5 g_m s^4 + g_m + s^3 (C_4 C_5 L_4 R_5 g_m - C_4 C_5 L_4) + s^2 (C_4 L_4 g_m + C_5 L_5 g_m) + s (C_5 R_5 g_m - C_5)}{s^4 (C_1 C_4 C_5 L_4 + 2C_1 C_4 C_5 L_5) + s^3 (2C_1 C_4 C_5 R_5 + 2C_4 C_5 L_4 g_m + 2C_4 C_5 L_5 g_m) + s^2 (2C_1 C_4 + C_1 C_5 + 2C_4 C_5 R_5 g_m + 2C_4 C_5) + s (2C_4 g_m + 2C_5 g_m)}$$

$$\mathbf{10.212 \quad INVALID-ORDER-212} \quad Z(s) = \left(\frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad L_4 s + \frac{1}{C_4 s}, \quad \frac{L_5 R_5 s}{C_5 L_5 R_5 s^2 + L_5 s + R_5}, \quad \infty \right)$$

$$H(s) = \frac{-C_4 C_5 L_4 L_5 R_5 s^4 - R_5 + s^3 (C_4 L_4 L_5 R_5 g_m - C_4 L_4 L_5) + s^2 (-C_4 L_4 R_5 - C_5 L_5 R_5) + s (L_5 R_5 g_m - L_5)}{C_1 C_4 C_5 L_4 L_5 R_5 s^5 + 2 R_5 g_m + s^4 (C_1 C_4 L_4 L_5 + 2 C_4 C_5 L_4 L_5 R_5 g_m) + s^3 (C_1 C_4 L_4 R_5 + 2 C_1 C_4 L_5 R_5 + C_1 C_5 L_5 R_5 + 2 C_4 C_5 L_5 R_5 + 2 C_4 L_4 L_5 g_m) + s^2 (C_1 L_5 + 2 C_4 L_4 R_5 g_m + 2 C_4 L_5 R_5 g_m + 2 C_4 L_5 + 2 C_5 L_5 R_5 g_m) + s (C_1 R_5 + 2 C_4 R_5 + 2 L_5 g_m)}$$

$$\mathbf{10.213 \quad INVALID-ORDER-213} \quad Z(s) = \left(\frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad L_4 s + \frac{1}{C_4 s}, \quad \frac{C_5 L_5 R_5 s^2 + L_5 s + R_5}{C_5 L_5 s^2 + 1}, \quad \infty \right)$$

$$H(s) = \frac{C_4 L_4 L_5 g_m s^3 + L_5 g_m s + R_5 g_m + s^4 (C_4 C_5 L_4 L_5 R_5 g_m - C_4 C_5 L_4 L_5) + s^2 (C_4 L_4 R_5 g_m - C_4 L_4 + C_5 L_5 R_5 g_m - C_5 L_5) - 1}{C_1 C_4 C_5 L_4 L_5 s^5 + 2 g_m + s^4 (2 C_1 C_4 C_5 L_5 R_5 + 2 C_4 C_5 L_4 L_5 g_m) + s^3 (C_1 C_4 L_4 + 2 C_1 C_4 L_5 + C_1 C_5 L_5 + 2 C_4 C_5 L_5 R_5 g_m + 2 C_4 C_5 L_5) + s^2 (2 C_1 C_4 R_5 + 2 C_4 L_4 g_m + 2 C_4 L_5 g_m + 2 C_5 L_5 g_m) + s (C_1 + 2 C_4 R_5 g_m + 2 C_4)}$$

$$\mathbf{10.214 \quad INVALID-ORDER-214} \quad Z(s) = \left(\frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad L_4 s + \frac{1}{C_4 s}, \quad \frac{R_5 (C_5 L_5 s^2 + 1)}{C_5 L_5 s^2 + C_5 R_5 s + 1}, \quad \infty \right)$$

$$H(s) = \frac{-C_4 C_5 L_4 R_5 s^3 - C_5 R_5 s + R_5 g_m + s^4 (C_4 C_5 L_4 L_5 R_5 g_m - C_4 C_5 L_4 L_5) + s^2 (C_4 L_4 R_5 g_m - C_4 L_4 + C_5 L_5 R_5 g_m - C_5 L_5) - 1}{C_1 C_4 C_5 L_4 L_5 s^5 + 2 g_m + s^4 (C_1 C_4 C_5 L_4 R_5 + 2 C_1 C_4 C_5 L_5 R_5 + 2 C_4 C_5 L_4 L_5 g_m) + s^3 (C_1 C_4 L_4 + C_1 C_5 L_5 + 2 C_4 C_5 L_4 R_5 g_m + 2 C_4 C_5 L_5 R_5 g_m + 2 C_4 C_5 L_5) + s^2 (2 C_1 C_4 R_5 + C_1 C_5 R_5 + 2 C_4 C_5 R_5 + 2 C_4 L_4 g_m + 2 C_5 L_5 g_m) + s (C_1 + 2 C_4 R_5 g_m + 2 C_4 + 2 C_5 R_5 g_m)}$$

$$\mathbf{10.215 \quad INVALID-ORDER-215} \quad Z(s) = \left(\frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \frac{L_4 s}{C_4 L_4 s^2 + 1}, \quad R_5, \quad \infty \right)$$

$$H(s) = \frac{s (L_4 R_5 g_m - L_4)}{2 C_1 C_4 L_4 R_5 s^3 + 2 R_5 g_m + s^2 (C_1 L_4 + 2 C_4 L_4 R_5 g_m + 2 C_4 L_4) + s (2 C_1 R_5 + 2 L_4 g_m) + 2}$$

$$\mathbf{10.216 \quad INVALID-ORDER-216} \quad Z(s) = \left(\frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \frac{L_4 s}{C_4 L_4 s^2 + 1}, \quad \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{-C_5 L_4 s^2 + L_4 g_m s}{2 g_m + s^3 (2 C_1 C_4 L_4 + C_1 C_5 L_4 + 2 C_4 C_5 L_4) + s^2 (2 C_4 L_4 g_m + 2 C_5 L_4 g_m) + s (2 C_1 + 2 C_5)}$$

$$\mathbf{10.217 \quad INVALID-ORDER-217} \quad Z(s) = \left(\frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \frac{L_4 s}{C_4 L_4 s^2 + 1}, \quad \frac{R_5}{C_5 R_5 s + 1}, \quad \infty \right)$$

$$H(s) = \frac{-C_5 L_4 R_5 s^2 + s (L_4 R_5 g_m - L_4)}{2 R_5 g_m + s^3 (2 C_1 C_4 L_4 R_5 + C_1 C_5 L_4 R_5 + 2 C_4 C_5 L_4 R_5) + s^2 (C_1 L_4 + 2 C_4 L_4 R_5 g_m + 2 C_4 L_4 + 2 C_5 L_4 R_5 g_m) + s (2 C_1 R_5 + 2 C_5 R_5 + 2 L_4 g_m) + 2}$$

$$\mathbf{10.218 \quad INVALID-ORDER-218} \quad Z(s) = \left(\frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \frac{L_4 s}{C_4 L_4 s^2 + 1}, \quad R_5 + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{L_4 g_m s + s^2 (C_5 L_4 R_5 g_m - C_5 L_4)}{2 C_1 C_4 C_5 L_4 R_5 s^4 + 2 g_m + s^3 (2 C_1 C_4 L_4 + C_1 C_5 L_4 + 2 C_4 C_5 L_4 R_5 g_m + 2 C_4 C_5 L_4) + s^2 (2 C_1 C_5 R_5 + 2 C_4 L_4 g_m + 2 C_5 L_4 g_m) + s (2 C_1 + 2 C_5 R_5 g_m + 2 C_5)}$$

$$\mathbf{10.219 \quad INVALID-ORDER-219} \quad Z(s) = \left(\frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \frac{L_4 s}{C_4 L_4 s^2 + 1}, \quad L_5 s + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{C_5 L_4 L_5 g_m s^3 - C_5 L_4 s^2 + L_4 g_m s}{2 C_1 C_4 C_5 L_4 L_5 s^5 + 2 C_4 C_5 L_4 L_5 g_m s^4 + 2 g_m + s^3 (2 C_1 C_4 L_4 + C_1 C_5 L_4 + 2 C_1 C_5 L_5 + 2 C_4 C_5 L_4) + s^2 (2 C_4 L_4 g_m + 2 C_5 L_4 g_m + 2 C_5 L_5 g_m) + s (2 C_1 + 2 C_5)}$$

$$\mathbf{10.220 \quad INVALID-ORDER-220} \quad Z(s) = \left(\frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \frac{L_4 s}{C_4 L_4 s^2 + 1}, \quad \frac{L_5 s}{C_5 L_5 s^2 + 1}, \quad \infty \right)$$

$$H(s) = \frac{-C_5 L_4 L_5 s^3 + L_4 L_5 g_m s^2 - L_4 s}{s^4 (2 C_1 C_4 L_4 L_5 + C_1 C_5 L_4 L_5 + 2 C_4 C_5 L_4 L_5) + s^3 (2 C_4 L_4 L_5 g_m + 2 C_5 L_4 L_5 g_m) + s^2 (C_1 L_4 + 2 C_1 L_5 + 2 C_4 L_4 + 2 C_5 L_5) + s (2 L_4 g_m + 2 L_5 g_m) + 2}$$

$$10.221 \quad \text{INVALID-ORDER-221} \quad Z(s) = \left(\frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \frac{L_4 s}{C_4 L_4 s^2 + 1}, \quad L_5 s + R_5 + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{C_5 L_4 L_5 g_m s^3 + L_4 g_m s + s^2 (C_5 L_4 R_5 g_m - C_5 L_4)}{2C_1 C_4 C_5 L_4 L_5 s^5 + 2g_m + s^4 (2C_1 C_4 C_5 L_4 R_5 + 2C_4 C_5 L_4 L_5 g_m) + s^3 (2C_1 C_4 L_4 + C_1 C_5 L_4 + 2C_1 C_5 L_5 + 2C_4 C_5 L_4 R_5 g_m + 2C_4 C_5 L_4) + s^2 (2C_1 C_5 R_5 + 2C_4 L_4 g_m + 2C_5 L_4 g_m + 2C_5 L_5 g_m) + s (2C_1 + 2C_5 R_5 g_m + 2C_5)}$$

$$10.222 \quad \text{INVALID-ORDER-222} \quad Z(s) = \left(\frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \frac{L_4 s}{C_4 L_4 s^2 + 1}, \quad \frac{L_5 R_5 s}{C_5 L_5 R_5 s^2 + L_5 s + R_5}, \quad \infty \right)$$

$$H(s) = \frac{-C_5 L_4 L_5 R_5 s^3 - L_4 R_5 s + s^2 (L_4 L_5 R_5 g_m - L_4 L_5)}{2R_5 + s^4 (2C_1 C_4 L_4 L_5 R_5 + C_1 C_5 L_4 L_5 R_5 + 2C_4 C_5 L_4 L_5 R_5) + s^3 (C_1 L_4 L_5 + 2C_4 L_4 L_5 R_5 g_m + 2C_4 L_4 L_5 + 2C_5 L_4 L_5 R_5 g_m) + s^2 (C_1 L_4 R_5 + 2C_1 L_5 R_5 + 2C_4 L_4 R_5 + 2C_5 L_5 R_5 + 2L_4 L_5 g_m) + s (2L_4 R_5 g_m + 2L_5 R_5 g_m + 2L_5)}$$

$$10.223 \quad \text{INVALID-ORDER-223} \quad Z(s) = \left(\frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \frac{L_4 s}{C_4 L_4 s^2 + 1}, \quad \frac{C_5 L_5 R_5 s^2 + L_5 s + R_5}{C_5 L_5 s^2 + 1}, \quad \infty \right)$$

$$H(s) = \frac{L_4 L_5 g_m s^2 + s^3 (C_5 L_4 L_5 R_5 g_m - C_5 L_4 L_5) + s (L_4 R_5 g_m - L_4)}{2C_1 C_4 C_5 L_4 L_5 R_5 s^5 + 2R_5 g_m + s^4 (2C_1 C_4 L_4 L_5 + C_1 C_5 L_4 L_5 + 2C_4 C_5 L_4 L_5 R_5 g_m + 2C_4 C_5 L_4 L_5) + s^3 (2C_1 C_4 L_4 R_5 + 2C_1 C_5 L_5 R_5 + 2C_4 L_4 L_5 g_m + 2C_5 L_4 L_5 g_m) + s^2 (C_1 L_4 + 2C_1 L_5 + 2C_4 L_4 R_5 g_m + 2C_4 L_4 + 2C_5 L_5 R_5 g_m + 2C_5 L_5) + s (2C_1 R_5 + 2L_4 g_m + 2L_5 g_m)}$$

$$10.224 \quad \text{INVALID-ORDER-224} \quad Z(s) = \left(\frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \frac{L_4 s}{C_4 L_4 s^2 + 1}, \quad \frac{R_5 (C_5 L_5 s^2 + 1)}{C_5 L_5 s^2 + C_5 R_5 s + 1}, \quad \infty \right)$$

$$H(s) = \frac{-C_5 L_4 R_5 s^2 + s^3 (C_5 L_4 L_5 R_5 g_m - C_5 L_4 L_5) + s (L_4 R_5 g_m - L_4)}{2C_1 C_4 C_5 L_4 L_5 R_5 s^5 + 2R_5 g_m + s^4 (C_1 C_5 L_4 L_5 + 2C_4 C_5 L_4 L_5 R_5 g_m + 2C_4 C_5 L_4 L_5) + s^3 (2C_1 C_4 L_4 R_5 + C_1 C_5 L_4 R_5 + 2C_1 C_5 L_5 R_5 + 2C_4 C_5 L_4 R_5 + 2C_5 L_4 L_5 g_m) + s^2 (C_1 L_4 + 2C_4 L_4 R_5 g_m + 2C_4 L_4 + 2C_5 L_4 R_5 g_m + 2C_5 L_5 R_5 g_m + 2C_5 L_5) + s (2C_1 R_5 + 2C_5 R_5 + 2C_5)}$$

$$10.225 \quad \text{INVALID-ORDER-225} \quad Z(s) = \left(\frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad L_4 s + R_4 + \frac{1}{C_4 s}, \quad R_5, \quad \infty \right)$$

$$H(s) = \frac{R_5 g_m + s^2 (C_4 L_4 R_5 g_m - C_4 L_4) + s (C_4 R_4 R_5 g_m - C_4 R_4) - 1}{C_1 C_4 L_4 s^3 + 2g_m + s^2 (C_1 C_4 R_4 + 2C_1 C_4 R_5 + 2C_4 L_4 g_m) + s (C_1 + 2C_4 R_4 g_m + 2C_4 R_5 g_m + 2C_4)}$$

$$10.226 \quad \text{INVALID-ORDER-226} \quad Z(s) = \left(\frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad L_4 s + R_4 + \frac{1}{C_4 s}, \quad \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{-C_4 C_5 L_4 s^3 + g_m + s^2 (-C_4 C_5 R_4 + C_4 L_4 g_m) + s (C_4 R_4 g_m - C_5)}{C_1 C_4 C_5 L_4 s^4 + s^3 (C_1 C_4 C_5 R_4 + 2C_4 C_5 L_4 g_m) + s^2 (2C_1 C_4 + C_1 C_5 + 2C_4 C_5 R_4 g_m + 2C_4 C_5) + s (2C_4 g_m + 2C_5 g_m)}$$

$$10.227 \quad \text{INVALID-ORDER-227} \quad Z(s) = \left(\frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad L_4 s + R_4 + \frac{1}{C_4 s}, \quad \frac{R_5}{C_5 R_5 s + 1}, \quad \infty \right)$$

$$H(s) = \frac{-C_4 C_5 L_4 R_5 s^3 + R_5 g_m + s^2 (-C_4 C_5 R_4 R_5 + C_4 L_4 R_5 g_m - C_4 L_4) + s (C_4 R_4 R_5 g_m - C_4 R_4 - C_5 R_5) - 1}{C_1 C_4 C_5 L_4 R_5 s^4 + 2g_m + s^3 (C_1 C_4 C_5 R_4 R_5 + C_1 C_4 L_4 + 2C_4 C_5 L_4 R_5 g_m) + s^2 (C_1 C_4 R_4 + 2C_1 C_4 R_5 + C_1 C_5 R_5 + 2C_4 C_5 R_4 R_5 g_m + 2C_4 C_5 R_5 + 2C_4 L_4 g_m) + s (C_1 + 2C_4 R_4 g_m + 2C_4 R_5 g_m + 2C_4 + 2C_5 R_5 g_m)}$$

$$10.228 \quad \text{INVALID-ORDER-228} \quad Z(s) = \left(\frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad L_4 s + R_4 + \frac{1}{C_4 s}, \quad R_5 + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{g_m + s^3 (C_4 C_5 L_4 R_5 g_m - C_4 C_5 L_4) + s^2 (C_4 C_5 R_4 R_5 g_m - C_4 C_5 R_4 + C_4 L_4 g_m) + s (C_4 R_4 g_m + C_5 R_5 g_m - C_5)}{C_1 C_4 C_5 L_4 s^4 + s^3 (C_1 C_4 C_5 R_4 + 2C_1 C_4 C_5 R_5 + 2C_4 C_5 L_4 g_m) + s^2 (2C_1 C_4 + C_1 C_5 + 2C_4 C_5 R_4 g_m + 2C_4 C_5 R_5 g_m + 2C_4 C_5) + s (2C_4 g_m + 2C_5 g_m)}$$

$$10.229 \quad \text{INVALID-ORDER-229} \quad Z(s) = \left(\frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad L_4 s + R_4 + \frac{1}{C_4 s}, \quad L_5 s + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{C_4 C_5 L_4 L_5 g_m s^4 + g_m + s^3 (-C_4 C_5 L_4 + C_4 C_5 L_5 R_4 g_m) + s^2 (-C_4 C_5 R_4 + C_4 L_4 g_m + C_5 L_5 g_m) + s (C_4 R_4 g_m - C_5)}{s^4 (C_1 C_4 C_5 L_4 + 2C_1 C_4 C_5 L_5) + s^3 (C_1 C_4 C_5 R_4 + 2C_4 C_5 L_4 g_m + 2C_4 C_5 L_5 g_m) + s^2 (2C_1 C_4 + C_1 C_5 + 2C_4 C_5 R_4 g_m + 2C_4 C_5) + s (2C_4 g_m + 2C_5 g_m)}$$

$$\mathbf{10.230 \quad INVALID-ORDER-230} \quad Z(s) = \left(\frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad L_4 s + R_4 + \frac{1}{C_4 s}, \quad \frac{L_5 s}{C_5 L_5 s^2 + 1}, \quad \infty \right)$$

$$H(s) = \frac{-C_4 C_5 L_4 L_5 s^4 + s^3 (-C_4 C_5 L_5 R_4 + C_4 L_4 L_5 g_m) + s^2 (-C_4 L_4 + C_4 L_5 R_4 g_m - C_5 L_5) + s (-C_4 R_4 + L_5 g_m) - 1}{C_1 C_4 C_5 L_4 L_5 s^5 + 2g_m + s^4 (C_1 C_4 C_5 L_5 R_4 + 2C_4 C_5 L_4 L_5 g_m) + s^3 (C_1 C_4 L_4 + 2C_1 C_4 L_5 + C_1 C_5 L_5 + 2C_4 C_5 L_5 R_4 g_m + 2C_4 C_5 L_5) + s^2 (C_1 C_4 R_4 + 2C_4 L_4 g_m + 2C_4 L_5 g_m + 2C_5 L_5 g_m) + s (C_1 + 2C_4 R_4 g_m + 2C_4)}$$

$$\mathbf{10.231 \quad INVALID-ORDER-231} \quad Z(s) = \left(\frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad L_4 s + R_4 + \frac{1}{C_4 s}, \quad L_5 s + R_5 + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{C_4 C_5 L_4 L_5 g_m s^4 + g_m + s^3 (C_4 C_5 L_4 R_5 g_m - C_4 C_5 L_4 + C_4 C_5 L_5 R_4 g_m) + s^2 (C_4 C_5 R_4 R_5 g_m - C_4 C_5 R_4 + C_4 L_4 g_m + C_5 L_5 g_m) + s (C_4 R_4 g_m + C_5 R_5 g_m - C_5)}{s^4 (C_1 C_4 C_5 L_4 + 2C_1 C_4 C_5 L_5) + s^3 (C_1 C_4 C_5 R_4 + 2C_1 C_4 C_5 R_5 + 2C_4 C_5 L_4 g_m + 2C_4 C_5 L_5 g_m) + s^2 (2C_1 C_4 + C_1 C_5 + 2C_4 C_5 R_4 g_m + 2C_4 C_5 R_5 g_m + 2C_4 C_5) + s (2C_4 g_m + 2C_5 g_m)}$$

$$\mathbf{10.232 \quad INVALID-ORDER-232} \quad Z(s) = \left(\frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad L_4 s + R_4 + \frac{1}{C_4 s}, \quad \frac{L_5 R_5 s}{C_5 L_5 R_5 s^2 + L_5 s + R_5}, \quad \infty \right)$$

$$H(s) = \frac{-C_4 C_5 L_4 L_5 R_5 s^4 - R_5 + s^3 (-C_4 C_5 L_5 R_4 R_5 + C_4 L_4 L_5 R_5 g_m - C_4 L_4 L_5) + s^2 (-C_4 L_4 R_5 + C_4 L_5 R_4 R_5 g_m - C_4 L_5 R_4 - C_5 L_5 R_5) + s (-C_4 R_4 R_5 + L_5 R_5 g_m - L_5)}{C_1 C_4 C_5 L_4 L_5 R_5 s^5 + 2R_5 g_m + s^4 (C_1 C_4 C_5 L_5 R_4 R_5 + C_1 C_4 L_4 L_5 + 2C_4 C_5 L_4 L_5 R_5 g_m) + s^3 (C_1 C_4 L_4 R_5 + C_1 C_4 L_5 R_4 + 2C_1 C_4 L_5 R_5 + C_1 C_5 L_5 R_5 + 2C_4 C_5 L_5 R_4 R_5 g_m + 2C_4 C_5 L_5 R_5 + 2C_4 L_4 L_5 g_m) + s^2 (C_1 C_4 R_4 R_5 + C_1 L_5 + 2C_4 L_4 R_5 g_m + 2C_4 L_5 R_4 g_m + 2C_4 L_5)}$$

$$\mathbf{10.233 \quad INVALID-ORDER-233} \quad Z(s) = \left(\frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad L_4 s + R_4 + \frac{1}{C_4 s}, \quad \frac{C_5 L_5 R_5 s^2 + L_5 s + R_5}{C_5 L_5 s^2 + 1}, \quad \infty \right)$$

$$H(s) = \frac{R_5 g_m + s^4 (C_4 C_5 L_4 L_5 R_5 g_m - C_4 C_5 L_4 L_5) + s^3 (C_4 C_5 L_5 R_4 R_5 g_m - C_4 C_5 L_5 R_4 + C_4 L_4 L_5 g_m) + s^2 (C_4 L_4 R_5 g_m - C_4 L_4 + C_4 L_5 R_4 g_m + C_5 L_5 R_5 g_m - C_5 L_5) + s (C_4 R_4 R_5 g_m - C_4 R_4 + L_5 g_m) - 1}{C_1 C_4 C_5 L_4 L_5 s^5 + 2g_m + s^4 (C_1 C_4 C_5 L_5 R_4 + 2C_1 C_4 C_5 L_5 R_5 + 2C_4 C_5 L_4 L_5 g_m) + s^3 (C_1 C_4 L_4 + 2C_1 C_4 L_5 + C_1 C_5 L_5 + 2C_4 C_5 L_5 R_4 g_m + 2C_4 C_5 L_5 R_5 g_m + 2C_4 C_5 L_5) + s^2 (C_1 C_4 R_4 + 2C_1 C_4 R_5 + 2C_4 L_4 g_m + 2C_4 L_5 g_m + 2C_5 L_5 g_m) + s (C_1 + 2C_4 R_4 g_m + 2C_4 R_5 g_m)}$$

$$\mathbf{10.234 \quad INVALID-ORDER-234} \quad Z(s) = \left(\frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad L_4 s + R_4 + \frac{1}{C_4 s}, \quad \frac{R_5 (C_5 L_5 s^2 + 1)}{C_5 L_5 s^2 + C_5 R_5 s + 1}, \quad \infty \right)$$

$$H(s) = \frac{R_5 g_m + s^4 (C_4 C_5 L_4 L_5 R_5 g_m - C_4 C_5 L_4 L_5) + s^3 (-C_4 C_5 L_4 R_5 + C_4 C_5 L_5 R_4 R_5 g_m - C_4 C_5 L_5 R_4) + s^2 (-C_4 C_5 R_4 R_5 + C_4 L_4 R_5 g_m - C_4 L_4 + C_5 L_5 R_5 g_m - C_5 L_5) + s (C_4 R_4 R_5 g_m - C_4 R_4 - R_5)}{C_1 C_4 C_5 L_4 L_5 s^5 + 2g_m + s^4 (C_1 C_4 C_5 L_4 R_5 + C_1 C_4 C_5 L_5 R_4 + 2C_1 C_4 C_5 L_5 R_5 + 2C_4 C_5 L_4 L_5 g_m) + s^3 (C_1 C_4 C_5 R_4 R_5 + C_1 C_4 L_4 + C_1 C_5 L_5 + 2C_4 C_5 L_4 R_5 g_m + 2C_4 C_5 L_5 R_4 g_m + 2C_4 C_5 L_5 R_5 g_m + 2C_4 C_5 L_5) + s^2 (C_1 C_4 R_4 + 2C_1 C_4 R_5 + C_1 C_5 R_5 + 2C_4 C_5 R_4 R_5 g_m + 2C_4 C_5 R_5 g_m + 2C_4 C_5 L_5)}$$

$$\mathbf{10.235 \quad INVALID-ORDER-235} \quad Z(s) = \left(\frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \frac{L_4 R_4 s}{C_4 L_4 R_4 s^2 + L_4 s + R_4}, \quad R_5, \quad \infty \right)$$

$$H(s) = \frac{s (L_4 R_4 R_5 g_m - L_4 R_4)}{2C_1 C_4 L_4 R_4 R_5 s^3 + 2R_4 R_5 g_m + 2R_4 + s^2 (C_1 L_4 R_4 + 2C_1 L_4 R_5 + 2C_4 L_4 R_4 R_5 g_m + 2C_4 L_4 R_4) + s (2C_1 R_4 R_5 + 2L_4 R_4 g_m + 2L_4 R_5 g_m + 2L_4)}$$

$$\mathbf{10.236 \quad INVALID-ORDER-236} \quad Z(s) = \left(\frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \frac{L_4 R_4 s}{C_4 L_4 R_4 s^2 + L_4 s + R_4}, \quad \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{-C_5 L_4 R_4 s^2 + L_4 R_4 g_m s}{2R_4 g_m + s^3 (2C_1 C_4 L_4 R_4 + C_1 C_5 L_4 R_4 + 2C_4 C_5 L_4 R_4) + s^2 (2C_1 L_4 + 2C_4 L_4 R_4 g_m + 2C_5 L_4 R_4 g_m + 2C_5 L_4) + s (2C_1 R_4 + 2C_5 R_4 + 2L_4 g_m)}$$

$$\mathbf{10.237 \quad INVALID-ORDER-237} \quad Z(s) = \left(\frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \frac{L_4 R_4 s}{C_4 L_4 R_4 s^2 + L_4 s + R_4}, \quad \frac{R_5}{C_5 R_5 s + 1}, \quad \infty \right)$$

$$H(s) = \frac{-C_5 L_4 R_4 R_5 s^2 + s (L_4 R_4 R_5 g_m - L_4 R_4)}{2R_4 R_5 g_m + 2R_4 + s^3 (2C_1 C_4 L_4 R_4 R_5 + C_1 C_5 L_4 R_4 R_5 + 2C_4 C_5 L_4 R_4 R_5) + s^2 (C_1 L_4 R_4 + 2C_1 L_4 R_5 + 2C_4 L_4 R_4 R_5 g_m + 2C_4 L_4 R_4 + 2C_5 L_4 R_4 R_5 g_m + 2C_5 L_4 R_5) + s (2C_1 R_4 R_5 + 2C_5 R_4 R_5 + 2L_4 R_4 g_m + 2L_4 R_5 g_m + 2L_4)}$$

$$\mathbf{10.238 \quad INVALID-ORDER-238} \quad Z(s) = \left(\frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \frac{L_4 R_4 s}{C_4 L_4 R_4 s^2 + L_4 s + R_4}, \quad R_5 + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{L_4 R_4 g_m s + s^2 (C_5 L_4 R_4 R_5 g_m - C_5 L_4 R_4)}{2C_1 C_4 C_5 L_4 R_4 R_5 s^4 + 2R_4 g_m + s^3 (2C_1 C_4 L_4 R_4 + C_1 C_5 L_4 R_4 + 2C_1 C_5 L_4 R_5 + 2C_4 C_5 L_4 R_4 R_5 g_m + 2C_4 C_5 L_4 R_4) + s^2 (2C_1 C_5 R_4 R_5 + 2C_1 L_4 + 2C_4 L_4 R_4 g_m + 2C_5 L_4 R_4 g_m + 2C_5 L_4 R_5 g_m + 2C_5 L_4) + s (2C_1 R_4 + 2C_5 R_4 R_5 g_m + 2C_5 R_4 + 2L_4 g_m)}$$

$$\mathbf{10.239 \quad INVALID-ORDER-239} \quad Z(s) = \left(\frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \frac{L_4 R_4 s}{C_4 L_4 R_4 s^2 + L_4 s + R_4}, \quad L_5 s + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{C_5 L_4 L_5 R_4 g_m s^3 - C_5 L_4 R_4 s^2 + L_4 R_4 g_m s}{2C_1 C_4 C_5 L_4 L_5 R_4 s^5 + 2R_4 g_m + s^4 (2C_1 C_5 L_4 L_5 + 2C_4 C_5 L_4 L_5 R_4 g_m) + s^3 (2C_1 C_4 L_4 R_4 + C_1 C_5 L_4 R_4 + 2C_1 C_5 L_5 R_4 + 2C_4 C_5 L_4 R_4 + 2C_5 L_4 L_5 g_m) + s^2 (2C_1 L_4 + 2C_4 L_4 R_4 g_m + 2C_5 L_4 R_4 g_m + 2C_5 L_4 + 2C_5 L_5 R_4 g_m) + s (2C_1 R_4 + 2C_5 R_4 + 2L_4 g_m)}$$

$$\mathbf{10.240 \quad INVALID-ORDER-240} \quad Z(s) = \left(\frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \frac{L_4 R_4 s}{C_4 L_4 R_4 s^2 + L_4 s + R_4}, \quad \frac{L_5 s}{C_5 L_5 s^2 + 1}, \quad \infty \right)$$

$$H(s) = \frac{-C_5 L_4 L_5 R_4 s^3 + L_4 L_5 R_4 g_m s^2 - L_4 R_4 s}{2R_4 + s^4 (2C_1 C_4 L_4 L_5 R_4 + C_1 C_5 L_4 L_5 R_4 + 2C_4 C_5 L_4 L_5 R_4) + s^3 (2C_1 L_4 L_5 + 2C_4 L_4 L_5 R_4 g_m + 2C_5 L_4 L_5 R_4 g_m + 2C_5 L_4 L_5) + s^2 (C_1 L_4 R_4 + 2C_1 L_5 R_4 + 2C_4 L_4 R_4 + 2C_5 L_5 R_4 + 2L_4 L_5 g_m) + s (2L_4 R_4 g_m + 2L_4 + 2L_5 R_4 g_m)}$$

$$\mathbf{10.241 \quad INVALID-ORDER-241} \quad Z(s) = \left(\frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \frac{L_4 R_4 s}{C_4 L_4 R_4 s^2 + L_4 s + R_4}, \quad L_5 s + R_5 + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{C_5 L_4 L_5 R_4 g_m s^3 + L_4 R_4 g_m s + s^2 (C_5 L_4 R_4 R_5 g_m - C_5 L_4 R_4)}{2C_1 C_4 C_5 L_4 L_5 R_4 s^5 + 2R_4 g_m + s^4 (2C_1 C_4 C_5 L_4 R_4 R_5 + 2C_1 C_5 L_4 L_5 + 2C_4 C_5 L_4 L_5 R_4 g_m) + s^3 (2C_1 C_4 L_4 R_4 + C_1 C_5 L_4 R_4 + 2C_1 C_5 L_4 R_5 + 2C_1 C_5 L_5 R_4 + 2C_4 C_5 L_4 R_4 R_5 g_m + 2C_4 C_5 L_4 R_4 + 2C_5 L_4 L_5 g_m) + s^2 (2C_1 C_5 R_4 R_5 + 2C_1 L_4 + 2C_4 L_4 R_4 g_m + 2C_5 L_4 R_4 g_m + 2C_5 L_5 R_4 g_m) + s (2C_1 R_4 + 2C_5 R_4 + 2L_4 g_m)}$$

$$\mathbf{10.242 \quad INVALID-ORDER-242} \quad Z(s) = \left(\frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \frac{L_4 R_4 s}{C_4 L_4 R_4 s^2 + L_4 s + R_4}, \quad \frac{L_5 R_5 s}{C_5 L_5 R_5 s^2 + L_5 s + R_5}, \quad \infty \right)$$

$$H(s) = \frac{-C_5 L_4 L_5 R_4 R_5 s^3 - L_4 R_4 R_5 s + s^2 (L_4 L_5 R_4 R_5 g_m - L_4 L_5 R_4)}{2R_4 R_5 + s^4 (2C_1 C_4 L_4 L_5 R_4 R_5 + C_1 C_5 L_4 L_5 R_4 R_5 + 2C_4 C_5 L_4 L_5 R_4 R_5) + s^3 (C_1 L_4 L_5 R_4 + 2C_1 L_4 L_5 R_5 + 2C_4 L_4 L_5 R_4 R_5 g_m + 2C_4 L_4 L_5 R_4 + 2C_5 L_4 L_5 R_4 R_5 g_m + 2C_5 L_4 L_5 R_5) + s^2 (C_1 L_4 R_4 R_5 + 2C_1 L_5 R_4 R_5 + 2C_4 L_4 R_4 R_5 + 2C_5 L_5 R_4 R_5 + 2L_4 L_5 R_4 g_m + 2L_4 L_5 R_5) + s (2C_1 R_4 R_5 + 2C_5 R_4 R_5 + 2L_4 R_4 g_m + 2L_4 R_5 g_m)}$$

$$\mathbf{10.243 \quad INVALID-ORDER-243} \quad Z(s) = \left(\frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \frac{L_4 R_4 s}{C_4 L_4 R_4 s^2 + L_4 s + R_4}, \quad \frac{C_5 L_5 R_5 s^2 + L_5 s + R_5}{C_5 L_5 s^2 + 1}, \quad \infty \right)$$

$$H(s) = \frac{L_4 L_5 R_4 g_m s^2 + s^3 (C_5 L_4 L_5 R_4 R_5 g_m - C_5 L_4 L_5 R_4) + s (L_4 R_4 R_5 g_m - L_4 R_4)}{2C_1 C_4 C_5 L_4 L_5 R_4 R_5 s^5 + 2R_4 R_5 g_m + 2R_4 + s^4 (2C_1 C_4 L_4 L_5 R_4 + C_1 C_5 L_4 L_5 R_4 + 2C_1 C_5 L_4 L_5 R_5 + 2C_4 C_5 L_4 L_5 R_4 R_5 g_m + 2C_4 C_5 L_4 L_5 R_4) + s^3 (2C_1 C_4 L_4 R_4 R_5 + 2C_1 C_5 L_5 R_4 R_5 + 2C_1 L_4 L_5 + 2C_4 L_4 L_5 R_4 g_m + 2C_5 L_4 L_5 R_4 g_m + 2C_5 L_4 L_5 R_5 g_m + 2C_5 L_4 L_5) + s^2 (C_1 L_4 R_4 R_5 + 2C_1 L_5 R_4 R_5 + 2C_4 L_4 R_4 R_5 + 2C_5 L_5 R_4 R_5 + 2L_4 L_5 R_4 g_m + 2L_4 L_5 R_5) + s (2C_1 R_4 R_5 + 2C_5 R_4 R_5 + 2L_4 R_4 g_m + 2L_4 R_5 g_m)}$$

$$\mathbf{10.244 \quad INVALID-ORDER-244} \quad Z(s) = \left(\frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \frac{L_4 R_4 s}{C_4 L_4 R_4 s^2 + L_4 s + R_4}, \quad \frac{R_5 (C_5 L_5 s^2 + 1)}{C_5 L_5 s^2 + C_5 R_5 s + 1}, \quad \infty \right)$$

$$H(s) = \frac{-C_5 L_4 R_4 R_5 s^2 + s^3 (C_5 L_4 L_5 R_4 R_5 g_m - C_5 L_4 L_5 R_4) + s (L_4 R_4 R_5 g_m - L_4 R_4)}{2C_1 C_4 C_5 L_4 L_5 R_4 R_5 s^5 + 2R_4 R_5 g_m + 2R_4 + s^4 (C_1 C_5 L_4 L_5 R_4 + 2C_1 C_5 L_4 L_5 R_5 + 2C_4 C_5 L_4 L_5 R_4 R_5 g_m + 2C_4 C_5 L_4 L_5 R_4) + s^3 (2C_1 C_4 L_4 R_4 R_5 + C_1 C_5 L_4 R_4 R_5 + 2C_1 C_5 L_5 R_4 R_5 + 2C_4 C_5 L_4 R_4 R_5 + 2C_5 L_4 L_5 R_4 g_m + 2C_5 L_4 L_5 R_5 g_m + 2C_5 L_4 L_5) + s^2 (C_1 L_4 R_4 + 2C_1 L_5 R_4 + 2C_4 L_4 R_4 R_5 + 2C_5 L_5 R_4 R_5 + 2L_4 L_5 R_4 g_m + 2L_4 L_5 R_5) + s (2C_1 R_4 + 2C_5 R_4 + 2L_4 g_m + 2L_5 g_m)}$$

$$\mathbf{10.245 \quad INVALID-ORDER-245} \quad Z(s) = \left(\frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \frac{C_4 L_4 R_4 s^2 + L_4 s + R_4}{C_4 L_4 s^2 + 1}, \quad R_5, \quad \infty \right)$$

$$H(s) = \frac{R_4 R_5 g_m - R_4 + s^2 (C_4 L_4 R_4 R_5 g_m - C_4 L_4 R_4) + s (L_4 R_5 g_m - L_4)}{2R_4 g_m + 2R_5 g_m + s^3 (C_1 C_4 L_4 R_4 + 2C_1 C_4 L_4 R_5) + s^2 (C_1 L_4 + 2C_4 L_4 R_4 g_m + 2C_4 L_4 R_5 g_m + 2C_4 L_4) + s (C_1 R_4 + 2C_1 R_5 + 2L_4 g_m) + 2}$$

$$\mathbf{10.246 \quad INVALID-ORDER-246} \quad Z(s) = \left(\frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \frac{C_4 L_4 R_4 s^2 + L_4 s + R_4}{C_4 L_4 s^2 + 1}, \quad \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{-C_4 C_5 L_4 R_4 s^3 + R_4 g_m + s^2 (C_4 L_4 R_4 g_m - C_5 L_4) + s (-C_5 R_4 + L_4 g_m)}{C_1 C_4 C_5 L_4 R_4 s^4 + 2g_m + s^3 (2C_1 C_4 L_4 + C_1 C_5 L_4 + 2C_4 C_5 L_4 R_4 g_m + 2C_4 C_5 L_4) + s^2 (C_1 C_5 R_4 + 2C_4 L_4 g_m + 2C_5 L_4 g_m) + s (2C_1 + 2C_5 R_4 g_m + 2C_5)}$$

$$\mathbf{10.247 \quad INVALID-ORDER-247} \quad Z(s) = \left(\frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \frac{C_4 L_4 R_4 s^2 + L_4 s + R_4}{C_4 L_4 s^2 + 1}, \quad \frac{R_5}{C_5 R_5 s + 1}, \quad \infty \right)$$

$$H(s) = \frac{-C_4 C_5 L_4 R_4 R_5 s^3 + R_4 R_5 g_m - R_4 + s^2 (C_4 L_4 R_4 R_5 g_m - C_4 L_4 R_4 - C_5 L_4 R_5) + s (-C_5 R_4 R_5 + L_4 R_5 g_m - L_4)}{C_1 C_4 C_5 L_4 R_4 R_5 s^4 + 2R_4 g_m + 2R_5 g_m + s^3 (C_1 C_4 L_4 R_4 + 2C_1 C_4 L_4 R_5 + C_1 C_5 L_4 R_5 + 2C_4 C_5 L_4 R_4 R_5 g_m + 2C_4 C_5 L_4 R_5) + s^2 (C_1 C_5 R_4 R_5 + C_1 L_4 + 2C_4 L_4 R_4 g_m + 2C_4 L_4 R_5 g_m + 2C_4 L_4 + 2C_5 L_4 R_5 g_m) + s (C_1 R_4 + 2C_1 R_5 + 2C_5 R_4 R_5 g_m + 2C_5 R_5 + 2L_4 g_m) + 2}$$

10.248 INVALID-ORDER-248 $Z(s) = \left(\frac{1}{C_1 s}, \infty, \infty, \frac{C_4 L_4 R_4 s^2 + L_4 s + R_4}{C_4 L_4 s^2 + 1}, R_5 + \frac{1}{C_5 s}, \infty \right)$

$$H(s) = \frac{R_4 g_m + s^3 (C_4 C_5 L_4 R_4 R_5 g_m - C_4 C_5 L_4 R_4) + s^2 (C_4 L_4 R_4 g_m + C_5 L_4 R_5 g_m - C_5 L_4) + s (C_5 R_4 R_5 g_m - C_5 R_4 + L_4 g_m)}{2g_m + s^4 (C_1 C_4 C_5 L_4 R_4 + 2C_1 C_4 C_5 L_4 R_5) + s^3 (2C_1 C_4 L_4 + C_1 C_5 L_4 + 2C_4 C_5 L_4 R_4 g_m + 2C_4 C_5 L_4 R_5 g_m + 2C_4 C_5 L_4) + s^2 (C_1 C_5 R_4 + 2C_1 C_5 R_5 + 2C_4 L_4 g_m + 2C_5 L_4 g_m) + s (2C_1 + 2C_5 R_4 g_m + 2C_5 R_5 g_m + 2C_5)}$$

10.249 INVALID-ORDER-249 $Z(s) = \left(\frac{1}{C_1 s}, \infty, \infty, \frac{C_4 L_4 R_4 s^2 + L_4 s + R_4}{C_4 L_4 s^2 + 1}, L_5 s + \frac{1}{C_5 s}, \infty \right)$

$$H(s) = \frac{C_4 C_5 L_4 L_5 R_4 g_m s^4 + R_4 g_m + s^3 (-C_4 C_5 L_4 R_4 + C_5 L_4 L_5 g_m) + s^2 (C_4 L_4 R_4 g_m - C_5 L_4 + C_5 L_5 R_4 g_m) + s (-C_5 R_4 + L_4 g_m)}{2C_1 C_4 C_5 L_4 L_5 s^5 + 2g_m + s^4 (C_1 C_4 C_5 L_4 R_4 + 2C_4 C_5 L_4 L_5 g_m) + s^3 (2C_1 C_4 L_4 + C_1 C_5 L_4 + 2C_1 C_5 L_5 + 2C_4 C_5 L_4 R_4 g_m + 2C_4 C_5 L_4) + s^2 (C_1 C_5 R_4 + 2C_4 L_4 g_m + 2C_5 L_4 g_m + 2C_5 L_5 g_m) + s (2C_1 + 2C_5 R_4 g_m + 2C_5)}$$

10.250 INVALID-ORDER-250 $Z(s) = \left(\frac{1}{C_1 s}, \infty, \infty, \frac{C_4 L_4 R_4 s^2 + L_4 s + R_4}{C_4 L_4 s^2 + 1}, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \infty \right)$

$$H(s) = \frac{-C_4 C_5 L_4 L_5 R_4 s^4 - R_4 + s^3 (C_4 L_4 L_5 R_4 g_m - C_5 L_4 L_5) + s^2 (-C_4 L_4 R_4 - C_5 L_5 R_4 + L_4 L_5 g_m) + s (-L_4 + L_5 R_4 g_m)}{C_1 C_4 C_5 L_4 L_5 R_4 s^5 + 2 R_4 g_m + s^4 (2 C_1 C_4 L_4 L_5 + C_1 C_5 L_4 L_5 + 2 C_4 C_5 L_4 L_5 R_4 g_m + 2 C_4 C_5 L_4 L_5) + s^3 (C_1 C_4 L_4 R_4 + C_1 C_5 L_5 R_4 + 2 C_4 L_4 L_5 g_m + 2 C_5 L_4 L_5 g_m) + s^2 (C_1 L_4 + 2 C_1 L_5 + 2 C_4 L_4 R_4 g_m + 2 C_4 L_4 + 2 C_5 L_5 R_4 g_m + 2 C_5 L_5) + s (C_1 R_4 + 2 L_4 g_m + 2 L_5 g_m) + 1}$$

10.251 INVALID-ORDER-251 $Z(s) = \left(\frac{1}{C_1 s}, \infty, \infty, \frac{C_4 L_4 R_4 s^2 + L_4 s + R_4}{C_4 L_4 s^2 + 1}, L_5 s + R_5 + \frac{1}{C_5 s}, \infty \right)$

$$H(s) = \frac{C_4 C_5 L_4 L_5 R_4 g_m s^4 + R_4 g_m + s^3 (C_4 C_5 L_4 R_4 R_5 g_m - C_4 C_5 L_4 R_4 + C_5 L_4 L_5 g_m) + s^2 (C_4 L_4 R_4 g_m + C_5 L_4 R_5 g_m - C_5 L_4 + C_5 L_5 R_4 g_m) + s (C_5 R_4 R_5 g_m - C_5 R_4 + L_4 g_m)}{2C_1 C_4 C_5 L_4 L_5 s^5 + 2g_m + s^4 (C_1 C_4 C_5 L_4 R_4 + 2C_1 C_4 C_5 L_4 R_5 + 2C_4 C_5 L_4 L_5 g_m) + s^3 (2C_1 C_4 L_4 + C_1 C_5 L_4 + 2C_1 C_5 L_5 + 2C_4 C_5 L_4 R_4 g_m + 2C_4 C_5 L_4 R_5 g_m + 2C_4 C_5 L_4) + s^2 (C_1 C_5 R_4 + 2C_1 C_5 R_5 + 2C_4 L_4 g_m + 2C_5 L_4 g_m + 2C_5 L_5 g_m) + s (2C_1 + 2C_5 R_4 g_m + 2C_5 R_5 g_m)}$$

10.252 INVALID-ORDER-252 $Z(s) = \left(\frac{1}{C_1 s}, \infty, \infty, \frac{C_4 L_4 R_4 s^2 + L_4 s + R_4}{C_4 L_4 s^2 + 1}, \frac{L_5 R_5 s}{C_5 L_5 R_5 s^2 + L_5 s + R_5}, \infty \right)$

$$H(s) = \frac{-C_4 C_5 L_4 L_5 R_4 R_5 s^4 - R_4 R_5 + s^3 (C_4 L_4 L_5 R_4 R_5 g_m - C_4 L_4 L_5 R_4 - C_5 L_4 L_5 R_5) + s^2 (-C_4 L_4 R_4 R_5 - C_5 L_5 R_4 R_5 + L_4 L_5 R_5 g_m - L_4 L_5) + C_1 C_4 C_5 L_4 L_5 R_4 R_5 s^5 + 2 R_4 R_5 g_m + 2 R_5 + s^4 (C_1 C_4 L_4 L_5 R_4 + 2 C_1 C_4 L_4 L_5 R_5 + C_1 C_5 L_4 L_5 R_5 + 2 C_4 C_5 L_4 L_5 R_4 R_5 g_m + 2 C_4 C_5 L_4 L_5 R_5) + s^3 (C_1 C_4 L_4 R_4 R_5 + C_1 C_5 L_5 R_4 R_5 + C_1 L_4 L_5 + 2 C_4 L_4 L_5 R_4 g_m + 2 C_4 L_4 L_5 R_5 g_m + 2 C_4 L_4 L_5 + 2 C_5 L_4 L_5 R_5 g_m) + s^2 (C_1 L_4 R_4 R_5 + C_1 L_5 R_4 R_5 + C_1 L_4 L_5 + 2 C_4 L_4 L_5 R_4 g_m + 2 C_4 L_4 L_5 R_5 g_m + 2 C_4 L_4 L_5 + 2 C_5 L_4 L_5 R_5 g_m)}{C_1 C_4 C_5 L_4 L_5 R_4 R_5 s^5 + 2 R_4 R_5 g_m + 2 R_5 + s^4 (C_1 C_4 L_4 L_5 R_4 + 2 C_1 C_4 L_4 L_5 R_5 + C_1 C_5 L_4 L_5 R_5 + 2 C_4 C_5 L_4 L_5 R_4 R_5 g_m + 2 C_4 C_5 L_4 L_5 R_5) + s^3 (C_1 C_4 L_4 R_4 R_5 + C_1 C_5 L_5 R_4 R_5 + C_1 L_4 L_5 + 2 C_4 L_4 L_5 R_4 g_m + 2 C_4 L_4 L_5 R_5 g_m + 2 C_4 L_4 L_5 + 2 C_5 L_4 L_5 R_5 g_m) + s^2 (C_1 L_4 R_4 R_5 + C_1 L_5 R_4 R_5 + C_1 L_4 L_5 + 2 C_4 L_4 L_5 R_4 g_m + 2 C_4 L_4 L_5 R_5 g_m + 2 C_4 L_4 L_5 + 2 C_5 L_4 L_5 R_5 g_m) + s (C_1 L_4 R_4 + C_1 L_5 R_4 + C_1 L_4 L_5 + 2 C_4 L_4 L_5 R_4 g_m + 2 C_4 L_4 L_5 R_5 g_m + 2 C_4 L_4 L_5 + 2 C_5 L_4 L_5 R_5 g_m) + C_1 L_4 R_4 + C_1 L_5 R_4 + C_1 L_4 L_5 + 2 C_4 L_4 L_5 R_4 g_m + 2 C_4 L_4 L_5 R_5 g_m + 2 C_4 L_4 L_5 + 2 C_5 L_4 L_5 R_5 g_m}$$

10.253 INVALID-ORDER-253 $Z(s) = \left(\frac{1}{C_1 s}, \infty, \infty, \frac{C_4 L_4 R_4 s^2 + L_4 s + R_4}{C_4 L_4 s^2 + 1}, \frac{C_5 L_5 R_5 s^2 + L_5 s + R_5}{C_5 L_5 s^2 + 1}, \infty \right)$

$$H(s) = \frac{R_4 R_5 g_m - R_4 + s^4 (C_4 C_5 L_4 L_5 R_4 R_5 g_m - C_4 C_5 L_4 L_5 R_4) + s^3 (C_4 L_4 L_5 R_4 g_m + C_5 L_4 L_5 R_5 g_m - C_5 L_4 L_5) + s^2 (C_4 L_4 R_4 R_5 g_m - C_4 L_4 R_4 + C_5 L_5 R_4 R_5 g_m - C_5 L_5 R_4 + L_4 L_5)}{2R_4 g_m + 2R_5 g_m + s^5 (C_1 C_4 C_5 L_4 L_5 R_4 + 2C_1 C_4 C_5 L_4 L_5 R_5) + s^4 (2C_1 C_4 L_4 L_5 + C_1 C_5 L_4 L_5 + 2C_4 C_5 L_4 L_5 R_4 g_m + 2C_4 C_5 L_4 L_5 R_5 g_m + 2C_4 C_5 L_4 L_5) + s^3 (C_1 C_4 L_4 R_4 + 2C_1 C_4 L_4 R_5 + C_1 C_5 L_5 R_4 + 2C_1 C_5 L_5 R_5 + 2C_4 L_4 L_5 g_m + 2C_5 L_4 L_5 g_m) + s^2 (C_1 L_4 + 2C_1 L_5}$$

10.254 INVALID-ORDER-254 $Z(s) = \left(\frac{1}{C_1 s}, \infty, \infty, \frac{C_4 L_4 R_4 s^2 + L_4 s + R_4}{C_4 L_4 s^2 + 1}, \frac{R_5 (C_5 L_5 s^2 + 1)}{C_5 L_5 s^2 + C_5 R_5 s + 1}, \infty \right)$

$$H(s) = \frac{R_4 R_5 g_m - R_4 + s^4 (C_4 C_5 L_4 L_5 R_4 R_5 g_m - C_4 C_5 L_4 L_5 R_4) + s^3 (-C_4 C_5 L_4 R_4 R_5 + C_5 L_4 L_5 R_5 g_m - C_5 L_4 L_5) + s^2 (C_4 L_4 R_4 R_5 g_m - C_4 L_4 R_4)}{2R_4 g_m + 2R_5 g_m + s^5 (C_1 C_4 C_5 L_4 L_5 R_4 + 2C_1 C_4 C_5 L_4 L_5 R_5) + s^4 (C_1 C_4 C_5 L_4 R_4 R_5 + C_1 C_5 L_4 L_5 + 2C_4 C_5 L_4 L_5 R_4 g_m + 2C_4 C_5 L_4 L_5 R_5 g_m + 2C_4 C_5 L_4 L_5) + s^3 (C_1 C_4 L_4 R_4 + 2C_1 C_4 L_4 R_5 + C_1 C_5 L_4 R_5 + C_1 C_5 L_5 R_4 + 2C_1 C_5 L_5 R_5 + 2C_4 C_5 L_4 R_4 R_5 g_m + 2C_4 C_5 L_4 R_5 g_m + 2C_4 C_5 L_4 R_5) + s^2 (C_1 C_4 L_4 R_4 + 2C_1 C_4 L_4 R_5 + C_1 C_5 L_4 R_5 + C_1 C_5 L_5 R_4 + 2C_1 C_5 L_5 R_5 + 2C_4 C_5 L_4 R_4 R_5 g_m + 2C_4 C_5 L_4 R_5 g_m + 2C_4 C_5 L_4 R_5) + s (C_1 C_4 L_4 R_4 + 2C_1 C_4 L_4 R_5 + C_1 C_5 L_4 R_5 + C_1 C_5 L_5 R_4 + 2C_1 C_5 L_5 R_5 + 2C_4 C_5 L_4 R_4 R_5 g_m + 2C_4 C_5 L_4 R_5 g_m + 2C_4 C_5 L_4 R_5) + s^0 (C_1 C_4 L_4 R_4 + 2C_1 C_4 L_4 R_5 + C_1 C_5 L_4 R_5 + C_1 C_5 L_5 R_4 + 2C_1 C_5 L_5 R_5 + 2C_4 C_5 L_4 R_4 R_5 g_m + 2C_4 C_5 L_4 R_5 g_m + 2C_4 C_5 L_4 R_5)}$$

10.255 INVALID-ORDER-255 $Z(s) = \left(\frac{1}{C_1 s}, \infty, \infty, \frac{R_4(C_4 L_4 s^2 + 1)}{C_4 L_4 s^2 + C_4 R_4 s + 1}, R_5, \infty \right)$

$$H(s) = \frac{R_4 R_5 g_m - R_4 + s^2 (C_4 L_4 R_4 R_5 g_m - C_4 L_4 R_4)}{2R_4 g_m + 2R_5 g_m + s^3 (C_1 C_4 L_4 R_4 + 2C_1 C_4 L_4 R_5) + s^2 (2C_1 C_4 R_4 R_5 + 2C_4 L_4 R_4 g_m + 2C_4 L_4 R_5 g_m + 2C_4 L_4) + s (C_1 R_4 + 2C_1 R_5 + 2C_4 R_4 R_5 g_m + 2C_4 R_4) + 2}$$

10.256 INVALID-ORDER-256 $Z(s) = \left(\frac{1}{C_1 s}, \infty, \infty, \frac{R_4(C_4 L_4 s^2 + 1)}{C_4 L_4 s^2 + C_4 R_4 s + 1}, \frac{1}{C_5 s}, \infty \right)$

$$H(s) = \frac{-C_4 C_5 L_4 R_4 s^3 + C_4 L_4 R_4 g_m s^2 - C_5 R_4 s + R_4 g_m}{C_1 C_4 C_5 L_4 R_4 s^4 + 2g_m + s^3 (2C_1 C_4 L_4 + 2C_4 C_5 L_4 R_4 g_m + 2C_4 C_5 L_4) + s^2 (2C_1 C_4 R_4 + C_1 C_5 R_4 + 2C_4 C_5 R_4 + 2C_4 L_4 g_m) + s (2C_1 + 2C_4 R_4 g_m + 2C_5 R_4 g_m + 2C_5)}$$

$$\mathbf{10.257 \quad INVALID-ORDER-257} \quad Z(s) = \left(\frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \frac{R_4(C_4 L_4 s^2 + 1)}{C_4 L_4 s^2 + C_4 R_4 s + 1}, \quad \frac{R_5}{C_5 R_5 s + 1}, \quad \infty \right)$$

$$H(s) = \frac{-C_4 C_5 L_4 R_4 R_5 s^3 - C_5 R_4 R_5 s + R_4 R_5 g_m - R_4 + s^2 (C_4 L_4 R_4 R_5 g_m - C_4 L_4 R_4)}{C_1 C_4 C_5 L_4 R_4 R_5 s^4 + 2R_4 g_m + 2R_5 g_m + s^3 (C_1 C_4 L_4 R_4 + 2C_1 C_4 L_4 R_5 + 2C_4 C_5 L_4 R_4 R_5 g_m + 2C_4 C_5 L_4 R_5) + s^2 (2C_1 C_4 R_4 R_5 + C_1 C_5 R_4 R_5 + 2C_4 C_5 R_4 R_5 + 2C_4 L_4 R_4 g_m + 2C_4 L_4 R_5 g_m + 2C_4 L_4) + s (C_1 R_4 + 2C_1 R_5 + 2C_4 R_4 R_5 g_m + 2C_4 R_4 + 2C_5 R_4 R_5 g_m + 2C_5 R_4 R_5)}$$

$$\mathbf{10.258 \quad INVALID-ORDER-258} \quad Z(s) = \left(\frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \frac{R_4(C_4 L_4 s^2 + 1)}{C_4 L_4 s^2 + C_4 R_4 s + 1}, \quad R_5 + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{C_4 L_4 R_4 g_m s^2 + R_4 g_m + s^3 (C_4 C_5 L_4 R_4 R_5 g_m - C_4 C_5 L_4 R_4) + s (C_5 R_4 R_5 g_m - C_5 R_4)}{2g_m + s^4 (C_1 C_4 C_5 L_4 R_4 + 2C_1 C_4 C_5 L_4 R_5) + s^3 (2C_1 C_4 C_5 R_4 R_5 + 2C_1 C_4 L_4 + 2C_4 C_5 L_4 R_4 g_m + 2C_4 C_5 L_4 R_5 g_m + 2C_4 C_5 L_4) + s^2 (2C_1 C_4 R_4 + C_1 C_5 R_4 + 2C_1 C_5 R_5 + 2C_4 C_5 R_4 R_5 g_m + 2C_4 C_5 R_4 + 2C_4 L_4 g_m) + s (2C_1 + 2C_4 R_4 g_m + 2C_5 R_4 g_m + 2C_5 R_5 g_m + 2C_5)}$$

$$\mathbf{10.259 \quad INVALID-ORDER-259} \quad Z(s) = \left(\frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \frac{R_4(C_4 L_4 s^2 + 1)}{C_4 L_4 s^2 + C_4 R_4 s + 1}, \quad L_5 s + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{C_4 C_5 L_4 L_5 R_4 g_m s^4 - C_4 C_5 L_4 R_4 s^3 - C_5 R_4 s + R_4 g_m + s^2 (C_4 L_4 R_4 g_m + C_5 L_5 R_4 g_m)}{2C_1 C_4 C_5 L_4 L_5 s^5 + 2g_m + s^4 (C_1 C_4 C_5 L_4 R_4 + 2C_1 C_4 C_5 L_5 R_4 + 2C_4 C_5 L_4 L_5 g_m) + s^3 (2C_1 C_4 L_4 + 2C_1 C_5 L_5 + 2C_4 C_5 L_4 R_4 g_m + 2C_4 C_5 L_4 + 2C_4 C_5 L_5 R_4 g_m) + s^2 (2C_1 C_4 R_4 + C_1 C_5 R_4 + 2C_1 C_5 R_5 + 2C_4 C_5 R_4 R_5 g_m + 2C_4 C_5 R_4 + 2C_4 L_4 g_m) + s (2C_1 + 2C_4 R_4 g_m + 2C_5 R_4 g_m + 2C_5 R_5 g_m + 2C_5)}$$

$$\mathbf{10.260 \quad INVALID-ORDER-260} \quad Z(s) = \left(\frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \frac{R_4(C_4 L_4 s^2 + 1)}{C_4 L_4 s^2 + C_4 R_4 s + 1}, \quad \frac{L_5 s}{C_5 L_5 s^2 + 1}, \quad \infty \right)$$

$$H(s) = \frac{-C_4 C_5 L_4 L_5 R_4 s^4 + C_4 L_4 L_5 R_4 g_m s^3 + L_5 R_4 g_m s - R_4 + s^2 (-C_4 L_4 R_4 - C_5 L_5 R_4)}{C_1 C_4 C_5 L_4 L_5 R_4 s^5 + 2R_4 g_m + s^4 (2C_1 C_4 L_4 L_5 + 2C_4 C_5 L_4 L_5 R_4 g_m + 2C_4 C_5 L_4 L_5) + s^3 (C_1 C_4 L_4 R_4 + 2C_1 C_4 L_5 R_4 + C_1 C_5 L_5 R_4 + 2C_4 C_5 L_5 R_4 + 2C_4 L_4 L_5 g_m) + s^2 (2C_1 L_5 + 2C_4 L_4 R_4 g_m + 2C_4 L_4 + 2C_4 L_5 R_4 g_m + 2C_5 L_5 R_4 g_m + 2C_5 L_5) + s (C_1 R_4 + 2C_4 R_4 + 2C_5 R_4)}$$

$$\mathbf{10.261 \quad INVALID-ORDER-261} \quad Z(s) = \left(\frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \frac{R_4(C_4 L_4 s^2 + 1)}{C_4 L_4 s^2 + C_4 R_4 s + 1}, \quad L_5 s + R_5 + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{C_4 C_5 L_4 L_5 R_4 g_m s^4 + R_4 g_m + s^3 (C_4 C_5 L_4 R_4 R_5 g_m - C_4 C_5 L_4 R_4) + s^2 (C_4 L_4 R_4 g_m + C_5 L_5 R_4 g_m) + s (C_5 R_4 R_5 g_m - C_5 R_4)}{2C_1 C_4 C_5 L_4 L_5 s^5 + 2g_m + s^4 (C_1 C_4 C_5 L_4 R_4 + 2C_1 C_4 C_5 L_4 R_5 + 2C_1 C_4 C_5 L_5 R_4 + 2C_4 C_5 L_4 L_5 g_m) + s^3 (2C_1 C_4 C_5 R_4 R_5 + 2C_1 C_4 L_4 + 2C_1 C_5 L_5 + 2C_4 C_5 L_4 R_4 g_m + 2C_4 C_5 L_4 R_5 g_m + 2C_4 C_5 L_4 + 2C_4 C_5 L_5 R_4 g_m) + s^2 (2C_1 C_4 R_4 + C_1 C_5 R_4 + 2C_1 C_5 R_5 + 2C_4 C_5 R_4 R_5 g_m + 2C_4 C_5 R_4 + 2C_4 L_4 g_m) + s (2C_1 + 2C_4 R_4 g_m + 2C_5 R_4 g_m + 2C_5 R_5 g_m + 2C_5)}$$

$$\mathbf{10.262 \quad INVALID-ORDER-262} \quad Z(s) = \left(\frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \frac{R_4(C_4 L_4 s^2 + 1)}{C_4 L_4 s^2 + C_4 R_4 s + 1}, \quad \frac{L_5 R_5 s}{C_5 L_5 R_5 s^2 + L_5 s + R_5}, \quad \infty \right)$$

$$H(s) = \frac{-C_4 C_5 L_4 L_5 R_4 R_5 s^4 - R_4 R_5 + s^3 (C_4 L_4 L_5 R_4 R_5 g_m - C_4 L_4 L_5 R_4) + s^2 (-C_4 L_4 R_4 R_5 - C_5 L_5 R_4 R_5) + s (L_5 R_4 R_5 g_m - L_5 R_4 R_5)}{C_1 C_4 C_5 L_4 L_5 R_4 R_5 s^5 + 2R_4 R_5 g_m + 2R_5 + s^4 (C_1 C_4 L_4 L_5 R_4 + 2C_1 C_4 L_4 L_5 R_5 + 2C_4 C_5 L_4 L_5 R_4 R_5 g_m + 2C_4 C_5 L_4 L_5 R_5) + s^3 (C_1 C_4 L_4 R_4 R_5 + 2C_1 C_4 L_5 R_4 R_5 + C_1 C_5 L_5 R_4 R_5 + 2C_4 C_5 L_5 R_4 R_5 + 2C_4 L_4 L_5 R_4 g_m + 2C_4 L_4 L_5 R_5 g_m + 2C_4 L_4 L_5) + s^2 (C_1 L_5 R_4 + 2C_1 L_5 R_5 + 2C_4 L_4 R_4 R_5 g_m + 2C_4 L_4 R_4 R_5 + 2C_4 L_4 R_5) + s (C_1 R_4 + 2C_4 R_4 R_5 g_m + 2C_4 R_4 R_5 + 2C_5 R_4 R_5 g_m + 2C_5 R_4 R_5)}$$

$$\mathbf{10.263 \quad INVALID-ORDER-263} \quad Z(s) = \left(\frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \frac{R_4(C_4 L_4 s^2 + 1)}{C_4 L_4 s^2 + C_4 R_4 s + 1}, \quad \frac{C_5 L_5 R_5 s^2 + L_5 s + R_5}{C_5 L_5 s^2 + 1}, \quad \infty \right)$$

$$H(s) = \frac{C_4 L_4 L_5 R_4 g_m s^3 + L_5 R_4 g_m s + R_4 R_5 g_m - R_4 + s^4 (C_4 C_5 L_4 L_5 R_4 R_5 g_m - C_4 C_5 L_4 L_5 R_4) + s^2 (C_4 L_4 R_4 R_5 g_m - C_4 L_4 R_4 R_5)}{2R_4 g_m + 2R_5 g_m + s^5 (C_1 C_4 C_5 L_4 L_5 R_4 + 2C_1 C_4 C_5 L_4 L_5 R_5) + s^4 (2C_1 C_4 C_5 L_5 R_4 R_5 + 2C_1 C_4 L_4 L_5 + 2C_4 C_5 L_4 L_5 R_4 g_m + 2C_4 C_5 L_4 L_5 R_5 g_m + 2C_4 C_5 L_4 L_5) + s^3 (C_1 C_4 L_4 R_4 + 2C_1 C_4 L_4 R_5 + 2C_1 C_4 L_5 R_4 + C_1 C_5 L_5 R_4 + 2C_1 C_5 L_5 R_5 + 2C_4 C_5 L_5 R_4 R_5 g_m + 2C_4 C_5 L_4 R_4 R_5 g_m + 2C_4 C_5 L_4 R_4 R_5) + s^2 (C_1 L_5 R_4 + 2C_1 L_5 R_5 + 2C_4 L_4 R_4 R_5 g_m + 2C_4 L_4 R_4 R_5 + 2C_4 L_4 R_5) + s (C_1 R_4 + 2C_4 R_4 R_5 g_m + 2C_4 R_4 R_5 + 2C_5 R_4 R_5 g_m + 2C_5 R_4 R_5)}$$

$$\mathbf{10.264 \quad INVALID-ORDER-264} \quad Z(s) = \left(\frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \frac{R_4(C_4 L_4 s^2 + 1)}{C_4 L_4 s^2 + C_4 R_4 s + 1}, \quad \frac{R_5(C_5 L_5 s^2 + 1)}{C_5 L_5 s^2 + C_5 R_5 s + 1}, \quad \infty \right)$$

$$H(s) = \frac{-C_4 C_5 L_4 R_4 R_5 s^3 - C_5 R_4 R_5 s + R_4 R_5 g_m - R_4 + s^4 (C_4 C_5 L_4 L_5 R_4 R_5 g_m - C_4 C_5 L_4 L_5 R_4)}{2R_4 g_m + 2R_5 g_m + s^5 (C_1 C_4 C_5 L_4 L_5 R_4 + 2C_1 C_4 C_5 L_4 L_5 R_5) + s^4 (C_1 C_4 C_5 L_4 R_4 R_5 + 2C_1 C_4 C_5 L_5 R_4 R_5 + 2C_4 C_5 L_4 L_5 R_4 g_m + 2C_4 C_5 L_4 L_5 R_5 g_m + 2C_4 C_5 L_4 L_5) + s^3 (C_1 C_4 L_4 R_4 + 2C_1 C_4 L_4 R_5 + C_1 C_5 L_5 R_4 + 2C_1 C_5 L_5 R_5 + 2C_4 C_5 L_4 R_4 R_5 g_m + 2C_4 C_5 L_4 R_5 + 2C_4 L_4 R_4 R_5 g_m + 2C_4 L_4 R_4 R_5 + 2C_4 L_4 R_5) + s^2 (C_1 L_5 R_4 + 2C_1 L_5 R_5 + 2C_4 L_4 R_4 R_5 g_m + 2C_4 L_4 R_4 R_5 + 2C_4 L_4 R_5) + s (C_1 R_4 + 2C_4 R_4 R_5 g_m + 2C_4 R_4 R_5 + 2C_5 R_4 R_5 g_m + 2C_5 R_4 R_5)}$$

$$\mathbf{10.265 \quad INVALID-ORDER-265} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \quad \infty, \quad \infty, \quad R_4, \quad R_5, \quad \infty \right)$$

$$H(s) = \frac{R_1 R_4 R_5 g_m - R_1 R_4}{2R_1 R_4 g_m + 2R_1 R_5 g_m + 2R_1 + R_4 + 2R_5 + s (C_1 R_1 R_4 + 2C_1 R_1 R_5)}$$

$$10.266 \quad \text{INVALID-ORDER-266} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \quad \infty, \quad \infty, \quad R_4, \quad L_5 s + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{C_5 L_5 R_1 R_4 g_m s^2 - C_5 R_1 R_4 s + R_1 R_4 g_m}{2 C_1 C_5 L_5 R_1 s^3 + 2 R_1 g_m + s^2 (C_1 C_5 R_1 R_4 + 2 C_5 L_5 R_1 g_m + 2 C_5 L_5) + s (2 C_1 R_1 + 2 C_5 R_1 R_4 g_m + 2 C_5 R_1 + C_5 R_4) + 2}$$

$$10.267 \quad \text{INVALID-ORDER-267} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \quad \infty, \quad \infty, \quad R_4, \quad \frac{L_5 s}{C_5 L_5 s^2 + 1}, \quad \infty \right)$$

$$H(s) = \frac{-C_5 L_5 R_1 R_4 s^2 + L_5 R_1 R_4 g_m s - R_1 R_4}{C_1 C_5 L_5 R_1 R_4 s^3 + 2 R_1 R_4 g_m + 2 R_1 + R_4 + s^2 (2 C_1 L_5 R_1 + 2 C_5 L_5 R_1 R_4 g_m + 2 C_5 L_5 R_1 + C_5 L_5 R_4) + s (C_1 R_1 R_4 + 2 L_5 R_1 g_m + 2 L_5)}$$

$$10.268 \quad \text{INVALID-ORDER-268} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \quad \infty, \quad \infty, \quad R_4, \quad L_5 s + R_5 + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{C_5 L_5 R_1 R_4 g_m s^2 + R_1 R_4 g_m + s (C_5 R_1 R_4 R_5 g_m - C_5 R_1 R_4)}{2 C_1 C_5 L_5 R_1 s^3 + 2 R_1 g_m + s^2 (C_1 C_5 R_1 R_4 + 2 C_1 C_5 R_1 R_5 + 2 C_5 L_5 R_1 g_m + 2 C_5 L_5) + s (2 C_1 R_1 + 2 C_5 R_1 R_4 g_m + 2 C_5 R_1 R_5 g_m + 2 C_5 R_1 + C_5 R_4 + 2 C_5 R_5) + 2}$$

$$10.269 \quad \text{INVALID-ORDER-269} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \quad \infty, \quad \infty, \quad R_4, \quad \frac{L_5 R_5 s}{C_5 L_5 R_5 s^2 + L_5 s + R_5}, \quad \infty \right)$$

$$H(s) = \frac{-C_5 L_5 R_1 R_4 R_5 s^2 - R_1 R_4 R_5 + s (L_5 R_1 R_4 R_5 g_m - L_5 R_1 R_4)}{C_1 C_5 L_5 R_1 R_4 R_5 s^3 + 2 R_1 R_4 R_5 g_m + 2 R_1 R_5 + R_4 R_5 + s^2 (C_1 L_5 R_1 R_4 + 2 C_1 L_5 R_1 R_5 + 2 C_5 L_5 R_1 R_4 R_5 g_m + 2 C_5 L_5 R_1 R_5 + C_5 L_5 R_4 R_5) + s (C_1 R_1 R_4 R_5 + 2 L_5 R_1 R_4 g_m + 2 L_5 R_1 R_5 g_m + 2 L_5 R_1 + L_5 R_4 + 2 L_5 R_5)}$$

$$10.270 \quad \text{INVALID-ORDER-270} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \quad \infty, \quad \infty, \quad R_4, \quad \frac{C_5 L_5 R_5 s^2 + L_5 s + R_5}{C_5 L_5 s^2 + 1}, \quad \infty \right)$$

$$H(s) = \frac{L_5 R_1 R_4 g_m s + R_1 R_4 R_5 g_m - R_1 R_4 + s^2 (C_5 L_5 R_1 R_4 R_5 g_m - C_5 L_5 R_1 R_4)}{2 R_1 R_4 g_m + 2 R_1 R_5 g_m + 2 R_1 + R_4 + 2 R_5 + s^3 (C_1 C_5 L_5 R_1 R_4 + 2 C_1 C_5 L_5 R_1 R_5) + s^2 (2 C_1 L_5 R_1 + 2 C_5 L_5 R_1 R_4 g_m + 2 C_5 L_5 R_1 R_5 g_m + 2 C_5 L_5 R_1 + C_5 L_5 R_4 + 2 C_5 L_5 R_5) + s (C_1 R_1 R_4 + 2 C_1 R_1 R_5 + 2 L_5 R_1 g_m + 2 L_5)}$$

$$10.271 \quad \text{INVALID-ORDER-271} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \quad \infty, \quad \infty, \quad R_4, \quad \frac{R_5 (C_5 L_5 s^2 + 1)}{C_5 L_5 s^2 + C_5 R_5 s + 1}, \quad \infty \right)$$

$$H(s) = \frac{-C_5 R_1 R_4 R_5 s + R_1 R_4 R_5 g_m - R_1 R_4 + s^2 (C_5 L_5 R_1 R_4 R_5 g_m - C_5 L_5 R_1 R_4)}{2 R_1 R_4 g_m + 2 R_1 R_5 g_m + 2 R_1 + R_4 + 2 R_5 + s^3 (C_1 C_5 L_5 R_1 R_4 + 2 C_1 C_5 L_5 R_1 R_5) + s^2 (C_1 C_5 R_1 R_4 R_5 + 2 C_5 L_5 R_1 R_4 g_m + 2 C_5 L_5 R_1 R_5 g_m + 2 C_5 L_5 R_1 + C_5 L_5 R_4 + 2 C_5 L_5 R_5) + s (C_1 R_1 R_4 + 2 C_1 R_1 R_5 + 2 C_5 R_1 R_4 R_5 g_m + 2 C_5 R_1 R_5 + C_5 R_4 R_5)}$$

$$10.272 \quad \text{INVALID-ORDER-272} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \quad \infty, \quad \infty, \quad \frac{1}{C_4 s}, \quad \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{-C_5 R_1 s + R_1 g_m}{s^2 (2 C_1 C_4 R_1 + C_1 C_5 R_1 + 2 C_4 C_5 R_1) + s (2 C_4 R_1 g_m + 2 C_4 + 2 C_5 R_1 g_m + C_5)}$$

$$10.273 \quad \text{INVALID-ORDER-273} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \quad \infty, \quad \infty, \quad \frac{1}{C_4 s}, \quad R_5 + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{R_1 g_m + s (C_5 R_1 R_5 g_m - C_5 R_1)}{2 C_1 C_4 C_5 R_1 R_5 s^3 + s^2 (2 C_1 C_4 R_1 + C_1 C_5 R_1 + 2 C_4 C_5 R_1 R_5 g_m + 2 C_4 C_5 R_1 + 2 C_4 C_5 R_5) + s (2 C_4 R_1 g_m + 2 C_4 + 2 C_5 R_1 g_m + C_5)}$$

$$10.274 \quad \text{INVALID-ORDER-274} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \quad \infty, \quad \infty, \quad \frac{1}{C_4 s}, \quad L_5 s + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{C_5 L_5 R_1 g_m s^2 - C_5 R_1 s + R_1 g_m}{2 C_1 C_4 C_5 L_5 R_1 s^4 + s^3 (2 C_4 C_5 L_5 R_1 g_m + 2 C_4 C_5 L_5) + s^2 (2 C_1 C_4 R_1 + C_1 C_5 R_1 + 2 C_4 C_5 R_1) + s (2 C_4 R_1 g_m + 2 C_4 + 2 C_5 R_1 g_m + C_5)}$$

$$10.275 \quad \text{INVALID-ORDER-275} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \quad \infty, \quad \infty, \quad \frac{1}{C_4 s}, \quad \frac{L_5 s}{C_5 L_5 s^2 + 1}, \quad \infty \right)$$

$$H(s) = \frac{-C_5 L_5 R_1 s^2 + L_5 R_1 g_m s - R_1}{2 R_1 g_m + s^3 (2 C_1 C_4 L_5 R_1 + C_1 C_5 L_5 R_1 + 2 C_4 C_5 L_5 R_1) + s^2 (2 C_4 L_5 R_1 g_m + 2 C_4 L_5 + 2 C_5 L_5 R_1 g_m + C_5 L_5) + s (C_1 R_1 + 2 C_4 R_1) + 1}$$

$$\mathbf{10.276 \quad INVALID-ORDER-276} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \quad \infty, \quad \infty, \quad \frac{1}{C_4 s}, \quad L_5 s + R_5 + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{C_5 L_5 R_1 g_m s^2 + R_1 g_m + s (C_5 R_1 R_5 g_m - C_5 R_1)}{2 C_1 C_4 C_5 L_5 R_1 s^4 + s^3 (2 C_1 C_4 C_5 R_1 R_5 + 2 C_4 C_5 L_5 R_1 g_m + 2 C_4 C_5 L_5) + s^2 (2 C_1 C_4 R_1 + C_1 C_5 R_1 + 2 C_4 C_5 R_1 R_5 g_m + 2 C_4 C_5 R_1 + 2 C_4 C_5 R_5) + s (2 C_4 R_1 g_m + 2 C_4 + 2 C_5 R_1 g_m + C_5)}$$

$$\mathbf{10.277 \quad INVALID-ORDER-277} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \quad \infty, \quad \infty, \quad \frac{1}{C_4 s}, \quad \frac{L_5 R_5 s}{C_5 L_5 R_5 s^2 + L_5 s + R_5}, \quad \infty \right)$$

$$H(s) = \frac{-C_5 L_5 R_1 R_5 s^2 - R_1 R_5 + s (L_5 R_1 R_5 g_m - L_5 R_1)}{2 R_1 R_5 g_m + R_5 + s^3 (2 C_1 C_4 L_5 R_1 R_5 + C_1 C_5 L_5 R_1 R_5 + 2 C_4 C_5 L_5 R_1 R_5) + s^2 (C_1 L_5 R_1 + 2 C_4 L_5 R_1 R_5 g_m + 2 C_4 L_5 R_1 + 2 C_4 L_5 R_5 + 2 C_5 L_5 R_1 R_5 g_m + C_5 L_5 R_5) + s (C_1 R_1 R_5 + 2 C_4 R_1 R_5 + 2 L_5 R_1 g_m + L_5)}$$

$$\mathbf{10.278 \quad INVALID-ORDER-278} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \quad \infty, \quad \infty, \quad \frac{1}{C_4 s}, \quad \frac{C_5 L_5 R_5 s^2 + L_5 s + R_5}{C_5 L_5 s^2 + 1}, \quad \infty \right)$$

$$H(s) = \frac{L_5 R_1 g_m s + R_1 R_5 g_m - R_1 + s^2 (C_5 L_5 R_1 R_5 g_m - C_5 L_5 R_1)}{2 C_1 C_4 C_5 L_5 R_1 R_5 s^4 + 2 R_1 g_m + s^3 (2 C_1 C_4 L_5 R_1 + C_1 C_5 L_5 R_1 + 2 C_4 C_5 L_5 R_1 R_5 g_m + 2 C_4 C_5 L_5 R_1 + 2 C_4 C_5 L_5 R_5) + s^2 (2 C_1 C_4 R_1 R_5 + 2 C_4 L_5 R_1 g_m + 2 C_4 L_5 + 2 C_5 L_5 R_1 g_m + C_5 L_5) + s (C_1 R_1 + 2 C_4 R_1 R_5 g_m + 2 C_4 R_1 + 2 C_4 R_5) + 1}$$

$$\mathbf{10.279 \quad INVALID-ORDER-279} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \quad \infty, \quad \infty, \quad \frac{1}{C_4 s}, \quad \frac{R_5 (C_5 L_5 s^2 + 1)}{C_5 L_5 s^2 + C_5 R_5 s + 1}, \quad \infty \right)$$

$$H(s) = \frac{-C_5 R_1 R_5 s + R_1 R_5 g_m - R_1 + s^2 (C_5 L_5 R_1 R_5 g_m - C_5 L_5 R_1)}{2 C_1 C_4 C_5 L_5 R_1 R_5 s^4 + 2 R_1 g_m + s^3 (C_1 C_5 L_5 R_1 + 2 C_4 C_5 L_5 R_1 R_5 g_m + 2 C_4 C_5 L_5 R_1 + 2 C_4 C_5 L_5 R_5) + s^2 (2 C_1 C_4 R_1 R_5 + C_1 C_5 R_1 R_5 + 2 C_4 C_5 R_1 R_5 + 2 C_5 L_5 R_1 g_m + C_5 L_5) + s (C_1 R_1 + 2 C_4 R_1 R_5 g_m + 2 C_4 R_1 + 2 C_4 R_5 + 2 C_5 R_1 R_5 g_m + C_5 R_5) + 1}$$

$$\mathbf{10.280 \quad INVALID-ORDER-280} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \quad \infty, \quad \infty, \quad \frac{R_4}{C_4 R_4 s + 1}, \quad R_5 + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{R_1 R_4 g_m + s (C_5 R_1 R_4 R_5 g_m - C_5 R_1 R_4)}{2 C_1 C_4 C_5 R_1 R_4 R_5 s^3 + 2 R_1 g_m + s^2 (2 C_1 C_4 R_1 R_4 + C_1 C_5 R_1 R_4 + 2 C_1 C_5 R_1 R_5 + 2 C_4 C_5 R_1 R_4 R_5 g_m + 2 C_4 C_5 R_1 R_4 + 2 C_4 C_5 R_4 R_5) + s (2 C_1 R_1 + 2 C_4 R_1 R_4 g_m + 2 C_4 R_4 + 2 C_5 R_1 R_4 g_m + 2 C_5 R_1 R_5 g_m + 2 C_5 R_1 + C_5 R_4 + 2 C_5 R_5) + 2}$$

$$\mathbf{10.281 \quad INVALID-ORDER-281} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \quad \infty, \quad \infty, \quad \frac{R_4}{C_4 R_4 s + 1}, \quad L_5 s + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{C_5 L_5 R_1 R_4 g_m s^2 - C_5 R_1 R_4 s + R_1 R_4 g_m}{2 C_1 C_4 C_5 L_5 R_1 R_4 s^4 + 2 R_1 g_m + s^3 (2 C_1 C_5 L_5 R_1 + 2 C_4 C_5 L_5 R_1 R_4 g_m + 2 C_4 C_5 L_5 R_4) + s^2 (2 C_1 C_4 R_1 R_4 + C_1 C_5 R_1 R_4 + 2 C_4 C_5 R_1 R_4 + 2 C_5 L_5 R_1 g_m + 2 C_5 L_5) + s (2 C_1 R_1 + 2 C_4 R_1 R_4 g_m + 2 C_4 R_4 + 2 C_5 R_1 R_4 g_m + 2 C_5 R_1 + C_5 R_4) + 2}$$

$$\mathbf{10.282 \quad INVALID-ORDER-282} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \quad \infty, \quad \infty, \quad \frac{R_4}{C_4 R_4 s + 1}, \quad \frac{L_5 s}{C_5 L_5 s^2 + 1}, \quad \infty \right)$$

$$H(s) = \frac{-C_5 L_5 R_1 R_4 s^2 + L_5 R_1 R_4 g_m s - R_1 R_4}{2 R_1 R_4 g_m + 2 R_1 + R_4 + s^3 (2 C_1 C_4 L_5 R_1 R_4 + C_1 C_5 L_5 R_1 R_4 + 2 C_4 C_5 L_5 R_1 R_4) + s^2 (2 C_1 L_5 R_1 + 2 C_4 L_5 R_1 R_4 g_m + 2 C_4 L_5 R_4 + 2 C_5 L_5 R_1 R_4 g_m + 2 C_5 L_5 R_1 + C_5 L_5 R_4) + s (C_1 R_1 R_4 + 2 C_4 R_1 R_4 + 2 L_5 R_1 g_m + 2 L_5)}$$

$$\mathbf{10.283 \quad INVALID-ORDER-283} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \quad \infty, \quad \infty, \quad \frac{R_4}{C_4 R_4 s + 1}, \quad L_5 s + R_5 + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{C_5 L_5 R_1 R_4 g_m s^2 + R_1 R_4 g_m + s (C_5 R_1 R_4 R_5 g_m - C_5 R_1 R_4)}{2 C_1 C_4 C_5 L_5 R_1 R_4 s^4 + 2 R_1 g_m + s^3 (2 C_1 C_4 C_5 R_1 R_4 R_5 + 2 C_1 C_5 L_5 R_1 + 2 C_4 C_5 L_5 R_1 R_4 g_m + 2 C_4 C_5 L_5 R_4) + s^2 (2 C_1 C_4 R_1 R_4 + C_1 C_5 R_1 R_4 + 2 C_1 C_5 R_1 R_5 + 2 C_4 C_5 R_1 R_4 R_5 g_m + 2 C_4 C_5 R_1 R_4 + 2 C_4 C_5 R_4 R_5 + 2 C_5 L_5 R_1 g_m + 2 C_5 L_5) + s (2 C_1 R_1 + 2 C_4 R_1 R_4 g_m + 2 C_4 R_4 + 2 C_5 R_1 R_4 g_m + 2 C_5 R_1 R_5 g_m + 2 C_5 R_1 + C_5 R_4 + 2 C_5 R_5) + 2}$$

$$\mathbf{10.284 \quad INVALID-ORDER-284} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \quad \infty, \quad \infty, \quad \frac{R_4}{C_4 R_4 s + 1}, \quad \frac{L_5 R_5 s}{C_5 L_5 R_5 s^2 + L_5 s + R_5}, \quad \infty \right)$$

$$H(s) = \frac{-C_5 L_5 R_1 R_4 R_5 s^2 - R_1 R_4 R_5 + s (L_5 R_1 R_4 R_5 g_m - L_5 R_1 R_4)}{2 R_1 R_4 R_5 g_m + 2 R_1 R_5 + R_4 R_5 + s^3 (2 C_1 C_4 L_5 R_1 R_4 R_5 + C_1 C_5 L_5 R_1 R_4 R_5 + 2 C_4 C_5 L_5 R_1 R_4 R_5) + s^2 (C_1 L_5 R_1 R_4 + 2 C_1 L_5 R_1 R_5 + 2 C_4 L_5 R_1 R_4 R_5 g_m + 2 C_4 L_5 R_1 R_4 + 2 C_4 L_5 R_4 R_5 + 2 C_5 L_5 R_1 R_4 R_5 g_m + 2 C_5 L_5 R_1 R_5 + C_5 L_5 R_4 R_5) + s (C_1 R_1 R_4 R_5 + 2 C_4 R_1 R_4 R_5 + 2 C_4 R_1 R_5 + 2 C_5 R_1 R_4 R_5 g_m + 2 C_5 R_1 R_5 g_m + 2 C_5 R_1 + C_5 R_4 + 2 C_5 R_5) + 2}$$

$$\mathbf{10.285 \quad INVALID-ORDER-285} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \quad \infty, \quad \infty, \quad \frac{R_4}{C_4 R_4 s + 1}, \quad \frac{C_5 L_5 R_5 s^2 + L_5 s + R_5}{C_5 L_5 s^2 + 1}, \quad \infty \right)$$

$$H(s) = \frac{L_5 R_1 R_4 g_m s + R_1 R_4 R_5 g_m - R_1 R_4 + s^2 (C_5 L_5 R_1 R_4 R_5 g_m - C_5 L_5 R_1 R_4)}{2C_1 C_4 C_5 L_5 R_1 R_4 R_5 s^4 + 2R_1 R_4 g_m + 2R_1 R_5 g_m + 2R_1 + R_4 + 2R_5 + s^3 (2C_1 C_4 L_5 R_1 R_4 + C_1 C_5 L_5 R_1 R_4 + 2C_1 C_5 L_5 R_1 R_5 + 2C_4 C_5 L_5 R_1 R_4 R_5 g_m + 2C_4 C_5 L_5 R_1 R_4 + 2C_4 C_5 L_5 R_4 R_5) + s^2 (2C_1 C_4 R_1 R_4 R_5 + 2C_1 L_5 R_1 + 2C_4 L_5 R_1 R_4 g_m + 2C_4 L_5 R_4 + 2C_5 L_5 R_1 R_4 g_m)}$$

$$\mathbf{10.286 \quad INVALID-ORDER-286} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \quad \infty, \quad \infty, \quad \frac{R_4}{C_4 R_4 s + 1}, \quad \frac{R_5 (C_5 L_5 s^2 + 1)}{C_5 L_5 s^2 + C_5 R_5 s + 1}, \quad \infty \right)$$

$$H(s) = \frac{-C_5 R_1 R_4 R_5 s + R_1 R_4 R_5 g_m - R_1 R_4 + s^2 (C_5 L_5 R_1 R_4 R_5 g_m - C_5 L_5 R_1 R_4)}{2C_1 C_4 C_5 L_5 R_1 R_4 R_5 s^4 + 2R_1 R_4 g_m + 2R_1 R_5 g_m + 2R_1 + R_4 + 2R_5 + s^3 (C_1 C_5 L_5 R_1 R_4 + 2C_1 C_5 L_5 R_1 R_5 + 2C_4 C_5 L_5 R_1 R_4 R_5 g_m + 2C_4 C_5 L_5 R_1 R_4 + 2C_4 C_5 L_5 R_4 R_5) + s^2 (2C_1 C_4 R_1 R_4 R_5 + C_1 C_5 R_1 R_4 R_5 + 2C_4 C_5 R_1 R_4 R_5 + 2C_5 L_5 R_1 R_4 g_m + 2C_5 L_5 R_1 R_5 g_m + 2C_5 L_5 R_1 R_4 R_5)}$$

$$\mathbf{10.287 \quad INVALID-ORDER-287} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \quad \infty, \quad \infty, \quad R_4 + \frac{1}{C_4 s}, \quad \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{-C_4 C_5 R_1 R_4 s^2 + R_1 g_m + s (C_4 R_1 R_4 g_m - C_5 R_1)}{C_1 C_4 C_5 R_1 R_4 s^3 + s^2 (2C_1 C_4 R_1 + C_1 C_5 R_1 + 2C_4 C_5 R_1 R_4 g_m + 2C_4 C_5 R_1 + C_4 C_5 R_4) + s (2C_4 R_1 g_m + 2C_4 + 2C_5 R_1 g_m + C_5)}$$

$$\mathbf{10.288 \quad INVALID-ORDER-288} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \quad \infty, \quad \infty, \quad R_4 + \frac{1}{C_4 s}, \quad \frac{R_5}{C_5 R_5 s + 1}, \quad \infty \right)$$

$$H(s) = \frac{-C_4 C_5 R_1 R_4 R_5 s^2 + R_1 R_5 g_m - R_1 + s (C_4 R_1 R_4 R_5 g_m - C_4 R_1 R_4 - C_5 R_1 R_5)}{C_1 C_4 C_5 R_1 R_4 R_5 s^3 + 2R_1 g_m + s^2 (C_1 C_4 R_1 R_4 + 2C_1 C_4 R_1 R_5 + C_1 C_5 R_1 R_5 + 2C_4 C_5 R_1 R_4 R_5 g_m + 2C_4 C_5 R_1 R_5 + C_4 C_5 R_4 R_5) + s (C_1 R_1 + 2C_4 R_1 R_4 g_m + 2C_4 R_1 R_5 g_m + 2C_4 R_1 + C_4 R_4 + 2C_4 R_5 + 2C_5 R_1 R_5 g_m + C_5 R_5) + 1}$$

$$\mathbf{10.289 \quad INVALID-ORDER-289} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \quad \infty, \quad \infty, \quad R_4 + \frac{1}{C_4 s}, \quad R_5 + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{R_1 g_m + s^2 (C_4 C_5 R_1 R_4 R_5 g_m - C_4 C_5 R_1 R_4) + s (C_4 R_1 R_4 g_m + C_5 R_1 R_5 g_m - C_5 R_1)}{s^3 (C_1 C_4 C_5 R_1 R_4 + 2C_1 C_4 C_5 R_1 R_5) + s^2 (2C_1 C_4 R_1 + C_1 C_5 R_1 + 2C_4 C_5 R_1 R_4 g_m + 2C_4 C_5 R_1 R_5 g_m + 2C_4 C_5 R_1 + C_4 C_5 R_4 + 2C_4 C_5 R_5) + s (2C_4 R_1 g_m + 2C_4 + 2C_5 R_1 g_m + C_5)}$$

$$\mathbf{10.290 \quad INVALID-ORDER-290} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \quad \infty, \quad \infty, \quad R_4 + \frac{1}{C_4 s}, \quad L_5 s + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{C_4 C_5 L_5 R_1 R_4 g_m s^3 + R_1 g_m + s^2 (-C_4 C_5 R_1 R_4 + C_5 L_5 R_1 g_m) + s (C_4 R_1 R_4 g_m - C_5 R_1)}{2C_1 C_4 C_5 L_5 R_1 s^4 + s^3 (C_1 C_4 C_5 R_1 R_4 + 2C_4 C_5 L_5 R_1 g_m + 2C_4 C_5 L_5) + s^2 (2C_1 C_4 R_1 + C_1 C_5 R_1 + 2C_4 C_5 R_1 R_4 g_m + 2C_4 C_5 R_1 + C_4 C_5 R_4) + s (2C_4 R_1 g_m + 2C_4 + 2C_5 R_1 g_m + C_5)}$$

$$\mathbf{10.291 \quad INVALID-ORDER-291} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \quad \infty, \quad \infty, \quad R_4 + \frac{1}{C_4 s}, \quad \frac{L_5 s}{C_5 L_5 s^2 + 1}, \quad \infty \right)$$

$$H(s) = \frac{-C_4 C_5 L_5 R_1 R_4 s^3 - R_1 + s^2 (C_4 L_5 R_1 R_4 g_m - C_5 L_5 R_1) + s (-C_4 R_1 R_4 + L_5 R_1 g_m)}{C_1 C_4 C_5 L_5 R_1 R_4 s^4 + 2R_1 g_m + s^3 (2C_1 C_4 L_5 R_1 + C_1 C_5 L_5 R_1 + 2C_4 C_5 L_5 R_1 R_4 g_m + 2C_4 C_5 L_5 R_1 + C_4 C_5 L_5 R_4) + s^2 (C_1 C_4 R_1 R_4 + 2C_4 L_5 R_1 g_m + 2C_4 L_5 + 2C_5 L_5 R_1 g_m + C_5 L_5) + s (C_1 R_1 + 2C_4 R_1 R_4 g_m + 2C_4 R_1 + C_4 R_4) + 1}$$

$$\mathbf{10.292 \quad INVALID-ORDER-292} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \quad \infty, \quad \infty, \quad R_4 + \frac{1}{C_4 s}, \quad L_5 s + R_5 + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{C_4 C_5 L_5 R_1 R_4 g_m s^3 + R_1 g_m + s^2 (C_4 C_5 R_1 R_4 R_5 g_m - C_4 C_5 R_1 R_4 + C_5 L_5 R_1 g_m) + s (C_4 R_1 R_4 g_m + C_5 R_1 R_5 g_m - C_5 R_1)}{2C_1 C_4 C_5 L_5 R_1 s^4 + s^3 (C_1 C_4 C_5 R_1 R_4 + 2C_1 C_4 C_5 R_1 R_5 + 2C_4 C_5 L_5 R_1 g_m + 2C_4 C_5 L_5) + s^2 (2C_1 C_4 R_1 + C_1 C_5 R_1 + 2C_4 C_5 R_1 R_4 g_m + 2C_4 C_5 R_1 R_5 g_m + 2C_4 C_5 R_1 + C_4 C_5 R_4 + 2C_4 C_5 R_5) + s (2C_4 R_1 g_m + 2C_4 + 2C_5 R_1 g_m + C_5)}$$

$$\mathbf{10.293 \quad INVALID-ORDER-293} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \quad \infty, \quad \infty, \quad R_4 + \frac{1}{C_4 s}, \quad \frac{L_5 R_5 s}{C_5 L_5 R_5 s^2 + L_5 s + R_5}, \quad \infty \right)$$

$$H(s) = \frac{-C_4 C_5 L_5 R_1 R_4 R_5 s^3 - R_1 R_5 + s^2 (C_4 L_5 R_1 R_4 R_5 g_m - C_4 L_5 R_1 R_4 - C_5 L_5 R_1 R_5) + s (-C_4 R_1 R_4 R_5 + L_5 R_1 R_5 g_m - L_5 R_1)}{C_1 C_4 C_5 L_5 R_1 R_4 R_5 s^4 + 2R_1 R_5 g_m + R_5 + s^3 (C_1 C_4 L_5 R_1 R_4 + 2C_1 C_4 L_5 R_1 R_5 + C_1 C_5 L_5 R_1 R_5 + 2C_4 C_5 L_5 R_1 R_4 R_5 g_m + 2C_4 C_5 L_5 R_1 R_5 + C_4 C_5 L_5 R_4 R_5) + s^2 (C_1 C_4 R_1 R_4 R_5 + C_1 L_5 R_1 + 2C_4 L_5 R_1 R_4 g_m + 2C_4 L_5 R_1 R_5 g_m + 2C_4 L_5 R_1 + C_4 L_5 R_4 + 2C_4 L_5 R_5 + 2C_5 L_5 R_1 R_4 R_5)}$$

$$\mathbf{10.294 \quad INVALID-ORDER-294} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \quad \infty, \quad \infty, \quad R_4 + \frac{1}{C_4 s}, \quad \frac{C_5 L_5 R_5 s^2 + L_5 s + R_5}{C_5 L_5 s^2 + 1}, \quad \infty \right)$$

$$H(s) = \frac{R_1 R_5 g_m - R_1 + s^3 (C_4 C_5 L_5 R_1 R_4 R_5 g_m - C_4 C_5 L_5 R_1 R_4) + s^2 (C_4 L_5 R_1 R_4 g_m + C_5 L_5 R_1 R_5 g_m - C_5 L_5 R_1) + s (C_4 R_1 R_4 R_5 g_m - C_4 R_1 R_4 + L_5 R_1 g_m)}{2 R_1 g_m + s^4 (C_1 C_4 C_5 L_5 R_1 R_4 + 2 C_1 C_4 C_5 L_5 R_1 R_5) + s^3 (2 C_1 C_4 L_5 R_1 + C_1 C_5 L_5 R_1 + 2 C_4 C_5 L_5 R_1 R_4 g_m + 2 C_4 C_5 L_5 R_1 R_5 g_m + 2 C_4 C_5 L_5 R_1 + C_4 C_5 L_5 R_4 + 2 C_4 C_5 L_5 R_5) + s^2 (C_1 C_4 R_1 R_4 + 2 C_1 C_4 R_1 R_5 + 2 C_4 L_5 R_1 g_m + 2 C_4 L_5 + 2 C_5 L_5 R_1 g_m + C_5 L_5) + s (C_1 R_1 + C_1 R_4 + C_1 R_5 + C_4 R_1 + C_4 R_4 + C_4 R_5 + C_5 R_1 + C_5 R_4 + C_5 R_5) + 1}$$

$$\mathbf{10.295 \quad INVALID-ORDER-295} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \quad \infty, \quad \infty, \quad R_4 + \frac{1}{C_4 s}, \quad \frac{R_5 (C_5 L_5 s^2 + 1)}{C_5 L_5 s^2 + C_5 R_5 s + 1}, \quad \infty \right)$$

$$H(s) = \frac{R_1 R_5 g_m - R_1 + s^3 (C_4 C_5 L_5 R_1 R_4 R_5 g_m - C_4 C_5 L_5 R_1 R_4) + s^2 (-C_4 C_5 R_1 R_4 R_5 + C_5 L_5 R_1 R_5 g_m - C_5 L_5 R_1) + s (C_4 R_1 R_4 R_5 g_m - C_4 R_1 R_4 - C_4 R_1 R_5 + L_5 R_1 g_m)}{2 R_1 g_m + s^4 (C_1 C_4 C_5 L_5 R_1 R_4 + 2 C_1 C_4 C_5 L_5 R_1 R_5) + s^3 (C_1 C_4 C_5 R_1 R_4 R_5 + C_1 C_5 L_5 R_1 + 2 C_4 C_5 L_5 R_1 R_4 g_m + 2 C_4 C_5 L_5 R_1 R_5 g_m + 2 C_4 C_5 L_5 R_1 + C_4 C_5 L_5 R_4 + 2 C_4 C_5 L_5 R_5) + s^2 (C_1 C_4 R_1 R_4 + 2 C_1 C_4 R_1 R_5 + C_1 C_5 R_1 R_5 + 2 C_4 C_5 R_1 R_4 R_5 g_m + 2 C_4 C_5 R_1 R_5 + C_4 C_5 R_1 + C_4 C_5 R_4 + C_4 C_5 R_5) + s (C_1 R_1 + C_1 R_4 + C_1 R_5 + C_4 R_1 + C_4 R_4 + C_4 R_5 + C_5 R_1 + C_5 R_4 + C_5 R_5) + 1}$$

$$\mathbf{10.296 \quad INVALID-ORDER-296} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \quad \infty, \quad \infty, \quad L_4 s + \frac{1}{C_4 s}, \quad R_5, \quad \infty \right)$$

$$H(s) = \frac{R_1 R_5 g_m - R_1 + s^2 (C_4 L_4 R_1 R_5 g_m - C_4 L_4 R_1)}{C_1 C_4 L_4 R_1 s^3 + 2 R_1 g_m + s^2 (2 C_1 C_4 R_1 R_5 + 2 C_4 L_4 R_1 g_m + C_4 L_4) + s (C_1 R_1 + 2 C_4 R_1 R_5 g_m + 2 C_4 R_1 + 2 C_4 R_5) + 1}$$

$$\mathbf{10.297 \quad INVALID-ORDER-297} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \quad \infty, \quad \infty, \quad L_4 s + \frac{1}{C_4 s}, \quad \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{-C_4 C_5 L_4 R_1 s^3 + C_4 L_4 R_1 g_m s^2 - C_5 R_1 s + R_1 g_m}{C_1 C_4 C_5 L_4 R_1 s^4 + s^3 (2 C_4 C_5 L_4 R_1 g_m + C_4 C_5 L_4) + s^2 (2 C_1 C_4 R_1 + C_1 C_5 R_1 + 2 C_4 C_5 R_1) + s (2 C_4 R_1 g_m + 2 C_4 + 2 C_5 R_1 g_m + C_5) + 1}$$

$$\mathbf{10.298 \quad INVALID-ORDER-298} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \quad \infty, \quad \infty, \quad L_4 s + \frac{1}{C_4 s}, \quad \frac{R_5}{C_5 R_5 s + 1}, \quad \infty \right)$$

$$H(s) = \frac{-C_4 C_5 L_4 R_1 R_5 s^3 - C_5 R_1 R_5 s + R_1 R_5 g_m - R_1 + s^2 (C_4 L_4 R_1 R_5 g_m - C_4 L_4 R_1)}{C_1 C_4 C_5 L_4 R_1 R_5 s^4 + 2 R_1 g_m + s^3 (C_1 C_4 L_4 R_1 + 2 C_4 C_5 L_4 R_1 R_5 g_m + C_4 C_5 L_4 R_5) + s^2 (2 C_1 C_4 R_1 R_5 + C_1 C_5 R_1 R_5 + 2 C_4 C_5 R_1 R_5 + 2 C_4 L_4 R_1 g_m + C_4 L_4) + s (C_1 R_1 + 2 C_4 R_1 R_5 g_m + 2 C_4 R_1 + 2 C_4 R_5 + 2 C_5 R_1 R_5 g_m + C_5 R_5) + 1}$$

$$\mathbf{10.299 \quad INVALID-ORDER-299} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \quad \infty, \quad \infty, \quad L_4 s + \frac{1}{C_4 s}, \quad R_5 + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{C_4 L_4 R_1 g_m s^2 + R_1 g_m + s^3 (C_4 C_5 L_4 R_1 R_5 g_m - C_4 C_5 L_4 R_1) + s (C_5 R_1 R_5 g_m - C_5 R_1)}{C_1 C_4 C_5 L_4 R_1 s^4 + s^3 (2 C_1 C_4 C_5 R_1 R_5 + 2 C_4 C_5 L_4 R_1 g_m + C_4 C_5 L_4) + s^2 (2 C_1 C_4 R_1 + C_1 C_5 R_1 + 2 C_4 C_5 R_1 R_5 g_m + 2 C_4 C_5 R_1 + 2 C_4 C_5 R_5) + s (2 C_4 R_1 g_m + 2 C_4 + 2 C_5 R_1 g_m + C_5) + 1}$$

$$\mathbf{10.300 \quad INVALID-ORDER-300} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \quad \infty, \quad \infty, \quad L_4 s + \frac{1}{C_4 s}, \quad L_5 s + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{C_4 C_5 L_4 L_5 R_1 g_m s^4 - C_4 C_5 L_4 R_1 s^3 - C_5 R_1 s + R_1 g_m + s^2 (C_4 L_4 R_1 g_m + C_5 L_5 R_1 g_m)}{s^4 (C_1 C_4 C_5 L_4 R_1 + 2 C_1 C_4 C_5 L_5 R_1) + s^3 (2 C_4 C_5 L_4 R_1 g_m + C_4 C_5 L_4 + 2 C_4 C_5 L_5 R_1 g_m + 2 C_4 C_5 L_5) + s^2 (2 C_1 C_4 R_1 + C_1 C_5 R_1 + 2 C_4 C_5 R_1) + s (2 C_4 R_1 g_m + 2 C_4 + 2 C_5 R_1 g_m + C_5) + 1}$$

$$\mathbf{10.301 \quad INVALID-ORDER-301} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \quad \infty, \quad \infty, \quad L_4 s + \frac{1}{C_4 s}, \quad \frac{L_5 s}{C_5 L_5 s^2 + 1}, \quad \infty \right)$$

$$H(s) = \frac{-C_4 C_5 L_4 L_5 R_1 s^4 + C_4 L_4 L_5 R_1 g_m s^3 + L_5 R_1 g_m s - R_1 + s^2 (-C_4 L_4 R_1 - C_5 L_5 R_1)}{C_1 C_4 C_5 L_4 L_5 R_1 s^5 + 2 R_1 g_m + s^4 (2 C_4 C_5 L_4 L_5 R_1 g_m + C_4 C_5 L_4 L_5) + s^3 (C_1 C_4 L_4 R_1 + 2 C_1 C_4 L_5 R_1 + C_1 C_5 L_5 R_1 + 2 C_4 C_5 L_5 R_1) + s^2 (2 C_4 L_4 R_1 g_m + C_4 L_4 + 2 C_4 L_5 R_1 g_m + 2 C_4 L_5 + 2 C_5 L_5 R_1 g_m + C_5 L_5) + s (C_1 R_1 + 2 C_4 R_1) + 1}$$

$$\mathbf{10.302 \quad INVALID-ORDER-302} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \quad \infty, \quad \infty, \quad L_4 s + \frac{1}{C_4 s}, \quad L_5 s + R_5 + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{C_4 C_5 L_4 L_5 R_1 g_m s^4 + R_1 g_m + s^3 (C_4 C_5 L_4 R_1 R_5 g_m - C_4 C_5 L_4 R_1) + s^2 (C_4 L_4 R_1 g_m + C_5 L_5 R_1 g_m) + s (C_5 R_1 R_5 g_m - C_5 R_1)}{s^4 (C_1 C_4 C_5 L_4 R_1 + 2 C_1 C_4 C_5 L_5 R_1) + s^3 (2 C_1 C_4 C_5 R_1 R_5 + 2 C_4 C_5 L_4 R_1 g_m + C_4 C_5 L_4 + 2 C_4 C_5 L_5 R_1 g_m + 2 C_4 C_5 L_5) + s^2 (2 C_1 C_4 R_1 + C_1 C_5 R_1 + 2 C_4 C_5 R_1 R_5 g_m + 2 C_4 C_5 R_1 + 2 C_4 C_5 R_5) + s (2 C_4 R_1 g_m + 2 C_4 + 2 C_5 R_1 g_m + C_5) + 1}$$

$$\mathbf{10.303 \quad INVALID-ORDER-303} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \quad \infty, \quad \infty, \quad L_4 s + \frac{1}{C_4 s}, \quad \frac{L_5 R_5 s}{C_5 L_5 R_5 s^2 + L_5 s + R_5}, \quad \infty \right)$$

$$H(s) = \frac{-C_4 C_5 L_4 L_5 R_1 R_5 s^4 - R_1 R_5 + s^3 (C_4 L_4 L_5 R_1 R_5 g_m - C_4 L_4 L_5 R_1) + s^2 (-C_4 L_4 R_1 R_5 - C_5 L_5 R_1 R_5) + s (L_5 R_1 R_5 g_m - L_5 R_1)}{C_1 C_4 C_5 L_4 L_5 R_1 R_5 s^5 + 2 R_1 R_5 g_m + R_5 + s^4 (C_1 C_4 L_4 L_5 R_1 + 2 C_4 C_5 L_4 L_5 R_1 R_5 g_m + C_4 C_5 L_4 L_5 R_5) + s^3 (C_1 C_4 L_4 R_1 R_5 + 2 C_1 C_4 L_5 R_1 R_5 + C_1 C_5 L_5 R_1 R_5 + 2 C_4 C_5 L_5 R_1 R_5 + 2 C_4 L_4 L_5 R_1 g_m + C_4 L_4 L_5) + s^2 (C_1 L_5 R_1 + 2 C_4 L_4 R_1 R_5 g_m + C_4 L_4 R_5 + 2 C_4 L_5 R_1 R_5 g_m - C_4 L_4 R_1) + s (L_5 R_1 R_5 g_m - L_5 R_1)}$$

$$\mathbf{10.304 \quad INVALID-ORDER-304} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \quad \infty, \quad \infty, \quad L_4 s + \frac{1}{C_4 s}, \quad \frac{C_5 L_5 R_5 s^2 + L_5 s + R_5}{C_5 L_5 s^2 + 1}, \quad \infty \right)$$

$$H(s) = \frac{C_4 L_4 L_5 R_1 g_m s^3 + L_5 R_1 g_m s + R_1 R_5 g_m - R_1 + s^4 (C_4 C_5 L_4 L_5 R_1 R_5 g_m - C_4 C_5 L_4 L_5 R_1) + s^2 (C_4 L_4 R_1 R_5 g_m - C_4 L_4 R_1 + C_5 L_5 R_1 R_5 g_m - C_5 L_5 R_1)}{C_1 C_4 C_5 L_4 L_5 R_1 s^5 + 2 R_1 g_m + s^4 (2 C_1 C_4 C_5 L_5 R_1 R_5 + 2 C_4 C_5 L_4 L_5 R_1 g_m + C_4 C_5 L_4 L_5) + s^3 (C_1 C_4 L_4 R_1 + 2 C_1 C_4 L_5 R_1 + C_1 C_5 L_5 R_1 + 2 C_4 C_5 L_5 R_1 R_5 g_m + 2 C_4 C_5 L_5 R_1 + 2 C_4 C_5 L_5 R_5) + s^2 (2 C_1 C_4 R_1 R_5 + 2 C_4 L_4 R_1 g_m + C_4 L_4 + 2 C_4 L_5 R_1 g_m + 2 C_4 L_5 + 2 C_5 L_5 R_1 R_5 g_m - C_4 L_4 R_1) + s (L_5 R_1 R_5 g_m - L_5 R_1)}$$

$$\mathbf{10.305 \quad INVALID-ORDER-305} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \quad \infty, \quad \infty, \quad L_4 s + \frac{1}{C_4 s}, \quad \frac{R_5 (C_5 L_5 s^2 + 1)}{C_5 L_5 s^2 + C_5 R_5 s + 1}, \quad \infty \right)$$

$$H(s) = \frac{-C_4 C_5 L_4 R_1 R_5 s^3 - C_5 R_1 R_5 s + R_1 R_5 g_m - R_1 + s^4 (C_4 C_5 L_4 L_5 R_1 R_5 g_m - C_4 C_5 L_4 L_5 R_1) + s^2 (C_4 L_4 R_1 R_5 g_m - C_4 L_4 R_1 + C_5 L_5 R_1 R_5 g_m - C_5 L_5 R_1)}{C_1 C_4 C_5 L_4 L_5 R_1 s^5 + 2 R_1 g_m + s^4 (C_1 C_4 C_5 L_4 R_1 R_5 + 2 C_1 C_4 C_5 L_5 R_1 R_5 + 2 C_4 C_5 L_4 L_5 R_1 g_m + C_4 C_5 L_4 L_5) + s^3 (C_1 C_4 L_4 R_1 + C_1 C_5 L_5 R_1 + 2 C_4 C_5 L_4 R_1 R_5 g_m + C_4 C_5 L_4 R_5 + 2 C_4 C_5 L_5 R_1 R_5 g_m + 2 C_4 C_5 L_5 R_1 + 2 C_4 C_5 L_5 R_5) + s^2 (2 C_1 C_4 R_1 R_5 + 2 C_4 L_4 R_1 g_m + C_4 L_4 + 2 C_4 L_5 R_1 g_m + 2 C_4 L_5 + 2 C_5 L_5 R_1 R_5 g_m - C_4 L_4 R_1) + s (L_5 R_1 R_5 g_m - L_5 R_1)}$$

$$\mathbf{10.306 \quad INVALID-ORDER-306} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \quad \infty, \quad \infty, \quad \frac{L_4 s}{C_4 L_4 s^2 + 1}, \quad R_5, \quad \infty \right)$$

$$H(s) = \frac{s (L_4 R_1 R_5 g_m - L_4 R_1)}{2 C_1 C_4 L_4 R_1 R_5 s^3 + 2 R_1 R_5 g_m + 2 R_1 + 2 R_5 + s^2 (C_1 L_4 R_1 + 2 C_4 L_4 R_1 R_5 g_m + 2 C_4 L_4 R_1 + 2 C_4 L_4 R_5) + s (2 C_1 R_1 R_5 + 2 L_4 R_1 g_m + L_4)}$$

$$\mathbf{10.307 \quad INVALID-ORDER-307} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \quad \infty, \quad \infty, \quad \frac{L_4 s}{C_4 L_4 s^2 + 1}, \quad \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{-C_5 L_4 R_1 s^2 + L_4 R_1 g_m s}{2 R_1 g_m + s^3 (2 C_1 C_4 L_4 R_1 + C_1 C_5 L_4 R_1 + 2 C_4 C_5 L_4 R_1) + s^2 (2 C_4 L_4 R_1 g_m + 2 C_4 L_4 + 2 C_5 L_4 R_1 g_m + C_5 L_4) + s (2 C_1 R_1 + 2 C_5 R_1) + 2}$$

$$\mathbf{10.308 \quad INVALID-ORDER-308} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \quad \infty, \quad \infty, \quad \frac{L_4 s}{C_4 L_4 s^2 + 1}, \quad \frac{R_5}{C_5 R_5 s + 1}, \quad \infty \right)$$

$$H(s) = \frac{-C_5 L_4 R_1 R_5 s^2 + s (L_4 R_1 R_5 g_m - L_4 R_1)}{2 R_1 R_5 g_m + 2 R_1 + 2 R_5 + s^3 (2 C_1 C_4 L_4 R_1 R_5 + C_1 C_5 L_4 R_1 R_5 + 2 C_4 C_5 L_4 R_1 R_5) + s^2 (C_1 L_4 R_1 + 2 C_4 L_4 R_1 R_5 g_m + 2 C_4 L_4 R_1 + 2 C_4 L_4 R_5 + 2 C_5 L_4 R_1 R_5 g_m + C_5 L_4 R_5) + s (2 C_1 R_1 R_5 + 2 C_5 R_1 R_5 + 2 L_4 R_1 g_m + L_4)}$$

$$\mathbf{10.309 \quad INVALID-ORDER-309} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \quad \infty, \quad \infty, \quad \frac{L_4 s}{C_4 L_4 s^2 + 1}, \quad R_5 + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{L_4 R_1 g_m s + s^2 (C_5 L_4 R_1 R_5 g_m - C_5 L_4 R_1)}{2 C_1 C_4 C_5 L_4 R_1 R_5 s^4 + 2 R_1 g_m + s^3 (2 C_1 C_4 L_4 R_1 + C_1 C_5 L_4 R_1 + 2 C_4 C_5 L_4 R_1 R_5 g_m + 2 C_4 C_5 L_4 R_1 + 2 C_4 C_5 L_4 R_5) + s^2 (2 C_1 C_5 R_1 R_5 + 2 C_4 L_4 R_1 g_m + 2 C_4 L_4 + 2 C_5 L_4 R_1 g_m + C_5 L_4) + s (2 C_1 R_1 + 2 C_5 R_1 R_5 g_m + 2 C_5 R_1 + 2 C_5 R_5) + 2}$$

$$\mathbf{10.310 \quad INVALID-ORDER-310} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \quad \infty, \quad \infty, \quad \frac{L_4 s}{C_4 L_4 s^2 + 1}, \quad L_5 s + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{C_5 L_4 L_5 R_1 g_m s^3 - C_5 L_4 R_1 s^2 + L_4 R_1 g_m s}{2 C_1 C_4 C_5 L_4 L_5 R_1 s^5 + 2 R_1 g_m + s^4 (2 C_4 C_5 L_4 L_5 R_1 g_m + 2 C_4 C_5 L_4 L_5) + s^3 (2 C_1 C_4 L_4 R_1 + C_1 C_5 L_4 R_1 + 2 C_1 C_5 L_5 R_1 + 2 C_4 C_5 L_4 R_1) + s^2 (2 C_4 L_4 R_1 g_m + 2 C_4 L_4 + 2 C_5 L_4 R_1 g_m + C_5 L_4 + 2 C_5 L_5 R_1 g_m + 2 C_5 L_5) + s (2 C_1 R_1 + 2 C_5 R_1) + 2}$$

$$\mathbf{10.311 \quad INVALID-ORDER-311} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \quad \infty, \quad \infty, \quad \frac{L_4 s}{C_4 L_4 s^2 + 1}, \quad \frac{L_5 s}{C_5 L_5 s^2 + 1}, \quad \infty \right)$$

$$H(s) = \frac{-C_5 L_4 L_5 R_1 s^3 + L_4 L_5 R_1 g_m s^2 - L_4 R_1 s}{2 R_1 + s^4 (2 C_1 C_4 L_4 L_5 R_1 + C_1 C_5 L_4 L_5 R_1 + 2 C_4 C_5 L_4 L_5 R_1) + s^3 (2 C_4 L_4 L_5 R_1 g_m + 2 C_4 L_4 L_5 + 2 C_5 L_4 L_5 R_1 g_m + C_5 L_4 L_5) + s^2 (C_1 L_4 R_1 + 2 C_1 L_5 R_1 + 2 C_4 L_4 R_1 + 2 C_5 L_5 R_1) + s (2 L_4 R_1 g_m + L_4 + 2 L_5 R_1 g_m + 2 L_5)}$$

$$\mathbf{10.312 \quad INVALID-ORDER-312} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \quad \infty, \quad \infty, \quad \frac{L_4 s}{C_4 L_4 s^2 + 1}, \quad L_5 s + R_5 + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{C_5 L_4 L_5 R_1 g_m s^3 + L_4 R_1 g_m s + s^2 (C_5 L_4 R_1 R_5 g_m - C_5 L_4 R_1)}{2C_1 C_4 C_5 L_4 L_5 R_1 s^5 + 2R_1 g_m + s^4 (2C_1 C_4 C_5 L_4 R_1 R_5 + 2C_4 C_5 L_4 L_5 R_1 g_m + 2C_4 C_5 L_4 L_5) + s^3 (2C_1 C_4 L_4 R_1 + C_1 C_5 L_4 R_1 + 2C_1 C_5 L_5 R_1 + 2C_4 C_5 L_4 R_1 R_5 g_m + 2C_4 C_5 L_4 R_1 + 2C_4 C_5 L_4 R_5) + s^2 (2C_1 C_5 R_1 R_5 + 2C_4 L_4 R_1 g_m + 2C_4 L_4 + 2C_5 L_4 R_1 g_m + C_5 L_4 + 2C_5 L_5 R_1 R_5) + s (L_4 R_1 R_5 g_m - L_4 R_1) + R_5}$$

$$\mathbf{10.313 \quad INVALID-ORDER-313} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \quad \infty, \quad \infty, \quad \frac{L_4 s}{C_4 L_4 s^2 + 1}, \quad \frac{L_5 R_5 s}{C_5 L_5 R_5 s^2 + L_5 s + R_5}, \quad \infty \right)$$

$$H(s) = \frac{-C_5 L_4 L_5 R_1 R_5 s^3 - L_4 R_1 R_5 s + s^2 (L_4 L_5 R_1 R_5 g_m - L_4 L_5 R_1)}{2R_1 R_5 + s^4 (2C_1 C_4 L_4 L_5 R_1 R_5 + C_1 C_5 L_4 L_5 R_1 R_5 + 2C_4 C_5 L_4 L_5 R_1 R_5) + s^3 (C_1 L_4 L_5 R_1 + 2C_4 L_4 L_5 R_1 R_5 g_m + 2C_4 L_4 L_5 R_1 + 2C_4 L_4 L_5 R_5 + 2C_5 L_4 L_5 R_1 R_5 g_m + C_5 L_4 L_5 R_5) + s^2 (C_1 L_4 R_1 R_5 + 2C_1 L_5 R_1 R_5 + 2C_4 L_4 R_1 R_5 + 2C_5 L_5 R_1 R_5 + 2L_4 L_5 R_1 g_m + L_4 L_5) + s (L_4 R_1 R_5 g_m - L_4 R_1) + R_5}$$

$$\mathbf{10.314 \quad INVALID-ORDER-314} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \quad \infty, \quad \infty, \quad \frac{L_4 s}{C_4 L_4 s^2 + 1}, \quad \frac{C_5 L_5 R_5 s^2 + L_5 s + R_5}{C_5 L_5 s^2 + 1}, \quad \infty \right)$$

$$H(s) = \frac{L_4 L_5 R_1 g_m s^2 + s^3 (C_5 L_4 L_5 R_1 R_5 g_m - C_5 L_4 L_5 R_1) + s (L_4 R_1 R_5 g_m - L_4 R_1)}{2C_1 C_4 C_5 L_4 L_5 R_1 R_5 s^5 + 2R_1 R_5 g_m + 2R_1 + 2R_5 + s^4 (2C_1 C_4 L_4 L_5 R_1 + C_1 C_5 L_4 L_5 R_1 + 2C_4 C_5 L_4 L_5 R_1 R_5 g_m + 2C_4 C_5 L_4 L_5 R_1 + 2C_4 C_5 L_4 L_5 R_5) + s^3 (2C_1 C_4 L_4 R_1 R_5 + 2C_1 C_5 L_5 R_1 R_5 + 2C_4 L_4 L_5 R_1 g_m + 2C_4 L_4 L_5 + 2C_5 L_4 L_5 R_1 g_m + C_5 L_4 L_5) + s^2 (C_1 L_4 R_1 + 2C_4 L_4 R_1 R_5 g_m + C_4 L_4 R_1 R_5) + s (L_4 R_1 R_5 g_m - L_4 R_1) + R_5}$$

$$\mathbf{10.315 \quad INVALID-ORDER-315} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \quad \infty, \quad \infty, \quad \frac{L_4 s}{C_4 L_4 s^2 + 1}, \quad \frac{R_5 (C_5 L_5 s^2 + 1)}{C_5 L_5 s^2 + C_5 R_5 s + 1}, \quad \infty \right)$$

$$H(s) = \frac{-C_5 L_4 R_1 R_5 s^2 + s^3 (C_5 L_4 L_5 R_1 R_5 g_m - C_5 L_4 L_5 R_1) + s (L_4 R_1 R_5 g_m - L_4 R_1)}{2C_1 C_4 C_5 L_4 L_5 R_1 R_5 s^5 + 2R_1 R_5 g_m + 2R_1 + 2R_5 + s^4 (C_1 C_5 L_4 L_5 R_1 + 2C_4 C_5 L_4 L_5 R_1 R_5 g_m + 2C_4 C_5 L_4 L_5 R_1 + 2C_4 C_5 L_4 L_5 R_5) + s^3 (2C_1 C_4 L_4 R_1 R_5 + C_1 C_5 L_4 R_1 R_5 + 2C_1 C_5 L_5 R_1 R_5 + 2C_4 C_5 L_4 R_1 R_5 + 2C_5 L_4 L_5 R_1 g_m + C_5 L_4 L_5) + s^2 (C_1 L_4 R_1 + 2C_4 L_4 R_1 R_5 g_m + C_4 L_4 R_1 R_5) + s (L_4 R_1 R_5 g_m - L_4 R_1) + R_5}$$

$$\mathbf{10.316 \quad INVALID-ORDER-316} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \quad \infty, \quad \infty, \quad L_4 s + R_4 + \frac{1}{C_4 s}, \quad R_5, \quad \infty \right)$$

$$H(s) = \frac{R_1 R_5 g_m - R_1 + s^2 (C_4 L_4 R_1 R_5 g_m - C_4 L_4 R_1) + s (C_4 R_1 R_4 R_5 g_m - C_4 R_1 R_4)}{C_1 C_4 L_4 R_1 s^3 + 2R_1 g_m + s^2 (C_1 C_4 R_1 R_4 + 2C_1 C_4 R_1 R_5 + 2C_4 L_4 R_1 g_m + C_4 L_4) + s (C_1 R_1 + 2C_4 R_1 R_4 g_m + 2C_4 R_1 R_5 g_m + 2C_4 R_1 + C_4 R_4 + 2C_4 R_5) + 1}$$

$$\mathbf{10.317 \quad INVALID-ORDER-317} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \quad \infty, \quad \infty, \quad L_4 s + R_4 + \frac{1}{C_4 s}, \quad \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{-C_4 C_5 L_4 R_1 s^3 + R_1 g_m + s^2 (-C_4 C_5 R_1 R_4 + C_4 L_4 R_1 g_m) + s (C_4 R_1 R_4 g_m - C_5 R_1)}{C_1 C_4 C_5 L_4 R_1 s^4 + s^3 (C_1 C_4 C_5 R_1 R_4 + 2C_4 C_5 L_4 R_1 g_m + C_4 C_5 L_4) + s^2 (2C_1 C_4 R_1 + C_1 C_5 R_1 + 2C_4 C_5 R_1 R_4 g_m + 2C_4 C_5 R_1 + C_4 C_5 R_4) + s (2C_4 R_1 g_m + 2C_4 + 2C_5 R_1 g_m + C_5) + R_5}$$

$$\mathbf{10.318 \quad INVALID-ORDER-318} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \quad \infty, \quad \infty, \quad L_4 s + R_4 + \frac{1}{C_4 s}, \quad \frac{R_5}{C_5 R_5 s + 1}, \quad \infty \right)$$

$$H(s) = \frac{-C_4 C_5 L_4 R_1 R_5 s^3 + R_1 R_5 g_m - R_1 + s^2 (-C_4 C_5 R_1 R_4 R_5 + C_4 L_4 R_1 R_5 g_m - C_4 L_4 R_1) + s (C_4 R_1 R_4 R_5 g_m - C_4 R_1 R_4 - C_5 R_1 R_5)}{C_1 C_4 C_5 L_4 R_1 R_5 s^4 + 2R_1 g_m + s^3 (C_1 C_4 C_5 R_1 R_4 R_5 + C_1 C_4 L_4 R_1 + 2C_4 C_5 L_4 R_1 R_5 g_m + C_4 C_5 L_4 R_5) + s^2 (C_1 C_4 R_1 R_4 + 2C_1 C_4 R_1 R_5 + C_1 C_5 R_1 R_5 + 2C_4 C_5 R_1 R_4 R_5 g_m + 2C_4 C_5 R_1 R_5 + C_4 C_5 R_4 R_5 + 2C_4 L_4 R_1 g_m + C_4 L_4) + s (C_1 R_1 + 2C_4 R_1 R_4 g_m + 2C_4 R_1 R_5 g_m + C_4 R_1 R_4 + C_4 R_1 R_5) + R_5}$$

$$\mathbf{10.319 \quad INVALID-ORDER-319} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \quad \infty, \quad \infty, \quad L_4 s + R_4 + \frac{1}{C_4 s}, \quad R_5 + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{R_1 g_m + s^3 (C_4 C_5 L_4 R_1 R_5 g_m - C_4 C_5 L_4 R_1) + s^2 (C_4 C_5 R_1 R_4 R_5 g_m - C_4 C_5 R_1 R_4 + C_4 L_4 R_1 g_m) + s (C_4 R_1 R_4 g_m + C_5 R_1 R_5 g_m - C_5 R_1)}{C_1 C_4 C_5 L_4 R_1 s^4 + s^3 (C_1 C_4 C_5 R_1 R_4 + 2C_1 C_4 C_5 R_1 R_5 + 2C_4 C_5 L_4 R_1 g_m + C_4 C_5 L_4) + s^2 (2C_1 C_4 R_1 + C_1 C_5 R_1 + 2C_4 C_5 R_1 R_4 g_m + 2C_4 C_5 R_1 R_5 g_m + 2C_4 C_5 R_1 + C_4 C_5 R_4 + 2C_4 C_5 R_5) + s (2C_4 R_1 g_m + 2C_4 + 2C_5 R_1 g_m + C_5) + R_5}$$

$$\mathbf{10.320 \quad INVALID-ORDER-320} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \quad \infty, \quad \infty, \quad L_4 s + R_4 + \frac{1}{C_4 s}, \quad L_5 s + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{C_4 C_5 L_4 L_5 R_1 g_m s^4 + R_1 g_m + s^3 (-C_4 C_5 L_4 R_1 + C_4 C_5 L_5 R_1 R_4 g_m) + s^2 (-C_4 C_5 R_1 R_4 + C_4 L_4 R_1 g_m + C_5 L_5 R_1 g_m) + s (C_4 R_1 R_4 g_m - C_5 R_1)}{s^4 (C_1 C_4 C_5 L_4 R_1 + 2C_1 C_4 C_5 L_5 R_1) + s^3 (C_1 C_4 C_5 R_1 R_4 + 2C_4 C_5 L_4 R_1 g_m + C_4 C_5 L_4 + 2C_4 C_5 L_5 R_1 g_m + 2C_4 C_5 L_5) + s^2 (2C_1 C_4 R_1 + C_1 C_5 R_1 + 2C_4 C_5 R_1 R_4 g_m + 2C_4 C_5 R_1 + C_4 C_5 R_4) + s (2C_4 R_1 g_m + 2C_4 + 2C_5 R_1 g_m + C_5) + R_5}$$

$$\mathbf{10.321 \quad INVALID-ORDER-321} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \quad \infty, \quad \infty, \quad L_4 s + R_4 + \frac{1}{C_4 s}, \quad \frac{L_5 s}{C_5 L_5 s^2 + 1}, \quad \infty \right)$$

$$H(s) = \frac{-C_4 C_5 L_4 L_5 R_1 s^4 - R_1 + s^3 (-C_4 C_5 L_5 R_1 R_4 + C_4 L_4 L_5 R_1 g_m) + s^2 (-C_4 L_4 R_1 + C_4 L_5 R_1 R_4 g_m - C_5 L_5 R_1) + s (-C_4 R_1 R_4 + L_5 R_1 g_m)}{C_1 C_4 C_5 L_4 L_5 R_1 s^5 + 2 R_1 g_m + s^4 (C_1 C_4 C_5 L_5 R_1 R_4 + 2 C_4 C_5 L_4 L_5 R_1 g_m + C_4 C_5 L_4 L_5) + s^3 (C_1 C_4 L_4 R_1 + 2 C_1 C_4 L_5 R_1 + C_1 C_5 L_5 R_1 + 2 C_4 C_5 L_5 R_1 R_4 g_m + 2 C_4 C_5 L_5 R_1 + C_4 C_5 L_5 R_4) + s^2 (C_1 C_4 R_1 R_4 + 2 C_4 L_4 R_1 g_m + C_4 L_4 + 2 C_4 L_5 R_1 g_m + 2 C_4 L_5 + 2 C_5 L_5 R_1 g_m)}$$

$$\mathbf{10.322 \quad INVALID-ORDER-322} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \quad \infty, \quad \infty, \quad L_4 s + R_4 + \frac{1}{C_4 s}, \quad L_5 s + R_5 + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{C_4 C_5 L_4 L_5 R_1 g_m s^4 + R_1 g_m + s^3 (C_4 C_5 L_4 R_1 R_5 g_m - C_4 C_5 L_4 R_1 + C_4 C_5 L_5 R_1 R_4 g_m) + s^2 (C_4 C_5 R_1 R_4 R_5 g_m - C_4 C_5 R_1 R_4 + C_4 L_4 R_1 g_m + C_5 L_5 R_1 g_m) + s (C_4 R_1 R_4 g_m + C_5 R_1 R_5 g_m - C_5 R_1)}{s^4 (C_1 C_4 C_5 L_4 R_1 + 2 C_1 C_4 C_5 L_5 R_1) + s^3 (C_1 C_4 C_5 R_1 R_4 + 2 C_1 C_4 C_5 R_1 R_5 + 2 C_4 C_5 L_4 R_1 g_m + C_4 C_5 L_4 + 2 C_4 C_5 L_5 R_1 g_m + 2 C_4 C_5 L_5) + s^2 (2 C_1 C_4 R_1 + C_1 C_5 R_1 + 2 C_4 C_5 R_1 R_4 g_m + 2 C_4 C_5 R_1 R_5 g_m + 2 C_4 C_5 R_1 + C_4 C_5 R_4 + 2 C_4 C_5 R_5) + s (2 C_4 R_1 g_m + 2 C_4 + 2 C_5 R_1 g_m)}$$

$$\mathbf{10.323 \quad INVALID-ORDER-323} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \quad \infty, \quad \infty, \quad L_4 s + R_4 + \frac{1}{C_4 s}, \quad \frac{L_5 R_5 s}{C_5 L_5 R_5 s^2 + L_5 s + R_5}, \quad \infty \right)$$

$$H(s) = \frac{-C_4 C_5 L_4 L_5 R_1 R_5 s^4 - R_1 R_5 + s^3 (-C_4 C_5 L_5 R_1 R_4 R_5 + C_4 L_4 L_5 R_1 R_5 g_m - C_4 L_4 L_5 R_1) + s^2 (-C_4 L_4 R_1 R_5 + C_4 L_5 R_1 R_4 g_m - C_5 L_5 R_1 R_5) + s (C_4 R_1 R_4 g_m + C_5 R_1 R_5 g_m - C_5 R_1)}{C_1 C_4 C_5 L_4 L_5 R_1 R_5 s^5 + 2 R_1 R_5 g_m + R_5 + s^4 (C_1 C_4 C_5 L_5 R_1 R_4 R_5 + C_1 C_4 L_4 L_5 R_1 + 2 C_4 C_5 L_4 L_5 R_1 R_5 g_m + C_4 C_5 L_4 L_5 R_5) + s^3 (C_1 C_4 L_4 R_1 R_5 + C_1 C_4 L_5 R_1 R_4 + 2 C_1 C_4 L_5 R_1 R_5 + C_1 C_5 L_5 R_1 R_5 + 2 C_4 C_5 L_5 R_1 R_4 R_5 g_m + 2 C_4 C_5 L_5 R_1 R_5 + C_4 C_5 L_5 R_4 R_5 + 2 C_4 L_4 L_5 R_1 R_5 g_m)}$$

$$\mathbf{10.324 \quad INVALID-ORDER-324} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \quad \infty, \quad \infty, \quad L_4 s + R_4 + \frac{1}{C_4 s}, \quad \frac{C_5 L_5 R_5 s^2 + L_5 s + R_5}{C_5 L_5 s^2 + 1}, \quad \infty \right)$$

$$H(s) = \frac{R_1 R_5 g_m - R_1 + s^4 (C_4 C_5 L_4 L_5 R_1 R_5 g_m - C_4 C_5 L_4 L_5 R_1) + s^3 (C_4 C_5 L_5 R_1 R_4 R_5 g_m - C_4 C_5 L_5 R_1 R_4 + C_4 L_4 L_5 R_1 g_m) + s^2 (C_4 L_4 R_1 R_5 g_m - C_4 L_4 R_1 + C_4 L_5 R_1 R_4 g_m + C_5 L_5 R_1 R_5 g_m) + s (C_4 R_1 R_4 g_m + C_5 R_1 R_5 g_m - C_5 R_1)}{C_1 C_4 C_5 L_4 L_5 R_1 s^5 + 2 R_1 g_m + s^4 (C_1 C_4 C_5 L_5 R_1 R_4 + 2 C_1 C_4 C_5 L_5 R_1 R_5 + 2 C_4 C_5 L_4 L_5 R_1 g_m + C_4 C_5 L_4 L_5) + s^3 (C_1 C_4 L_4 R_1 + 2 C_1 C_4 L_5 R_1 + C_1 C_5 L_5 R_1 + 2 C_4 C_5 L_5 R_1 R_4 g_m + 2 C_4 C_5 L_5 R_1 R_5 g_m + 2 C_4 C_5 L_5 R_1 + C_4 C_5 L_5 R_4 + 2 C_4 C_5 L_5 R_5) + s^2 (C_1 C_4 R_1 R_4 + 2 C_1 C_4 R_1 R_5 + 2 C_4 L_4 R_1 g_m + 2 C_4 L_5 R_1 g_m - C_5 R_1)}$$

$$\mathbf{10.325 \quad INVALID-ORDER-325} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \quad \infty, \quad \infty, \quad L_4 s + R_4 + \frac{1}{C_4 s}, \quad \frac{R_5 (C_5 L_5 s^2 + 1)}{C_5 L_5 s^2 + C_5 R_5 s + 1}, \quad \infty \right)$$

$$H(s) = \frac{R_1 R_5 g_m - R_1 + s^4 (C_4 C_5 L_4 L_5 R_1 R_5 g_m - C_4 C_5 L_4 L_5 R_1) + s^3 (-C_4 C_5 L_4 R_1 R_5 + C_4 C_5 L_5 R_1 R_4 R_5 g_m - C_4 C_5 L_5 R_1 R_5) + s^2 (-C_4 L_4 R_1 R_5 + C_4 L_5 R_1 R_4 g_m - C_5 L_5 R_1 R_5) + s (C_4 R_1 R_4 g_m + C_5 R_1 R_5 g_m - C_5 R_1)}{C_1 C_4 C_5 L_4 L_5 R_1 s^5 + 2 R_1 g_m + s^4 (C_1 C_4 C_5 L_4 R_1 R_5 + C_1 C_4 C_5 L_5 R_1 R_4 + 2 C_1 C_4 C_5 L_5 R_1 R_5 + 2 C_4 C_5 L_4 L_5 R_1 g_m + C_4 C_5 L_4 L_5) + s^3 (C_1 C_4 C_5 R_1 R_4 R_5 + C_1 C_4 L_4 R_1 + C_1 C_5 L_5 R_1 + 2 C_4 C_5 L_4 R_1 R_5 g_m + C_4 C_5 L_4 R_5 + 2 C_4 C_5 L_5 R_1 R_4 g_m + 2 C_4 C_5 L_5 R_1 R_5 g_m + 2 C_4 C_5 L_5 R_1 + C_4 C_5 L_5 R_4 + 2 C_4 C_5 L_5 R_5) + s^2 (C_1 C_4 R_1 R_4 + 2 C_1 C_4 R_1 R_5 + 2 C_4 L_4 R_1 g_m + 2 C_4 L_5 R_1 g_m - C_5 R_1)}$$

$$\mathbf{10.326 \quad INVALID-ORDER-326} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \quad \infty, \quad \infty, \quad \frac{L_4 R_4 s}{C_4 L_4 R_4 s^2 + L_4 s + R_4}, \quad R_5, \quad \infty \right)$$

$$H(s) = \frac{s (L_4 R_1 R_4 R_5 g_m - L_4 R_1 R_4)}{2 C_1 C_4 L_4 R_1 R_4 R_5 s^3 + 2 R_1 R_4 R_5 g_m + 2 R_1 R_4 + 2 R_4 R_5 + s^2 (C_1 L_4 R_1 R_4 + 2 C_1 L_4 R_1 R_5 + 2 C_4 L_4 R_1 R_4 R_5 g_m + 2 C_4 L_4 R_1 R_4 + 2 C_4 L_4 R_4 R_5) + s (2 C_1 R_1 R_4 R_5 + 2 L_4 R_1 R_4 g_m + 2 L_4 R_1 R_5 g_m + 2 L_4 R_1 + L_4 R_4 + 2 L_4 R_5)}$$

$$\mathbf{10.327 \quad INVALID-ORDER-327} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \quad \infty, \quad \infty, \quad \frac{L_4 R_4 s}{C_4 L_4 R_4 s^2 + L_4 s + R_4}, \quad \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{-C_5 L_4 R_1 R_4 s^2 + L_4 R_1 R_4 g_m s}{2 R_1 R_4 g_m + 2 R_4 + s^3 (2 C_1 C_4 L_4 R_1 R_4 + C_1 C_5 L_4 R_1 R_4 + 2 C_4 C_5 L_4 R_1 R_4) + s^2 (2 C_1 L_4 R_1 + 2 C_4 L_4 R_1 R_4 g_m + 2 C_4 L_4 R_4 + 2 C_5 L_4 R_1 R_4 g_m + 2 C_5 L_4 R_1 + C_5 L_4 R_4) + s (2 C_1 R_1 R_4 + 2 C_5 R_1 R_4 + 2 L_4 R_1 g_m + 2 L_4)}$$

$$\mathbf{10.328 \quad INVALID-ORDER-328} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \quad \infty, \quad \infty, \quad \frac{L_4 R_4 s}{C_4 L_4 R_4 s^2 + L_4 s + R_4}, \quad \frac{R_5}{C_5 R_5 s + 1}, \quad \infty \right)$$

$$H(s) = \frac{-C_5 L_4 R_1 R_4 R_5 s^2 + s (L_4 R_1 R_4 R_5 g_m - L_4 R_1 R_4)}{2 R_1 R_4 R_5 g_m + 2 R_1 R_4 + 2 R_4 R_5 + s^3 (2 C_1 C_4 L_4 R_1 R_4 R_5 + C_1 C_5 L_4 R_1 R_4 R_5 + 2 C_4 C_5 L_4 R_1 R_4 R_5) + s^2 (C_1 L_4 R_1 R_4 + 2 C_1 L_4 R_1 R_5 + 2 C_4 L_4 R_1 R_4 R_5 g_m + 2 C_4 L_4 R_1 R_4 + 2 C_4 L_4 R_4 R_5 + 2 C_5 L_4 R_1 R_4 R_5 g_m + 2 C_5 L_4 R_1 R_5 + C_5 L_4 R_4 R_5) + s (2 C_1 R_1 R_4 R_5 + 2 C_5 R_1 R_4 R_5 + 2 L_4 R_1 R_4 g_m + 2 L_4 R_1 R_5 g_m - C_5 R_1)}$$

$$\mathbf{10.329 \quad INVALID-ORDER-329} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \quad \infty, \quad \infty, \quad \frac{L_4 R_4 s}{C_4 L_4 R_4 s^2 + L_4 s + R_4}, \quad R_5 + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{L_4 R_1 R_4 g_m s + s^2 (C_5 L_4 R_1 R_4 R_5 g_m - C_5 L_4 R_1 R_4)}{2 C_1 C_4 C_5 L_4 R_1 R_4 R_5 s^4 + 2 R_1 R_4 g_m + 2 R_4 + s^3 (2 C_1 C_4 L_4 R_1 R_4 + C_1 C_5 L_4 R_1 R_4 + 2 C_1 C_5 L_4 R_1 R_5 + 2 C_4 C_5 L_4 R_1 R_4 R_5 g_m + 2 C_4 C_5 L_4 R_1 R_4 + 2 C_4 C_5 L_4 R_4 R_5) + s^2 (2 C_1 C_5 R_1 R_4 R_5 + 2 C_1 L_4 R_1 + 2 C_4 L_4 R_1 R_4 g_m + 2 C_4 L_4 R_4 + 2 C_5 L_4 R_1 R_4 g_m + 2 C_5 L_4 R_1 R_5 g_m + 2 C_5 L_4 R_4 R_5) + s (2 C_1 R_1 R_4 R_5 + 2 C_5 R_1 R_4 R_5 + 2 L_4 R_1 R_4 g_m + 2 L_4 R_1 R_5 g_m - C_5 R_1)}$$

$$\mathbf{10.330 \quad INVALID-ORDER-330} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \quad \infty, \quad \infty, \quad \frac{L_4 R_4 s}{C_4 L_4 R_4 s^2 + L_4 s + R_4}, \quad L_5 s + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{C_5 L_4 L_5 R_1 R_4 g_m s^3 - C_5 L_4 R_1 R_4 s^2 + L_4 R_1 R_4 g_m s}{2C_1 C_4 C_5 L_4 L_5 R_1 R_4 s^5 + 2R_1 R_4 g_m + 2R_4 + s^4 (2C_1 C_5 L_4 L_5 R_1 + 2C_4 C_5 L_4 L_5 R_1 R_4 g_m + 2C_4 C_5 L_4 L_5 R_4) + s^3 (2C_1 C_4 L_4 R_1 R_4 + C_1 C_5 L_4 R_1 R_4 + 2C_1 C_5 L_5 R_1 R_4 + 2C_4 C_5 L_4 R_1 R_4 + 2C_5 L_4 L_5 R_1 g_m + 2C_5 L_4 L_5) + s^2 (2C_1 L_4 R_1 + 2C_4 L_4 R_1 R_4 g_m + 2C_4 L_4 R_4 + 2C_5 L_4 L_5)}$$

$$\mathbf{10.331 \quad INVALID-ORDER-331} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \quad \infty, \quad \infty, \quad \frac{L_4 R_4 s}{C_4 L_4 R_4 s^2 + L_4 s + R_4}, \quad \frac{L_5 s}{C_5 L_5 s^2 + 1}, \quad \infty \right)$$

$$H(s) = \frac{-C_5 L_4 L_5 R_1 R_4 s^3 + L_4 L_5 R_1 R_4 g_m s^2 - L_4 R_1 R_4 s}{2R_1 R_4 + s^4 (2C_1 C_4 L_4 L_5 R_1 R_4 + C_1 C_5 L_4 L_5 R_1 R_4 + 2C_4 C_5 L_4 L_5 R_1 R_4) + s^3 (2C_1 L_4 L_5 R_1 + 2C_4 L_4 L_5 R_1 R_4 g_m + 2C_4 L_4 L_5 R_4 + 2C_5 L_4 L_5 R_1 R_4 g_m + 2C_5 L_4 L_5 R_1 + C_5 L_4 L_5 R_4) + s^2 (C_1 L_4 R_1 R_4 + 2C_1 L_5 R_1 R_4 + 2C_4 L_4 R_1 R_4 + 2C_5 L_5 R_1 R_4 + 2L_4 L_5 R_1 g_m + 2L_4 L_5)}$$

$$\mathbf{10.332 \quad INVALID-ORDER-332} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \quad \infty, \quad \infty, \quad \frac{L_4 R_4 s}{C_4 L_4 R_4 s^2 + L_4 s + R_4}, \quad L_5 s + R_5 + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{C_5 L_4 L_5 R_1 R_4 g_m s^3 + L_4 R_1 R_4 g_m s}{2C_1 C_4 C_5 L_4 L_5 R_1 R_4 s^5 + 2R_1 R_4 g_m + 2R_4 + s^4 (2C_1 C_4 C_5 L_4 R_1 R_4 R_5 + 2C_1 C_5 L_4 L_5 R_1 + 2C_4 C_5 L_4 L_5 R_1 R_4 g_m + 2C_4 C_5 L_4 L_5 R_4) + s^3 (2C_1 C_4 L_4 R_1 R_4 + C_1 C_5 L_4 R_1 R_4 + 2C_1 C_5 L_4 R_1 R_5 + 2C_1 C_5 L_5 R_1 R_4 + 2C_4 C_5 L_4 R_1 R_4 R_5 g_m + 2C_4 C_5 L_4 R_1 R_4 + 2C_4 C_5 L_4 R_4 R_5) + s^2 (C_1 L_4 R_1 R_4 + 2C_1 L_5 R_1 R_4 + 2C_4 L_4 R_1 R_4 + 2C_5 L_5 R_1 R_4 + 2L_4 L_5 R_1 g_m + 2L_4 L_5)}$$

$$\mathbf{10.333 \quad INVALID-ORDER-333} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \quad \infty, \quad \infty, \quad \frac{L_4 R_4 s}{C_4 L_4 R_4 s^2 + L_4 s + R_4}, \quad \frac{L_5 R_5 s}{C_5 L_5 R_5 s^2 + L_5 s + R_5}, \quad \infty \right)$$

$$H(s) = \frac{-C_5 L_4 L_5 R_1 R_4 R_5 s^3 - L_4 R_1 R_4 R_5 s + s^2 (L_4 L_5 R_1 R_4 R_5 g_m - L_4 R_1 R_4 R_5)}{2R_1 R_4 R_5 + s^4 (2C_1 C_4 L_4 L_5 R_1 R_4 R_5 + C_1 C_5 L_4 L_5 R_1 R_4 R_5 + 2C_4 C_5 L_4 L_5 R_1 R_4 R_5) + s^3 (C_1 L_4 L_5 R_1 R_4 + 2C_1 L_4 L_5 R_1 R_5 + 2C_4 L_4 L_5 R_1 R_4 R_5 g_m + 2C_4 L_4 L_5 R_1 R_4 + 2C_4 L_4 L_5 R_4 R_5 + 2C_5 L_4 L_5 R_1 R_4 R_5 g_m + 2C_5 L_4 L_5 R_1 R_5 + C_5 L_4 L_5 R_4 R_5) + s^2 (C_1 L_4 R_1 R_4 R_5 + 2C_1 L_5 R_1 R_4 R_5 + 2C_4 L_4 R_1 R_4 R_5 + 2C_5 L_5 R_1 R_4 R_5 + 2L_4 L_5 R_1 g_m + 2L_4 L_5)}$$

$$\mathbf{10.334 \quad INVALID-ORDER-334} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \quad \infty, \quad \infty, \quad \frac{L_4 R_4 s}{C_4 L_4 R_4 s^2 + L_4 s + R_4}, \quad \frac{C_5 L_5 R_5 s^2 + L_5 s + R_5}{C_5 L_5 s^2 + 1}, \quad \infty \right)$$

$$H(s) = \frac{C_5 L_5 R_5 s^2 + L_5 s + R_5}{2C_1 C_4 C_5 L_4 L_5 R_1 R_4 R_5 s^5 + 2R_1 R_4 R_5 g_m + 2R_1 R_4 + 2R_4 R_5 + s^4 (2C_1 C_4 L_4 L_5 R_1 R_4 + C_1 C_5 L_4 L_5 R_1 R_4 + 2C_1 C_5 L_4 L_5 R_1 R_5 + 2C_4 C_5 L_4 L_5 R_1 R_4 R_5 g_m + 2C_4 C_5 L_4 L_5 R_1 R_4 + 2C_4 C_5 L_4 L_5 R_4 R_5) + s^3 (2C_1 C_4 L_4 R_1 R_4 R_5 + 2C_1 C_5 L_5 R_1 R_4 R_5 + 2C_1 L_4 L_5 R_1 + 2C_4 L_4 L_5)}$$

$$\mathbf{10.335 \quad INVALID-ORDER-335} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \quad \infty, \quad \infty, \quad \frac{L_4 R_4 s}{C_4 L_4 R_4 s^2 + L_4 s + R_4}, \quad \frac{R_5 (C_5 L_5 s^2 + 1)}{C_5 L_5 s^2 + C_5 R_5 s + 1}, \quad \infty \right)$$

$$H(s) = \frac{R_5 (C_5 L_5 s^2 + 1)}{2C_1 C_4 C_5 L_4 L_5 R_1 R_4 R_5 s^5 + 2R_1 R_4 R_5 g_m + 2R_1 R_4 + 2R_4 R_5 + s^4 (C_1 C_5 L_4 L_5 R_1 R_4 + 2C_1 C_5 L_4 L_5 R_1 R_5 + 2C_4 C_5 L_4 L_5 R_1 R_4 R_5 g_m + 2C_4 C_5 L_4 L_5 R_1 R_4 + 2C_4 C_5 L_4 L_5 R_4 R_5) + s^3 (2C_1 C_4 L_4 R_1 R_4 R_5 + C_1 C_5 L_4 R_1 R_4 R_5 + 2C_1 C_5 L_5 R_1 R_4 R_5 + 2C_4 C_5 L_4 R_1 R_4 R_5 + 2C_5 L_4 L_5 R_1 R_4 R_5 + 2C_5 L_4 L_5 R_4 R_5)}$$

$$\mathbf{10.336 \quad INVALID-ORDER-336} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \quad \infty, \quad \infty, \quad \frac{C_4 L_4 R_4 s^2 + L_4 s + R_4}{C_4 L_4 s^2 + 1}, \quad R_5, \quad \infty \right)$$

$$H(s) = \frac{R_1 R_4 R_5 g_m - R_1 R_4 + s^2 (C_4 L_4 R_1 R_4 R_5 g_m - C_4 L_4 R_1 R_4) + s (L_4 R_1 R_5 g_m - L_4 R_1)}{2R_1 R_4 g_m + 2R_1 R_5 g_m + 2R_1 + R_4 + 2R_5 + s^3 (C_1 C_4 L_4 R_1 R_4 + 2C_1 C_4 L_4 R_1 R_5) + s^2 (C_1 L_4 R_1 + 2C_4 L_4 R_1 R_4 g_m + 2C_4 L_4 R_1 R_5 g_m + 2C_4 L_4 R_1 + C_4 L_4 R_4 + 2C_4 L_4 R_5) + s (C_1 R_1 R_4 + 2C_1 R_1 R_5 + 2L_4 R_1 g_m + L_4)}$$

$$\mathbf{10.337 \quad INVALID-ORDER-337} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \quad \infty, \quad \infty, \quad \frac{C_4 L_4 R_4 s^2 + L_4 s + R_4}{C_4 L_4 s^2 + 1}, \quad \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{-C_4 C_5 L_4 R_1 R_4 s^3 + R_1 R_4 g_m + s^2 (C_4 L_4 R_1 R_4 g_m - C_5 L_4 R_1) + s (-C_5 R_1 R_4 + L_4 R_1 g_m)}{C_1 C_4 C_5 L_4 R_1 R_4 s^4 + 2R_1 g_m + s^3 (2C_1 C_4 L_4 R_1 + C_1 C_5 L_4 R_1 + 2C_4 C_5 L_4 R_1 R_4 g_m + 2C_4 C_5 L_4 R_1 + C_4 C_5 L_4 R_4) + s^2 (C_1 C_5 R_1 R_4 + 2C_4 L_4 R_1 g_m + 2C_4 L_4 + 2C_5 L_4 R_1 g_m + C_5 L_4) + s (2C_1 R_1 + 2C_5 R_1 R_4 g_m + 2C_5 R_1 + C_5 R_4) + 2}$$

$$\mathbf{10.338 \quad INVALID-ORDER-338} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \quad \infty, \quad \infty, \quad \frac{C_4 L_4 R_4 s^2 + L_4 s + R_4}{C_4 L_4 s^2 + 1}, \quad \frac{R_5}{C_5 R_5 s + 1}, \quad \infty \right)$$

$$H(s) = \frac{-C_4 C_5 L_4 R_1 R_4 R_5 s^3 + R_1 R_4 R_5 g_m - R_1 R_4 + s^2 (C_4 L_4 R_1 R_4 R_5 g_m - C_4 L_4 R_1 R_4 - C_5 L_4 R_1 R_5) + s (-C_5 R_1 R_4 R_5 + L_4 R_1 R_5 g_m - L_4 R_1 R_5)}{C_1 C_4 C_5 L_4 R_1 R_4 R_5 s^4 + 2R_1 R_4 g_m + 2R_1 R_5 g_m + 2R_1 + R_4 + 2R_5 + s^3 (C_1 C_4 L_4 R_1 R_4 + 2C_1 C_4 L_4 R_1 R_5 + C_1 C_5 L_4 R_1 R_5 + 2C_4 C_5 L_4 R_1 R_4 R_5 g_m + 2C_4 C_5 L_4 R_1 R_5 + C_4 C_5 L_4 R_4 R_5) + s^2 (C_1 C_5 R_1 R_4 R_5 + C_1 L_4 R_1 + 2C_4 L_4 R_1 R_4 g_m + 2C_4 L_4 R_1 R_5 g_m + 2C_4 L_4 R_1 + C_4 L_4 R_4 + 2C_4 L_4 R_5) + s (C_1 R_1 R_4 R_5 + L_4 R_1 R_5 g_m + L_4 R_1 R_5)}$$

$$\mathbf{10.339 \quad INVALID-ORDER-339} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \quad \infty, \quad \infty, \quad \frac{C_4 L_4 R_4 s^2 + L_4 s + R_4}{C_4 L_4 s^2 + 1}, \quad R_5 + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{R_1 R_4 g_m + s^3 (C_4 C_5 L_4 R_1 R_4 R_5 g_m - C_4 C_5 L_4 R_1 R_4) + s^2 (C_4 L_4 R_1 R_4 g_m + C_5 L_4 R_1 R_5 g_m - C_5 L_4 R_1) + s (C_5 R_1 R_4 R_5 g_m - C_5 R_1 R_4 + L_4 R_1 g_m)}{2 R_1 g_m + s^4 (C_1 C_4 C_5 L_4 R_1 R_4 + 2 C_1 C_4 C_5 L_4 R_1 R_5) + s^3 (2 C_1 C_4 L_4 R_1 + C_1 C_5 L_4 R_1 + 2 C_4 C_5 L_4 R_1 R_4 g_m + 2 C_4 C_5 L_4 R_1 R_5 g_m + 2 C_4 C_5 L_4 R_1 + C_4 C_5 L_4 R_4 + 2 C_4 C_5 L_4 R_5) + s^2 (C_1 C_5 R_1 R_4 + 2 C_1 C_5 R_1 R_5 + 2 C_4 L_4 R_1 g_m + 2 C_4 L_4 + 2 C_5 L_4 R_1 g_m + C_5 L_4) + s (2 C_1 R_1 + C_1 R_4 + C_5 R_5)}$$

$$\mathbf{10.340 \quad INVALID-ORDER-340} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \quad \infty, \quad \infty, \quad \frac{C_4 L_4 R_4 s^2 + L_4 s + R_4}{C_4 L_4 s^2 + 1}, \quad L_5 s + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{C_4 C_5 L_4 L_5 R_1 R_4 g_m s^4 + R_1 R_4 g_m + s^3 (-C_4 C_5 L_4 R_1 R_4 + C_5 L_4 L_5 R_1 g_m) + s^2 (C_4 L_4 R_1 R_4 g_m - C_5 L_4 R_1 + C_5 L_5 R_1 R_4 g_m) + s (-C_5 R_1 R_4 + L_4 R_1 g_m)}{2 C_1 C_4 C_5 L_4 L_5 R_1 s^5 + 2 R_1 g_m + s^4 (C_1 C_4 C_5 L_4 R_1 R_4 + 2 C_4 C_5 L_4 L_5 R_1 g_m + 2 C_4 C_5 L_4 L_5) + s^3 (2 C_1 C_4 L_4 R_1 + C_1 C_5 L_4 R_1 + 2 C_1 C_5 L_5 R_1 + 2 C_4 C_5 L_4 R_1 R_4 g_m + 2 C_4 C_5 L_4 R_1 + C_4 C_5 L_4 R_4) + s^2 (C_1 C_5 R_1 R_4 + 2 C_4 L_4 R_1 g_m + 2 C_4 L_4 + 2 C_5 L_4 R_1 g_m + C_5 L_4 + 2 C_5 L_5 R_1) + s (C_1 R_1 + C_1 R_4 + C_5 R_5)}$$

$$\mathbf{10.341 \quad INVALID-ORDER-341} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \quad \infty, \quad \infty, \quad \frac{C_4 L_4 R_4 s^2 + L_4 s + R_4}{C_4 L_4 s^2 + 1}, \quad \frac{L_5 s}{C_5 L_5 s^2 + 1}, \quad \infty \right)$$

$$H(s) = \frac{-C_4 C_5 L_4 L_5 R_1 R_4 s^4 - R_1 R_4 + s^3 (C_4 L_4 L_5 R_1 R_4 g_m - C_5 L_4 L_5 R_1) + s^2 (-C_4 L_4 R_1 R_4 - C_5 L_5 R_1 R_4 + L_4 L_5 R_1 g_m) + s (-L_4 R_1 + L_5 R_1)}{C_1 C_4 C_5 L_4 L_5 R_1 R_4 s^5 + 2 R_1 R_4 g_m + 2 R_1 + R_4 + s^4 (2 C_1 C_4 L_4 L_5 R_1 + C_1 C_5 L_4 L_5 R_1 + 2 C_4 C_5 L_4 L_5 R_1 R_4 g_m + 2 C_4 C_5 L_4 L_5 R_1 + C_4 C_5 L_4 L_5 R_4) + s^3 (C_1 C_4 L_4 R_1 R_4 + C_1 C_5 L_5 R_1 R_4 + 2 C_4 L_4 L_5 R_1 g_m + 2 C_4 L_4 L_5 + 2 C_5 L_4 L_5 R_1 g_m + C_5 L_4 L_5) + s^2 (C_1 L_4 R_1 + 2 C_1 L_5 R_1) + s (C_1 R_1 + C_1 R_4 + C_5 R_5)}$$

$$\mathbf{10.342 \quad INVALID-ORDER-342} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \quad \infty, \quad \infty, \quad \frac{C_4 L_4 R_4 s^2 + L_4 s + R_4}{C_4 L_4 s^2 + 1}, \quad L_5 s + R_5 + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{C_4 C_5 L_4 L_5 R_1 R_4 g_m s^4 + R_1 R_4 g_m + s^3 (C_4 C_5 L_4 R_1 R_4 R_5 g_m - C_4 C_5 L_4 R_1 R_4 + C_5 L_4 L_5 R_1 g_m) + s^2 (C_4 L_4 R_1 R_4 g_m + C_5 L_4 R_1 R_5 g_m - C_5 L_4 R_1 + C_5 L_5 R_1) + s (C_5 R_1 R_4 R_5 g_m - C_5 R_1 R_4 + L_4 R_1 g_m)}{2 C_1 C_4 C_5 L_4 L_5 R_1 s^5 + 2 R_1 g_m + s^4 (C_1 C_4 C_5 L_4 R_1 R_4 + 2 C_1 C_4 C_5 L_4 R_1 R_5 + 2 C_4 C_5 L_4 L_5 R_1 g_m + 2 C_4 C_5 L_4 L_5) + s^3 (2 C_1 C_4 L_4 R_1 + C_1 C_5 L_4 R_1 + 2 C_1 C_5 L_5 R_1 + 2 C_4 C_5 L_4 R_1 R_4 g_m + 2 C_4 C_5 L_4 R_1 R_5 g_m + 2 C_4 C_5 L_4 R_1 + C_4 C_5 L_4 R_4 + 2 C_4 C_5 L_4 R_5) + s^2 (C_1 C_5 R_1 R_4 + 2 C_4 L_4 R_1 g_m + 2 C_4 L_4 + 2 C_5 L_4 R_1 g_m + C_5 L_4 + 2 C_5 L_5 R_1) + s (C_1 R_1 + C_1 R_4 + C_5 R_5)}$$

$$\mathbf{10.343 \quad INVALID-ORDER-343} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \quad \infty, \quad \infty, \quad \frac{C_4 L_4 R_4 s^2 + L_4 s + R_4}{C_4 L_4 s^2 + 1}, \quad \frac{L_5 R_5 s}{C_5 L_5 R_5 s^2 + L_5 s + R_5}, \quad \infty \right)$$

$$H(s) = \frac{-C_4 C_5 L_4 L_5 R_1 R_4 R_5 s^4 - R_1 R_4 R_5 + s^3 (C_4 L_4 L_5 R_1 R_4 g_m - C_5 L_4 L_5 R_1) + s^2 (-C_4 L_4 R_1 R_4 - C_5 L_5 R_1 R_4 + L_4 L_5 R_1 g_m) + s (-L_4 R_1 + L_5 R_1)}{C_1 C_4 C_5 L_4 L_5 R_1 R_4 R_5 s^5 + 2 R_1 R_4 R_5 g_m + 2 R_1 R_5 + R_4 R_5 + s^4 (C_1 C_4 L_4 L_5 R_1 R_4 + 2 C_1 C_4 L_4 L_5 R_1 R_5 + C_1 C_5 L_4 L_5 R_1 R_5 + 2 C_4 C_5 L_4 L_5 R_1 R_4 g_m + 2 C_4 C_5 L_4 L_5 R_1 R_5 + C_4 C_5 L_4 L_5 R_4 R_5) + s^3 (C_1 C_4 L_4 R_1 R_4 R_5 + C_1 C_5 L_5 R_1 R_4 R_5 + C_1 L_4 L_5 R_1 + 2 C_4 L_4 L_5 R_1 R_4 g_m + 2 C_4 L_4 L_5 R_1 R_5 g_m + 2 C_4 L_4 L_5 R_1 + C_4 C_5 L_4 L_5 R_4 + 2 C_4 C_5 L_4 L_5 R_5) + s^2 (C_1 C_5 R_1 R_4 R_5 + 2 C_4 L_4 R_1 g_m + 2 C_4 L_4 + 2 C_5 L_4 R_1 g_m + C_5 L_4 + 2 C_5 L_5 R_1) + s (C_1 R_1 + C_1 R_4 + C_5 R_5)}$$

$$\mathbf{10.344 \quad INVALID-ORDER-344} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \quad \infty, \quad \infty, \quad \frac{C_4 L_4 R_4 s^2 + L_4 s + R_4}{C_4 L_4 s^2 + 1}, \quad \frac{C_5 L_5 R_5 s^2 + L_5 s + R_5}{C_5 L_5 s^2 + 1}, \quad \infty \right)$$

$$H(s) = \frac{R_1 R_4 R_5 g_m - R_1 R_4 + s^4 (C_4 C_5 L_4 L_5 R_1 R_4 R_5 g_m - C_4 C_5 L_4 L_5 R_1 R_4) + s^3 (C_4 L_4 L_5 R_1 R_4 g_m + C_5 L_4 L_5 R_1 R_5 g_m - C_5 L_4 R_1 + C_5 L_5 R_1) + s^2 (-C_4 L_4 R_1 R_4 - C_5 L_5 R_1 R_4 + L_4 L_5 R_1 g_m) + s (-L_4 R_1 + L_5 R_1)}{2 R_1 R_4 g_m + 2 R_1 R_5 g_m + 2 R_1 + R_4 + 2 R_5 + s^5 (C_1 C_4 C_5 L_4 L_5 R_1 R_4 + 2 C_1 C_4 C_5 L_4 L_5 R_1 R_5) + s^4 (2 C_1 C_4 L_4 L_5 R_1 + C_1 C_5 L_4 L_5 R_1 + 2 C_4 C_5 L_4 L_5 R_1 R_4 g_m + 2 C_4 C_5 L_4 L_5 R_1 R_5 g_m + 2 C_4 C_5 L_4 L_5 R_1 + C_4 C_5 L_4 L_5 R_4 + 2 C_4 C_5 L_4 L_5 R_5) + s^3 (C_1 C_4 L_4 R_1 R_4 + 2 C_1 C_4 L_4 R_1 R_5 + 2 C_4 L_4 R_1 g_m + 2 C_4 L_4 R_1 R_5 g_m + 2 C_4 L_4 R_1 + C_4 L_4 R_4 + 2 C_4 L_4 R_5) + s^2 (C_1 C_5 R_1 R_4 + 2 C_4 L_4 R_1 g_m + 2 C_4 L_4 + 2 C_5 L_4 R_1 g_m + C_5 L_4 + 2 C_5 L_5 R_1) + s (C_1 R_1 + C_1 R_4 + C_5 R_5)}$$

$$\mathbf{10.345 \quad INVALID-ORDER-345} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \quad \infty, \quad \infty, \quad \frac{C_4 L_4 R_4 s^2 + L_4 s + R_4}{C_4 L_4 s^2 + 1}, \quad \frac{R_5 (C_5 L_5 s^2 + 1)}{C_5 L_5 s^2 + C_5 R_5 s + 1}, \quad \infty \right)$$

$$H(s) = \frac{R_1 R_4 R_5 g_m - R_1 R_4 + s^4 (C_4 C_5 L_4 L_5 R_1 R_4 R_5 g_m - C_4 C_5 L_4 L_5 R_1 R_4) + s^3 (C_4 L_4 L_5 R_1 R_4 g_m + C_5 L_4 L_5 R_1 R_5 g_m - C_5 L_4 R_1 + C_5 L_5 R_1) + s^2 (-C_4 L_4 R_1 R_4 - C_5 L_5 R_1 R_4 + L_4 L_5 R_1 g_m) + s (-L_4 R_1 + L_5 R_1)}{2 R_1 R_4 g_m + 2 R_1 R_5 g_m + 2 R_1 + R_4 + 2 R_5 + s^5 (C_1 C_4 C_5 L_4 L_5 R_1 R_4 + 2 C_1 C_4 C_5 L_4 L_5 R_1 R_5) + s^4 (C_1 C_4 C_5 L_4 R_1 R_4 R_5 + C_1 C_5 L_4 L_5 R_1 + 2 C_4 C_5 L_4 L_5 R_1 R_4 g_m + 2 C_4 C_5 L_4 L_5 R_1 R_5 g_m + 2 C_4 C_5 L_4 L_5 R_1 + C_4 C_5 L_4 L_5 R_4 + 2 C_4 C_5 L_4 L_5 R_5) + s^3 (C_1 C_4 L_4 R_1 R_4 + 2 C_1 C_4 L_4 R_1 R_5 + 2 C_4 L_4 R_1 g_m + 2 C_4 L_4 R_1 R_5 g_m + 2 C_4 L_4 R_1 + C_4 L_4 R_4 + 2 C_4 L_4 R_5) + s^2 (C_1 C_5 R_1 R_4 + 2 C_4 L_4 R_1 g_m + 2 C_4 L_4 + 2 C_5 L_4 R_1 g_m + C_5 L_4 + 2 C_5 L_5 R_1) + s (C_1 R_1 + C_1 R_4 + C_5 R_5)}$$

$$\mathbf{10.346 \quad INVALID-ORDER-346} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \quad \infty, \quad \infty, \quad \frac{R_4 (C_4 L_4 s^2 + 1)}{C_4 L_4 s^2 + C_4 R_4 s + 1}, \quad R_5, \quad \infty \right)$$

$$H(s) = \frac{R_1 R_4 R_5 g_m - R_1 R_4 + s^2 (C_4 L_4 R_1 R_4 R_5 g_m - C_4 L_4 R_1 R_4)}{2 R_1 R_4 g_m + 2 R_1 R_5 g_m + 2 R_1 + R_4 + 2 R_5 + s^3 (C_1 C_4 L_4 R_1 R_4 + 2 C_1 C_4 L_4 R_1 R_5) + s^2 (2 C_1 C_4 R_1 R_4 R_5 + 2 C_4 L_4 R_1 R_4 g_m + 2 C_4 L_4 R_1 R_5 g_m + 2 C_4 L_4 R_1 + C_4 L_4 R_4 + 2 C_4 L_4 R_5) + s (C_1 R_1 R_4 + 2 C_1 R_1 R_5 + 2 C_4 R_1 R_4 R_5 g_m + 2 C_4 R_1 R_4 + 2 C_4 R_4 R_5)}$$

$$\mathbf{10.347 \quad INVALID-ORDER-347} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \quad \infty, \quad \infty, \quad \frac{R_4 (C_4 L_4 s^2 + 1)}{C_4 L_4 s^2 + C_4 R_4 s + 1}, \quad \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{-C_4 C_5 L_4 R_1 R_4 s^3 + C_4 L_4 R_1 R_4 g_m s^2 - C_5 R_1 R_4 s + R_1 R_4 g_m}{C_1 C_4 C_5 L_4 R_1 R_4 s^4 + 2 R_1 g_m + s^3 (2 C_1 C_4 L_4 R_1 + 2 C_4 C_5 L_4 R_1 R_4 g_m + 2 C_4 C_5 L_4 R_1 + C_4 C_5 L_4 R_4) + s^2 (2 C_1 C_4 R_1 R_4 + C_1 C_5 R_1 R_4 + 2 C_4 C_5 R_1 R_4 + 2 C_4 L_4 R_1 g_m + 2 C_4 L_4) + s (2 C_1 R_1 + 2 C_4 R_1 R_4 g_m + 2 C_4 R_4 + 2 C_5 R_1 R_4 g_m + 2 C_5 R_1 + C_5 R_4) + 2}$$

$$\mathbf{10.357 \quad INVALID-ORDER-357} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad R_4, \quad L_5 s + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{C_1 C_5 L_5 R_1 R_4 g_m s^3 + R_4 g_m + s^2 (-C_1 C_5 R_1 R_4 + C_5 L_5 R_4 g_m) + s (C_1 R_1 R_4 g_m - C_5 R_4)}{2g_m + s^3 (2C_1 C_5 L_5 R_1 g_m + 2C_1 C_5 L_5) + s^2 (2C_1 C_5 R_1 R_4 g_m + 2C_1 C_5 R_1 + C_1 C_5 R_4 + 2C_5 L_5 g_m) + s (2C_1 R_1 g_m + 2C_1 + 2C_5 R_4 g_m + 2C_5)}$$

$$\mathbf{10.358 \quad INVALID-ORDER-358} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad R_4, \quad \frac{L_5 s}{C_5 L_5 s^2 + 1}, \quad \infty \right)$$

$$H(s) = \frac{-C_1 C_5 L_5 R_1 R_4 s^3 - R_4 + s^2 (C_1 L_5 R_1 R_4 g_m - C_5 L_5 R_4) + s (-C_1 R_1 R_4 + L_5 R_4 g_m)}{2R_4 g_m + s^3 (2C_1 C_5 L_5 R_1 R_4 g_m + 2C_1 C_5 L_5 R_1 + C_1 C_5 L_5 R_4) + s^2 (2C_1 L_5 R_1 g_m + 2C_1 L_5 + 2C_5 L_5 R_4 g_m + 2C_5 L_5) + s (2C_1 R_1 R_4 g_m + 2C_1 R_1 + C_1 R_4 + 2L_5 g_m) + 2}$$

$$\mathbf{10.359 \quad INVALID-ORDER-359} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad R_4, \quad L_5 s + R_5 + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{C_1 C_5 L_5 R_1 R_4 g_m s^3 + R_4 g_m + s^2 (C_1 C_5 R_1 R_4 R_5 g_m - C_1 C_5 R_1 R_4 + C_5 L_5 R_4 g_m) + s (C_1 R_1 R_4 g_m + C_5 R_4 R_5 g_m - C_5 R_4)}{2g_m + s^3 (2C_1 C_5 L_5 R_1 g_m + 2C_1 C_5 L_5) + s^2 (2C_1 C_5 R_1 R_4 g_m + 2C_1 C_5 R_1 R_5 g_m + 2C_1 C_5 R_1 + C_1 C_5 R_4 + 2C_1 C_5 R_5 + 2C_5 L_5 g_m) + s (2C_1 R_1 g_m + 2C_1 + 2C_5 R_4 g_m + 2C_5 R_5 g_m + 2C_5)}$$

$$\mathbf{10.360 \quad INVALID-ORDER-360} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad R_4, \quad \frac{L_5 R_5 s}{C_5 L_5 R_5 s^2 + L_5 s + R_5}, \quad \infty \right)$$

$$H(s) = \frac{-C_1 C_5 L_5 R_1 R_4 R_5 s^3 - R_4 R_5 + s^2 (C_1 L_5 R_1 R_4 R_5 g_m - C_1 L_5 R_1 R_4 - C_5 L_5 R_4 R_5) + s (-C_1 R_1 R_4 R_5 + L_5 R_4 R_5 g_m - L_5 R_4)}{2R_4 R_5 g_m + 2R_5 + s^3 (2C_1 C_5 L_5 R_1 R_4 R_5 g_m + 2C_1 C_5 L_5 R_1 R_5 + C_1 C_5 L_5 R_4 R_5) + s^2 (2C_1 L_5 R_1 R_4 g_m + 2C_1 L_5 R_1 R_5 g_m + 2C_1 L_5 R_1 + C_1 L_5 R_4 + 2C_1 L_5 R_5 + 2C_5 L_5 R_4 R_5 g_m + 2C_5 L_5 R_5) + s (2C_1 R_1 R_4 R_5 g_m + 2C_1 R_1 R_5 + C_1 R_4 R_5 + 2L_5 R_4 g_m + 2L_5 R_5 g_m + 2L_5)}$$

$$\mathbf{10.361 \quad INVALID-ORDER-361} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad R_4, \quad \frac{C_5 L_5 R_5 s^2 + L_5 s + R_5}{C_5 L_5 s^2 + 1}, \quad \infty \right)$$

$$H(s) = \frac{R_4 R_5 g_m - R_4 + s^3 (C_1 C_5 L_5 R_1 R_4 R_5 g_m - C_1 C_5 L_5 R_1 R_4) + s^2 (C_1 L_5 R_1 R_4 g_m + C_5 L_5 R_4 R_5 g_m - C_5 L_5 R_4) + s (C_1 R_1 R_4 R_5 g_m - C_1 R_1 R_4 + L_5 R_4 g_m)}{2R_4 g_m + 2R_5 g_m + s^3 (2C_1 C_5 L_5 R_1 R_4 g_m + 2C_1 C_5 L_5 R_1 R_5 g_m + 2C_1 C_5 L_5 R_1 + C_1 C_5 L_5 R_4 + 2C_1 C_5 L_5 R_5) + s^2 (2C_1 L_5 R_1 g_m + 2C_1 L_5 + 2C_5 L_5 R_4 g_m + 2C_5 L_5 R_5 g_m + 2C_5 L_5) + s (2C_1 R_1 R_4 g_m + 2C_1 R_1 R_5 g_m + 2C_1 R_1 + C_1 R_4 + 2C_1 R_5 + 2L_5 g_m) + 2}$$

$$\mathbf{10.362 \quad INVALID-ORDER-362} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad R_4, \quad \frac{R_5 (C_5 L_5 s^2 + 1)}{C_5 L_5 s^2 + C_5 R_5 s + 1}, \quad \infty \right)$$

$$H(s) = \frac{R_4 R_5 g_m - R_4 + s^3 (C_1 C_5 L_5 R_1 R_4 R_5 g_m - C_1 C_5 L_5 R_1 R_4) + s^2 (-C_1 C_5 R_1 R_4 R_5 + C_5 L_5 R_4 R_5 g_m - C_5 L_5 R_4) + s (C_1 R_1 R_4 R_5 g_m - C_1 R_1 R_4 - C_5 R_4 R_5)}{2R_4 g_m + 2R_5 g_m + s^3 (2C_1 C_5 L_5 R_1 R_4 g_m + 2C_1 C_5 L_5 R_1 R_5 g_m + 2C_1 C_5 L_5 R_1 + C_1 C_5 L_5 R_4 + 2C_1 C_5 L_5 R_5) + s^2 (2C_1 C_5 R_1 R_4 R_5 g_m + 2C_1 C_5 R_1 R_5 + C_1 C_5 R_4 R_5 + 2C_5 L_5 R_4 g_m + 2C_5 L_5 R_5 g_m + 2C_5 L_5) + s (2C_1 R_1 R_4 g_m + 2C_1 R_1 R_5 g_m + 2C_1 R_1 + C_1 R_4 + 2C_1 R_5 + 2C_5 R_4 R_5)}$$

$$\mathbf{10.363 \quad INVALID-ORDER-363} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \frac{1}{C_4 s}, \quad \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{-C_1 C_5 R_1 s^2 + g_m + s (C_1 R_1 g_m - C_5)}{2C_1 C_4 C_5 R_1 s^3 + s^2 (2C_1 C_4 R_1 g_m + 2C_1 C_4 + 2C_1 C_5 R_1 g_m + C_1 C_5 + 2C_4 C_5) + s (2C_4 g_m + 2C_5 g_m)}$$

$$\mathbf{10.364 \quad INVALID-ORDER-364} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \frac{1}{C_4 s}, \quad \frac{R_5}{C_5 R_5 s + 1}, \quad \infty \right)$$

$$H(s) = \frac{-C_1 C_5 R_1 R_5 s^2 + R_5 g_m + s (C_1 R_1 R_5 g_m - C_1 R_1 - C_5 R_5) - 1}{2C_1 C_4 C_5 R_1 R_5 s^3 + 2g_m + s^2 (2C_1 C_4 R_1 R_5 g_m + 2C_1 C_4 R_1 + 2C_1 C_4 R_5 + 2C_1 C_5 R_1 R_5 g_m + C_1 C_5 R_5 + 2C_4 C_5 R_5) + s (2C_1 R_1 g_m + C_1 + 2C_4 R_5 g_m + 2C_4 + 2C_5 R_5 g_m)}$$

$$\mathbf{10.365 \quad INVALID-ORDER-365} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \frac{1}{C_4 s}, \quad R_5 + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{g_m + s^2 (C_1 C_5 R_1 R_5 g_m - C_1 C_5 R_1) + s (C_1 R_1 g_m + C_5 R_5 g_m - C_5)}{s^3 (2C_1 C_4 C_5 R_1 R_5 g_m + 2C_1 C_4 C_5 R_1 + 2C_1 C_4 C_5 R_5) + s^2 (2C_1 C_4 R_1 g_m + 2C_1 C_4 + 2C_1 C_5 R_1 g_m + C_1 C_5 + 2C_4 C_5 R_5 g_m + 2C_4 C_5) + s (2C_4 g_m + 2C_5 g_m)}$$

$$\mathbf{10.366 \quad INVALID-ORDER-366} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \frac{1}{C_4 s}, \quad L_5 s + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{C_1 C_5 L_5 R_1 g_m s^3 + g_m + s^2 (-C_1 C_5 R_1 + C_5 L_5 g_m) + s (C_1 R_1 g_m - C_5)}{s^4 (2C_1 C_4 C_5 L_5 R_1 g_m + 2C_1 C_4 C_5 L_5) + s^3 (2C_1 C_4 C_5 R_1 + 2C_4 C_5 L_5 g_m) + s^2 (2C_1 C_4 R_1 g_m + 2C_1 C_4 + 2C_1 C_5 R_1 g_m + C_1 C_5 + 2C_4 C_5) + s (2C_4 g_m + 2C_5 g_m)}$$

$$\mathbf{10.367 \quad INVALID-ORDER-367} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \frac{1}{C_4 s}, \quad \frac{L_5 s}{C_5 L_5 s^2 + 1}, \quad \infty \right)$$

$$H(s) = \frac{-C_1 C_5 L_5 R_1 s^3 + s^2 (C_1 L_5 R_1 g_m - C_5 L_5) + s (-C_1 R_1 + L_5 g_m) - 1}{2C_1 C_4 C_5 L_5 R_1 s^4 + 2g_m + s^3 (2C_1 C_4 L_5 R_1 g_m + 2C_1 C_4 L_5 + 2C_1 C_5 L_5 R_1 g_m + C_1 C_5 L_5 + 2C_4 C_5 L_5) + s^2 (2C_1 C_4 R_1 + 2C_4 L_5 g_m + 2C_5 L_5 g_m) + s (2C_1 R_1 g_m + C_1 + 2C_4)}$$

$$\mathbf{10.368 \quad INVALID-ORDER-368} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \frac{1}{C_4 s}, \quad L_5 s + R_5 + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{C_1 C_5 L_5 R_1 g_m s^3 + g_m + s^2 (C_1 C_5 R_1 R_5 g_m - C_1 C_5 R_1 + C_5 L_5 g_m) + s (C_1 R_1 g_m + C_5 R_5 g_m - C_5)}{s^4 (2C_1 C_4 C_5 L_5 R_1 g_m + 2C_1 C_4 C_5 L_5) + s^3 (2C_1 C_4 C_5 R_1 R_5 g_m + 2C_1 C_4 C_5 R_1 + 2C_1 C_4 C_5 R_5 + 2C_4 C_5 L_5 g_m) + s^2 (2C_1 C_4 R_1 g_m + 2C_1 C_4 + 2C_1 C_5 R_1 g_m + C_1 C_5 + 2C_4 C_5 R_5 g_m + 2C_4 C_5) + s (2C_4 g_m + 2C_5 g_m)}$$

$$\mathbf{10.369 \quad INVALID-ORDER-369} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \frac{1}{C_4 s}, \quad \frac{L_5 R_5 s}{C_5 L_5 R_5 s^2 + L_5 s + R_5}, \quad \infty \right)$$

$$H(s) = \frac{-C_1 C_5 L_5 R_1 R_5 s^3 - R_5 + s^2 (C_1 L_5 R_1 R_5 g_m - C_1 L_5 R_1 - C_5 L_5 R_5) + s (-C_1 R_1 R_5 + L_5 R_5 g_m - L_5)}{2C_1 C_4 C_5 L_5 R_1 R_5 s^4 + 2R_5 g_m + s^3 (2C_1 C_4 L_5 R_1 R_5 g_m + 2C_1 C_4 L_5 R_1 + 2C_1 C_4 L_5 R_5 + 2C_1 C_5 L_5 R_1 R_5 g_m + C_1 C_5 L_5 R_5 + 2C_4 C_5 L_5 R_5) + s^2 (2C_1 C_4 R_1 R_5 + 2C_1 L_5 R_1 g_m + C_1 L_5 + 2C_4 L_5 R_5 g_m + 2C_4 L_5 + 2C_5 L_5 R_5 g_m) + s (2C_1 R_1 R_5 g_m + C_1 R_5 + 2C_4 R_5 + 2L_5 g_m)}$$

$$\mathbf{10.370 \quad INVALID-ORDER-370} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \frac{1}{C_4 s}, \quad \frac{C_5 L_5 R_5 s^2 + L_5 s + R_5}{C_5 L_5 s^2 + 1}, \quad \infty \right)$$

$$H(s) = \frac{R_5 g_m + s^3 (C_1 C_5 L_5 R_1 R_5 g_m - C_1 C_5 L_5 R_1) + s^2 (C_1 L_5 R_1 g_m + C_5 L_5 R_5 g_m - C_5 L_5) + s (C_1 R_1 R_5 g_m - C_1 R_1 + L_5 g_m) - 1}{2g_m + s^4 (2C_1 C_4 C_5 L_5 R_1 R_5 g_m + 2C_1 C_4 C_5 L_5 R_1 + 2C_1 C_4 C_5 L_5 R_5) + s^3 (2C_1 C_4 L_5 R_1 g_m + 2C_1 C_4 L_5 + 2C_1 C_5 L_5 R_1 g_m + C_1 C_5 L_5 + 2C_4 C_5 L_5 R_5 g_m + 2C_4 C_5 L_5) + s^2 (2C_1 C_4 R_1 R_5 g_m + 2C_1 C_4 R_1 + 2C_1 C_4 R_5 + 2C_4 L_5 g_m + 2C_5 L_5 g_m) + s (2C_1 R_1 g_m + C_1 + 2C_4 R_5 g_m)}$$

$$\mathbf{10.371 \quad INVALID-ORDER-371} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \frac{1}{C_4 s}, \quad \frac{R_5 (C_5 L_5 s^2 + 1)}{C_5 L_5 s^2 + C_5 R_5 s + 1}, \quad \infty \right)$$

$$H(s) = \frac{R_5 g_m + s^3 (C_1 C_5 L_5 R_1 R_5 g_m - C_1 C_5 L_5 R_1) + s^2 (-C_1 C_5 R_1 R_5 + C_5 L_5 R_5 g_m - C_5 L_5) + s (C_1 R_1 R_5 g_m - C_1 R_1 - C_5 R_5) - 1}{2g_m + s^4 (2C_1 C_4 C_5 L_5 R_1 R_5 g_m + 2C_1 C_4 C_5 L_5 R_1 + 2C_1 C_4 C_5 L_5 R_5) + s^3 (2C_1 C_4 C_5 R_1 R_5 + 2C_1 C_5 L_5 R_1 g_m + C_1 C_5 L_5 + 2C_4 C_5 L_5 R_5 g_m + 2C_4 C_5 L_5) + s^2 (2C_1 C_4 R_1 R_5 g_m + 2C_1 C_4 R_1 + 2C_1 C_4 R_5 + 2C_1 C_5 R_1 R_5 g_m + C_1 C_5 R_5 + 2C_4 C_5 R_5 + 2C_5 L_5 g_m) + s (2C_1 R_1 g_m + C_1 + 2C_4 R_5 g_m)}$$

$$\mathbf{10.372 \quad INVALID-ORDER-372} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \frac{R_4}{C_4 R_4 s + 1}, \quad \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{-C_1 C_5 R_1 R_4 s^2 + R_4 g_m + s (C_1 R_1 R_4 g_m - C_5 R_4)}{2C_1 C_4 C_5 R_1 R_4 s^3 + 2g_m + s^2 (2C_1 C_4 R_1 R_4 g_m + 2C_1 C_4 R_4 + 2C_1 C_5 R_1 R_4 g_m + 2C_1 C_5 R_1 + C_1 C_5 R_4 + 2C_4 C_5 R_4) + s (2C_1 R_1 g_m + 2C_1 + 2C_4 R_4 g_m + 2C_5 R_4 g_m + 2C_5)}$$

$$\mathbf{10.373 \quad INVALID-ORDER-373} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \frac{R_4}{C_4 R_4 s + 1}, \quad \frac{R_5}{C_5 R_5 s + 1}, \quad \infty \right)$$

$$H(s) = \frac{-C_1 C_5 R_1 R_4 R_5 s^2 + R_4 R_5 g_m - R_4 + s (C_1 R_1 R_4 R_5 g_m - C_1 R_1 R_4 - C_5 R_4 R_5)}{2C_1 C_4 C_5 R_1 R_4 R_5 s^3 + 2R_4 g_m + 2R_5 g_m + s^2 (2C_1 C_4 R_1 R_4 R_5 g_m + 2C_1 C_4 R_1 R_4 + 2C_1 C_4 R_4 R_5 + 2C_1 C_5 R_1 R_4 R_5 g_m + 2C_1 C_5 R_1 R_5 + C_1 C_5 R_4 R_5 + 2C_4 C_5 R_4 R_5) + s (2C_1 R_1 R_4 g_m + 2C_1 R_1 R_5 g_m + 2C_1 R_1 + C_1 R_4 + 2C_1 R_5 + 2C_4 R_4 R_5 g_m + 2C_4 R_4 + 2C_5 R_4 R_5 g_m + 2C_5)}$$

$$\mathbf{10.374 \quad INVALID-ORDER-374} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \frac{R_4}{C_4 R_4 s + 1}, \quad R_5 + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{R_4 g_m + s^2 (C_1 C_5 R_1 R_4 R_5 g_m - C_1 C_5 R_1 R_4) + s (C_1 R_1 R_4 g_m + C_5 R_4 R_5 g_m - C_5 R_4)}{2g_m + s^3 (2C_1 C_4 C_5 R_1 R_4 R_5 g_m + 2C_1 C_4 C_5 R_1 R_4 + 2C_1 C_4 C_5 R_4 R_5) + s^2 (2C_1 C_4 R_1 R_4 g_m + 2C_1 C_4 R_4 + 2C_1 C_5 R_1 R_4 g_m + 2C_1 C_5 R_1 R_5 g_m + 2C_1 C_5 R_1 + C_1 C_5 R_4 + 2C_1 C_5 R_5 + 2C_4 C_5 R_4 R_5 g_m + 2C_4 C_5 R_4) + s (2C_1 R_1 g_m + 2C_1 + 2C_4 R_4 g_m + 2C_5 R_4 g_m + 2C_5 R_5 g_m)}$$

$$\mathbf{10.375 \quad INVALID-ORDER-375} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \frac{R_4}{C_4 R_4 s + 1}, \quad L_5 s + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{C_1 C_5 L_5 R_1 R_4 g_m s^3 + R_4 g_m + s^2 (-C_1 C_5 R_1 R_4 + C_5 L_5 R_4 g_m) + s (C_1 R_1 R_4 g_m - C_5 R_4)}{2g_m + s^4 (2C_1 C_4 C_5 L_5 R_1 R_4 g_m + 2C_1 C_4 C_5 L_5 R_4) + s^3 (2C_1 C_4 C_5 R_1 R_4 + 2C_1 C_5 L_5 R_1 g_m + 2C_1 C_5 L_5 + 2C_4 C_5 L_5 R_4 g_m) + s^2 (2C_1 C_4 R_1 R_4 g_m + 2C_1 C_4 R_4 + 2C_1 C_5 R_1 R_4 g_m + 2C_1 C_5 R_1 + C_1 C_5 R_4 + 2C_4 C_5 R_4 + 2C_5 L_5 g_m) + s (2C_1 R_1 g_m + 2C_1 + 2C_4 R_4 g_m + 2C_5 R_4)}$$

$$\mathbf{10.376 \quad INVALID-ORDER-376} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \frac{R_4}{C_4 R_4 s + 1}, \quad \frac{L_5 s}{C_5 L_5 s^2 + 1}, \quad \infty \right)$$

$$H(s) = \frac{-C_1 C_5 L_5 R_1 R_4 s^3 - R_4 + s^2 (C_1 L_5 R_1 R_4 g_m - C_5 L_5 R_4) + s (-C_1 R_1 R_4 + L_5 R_4 g_m)}{2C_1 C_4 C_5 L_5 R_1 R_4 s^4 + 2R_4 g_m + s^3 (2C_1 C_4 L_5 R_1 R_4 g_m + 2C_1 C_4 L_5 R_4 + 2C_1 C_5 L_5 R_1 R_4 g_m + 2C_1 C_5 L_5 R_1 + C_1 C_5 L_5 R_4 + 2C_4 C_5 L_5 R_4) + s^2 (2C_1 C_4 R_1 R_4 + 2C_1 L_5 R_1 g_m + 2C_1 L_5 + 2C_4 L_5 R_4 g_m + 2C_5 L_5 R_4 g_m + 2C_5 L_5) + s (2C_1 R_1 R_4 g_m + 2C_1 R_1 + C_1 R_4 + 2C_4 R_4)}$$

$$\mathbf{10.377 \quad INVALID-ORDER-377} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \frac{R_4}{C_4 R_4 s + 1}, \quad L_5 s + R_5 + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{C_1 C_5 L_5 R_1 R_4 g_m s^3 + R_4 g_m + s^2 (C_1 C_5 R_1 R_4 R_5 g_m - C_1 C_5 R_1 R_4 + C_5 L_5 R_4 g_m) + s (C_1 R_1 R_4 g_m + C_5 R_4 R_5 g_m - C_5 R_4)}{2g_m + s^4 (2C_1 C_4 C_5 L_5 R_1 R_4 g_m + 2C_1 C_4 C_5 L_5 R_4) + s^3 (2C_1 C_4 C_5 R_1 R_4 R_5 g_m + 2C_1 C_4 C_5 R_1 R_4 + 2C_1 C_4 C_5 R_4 R_5 + 2C_1 C_5 L_5 R_1 g_m + 2C_1 C_5 L_5 + 2C_4 C_5 L_5 R_4 g_m) + s^2 (2C_1 C_4 R_1 R_4 g_m + 2C_1 C_4 R_4 + 2C_1 C_5 R_1 R_4 g_m + 2C_1 C_5 R_1 R_5 g_m + 2C_1 C_5 R_1 + C_1 C_5 R_4 + 2C_1 C_4 R_4)}$$

$$\mathbf{10.378 \quad INVALID-ORDER-378} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \frac{R_4}{C_4 R_4 s + 1}, \quad \frac{L_5 R_5 s}{C_5 L_5 R_5 s^2 + L_5 s + R_5}, \quad \infty \right)$$

$$H(s) = \frac{-C_1 C_5 L_5 R_1 R_4 R_5 s^3 - R_4 R_5 + s^2 (C_1 L_5 R_1 R_4 R_5 g_m - C_1 L_5 R_1 R_4 - C_5 L_5 R_4 R_5) + s (-C_1 R_1 R_4 R_5 + L_5 R_4 R_5 g_m)}{2C_1 C_4 C_5 L_5 R_1 R_4 R_5 s^4 + 2R_4 R_5 g_m + 2R_5 + s^3 (2C_1 C_4 L_5 R_1 R_4 R_5 g_m + 2C_1 C_4 L_5 R_1 R_4 + 2C_1 C_4 L_5 R_4 R_5 + 2C_1 C_5 L_5 R_1 R_4 R_5 g_m + 2C_1 C_5 L_5 R_1 R_5 + C_1 C_5 L_5 R_4 R_5 + 2C_4 C_5 L_5 R_4 R_5) + s^2 (2C_1 C_4 R_1 R_4 R_5 + 2C_1 L_5 R_1 R_4 g_m + 2C_1 L_5 R_1 R_5 g_m + 2C_1 L_5 R_1 + C_1 L_5 R_4 - C_5 R_4 R_5)}$$

$$\mathbf{10.379 \quad INVALID-ORDER-379} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \frac{R_4}{C_4 R_4 s + 1}, \quad \frac{C_5 L_5 R_5 s^2 + L_5 s + R_5}{C_5 L_5 s^2 + 1}, \quad \infty \right)$$

$$H(s) = \frac{R_4 R_5 g_m - R_4 + s^3 (C_1 C_5 L_5 R_1 R_4 R_5 g_m - C_1 C_5 L_5 R_1 R_4) + s^2 (C_1 L_5 R_1 R_4 g_m + C_5 L_5 R_4 R_5 g_m - C_5 R_4)}{2R_4 g_m + 2R_5 g_m + s^4 (2C_1 C_4 C_5 L_5 R_1 R_4 R_5 g_m + 2C_1 C_4 C_5 L_5 R_1 R_4 + 2C_1 C_4 C_5 L_5 R_4 R_5) + s^3 (2C_1 C_4 L_5 R_1 R_4 g_m + 2C_1 C_4 L_5 R_4 + 2C_1 C_5 L_5 R_1 R_4 g_m + 2C_1 C_5 L_5 R_1 R_5 g_m + 2C_1 C_5 L_5 R_1 + C_1 C_5 L_5 R_4 + 2C_1 C_5 L_5 R_5 + 2C_4 C_5 L_5 R_4 R_5 g_m + 2C_4 C_5 L_5 R_4) + s^2 (2C_1 C_4 R_1 R_4 R_5 g_m + 2C_1 C_4 R_1 R_4 R_5 + 2C_1 C_4 R_4 R_5 g_m + 2C_1 C_4 R_4 R_5)}$$

$$\mathbf{10.380 \quad INVALID-ORDER-380} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \frac{R_4}{C_4 R_4 s + 1}, \quad \frac{R_5 (C_5 L_5 s^2 + 1)}{C_5 L_5 s^2 + C_5 R_5 s + 1}, \quad \infty \right)$$

$$H(s) = \frac{R_4 R_5 g_m - R_4 + s^3 (C_1 C_5 L_5 R_1 R_4 R_5 g_m - C_1 C_5 L_5 R_1 R_4) + s^2 (-C_1 C_5 R_1 R_4 R_5 + C_5 R_4)}{2R_4 g_m + 2R_5 g_m + s^4 (2C_1 C_4 C_5 L_5 R_1 R_4 R_5 g_m + 2C_1 C_4 C_5 L_5 R_1 R_4 + 2C_1 C_4 C_5 L_5 R_4 R_5) + s^3 (2C_1 C_4 C_5 R_1 R_4 R_5 + 2C_1 C_5 L_5 R_1 R_4 g_m + 2C_1 C_5 L_5 R_1 R_5 g_m + 2C_1 C_5 L_5 R_1 + C_1 C_5 L_5 R_4 + 2C_1 C_5 L_5 R_5 + 2C_4 C_5 L_5 R_4 R_5 g_m + 2C_4 C_5 L_5 R_4) + s^2 (2C_1 C_4 R_1 R_4 R_5 g_m + 2C_1 C_4 R_1 R_4 R_5 + 2C_1 C_4 R_4 R_5 g_m + 2C_1 C_4 R_4 R_5)}$$

$$\mathbf{10.381 \quad INVALID-ORDER-381} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad R_4 + \frac{1}{C_4 s}, \quad \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{-C_1 C_4 C_5 R_1 R_4 s^3 + g_m + s^2 (C_1 C_4 R_1 R_4 g_m - C_1 C_5 R_1 - C_4 C_5 R_4) + s (C_1 R_1 g_m + C_4 R_4 g_m - C_5)}{s^3 (2C_1 C_4 C_5 R_1 R_4 g_m + 2C_1 C_4 C_5 R_1 + C_1 C_4 C_5 R_4) + s^2 (2C_1 C_4 R_1 g_m + 2C_1 C_4 + 2C_1 C_5 R_1 g_m + C_1 C_5 + 2C_4 C_5 R_4 g_m + 2C_4 C_5) + s (2C_4 g_m + 2C_5 g_m)}$$

$$\mathbf{10.382 \quad INVALID-ORDER-382} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad R_4 + \frac{1}{C_4 s}, \quad \frac{R_5}{C_5 R_5 s + 1}, \quad \infty \right)$$

$$H(s) = \frac{-C_1 C_4 C_5 R_1 R_4 R_5 s^3 + R_5 g_m + s^2 (C_1 C_4 R_1 R_4 R_5 g_m - C_1 C_4 R_1 R_4 - C_1 C_5 R_1 R_5 - C_4 C_5 R_4 R_5) + s (C_1 R_1 R_5 g_m - C_1 R_1 + C_4 R_4 R_5 g_m - C_4 R_4 - C_5 R_5) - 1}{2g_m + s^3 (2C_1 C_4 C_5 R_1 R_4 R_5 g_m + 2C_1 C_4 C_5 R_1 R_5 + C_1 C_4 C_5 R_4 R_5) + s^2 (2C_1 C_4 R_1 R_4 g_m + 2C_1 C_4 R_1 R_5 g_m + 2C_1 C_4 R_1 + C_1 C_4 R_4 + 2C_1 C_4 R_5 + 2C_1 C_5 R_1 R_5 g_m + C_1 C_5 R_5 + 2C_4 C_5 R_4 R_5 g_m + 2C_4 C_5 R_5) + s (2C_1 R_1 g_m + C_1 + 2C_4 R_4 g_m + 2C_4 R_5 g_m + 2C_4 + 2C_5 R_5)}$$

$$\mathbf{10.383 \quad INVALID-ORDER-383} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad R_4 + \frac{1}{C_4 s}, \quad R_5 + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{g_m + s^3 (C_1 C_4 C_5 R_1 R_4 R_5 g_m - C_1 C_4 C_5 R_1 R_4) + s^2 (C_1 C_4 R_1 R_4 g_m + C_1 C_5 R_1 R_5 g_m - C_1 C_5 R_1 + C_4 C_5 R_4 R_5 g_m - C_4 C_5 R_4) + s (C_1 R_1 g_m + C_4 R_4 g_m + C_5 R_5 g_m - C_5)}{s^3 (2C_1 C_4 C_5 R_1 R_4 g_m + 2C_1 C_4 C_5 R_1 R_5 g_m + 2C_1 C_4 C_5 R_1 + C_1 C_4 C_5 R_4 + 2C_1 C_4 C_5 R_5) + s^2 (2C_1 C_4 R_1 g_m + 2C_1 C_4 + 2C_1 C_5 R_1 g_m + C_1 C_5 + 2C_4 C_5 R_4 g_m + 2C_4 C_5 R_5 g_m + 2C_4 C_5) + s (2C_4 g_m + 2C_5 g_m)}$$

$$\mathbf{10.384 \quad INVALID-ORDER-384} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad R_4 + \frac{1}{C_4 s}, \quad L_5 s + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{C_1 C_4 C_5 L_5 R_1 R_4 g_m s^4 + g_m + s^3 (-C_1 C_4 C_5 R_1 R_4 + C_1 C_5 L_5 R_1 g_m + C_4 C_5 L_5 R_4 g_m) + s^2 (C_1 C_4 R_1 R_4 g_m - C_1 C_5 R_1 - C_4 C_5 R_4 + C_5 L_5 g_m) + s (C_1 R_1 g_m + C_4 R_4 g_m - C_5)}{s^4 (2C_1 C_4 C_5 L_5 R_1 g_m + 2C_1 C_4 C_5 L_5) + s^3 (2C_1 C_4 C_5 R_1 R_4 g_m + 2C_1 C_4 C_5 R_1 + C_1 C_4 C_5 R_4 + 2C_4 C_5 L_5 g_m) + s^2 (2C_1 C_4 R_1 g_m + 2C_1 C_4 + 2C_1 C_5 R_1 g_m + C_1 C_5 + 2C_4 C_5 R_4 g_m + 2C_4 C_5) + s (2C_4 g_m + 2C_5 g_m)}$$

$$\mathbf{10.385 \quad INVALID-ORDER-385} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad R_4 + \frac{1}{C_4 s}, \quad \frac{L_5 s}{C_5 L_5 s^2 + 1}, \quad \infty \right)$$

$$H(s) = \frac{-C_1 C_4 C_5 L_5 R_1 R_4 s^4 + s^3 (C_1 C_4 L_5 R_1 R_4 g_m - C_1 C_5 L_5 R_1 - C_4 C_5 L_5 R_4) + s^2 (-C_1 C_4 R_1 R_4 + C_1 L_5 R_1 g_m + C_4 L_5 R_4 g_m - C_5 L_5) + s (-C_1 R_1 - C_4 R_4 + L_5 g_m) - 1}{2g_m + s^4 (2C_1 C_4 C_5 L_5 R_1 R_4 g_m + 2C_1 C_4 C_5 L_5 R_1 + C_1 C_4 C_5 L_5 R_4) + s^3 (2C_1 C_4 L_5 R_1 g_m + 2C_1 C_4 L_5 + 2C_1 C_5 L_5 R_1 g_m + C_1 C_5 L_5 + 2C_4 C_5 L_5 R_4 g_m + 2C_4 C_5 L_5) + s^2 (2C_1 C_4 R_1 R_4 g_m + 2C_1 C_4 R_1 + C_1 C_4 R_4 + 2C_4 L_5 g_m + 2C_5 L_5 g_m) + s (2C_1 R_1 g_m + C_1 + 2C_4 R_4 g_m)}$$

$$\mathbf{10.386 \quad INVALID-ORDER-386} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad R_4 + \frac{1}{C_4 s}, \quad L_5 s + R_5 + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{C_1 C_4 C_5 L_5 R_1 R_4 g_m s^4 + g_m + s^3 (C_1 C_4 C_5 R_1 R_4 R_5 g_m - C_1 C_4 C_5 R_1 R_4 + C_1 C_5 L_5 R_1 g_m + C_4 C_5 L_5 R_4 g_m) + s^2 (C_1 C_4 R_1 R_4 g_m + C_1 C_5 R_1 R_5 g_m - C_1 C_5 R_1 + C_4 C_5 R_4 R_5 g_m - C_4 C_5 R_4 + C_5 L_5 g_m) + s (C_1 R_1 g_m + C_4 R_4 g_m + C_5 R_5 g_m - C_5)}{s^4 (2C_1 C_4 C_5 L_5 R_1 g_m + 2C_1 C_4 C_5 L_5) + s^3 (2C_1 C_4 C_5 R_1 R_4 g_m + 2C_1 C_4 C_5 R_1 R_5 g_m + 2C_1 C_4 C_5 R_1 + C_1 C_4 C_5 R_4 + 2C_1 C_4 C_5 R_5 + 2C_4 C_5 L_5 g_m) + s^2 (2C_1 C_4 R_1 g_m + 2C_1 C_4 + 2C_1 C_5 R_1 g_m + C_1 C_5 + 2C_4 C_5 R_4 g_m + 2C_4 C_5 R_5 g_m + 2C_4 C_5) + s (2C_4 g_m + 2C_5 g_m)}$$

$$\mathbf{10.387 \quad INVALID-ORDER-387} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad R_4 + \frac{1}{C_4 s}, \quad \frac{L_5 R_5 s}{C_5 L_5 R_5 s^2 + L_5 s + R_5}, \quad \infty \right)$$

$$H(s) = \frac{-C_1 C_4 C_5 L_5 R_1 R_4 R_5 s^4 - R_5 + s^3 (C_1 C_4 L_5 R_1 R_4 R_5 g_m - C_1 C_4 L_5 R_1 R_4 - C_1 C_5 L_5 R_1 R_5 - C_4 C_5 L_5 R_4 R_5) + s^2 (-C_1 C_4 R_1 R_4 R_5 + C_1 L_5 R_1 R_5 g_m - C_1 L_5 R_1 + C_4 L_5 R_4 R_5) + s (C_1 R_1 R_5 g_m - C_1 R_1 + C_4 R_4 R_5 g_m - C_4 R_4 R_5) - 1}{2R_5 g_m + s^4 (2C_1 C_4 C_5 L_5 R_1 R_4 R_5 g_m + 2C_1 C_4 C_5 L_5 R_1 R_5 + C_1 C_4 C_5 L_5 R_4 R_5) + s^3 (2C_1 C_4 L_5 R_1 R_4 g_m + 2C_1 C_4 L_5 R_1 R_5 g_m + 2C_1 C_4 L_5 R_1 + C_1 C_4 L_5 R_4 + 2C_1 C_4 L_5 R_5 + 2C_1 C_5 L_5 R_1 R_5 g_m + C_1 C_5 L_5 R_5 + 2C_4 C_5 L_5 R_4 R_5 g_m + 2C_4 C_5 L_5 R_5) + s^2 (2C_1 C_4 R_1 R_4 R_5 g_m + 2C_1 C_4 R_1 R_5 g_m + 2C_1 C_4 R_1 R_5 + C_4 R_4 R_5 g_m + C_4 R_4 R_5) + s (C_1 R_1 R_5 g_m - C_1 R_1 + C_4 R_4 R_5 g_m - C_4 R_4 R_5)}$$

$$\mathbf{10.388 \quad INVALID-ORDER-388} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad R_4 + \frac{1}{C_4 s}, \quad \frac{C_5 L_5 R_5 s^2 + L_5 s + R_5}{C_5 L_5 s^2 + 1}, \quad \infty \right)$$

$$H(s) = \frac{R_5 g_m + s^4 (C_1 C_4 C_5 L_5 R_1 R_4 R_5 g_m - C_1 C_4 C_5 L_5 R_1 R_4) + s^3 (C_1 C_4 L_5 R_1 R_4 g_m + C_1 C_5 L_5 R_1 R_5 g_m - C_1 C_5 L_5 R_1 + C_4 C_5 L_5 R_4 R_5 g_m - C_4 C_5 L_5 R_4) + s^2 (C_1 C_4 R_1 R_4 R_5 g_m - C_1 C_4 R_1 R_4 + C_1 L_5 R_1 g_m + C_4 L_5 R_4 g_m + C_5 L_5 R_5 g_m) + s (C_1 R_1 R_5 g_m - C_1 R_1 + C_4 R_4 R_5 g_m - C_4 R_4 R_5) - 1}{2g_m + s^4 (2C_1 C_4 C_5 L_5 R_1 R_4 g_m + 2C_1 C_4 C_5 L_5 R_1 R_5 g_m + 2C_1 C_4 C_5 L_5 R_1 + C_1 C_4 C_5 L_5 R_4 + 2C_1 C_4 C_5 L_5 R_5) + s^3 (2C_1 C_4 L_5 R_1 g_m + 2C_1 C_4 L_5 + 2C_1 C_5 L_5 R_1 g_m + C_1 C_5 L_5 + 2C_4 C_5 L_5 R_4 g_m + 2C_4 C_5 L_5 R_5 g_m + 2C_4 C_5 L_5) + s^2 (2C_1 C_4 R_1 R_4 g_m + 2C_1 C_4 R_1 R_5 g_m + 2C_1 C_4 R_1 R_5 + C_4 R_4 R_5 g_m + C_4 R_4 R_5) + s (C_1 R_1 R_5 g_m - C_1 R_1 + C_4 R_4 R_5 g_m - C_4 R_4 R_5)}$$

$$\mathbf{10.389 \quad INVALID-ORDER-389} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad R_4 + \frac{1}{C_4 s}, \quad \frac{R_5 (C_5 L_5 s^2 + 1)}{C_5 L_5 s^2 + C_5 R_5 s + 1}, \quad \infty \right)$$

$$H(s) = \frac{R_5 g_m + s^4 (C_1 C_4 C_5 L_5 R_1 R_4 R_5 g_m - C_1 C_4 C_5 L_5 R_1 R_4) + s^3 (-C_1 C_4 C_5 R_1 R_4 R_5 + C_1 C_5 L_5 R_1 R_5 g_m - C_1 C_5 L_5 R_1 + C_4 C_5 L_5 R_4 R_5 g_m - C_4 C_5 L_5 R_4) + s^2 (C_1 C_4 R_1 R_4 R_5 g_m - C_1 C_4 R_1 R_4 + C_1 L_5 R_1 g_m + C_4 L_5 R_4 g_m + C_5 L_5 R_5 g_m) + s (C_1 R_1 R_5 g_m - C_1 R_1 + C_4 R_4 R_5 g_m - C_4 R_4 R_5) - 1}{2g_m + s^4 (2C_1 C_4 C_5 L_5 R_1 R_4 g_m + 2C_1 C_4 C_5 L_5 R_1 R_5 g_m + 2C_1 C_4 C_5 L_5 R_1 + C_1 C_4 C_5 L_5 R_4 + 2C_1 C_4 C_5 L_5 R_5) + s^3 (2C_1 C_4 C_5 R_1 R_4 R_5 g_m + 2C_1 C_4 C_5 R_1 R_5 + C_1 C_4 C_5 R_4 R_5 + 2C_1 C_5 L_5 R_1 g_m + C_1 C_5 L_5 + 2C_4 C_5 L_5 R_4 g_m + 2C_4 C_5 L_5 R_5 g_m + 2C_4 C_5 L_5) + s^2 (2C_1 C_4 R_1 R_4 R_5 g_m + 2C_1 C_4 R_1 R_5 g_m + 2C_1 C_4 R_1 R_5 + C_4 R_4 R_5 g_m + C_4 R_4 R_5) + s (C_1 R_1 R_5 g_m - C_1 R_1 + C_4 R_4 R_5 g_m - C_4 R_4 R_5)}$$

$$\mathbf{10.390 \quad INVALID-ORDER-390} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad L_4 s + \frac{1}{C_4 s}, \quad R_5, \quad \infty \right)$$

$$H(s) = \frac{R_5 g_m + s^3 (C_1 C_4 L_4 R_1 R_5 g_m - C_1 C_4 L_4 R_1) + s^2 (C_4 L_4 R_5 g_m - C_4 L_4) + s (C_1 R_1 R_5 g_m - C_1 R_1) - 1}{2g_m + s^3 (2C_1 C_4 L_4 R_1 g_m + C_1 C_4 L_4) + s^2 (2C_1 C_4 R_1 R_5 g_m + 2C_1 C_4 R_1 + 2C_1 C_4 R_5 + 2C_4 L_4 g_m) + s (2C_1 R_1 g_m + C_1 + 2C_4 R_5 g_m + 2C_4)}$$

$$\mathbf{10.391 \quad INVALID-ORDER-391} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad L_4 s + \frac{1}{C_4 s}, \quad \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{-C_1 C_4 C_5 L_4 R_1 s^4 + g_m + s^3 (C_1 C_4 L_4 R_1 g_m - C_4 C_5 L_4) + s^2 (-C_1 C_5 R_1 + C_4 L_4 g_m) + s (C_1 R_1 g_m - C_5)}{s^4 (2C_1 C_4 C_5 L_4 R_1 g_m + C_1 C_4 C_5 L_4) + s^3 (2C_1 C_4 C_5 R_1 + 2C_4 C_5 L_4 g_m) + s^2 (2C_1 C_4 R_1 g_m + 2C_1 C_4 + 2C_1 C_5 R_1 g_m + C_1 C_5 + 2C_4 C_5) + s (2C_4 g_m + 2C_5 g_m)}$$

$$\mathbf{10.392 \quad INVALID-ORDER-392} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad L_4 s + \frac{1}{C_4 s}, \quad \frac{R_5}{C_5 R_5 s + 1}, \quad \infty \right)$$

$$H(s) = \frac{-C_1 C_4 C_5 L_4 R_1 R_5 s^4 + R_5 g_m + s^3 (C_1 C_4 L_4 R_1 R_5 g_m - C_1 C_4 L_4 R_1 - C_4 C_5 L_4 R_5) + s^2 (-C_1 C_5 R_1 R_5 + C_4 L_4 R_5 g_m - C_4 L_4) + s (C_1 R_1 R_5 g_m - C_1 R_1 - C_5 R_5) - 1}{2g_m + s^4 (2C_1 C_4 C_5 L_4 R_1 R_5 g_m + C_1 C_4 C_5 L_4 R_5) + s^3 (2C_1 C_4 C_5 R_1 R_5 + 2C_1 C_4 L_4 R_1 g_m + C_1 C_4 L_4 + 2C_4 C_5 L_4 R_5 g_m) + s^2 (2C_1 C_4 R_1 R_5 g_m + 2C_1 C_4 R_1 + 2C_1 C_4 R_5 + 2C_1 C_5 R_1 R_5 g_m + C_1 C_5 R_5 + 2C_4 C_5 R_5 + 2C_4 L_4 g_m) + s (2C_1 R_1 g_m + C_1 + 2C_4 R_5 g_m + 2C_4 + 2C_5 g_m)}$$

$$\mathbf{10.393 \quad INVALID-ORDER-393} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad L_4 s + \frac{1}{C_4 s}, \quad R_5 + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{g_m + s^4 (C_1 C_4 C_5 L_4 R_1 R_5 g_m - C_1 C_4 C_5 L_4 R_1) + s^3 (C_1 C_4 L_4 R_1 g_m + C_4 C_5 L_4 R_5 g_m - C_4 C_5 L_4) + s^2 (C_1 C_5 R_1 R_5 g_m - C_1 C_5 R_1 + C_4 L_4 g_m) + s (C_1 R_1 g_m + C_5 R_5 g_m - C_5)}{s^4 (2C_1 C_4 C_5 L_4 R_1 g_m + C_1 C_4 C_5 L_4) + s^3 (2C_1 C_4 C_5 R_1 R_5 g_m + 2C_1 C_4 C_5 R_1 + 2C_1 C_4 C_5 R_5 + 2C_4 C_5 L_4 g_m) + s^2 (2C_1 C_4 R_1 g_m + 2C_1 C_4 + 2C_1 C_5 R_1 g_m + C_1 C_5 + 2C_4 C_5 R_5 g_m + 2C_4 C_5) + s (2C_4 g_m + 2C_5 g_m)}$$

$$\mathbf{10.394 \quad INVALID-ORDER-394} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad L_4 s + \frac{1}{C_4 s}, \quad L_5 s + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{C_1 C_4 C_5 L_4 L_5 R_1 g_m s^5 + g_m + s^4 (-C_1 C_4 C_5 L_4 R_1 + C_4 C_5 L_4 L_5 g_m) + s^3 (C_1 C_4 L_4 R_1 g_m + C_1 C_5 L_5 R_1 g_m - C_4 C_5 L_4) + s^2 (-C_1 C_5 R_1 + C_4 L_4 g_m + C_5 L_5 g_m) + s (C_1 R_1 g_m - C_5)}{s^4 (2C_1 C_4 C_5 L_4 R_1 g_m + C_1 C_4 C_5 L_4 + 2C_1 C_4 C_5 L_5 R_1 g_m + 2C_1 C_4 C_5 L_5) + s^3 (2C_1 C_4 C_5 R_1 + 2C_4 C_5 L_4 g_m + 2C_4 C_5 L_5 g_m) + s^2 (2C_1 C_4 R_1 g_m + 2C_1 C_4 + 2C_1 C_5 R_1 g_m + C_1 C_5 + 2C_4 C_5) + s (2C_4 g_m + 2C_5 g_m)}$$

$$\mathbf{10.395 \quad INVALID-ORDER-395} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad L_4 s + \frac{1}{C_4 s}, \quad \frac{L_5 s}{C_5 L_5 s^2 + 1}, \quad \infty \right)$$

$$H(s) = \frac{-C_1 C_4 C_5 L_4 L_5 R_1 s^5 + s^4 (C_1 C_4 L_4 L_5 R_1 g_m - C_4 C_5 L_4 L_5) + s^3 (-C_1 C_4 L_4 R_1 - C_1 C_5 L_5 R_1 + C_4 L_4 L_5 g_m) + s^2 (C_1 L_5 R_1 g_m - C_4 L_4 - C_5 L_5) + s (-C_1 R_1 + L_5 g_m) - 1}{2g_m + s^5 (2C_1 C_4 C_5 L_4 L_5 R_1 g_m + C_1 C_4 C_5 L_4 L_5) + s^4 (2C_1 C_4 C_5 L_5 R_1 + 2C_4 C_5 L_4 L_5 g_m) + s^3 (2C_1 C_4 L_4 R_1 g_m + C_1 C_4 L_4 + 2C_1 C_4 L_5 R_1 g_m + 2C_1 C_4 L_5 + 2C_1 C_5 L_5 R_1 g_m + C_1 C_5 L_5 + 2C_4 C_5 L_5) + s^2 (2C_1 C_4 R_1 + 2C_4 L_4 g_m + 2C_4 L_5 g_m + 2C_5 L_5 g_m) + s (2C_1 R_1 g_m + 2C_5 g_m)}$$

$$\mathbf{10.396 \quad INVALID-ORDER-396} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad L_4 s + \frac{1}{C_4 s}, \quad L_5 s + R_5 + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{C_1 C_4 C_5 L_4 L_5 R_1 g_m s^5 + g_m + s^4 (C_1 C_4 C_5 L_4 R_1 R_5 g_m - C_1 C_4 C_5 L_4 R_1 + C_4 C_5 L_4 L_5 g_m) + s^3 (C_1 C_4 L_4 R_1 g_m + C_1 C_5 L_5 R_1 g_m + C_4 C_5 L_4 R_5 g_m - C_4 C_5 L_4) + s^2 (C_1 C_5 R_1 R_5 g_m - C_1 C_5 R_1 + C_4 L_4 g_m + C_5 L_5 g_m) + s (C_1 R_1 g_m + C_5 R_5 g_m - C_5)}{s^4 (2C_1 C_4 C_5 L_4 R_1 g_m + C_1 C_4 C_5 L_4 + 2C_1 C_4 C_5 L_5 R_1 g_m + 2C_1 C_4 C_5 L_5) + s^3 (2C_1 C_4 C_5 R_1 R_5 g_m + 2C_1 C_4 C_5 R_1 + 2C_1 C_4 C_5 R_5 + 2C_4 C_5 L_4 g_m + 2C_4 C_5 L_5 g_m) + s^2 (2C_1 C_4 R_1 g_m + 2C_1 C_4 + 2C_1 C_5 R_1 g_m + C_1 C_5 + 2C_4 C_5 R_5 g_m + 2C_4 C_5) + s (2C_4 g_m + 2C_5 g_m)}$$

$$\mathbf{10.397 \quad INVALID-ORDER-397} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad L_4 s + \frac{1}{C_4 s}, \quad \frac{L_5 R_5 s}{C_5 L_5 R_5 s^2 + L_5 s + R_5}, \quad \infty \right)$$

$$H(s) = \frac{-C_1 C_4 C_5 L_4 L_5 R_1 R_5 s^5 - R_5 + s^4 (C_1 C_4 L_4 L_5 R_1 R_5 g_m - C_1 C_4 L_4 L_5 R_1 - C_4 C_5 L_4 L_5 R_5) + s^3 (-C_1 C_4 L_4 R_1 R_5 - C_1 C_5 L_5 R_1 R_5 + C_4 L_4 L_5 R_5 g_m - C_4 L_4 L_5) + s^2 (C_1 L_5 R_1 g_m + C_4 L_4 R_5) + s (C_1 R_1 g_m + C_5 R_5 g_m - C_5)}{2R_5 g_m + s^5 (2C_1 C_4 C_5 L_4 L_5 R_1 R_5 g_m + C_1 C_4 C_5 L_4 L_5 R_5) + s^4 (2C_1 C_4 C_5 L_5 R_1 R_5 + 2C_1 C_4 L_4 L_5 R_1 g_m + C_1 C_4 L_4 L_5 + 2C_4 C_5 L_4 L_5 R_5 g_m) + s^3 (2C_1 C_4 L_4 R_1 R_5 g_m + C_1 C_4 L_4 R_5 + 2C_1 C_4 L_5 R_1 R_5 g_m + 2C_1 C_4 L_5 R_1 + 2C_1 C_5 L_5 R_1 R_5 g_m + C_1 C_5 L_5 R_5 + 2C_4 C_5 L_5 R_5) + s^2 (2C_1 C_4 R_1 g_m + 2C_4 L_4 R_5) + s (C_1 R_1 g_m + C_5 R_5 g_m - C_5)}$$

$$\mathbf{10.398 \quad INVALID-ORDER-398} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad L_4 s + \frac{1}{C_4 s}, \quad \frac{C_5 L_5 R_5 s^2 + L_5 s + R_5}{C_5 L_5 s^2 + 1}, \quad \infty \right)$$

$$H(s) = \frac{R_5 g_m + s^5 (C_1 C_4 C_5 L_4 L_5 R_1 R_5 g_m - C_1 C_4 C_5 L_4 L_5 R_1) + s^4 (C_1 C_4 L_4 L_5 R_1 g_m + C_4 C_5 L_4 L_5 R_5 g_m - C_4 C_5 L_4 L_5) + s^3 (C_1 C_4 L_4 R_1 R_5 g_m - C_1 C_4 L_4 R_1 + C_1 C_5 L_5 R_1 R_5 g_m - C_1 C_5 L_5 R_1 + C_4 L_4 L_5 g_m) + s^2 (C_1 L_5 R_1 g_m + C_4 L_4 R_5) + s (C_1 R_1 g_m + C_5 R_5 g_m - C_5)}{2g_m + s^5 (2C_1 C_4 C_5 L_4 L_5 R_1 g_m + C_1 C_4 C_5 L_4 L_5) + s^4 (2C_1 C_4 C_5 L_5 R_1 R_5 g_m + 2C_1 C_4 C_5 L_5 R_1 + 2C_1 C_4 C_5 L_5 R_5 + 2C_4 C_5 L_4 L_5 g_m) + s^3 (2C_1 C_4 L_4 R_1 R_5 g_m + C_1 C_4 L_4 R_5 + 2C_1 C_4 L_5 R_1 R_5 g_m + 2C_1 C_4 L_5 R_1 + 2C_1 C_5 L_5 R_1 R_5 g_m + C_1 C_5 L_5 R_5 + 2C_4 C_5 L_5 R_5) + s^2 (2C_1 C_4 R_1 g_m + 2C_4 L_4 R_5) + s (C_1 R_1 g_m + C_5 R_5 g_m - C_5)}$$

$$\mathbf{10.399 \quad INVALID-ORDER-399} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad L_4 s + \frac{1}{C_4 s}, \quad \frac{R_5 (C_5 L_5 s^2 + 1)}{C_5 L_5 s^2 + C_5 R_5 s + 1}, \quad \infty \right)$$

$$H(s) = \frac{R_5 g_m + s^5 (C_1 C_4 C_5 L_4 L_5 R_1 R_5 g_m - C_1 C_4 C_5 L_4 L_5 R_1) + s^4 (-C_1 C_4 C_5 L_4 R_1 R_5 + C_4 C_5 L_4 L_5 R_5 g_m - C_4 C_5 L_4 L_5) + s^3 (C_1 C_4 L_4 R_1 R_5 g_m - C_1 C_4 L_4 R_1 + C_1 C_5 L_5 R_1 R_5 g_m - C_1 C_5 L_5 R_1 + C_4 L_4 L_5 g_m) + s^2 (C_1 L_5 R_1 g_m + C_4 L_4 R_5) + s (C_1 R_1 g_m + C_5 R_5 g_m - C_5)}{2g_m + s^5 (2C_1 C_4 C_5 L_4 L_5 R_1 g_m + C_1 C_4 C_5 L_4 L_5) + s^4 (2C_1 C_4 C_5 L_4 R_1 R_5 g_m + C_1 C_4 C_5 L_4 R_5 + 2C_1 C_4 C_5 L_5 R_1 R_5 g_m + 2C_1 C_4 C_5 L_5 R_1 + 2C_1 C_4 C_5 L_5 R_5 + 2C_4 C_5 L_4 L_5 g_m) + s^3 (2C_1 C_4 C_5 R_1 R_5 + 2C_1 C_4 L_4 R_1 g_m + C_1 C_4 L_4 + 2C_1 C_5 L_5 R_1 g_m + C_1 C_5 L_5 + 2C_4 C_5 L_4 R_5) + s^2 (2C_1 C_4 R_1 g_m + 2C_4 L_4 R_5) + s (C_1 R_1 g_m + C_5 R_5 g_m - C_5)}$$

$$\mathbf{10.400 \quad INVALID-ORDER-400} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \frac{L_4 s}{C_4 L_4 s^2 + 1}, \quad R_5, \quad \infty \right)$$

$$H(s) = \frac{s^2 (C_1 L_4 R_1 R_5 g_m - C_1 L_4 R_1) + s (L_4 R_5 g_m - L_4)}{2R_5 g_m + s^3 (2C_1 C_4 L_4 R_1 R_5 g_m + 2C_1 C_4 L_4 R_1 + 2C_1 C_4 L_4 R_5) + s^2 (2C_1 L_4 R_1 g_m + C_1 L_4 + 2C_4 L_4 R_5 g_m + 2C_4 L_4) + s (2C_1 R_1 R_5 g_m + 2C_1 R_1 + 2C_1 R_5 + 2L_4 g_m) + 2}$$

$$\mathbf{10.401 \quad INVALID-ORDER-401} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \frac{L_4 s}{C_4 L_4 s^2 + 1}, \quad \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{-C_1 C_5 L_4 R_1 s^3 + L_4 g_m s + s^2 (C_1 L_4 R_1 g_m - C_5 L_4)}{2C_1 C_4 C_5 L_4 R_1 s^4 + 2g_m + s^3 (2C_1 C_4 L_4 R_1 g_m + 2C_1 C_4 L_4 + 2C_1 C_5 L_4 R_1 g_m + C_1 C_5 L_4 + 2C_4 C_5 L_4) + s^2 (2C_1 C_5 R_1 + 2C_4 L_4 g_m + 2C_5 L_4 g_m) + s (2C_1 R_1 g_m + 2C_1 + 2C_5)}$$

$$\mathbf{10.402 \quad INVALID-ORDER-402} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \frac{L_4 s}{C_4 L_4 s^2 + 1}, \quad \frac{R_5}{C_5 R_5 s + 1}, \quad \infty \right)$$

$$H(s) = \frac{-C_1 C_5 L_4 R_1 R_5 s^3 + s^2 (C_1 L_4 R_1 R_5 g_m - C_1 L_4 R_1 - C_5 L_4 R_5) + s (L_4 R_5 g_m - L_4)}{2C_1 C_4 C_5 L_4 R_1 R_5 s^4 + 2R_5 g_m + s^3 (2C_1 C_4 L_4 R_1 R_5 g_m + 2C_1 C_4 L_4 R_1 + 2C_1 C_4 L_4 R_5 + 2C_1 C_5 L_4 R_1 R_5 g_m + C_1 C_5 L_4 R_5 + 2C_4 C_5 L_4 R_5) + s^2 (2C_1 C_5 R_1 R_5 + 2C_1 L_4 R_1 g_m + C_1 L_4 + 2C_4 L_4 R_5 g_m + 2C_4 L_4 + 2C_5 L_4 R_5 g_m) + s (2C_1 R_1 R_5 g_m + 2C_1 R_1 + 2C_1 R_5 + 2C_5 R_5)}$$

$$\mathbf{10.403 \quad INVALID-ORDER-403} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \frac{L_4 s}{C_4 L_4 s^2 + 1}, \quad R_5 + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{L_4 g_m s + s^3 (C_1 C_5 L_4 R_1 R_5 g_m - C_1 C_5 L_4 R_1) + s^2 (C_1 L_4 R_1 g_m + C_5 L_4 R_5 g_m - C_5 L_4)}{2g_m + s^4 (2C_1 C_4 C_5 L_4 R_1 R_5 g_m + 2C_1 C_4 C_5 L_4 R_1 + 2C_1 C_4 C_5 L_4 R_5) + s^3 (2C_1 C_4 L_4 R_1 g_m + 2C_1 C_4 L_4 + 2C_1 C_5 L_4 R_1 g_m + C_1 C_5 L_4 + 2C_4 C_5 L_4 R_5 g_m + 2C_4 C_5 L_4) + s^2 (2C_1 C_5 R_1 R_5 g_m + 2C_1 C_5 R_1 + 2C_1 C_5 R_5 + 2C_4 L_4 g_m + 2C_5 L_4 g_m) + s (2C_1 R_1 g_m + 2C_1 + 2C_5 R_5)}$$

$$\mathbf{10.404 \quad INVALID-ORDER-404} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \frac{L_4 s}{C_4 L_4 s^2 + 1}, \quad L_5 s + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{C_1 C_5 L_4 L_5 R_1 g_m s^4 + L_4 g_m s + s^3 (-C_1 C_5 L_4 R_1 + C_5 L_4 L_5 g_m) + s^2 (C_1 L_4 R_1 g_m - C_5 L_4)}{2g_m + s^5 (2C_1 C_4 C_5 L_4 L_5 R_1 g_m + 2C_1 C_4 C_5 L_4 L_5) + s^4 (2C_1 C_4 C_5 L_4 R_1 + 2C_4 C_5 L_4 L_5 g_m) + s^3 (2C_1 C_4 L_4 R_1 g_m + 2C_1 C_4 L_4 + 2C_1 C_5 L_4 R_1 g_m + C_1 C_5 L_4 + 2C_1 C_5 L_5 R_1 g_m + 2C_1 C_5 L_5 + 2C_4 C_5 L_4) + s^2 (2C_1 C_5 R_1 + 2C_4 L_4 g_m + 2C_5 L_4 g_m + 2C_5 L_5 g_m) + s (2C_1 R_1 g_m + 2C_1 + 2C_5 R_5)}$$

$$\mathbf{10.405 \quad INVALID-ORDER-405} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \frac{L_4 s}{C_4 L_4 s^2 + 1}, \quad \frac{L_5 s}{C_5 L_5 s^2 + 1}, \quad \infty \right)$$

$$H(s) = \frac{-C_1 C_5 L_4 L_5 R_1 s^4 - L_4 s + s^3 (C_1 L_4 L_5 R_1 g_m - C_5 L_4 L_5) + s^2 (-C_1 L_4 R_1 + L_4 L_5 g_m)}{2C_1 C_4 C_5 L_4 L_5 R_1 s^5 + s^4 (2C_1 C_4 L_4 L_5 R_1 g_m + 2C_1 C_4 L_4 L_5 + 2C_1 C_5 L_4 L_5 R_1 g_m + C_1 C_5 L_4 L_5 + 2C_4 C_5 L_4 L_5) + s^3 (2C_1 C_4 L_4 R_1 + 2C_1 C_5 L_5 R_1 + 2C_4 L_4 L_5 g_m + 2C_5 L_4 L_5 g_m) + s^2 (2C_1 L_4 R_1 g_m + C_1 L_4 + 2C_1 L_5 R_1 g_m + 2C_1 L_5 + 2C_4 L_4 + 2C_5 L_5) + s (2C_1 R_1 + 2L_4 g_m)}$$

$$\mathbf{10.406 \quad INVALID-ORDER-406} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \frac{L_4 s}{C_4 L_4 s^2 + 1}, \quad L_5 s + R_5 + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{C_1 C_5 L_4 L_5 R_1 g_m s^4 + L_4 g_m s + s^3 (C_1 C_5 L_4 R_1 R_5 g_m - C_1 C_5 L_4 R_1 + C_5 L_4 L_5 g_m) + s^2 (C_1 L_4 R_1 g_m + C_5 L_4 R_5 g_m - C_5 L_4)}{2g_m + s^5 (2C_1 C_4 C_5 L_4 L_5 R_1 g_m + 2C_1 C_4 C_5 L_4 L_5) + s^4 (2C_1 C_4 C_5 L_4 R_1 R_5 g_m + 2C_1 C_4 C_5 L_4 R_1 + 2C_1 C_4 C_5 L_4 R_5 + 2C_4 C_5 L_4 L_5 g_m) + s^3 (2C_1 C_4 L_4 R_1 g_m + 2C_1 C_4 L_4 + 2C_1 C_5 L_4 R_1 g_m + C_1 C_5 L_4 + 2C_1 C_5 L_5 R_1 g_m + 2C_1 C_5 L_5 + 2C_4 C_5 L_4 R_5 g_m + 2C_4 C_5 L_4) + s^2 (2C_1 C_5 R_1 + 2C_4 L_4 g_m + 2C_5 L_4 g_m + 2C_5 L_5 g_m) + s (2C_1 R_1 + 2L_4 g_m)}$$

$$\mathbf{10.407 \quad INVALID-ORDER-407} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \frac{L_4 s}{C_4 L_4 s^2 + 1}, \quad \frac{L_5 R_5 s}{C_5 L_5 R_5 s^2 + L_5 s + R_5}, \quad \infty \right)$$

$$H(s) = \frac{-C_1 C_5 L_4 L_5 R_1 R_5 s^4 - L_4 R_5 s + s^3 (C_1 L_4 L_5 R_1 R_5 g_m - C_1 L_4 L_5 R_1 - C_5 L_4 L_5 R_5) + s^2 (-C_1 L_4 R_1 R_5 + L_4 L_5 R_5 g_m)}{2C_1 C_4 C_5 L_4 L_5 R_1 R_5 s^5 + 2R_5 + s^4 (2C_1 C_4 L_4 L_5 R_1 R_5 g_m + 2C_1 C_4 L_4 L_5 R_1 + 2C_1 C_4 L_4 L_5 R_5 + 2C_1 C_5 L_4 L_5 R_1 R_5 g_m + C_1 C_5 L_4 L_5 R_5 + 2C_4 C_5 L_4 L_5 R_5) + s^3 (2C_1 C_4 L_4 R_1 R_5 + 2C_1 C_5 L_5 R_1 R_5 + 2C_1 L_4 L_5 R_1 g_m + C_1 L_4 L_5 + 2C_4 L_4 L_5 R_5 g_m + 2C_4 L_4 L_5 + 2C_5 L_4 L_5 R_5 g_m) + s^2 (2C_1 C_5 R_1 R_5 + 2C_4 L_4 R_5 g_m + 2C_5 L_4 R_5 g_m + 2C_5 L_5 R_5) + s (2C_1 R_1 R_5 + 2L_4 R_5 g_m)}$$

$$\mathbf{10.408 \quad INVALID-ORDER-408} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \frac{L_4 s}{C_4 L_4 s^2 + 1}, \quad \frac{C_5 L_5 R_5 s^2 + L_5 s + R_5}{C_5 L_5 s^2 + 1}, \quad \infty \right)$$

$$H(s) = \frac{s^4 (C_1 C_5 L_4 L_5 R_1 R_5 g_m - C_1 C_5 L_4 L_5 R_1) + s^3 (C_1 L_4 L_5 R_1 g_m + C_5 L_4 L_5 R_5 g_m - C_5 L_4 L_5) + s^2 (C_1 L_4 R_1 g_m + C_5 L_4 R_5 g_m - C_5 L_4)}{2R_5 g_m + s^5 (2C_1 C_4 C_5 L_4 L_5 R_1 R_5 g_m + 2C_1 C_4 C_5 L_4 L_5 R_1 + 2C_1 C_4 C_5 L_4 L_5 R_5) + s^4 (2C_1 C_4 L_4 L_5 R_1 g_m + 2C_1 C_4 L_4 L_5 + 2C_1 C_5 L_4 L_5 R_1 g_m + C_1 C_5 L_4 L_5 + 2C_4 C_5 L_4 L_5 R_5 g_m + 2C_4 C_5 L_4 L_5) + s^3 (2C_1 C_4 L_4 R_1 R_5 g_m + 2C_1 C_4 L_4 R_1 + 2C_1 C_4 L_4 R_5 + 2C_1 C_5 L_5 R_1 R_5 g_m - C_1 C_5 L_4 L_5 R_5) + s^2 (2C_1 C_5 R_1 R_5 + 2C_4 L_4 R_5 g_m + 2C_5 L_4 R_5 g_m + 2C_5 L_5 R_5) + s (2C_1 R_1 R_5 + 2L_4 R_5 g_m)}$$

$$\mathbf{10.409 \quad INVALID-ORDER-409} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \frac{L_4 s}{C_4 L_4 s^2 + 1}, \quad \frac{R_5 (C_5 L_5 s^2 + 1)}{C_5 L_5 s^2 + C_5 R_5 s + 1}, \quad \infty \right)$$

$$H(s) = \frac{s^4 (C_1 C_5 L_4 L_5 R_1 R_5 g_m - C_1 C_5 L_4 L_5 R_1) + s^3 (-C_1 C_5 L_4 R_1 R_5 + C_5 L_4 L_5 R_5 g_m - C_5 L_4 L_5) + s^2 (C_1 L_4 R_1 g_m + C_5 L_4 R_5 g_m - C_5 L_4)}{2R_5 g_m + s^5 (2C_1 C_4 C_5 L_4 L_5 R_1 R_5 g_m + 2C_1 C_4 C_5 L_4 L_5 R_1 + 2C_1 C_4 C_5 L_4 L_5 R_5) + s^4 (2C_1 C_4 C_5 L_4 R_1 R_5 + 2C_1 C_5 L_4 L_5 R_1 g_m + C_1 C_5 L_4 L_5 + 2C_4 C_5 L_4 L_5 R_5 g_m + 2C_4 C_5 L_4 L_5) + s^3 (2C_1 C_4 L_4 R_1 R_5 g_m + 2C_1 C_4 L_4 R_1 + 2C_1 C_4 L_4 R_5 + 2C_1 C_5 L_4 R_1 R_5 g_m + C_1 C_5 L_4 R_5 + 2C_4 C_5 L_4 R_5 g_m + 2C_4 C_5 L_4 R_5) + s^2 (2C_1 C_5 R_1 R_5 + 2C_4 L_4 R_5 g_m + 2C_5 L_4 R_5 g_m + 2C_5 L_5 R_5) + s (2C_1 R_1 R_5 + 2L_4 R_5 g_m)}$$

$$\mathbf{10.410 \quad INVALID-ORDER-410} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad L_4 s + R_4 + \frac{1}{C_4 s}, \quad R_5, \quad \infty \right)$$

$$H(s) = \frac{R_5 g_m + s^3 (C_1 C_4 L_4 R_1 R_5 g_m - C_1 C_4 L_4 R_1) + s^2 (C_1 C_4 R_1 R_4 R_5 g_m - C_1 C_4 R_1 R_4 + C_4 L_4 R_5 g_m - C_4 L_4) + s (C_1 R_1 R_5 g_m - C_1 R_1 + C_4 R_4 R_5 g_m - C_4 R_4) - 1}{2g_m + s^3 (2C_1 C_4 L_4 R_1 g_m + C_1 C_4 L_4) + s^2 (2C_1 C_4 R_1 R_4 g_m + 2C_1 C_4 R_1 R_5 g_m + 2C_1 C_4 R_1 + C_1 C_4 R_4 + 2C_1 C_4 R_5 + 2C_4 L_4 g_m) + s (2C_1 R_1 g_m + C_1 + 2C_4 R_4 g_m + 2C_4 R_5 g_m + 2C_4)}$$

$$\mathbf{10.411 \quad INVALID-ORDER-411} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad L_4 s + R_4 + \frac{1}{C_4 s}, \quad \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{-C_1 C_4 C_5 L_4 R_1 s^4 + g_m + s^3 (-C_1 C_4 C_5 R_1 R_4 + C_1 C_4 L_4 R_1 g_m - C_4 C_5 L_4) + s^2 (C_1 C_4 R_1 R_4 g_m - C_1 C_5 R_1 - C_4 C_5 R_4 + C_4 L_4 g_m) + s (C_1 R_1 g_m + C_4 R_4 g_m - C_5)}{s^4 (2C_1 C_4 C_5 L_4 R_1 g_m + C_1 C_4 C_5 L_4) + s^3 (2C_1 C_4 C_5 R_1 R_4 g_m + 2C_1 C_4 C_5 R_1 + C_1 C_4 C_5 R_4 + 2C_4 C_5 L_4 g_m) + s^2 (2C_1 C_4 R_1 g_m + 2C_1 C_4 + 2C_1 C_5 R_1 g_m + C_1 C_5 + 2C_4 C_5 R_4 g_m + 2C_4 C_5) + s (2C_4 g_m + 2C_5 g_m)}$$

$$\mathbf{10.412 \quad INVALID-ORDER-412} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad L_4 s + R_4 + \frac{1}{C_4 s}, \quad \frac{R_5}{C_5 R_5 s + 1}, \quad \infty \right)$$

$$H(s) = \frac{-C_1 C_4 C_5 L_4 R_1 R_5 s^4 + R_5 g_m + s^3 (-C_1 C_4 C_5 R_1 R_4 R_5 + C_1 C_4 L_4 R_1 R_5 g_m - C_1 C_4 L_4 R_1 - C_4 C_5 L_4 R_5) + s^2 (C_1 C_4 R_1 R_4 R_5 g_m - C_1 C_4 R_1 R_4 - C_1 C_5 R_1 R_5 - C_4 C_5 R_4 R_5 + C_4 L_4 R_5 g_m - C_4 L_4) + s (C_1 R_1 R_5 g_m + C_4 R_4 R_5 g_m - C_5)}{2g_m + s^4 (2C_1 C_4 C_5 L_4 R_1 R_5 g_m + C_1 C_4 C_5 L_4 R_5) + s^3 (2C_1 C_4 C_5 R_1 R_4 R_5 g_m + 2C_1 C_4 C_5 R_1 R_5 + C_1 C_4 C_5 R_4 R_5 + 2C_1 C_4 L_4 R_1 g_m + C_1 C_4 L_4 + 2C_4 C_5 L_4 R_5 g_m) + s^2 (2C_1 C_4 R_1 R_4 g_m + 2C_1 C_4 R_1 R_5 g_m + 2C_1 C_4 R_1 + C_1 C_4 R_4 + 2C_1 C_4 R_5 + 2C_1 C_5 R_1 R_5 g_m + C_1 C_5 R_5) + s (C_1 R_1 R_5 g_m + C_4 R_4 R_5 g_m - C_5)}$$

$$\mathbf{10.413 \quad INVALID-ORDER-413} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad L_4 s + R_4 + \frac{1}{C_4 s}, \quad R_5 + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{g_m + s^4 (C_1 C_4 C_5 L_4 R_1 R_5 g_m - C_1 C_4 C_5 L_4 R_1) + s^3 (C_1 C_4 C_5 R_1 R_4 R_5 g_m - C_1 C_4 C_5 R_1 R_4 + C_1 C_4 L_4 R_1 g_m + C_4 C_5 L_4 R_5 g_m - C_4 C_5 L_4) + s^2 (C_1 C_4 R_1 R_4 g_m + C_1 C_5 R_1 R_5 g_m - C_1 C_5 R_1 + C_4 C_5 R_4 R_5 g_m - C_4 C_5 R_4 + C_4 L_4 g_m) + s (C_1 R_1 g_m + C_4 R_4 g_m + C_5 R_5 g_m - C_5)}{s^4 (2C_1 C_4 C_5 L_4 R_1 g_m + C_1 C_4 C_5 L_4) + s^3 (2C_1 C_4 C_5 R_1 R_4 g_m + 2C_1 C_4 C_5 R_1 R_5 g_m + 2C_1 C_4 C_5 R_1 + C_1 C_4 C_5 R_4 + 2C_1 C_4 C_5 R_5 + 2C_4 C_5 L_4 g_m) + s^2 (2C_1 C_4 R_1 g_m + 2C_1 C_4 + 2C_1 C_5 R_1 g_m + C_1 C_5 + 2C_4 C_5 R_4 g_m + 2C_4 C_5 R_5 g_m + 2C_4 C_5) + s (2C_4 g_m + 2C_5 g_m)}$$

$$\mathbf{10.414 \quad INVALID-ORDER-414} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad L_4 s + R_4 + \frac{1}{C_4 s}, \quad L_5 s + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{C_1 C_4 C_5 L_4 L_5 R_1 g_m s^5 + g_m + s^4 (-C_1 C_4 C_5 L_4 R_1 + C_1 C_4 C_5 L_5 R_1 R_4 g_m + C_4 C_5 L_4 L_5 g_m) + s^3 (-C_1 C_4 C_5 R_1 R_4 + C_1 C_4 L_4 R_1 g_m + C_1 C_5 L_5 R_1 g_m - C_4 C_5 L_4 + C_4 C_5 L_5 R_4 g_m) + s^2 (C_1 C_4 R_1 R_4 g_m - C_1 C_5 R_1 - C_4 C_5 R_4 + C_4 L_4 g_m + C_5 L_5 g_m) + s (C_1 R_1 g_m + C_4 R_4 g_m - C_5)}{s^4 (2C_1 C_4 C_5 L_4 R_1 g_m + C_1 C_4 C_5 L_4 + 2C_1 C_4 C_5 L_5 R_1 g_m + 2C_1 C_4 C_5 L_5) + s^3 (2C_1 C_4 C_5 R_1 R_4 g_m + 2C_1 C_4 C_5 R_1 + C_1 C_4 C_5 R_4 + 2C_4 C_5 L_4 g_m + 2C_4 C_5 L_5 g_m) + s^2 (2C_1 C_4 R_1 g_m + 2C_1 C_4 + 2C_1 C_5 R_1 g_m + C_1 C_5 + 2C_4 C_5 R_4 g_m + 2C_4 C_5) + s (2C_4 g_m + 2C_5 g_m)}$$

$$\mathbf{10.415 \quad INVALID-ORDER-415} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad L_4 s + R_4 + \frac{1}{C_4 s}, \quad \frac{L_5 s}{C_5 L_5 s^2 + 1}, \quad \infty \right)$$

$$H(s) = \frac{-C_1 C_4 C_5 L_4 L_5 R_1 s^5 + s^4 (-C_1 C_4 C_5 L_5 R_1 R_4 + C_1 C_4 L_4 L_5 R_1 g_m - C_4 C_5 L_4 L_5) + s^3 (-C_1 C_4 L_4 R_1 + C_1 C_4 L_5 R_1 R_4 g_m - C_1 C_5 L_5 R_1 - C_4 C_5 L_5 R_4 + C_4 L_4 L_5 g_m) + s^2 (-C_1 C_4 R_1 R_4 + C_1 L_5 R_1 g_m - C_4 L_4 + C_4 L_5 R_4 g_m) + s (C_1 R_1 g_m + C_4 R_4 g_m - C_5)}{2g_m + s^5 (2C_1 C_4 C_5 L_4 L_5 R_1 g_m + C_1 C_4 C_5 L_4 L_5) + s^4 (2C_1 C_4 C_5 L_5 R_1 R_4 g_m + 2C_1 C_4 C_5 L_5 R_1 + C_1 C_4 C_5 L_5 R_4 + 2C_4 C_5 L_4 L_5 g_m) + s^3 (2C_1 C_4 L_4 R_1 g_m + C_1 C_4 L_4 + 2C_1 C_4 L_5 R_1 g_m + 2C_1 C_4 L_5 + 2C_1 C_5 L_5 R_1 g_m + C_1 C_5 L_5 + 2C_4 C_5 L_5 R_4 g_m + 2C_4 C_5 L_5) + s^2 (2C_1 C_4 R_1 g_m + 2C_1 C_4 L_4 + 2C_1 C_4 L_5 R_4 g_m - C_4 L_4 + C_4 L_5 R_4 g_m) + s (C_1 R_1 g_m + C_4 R_4 g_m - C_5)}$$

$$\mathbf{10.416 \quad INVALID-ORDER-416} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad L_4 s + R_4 + \frac{1}{C_4 s}, \quad L_5 s + R_5 + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{C_1 C_4 C_5 L_4 L_5 R_1 g_m s^5 + g_m + s^4 (C_1 C_4 C_5 L_4 R_1 R_5 g_m - C_1 C_4 C_5 L_4 R_1 + C_1 C_4 C_5 L_5 R_1 R_4 g_m + C_4 C_5 L_4 L_5 g_m) + s^3 (C_1 C_4 C_5 R_1 R_4 R_5 g_m - C_1 C_4 C_5 R_1 R_4 + C_1 C_4 L_4 R_1 g_m + C_1 C_5 L_5 R_1 g_m + C_4 C_5 L_4 R_5 g_m - C_4 C_5 L_4 + C_4 C_5 L_5 R_4 g_m) + s^2 (C_1 C_4 R_1 R_4 g_m + C_1 C_5 R_1 R_5 g_m - C_4 C_5 R_4 + C_4 L_4 g_m + C_5 L_5 g_m) + s (C_1 R_1 g_m + C_4 R_4 g_m + C_5 R_5 g_m - C_5)}{s^4 (2C_1 C_4 C_5 L_4 R_1 g_m + C_1 C_4 C_5 L_4 + 2C_1 C_4 C_5 L_5 R_1 g_m + 2C_1 C_4 C_5 L_5) + s^3 (2C_1 C_4 C_5 R_1 R_4 g_m + 2C_1 C_4 C_5 R_1 R_5 g_m + 2C_1 C_4 C_5 R_1 + C_1 C_4 C_5 R_4 + 2C_1 C_4 C_5 R_5 + 2C_4 C_5 L_4 g_m + 2C_4 C_5 L_5 g_m) + s^2 (2C_1 C_4 R_1 g_m + 2C_1 C_4 + 2C_1 C_5 R_1 g_m + C_1 C_5 + 2C_4 C_5 R_4 g_m + 2C_4 C_5 R_5 g_m + 2C_4 C_5) + s (2C_4 g_m + 2C_5 g_m)}$$

$$\mathbf{10.417 \quad INVALID-ORDER-417} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad L_4 s + R_4 + \frac{1}{C_4 s}, \quad \frac{L_5 R_5 s}{C_5 L_5 R_5 s^2 + L_5 s + R_5}, \quad \infty \right)$$

$$H(s) = \frac{-C_1 C_4 C_5 L_4 L_5 R_1 R_5 s^5 - R_5 + s^4 (-C_1 C_4 C_5 L_5 R_1 R_4 R_5 + C_1 C_4 L_4 L_5 R_1 R_5 g_m - C_1 C_4 L_4 L_5 R_1 - C_4 C_5 L_4 L_5 R_5) + s^3 (-C_1 C_4 L_4 R_1 R_5 + C_1 C_4 L_5 R_1 R_4 R_5 g_m - C_1 C_5 L_5 R_1 R_5 - C_4 C_5 L_5 R_4 R_5 + C_4 L_4 L_5 g_m) + s^2 (-C_1 C_4 R_1 R_4 R_5 g_m + C_1 C_5 R_1 R_5 g_m - C_4 C_5 R_4 R_5 + C_4 L_4 R_5 g_m - C_4 L_4) + s (C_1 R_1 R_5 g_m + C_4 R_4 R_5 g_m - C_5)}{2R_5 g_m + s^5 (2C_1 C_4 C_5 L_4 L_5 R_1 R_5 g_m + C_1 C_4 C_5 L_4 L_5 R_5) + s^4 (2C_1 C_4 C_5 L_5 R_1 R_4 R_5 g_m + 2C_1 C_4 C_5 L_5 R_1 R_5 + C_1 C_4 C_5 L_5 R_4 R_5 + 2C_1 C_4 L_4 L_5 R_1 g_m + C_1 C_4 L_4 L_5 + 2C_4 C_5 L_4 L_5 R_5 g_m) + s^3 (2C_1 C_4 L_4 R_1 R_5 g_m + C_1 C_4 L_4 R_5 + 2C_1 C_4 L_5 R_1 R_4 g_m + 2C_1 C_4 L_5 R_1 R_5 g_m - C_4 C_5 R_4 R_5 + C_4 L_4 R_5 g_m - C_4 L_4) + s^2 (-C_1 C_4 R_1 R_4 R_5 g_m + C_1 C_5 R_1 R_5 g_m - C_4 C_5 R_4 R_5 + C_4 L_4 R_5 g_m - C_4 L_4) + s (C_1 R_1 R_5 g_m + C_4 R_4 R_5 g_m - C_5)}$$

$$\mathbf{10.418 \quad INVALID-ORDER-418} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad L_4 s + R_4 + \frac{1}{C_4 s}, \quad \frac{C_5 L_5 R_5 s^2 + L_5 s + R_5}{C_5 L_5 s^2 + 1}, \quad \infty \right)$$

$$H(s) = \frac{R_5 g_m + s^5 (C_1 C_4 C_5 L_4 L_5 R_1 R_5 g_m - C_1 C_4 C_5 L_4 L_5 R_1) + s^4 (C_1 C_4 C_5 L_5 R_1 R_4 R_5 g_m - C_1 C_4 C_5 L_5 R_1 R_4 + C_1 C_4 L_4 L_5 R_1 g_m + C_4 C_5 L_4 L_5 R_5 g_m - C_4 C_5 L_4 L_5) + s^3 (C_1 C_4 L_4 R_1 R_5 g_m - C_1 C_4 L_4 R_1 + C_1 C_4 L_5 R_1 R_4 g_m + C_1 C_5 L_5 R_1 R_5 g_m - C_1 C_5 L_5 R_1 + C_4 C_5 L_5 R_4 R_5 g_m - C_4 C_5 L_5 R_4 + C_4 L_4 L_5 g_m) + s^2 (C_1 C_4 R_1 R_4 R_5 g_m - C_1 C_5 R_1 R_5 g_m - C_4 C_5 R_4 R_5 + C_4 L_4 R_5 g_m - C_4 L_4) + s (C_1 R_1 R_5 g_m + C_4 R_4 R_5 g_m - C_5)}{2g_m + s^5 (2C_1 C_4 C_5 L_4 L_5 R_1 g_m + C_1 C_4 C_5 L_4 L_5) + s^4 (2C_1 C_4 C_5 L_5 R_1 R_4 g_m + 2C_1 C_4 C_5 L_5 R_1 R_5 g_m + 2C_1 C_4 C_5 L_5 R_1 + C_1 C_4 C_5 L_5 R_4 + 2C_1 C_4 C_5 L_5 R_5 + 2C_4 C_5 L_4 L_5 g_m) + s^3 (2C_1 C_4 L_4 R_1 g_m + C_1 C_4 L_4 + 2C_1 C_4 L_5 R_1 g_m + 2C_1 C_4 L_5 + 2C_1 C_5 L_5 R_1 g_m + C_1 C_5 L_5 + 2C_4 C_5 L_5 R_4 g_m - C_4 C_5 L_5 R_4 + C_4 L_4 L_5 g_m) + s^2 (-C_1 C_4 R_1 R_4 R_5 g_m + C_1 C_5 R_1 R_5 g_m - C_4 C_5 R_4 R_5 + C_4 L_4 R_5 g_m - C_4 L_4) + s (C_1 R_1 R_5 g_m + C_4 R_4 R_5 g_m - C_5)}$$

$$\mathbf{10.419 \quad INVALID-ORDER-419} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad L_4 s + R_4 + \frac{1}{C_4 s}, \quad \frac{R_5 (C_5 L_5 s^2 + 1)}{C_5 L_5 s^2 + C_5 R_5 s + 1}, \quad \infty \right)$$

$$H(s) = \frac{R_5 g_m + s^5 (C_1 C_4 C_5 L_4 L_5 R_1 R_5 g_m - C_1 C_4 C_5 L_4 L_5 R_1) + s^4 (-C_1 C_4 C_5 L_4 R_1 R_5 + C_1 C_4 C_5 L_5 R_1 R_4 R_5 g_m - C_1 C_4 C_5 L_5 R_1 R_4 + C_4 C_5 L_4 L_5 R_5 g_m - C_4 C_5 L_4 L_5) + s^3 (-C_1 C_4 C_5 R_1 R_4 R_5 + C_1 C_4 L_4 L_5 R_1 R_5 g_m - C_1 C_5 L_5 R_1 R_5 - C_4 C_5 L_5 R_4 R_5 + C_4 L_4 L_5 g_m) + s^2 (-C_1 C_4 R_1 R_4 R_5 g_m + C_1 C_5 R_1 R_5 g_m - C_4 C_5 R_4 R_5 + C_4 L_4 R_5 g_m - C_4 L_4) + s (C_1 R_1 R_5 g_m + C_4 R_4 R_5 g_m - C_5)}{2g_m + s^5 (2C_1 C_4 C_5 L_4 L_5 R_1 g_m + C_1 C_4 C_5 L_4 L_5) + s^4 (2C_1 C_4 C_5 L_4 R_1 R_5 g_m + C_1 C_4 C_5 L_4 R_5 + 2C_1 C_4 C_5 L_5 R_1 R_4 g_m + 2C_1 C_4 C_5 L_5 R_1 R_5 g_m + 2C_1 C_4 C_5 L_5 R_1 + C_1 C_4 C_5 L_5 R_4 + 2C_1 C_4 C_5 L_5 R_5 + 2C_4 C_5 L_4 L_5 g_m) + s^3 (2C_1 C_4 C_5 R_1 R_4 R_5 g_m + 2C_1 C_4 C_5 R_1 R_5 + C_1 C_4 C_5 L_4 L_5 R_1 R_5 g_m - C_1 C_5 L_5 R_1 R_5 - C_4 C_5 L_5 R_4 R_5 + C_4 L_4 L_5 g_m) + s^2 (-C_1 C_4 R_1 R_4 R_5 g_m + C_1 C_5 R_1 R_5 g_m - C_4 C_5 R_4 R_5 + C_4 L_4 R_5 g_m - C_4 L_4) + s (C_1 R_1 R_5 g_m + C_4 R_4 R_5 g_m - C_5)}$$

$$\mathbf{10.420 \quad INVALID-ORDER-420} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \frac{L_4 R_4 s}{C_4 L_4 R_4 s^2 + L_4 s + R_4}, \quad R_5, \quad \infty \right)$$

$$H(s) = \frac{s^2 (C_1 L_4 R_1 R_4 R_5 g_m - C_1 L_4 R_1 R_4) + s (L_4 R_4 R_5 g_m - L_4 R_4)}{2 R_4 R_5 g_m + 2 R_4 + s^3 (2 C_1 C_4 L_4 R_1 R_4 R_5 g_m + 2 C_1 C_4 L_4 R_1 R_4 + 2 C_1 C_4 L_4 R_4 R_5) + s^2 (2 C_1 L_4 R_1 R_4 g_m + 2 C_1 L_4 R_1 R_5 g_m + 2 C_1 L_4 R_1 + C_1 L_4 R_4 + 2 C_1 L_4 R_5 + 2 C_4 L_4 R_4 R_5 g_m + 2 C_4 L_4 R_4) + s (2 C_1 R_1 R_4 R_5 g_m + 2 C_1 R_1 R_4 + 2 C_1 R_4 R_5 + 2 L_4 R_4 g_m + 2 L_4 R_5 g_m + 2 L_4 R_4)}$$

$$\mathbf{10.421 \quad INVALID-ORDER-421} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \frac{L_4 R_4 s}{C_4 L_4 R_4 s^2 + L_4 s + R_4}, \quad \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{-C_1 C_5 L_4 R_1 R_4 s^3 + L_4 R_4 g_m s + s^2 (C_1 L_4 R_1 R_4 g_m - C_5 L_4 R_4)}{2 C_1 C_4 C_5 L_4 R_1 R_4 s^4 + 2 R_4 g_m + s^3 (2 C_1 C_4 L_4 R_1 R_4 g_m + 2 C_1 C_4 L_4 R_4 + 2 C_1 C_5 L_4 R_1 R_4 g_m + 2 C_1 C_5 L_4 R_1 + C_1 C_5 L_4 R_4 + 2 C_4 C_5 L_4 R_4) + s^2 (2 C_1 C_5 R_1 R_4 + 2 C_1 L_4 R_1 g_m + 2 C_1 L_4 + 2 C_4 L_4 R_4 g_m + 2 C_5 L_4 R_4 g_m + 2 C_5 L_4) + s (2 C_1 R_1 R_4 g_m + 2 C_1 R_4 + 2 C_5 R_4 + 2 L_4 g_m)}$$

$$\mathbf{10.422 \quad INVALID-ORDER-422} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \frac{L_4 R_4 s}{C_4 L_4 R_4 s^2 + L_4 s + R_4}, \quad \frac{R_5}{C_5 R_5 s + 1}, \quad \infty \right)$$

$$H(s) = \frac{-C_1 C_5 L_4 R_1 R_4 R_5 s^3 + s^2 (C_1 L_4 R_1 R_4 R_5 g_m - C_1 L_4 R_1 R_4 - C_5 L_4 R_4 R_5) + s (L_4 R_4 R_5 g_m - L_4 R_4)}{2 C_1 C_4 C_5 L_4 R_1 R_4 R_5 s^4 + 2 R_4 R_5 g_m + 2 R_4 + s^3 (2 C_1 C_4 L_4 R_1 R_4 R_5 g_m + 2 C_1 C_4 L_4 R_1 R_4 + 2 C_1 C_4 L_4 R_4 R_5 + 2 C_1 C_5 L_4 R_1 R_4 R_5 g_m + 2 C_1 C_5 L_4 R_1 R_5 + C_1 C_5 L_4 R_4 R_5 + 2 C_4 C_5 L_4 R_4 R_5) + s^2 (2 C_1 C_5 R_1 R_4 R_5 + 2 C_1 L_4 R_1 R_4 g_m + 2 C_1 L_4 R_1 R_5 g_m + 2 C_1 L_4 R_1 + C_1 L_4 R_4)}$$

$$\mathbf{10.423 \quad INVALID-ORDER-423} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \frac{L_4 R_4 s}{C_4 L_4 R_4 s^2 + L_4 s + R_4}, \quad R_5 + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{L_4 R_4 g_m s + s^3 (C_1 C_5 L_4 R_1 R_4 R_5 g_m - C_1 C_5 L_4 R_1 R_4) + s^2 (C_1 L_4 R_1 R_4 g_m + C_5 L_4 R_4 R_5 g_m - C_5 L_4 R_4)}{2 R_4 g_m + s^4 (2 C_1 C_4 C_5 L_4 R_1 R_4 R_5 g_m + 2 C_1 C_4 C_5 L_4 R_1 R_4 + 2 C_1 C_4 C_5 L_4 R_4 R_5) + s^3 (2 C_1 C_4 L_4 R_1 R_4 g_m + 2 C_1 C_4 L_4 R_4 + 2 C_1 C_5 L_4 R_1 R_4 g_m + 2 C_1 C_5 L_4 R_1 R_5 g_m + 2 C_1 C_5 L_4 R_1 + C_1 C_5 L_4 R_4 + 2 C_1 C_5 L_4 R_5 + 2 C_4 C_5 L_4 R_4 R_5 g_m + 2 C_4 C_5 L_4 R_4) + s^2 (2 C_1 C_5 R_1 R_4 R_5 g_m)}$$

$$\mathbf{10.424 \quad INVALID-ORDER-424} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \frac{L_4 R_4 s}{C_4 L_4 R_4 s^2 + L_4 s + R_4}, \quad L_5 s + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{C_1 C_5 L_4 L_5 R_1 R_4 g_m s^4 + L_4 R_4 g_m s + s^3 (-C_1 C_5 L_4 R_1 R_4 + C_5 L_4 L_5 R_4 g_m) + s^2 (C_1 L_4 R_1 R_4 g_m - C_5 L_4 L_5 R_4)}{2 R_4 g_m + s^5 (2 C_1 C_4 C_5 L_4 L_5 R_1 R_4 g_m + 2 C_1 C_4 C_5 L_4 L_5 R_4) + s^4 (2 C_1 C_4 C_5 L_4 R_1 R_4 + 2 C_1 C_5 L_4 L_5 R_1 g_m + 2 C_1 C_5 L_4 L_5 + 2 C_4 C_5 L_4 L_5 R_4 g_m) + s^3 (2 C_1 C_4 L_4 R_1 R_4 g_m + 2 C_1 C_4 L_4 R_4 + 2 C_1 C_5 L_4 R_1 R_4 g_m + 2 C_1 C_5 L_4 R_1 + C_1 C_5 L_4 R_4 + 2 C_1 C_5 L_5 R_1 R_4 g_m + 2 C_1 C_5 L_5 R_4)}$$

$$\mathbf{10.425 \quad INVALID-ORDER-425} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \frac{L_4 R_4 s}{C_4 L_4 R_4 s^2 + L_4 s + R_4}, \quad \frac{L_5 s}{C_5 L_5 s^2 + 1}, \quad \infty \right)$$

$$H(s) = \frac{-C_1 C_5 L_4 L_5 R_1 R_4 s^4 - L_4 R_4 s + s^3 (C_1 L_4 L_5 R_1 R_4 g_m - C_5 L_4 L_5 R_4) + s^2 (-C_1 L_4 R_1 R_4 + L_4 L_5 R_4 g_m)}{2 C_1 C_4 C_5 L_4 L_5 R_1 R_4 s^5 + 2 R_4 + s^4 (2 C_1 C_4 L_4 L_5 R_1 R_4 g_m + 2 C_1 C_4 L_4 L_5 R_4 + 2 C_1 C_5 L_4 L_5 R_1 R_4 g_m + 2 C_1 C_5 L_4 L_5 R_1 + C_1 C_5 L_4 L_5 R_4 + 2 C_4 C_5 L_4 L_5 R_4) + s^3 (2 C_1 C_4 L_4 R_1 R_4 + 2 C_1 C_5 L_5 R_1 R_4 + 2 C_1 L_4 L_5 R_1 g_m + 2 C_1 L_4 L_5 + 2 C_4 L_4 L_5 R_4 g_m + 2 C_5 L_4 L_5 R_4 g_m + 2 C_5 L_4)}$$

$$\mathbf{10.426 \quad INVALID-ORDER-426} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \frac{L_4 R_4 s}{C_4 L_4 R_4 s^2 + L_4 s + R_4}, \quad L_5 s + R_5 + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{C_1 C_5 L_4 L_5 R_1 R_4 g_m s^4 + L_4 R_4}{2 R_4 g_m + s^5 (2 C_1 C_4 C_5 L_4 L_5 R_1 R_4 g_m + 2 C_1 C_4 C_5 L_4 L_5 R_4) + s^4 (2 C_1 C_4 C_5 L_4 R_1 R_4 R_5 g_m + 2 C_1 C_4 C_5 L_4 R_1 R_4 + 2 C_1 C_4 C_5 L_4 R_4 R_5 + 2 C_1 C_5 L_4 L_5 R_1 g_m + 2 C_1 C_5 L_4 L_5 + 2 C_4 C_5 L_4 L_5 R_4 g_m) + s^3 (2 C_1 C_4 L_4 R_1 R_4 g_m + 2 C_1 C_4 L_4 R_4 + 2 C_1 C_5 L_4 R_1 R_4 g_m + 2 C_1 C_5 L_4 R_1 R_5)}$$

$$\mathbf{10.427 \quad INVALID-ORDER-427} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \frac{L_4 R_4 s}{C_4 L_4 R_4 s^2 + L_4 s + R_4}, \quad \frac{L_5 R_5 s}{C_5 L_5 R_5 s^2 + L_5 s + R_5}, \quad \infty \right)$$

$$H(s) = \frac{-C_1 C_5 L_4 L_5 R_1 R_4}{2 C_1 C_4 C_5 L_4 L_5 R_1 R_4 R_5 s^5 + 2 R_4 R_5 + s^4 (2 C_1 C_4 L_4 L_5 R_1 R_4 R_5 g_m + 2 C_1 C_4 L_4 L_5 R_1 R_4 + 2 C_1 C_4 L_4 L_5 R_4 R_5 + 2 C_1 C_5 L_4 L_5 R_1 R_4 R_5 g_m + 2 C_1 C_5 L_4 L_5 R_1 R_5 + C_1 C_5 L_4 L_5 R_4 R_5 + 2 C_4 C_5 L_4 L_5 R_4 R_5) + s^3 (2 C_1 C_4 L_4 R_1 R_4 R_5 + 2 C_1 C_5 L_5 R_1 R_4 R_5 + 2 C_1 L_4 L_5 R_1 R_4 g_m + 2 C_1 L_4 L_5 R_1 R_5)}$$

$$\mathbf{10.428 \quad INVALID-ORDER-428} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \frac{L_4 R_4 s}{C_4 L_4 R_4 s^2 + L_4 s + R_4}, \quad \frac{C_5 L_5 R_5 s^2 + L_5 s + R_5}{C_5 L_5 s^2 + 1}, \quad \infty \right)$$

$$H(s) = \frac{2 R_4 R_5 g_m + 2 R_4 + s^5 (2 C_1 C_4 C_5 L_4 L_5 R_1 R_4 R_5 g_m + 2 C_1 C_4 C_5 L_4 L_5 R_1 R_4 + 2 C_1 C_4 C_5 L_4 L_5 R_4 R_5) + s^4 (2 C_1 C_4 L_4 L_5 R_1 R_4 g_m + 2 C_1 C_4 L_4 L_5 R_4 + 2 C_1 C_5 L_4 L_5 R_1 R_4 g_m + 2 C_1 C_5 L_4 L_5 R_1 R_5 g_m + 2 C_1 C_5 L_4 L_5 R_1 + C_1 C_5 L_4 L_5 R_4 + 2 C_1 C_5 L_4 L_5 R_5 + 2 C_4 C_5 L_4 L_5 R_4 R_5 g_m)}$$

$$\mathbf{10.429 \quad INVALID-ORDER-429} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \frac{L_4 R_4 s}{C_4 L_4 R_4 s^2 + L_4 s + R_4}, \quad \frac{R_5 (C_5 L_5 s^2 + 1)}{C_5 L_5 s^2 + C_5 R_5 s + 1}, \quad \infty \right)$$

$$H(s) = \frac{2 R_4 R_5 g_m + 2 R_4 + s^5 (2 C_1 C_4 C_5 L_4 L_5 R_1 R_4 R_5 g_m + 2 C_1 C_4 C_5 L_4 L_5 R_1 R_4 + 2 C_1 C_4 C_5 L_4 L_5 R_4 R_5) + s^4 (2 C_1 C_4 C_5 L_4 R_1 R_4 R_5 + 2 C_1 C_5 L_4 L_5 R_1 R_4 g_m + 2 C_1 C_5 L_4 L_5 R_1 R_5 g_m + 2 C_1 C_5 L_4 L_5 R_1 + C_1 C_5 L_4 L_5 R_4 + 2 C_1 C_5 L_4 L_5 R_5 + 2 C_4 C_5 L_4 L_5 R_4 R_5 g_m + 2 C_4 C_5 L_4 L_5 R_4)}$$

$$\mathbf{10.430 \quad INVALID-ORDER-430} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \frac{C_4 L_4 R_4 s^2 + L_4 s + R_4}{C_4 L_4 s^2 + 1}, \quad R_5, \quad \infty \right)$$

$$H(s) = \frac{R_4 R_5 g_m - R_4 + s^3 (C_1 C_4 L_4 R_1 R_4 R_5 g_m - C_1 C_4 L_4 R_1 R_4) + s^2 (C_1 L_4 R_1 R_5 g_m - C_1 L_4 R_1 + C_4 L_4 R_4 R_5 g_m - C_4 L_4 R_4) + s (C_1 R_1 R_4 R_5 g_m - C_1 R_1 R_4 + L_4 R_5 g_m - L_4)}{2 R_4 g_m + 2 R_5 g_m + s^3 (2 C_1 C_4 L_4 R_1 R_4 g_m + 2 C_1 C_4 L_4 R_1 R_5 g_m + 2 C_1 C_4 L_4 R_1 + C_1 C_4 L_4 R_4 + 2 C_1 C_4 L_4 R_5) + s^2 (2 C_1 L_4 R_1 g_m + C_1 L_4 + 2 C_4 L_4 R_4 g_m + 2 C_4 L_4 R_5 g_m + 2 C_4 L_4) + s (2 C_1 R_1 R_4 g_m + 2 C_1 R_1 R_5 g_m + 2 C_1 R_1 + C_1 R_4 + 2 C_1 R_5 + 2 L_4 g_m) + 2}$$

$$\mathbf{10.431 \quad INVALID-ORDER-431} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \frac{C_4 L_4 R_4 s^2 + L_4 s + R_4}{C_4 L_4 s^2 + 1}, \quad \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{-C_1 C_4 C_5 L_4 R_1 R_4 s^4 + R_4 g_m + s^3 (C_1 C_4 L_4 R_1 R_4 g_m - C_1 C_5 L_4 R_1 - C_4 C_5 L_4 R_4) + s^2 (-C_1 C_5 R_1 R_4 + C_1 L_4 R_1 g_m + C_4 L_4 R_4 g_m - C_5 L_4) + s (C_1 R_1 R_4 g_m - C_5 R_4 + L_4 g_m)}{2 g_m + s^4 (2 C_1 C_4 C_5 L_4 R_1 R_4 g_m + 2 C_1 C_4 C_5 L_4 R_1 + C_1 C_4 C_5 L_4 R_4) + s^3 (2 C_1 C_4 L_4 R_1 g_m + 2 C_1 C_4 L_4 + 2 C_1 C_5 L_4 R_1 g_m + C_1 C_5 L_4 + 2 C_4 C_5 L_4 R_4 g_m + 2 C_4 C_5 L_4) + s^2 (2 C_1 C_5 R_1 R_4 g_m + 2 C_1 C_5 R_1 + C_1 C_5 R_4 + 2 C_4 L_4 g_m + 2 C_5 L_4 g_m) + s (2 C_1 R_1 g_m + 2 C_1 + 2 C_5 R_4 g_m)}$$

$$\mathbf{10.432 \quad INVALID-ORDER-432} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \frac{C_4 L_4 R_4 s^2 + L_4 s + R_4}{C_4 L_4 s^2 + 1}, \quad \frac{R_5}{C_5 R_5 s + 1}, \quad \infty \right)$$

$$H(s) = \frac{-C_1 C_4 C_5 L_4 R_1 R_4 R_5 s^4 + R_4 R_5 g_m - R_4 + s^3 (C_1 C_4 L_4 R_1 R_4 R_5 g_m - C_1 C_4 L_4 R_1 R_4 - C_1 C_5 L_4 R_1 R_5 - C_4 C_5 L_4 R_4 R_5) + s^2 (-C_1 C_5 R_1 R_4 R_5 + C_1 L_4 R_1 R_5 g_m)}{2 R_4 g_m + 2 R_5 g_m + s^4 (2 C_1 C_4 C_5 L_4 R_1 R_4 R_5 g_m + 2 C_1 C_4 C_5 L_4 R_1 R_5 + C_1 C_4 C_5 L_4 R_4 R_5) + s^3 (2 C_1 C_4 L_4 R_1 R_4 g_m + 2 C_1 C_4 L_4 R_1 R_5 g_m + 2 C_1 C_4 L_4 R_1 + C_1 C_4 L_4 R_4 + 2 C_1 C_4 L_4 R_5 + 2 C_1 C_5 L_4 R_1 R_5 g_m + C_1 C_5 L_4 R_5 + 2 C_4 C_5 L_4 R_4 R_5 g_m + 2 C_4 C_5 L_4 R_5) + s^2 (2 C_1 C_5 R_1 R_4 g_m + 2 C_1 C_5 R_1 R_5 g_m + 2 C_1 C_5 R_1 R_4 R_5 + C_1 L_4 R_1 R_5 g_m)}$$

$$\mathbf{10.433 \quad INVALID-ORDER-433} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \frac{C_4 L_4 R_4 s^2 + L_4 s + R_4}{C_4 L_4 s^2 + 1}, \quad R_5 + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{R_4 g_m + s^4 (C_1 C_4 C_5 L_4 R_1 R_4 R_5 g_m - C_1 C_4 C_5 L_4 R_1 R_4) + s^3 (C_1 C_4 L_4 R_1 R_4 g_m + C_1 C_5 L_4 R_1 R_5 g_m - C_1 C_5 L_4 R_1 + C_4 C_5 L_4 R_4 R_5 g_m - C_4 C_5 L_4 R_4) + s^2 (C_1 C_5 R_1 R_4 R_5 g_m - C_1 C_5 R_1 R_4 + C_1 L_4 R_1 g_m + C_4 L_4 R_4 g_m + C_5 L_4)}{2 g_m + s^4 (2 C_1 C_4 C_5 L_4 R_1 R_4 g_m + 2 C_1 C_4 C_5 L_4 R_1 R_5 g_m + 2 C_1 C_4 C_5 L_4 R_1 + C_1 C_4 C_5 L_4 R_4 + 2 C_1 C_4 C_5 L_4 R_5) + s^3 (2 C_1 C_4 L_4 R_1 g_m + 2 C_1 C_4 L_4 + 2 C_1 C_5 L_4 R_1 g_m + C_1 C_5 L_4 + 2 C_4 C_5 L_4 R_4 g_m + 2 C_4 C_5 L_4 R_5 g_m + 2 C_4 C_5 L_4) + s^2 (2 C_1 C_5 R_1 R_4 g_m + 2 C_1 C_5 R_1 R_5 g_m + 2 C_1 C_5 R_1 R_4 R_5 + C_1 L_4 R_1 g_m)}$$

$$\mathbf{10.434 \quad INVALID-ORDER-434} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \frac{C_4 L_4 R_4 s^2 + L_4 s + R_4}{C_4 L_4 s^2 + 1}, \quad L_5 s + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{C_1 C_4 C_5 L_4 L_5 R_1 R_4 g_m s^5 + R_4 g_m + s^4 (-C_1 C_4 C_5 L_4 R_1 R_4 + C_1 C_5 L_4 L_5 R_1 g_m + C_4 C_5 L_4 L_5 R_4 g_m) + s^3 (C_1 C_4 L_4 R_1 R_4 g_m - C_1 C_5 L_4 R_1 + C_1 C_5 L_5 R_1 R_4 g_m - C_4 C_5 L_4 R_4 + C_5 L_4 L_5 g_m) + s^2 (-C_1 C_5 R_1 R_4 + C_1 L_4 R_1 g_m + C_4 L_4 R_4 g_m + C_5 L_4)}{2 g_m + s^5 (2 C_1 C_4 C_5 L_4 L_5 R_1 R_4 g_m + 2 C_1 C_4 C_5 L_4 L_5) + s^4 (2 C_1 C_4 C_5 L_4 R_1 R_4 g_m + 2 C_1 C_4 C_5 L_4 R_1 + C_1 C_4 C_5 L_4 R_4 + 2 C_4 C_5 L_4 L_5 g_m) + s^3 (2 C_1 C_4 L_4 R_1 g_m + 2 C_1 C_4 L_4 + 2 C_1 C_5 L_4 R_1 g_m + C_1 C_5 L_4 + 2 C_1 C_5 L_5 R_1 g_m + 2 C_1 C_5 L_5 + 2 C_4 C_5 L_4 R_4 g_m + 2 C_4 C_5 L_4) + s^2 (2 C_1 C_5 R_1 R_4 g_m + 2 C_1 C_5 R_1 R_5 g_m + 2 C_1 C_5 R_1 R_4 R_5 + C_1 L_4 R_1 g_m)}$$

$$\mathbf{10.435 \quad INVALID-ORDER-435} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \frac{C_4 L_4 R_4 s^2 + L_4 s + R_4}{C_4 L_4 s^2 + 1}, \quad \frac{L_5 s}{C_5 L_5 s^2 + 1}, \quad \infty \right)$$

$$H(s) = \frac{-C_1 C_4 C_5 L_4 L_5 R_1 R_4 s^5 - R_4 + s^4 (C_1 C_4 L_4 L_5 R_1 R_4 g_m - C_1 C_5 L_4 L_5 R_1 - C_4 C_5 L_4 L_5 R_4) + s^3 (-C_1 C_4 L_4 R_1 R_4 - C_1 C_5 L_5 R_1 R_4 + C_1 L_4 L_5 R_1 g_m + C_4 L_4 L_5 R_4 g_m)}{2 R_4 g_m + s^5 (2 C_1 C_4 C_5 L_4 L_5 R_1 R_4 g_m + 2 C_1 C_4 C_5 L_4 L_5 R_1 + C_1 C_4 C_5 L_4 L_5 R_4) + s^4 (2 C_1 C_4 L_4 L_5 R_1 g_m + 2 C_1 C_4 L_4 L_5 + 2 C_1 C_5 L_4 L_5 R_1 g_m + C_1 C_5 L_4 L_5 + 2 C_4 C_5 L_4 L_5 R_4 g_m + 2 C_4 C_5 L_4 L_5) + s^3 (2 C_1 C_4 L_4 R_1 R_4 g_m + 2 C_1 C_4 L_4 R_1 + C_1 C_4 L_4 R_4 + 2 C_1 C_5 L_5 R_1 R_4 g_m + 2 C_1 C_5 L_5 R_1 R_4 + C_1 L_4 L_5 R_1 g_m)}$$

$$\mathbf{10.436 \quad INVALID-ORDER-436} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \frac{C_4 L_4 R_4 s^2 + L_4 s + R_4}{C_4 L_4 s^2 + 1}, \quad L_5 s + R_5 + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{C_1 C_4 C_5 L_4 L_5 R_1 R_4 g_m s^5 + R_4 g_m + s^4 (C_1 C_4 C_5 L_4 R_1 R_4 R_5 g_m - C_1 C_4 C_5 L_4 R_1 R_4 + C_1 C_5 L_4 L_5 R_1 g_m + C_4 C_5 L_4 L_5 R_4 g_m) + s^3 (C_1 C_4 L_4 R_1 R_4 g_m + C_1 C_5 L_4 R_1 R_5 g_m - C_1 C_5 L_4 R_1 + C_1 C_5 L_5 R_1 R_4 g_m + C_4 C_5 L_4 R_4 R_5 g_m - C_4 C_5 L_4 R_4)}{2 g_m + s^5 (2 C_1 C_4 C_5 L_4 L_5 R_1 R_4 g_m + 2 C_1 C_4 C_5 L_4 L_5) + s^4 (2 C_1 C_4 C_5 L_4 R_1 R_4 g_m + 2 C_1 C_4 C_5 L_4 R_1 R_5 g_m + 2 C_1 C_4 C_5 L_4 R_1 + C_1 C_4 C_5 L_4 R_4 + 2 C_1 C_4 C_5 L_4 R_5 + 2 C_4 C_5 L_4 L_5 g_m) + s^3 (2 C_1 C_4 L_4 R_1 g_m + 2 C_1 C_4 L_4 + 2 C_1 C_5 L_4 R_1 g_m + C_1 C_5 L_4 + 2 C_1 C_5 L_5 R_1 g_m + 2 C_1 C_5 L_5 + 2 C_4 C_5 L_4 R_4 g_m + 2 C_4 C_5 L_4 R_5 + C_4 C_5 L_4 L_5 g_m)}$$

$$\mathbf{10.437 \quad INVALID-ORDER-437} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \frac{C_4 L_4 R_4 s^2 + L_4 s + R_4}{C_4 L_4 s^2 + 1}, \quad \frac{L_5 R_5 s}{C_5 L_5 R_5 s^2 + L_5 s + R_5}, \quad \infty \right)$$

$$H(s) = \frac{-C_1 C_4 C_5 L_4 L_5 R_1 R_4 R_5 s^5 - R_4 R_5 + s^4 (C_1 C_4 L_4 L_5 R_1 R_4 R_5 g_m - C_1 C_4 L_4 L_5 R_1 R_4 - C_1 C_5 L_4 L_5 R_1 R_5 - C_4 C_5 L_4 L_5 R_4 R_5) + s^3 (-C_1 C_4 L_4 R_1 R_4 R_5 g_m - C_1 C_5 L_4 L_5 R_1 R_5 + C_1 L_4 L_5 R_1 R_5 g_m + C_4 L_4 L_5 R_4 R_5 g_m - C_4 C_5 L_4 L_5 R_4 R_5)}{2 R_4 R_5 g_m + 2 R_5 + s^5 (2 C_1 C_4 C_5 L_4 L_5 R_1 R_4 R_5 g_m + 2 C_1 C_4 C_5 L_4 L_5 R_1 R_5 + C_1 C_4 C_5 L_4 L_5 R_4 R_5) + s^4 (2 C_1 C_4 L_4 L_5 R_1 R_4 g_m + 2 C_1 C_4 L_4 L_5 R_1 R_5 g_m + 2 C_1 C_4 L_4 L_5 R_1 + C_1 C_4 L_4 L_5 R_4 + 2 C_1 C_4 L_4 L_5 R_5 + 2 C_1 C_5 L_4 L_5 R_1 R_5 g_m + C_1 C_5 L_4 L_5 R_5 + 2 C_4 C_5 L_4 L_5 R_4 R_5 g_m + 2 C_4 C_5 L_4 L_5 R_4 R_5 + C_4 C_5 L_4 L_5 R_4 R_5)}$$

$$\mathbf{10.438 \quad INVALID-ORDER-438} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \frac{C_4 L_4 R_4 s^2 + L_4 s + R_4}{C_4 L_4 s^2 + 1}, \quad \frac{C_5 L_5 R_5 s^2 + L_5 s + R_5}{C_5 L_5 s^2 + 1}, \quad \infty \right)$$

$$H(s) = \frac{R_4 R_5 g_m - R_4 + s^5 (C_1 C_4 C_5 L_4 L_5 R_1 R_4 R_5 g_m - C_1 C_4 C_5 L_4 L_5 R_1 R_4) + s^4 (C_1 C_4 L_4 L_5 R_1 R_4 g_m + C_1 C_5 L_4 L_5 R_1 R_5 g_m - C_1 C_5 L_4 L_5 R_1 + C_4 C_5 L_4 L_5 R_4 R_5 g_m - C_4 C_5 L_4 L_5 R_4 R_5)}{2 R_4 g_m + 2 R_5 g_m + s^5 (2 C_1 C_4 C_5 L_4 L_5 R_1 R_4 g_m + 2 C_1 C_4 C_5 L_4 L_5 R_1 R_5 g_m + 2 C_1 C_4 C_5 L_4 L_5 R_1 + C_1 C_4 C_5 L_4 L_5 R_4 + 2 C_1 C_4 C_5 L_4 L_5 R_5) + s^4 (2 C_1 C_4 L_4 L_5 R_1 g_m + 2 C_1 C_4 L_4 L_5 + 2 C_1 C_5 L_4 L_5 R_1 g_m + C_1 C_5 L_4 L_5 + 2 C_4 C_5 L_4 L_5 R_4 g_m + 2 C_4 C_5 L_4 L_5 R_5 g_m + 2 C_4 C_5 L_4 L_5)}$$

$$\mathbf{10.439 \quad INVALID-ORDER-439} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \frac{C_4 L_4 R_4 s^2 + L_4 s + R_4}{C_4 L_4 s^2 + 1}, \quad \frac{R_5 (C_5 L_5 s^2 + 1)}{C_5 L_5 s^2 + C_5 R_5 s + 1}, \quad \infty \right)$$

$$H(s) = \frac{R_4 R_5 g_m - R_4 + s^5 (C_1 C_4 C_5 L_4 L_5 R_1 R_4 R_5 g_m - C_1 C_4 C_5 L_4 L_5 R_1 R_4) + s^4 (-C_1 C_4 C_5 L_4 R_1 R_4 R_5 + C_1 L_4 L_5 R_1 R_5 g_m + C_4 L_4 L_5 R_4 R_5 g_m - C_4 C_5 L_4 L_5 R_4 R_5)}{2 R_4 g_m + 2 R_5 g_m + s^5 (2 C_1 C_4 C_5 L_4 L_5 R_1 R_4 g_m + 2 C_1 C_4 C_5 L_4 L_5 R_1 R_5 g_m + 2 C_1 C_4 C_5 L_4 L_5 R_1 + C_1 C_4 C_5 L_4 L_5 R_4 + 2 C_1 C_4 C_5 L_4 L_5 R_5) + s^4 (2 C_1 C_4 C_5 L_4 R_1 R_4 R_5 g_m + 2 C_1 C_4 C_5 L_4 R_1 R_5 + C_1 C_4 C_5 L_4 R_4 R_5 + 2 C_1 C_5 L_4 L_5 R_1 g_m + C_1 C_5 L_4 L_5 + 2 C_4 C_5 L_4 L_5 R_4 g_m + 2 C_4 C_5 L_4 L_5 R_5 + C_4 C_5 L_4 L_5 R_4 R_5)}$$

10.440 INVALID-ORDER-440 $Z(s) = \left(R_1 + \frac{1}{C_1 s}, \infty, \infty, \frac{R_4(C_4 L_4 s^2 + 1)}{C_4 L_4 s^2 + C_4 R_4 s + 1}, R_5, \infty \right)$

$$H(s) = \frac{R_4 R_5 g_m - R_4 + s^3 (C_1 C_4 L_4 R_1 R_4 R_5 g_m - C_1 C_4 L_4 R_1 R_4) + s^2 (C_4 L_4 R_4 R_5 g_m - C_4 L_4 R_4) + s (C_1 R_1 R_4 R_5 g_m - C_1 R_1 R_4)}{2R_4 g_m + 2R_5 g_m + s^3 (2C_1 C_4 L_4 R_1 R_4 g_m + 2C_1 C_4 L_4 R_1 R_5 g_m + 2C_1 C_4 L_4 R_1 + C_1 C_4 L_4 R_4 + 2C_1 C_4 L_4 R_5) + s^2 (2C_1 C_4 R_1 R_4 R_5 g_m + 2C_1 C_4 R_1 R_4 + 2C_1 C_4 R_4 R_5 + 2C_4 L_4 R_4 g_m + 2C_4 L_4 R_5 g_m + 2C_4 L_4) + s (2C_1 R_1 R_4 g_m + 2C_1 R_1 R_5 g_m + 2C_1 R_1 + C_1 R_4 + 2C_1 R_5)}$$

10.441 INVALID-ORDER-441 $Z(s) = \left(R_1 + \frac{1}{C_1 s}, \infty, \infty, \frac{R_4(C_4 L_4 s^2 + 1)}{C_4 L_4 s^2 + C_4 R_4 s + 1}, \frac{1}{C_5 s}, \infty \right)$

$$H(s) = \frac{-C_1 C_4 C_5 L_4 R_1 R_4 s^4 + R_4 g_m + s^3 (C_1 C_4 L_4 R_1 R_4 g_m - C_4 C_5 L_4 R_4) + s^2 (-C_1 C_5 R_1 R_4 + C_4 L_4 R_4 g_m) + s (C_1 R_1 R_4 g_m - C_5 R_4)}{2g_m + s^4 (2C_1 C_4 C_5 L_4 R_1 R_4 g_m + 2C_1 C_4 C_5 L_4 R_1 + C_1 C_4 C_5 L_4 R_4) + s^3 (2C_1 C_4 C_5 R_1 R_4 + 2C_1 C_4 L_4 R_1 g_m + 2C_1 C_4 L_4 + 2C_4 C_5 L_4 R_4 g_m + 2C_4 C_5 L_4) + s^2 (2C_1 C_4 R_1 R_4 g_m + 2C_1 C_4 R_4 + 2C_1 C_5 R_1 R_4 g_m + 2C_1 C_5 R_1 + C_1 C_5 R_4 + 2C_4 C_5 R_4 + 2C_4 L_4 g_m) + s (2C_1 R_1 g_m)}$$

10.442 INVALID-ORDER-442 $Z(s) = \left(R_1 + \frac{1}{C_1 s}, \infty, \infty, \frac{R_4(C_4 L_4 s^2 + 1)}{C_4 L_4 s^2 + C_4 R_4 s + 1}, \frac{R_5}{C_5 R_5 s + 1}, \infty \right)$

$$H(s) = \frac{-C_1 C_4 C_5 L_4 R_1 R_4 R_5 s^4 + R_4 R_5 g_m - R_4 + s^3 (C_1 C_4 L_4 R_1 R_4 R_5 g_m - C_1 C_4 L_4 R_1 R_4 - C_4 C_5 L_4 R_4 R_5) + s^2}{2R_4 g_m + 2R_5 g_m + s^4 (2C_1 C_4 C_5 L_4 R_1 R_4 R_5 g_m + 2C_1 C_4 C_5 L_4 R_1 R_5 + C_1 C_4 C_5 L_4 R_4 R_5) + s^3 (2C_1 C_4 C_5 R_1 R_4 R_5 + 2C_1 C_4 L_4 R_1 R_4 g_m + 2C_1 C_4 L_4 R_1 R_5 g_m + 2C_1 C_4 L_4 R_1 + C_1 C_4 L_4 R_4 + 2C_1 C_4 L_4 R_5 + 2C_4 C_5 L_4 R_4 R_5 g_m + 2C_4 C_5 L_4 R_5) + s^2 (2C_1 C_4 R_1 R_4 R_5 g_m + 2C_1 C_4 R_1 R_4 R_5)}.$$

10.443 INVALID-ORDER-443 $Z(s) = \left(R_1 + \frac{1}{C_1 s}, \infty, \infty, \frac{R_4(C_4 L_4 s^2 + 1)}{C_4 L_4 s^2 + C_4 R_4 s + 1}, R_5 + \frac{1}{C_5 s}, \infty \right)$

$$H(s) = \frac{R_4 g_m + s^4 (C_1 C_4 C_5 L_4 R_1 R_4 R_5 g_m - C_1 C_4 C_5 L_4 R_1 R_4) + s^3 (C_1 C_4 L_4 R_1 R_4 g_m + C_4 C_5 L_4 R_4 R_5 g_m - C_4 C_5 L_4 R_4) + s^2 (C_1 C_5 R_1 R_4 R_5)}{2g_m + s^4 (2C_1 C_4 C_5 L_4 R_1 R_4 g_m + 2C_1 C_4 C_5 L_4 R_1 R_5 g_m + 2C_1 C_4 C_5 L_4 R_1 + C_1 C_4 C_5 L_4 R_4 + 2C_1 C_4 C_5 L_4 R_5) + s^3 (2C_1 C_4 C_5 R_1 R_4 R_5 g_m + 2C_1 C_4 C_5 R_1 R_4 + 2C_1 C_4 C_5 R_4 R_5 + 2C_1 C_4 L_4 R_1 g_m + 2C_1 C_4 L_4 + 2C_4 C_5 L_4 R_4 g_m + 2C_4 C_5 L_4 R_5 g_m + 2C_4 C_5 L_4) + s^2 (2C_1 C_4 R_1 R_4 R_5)}$$

10.444 INVALID-ORDER-444 $Z(s) = \left(R_1 + \frac{1}{C_1 s}, \infty, \infty, \frac{R_4(C_4 L_4 s^2 + 1)}{C_4 L_4 s^2 + C_4 R_4 s + 1}, L_5 s + \frac{1}{C_5 s}, \infty \right)$

$$H(s) = \frac{C_1 C_4 C_5 L_4 L_5 R_1 R_4 g_m s^5 + R_4 g_m + s^4 (-C_1 C_4 C_5 L_4 R_1 R_4 + C_4 C_5 L_4 L_5 R_4 g_m) + s^3 (C_1 C_4 L_4 R_1 R_4 g_m + C_1 C_5 L_5 R_1 R_4 g_m - C_4 C_5 L_4 R_4)}{2g_m + s^5 (2C_1 C_4 C_5 L_4 L_5 R_1 g_m + 2C_1 C_4 C_5 L_4 L_5) + s^4 (2C_1 C_4 C_5 L_4 R_1 R_4 g_m + 2C_1 C_4 C_5 L_4 R_1 + C_1 C_4 C_5 L_4 R_4 + 2C_1 C_4 C_5 L_5 R_1 R_4 g_m + 2C_1 C_4 C_5 L_5 R_4 + 2C_4 C_5 L_4 L_5 g_m) + s^3 (2C_1 C_4 C_5 R_1 R_4 + 2C_1 C_4 L_4 R_1 g_m + 2C_1 C_4 L_4 + 2C_1 C_5 L_5 R_1 g_m + 2C_1 C_5 L_5 + 2C_4 C_5 L_4}$$

10.445 INVALID-ORDER-445 $Z(s) = \left(R_1 + \frac{1}{C_1 s}, \infty, \infty, \frac{R_4(C_4 L_4 s^2 + 1)}{C_4 L_4 s^2 + C_4 R_4 s + 1}, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \infty \right)$

$$H(s) = \frac{-C_1 C_4 C_5 L_4 L_5 R_1 R_4 s^5 - R_4 + s^4 (C_1 C_4 L_4 L_5 R_1 R_4 g_m - C_4 C_5 L_4 L_5 R_4) + s^3 (-C_1 C_4 L_4 R_1 R_4 - C_1 C_5 L_5 R_1 R_4) + s^2 (2C_1 C_4 C_5 L_4 L_5 R_1 R_4 g_m + 2C_1 C_4 C_5 L_4 L_5 R_1 + C_1 C_4 C_5 L_4 L_5 R_4) + s (2C_1 C_4 C_5 L_5 R_1 R_4 + 2C_1 C_4 L_4 L_5 R_1 g_m + 2C_1 C_4 L_4 L_5 + 2C_4 C_5 L_4 L_5 R_4 g_m + 2C_4 C_5 L_4 L_5) + s^0 (2C_1 C_4 L_4 R_1 R_4 g_m + 2C_1 C_4 L_4 R_1 + C_1 C_4 L_4 R_4 + 2C_1 C_4 L_5 R_1 R_4 g_m + 2C_1 C_4 L_5 R_4 + 2C_4 C_5 L_4 L_5 R_1 R_4 g_m + 2C_4 C_5 L_4 L_5 R_1 + C_4 C_5 L_4 L_5 R_4)}{2R_4 g_m + s^5 (2C_1 C_4 C_5 L_4 L_5 R_1 R_4 g_m + 2C_1 C_4 C_5 L_4 L_5 R_1 + C_1 C_4 C_5 L_4 L_5 R_4) + s^4 (2C_1 C_4 C_5 L_5 R_1 R_4 + 2C_1 C_4 L_4 L_5 R_1 g_m + 2C_1 C_4 L_4 L_5 + 2C_4 C_5 L_4 L_5 R_4 g_m + 2C_4 C_5 L_4 L_5) + s^3 (2C_1 C_4 L_4 R_1 R_4 g_m + 2C_1 C_4 L_4 R_1 + C_1 C_4 L_4 R_4 + 2C_1 C_4 L_5 R_1 R_4 g_m + 2C_1 C_4 L_5 R_4 + 2C_4 C_5 L_4 L_5 R_1 R_4 g_m + 2C_4 C_5 L_4 L_5 R_1 + C_4 C_5 L_4 L_5 R_4)}$$

10.446 INVALID-ORDER-446 $Z(s) = \left(R_1 + \frac{1}{C_1 s}, \infty, \infty, \frac{R_4(C_4 L_4 s^2 + 1)}{C_4 L_4 s^2 + C_4 R_4 s + 1}, L_5 s + R_5 + \frac{1}{C_5 s}, \infty \right)$

$$H(s) = \frac{C_1 C_4 C_5 L_4 L_5 R_1 R_4 g_m s^5 + R_4 g_m + s^4 (C_1 C_4 C_5 L_4 R_1 R_4 R_5 g_m - C_1 C_4 C_5 L_4 R_1 R_4 + C_4 C_5 L}{2g_m + s^5 (2C_1 C_4 C_5 L_4 L_5 R_1 g_m + 2C_1 C_4 C_5 L_4 L_5) + s^4 (2C_1 C_4 C_5 L_4 R_1 R_4 g_m + 2C_1 C_4 C_5 L_4 R_1 R_5 g_m + 2C_1 C_4 C_5 L_4 R_1 + C_1 C_4 C_5 L_4 R_4 + 2C_1 C_4 C_5 L_4 R_5 + 2C_1 C_4 C_5 L_5 R_1 R_4 g_m + 2C_1 C_4 C_5 L_5 R_4 + 2C_4 C_5 L_4 L_5 g_m) + s^3 (2C_1 C_4 C_5 R_1 R_4 R_5 g_m + 2C_1 C_4 C_5 R_1 R_4 + 2C_1$$

10.447 INVALID-ORDER-447 $Z(s) = \left(R_1 + \frac{1}{C_1 s}, \infty, \infty, \frac{R_4(C_4 L_4 s^2 + 1)}{C_4 L_4 s^2 + C_4 R_4 s + 1}, \frac{L_5 R_5 s}{C_5 L_5 R_5 s^2 + L_5 s + R_5}, \infty \right)$

$$H(s) = \frac{-C_1 C_4 C_5 L_4 L_5 R}{2R_4 R_5 g_m + 2R_5 + s^5 (2C_1 C_4 C_5 L_4 L_5 R_1 R_4 R_5 g_m + 2C_1 C_4 C_5 L_4 L_5 R_1 R_5 + C_1 C_4 C_5 L_4 L_5 R_4 R_5) + s^4 (2C_1 C_4 C_5 L_5 R_1 R_4 R_5 + 2C_1 C_4 L_4 L_5 R_1 R_4 g_m + 2C_1 C_4 L_4 L_5 R_1 R_5 g_m + 2C_1 C_4 L_4 L_5 R_1 + C_1 C_4 L_4 L_5 R_4 + 2C_1 C_4 L_4 L_5 R_5 + 2C_4 C_5 L_4 L_5 R_4 R_5 g_m + 2C_4 C_5 L_4 L_5 R_5)}$$

10.448 INVALID-ORDER-448 $Z(s) = \left(R_1 + \frac{1}{C_1 s}, \infty, \infty, \frac{R_4(C_4 L_4 s^2 + 1)}{C_4 L_4 s^2 + C_4 R_4 s + 1}, \frac{C_5 L_5 R_5 s^2 + L_5 s + R_5}{C_5 L_5 s^2 + 1}, \infty \right)$

[illegible]

$$10.449 \quad \text{INVALID-ORDER-449} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \frac{R_4(C_4 L_4 s^2 + 1)}{C_4 L_4 s^2 + C_4 R_4 s + 1}, \quad \frac{R_5(C_5 L_5 s^2 + 1)}{C_5 L_5 s^2 + C_5 R_5 s + 1}, \quad \infty \right)$$

$$H(s) = \frac{2R_4 g_m + 2R_5 g_m + s^5 (2C_1 C_4 C_5 L_4 L_5 R_1 R_4 g_m + 2C_1 C_4 C_5 L_4 L_5 R_1 R_5 g_m + 2C_1 C_4 C_5 L_4 L_5 R_1 + C_1 C_4 C_5 L_4 L_5 R_4 + 2C_1 C_4 C_5 L_4 L_5 R_5) + s^4 (2C_1 C_4 C_5 L_4 R_1 R_4 R_5 g_m + 2C_1 C_4 C_5 L_4 R_1 R_5 + C_1 C_4 C_5 L_4 R_4 R_5 + 2C_1 C_4 C_5 L_5 R_1 R_4 R_5 g_m + 2C_1 C_4 C_5 L_5 R_1 R_4 + 2C_1 C_4 C_5 L_5 R_4 R_5)}{2R_4 g_m + 2R_5 g_m + s^5 (2C_1 C_4 C_5 L_4 L_5 R_1 R_4 g_m + 2C_1 C_4 C_5 L_4 L_5 R_1 R_5 g_m + 2C_1 C_4 C_5 L_4 L_5 R_1 + C_1 C_4 C_5 L_4 L_5 R_4 + 2C_1 C_4 C_5 L_4 L_5 R_5) + s^4 (2C_1 C_4 C_5 L_4 R_1 R_4 R_5 g_m + 2C_1 C_4 C_5 L_4 R_1 R_5 + C_1 C_4 C_5 L_4 R_4 R_5 + 2C_1 C_4 C_5 L_5 R_1 R_4 R_5 g_m + 2C_1 C_4 C_5 L_5 R_1 R_4 + 2C_1 C_4 C_5 L_5 R_4 R_5)}$$

$$10.450 \quad \text{INVALID-ORDER-450} \quad Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad R_4, \quad \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{-C_1 C_5 L_1 R_4 s^3 + C_1 L_1 R_4 g_m s^2 - C_5 R_4 s + R_4 g_m}{2g_m + s^3 (2C_1 C_5 L_1 R_4 g_m + 2C_1 C_5 L_1) + s^2 (C_1 C_5 R_4 + 2C_1 L_1 g_m) + s (2C_1 + 2C_5 R_4 g_m + 2C_5)}$$

$$10.451 \quad \text{INVALID-ORDER-451} \quad Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad R_4, \quad \frac{R_5}{C_5 R_5 s + 1}, \quad \infty \right)$$

$$H(s) = \frac{-C_1 C_5 L_1 R_4 R_5 s^3 - C_5 R_4 R_5 s + R_4 R_5 g_m - R_4 + s^2 (C_1 L_1 R_4 R_5 g_m - C_1 L_1 R_4)}{2R_4 g_m + 2R_5 g_m + s^3 (2C_1 C_5 L_1 R_4 R_5 g_m + 2C_1 C_5 L_1 R_5) + s^2 (C_1 C_5 R_4 R_5 + 2C_1 L_1 R_4 g_m + 2C_1 L_1 R_5 g_m + 2C_1 L_1) + s (C_1 R_4 + 2C_1 R_5 + 2C_5 R_4 R_5 g_m + 2C_5 R_5) + 2}$$

$$10.452 \quad \text{INVALID-ORDER-452} \quad Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad R_4, \quad R_5 + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{C_1 L_1 R_4 g_m s^2 + R_4 g_m + s^3 (C_1 C_5 L_1 R_4 R_5 g_m - C_1 C_5 L_1 R_4) + s (C_5 R_4 R_5 g_m - C_5 R_4)}{2g_m + s^3 (2C_1 C_5 L_1 R_4 g_m + 2C_1 C_5 L_1 R_5 g_m + 2C_1 C_5 L_1) + s^2 (C_1 C_5 R_4 + 2C_1 C_5 R_5 + 2C_1 L_1 g_m) + s (2C_1 + 2C_5 R_4 g_m + 2C_5 R_5 g_m + 2C_5)}$$

$$10.453 \quad \text{INVALID-ORDER-453} \quad Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad R_4, \quad L_5 s + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{C_1 C_5 L_1 L_5 R_4 g_m s^4 - C_1 C_5 L_1 R_4 s^3 - C_5 R_4 s + R_4 g_m + s^2 (C_1 L_1 R_4 g_m + C_5 L_5 R_4 g_m)}{2C_1 C_5 L_1 L_5 g_m s^4 + 2g_m + s^3 (2C_1 C_5 L_1 R_4 g_m + 2C_1 C_5 L_1 + 2C_1 C_5 L_5) + s^2 (C_1 C_5 R_4 + 2C_1 L_1 g_m + 2C_5 L_5 g_m) + s (2C_1 + 2C_5 R_4 g_m + 2C_5)}$$

$$10.454 \quad \text{INVALID-ORDER-454} \quad Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad R_4, \quad \frac{L_5 s}{C_5 L_5 s^2 + 1}, \quad \infty \right)$$

$$H(s) = \frac{-C_1 C_5 L_1 L_5 R_4 s^4 + C_1 L_1 L_5 R_4 g_m s^3 + L_5 R_4 g_m s - R_4 + s^2 (-C_1 L_1 R_4 - C_5 L_5 R_4)}{2R_4 g_m + s^4 (2C_1 C_5 L_1 L_5 R_4 g_m + 2C_1 C_5 L_1 L_5) + s^3 (C_1 C_5 L_5 R_4 + 2C_1 L_1 L_5 g_m) + s^2 (2C_1 L_1 R_4 g_m + 2C_1 L_1 + 2C_1 L_5 + 2C_5 L_5 R_4 g_m + 2C_5 L_5) + s (C_1 R_4 + 2L_5 g_m) + 2}$$

$$10.455 \quad \text{INVALID-ORDER-455} \quad Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad R_4, \quad L_5 s + R_5 + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{C_1 C_5 L_1 L_5 R_4 g_m s^4 + R_4 g_m + s^3 (C_1 C_5 L_1 R_4 R_5 g_m - C_1 C_5 L_1 R_4) + s^2 (C_1 L_1 R_4 g_m + C_5 L_5 R_4 g_m) + s (C_5 R_4 R_5 g_m - C_5 R_4)}{2C_1 C_5 L_1 L_5 g_m s^4 + 2g_m + s^3 (2C_1 C_5 L_1 R_4 g_m + 2C_1 C_5 L_1 R_5 g_m + 2C_1 C_5 L_1 + 2C_1 C_5 L_5) + s^2 (C_1 C_5 R_4 + 2C_1 C_5 R_5 + 2C_1 L_1 g_m + 2C_5 L_5 g_m) + s (2C_1 + 2C_5 R_4 g_m + 2C_5 R_5 g_m + 2C_5)}$$

$$10.456 \quad \text{INVALID-ORDER-456} \quad Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad R_4, \quad \frac{L_5 R_5 s}{C_5 L_5 R_5 s^2 + L_5 s + R_5}, \quad \infty \right)$$

$$H(s) = \frac{-C_1 C_5 L_1 L_5 R_4 R_5 s^4 - R_4 R_5 + s^3 (C_1 L_1 L_5 R_4 R_5 g_m - C_1 L_1 L_5 R_4) + s^2 (-C_1 L_1 R_4 R_5 - C_5 L_5 R_4 R_5) + s (L_5 R_4 R_5 g_m - L_5 R_4)}{2R_4 R_5 g_m + 2R_5 + s^4 (2C_1 C_5 L_1 L_5 R_4 R_5 g_m + 2C_1 C_5 L_1 L_5 R_5) + s^3 (C_1 C_5 L_5 R_4 R_5 + 2C_1 L_1 L_5 R_4 g_m + 2C_1 L_1 L_5 R_5 g_m + 2C_1 L_1 L_5) + s^2 (2C_1 L_1 R_4 R_5 g_m + 2C_1 L_1 R_5 + C_1 L_5 R_4 + 2C_1 L_5 R_5 + 2C_5 L_5 R_4 R_5 g_m + 2C_5 L_5 R_5) + s (C_1 R_4 R_5 + 2L_5 R_4 g_m + 2L_5 R_5 g_m + 2L_5)}$$

$$10.457 \quad \text{INVALID-ORDER-457} \quad Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad R_4, \quad \frac{C_5 L_5 R_5 s^2 + L_5 s + R_5}{C_5 L_5 s^2 + 1}, \quad \infty \right)$$

$$H(s) = \frac{C_1 L_1 L_5 R_4 g_m s^3 + L_5 R_4 g_m s + R_4 R_5 g_m - R_4 + s^4 (C_1 C_5 L_1 L_5 R_4 R_5 g_m - C_1 C_5 L_1 L_5 R_4) + s^2 (C_1 L_1 R_4 R_5 g_m - C_1 L_1 R_4 + C_5 L_5 R_4 R_5 g_m - C_5 L_5 R_4)}{2R_4 g_m + 2R_5 g_m + s^4 (2C_1 C_5 L_1 L_5 R_4 g_m + 2C_1 C_5 L_1 L_5 R_5 g_m + 2C_1 C_5 L_1 L_5) + s^3 (C_1 C_5 L_5 R_4 + 2C_1 C_5 L_5 R_5 + 2C_1 L_1 L_5 g_m) + s^2 (2C_1 L_1 R_4 g_m + 2C_1 L_1 R_5 g_m + 2C_1 L_1 + 2C_1 L_5 + 2C_5 L_5 R_4 g_m + 2C_5 L_5 R_5 g_m + 2C_5 L_5) + s (C_1 R_4 + 2C_1 R_5 + 2L_5 g_m) + 2}$$

$$10.458 \quad \text{INVALID-ORDER-458} \quad Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad R_4, \quad \frac{R_5(C_5 L_5 s^2 + 1)}{C_5 L_5 s^2 + C_5 R_5 s + 1}, \quad \infty \right)$$

$$H(s) = \frac{-C_1 C_5 L_1 R_4 R_5 s^3 - C_5 R_4 R_5 s + R_4 R_5 g_m - R_4 + s^4 (C_1 C_5 L_1 L_5 R_4 R_5 g_m - C_1 C_5 L_1 L_5 R_4) + s^2 (C_1 L_1 R_4 R_5 g_m - C_1 L_1 R_4 + C_5 L_5 R_4 R_5 g_m - C_5 L_5 R_4)}{2R_4 g_m + 2R_5 g_m + s^4 (2C_1 C_5 L_1 L_5 R_4 g_m + 2C_1 C_5 L_1 L_5 R_5 g_m + 2C_1 C_5 L_1 L_5) + s^3 (2C_1 C_5 L_1 R_4 R_5 g_m + 2C_1 C_5 L_1 R_5 + C_1 C_5 L_5 R_4 + 2C_1 C_5 L_5 R_5) + s^2 (C_1 C_5 R_4 R_5 + 2C_1 L_1 R_4 g_m + 2C_1 L_1 R_5 g_m + 2C_1 L_1 + 2C_5 L_5 R_4 g_m + 2C_5 L_5 R_5 g_m + 2C_5 L_5) + s (C_1 R_4 + 2C_1 R_5)}$$

$$10.459 \quad \text{INVALID-ORDER-459} \quad Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \frac{1}{C_4 s}, \quad R_5, \quad \infty \right)$$

$$H(s) = \frac{R_5 g_m + s^2 (C_1 L_1 R_5 g_m - C_1 L_1) - 1}{2g_m + s^3 (2C_1 C_4 L_1 R_5 g_m + 2C_1 C_4 L_1) + s^2 (2C_1 C_4 R_5 + 2C_1 L_1 g_m) + s (C_1 + 2C_4 R_5 g_m + 2C_4)}$$

$$10.460 \quad \text{INVALID-ORDER-460} \quad Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \frac{1}{C_4 s}, \quad \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{-C_1 C_5 L_1 s^3 + C_1 L_1 g_m s^2 - C_5 s + g_m}{2C_1 C_4 C_5 L_1 s^4 + s^3 (2C_1 C_4 L_1 g_m + 2C_1 C_5 L_1 g_m) + s^2 (2C_1 C_4 + C_1 C_5 + 2C_4 C_5) + s (2C_4 g_m + 2C_5 g_m)}$$

$$10.461 \quad \text{INVALID-ORDER-461} \quad Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \frac{1}{C_4 s}, \quad \frac{R_5}{C_5 R_5 s + 1}, \quad \infty \right)$$

$$H(s) = \frac{-C_1 C_5 L_1 R_5 s^3 - C_5 R_5 s + R_5 g_m + s^2 (C_1 L_1 R_5 g_m - C_1 L_1) - 1}{2C_1 C_4 C_5 L_1 R_5 s^4 + 2g_m + s^3 (2C_1 C_4 L_1 R_5 g_m + 2C_1 C_4 L_1 + 2C_1 C_5 L_1 R_5 g_m) + s^2 (2C_1 C_4 R_5 + C_1 C_5 R_5 + 2C_1 L_1 g_m + 2C_4 C_5 R_5) + s (C_1 + 2C_4 R_5 g_m + 2C_4 + 2C_5 R_5 g_m)}$$

$$10.462 \quad \text{INVALID-ORDER-462} \quad Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \frac{1}{C_4 s}, \quad R_5 + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{C_1 L_1 g_m s^2 + g_m + s^3 (C_1 C_5 L_1 R_5 g_m - C_1 C_5 L_1) + s (C_5 R_5 g_m - C_5)}{s^4 (2C_1 C_4 C_5 L_1 R_5 g_m + 2C_1 C_4 C_5 L_1) + s^3 (2C_1 C_4 C_5 R_5 + 2C_1 C_4 L_1 g_m + 2C_1 C_5 L_1 g_m) + s^2 (2C_1 C_4 + C_1 C_5 + 2C_4 C_5 R_5 g_m + 2C_4 C_5) + s (2C_4 g_m + 2C_5 g_m)}$$

$$10.463 \quad \text{INVALID-ORDER-463} \quad Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \frac{1}{C_4 s}, \quad L_5 s + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{C_1 C_5 L_1 L_5 g_m s^4 - C_1 C_5 L_1 s^3 - C_5 s + g_m + s^2 (C_1 L_1 g_m + C_5 L_5 g_m)}{2C_1 C_4 C_5 L_1 L_5 g_m s^5 + s^4 (2C_1 C_4 C_5 L_1 + 2C_1 C_4 C_5 L_5) + s^3 (2C_1 C_4 L_1 g_m + 2C_1 C_5 L_1 g_m + 2C_4 C_5 L_5 g_m) + s^2 (2C_1 C_4 + C_1 C_5 + 2C_4 C_5) + s (2C_4 g_m + 2C_5 g_m)}$$

$$10.464 \quad \text{INVALID-ORDER-464} \quad Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \frac{1}{C_4 s}, \quad \frac{L_5 s}{C_5 L_5 s^2 + 1}, \quad \infty \right)$$

$$H(s) = \frac{-C_1 C_5 L_1 L_5 s^4 + C_1 L_1 L_5 g_m s^3 + L_5 g_m s + s^2 (-C_1 L_1 - C_5 L_5) - 1}{2C_1 C_4 C_5 L_1 L_5 s^5 + 2g_m + s^4 (2C_1 C_4 L_1 L_5 g_m + 2C_1 C_5 L_1 L_5 g_m) + s^3 (2C_1 C_4 L_1 + 2C_1 C_4 L_5 + C_1 C_5 L_5 + 2C_4 C_5 L_5) + s^2 (2C_1 L_1 g_m + 2C_4 L_5 g_m + 2C_5 L_5 g_m) + s (C_1 + 2C_4)}$$

$$10.465 \quad \text{INVALID-ORDER-465} \quad Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \frac{1}{C_4 s}, \quad L_5 s + R_5 + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{C_1 C_5 L_1 L_5 g_m s^4 + g_m + s^3 (C_1 C_5 L_1 R_5 g_m - C_1 C_5 L_1) + s^2 (C_1 L_1 g_m + C_5 L_5 g_m) + s (C_5 R_5 g_m - C_5)}{2C_1 C_4 C_5 L_1 L_5 g_m s^5 + s^4 (2C_1 C_4 C_5 L_1 R_5 g_m + 2C_1 C_4 C_5 L_1 + 2C_1 C_4 C_5 L_5) + s^3 (2C_1 C_4 C_5 R_5 + 2C_1 C_4 L_1 g_m + 2C_1 C_5 L_1 g_m + 2C_4 C_5 L_5 g_m) + s^2 (2C_1 C_4 + C_1 C_5 + 2C_4 C_5 R_5 g_m + 2C_4 C_5) + s (2C_4 g_m + 2C_5 g_m)}$$

$$10.466 \quad \text{INVALID-ORDER-466} \quad Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \frac{1}{C_4 s}, \quad \frac{L_5 R_5 s}{C_5 L_5 R_5 s^2 + L_5 s + R_5}, \quad \infty \right)$$

$$H(s) = \frac{-C_1 C_5 L_1 L_5 R_5 s^4 - R_5 + s^3 (C_1 L_1 L_5 R_5 g_m - C_1 L_1 L_5) + s^2 (-C_1 L_1 R_5 - C_5 L_5 R_5) + s (L_5 R_5 g_m - L_5)}{2C_1 C_4 C_5 L_1 L_5 R_5 s^5 + 2R_5 g_m + s^4 (2C_1 C_4 L_1 L_5 R_5 g_m + 2C_1 C_4 L_1 L_5 + 2C_1 C_5 L_1 L_5 R_5 g_m) + s^3 (2C_1 C_4 L_1 R_5 + 2C_1 C_4 L_5 R_5 + C_1 C_5 L_5 R_5 + 2C_1 L_1 L_5 g_m + 2C_4 C_5 L_5 R_5) + s^2 (2C_1 L_1 R_5 g_m + C_1 L_5 + 2C_4 L_5 R_5 g_m + 2C_4 L_5 + 2C_5 L_5 R_5 g_m) + s (C_1 R_5 + 2C_4 R_5 + 2L_5 g_m)}$$

$$10.467 \quad \text{INVALID-ORDER-467} \quad Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \frac{1}{C_4 s}, \quad \frac{C_5 L_5 R_5 s^2 + L_5 s + R_5}{C_5 L_5 s^2 + 1}, \quad \infty \right)$$

$$H(s) = \frac{C_1 L_1 L_5 g_m s^3 + L_5 g_m s + R_5 g_m + s^4 (C_1 C_5 L_1 L_5 R_5 g_m - C_1 C_5 L_1 L_5) + s^2 (C_1 L_1 R_5 g_m - C_1 L_1 + C_5 L_5 R_5 g_m - C_5 L_5) - 1}{2g_m + s^5 (2C_1 C_4 C_5 L_1 L_5 R_5 g_m + 2C_1 C_4 C_5 L_1 L_5) + s^4 (2C_1 C_4 C_5 L_5 R_5 + 2C_1 C_4 L_1 L_5 g_m + 2C_1 C_5 L_1 L_5 g_m) + s^3 (2C_1 C_4 L_1 R_5 g_m + 2C_1 C_4 L_1 + 2C_1 C_4 L_5 + C_1 C_5 L_5 + 2C_4 C_5 L_5 R_5 g_m + 2C_4 C_5 L_5) + s^2 (2C_1 C_4 R_5 + 2C_1 L_1 g_m + 2C_4 L_5 g_m + 2C_5 L_5 g_m) + s (C_1 + 2C_4)}$$

$$\mathbf{10.468 \quad INVALID-ORDER-468} \quad Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \frac{1}{C_4 s}, \quad \frac{R_5(C_5 L_5 s^2 + 1)}{C_5 L_5 s^2 + C_5 R_5 s + 1}, \quad \infty \right)$$

$$H(s) = \frac{-C_1 C_5 L_1 R_5 s^3 - C_5 R_5 s + R_5 g_m + s^4 (C_1 C_5 L_1 L_5 R_5 g_m - C_1 C_5 L_1 L_5) + s^2 (C_1 L_1 R_5 g_m - C_1 L_1 + C_5 L_5 R_5 g_m - C_5 L_5) - 1}{2g_m + s^5 (2C_1 C_4 C_5 L_1 L_5 R_5 g_m + 2C_1 C_4 C_5 L_1 L_5) + s^4 (2C_1 C_4 C_5 L_1 R_5 + 2C_1 C_4 C_5 L_5 R_5 + 2C_1 C_5 L_1 L_5 g_m) + s^3 (2C_1 C_4 L_1 R_5 g_m + 2C_1 C_4 L_1 + 2C_1 C_5 L_1 R_5 g_m + C_1 C_5 L_5 + 2C_4 C_5 L_5 R_5 g_m + 2C_4 C_5 L_5) + s^2 (2C_1 C_4 R_5 + C_1 C_5 R_5 + 2C_1 L_1 g_m + 2C_4 C_5 R_5 + 2C_5 L_5 g_m) + s (C_1 R_4 + 2C_1 R_5 + 2C_4 R_4 R_5 g_m + 2C_4 R_4) + 2}$$

$$\mathbf{10.469 \quad INVALID-ORDER-469} \quad Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \frac{R_4}{C_4 R_4 s + 1}, \quad R_5, \quad \infty \right)$$

$$H(s) = \frac{R_4 R_5 g_m - R_4 + s^2 (C_1 L_1 R_4 R_5 g_m - C_1 L_1 R_4)}{2R_4 g_m + 2R_5 g_m + s^3 (2C_1 C_4 L_1 R_4 R_5 g_m + 2C_1 C_4 L_1 R_4) + s^2 (2C_1 C_4 R_4 R_5 + 2C_1 L_1 R_4 g_m + 2C_1 L_1 R_5 g_m + 2C_1 L_1) + s (C_1 R_4 + 2C_1 R_5 + 2C_4 R_4 R_5 g_m + 2C_4 R_4) + 2}$$

$$\mathbf{10.470 \quad INVALID-ORDER-470} \quad Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \frac{R_4}{C_4 R_4 s + 1}, \quad \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{-C_1 C_5 L_1 R_4 s^3 + C_1 L_1 R_4 g_m s^2 - C_5 R_4 s + R_4 g_m}{2C_1 C_4 C_5 L_1 R_4 s^4 + 2g_m + s^3 (2C_1 C_4 L_1 R_4 g_m + 2C_1 C_5 L_1 R_4 g_m + 2C_1 C_5 L_1) + s^2 (2C_1 C_4 R_4 + C_1 C_5 R_4 + 2C_1 L_1 g_m + 2C_4 C_5 R_4) + s (2C_1 + 2C_4 R_4 g_m + 2C_5 R_4 g_m + 2C_5)}$$

$$\mathbf{10.471 \quad INVALID-ORDER-471} \quad Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \frac{R_4}{C_4 R_4 s + 1}, \quad \frac{R_5}{C_5 R_5 s + 1}, \quad \infty \right)$$

$$H(s) = \frac{-C_1 C_5 L_1 R_4 R_5 s^3 - C_5 R_4 R_5 s + R_4 R_5 g_m - R_4 + s^2 (C_1 L_1 R_4 R_5 g_m - C_1 L_1 R_4)}{2C_1 C_4 C_5 L_1 R_4 R_5 s^4 + 2R_4 g_m + 2R_5 g_m + s^3 (2C_1 C_4 L_1 R_4 R_5 g_m + 2C_1 C_4 L_1 R_4 + 2C_1 C_5 L_1 R_4 R_5 g_m + 2C_1 C_5 L_1 R_5) + s^2 (2C_1 C_4 R_4 R_5 + C_1 C_5 R_4 R_5 + 2C_1 L_1 R_4 g_m + 2C_1 L_1 R_5 g_m + 2C_1 L_1 + 2C_4 C_5 R_4 R_5) + s (C_1 R_4 + 2C_1 R_5 + 2C_4 R_4 R_5 g_m + 2C_4 R_4 + 2C_5 R_4 R_5 g_m) + 2}$$

$$\mathbf{10.472 \quad INVALID-ORDER-472} \quad Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \frac{R_4}{C_4 R_4 s + 1}, \quad R_5 + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{C_1 L_1 R_4 g_m s^2 + R_4 g_m + s^3 (C_1 C_5 L_1 R_4 R_5 g_m - C_1 C_5 L_1 R_4) + s (C_5 R_4 R_5 g_m - C_5 R_4)}{2g_m + s^4 (2C_1 C_4 C_5 L_1 R_4 R_5 g_m + 2C_1 C_4 C_5 L_1 R_4) + s^3 (2C_1 C_4 C_5 R_4 R_5 + 2C_1 C_4 L_1 R_4 g_m + 2C_1 C_5 L_1 R_4 g_m + 2C_1 C_5 L_1 R_5 g_m + 2C_1 C_5 L_1) + s^2 (2C_1 C_4 R_4 + C_1 C_5 R_4 + 2C_1 C_5 R_5 + 2C_1 L_1 g_m + 2C_4 C_5 R_4 R_5 g_m + 2C_4 C_5 R_4) + s (2C_1 + 2C_4 R_4 g_m + 2C_5 R_4 g_m + 2C_5 R_4) + 2}$$

$$\mathbf{10.473 \quad INVALID-ORDER-473} \quad Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \frac{R_4}{C_4 R_4 s + 1}, \quad L_5 s + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{C_1 C_5 L_1 L_5 R_4 g_m s^4 - C_1 C_5 L_1 R_4 s^3 - C_5 R_4 s + R_4 g_m + s^2 (C_1 L_1 R_4 g_m + C_5 L_5 R_4 g_m)}{2C_1 C_4 C_5 L_1 L_5 R_4 g_m s^5 + 2g_m + s^4 (2C_1 C_4 C_5 L_1 R_4 + 2C_1 C_4 C_5 L_5 R_4 + 2C_1 C_5 L_1 L_5 g_m) + s^3 (2C_1 C_4 L_1 R_4 g_m + 2C_1 C_5 L_1 R_4 g_m + 2C_1 C_5 L_1 + 2C_1 C_5 L_5 + 2C_4 C_5 L_5 R_4 g_m) + s^2 (2C_1 C_4 R_4 + C_1 C_5 R_4 + 2C_1 L_1 g_m + 2C_4 C_5 R_4 + 2C_5 L_5 g_m) + s (2C_1 + 2C_4 R_4 g_m + 2C_5 L_5 g_m) + 2}$$

$$\mathbf{10.474 \quad INVALID-ORDER-474} \quad Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \frac{R_4}{C_4 R_4 s + 1}, \quad \frac{L_5 s}{C_5 L_5 s^2 + 1}, \quad \infty \right)$$

$$H(s) = \frac{-C_1 C_5 L_1 L_5 R_4 s^4 + C_1 L_1 L_5 R_4 g_m s^3 + L_5 R_4 g_m s - R_4 + s^2 (-C_1 L_1 R_4 - C_5 L_5 R_4)}{2C_1 C_4 C_5 L_1 L_5 R_4 s^5 + 2R_4 g_m + s^4 (2C_1 C_4 L_1 L_5 R_4 g_m + 2C_1 C_5 L_1 L_5 R_4 g_m + 2C_1 C_5 L_1 L_5) + s^3 (2C_1 C_4 L_1 R_4 + 2C_1 C_4 L_5 R_4 + C_1 C_5 L_5 R_4 + 2C_1 L_1 L_5 g_m + 2C_4 C_5 L_5 R_4) + s^2 (2C_1 L_1 R_4 g_m + 2C_1 L_1 + 2C_1 L_5 + 2C_4 L_5 R_4 g_m + 2C_5 L_5 R_4 g_m + 2C_5 L_5) + s (C_1 R_4 + 2C_4 R_4 g_m + 2C_5 L_5 g_m) + 2}$$

$$\mathbf{10.475 \quad INVALID-ORDER-475} \quad Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \frac{R_4}{C_4 R_4 s + 1}, \quad L_5 s + R_5 + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{C_1 C_5 L_1 L_5 R_4 g_m s^4 + R_4 g_m + s^3 (C_1 C_5 L_1 R_4 R_5 g_m - C_1 C_5 L_1 R_4) + s^2 (C_1 L_1 R_4 g_m + C_5 L_5 R_4 g_m) + s (C_5 R_4 R_5 g_m - C_5 R_4)}{2C_1 C_4 C_5 L_1 L_5 R_4 g_m s^5 + 2g_m + s^4 (2C_1 C_4 C_5 L_1 R_4 R_5 g_m + 2C_1 C_4 C_5 L_1 R_4 + 2C_1 C_4 C_5 L_5 R_4 + 2C_1 C_5 L_1 L_5 g_m) + s^3 (2C_1 C_4 C_5 R_4 R_5 + 2C_1 C_4 L_1 R_4 g_m + 2C_1 C_5 L_1 R_4 g_m + 2C_1 C_5 L_1 R_5 g_m + 2C_1 C_5 L_1 + 2C_1 C_5 L_5 + 2C_4 C_5 L_5 R_4 g_m) + s^2 (2C_1 C_4 R_4 + C_1 C_5 R_4 + 2C_1 L_1 g_m + 2C_4 C_5 R_4 R_5 g_m + 2C_4 C_5 R_4) + s (C_1 R_4 + 2C_4 R_4 g_m + 2C_5 L_5 g_m) + 2}$$

$$\mathbf{10.476 \quad INVALID-ORDER-476} \quad Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \frac{R_4}{C_4 R_4 s + 1}, \quad \frac{L_5 R_5 s}{C_5 L_5 R_5 s^2 + L_5 s + R_5}, \quad \infty \right)$$

$$H(s) = \frac{-C_1 C_5 L_1 L_5 R_4 R_5 s^4 - R_4 R_5 + s^3 (C_1 L_1 L_5 R_4 R_5 g_m - C_1 L_1 L_5 R_4) + s^2 (-C_1 L_1 R_4 R_5 - C_5 L_5 R_4 R_5) + s (L_5 R_4 R_5 g_m - C_5 R_4 R_5)}{2C_1 C_4 C_5 L_1 L_5 R_4 R_5 s^5 + 2R_4 R_5 g_m + 2R_5 + s^4 (2C_1 C_4 L_1 L_5 R_4 R_5 g_m + 2C_1 C_4 L_1 L_5 R_4 + 2C_1 C_5 L_1 L_5 R_4 R_5 g_m + 2C_1 C_5 L_1 L_5 R_5) + s^3 (2C_1 C_4 L_1 R_4 R_5 + 2C_1 C_4 L_5 R_4 R_5 + C_1 C_5 L_5 R_4 R_5 + 2C_1 L_1 L_5 R_4 g_m + 2C_1 L_1 L_5 R_5 g_m + 2C_1 L_1 L_5 + 2C_4 C_5 L_5 R_4 R_5) + s^2 (2C_1 L_1 R_4 R_5 + 2C_1 L_1 R_5 + 2C_4 C_5 L_5 R_4 R_5) + s (C_1 R_4 + 2C_4 R_4 g_m + 2C_5 L_5 g_m) + 2}$$

$$\mathbf{10.477 \quad INVALID-ORDER-477} \quad Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \frac{R_4}{C_4 R_4 s + 1}, \quad \frac{C_5 L_5 R_5 s^2 + L_5 s + R_5}{C_5 L_5 s^2 + 1}, \quad \infty \right)$$

$$H(s) = \frac{C_1 L_1 L_5 R_4 g_m s^3 + L_5 R_4 g_m s + R_4 R_5 g_m - R_4 + s^4 (C_1 C_5 L_1 L_5 R_4 R_5 g_m - C_1 C_5 L_1 L_5 R_4) + s^2 (C_1 L_1 L_5 R_4 R_5 g_m - C_1 L_1 L_5 R_4) + s (L_5 R_4 R_5 g_m - C_5 R_4 R_5)}{2R_4 g_m + 2R_5 g_m + s^5 (2C_1 C_4 C_5 L_1 L_5 R_4 R_5 g_m + 2C_1 C_4 C_5 L_1 L_5 R_4) + s^4 (2C_1 C_4 C_5 L_5 R_4 R_5 + 2C_1 C_4 L_1 L_5 R_4 g_m + 2C_1 C_5 L_1 L_5 R_4 g_m + 2C_1 C_5 L_1 L_5 R_5 g_m + 2C_1 C_5 L_1 L_5) + s^3 (2C_1 C_4 L_1 R_4 R_5 g_m + 2C_1 C_4 L_1 R_4 + 2C_1 C_4 L_5 R_4 + C_1 C_5 L_5 R_4 + 2C_1 C_5 L_5 R_5 + 2C_1 L_1 L_5) + s^2 (2C_1 L_1 R_4 R_5 + 2C_1 L_1 R_5 + 2C_4 C_5 L_5 R_4 R_5) + s (C_1 R_4 + 2C_4 R_4 g_m + 2C_5 L_5 g_m) + 2}$$

$$\mathbf{10.478 \quad INVALID-ORDER-478} \quad Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \frac{R_4}{C_4 R_4 s + 1}, \quad \frac{R_5 (C_5 L_5 s^2 + 1)}{C_5 L_5 s^2 + C_5 R_5 s + 1}, \quad \infty \right)$$

$$H(s) = \frac{-C_1 C_5 L_1 R_4 R_5 s^3 - C_5 R_4 R_5 s + R_4 R_5 g_m - R_4 + s^4 (C_1 C_5 L_1 L_5 R_4 R_5 g_m - C_1 C_5 L_1 L_5 R_4 R_5) - C_1 C_5 L_1 L_5 R_4 R_5 g_m + C_1 C_5 L_1 L_5 R_4 R_5}{2 R_4 g_m + 2 R_5 g_m + s^5 (2 C_1 C_4 C_5 L_1 L_5 R_4 R_5 g_m + 2 C_1 C_4 C_5 L_1 L_5 R_4) + s^4 (2 C_1 C_4 C_5 L_1 R_4 R_5 + 2 C_1 C_4 C_5 L_5 R_4 R_5 + 2 C_1 C_5 L_1 L_5 R_4 g_m + 2 C_1 C_5 L_1 L_5 R_5 g_m + 2 C_1 C_5 L_1 L_5) + s^3 (2 C_1 C_4 L_1 R_4 R_5 g_m + 2 C_1 C_4 L_1 R_4 + 2 C_1 C_5 L_1 R_4 R_5 g_m + 2 C_1 C_5 L_1 R_5 + C_1 C_5 L_5 R_4 + 2 C_1 C_5 L_5 R_5) + s^2 (C_1 C_4 R_4 + 2 C_1 C_4 R_5 + 2 C_1 L_1 g_m) + s (C_1 + 2 C_4 R_4 g_m + 2 C_4 R_5 g_m + 2 C_4)}$$

$$\mathbf{10.479 \quad INVALID-ORDER-479} \quad Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad R_4 + \frac{1}{C_4 s}, \quad R_5, \quad \infty \right)$$

$$H(s) = \frac{R_5 g_m + s^3 (C_1 C_4 L_1 R_4 R_5 g_m - C_1 C_4 L_1 R_4) + s^2 (C_1 L_1 R_5 g_m - C_1 L_1) + s (C_4 R_4 R_5 g_m - C_4 R_4) - 1}{2 g_m + s^3 (2 C_1 C_4 L_1 R_4 g_m + 2 C_1 C_4 L_1 R_5 g_m + 2 C_1 C_4 L_1) + s^2 (C_1 C_4 R_4 + 2 C_1 C_4 R_5 + 2 C_1 L_1 g_m) + s (C_1 + 2 C_4 R_4 g_m + 2 C_4 R_5 g_m + 2 C_4)}$$

$$\mathbf{10.480 \quad INVALID-ORDER-480} \quad Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad R_4 + \frac{1}{C_4 s}, \quad \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{-C_1 C_4 C_5 L_1 R_4 s^4 + g_m + s^3 (C_1 C_4 L_1 R_4 g_m - C_1 C_5 L_1) + s^2 (C_1 L_1 g_m - C_4 C_5 R_4) + s (C_4 R_4 g_m - C_5)}{s^4 (2 C_1 C_4 C_5 L_1 R_4 g_m + 2 C_1 C_4 C_5 L_1) + s^3 (C_1 C_4 C_5 R_4 + 2 C_1 C_4 L_1 g_m + 2 C_1 C_5 L_1 g_m) + s^2 (2 C_1 C_4 + C_1 C_5 + 2 C_4 C_5 R_4 g_m + 2 C_4 C_5) + s (2 C_4 g_m + 2 C_5 g_m)}$$

$$\mathbf{10.481 \quad INVALID-ORDER-481} \quad Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad R_4 + \frac{1}{C_4 s}, \quad \frac{R_5}{C_5 R_5 s + 1}, \quad \infty \right)$$

$$H(s) = \frac{-C_1 C_4 C_5 L_1 R_4 R_5 s^4 + R_5 g_m + s^3 (C_1 C_4 L_1 R_4 R_5 g_m - C_1 C_4 L_1 R_4 - C_1 C_5 L_1 R_5) + s^2 (C_1 L_1 R_5 g_m - C_1 L_1 - C_4 C_5 R_4 R_5) + s (C_4 R_4 R_5 g_m - C_4 R_4 - C_5 R_5) - 1}{2 g_m + s^4 (2 C_1 C_4 C_5 L_1 R_4 R_5 g_m + 2 C_1 C_4 C_5 L_1 R_5) + s^3 (C_1 C_4 C_5 R_4 R_5 + 2 C_1 C_4 L_1 R_4 g_m + 2 C_1 C_4 L_1 R_5 g_m + 2 C_1 C_4 L_1 + 2 C_1 C_5 L_1 R_5 g_m) + s^2 (C_1 C_4 R_4 + 2 C_1 C_4 R_5 + C_1 C_5 R_5 + 2 C_1 L_1 g_m + 2 C_4 C_5 R_4 R_5 g_m + 2 C_4 C_5 R_5) + s (C_1 + 2 C_4 R_4 g_m + 2 C_4 R_5 g_m + 2 C_4 + 2 C_5)}$$

$$\mathbf{10.482 \quad INVALID-ORDER-482} \quad Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad R_4 + \frac{1}{C_4 s}, \quad R_5 + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{g_m + s^4 (C_1 C_4 C_5 L_1 R_4 R_5 g_m - C_1 C_4 C_5 L_1 R_4) + s^3 (C_1 C_4 L_1 R_4 g_m + C_1 C_5 L_1 R_5 g_m - C_1 C_5 L_1) + s^2 (C_1 L_1 g_m + C_4 C_5 R_4 R_5 g_m - C_4 C_5 R_4) + s (C_4 R_4 g_m + C_5 R_5 g_m - C_5)}{s^4 (2 C_1 C_4 C_5 L_1 R_4 g_m + 2 C_1 C_4 C_5 L_1 R_5 g_m + 2 C_1 C_4 C_5 L_1) + s^3 (C_1 C_4 C_5 R_4 + 2 C_1 C_4 C_5 R_5 + 2 C_1 C_4 L_1 g_m + 2 C_1 C_5 L_1 g_m) + s^2 (2 C_1 C_4 + C_1 C_5 + 2 C_4 C_5 R_4 g_m + 2 C_4 C_5 R_5 g_m + 2 C_4 C_5) + s (2 C_4 g_m + 2 C_5 g_m)}$$

$$\mathbf{10.483 \quad INVALID-ORDER-483} \quad Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad R_4 + \frac{1}{C_4 s}, \quad L_5 s + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{C_1 C_4 C_5 L_1 L_5 R_4 g_m s^5 + g_m + s^4 (-C_1 C_4 C_5 L_1 R_4 + C_1 C_5 L_1 L_5 g_m) + s^3 (C_1 C_4 L_1 R_4 g_m - C_1 C_5 L_1 + C_4 C_5 L_5 R_4 g_m) + s^2 (C_1 L_1 g_m - C_4 C_5 R_4 + C_5 L_5 g_m) + s (C_4 R_4 g_m - C_5)}{2 C_1 C_4 C_5 L_1 L_5 g_m s^5 + s^4 (2 C_1 C_4 C_5 L_1 R_4 g_m + 2 C_1 C_4 C_5 L_1 + 2 C_1 C_4 C_5 L_5) + s^3 (C_1 C_4 C_5 R_4 + 2 C_1 C_4 L_1 g_m + 2 C_1 C_5 L_1 g_m + 2 C_4 C_5 L_5 g_m) + s^2 (2 C_1 C_4 + C_1 C_5 + 2 C_4 C_5 R_4 g_m + 2 C_4 C_5) + s (2 C_4 g_m + 2 C_5 g_m)}$$

$$\mathbf{10.484 \quad INVALID-ORDER-484} \quad Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad R_4 + \frac{1}{C_4 s}, \quad \frac{L_5 s}{C_5 L_5 s^2 + 1}, \quad \infty \right)$$

$$H(s) = \frac{-C_1 C_4 C_5 L_1 L_5 R_4 s^5 + s^4 (C_1 C_4 L_1 L_5 R_4 g_m - C_1 C_5 L_1 L_5) + s^3 (-C_1 C_4 L_1 R_4 + C_1 L_1 L_5 g_m - C_4 C_5 L_5 R_4) + s^2 (-C_1 L_1 + C_4 L_5 R_4 g_m - C_5 L_5) + s (-C_4 R_4 + L_5 g_m) - 1}{2 g_m + s^5 (2 C_1 C_4 C_5 L_1 L_5 R_4 g_m + 2 C_1 C_4 C_5 L_1 L_5) + s^4 (C_1 C_4 C_5 L_5 R_4 + 2 C_1 C_4 L_1 L_5 g_m + 2 C_1 C_5 L_1 L_5 g_m) + s^3 (2 C_1 C_4 L_1 R_4 g_m + 2 C_1 C_4 L_1 + 2 C_1 C_4 L_5 + C_1 C_5 L_5 + 2 C_4 C_5 L_5 R_4 g_m + 2 C_4 C_5 L_5) + s^2 (C_1 C_4 R_4 + 2 C_1 L_1 g_m + 2 C_4 L_5 g_m + 2 C_5 L_5 g_m) + s (C_1 + 2 C_4 R_4)}$$

$$\mathbf{10.485 \quad INVALID-ORDER-485} \quad Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad R_4 + \frac{1}{C_4 s}, \quad L_5 s + R_5 + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{C_1 C_4 C_5 L_1 L_5 R_4 g_m s^5 + g_m + s^4 (C_1 C_4 C_5 L_1 R_4 R_5 g_m - C_1 C_4 C_5 L_1 R_4 + C_1 C_5 L_1 L_5 g_m) + s^3 (C_1 C_4 L_1 R_4 g_m + C_1 C_5 L_1 R_5 g_m - C_1 C_5 L_1 + C_4 C_5 L_5 R_4 g_m) + s^2 (C_1 L_1 g_m + C_4 C_5 R_4 R_5 g_m - C_4 C_5 R_4 + C_5 L_5 g_m) + s (C_4 R_4 g_m + C_5 R_5 g_m - C_5)}{2 C_1 C_4 C_5 L_1 L_5 g_m s^5 + s^4 (2 C_1 C_4 C_5 L_1 R_4 g_m + 2 C_1 C_4 C_5 L_1 R_5 g_m + 2 C_1 C_4 C_5 L_1 + 2 C_1 C_4 C_5 L_5) + s^3 (C_1 C_4 C_5 R_4 + 2 C_1 C_4 C_5 R_5 + 2 C_1 C_4 L_1 g_m + 2 C_1 C_5 L_1 g_m + 2 C_4 C_5 L_5 g_m) + s^2 (2 C_1 C_4 + C_1 C_5 + 2 C_4 C_5 R_4 g_m + 2 C_4 C_5 R_5 g_m + 2 C_4 C_5) + s (2 C_4 g_m + 2 C_5 g_m)}$$

$$\mathbf{10.486 \quad INVALID-ORDER-486} \quad Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad R_4 + \frac{1}{C_4 s}, \quad \frac{L_5 R_5 s}{C_5 L_5 R_5 s^2 + L_5 s + R_5}, \quad \infty \right)$$

$$H(s) = \frac{-C_1 C_4 C_5 L_1 L_5 R_4 R_5 s^5 - R_5 + s^4 (C_1 C_4 L_1 L_5 R_4 R_5 g_m - C_1 C_4 L_1 L_5 R_4 - C_1 C_5 L_1 L_5 R_5) + s^3 (-C_1 C_4 L_1 R_4 R_5 + C_1 L_1 L_5 R_5 g_m - C_1 L_1 L_5 - C_4 C_5 L_5 R_4 R_5) + s^2 (-C_1 L_1 + C_4 L_5 R_4 g_m - C_5 L_5) + s (-C_4 R_4 + L_5 g_m) - 1}{2 R_5 g_m + s^5 (2 C_1 C_4 C_5 L_1 L_5 R_4 R_5 g_m + 2 C_1 C_4 C_5 L_1 L_5 R_5) + s^4 (C_1 C_4 C_5 L_5 R_4 R_5 + 2 C_1 C_4 L_1 L_5 R_4 g_m + 2 C_1 C_4 L_1 L_5 R_5 g_m + 2 C_1 C_4 L_1 L_5 + 2 C_1 C_5 L_1 L_5 R_5 g_m) + s^3 (2 C_1 C_4 L_1 R_4 R_5 g_m + 2 C_1 C_4 L_1 R_5 + C_1 C_4 L_5 R_4 + 2 C_1 C_4 L_5 R_5 + C_1 C_5 L_5 R_5 + 2 C_1 L_1 L_5 g_m + 2 C_4 C_5 L_5 R_4 R_5) + s^2 (C_1 C_4 R_4 + 2 C_1 L_1 g_m + 2 C_4 L_5 g_m + 2 C_5 L_5 g_m) + s (C_1 + 2 C_4 R_4)}$$

$$\mathbf{10.487 \quad INVALID-ORDER-487} \quad Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad R_4 + \frac{1}{C_4 s}, \quad \frac{C_5 L_5 R_5 s^2 + L_5 s + R_5}{C_5 L_5 s^2 + 1}, \quad \infty \right)$$

$$H(s) = \frac{R_5 g_m + s^5 (C_1 C_4 C_5 L_1 L_5 R_4 R_5 g_m - C_1 C_4 C_5 L_1 L_5 R_4) + s^4 (C_1 C_4 L_1 L_5 R_4 g_m + C_1 C_5 L_1 L_5 R_5 g_m - C_1 C_5 L_1 L_5) + s^3 (C_1 C_4 L_1 R_4 R_5 g_m - C_1 C_4 L_1 R_4 + C_1 L_1 L_5 g_m + C_4 C_5 L_5 R_4 R_5 g_m - C_4 C_5 L_5 R_4) + s^2 (C_1 L_1 R_5 g_m - C_1 L_1 + C_4 C_5 L_5 R_4 R_5) + s (C_4 R_4 R_5 g_m - C_4 R_4 - C_5 R_5) - 1}{2 g_m + s^5 (2 C_1 C_4 C_5 L_1 L_5 R_4 g_m + 2 C_1 C_4 C_5 L_1 L_5 R_5 g_m + 2 C_1 C_4 C_5 L_1 L_5) + s^4 (C_1 C_4 C_5 L_5 R_4 + 2 C_1 C_4 C_5 L_5 R_5 + 2 C_1 C_4 L_1 L_5 g_m + 2 C_1 C_5 L_1 L_5 g_m) + s^3 (2 C_1 C_4 L_1 R_4 g_m + 2 C_1 C_4 L_1 R_5 g_m + 2 C_1 C_4 L_1 + 2 C_1 C_4 L_5 + C_1 C_5 L_5 + 2 C_4 C_5 L_5 R_4 g_m + 2 C_4 C_5 L_5 R_5 g_m + 2 C_4 C_5 L_5 R_4 R_5) + s^2 (C_1 C_4 R_4 + 2 C_1 L_1 g_m + 2 C_4 L_5 g_m + 2 C_5 L_5 g_m) + s (C_1 + 2 C_4 R_4)}$$

$$\mathbf{10.508 \quad INVALID-ORDER-508} \quad Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \frac{L_4 s}{C_4 L_4 s^2 + 1}, \quad \frac{R_5 (C_5 L_5 s^2 + 1)}{C_5 L_5 s^2 + C_5 R_5 s + 1}, \quad \infty \right)$$

$$H(s) = \frac{-C_1 C_5 L_1 L_4 R_5 s^4 - C_5 L_4 R_5 s^2 + s^5 (C_1 C_5 L_1 L_4 L_5 R_5 g_m - C_1 C_5 L_1 L_4 L_5) + s^3 (C_1 L_1 R_5 g_m - C_1 L_1 + C_4 L_4 R_5 g_m - C_4 L_4) + s (C_4 R_4 R_5 g_m - C_4 R_4) - 1}{2 R_5 g_m + s^6 (2 C_1 C_4 C_5 L_1 L_4 L_5 R_5 g_m + 2 C_1 C_4 C_5 L_1 L_4 L_5) + s^5 (2 C_1 C_4 C_5 L_1 L_4 R_5 + 2 C_1 C_4 C_5 L_4 L_5 R_5 + 2 C_1 C_5 L_1 L_4 L_5 g_m) + s^4 (2 C_1 C_4 L_1 L_4 R_5 g_m + 2 C_1 C_4 L_1 L_4 + 2 C_1 C_5 L_1 L_4 R_5 g_m + 2 C_1 C_5 L_1 L_5 R_5 g_m + 2 C_1 C_5 L_1 L_5 + C_1 C_5 L_4 L_5 + 2 C_4 C_5 L_4 L_5 R_5 g_m + 2 C_4 C_5 L_4 L_5) + s^3 (C_1 C_4 L_1 L_4 R_5 g_m - C_1 C_4 L_1 L_4) + s^2 (C_1 L_1 R_5 g_m - C_1 L_1 + C_4 L_4 R_5 g_m - C_4 L_4) + s (C_4 R_4 R_5 g_m - C_4 R_4) - 1}$$

$$\mathbf{10.509 \quad INVALID-ORDER-509} \quad Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad L_4 s + R_4 + \frac{1}{C_4 s}, \quad R_5, \quad \infty \right)$$

$$H(s) = \frac{R_5 g_m + s^4 (C_1 C_4 L_1 L_4 R_5 g_m - C_1 C_4 L_1 L_4) + s^3 (C_1 C_4 L_1 R_4 R_5 g_m - C_1 C_4 L_1 R_4) + s^2 (C_1 L_1 R_5 g_m - C_1 L_1 + C_4 L_4 R_5 g_m - C_4 L_4) + s (C_4 R_4 R_5 g_m - C_4 R_4) - 1}{2 C_1 C_4 L_1 L_4 g_m s^4 + 2 g_m + s^3 (2 C_1 C_4 L_1 R_4 g_m + 2 C_1 C_4 L_1 R_5 g_m + 2 C_1 C_4 L_1 + C_1 C_4 L_4) + s^2 (C_1 C_4 R_4 + 2 C_1 C_4 R_5 + 2 C_1 L_1 g_m + 2 C_4 L_4 g_m) + s (C_1 + 2 C_4 R_4 g_m + 2 C_4 R_5 g_m + 2 C_4)}$$

$$\mathbf{10.510 \quad INVALID-ORDER-510} \quad Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad L_4 s + R_4 + \frac{1}{C_4 s}, \quad \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{-C_1 C_4 C_5 L_1 L_4 s^5 + g_m + s^4 (-C_1 C_4 C_5 L_1 R_4 + C_1 C_4 L_1 L_4 g_m) + s^3 (C_1 C_4 L_1 R_4 g_m - C_1 C_5 L_1 - C_4 C_5 L_4) + s^2 (C_1 L_1 g_m - C_4 C_5 R_4 + C_4 L_4 g_m) + s (C_4 R_4 g_m - C_5)}{2 C_1 C_4 C_5 L_1 L_4 g_m s^5 + s^4 (2 C_1 C_4 C_5 L_1 R_4 g_m + 2 C_1 C_4 C_5 L_1 + C_1 C_4 C_5 L_4) + s^3 (C_1 C_4 C_5 R_4 + 2 C_1 C_4 L_1 g_m + 2 C_1 C_5 L_1 g_m + 2 C_4 C_5 L_4 g_m) + s^2 (2 C_1 C_4 + C_1 C_5 + 2 C_4 C_5 R_4 g_m + 2 C_4 C_5) + s (2 C_4 g_m + 2 C_5 g_m)}$$

$$\mathbf{10.511 \quad INVALID-ORDER-511} \quad Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad L_4 s + R_4 + \frac{1}{C_4 s}, \quad \frac{R_5}{C_5 R_5 s + 1}, \quad \infty \right)$$

$$H(s) = \frac{-C_1 C_4 C_5 L_1 L_4 R_5 s^5 + R_5 g_m + s^4 (-C_1 C_4 C_5 L_1 R_4 R_5 + C_1 C_4 L_1 L_4 R_5 g_m - C_1 C_4 L_1 L_4) + s^3 (C_1 C_4 L_1 R_4 R_5 g_m - C_1 C_4 L_1 R_4 - C_1 C_5 L_1 R_5 - C_4 C_5 L_4 R_5) + s^2 (C_1 L_1 R_5 g_m - C_1 L_1 - C_4 C_5 R_4 R_5 + C_4 L_4 R_5 g_m) + s (C_4 R_4 R_5 g_m - C_4 R_4) - 1}{2 C_1 C_4 C_5 L_1 L_4 R_5 g_m s^5 + 2 g_m + s^4 (2 C_1 C_4 C_5 L_1 R_4 R_5 g_m + 2 C_1 C_4 C_5 L_1 R_5 + C_1 C_4 C_5 L_4 R_5 + 2 C_1 C_4 L_1 L_4 g_m) + s^3 (C_1 C_4 C_5 R_4 R_5 + 2 C_1 C_4 L_1 R_4 g_m + 2 C_1 C_4 L_1 R_5 g_m + 2 C_1 C_4 L_1 + C_1 C_4 L_4 + 2 C_1 C_5 L_1 R_5 g_m + 2 C_4 C_5 L_4 R_5 g_m) + s^2 (C_1 C_4 R_4 + 2 C_1 C_4 R_5 + C_1 C_5 R_5) + s (C_4 R_4 R_5 g_m - C_4 R_4) - 1}$$

$$\mathbf{10.512 \quad INVALID-ORDER-512} \quad Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad L_4 s + R_4 + \frac{1}{C_4 s}, \quad R_5 + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{g_m + s^5 (C_1 C_4 C_5 L_1 L_4 R_5 g_m - C_1 C_4 C_5 L_1 L_4) + s^4 (C_1 C_4 C_5 L_1 R_4 R_5 g_m - C_1 C_4 C_5 L_1 R_4 + C_1 C_4 L_1 L_4 g_m) + s^3 (C_1 C_4 L_1 R_4 g_m + C_1 C_5 L_1 R_5 g_m - C_1 C_5 L_1 + C_4 C_5 L_4 R_5 g_m - C_4 C_5 L_4) + s^2 (C_1 L_1 g_m + C_4 C_5 R_4 R_5 g_m - C_4 C_5 R_4 + C_4 L_4 g_m) + s (C_4 R_4 g_m + C_5 R_5 g_m - C_5)}{2 C_1 C_4 C_5 L_1 L_4 g_m s^5 + s^4 (2 C_1 C_4 C_5 L_1 R_4 g_m + 2 C_1 C_4 C_5 L_1 R_5 g_m + 2 C_1 C_4 C_5 L_1 + C_1 C_4 C_5 L_4) + s^3 (C_1 C_4 C_5 R_4 + 2 C_1 C_4 C_5 R_5 + 2 C_1 C_4 L_1 g_m + 2 C_1 C_5 L_1 g_m + 2 C_4 C_5 L_4 g_m) + s^2 (2 C_1 C_4 + C_1 C_5 + 2 C_4 C_5 R_4 g_m + 2 C_4 C_5 R_5 g_m + 2 C_4 C_5) + s (2 C_4 g_m + 2 C_5 g_m)}$$

$$\mathbf{10.513 \quad INVALID-ORDER-513} \quad Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad L_4 s + R_4 + \frac{1}{C_4 s}, \quad L_5 s + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{C_1 C_4 C_5 L_1 L_4 L_5 g_m s^6 + g_m + s^5 (-C_1 C_4 C_5 L_1 L_4 + C_1 C_4 C_5 L_1 L_5 R_4 g_m) + s^4 (-C_1 C_4 C_5 L_1 R_4 + C_1 C_4 L_1 L_4 g_m + C_1 C_5 L_1 L_5 g_m + C_4 C_5 L_4 L_5 g_m) + s^3 (C_1 C_4 L_1 R_4 g_m - C_1 C_5 L_1 - C_4 C_5 L_4 + C_4 C_5 L_5 R_4 g_m) + s^2 (C_1 L_1 g_m - C_4 C_5 R_4 + C_4 L_4 g_m + C_5 L_5 g_m) + s (C_4 R_4 g_m + C_5 R_5 g_m - C_5)}{s^5 (2 C_1 C_4 C_5 L_1 L_4 g_m + 2 C_1 C_4 C_5 L_1 L_5 g_m) + s^4 (2 C_1 C_4 C_5 L_1 R_4 g_m + 2 C_1 C_4 C_5 L_1 + C_1 C_4 C_5 L_4 + 2 C_1 C_4 C_5 L_5) + s^3 (C_1 C_4 C_5 R_4 + 2 C_1 C_4 L_1 g_m + 2 C_1 C_5 L_1 g_m + 2 C_4 C_5 L_4 g_m + 2 C_4 C_5 L_5 g_m) + s^2 (2 C_1 C_4 + C_1 C_5 + 2 C_4 C_5 R_4 g_m + 2 C_4 C_5) + s (2 C_4 g_m + 2 C_5 g_m)}$$

$$\mathbf{10.514 \quad INVALID-ORDER-514} \quad Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad L_4 s + R_4 + \frac{1}{C_4 s}, \quad \frac{L_5 s}{C_5 L_5 s^2 + 1}, \quad \infty \right)$$

$$H(s) = \frac{-C_1 C_4 C_5 L_1 L_4 L_5 s^6 + s^5 (-C_1 C_4 C_5 L_1 L_5 R_4 + C_1 C_4 L_1 L_4 L_5 g_m) + s^4 (-C_1 C_4 L_1 L_4 + C_1 C_4 L_1 L_5 R_4 g_m - C_1 C_5 L_1 L_5 - C_4 C_5 L_4 L_5) + s^3 (-C_1 C_4 L_1 R_4 + C_1 L_1 L_5 g_m - C_4 C_5 L_5 R_4 + C_4 L_4 L_5 g_m) + s^2 (-C_1 L_1 - C_4 C_5 R_4 + C_4 L_4 g_m + C_5 L_5 g_m) + s (C_4 R_4 g_m + C_5 R_5 g_m - C_5)}{2 C_1 C_4 C_5 L_1 L_4 L_5 g_m s^6 + 2 g_m + s^5 (2 C_1 C_4 C_5 L_1 L_5 R_4 g_m + 2 C_1 C_4 C_5 L_1 L_5 + C_1 C_4 C_5 L_4 L_5) + s^4 (C_1 C_4 C_5 L_5 R_4 + 2 C_1 C_4 L_1 L_4 g_m + 2 C_1 C_4 L_1 L_5 g_m + 2 C_1 C_5 L_1 L_5 g_m + 2 C_4 C_5 L_4 L_5 g_m) + s^3 (2 C_1 C_4 L_1 R_4 g_m + 2 C_1 C_4 L_1 + C_1 C_4 L_4 + 2 C_1 C_4 L_5 + C_1 C_5 L_5 + 2 C_4 C_5 L_5 R_4) + s^2 (2 C_1 C_4 + C_1 C_5 + 2 C_4 C_5 R_4 g_m + 2 C_4 C_5) + s (2 C_4 g_m + 2 C_5 g_m)}$$

$$\mathbf{10.515 \quad INVALID-ORDER-515} \quad Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad L_4 s + R_4 + \frac{1}{C_4 s}, \quad L_5 s + R_5 + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{C_1 C_4 C_5 L_1 L_4 L_5 g_m s^6 + g_m + s^5 (C_1 C_4 C_5 L_1 L_4 R_5 g_m - C_1 C_4 C_5 L_1 L_4 + C_1 C_4 C_5 L_1 L_5 R_4 g_m) + s^4 (C_1 C_4 C_5 L_1 R_4 R_5 g_m - C_1 C_4 C_5 L_1 R_4 + C_1 C_4 L_1 L_4 g_m + C_1 C_5 L_1 L_5 g_m + C_4 C_5 L_4 L_5 g_m) + s^3 (C_1 C_4 L_1 R_4 g_m + C_1 C_5 L_1 R_5 g_m - C_1 C_5 L_1 + C_4 C_5 L_4 R_5 g_m - C_4 C_5 L_4 + C_4 C_5 L_5 R_4 g_m) + s^2 (C_1 L_1 g_m - C_4 C_5 R_4 + C_4 L_4 g_m + C_5 L_5 g_m) + s (C_4 R_4 g_m + C_5 R_5 g_m - C_5)}{s^5 (2 C_1 C_4 C_5 L_1 L_4 g_m + 2 C_1 C_4 C_5 L_1 L_5 g_m) + s^4 (2 C_1 C_4 C_5 L_1 R_4 g_m + 2 C_1 C_4 C_5 L_1 R_5 g_m + 2 C_1 C_4 C_5 L_1 + C_1 C_4 C_5 L_4 + 2 C_1 C_4 C_5 L_5) + s^3 (C_1 C_4 C_5 R_4 + 2 C_1 C_4 C_5 R_5 + 2 C_1 C_4 L_1 g_m + 2 C_1 C_5 L_1 g_m + 2 C_4 C_5 L_4 g_m + 2 C_4 C_5 L_5 g_m) + s^2 (2 C_1 C_4 + C_1 C_5 + 2 C_4 C_5 R_4 g_m + 2 C_4 C_5) + s (2 C_4 g_m + 2 C_5 g_m)}$$

$$\mathbf{10.516 \quad INVALID-ORDER-516} \quad Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad L_4 s + R_4 + \frac{1}{C_4 s}, \quad \frac{L_5 R_5 s}{C_5 L_5 R_5 s^2 + L_5 s + R_5}, \quad \infty \right)$$

$$H(s) = \frac{-C_1 C_4 C_5 L_1 L_4 L_5 R_5 s^6 - R_5 + s^5 (-C_1 C_4 C_5 L_1 L_5 R_4 R_5 + C_1 C_4 L_1 L_4 L_5 R_5 g_m - C_1 C_4 L_1 L_4 L_5) + s^4 (-C_1 C_4 L_1 L_4 R_5 + C_1 C_4 L_1 L_5 R_4 R_5 g_m - C_1 C_4 L_1 L_5 R_4) + s^3 (C_1 C_4 L_1 R_4 R_5 g_m - C_1 C_4 L_1 R_4 - C_1 C_5 L_1 R_5 - C_4 C_5 L_4 R_5) + s^2 (C_1 L_1 R_5 g_m - C_1 L_1 - C_4 C_5 R_4 R_5 + C_4 L_4 R_5 g_m) + s (C_4 R_4 R_5 g_m - C_4 R_4) - 1}{2 C_1 C_4 C_5 L_1 L_4 L_5 R_5 g_m s^6 + 2 R_5 g_m + s^5 (2 C_1 C_4 C_5 L_1 L_5 R_4 R_5 g_m + 2 C_1 C_4 C_5 L_1 L_5 R_5 + C_1 C_4 C_5 L_4 L_5 R_5 + 2 C_1 C_4 L_1 L_4 L_5 g_m) + s^4 (C_1 C_4 C_5 L_5 R_4 R_5 + 2 C_1 C_4 L_1 L_4 R_5 g_m + 2 C_1 C_4 L_1 L_5 R_4 g_m + 2 C_1 C_4 L_1 L_5 R_5 g_m + 2 C_1 C_4 L_1 L_5 + C_1 C_4 L_4 L_5 + 2 C_1 C_5 L_1 L_5 R_5 g_m + 2 C_4 C_5 L_4 L_5 R_5 g_m) + s^3 (C_1 C_4 L_1 R_4 R_5 g_m - C_1 C_4 L_1 R_4 - C_1 C_5 L_1 R_5 - C_4 C_5 L_4 R_5) + s^2 (C_1 L_1 R_5 g_m - C_1 L_1 - C_4 C_5 R_4 R_5 + C_4 L_4 R_5 g_m) + s (C_4 R_4 R_5 g_m - C_4 R_4) - 1}$$

$$\mathbf{10.517 \quad INVALID-ORDER-517} \quad Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad L_4 s + R_4 + \frac{1}{C_4 s}, \quad \frac{C_5 L_5 R_5 s^2 + L_5 s + R_5}{C_5 L_5 s^2 + 1}, \quad \infty \right)$$

$$H(s) = \frac{R_5 g_m + s^6 (C_1 C_4 C_5 L_1 L_4 L_5 R_5 g_m - C_1 C_4 C_5 L_1 L_4 L_5) + s^5 (C_1 C_4 C_5 L_1 L_5 R_4 R_5 g_m - C_1 C_4 C_5 L_1 L_5 R_4 + C_1 C_4 L_1 L_4 L_5 g_m) + s^4 (C_1 C_4 L_1 L_4 R_5 g_m - C_1 C_4 L_1 L_4 + C_1 C_4 L_1 L_5 R_4 g_m + C_1 C_5 L_1 L_5 R_5 g_m - C_1 C_5 L_1 L_5 + C_4 C_5 L_4 L_5 R_5 g_m - C_4 C_5 L_4 L_5) + s^3 (C_1 C_4 L_1 R_4 R_5 g_m - C_1 C_4 L_1 R_4 - C_1 C_5 L_1 R_5 - C_4 C_5 L_4 R_5) + s^2 (C_1 L_1 R_5 g_m - C_1 L_1 - C_4 C_5 R_4 R_5 + C_4 L_4 R_5 g_m) + s (C_4 R_4 R_5 g_m - C_4 R_4) - 1}{2 C_1 C_4 C_5 L_1 L_4 L_5 g_m s^6 + 2 g_m + s^5 (2 C_1 C_4 C_5 L_1 L_5 R_4 g_m + 2 C_1 C_4 C_5 L_1 L_5 R_5 g_m + 2 C_1 C_4 C_5 L_1 L_5 + C_1 C_4 C_5 L_4 L_5) + s^4 (C_1 C_4 C_5 L_5 R_4 + 2 C_1 C_4 C_5 L_5 R_5 + 2 C_1 C_4 L_1 L_4 g_m + 2 C_1 C_4 L_1 L_5 g_m + 2 C_1 C_5 L_1 L_5 g_m + 2 C_4 C_5 L_4 L_5 g_m) + s^3 (2 C_1 C_4 L_1 R_4 g_m + 2 C_1 C_4 L_1 R_5 g_m + 2 C_1 C_4 L_1 + C_1 C_4 L_4 + 2 C_1 C_4 L_5 + C_1 C_5 L_5 + 2 C_4 C_5 L_5 R_4) + s^2 (2 C_1 C_4 + C_1 C_5 + 2 C_4 C_5 R_4 g_m + 2 C_4 C_5) + s (2 C_4 g_m + 2 C_5 g_m)}$$

$$\mathbf{10.547 \quad INVALID-ORDER-547} \quad Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \frac{R_4(C_4 L_4 s^2 + 1)}{C_4 L_4 s^2 + C_4 R_4 s + 1}, \quad \frac{C_5 L_5 R_5 s^2 + L_5 s + R_5}{C_5 L_5 s^2 + 1}, \quad \infty \right)$$

$$H(s) = \frac{C_1 C_4 L_1 L_4 L_5 R_4 g_m s^5}{2 R_4 g_m + 2 R_5 g_m + s^6 (2 C_1 C_4 C_5 L_1 L_4 L_5 R_4 g_m + 2 C_1 C_4 C_5 L_1 L_4 L_5 R_5 g_m + 2 C_1 C_4 C_5 L_1 L_4 L_5) + s^5 (2 C_1 C_4 C_5 L_1 L_5 R_4 R_5 g_m + 2 C_1 C_4 C_5 L_1 L_5 R_4 + C_1 C_4 C_5 L_4 L_5 R_4 + 2 C_1 C_4 C_5 L_4 L_5 R_5 + 2 C_1 C_4 L_1 L_4 L_5 g_m) + s^4 (2 C_1 C_4 C_5 L_5 R_4 R_5 + 2 C_1 C_4 L_1 L_4 R_4 g_m + 2 C_1 C_4 L_1 L_4 R_5 + 2 C_1 C_4 L_1 L_4 R_5 g_m) + s^3 (2 C_1 C_4 C_5 L_5 R_4 R_5 + 2 C_1 C_4 L_1 L_4 R_4 g_m + 2 C_1 C_4 L_1 L_4 R_5 + 2 C_1 C_4 L_1 L_4 R_5 g_m) + s^2 (2 C_1 C_4 C_5 L_5 R_4 R_5 + 2 C_1 C_4 L_1 L_4 R_4 g_m + 2 C_1 C_4 L_1 L_4 R_5 + 2 C_1 C_4 L_1 L_4 R_5 g_m) + s (2 C_1 C_4 C_5 L_5 R_4 R_5 + 2 C_1 C_4 L_1 L_4 R_4 g_m + 2 C_1 C_4 L_1 L_4 R_5 + 2 C_1 C_4 L_1 L_4 R_5 g_m) + 2}$$

$$\mathbf{10.548 \quad INVALID-ORDER-548} \quad Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \frac{R_4(C_4 L_4 s^2 + 1)}{C_4 L_4 s^2 + C_4 R_4 s + 1}, \quad \frac{R_5(C_5 L_5 s^2 + 1)}{C_5 L_5 s^2 + C_5 R_5 s + 1}, \quad \infty \right)$$

$$H(s) = \frac{C_1 C_4 L_1 L_4 L_5 R_4 g_m s^5}{2 R_4 g_m + 2 R_5 g_m + s^6 (2 C_1 C_4 C_5 L_1 L_4 L_5 R_4 g_m + 2 C_1 C_4 C_5 L_1 L_4 L_5 R_5 g_m + 2 C_1 C_4 C_5 L_1 L_4 L_5) + s^5 (2 C_1 C_4 C_5 L_1 L_4 R_4 R_5 g_m + 2 C_1 C_4 C_5 L_1 L_4 R_5 + 2 C_1 C_4 C_5 L_1 L_5 R_4 R_5 g_m + 2 C_1 C_4 C_5 L_1 L_5 R_4 + C_1 C_4 C_5 L_4 L_5 R_4 + 2 C_1 C_4 C_5 L_4 L_5 R_5) + s^4 (2 C_1 C_4 C_5 L_1 R_4 R_5 + C_1 C_4 C_5 L_1 R_4 R_5 g_m + C_1 C_4 C_5 L_1 R_4 R_5 + C_1 C_4 C_5 L_1 R_4 R_5 g_m) + s^3 (2 C_1 C_4 C_5 L_1 R_4 R_5 + C_1 C_4 C_5 L_1 R_4 R_5 g_m + C_1 C_4 C_5 L_1 R_4 R_5 + C_1 C_4 C_5 L_1 R_4 R_5 g_m) + s^2 (2 C_1 C_4 C_5 L_1 R_4 R_5 + C_1 C_4 C_5 L_1 R_4 R_5 g_m + C_1 C_4 C_5 L_1 R_4 R_5 + C_1 C_4 C_5 L_1 R_4 R_5 g_m) + s (2 C_1 C_4 C_5 L_1 R_4 R_5 + C_1 C_4 C_5 L_1 R_4 R_5 g_m + C_1 C_4 C_5 L_1 R_4 R_5 + C_1 C_4 C_5 L_1 R_4 R_5 g_m) + 2}$$

$$\mathbf{10.549 \quad INVALID-ORDER-549} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \quad \infty, \quad \infty, \quad R_4, \quad \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{-C_5 L_1 R_4 s^2 + L_1 R_4 g_m s}{C_1 C_5 L_1 R_4 s^3 + s^2 (2 C_1 L_1 + 2 C_5 L_1 R_4 g_m + 2 C_5 L_1) + s (C_5 R_4 + 2 L_1 g_m) + 2}$$

$$\mathbf{10.550 \quad INVALID-ORDER-550} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \quad \infty, \quad \infty, \quad R_4, \quad \frac{R_5}{C_5 R_5 s + 1}, \quad \infty \right)$$

$$H(s) = \frac{-C_5 L_1 R_4 R_5 s^2 + s (L_1 R_4 R_5 g_m - L_1 R_4)}{C_1 C_5 L_1 R_4 R_5 s^3 + R_4 + 2 R_5 + s^2 (C_1 L_1 R_4 + 2 C_1 L_1 R_5 + 2 C_5 L_1 R_4 R_5 g_m + 2 C_5 L_1 R_5) + s (C_5 R_4 R_5 + 2 L_1 R_4 g_m + 2 L_1 R_5 g_m + 2 L_1)}$$

$$\mathbf{10.551 \quad INVALID-ORDER-551} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \quad \infty, \quad \infty, \quad R_4, \quad R_5 + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{L_1 R_4 g_m s + s^2 (C_5 L_1 R_4 R_5 g_m - C_5 L_1 R_4)}{s^3 (C_1 C_5 L_1 R_4 + 2 C_1 C_5 L_1 R_5) + s^2 (2 C_1 L_1 + 2 C_5 L_1 R_4 g_m + 2 C_5 L_1 R_5 g_m + 2 C_5 L_1) + s (C_5 R_4 + 2 C_5 R_5 + 2 L_1 g_m) + 2}$$

$$\mathbf{10.552 \quad INVALID-ORDER-552} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \quad \infty, \quad \infty, \quad R_4, \quad L_5 s + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{C_5 L_1 L_5 R_4 g_m s^3 - C_5 L_1 R_4 s^2 + L_1 R_4 g_m s}{2 C_1 C_5 L_1 L_5 s^4 + s^3 (C_1 C_5 L_1 R_4 + 2 C_5 L_1 L_5 g_m) + s^2 (2 C_1 L_1 + 2 C_5 L_1 R_4 g_m + 2 C_5 L_1 + 2 C_5 L_5) + s (C_5 R_4 + 2 L_1 g_m) + 2}$$

$$\mathbf{10.553 \quad INVALID-ORDER-553} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \quad \infty, \quad \infty, \quad R_4, \quad \frac{L_5 s}{C_5 L_5 s^2 + 1}, \quad \infty \right)$$

$$H(s) = \frac{-C_5 L_1 L_5 R_4 s^3 + L_1 L_5 R_4 g_m s^2 - L_1 R_4 s}{C_1 C_5 L_1 L_5 R_4 s^4 + R_4 + s^3 (2 C_1 L_1 L_5 + 2 C_5 L_1 L_5 R_4 g_m + 2 C_5 L_1 L_5) + s^2 (C_1 L_1 R_4 + C_5 L_5 R_4 + 2 L_1 L_5 g_m) + s (2 L_1 R_4 g_m + 2 L_1 + 2 L_5)}$$

$$\mathbf{10.554 \quad INVALID-ORDER-554} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \quad \infty, \quad \infty, \quad R_4, \quad L_5 s + R_5 + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{C_5 L_1 L_5 R_4 g_m s^3 + L_1 R_4 g_m s + s^2 (C_5 L_1 R_4 R_5 g_m - C_5 L_1 R_4)}{2 C_1 C_5 L_1 L_5 s^4 + s^3 (C_1 C_5 L_1 R_4 + 2 C_1 C_5 L_1 R_5 + 2 C_5 L_1 L_5 g_m) + s^2 (2 C_1 L_1 + 2 C_5 L_1 R_4 g_m + 2 C_5 L_1 R_5 g_m + 2 C_5 L_1 + 2 C_5 L_5) + s (C_5 R_4 + 2 C_5 R_5 + 2 L_1 g_m) + 2}$$

$$\mathbf{10.555 \quad INVALID-ORDER-555} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \quad \infty, \quad \infty, \quad R_4, \quad \frac{L_5 R_5 s}{C_5 L_5 R_5 s^2 + L_5 s + R_5}, \quad \infty \right)$$

$$H(s) = \frac{-C_5 L_1 L_5 R_4 R_5 s^3 - L_1 R_4 R_5 s + s^2 (L_1 L_5 R_4 R_5 g_m - L_1 L_5 R_4)}{C_1 C_5 L_1 L_5 R_4 R_5 s^4 + R_4 R_5 + s^3 (C_1 L_1 L_5 R_4 + 2 C_1 L_1 L_5 R_5 + 2 C_5 L_1 L_5 R_4 R_5 g_m + 2 C_5 L_1 L_5 R_5) + s^2 (C_1 L_1 R_4 R_5 + C_5 L_5 R_4 R_5 + 2 L_1 L_5 R_4 g_m + 2 L_1 L_5 R_5 g_m + 2 L_1 L_5) + s (2 L_1 R_4 R_5 g_m + 2 L_1 R_5 + L_5 R_4 + 2 L_5 R_5)}$$

$$\mathbf{10.556 \quad INVALID-ORDER-556} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \quad \infty, \quad \infty, \quad R_4, \quad \frac{C_5 L_5 R_5 s^2 + L_5 s + R_5}{C_5 L_5 s^2 + 1}, \quad \infty \right)$$

$$H(s) = \frac{L_1 L_5 R_4 g_m s^2 + s^3 (C_5 L_1 L_5 R_4 R_5 g_m - C_5 L_1 L_5 R_4) + s (L_1 R_4 R_5 g_m - L_1 R_4)}{R_4 + 2R_5 + s^4 (C_1 C_5 L_1 L_5 R_4 + 2C_1 C_5 L_1 L_5 R_5) + s^3 (2C_1 L_1 L_5 + 2C_5 L_1 L_5 R_4 g_m + 2C_5 L_1 L_5 R_5 g_m + 2C_5 L_1 L_5) + s^2 (C_1 L_1 R_4 + 2C_1 L_1 R_5 + C_5 L_5 R_4 + 2C_5 L_5 R_5 + 2L_1 L_5 g_m) + s (2L_1 R_4 g_m + 2L_1 R_5 g_m + 2L_1 + 2L_5)}$$

$$\mathbf{10.557 \quad INVALID-ORDER-557} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \quad \infty, \quad \infty, \quad R_4, \quad \frac{R_5 (C_5 L_5 s^2 + 1)}{C_5 L_5 s^2 + C_5 R_5 s + 1}, \quad \infty \right)$$

$$H(s) = \frac{-C_5 L_1 R_4 R_5 s^2 + s^3 (C_5 L_1 L_5 R_4 R_5 g_m - C_5 L_1 L_5 R_4) + s (L_1 R_4 R_5 g_m - L_1 R_4)}{R_4 + 2R_5 + s^4 (C_1 C_5 L_1 L_5 R_4 + 2C_1 C_5 L_1 L_5 R_5) + s^3 (C_1 C_5 L_1 R_4 R_5 + 2C_5 L_1 L_5 R_4 g_m + 2C_5 L_1 L_5 R_5 g_m + 2C_5 L_1 L_5) + s^2 (C_1 L_1 R_4 + 2C_1 L_1 R_5 + C_5 L_5 R_4 + 2C_5 L_5 R_5) + s (C_5 R_4 R_5 + 2L_1 R_4 g_m + 2L_1 R_5 g_m + 2L_1)}$$

$$\mathbf{10.558 \quad INVALID-ORDER-558} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \quad \infty, \quad \infty, \quad \frac{1}{C_4 s}, \quad R_5, \quad \infty \right)$$

$$H(s) = \frac{s (L_1 R_5 g_m - L_1)}{2C_1 C_4 L_1 R_5 s^3 + s^2 (C_1 L_1 + 2C_4 L_1 R_5 g_m + 2C_4 L_1) + s (2C_4 R_5 + 2L_1 g_m) + 1}$$

$$\mathbf{10.559 \quad INVALID-ORDER-559} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \quad \infty, \quad \infty, \quad \frac{1}{C_4 s}, \quad \frac{R_5}{C_5 R_5 s + 1}, \quad \infty \right)$$

$$H(s) = \frac{-C_5 L_1 R_5 s^2 + s (L_1 R_5 g_m - L_1)}{s^3 (2C_1 C_4 L_1 R_5 + C_1 C_5 L_1 R_5 + 2C_4 C_5 L_1 R_5) + s^2 (C_1 L_1 + 2C_4 L_1 R_5 g_m + 2C_4 L_1 + 2C_5 L_1 R_5 g_m) + s (2C_4 R_5 + C_5 R_5 + 2L_1 g_m) + 1}$$

$$\mathbf{10.560 \quad INVALID-ORDER-560} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \quad \infty, \quad \infty, \quad \frac{1}{C_4 s}, \quad R_5 + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{L_1 g_m + s (C_5 L_1 R_5 g_m - C_5 L_1)}{2C_1 C_4 C_5 L_1 R_5 s^3 + 2C_4 + C_5 + s^2 (2C_1 C_4 L_1 + C_1 C_5 L_1 + 2C_4 C_5 L_1 R_5 g_m + 2C_4 C_5 L_1) + s (2C_4 C_5 R_5 + 2C_4 L_1 g_m + 2C_5 L_1 g_m)}$$

$$\mathbf{10.561 \quad INVALID-ORDER-561} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \quad \infty, \quad \infty, \quad \frac{1}{C_4 s}, \quad L_5 s + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{C_5 L_1 L_5 g_m s^2 - C_5 L_1 s + L_1 g_m}{2C_1 C_4 C_5 L_1 L_5 s^4 + 2C_4 C_5 L_1 L_5 g_m s^3 + 2C_4 + C_5 + s^2 (2C_1 C_4 L_1 + C_1 C_5 L_1 + 2C_4 C_5 L_1 + 2C_4 C_5 L_5) + s (2C_4 L_1 g_m + 2C_5 L_1 g_m)}$$

$$\mathbf{10.562 \quad INVALID-ORDER-562} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \quad \infty, \quad \infty, \quad \frac{1}{C_4 s}, \quad \frac{L_5 s}{C_5 L_5 s^2 + 1}, \quad \infty \right)$$

$$H(s) = \frac{-C_5 L_1 L_5 s^3 + L_1 L_5 g_m s^2 - L_1 s}{2L_1 g_m s + s^4 (2C_1 C_4 L_1 L_5 + C_1 C_5 L_1 L_5 + 2C_4 C_5 L_1 L_5) + s^3 (2C_4 L_1 L_5 g_m + 2C_5 L_1 L_5 g_m) + s^2 (C_1 L_1 + 2C_4 L_1 + 2C_4 L_5 + C_5 L_5) + 1}$$

$$\mathbf{10.563 \quad INVALID-ORDER-563} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \quad \infty, \quad \infty, \quad \frac{1}{C_4 s}, \quad L_5 s + R_5 + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{C_5 L_1 L_5 g_m s^2 + L_1 g_m + s (C_5 L_1 R_5 g_m - C_5 L_1)}{2C_1 C_4 C_5 L_1 L_5 s^4 + 2C_4 + C_5 + s^3 (2C_1 C_4 C_5 L_1 R_5 + 2C_4 C_5 L_1 L_5 g_m) + s^2 (2C_1 C_4 L_1 + C_1 C_5 L_1 + 2C_4 C_5 L_1 R_5 g_m + 2C_4 C_5 L_1 + 2C_4 C_5 L_5) + s (2C_4 C_5 R_5 + 2C_4 L_1 g_m + 2C_5 L_1 g_m)}$$

$$\mathbf{10.564 \quad INVALID-ORDER-564} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \quad \infty, \quad \infty, \quad \frac{1}{C_4 s}, \quad \frac{L_5 R_5 s}{C_5 L_5 R_5 s^2 + L_5 s + R_5}, \quad \infty \right)$$

$$H(s) = \frac{-C_5 L_1 L_5 R_5 s^3 - L_1 R_5 s + s^2 (L_1 L_5 R_5 g_m - L_1 L_5)}{R_5 + s^4 (2C_1 C_4 L_1 L_5 R_5 + C_1 C_5 L_1 L_5 R_5 + 2C_4 C_5 L_1 L_5 R_5) + s^3 (C_1 L_1 L_5 + 2C_4 L_1 L_5 R_5 g_m + 2C_4 L_1 L_5 + 2C_5 L_1 L_5 R_5 g_m) + s^2 (C_1 L_1 R_5 + 2C_4 L_1 R_5 + 2C_4 L_5 R_5 + C_5 L_5 R_5 + 2L_1 L_5 g_m) + s (2L_1 R_5 g_m + L_5)}$$

$$\mathbf{10.565 \quad INVALID-ORDER-565} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \quad \infty, \quad \infty, \quad \frac{1}{C_4 s}, \quad \frac{C_5 L_5 R_5 s^2 + L_5 s + R_5}{C_5 L_5 s^2 + 1}, \quad \infty \right)$$

$$H(s) = \frac{L_1 L_5 g_m s^2 + s^3 (C_5 L_1 L_5 R_5 g_m - C_5 L_1 L_5) + s (L_1 R_5 g_m - L_1)}{2C_1 C_4 C_5 L_1 L_5 R_5 s^5 + s^4 (2C_1 C_4 L_1 L_5 + C_1 C_5 L_1 L_5 + 2C_4 C_5 L_1 L_5 R_5 g_m + 2C_4 C_5 L_1 L_5) + s^3 (2C_1 C_4 L_1 R_5 + 2C_4 C_5 L_5 R_5 + 2C_4 L_1 L_5 g_m + 2C_5 L_1 L_5 g_m) + s^2 (C_1 L_1 + 2C_4 L_1 R_5 g_m + 2C_4 L_1 + 2C_4 L_5 + C_5 L_5) + s (2C_4 R_5 + 2L_1 g_m) + 1}$$

$$\mathbf{10.566 \quad INVALID-ORDER-566} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \quad \infty, \quad \infty, \quad \frac{1}{C_4 s}, \quad \frac{R_5 (C_5 L_5 s^2 + 1)}{C_5 L_5 s^2 + C_5 R_5 s + 1}, \quad \infty \right)$$

$$H(s) = \frac{-C_5 L_1 R_5 s^2 + s^3 (C_5 L_1 L_5 R_5 g_m - C_5 L_1 L_5) + s (L_1 R_5 g_m - L_1)}{2C_1 C_4 C_5 L_1 L_5 R_5 s^5 + s^4 (C_1 C_5 L_1 L_5 + 2C_4 C_5 L_1 L_5 R_5 g_m + 2C_4 C_5 L_1 L_5) + s^3 (2C_1 C_4 L_1 R_5 + C_1 C_5 L_1 R_5 + 2C_4 C_5 L_1 R_5 + 2C_4 C_5 L_5 R_5 + 2C_5 L_1 L_5 g_m) + s^2 (C_1 L_1 + 2C_4 L_1 R_5 g_m + 2C_4 L_1 + 2C_5 L_1 R_5 g_m + C_5 L_5) + s (2C_4 R_5 + C_5 R_5 + 2L_1 g_m) + 1}$$

$$\mathbf{10.567 \quad INVALID-ORDER-567} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \quad \infty, \quad \infty, \quad \frac{R_4}{C_4 R_4 s + 1}, \quad R_5, \quad \infty \right)$$

$$H(s) = \frac{s (L_1 R_4 R_5 g_m - L_1 R_4)}{2C_1 C_4 L_1 R_4 R_5 s^3 + R_4 + 2R_5 + s^2 (C_1 L_1 R_4 + 2C_1 L_1 R_5 + 2C_4 L_1 R_4 R_5 g_m + 2C_4 L_1 R_4) + s (2C_4 R_4 R_5 + 2L_1 R_4 g_m + 2L_1 R_5 g_m + 2L_1)}$$

$$\mathbf{10.568 \quad INVALID-ORDER-568} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \quad \infty, \quad \infty, \quad \frac{R_4}{C_4 R_4 s + 1}, \quad \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{-C_5 L_1 R_4 s^2 + L_1 R_4 g_m s}{s^3 (2C_1 C_4 L_1 R_4 + C_1 C_5 L_1 R_4 + 2C_4 C_5 L_1 R_4) + s^2 (2C_1 L_1 + 2C_4 L_1 R_4 g_m + 2C_5 L_1 R_4 g_m + 2C_5 L_1) + s (2C_4 R_4 + C_5 R_4 + 2L_1 g_m) + 2}$$

$$\mathbf{10.569 \quad INVALID-ORDER-569} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \quad \infty, \quad \infty, \quad \frac{R_4}{C_4 R_4 s + 1}, \quad \frac{R_5}{C_5 R_5 s + 1}, \quad \infty \right)$$

$$H(s) = \frac{-C_5 L_1 R_4 R_5 s^2 + s (L_1 R_4 R_5 g_m - L_1 R_4)}{R_4 + 2R_5 + s^3 (2C_1 C_4 L_1 R_4 R_5 + C_1 C_5 L_1 R_4 R_5 + 2C_4 C_5 L_1 R_4 R_5) + s^2 (C_1 L_1 R_4 + 2C_1 L_1 R_5 + 2C_4 L_1 R_4 R_5 g_m + 2C_4 L_1 R_4 + 2C_5 L_1 R_4 R_5 g_m + 2C_5 L_1 R_5) + s (2C_4 R_4 R_5 + C_5 R_4 R_5 + 2L_1 R_4 g_m + 2L_1 R_5 g_m + 2L_1)}$$

$$\mathbf{10.570 \quad INVALID-ORDER-570} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \quad \infty, \quad \infty, \quad \frac{R_4}{C_4 R_4 s + 1}, \quad R_5 + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{L_1 R_4 g_m s + s^2 (C_5 L_1 R_4 R_5 g_m - C_5 L_1 R_4)}{2C_1 C_4 C_5 L_1 R_4 R_5 s^4 + s^3 (2C_1 C_4 L_1 R_4 + C_1 C_5 L_1 R_4 + 2C_1 C_5 L_1 R_5 + 2C_4 C_5 L_1 R_4 R_5 g_m + 2C_4 C_5 L_1 R_4) + s^2 (2C_1 L_1 + 2C_4 C_5 R_4 R_5 + 2C_4 L_1 R_4 g_m + 2C_5 L_1 R_4 g_m + 2C_5 L_1 R_5 g_m + 2C_5 L_1) + s (2C_4 R_4 + C_5 R_4 + 2C_5 R_5 + 2L_1 g_m) + 2}$$

$$\mathbf{10.571 \quad INVALID-ORDER-571} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \quad \infty, \quad \infty, \quad \frac{R_4}{C_4 R_4 s + 1}, \quad L_5 s + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{C_5 L_1 L_5 R_4 g_m s^3 - C_5 L_1 R_4 s^2 + L_1 R_4 g_m s}{2C_1 C_4 C_5 L_1 L_5 R_4 s^5 + s^4 (2C_1 C_5 L_1 L_5 + 2C_4 C_5 L_1 L_5 R_4 g_m) + s^3 (2C_1 C_4 L_1 R_4 + C_1 C_5 L_1 R_4 + 2C_4 C_5 L_1 R_4 + 2C_4 C_5 L_5 R_4 + 2C_5 L_1 L_5 g_m) + s^2 (2C_1 L_1 + 2C_4 L_1 R_4 g_m + 2C_5 L_1 R_4 g_m + 2C_5 L_1 + 2C_5 L_5) + s (2C_4 R_4 + C_5 R_4 + 2L_1 g_m) + 2}$$

$$\mathbf{10.572 \quad INVALID-ORDER-572} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \quad \infty, \quad \infty, \quad \frac{R_4}{C_4 R_4 s + 1}, \quad \frac{L_5 s}{C_5 L_5 s^2 + 1}, \quad \infty \right)$$

$$H(s) = \frac{-C_5 L_1 L_5 R_4 s^3 + L_1 L_5 R_4 g_m s^2 - L_1 R_4 s}{R_4 + s^4 (2C_1 C_4 L_1 L_5 R_4 + C_1 C_5 L_1 L_5 R_4 + 2C_4 C_5 L_1 L_5 R_4) + s^3 (2C_1 L_1 L_5 + 2C_4 L_1 L_5 R_4 g_m + 2C_5 L_1 L_5 R_4 g_m + 2C_5 L_1 L_5) + s^2 (C_1 L_1 R_4 + 2C_4 L_1 R_4 + 2C_4 L_5 R_4 + C_5 L_5 R_4 + 2L_1 L_5 g_m) + s (2L_1 R_4 g_m + 2L_1 + 2L_5)}$$

$$\mathbf{10.573 \quad INVALID-ORDER-573} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \quad \infty, \quad \infty, \quad \frac{R_4}{C_4 R_4 s + 1}, \quad L_5 s + R_5 + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{C_5 L_1 L_5 R_4 g_m s^3 + L_1 R_4 g_m s + s^2 (C_5 L_1 R_4 R_5 g_m - C_5 L_1 R_4)}{2C_1 C_4 C_5 L_1 L_5 R_4 s^5 + s^4 (2C_1 C_4 C_5 L_1 R_4 R_5 + 2C_1 C_5 L_1 L_5 + 2C_4 C_5 L_1 L_5 R_4 g_m) + s^3 (2C_1 C_4 L_1 R_4 + C_1 C_5 L_1 R_4 + 2C_1 C_5 L_1 R_5 + 2C_4 C_5 L_1 R_4 R_5 g_m + 2C_4 C_5 L_1 R_4 + 2C_4 C_5 L_5 R_4 + 2C_5 L_1 L_5 g_m) + s^2 (2C_1 L_1 + 2C_4 C_5 R_4 R_5 + 2C_4 L_1 R_4 g_m + 2C_5 L_1 R_4 g_m + 2C_5 L_1 R_5) + s (2C_4 R_4 + C_5 R_4 + 2L_1 g_m) + 2}$$

$$\mathbf{10.574 \quad INVALID-ORDER-574} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \quad \infty, \quad \infty, \quad \frac{R_4}{C_4 R_4 s + 1}, \quad \frac{L_5 R_5 s}{C_5 L_5 R_5 s^2 + L_5 s + R_5}, \quad \infty \right)$$

$$H(s) = \frac{-C_5 L_1 L_5 R_4 R_5 s^3 - L_1 R_4 R_5 s + s^2 (L_1 L_5 R_4 R_5 g_m - L_1 L_5 R_4)}{R_4 R_5 + s^4 (2C_1 C_4 L_1 L_5 R_4 R_5 + C_1 C_5 L_1 L_5 R_4 R_5 + 2C_4 C_5 L_1 L_5 R_4 R_5) + s^3 (C_1 L_1 L_5 R_4 + 2C_1 L_1 L_5 R_5 + 2C_4 L_1 L_5 R_4 R_5 g_m + 2C_4 L_1 L_5 R_4 + 2C_5 L_1 L_5 R_4 R_5 g_m + 2C_5 L_1 L_5 R_5) + s^2 (C_1 L_1 R_4 R_5 + 2C_4 L_1 R_4 R_5 + 2C_4 L_5 R_4 R_5 + C_5 L_5 R_4 R_5 + 2L_1 L_5 R_4 g_m + 2L_1 L_5 R_5) + s (2C_4 R_4 R_5 + 2L_1 R_4 R_5 + 2L_1 R_5 g_m + 2L_1 R_5)}$$

$$\mathbf{10.575 \quad INVALID-ORDER-575} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \quad \infty, \quad \infty, \quad \frac{R_4}{C_4 R_4 s + 1}, \quad \frac{C_5 L_5 R_5 s^2 + L_5 s + R_5}{C_5 L_5 s^2 + 1}, \quad \infty \right)$$

$$H(s) = \frac{L_1 L_5 R_4 g_m s^2 + s^3 (C_5 L_1 L_5 R_4 R_5 g_m - C_5 L_1 L_5 R_4) + s (L_1 R_4 R_5 g_m - L_1 R_4)}{2C_1 C_4 C_5 L_1 L_5 R_4 R_5 s^5 + R_4 + 2R_5 + s^4 (2C_1 C_4 L_1 L_5 R_4 + C_1 C_5 L_1 L_5 R_4 + 2C_1 C_5 L_1 L_5 R_5 + 2C_4 C_5 L_1 L_5 R_4 R_5 g_m + 2C_4 C_5 L_1 L_5 R_4) + s^3 (2C_1 C_4 L_1 R_4 R_5 + 2C_1 L_1 L_5 + 2C_4 C_5 L_5 R_4 R_5 + 2C_4 L_1 L_5 R_4 g_m + 2C_5 L_1 L_5 R_4 g_m + 2C_5 L_1 L_5 R_5) + s^2 (C_1 L_1 R_4 R_5 + 2C_4 L_1 R_4 R_5 + 2C_4 L_5 R_4 R_5 + C_5 L_5 R_4 R_5 + 2L_1 L_5 R_4 g_m + 2L_1 L_5 R_5) + s (2C_4 R_4 R_5 + 2L_1 R_4 R_5 + 2L_1 R_5 g_m + 2L_1 R_5)}$$

$$\mathbf{10.576 \quad INVALID-ORDER-576} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \quad \infty, \quad \infty, \quad \frac{R_4}{C_4 R_4 s + 1}, \quad \frac{R_5 (C_5 L_5 s^2 + 1)}{C_5 L_5 s^2 + C_5 R_5 s + 1}, \quad \infty \right)$$

$$H(s) = \frac{-C_5 L_1 R_4 R_5 s^2 + s^3 (C_5 L_1 L_5 R_4 R_5 g_m - C_5 L_1 L_5 R_4) + s (L_1 R_4 R_5 g_m - L_1 R_4)}{2C_1 C_4 C_5 L_1 L_5 R_4 R_5 s^5 + R_4 + 2R_5 + s^4 (C_1 C_5 L_1 L_5 R_4 + 2C_1 C_5 L_1 L_5 R_5 + 2C_4 C_5 L_1 L_5 R_4 R_5 g_m + 2C_4 C_5 L_1 L_5 R_4) + s^3 (2C_1 C_4 L_1 R_4 R_5 + C_1 C_5 L_1 R_4 R_5 + 2C_4 C_5 L_1 R_4 R_5 + 2C_4 C_5 L_5 R_4 R_5 + 2C_5 L_1 L_5 R_4 g_m + 2C_5 L_1 L_5 R_5 g_m + 2C_5 L_1 L_5) + s^2 (C_1 L_1 R_4 + 2C_1 L_1 R_5)}$$

$$\mathbf{10.577 \quad INVALID-ORDER-577} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \quad \infty, \quad \infty, \quad R_4 + \frac{1}{C_4 s}, \quad R_5, \quad \infty \right)$$

$$H(s) = \frac{s^2 (C_4 L_1 R_4 R_5 g_m - C_4 L_1 R_4) + s (L_1 R_5 g_m - L_1)}{s^3 (C_1 C_4 L_1 R_4 + 2C_1 C_4 L_1 R_5) + s^2 (C_1 L_1 + 2C_4 L_1 R_4 g_m + 2C_4 L_1 R_5 g_m + 2C_4 L_1) + s (C_4 R_4 + 2C_4 R_5 + 2L_1 g_m) + 1}$$

$$\mathbf{10.578 \quad INVALID-ORDER-578} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \quad \infty, \quad \infty, \quad R_4 + \frac{1}{C_4 s}, \quad \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{-C_4 C_5 L_1 R_4 s^2 + L_1 g_m + s (C_4 L_1 R_4 g_m - C_5 L_1)}{C_1 C_4 C_5 L_1 R_4 s^3 + 2C_4 + C_5 + s^2 (2C_1 C_4 L_1 + C_1 C_5 L_1 + 2C_4 C_5 L_1 R_4 g_m + 2C_4 C_5 L_1) + s (C_4 C_5 R_4 + 2C_4 L_1 g_m + 2C_5 L_1 g_m)}$$

$$\mathbf{10.579 \quad INVALID-ORDER-579} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \quad \infty, \quad \infty, \quad R_4 + \frac{1}{C_4 s}, \quad \frac{R_5}{C_5 R_5 s + 1}, \quad \infty \right)$$

$$H(s) = \frac{-C_4 C_5 L_1 R_4 R_5 s^3 + s^2 (C_4 L_1 R_4 R_5 g_m - C_4 L_1 R_4 - C_5 L_1 R_5) + s (L_1 R_5 g_m - L_1)}{C_1 C_4 C_5 L_1 R_4 R_5 s^4 + s^3 (C_1 C_4 L_1 R_4 + 2C_1 C_4 L_1 R_5 + C_1 C_5 L_1 R_5 + 2C_4 C_5 L_1 R_4 R_5 g_m + 2C_4 C_5 L_1 R_5) + s^2 (C_1 L_1 + C_4 C_5 R_4 R_5 + 2C_4 L_1 R_4 g_m + 2C_4 L_1 R_5 g_m + 2C_4 L_1 + 2C_5 L_1 R_5 g_m) + s (C_4 R_4 + 2C_4 R_5 + C_5 R_5 + 2L_1 g_m) + 1}$$

$$\mathbf{10.580 \quad INVALID-ORDER-580} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \quad \infty, \quad \infty, \quad R_4 + \frac{1}{C_4 s}, \quad R_5 + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{L_1 g_m + s^2 (C_4 C_5 L_1 R_4 R_5 g_m - C_4 C_5 L_1 R_4) + s (C_4 L_1 R_4 g_m + C_5 L_1 R_5 g_m - C_5 L_1)}{2C_4 + C_5 + s^3 (C_1 C_4 C_5 L_1 R_4 + 2C_1 C_4 C_5 L_1 R_5) + s^2 (2C_1 C_4 L_1 + C_1 C_5 L_1 + 2C_4 C_5 L_1 R_4 g_m + 2C_4 C_5 L_1 R_5 g_m + 2C_4 C_5 L_1) + s (C_4 C_5 R_4 + 2C_4 C_5 R_5 + 2C_4 L_1 g_m + 2C_5 L_1 g_m)}$$

$$\mathbf{10.581 \quad INVALID-ORDER-581} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \quad \infty, \quad \infty, \quad R_4 + \frac{1}{C_4 s}, \quad L_5 s + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{C_4 C_5 L_1 L_5 R_4 g_m s^3 + L_1 g_m + s^2 (-C_4 C_5 L_1 R_4 + C_5 L_1 L_5 g_m) + s (C_4 L_1 R_4 g_m - C_5 L_1)}{2C_1 C_4 C_5 L_1 L_5 s^4 + 2C_4 + C_5 + s^3 (C_1 C_4 C_5 L_1 R_4 + 2C_4 C_5 L_1 L_5 g_m) + s^2 (2C_1 C_4 L_1 + C_1 C_5 L_1 + 2C_4 C_5 L_1 R_4 g_m + 2C_4 C_5 L_1 + 2C_4 C_5 L_5) + s (C_4 C_5 R_4 + 2C_4 L_1 g_m + 2C_5 L_1 g_m)}$$

$$\mathbf{10.582 \quad INVALID-ORDER-582} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \quad \infty, \quad \infty, \quad R_4 + \frac{1}{C_4 s}, \quad \frac{L_5 s}{C_5 L_5 s^2 + 1}, \quad \infty \right)$$

$$H(s) = \frac{-C_4 C_5 L_1 L_5 R_4 s^4 - L_1 s + s^3 (C_4 L_1 L_5 R_4 g_m - C_5 L_1 L_5) + s^2 (-C_4 L_1 R_4 + L_1 L_5 g_m)}{C_1 C_4 C_5 L_1 L_5 R_4 s^5 + s^4 (2C_1 C_4 L_1 L_5 + C_1 C_5 L_1 L_5 + 2C_4 C_5 L_1 L_5 R_4 g_m + 2C_4 C_5 L_1 L_5) + s^3 (C_1 C_4 L_1 R_4 + C_4 C_5 L_5 R_4 + 2C_4 L_1 L_5 g_m + 2C_5 L_1 L_5 g_m) + s^2 (C_1 L_1 + 2C_4 L_1 R_4 g_m + 2C_4 L_1 + 2C_4 L_5 + C_5 L_5) + s (C_4 R_4 + 2L_1 g_m) + 1}$$

$$\mathbf{10.583 \quad INVALID-ORDER-583} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \quad \infty, \quad \infty, \quad R_4 + \frac{1}{C_4 s}, \quad L_5 s + R_5 + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{C_4 C_5 L_1 L_5 R_4 g_m s^3 + L_1 g_m + s^2 (C_4 C_5 L_1 R_4 R_5 g_m - C_4 C_5 L_1 R_4 + C_5 L_1 L_5 g_m) + s (C_4 L_1 R_4 g_m + C_5 L_1 R_5 g_m - C_5 L_1)}{2C_1 C_4 C_5 L_1 L_5 s^4 + 2C_4 + C_5 + s^3 (C_1 C_4 C_5 L_1 R_4 + 2C_1 C_4 C_5 L_1 R_5 + 2C_4 C_5 L_1 L_5 g_m) + s^2 (2C_1 C_4 L_1 + C_1 C_5 L_1 + 2C_4 C_5 L_1 R_4 g_m + 2C_4 C_5 L_1 R_5 g_m + 2C_4 C_5 L_1 + 2C_4 C_5 L_5) + s (C_4 C_5 R_4 + 2C_4 C_5 R_5 + 2C_4 L_1 g_m + 2C_5 L_1 g_m)}$$

$$\mathbf{10.584 \quad INVALID-ORDER-584} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \quad \infty, \quad \infty, \quad R_4 + \frac{1}{C_4 s}, \quad \frac{L_5 R_5 s}{C_5 L_5 R_5 s^2 + L_5 s + R_5}, \quad \infty \right)$$

$$H(s) = \frac{-C_4 C_5 L_1 L_5 R_4 R_5 s^4 - L_1 R_5 s + s^3 (C_4 L_1 L_5 R_4 R_5 g_m - C_4 L_1 L_5 R_4 - C_5 L_1 L_5 R_5) + s^2 (-C_4 L_1 R_4 R_5 + L_1 L_5 R_5 g_m - L_1 L_5)}{C_1 C_4 C_5 L_1 L_5 R_4 R_5 s^5 + R_5 + s^4 (C_1 C_4 L_1 L_5 R_4 + 2C_1 C_4 L_1 L_5 R_5 + C_1 C_5 L_1 L_5 R_5 + 2C_4 C_5 L_1 L_5 R_4 R_5 g_m + 2C_4 C_5 L_1 L_5 R_5) + s^3 (C_1 C_4 L_1 R_4 R_5 + C_1 L_1 L_5 + C_4 C_5 L_5 R_4 R_5 + 2C_4 L_1 L_5 R_4 g_m + 2C_4 L_1 L_5 R_5 g_m + 2C_4 L_1 L_5 + 2C_5 L_1 L_5 R_5 g_m) + s^2 (C_1 L_1 R_5 + 2C_4 L_1 R_4)}$$

$$\mathbf{10.585 \quad INVALID-ORDER-585} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \quad \infty, \quad \infty, \quad R_4 + \frac{1}{C_4 s}, \quad \frac{C_5 L_5 R_5 s^2 + L_5 s + R_5}{C_5 L_5 s^2 + 1}, \quad \infty \right)$$

$$H(s) = \frac{s^4 (C_4 C_5 L_1 L_5 R_4 R_5 g_m - C_4 C_5 L_1 L_5 R_4) + s^3 (C_4 L_1 L_5 R_4 g_m + C_5 L_1 L_5 R_5 g_m - C_5 L_1 L_5) + s^2 (C_4 L_1 R_4 R_5 g_m - C_4 L_1 R_4 + L_1 L_5 g_m) + s (L_1 R_5 g_m - L_1)}{s^5 (C_1 C_4 C_5 L_1 L_5 R_4 + 2C_1 C_4 C_5 L_1 L_5 R_5) + s^4 (2C_1 C_4 L_1 L_5 + C_1 C_5 L_1 L_5 + 2C_4 C_5 L_1 L_5 R_4 g_m + 2C_4 C_5 L_1 L_5 R_5 g_m + 2C_4 C_5 L_1 L_5) + s^3 (C_1 C_4 L_1 R_4 + 2C_1 C_4 L_1 R_5 + C_4 C_5 L_5 R_4 + 2C_4 C_5 L_5 R_5 + 2C_4 L_1 L_5 g_m + 2C_5 L_1 L_5 g_m) + s^2 (C_1 L_1 + 2C_4 L_1 R_4 g_m + 2C_4 L_1 R_5 g_m)}$$

$$\mathbf{10.586 \quad INVALID-ORDER-586} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \quad \infty, \quad \infty, \quad R_4 + \frac{1}{C_4 s}, \quad \frac{R_5 (C_5 L_5 s^2 + 1)}{C_5 L_5 s^2 + C_5 R_5 s + 1}, \quad \infty \right)$$

$$H(s) = \frac{s^4 (C_4 C_5 L_1 L_5 R_4 R_5 g_m - C_4 C_5 L_1 L_5 R_4) + s^3 (-C_4 C_5 L_1 R_4 R_5 + C_5 L_1 L_5 R_5 g_m - C_5 L_1 L_5) + s^2 (C_4 L_1 R_4 R_5 g_m - C_4 L_1 R_4 - C_5 L_1 R_5) + s (L_1 R_4 R_5 g_m - L_1 R_4 - L_5 R_5) + R_5}{s^5 (C_1 C_4 C_5 L_1 L_5 R_4 + 2 C_1 C_4 C_5 L_1 L_5 R_5) + s^4 (C_1 C_4 C_5 L_1 R_4 R_5 + C_1 C_5 L_1 L_5 + 2 C_4 C_5 L_1 L_5 R_4 g_m + 2 C_4 C_5 L_1 L_5 R_5 g_m + 2 C_4 C_5 L_1 L_5) + s^3 (C_1 C_4 L_1 R_4 + 2 C_1 C_4 L_1 R_5 + C_1 C_5 L_1 R_5 + 2 C_4 C_5 L_1 R_4 R_5 g_m + 2 C_4 C_5 L_1 R_5 + C_4 C_5 L_5 R_4 + 2 C_4 C_5 L_5 R_5 + 2 C_5 L_1 L_5 g_m) + s^2 (C_1 C_4 L_1 R_4 + C_1 C_5 L_1 R_5 + C_4 C_5 L_4 R_5) + s (C_1 C_4 L_1 R_5 + C_1 C_5 L_1 R_5 + C_4 C_5 L_4 R_5) + R_5}$$

$$\mathbf{10.587 \quad INVALID-ORDER-587} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \quad \infty, \quad \infty, \quad L_4 s + \frac{1}{C_4 s}, \quad R_5, \quad \infty \right)$$

$$H(s) = \frac{s^3 (C_4 L_1 L_4 R_5 g_m - C_4 L_1 L_4) + s (L_1 R_5 g_m - L_1)}{C_1 C_4 L_1 L_4 s^4 + s^3 (2 C_1 C_4 L_1 R_5 + 2 C_4 L_1 L_4 g_m) + s^2 (C_1 L_1 + 2 C_4 L_1 R_5 g_m + 2 C_4 L_1 + C_4 L_4) + s (2 C_4 R_5 + 2 L_1 g_m) + 1}$$

$$\mathbf{10.588 \quad INVALID-ORDER-588} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \quad \infty, \quad \infty, \quad L_4 s + \frac{1}{C_4 s}, \quad \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{-C_4 C_5 L_1 L_4 s^3 + C_4 L_1 L_4 g_m s^2 - C_5 L_1 s + L_1 g_m}{C_1 C_4 C_5 L_1 L_4 s^4 + 2 C_4 C_5 L_1 L_4 g_m s^3 + 2 C_4 + C_5 + s^2 (2 C_1 C_4 L_1 + C_1 C_5 L_1 + 2 C_4 C_5 L_1 + C_4 C_5 L_4) + s (2 C_4 L_1 g_m + 2 C_5 L_1 g_m)}$$

$$\mathbf{10.589 \quad INVALID-ORDER-589} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \quad \infty, \quad \infty, \quad L_4 s + \frac{1}{C_4 s}, \quad \frac{R_5}{C_5 R_5 s + 1}, \quad \infty \right)$$

$$H(s) = \frac{-C_4 C_5 L_1 L_4 R_5 s^4 - C_5 L_1 R_5 s^2 + s^3 (C_4 L_1 L_4 R_5 g_m - C_4 L_1 L_4) + s (L_1 R_5 g_m - L_1)}{C_1 C_4 C_5 L_1 L_4 R_5 s^5 + s^4 (C_1 C_4 L_1 L_4 + 2 C_4 C_5 L_1 L_4 R_5 g_m) + s^3 (2 C_1 C_4 L_1 R_5 + C_1 C_5 L_1 R_5 + 2 C_4 C_5 L_1 R_5 + C_4 C_5 L_4 R_5 + 2 C_4 L_1 L_4 g_m) + s^2 (C_1 L_1 + 2 C_4 L_1 R_5 g_m + 2 C_4 L_1 + C_4 L_4 + 2 C_5 L_1 R_5 g_m) + s (2 C_4 R_5 + C_5 R_5 + 2 L_1 g_m) + 1}$$

$$\mathbf{10.590 \quad INVALID-ORDER-590} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \quad \infty, \quad \infty, \quad L_4 s + \frac{1}{C_4 s}, \quad R_5 + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{C_4 L_1 L_4 g_m s^2 + L_1 g_m + s^3 (C_4 C_5 L_1 L_4 R_5 g_m - C_4 C_5 L_1 L_4) + s (C_5 L_1 R_5 g_m - C_5 L_1)}{C_1 C_4 C_5 L_1 L_4 s^4 + 2 C_4 + C_5 + s^3 (2 C_1 C_4 C_5 L_1 R_5 + 2 C_4 C_5 L_1 L_4 g_m) + s^2 (2 C_1 C_4 L_1 + C_1 C_5 L_1 + 2 C_4 C_5 L_1 R_5 g_m + 2 C_4 C_5 L_1 + C_4 C_5 L_4) + s (2 C_4 C_5 R_5 + 2 C_4 L_1 g_m + 2 C_5 L_1 g_m)}$$

$$\mathbf{10.591 \quad INVALID-ORDER-591} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \quad \infty, \quad \infty, \quad L_4 s + \frac{1}{C_4 s}, \quad L_5 s + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{C_4 C_5 L_1 L_4 L_5 g_m s^4 - C_4 C_5 L_1 L_4 s^3 - C_5 L_1 s + L_1 g_m + s^2 (C_4 L_1 L_4 g_m + C_5 L_1 L_5 g_m)}{2 C_4 + C_5 + s^4 (C_1 C_4 C_5 L_1 L_4 + 2 C_1 C_4 C_5 L_1 L_5) + s^3 (2 C_4 C_5 L_1 L_4 g_m + 2 C_4 C_5 L_1 L_5 g_m) + s^2 (2 C_1 C_4 L_1 + C_1 C_5 L_1 + 2 C_4 C_5 L_1 + C_4 C_5 L_4 + 2 C_4 C_5 L_5) + s (2 C_4 L_1 g_m + 2 C_5 L_1 g_m)}$$

$$\mathbf{10.592 \quad INVALID-ORDER-592} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \quad \infty, \quad \infty, \quad L_4 s + \frac{1}{C_4 s}, \quad \frac{L_5 s}{C_5 L_5 s^2 + 1}, \quad \infty \right)$$

$$H(s) = \frac{-C_4 C_5 L_1 L_4 L_5 s^5 + C_4 L_1 L_4 L_5 g_m s^4 + L_1 L_5 g_m s^2 - L_1 s + s^3 (-C_4 L_1 L_4 - C_5 L_1 L_5)}{C_1 C_4 C_5 L_1 L_4 L_5 s^6 + 2 C_4 C_5 L_1 L_4 L_5 g_m s^5 + 2 L_1 g_m s + s^4 (C_1 C_4 L_1 L_4 + 2 C_1 C_4 L_1 L_5 + C_1 C_5 L_1 L_5 + 2 C_4 C_5 L_1 L_5 + C_4 C_5 L_4 L_5) + s^3 (2 C_4 L_1 L_4 g_m + 2 C_4 L_1 L_5 g_m + 2 C_5 L_1 L_5 g_m) + s^2 (C_1 L_1 + 2 C_4 L_1 + C_4 L_4 + 2 C_4 L_5 + C_5 L_5) + 1}$$

$$\mathbf{10.593 \quad INVALID-ORDER-593} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \quad \infty, \quad \infty, \quad L_4 s + \frac{1}{C_4 s}, \quad L_5 s + R_5 + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{C_4 C_5 L_1 L_4 L_5 g_m s^4 + L_1 g_m + s^3 (C_4 C_5 L_1 L_4 R_5 g_m - C_4 C_5 L_1 L_4) + s^2 (C_4 L_1 L_4 g_m + C_5 L_1 L_5 g_m) + s (C_5 L_1 R_5 g_m - C_5 L_1)}{2 C_4 + C_5 + s^4 (C_1 C_4 C_5 L_1 L_4 + 2 C_1 C_4 C_5 L_1 L_5) + s^3 (2 C_1 C_4 C_5 L_1 R_5 + 2 C_4 C_5 L_1 L_4 g_m + 2 C_4 C_5 L_1 L_5 g_m) + s^2 (2 C_1 C_4 L_1 + C_1 C_5 L_1 + 2 C_4 C_5 L_1 R_5 g_m + 2 C_4 C_5 L_1 + C_4 C_5 L_4 + 2 C_4 C_5 L_5) + s (2 C_4 C_5 R_5 + 2 C_4 L_1 g_m + 2 C_5 L_1 g_m)}$$

$$\mathbf{10.594 \quad INVALID-ORDER-594} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \quad \infty, \quad \infty, \quad L_4 s + \frac{1}{C_4 s}, \quad \frac{L_5 R_5 s}{C_5 L_5 R_5 s^2 + L_5 s + R_5}, \quad \infty \right)$$

$$H(s) = \frac{-C_4 C_5 L_1 L_4 L_5 R_5 s^5 - L_1 R_5 s + s^4 (C_4 L_1 L_4 L_5 R_5 g_m - C_4 L_1 L_4 L_5) + s^3 (-C_4 L_1 L_4 R_5 - C_5 L_1 L_5 R_5) + s^2 (L_1 L_5 R_5 g_m - L_1 L_5)}{C_1 C_4 C_5 L_1 L_4 L_5 R_5 s^6 + R_5 + s^5 (C_1 C_4 L_1 L_4 L_5 + 2 C_4 C_5 L_1 L_4 L_5 R_5 g_m) + s^4 (C_1 C_4 L_1 L_4 R_5 + 2 C_1 C_4 L_1 L_5 R_5 + C_1 C_5 L_1 L_5 R_5 + 2 C_4 C_5 L_1 L_5 R_5 + C_4 C_5 L_4 L_5 R_5 + 2 C_4 L_1 L_4 L_5 g_m) + s^3 (C_1 L_1 L_5 + 2 C_4 L_1 L_4 R_5 g_m + 2 C_4 L_1 L_5 R_5 g_m + 2 C_4 L_1 L_5 + C_4 L_4 L_5 + 2 C_5 L_1 L_5 R_5) + s^2 (C_1 L_1 + 2 C_4 L_1 + C_4 L_4 + 2 C_4 L_5 + C_5 L_5) + s (C_1 C_4 L_1 L_5 + C_1 C_5 L_1 L_5 + C_4 C_5 L_4 L_5) + R_5}$$

$$\mathbf{10.595 \quad INVALID-ORDER-595} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \quad \infty, \quad \infty, \quad L_4 s + \frac{1}{C_4 s}, \quad \frac{C_5 L_5 R_5 s^2 + L_5 s + R_5}{C_5 L_5 s^2 + 1}, \quad \infty \right)$$

$$H(s) = \frac{C_4 L_1 L_4 L_5 g_m s^4 + L_1 L_5 g_m s^2 + s^5 (C_4 C_5 L_1 L_4 L_5 R_5 g_m - C_4 C_5 L_1 L_4 L_5) + s^3 (C_4 L_1 L_4 R_5 g_m - C_4 L_1 L_4 + C_5 L_1 L_5 R_5 g_m - C_5 L_1 L_5) + s (L_1 R_5 g_m - L_1)}{C_1 C_4 C_5 L_1 L_4 L_5 s^6 + s^5 (2 C_1 C_4 C_5 L_1 L_5 R_5 + 2 C_4 C_5 L_1 L_4 L_5 g_m) + s^4 (C_1 C_4 L_1 L_4 + 2 C_1 C_4 L_1 L_5 + C_1 C_5 L_1 L_5 + 2 C_4 C_5 L_1 L_5 R_5 g_m + 2 C_4 C_5 L_1 L_5 + C_4 C_5 L_4 L_5) + s^3 (2 C_1 C_4 L_1 R_5 + 2 C_4 C_5 L_5 R_5 + 2 C_4 L_1 L_4 g_m + 2 C_4 L_1 L_5 g_m + 2 C_5 L_1 L_5 g_m) + s^2 (C_1 L_1 + 2 C_4 L_1 R_5 g_m + 2 C_4 L_1 L_5 g_m + 2 C_4 L_1 + C_4 L_4 + 2 C_5 L_1 L_5 R_5) + s (C_1 C_4 L_1 L_5 + C_1 C_5 L_1 L_5 + C_4 C_5 L_4 L_5) + R_5}$$

$$\mathbf{10.596 \quad INVALID-ORDER-596} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \quad \infty, \quad \infty, \quad L_4 s + \frac{1}{C_4 s}, \quad \frac{R_5 (C_5 L_5 s^2 + 1)}{C_5 L_5 s^2 + C_5 R_5 s + 1}, \quad \infty \right)$$

$$H(s) = \frac{-C_4 C_5 L_1 L_4 R_5 s^4 - C_5 L_1 R_5 s^2 + s^5 (C_4 C_5 L_1 L_4 L_5 R_5 g_m - C_4 C_5 L_1 L_4 L_5) + s^3 (C_4 L_1 L_4 R_5 g_m - C_4 L_1 L_4 + C_5 L_1 L_5 R_5 g_m - C_5 L_1 L_5) + s (L_1 R_5 + L_4 R_5)}{C_1 C_4 C_5 L_1 L_4 L_5 s^6 + s^5 (C_1 C_4 C_5 L_1 L_4 R_5 + 2 C_1 C_4 C_5 L_1 L_5 R_5 + 2 C_4 C_5 L_1 L_4 L_5 g_m) + s^4 (C_1 C_4 L_1 L_4 + C_1 C_5 L_1 L_5 + 2 C_4 C_5 L_1 L_4 R_5 g_m + 2 C_4 C_5 L_1 L_5 R_5 g_m + 2 C_4 C_5 L_1 L_5 + C_4 C_5 L_4 L_5) + s^3 (2 C_1 C_4 L_1 R_5 + C_1 C_5 L_1 R_5 + 2 C_4 C_5 L_1 R_5 + C_4 C_5 L_4 R_5 + 2 C_4 C_5 L_5 R_5 + 2 C_1 C_4 L_1 L_4 + C_1 C_5 L_1 L_4 + 2 C_4 C_5 L_1 L_4 R_5 g_m + 2 C_4 C_5 L_1 L_4 L_5 g_m) + s^2 (2 C_1 L_1 R_5 + 2 C_4 L_4 R_5 + 2 L_1 L_4 g_m) + s (2 L_1 R_5 g_m + 2 L_1 + L_4)}$$

$$\mathbf{10.597 \quad INVALID-ORDER-597} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \quad \infty, \quad \infty, \quad \frac{L_4 s}{C_4 L_4 s^2 + 1}, \quad R_5, \quad \infty \right)$$

$$H(s) = \frac{s^2 (L_1 L_4 R_5 g_m - L_1 L_4)}{2 C_1 C_4 L_1 L_4 R_5 s^4 + 2 R_5 + s^3 (C_1 L_1 L_4 + 2 C_4 L_1 L_4 R_5 g_m + 2 C_4 L_1 L_4) + s^2 (2 C_1 L_1 R_5 + 2 C_4 L_4 R_5 + 2 L_1 L_4 g_m) + s (2 L_1 R_5 g_m + 2 L_1 + L_4)}$$

$$\mathbf{10.598 \quad INVALID-ORDER-598} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \quad \infty, \quad \infty, \quad \frac{L_4 s}{C_4 L_4 s^2 + 1}, \quad \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{-C_5 L_1 L_4 s^3 + L_1 L_4 g_m s^2}{2 L_1 g_m s + s^4 (2 C_1 C_4 L_1 L_4 + C_1 C_5 L_1 L_4 + 2 C_4 C_5 L_1 L_4) + s^3 (2 C_4 L_1 L_4 g_m + 2 C_5 L_1 L_4 g_m) + s^2 (2 C_1 L_1 + 2 C_4 L_4 + 2 C_5 L_1 + C_5 L_4) + 2}$$

$$\mathbf{10.599 \quad INVALID-ORDER-599} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \quad \infty, \quad \infty, \quad \frac{L_4 s}{C_4 L_4 s^2 + 1}, \quad \frac{R_5}{C_5 R_5 s + 1}, \quad \infty \right)$$

$$H(s) = \frac{-C_5 L_1 L_4 R_5 s^3 + s^2 (L_1 L_4 R_5 g_m - L_1 L_4)}{2 R_5 + s^4 (2 C_1 C_4 L_1 L_4 R_5 + C_1 C_5 L_1 L_4 R_5 + 2 C_4 C_5 L_1 L_4 R_5) + s^3 (C_1 L_1 L_4 + 2 C_4 L_1 L_4 R_5 g_m + 2 C_4 L_1 L_4 + 2 C_5 L_1 L_4 R_5 g_m) + s^2 (2 C_1 L_1 R_5 + 2 C_4 L_4 R_5 + 2 C_5 L_1 R_5 + C_5 L_4 R_5 + 2 L_1 L_4 g_m) + s (2 L_1 R_5 g_m + 2 L_1 + L_4)}$$

$$\mathbf{10.600 \quad INVALID-ORDER-600} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \quad \infty, \quad \infty, \quad \frac{L_4 s}{C_4 L_4 s^2 + 1}, \quad R_5 + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{L_1 L_4 g_m s^2 + s^3 (C_5 L_1 L_4 R_5 g_m - C_5 L_1 L_4)}{2 C_1 C_4 C_5 L_1 L_4 R_5 s^5 + s^4 (2 C_1 C_4 L_1 L_4 + C_1 C_5 L_1 L_4 + 2 C_4 C_5 L_1 L_4 R_5 g_m + 2 C_4 C_5 L_1 L_4) + s^3 (2 C_1 C_5 L_1 R_5 + 2 C_4 C_5 L_4 R_5 + 2 C_4 L_1 L_4 g_m + 2 C_5 L_1 L_4 g_m) + s^2 (2 C_1 L_1 + 2 C_4 L_4 + 2 C_5 L_1 R_5 g_m + 2 C_5 L_1 + C_5 L_4) + s (2 C_5 R_5 + 2 L_1 g_m) + 2}$$

$$\mathbf{10.601 \quad INVALID-ORDER-601} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \quad \infty, \quad \infty, \quad \frac{L_4 s}{C_4 L_4 s^2 + 1}, \quad L_5 s + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{C_5 L_1 L_4 L_5 g_m s^4 - C_5 L_1 L_4 s^3 + L_1 L_4 g_m s^2}{2 C_1 C_4 C_5 L_1 L_4 L_5 s^6 + 2 C_4 C_5 L_1 L_4 L_5 g_m s^5 + 2 L_1 g_m s + s^4 (2 C_1 C_4 L_1 L_4 + C_1 C_5 L_1 L_4 + 2 C_1 C_5 L_1 L_5 + 2 C_4 C_5 L_1 L_4 + 2 C_4 C_5 L_4 L_5) + s^3 (2 C_4 L_1 L_4 g_m + 2 C_5 L_1 L_4 g_m + 2 C_5 L_1 L_5 g_m) + s^2 (2 C_1 L_1 + 2 C_4 L_4 + 2 C_5 L_1 + C_5 L_4 + 2 C_5 L_5) + 2}$$

$$\mathbf{10.602 \quad INVALID-ORDER-602} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \quad \infty, \quad \infty, \quad \frac{L_4 s}{C_4 L_4 s^2 + 1}, \quad \frac{L_5 s}{C_5 L_5 s^2 + 1}, \quad \infty \right)$$

$$H(s) = \frac{-C_5 L_1 L_4 L_5 s^3 + L_1 L_4 L_5 g_m s^2 - L_1 L_4 s}{2 L_1 + L_4 + 2 L_5 + s^4 (2 C_1 C_4 L_1 L_4 L_5 + C_1 C_5 L_1 L_4 L_5 + 2 C_4 C_5 L_1 L_4 L_5) + s^3 (2 C_4 L_1 L_4 L_5 g_m + 2 C_5 L_1 L_4 L_5 g_m) + s^2 (C_1 L_1 L_4 + 2 C_1 L_1 L_5 + 2 C_4 L_1 L_4 + 2 C_4 L_4 L_5 + 2 C_5 L_1 L_5 + C_5 L_4 L_5) + s (2 L_1 L_4 g_m + 2 L_1 L_5 g_m)}$$

$$\mathbf{10.603 \quad INVALID-ORDER-603} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \quad \infty, \quad \infty, \quad \frac{L_4 s}{C_4 L_4 s^2 + 1}, \quad L_5 s + R_5 + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{C_5 L_1 L_4 L_5 g_m s^4 + L_1 L_4 g_m s^2 + s^3 (C_5 L_1 L_4 R_5 g_m - C_5 L_1 L_4)}{2 C_1 C_4 C_5 L_1 L_4 L_5 s^6 + s^5 (2 C_1 C_4 C_5 L_1 L_4 R_5 + 2 C_4 C_5 L_1 L_4 L_5 g_m) + s^4 (2 C_1 C_4 L_1 L_4 + C_1 C_5 L_1 L_4 + 2 C_1 C_5 L_1 L_5 + 2 C_4 C_5 L_1 L_4 R_5 g_m + 2 C_4 C_5 L_1 L_4 + 2 C_4 C_5 L_4 L_5) + s^3 (2 C_1 C_5 L_1 R_5 + 2 C_4 C_5 L_4 R_5 + 2 C_4 L_1 L_4 g_m + 2 C_5 L_1 L_4 g_m + 2 C_5 L_1 L_5 g_m) + s^2 (2 C_1 L_1 + 2 C_4 L_4 + 2 C_5 L_1 R_5 g_m + 2 C_5 L_1 + C_5 L_4) + s (2 L_1 R_5 g_m + 2 L_1 + L_4)}$$

$$\mathbf{10.604 \quad INVALID-ORDER-604} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \quad \infty, \quad \infty, \quad \frac{L_4 s}{C_4 L_4 s^2 + 1}, \quad \frac{L_5 R_5 s}{C_5 L_5 R_5 s^2 + L_5 s + R_5}, \quad \infty \right)$$

$$H(s) = \frac{-C_5 L_1 L_4 L_5 R_5 s^3 - L_1 L_4 R_5 s + s^2 (L_1 L_4 L_5 R_5 g_m - L_1 L_4 L_5)}{2 L_1 R_5 + L_4 R_5 + 2 L_5 R_5 + s^4 (2 C_1 C_4 L_1 L_4 L_5 R_5 + C_1 C_5 L_1 L_4 L_5 R_5 + 2 C_4 C_5 L_1 L_4 L_5 R_5) + s^3 (C_1 L_1 L_4 L_5 + 2 C_4 L_1 L_4 L_5 R_5 g_m + 2 C_4 L_1 L_4 L_5 + 2 C_5 L_1 L_4 L_5 R_5 g_m) + s^2 (C_1 L_1 L_4 R_5 + 2 C_1 L_1 L_5 R_5 + 2 C_4 L_1 L_4 R_5 + 2 C_4 L_4 L_5 R_5 + 2 C_5 L_1 L_5 R_5 + C_5 L_4 L_5 R_5 + 2 L_1 L_4 L_5) + s (2 L_1 L_4 R_5 g_m + 2 L_1 L_5 R_5 g_m)}$$

$$\mathbf{10.605 \quad INVALID-ORDER-605} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \quad \infty, \quad \infty, \quad \frac{L_4 s}{C_4 L_4 s^2 + 1}, \quad \frac{C_5 L_5 R_5 s^2 + L_5 s + R_5}{C_5 L_5 s^2 + 1}, \quad \infty \right)$$

$$H(s) = \frac{L_1 L_4 L_5 g_m s^3 + s^4 (C_5 L_1 L_4 L_5 R_5 g_m - C_5 L_1 L_4 L_5) + s^2 (L_1 L_4 R_5 g_m - L_1 L_4)}{2 C_1 C_4 C_5 L_1 L_4 L_5 R_5 s^6 + 2 R_5 + s^5 (2 C_1 C_4 L_1 L_4 L_5 + C_1 C_5 L_1 L_4 L_5 + 2 C_4 C_5 L_1 L_4 L_5 R_5 g_m + 2 C_4 C_5 L_1 L_4 L_5) + s^4 (2 C_1 C_4 L_1 L_4 R_5 + 2 C_1 C_5 L_1 L_5 R_5 + 2 C_4 C_5 L_4 L_5 R_5 + 2 C_4 L_1 L_4 L_5 g_m + 2 C_5 L_1 L_4 L_5 g_m) + s^3 (C_1 L_1 L_4 + 2 C_1 L_1 L_5 + 2 C_4 L_1 L_4 R_5 g_m + 2 C_4 L_1 L_4 + 2 C_4 L_1 L_5 + 2 C_5 L_1 L_4 R_5 g_m + 2 C_5 L_1 L_4 L_5 g_m) + s^2 (2 C_1 L_1 + 2 C_4 L_4 + 2 C_5 L_1 R_5 g_m + 2 C_5 L_1 + C_5 L_4) + s (2 L_1 R_5 g_m + 2 L_1 + L_4)}$$

$$\mathbf{10.606 \quad INVALID-ORDER-606} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \quad \infty, \quad \infty, \quad \frac{L_4 s}{C_4 L_4 s^2 + 1}, \quad \frac{R_5 (C_5 L_5 s^2 + 1)}{C_5 L_5 s^2 + C_5 R_5 s + 1}, \quad \infty \right)$$

$$H(s) = \frac{-C_5 L_1 L_4 R_5 s^3 + s^4 (C_5 L_1 L_4 L_5 R_5 g_m - C_5 L_1 L_4 L_5) + s^2 (L_1 L_4 R_5 g_m - L_1 L_4)}{2C_1 C_4 C_5 L_1 L_4 L_5 R_5 s^6 + 2R_5 + s^5 (C_1 C_5 L_1 L_4 L_5 + 2C_4 C_5 L_1 L_4 L_5 R_5 g_m + 2C_4 C_5 L_1 L_4 L_5) + s^4 (2C_1 C_4 L_1 L_4 R_5 + C_1 C_5 L_1 L_4 R_5 + 2C_1 C_5 L_1 L_5 R_5 + 2C_4 C_5 L_1 L_4 R_5 + 2C_4 C_5 L_4 L_5 R_5 + 2C_5 L_1 L_4 L_5 g_m) + s^3 (C_1 L_1 L_4 + 2C_4 L_1 L_4 R_5 g_m + 2C_4 L_1 L_4 + 2C_5 L_1 L_4 R_5 g_m + C_5 L_1 L_4 L_5)} + s^2 (C_1 L_1 L_4 + 2C_4 L_1 L_4 R_5 g_m + 2C_4 L_1 L_4 + 2C_5 L_1 L_4 R_5 g_m + C_5 L_1 L_4 L_5)$$

$$\mathbf{10.607 \quad INVALID-ORDER-607} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \quad \infty, \quad \infty, \quad L_4 s + R_4 + \frac{1}{C_4 s}, \quad R_5, \quad \infty \right)$$

$$H(s) = \frac{s^3 (C_4 L_1 L_4 R_5 g_m - C_4 L_1 L_4) + s^2 (C_4 L_1 R_4 R_5 g_m - C_4 L_1 R_4) + s (L_1 R_5 g_m - L_1)}{C_1 C_4 L_1 L_4 s^4 + s^3 (C_1 C_4 L_1 R_4 + 2C_1 C_4 L_1 R_5 + 2C_4 L_1 L_4 g_m) + s^2 (C_1 L_1 + 2C_4 L_1 R_4 g_m + 2C_4 L_1 R_5 g_m + 2C_4 L_1 + C_4 L_4) + s (C_4 R_4 + 2C_4 R_5 + 2L_1 g_m) + 1}$$

$$\mathbf{10.608 \quad INVALID-ORDER-608} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \quad \infty, \quad \infty, \quad L_4 s + R_4 + \frac{1}{C_4 s}, \quad \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{-C_4 C_5 L_1 L_4 s^3 + L_1 g_m + s^2 (-C_4 C_5 L_1 R_4 + C_4 L_1 L_4 g_m) + s (C_4 L_1 R_4 g_m - C_5 L_1)}{C_1 C_4 C_5 L_1 L_4 s^4 + 2C_4 + C_5 + s^3 (C_1 C_4 C_5 L_1 R_4 + 2C_4 C_5 L_1 L_4 g_m) + s^2 (2C_1 C_4 L_1 + C_1 C_5 L_1 + 2C_4 C_5 L_1 R_4 g_m + 2C_4 C_5 L_1 + C_4 C_5 L_4) + s (C_4 C_5 R_4 + 2C_4 L_1 g_m + 2C_5 L_1 g_m)}$$

$$\mathbf{10.609 \quad INVALID-ORDER-609} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \quad \infty, \quad \infty, \quad L_4 s + R_4 + \frac{1}{C_4 s}, \quad \frac{R_5}{C_5 R_5 s + 1}, \quad \infty \right)$$

$$H(s) = \frac{-C_4 C_5 L_1 L_4 R_5 s^4 + s^3 (-C_4 C_5 L_1 R_4 R_5 + C_4 L_1 L_4 R_5 g_m - C_4 L_1 L_4) + s^2 (C_4 L_1 R_4 R_5 g_m - C_4 L_1 R_4 - C_5 L_1 R_5) + s (L_1 R_5 g_m - L_1)}{C_1 C_4 C_5 L_1 L_4 R_5 s^5 + s^4 (C_1 C_4 C_5 L_1 R_4 R_5 + C_1 C_4 L_1 L_4 + 2C_4 C_5 L_1 L_4 R_5 g_m) + s^3 (C_1 C_4 L_1 R_4 + 2C_1 C_4 L_1 R_5 + C_1 C_5 L_1 R_5 + 2C_4 C_5 L_1 R_4 R_5 g_m + 2C_4 C_5 L_1 R_5 + C_4 C_5 L_4 R_5 + 2C_4 L_1 L_4 g_m) + s^2 (C_1 L_1 + C_4 C_5 R_4 R_5 + 2C_4 L_1 R_4 g_m + 2C_4 L_1 R_5 g_m + 2C_4 L_1 + C_4 L_4 + C_5 L_1 L_4)} + s^2 (C_1 L_1 + C_4 C_5 R_4 R_5 + 2C_4 L_1 R_4 g_m + 2C_4 L_1 R_5 g_m + 2C_4 L_1 + C_4 L_4 + C_5 L_1 L_4)$$

$$\mathbf{10.610 \quad INVALID-ORDER-610} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \quad \infty, \quad \infty, \quad L_4 s + R_4 + \frac{1}{C_4 s}, \quad R_5 + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{L_1 g_m + s^3 (C_4 C_5 L_1 L_4 R_5 g_m - C_4 C_5 L_1 L_4) + s^2 (C_4 C_5 L_1 R_4 R_5 g_m - C_4 C_5 L_1 R_4 + C_4 L_1 L_4 g_m) + s (C_4 L_1 R_4 g_m + C_5 L_1 R_5 g_m - C_5 L_1)}{C_1 C_4 C_5 L_1 L_4 s^4 + 2C_4 + C_5 + s^3 (C_1 C_4 C_5 L_1 R_4 + 2C_1 C_4 C_5 L_1 R_5 + 2C_4 C_5 L_1 L_4 g_m) + s^2 (2C_1 C_4 L_1 + C_1 C_5 L_1 + 2C_4 C_5 L_1 R_4 g_m + 2C_4 C_5 L_1 R_5 g_m + 2C_4 C_5 L_1 + C_4 C_5 L_4) + s (C_4 C_5 R_4 + 2C_4 C_5 R_5 + 2C_4 L_1 g_m + 2C_5 L_1 g_m)}$$

$$\mathbf{10.611 \quad INVALID-ORDER-611} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \quad \infty, \quad \infty, \quad L_4 s + R_4 + \frac{1}{C_4 s}, \quad L_5 s + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{C_4 C_5 L_1 L_4 L_5 g_m s^4 + L_1 g_m + s^3 (-C_4 C_5 L_1 L_4 + C_4 C_5 L_1 L_5 R_4 g_m) + s^2 (-C_4 C_5 L_1 R_4 + C_4 L_1 L_4 g_m + C_5 L_1 L_5 g_m) + s (C_4 L_1 R_4 g_m - C_5 L_1)}{2C_4 + C_5 + s^4 (C_1 C_4 C_5 L_1 L_4 + 2C_1 C_4 C_5 L_1 L_5) + s^3 (C_1 C_4 C_5 L_1 R_4 + 2C_4 C_5 L_1 L_4 g_m + 2C_4 C_5 L_1 L_5 g_m) + s^2 (2C_1 C_4 L_1 + C_1 C_5 L_1 + 2C_4 C_5 L_1 R_4 g_m + 2C_4 C_5 L_1 + C_4 C_5 L_4 + 2C_4 C_5 L_5) + s (C_4 C_5 R_4 + 2C_4 L_1 g_m + 2C_5 L_1 g_m)}$$

$$\mathbf{10.612 \quad INVALID-ORDER-612} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \quad \infty, \quad \infty, \quad L_4 s + R_4 + \frac{1}{C_4 s}, \quad \frac{L_5 s}{C_5 L_5 s^2 + 1}, \quad \infty \right)$$

$$H(s) = \frac{-C_4 C_5 L_1 L_4 L_5 s^5 - L_1 s + s^4 (-C_4 C_5 L_1 L_5 R_4 + C_4 L_1 L_4 L_5 g_m) + s^3 (-C_4 L_1 L_4 + C_4 L_1 L_5 R_4 g_m - C_5 L_1 L_5) + s^2 (-C_4 L_1 R_4 + L_1 L_5 g_m)}{C_1 C_4 C_5 L_1 L_4 L_5 s^6 + s^5 (C_1 C_4 C_5 L_1 L_5 R_4 + 2C_4 C_5 L_1 L_4 L_5 g_m) + s^4 (C_1 C_4 L_1 L_4 + 2C_1 C_4 L_1 L_5 + C_1 C_5 L_1 L_5 + 2C_4 C_5 L_1 L_5 R_4 g_m + 2C_4 C_5 L_1 L_5 + C_4 C_5 L_4 L_5) + s^3 (C_1 C_4 L_1 R_4 + C_4 C_5 L_5 R_4 + 2C_4 L_1 L_4 g_m + 2C_4 L_1 L_5 g_m + 2C_5 L_1 L_5 g_m) + s^2 (C_1 L_1 + 2C_4 L_1 R_4 g_m + C_5 L_1 L_5)} + s^2 (C_1 L_1 + 2C_4 L_1 R_4 g_m + C_5 L_1 L_5)$$

$$\mathbf{10.613 \quad INVALID-ORDER-613} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \quad \infty, \quad \infty, \quad L_4 s + R_4 + \frac{1}{C_4 s}, \quad L_5 s + R_5 + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{C_4 C_5 L_1 L_4 L_5 g_m s^4 + L_1 g_m + s^3 (C_4 C_5 L_1 L_4 R_5 g_m - C_4 C_5 L_1 L_4 + C_4 C_5 L_1 L_5 R_4 g_m) + s^2 (C_4 C_5 L_1 R_4 R_5 g_m - C_4 C_5 L_1 R_4 + C_4 L_1 L_4 g_m + C_5 L_1 L_5 g_m) + s (C_4 L_1 R_4 g_m + C_5 L_1 R_5 g_m - C_5 L_1)}{2C_4 + C_5 + s^4 (C_1 C_4 C_5 L_1 L_4 + 2C_1 C_4 C_5 L_1 L_5) + s^3 (C_1 C_4 C_5 L_1 R_4 + 2C_1 C_4 C_5 L_1 R_5 + 2C_4 C_5 L_1 L_4 g_m + 2C_4 C_5 L_1 L_5 g_m) + s^2 (2C_1 C_4 L_1 + C_1 C_5 L_1 + 2C_4 C_5 L_1 R_4 g_m + 2C_4 C_5 L_1 R_5 g_m + 2C_4 C_5 L_1 + C_4 C_5 L_4 + 2C_4 C_5 L_5) + s (C_4 C_5 R_4 + 2C_4 C_5 R_5 + 2C_4 L_1 g_m + 2C_5 L_1 g_m)}$$

$$\mathbf{10.614 \quad INVALID-ORDER-614} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \quad \infty, \quad \infty, \quad L_4 s + R_4 + \frac{1}{C_4 s}, \quad \frac{L_5 R_5 s}{C_5 L_5 R_5 s^2 + L_5 s + R_5}, \quad \infty \right)$$

$$H(s) = \frac{-C_4 C_5 L_1 L_4 L_5 R_5 s^5 - L_1 R_5 s + s^4 (-C_4 C_5 L_1 L_5 R_4 R_5 + C_4 L_1 L_4 L_5 R_5 g_m - C_4 L_1 L_4 L_5) + s^3 (-C_4 L_1 L_4 + C_4 L_1 L_5 R_4 g_m - C_5 L_1 L_5) + s^2 (-C_4 L_1 R_4 + L_1 L_5 g_m)}{C_1 C_4 C_5 L_1 L_4 L_5 R_5 s^6 + R_5 + s^5 (C_1 C_4 C_5 L_1 L_5 R_4 R_5 + C_1 C_4 L_1 L_4 L_5 + 2C_4 C_5 L_1 L_4 L_5 R_5 g_m) + s^4 (C_1 C_4 L_1 L_4 R_5 + C_1 C_4 L_1 L_5 R_4 + 2C_1 C_4 L_1 L_5 R_5 + C_1 C_5 L_1 L_5 R_5 + 2C_4 C_5 L_1 L_5 R_4 R_5 g_m + 2C_4 C_5 L_1 L_5 R_5 + C_4 C_5 L_4 L_5 R_5 + 2C_4 L_1 L_4 L_5 g_m) + s^3 (C_1 C_4 L_1 R_4 R_5 + C_4 C_5 L_5 R_4 R_5 + 2C_4 L_1 L_4 R_5 g_m + 2C_4 L_1 L_5 R_5 g_m + 2C_5 L_1 L_5 R_5 g_m) + s^2 (C_1 L_1 + 2C_4 L_1 R_4 g_m + C_5 L_1 L_5)} + s^2 (C_1 L_1 + 2C_4 L_1 R_4 g_m + C_5 L_1 L_5)$$

$$\mathbf{10.615 \quad INVALID-ORDER-615} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \quad \infty, \quad \infty, \quad L_4 s + R_4 + \frac{1}{C_4 s}, \quad \frac{C_5 L_5 R_5 s^2 + L_5 s + R_5}{C_5 L_5 s^2 + 1}, \quad \infty \right)$$

$$H(s) = \frac{s^5 (C_4 C_5 L_1 L_4 L_5 R_5 g_m - C_4 C_5 L_1 L_4 L_5) + s^4 (C_4 C_5 L_1 L_5 R_4 R_5 g_m - C_4 C_5 L_1 L_5 R_4 + C_4 L_1 L_4 L_5 g_m) + s^3 (C_4 L_1 L_4 R_5 g_m - C_4 L_1 L_4 + C_4 L_1 L_5 R_4 g_m + C_5 L_1 L_5 R_5 g_m - C_5 L_1 L_5)}{C_1 C_4 C_5 L_1 L_4 L_5 s^6 + s^5 (C_1 C_4 C_5 L_1 L_5 R_4 + 2C_1 C_4 C_5 L_1 L_5 R_5 + 2C_4 C_5 L_1 L_4 L_5 g_m) + s^4 (C_1 C_4 L_1 L_4 + 2C_1 C_4 L_1 L_5 + C_1 C_5 L_1 L_5 + 2C_4 C_5 L_1 L_5 R_4 g_m + 2C_4 C_5 L_1 L_5 R_5 g_m + 2C_4 C_5 L_1 L_5 + C_4 C_5 L_4 L_5) + s^3 (C_1 C_4 L_1 R_4 + 2C_1 C_4 L_1 R_5 + C_4 C_5 L_5 R_4 + 2C_4 C_5 L_5 R_5 + 2C_4 L_1 L_4 R_5 g_m + 2C_4 L_1 L_5 R_5 g_m + 2C_5 L_1 L_5 R_5 g_m) + s^2 (C_1 L_1 + 2C_4 L_1 R_4 g_m + C_5 L_1 L_5)} + s^2 (C_1 L_1 + 2C_4 L_1 R_4 g_m + C_5 L_1 L_5)$$

$$\mathbf{10.626 \quad INVALID-ORDER-626} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \quad \infty, \quad \infty, \quad \frac{L_4 R_4 s}{C_4 L_4 R_4 s^2 + L_4 s + R_4}, \quad \frac{R_5 (C_5 L_5 s^2 + 1)}{C_5 L_5 s^2 + C_5 R_5 s + 1}, \quad \infty \right)$$

$$H(s) = \frac{2C_1 C_4 C_5 L_1 L_4 L_5 R_4 R_5 s^6 + 2R_4 R_5 + s^5 (C_1 C_5 L_1 L_4 L_5 R_4 + 2C_1 C_5 L_1 L_4 L_5 R_5 + 2C_4 C_5 L_1 L_4 L_5 R_4 R_5 g_m + 2C_4 C_5 L_1 L_4 L_5 R_4) + s^4 (2C_1 C_4 L_1 L_4 R_4 R_5 + C_1 C_5 L_1 L_4 R_4 R_5 + 2C_1 C_5 L_1 L_5 R_4 R_5 + 2C_4 C_5 L_1 L_4 R_4 R_5 + 2C_4 C_5 L_4 L_5 R_4 R_5 + 2C_5 L_1 L_4 L_5 R_4 g_m + 2C_5 L_1 L_4 L_5 R_5)}{2C_1 C_4 C_5 L_1 L_4 L_5 R_4 R_5 s^6 + 2R_4 R_5 + s^5 (C_1 C_5 L_1 L_4 L_5 R_4 + 2C_1 C_5 L_1 L_4 L_5 R_5 + 2C_4 C_5 L_1 L_4 L_5 R_4 R_5 g_m + 2C_4 C_5 L_1 L_4 L_5 R_4) + s^4 (2C_1 C_4 L_1 L_4 R_4 R_5 + C_1 C_5 L_1 L_4 R_4 R_5 + 2C_1 C_5 L_1 L_5 R_4 R_5 + 2C_4 C_5 L_1 L_4 R_4 R_5 + 2C_4 C_5 L_4 L_5 R_4 R_5 + 2C_5 L_1 L_4 L_5 R_4 g_m + 2C_5 L_1 L_4 L_5 R_5)}$$

$$\mathbf{10.627 \quad INVALID-ORDER-627} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \quad \infty, \quad \infty, \quad \frac{C_4 L_4 R_4 s^2 + L_4 s + R_4}{C_4 L_4 s^2 + 1}, \quad R_5, \quad \infty \right)$$

$$H(s) = \frac{s^3 (C_4 L_1 L_4 R_4 R_5 g_m - C_4 L_1 L_4 R_4) + s^2 (L_1 L_4 R_5 g_m - L_1 L_4) + s (L_1 R_4 R_5 g_m - L_1 R_4)}{R_4 + 2R_5 + s^4 (C_1 C_4 L_1 L_4 R_4 + 2C_1 C_4 L_1 L_4 R_5) + s^3 (C_1 L_1 L_4 + 2C_4 L_1 L_4 R_4 g_m + 2C_4 L_1 L_4 R_5 g_m + 2C_4 L_1 L_4) + s^2 (C_1 L_1 R_4 + 2C_1 L_1 R_5 + C_4 L_4 R_4 + 2C_4 L_4 R_5 + 2L_1 L_4 g_m) + s (2L_1 R_4 g_m + 2L_1 R_5 g_m + 2L_1 + L_4)}$$

$$\mathbf{10.628 \quad INVALID-ORDER-628} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \quad \infty, \quad \infty, \quad \frac{C_4 L_4 R_4 s^2 + L_4 s + R_4}{C_4 L_4 s^2 + 1}, \quad \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{-C_4 C_5 L_1 L_4 R_4 s^4 + L_1 R_4 g_m s + s^3 (C_4 L_1 L_4 R_4 g_m - C_5 L_1 L_4) + s^2 (-C_5 L_1 R_4 + L_1 L_4 g_m)}{C_1 C_4 C_5 L_1 L_4 R_4 s^5 + s^4 (2C_1 C_4 L_1 L_4 + C_1 C_5 L_1 L_4 + 2C_4 C_5 L_1 L_4 R_4 g_m + 2C_4 C_5 L_1 L_4) + s^3 (C_1 C_5 L_1 R_4 + C_4 C_5 L_4 R_4 + 2C_4 L_1 L_4 g_m + 2C_5 L_1 L_4 g_m) + s^2 (2C_1 L_1 + 2C_4 L_4 + 2C_5 L_1 R_4 g_m + 2C_5 L_1 + C_5 L_4) + s (C_5 R_4 + 2L_1 g_m) + 2}$$

$$\mathbf{10.629 \quad INVALID-ORDER-629} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \quad \infty, \quad \infty, \quad \frac{C_4 L_4 R_4 s^2 + L_4 s + R_4}{C_4 L_4 s^2 + 1}, \quad \frac{R_5}{C_5 R_5 s + 1}, \quad \infty \right)$$

$$H(s) = \frac{-C_4 C_5 L_1 L_4 R_4 R_5 s^4 + s^3 (C_4 L_1 L_4 R_4 R_5 g_m - C_4 L_1 L_4 R_4 - C_5 L_1 L_4 R_5) + s^2 (-C_5 L_1 R_4 R_5 + L_1 L_4 R_5 g_m - L_1 L_4) + s (L_1 R_4 R_5 g_m - L_1 R_4 R_5)}{C_1 C_4 C_5 L_1 L_4 R_4 R_5 s^5 + R_4 + 2R_5 + s^4 (C_1 C_4 L_1 L_4 R_4 + 2C_1 C_4 L_1 L_4 R_5 + C_1 C_5 L_1 L_4 R_5 + 2C_4 C_5 L_1 L_4 R_4 R_5 g_m + 2C_4 C_5 L_1 L_4 R_5) + s^3 (C_1 C_5 L_1 R_4 R_5 + C_1 L_1 L_4 + C_4 C_5 L_4 R_4 R_5 + 2C_4 L_1 L_4 R_4 g_m + 2C_4 L_1 L_4 R_5 g_m + 2C_4 L_1 L_4 + 2C_5 L_1 L_4 R_5 g_m) + s^2 (C_1 L_1 R_4 + 2C_1 L_1 R_5 + C_4 L_4 R_4 + 2C_4 L_4 R_5 + 2L_1 L_4 g_m) + s (L_1 R_4 R_5 g_m - L_1 R_4 R_5)}$$

$$\mathbf{10.630 \quad INVALID-ORDER-630} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \quad \infty, \quad \infty, \quad \frac{C_4 L_4 R_4 s^2 + L_4 s + R_4}{C_4 L_4 s^2 + 1}, \quad R_5 + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{L_1 R_4 g_m s + s^4 (C_4 C_5 L_1 L_4 R_4 R_5 g_m - C_4 C_5 L_1 L_4 R_4) + s^3 (C_4 L_1 L_4 R_4 g_m + C_5 L_1 L_4 R_5 g_m - C_5 L_1 L_4) + s^2 (C_5 L_1 R_4 R_5 g_m - C_5 L_1 R_4 + L_1 L_4 g_m)}{s^5 (C_1 C_4 C_5 L_1 L_4 R_4 + 2C_1 C_4 C_5 L_1 L_4 R_5) + s^4 (2C_1 C_4 L_1 L_4 + C_1 C_5 L_1 L_4 + 2C_4 C_5 L_1 L_4 R_4 g_m + 2C_4 C_5 L_1 L_4 R_5 g_m + 2C_4 C_5 L_1 L_4) + s^3 (C_1 C_5 L_1 R_4 + 2C_1 C_5 L_1 R_5 + C_4 C_5 L_4 R_4 + 2C_4 C_5 L_4 R_5 + 2C_4 L_1 L_4 g_m + 2C_5 L_1 L_4 g_m) + s^2 (2C_1 L_1 + 2C_4 L_4 + 2C_5 L_1 R_4 g_m + 2C_5 L_1 + C_5 L_4) + s (C_5 R_4 + 2L_1 g_m) + 2}$$

$$\mathbf{10.631 \quad INVALID-ORDER-631} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \quad \infty, \quad \infty, \quad \frac{C_4 L_4 R_4 s^2 + L_4 s + R_4}{C_4 L_4 s^2 + 1}, \quad L_5 s + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{C_4 C_5 L_1 L_4 L_5 R_4 g_m s^5 + L_1 R_4 g_m s + s^4 (-C_4 C_5 L_1 L_4 R_4 + C_5 L_1 L_4 L_5 g_m) + s^3 (C_4 L_1 L_4 R_4 g_m - C_5 L_1 L_4 + C_5 L_1 L_5 R_4 g_m) + s^2 (-C_5 L_1 R_4 + L_1 L_4 g_m)}{2C_1 C_4 C_5 L_1 L_4 L_5 s^6 + s^5 (C_1 C_4 C_5 L_1 L_4 R_4 + 2C_4 C_5 L_1 L_4 L_5 g_m) + s^4 (2C_1 C_4 L_1 L_4 + C_1 C_5 L_1 L_4 + 2C_1 C_5 L_1 L_5 + 2C_4 C_5 L_1 L_4 R_4 g_m + 2C_4 C_5 L_1 L_4 + 2C_4 C_5 L_4 L_5) + s^3 (C_1 C_5 L_1 R_4 + C_4 C_5 L_4 R_4 + 2C_4 L_1 L_4 g_m + 2C_5 L_1 L_4 g_m + 2C_5 L_1 L_5 g_m) + s^2 (2C_1 L_1 + 2C_4 L_4 + 2C_5 L_1 R_4 g_m + 2C_5 L_1 + C_5 L_4) + s (C_5 R_4 + 2L_1 g_m) + 2}$$

$$\mathbf{10.632 \quad INVALID-ORDER-632} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \quad \infty, \quad \infty, \quad \frac{C_4 L_4 R_4 s^2 + L_4 s + R_4}{C_4 L_4 s^2 + 1}, \quad \frac{L_5 s}{C_5 L_5 s^2 + 1}, \quad \infty \right)$$

$$H(s) = \frac{-C_4 C_5 L_1 L_4 L_5 R_4 s^5 - L_1 R_4 s + s^4 (C_4 L_1 L_4 L_5 R_4 g_m - C_5 L_1 L_4 L_5) + s^3 (-C_4 L_1 L_4 R_4 - C_5 L_1 L_5 R_4 + L_1 L_4 L_5 g_m) + s^2 (-L_1 L_4 + L_1 L_5)}{C_1 C_4 C_5 L_1 L_4 L_5 R_4 s^6 + R_4 + s^5 (2C_1 C_4 L_1 L_4 L_5 + C_1 C_5 L_1 L_4 L_5 + 2C_4 C_5 L_1 L_4 L_5 R_4 g_m + 2C_4 C_5 L_1 L_4 L_5) + s^4 (C_1 C_4 L_1 L_4 R_4 + C_1 C_5 L_1 L_5 R_4 + C_4 C_5 L_4 L_5 R_4 + 2C_4 L_1 L_4 L_5 g_m + 2C_5 L_1 L_4 L_5 g_m) + s^3 (C_1 L_1 L_4 + 2C_1 L_1 L_5 + 2C_4 L_1 L_4 R_4 g_m + 2C_4 L_1 L_4 + 2C_4 L_4 L_5) + s^2 (2C_1 L_1 + 2C_4 L_4 + 2C_5 L_1 R_4 g_m + 2C_5 L_1 + C_5 L_4) + s (C_5 R_4 + 2L_1 g_m) + 2}$$

$$\mathbf{10.633 \quad INVALID-ORDER-633} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \quad \infty, \quad \infty, \quad \frac{C_4 L_4 R_4 s^2 + L_4 s + R_4}{C_4 L_4 s^2 + 1}, \quad L_5 s + R_5 + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{C_4 C_5 L_1 L_4 L_5 R_4 g_m s^5 + L_1 R_4 g_m s + s^4 (C_4 C_5 L_1 L_4 R_4 R_5 g_m - C_4 C_5 L_1 L_4 R_4 + C_5 L_1 L_4 L_5 g_m) + s^3 (C_4 L_1 L_4 R_4 g_m + C_5 L_1 L_4 R_5 g_m - C_5 L_1 L_4 + C_5 L_1 L_5 R_4 g_m) + s^2 (-C_5 L_1 R_4 + L_1 L_4 g_m)}{2C_1 C_4 C_5 L_1 L_4 L_5 s^6 + s^5 (C_1 C_4 C_5 L_1 L_4 R_4 + 2C_1 C_4 C_5 L_1 L_4 R_5 + 2C_4 C_5 L_1 L_4 L_5 g_m) + s^4 (2C_1 C_4 L_1 L_4 + C_1 C_5 L_1 L_4 + 2C_1 C_5 L_1 L_5 + 2C_4 C_5 L_1 L_4 R_4 g_m + 2C_4 C_5 L_1 L_4 + 2C_4 C_5 L_4 L_5) + s^3 (C_1 C_5 L_1 R_4 + 2C_1 C_5 L_1 R_5 + C_4 C_5 L_4 R_4 + 2C_4 C_5 L_4 R_5 + 2C_4 L_1 L_4 g_m + 2C_5 L_1 L_4 g_m) + s^2 (2C_1 L_1 + 2C_4 L_4 + 2C_5 L_1 R_4 g_m + 2C_5 L_1 + C_5 L_4) + s (C_5 R_4 + 2L_1 g_m) + 2}$$

$$\mathbf{10.634 \quad INVALID-ORDER-634} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \quad \infty, \quad \infty, \quad \frac{C_4 L_4 R_4 s^2 + L_4 s + R_4}{C_4 L_4 s^2 + 1}, \quad \frac{L_5 R_5 s}{C_5 L_5 R_5 s^2 + L_5 s + R_5}, \quad \infty \right)$$

$$H(s) = \frac{-C_4 C_5 L_1 L_4 L_5 R_4 R_5 s^5 - L_1 R_4 R_5 s + s^4 (C_4 L_1 L_4 L_5 R_4 g_m - C_5 L_1 L_4 L_5 R_4) + s^3 (-C_4 L_1 L_4 R_4 - C_5 L_1 L_5 R_4 + L_1 L_4 L_5 g_m) + s^2 (-L_1 L_4 + L_1 L_5)}{C_1 C_4 C_5 L_1 L_4 L_5 R_4 R_5 s^6 + R_4 R_5 + s^5 (C_1 C_4 L_1 L_4 L_5 R_4 + 2C_1 C_4 L_1 L_4 L_5 R_5 + C_1 C_5 L_1 L_4 L_5 R_5 + 2C_4 C_5 L_1 L_4 L_5 R_4 R_5 g_m + 2C_4 C_5 L_1 L_4 L_5 R_5) + s^4 (C_1 C_4 L_1 L_4 R_4 R_5 + C_1 C_5 L_1 L_5 R_4 R_5 + C_1 L_1 L_4 L_5 + C_4 C_5 L_4 L_5 R_4 R_5 + 2C_4 L_1 L_4 L_5 R_4 g_m + 2C_4 L_1 L_4 L_5 R_5 g_m + 2C_4 L_1 L_4 L_5) + s^3 (C_1 L_1 L_4 + 2C_1 L_1 L_5 + 2C_4 L_1 L_4 R_4 g_m + 2C_4 L_1 L_4 + 2C_4 L_4 L_5) + s^2 (2C_1 L_1 + 2C_4 L_4 + 2C_5 L_1 R_4 g_m + 2C_5 L_1 + C_5 L_4) + s (C_5 R_4 + 2L_1 g_m) + 2}$$

$$\mathbf{10.635 \quad INVALID-ORDER-635} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \quad \infty, \quad \infty, \quad \frac{C_4 L_4 R_4 s^2 + L_4 s + R_4}{C_4 L_4 s^2 + 1}, \quad \frac{C_5 L_5 R_5 s^2 + L_5 s + R_5}{C_5 L_5 s^2 + 1}, \quad \infty \right)$$

$$H(s) = \frac{s^5 (C_4 C_5 L_1 L_4 L_5 R_4 R_5 g_m - C_4 C_5 L_1 L_4 L_5 R_4) + s^4 (C_4 L_1 L_4 L_5 R_4 g_m + C_5 L_1 L_4 L_5 R_5 g_m - C_5 L_1 L_4 L_5 R_4) + s^3 (-C_4 L_1 L_4 R_4 - C_5 L_1 L_5 R_4 + L_1 L_4 L_5 g_m) + s^2 (-L_1 L_4 + L_1 L_5)}{R_4 + 2R_5 + s^6 (C_1 C_4 C_5 L_1 L_4 L_5 R_4 + 2C_1 C_4 C_5 L_1 L_4 L_5 R_5) + s^5 (2C_1 C_4 L_1 L_4 L_5 + C_1 C_5 L_1 L_4 L_5 + 2C_4 C_5 L_1 L_4 L_5 R_4 g_m + 2C_4 C_5 L_1 L_4 L_5 R_5 g_m + 2C_4 C_5 L_1 L_4 L_5) + s^4 (C_1 C_4 L_1 L_4 R_4 + 2C_1 C_4 L_1 L_4 R_5 + C_1 C_5 L_1 L_5 R_4 + 2C_1 C_5 L_1 L_5 R_5 + C_4 C_5 L_4 L_5 R_4 + 2C_4 C_5 L_4 L_5 R_5) + s^3 (C_1 L_1 L_4 + 2C_1 L_1 L_5 + 2C_4 L_1 L_4 R_4 g_m + 2C_4 L_1 L_4 + 2C_4 L_4 L_5) + s^2 (2C_1 L_1 + 2C_4 L_4 + 2C_5 L_1 R_4 g_m + 2C_5 L_1 + C_5 L_4) + s (C_5 R_4 + 2L_1 g_m) + 2}$$

10.645 INVALID-ORDER-645 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \frac{R_4 (C_4 L_4 s^2 + 1)}{C_4 L_4 s^2 + C_4 R_4 s + 1}, \frac{C_5 L_5 R_5 s^2 + L_5 s + R_5}{C_5 L_5 s^2 + 1}, \infty \right)$

$$H(s) = \frac{R_4 + 2R_5 + s^6(C_1C_4C_5L_1L_4L_5R_4 + 2C_1C_4C_5L_1L_4L_5R_5) + s^5(2C_1C_4C_5L_1L_5R_4R_5 + 2C_1C_4L_1L_4L_5 + 2C_4C_5L_1L_4L_5R_4g_m + 2C_4C_5L_1L_4L_5R_5g_m + 2C_4C_5L_1L_4L_5)}{R_4 + 2R_5 + s^6(C_1C_4C_5L_1L_4L_5R_4 + 2C_1C_4C_5L_1L_4L_5R_5) + s^5(2C_1C_4C_5L_1L_5R_4R_5 + 2C_1C_4L_1L_4L_5 + 2C_4C_5L_1L_4L_5R_4g_m + 2C_4C_5L_1L_4L_5R_5g_m + 2C_4C_5L_1L_4L_5) + s^4(C_1C_4L_1L_4R_4 + 2C_1C_4L_1L_4R_5 + 2C_1C_4L_1L_5R_4 + C_1C_5L_1L_5R_4 + 2C_1C_5L_1L_5R_5 + 2C_4L_1L_5R_4 + 2C_4L_1L_5R_5 + 2C_4L_4L_5R_4 + 2C_4L_4L_5R_5)}$$

10.646 INVALID-ORDER-646 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \frac{R_4 (C_4 L_4 s^2 + 1)}{C_4 L_4 s^2 + C_4 R_4 s + 1}, \frac{R_5 (C_5 L_5 s^2 + 1)}{C_5 L_5 s^2 + C_5 R_5 s + 1}, \infty \right)$

$$H(s) = \frac{R_4 + 2R_5 + s^6 (C_1 C_4 C_5 L_1 L_4 L_5 R_4 + 2C_1 C_4 C_5 L_1 L_4 L_5 R_5) + s^5 (C_1 C_4 C_5 L_1 L_4 R_4 R_5 + 2C_1 C_4 C_5 L_1 L_5 R_4 R_5 + 2C_4 C_5 L_1 L_4 L_5 R_4 g_m + 2C_4 C_5 L_1 L_4 L_5 R_5 g_m + 2C_4 C_5 L_1 L_4 L_5) + s^4 (C_1 C_4 L_1 L_4 R_4 + 2C_1 C_4 L_1 L_4 R_5 + C_1 C_5 L_1 L_5 R_4 + 2C_1 C_5 L_1 L_5 R_5 + 2C_4 C_5 L_1 L_4 R_4 R_5)}{1}$$

10.647 INVALID-ORDER-647 $Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s}, \infty, \infty, R_4, \frac{1}{C_5 s}, \infty \right)$

$$H(s) = \frac{-C_1 C_5 L_1 R_4 s^3 + R_4 g_m + s^2 (-C_1 C_5 R_1 R_4 + C_1 L_1 R_4 g_m) + s (C_1 R_1 R_4 g_m - C_5 R_4)}{2g_m + s^3 (2C_1 C_5 L_1 R_4 g_m + 2C_1 C_5 L_1) + s^2 (2C_1 C_5 R_1 R_4 g_m + 2C_1 C_5 R_1 + C_1 C_5 R_4 + 2C_1 L_1 g_m) + s (2C_1 R_1 g_m + 2C_1 + 2C_5 R_4 g_m + 2C_5)}$$

10.648 INVALID-ORDER-648 $Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s}, \infty, \infty, R_4, \frac{R_5}{C_5 R_5 s + 1}, \infty \right)$

$$H(s) = \frac{-C_1 C_5 L_1 R_4 R_5 s^3 + R_4 R_5 g_m - R_4 + s^2 (-C_1 C_5 R_1 R_4 R_5 + C_1 L_1 R_4 R_5 g_m - C_1 L_1 R_4) + s (C_1 R_1 R_4 R_5 g_m - C_1 R_1 R_4 - C_5 R_4 R_5)}{2R_4 g_m + 2R_5 g_m + s^3 (2C_1 C_5 L_1 R_4 R_5 g_m + 2C_1 C_5 L_1 R_5) + s^2 (2C_1 C_5 R_1 R_4 R_5 g_m + 2C_1 C_5 R_1 R_5 + C_1 C_5 R_4 R_5 + 2C_1 L_1 R_4 g_m + 2C_1 L_1 R_5 g_m + 2C_1 L_1) + s (2C_1 R_1 R_4 g_m + 2C_1 R_1 R_5 g_m + 2C_1 R_1 + C_1 R_4 + 2C_1 R_5 + 2C_5 R_4 R_5 g_m + 2C_5 R_5) + 2}$$

10.649 INVALID-ORDER-649 $Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s}, \infty, \infty, R_4, R_5 + \frac{1}{C_5 s}, \infty \right)$

$$H(s) = \frac{R_4 g_m + s^3 (C_1 C_5 L_1 R_4 R_5 g_m - C_1 C_5 L_1 R_4) + s^2 (C_1 C_5 R_1 R_4 R_5 g_m - C_1 C_5 R_1 R_4 + C_1 L_1 R_4 g_m) + s (C_1 R_1 R_4 g_m + C_5 R_4 R_5 g_m - C_5 R_4)}{2g_m + s^3 (2C_1 C_5 L_1 R_4 g_m + 2C_1 C_5 L_1 R_5 g_m + 2C_1 C_5 L_1) + s^2 (2C_1 C_5 R_1 R_4 g_m + 2C_1 C_5 R_1 R_5 g_m + 2C_1 C_5 R_1 + C_1 C_5 R_4 + 2C_1 C_5 R_5 + 2C_1 L_1 g_m) + s (2C_1 R_1 g_m + 2C_1 + 2C_5 R_4 g_m + 2C_5 R_5 g_m + 2C_5)}$$

10.650 INVALID-ORDER-650 $Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s}, \infty, \infty, R_4, L_5 s + \frac{1}{C_5 s}, \infty \right)$

$$H(s) = \frac{C_1 C_5 L_1 L_5 R_4 g_m s^4 + R_4 g_m + s^3 (-C_1 C_5 L_1 R_4 + C_1 C_5 L_5 R_1 R_4 g_m) + s^2 (-C_1 C_5 R_1 R_4 + C_1 L_1 R_4 g_m + C_5 L_5 R_4 g_m) + s (C_1 R_1 R_4 g_m - C_5 R_4)}{2 C_1 C_5 L_1 L_5 g_m s^4 + 2 g_m + s^3 (2 C_1 C_5 L_1 R_4 g_m + 2 C_1 C_5 L_1 + 2 C_1 C_5 L_5 R_1 g_m + 2 C_1 C_5 L_5) + s^2 (2 C_1 C_5 R_1 R_4 g_m + 2 C_1 C_5 R_1 + C_1 C_5 R_4 + 2 C_1 L_1 g_m + 2 C_5 L_5 g_m) + s (2 C_1 R_1 g_m + 2 C_1 + 2 C_5 R_4 g_m + 2 C_5)}$$

10.651 INVALID-ORDER-651 $Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s}, \infty, \infty, R_4, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \infty \right)$

$$H(s) = \frac{-C_1 C_5 L_1 L_5 R_4 s^4 - R_4 + s^3 (-C_1 C_5 L_5 R_1 R_4 + C_1 L_1 L_5 R_4 g_m) + s^2 (-C_1 L_1 R_4 + C_1 L_5 R_1 R_4 g_m - C_5 L_5 R_4) + s (-C_1 R_1 R_4 + L_5 R_4 g_m)}{2 R_4 g_m + s^4 (2 C_1 C_5 L_1 L_5 R_4 g_m + 2 C_1 C_5 L_1 L_5) + s^3 (2 C_1 C_5 L_5 R_1 R_4 g_m + 2 C_1 C_5 L_5 R_1 + C_1 C_5 L_5 R_4 + 2 C_1 L_1 L_5 g_m) + s^2 (2 C_1 L_1 R_4 g_m + 2 C_1 L_1 + 2 C_1 L_5 R_1 g_m + 2 C_1 L_5 + 2 C_5 L_5 R_4 g_m + 2 C_5 L_5) + s (2 C_1 R_1 R_4 g_m + 2 C_1 R_1 + C_1 R_4 + 2 L_5 g_m) + 2}$$

10.652 INVALID-ORDER-652 $Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s}, \infty, \infty, R_4, L_5 s + R_5 + \frac{1}{C_5 s}, \infty \right)$

$$H(s) = \frac{C_1 C_5 L_1 L_5 R_4 g_m s^4 + R_4 g_m + s^3 (C_1 C_5 L_1 R_4 R_5 g_m - C_1 C_5 L_1 R_4 + C_1 C_5 L_5 R_1 R_4 g_m) + s^2 (C_1 C_5 R_1 R_4 R_5 g_m - C_1 C_5 R_1 R_4 + C_1 L_1 R_4 g_m + C_5 L_5 R_4 g_m) + s (C_1 R_1 R_4 g_m + C_5 R_4 R_5 g_m - C_5 R_4)}{2 C_1 C_5 L_1 L_5 g_m s^4 + 2 g_m + s^3 (2 C_1 C_5 L_1 R_4 g_m + 2 C_1 C_5 L_1 R_5 g_m + 2 C_1 C_5 L_1 + 2 C_1 C_5 L_5 R_1 g_m + 2 C_1 C_5 L_5) + s^2 (2 C_1 C_5 R_1 R_4 g_m + 2 C_1 C_5 R_1 R_5 g_m + 2 C_1 C_5 R_1 + C_1 C_5 R_4 + 2 C_1 C_5 R_5 + 2 C_1 L_1 g_m + 2 C_5 L_5 g_m) + s (2 C_1 R_1 g_m + 2 C_1 + 2 C_5 R_4 g_m + 2 C_5 R_5 g_m + 2 C_5)}$$

10.653 INVALID-ORDER-653 $Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s}, \infty, \infty, R_4, \frac{L_5 R_5 s}{C_5 L_5 R_5 s^2 + L_5 s + R_5}, \infty \right)$

$$H(s) = \frac{-C_1 C_5 L_1 L_5 R_4 R_5 s^4 - R_4 R_5 + s^3 (-C_1 C_5 L_5 R_1 R_4 R_5 + C_1 L_1 L_5 R_4 R_5 g_m - C_1 L_1 L_5 R_4) + s^2 (-C_1 L_1 R_4 R_5 + C_1 L_5 R_1 R_4 R_5 g_m - C_1 L_5 R_1 R_4 - C_5 L_5 R_4 R_5) + s (-C_1 R_1 R_5 g_m + 2R_4 R_5 g_m + 2R_5 + s^4 (2C_1 C_5 L_1 L_5 R_4 R_5 g_m + 2C_1 C_5 L_1 L_5 R_5) + s^3 (2C_1 C_5 L_5 R_1 R_4 R_5 g_m + 2C_1 C_5 L_5 R_1 R_5 + C_1 C_5 L_5 R_4 R_5 + 2C_1 L_1 L_5 R_4 g_m + 2C_1 L_1 L_5 R_5 g_m + 2C_1 L_1 L_5) + s^2 (2C_1 L_1 R_4 R_5 g_m + 2C_1 L_1 R_5 + 2C_1 L_5 R_1 R_4 g_m + 2C_1 L_5 R_1 R_5 g_m + 2C_1 L_5 R_1 + C_1 L_5 R_4 R_5) + s (C_1 L_1 R_4 R_5 + C_1 L_5 R_1 R_4 R_5 g_m - C_1 L_1 L_5 R_4) - R_4 R_5}{2R_4 R_5 g_m + 2R_5 + s^4 (2C_1 C_5 L_1 L_5 R_4 R_5 g_m + 2C_1 C_5 L_1 L_5 R_5) + s^3 (2C_1 C_5 L_5 R_1 R_4 R_5 g_m + 2C_1 C_5 L_5 R_1 R_5 + C_1 C_5 L_5 R_4 R_5 + 2C_1 L_1 L_5 R_4 g_m + 2C_1 L_1 L_5 R_5 g_m + 2C_1 L_1 L_5) + s^2 (2C_1 L_1 R_4 R_5 g_m + 2C_1 L_1 R_5 + 2C_1 L_5 R_1 R_4 g_m + 2C_1 L_5 R_1 R_5 g_m + 2C_1 L_5 R_1 + C_1 L_5 R_4 R_5) + s (-C_1 R_1 R_5 g_m + C_1 L_1 R_4 R_5 + C_1 L_5 R_1 R_4 R_5 g_m - C_1 L_1 L_5 R_4) - R_4 R_5}.$$

$$\mathbf{10.654 \quad INVALID-ORDER-654} \quad Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad R_4, \quad \frac{C_5 L_5 R_5 s^2 + L_5 s + R_5}{C_5 L_5 s^2 + 1}, \quad \infty \right)$$

$$H(s) = \frac{R_4 R_5 g_m - R_4 + s^4 (C_1 C_5 L_1 L_5 R_4 R_5 g_m - C_1 C_5 L_1 L_5 R_4) + s^3 (C_1 C_5 L_5 R_1 R_4 R_5 g_m - C_1 C_5 L_5 R_1 R_4 + C_1 L_1 L_5 R_4 g_m) + s^2 (C_1 L_1 R_4 R_5 g_m - C_1 L_1 R_4 + C_1 L_5 R_1 R_4 g_m + C_5 L_5 R_4 R_5 g_m - C_5 L_5 R_4) + s (C_1 L_1 R_4 R_5 g_m - C_1 L_1 R_4 + C_1 L_5 R_1 R_4 g_m + C_5 L_5 R_4 R_5 g_m - C_5 L_5 R_4)}{2 R_4 g_m + 2 R_5 g_m + s^4 (2 C_1 C_5 L_1 L_5 R_4 g_m + 2 C_1 C_5 L_1 L_5 R_5 g_m + 2 C_1 C_5 L_1 L_5) + s^3 (2 C_1 C_5 L_5 R_1 R_4 g_m + 2 C_1 C_5 L_5 R_1 R_5 g_m + 2 C_1 C_5 L_5 R_1 + C_1 C_5 L_5 R_4 + 2 C_1 C_5 L_5 R_5 + 2 C_1 L_1 L_5 g_m) + s^2 (2 C_1 L_1 R_4 g_m + 2 C_1 L_1 R_5 g_m + 2 C_1 L_1 + 2 C_1 L_5 R_1 g_m + 2 C_1 L_5 + 2 C_5 L_5 R_4 g_m + 2 C_5 L_5 R_4) + s (C_1 L_1 R_4 R_5 g_m - C_1 L_1 R_4 + C_1 L_5 R_1 R_4 g_m + C_5 L_5 R_4 R_5 g_m - C_5 L_5 R_4)}$$

$$\mathbf{10.655 \quad INVALID-ORDER-655} \quad Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad R_4, \quad \frac{R_5 (C_5 L_5 s^2 + 1)}{C_5 L_5 s^2 + C_5 R_5 s + 1}, \quad \infty \right)$$

$$H(s) = \frac{R_4 R_5 g_m - R_4 + s^4 (C_1 C_5 L_1 L_5 R_4 R_5 g_m - C_1 C_5 L_1 L_5 R_4) + s^3 (-C_1 C_5 L_1 R_4 R_5 + C_1 C_5 L_5 R_1 R_4 R_5 g_m - C_1 C_5 L_5 R_1 R_4) + s^2 (-C_1 C_5 R_1 R_4 R_5 + C_1 L_1 R_4 R_5 g_m - C_1 L_1 R_4 + C_1 L_5 R_1 R_4 g_m + C_5 L_5 R_4 R_5 g_m - C_5 L_5 R_4) + s (C_1 L_1 R_4 R_5 g_m - C_1 L_1 R_4 + C_1 L_5 R_1 R_4 g_m + C_5 L_5 R_4 R_5 g_m - C_5 L_5 R_4)}{2 R_4 g_m + 2 R_5 g_m + s^4 (2 C_1 C_5 L_1 L_5 R_4 g_m + 2 C_1 C_5 L_1 L_5 R_5 g_m + 2 C_1 C_5 L_1 L_5) + s^3 (2 C_1 C_5 L_1 R_4 R_5 g_m + 2 C_1 C_5 L_1 R_5 + 2 C_1 C_5 L_5 R_1 R_4 g_m + 2 C_1 C_5 L_5 R_1 R_5 g_m + 2 C_1 C_5 L_5 R_1 + C_1 C_5 L_5 R_4 + 2 C_1 C_5 L_5 R_5) + s^2 (2 C_1 C_5 R_1 R_4 R_5 g_m + 2 C_1 C_5 R_1 R_5 + C_1 C_5 R_4 R_5 + 2 C_1 L_1 R_4 R_5 g_m + 2 C_1 L_1 R_5 + C_1 L_5 R_1 R_4 g_m + C_5 L_5 R_4 R_5 g_m - C_5 L_5 R_4)}$$

$$\mathbf{10.656 \quad INVALID-ORDER-656} \quad Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \frac{1}{C_4 s}, \quad R_5, \quad \infty \right)$$

$$H(s) = \frac{R_5 g_m + s^2 (C_1 L_1 R_5 g_m - C_1 L_1) + s (C_1 R_1 R_5 g_m - C_1 R_1) - 1}{2 g_m + s^3 (2 C_1 C_4 L_1 R_5 g_m + 2 C_1 C_4 L_1) + s^2 (2 C_1 C_4 R_1 R_5 g_m + 2 C_1 C_4 R_1 + 2 C_1 C_4 R_5 + 2 C_1 L_1 g_m) + s (2 C_1 R_1 g_m + C_1 + 2 C_4 R_5 g_m + 2 C_4)}$$

$$\mathbf{10.657 \quad INVALID-ORDER-657} \quad Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \frac{1}{C_4 s}, \quad \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{-C_1 C_5 L_1 s^3 + g_m + s^2 (-C_1 C_5 R_1 + C_1 L_1 g_m) + s (C_1 R_1 g_m - C_5)}{2 C_1 C_4 C_5 L_1 s^4 + s^3 (2 C_1 C_4 C_5 R_1 + 2 C_1 C_4 L_1 g_m + 2 C_1 C_5 L_1 g_m) + s^2 (2 C_1 C_4 R_1 g_m + 2 C_1 C_4 + 2 C_1 C_5 R_1 g_m + C_1 C_5 + 2 C_4 C_5) + s (2 C_4 g_m + 2 C_5 g_m)}$$

$$\mathbf{10.658 \quad INVALID-ORDER-658} \quad Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \frac{1}{C_4 s}, \quad \frac{R_5}{C_5 R_5 s + 1}, \quad \infty \right)$$

$$H(s) = \frac{-C_1 C_5 L_1 R_5 s^3 + R_5 g_m + s^2 (-C_1 C_5 R_1 R_5 + C_1 L_1 R_5 g_m - C_1 L_1) + s (C_1 R_1 R_5 g_m - C_1 R_1 - C_5 R_5) - 1}{2 C_1 C_4 C_5 L_1 R_5 s^4 + 2 g_m + s^3 (2 C_1 C_4 C_5 R_1 R_5 + 2 C_1 C_4 L_1 R_5 g_m + 2 C_1 C_4 L_1 + 2 C_1 C_5 L_1 R_5 g_m) + s^2 (2 C_1 C_4 R_1 R_5 g_m + 2 C_1 C_4 R_1 + 2 C_1 C_4 R_5 + 2 C_1 C_5 R_1 R_5 g_m + C_1 C_5 R_5 + 2 C_1 L_1 g_m + 2 C_4 C_5 R_5) + s (2 C_1 R_1 g_m + C_1 + 2 C_4 R_5 g_m + 2 C_4 + 2 C_5 R_5 g_m)}$$

$$\mathbf{10.659 \quad INVALID-ORDER-659} \quad Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \frac{1}{C_4 s}, \quad R_5 + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{g_m + s^3 (C_1 C_5 L_1 R_5 g_m - C_1 C_5 L_1) + s^2 (C_1 C_5 R_1 R_5 g_m - C_1 C_5 R_1 + C_1 L_1 g_m) + s (C_1 R_1 g_m + C_5 R_5 g_m - C_5)}{s^4 (2 C_1 C_4 C_5 L_1 R_5 g_m + 2 C_1 C_4 C_5 L_1) + s^3 (2 C_1 C_4 C_5 R_1 R_5 g_m + 2 C_1 C_4 C_5 R_1 + 2 C_1 C_4 C_5 R_5 + 2 C_1 C_4 L_1 g_m + 2 C_1 C_5 L_1 g_m) + s^2 (2 C_1 C_4 R_1 g_m + 2 C_1 C_4 + 2 C_1 C_5 R_1 g_m + C_1 C_5 + 2 C_4 C_5 R_5 g_m + 2 C_4 C_5) + s (2 C_4 g_m + 2 C_5 g_m)}$$

$$\mathbf{10.660 \quad INVALID-ORDER-660} \quad Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \frac{1}{C_4 s}, \quad L_5 s + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{C_1 C_5 L_1 L_5 g_m s^4 + g_m + s^3 (-C_1 C_5 L_1 + C_1 C_5 L_5 R_1 g_m) + s^2 (-C_1 C_5 R_1 + C_1 L_1 g_m + C_5 L_5 g_m) + s (C_1 R_1 g_m - C_5)}{2 C_1 C_4 C_5 L_1 L_5 g_m s^5 + s^4 (2 C_1 C_4 C_5 L_1 + 2 C_1 C_4 C_5 L_5 R_1 g_m + 2 C_1 C_4 C_5 L_5) + s^3 (2 C_1 C_4 C_5 R_1 + 2 C_1 C_4 L_1 g_m + 2 C_1 C_5 L_1 g_m + 2 C_4 C_5 L_5 g_m) + s^2 (2 C_1 C_4 R_1 g_m + 2 C_1 C_4 + 2 C_1 C_5 R_1 g_m + C_1 C_5 + 2 C_4 C_5) + s (2 C_4 g_m + 2 C_5 g_m)}$$

$$\mathbf{10.661 \quad INVALID-ORDER-661} \quad Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \frac{1}{C_4 s}, \quad \frac{L_5 s}{C_5 L_5 s^2 + 1}, \quad \infty \right)$$

$$H(s) = \frac{-C_1 C_5 L_1 L_5 s^4 + s^3 (-C_1 C_5 L_5 R_1 + C_1 L_1 L_5 g_m) + s^2 (-C_1 L_1 + C_1 L_5 R_1 g_m - C_5 L_5) + s (-C_1 R_1 + L_5 g_m) - 1}{2 C_1 C_4 C_5 L_1 L_5 s^5 + 2 g_m + s^4 (2 C_1 C_4 C_5 L_5 R_1 + 2 C_1 C_4 L_1 L_5 g_m + 2 C_1 C_5 L_1 L_5 g_m) + s^3 (2 C_1 C_4 L_1 + 2 C_1 C_4 L_5 R_1 g_m + 2 C_1 C_4 L_5 + 2 C_1 C_5 L_5 R_1 g_m + C_1 C_5 L_5 + 2 C_4 C_5 L_5) + s^2 (2 C_1 C_4 R_1 + 2 C_1 L_1 g_m + 2 C_4 L_5 g_m + 2 C_5 L_5 g_m) + s (2 C_1 R_1 g_m + C_1 + 2 C_4)}$$

$$\mathbf{10.662 \quad INVALID-ORDER-662} \quad Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \frac{1}{C_4 s}, \quad L_5 s + R_5 + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{C_1 C_5 L_1 L_5 g_m s^4 + g_m + s^3 (C_1 C_5 L_1 R_5 g_m - C_1 C_5 L_1 + C_1 C_5 L_5 R_1 g_m) + s^2 (C_1 C_5 R_1 R_5 g_m - C_1 C_5 R_1 + C_1 L_1 g_m + C_5 L_5 g_m) + s (C_1 R_1 g_m + C_5 R_5 g_m - C_5)}{2 C_1 C_4 C_5 L_1 L_5 g_m s^5 + s^4 (2 C_1 C_4 C_5 L_1 R_5 g_m + 2 C_1 C_4 C_5 L_1 + 2 C_1 C_4 C_5 L_5 R_1 g_m + 2 C_1 C_4 C_5 L_5) + s^3 (2 C_1 C_4 C_5 R_1 R_5 g_m + 2 C_1 C_4 C_5 R_1 + 2 C_1 C_4 C_5 R_5 + 2 C_1 C_4 L_1 g_m + 2 C_1 C_5 L_1 g_m + 2 C_4 C_5 L_5 g_m) + s^2 (2 C_1 C_4 R_1 g_m + 2 C_1 C_4 + 2 C_1 C_5 R_1 g_m + C_1 C_5 + 2 C_4 C_5 R_5 g_m + 2 C_4 C_5) + s (2 C_4 g_m + 2 C_5 g_m)}$$

$$\mathbf{10.681 \quad INVALID-ORDER-681} \quad Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad R_4 + \frac{1}{C_4 s}, \quad \frac{L_5 s}{C_5 L_5 s^2 + 1}, \quad \infty \right)$$

$$H(s) = \frac{-C_1 C_4 C_5 L_1 L_5 R_4 s^5 + s^4 (-C_1 C_4 C_5 L_5 R_1 R_4 + C_1 C_4 L_1 L_5 R_4 g_m - C_1 C_5 L_1 L_5) + s^3 (-C_1 C_4 L_1 R_4 + C_1 C_4 L_5 R_1 R_4 g_m - C_1 C_5 L_5 R_1 + C_1 L_1 L_5 g_m - C_4 C_5 L_5 R_4) + s^2 (-C_1 C_4 R_1 R_4 - C_1 L_1 + C_1 L_5) + s (-C_1 C_4 R_1 R_4 g_m - C_1 L_1 L_5 g_m) + C_4 C_5 L_5 R_4 g_m}{2g_m + s^5 (2C_1 C_4 C_5 L_1 L_5 R_4 g_m + 2C_1 C_4 C_5 L_1 L_5) + s^4 (2C_1 C_4 C_5 L_5 R_1 R_4 g_m + 2C_1 C_4 C_5 L_5 R_1 + C_1 C_4 C_5 L_5 R_4 + 2C_1 C_4 L_1 L_5 g_m + 2C_1 C_5 L_1 L_5 g_m) + s^3 (2C_1 C_4 L_1 R_4 g_m + 2C_1 C_4 L_1 + 2C_1 C_4 L_5 R_1 g_m + 2C_1 C_4 L_5 + 2C_1 C_5 L_5 R_1 g_m + C_1 C_5 L_5 + 2C_4 C_5 L_5 R_4 g_m + 2C_4 C_5 L_5 R_4) + s^2 (2C_1 C_4 R_1 R_4 g_m + 2C_1 C_4 R_1 + 2C_1 C_4 L_1 L_5 g_m + 2C_1 C_4 L_1 L_5) + s (2C_1 C_4 R_1 R_4 g_m + 2C_1 C_4 R_1 + 2C_1 C_4 L_1 L_5 g_m + 2C_1 C_4 L_1 L_5) + C_4 C_5 L_5 R_4 g_m}$$

$$\mathbf{10.682 \quad INVALID-ORDER-682} \quad Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad R_4 + \frac{1}{C_4 s}, \quad L_5 s + R_5 + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{C_1 C_4 C_5 L_1 L_5 R_4 g_m s^5 + g_m + s^4 (C_1 C_4 C_5 L_1 R_4 R_5 g_m - C_1 C_4 C_5 L_1 R_4 + C_1 C_4 C_5 L_5 R_1 R_4 g_m + C_1 C_5 L_1 L_5 g_m) + s^3 (C_1 C_4 C_5 R_1 R_4 R_5 g_m - C_1 C_4 C_5 R_1 R_4 + C_1 C_4 L_1 R_4 g_m + C_1 C_5 L_1 R_5 g_m - C_1 C_5 L_1 + C_1 C_5 L_5 R_1 g_m + C_4 C_5 L_5 R_4 g_m) + s^2 (C_1 C_4 R_1 R_4 g_m + C_1 C_5 R_1 R_4 g_m) + s (C_1 C_4 R_1 R_4 g_m + C_1 C_5 R_1 R_4 g_m) + C_4 C_5 L_5 R_4 g_m}{2C_1 C_4 C_5 L_1 L_5 g_m s^5 + s^4 (2C_1 C_4 C_5 L_1 R_4 g_m + 2C_1 C_4 C_5 L_1 R_5 g_m + 2C_1 C_4 C_5 L_1 + 2C_1 C_4 C_5 L_5 R_1 g_m + 2C_1 C_4 C_5 L_5) + s^3 (2C_1 C_4 C_5 R_1 R_4 g_m + 2C_1 C_4 C_5 R_1 R_5 g_m + 2C_1 C_4 C_5 R_1 + C_1 C_4 C_5 R_4 + 2C_1 C_4 C_5 R_5 + 2C_1 C_4 L_1 g_m + 2C_1 C_5 L_1 g_m + 2C_4 C_5 L_5 g_m) + s^2 (2C_1 C_4 R_1 R_4 g_m + 2C_1 C_4 R_1 + 2C_1 C_4 L_1 L_5 g_m + 2C_1 C_4 L_1 L_5) + s (2C_1 C_4 R_1 R_4 g_m + 2C_1 C_4 R_1 + 2C_1 C_4 L_1 L_5 g_m + 2C_1 C_4 L_1 L_5) + C_4 C_5 L_5 R_4 g_m}$$

$$\mathbf{10.683 \quad INVALID-ORDER-683} \quad Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad R_4 + \frac{1}{C_4 s}, \quad \frac{L_5 R_5 s}{C_5 L_5 R_5 s^2 + L_5 s + R_5}, \quad \infty \right)$$

$$H(s) = \frac{-C_1 C_4 C_5 L_1 L_5 R_4 R_5 s^5 - R_5 + s^4 (-C_1 C_4 C_5 L_5 R_1 R_4 R_5 + C_1 C_4 L_1 L_5 R_4 R_5 g_m - C_1 C_4 L_1 L_5 R_4 - C_1 C_5 L_1 L_5 R_5) + s^3 (-C_1 C_4 L_1 R_4 R_5 + C_1 C_4 L_5 R_1 R_4 g_m - C_1 C_5 L_5 R_1 R_4 + C_1 C_4 L_1 L_5 R_4 g_m - C_1 C_5 L_1 L_5 R_4) + s^2 (-C_1 C_4 L_1 R_4 R_5 + C_1 C_4 L_5 R_1 R_4 g_m - C_1 C_5 L_5 R_1 R_4 + C_1 C_4 L_1 L_5 R_4 g_m - C_1 C_5 L_1 L_5 R_4) + s (-C_1 C_4 L_1 R_4 R_5 + C_1 C_4 L_5 R_1 R_4 g_m - C_1 C_5 L_5 R_1 R_4 + C_1 C_4 L_1 L_5 R_4 g_m - C_1 C_5 L_1 L_5 R_4) + C_4 C_5 L_5 R_4 g_m}{2R_5 g_m + s^5 (2C_1 C_4 C_5 L_1 L_5 R_4 R_5 g_m + 2C_1 C_4 C_5 L_1 L_5 R_5) + s^4 (2C_1 C_4 C_5 L_5 R_1 R_4 R_5 g_m + 2C_1 C_4 C_5 L_5 R_1 R_5 + C_1 C_4 C_5 L_5 R_4 R_5 + 2C_1 C_4 L_1 L_5 R_4 g_m + 2C_1 C_4 L_1 L_5 R_5 g_m + 2C_1 C_4 L_1 L_5 + 2C_1 C_5 L_1 L_5 R_5 g_m) + s^3 (2C_1 C_4 L_1 R_4 R_5 g_m + 2C_1 C_4 L_1 R_5 + 2C_1 C_4 L_5 R_1 R_4 g_m - C_1 C_5 L_5 R_1 R_4 + C_1 C_4 L_1 L_5 R_4 g_m - C_1 C_5 L_1 L_5 R_4) + s^2 (-C_1 C_4 L_1 R_4 R_5 + C_1 C_4 L_5 R_1 R_4 g_m - C_1 C_5 L_5 R_1 R_4 + C_1 C_4 L_1 L_5 R_4 g_m - C_1 C_5 L_1 L_5 R_4) + s (-C_1 C_4 L_1 R_4 R_5 + C_1 C_4 L_5 R_1 R_4 g_m - C_1 C_5 L_5 R_1 R_4 + C_1 C_4 L_1 L_5 R_4 g_m - C_1 C_5 L_1 L_5 R_4) + C_4 C_5 L_5 R_4 g_m}$$

$$\mathbf{10.684 \quad INVALID-ORDER-684} \quad Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad R_4 + \frac{1}{C_4 s}, \quad \frac{C_5 L_5 R_5 s^2 + L_5 s + R_5}{C_5 L_5 s^2 + 1}, \quad \infty \right)$$

$$H(s) = \frac{R_5 g_m + s^5 (C_1 C_4 C_5 L_1 L_5 R_4 R_5 g_m - C_1 C_4 C_5 L_1 L_5 R_4) + s^4 (C_1 C_4 C_5 L_5 R_1 R_4 R_5 g_m - C_1 C_4 C_5 L_5 R_1 R_4 + C_1 C_4 L_1 L_5 R_4 g_m + C_1 C_5 L_1 L_5 R_5 g_m - C_1 C_5 L_1 L_5) + s^3 (C_1 C_4 L_1 R_4 R_5 g_m - C_1 C_4 L_1 R_4 + C_1 C_4 L_5 R_1 R_4 g_m + C_1 C_5 L_5 R_1 R_4 g_m - C_1 C_5 L_1 L_5 R_4) + s^2 (C_1 C_4 L_1 R_4 R_5 g_m - C_1 C_4 L_1 R_4 + C_1 C_4 L_5 R_1 R_4 g_m + C_1 C_5 L_5 R_1 R_4 g_m - C_1 C_5 L_1 L_5 R_4) + s (C_1 C_4 L_1 R_4 R_5 g_m - C_1 C_4 L_1 R_4 + C_1 C_4 L_5 R_1 R_4 g_m + C_1 C_5 L_5 R_1 R_4 g_m - C_1 C_5 L_1 L_5 R_4) + C_4 C_5 L_5 R_4 g_m}{2g_m + s^5 (2C_1 C_4 C_5 L_1 L_5 R_4 g_m + 2C_1 C_4 C_5 L_1 L_5 R_5 g_m + 2C_1 C_4 C_5 L_1 L_5) + s^4 (2C_1 C_4 C_5 L_5 R_1 R_4 g_m + 2C_1 C_4 C_5 L_5 R_1 R_5 g_m + 2C_1 C_4 C_5 L_5 R_1 + C_1 C_4 C_5 L_5 R_4 + 2C_1 C_4 C_5 L_5 R_5 + 2C_1 C_4 L_1 L_5 g_m + 2C_1 C_5 L_1 L_5 g_m) + s^3 (2C_1 C_4 L_1 R_4 R_5 g_m + 2C_1 C_4 L_1 R_5 + 2C_1 C_4 L_5 R_1 R_4 g_m - C_1 C_5 L_5 R_1 R_4 + C_1 C_4 L_1 L_5 R_4 g_m - C_1 C_5 L_1 L_5 R_4) + s^2 (-C_1 C_4 L_1 R_4 R_5 + C_1 C_4 L_5 R_1 R_4 g_m - C_1 C_5 L_5 R_1 R_4 + C_1 C_4 L_1 L_5 R_4 g_m - C_1 C_5 L_1 L_5 R_4) + s (-C_1 C_4 L_1 R_4 R_5 + C_1 C_4 L_5 R_1 R_4 g_m - C_1 C_5 L_5 R_1 R_4 + C_1 C_4 L_1 L_5 R_4 g_m - C_1 C_5 L_1 L_5 R_4) + C_4 C_5 L_5 R_4 g_m}$$

$$\mathbf{10.685 \quad INVALID-ORDER-685} \quad Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad R_4 + \frac{1}{C_4 s}, \quad \frac{R_5 (C_5 L_5 s^2 + 1)}{C_5 L_5 s^2 + C_5 R_5 s + 1}, \quad \infty \right)$$

$$H(s) = \frac{R_5 g_m + s^5 (C_1 C_4 C_5 L_1 L_5 R_4 R_5 g_m - C_1 C_4 C_5 L_1 L_5 R_4) + s^4 (-C_1 C_4 C_5 L_1 R_4 R_5 + C_1 C_4 C_5 L_5 R_1 R_4 R_5 g_m - C_1 C_4 C_5 L_5 R_1 R_4 + C_1 C_5 L_1 L_5 R_5 g_m - C_1 C_5 L_1 L_5) + s^3 (-C_1 C_4 L_1 R_4 R_5 + C_1 C_4 L_5 R_1 R_4 g_m - C_1 C_5 L_5 R_1 R_4 + C_1 C_4 L_1 L_5 R_4 g_m - C_1 C_5 L_1 L_5 R_4) + s^2 (-C_1 C_4 L_1 R_4 R_5 + C_1 C_4 L_5 R_1 R_4 g_m - C_1 C_5 L_5 R_1 R_4 + C_1 C_4 L_1 L_5 R_4 g_m - C_1 C_5 L_1 L_5 R_4) + s (-C_1 C_4 L_1 R_4 R_5 + C_1 C_4 L_5 R_1 R_4 g_m - C_1 C_5 L_5 R_1 R_4 + C_1 C_4 L_1 L_5 R_4 g_m - C_1 C_5 L_1 L_5 R_4) + C_4 C_5 L_5 R_4 g_m}{2g_m + s^5 (2C_1 C_4 C_5 L_1 L_5 R_4 g_m + 2C_1 C_4 C_5 L_1 L_5 R_5 g_m + 2C_1 C_4 C_5 L_1 L_5) + s^4 (2C_1 C_4 C_5 L_1 R_4 R_5 g_m + 2C_1 C_4 C_5 L_1 R_5 + 2C_1 C_4 C_5 L_5 R_1 R_4 g_m + 2C_1 C_4 C_5 L_5 R_1 R_5 g_m + 2C_1 C_4 C_5 L_5 R_1 + C_1 C_4 C_5 L_5 R_4 + 2C_1 C_4 C_5 L_5 R_5 + 2C_1 C_4 L_1 L_5 g_m + 2C_1 C_5 L_1 L_5 g_m) + s^3 (2C_1 C_4 L_1 R_4 R_5 g_m + 2C_1 C_4 L_1 R_5 + 2C_1 C_4 L_5 R_1 R_4 g_m - C_1 C_5 L_5 R_1 R_4 + C_1 C_4 L_1 L_5 R_4 g_m - C_1 C_5 L_1 L_5 R_4) + s^2 (-C_1 C_4 L_1 R_4 R_5 + C_1 C_4 L_5 R_1 R_4 g_m - C_1 C_5 L_5 R_1 R_4 + C_1 C_4 L_1 L_5 R_4 g_m - C_1 C_5 L_1 L_5 R_4) + s (-C_1 C_4 L_1 R_4 R_5 + C_1 C_4 L_5 R_1 R_4 g_m - C_1 C_5 L_5 R_1 R_4 + C_1 C_4 L_1 L_5 R_4 g_m - C_1 C_5 L_1 L_5 R_4) + C_4 C_5 L_5 R_4 g_m}$$

$$\mathbf{10.686 \quad INVALID-ORDER-686} \quad Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad L_4 s + \frac{1}{C_4 s}, \quad R_5, \quad \infty \right)$$

$$H(s) = \frac{R_5 g_m + s^4 (C_1 C_4 L_1 L_4 R_5 g_m - C_1 C_4 L_1 L_4) + s^3 (C_1 C_4 L_4 R_1 R_5 g_m - C_1 C_4 L_4 R_1) + s^2 (C_1 L_1 R_5 g_m - C_1 L_1 + C_4 L_4 R_5 g_m - C_4 L_4) + s (C_1 R_1 R_5 g_m - C_1 R_1) - 1}{2C_1 C_4 L_1 L_4 g_m s^4 + 2g_m + s^3 (2C_1 C_4 L_1 R_5 g_m + 2C_1 C_4 L_1 + 2C_1 C_4 L_4 R_1 g_m + C_1 C_4 L_4) + s^2 (2C_1 C_4 R_1 R_5 g_m + 2C_1 C_4 R_1 + 2C_1 C_4 R_5 + 2C_1 L_1 g_m + 2C_4 L_4 g_m) + s (2C_1 R_1 R_5 g_m + C_1 + 2C_4 R_5 g_m + 2C_4)}$$

$$\mathbf{10.687 \quad INVALID-ORDER-687} \quad Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad L_4 s + \frac{1}{C_4 s}, \quad \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{-C_1 C_4 C_5 L_1 L_4 s^5 + g_m + s^4 (-C_1 C_4 C_5 L_4 R_1 + C_1 C_4 L_1 L_4 g_m) + s^3 (C_1 C_4 L_4 R_1 g_m - C_1 C_5 L_1 - C_4 C_5 L_4) + s^2 (-C_1 C_5 R_1 + C_1 L_1 g_m + C_4 L_4 g_m) + s (C_1 R_1 g_m - C_5)}{2C_1 C_4 C_5 L_1 L_4 g_m s^5 + s^4 (2C_1 C_4 C_5 L_1 + 2C_1 C_4 C_5 L_4 R_1 g_m + C_1 C_4 C_5 L_4) + s^3 (2C_1 C_4 C_5 R_1 + 2C_1 C_4 L_1 g_m + 2C_1 C_5 L_1 g_m + 2C_4 C_5 L_4 g_m) + s^2 (2C_1 C_4 R_1 g_m + 2C_1 C_4 + 2C_1 C_5 R_1 g_m + C_1 C_5 + 2C_4 C_5) + s (2C_4 g_m + 2C_5 g_m)}$$

$$\mathbf{10.688 \quad INVALID-ORDER-688} \quad Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad L_4 s + \frac{1}{C_4 s}, \quad \frac{R_5}{C_5 R_5 s + 1}, \quad \infty \right)$$

$$H(s) = \frac{-C_1 C_4 C_5 L_1 L_4 R_5 s^5 + R_5 g_m + s^4 (-C_1 C_4 C_5 L_4 R_1 R_5 + C_1 C_4 L_1 L_4 R_5 g_m - C_1 C_4 L_1 L_4) + s^3 (C_1 C_4 L_4 R_1 R_5 g_m - C_1 C_4 L_4 R_1 - C_1 C_5 L_1 R_5 - C_4 C_5 L_4 R_5) + s^2 (-C_1 C_5 R_1 R_5 + C_1 L_1 R_5 g_m - C_1 L_1) + s (-C_1 C_5 R_1 R_5 + C_1 L_1 R_5 g_m - C_1 L_1) + C_4 C_5 L_4 R_5 g_m}{2C_1 C_4 C_5 L_1 L_4 R_5 g_m s^5 + 2g_m + s^4 (2C_1 C_4 C_5 L_1 R_5 + 2C_1 C_4 C_5 L_4 R_1 R_5 g_m + C_1 C_4 C_5 L_4 R_5 + 2C_1 C_4 L_1 L_4 g_m) + s^3 (2C_1 C_4 C_5 R_1 R_5 + 2C_1 C_4 L_1 R_5 g_m + 2C_1 C_4 L_1 + 2C_1 C_4 L_4 R_1 g_m + C_1 C_4 L_4 + 2C_1 C_5 L_1 R_5 g_m + 2C_4 C_5 L_4 R_5 g_m) + s^2 (-C_1 C_5 R_1 R_5 + C_1 L_1 R_5 g_m - C_1 L_1) + s (-C_1 C_5 R_1 R_5 + C_1 L_1 R_5 g_m - C_1 L_1) + C_4 C_5 L_4 R_5 g_m}$$

$$\mathbf{10.689 \quad INVALID-ORDER-689} \quad Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad L_4 s + \frac{1}{C_4 s}, \quad R_5 + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{g_m + s^5 (C_1 C_4 C_5 L_1 L_4 R_5 g_m - C_1 C_4 C_5 L_1 L_4) + s^4 (C_1 C_4 C_5 L_4 R_1 R_5 g_m - C_1 C_4 C_5 L_4 R_1 + C_1 C_4 L_1 L_4 g_m) + s^3 (C_1 C_4 L_4 R_1 g_m + C_1 C_5 L_1 R_5 g_m - C_1 C_5 L_1 + C_4 C_5 L_4 R_5 g_m - C_4 C_5 L_4) + s^2 (C_1 C_5 R_1 R_5 g_m - C_1 C_5 R_1 + C_1 L_1 g_m + C_4 L_4 g_m) + s (C_1 R_1 R_5 g_m - C_1 R_1) - 1}{2C_1 C_4 C_5 L_1 L_4 g_m s^5 + s^4 (2C_1 C_4 C_5 L_1 R_5 g_m + 2C_1 C_4 C_5 L_1 + 2C_1 C_4 C_5 L_4 R_1 g_m + C_1 C_4 C_5 L_4) + s^3 (2C_1 C_4 C_5 R_1 R_5 g_m + 2C_1 C_4 C_5 R_1 + 2C_1 C_4 C_5 R_5 + 2C_1 C_4 L_1 g_m + 2C_1 C_5 L_1 g_m + 2C_4 C_5 L_4 g_m) + s^2 (2C_1 C_4 R_1 R_5 g_m + 2C_1 C_4 + 2C_1 C_5 R_1 g_m + C_1 C_5 + 2C_4 C_5 R_5 g_m + 2C_4 C_5 R_5) + s (2C_1 R_1 R_5 g_m + C_1 + 2C_4 R_5 g_m + 2C_4)}$$

$$\mathbf{10.699 \quad INVALID-ORDER-699} \quad Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \frac{L_4 s}{C_4 L_4 s^2 + 1}, \quad R_5 + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{L_4 g_m s + s^4 (C_1 C_5 L_1 L_4 R_5 g_m - C_1 C_5 L_1 L_4) + s^3 (C_1 C_5 L_4 R_1 R_5 g_m - C_1 C_5 L_4 R_1 + C_1 L_1 L_4 g_m) + s^2 (C_1 L_4 R_1 g_m + C_5 L_4 R_5 g_m - C_5 L_4 R_1) + s (C_1 L_1 R_5 g_m - C_1 L_1 R_5 + C_4 L_4 R_5 g_m - C_4 L_4 R_5) - 1}{2 g_m + s^5 (2 C_1 C_4 C_5 L_1 L_4 R_5 g_m + 2 C_1 C_4 C_5 L_1 L_4) + s^4 (2 C_1 C_4 C_5 L_4 R_1 R_5 g_m + 2 C_1 C_4 C_5 L_4 R_1 + 2 C_1 C_4 C_5 L_4 R_5 + 2 C_1 C_4 L_1 L_4 g_m + 2 C_1 C_5 L_1 L_4 g_m) + s^3 (2 C_1 C_4 L_4 R_1 g_m + 2 C_1 C_4 L_4 + 2 C_1 C_5 L_1 R_5 g_m + 2 C_1 C_5 L_1 + 2 C_1 C_5 L_4 R_1 g_m + C_1 C_5 L_4 + 2 C_4 C_5 L_4 R_5 g_m + 2 C_4 C_5 L_4 R_5) - 1}$$

$$\mathbf{10.700 \quad INVALID-ORDER-700} \quad Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \frac{L_4 s}{C_4 L_4 s^2 + 1}, \quad L_5 s + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{C_1 C_5 L_1 L_4 L_5 g_m s^5 + L_4 g_m s + s^4 (-C_1 C_5 L_1 L_4 + C_1 C_5 L_4 L_5 R_1 g_m) + s^3 (-C_1 C_5 L_4 R_1 + C_1 L_1 L_4 g_m + C_5 L_4 L_5 g_m) + s^2 (C_1 L_4 R_1 g_m - C_1 L_4 R_1 + C_5 L_4 R_5 g_m - C_5 L_4 R_1) + s (C_1 L_1 R_5 g_m - C_1 L_1 R_5 + C_4 L_4 R_5 g_m - C_4 L_4 R_5) - 1}{2 C_1 C_4 C_5 L_1 L_4 L_5 g_m s^6 + 2 g_m + s^5 (2 C_1 C_4 C_5 L_1 L_4 + 2 C_1 C_4 C_5 L_4 L_5 R_1 g_m + 2 C_1 C_4 C_5 L_4 L_5) + s^4 (2 C_1 C_4 C_5 L_4 R_1 + 2 C_1 C_4 L_1 L_4 g_m + 2 C_1 C_5 L_1 L_4 g_m + 2 C_1 C_5 L_1 L_5 g_m + 2 C_4 C_5 L_4 L_5 g_m) + s^3 (2 C_1 C_4 L_4 R_1 g_m + 2 C_1 C_4 L_4 + 2 C_1 C_5 L_1 + 2 C_1 C_5 L_4 R_1 g_m + C_1 C_5 L_4 + 2 C_4 C_5 L_4 R_5 g_m + 2 C_4 C_5 L_4 R_5) - 1}$$

$$\mathbf{10.701 \quad INVALID-ORDER-701} \quad Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \frac{L_4 s}{C_4 L_4 s^2 + 1}, \quad \frac{L_5 s}{C_5 L_5 s^2 + 1}, \quad \infty \right)$$

$$H(s) = \frac{-C_1 C_5 L_1 L_4 L_5 s^5 - L_4 s + s^4 (-C_1 C_5 L_4 L_5 R_1 + C_1 L_1 L_4 L_5 g_m) + s^3 (-C_1 L_1 L_4 + C_1 L_4 L_5 R_1 g_m - C_5 L_4 L_5) + s^2 (-C_1 L_4 R_1 + C_1 L_4 R_1 - C_5 L_4 R_5 g_m + C_5 L_4 R_5) + s (C_1 L_1 R_5 g_m - C_1 L_1 R_5 + C_4 L_4 R_5 g_m - C_4 L_4 R_5) - 1}{2 C_1 C_4 C_5 L_1 L_4 L_5 s^6 + s^5 (2 C_1 C_4 C_5 L_4 L_5 R_1 + 2 C_1 C_4 L_1 L_4 L_5 g_m + 2 C_1 C_5 L_1 L_4 L_5 g_m) + s^4 (2 C_1 C_4 L_1 L_4 + 2 C_1 C_4 L_4 L_5 R_1 g_m + 2 C_1 C_4 L_4 L_5 + 2 C_1 C_5 L_1 L_5 + 2 C_1 C_5 L_4 L_5 R_1 g_m + C_1 C_5 L_4 L_5 + 2 C_4 C_5 L_4 L_5) + s^3 (2 C_1 C_4 L_4 R_1 + 2 C_1 C_5 L_5 R_1 + 2 C_1 L_1 L_4 g_m + 2 C_1 L_1 L_5 g_m + 2 C_4 C_5 L_4 R_5 g_m + 2 C_4 C_5 L_4 R_5) - 1}$$

$$\mathbf{10.702 \quad INVALID-ORDER-702} \quad Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \frac{L_4 s}{C_4 L_4 s^2 + 1}, \quad L_5 s + R_5 + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{C_1 C_5 L_1 L_4 L_5 g_m s^5 + L_4 g_m s + s^4 (C_1 C_5 L_1 L_4 R_5 g_m - C_1 C_5 L_1 L_4 + C_1 C_5 L_4 L_5 R_1 g_m) + s^3 (C_1 C_5 L_4 R_1 R_5 g_m - C_1 C_5 L_4 R_1 + C_1 L_1 L_4 g_m) + s^2 (C_1 L_4 R_1 g_m - C_1 L_4 R_1 + C_5 L_4 R_5 g_m - C_5 L_4 R_1) + s (C_1 L_1 R_5 g_m - C_1 L_1 R_5 + C_4 L_4 R_5 g_m - C_4 L_4 R_5) - 1}{2 C_1 C_4 C_5 L_1 L_4 L_5 g_m s^6 + 2 g_m + s^5 (2 C_1 C_4 C_5 L_1 L_4 R_5 g_m + 2 C_1 C_4 C_5 L_1 L_4 + 2 C_1 C_4 C_5 L_4 L_5 R_1 g_m + 2 C_1 C_4 C_5 L_4 L_5) + s^4 (2 C_1 C_4 C_5 L_4 R_1 R_5 g_m + 2 C_1 C_4 C_5 L_4 R_1 + 2 C_1 C_4 C_5 L_4 R_5 + 2 C_1 C_4 L_1 L_4 g_m + 2 C_1 C_5 L_1 L_4 g_m + 2 C_1 C_5 L_1 L_5 g_m + 2 C_4 C_5 L_4 L_5 g_m) + s^3 (2 C_1 C_4 L_4 R_1 g_m + 2 C_1 C_4 L_4 L_5 + 2 C_1 C_5 L_1 R_5 g_m + 2 C_1 C_5 L_4 L_5 R_1 g_m + C_1 C_5 L_4 L_5 + 2 C_4 C_5 L_4 L_5) - 1}$$

$$\mathbf{10.703 \quad INVALID-ORDER-703} \quad Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \frac{L_4 s}{C_4 L_4 s^2 + 1}, \quad \frac{L_5 R_5 s}{C_5 L_5 R_5 s^2 + L_5 s + R_5}, \quad \infty \right)$$

$$H(s) = \frac{-C_1 C_5 L_1 L_4 L_5 R_5 s^5 - L_4 R_5 s + s^4 (-C_1 C_5 L_4 L_5 R_1 + C_1 L_1 L_4 L_5 g_m) + s^3 (-C_1 L_1 L_4 + C_1 L_4 L_5 R_1 g_m - C_5 L_4 L_5) + s^2 (-C_1 L_4 R_1 + C_1 L_4 R_1 - C_5 L_4 R_5 g_m + C_5 L_4 R_5) + s (C_1 L_1 R_5 g_m - C_1 L_1 R_5 + C_4 L_4 R_5 g_m - C_4 L_4 R_5) - 1}{2 C_1 C_4 C_5 L_1 L_4 L_5 R_5 s^6 + 2 R_5 + s^5 (2 C_1 C_4 C_5 L_4 L_5 R_1 R_5 + 2 C_1 C_4 L_1 L_4 L_5 R_5 g_m + 2 C_1 C_4 L_1 L_4 L_5 + 2 C_1 C_5 L_1 L_4 L_5 R_5 g_m) + s^4 (2 C_1 C_4 L_1 L_4 R_5 + 2 C_1 C_4 L_4 L_5 R_1 R_5 g_m + 2 C_1 C_4 L_4 L_5 R_1 + 2 C_1 C_4 L_4 L_5 R_5 + 2 C_1 C_5 L_1 L_5 R_5 + 2 C_1 C_5 L_4 L_5 R_1 R_5 g_m + C_1 C_5 L_4 L_5 R_5 + 2 C_4 C_5 L_4 L_5 R_5) - 1}$$

$$\mathbf{10.704 \quad INVALID-ORDER-704} \quad Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \frac{L_4 s}{C_4 L_4 s^2 + 1}, \quad \frac{C_5 L_5 R_5 s^2 + L_5 s + R_5}{C_5 L_5 s^2 + 1}, \quad \infty \right)$$

$$H(s) = \frac{s^5 (C_1 C_5 L_1 L_4 L_5 R_5 g_m - C_1 C_5 L_1 L_4 L_5 R_5) + s^4 (C_1 C_5 L_4 R_1 R_5 g_m - C_1 C_5 L_4 R_1 + C_1 L_1 L_4 g_m) + s^3 (C_1 C_5 L_4 R_1 R_5 g_m - C_1 C_5 L_4 R_1 + C_1 L_1 L_4 g_m) + s^2 (C_1 L_4 R_1 g_m - C_1 L_4 R_1 + C_5 L_4 R_5 g_m - C_5 L_4 R_1) + s (C_1 L_1 R_5 g_m - C_1 L_1 R_5 + C_4 L_4 R_5 g_m - C_4 L_4 R_5) - 1}{2 R_5 g_m + s^6 (2 C_1 C_4 C_5 L_1 L_4 L_5 R_5 g_m + 2 C_1 C_4 C_5 L_1 L_4 L_5) + s^5 (2 C_1 C_4 C_5 L_4 L_5 R_1 R_5 g_m + 2 C_1 C_4 C_5 L_4 L_5 R_1 + 2 C_1 C_4 C_5 L_4 L_5 R_5 + 2 C_1 C_4 L_1 L_4 L_5 g_m + 2 C_1 C_5 L_1 L_4 L_5 g_m) + s^4 (2 C_1 C_4 L_1 L_4 R_5 g_m + 2 C_1 C_4 L_1 L_4 + 2 C_1 C_4 L_4 L_5 R_1 g_m + 2 C_1 C_4 L_4 L_5 + 2 C_1 C_5 L_1 L_5 R_5 g_m + 2 C_1 C_5 L_4 L_5 R_1 R_5 g_m + C_1 C_5 L_4 L_5 R_5 + 2 C_4 C_5 L_4 L_5 R_5) - 1}$$

$$\mathbf{10.705 \quad INVALID-ORDER-705} \quad Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \frac{L_4 s}{C_4 L_4 s^2 + 1}, \quad \frac{R_5 (C_5 L_5 s^2 + 1)}{C_5 L_5 s^2 + C_5 R_5 s + 1}, \quad \infty \right)$$

$$H(s) = \frac{s^5 (C_1 C_5 L_1 L_4 L_5 R_5 g_m - C_1 C_5 L_1 L_4 L_5 R_5) + s^4 (C_1 C_5 L_4 R_1 R_5 g_m - C_1 C_5 L_4 R_1 + C_1 L_1 L_4 g_m) + s^3 (C_1 C_5 L_4 R_1 R_5 g_m - C_1 C_5 L_4 R_1 + C_1 L_1 L_4 g_m) + s^2 (C_1 L_4 R_1 g_m - C_1 L_4 R_1 + C_5 L_4 R_5 g_m - C_5 L_4 R_1) + s (C_1 L_1 R_5 g_m - C_1 L_1 R_5 + C_4 L_4 R_5 g_m - C_4 L_4 R_5) - 1}{2 R_5 g_m + s^6 (2 C_1 C_4 C_5 L_1 L_4 L_5 R_5 g_m + 2 C_1 C_4 C_5 L_1 L_4 L_5) + s^5 (2 C_1 C_4 C_5 L_1 L_4 R_5 + 2 C_1 C_4 C_5 L_4 L_5 R_1 R_5 g_m + 2 C_1 C_4 C_5 L_4 L_5 R_1 + 2 C_1 C_4 C_5 L_4 L_5 R_5 + 2 C_1 C_5 L_1 L_4 L_5 g_m + 2 C_1 C_5 L_1 L_5 g_m) + s^4 (2 C_1 C_4 C_5 L_4 R_1 R_5 + 2 C_1 C_4 L_1 L_4 R_5 g_m + 2 C_1 C_4 L_1 L_4 + 2 C_1 C_5 L_1 L_4 R_5 g_m + 2 C_1 C_5 L_1 L_5 R_5 g_m + 2 C_4 C_5 L_4 L_5 R_5) - 1}$$

$$\mathbf{10.706 \quad INVALID-ORDER-706} \quad Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad L_4 s + R_4 + \frac{1}{C_4 s}, \quad R_5, \quad \infty \right)$$

$$H(s) = \frac{R_5 g_m + s^4 (C_1 C_4 L_1 L_4 R_5 g_m - C_1 C_4 L_1 L_4) + s^3 (C_1 C_4 L_1 R_4 R_5 g_m - C_1 C_4 L_1 R_4 + C_1 C_4 L_4 R_1 R_5 g_m - C_1 C_4 L_4 R_1) + s^2 (C_1 C_4 R_1 R_4 R_5 g_m - C_1 C_4 R_1 R_4 + C_1 L_1 R_5 g_m - C_1 L_1 + C_4 L_4 R_5 g_m - C_4 L_4) + s (C_1 R_1 R_5 g_m - C_1 R_1 + C_4 R_4 R_5 g_m - C_4 R_4) - 1}{2 C_1 C_4 L_1 L_4 g_m s^4 + 2 g_m + s^3 (2 C_1 C_4 L_1 R_4 g_m + 2 C_1 C_4 L_1 R_5 g_m + 2 C_1 C_4 L_1 + 2 C_1 C_4 L_4 R_1 g_m + C_1 C_4 L_4) + s^2 (2 C_1 C_4 R_1 R_4 g_m + 2 C_1 C_4 R_1 R_5 g_m + 2 C_1 C_4 R_1 + C_1 C_4 R_4 + 2 C_1 C_4 R_5 + 2 C_1 L_1 g_m + 2 C_4 L_4 g_m) + s (2 C_1 R_1 g_m + C_1 + 2 C_4 R_4 g_m + 2 C_4 R_5 g_m + 2 C_4) - 1}$$

$$\mathbf{10.707 \quad INVALID-ORDER-707} \quad Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad L_4 s + R_4 + \frac{1}{C_4 s}, \quad \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{-C_1 C_4 C_5 L_1 L_4 s^5 + g_m + s^4 (-C_1 C_4 C_5 L_1 R_4 - C_1 C_4 C_5 L_4 R_1 + C_1 C_4 L_1 L_4 g_m) + s^3 (-C_1 C_4 C_5 R_1 R_4 + C_1 C_4 L_1 R_4 g_m + C_1 C_4 L_4 R_1 g_m - C_1 C_5 L_1 - C_4 C_5 L_4) + s^2 (C_1 C_4 R_1 R_4 g_m - C_1 C_5 R_1 + C_1 L_1 g_m - C_4 C_5 R_4 + C_4 L_4 g_m) + s (C_1 R_1 g_m + C_4 R_4 g_m - C_4 R_4) - 1}{2 C_1 C_4 C_5 L_1 L_4 g_m s^5 + s^4 (2 C_1 C_4 C_5 L_1 R_4 g_m + 2 C_1 C_4 C_5 L_1 + 2 C_1 C_4 C_5 L_4 R_1 g_m + C_1 C_4 C_5 L_4) + s^3 (2 C_1 C_4 C_5 R_1 R_4 g_m + 2 C_1 C_4 C_5 R_1 + C_1 C_4 C_5 R_4 + 2 C_1 C_4 L_1 g_m + 2 C_1 C_5 L_1 g_m + 2 C_4 C_5 L_4 g_m) + s^2 (2 C_1 C_4 R_1 g_m + 2 C_1 C_4 + 2 C_1 C_5 R_1 g_m + C_1 C_5 + 2 C_4 C_5 R_4 g_m + 2 C_4 C_5 R_4) - 1}$$

10.745 INVALID-ORDER-745 $Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s}, \infty, \infty, \frac{R_4(C_4 L_4 s^2 + 1)}{C_4 L_4 s^2 + C_4 R_4 s + 1}, \frac{R_5(C_5 L_5 s^2 + 1)}{C_5 L_5 s^2 + C_5 R_5 s + 1}, \infty \right)$

$$H(s) = \frac{2R_4g_m + 2R_5g_m + s^6(2C_1C_4C_5L_1L_4L_5R_4g_m + 2C_1C_4C_5L_1L_4L_5R_5g_m + 2C_1C_4C_5L_1L_4L_5) + s^5(2C_1C_4C_5L_1L_4R_4R_5g_m + 2C_1C_4C_5L_1L_4R_5 + 2C_1C_4C_5L_1L_5R_4R_5g_m + 2C_1C_4C_5L_1L_5R_4 + 2C_1C_4C_5L_4L_5R_1R_4g_m + 2C_1C_4C_5L_4L_5R_1R_5g_m + 2C_1C_4C_5L_4L_5R_1 -$$

$$\mathbf{10.746} \quad \text{INVALID-ORDER-746} \quad Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \infty, \infty, R_4, \frac{1}{C_5 s}, \infty \right)$$

$$H(s) = \frac{-C_5 L_1 R_1 R_4 s^2 + L_1 R_1 R_4 g_m s}{C_1 C_5 L_1 R_1 R_4 s^3 + 2R_1 + s^2 (2C_1 L_1 R_1 + 2C_5 L_1 R_1 R_4 g_m + 2C_5 L_1 R_1 + C_5 L_1 R_4) + s (C_5 R_1 R_4 + 2L_1 R_1 g_m + 2L_1)}$$

$$\mathbf{10.747} \quad \text{INVALID-ORDER-747} \quad Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \infty, \infty, R_4, \frac{R_5}{C_5 R_5 s + 1}, \infty \right)$$

$$H(s) = \frac{-C_5 L_1 R_1 R_4 R_5 s^2 + s (L_1 R_1 R_4 R_5 g_m - L_1 R_1 R_4)}{C_1 C_5 L_1 R_1 R_4 R_5 s^3 + R_1 R_4 + 2 R_1 R_5 + s^2 (C_1 L_1 R_1 R_4 + 2 C_1 L_1 R_1 R_5 + 2 C_5 L_1 R_1 R_4 R_5 g_m + 2 C_5 L_1 R_1 R_5 + C_5 L_1 R_4 R_5) + s (C_5 R_1 R_4 R_5 + 2 L_1 R_1 R_4 g_m + 2 L_1 R_1 R_5 g_m + 2 L_1 R_1 + L_1 R_4 + 2 L_1 R_5)}$$

$$10.748 \quad \text{INVALID-ORDER-748} \quad Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \infty, \infty, R_4, R_5 + \frac{1}{C_5 s}, \infty \right)$$

$$H(s) = \frac{L_1 R_1 R_4 g_m s + s^2 (C_5 L_1 R_1 R_4 R_5 g_m - C_5 L_1 R_1 R_4)}{2 R_1 + s^3 (C_1 C_5 L_1 R_1 R_4 + 2 C_1 C_5 L_1 R_1 R_5) + s^2 (2 C_1 L_1 R_1 + 2 C_5 L_1 R_1 R_4 g_m + 2 C_5 L_1 R_1 R_5 g_m + 2 C_5 L_1 R_1 + C_5 L_1 R_4 + 2 C_5 L_1 R_5) + s (C_5 R_1 R_4 + 2 C_5 R_1 R_5 + 2 L_1 R_1 g_m + 2 L_1)}$$

$$\mathbf{10.749} \quad \text{INVALID-ORDER-749} \quad Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \infty, \infty, R_4, L_5 s + \frac{1}{C_5 s}, \infty \right)$$

$$H(s) = \frac{C_5 L_1 L_5 R_1 R_4 g_m s^3 - C_5 L_1 R_1 R_4 s^2 + L_1 R_1 R_4 g_m s}{2 C_1 C_5 L_1 L_5 R_1 s^4 + 2 R_1 + s^3 (C_1 C_5 L_1 R_1 R_4 + 2 C_5 L_1 L_5 R_1 g_m + 2 C_5 L_1 L_5) + s^2 (2 C_1 L_1 R_1 + 2 C_5 L_1 R_1 R_4 g_m + 2 C_5 L_1 R_1 + C_5 L_1 R_4 + 2 C_5 L_5 R_1) + s (C_5 R_1 R_4 + 2 L_1 R_1 g_m + 2 L_1)}$$

$$\mathbf{10.750} \quad \text{INVALID-ORDER-750} \quad Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \infty, \infty, R_4, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \infty \right)$$

$$H(s) = \frac{-C_5 L_1 L_5 R_1 R_4 s^3 + L_1 L_5 R_1 R_4 g_m s^2 - L_1 R_1 R_4 s}{C_1 C_5 L_1 L_5 R_1 R_4 s^4 + R_1 R_4 + s^3 (2 C_1 L_1 L_5 R_1 + 2 C_5 L_1 L_5 R_1 R_4 g_m + 2 C_5 L_1 L_5 R_1 + C_5 L_1 L_5 R_4) + s^2 (C_1 L_1 R_1 R_4 + C_5 L_5 R_1 R_4 + 2 L_1 L_5 R_1 g_m + 2 L_1 L_5) + s (2 L_1 R_1 R_4 g_m + 2 L_1 R_1 + L_1 R_4 + 2 L_5 R_1)}$$

10.751 INVALID-ORDER-751 $Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \infty, \infty, R_4, L_5 s + R_5 + \frac{1}{C_5 s}, \infty \right)$

$$H(s) = \frac{C_5 L_1 L_5 R_1 R_4 g_m s^3 + L_1 R_1 R_4 g_m s + s^2 (C_5 L_1 R_1 R_4 R_5 g_m - C_5 L_1 R_1 R_4)}{2 C_1 C_5 L_1 L_5 R_1 s^4 + 2 R_1 + s^3 (C_1 C_5 L_1 R_1 R_4 + 2 C_1 C_5 L_1 R_1 R_5 + 2 C_5 L_1 L_5 R_1 g_m + 2 C_5 L_1 L_5) + s^2 (2 C_1 L_1 R_1 + 2 C_5 L_1 R_1 R_4 g_m + 2 C_5 L_1 R_1 R_5 g_m + 2 C_5 L_1 R_1 + C_5 L_1 R_4 + 2 C_5 L_1 R_5 + 2 C_5 L_5 R_1) + s (C_5 R_1 R_4 + 2 C_5 R_1 R_5 + 2 L_1 R_1 g_m + 2 L_1)}$$

$$\mathbf{10.752} \quad \text{INVALID-ORDER-752} \quad Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \infty, \infty, R_4, \frac{L_5 R_5 s}{C_5 L_5 R_5 s^2 + L_5 s + R_5}, \infty \right)$$

$$H(s) = \frac{-C_5 L_1 L_5 R_1 R_4 R_5 s^3 - L_1 R_1 R_4 R_5 s + s^2 (L_1 L_5 R_1 R_4 R_5 g_m - L_1 L_5 R_1 R_4)}{C_1 C_5 L_1 L_5 R_1 R_4 R_5 s^4 + R_1 R_4 R_5 + s^3 (C_1 L_1 L_5 R_1 R_4 + 2 C_1 L_1 L_5 R_1 R_5 + 2 C_5 L_1 L_5 R_1 R_4 R_5 g_m + 2 C_5 L_1 L_5 R_1 R_5 + C_5 L_1 L_5 R_4 R_5) + s^2 (C_1 L_1 R_1 R_4 R_5 + C_5 L_5 R_1 R_4 R_5 + 2 L_1 L_5 R_1 R_4 g_m + 2 L_1 L_5 R_1 R_5 g_m + 2 L_1 L_5 R_1 + L_1 L_5 R_4 + 2 L_1 L_5 R_5) + s (2 L_1 R_1 R_4 R_5 g_m + 2 L_1 R_1 R_4 R_5 + 2 L_1 R_1 R_5 g_m + 2 L_1 R_1 R_5 + 2 L_1 R_4 R_5 + 2 L_1 R_4 R_5 g_m + 2 L_1 R_5 R_5 + 2 L_1 R_5 R_5 g_m) + 2 L_1 R_4 R_5}$$

$$\mathbf{10.753} \quad \mathbf{INVALID-ORDER-753} \quad Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \infty, \infty, R_4, \frac{C_5 L_5 R_5 s^2 + L_5 s + R_5}{C_5 L_5 s^2 + 1}, \infty \right)$$

$$H(s) = \frac{L_1 L_5 R_1 R_4 g_m s^2 + s^3 (C_5 L_1 L_5 R_1 R_4 R_5 g_m - C_5 L_1 L_5 R_1 R_4) + s (L_1 R_1 R_4 R_5 g_m - L_1 R_1 R_4)}{R_1 R_4 + 2 R_1 R_5 + s^4 (C_1 C_5 L_1 L_5 R_1 R_4 + 2 C_1 C_5 L_1 L_5 R_1 R_5) + s^3 (2 C_1 L_1 L_5 R_1 + 2 C_5 L_1 L_5 R_1 R_4 g_m + 2 C_5 L_1 L_5 R_1 R_5 g_m + 2 C_5 L_1 L_5 R_1 + C_5 L_1 L_5 R_4 + 2 C_5 L_1 L_5 R_5) + s^2 (C_1 L_1 R_1 R_4 + 2 C_1 L_1 R_1 R_5 + C_5 L_5 R_1 R_4 + 2 C_5 L_5 R_1 R_5 + 2 L_1 L_5 R_1 g_m + 2 L_1 L_5) + s (2 L_1 R_1 R_4 R_5 g_m - L_1 R_1 R_4)}$$

$$\mathbf{10.754 \quad INVALID-ORDER-754} \quad Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \quad \infty, \quad \infty, \quad R_4, \quad \frac{R_5 (C_5 L_5 s^2 + 1)}{C_5 L_5 s^2 + C_5 R_5 s + 1}, \quad \infty \right)$$

$$H(s) = \frac{-C_5 L_1 R_1 R_4 R_5 s^2 + s^3 (C_5 L_1 L_5 R_1 R_4 R_5 g_m - C_5 L_1 L_5 R_1 R_4) + s (L_1 R_1 R_4 R_5 g_m - L_1 R_1 R_4)}{R_1 R_4 + 2 R_1 R_5 + s^4 (C_1 C_5 L_1 L_5 R_1 R_4 + 2 C_1 C_5 L_1 L_5 R_1 R_5) + s^3 (C_1 C_5 L_1 R_1 R_4 R_5 + 2 C_5 L_1 L_5 R_1 R_4 g_m + 2 C_5 L_1 L_5 R_1 R_5 g_m + 2 C_5 L_1 L_5 R_1 + C_5 L_1 L_5 R_4 + 2 C_5 L_1 L_5 R_5) + s^2 (C_1 L_1 R_1 R_4 + 2 C_1 L_1 R_1 R_5 + 2 C_5 L_1 R_1 R_4 R_5 g_m + 2 C_5 L_1 R_1 R_5 + C_5 L_1 R_4 R_5 + C_5 L_5 R_1 R_4)}$$

$$\mathbf{10.755 \quad INVALID-ORDER-755} \quad Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \quad \infty, \quad \infty, \quad \frac{1}{C_4 s}, \quad R_5, \quad \infty \right)$$

$$H(s) = \frac{s (L_1 R_1 R_5 g_m - L_1 R_1)}{2 C_1 C_4 L_1 R_1 R_5 s^3 + R_1 + s^2 (C_1 L_1 R_1 + 2 C_4 L_1 R_1 R_5 g_m + 2 C_4 L_1 R_1 + 2 C_4 L_1 R_5) + s (2 C_4 R_1 R_5 + 2 L_1 R_1 g_m + L_1)}$$

$$\mathbf{10.756 \quad INVALID-ORDER-756} \quad Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \quad \infty, \quad \infty, \quad \frac{1}{C_4 s}, \quad \frac{R_5}{C_5 R_5 s + 1}, \quad \infty \right)$$

$$H(s) = \frac{-C_5 L_1 R_1 R_5 s^2 + s (L_1 R_1 R_5 g_m - L_1 R_1)}{R_1 + s^3 (2 C_1 C_4 L_1 R_1 R_5 + C_1 C_5 L_1 R_1 R_5 + 2 C_4 C_5 L_1 R_1 R_5) + s^2 (C_1 L_1 R_1 + 2 C_4 L_1 R_1 R_5 g_m + 2 C_4 L_1 R_1 + 2 C_4 L_1 R_5 + 2 C_5 L_1 R_1 R_5 g_m + C_5 L_1 R_5) + s (2 C_4 R_1 R_5 + C_5 R_1 R_5 + 2 L_1 R_1 g_m + L_1)}$$

$$\mathbf{10.757 \quad INVALID-ORDER-757} \quad Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \quad \infty, \quad \infty, \quad \frac{1}{C_4 s}, \quad R_5 + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{L_1 R_1 g_m + s (C_5 L_1 R_1 R_5 g_m - C_5 L_1 R_1)}{2 C_1 C_4 C_5 L_1 R_1 R_5 s^3 + 2 C_4 R_1 + C_5 R_1 + s^2 (2 C_1 C_4 L_1 R_1 + C_1 C_5 L_1 R_1 + 2 C_4 C_5 L_1 R_1 R_5 g_m + 2 C_4 C_5 L_1 R_1 + 2 C_4 C_5 L_1 R_5) + s (2 C_4 C_5 R_1 R_5 + 2 C_4 L_1 R_1 g_m + 2 C_4 L_1 + 2 C_5 L_1 R_1 g_m + C_5 L_1)}$$

$$\mathbf{10.758 \quad INVALID-ORDER-758} \quad Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \quad \infty, \quad \infty, \quad \frac{1}{C_4 s}, \quad L_5 s + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{C_5 L_1 L_5 R_1 g_m s^2 - C_5 L_1 R_1 s + L_1 R_1 g_m}{2 C_1 C_4 C_5 L_1 L_5 R_1 s^4 + 2 C_4 R_1 + C_5 R_1 + s^3 (2 C_4 C_5 L_1 L_5 R_1 g_m + 2 C_4 C_5 L_1 L_5) + s^2 (2 C_1 C_4 L_1 R_1 + C_1 C_5 L_1 R_1 + 2 C_4 C_5 L_1 R_1 + 2 C_4 C_5 L_5 R_1) + s (2 C_4 L_1 R_1 g_m + 2 C_4 L_1 + 2 C_5 L_1 R_1 g_m + C_5 L_1)}$$

$$\mathbf{10.759 \quad INVALID-ORDER-759} \quad Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \quad \infty, \quad \infty, \quad \frac{1}{C_4 s}, \quad \frac{L_5 s}{C_5 L_5 s^2 + 1}, \quad \infty \right)$$

$$H(s) = \frac{-C_5 L_1 L_5 R_1 s^3 + L_1 L_5 R_1 g_m s^2 - L_1 R_1 s}{R_1 + s^4 (2 C_1 C_4 L_1 L_5 R_1 + C_1 C_5 L_1 L_5 R_1 + 2 C_4 C_5 L_1 L_5 R_1) + s^3 (2 C_4 L_1 L_5 R_1 g_m + 2 C_4 L_1 L_5 + 2 C_5 L_1 L_5 R_1 g_m + C_5 L_1 L_5) + s^2 (C_1 L_1 R_1 + 2 C_4 L_1 R_1 + 2 C_4 L_5 R_1 + C_5 L_5 R_1) + s (2 L_1 R_1 g_m + L_1)}$$

$$\mathbf{10.760 \quad INVALID-ORDER-760} \quad Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \quad \infty, \quad \infty, \quad \frac{1}{C_4 s}, \quad L_5 s + R_5 + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{C_5 L_1 L_5 R_1 g_m s^2 + L_1 R_1 g_m + s (C_5 L_1 R_1 R_5 g_m - C_5 L_1 R_1)}{2 C_1 C_4 C_5 L_1 L_5 R_1 s^4 + 2 C_4 R_1 + C_5 R_1 + s^3 (2 C_1 C_4 C_5 L_1 R_1 R_5 + 2 C_4 C_5 L_1 L_5 R_1 g_m + 2 C_4 C_5 L_1 L_5) + s^2 (2 C_1 C_4 L_1 R_1 + C_1 C_5 L_1 R_1 + 2 C_4 C_5 L_1 R_1 R_5 g_m + 2 C_4 C_5 L_1 R_1 + 2 C_4 C_5 L_1 R_5 + 2 C_4 C_5 L_5 R_1) + s (2 C_4 C_5 R_1 R_5 + 2 C_4 L_1 R_1 g_m + 2 C_4 L_1 + 2 C_5 L_1 R_1 g_m + C_5 L_1)}$$

$$\mathbf{10.761 \quad INVALID-ORDER-761} \quad Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \quad \infty, \quad \infty, \quad \frac{1}{C_4 s}, \quad \frac{L_5 R_5 s}{C_5 L_5 R_5 s^2 + L_5 s + R_5}, \quad \infty \right)$$

$$H(s) = \frac{-C_5 L_1 L_5 R_1 R_5 s^3 - L_1 R_1 R_5 s + s^2 (L_1 L_5 R_1 R_5 g_m - L_1 L_5 R_1)}{R_1 R_5 + s^4 (2 C_1 C_4 L_1 L_5 R_1 R_5 + C_1 C_5 L_1 L_5 R_1 R_5 + 2 C_4 C_5 L_1 L_5 R_1 R_5) + s^3 (C_1 L_1 L_5 R_1 + 2 C_4 L_1 L_5 R_1 R_5 g_m + 2 C_4 L_1 L_5 R_1 + 2 C_4 L_1 L_5 R_5 + 2 C_5 L_1 L_5 R_1 R_5 g_m + C_5 L_1 L_5 R_5) + s^2 (C_1 L_1 R_1 R_5 + 2 C_4 L_1 R_1 R_5 + 2 C_4 L_5 R_1 R_5 + C_5 L_5 R_1 R_5 + 2 L_1 L_5 R_1 g_m + L_1 L_5) + s (L_1 R_1 R_5 g_m + L_1 R_1)}$$

$$\mathbf{10.762 \quad INVALID-ORDER-762} \quad Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \quad \infty, \quad \infty, \quad \frac{1}{C_4 s}, \quad \frac{C_5 L_5 R_5 s^2 + L_5 s + R_5}{C_5 L_5 s^2 + 1}, \quad \infty \right)$$

$$H(s) = \frac{L_1 L_5 R_1 g_m s^2 + s^3 (C_5 L_1 L_5 R_1 R_5 g_m - C_5 L_1 L_5 R_1) + s (L_1 R_1 R_5 g_m - L_1 R_1)}{2 C_1 C_4 C_5 L_1 L_5 R_1 R_5 s^5 + R_1 + s^4 (2 C_1 C_4 L_1 L_5 R_1 + C_1 C_5 L_1 L_5 R_1 + 2 C_4 C_5 L_1 L_5 R_1 R_5 g_m + 2 C_4 C_5 L_1 L_5 R_1 + 2 C_4 C_5 L_1 L_5 R_5) + s^3 (2 C_1 C_4 L_1 R_1 R_5 + 2 C_4 C_5 L_5 R_1 R_5 + 2 C_4 L_1 L_5 R_1 g_m + 2 C_4 L_1 L_5 + 2 C_5 L_1 L_5 R_1 g_m + C_5 L_1 L_5) + s^2 (C_1 L_1 R_1 + 2 C_4 L_1 R_1 R_5 g_m + 2 C_4 L_1 R_1 R_5 + 2 C_4 L_5 R_1 R_5 + C_5 L_5 R_1 R_5 + 2 L_1 L_5 R_1 g_m + L_1 L_5) + s (L_1 R_1 R_5 g_m + L_1 R_1)}$$

$$\mathbf{10.763 \quad INVALID-ORDER-763} \quad Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \quad \infty, \quad \infty, \quad \frac{1}{C_4 s}, \quad \frac{R_5 (C_5 L_5 s^2 + 1)}{C_5 L_5 s^2 + C_5 R_5 s + 1}, \quad \infty \right)$$

$$H(s) = \frac{-C_5 L_1 R_1 R_5 s^2 + s^3 (C_5 L_1 L_5 R_1 R_5 g_m - C_5 L_1 L_5 R_1) + s (L_1 R_1 R_5 g_m - L_1 R_1)}{2 C_1 C_4 C_5 L_1 L_5 R_1 R_5 s^5 + R_1 + s^4 (C_1 C_5 L_1 L_5 R_1 + 2 C_4 C_5 L_1 L_5 R_1 R_5 g_m + 2 C_4 C_5 L_1 L_5 R_1 + 2 C_4 C_5 L_1 L_5 R_5) + s^3 (2 C_1 C_4 L_1 R_1 R_5 + C_1 C_5 L_1 R_1 R_5 + 2 C_4 C_5 L_1 R_1 R_5 + 2 C_4 C_5 L_5 R_1 R_5 + 2 C_5 L_1 L_5 R_1 g_m + C_5 L_1 L_5) + s^2 (C_1 L_1 R_1 + 2 C_4 L_1 R_1 R_5 g_m + 2 C_4 L_1 R_1 + 2 C_4 L_1 R_5) + s (L_1 R_1 + L_1 R_4 + 2 L_1 R_5)}$$

$$\mathbf{10.764 \quad INVALID-ORDER-764} \quad Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \quad \infty, \quad \infty, \quad \frac{R_4}{C_4 R_4 s + 1}, \quad R_5, \quad \infty \right)$$

$$H(s) = \frac{s (L_1 R_1 R_4 R_5 g_m - L_1 R_1 R_4)}{2 C_1 C_4 L_1 R_1 R_4 R_5 s^3 + R_1 R_4 + 2 R_1 R_5 + s^2 (C_1 L_1 R_1 R_4 + 2 C_1 L_1 R_1 R_5 + 2 C_4 L_1 R_1 R_4 R_5 g_m + 2 C_4 L_1 R_1 R_4 + 2 C_4 L_1 R_4 R_5) + s (2 C_4 R_1 R_4 R_5 + 2 L_1 R_1 R_4 g_m + 2 L_1 R_1 R_5 g_m + 2 L_1 R_1 + L_1 R_4 + 2 L_1 R_5)}$$

$$\mathbf{10.765 \quad INVALID-ORDER-765} \quad Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \quad \infty, \quad \infty, \quad \frac{R_4}{C_4 R_4 s + 1}, \quad \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{-C_5 L_1 R_1 R_4 s^2 + L_1 R_1 R_4 g_m s}{2 R_1 + s^3 (2 C_1 C_4 L_1 R_1 R_4 + C_1 C_5 L_1 R_1 R_4 + 2 C_4 C_5 L_1 R_1 R_4) + s^2 (2 C_1 L_1 R_1 + 2 C_4 L_1 R_1 R_4 g_m + 2 C_4 L_1 R_4 + 2 C_5 L_1 R_1 R_4 g_m + 2 C_5 L_1 R_1 + C_5 L_1 R_4) + s (2 C_4 R_1 R_4 + C_5 R_1 R_4 + 2 L_1 R_1 g_m + 2 L_1)}$$

$$\mathbf{10.766 \quad INVALID-ORDER-766} \quad Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \quad \infty, \quad \infty, \quad \frac{R_4}{C_4 R_4 s + 1}, \quad \frac{R_5}{C_5 R_5 s + 1}, \quad \infty \right)$$

$$H(s) = \frac{-C_5 L_1 R_1 R_4 R_5 s^2 + s (L_1 R_1 R_4 R_5 g_m - L_1 R_1 R_4)}{R_1 R_4 + 2 R_1 R_5 + s^3 (2 C_1 C_4 L_1 R_1 R_4 R_5 + C_1 C_5 L_1 R_1 R_4 R_5 + 2 C_4 C_5 L_1 R_1 R_4 R_5) + s^2 (C_1 L_1 R_1 R_4 + 2 C_1 L_1 R_1 R_5 + 2 C_4 L_1 R_1 R_4 R_5 g_m + 2 C_4 L_1 R_1 R_4 + 2 C_4 L_1 R_4 R_5 + 2 C_5 L_1 R_1 R_4 R_5 g_m + 2 C_5 L_1 R_1 R_5 + C_5 L_1 R_4 R_5) + s (2 C_4 R_1 R_4 R_5 + C_5 R_1 R_4 R_5 + 2 L_1 R_1 R_4 g_m + 2 L_1 R_1 R_5 + L_1 R_4 + 2 L_1 R_5)}$$

$$\mathbf{10.767 \quad INVALID-ORDER-767} \quad Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \quad \infty, \quad \infty, \quad \frac{R_4}{C_4 R_4 s + 1}, \quad R_5 + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{L_1 R_1 R_4 g_m s + s^2 (C_5 L_1 R_1 R_4 R_5 g_m - C_5 L_1 R_1 R_4)}{2 C_1 C_4 C_5 L_1 R_1 R_4 R_5 s^4 + 2 R_1 + s^3 (2 C_1 C_4 L_1 R_1 R_4 + C_1 C_5 L_1 R_1 R_4 + 2 C_1 C_5 L_1 R_1 R_5 + 2 C_4 C_5 L_1 R_1 R_4 R_5 g_m + 2 C_4 C_5 L_1 R_1 R_4 + 2 C_4 C_5 L_1 R_4 R_5) + s^2 (2 C_1 L_1 R_1 + 2 C_4 C_5 R_1 R_4 R_5 + 2 C_4 L_1 R_1 R_4 g_m + 2 C_4 L_1 R_4 + 2 C_5 L_1 R_1 R_4 g_m + 2 C_5 L_1 R_1 R_5 g_m + 2 C_5 L_1 R_1 + C_5 L_1 R_4) + s (2 C_4 R_1 R_4 + C_5 R_1 R_4 + 2 L_1 R_1 g_m + 2 L_1)}$$

$$\mathbf{10.768 \quad INVALID-ORDER-768} \quad Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \quad \infty, \quad \infty, \quad \frac{R_4}{C_4 R_4 s + 1}, \quad L_5 s + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{C_5 L_1 L_5 R_1 R_4 g_m s^3 - C_5 L_1 R_1 R_4 s^2 + L_1 R_1 R_4 g_m s}{2 C_1 C_4 C_5 L_1 L_5 R_1 R_4 s^5 + 2 R_1 + s^4 (2 C_1 C_5 L_1 L_5 R_1 + 2 C_4 C_5 L_1 L_5 R_1 R_4 g_m + 2 C_4 C_5 L_1 L_5 R_4) + s^3 (2 C_1 C_4 L_1 R_1 R_4 + C_1 C_5 L_1 R_1 R_4 + 2 C_4 C_5 L_1 R_1 R_4 + 2 C_4 C_5 L_5 R_1 R_4 + 2 C_5 L_1 L_5 R_1 g_m + 2 C_5 L_1 L_5) + s^2 (2 C_1 L_1 R_1 + 2 C_4 L_1 R_1 R_4 g_m + 2 C_4 L_1 R_4 + 2 C_5 L_1 R_1 R_4 g_m + 2 C_5 L_1 R_1 R_5 g_m + 2 C_5 L_1 R_1 + C_5 L_1 R_4) + s (L_1 R_1 + L_1 R_4 + 2 L_1 R_5)}$$

$$\mathbf{10.769 \quad INVALID-ORDER-769} \quad Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \quad \infty, \quad \infty, \quad \frac{R_4}{C_4 R_4 s + 1}, \quad \frac{L_5 s}{C_5 L_5 s^2 + 1}, \quad \infty \right)$$

$$H(s) = \frac{-C_5 L_1 L_5 R_1 R_4 s^3 + L_1 L_5 R_1 R_4 g_m s^2 - L_1 R_1 R_4 s}{R_1 R_4 + s^4 (2 C_1 C_4 L_1 L_5 R_1 R_4 + C_1 C_5 L_1 L_5 R_1 R_4 + 2 C_4 C_5 L_1 L_5 R_1 R_4) + s^3 (2 C_1 L_1 L_5 R_1 + 2 C_4 L_1 L_5 R_1 R_4 g_m + 2 C_4 L_1 L_5 R_4 + 2 C_5 L_1 L_5 R_1 R_4 g_m + 2 C_5 L_1 L_5 R_1 + C_5 L_1 L_5 R_4) + s^2 (C_1 L_1 R_1 R_4 + 2 C_4 L_1 R_1 R_4 + 2 C_4 L_5 R_1 R_4 + C_5 L_5 R_1 R_4 + 2 L_1 L_5 R_1 g_m + 2 L_1 L_5) + s (L_1 R_1 + L_1 R_4 + 2 L_1 R_5)}$$

$$\mathbf{10.770 \quad INVALID-ORDER-770} \quad Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \quad \infty, \quad \infty, \quad \frac{R_4}{C_4 R_4 s + 1}, \quad L_5 s + R_5 + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{C_5 L_1 L_5 R_1 R_4 g_m s^3 + L_1 R_1 R_4 g_m s + s^2 (C_5 L_1 R_1 R_4 R_5 g_m - L_1 L_5 R_1 R_4)}{2 C_1 C_4 C_5 L_1 L_5 R_1 R_4 s^5 + 2 R_1 + s^4 (2 C_1 C_4 C_5 L_1 R_1 R_4 R_5 + 2 C_1 C_5 L_1 L_5 R_1 + 2 C_4 C_5 L_1 L_5 R_1 R_4 g_m + 2 C_4 C_5 L_1 L_5 R_4) + s^3 (2 C_1 C_4 L_1 R_1 R_4 + C_1 C_5 L_1 R_1 R_4 + 2 C_1 C_5 L_1 R_1 R_5 + 2 C_4 C_5 L_1 R_1 R_4 R_5 g_m + 2 C_4 C_5 L_1 R_1 R_4 + 2 C_4 C_5 L_5 R_1 R_4 + 2 C_5 L_1 L_5 R_1 R_4 g_m + 2 C_5 L_1 L_5 R_1 + C_5 L_1 L_5 R_4) + s^2 (C_1 L_1 R_1 R_4 + 2 C_4 L_1 R_1 R_4 + 2 C_4 L_5 R_1 R_4 + C_5 L_5 R_1 R_4 + 2 L_1 L_5 R_1 g_m + 2 L_1 L_5) + s (L_1 R_1 + L_1 R_4 + 2 L_1 R_5)}$$

$$\mathbf{10.771 \quad INVALID-ORDER-771} \quad Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \quad \infty, \quad \infty, \quad \frac{R_4}{C_4 R_4 s + 1}, \quad \frac{L_5 R_5 s}{C_5 L_5 R_5 s^2 + L_5 s + R_5}, \quad \infty \right)$$

$$H(s) = \frac{-C_5 L_1 L_5 R_1 R_4 R_5 s^3 - L_1 R_1 R_4 R_5 s + s^2 (L_1 L_5 R_1 R_4 R_5 g_m - L_1 L_5 R_1 R_4)}{R_1 R_4 R_5 + s^4 (2 C_1 C_4 L_1 L_5 R_1 R_4 R_5 + C_1 C_5 L_1 L_5 R_1 R_4 R_5 + 2 C_4 C_5 L_1 L_5 R_1 R_4 R_5) + s^3 (C_1 L_1 L_5 R_1 R_4 + 2 C_1 L_1 L_5 R_1 R_5 + 2 C_4 L_1 L_5 R_1 R_4 R_5 g_m + 2 C_4 L_1 L_5 R_1 R_4 + 2 C_4 L_1 L_5 R_4 R_5 + 2 C_5 L_1 L_5 R_1 R_4 R_5 g_m + 2 C_5 L_1 L_5 R_1 R_5 + C_5 L_1 L_5 R_4 R_5) + s^2 (C_1 L_1 R_1 R_4 R_5 + 2 C_4 L_1 R_1 R_4 R_5 + 2 C_4 L_5 R_1 R_4 R_5 + C_5 L_5 R_1 R_4 R_5 + 2 L_1 L_5 R_1 g_m + 2 L_1 L_5) + s (L_1 R_1 + L_1 R_4 + 2 L_1 R_5)}$$

$$\mathbf{10.772 \quad INVALID-ORDER-772} \quad Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \quad \infty, \quad \infty, \quad \frac{R_4}{C_4 R_4 s + 1}, \quad \frac{C_5 L_5 R_5 s^2 + L_5 s + R_5}{C_5 L_5 s^2 + 1}, \quad \infty \right)$$

$$H(s) = \frac{L_1 L_5 R_1 R_4}{2 C_1 C_4 C_5 L_1 L_5 R_1 R_4 R_5 s^5 + R_1 R_4 + 2 R_1 R_5 + s^4 (2 C_1 C_4 L_1 L_5 R_1 R_4 + C_1 C_5 L_1 L_5 R_1 R_4 + 2 C_1 C_5 L_1 L_5 R_1 R_5 + 2 C_4 C_5 L_1 L_5 R_1 R_4 R_5 g_m + 2 C_4 C_5 L_1 L_5 R_1 R_4 + 2 C_4 C_5 L_1 L_5 R_4 R_5) + s^3 (2 C_1 C_4 L_1 R_1 R_4 R_5 + 2 C_1 L_1 L_5 R_1 + 2 C_4 C_5 L_5 R_1 R_4 R_5 + 2 C_4 L_1 L_5 R_1 R_4 g_m + 2 C_4 L_1 L_5 R_1 + C_5 L_1 L_5 R_4) + s^2 (C_1 L_1 R_1 R_4 R_5 + 2 C_4 L_1 R_1 R_4 R_5 + 2 C_4 L_5 R_1 R_4 R_5 + C_5 L_5 R_1 R_4 R_5 + 2 L_1 L_5 R_1 g_m + 2 L_1 L_5) + s (L_1 R_1 + L_1 R_4 + 2 L_1 R_5)}$$

$$\mathbf{10.773 \quad INVALID-ORDER-773} \quad Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \quad \infty, \quad \infty, \quad \frac{R_4}{C_4 R_4 s + 1}, \quad \frac{R_5 (C_5 L_5 s^2 + 1)}{C_5 L_5 s^2 + C_5 R_5 s + 1}, \quad \infty \right)$$

$$H(s) = \frac{-C_5 L_1 R_1 R_4 R_5 s^2 + 2C_1 C_4 C_5 L_1 L_5 R_1 R_4 R_5 s^5 + R_1 R_4 + 2R_1 R_5 + s^4 (C_1 C_5 L_1 L_5 R_1 R_4 + 2C_1 C_5 L_1 L_5 R_1 R_5 + 2C_4 C_5 L_1 L_5 R_1 R_4 R_5 g_m + 2C_4 C_5 L_1 L_5 R_1 R_4 + 2C_4 C_5 L_1 L_5 R_4 R_5) + s^3 (2C_1 C_4 L_1 R_1 R_4 R_5 + C_1 C_5 L_1 R_1 R_4 R_5 + 2C_4 C_5 L_1 R_1 R_4 R_5 + 2C_4 C_5 L_5 R_1 R_4 R_5 + 2C_5 L_1 L_5 R_1 R_4 g_m + 2C_5 L_1 L_5 R_1 R_4 R_5)}{2C_1 C_4 C_5 L_1 L_5 R_1 R_4 R_5 s^5 + R_1 R_4 + 2R_1 R_5 + s^4 (C_1 C_5 L_1 L_5 R_1 R_4 + 2C_1 C_5 L_1 L_5 R_1 R_5 + 2C_4 C_5 L_1 L_5 R_1 R_4 R_5 g_m + 2C_4 C_5 L_1 L_5 R_1 R_4 + 2C_4 C_5 L_1 L_5 R_4 R_5) + s^3 (2C_1 C_4 L_1 R_1 R_4 R_5 + C_1 C_5 L_1 R_1 R_4 R_5 + 2C_4 C_5 L_1 R_1 R_4 R_5 + 2C_4 C_5 L_5 R_1 R_4 R_5 + 2C_5 L_1 L_5 R_1 R_4 g_m + 2C_5 L_1 L_5 R_1 R_4 R_5)}$$

$$\mathbf{10.774 \quad INVALID-ORDER-774} \quad Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \quad \infty, \quad \infty, \quad R_4 + \frac{1}{C_4 s}, \quad R_5, \quad \infty \right)$$

$$H(s) = \frac{s^2 (C_4 L_1 R_1 R_4 R_5 g_m - C_4 L_1 R_1 R_4) + s (L_1 R_1 R_5 g_m - L_1 R_1)}{R_1 + s^3 (C_1 C_4 L_1 R_1 R_4 + 2C_1 C_4 L_1 R_1 R_5) + s^2 (C_1 L_1 R_1 + 2C_4 L_1 R_1 R_4 g_m + 2C_4 L_1 R_1 R_5 g_m + 2C_4 L_1 R_1 + C_4 L_1 R_4 + 2C_4 L_1 R_5) + s (C_4 R_1 R_4 + 2C_4 R_1 R_5 + 2L_1 R_1 g_m + L_1)}$$

$$\mathbf{10.775 \quad INVALID-ORDER-775} \quad Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \quad \infty, \quad \infty, \quad R_4 + \frac{1}{C_4 s}, \quad \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{-C_4 C_5 L_1 R_1 R_4 s^2 + L_1 R_1 g_m + s (C_4 L_1 R_1 R_4 g_m - C_5 L_1 R_1)}{C_1 C_4 C_5 L_1 R_1 R_4 s^3 + 2C_4 R_1 + C_5 R_1 + s^2 (2C_1 C_4 L_1 R_1 + C_1 C_5 L_1 R_1 + 2C_4 C_5 L_1 R_1 R_4 g_m + 2C_4 C_5 L_1 R_1 + C_4 C_5 L_1 R_4) + s (C_4 C_5 R_1 R_4 + 2C_4 L_1 R_1 g_m + 2C_4 L_1 + 2C_5 L_1 R_1 g_m + C_5 L_1)}$$

$$\mathbf{10.776 \quad INVALID-ORDER-776} \quad Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \quad \infty, \quad \infty, \quad R_4 + \frac{1}{C_4 s}, \quad \frac{R_5}{C_5 R_5 s + 1}, \quad \infty \right)$$

$$H(s) = \frac{-C_4 C_5 L_1 R_1 R_4 R_5 s^3 + s^2 (C_4 L_1 R_1 R_4 R_5 g_m - C_4 L_1 R_1 R_4 - C_5 L_1 R_1 R_5) + s (L_1 R_1 R_5 g_m - L_1 R_1)}{C_1 C_4 C_5 L_1 R_1 R_4 R_5 s^4 + R_1 + s^3 (C_1 C_4 L_1 R_1 R_4 + 2C_1 C_4 L_1 R_1 R_5 + C_1 C_5 L_1 R_1 R_5 + 2C_4 C_5 L_1 R_1 R_4 R_5 g_m + 2C_4 C_5 L_1 R_1 R_5 + C_4 C_5 L_1 R_4 R_5) + s^2 (C_1 L_1 R_1 + C_4 C_5 R_1 R_4 R_5 + 2C_4 L_1 R_1 R_4 g_m + 2C_4 L_1 R_1 R_5 g_m + 2C_4 L_1 R_1 + C_4 L_1 R_4 + 2C_4 L_1 R_5 + 2C_5 L_1 R_1 R_5 g_m + 2C_5 L_1 R_1 R_4 R_5)}$$

$$\mathbf{10.777 \quad INVALID-ORDER-777} \quad Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \quad \infty, \quad \infty, \quad R_4 + \frac{1}{C_4 s}, \quad R_5 + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{L_1 R_1 g_m + s^2 (C_4 C_5 L_1 R_1 R_4 R_5 g_m - C_4 C_5 L_1 R_1 R_4) + s (C_4 L_1 R_1 R_4 g_m + C_5 L_1 R_1 R_5 g_m - C_5 L_1 R_1)}{2C_4 R_1 + C_5 R_1 + s^3 (C_1 C_4 C_5 L_1 R_1 R_4 + 2C_1 C_4 C_5 L_1 R_1 R_5) + s^2 (2C_1 C_4 L_1 R_1 + C_1 C_5 L_1 R_1 + 2C_4 C_5 L_1 R_1 R_4 g_m + 2C_4 C_5 L_1 R_1 R_5 g_m + 2C_4 C_5 L_1 R_1 + C_4 C_5 L_1 R_4 + 2C_4 C_5 L_1 R_5) + s (C_4 C_5 R_1 R_4 + 2C_4 C_5 R_1 R_5 + 2C_4 L_1 R_1 g_m + 2C_4 L_1 + 2C_5 L_1 R_1 g_m + C_5 L_1)}$$

$$\mathbf{10.778 \quad INVALID-ORDER-778} \quad Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \quad \infty, \quad \infty, \quad R_4 + \frac{1}{C_4 s}, \quad L_5 s + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{C_4 C_5 L_1 L_5 R_1 R_4 g_m s^3 + L_1 R_1 g_m + s^2 (-C_4 C_5 L_1 R_1 R_4 + C_5 L_1 L_5 R_1 g_m) + s (C_4 L_1 R_1 R_4 g_m - C_5 L_1 R_1)}{2C_1 C_4 C_5 L_1 L_5 R_1 s^4 + 2C_4 R_1 + C_5 R_1 + s^3 (C_1 C_4 C_5 L_1 R_1 R_4 + 2C_4 C_5 L_1 L_5 R_1 g_m + 2C_4 C_5 L_1 L_5) + s^2 (2C_1 C_4 L_1 R_1 + C_1 C_5 L_1 R_1 + 2C_4 C_5 L_1 R_1 R_4 g_m + 2C_4 C_5 L_1 R_1 R_5 g_m + 2C_4 C_5 L_1 R_1 + C_4 C_5 L_1 R_4 + 2C_4 C_5 L_5 R_1) + s (C_4 C_5 R_1 R_4 + 2C_4 L_1 R_1 g_m + 2C_4 L_1 + 2C_5 L_1 R_1 g_m + C_5 L_1)}$$

$$\mathbf{10.779 \quad INVALID-ORDER-779} \quad Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \quad \infty, \quad \infty, \quad R_4 + \frac{1}{C_4 s}, \quad \frac{L_5 s}{C_5 L_5 s^2 + 1}, \quad \infty \right)$$

$$H(s) = \frac{-C_4 C_5 L_1 L_5 R_1 R_4 s^4 - L_1 R_1 s + s^3 (C_4 L_1 L_5 R_1 R_4 g_m - C_5 L_1 L_5 R_1) + s^2 (-C_4 L_1 R_1 R_4 + L_1 L_5 R_1 g_m)}{C_1 C_4 C_5 L_1 L_5 R_1 R_4 s^5 + R_1 + s^4 (2C_1 C_4 L_1 L_5 R_1 + C_1 C_5 L_1 L_5 R_1 + 2C_4 C_5 L_1 L_5 R_1 R_4 g_m + 2C_4 C_5 L_1 L_5 R_1 + C_4 C_5 L_1 L_5 R_4) + s^3 (C_1 C_4 L_1 R_1 R_4 + C_4 C_5 L_5 R_1 R_4 + 2C_4 L_1 L_5 R_1 g_m + 2C_4 L_1 L_5 + 2C_5 L_1 L_5 R_1 g_m + C_5 L_1 L_5) + s^2 (C_1 L_1 R_1 + 2C_4 L_1 R_1 R_4 g_m + 2C_4 L_1 R_1 R_5 g_m + 2C_4 L_1 R_1 R_4 R_5)}$$

$$\mathbf{10.780 \quad INVALID-ORDER-780} \quad Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \quad \infty, \quad \infty, \quad R_4 + \frac{1}{C_4 s}, \quad L_5 s + R_5 + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{C_4 C_5 L_1 L_5 R_1 R_4 g_m s^3 + L_1 R_1 g_m + s^2 (C_4 C_5 L_1 R_1 R_4 R_5 g_m - C_4 C_5 L_1 R_1 R_4 + C_5 L_1 L_5 R_1 g_m) + s (C_4 L_1 R_1 R_4 g_m + C_5 L_1 R_1 R_5 g_m - C_5 L_1 R_1)}{2C_1 C_4 C_5 L_1 L_5 R_1 s^4 + 2C_4 R_1 + C_5 R_1 + s^3 (C_1 C_4 C_5 L_1 R_1 R_4 + 2C_1 C_4 C_5 L_1 R_1 R_5 + 2C_4 C_5 L_1 L_5 R_1 g_m + 2C_4 C_5 L_1 L_5) + s^2 (2C_1 C_4 L_1 R_1 + C_1 C_5 L_1 R_1 + 2C_4 C_5 L_1 R_1 R_4 g_m + 2C_4 C_5 L_1 R_1 R_5 g_m + 2C_4 C_5 L_1 R_1 + C_4 C_5 L_1 R_4 + 2C_4 C_5 L_1 R_5 + 2C_4 C_5 L_5 R_1) + s (C_4 C_5 R_1 R_4 + 2C_4 L_1 R_1 g_m + 2C_4 L_1 R_1 R_5 g_m + 2C_4 L_1 R_1 R_4 R_5)}$$

$$\mathbf{10.781 \quad INVALID-ORDER-781} \quad Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \quad \infty, \quad \infty, \quad R_4 + \frac{1}{C_4 s}, \quad \frac{L_5 R_5 s}{C_5 L_5 R_5 s^2 + L_5 s + R_5}, \quad \infty \right)$$

$$H(s) = \frac{-C_4 C_5 L_1 L_5 R_1 R_4 R_5 s^4 - L_1 R_1 R_5 s + s^3 (C_4 L_1 L_5 R_1 R_4 R_5 g_m - C_4 L_1 L_5 R_1) + s^2 (C_4 L_1 L_5 R_1 R_4 g_m + C_5 L_1 L_5 R_1 R_5 g_m - C_5 L_1 L_5 R_1)}{C_1 C_4 C_5 L_1 L_5 R_1 R_4 R_5 s^5 + R_1 R_5 + s^4 (C_1 C_4 L_1 L_5 R_1 R_4 + 2C_1 C_4 L_1 L_5 R_1 R_5 + C_1 C_5 L_1 L_5 R_1 R_5 + 2C_4 C_5 L_1 L_5 R_1 R_4 R_5 g_m + 2C_4 C_5 L_1 L_5 R_1 R_5 + C_4 C_5 L_1 L_5 R_4 R_5) + s^3 (C_1 C_4 L_1 R_1 R_4 R_5 + C_1 L_1 L_5 R_1 + C_4 C_5 L_5 R_1 R_4 R_5 + 2C_4 L_1 L_5 R_1 R_4 g_m + 2C_4 L_1 L_5 R_1 R_5 g_m + 2C_4 L_1 L_5 R_1 R_4 R_5)}$$

$$\mathbf{10.782 \quad INVALID-ORDER-782} \quad Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \quad \infty, \quad \infty, \quad R_4 + \frac{1}{C_4 s}, \quad \frac{C_5 L_5 R_5 s^2 + L_5 s + R_5}{C_5 L_5 s^2 + 1}, \quad \infty \right)$$

$$H(s) = \frac{s^4 (C_4 C_5 L_1 L_5 R_1 R_4 R_5 g_m - C_4 C_5 L_1 L_5 R_1 R_4) + s^3 (C_4 L_1 L_5 R_1 R_4 g_m + C_5 L_1 L_5 R_1 R_5 g_m - C_5 L_1 L_5 R_1) + s^2 (C_4 L_1 L_5 R_1 R_4 g_m + C_5 L_1 L_5 R_1 R_5 g_m - C_5 L_1 L_5 R_1)}{R_1 + s^5 (C_1 C_4 C_5 L_1 L_5 R_1 R_4 + 2C_1 C_4 C_5 L_1 L_5 R_1 R_5) + s^4 (2C_1 C_4 L_1 L_5 R_1 + C_1 C_5 L_1 L_5 R_1 + 2C_4 C_5 L_1 L_5 R_1 R_4 g_m + 2C_4 C_5 L_1 L_5 R_1 R_5 g_m + 2C_4 C_5 L_1 L_5 R_1 + C_4 C_5 L_1 L_5 R_4 + 2C_4 C_5 L_1 L_5 R_5) + s^3 (C_1 C_4 L_1 R_1 R_4 + 2C_1 C_4 L_1 R_1 R_5 + C_4 C_5 L_5 R_1 R_4 + 2C_4 C_5 L_5 R_1 R_5)}$$

$$\mathbf{10.793 \quad INVALID-ORDER-793} \quad Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \quad \infty, \quad \infty, \quad L_4 s + \frac{1}{C_4 s}, \quad \frac{R_5 (C_5 L_5 s^2 + 1)}{C_5 L_5 s^2 + C_5 R_5 s + 1}, \quad \infty \right)$$

$$H(s) = \frac{-C_4 C_5 L_1 L_4 R_1 R_5 s^4 - C_5 L_1 R_1 R_5 s^2 + s^5 (C_4 C_5 L_1 L_4 L_5 R_1 R_5 g_m - C_5 L_1 L_4 L_5 R_1 R_5) + C_1 C_4 C_5 L_1 L_4 L_5 R_1 s^6 + R_1 + s^5 (C_1 C_4 C_5 L_1 L_4 R_1 R_5 + 2 C_1 C_4 C_5 L_1 L_5 R_1 R_5 + 2 C_4 C_5 L_1 L_4 L_5 R_1 g_m + C_4 C_5 L_1 L_4 L_5) + s^4 (C_1 C_4 L_1 L_4 R_1 + C_1 C_5 L_1 L_5 R_1 + 2 C_4 C_5 L_1 L_4 R_1 R_5 g_m + C_4 C_5 L_1 L_4 R_5 + 2 C_4 C_5 L_1 L_5 R_1 R_5 g_m + 2 C_4 C_5 L_1 L_5 R_1 + 2 C_4 C_5 L_1 L_5 R_5 + C_4 C_5 L_4 L_5 R_1 R_5)}{1}$$

$$\mathbf{10.794 \quad INVALID-ORDER-794} \quad Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \quad \infty, \quad \infty, \quad \frac{L_4 s}{C_4 L_4 s^2 + 1}, \quad R_5, \quad \infty \right)$$

$$H(s) = \frac{s^2 (L_1 L_4 R_1 R_5 g_m - L_1 L_4 R_1)}{2 C_1 C_4 L_1 L_4 R_1 R_5 s^4 + 2 R_1 R_5 + s^3 (C_1 L_1 L_4 R_1 + 2 C_4 L_1 L_4 R_1 R_5 g_m + 2 C_4 L_1 L_4 R_1 + 2 C_4 L_1 L_4 R_5) + s^2 (2 C_1 L_1 R_1 R_5 + 2 C_4 L_4 R_1 R_5 + 2 L_1 L_4 R_1 g_m + L_1 L_4) + s (2 L_1 R_1 R_5 g_m + 2 L_1 R_1 + 2 L_1 R_5 + L_4 R_1)}$$

$$\mathbf{10.795 \quad INVALID-ORDER-795} \quad Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \quad \infty, \quad \infty, \quad \frac{L_4 s}{C_4 L_4 s^2 + 1}, \quad \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{-C_5 L_1 L_4 R_1 s^3 + L_1 L_4 R_1 g_m s^2}{2 R_1 + s^4 (2 C_1 C_4 L_1 L_4 R_1 + C_1 C_5 L_1 L_4 R_1 + 2 C_4 C_5 L_1 L_4 R_1) + s^3 (2 C_4 L_1 L_4 R_1 g_m + 2 C_4 L_1 L_4 + 2 C_5 L_1 L_4 R_1 g_m + C_5 L_1 L_4) + s^2 (2 C_1 L_1 R_1 + 2 C_4 L_4 R_1 + 2 C_5 L_1 R_1 + C_5 L_4 R_1) + s (2 L_1 R_1 g_m + 2 L_1)}$$

$$\mathbf{10.796 \quad INVALID-ORDER-796} \quad Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \quad \infty, \quad \infty, \quad \frac{L_4 s}{C_4 L_4 s^2 + 1}, \quad \frac{R_5}{C_5 R_5 s + 1}, \quad \infty \right)$$

$$H(s) = \frac{-C_5 L_1 L_4 R_1 R_5 s^3 + s^2 (L_1 L_4 R_1 R_5 g_m - L_1 L_4 R_1)}{2 R_1 R_5 + s^4 (2 C_1 C_4 L_1 L_4 R_1 R_5 + C_1 C_5 L_1 L_4 R_1 R_5 + 2 C_4 C_5 L_1 L_4 R_1 R_5) + s^3 (C_1 L_1 L_4 R_1 + 2 C_4 L_1 L_4 R_1 R_5 g_m + 2 C_4 L_1 L_4 R_1 + 2 C_4 L_1 L_4 R_5 + 2 C_5 L_1 L_4 R_1 R_5 g_m + C_5 L_1 L_4 R_5) + s^2 (2 C_1 L_1 R_1 R_5 + 2 C_4 L_4 R_1 R_5 + 2 C_5 L_1 R_1 R_5 + C_5 L_4 R_1 R_5 + 2 L_1 L_4 R_1 g_m + L_1 L_4) + s (2 L_1 R_1 R_5 g_m + 2 L_1 R_1 + 2 L_1 R_5 + L_4 R_1)}$$

$$\mathbf{10.797 \quad INVALID-ORDER-797} \quad Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \quad \infty, \quad \infty, \quad \frac{L_4 s}{C_4 L_4 s^2 + 1}, \quad R_5 + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{L_1 L_4 R_1 g_m s^2 + s^3 (C_5 L_1 L_4 R_1 R_5 g_m - C_5 L_1 L_4 R_1)}{2 C_1 C_4 C_5 L_1 L_4 R_1 R_5 s^5 + 2 R_1 + s^4 (2 C_1 C_4 L_1 L_4 R_1 + C_1 C_5 L_1 L_4 R_1 + 2 C_4 C_5 L_1 L_4 R_1 R_5 g_m + 2 C_4 C_5 L_1 L_4 R_1 + 2 C_4 C_5 L_1 L_4 R_5) + s^3 (2 C_1 C_5 L_1 R_1 R_5 + 2 C_4 C_5 L_4 R_1 R_5 + 2 C_4 L_1 L_4 R_1 g_m + 2 C_4 L_1 L_4 + 2 C_5 L_1 L_4 R_1 g_m + C_5 L_1 L_4) + s^2 (2 C_1 L_1 R_1 + 2 C_4 L_4 R_1 + 2 C_5 L_1 R_1 + 2 C_5 L_1 L_5 R_1 g_m + 2 C_5 L_1 L_5) + s (2 L_1 R_1 g_m + 2 L_1)}$$

$$\mathbf{10.798 \quad INVALID-ORDER-798} \quad Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \quad \infty, \quad \infty, \quad \frac{L_4 s}{C_4 L_4 s^2 + 1}, \quad L_5 s + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{C_5 L_1 L_4 L_5 R_1 g_m s^4 - C_5 L_1 L_4 R_1 s^3 + L_1 L_4 R_1 g_m s^2}{2 C_1 C_4 C_5 L_1 L_4 L_5 R_1 s^6 + 2 R_1 + s^5 (2 C_4 C_5 L_1 L_4 L_5 R_1 g_m + 2 C_4 C_5 L_1 L_4 L_5) + s^4 (2 C_1 C_4 L_1 L_4 R_1 + C_1 C_5 L_1 L_4 R_1 + 2 C_1 C_5 L_1 L_5 R_1 + 2 C_4 C_5 L_1 L_4 R_1 + 2 C_4 C_5 L_4 L_5 R_1) + s^3 (2 C_4 L_1 L_4 R_1 g_m + 2 C_4 L_1 L_4 + 2 C_5 L_1 L_4 R_1 g_m + C_5 L_1 L_4 + 2 C_5 L_1 L_5 R_1 g_m + 2 C_5 L_1 L_5) + s^2 (2 C_1 L_1 R_1 + 2 C_4 L_4 R_1 + 2 C_5 L_1 R_1 + 2 C_5 L_1 L_5 R_1 g_m + 2 C_5 L_1 L_5) + s (2 L_1 R_1 g_m + 2 L_1)}$$

$$\mathbf{10.799 \quad INVALID-ORDER-799} \quad Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \quad \infty, \quad \infty, \quad \frac{L_4 s}{C_4 L_4 s^2 + 1}, \quad \frac{L_5 s}{C_5 L_5 s^2 + 1}, \quad \infty \right)$$

$$H(s) = \frac{-C_5 L_1 L_4 L_5 R_1 s^3 + L_1 L_4 L_5 R_1 g_m s^2 - L_1 L_4 R_1 s}{2 L_1 R_1 + L_4 R_1 + 2 L_5 R_1 + s^4 (2 C_1 C_4 L_1 L_4 L_5 R_1 + C_1 C_5 L_1 L_4 L_5 R_1 + 2 C_4 C_5 L_1 L_4 L_5 R_1) + s^3 (2 C_4 L_1 L_4 L_5 R_1 g_m + 2 C_4 L_1 L_4 L_5 + 2 C_5 L_1 L_4 L_5 R_1 g_m + C_5 L_1 L_4 L_5) + s^2 (C_1 L_1 L_4 R_1 + 2 C_1 L_1 L_5 R_1 + 2 C_4 L_1 L_4 R_1 + 2 C_4 L_4 L_5 R_1 + 2 C_5 L_1 L_5 R_1 + C_5 L_4 L_5 R_1) + s (2 L_1 L_4 R_1 g_m + 2 L_1 L_4 R_1 + 2 L_1 L_5 R_1 + L_4 R_1 + 2 L_5 R_1)}$$

$$\mathbf{10.800 \quad INVALID-ORDER-800} \quad Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \quad \infty, \quad \infty, \quad \frac{L_4 s}{C_4 L_4 s^2 + 1}, \quad L_5 s + R_5 + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{C_5 L_1 L_4 L_5 R_1 g_m s^4 + L_1 L_4 R_1 g_m s^2 + s^3 (C_5 L_1 L_4 R_1 R_5 g_m - C_5 L_1 L_4 R_1 R_5) + C_1 C_4 C_5 L_1 L_4 L_5 R_1 s^6 + 2 R_1 + s^5 (2 C_1 C_4 C_5 L_1 L_4 R_1 R_5 + 2 C_4 C_5 L_1 L_4 L_5 R_1 g_m + 2 C_4 C_5 L_1 L_4 L_5) + s^4 (2 C_1 C_4 L_1 L_4 R_1 + C_1 C_5 L_1 L_4 R_1 + 2 C_1 C_5 L_1 L_5 R_1 + 2 C_4 C_5 L_1 L_4 R_1 R_5 g_m + 2 C_4 C_5 L_1 L_4 R_1 + 2 C_4 C_5 L_4 L_5 R_1) + s^3 (2 C_1 C_5 L_1 R_1 R_5 + 2 C_4 C_5 L_4 R_1 R_5 + 2 C_4 L_1 L_4 R_1 g_m + 2 C_4 L_1 L_4 + 2 C_5 L_1 L_4 R_1 g_m + C_5 L_1 L_4 + 2 C_5 L_1 L_5 R_1 g_m + 2 C_5 L_1 L_5) + s^2 (2 C_1 L_1 R_1 + 2 C_4 L_4 R_1 + 2 C_5 L_1 R_1 + 2 C_5 L_1 L_5 R_1 g_m + 2 C_5 L_1 L_5) + s (2 L_1 R_1 g_m + 2 L_1 R_1 + 2 L_1 R_5 + L_4 R_1 + 2 L_5 R_1)}$$

$$\mathbf{10.801 \quad INVALID-ORDER-801} \quad Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \quad \infty, \quad \infty, \quad \frac{L_4 s}{C_4 L_4 s^2 + 1}, \quad \frac{L_5 R_5 s}{C_5 L_5 R_5 s^2 + L_5 s + R_5}, \quad \infty \right)$$

$$H(s) = \frac{-C_5 L_1 L_4 L_5 R_1 R_5 s^3 - L_1 L_4 R_1 R_5 s + s^2 (L_1 L_4 L_5 R_1 R_5 g_m - L_1 L_4 L_5 R_1)}{2 L_1 R_1 R_5 + L_4 R_1 R_5 + 2 L_5 R_1 R_5 + s^4 (2 C_1 C_4 L_1 L_4 L_5 R_1 R_5 + C_1 C_5 L_1 L_4 L_5 R_1 R_5 + 2 C_4 C_5 L_1 L_4 L_5 R_1 R_5) + s^3 (C_1 L_1 L_4 L_5 R_1 + 2 C_4 L_1 L_4 L_5 R_1 R_5 g_m + 2 C_4 L_1 L_4 L_5 R_1 + 2 C_4 L_1 L_4 L_5 R_5 + 2 C_5 L_1 L_4 L_5 R_1 R_5 g_m + C_5 L_1 L_4 L_5 R_5) + s^2 (C_1 L_1 L_4 R_1 R_5 + 2 C_1 L_1 L_5 R_1 R_5 + 2 C_4 L_1 L_4 R_1 R_5 g_m + 2 C_4 L_1 L_4 R_1 + 2 C_4 L_4 L_5 R_1 + 2 C_5 L_1 L_5 R_1 + C_5 L_4 L_5 R_1) + s (2 L_1 L_4 R_1 R_5 g_m + 2 L_1 L_4 R_1 R_5 + 2 L_1 L_5 R_1 R_5 + L_4 R_1 R_5 + 2 L_5 R_1 R_5)}$$

$$\mathbf{10.802 \quad INVALID-ORDER-802} \quad Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \quad \infty, \quad \infty, \quad \frac{L_4 s}{C_4 L_4 s^2 + 1}, \quad \frac{C_5 L_5 R_5 s^2 + L_5 s + R_5}{C_5 L_5 s^2 + 1}, \quad \infty \right)$$

$$H(s) = \frac{L_1 L_4 L_5 R_1 s^2 + s^3 (C_5 L_1 L_4 R_1 R_5 g_m - C_5 L_1 L_4 R_1 R_5) + C_1 C_4 C_5 L_1 L_4 L_5 R_1 s^6 + 2 R_1 R_5 + s^5 (2 C_1 C_4 L_1 L_4 L_5 R_1 + C_1 C_5 L_1 L_4 L_5 R_1 + 2 C_4 C_5 L_1 L_4 L_5 R_1 R_5 g_m + 2 C_4 C_5 L_1 L_4 L_5 R_1 + 2 C_4 C_5 L_1 L_4 L_5 R_5) + s^4 (2 C_1 C_4 L_1 L_4 R_1 R_5 + 2 C_1 C_5 L_1 L_5 R_1 R_5 + 2 C_4 C_5 L_4 L_5 R_1 R_5 + 2 C_4 L_1 L_4 L_5 R_1 g_m + 2 C_4 L_1 L_4 L_5 + 2 C_5 L_1 L_4 L_5 R_1 g_m + 2 C_5 L_1 L_5 R_1 g_m + 2 C_5 L_1 L_5 R_5) + s^3 (2 C_1 C_5 L_1 R_1 R_5 + 2 C_4 C_5 L_4 R_1 R_5 + 2 C_4 L_1 L_4 R_1 g_m + 2 C_4 L_1 L_4 + 2 C_5 L_1 L_4 R_1 g_m + C_5 L_1 L_4 + 2 C_5 L_1 L_5 R_1 g_m + 2 C_5 L_1 L_5 R_5) + s^2 (2 C_1 L_1 R_1 + 2 C_4 L_4 R_1 + 2 C_5 L_1 R_1 + 2 C_5 L_1 L_5 R_1 g_m + 2 C_5 L_1 L_5 R_5) + s (2 L_1 R_1 g_m + 2 L_1 R_1 + 2 L_1 R_5 + L_4 R_1 + 2 L_5 R_1)}$$

$$\mathbf{10.803 \quad INVALID-ORDER-803} \quad Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \quad \infty, \quad \infty, \quad \frac{L_4 s}{C_4 L_4 s^2 + 1}, \quad \frac{R_5 (C_5 L_5 s^2 + 1)}{C_5 L_5 s^2 + C_5 R_5 s + 1}, \quad \infty \right)$$

$$H(s) = \frac{-C_5 L_1 L_4 R_1 R_5 s^3 + 2C_1 C_4 C_5 L_1 L_4 L_5 R_1 R_5 s^6 + 2R_1 R_5 + s^5 (C_1 C_5 L_1 L_4 L_5 R_1 + 2C_4 C_5 L_1 L_4 L_5 R_1 R_5 g_m + 2C_4 C_5 L_1 L_4 L_5 R_1 + 2C_4 C_5 L_1 L_4 L_5 R_5) + s^4 (2C_1 C_4 L_1 L_4 R_1 R_5 + C_1 C_5 L_1 L_4 R_1 R_5 + 2C_1 C_5 L_1 L_5 R_1 R_5 + 2C_4 C_5 L_1 L_4 R_1 R_5 + 2C_4 C_5 L_4 L_5 R_1 R_5 + 2C_5 L_1 L_4 L_5 R_1 g_m + C_5 L_1 L_4 L_5 R_1)}{2C_1 C_4 C_5 L_1 L_4 L_5 R_1 R_5 s^6 + 2R_1 R_5 + s^5 (C_1 C_5 L_1 L_4 L_5 R_1 + 2C_4 C_5 L_1 L_4 L_5 R_1 R_5 g_m + 2C_4 C_5 L_1 L_4 L_5 R_1 + 2C_4 C_5 L_1 L_4 L_5 R_5) + s^4 (2C_1 C_4 L_1 L_4 R_1 R_5 + C_1 C_5 L_1 L_4 R_1 R_5 + 2C_1 C_5 L_1 L_5 R_1 R_5 + 2C_4 C_5 L_1 L_4 R_1 R_5 + 2C_4 C_5 L_4 L_5 R_1 R_5 + 2C_5 L_1 L_4 L_5 R_1 g_m + C_5 L_1 L_4 L_5 R_1)}$$

$$\mathbf{10.804 \quad INVALID-ORDER-804} \quad Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \quad \infty, \quad \infty, \quad L_4 s + R_4 + \frac{1}{C_4 s}, \quad R_5, \quad \infty \right)$$

$$H(s) = \frac{s^3 (C_4 L_1 L_4 R_1 R_5 g_m - C_4 L_1 L_4 R_1) + s^2 (C_4 L_1 R_1 R_4 R_5 g_m - C_4 L_1 R_1 R_4) + s (L_1 R_1 R_5 g_m - L_1 R_1)}{C_1 C_4 L_1 L_4 R_1 s^4 + R_1 + s^3 (C_1 C_4 L_1 R_1 R_4 + 2C_1 C_4 L_1 R_1 R_5 + 2C_4 L_1 L_4 R_1 g_m + C_4 L_1 L_4) + s^2 (C_1 L_1 R_1 + 2C_4 L_1 R_1 R_4 g_m + 2C_4 L_1 R_1 R_5 g_m + 2C_4 L_1 R_1 + C_4 L_1 R_4 + 2C_4 L_1 R_5 + C_4 L_4 R_1) + s (C_4 R_1 R_4 + 2C_4 R_1 R_5 + 2L_1 R_1 g_m + L_1)}$$

$$\mathbf{10.805 \quad INVALID-ORDER-805} \quad Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \quad \infty, \quad \infty, \quad L_4 s + R_4 + \frac{1}{C_4 s}, \quad \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{-C_4 C_5 L_1 L_4 R_1 s^3 + L_1 R_1 g_m + s^2 (-C_4 C_5 L_1 R_1 R_4 + C_4 L_1 L_4 R_1 g_m) + s (C_4 L_1 R_1 R_4 g_m - C_5 L_1 R_1)}{C_1 C_4 C_5 L_1 L_4 R_1 s^4 + 2C_4 R_1 + C_5 R_1 + s^3 (C_1 C_4 C_5 L_1 R_1 R_4 + 2C_4 C_5 L_1 L_4 R_1 g_m + C_4 C_5 L_1 L_4) + s^2 (2C_1 C_4 L_1 R_1 + C_1 C_5 L_1 R_1 + 2C_4 C_5 L_1 R_1 R_4 g_m + 2C_4 C_5 L_1 R_1 + C_4 C_5 L_1 R_4 + C_4 C_5 L_4 R_1) + s (C_4 C_5 R_1 R_4 + 2C_4 L_1 R_1 g_m + 2C_4 L_1 + 2C_5 L_1 R_1 g_m + C_5 L_1)}$$

$$\mathbf{10.806 \quad INVALID-ORDER-806} \quad Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \quad \infty, \quad \infty, \quad L_4 s + R_4 + \frac{1}{C_4 s}, \quad \frac{R_5}{C_5 R_5 s + 1}, \quad \infty \right)$$

$$H(s) = \frac{-C_4 C_5 L_1 L_4 R_1 R_5 s^4 + s^3 (-C_4 C_5 L_1 R_1 R_4 R_5 + C_4 L_1 L_4 R_1 R_5 g_m - C_4 L_1 L_4 R_1) + s^2 (C_4 L_1 R_1 R_4 R_5 g_m - C_4 L_1 R_1 R_4) + s (C_4 L_1 R_1 R_4 g_m - C_5 L_1 R_1)}{C_1 C_4 C_5 L_1 L_4 R_1 R_5 s^5 + R_1 + s^4 (C_1 C_4 C_5 L_1 R_1 R_4 R_5 + C_1 C_4 L_1 L_4 R_1 + 2C_4 C_5 L_1 L_4 R_1 R_5 g_m + C_4 C_5 L_1 L_4 R_5) + s^3 (C_1 C_4 L_1 R_1 R_4 + 2C_1 C_4 L_1 R_1 R_5 + C_1 C_5 L_1 R_1 R_5 + 2C_4 C_5 L_1 R_1 R_4 R_5 g_m + 2C_4 C_5 L_1 R_1 R_5 + C_4 C_5 L_1 R_4 R_5 + C_4 C_5 L_4 R_1 R_5 + 2C_4 L_1 L_4 R_1 g_m + C_4 L_1 L_4 R_1)}$$

$$\mathbf{10.807 \quad INVALID-ORDER-807} \quad Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \quad \infty, \quad \infty, \quad L_4 s + R_4 + \frac{1}{C_4 s}, \quad R_5 + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{L_1 R_1 g_m + s^3 (C_4 C_5 L_1 L_4 R_1 R_5 g_m - C_4 C_5 L_1 L_4 R_1) + s^2 (C_4 C_5 L_1 R_1 R_4 R_5 g_m - C_4 C_5 L_1 R_1 R_4 + C_4 L_1 L_4 R_1 g_m) + s (C_4 L_1 R_1 R_4 g_m + C_5 L_1 R_1 R_5 g_m - C_5 L_1 R_1)}{C_1 C_4 C_5 L_1 L_4 R_1 s^4 + 2C_4 R_1 + C_5 R_1 + s^3 (C_1 C_4 C_5 L_1 R_1 R_4 + 2C_1 C_4 C_5 L_1 R_1 R_5 + 2C_4 C_5 L_1 L_4 R_1 g_m + C_4 C_5 L_1 L_4) + s^2 (2C_1 C_4 L_1 R_1 + C_1 C_5 L_1 R_1 + 2C_4 C_5 L_1 R_1 R_4 g_m + 2C_4 C_5 L_1 R_1 R_5 g_m + 2C_4 C_5 L_1 R_1 + C_4 C_5 L_1 R_4 + 2C_4 C_5 L_1 R_5 + C_4 C_5 L_4 R_1) + s (C_4 C_5 R_1 R_4)}$$

$$\mathbf{10.808 \quad INVALID-ORDER-808} \quad Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \quad \infty, \quad \infty, \quad L_4 s + R_4 + \frac{1}{C_4 s}, \quad L_5 s + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{C_4 C_5 L_1 L_4 L_5 R_1 g_m s^4 + L_1 R_1 g_m + s^3 (-C_4 C_5 L_1 L_4 R_1 + C_4 C_5 L_1 L_5 R_1 R_4 g_m) + s^2 (-C_4 C_5 L_1 R_1 R_4 + C_4 L_1 L_4 R_1 g_m + C_5 L_1 L_5 R_1 g_m) + s (C_4 L_1 R_1 R_4 g_m - C_5 L_1 R_1)}{2C_4 R_1 + C_5 R_1 + s^4 (C_1 C_4 C_5 L_1 L_4 R_1 + 2C_1 C_4 C_5 L_1 L_5 R_1) + s^3 (C_1 C_4 C_5 L_1 R_1 R_4 + 2C_4 C_5 L_1 L_4 R_1 g_m + C_4 C_5 L_1 L_4 + 2C_4 C_5 L_1 L_5 R_1 g_m + 2C_4 C_5 L_1 L_5) + s^2 (2C_1 C_4 L_1 R_1 + C_1 C_5 L_1 R_1 + 2C_4 C_5 L_1 R_1 R_4 g_m + 2C_4 C_5 L_1 R_1 R_5 g_m + 2C_4 C_5 L_1 R_1 + C_4 C_5 L_1 R_4 + 2C_4 C_5 L_1 R_5 + C_4 C_5 L_4 R_1) + s (C_4 C_5 R_1 R_4)}$$

$$\mathbf{10.809 \quad INVALID-ORDER-809} \quad Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \quad \infty, \quad \infty, \quad L_4 s + R_4 + \frac{1}{C_4 s}, \quad \frac{L_5 s}{C_5 L_5 s^2 + 1}, \quad \infty \right)$$

$$H(s) = \frac{-C_4 C_5 L_1 L_4 L_5 R_1 s^5 - L_1 R_1 s + s^4 (-C_4 C_5 L_1 L_5 R_1 R_4 + C_4 L_1 L_4 L_5 R_1 g_m) + s^3 (-C_4 L_1 L_4 R_1 + C_4 L_1 L_5 R_1 R_4 g_m) + s^2 (C_4 L_1 R_1 R_4 g_m - C_5 L_1 R_1)}{C_1 C_4 C_5 L_1 L_4 L_5 R_1 s^6 + R_1 + s^5 (C_1 C_4 C_5 L_1 L_5 R_1 R_4 + 2C_4 C_5 L_1 L_4 L_5 R_1 g_m + C_4 C_5 L_1 L_4 L_5) + s^4 (C_1 C_4 L_1 L_4 R_1 + 2C_1 C_4 L_1 L_5 R_1 + C_1 C_5 L_1 L_5 R_1 + 2C_4 C_5 L_1 L_5 R_1 R_4 g_m + 2C_4 C_5 L_1 L_5 R_1 + C_4 C_5 L_1 L_5 R_4 + C_4 C_5 L_4 L_5 R_1) + s^3 (C_1 C_4 L_1 R_1 R_4 + C_4 C_5 L_5 R_1 R_4 + 2C_4 C_5 L_1 R_1 R_4 g_m - C_5 L_1 R_1)}$$

$$\mathbf{10.810 \quad INVALID-ORDER-810} \quad Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \quad \infty, \quad \infty, \quad L_4 s + R_4 + \frac{1}{C_4 s}, \quad L_5 s + R_5 + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{C_4 C_5 L_1 L_4 L_5 R_1 g_m s^4 + L_1 R_1 g_m + s^3 (C_4 C_5 L_1 L_4 R_1 R_5 g_m - C_4 C_5 L_1 L_4 R_1 + C_4 C_5 L_1 L_5 R_1 R_4 g_m) + s^2 (C_4 C_5 L_1 R_1 R_4 R_5 g_m - C_4 C_5 L_1 R_1 R_4 + C_4 L_1 L_4 R_1 g_m + C_5 L_1 L_5 R_1 g_m) + s (C_4 L_1 R_1 R_4 g_m - C_5 L_1 R_1)}{2C_4 R_1 + C_5 R_1 + s^4 (C_1 C_4 C_5 L_1 L_4 R_1 + 2C_1 C_4 C_5 L_1 L_5 R_1) + s^3 (C_1 C_4 C_5 L_1 R_1 R_4 + 2C_1 C_4 C_5 L_1 R_1 R_5 + 2C_4 C_5 L_1 L_4 R_1 g_m + C_4 C_5 L_1 L_4 + 2C_4 C_5 L_1 L_5 R_1 g_m + 2C_4 C_5 L_1 L_5) + s^2 (2C_1 C_4 L_1 R_1 + C_1 C_5 L_1 R_1 + 2C_4 C_5 L_1 R_1 R_4 g_m + 2C_4 C_5 L_1 R_1 R_5 g_m + 2C_4 C_5 L_1 R_1 + C_4 C_5 L_1 R_4 + 2C_4 C_5 L_1 R_5 + C_4 C_5 L_4 R_1) + s (C_4 C_5 R_1 R_4)}$$

$$\mathbf{10.811 \quad INVALID-ORDER-811} \quad Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \quad \infty, \quad \infty, \quad L_4 s + R_4 + \frac{1}{C_4 s}, \quad \frac{L_5 R_5 s}{C_5 L_5 R_5 s^2 + L_5 s + R_5}, \quad \infty \right)$$

$$H(s) = \frac{-C_4 C_5 L_1 L_4 L_5 R_1 s^5 - L_1 R_1 s + s^4 (-C_4 C_5 L_1 L_5 R_1 R_4 + C_4 L_1 L_4 L_5 R_1 g_m) + s^3 (-C_4 L_1 L_4 R_1 + C_4 L_1 L_5 R_1 R_4 g_m) + s^2 (C_4 L_1 R_1 R_4 g_m - C_5 L_1 R_1)}{C_1 C_4 C_5 L_1 L_4 L_5 R_1 s^6 + R_1 R_5 + s^5 (C_1 C_4 C_5 L_1 L_5 R_1 R_4 R_5 + C_1 C_4 L_1 L_4 L_5 R_1 + 2C_4 C_5 L_1 L_4 L_5 R_1 R_5 g_m + C_4 C_5 L_1 L_4 L_5 R_5) + s^4 (C_1 C_4 L_1 L_4 R_1 R_5 + C_1 C_4 L_1 L_5 R_1 R_4 + 2C_1 C_4 L_1 L_5 R_1 R_5 + C_1 C_5 L_1 L_5 R_1 R_5 + 2C_4 C_5 L_1 L_5 R_1 R_4 R_5 g_m + 2C_4 C_5 L_1 L_5 R_1 R_5 + C_4 C_5 L_1 L_5 R_4 + 2C_4 C_5 L_4 L_5 R_1) + s^3 (C_1 C_4 L_1 R_1 R_4 + C_4 C_5 L_5 R_1 R_4 + 2C_4 C_5 L_1 R_1 R_4 g_m - C_5 L_1 R_1)}$$

$$\mathbf{10.812 \quad INVALID-ORDER-812} \quad Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \quad \infty, \quad \infty, \quad L_4 s + R_4 + \frac{1}{C_4 s}, \quad \frac{C_5 L_5 R_5 s^2 + L_5 s + R_5}{C_5 L_5 s^2 + 1}, \quad \infty \right)$$

$$H(s) = \frac{s^5 (C_4 C_5 L_1 L_4 L_5 R_1 R_5 g_m - C_4 C_5 L_1 L_4 L_5 R_1) + s^4 (C_4 C_5 L_1 L_5 R_1 R_4 R_5 g_m - C_4 C_5 L_1 L_5 R_1 R_4 + C_4 L_1 L_4 L_5 R_1 g_m) + s^3 (C_4 C_5 L_1 R_1 R_4 R_5 g_m - C_4 C_5 L_1 R_1 R_4 + C_4 L_1 L_4 R_1 g_m + C_5 L_1 L_5 R_1 g_m) + s^2 (C_4 L_1 R_1 R_4 g_m - C_5 L_1 R_1)}{C_1 C_4 C_5 L_1 L_4 L_5 R_1 s^6 + R_1 + s^5 (C_1 C_4 C_5 L_1 L_5 R_1 R_4 + 2C_1 C_4 C_5 L_1 L_5 R_1 R_5 + 2C_4 C_5 L_1 L_4 L_5 R_1 g_m + C_4 C_5 L_1 L_4 L_5) + s^4 (C_1 C_4 L_1 L_4 R_1 + 2C_1 C_4 L_1 L_5 R_1 + C_1 C_5 L_1 L_5 R_1 + 2C_4 C_5 L_1 L_5 R_1 R_4 g_m + 2C_4 C_5 L_1 L_5 R_1 R_5 g_m + 2C_4 C_5 L_1 L_5 R_1 + C_4 C_5 L_1 L_5 R_4 + 2C_4 C_5 L_4 L_5 R_1) + s^3 (C_1 C_4 L_1 R_1 R_4 + C_4 C_5 L_5 R_1 R_4 + 2C_4 C_5 L_1 R_1 R_4 g_m - C_5 L_1 R_1)}$$

$$\textbf{10.813} \quad \textbf{INVALID-ORDER-813} \quad Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \infty, \infty, L_4 s + R_4 + \frac{1}{C_4 s}, \frac{R_5 (C_5 L_5 s^2 + 1)}{C_5 L_5 s^2 + C_5 R_5 s + 1}, \infty \right)$$

$$H(s) = \frac{s^5 (C_4 C_5 L_1 L_4 L_5 R_1 L_5 R_4 g_m + C_1 C_4 C_5 L_1 L_4 R_1 R_5 + C_1 C_4 C_5 L_1 L_5 R_1 R_4 + 2 C_1 C_4 C_5 L_1 L_5 R_1 R_5 + 2 C_4 C_5 L_1 L_4 L_5 R_1 g_m + C_4 C_5 L_1 L_4 L_5) + s^4 (C_1 C_4 C_5 L_1 R_1 R_4 R_5 + C_1 C_4 L_1 L_4 R_1 + C_1 C_5 L_1 L_5 R_1 + 2 C_4 C_5 L_1 L_4 R_1 R_5 g_m + C_4 C_5 L_1 L_4 R_5 + 2 C_4 C_5 L_1 L_5 R_1 R_4 g_m + 2$$

$$\textbf{10.814} \quad \textbf{INVALID-ORDER-814} \quad Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \infty, \infty, \frac{L_4 R_4 s}{C_4 L_4 R_4 s^2 + L_4 s + R_4}, R_5, \infty \right)$$

$$H(s) = \frac{s^2 (L_1 L_4 R_1 R_4 R_5 g_m - L_1 L_4 R_1 R_4)}{2 C_1 C_4 L_1 L_4 R_1 R_4 R_5 s^4 + 2 R_1 R_4 R_5 + s^3 (C_1 L_1 L_4 R_1 R_4 + 2 C_1 L_1 L_4 R_1 R_5 + 2 C_4 L_1 L_4 R_1 R_4 R_5 g_m + 2 C_4 L_1 L_4 R_1 R_4 + 2 C_4 L_1 L_4 R_4 R_5) + s^2 (2 C_1 L_1 R_1 R_4 R_5 + 2 C_4 L_4 R_1 R_4 R_5 + 2 L_1 L_4 R_1 R_4 g_m + 2 L_1 L_4 R_1 R_5 g_m + 2 L_1 L_4 R_1 + L_1 L_4 R_4 + 2 L_1 L_4 R_5) + s (2 L_1 R_1 R_4 R_5 g_m)}$$

$$\mathbf{10.815} \quad \text{INVALID-ORDER-815} \quad Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \infty, \infty, \frac{L_4 R_4 s}{C_4 L_4 R_4 s^2 + L_4 s + R_4}, \frac{1}{C_5 s}, \infty \right)$$

$$H(s) = \frac{-C_5 L_1 L_4 R_1 R_4 s^3 + L_1 L_4 R_1 R_4 g_m s^2}{2 R_1 R_4 + s^4 (2 C_1 C_4 L_1 L_4 R_1 R_4 + C_1 C_5 L_1 L_4 R_1 R_4 + 2 C_4 C_5 L_1 L_4 R_1 R_4) + s^3 (2 C_1 L_1 L_4 R_1 + 2 C_4 L_1 L_4 R_1 R_4 g_m + 2 C_4 L_1 L_4 R_4 + 2 C_5 L_1 L_4 R_1 R_4 g_m + 2 C_5 L_1 L_4 R_1 + C_5 L_1 L_4 R_4) + s^2 (2 C_1 L_1 R_1 R_4 + 2 C_4 L_4 R_1 R_4 + 2 C_5 L_1 R_1 R_4 + C_5 L_4 R_1 R_4 + 2 L_1 L_4 R_1 g_m + 2 L_1 L_4)}$$

$$\mathbf{10.816} \quad \text{INVALID-ORDER-816} \quad Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \infty, \infty, \frac{L_4 R_4 s}{C_4 L_4 R_4 s^2 + L_4 s + R_4}, \frac{R_5}{C_5 R_5 s + 1}, \infty \right)$$

$$H(s) = \frac{-C_5 L_1 L_4 R_1 R_4 R_5 s^3 + s^2 (L_1 L_4 R_1 R_4 R_5 g_m - L_1 L_4 R_1 R_4)}{2 R_1 R_4 R_5 + s^4 (2 C_1 C_4 L_1 L_4 R_1 R_4 R_5 + C_1 C_5 L_1 L_4 R_1 R_4 R_5 + 2 C_4 C_5 L_1 L_4 R_1 R_4 R_5) + s^3 (C_1 L_1 L_4 R_1 R_4 + 2 C_1 L_1 L_4 R_1 R_5 + 2 C_4 L_1 L_4 R_1 R_4 R_5 g_m + 2 C_4 L_1 L_4 R_1 R_4 + 2 C_4 L_1 L_4 R_4 R_5 + 2 C_5 L_1 L_4 R_1 R_4 R_5 g_m + 2 C_5 L_1 L_4 R_1 R_5 + C_5 L_1 L_4 R_4 R_5) + s^2 (2 C_1 L_1 R_1 R_4 R_5 + 2$$

$$\mathbf{10.817} \quad \text{INVALID-ORDER-817} \quad Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \infty, \infty, \frac{L_4 R_4 s}{C_4 L_4 R_4 s^2 + L_4 s + R_4}, R_5 + \frac{1}{C_5 s}, \infty \right)$$

$$H(s) = \frac{L_1 L_4 R_1 R_4 g_m s^2 + s^3 (C_1 C_4 L_1 L_4 R_1 R_4 + C_1 C_5 L_1 L_4 R_1 R_4 + 2 C_1 C_5 L_1 L_4 R_1 R_5 + 2 C_4 C_5 L_1 L_4 R_1 R_4 R_5 g_m + 2 C_4 C_5 L_1 L_4 R_1 R_4 + 2 C_4 C_5 L_1 L_4 R_4 R_5) + s^3 (2 C_1 C_5 L_1 R_1 R_4 R_5 + 2 C_1 L_1 L_4 R_1 + 2 C_4 C_5 L_4 R_1 R_4 R_5 + 2 C_4 L_1 L_4 R_1 R_4 g_m + 2 C_4 L_1 L_4 R_4)}{2 C_1 C_4 C_5 L_1 L_4 R_1 R_4 R_5 s^5 + 2 R_1 R_4 + s^4 (2 C_1 C_4 L_1 L_4 R_1 R_4 + C_1 C_5 L_1 L_4 R_1 R_4 + 2 C_1 C_5 L_1 L_4 R_1 R_5 + 2 C_4 C_5 L_1 L_4 R_1 R_4 R_5 g_m + 2 C_4 C_5 L_1 L_4 R_1 R_4 + 2 C_4 C_5 L_1 L_4 R_4 R_5) + s^3 (2 C_1 C_5 L_1 R_1 R_4 R_5 + 2 C_1 L_1 L_4 R_1 + 2 C_4 C_5 L_4 R_1 R_4 R_5 + 2 C_4 L_1 L_4 R_1 R_4 g_m + 2 C_4 L_1 L_4 R_4)}$$

$$\mathbf{10.818} \quad \text{INVALID-ORDER-818} \quad Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \infty, \infty, \frac{L_4 R_4 s}{C_4 L_4 R_4 s^2 + L_4 s + R_4}, L_5 s + \frac{1}{C_5 s}, \infty \right)$$

$$H(s) = \frac{C_5 L_1 L_4 L_5 R_1 R_4 g_m s^4}{2 C_1 C_4 C_5 L_1 L_4 L_5 R_1 R_4 s^6 + 2 R_1 R_4 + s^5 (2 C_1 C_5 L_1 L_4 L_5 R_1 + 2 C_4 C_5 L_1 L_4 L_5 R_1 R_4 g_m + 2 C_4 C_5 L_1 L_4 L_5 R_4) + s^4 (2 C_1 C_4 L_1 L_4 R_1 R_4 + C_1 C_5 L_1 L_4 R_1 R_4 + 2 C_1 C_5 L_1 L_5 R_1 R_4 + 2 C_4 C_5 L_1 L_4 R_1 R_4 + 2 C_4 C_5 L_4 L_5 R_1 R_4 + 2 C_5 L_1 L_4 L_5 R_1 g_m + 2 C_5 L_1 L_4 L_5) + s^3 (2 C_1 L_1 L_4 F$$

$$\mathbf{10.819} \quad \text{INVALID-ORDER-819} \quad Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \infty, \infty, \frac{L_4 R_4 s}{C_4 L_4 R_4 s^2 + L_4 s + R_4}, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \infty \right)$$

$$H(s) = \frac{-C_5 L_1 L_4 L_5 R_1 R_4 s^3 + L_1 L_4 L_5 R_1 R_4 g_m s^2 - L_1 L_4 R_1 R_4 s}{2L_1 R_1 R_4 + L_4 R_1 R_4 + 2L_5 R_1 R_4 + s^4 (2C_1 C_4 L_1 L_4 L_5 R_1 R_4 + C_1 C_5 L_1 L_4 L_5 R_1 R_4 + 2C_4 C_5 L_1 L_4 L_5 R_1 R_4) + s^3 (2C_1 L_1 L_4 L_5 R_1 + 2C_4 L_1 L_4 L_5 R_1 R_4 g_m + 2C_4 L_1 L_4 L_5 R_4 + 2C_5 L_1 L_4 L_5 R_1 R_4 g_m + 2C_5 L_1 L_4 L_5 R_1 + C_5 L_1 L_4 L_5 R_4) + s^2 (C_1 L_1 L_4 R_1 R_4 + 2C_1 L_1 L_5 R_1 R_4)}$$

$$\mathbf{10.820} \quad \text{INVALID-ORDER-820} \quad Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \infty, \infty, \frac{L_4 R_4 s}{C_4 L_4 R_4 s^2 + L_4 s + R_4}, L_5 s + R_5 + \frac{1}{C_5 s}, \infty \right)$$

$$H(s) = \frac{2C_1 C_4 C_5 L_1 L_4 L_5 R_1 R_4 s^6 + 2R_1 R_4 + s^5 (2C_1 C_4 C_5 L_1 L_4 R_1 R_4 R_5 + 2C_1 C_5 L_1 L_4 L_5 R_1 + 2C_4 C_5 L_1 L_4 L_5 R_1 R_4 g_m + 2C_4 C_5 L_1 L_4 L_5 R_4) + s^4 (2C_1 C_4 L_1 L_4 R_1 R_4 + C_1 C_5 L_1 L_4 R_1 R_4 + 2C_1 C_5 L_1 L_4 R_1 R_5 + 2C_1 C_5 L_1 L_5 R_1 R_4 + 2C_4 C_5 L_1 L_4 R_1 R_4 R_5 g_m + 2C_4 C_5 L_1 L_4 R_1 R_4)}{2C_1 C_4 C_5 L_1 L_4 L_5 R_1 R_4 s^6 + 2R_1 R_4 + s^5 (2C_1 C_4 C_5 L_1 L_4 R_1 R_4 R_5 + 2C_1 C_5 L_1 L_4 L_5 R_1 + 2C_4 C_5 L_1 L_4 L_5 R_1 R_4 g_m + 2C_4 C_5 L_1 L_4 L_5 R_4) + s^4 (2C_1 C_4 L_1 L_4 R_1 R_4 + C_1 C_5 L_1 L_4 R_1 R_4 + 2C_1 C_5 L_1 L_4 R_1 R_5 + 2C_1 C_5 L_1 L_5 R_1 R_4 + 2C_4 C_5 L_1 L_4 R_1 R_4 R_5 g_m + 2C_4 C_5 L_1 L_4 R_1 R_4)}$$

$$\mathbf{10.821} \quad \text{INVALID-ORDER-821} \quad Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \infty, \infty, \frac{L_4 R_4 s}{C_4 L_4 R_4 s^2 + L_4 s + R_4}, \frac{L_5 R_5 s}{C_5 L_5 R_5 s^2 + L_5 s + R_5}, \infty \right)$$

$$H(s) = \frac{2L_1 R_1 R_4 R_5 + L_4 R_1 R_4 R_5 + 2L_5 R_1 R_4 R_5 + s^4 (2C_1 C_4 L_1 L_4 L_5 R_1 R_4 R_5 + C_1 C_5 L_1 L_4 L_5 R_1 R_4 R_5 + 2C_4 C_5 L_1 L_4 L_5 R_1 R_4 R_5) + s^3 (C_1 L_1 L_4 L_5 R_1 R_4 + 2C_1 L_1 L_4 L_5 R_1 R_5 + 2C_4 L_1 L_4 L_5 R_1 R_4 R_5 g_m + 2C_4 L_1 L_4 L_5 R_1 R_4 + 2C_4 L_1 L_4 L_5 R_4 R_5 + 2C_5 L_1 L_4 L_5 R_1 R_4 R_5 g_m + 2C_5 L_1 L_4 L_5 R_4 R_5)}{2L_1 R_1 R_4 R_5 + L_4 R_1 R_4 R_5 + 2L_5 R_1 R_4 R_5 + s^4 (2C_1 C_4 L_1 L_4 L_5 R_1 R_4 R_5 + C_1 C_5 L_1 L_4 L_5 R_1 R_4 R_5 + 2C_4 C_5 L_1 L_4 L_5 R_1 R_4 R_5) + s^3 (C_1 L_1 L_4 L_5 R_1 R_4 + 2C_1 L_1 L_4 L_5 R_1 R_5 + 2C_4 L_1 L_4 L_5 R_1 R_4 R_5 g_m + 2C_4 L_1 L_4 L_5 R_1 R_4 + 2C_4 L_1 L_4 L_5 R_4 R_5 + 2C_5 L_1 L_4 L_5 R_1 R_4 R_5 g_m + 2C_5 L_1 L_4 L_5 R_4 R_5)}$$

$$\mathbf{10.822} \quad \text{INVALID-ORDER-822} \quad Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \infty, \infty, \frac{L_4 R_4 s}{C_4 L_4 R_4 s^2 + L_4 s + R_4}, \frac{C_5 L_5 R_5 s^2 + L_5 s + R_5}{C_5 L_5 s^2 + 1}, \infty \right)$$

$$H(s) = \frac{2C_1 C_4 C_5 L_1 L_4 L_5 R_1 R_4 R_5 s^6 + 2R_1 R_4 R_5 + s^5 (2C_1 C_4 L_1 L_4 L_5 R_1 R_4 + C_1 C_5 L_1 L_4 L_5 R_1 R_4 + 2C_1 C_5 L_1 L_4 L_5 R_1 R_5 + 2C_4 C_5 L_1 L_4 L_5 R_1 R_4 R_5 g_m + 2C_4 C_5 L_1 L_4 L_5 R_1 R_4 + 2C_4 C_5 L_1 L_4 L_5 R_4 R_5) + s^4 (2C_1 C_4 L_1 L_4 R_1 R_4 R_5 + 2C_1 C_5 L_1 L_5 R_1 R_4 R_5 + 2C_1 L_1 L_4 L_5 R_1 + 2C_4 L_1 L_4 L_5 R_1 R_4 + 2C_4 L_1 L_4 L_5 R_4 R_5) + s^3 (2C_1 C_4 L_1 L_4 R_1 R_4 + 2C_1 C_5 L_1 L_4 R_1 R_4 + 2C_4 C_5 L_1 L_4 R_1 R_4 + 2C_4 L_1 L_4 R_1 R_4 + 2C_4 L_1 L_4 R_4 R_5) + s^2 (2C_1 C_4 L_1 L_4 R_1 + 2C_1 C_5 L_1 L_4 R_1 + 2C_4 C_5 L_1 L_4 R_1 + 2C_4 L_1 L_4 R_1 + 2C_4 L_1 L_4 R_4 + 2C_4 L_1 L_4 R_5) + s (2C_1 C_4 L_1 L_4 R_1 + 2C_1 C_5 L_1 L_4 R_1 + 2C_4 C_5 L_1 L_4 R_1 + 2C_4 L_1 L_4 R_1 + 2C_4 L_1 L_4 R_4 + 2C_4 L_1 L_4 R_5) + 2C_1 C_4 L_1 L_4 R_1 + 2C_1 C_5 L_1 L_4 R_1 + 2C_4 C_5 L_1 L_4 R_1 + 2C_4 L_1 L_4 R_1 + 2C_4 L_1 L_4 R_4 + 2C_4 L_1 L_4 R_5}{2C_1 C_4 C_5 L_1 L_4 L_5 R_1 R_4 R_5 s^6 + 2R_1 R_4 R_5 + s^5 (2C_1 C_4 L_1 L_4 L_5 R_1 R_4 + C_1 C_5 L_1 L_4 L_5 R_1 R_4 + 2C_1 C_5 L_1 L_4 L_5 R_1 R_5 + 2C_4 C_5 L_1 L_4 L_5 R_1 R_4 R_5 g_m + 2C_4 C_5 L_1 L_4 L_5 R_1 R_4 + 2C_4 C_5 L_1 L_4 L_5 R_4 R_5) + s^4 (2C_1 C_4 L_1 L_4 R_1 R_4 R_5 + 2C_1 C_5 L_1 L_5 R_1 R_4 R_5 + 2C_1 L_1 L_4 L_5 R_1 + 2C_4 L_1 L_4 L_5 R_1 R_4 + 2C_4 L_1 L_4 L_5 R_4 R_5) + s^3 (2C_1 C_4 L_1 L_4 R_1 R_4 + 2C_1 C_5 L_1 L_4 R_1 R_4 + 2C_4 C_5 L_1 L_4 R_1 R_4 + 2C_4 L_1 L_4 R_1 R_4 + 2C_4 L_1 L_4 R_4 R_5) + s^2 (2C_1 C_4 L_1 L_4 R_1 + 2C_1 C_5 L_1 L_4 R_1 + 2C_4 C_5 L_1 L_4 R_1 + 2C_4 L_1 L_4 R_1 + 2C_4 L_1 L_4 R_4 + 2C_4 L_1 L_4 R_5) + s (2C_1 C_4 L_1 L_4 R_1 + 2C_1 C_5 L_1 L_4 R_1 + 2C_4 C_5 L_1 L_4 R_1 + 2C_4 L_1 L_4 R_1 + 2C_4 L_1 L_4 R_4 + 2C_4 L_1 L_4 R_5) + 2C_1 C_4 L_1 L_4 R_1 + 2C_1 C_5 L_1 L_4 R_1 + 2C_4 C_5 L_1 L_4 R_1 + 2C_4 L_1 L_4 R_1 + 2C_4 L_1 L_4 R_4 + 2C_4 L_1 L_4 R_5}$$

$$\mathbf{10.823 \quad INVALID-ORDER-823} \quad Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \quad \infty, \quad \infty, \quad \frac{L_4 R_4 s}{C_4 L_4 R_4 s^2 + L_4 s + R_4}, \quad \frac{R_5 (C_5 L_5 s^2 + 1)}{C_5 L_5 s^2 + C_5 R_5 s + 1}, \quad \infty \right)$$

$$H(s) = \frac{2C_1 C_4 C_5 L_1 L_4 L_5 R_1 R_4 R_5 s^6 + 2R_1 R_4 R_5 + s^5 (C_1 C_5 L_1 L_4 L_5 R_1 R_4 + 2C_1 C_5 L_1 L_4 L_5 R_1 R_5 + 2C_4 C_5 L_1 L_4 L_5 R_1 R_4 R_5 g_m + 2C_4 C_5 L_1 L_4 L_5 R_1 R_4 + 2C_4 C_5 L_1 L_4 L_5 R_4 R_5) + s^4 (2C_1 C_4 L_1 L_4 R_1 R_4 R_5 + C_1 C_5 L_1 L_4 R_1 R_4 R_5 + 2C_1 C_5 L_1 L_5 R_1 R_4 R_5 + 2C_4 C_5 L_1 L_4 R_1 R_4 R_5 +$$

$$\mathbf{10.824 \quad INVALID-ORDER-824} \quad Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \quad \infty, \quad \infty, \quad \frac{C_4 L_4 R_4 s^2 + L_4 s + R_4}{C_4 L_4 s^2 + 1}, \quad R_5, \quad \infty \right)$$

$$H(s) = \frac{s^3 (C_4 L_1 L_4 R_1 R_4 R_5 g_m - C_4 L_1 L_4 R_1 R_4) + s^2 (L_1 L_4 R_1 R_5 g_m - L_1 L_4 R_1) + s (L_1 R_1 R_4 R_5 g_m - L_1 R_1 R_4)}{R_1 R_4 + 2R_1 R_5 + s^4 (C_1 C_4 L_1 L_4 R_1 R_4 + 2C_1 C_4 L_1 L_4 R_1 R_5) + s^3 (C_1 L_1 L_4 R_1 + 2C_4 L_1 L_4 R_1 R_4 g_m + 2C_4 L_1 L_4 R_1 R_5 g_m + 2C_4 L_1 L_4 R_1 + C_4 L_1 L_4 R_4 + 2C_4 L_1 L_4 R_5) + s^2 (C_1 L_1 R_1 R_4 + 2C_1 L_1 R_1 R_5 + C_4 L_4 R_1 R_4 + 2C_4 L_4 R_1 R_5 + 2L_1 L_4 R_1 g_m + L_1 L_4) + s (2L_1 R_1 R_4 R_5 g_m - L_1 R_1 R_4)}$$

$$\mathbf{10.825 \quad INVALID-ORDER-825} \quad Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \quad \infty, \quad \infty, \quad \frac{C_4 L_4 R_4 s^2 + L_4 s + R_4}{C_4 L_4 s^2 + 1}, \quad \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{-C_4 C_5 L_1 L_4 R_1 R_4 s^4 + L_1 R_1 R_4 g_m s + s^3 (C_4 L_1 L_4 R_1 R_4 g_m - C_5 L_1 L_4 R_1) + s^2 (-C_5 L_1 R_1 R_4 + L_1 L_4 R_1 g_m)}{C_1 C_4 C_5 L_1 L_4 R_1 R_4 s^5 + 2R_1 + s^4 (2C_1 C_4 L_1 L_4 R_1 + C_1 C_5 L_1 L_4 R_1 + 2C_4 C_5 L_1 L_4 R_1 R_4 g_m + 2C_4 C_5 L_1 L_4 R_1 + C_4 C_5 L_1 L_4 R_4) + s^3 (C_1 C_5 L_1 R_1 R_4 + C_4 C_5 L_4 R_1 R_4 + 2C_4 L_1 L_4 R_1 g_m + 2C_4 L_1 L_4 + 2C_5 L_1 L_4 R_1 g_m + C_5 L_1 L_4) + s^2 (2C_1 L_1 R_1 + 2C_4 L_4 R_1 + 2C_5 L_1 R_1 R_4)}$$

$$\mathbf{10.826 \quad INVALID-ORDER-826} \quad Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \quad \infty, \quad \infty, \quad \frac{C_4 L_4 R_4 s^2 + L_4 s + R_4}{C_4 L_4 s^2 + 1}, \quad \frac{R_5}{C_5 R_5 s + 1}, \quad \infty \right)$$

$$H(s) = \frac{-C_4 C_5 L_1 L_4 R_1 R_4 R_5 s^4 + s^3 (C_4 L_1 L_4 R_1 R_4 R_5 g_m - C_4 L_1 L_4 R_1 R_4) + s^2 (C_4 L_1 L_4 R_1 R_4 R_5 g_m - C_4 L_1 L_4 R_1 R_4) + s (L_1 R_1 R_4 R_5 g_m - L_1 R_1 R_4)}{C_1 C_4 C_5 L_1 L_4 R_1 R_4 R_5 s^5 + R_1 R_4 + 2R_1 R_5 + s^4 (C_1 C_4 L_1 L_4 R_1 R_4 + 2C_1 C_4 L_1 L_4 R_1 R_5 + C_1 C_5 L_1 L_4 R_1 R_5 + 2C_4 C_5 L_1 L_4 R_1 R_4 R_5 g_m + 2C_4 C_5 L_1 L_4 R_1 R_5 + C_4 C_5 L_1 L_4 R_4 R_5) + s^3 (C_1 C_5 L_1 R_1 R_4 R_5 + C_1 L_1 L_4 R_1 + C_4 C_5 L_4 R_1 R_4 R_5 + 2C_4 L_1 L_4 R_1 R_4 g_m + 2C_4 L_1 L_4 R_1)}$$

$$\mathbf{10.827 \quad INVALID-ORDER-827} \quad Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \quad \infty, \quad \infty, \quad \frac{C_4 L_4 R_4 s^2 + L_4 s + R_4}{C_4 L_4 s^2 + 1}, \quad R_5 + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{L_1 R_1 R_4 g_m s + s^4 (C_4 C_5 L_1 L_4 R_1 R_4 R_5 g_m - C_4 C_5 L_1 L_4 R_1 R_4) + s^3 (C_4 L_1 L_4 R_1 R_4 g_m + C_5 L_1 L_4 R_1 R_5 g_m - C_4 L_1 L_4 R_1 R_4)}{2R_1 + s^5 (C_1 C_4 C_5 L_1 L_4 R_1 R_4 + 2C_1 C_4 C_5 L_1 L_4 R_1 R_5) + s^4 (2C_1 C_4 L_1 L_4 R_1 + C_1 C_5 L_1 L_4 R_1 + 2C_4 C_5 L_1 L_4 R_1 R_4 g_m + 2C_4 C_5 L_1 L_4 R_1 R_5 g_m + 2C_4 C_5 L_1 L_4 R_1 + C_4 C_5 L_1 L_4 R_4 + 2C_4 C_5 L_1 L_4 R_5) + s^3 (C_1 C_5 L_1 R_1 R_4 + 2C_1 C_5 L_1 R_1 R_5 + C_4 C_5 L_4 R_1 R_4 + 2C_4 C_5 L_4 R_1 R_5)}$$

$$\mathbf{10.828 \quad INVALID-ORDER-828} \quad Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \quad \infty, \quad \infty, \quad \frac{C_4 L_4 R_4 s^2 + L_4 s + R_4}{C_4 L_4 s^2 + 1}, \quad L_5 s + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{C_4 C_5 L_1 L_4 L_5 R_1 R_4 g_m s^5 + L_1 R_1 R_4 g_m s + s^4 (-C_4 C_5 L_1 L_4 R_1 R_4 + C_5 L_1 L_4 L_5 R_1 g_m) + s^3 (C_4 L_1 L_4 R_1 R_4 g_m - C_4 L_1 L_4 R_1 R_4)}{2C_1 C_4 C_5 L_1 L_4 L_5 R_1 R_4 s^6 + 2R_1 + s^5 (C_1 C_4 C_5 L_1 L_4 R_1 R_4 + 2C_4 C_5 L_1 L_4 L_5 R_1 g_m + 2C_4 C_5 L_1 L_4 L_5) + s^4 (2C_1 C_4 L_1 L_4 R_1 + C_1 C_5 L_1 L_4 R_1 + 2C_1 C_5 L_1 L_5 R_1 + 2C_4 C_5 L_1 L_4 R_1 R_4 g_m + 2C_4 C_5 L_1 L_4 R_1 + C_4 C_5 L_1 L_4 R_4 + 2C_4 C_5 L_4 L_5 R_1) + s^3 (C_1 C_5 L_1 R_1 R_4 + C_4 C_5 L_4 R_1 R_4)}$$

$$\mathbf{10.829 \quad INVALID-ORDER-829} \quad Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \quad \infty, \quad \infty, \quad \frac{C_4 L_4 R_4 s^2 + L_4 s + R_4}{C_4 L_4 s^2 + 1}, \quad \frac{L_5 s}{C_5 L_5 s^2 + 1}, \quad \infty \right)$$

$$H(s) = \frac{-C_4 C_5 L_1 L_4 L_5 R_1 R_4 s^5 - L_1 R_1 R_4 s + s^4 (C_4 L_1 L_4 L_5 R_1 R_4 g_m - C_4 L_1 L_4 L_5 R_1 R_4)}{C_1 C_4 C_5 L_1 L_4 L_5 R_1 R_4 s^6 + R_1 R_4 + s^5 (2C_1 C_4 L_1 L_4 L_5 R_1 + C_1 C_5 L_1 L_4 L_5 R_1 + 2C_4 C_5 L_1 L_4 L_5 R_1 R_4 g_m + 2C_4 C_5 L_1 L_4 L_5 R_1 + C_4 C_5 L_1 L_4 L_5 R_4) + s^4 (C_1 C_4 L_1 L_4 R_1 R_4 + C_1 C_5 L_1 L_5 R_1 R_4 + C_4 C_5 L_4 L_5 R_1 R_4 + 2C_4 L_1 L_4 L_5 R_1 g_m + 2C_4 L_1 L_4 L_5 + 2C_5 L_1 L_4 L_5 R_1 g_m + C_5 L_1 L_4 L_5 R_1)}$$

$$\mathbf{10.830 \quad INVALID-ORDER-830} \quad Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \quad \infty, \quad \infty, \quad \frac{C_4 L_4 R_4 s^2 + L_4 s + R_4}{C_4 L_4 s^2 + 1}, \quad L_5 s + R_5 + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{C_4 C_5 L_1 L_4 L_5 R_1 R_4 g_m s^5 + L_1 R_1 R_4 g_m s + s^4 (C_4 C_5 L_1 L_4 R_1 R_4 R_5 g_m - C_4 C_5 L_1 L_4 L_5 R_1 R_4) + s^3 (C_4 L_1 L_4 R_1 R_4 g_m - C_4 L_1 L_4 R_1 R_4)}{2C_1 C_4 C_5 L_1 L_4 L_5 R_1 R_4 s^6 + 2R_1 + s^5 (C_1 C_4 C_5 L_1 L_4 R_1 R_4 + 2C_1 C_4 C_5 L_1 L_4 R_1 R_5 + 2C_4 C_5 L_1 L_4 L_5 R_1 g_m + 2C_4 C_5 L_1 L_4 L_5) + s^4 (2C_1 C_4 L_1 L_4 R_1 + C_1 C_5 L_1 L_4 R_1 + 2C_1 C_5 L_1 L_5 R_1 + 2C_4 C_5 L_1 L_4 R_1 R_4 g_m + 2C_4 C_5 L_1 L_4 R_1 + C_4 C_5 L_1 L_4 R_4 + 2C_4 C_5 L_4 L_5 R_1) + s^3 (C_1 C_5 L_1 R_1 R_4 + C_4 C_5 L_4 R_1 R_4)}$$

$$\mathbf{10.831 \quad INVALID-ORDER-831} \quad Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \quad \infty, \quad \infty, \quad \frac{C_4 L_4 R_4 s^2 + L_4 s + R_4}{C_4 L_4 s^2 + 1}, \quad \frac{L_5 R_5 s}{C_5 L_5 R_5 s^2 + L_5 s + R_5}, \quad \infty \right)$$

$$H(s) = \frac{C_4 C_5 L_1 L_4 L_5 R_1 R_4 R_5 s^6 + R_1 R_4 R_5 + s^5 (C_1 C_4 L_1 L_4 L_5 R_1 R_4 + 2C_1 C_4 L_1 L_4 L_5 R_1 R_5 + C_1 C_5 L_1 L_4 L_5 R_1 R_5 + 2C_4 C_5 L_1 L_4 L_5 R_1 R_4 R_5 g_m + 2C_4 C_5 L_1 L_4 L_5 R_1 R_5 + C_4 C_5 L_1 L_4 L_5 R_4 R_5) + s^4 (C_1 C_4 L_1 L_4 R_1 R_4 R_5 + C_1 C_5 L_1 L_5 R_1 R_4 R_5 + C_1 L_1 L_4 L_5 R_1 + C_4 C_5 L_4 L_5 R_1 R_4 R_5) + s^3 (C_1 C_5 L_1 R_1 R_4 R_5 + C_4 C_5 L_4 R_1 R_4 R_5) + s^2 (C_1 C_5 L_1 R_1 R_5 + C_4 C_5 L_4 R_1 R_5) + s (L_1 R_1 R_4 R_5 g_m - L_1 R_1 R_4)}$$

$$\mathbf{10.832 \quad INVALID-ORDER-832} \quad Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \quad \infty, \quad \infty, \quad \frac{C_4 L_4 R_4 s^2 + L_4 s + R_4}{C_4 L_4 s^2 + 1}, \quad \frac{C_5 L_5 R_5 s^2 + L_5 s + R_5}{C_5 L_5 s^2 + 1}, \quad \infty \right)$$

$$H(s) = \frac{C_4 C_5 L_1 L_4 L_5 R_1 R_4 R_5 s^6 + R_1 R_4 + 2R_1 R_5 + s^6 (C_1 C_4 C_5 L_1 L_4 L_5 R_1 R_4 + 2C_1 C_4 C_5 L_1 L_4 L_5 R_1 R_5) + s^5 (2C_1 C_4 L_1 L_4 L_5 R_1 + C_1 C_5 L_1 L_4 L_5 R_1 + 2C_4 C_5 L_1 L_4 L_5 R_1 R_4 g_m + 2C_4 C_5 L_1 L_4 L_5 R_1 R_5 g_m + 2C_4 C_5 L_1 L_4 L_5 R_1 + C_4 C_5 L_1 L_4 L_5 R_4 + 2C_4 C_5 L_1 L_4 L_5 R_5) + s^4 (C_1 C_4 L_1 L_4 R_1 R_4 + 2C_1 C_4 L_1 L_4 R_1 R_5) + s^3 (C_1 C_5 L_1 R_1 R_4 R_5 + C_4 C_5 L_4 R_1 R_4 R_5) + s^2 (C_1 C_5 L_1 R_1 R_5 + C_4 C_5 L_4 R_1 R_5) + s (L_1 R_1 R_4 R_5 g_m - L_1 R_1 R_4)}$$

$$\mathbf{10.833 \quad INVALID-ORDER-833} \quad Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \quad \infty, \quad \infty, \quad \frac{C_4 L_4 R_4 s^2 + L_4 s + R_4}{C_4 L_4 s^2 + 1}, \quad \frac{R_5 (C_5 L_5 s^2 + 1)}{C_5 L_5 s^2 + C_5 R_5 s + 1}, \quad \infty \right)$$

$$H(s) = \frac{R_1 R_4 + 2R_1 R_5 + s^6 (C_1 C_4 C_5 L_1 L_4 L_5 R_1 R_4 + 2C_1 C_4 C_5 L_1 L_4 L_5 R_1 R_5) + s^5 (C_1 C_4 C_5 L_1 L_4 R_1 R_4 R_5 + C_1 C_5 L_1 L_4 L_5 R_1 + 2C_4 C_5 L_1 L_4 L_5 R_1 R_4 g_m + 2C_4 C_5 L_1 L_4 L_5 R_1 R_5 g_m + 2C_4 C_5 L_1 L_4 L_5 R_1 + C_4 C_5 L_1 L_4 L_5 R_4 + 2C_4 C_5 L_1 L_4 L_5 R_5) + s^4 (C_1 C_4 L_1 L_4 R_1 R_4 + 2C_1 C_4 L_1 L_4 R_1 R_5)}{R_1 R_4 + 2R_1 R_5 + s^6 (C_1 C_4 C_5 L_1 L_4 L_5 R_1 R_4 + 2C_1 C_4 C_5 L_1 L_4 L_5 R_1 R_5) + s^5 (C_1 C_4 C_5 L_1 L_4 R_1 R_4 R_5 + C_1 C_5 L_1 L_4 L_5 R_1 + 2C_4 C_5 L_1 L_4 L_5 R_1 R_4 g_m + 2C_4 C_5 L_1 L_4 L_5 R_1 R_5 g_m + 2C_4 C_5 L_1 L_4 L_5 R_1 + C_4 C_5 L_1 L_4 L_5 R_4 + 2C_4 C_5 L_1 L_4 L_5 R_5) + s^4 (C_1 C_4 L_1 L_4 R_1 R_4 + 2C_1 C_4 L_1 L_4 R_1 R_5)}$$

$$\mathbf{10.834 \quad INVALID-ORDER-834} \quad Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \quad \infty, \quad \infty, \quad \frac{R_4 (C_4 L_4 s^2 + 1)}{C_4 L_4 s^2 + C_4 R_4 s + 1}, \quad R_5, \quad \infty \right)$$

$$H(s) = \frac{s^3 (C_4 L_1 L_4 R_1 R_4 R_5 g_m - C_4 L_1 L_4 R_1 R_4) + s (L_1 R_1 R_4 R_5 g_m - L_1 R_1 R_4)}{R_1 R_4 + 2R_1 R_5 + s^4 (C_1 C_4 L_1 L_4 R_1 R_4 + 2C_1 C_4 L_1 L_4 R_1 R_5) + s^3 (2C_1 C_4 L_1 R_1 R_4 R_5 + 2C_4 L_1 L_4 R_1 R_4 g_m + 2C_4 L_1 L_4 R_1 R_5 g_m + 2C_4 L_1 L_4 R_1 + C_4 L_1 L_4 R_4 + 2C_4 L_1 L_4 R_5) + s^2 (C_1 L_1 R_1 R_4 + 2C_1 L_1 R_1 R_5 + 2C_4 L_1 R_1 R_4 R_5 g_m + 2C_4 L_1 R_1 R_4 + 2C_4 L_1 R_4 R_5 + C_4 L_4 R_1 R_4 g_m)}$$

$$\mathbf{10.835 \quad INVALID-ORDER-835} \quad Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \quad \infty, \quad \infty, \quad \frac{R_4 (C_4 L_4 s^2 + 1)}{C_4 L_4 s^2 + C_4 R_4 s + 1}, \quad \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{-C_4 C_5 L_1 L_4 R_1 R_4 s^4 + C_4 L_1 L_4 R_1 R_4 g_m s^3 - C_5 L_1 R_1 R_4 s^2 + L_1 R_1 R_4 g_m s}{C_1 C_4 C_5 L_1 L_4 R_1 R_4 s^5 + 2R_1 + s^4 (2C_1 C_4 L_1 L_4 R_1 + 2C_4 C_5 L_1 L_4 R_1 R_4 g_m + 2C_4 C_5 L_1 L_4 R_1 + C_4 C_5 L_1 L_4 R_4) + s^3 (2C_1 C_4 L_1 R_1 R_4 + C_1 C_5 L_1 R_1 R_4 + 2C_4 C_5 L_1 R_1 R_4 + C_4 C_5 L_4 R_1 R_4 + 2C_4 L_1 L_4 R_1 g_m + 2C_4 L_1 L_4) + s^2 (2C_1 L_1 R_1 + 2C_4 L_1 R_1 R_4 g_m + 2C_4 L_1 R_4 + 2C_4 L_1 R_4 R_5)}$$

$$\mathbf{10.836 \quad INVALID-ORDER-836} \quad Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \quad \infty, \quad \infty, \quad \frac{R_4 (C_4 L_4 s^2 + 1)}{C_4 L_4 s^2 + C_4 R_4 s + 1}, \quad \frac{R_5}{C_5 R_5 s + 1}, \quad \infty \right)$$

$$H(s) = \frac{-C_4 C_5 L_1 L_4 R_1 R_4 R_5 s^4 - C_5 L_1 R_1 R_4 g_m s^3 + L_1 R_1 R_4 g_m s}{C_1 C_4 C_5 L_1 L_4 R_1 R_4 R_5 s^5 + R_1 R_4 + 2R_1 R_5 + s^4 (C_1 C_4 L_1 L_4 R_1 R_4 + 2C_1 C_4 L_1 L_4 R_1 R_5 + 2C_4 C_5 L_1 L_4 R_1 R_4 R_5 g_m + 2C_4 C_5 L_1 L_4 R_1 R_5 + C_4 C_5 L_1 L_4 R_4 R_5) + s^3 (2C_1 C_4 L_1 R_1 R_4 R_5 + C_1 C_5 L_1 R_1 R_4 R_5 + 2C_4 C_5 L_1 R_1 R_4 R_5 + C_4 C_5 L_4 R_1 R_4 R_5 + 2C_4 L_1 L_4 R_1 R_4 g_m + 2C_4 L_1 L_4 R_1 R_5 g_m)}$$

$$\mathbf{10.837 \quad INVALID-ORDER-837} \quad Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \quad \infty, \quad \infty, \quad \frac{R_4 (C_4 L_4 s^2 + 1)}{C_4 L_4 s^2 + C_4 R_4 s + 1}, \quad R_5 + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{C_4 L_1 L_4 R_1 R_4 g_m s^3 + L_1 R_1 R_4 g_m s}{2R_1 + s^5 (C_1 C_4 C_5 L_1 L_4 R_1 R_4 + 2C_1 C_4 C_5 L_1 L_4 R_1 R_5) + s^4 (2C_1 C_4 C_5 L_1 R_1 R_4 R_5 + 2C_1 C_4 L_1 L_4 R_1 + 2C_4 C_5 L_1 L_4 R_1 R_4 g_m + 2C_4 C_5 L_1 L_4 R_1 R_5 g_m + 2C_4 C_5 L_1 L_4 R_1 + C_4 C_5 L_1 L_4 R_4 + 2C_4 C_5 L_1 L_4 R_5) + s^3 (2C_1 C_4 L_1 R_1 R_4 + C_1 C_5 L_1 R_1 R_4 + 2C_1 C_5 L_1 R_1 R_5 + 2C_4 C_5 L_1 R_1 R_4 R_5)}$$

$$\mathbf{10.838 \quad INVALID-ORDER-838} \quad Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \quad \infty, \quad \infty, \quad \frac{R_4 (C_4 L_4 s^2 + 1)}{C_4 L_4 s^2 + C_4 R_4 s + 1}, \quad L_5 s + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{C_4 C_5 L_1 L_4 L_5 R_1 R_4 g_m s^5 - C_4 C_5 L_1 L_4 L_5 R_1 R_4}{2C_1 C_4 C_5 L_1 L_4 L_5 R_1 s^6 + 2R_1 + s^5 (C_1 C_4 C_5 L_1 L_4 R_1 R_4 + 2C_1 C_4 C_5 L_1 L_5 R_1 R_4 + 2C_4 C_5 L_1 L_4 L_5 R_1 g_m + 2C_4 C_5 L_1 L_4 L_5) + s^4 (2C_1 C_4 L_1 L_4 R_1 + 2C_1 C_5 L_1 L_5 R_1 + 2C_4 C_5 L_1 L_4 R_1 R_4 g_m + 2C_4 C_5 L_1 L_4 R_1 + C_4 C_5 L_1 L_4 R_4 + 2C_4 C_5 L_1 L_5 R_1 R_4 g_m + 2C_4 C_5 L_1 L_5 R_4 + 2C_4 C_5 L_1 L_4 L_5 R_1 R_4)}$$

$$\mathbf{10.839 \quad INVALID-ORDER-839} \quad Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \quad \infty, \quad \infty, \quad \frac{R_4 (C_4 L_4 s^2 + 1)}{C_4 L_4 s^2 + C_4 R_4 s + 1}, \quad \frac{L_5 s}{C_5 L_5 s^2 + 1}, \quad \infty \right)$$

$$H(s) = \frac{-C_4 C_5 L_1 L_4 L_5 R_1 R_4 s^5 + C_4 L_1 L_4 L_5 R_1 R_4 g_m s^4}{C_1 C_4 C_5 L_1 L_4 L_5 R_1 R_4 s^6 + R_1 R_4 + s^5 (2C_1 C_4 L_1 L_4 L_5 R_1 + 2C_4 C_5 L_1 L_4 L_5 R_1 R_4 g_m + 2C_4 C_5 L_1 L_4 L_5 R_1 + C_4 C_5 L_1 L_4 L_5 R_4) + s^4 (C_1 C_4 L_1 L_4 R_1 R_4 + 2C_1 C_4 L_1 L_5 R_1 R_4 + C_1 C_5 L_1 L_5 R_1 R_4 + 2C_4 C_5 L_1 L_5 R_1 R_4 + C_4 C_5 L_4 L_5 R_1 R_4 + 2C_4 L_1 L_4 L_5 R_1 g_m + 2C_4 L_1 L_4 L_5) + s^3 (2C_1 L_1 R_1 + 2C_4 L_1 R_1 R_4 g_m + 2C_4 L_1 R_4 R_5)}$$

$$\mathbf{10.840 \quad INVALID-ORDER-840} \quad Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \quad \infty, \quad \infty, \quad \frac{R_4 (C_4 L_4 s^2 + 1)}{C_4 L_4 s^2 + C_4 R_4 s + 1}, \quad L_5 s + R_5 + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{C_4 L_1 L_4 L_5 R_1 R_4 g_m s^4 + L_1 R_1 R_4 g_m s^3 + L_1 R_1 R_4 g_m s}{2C_1 C_4 C_5 L_1 L_4 L_5 R_1 s^6 + 2R_1 + s^5 (C_1 C_4 C_5 L_1 L_4 R_1 R_4 + 2C_1 C_4 C_5 L_1 L_4 R_1 R_5 + 2C_1 C_4 C_5 L_1 L_5 R_1 R_4 + 2C_4 C_5 L_1 L_4 L_5 R_1 g_m + 2C_4 C_5 L_1 L_4 L_5) + s^4 (2C_1 C_4 C_5 L_1 R_1 R_4 R_5 + 2C_1 C_4 L_1 L_4 R_1 + 2C_1 C_5 L_1 L_5 R_1 + 2C_4 C_5 L_1 L_4 R_1 R_4 g_m + 2C_4 C_5 L_1 L_4 R_1 R_5 g_m + 2C_4 C_5 L_1 L_4 R_1 R_4 R_5)}$$

$$\mathbf{10.841 \quad INVALID-ORDER-841} \quad Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \quad \infty, \quad \infty, \quad \frac{R_4 (C_4 L_4 s^2 + 1)}{C_4 L_4 s^2 + C_4 R_4 s + 1}, \quad \frac{L_5 R_5 s}{C_5 L_5 R_5 s^2 + L_5 s + R_5}, \quad \infty \right)$$

$$H(s) = \frac{C_4 L_1 L_4 L_5 R_1 R_4 g_m s^4 + L_1 R_1 R_4 g_m s^3 + L_1 R_1 R_4 g_m s}{C_1 C_4 C_5 L_1 L_4 L_5 R_1 R_4 R_5 s^6 + R_1 R_4 R_5 + s^5 (C_1 C_4 L_1 L_4 L_5 R_1 R_4 + 2C_1 C_4 L_1 L_4 L_5 R_1 R_5 + 2C_4 C_5 L_1 L_4 L_5 R_1 R_4 R_5 g_m + 2C_4 C_5 L_1 L_4 L_5 R_1 R_5 + C_4 C_5 L_1 L_4 L_5 R_4 R_5) + s^4 (C_1 C_4 L_1 L_4 R_1 R_4 R_5 + 2C_1 C_4 L_1 L_5 R_1 R_4 R_5 + C_1 C_5 L_1 L_5 R_1 R_4 R_5 + 2C_4 C_5 L_1 L_5 R_1 R_4 R_5 + C_4 C_5 L_1 L_5 R_1 R_4 R_5 + C_4 C_5 L_1 L_5 R_1 R_4 R_5)}$$

10.842 INVALID-ORDER-842 $Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \infty, \infty, \frac{R_4 (C_4 L_4 s^2 + 1)}{C_4 L_4 s^2 + C_4 R_4 s + 1}, \frac{C_5 L_5 R_5 s^2 + L_5 s + R_5}{C_5 L_5 s^2 + 1}, \infty \right)$

$$H(s) = \frac{1}{R_1 R_4 + 2R_1 R_5 + s^6 (C_1 C_4 C_5 L_1 L_4 L_5 R_1 R_4 + 2C_1 C_4 C_5 L_1 L_4 L_5 R_1 R_5) + s^5 (2C_1 C_4 C_5 L_1 L_5 R_1 R_4 R_5 + 2C_1 C_4 C_5 L_1 L_4 L_5 R_1 + 2C_4 C_5 L_1 L_4 L_5 R_1 R_4 g_m + 2C_4 C_5 L_1 L_4 L_5 R_1 R_5 g_m + 2C_4 C_5 L_1 L_4 L_5 R_1 + C_4 C_5 L_1 L_4 L_5 R_4 + 2C_4 C_5 L_1 L_4 L_5 R_5) + s^4 (C_1 C_4 L_1 L_4 R_1 R_4 + 2C_1 C_4 L_1 L_4 R_1 R_5) + s^3 (C_1 C_4 L_1 L_4 R_1 + C_1 C_4 L_1 L_4 R_5) + s^2 (C_1 C_4 L_1 L_4 + C_1 C_4 L_1 L_5) + s (C_1 C_4 L_1 + C_1 C_4 L_5) + C_1 C_4}.$$

10.843 INVALID-ORDER-843 $Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \infty, \infty, \frac{R_4 (C_4 L_4 s^2 + 1)}{C_4 L_4 s^2 + C_4 R_4 s + 1}, \frac{R_5 (C_5 L_5 s^2 + 1)}{C_5 L_5 s^2 + C_5 R_5 s + 1}, \infty \right)$

$$H(s) = \frac{1}{R_1 R_4 + 2R_1 R_5 + s^6 (C_1 C_4 C_5 L_1 L_4 L_5 R_1 R_4 + 2C_1 C_4 C_5 L_1 L_4 L_5 R_1 R_5) + s^5 (C_1 C_4 C_5 L_1 L_4 R_1 R_4 R_5 + 2C_1 C_4 C_5 L_1 L_5 R_1 R_4 R_5 + 2C_4 C_5 L_1 L_4 L_5 R_1 R_4 g_m + 2C_4 C_5 L_1 L_4 L_5 R_1 R_5 g_m + 2C_4 C_5 L_1 L_4 L_5 R_1 + C_4 C_5 L_1 L_4 L_5 R_4 + 2C_4 C_5 L_1 L_4 L_5 R_5) + s^4 (C_1 C_4 L_1 L_4 R_1 R_4 +$$

$$\textbf{10.844} \quad \textbf{INVALID-ORDER-844} \quad Z(s) = \left(\frac{C_1 L_1 R_1 s^2 + L_1 s + R_1}{C_1 L_1 s^2 + 1}, \infty, \infty, R_4, \frac{1}{C_5 s}, \infty \right)$$

$$H(s) = \frac{-C_1 C_5 L_1 R_1 R_4 s^3 + R_1 R_4 g_m + s^2 (C_1 L_1 R_1 R_4 g_m - C_5 L_1 R_4) + s (-C_5 R_1 R_4 + L_1 R_4 g_m)}{2 R_1 g_m + s^3 (2 C_1 C_5 L_1 R_1 R_4 g_m + 2 C_1 C_5 L_1 R_1 + C_1 C_5 L_1 R_4) + s^2 (2 C_1 L_1 R_1 g_m + 2 C_1 L_1 + 2 C_5 L_1 R_4 g_m + 2 C_5 L_1) + s (2 C_5 R_1 R_4 g_m + 2 C_5 R_1 + C_5 R_4 + 2 L_1 g_m) + 2}$$

10.845 INVALID-ORDER-845 $Z(s) = \left(\frac{C_1 L_1 R_1 s^2 + L_1 s + R_1}{C_1 L_1 s^2 + 1}, \infty, \infty, R_4, \frac{R_5}{C_5 R_5 s + 1}, \infty \right)$

$H(s) = \frac{-C_1 C_5 L_1 R_1 R_4 R_5 s^3 + R_1 R_4 R_5 g_m - R_1 R_4 + s^2 (C_1 L_1 R_1 R_4 R_5 g_m - C_1 L_1 R_1 R_4 - C_5 L_1 R_4 R_5) + s (-C_5 R_1 R_4 R_5 + L_1 R_4 R_5 g_m - L_1 R_4)}{2 R_1 R_4 g_m + 2 R_1 R_5 g_m + 2 R_1 + R_4 + 2 R_5 + s^3 (2 C_1 C_5 L_1 R_1 R_4 R_5 g_m + 2 C_1 C_5 L_1 R_1 R_5 + C_1 C_5 L_1 R_4 R_5) + s^2 (2 C_1 L_1 R_1 R_4 g_m + 2 C_1 L_1 R_1 R_5 g_m + 2 C_1 L_1 R_1 + C_1 L_1 R_4 + 2 C_1 L_1 R_5 + 2 C_5 L_1 R_4 R_5 g_m + 2 C_5 L_1 R_5) + s (2 C_5 R_1 R_4 R_5 g_m + 2 C_5 R_1 R_5 + C_5 R_4 R_5 + 2 L_1 R_4)}$

10.846 INVALID-ORDER-846 $Z(s) = \left(\frac{C_1 L_1 R_1 s^2 + L_1 s + R_1}{C_1 L_1 s^2 + 1}, \infty, \infty, R_4, R_5 + \frac{1}{C_5 s}, \infty \right)$

$$H(s) = \frac{R_1 R_4 g_m + s^3 (C_1 C_5 L_1 R_1 R_4 R_5 g_m - C_1 C_5 L_1 R_1 R_4) + s^2 (C_1 L_1 R_1 R_4 g_m + C_5 L_1 R_4 R_5 g_m - C_5 L_1 R_4) + s (C_5 R_1 R_4 R_5 g_m - C_5 R_1 R_4 + L_1 R_4 g_m)}{2 R_1 g_m + s^3 (2 C_1 C_5 L_1 R_1 R_4 g_m + 2 C_1 C_5 L_1 R_1 R_5 g_m + 2 C_1 C_5 L_1 R_1 + C_1 C_5 L_1 R_4 + 2 C_1 C_5 L_1 R_5) + s^2 (2 C_1 L_1 R_1 g_m + 2 C_1 L_1 + 2 C_5 L_1 R_4 g_m + 2 C_5 L_1 R_5 g_m + 2 C_5 L_1) + s (2 C_5 R_1 R_4 g_m + 2 C_5 R_1 R_5 g_m + 2 C_5 R_1 + C_5 R_4 + 2 C_5 R_5 + 2 L_1 g_m) + 2}$$

10.847 INVALID-ORDER-847 $Z(s) = \left(\frac{C_1 L_1 R_1 s^2 + L_1 s + R_1}{C_1 L_1 s^2 + 1}, \infty, \infty, R_4, L_5 s + \frac{1}{C_5 s}, \infty \right)$

$$H(s) = \frac{C_1 C_5 L_1 L_5 R_1 R_4 g_m s^4 + R_1 R_4 g_m + s^3 (-C_1 C_5 L_1 R_1 R_4 + C_5 L_1 L_5 R_4 g_m) + s^2 (C_1 L_1 R_1 R_4 g_m - C_5 L_1 R_4 + C_5 L_5 R_1 R_4 g_m) + s (-C_5 R_1 R_4 + L_1 R_4 g_m)}{2 R_1 g_m + s^4 (2 C_1 C_5 L_1 L_5 R_1 g_m + 2 C_1 C_5 L_1 L_5) + s^3 (2 C_1 C_5 L_1 R_1 R_4 g_m + 2 C_1 C_5 L_1 R_1 + C_1 C_5 L_1 R_4 + 2 C_5 L_1 L_5 g_m) + s^2 (2 C_1 L_1 R_1 g_m + 2 C_1 L_1 + 2 C_5 L_1 R_4 g_m + 2 C_5 L_1 + 2 C_5 L_5 R_1 g_m + 2 C_5 L_5) + s (2 C_5 R_1 R_4 g_m + 2 C_5 R_1 + C_5 R_4 + 2 L_1 g_m) + 2}$$

$$\mathbf{10.848} \quad \text{INVALID-ORDER-848} \quad Z(s) = \left(\frac{C_1 L_1 R_1 s^2 + L_1 s + R_1}{C_1 L_1 s^2 + 1}, \infty, \infty, R_4, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \infty \right)$$

$$H(s) = \frac{-C_1 C_5 L_1 L_5 R_1 R_4 s^4 - R_1 R_4 + s^3 (C_1 L_1 L_5 R_1 R_4 g_m - C_5 L_1 L_5 R_4) + s^2 (-C_1 L_1 R_1 R_4 - C_5 L_5 R_1 R_4 + L_1 L_5 R_4 g_m) + s (-L_1 R_4 + L_5 R_1 R_4 g_m)}{2 R_1 R_4 g_m + 2 R_1 + R_4 + s^4 (2 C_1 C_5 L_1 L_5 R_1 R_4 g_m + 2 C_1 C_5 L_1 L_5 R_1 + C_1 C_5 L_1 L_5 R_4) + s^3 (2 C_1 L_1 L_5 R_1 g_m + 2 C_1 L_1 L_5 + 2 C_5 L_1 L_5 R_4 g_m + 2 C_5 L_1 L_5) + s^2 (2 C_1 L_1 R_1 R_4 g_m + 2 C_1 L_1 R_1 + C_1 L_1 R_4 + 2 C_5 L_5 R_1 R_4 g_m + 2 C_5 L_5 R_1 + C_5 L_5 R_4 + 2 L_1 L_5 g_m) + s (2 L_1 R_4 g_m)}$$

10.849 INVALID-ORDER-849 $Z(s) = \left(\frac{C_1 L_1 R_1 s^2 + L_1 s + R_1}{C_1 L_1 s^2 + 1}, \infty, \infty, R_4, L_5 s + R_5 + \frac{1}{C_5 s}, \infty \right)$

$$H(s) = \frac{C_1 C_5 L_1 L_5 R_1 R_4 g_m s^4 + R_1 R_4 g_m + s^3 (C_1 C_5 L_1 R_1 R_4 R_5 g_m - C_1 C_5 L_1 R_1 R_4 + C_5 L_1 L_5 R_4 g_m) + s^2 (C_1 L_1 R_1 R_4 g_m + C_5 L_1 R_4 R_5 g_m - C_5 L_1 R_4 + C_5 L_5 R_1 R_4 g_m) + s (C_5 R_1 R_4 R_5 g_m - C_5 R_1 R_4 + L_1 R_4 g_m)}{2 R_1 g_m + s^4 (2 C_1 C_5 L_1 L_5 R_1 g_m + 2 C_1 C_5 L_1 L_5) + s^3 (2 C_1 C_5 L_1 R_1 R_4 g_m + 2 C_1 C_5 L_1 R_1 R_5 g_m + 2 C_1 C_5 L_1 R_1 + C_1 C_5 L_1 R_4 + 2 C_1 C_5 L_1 R_5 + 2 C_5 L_1 L_5 g_m) + s^2 (2 C_1 L_1 R_1 g_m + 2 C_1 L_1 + 2 C_5 L_1 R_4 g_m + 2 C_5 L_1 R_5 g_m + 2 C_5 L_1 + 2 C_5 L_5 R_1 g_m + 2 C_5 L_5) + s (2 C_5 R_1 R_4 g_m - C_5 R_1 R_4 + L_1 R_4 g_m)}$$

$$\mathbf{10.850} \quad \text{INVALID-ORDER-850} \quad Z(s) = \left(\frac{C_1 L_1 R_1 s^2 + L_1 s + R_1}{C_1 L_1 s^2 + 1}, \infty, \infty, R_4, \frac{L_5 R_5 s}{C_5 L_5 R_5 s^2 + L_5 s + R_5}, \infty \right)$$

$$H(s) = \frac{-C_1 C_5 L_1 L_5 R_1 R_4 R_5 s^4 - R_1 R_4 R_5 + s^3 (C_1 L_1 L_5 R_1 R_4 R_5 g_m - C_1 L_1 L_5 R_1 R_4 - C_5 L_1 L_5 R_4 R_5) + s^2 (-C_1 L_1 R_1 R_4 R_5 - C_5 L_5 R_1 R_4 R_5 + L_1}{2 R_1 R_4 R_5 g_m + 2 R_1 R_5 + R_4 R_5 + s^4 (2 C_1 C_5 L_1 L_5 R_1 R_4 R_5 g_m + 2 C_1 C_5 L_1 L_5 R_1 R_5 + C_1 C_5 L_1 L_5 R_4 R_5) + s^3 (2 C_1 L_1 L_5 R_1 R_4 g_m + 2 C_1 L_1 L_5 R_1 R_5 g_m + 2 C_1 L_1 L_5 R_1 + C_1 L_1 L_5 R_4 + 2 C_1 L_1 L_5 R_5 + 2 C_5 L_1 L_5 R_4 R_5 g_m + 2 C_5 L_1 L_5 R_5) + s^2 (2 C_1 L_1 R_1 R_4 R_5 g_m + 2 C_1 L_1 R_1 R_4 R_5 + 2 C_1 L_1 R_1 R_5 g_m + 2 C_1 L_1 R_1 R_5 + 2 C_5 L_1 R_4 R_5 g_m + 2 C_5 L_1 R_4 R_5 + 2 C_5 L_1 R_5 g_m + 2 C_5 L_1 R_5)}$$

$$\mathbf{10.851 \quad INVALID-ORDER-851} \quad Z(s) = \left(\frac{C_1 L_1 R_1 s^2 + L_1 s + R_1}{C_1 L_1 s^2 + 1}, \quad \infty, \quad \infty, \quad R_4, \quad \frac{C_5 L_5 R_5 s^2 + L_5 s + R_5}{C_5 L_5 s^2 + 1}, \quad \infty \right)$$

$$H(s) = \frac{R_1 R_4 R_5 g_m - R_1 R_4 + s^4 (C_1 C_5 L_1 L_5 R_1 R_4 R_5 g_m - C_1 C_5 L_1 L_5 R_1 R_4) + s^3 (C_1 L_1 L_5 R_1 R_4 g_m + C_5 L_1 L_5 R_4 R_5 g_m - C_5 L_1 L_5 R_4) + s^2 (C_1 L_1 R_1 R_4 R_5 g_m - C_1 L_1 R_1 R_4 + C_5 L_1 R_1 R_4 R_5 g_m - C_5 L_1 R_1 R_4) + s (C_1 L_1 R_1 R_4 g_m + C_5 L_1 R_1 R_4 R_5 g_m - C_5 L_1 R_1 R_4) + R_1 R_4 R_5 g_m + 2 R_1 R_5 g_m + 2 R_1 + R_4 + 2 R_5 + s^4 (2 C_1 C_5 L_1 L_5 R_1 R_4 g_m + 2 C_1 C_5 L_1 L_5 R_1 R_5 g_m + 2 C_1 C_5 L_1 L_5 R_1 + C_1 C_5 L_1 L_5 R_4 + 2 C_1 C_5 L_1 L_5 R_5) + s^3 (2 C_1 L_1 L_5 R_1 g_m + 2 C_1 L_1 L_5 + 2 C_5 L_1 L_5 R_4 g_m + 2 C_5 L_1 L_5 R_5 g_m + 2 C_5 L_1 L_5) + s^2 (2 C_1 L_1 R_1 R_4 g_m + 2 C_1 L_1 R_1 R_5 g_m - 2 C_1 L_1 R_1 R_4 + C_5 L_1 R_1 R_4 R_5 g_m - C_5 L_1 R_1 R_4) + s (C_1 L_1 R_1 R_4 g_m + C_5 L_1 R_1 R_4 R_5 g_m - C_5 L_1 R_1 R_4) + R_1 R_4 R_5 g_m + 2 R_1 R_5 g_m + 2 R_1 + R_4 + 2 R_5}{2 R_1 R_4 g_m + 2 R_1 R_5 g_m + 2 R_1 + R_4 + 2 R_5 + s^4 (2 C_1 C_5 L_1 L_5 R_1 R_4 g_m + 2 C_1 C_5 L_1 L_5 R_1 R_5 g_m + 2 C_1 C_5 L_1 L_5 R_1 + C_1 C_5 L_1 L_5 R_4 + 2 C_1 C_5 L_1 L_5 R_5) + s^3 (2 C_1 L_1 L_5 R_1 g_m + 2 C_1 L_1 L_5 + 2 C_5 L_1 L_5 R_4 g_m + 2 C_5 L_1 L_5 R_5 g_m + 2 C_5 L_1 L_5) + s^2 (2 C_1 L_1 R_1 R_4 g_m + 2 C_1 L_1 R_1 R_5 g_m - 2 C_1 L_1 R_1 R_4 + C_5 L_1 R_1 R_4 R_5 g_m - C_5 L_1 R_1 R_4) + s (C_1 L_1 R_1 R_4 g_m + C_5 L_1 R_1 R_4 R_5 g_m - C_5 L_1 R_1 R_4) + R_1 R_4 R_5 g_m + 2 R_1 R_5 g_m + 2 R_1 + R_4 + 2 R_5}$$

$$\mathbf{10.852 \quad INVALID-ORDER-852} \quad Z(s) = \left(\frac{C_1 L_1 R_1 s^2 + L_1 s + R_1}{C_1 L_1 s^2 + 1}, \quad \infty, \quad \infty, \quad R_4, \quad \frac{R_5 (C_5 L_5 s^2 + 1)}{C_5 L_5 s^2 + C_5 R_5 s + 1}, \quad \infty \right)$$

$$H(s) = \frac{R_1 R_4 R_5 g_m - R_1 R_4 + s^4 (C_1 C_5 L_1 L_5 R_1 R_4 R_5 g_m - C_1 C_5 L_1 L_5 R_1 R_4) + s^3 (-C_1 C_5 L_1 R_1 R_4 R_5 + C_5 L_1 L_5 R_4 R_5 g_m - C_5 L_1 L_5 R_4) + s^2 (C_1 L_1 R_1 R_4 R_5 g_m - C_1 L_1 R_1 R_4 + C_5 L_1 R_1 R_4 R_5 g_m - C_5 L_1 R_1 R_4) + s (C_1 L_1 R_1 R_4 g_m + C_5 L_1 R_1 R_4 R_5 g_m - C_5 L_1 R_1 R_4) + R_1 R_4 R_5 g_m + 2 R_1 R_5 g_m + 2 R_1 + R_4 + 2 R_5 + s^4 (2 C_1 C_5 L_1 L_5 R_1 R_4 g_m + 2 C_1 C_5 L_1 L_5 R_1 R_5 g_m + 2 C_1 C_5 L_1 L_5 R_1 + C_1 C_5 L_1 L_5 R_4 + 2 C_1 C_5 L_1 L_5 R_5) + s^3 (2 C_1 C_5 L_1 R_1 R_4 R_5 g_m + 2 C_1 C_5 L_1 R_1 R_5 + C_1 C_5 L_1 R_4 R_5 + 2 C_5 L_1 L_5 R_4 g_m + 2 C_5 L_1 L_5 R_5 g_m + 2 C_5 L_1 L_5) + s^2 (2 C_1 L_1 R_1 R_4 g_m + 2 C_1 L_1 R_1 R_5 g_m - 2 C_1 L_1 R_1 R_4 + C_5 L_1 R_1 R_4 R_5 g_m - C_5 L_1 R_1 R_4) + s (C_1 L_1 R_1 R_4 g_m + C_5 L_1 R_1 R_4 R_5 g_m - C_5 L_1 R_1 R_4) + R_1 R_4 R_5 g_m + 2 R_1 R_5 g_m + 2 R_1 + R_4 + 2 R_5}{2 R_1 R_4 g_m + 2 R_1 R_5 g_m + 2 R_1 + R_4 + 2 R_5 + s^4 (2 C_1 C_5 L_1 L_5 R_1 R_4 g_m + 2 C_1 C_5 L_1 L_5 R_1 R_5 g_m + 2 C_1 C_5 L_1 L_5 R_1 + C_1 C_5 L_1 L_5 R_4 + 2 C_1 C_5 L_1 L_5 R_5) + s^3 (2 C_1 C_5 L_1 R_1 R_4 R_5 g_m + 2 C_1 C_5 L_1 R_1 R_5 + C_1 C_5 L_1 R_4 R_5 + 2 C_5 L_1 L_5 R_4 g_m + 2 C_5 L_1 L_5 R_5 g_m + 2 C_5 L_1 L_5) + s^2 (2 C_1 L_1 R_1 R_4 g_m + 2 C_1 L_1 R_1 R_5 g_m - 2 C_1 L_1 R_1 R_4 + C_5 L_1 R_1 R_4 R_5 g_m - C_5 L_1 R_1 R_4) + s (C_1 L_1 R_1 R_4 g_m + C_5 L_1 R_1 R_4 R_5 g_m - C_5 L_1 R_1 R_4) + R_1 R_4 R_5 g_m + 2 R_1 R_5 g_m + 2 R_1 + R_4 + 2 R_5}$$

$$\mathbf{10.853 \quad INVALID-ORDER-853} \quad Z(s) = \left(\frac{C_1 L_1 R_1 s^2 + L_1 s + R_1}{C_1 L_1 s^2 + 1}, \quad \infty, \quad \infty, \quad \frac{1}{C_4 s}, \quad R_5, \quad \infty \right)$$

$$H(s) = \frac{R_1 R_5 g_m - R_1 + s^2 (C_1 L_1 R_1 R_5 g_m - C_1 L_1 R_1) + s (L_1 R_5 g_m - L_1)}{2 R_1 g_m + s^3 (2 C_1 C_4 L_1 R_1 R_5 g_m + 2 C_1 C_4 L_1 R_1 + 2 C_1 C_4 L_1 R_5) + s^2 (2 C_1 L_1 R_1 g_m + C_1 L_1 + 2 C_4 L_1 R_5 g_m + 2 C_4 L_1) + s (2 C_4 R_1 R_5 g_m + 2 C_4 R_1 + 2 C_4 R_5 + 2 L_1 g_m) + 1}$$

$$\mathbf{10.854 \quad INVALID-ORDER-854} \quad Z(s) = \left(\frac{C_1 L_1 R_1 s^2 + L_1 s + R_1}{C_1 L_1 s^2 + 1}, \quad \infty, \quad \infty, \quad \frac{1}{C_4 s}, \quad \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{-C_1 C_5 L_1 R_1 s^3 + R_1 g_m + s^2 (C_1 L_1 R_1 g_m - C_5 L_1) + s (-C_5 R_1 + L_1 g_m)}{2 C_1 C_4 C_5 L_1 R_1 s^4 + s^3 (2 C_1 C_4 L_1 R_1 g_m + 2 C_1 C_4 L_1 + 2 C_1 C_5 L_1 R_1 g_m + C_1 C_5 L_1 + 2 C_4 C_5 L_1) + s^2 (2 C_4 C_5 R_1 + 2 C_4 L_1 g_m + 2 C_5 L_1 g_m) + s (2 C_4 R_1 g_m + 2 C_4 + 2 C_5 R_1 g_m + C_5)}$$

$$\mathbf{10.855 \quad INVALID-ORDER-855} \quad Z(s) = \left(\frac{C_1 L_1 R_1 s^2 + L_1 s + R_1}{C_1 L_1 s^2 + 1}, \quad \infty, \quad \infty, \quad \frac{1}{C_4 s}, \quad \frac{R_5}{C_5 R_5 s + 1}, \quad \infty \right)$$

$$H(s) = \frac{-C_1 C_5 L_1 R_1 R_5 s^3 + R_1 R_5 g_m - R_1 + s^2 (C_1 L_1 R_1 R_5 g_m - C_1 L_1 R_1 - C_5 L_1 R_5) + s (-C_5 R_1 R_5 + L_1 R_5 g_m - L_1)}{2 C_1 C_4 C_5 L_1 R_1 R_5 s^4 + 2 R_1 g_m + s^3 (2 C_1 C_4 L_1 R_1 R_5 g_m + 2 C_1 C_4 L_1 R_1 + 2 C_1 C_4 L_1 R_5 + 2 C_1 C_5 L_1 R_1 R_5 g_m + C_1 C_5 L_1 R_5 + 2 C_4 C_5 L_1 R_5) + s^2 (2 C_1 L_1 R_1 g_m + C_1 L_1 + 2 C_4 C_5 R_1 R_5 + 2 C_4 L_1 R_5 g_m + 2 C_4 L_1 + 2 C_5 L_1 R_5 g_m) + s (2 C_4 R_1 R_5 g_m + 2 C_4 R_1 + 2 C_4 R_5 + 2 C_5 R_1 g_m + C_5)}$$

$$\mathbf{10.856 \quad INVALID-ORDER-856} \quad Z(s) = \left(\frac{C_1 L_1 R_1 s^2 + L_1 s + R_1}{C_1 L_1 s^2 + 1}, \quad \infty, \quad \infty, \quad \frac{1}{C_4 s}, \quad R_5 + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{R_1 g_m + s^3 (C_1 C_5 L_1 R_1 R_5 g_m - C_1 C_5 L_1 R_1) + s^2 (C_1 L_1 R_1 g_m + C_5 L_1 R_5 g_m - C_5 L_1) + s (C_5 R_1 R_5 g_m - C_5 R_1 + L_1 g_m)}{s^4 (2 C_1 C_4 C_5 L_1 R_1 R_5 g_m + 2 C_1 C_4 C_5 L_1 R_1 + 2 C_1 C_4 C_5 L_1 R_5) + s^3 (2 C_1 C_4 L_1 R_1 g_m + 2 C_1 C_4 L_1 + 2 C_1 C_5 L_1 R_1 g_m + C_1 C_5 L_1 + 2 C_4 C_5 L_1 R_5 g_m + 2 C_4 C_5 L_1) + s^2 (2 C_4 C_5 R_1 R_5 g_m + 2 C_4 C_5 R_1 + 2 C_4 C_5 R_5 + 2 C_4 L_1 g_m + 2 C_5 L_1 g_m) + s (2 C_4 R_1 g_m + 2 C_4 + 2 C_5 R_1 g_m + C_5)}$$

$$\mathbf{10.857 \quad INVALID-ORDER-857} \quad Z(s) = \left(\frac{C_1 L_1 R_1 s^2 + L_1 s + R_1}{C_1 L_1 s^2 + 1}, \quad \infty, \quad \infty, \quad \frac{1}{C_4 s}, \quad L_5 s + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{C_1 C_5 L_1 L_5 R_1 g_m s^4 + R_1 g_m + s^3 (-C_1 C_5 L_1 R_1 + C_5 L_1 L_5 g_m) + s^2 (C_1 L_1 R_1 g_m - C_5 L_1 + C_5 L_5 R_1 g_m) + s (-C_5 R_1 + L_1 g_m)}{s^5 (2 C_1 C_4 C_5 L_1 L_5 R_1 g_m + 2 C_1 C_4 C_5 L_1 L_5) + s^4 (2 C_1 C_4 C_5 L_1 R_1 + 2 C_4 C_5 L_1 L_5 g_m) + s^3 (2 C_1 C_4 L_1 R_1 g_m + 2 C_1 C_4 L_1 + 2 C_1 C_5 L_1 R_1 g_m + C_1 C_5 L_1 + 2 C_4 C_5 L_1 + 2 C_4 C_5 L_5 R_1 g_m + 2 C_4 C_5 L_5) + s^2 (2 C_4 C_5 R_1 + 2 C_4 L_1 g_m + 2 C_5 L_1 g_m) + s (2 C_4 R_1 g_m + 2 C_4 + 2 C_5 R_1 g_m + C_5)}$$

$$\mathbf{10.858 \quad INVALID-ORDER-858} \quad Z(s) = \left(\frac{C_1 L_1 R_1 s^2 + L_1 s + R_1}{C_1 L_1 s^2 + 1}, \quad \infty, \quad \infty, \quad \frac{1}{C_4 s}, \quad \frac{L_5 s}{C_5 L_5 s^2 + 1}, \quad \infty \right)$$

$$H(s) = \frac{-C_1 C_5 L_1 L_5 R_1 s^4 - R_1 + s^3 (C_1 L_1 L_5 R_1 g_m - C_5 L_1 L_5) + s^2 (-C_1 L_1 R_1 - C_5 L_5 R_1 + L_1 L_5 g_m) + s (-L_1 + L_5 R_1 g_m)}{2 C_1 C_4 C_5 L_1 L_5 R_1 s^5 + 2 R_1 g_m + s^4 (2 C_1 C_4 L_1 L_5 R_1 g_m + 2 C_1 C_4 L_1 L_5 + 2 C_1 C_5 L_1 L_5 R_1 g_m + C_1 C_5 L_1 L_5 + 2 C_4 C_5 L_1 L_5) + s^3 (2 C_1 C_4 L_1 R_1 + 2 C_4 C_5 L_5 R_1 + 2 C_4 L_1 L_5 g_m + 2 C_5 L_1 L_5 g_m) + s^2 (2 C_1 L_1 R_1 g_m + C_1 L_1 + 2 C_4 L_1 + 2 C_4 L_5 R_1 g_m + 2 C_4 L_5 + 2 C_5 L_5 R_1 g_m + C_5)}$$

$$\mathbf{10.859 \quad INVALID-ORDER-859} \quad Z(s) = \left(\frac{C_1 L_1 R_1 s^2 + L_1 s + R_1}{C_1 L_1 s^2 + 1}, \quad \infty, \quad \infty, \quad \frac{1}{C_4 s}, \quad L_5 s + R_5 + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{C_1 C_5 L_1 L_5 R_1 g_m s^4 + R_1 g_m + s^3 (C_1 C_5 L_1 R_1 R_5 g_m - C_1 C_5 L_1 R_1 + C_5 L_1 L_5 g_m) + s^2 (C_1 L_1 R_1 g_m + C_5 L_1 R_5 g_m - C_5 L_1 + C_5 L_5 R_1 g_m) + s (C_5 R_1 R_5 g_m - C_5 R_1 + L_1 g_m)}{s^5 (2 C_1 C_4 C_5 L_1 L_5 R_1 g_m + 2 C_1 C_4 C_5 L_1 L_5) + s^4 (2 C_1 C_4 C_5 L_1 R_1 R_5 g_m + 2 C_1 C_4 C_5 L_1 R_1 + 2 C_1 C_4 C_5 L_1 R_5 + 2 C_4 C_5 L_1 L_5 g_m) + s^3 (2 C_1 C_4 L_1 R_1 g_m + 2 C_1 C_4 L_1 + 2 C_1 C_5 L_1 R_1 g_m + C_1 C_5 L_1 + 2 C_4 C_5 L_1 R_5 g_m + 2 C_4 C_5 L_1 + 2 C_4 C_5 L_5 R_1 g_m + 2 C_4 C_5 L_5) + s^2 (2 C_4 C_5 R_1 R_5 g_m - 2 C_4 C_5 R_1 + L_1 g_m) + s (C_5 R_1 R_5 g_m - C_5 R_1 + L_1 g_m) + R_1 R_5 g_m + 2 R_1 R_5 g_m + 2 R_1 + R_5 + \frac{1}{C_5 s}}$$

$$\mathbf{10.869 \quad INVALID-ORDER-869} \quad Z(s) = \left(\frac{C_1 L_1 R_1 s^2 + L_1 s + R_1}{C_1 L_1 s^2 + 1}, \quad \infty, \quad \infty, \quad \frac{R_4}{C_4 R_4 s + 1}, \quad L_5 s + R_5 + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{C_1 C_5 L_1 L_5 R_1 R_4 g_m s^4 + R_1 R_4 g_m + 2 R_1 g_m + s^5 (2 C_1 C_4 C_5 L_1 L_5 R_1 R_4 g_m + 2 C_1 C_4 C_5 L_1 L_5 R_4) + s^4 (2 C_1 C_4 C_5 L_1 R_1 R_4 R_5 g_m + 2 C_1 C_4 C_5 L_1 R_1 R_4 + 2 C_1 C_4 C_5 L_1 R_4 R_5 + 2 C_1 C_5 L_1 L_5 R_1 g_m + 2 C_1 C_5 L_1 L_5 + 2 C_4 C_5 L_1 L_5 R_4 g_m) + s^3 (2 C_1 C_4 L_1 R_1 R_4 g_m + 2 C_1 C_4 L_1 R_4 + 2 C_1 C_5 L_1 R_1 R_4 g_m + 2 C_1 C_5 L_1 R_1 R_5)}{2 R_1 g_m + s^5 (2 C_1 C_4 C_5 L_1 L_5 R_1 R_4 g_m + 2 C_1 C_4 C_5 L_1 L_5 R_4) + s^4 (2 C_1 C_4 C_5 L_1 R_1 R_4 R_5 g_m + 2 C_1 C_4 C_5 L_1 R_1 R_4 + 2 C_1 C_4 C_5 L_1 R_4 R_5 + 2 C_1 C_5 L_1 L_5 R_1 g_m + 2 C_1 C_5 L_1 L_5 + 2 C_4 C_5 L_1 L_5 R_4 g_m) + s^3 (2 C_1 C_4 L_1 R_1 R_4 g_m + 2 C_1 C_4 L_1 R_4 + 2 C_1 C_5 L_1 R_1 R_4 g_m + 2 C_1 C_5 L_1 R_1 R_5)}$$

$$\mathbf{10.870 \quad INVALID-ORDER-870} \quad Z(s) = \left(\frac{C_1 L_1 R_1 s^2 + L_1 s + R_1}{C_1 L_1 s^2 + 1}, \quad \infty, \quad \infty, \quad \frac{R_4}{C_4 R_4 s + 1}, \quad \frac{L_5 R_5 s}{C_5 L_5 R_5 s^2 + L_5 s + R_5}, \quad \infty \right)$$

$$H(s) = \frac{2 C_1 C_4 C_5 L_1 L_5 R_1 R_4 R_5 s^5 + 2 R_1 R_4 R_5 g_m + 2 R_1 R_5 + R_4 R_5 + s^4 (2 C_1 C_4 L_1 L_5 R_1 R_4 R_5 g_m + 2 C_1 C_4 L_1 L_5 R_1 R_4 + 2 C_1 C_4 L_1 L_5 R_4 R_5 + 2 C_1 C_5 L_1 L_5 R_1 R_4 R_5 g_m + 2 C_1 C_5 L_1 L_5 R_1 R_5 + C_1 C_5 L_1 L_5 R_4 R_5 + 2 C_4 C_5 L_1 L_5 R_4 R_5) + s^3 (2 C_1 C_4 L_1 R_1 R_4 R_5 + 2 C_1 L_1 L_5 R_1 R_4 g_m + 2 C_1 C_4 L_1 R_1 R_4 R_5)}{2 C_1 C_4 C_5 L_1 L_5 R_1 R_4 R_5 s^5 + 2 R_1 R_4 R_5 g_m + 2 R_1 R_5 + R_4 R_5 + s^4 (2 C_1 C_4 L_1 L_5 R_1 R_4 R_5 g_m + 2 C_1 C_4 L_1 L_5 R_1 R_4 + 2 C_1 C_4 L_1 L_5 R_4 R_5 + 2 C_1 C_5 L_1 L_5 R_1 R_4 R_5 g_m + 2 C_1 C_5 L_1 L_5 R_1 R_5 + C_1 C_5 L_1 L_5 R_4 R_5 + 2 C_4 C_5 L_1 L_5 R_4 R_5) + s^3 (2 C_1 C_4 L_1 R_1 R_4 R_5 + 2 C_1 L_1 L_5 R_1 R_4 g_m + 2 C_1 C_4 L_1 R_1 R_4 R_5)}$$

$$\mathbf{10.871 \quad INVALID-ORDER-871} \quad Z(s) = \left(\frac{C_1 L_1 R_1 s^2 + L_1 s + R_1}{C_1 L_1 s^2 + 1}, \quad \infty, \quad \infty, \quad \frac{R_4}{C_4 R_4 s + 1}, \quad \frac{C_5 L_5 R_5 s^2 + L_5 s + R_5}{C_5 L_5 s^2 + 1}, \quad \infty \right)$$

$$H(s) = \frac{2 R_1 R_4 g_m + 2 R_1 R_5 g_m + 2 R_1 + R_4 + 2 R_5 + s^5 (2 C_1 C_4 C_5 L_1 L_5 R_1 R_4 R_5 g_m + 2 C_1 C_4 C_5 L_1 L_5 R_1 R_4 + 2 C_1 C_4 C_5 L_1 L_5 R_4 R_5) + s^4 (2 C_1 C_4 L_1 L_5 R_1 R_4 g_m + 2 C_1 C_4 L_1 L_5 R_4 + 2 C_1 C_5 L_1 L_5 R_1 R_4 g_m + 2 C_1 C_5 L_1 L_5 R_1 R_5 g_m + 2 C_1 C_5 L_1 L_5 R_1 + C_1 C_5 L_1 L_5 R_4 + 2 C_1 C_5 L_1 L_5 R_5)}{2 R_1 R_4 g_m + 2 R_1 R_5 g_m + 2 R_1 + R_4 + 2 R_5 + s^5 (2 C_1 C_4 C_5 L_1 L_5 R_1 R_4 R_5 g_m + 2 C_1 C_4 C_5 L_1 L_5 R_1 R_4 + 2 C_1 C_4 C_5 L_1 L_5 R_4 R_5) + s^4 (2 C_1 C_4 L_1 L_5 R_1 R_4 g_m + 2 C_1 C_4 L_1 L_5 R_4 + 2 C_1 C_5 L_1 L_5 R_1 R_4 g_m + 2 C_1 C_5 L_1 L_5 R_1 R_5 g_m + 2 C_1 C_5 L_1 L_5 R_1 + C_1 C_5 L_1 L_5 R_4 + 2 C_1 C_5 L_1 L_5 R_5)}$$

$$\mathbf{10.872 \quad INVALID-ORDER-872} \quad Z(s) = \left(\frac{C_1 L_1 R_1 s^2 + L_1 s + R_1}{C_1 L_1 s^2 + 1}, \quad \infty, \quad \infty, \quad \frac{R_4}{C_4 R_4 s + 1}, \quad \frac{R_5 (C_5 L_5 s^2 + 1)}{C_5 L_5 s^2 + C_5 R_5 s + 1}, \quad \infty \right)$$

$$H(s) = \frac{2 R_1 R_4 g_m + 2 R_1 R_5 g_m + 2 R_1 + R_4 + 2 R_5 + s^5 (2 C_1 C_4 C_5 L_1 L_5 R_1 R_4 R_5 g_m + 2 C_1 C_4 C_5 L_1 L_5 R_1 R_4 + 2 C_1 C_4 C_5 L_1 L_5 R_4 R_5) + s^4 (2 C_1 C_4 C_5 L_1 R_1 R_4 R_5 + 2 C_1 C_5 L_1 L_5 R_1 R_4 g_m + 2 C_1 C_5 L_1 L_5 R_1 R_5 g_m + 2 C_1 C_5 L_1 L_5 R_1 + C_1 C_5 L_1 L_5 R_4 + 2 C_1 C_5 L_1 L_5 R_5 + 2 C_4 C_5 L_1 L_5 R_5)}{2 R_1 R_4 g_m + 2 R_1 R_5 g_m + 2 R_1 + R_4 + 2 R_5 + s^5 (2 C_1 C_4 C_5 L_1 L_5 R_1 R_4 R_5 g_m + 2 C_1 C_4 C_5 L_1 L_5 R_1 R_4 + 2 C_1 C_4 C_5 L_1 L_5 R_4 R_5) + s^4 (2 C_1 C_4 C_5 L_1 R_1 R_4 R_5 + 2 C_1 C_5 L_1 L_5 R_1 R_4 g_m + 2 C_1 C_5 L_1 L_5 R_1 R_5 g_m + 2 C_1 C_5 L_1 L_5 R_1 + C_1 C_5 L_1 L_5 R_4 + 2 C_1 C_5 L_1 L_5 R_5 + 2 C_4 C_5 L_1 L_5 R_5)}$$

$$\mathbf{10.873 \quad INVALID-ORDER-873} \quad Z(s) = \left(\frac{C_1 L_1 R_1 s^2 + L_1 s + R_1}{C_1 L_1 s^2 + 1}, \quad \infty, \quad \infty, \quad R_4 + \frac{1}{C_4 s}, \quad R_5, \quad \infty \right)$$

$$H(s) = \frac{R_1 R_5 g_m - R_1 + s^3 (C_1 C_4 L_1 R_1 R_4 R_5 g_m - C_1 C_4 L_1 R_1 R_4) + s^2 (C_1 L_1 R_1 R_5 g_m - C_1 L_1 R_1 + C_4 L_1 R_4 R_5 g_m - C_4 L_1 R_4) + s (C_4 R_1 R_4 R_5 g_m - C_4 R_1 R_4 + L_1 R_5 g_m - L_1)}{2 R_1 g_m + s^3 (2 C_1 C_4 L_1 R_1 R_4 g_m + 2 C_1 C_4 L_1 R_1 R_5 g_m + 2 C_1 C_4 L_1 R_1 + C_1 C_4 L_1 R_4 + 2 C_1 C_4 L_1 R_5) + s^2 (2 C_1 L_1 R_1 g_m + C_1 L_1 + 2 C_4 L_1 R_4 g_m + 2 C_4 L_1 R_5 g_m + 2 C_4 L_1) + s (2 C_4 R_1 R_4 g_m + 2 C_4 R_1 R_5 g_m + 2 C_4 R_1 + C_4 R_4 + 2 C_4 R_5 + 2 L_1 g_m) + 1}$$

$$\mathbf{10.874 \quad INVALID-ORDER-874} \quad Z(s) = \left(\frac{C_1 L_1 R_1 s^2 + L_1 s + R_1}{C_1 L_1 s^2 + 1}, \quad \infty, \quad \infty, \quad R_4 + \frac{1}{C_4 s}, \quad \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{-C_1 C_4 C_5 L_1 R_1 R_4 s^4 + R_1 g_m + s^3 (C_1 C_4 L_1 R_1 R_4 g_m - C_1 C_5 L_1 R_1 - C_4 C_5 L_1 R_4) + s^2 (C_1 L_1 R_1 g_m - C_4 C_5 R_1 R_4 + C_4 L_1 R_4 g_m - C_5 L_1) + s (C_4 R_1 R_4 g_m - C_5 R_1 + L_1 g_m)}{s^4 (2 C_1 C_4 C_5 L_1 R_1 R_4 g_m + 2 C_1 C_4 C_5 L_1 R_1 + C_1 C_4 C_5 L_1 R_4) + s^3 (2 C_1 C_4 L_1 R_1 g_m + 2 C_1 C_4 L_1 + 2 C_1 C_5 L_1 R_1 g_m + C_1 C_5 L_1 + 2 C_4 C_5 L_1 R_4 g_m + 2 C_4 C_5 L_1) + s^2 (2 C_4 C_5 R_1 R_4 g_m + 2 C_4 C_5 R_1 + C_4 C_5 R_4 + 2 C_4 L_1 g_m + 2 C_5 L_1 g_m) + s (2 C_4 R_1 g_m + 2 C_4 + 2 C_5 R_1 g_m + C_5)}$$

$$\mathbf{10.875 \quad INVALID-ORDER-875} \quad Z(s) = \left(\frac{C_1 L_1 R_1 s^2 + L_1 s + R_1}{C_1 L_1 s^2 + 1}, \quad \infty, \quad \infty, \quad R_4 + \frac{1}{C_4 s}, \quad \frac{R_5}{C_5 R_5 s + 1}, \quad \infty \right)$$

$$H(s) = \frac{-C_1 C_4 C_5 L_1 R_1 R_4 R_5 s^4 + R_1 R_5 g_m - R_1 + s^3 (C_1 C_4 L_1 R_1 R_4 R_5 g_m - C_1 C_4 L_1 R_1 R_4 - C_1 C_5 L_1 R_1 R_5 - C_4 C_5 L_1 R_4 R_5) + s^2 (C_1 L_1 R_1 R_5 g_m - C_1 L_1 R_1 - C_4 C_5 R_1 R_4) + s (C_4 R_1 R_4 R_5 g_m - C_4 R_1 R_4 + L_1 R_5 g_m - L_1)}{2 R_1 g_m + s^4 (2 C_1 C_4 C_5 L_1 R_1 R_4 R_5 g_m + 2 C_1 C_4 C_5 L_1 R_1 R_5 + C_1 C_4 C_5 L_1 R_4 R_5) + s^3 (2 C_1 C_4 L_1 R_1 R_4 g_m + 2 C_1 C_4 L_1 R_1 R_5 g_m + 2 C_1 C_4 L_1 R_1 + C_1 C_4 L_1 R_4 + 2 C_1 C_4 L_1 R_5 + 2 C_1 C_5 L_1 R_1 R_5 g_m + C_1 C_5 L_1 R_5 + 2 C_4 C_5 L_1 R_4 R_5 g_m + 2 C_4 C_5 L_1 R_5) + s^2 (2 C_1 L_1 R_1 g_m + C_1 L_1 + 2 C_4 R_1 R_4 g_m + 2 C_4 R_1 R_5 g_m + 2 C_4 R_1 + C_4 R_4 + 2 C_4 R_5 + 2 L_1 g_m) + 1}$$

$$\mathbf{10.876 \quad INVALID-ORDER-876} \quad Z(s) = \left(\frac{C_1 L_1 R_1 s^2 + L_1 s + R_1}{C_1 L_1 s^2 + 1}, \quad \infty, \quad \infty, \quad R_4 + \frac{1}{C_4 s}, \quad R_5 + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{R_1 g_m + s^4 (C_1 C_4 C_5 L_1 R_1 R_4 R_5 g_m - C_1 C_4 C_5 L_1 R_1 R_4) + s^3 (C_1 C_4 L_1 R_1 R_4 g_m + C_1 C_5 L_1 R_1 R_5 g_m - C_1 C_5 L_1 R_1 + C_4 C_5 L_1 R_4 R_5 g_m - C_4 C_5 L_1 R_4) + s^2 (C_1 L_1 R_1 g_m + C_4 C_5 R_1 R_4 R_5 g_m - C_4 C_5 R_1 R_4 + C_4 L_1 R_4 g_m + C_5 L_1 R_5 g_m - C_5 L_1) + s (C_4 R_1 R_4 R_5 g_m - C_4 R_1 R_4 + L_1 R_5 g_m - L_1)}{s^4 (2 C_1 C_4 C_5 L_1 R_1 R_4 g_m + 2 C_1 C_4 C_5 L_1 R_1 R_5 g_m + 2 C_1 C_4 C_5 L_1 R_1 + C_1 C_4 C_5 L_1 R_4 + 2 C_1 C_4 C_5 L_1 R_5) + s^3 (2 C_1 C_4 L_1 R_1 g_m + 2 C_1 C_4 L_1 + 2 C_1 C_5 L_1 R_1 g_m + C_1 C_5 L_1 + 2 C_4 C_5 L_1 R_4 g_m + 2 C_4 C_5 L_1 R_5 g_m + 2 C_4 C_5 L_1) + s^2 (2 C_4 C_5 R_1 R_4 g_m + 2 C_4 C_5 R_1 R_5 g_m + 2 C_4 C_5 R_1 + C_4 C_5 R_4 + 2 C_4 L_1 g_m + 2 C_5 L_1 g_m) + s (2 C_4 R_1 g_m + 2 C_4 + 2 C_5 R_1 g_m + C_5)}$$

$$\mathbf{10.877 \quad INVALID-ORDER-877} \quad Z(s) = \left(\frac{C_1 L_1 R_1 s^2 + L_1 s + R_1}{C_1 L_1 s^2 + 1}, \quad \infty, \quad \infty, \quad R_4 + \frac{1}{C_4 s}, \quad L_5 s + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{C_1 C_4 C_5 L_1 L_5 R_1 R_4 g_m s^5 + R_1 g_m + s^4 (-C_1 C_4 C_5 L_1 R_1 R_4 + C_1 C_5 L_1 L_5 R_1 g_m + C_4 C_5 L_1 L_5 R_4 g_m) + s^3 (C_1 C_4 L_1 R_1 R_4 g_m - C_1 C_5 L_1 R_1 - C_4 C_5 L_1 R_4 + C_4 C_5 L_5 R_1 R_4 g_m + C_5 L_1 L_5 g_m) + s^2 (C_1 L_1 R_1 g_m - C_4 C_5 R_1 R_4 + C_4 L_1 R_4 g_m - C_5 L_1) + s (C_4 R_1 R_4 R_5 g_m - C_4 R_1 R_4 + L_1 R_5 g_m - L_1)}{s^5 (2 C_1 C_4 C_5 L_1 L_5 R_1 g_m + 2 C_1 C_4 C_5 L_1 L_5) + s^4 (2 C_1 C_4 C_5 L_1 R_1 R_4 g_m + 2 C_1 C_4 C_5 L_1 R_1 + C_1 C_4 C_5 L_1 R_4 + 2 C_4 C_5 L_1 L_5 g_m) + s^3 (2 C_1 C_4 L_1 R_1 g_m + 2 C_1 C_4 L_1 + 2 C_1 C_5 L_1 R_1 g_m + C_1 C_5 L_1 + 2 C_4 C_5 L_1 R_4 g_m + 2 C_4 C_5 L_1 + 2 C_4 C_5 L_5 R_1 g_m + 2 C_4 C_5 L_5) + s^2 (2 C_4 C_5 R_1 R_4 g_m + 2 C_4 C_5 R_1 R_5 g_m + 2 C_4 C_5 R_1 + C_4 C_5 R_4 + 2 C_4 L_1 g_m + 2 C_5 L_1 g_m) + s (2 C_4 R_1 g_m + 2 C_4 + 2 C_5 R_1 g_m + C_5)}$$

10.905 INVALID-ORDER-905 $Z(s) = \left(\frac{C_1 L_1 R_1 s^2 + L_1 s + R_1}{C_1 L_1 s^2 + 1}, \infty, \infty, L_4 s + R_4 + \frac{1}{C_4 s}, \frac{R_5}{C_5 R_5 s + 1}, \infty \right)$

$$H(s) = \frac{-C_1 C_4 C_5 L_1 L_4 R_1 R_5 s^5 + R_1 R_5 g_m - R_1 + s^4 (-C_1 C_4 C_5 L_1 R_1 R_4 R_5 + C_1 C_4 L_1 L_4 R_1 R_5 g_m - C_1 C_4 L_1 L_4 R_1 - C_4 C_5 L_1 L_4 R_5) + s^3 (C_1 C_4 L_1 R_1 R_4 R_5 g_m + C_1 C_4 L_1 R_1 R_4 R_5 - C_1 C_4 L_1 R_1 R_4 - C_4 C_5 L_1 R_1 R_5) + s^2 (C_1 C_4 L_1 R_1 R_4 R_5 - C_1 C_4 L_1 R_1 R_4 - C_4 C_5 L_1 R_1 R_5) + s (C_1 C_4 L_1 R_1 R_4 R_5 - C_1 C_4 L_1 R_1 R_4 - C_4 C_5 L_1 R_1 R_5) + C_1 C_4 L_1 R_1 R_4 R_5}{2R_1 g_m + s^5 (2C_1 C_4 C_5 L_1 L_4 R_1 R_5 g_m + C_1 C_4 C_5 L_1 L_4 R_5) + s^4 (2C_1 C_4 C_5 L_1 R_1 R_4 R_5 g_m + 2C_1 C_4 C_5 L_1 R_1 R_5 + C_1 C_4 C_5 L_1 R_4 R_5 + 2C_1 C_4 L_1 L_4 R_1 g_m + C_1 C_4 L_1 L_4 + 2C_4 C_5 L_1 L_4 R_5 g_m) + s^3 (2C_1 C_4 L_1 R_1 R_4 g_m + 2C_1 C_4 L_1 R_1 R_5 g_m + 2C_1 C_4 L_1 R_1 + C_1 C_4 L_1 R_4 + 2C_1 C_4 L_1 R_5) + s^2 (2C_1 C_4 L_1 R_1 R_4 + 2C_1 C_4 L_1 R_1 R_5 + C_1 C_4 L_1 R_4 + C_1 C_4 L_1 R_5) + s (C_1 C_4 L_1 R_1 R_4 + C_1 C_4 L_1 R_1 R_5 + C_1 C_4 L_1 R_4 + C_1 C_4 L_1 R_5) + C_1 C_4 L_1 R_1 R_4 R_5}$$

10.906 INVALID-ORDER-906 $Z(s) = \left(\frac{C_1 L_1 R_1 s^2 + L_1 s + R_1}{C_1 L_1 s^2 + 1}, \infty, \infty, L_4 s + R_4 + \frac{1}{C_4 s}, R_5 + \frac{1}{C_5 s}, \infty \right)$

$$H(s) = \frac{R_1 g_m + s^5 (C_1 C_4 C_5 L_1 L_4 R_1 R_5 g_m - C_1 C_4 C_5 L_1 L_4 R_1) + s^4 (C_1 C_4 C_5 L_1 R_1 R_4 R_5 g_m - C_1 C_4 C_5 L_1 R_1 R_4 + C_1 C_4 L_1 L_4 R_1 g_m + C_4 C_5 L_1 L_4 R_5 g_m - C_4 C_5 L_1 L_4) + s^3 (C_1 C_4 L_1 R_1 R_4 g_m + C_1 C_5 L_1 R_1 R_5 g_m - C_1 C_5 L_1 R_1 + C_4 C_5 L_1 R_4 R_5 g_m - C_4 C_5 L_1 R_4 + C_4 C_5 L_4 R_1 R_5 g_m - C_4 C_5 L_4 R_1) + s^2 (C_1 C_4 C_5 L_1 L_4 R_1 g_m + C_1 C_4 C_5 L_1 L_4) + s (2 C_1 C_4 C_5 L_1 R_1 R_4 g_m + 2 C_1 C_4 C_5 L_1 R_1 R_5 g_m + 2 C_1 C_4 C_5 L_1 R_1 + C_1 C_4 C_5 L_1 R_4 + 2 C_1 C_4 C_5 L_1 R_5 + 2 C_4 C_5 L_1 L_4 g_m) + s (2 C_1 C_4 L_1 R_1 g_m + 2 C_1 C_4 L_1 + 2 C_1 C_5 L_1 R_1 g_m + C_1 C_5 L_1 + 2 C_4 C_5 L_1 R_4 g_m + 2 C_4 C_5 L_1 R_5 g_m + 2 C_4 C_5 L_1)}{s^5 (2 C_1 C_4 C_5 L_1 L_4 R_1 g_m + C_1 C_4 C_5 L_1 L_4) + s^4 (2 C_1 C_4 C_5 L_1 R_1 R_4 g_m + 2 C_1 C_4 C_5 L_1 R_1 R_5 g_m + 2 C_1 C_4 C_5 L_1 R_1 + C_1 C_4 C_5 L_1 R_4 + 2 C_1 C_4 C_5 L_1 R_5 + 2 C_4 C_5 L_1 L_4 g_m) + s^3 (2 C_1 C_4 L_1 R_1 g_m + 2 C_1 C_4 L_1 + 2 C_1 C_5 L_1 R_1 g_m + C_1 C_5 L_1 + 2 C_4 C_5 L_1 R_4 g_m + 2 C_4 C_5 L_1 R_5 g_m + 2 C_4 C_5 L_1) + s^2 (2 C_1 C_4 C_5 L_1 L_4 R_1 g_m + C_1 C_4 C_5 L_1 L_4) + s (2 C_1 C_4 C_5 L_1 R_1 R_4 g_m + 2 C_1 C_4 C_5 L_1 R_1 R_5 g_m + 2 C_1 C_4 C_5 L_1 R_1 + C_1 C_4 C_5 L_1 R_4 + 2 C_1 C_4 C_5 L_1 R_5 + 2 C_4 C_5 L_1 L_4 g_m) + s (2 C_1 C_4 L_1 R_1 g_m + 2 C_1 C_4 L_1 + 2 C_1 C_5 L_1 R_1 g_m + C_1 C_5 L_1 + 2 C_4 C_5 L_1 R_4 g_m + 2 C_4 C_5 L_1 R_5 g_m + 2 C_4 C_5 L_1) + 2 C_1 C_4 C_5 L_1 L_4 R_1 g_m + C_1 C_4 C_5 L_1 L_4}$$

10.907 INVALID-ORDER-907 $Z(s) = \left(\frac{C_1 L_1 R_1 s^2 + L_1 s + R_1}{C_1 L_1 s^2 + 1}, \infty, \infty, L_4 s + R_4 + \frac{1}{C_4 s}, L_5 s + \frac{1}{C_5 s}, \infty \right)$

$$H(s) = \frac{C_1 C_4 C_5 L_1 L_4 L_5 R_1 g_m s^6 + R_1 g_m + s^5 (-C_1 C_4 C_5 L_1 L_4 R_1 + C_1 C_4 C_5 L_1 L_5 R_1 R_4 g_m + C_4 C_5 L_1 L_4 L_5 g_m) + s^4 (-C_1 C_4 C_5 L_1 R_1 R_4 + C_1 C_4 L_1 L_4 R_1 g_m + C_1 C_5 L_1 L_5 R_1 g_m - C_4 C_5 L_1 L_4 + C_4 C_5 L_1 L_5 R_4 g_m + C_4 C_5 L_4 L_5 R_1 g_m) + s^3 (C_1 C_4 L_1 R_1 R_4 g_m - C_1 C_5 L_1 R_1 - C_4 C_5 L_1 L_4 + C_4 C_5 L_1 L_5 R_4 g_m + C_4 C_5 L_4 L_5 R_1 g_m) + s^2 (C_1 C_4 C_5 L_1 L_4 R_1 g_m + C_1 C_4 C_5 L_1 L_4 + 2 C_1 C_4 C_5 L_1 L_5 R_1 g_m + 2 C_1 C_4 C_5 L_1 L_5) + s (2 C_1 C_4 C_5 L_1 R_1 R_4 g_m + 2 C_1 C_4 C_5 L_1 R_1 + C_1 C_4 C_5 L_1 R_4 + 2 C_4 C_5 L_1 L_4 g_m + 2 C_4 C_5 L_1 L_5 g_m) + s^3 (2 C_1 C_4 L_1 R_1 g_m + 2 C_1 C_4 L_1 + 2 C_1 C_5 L_1 R_1 g_m + C_1 C_5 L_1 + 2 C_4 C_5 L_1 R_4 g_m -$$

10.908 INVALID-ORDER-908 $Z(s) = \left(\frac{C_1 L_1 R_1 s^2 + L_1 s + R_1}{C_1 L_1 s^2 + 1}, \infty, \infty, L_4 s + R_4 + \frac{1}{C_4 s}, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \infty \right)$

$$H(s) = \frac{-C_1 C_4 C_5 L_1 L_4 L_5 R_1 s^6 - R_1 + s^5 (-C_1 C_4 C_5 L_1 L_5 R_1 R_4 + C_1 C_4 L_1 L_4 L_5 R_1 g_m - C_4 C_5 L_1 L_4 L_5) + s^4 (-C_1 C_4 L_1 L_4 R_1 + C_1 C_4 L_1 L_5 R_1 R_4 g_m - C_1 C_5 L_1 L_5 R_1)}{2 R_1 g_m + s^6 (2 C_1 C_4 C_5 L_1 L_4 L_5 R_1 g_m + C_1 C_4 C_5 L_1 L_4 L_5) + s^5 (2 C_1 C_4 C_5 L_1 L_5 R_1 R_4 g_m + 2 C_1 C_4 C_5 L_1 L_5 R_1 + C_1 C_4 C_5 L_1 L_5 R_4 + 2 C_4 C_5 L_1 L_4 L_5 g_m) + s^4 (2 C_1 C_4 L_1 L_4 R_1 g_m + C_1 C_4 L_1 L_4 + 2 C_1 C_4 L_1 L_5 R_1 g_m + 2 C_1 C_4 L_1 L_5 + 2 C_1 C_5 L_1 L_5 R_1 g_m + C_1 C_5 L_1 L_5 + 2 C_4 C_5)}$$

10.909 INVALID-ORDER-909 $Z(s) = \left(\frac{C_1 L_1 R_1 s^2 + L_1 s + R_1}{C_1 L_1 s^2 + 1}, \infty, \infty, L_4 s + R_4 + \frac{1}{C_4 s}, L_5 s + R_5 + \frac{1}{C_5 s}, \infty \right)$

$$H(s) = \frac{C_1 C_4 C_5 L_1 L_4 L_5 R_1 g_m s^6 + R_1 g_m + s^5 (C_1 C_4 C_5 L_1 L_4 R_1 R_5 g_m - C_1 C_4 C_5 L_1 L_4 R_1 + C_1 C_4 C_5 L_1 L_5 R_1 R_4 g_m + C_4 C_5 L_1 L_4 L_5 g_m) + s^4 (C_1 C_4 C_5 L_1 R_1 R_4 R_5 g_m - C_1 C_4 C_5 L_1 R_1 R_4 + C_1 C_4 L_1 L_4 R_1 g_m + C_1 C_5 L_1 L_5 R_1 g_m + C_4 C_5 L_1 L_4 R_5 g_m - C_4 C_5 L_1 L_4 + C_4 C_5 L_1 L_5 R_4 g_m)}{s^5 (2 C_1 C_4 C_5 L_1 L_4 R_1 g_m + C_1 C_4 C_5 L_1 L_4 + 2 C_1 C_4 C_5 L_1 L_5 R_1 g_m + 2 C_1 C_4 C_5 L_1 L_5) + s^4 (2 C_1 C_4 C_5 L_1 R_1 R_4 g_m + 2 C_1 C_4 C_5 L_1 R_1 R_5 g_m + 2 C_1 C_4 C_5 L_1 R_1 + C_1 C_4 C_5 L_1 R_4 + 2 C_1 C_4 C_5 L_1 R_5 + 2 C_4 C_5 L_1 L_4 g_m + 2 C_4 C_5 L_1 L_5 g_m)}$$

10.910 INVALID-ORDER-910 $Z(s) = \left(\frac{C_1 L_1 R_1 s^2 + L_1 s + R_1}{C_1 L_1 s^2 + 1}, \infty, \infty, L_4 s + R_4 + \frac{1}{C_4 s}, \frac{L_5 R_5 s}{C_5 L_5 R_5 s^2 + L_5 s + R_5}, \infty \right)$

10.911 INVALID-ORDER-911 $Z(s) = \left(\frac{C_1 L_1 R_1 s^2 + L_1 s + R_1}{C_1 L_1 s^2 + 1}, \infty, \infty, L_4 s + R_4 + \frac{1}{C_4 s}, \frac{C_5 L_5 R_5 s^2 + L_5 s + R_5}{C_5 L_5 s^2 + 1}, \infty \right)$

$$H(s) = \frac{R_1 R_5 g_m - R_1 + s^6 (C_1 C_4 C_5 L_1 L_4 L_5 R_1 R_5 g_m - C_1 C_4 C_5 L_1 L_4 L_5 R_1) + s^5 (C_1 C_4 C_5 L_1 L_5 R_1 R_4 R_5 g_m - C_1 C_4 C_5 L_1 L_5 R_1 R_4 + C_1 C_4 L_1 L_4 L_5 R_1 g_m + C_4 C_5 L_1 L_4 L_5 R_5 g_m - C_4 C_5 L_1 L_4 L_5) + s^4 (C_1 C_4 L_1 L_4 R_1 R_5 g_m - C_1 C_4 L_1 L_4 R_1 + C_1 C_4 L_1 L_4 R_5 g_m - C_1 C_4 L_1 L_4 R_5) + s^3 (C_1 C_4 L_1 L_4 R_1 g_m + C_1 C_4 L_1 L_4 R_5 g_m - C_1 C_4 L_1 L_4 R_1) + s^2 (C_1 C_4 L_1 L_4 R_1 + C_1 C_4 L_1 L_4 R_5) + s (C_1 C_4 L_1 L_4 R_1 + C_1 C_4 L_1 L_4 R_5) + C_1 C_4 L_1 L_4 R_1 + C_1 C_4 L_1 L_4 R_5}{2 R_1 g_m + s^6 (2 C_1 C_4 C_5 L_1 L_4 L_5 R_1 g_m + C_1 C_4 C_5 L_1 L_4 L_5) + s^5 (2 C_1 C_4 C_5 L_1 L_5 R_1 R_4 g_m + 2 C_1 C_4 C_5 L_1 L_5 R_1 R_5 g_m + 2 C_1 C_4 C_5 L_1 L_5 R_1 + C_1 C_4 C_5 L_1 L_5 R_4 + 2 C_1 C_4 C_5 L_1 L_5 R_5 + 2 C_4 C_5 L_1 L_4 L_5 g_m) + s^4 (2 C_1 C_4 L_1 L_4 R_1 g_m + C_1 C_4 L_1 L_4 + 2 C_1 C_4 L_1 L_5 R_1 g_m + 2 C_1 C_4 L_1 L_5 R_1 + 2 C_4 C_5 L_1 L_4 L_5 g_m) + s^3 (2 C_1 C_4 L_1 L_4 R_1 + C_1 C_4 L_1 L_4 + 2 C_1 C_4 L_1 L_5 R_1 + 2 C_4 C_5 L_1 L_4 L_5) + s^2 (2 C_1 C_4 L_1 L_4 R_1 + C_1 C_4 L_1 L_4 + 2 C_1 C_4 L_1 L_5 R_1 + 2 C_4 C_5 L_1 L_4 L_5) + s (2 C_1 C_4 L_1 L_4 R_1 + C_1 C_4 L_1 L_4 + 2 C_1 C_4 L_1 L_5 R_1 + 2 C_4 C_5 L_1 L_4 L_5) + 2 C_1 C_4 L_1 L_4 R_1 + 2 C_1 C_4 L_1 L_4 R_5}$$

10.912 INVALID-ORDER-912 $Z(s) = \left(\frac{C_1 L_1 R_1 s^2 + L_1 s + R_1}{C_1 L_1 s^2 + 1}, \infty, \infty, L_4 s + R_4 + \frac{1}{C_4 s}, \frac{R_5 (C_5 L_5 s^2 + 1)}{C_5 L_5 s^2 + C_5 R_5 s + 1}, \infty \right)$

10.913 INVALID-ORDER-913 $Z(s) = \left(\frac{C_1 L_1 R_1 s^2 + L_1 s + R_1}{C_1 L_1 s^2 + 1}, \infty, \infty, \frac{L_4 R_4 s}{C_4 L_4 R_4 s^2 + L_4 s + R_4}, R_5, \infty \right)$

10.914 INVALID-ORDER-914 $Z(s) = \left(\frac{C_1 L_1 R_1 s^2 + L_1 s + R_1}{C_1 L_1 s^2 + 1}, \infty, \infty, \frac{L_4 R_4 s}{C_4 L_4 R_4 s^2 + L_4 s + R_4}, \frac{1}{C_5 s}, \infty \right)$

$$H(s) = \frac{-C_1 C_5 L_1 L_4 R_1 R_4 s^4 + L_4 R_1 R_4 g_m s + s^3 (C_1 L_1 L_4 R_1 R_4 g_m - C_5 L_1 L_4 R_4) + s^2 (-C_5 L_4 R_1 R_4 g_m + C_1 L_1 L_4 R_1 R_4 g_m - C_5 L_1 L_4 R_4) + s (C_1 L_1 L_4 R_1 R_4 g_m - C_5 L_1 L_4 R_4)}{2C_1 C_4 C_5 L_1 L_4 R_1 R_4 s^5 + 2R_1 R_4 g_m + 2R_4 + s^4 (2C_1 C_4 L_1 L_4 R_1 R_4 g_m + 2C_1 C_4 L_1 L_4 R_4 + 2C_1 C_5 L_1 L_4 R_1 R_4 g_m + 2C_1 C_5 L_1 L_4 R_1 + C_1 C_5 L_1 L_4 R_4 + 2C_4 C_5 L_1 L_4 R_4) + s^3 (2C_1 C_5 L_1 R_1 R_4 + 2C_1 L_1 L_4 R_1 g_m + 2C_1 L_1 L_4 + 2C_4 C_5 L_4 R_1 R_4 + 2C_4 L_1 L_4 R_4 g_m + 2C_5 L_1 L_4 R_4)}$$

10.915 INVALID-ORDER-915 $Z(s) = \left(\frac{C_1 L_1 R_1 s^2 + L_1 s + R_1}{C_1 L_1 s^2 + 1}, \infty, \infty, \frac{L_4 R_4 s}{C_4 L_4 R_4 s^2 + L_4 s + R_4}, \frac{R_5}{C_5 R_5 s + 1}, \infty \right)$

$$H(s) = \frac{2C_1C_4C_5L_1L_4R_1R_4R_5s^5 + 2R_1R_4R_5g_m + 2R_1R_4 + 2R_4R_5 + s^4(2C_1C_4L_1L_4R_1R_4R_5g_m + 2C_1C_4L_1L_4R_1R_4 + 2C_1C_4L_1L_4R_4R_5 + 2C_1C_5L_1L_4R_1R_4R_5g_m + 2C_1C_5L_1L_4R_1R_5 + C_1C_5L_1L_4R_4R_5 + 2C_4C_5L_1L_4R_4R_5) + s^3(2C_1C_5L_1R_1R_4R_5 + 2C_1L_1L_4R_1R_4g_m}$$

10.916 INVALID-ORDER-916 $Z(s) = \left(\frac{C_1 L_1 R_1 s^2 + L_1 s + R_1}{C_1 L_1 s^2 + 1}, \infty, \infty, \frac{L_4 R_4 s}{C_4 L_4 R_4 s^2 + L_4 s + R_4}, R_5 + \frac{1}{C_5 s}, \infty \right)$

$$H(s) = \frac{2R_1R_4g_m + 2R_4 + s^5(2C_1C_4C_5L_1L_4R_1R_4R_5g_m + 2C_1C_4C_5L_1L_4R_1R_4 + 2C_1C_4C_5L_1L_4R_4R_5) + s^4(2C_1C_4L_1L_4R_1R_4g_m + 2C_1C_4L_1L_4R_4 + 2C_1C_5L_1L_4R_1R_4g_m + 2C_1C_5L_1L_4R_1R_5g_m + 2C_1C_5L_1L_4R_1 + C_1C_5L_1L_4R_4 + 2C_1C_5L_1L_4R_5 + 2C_4C_5L_1L_4R_4R_5g_m}$$

10.917 INVALID-ORDER-917 $Z(s) = \left(\frac{C_1 L_1 R_1 s^2 + L_1 s + R_1}{C_1 L_1 s^2 + 1}, \infty, \infty, \frac{L_4 R_4 s}{C_4 L_4 R_4 s^2 + L_4 s + R_4}, L_5 s + \frac{1}{C_5 s}, \infty \right)$

$$H(s) = \frac{2R_1R_4g_m + 2R_4 + s^6(2C_1C_4C_5L_1L_4L_5R_1R_4g_m + 2C_1C_4C_5L_1L_4L_5R_4) + s^5(2C_1C_4C_5L_1L_4R_1R_4 + 2C_1C_5L_1L_4L_5R_1g_m + 2C_1C_5L_1L_4L_5 + 2C_4C_5L_1L_4L_5R_4g_m) + s^4(2C_1C_4L_1L_4R_1R_4g_m + 2C_1C_4L_1L_4R_4 + 2C_1C_5L_1L_4R_1R_4g_m + 2C_1C_5L_1L_4R_1 + C_1C_5L_1L_4L_5R_4g_m) + s^3(2C_1C_4L_1L_4R_1R_4 + 2C_1C_4L_1L_4R_4 + 2C_1C_5L_1L_4R_1R_4 + 2C_1C_5L_1L_4R_1 + C_1C_5L_1L_4L_5R_4) + s^2(2C_1C_4L_1L_4R_1R_4 + 2C_1C_4L_1L_4R_4 + 2C_1C_5L_1L_4R_1R_4 + 2C_1C_5L_1L_4R_1 + C_1C_5L_1L_4L_5R_4) + s(2C_1C_4L_1L_4R_1R_4 + 2C_1C_4L_1L_4R_4 + 2C_1C_5L_1L_4R_1R_4 + 2C_1C_5L_1L_4R_1 + C_1C_5L_1L_4L_5R_4) + 2C_1C_4L_1L_4R_1R_4 + 2C_1C_4L_1L_4R_4 + 2C_1C_5L_1L_4R_1R_4 + 2C_1C_5L_1L_4R_1 + C_1C_5L_1L_4L_5R_4}{2R_1R_4g_m + 2R_4 + s^6(2C_1C_4C_5L_1L_4L_5R_1R_4g_m + 2C_1C_4C_5L_1L_4L_5R_4) + s^5(2C_1C_4C_5L_1L_4R_1R_4 + 2C_1C_5L_1L_4L_5R_1g_m + 2C_1C_5L_1L_4L_5 + 2C_4C_5L_1L_4L_5R_4g_m) + s^4(2C_1C_4L_1L_4R_1R_4g_m + 2C_1C_4L_1L_4R_4 + 2C_1C_5L_1L_4R_1R_4g_m + 2C_1C_5L_1L_4R_1 + C_1C_5L_1L_4L_5R_4g_m) + s^3(2C_1C_4L_1L_4R_1R_4 + 2C_1C_4L_1L_4R_4 + 2C_1C_5L_1L_4R_1R_4 + 2C_1C_5L_1L_4R_1 + C_1C_5L_1L_4L_5R_4) + s^2(2C_1C_4L_1L_4R_1R_4 + 2C_1C_4L_1L_4R_4 + 2C_1C_5L_1L_4R_1R_4 + 2C_1C_5L_1L_4R_1 + C_1C_5L_1L_4L_5R_4) + s(2C_1C_4L_1L_4R_1R_4 + 2C_1C_4L_1L_4R_4 + 2C_1C_5L_1L_4R_1R_4 + 2C_1C_5L_1L_4R_1 + C_1C_5L_1L_4L_5R_4) + 2C_1C_4L_1L_4R_1R_4 + 2C_1C_4L_1L_4R_4 + 2C_1C_5L_1L_4R_1R_4 + 2C_1C_5L_1L_4R_1 + C_1C_5L_1L_4L_5R_4}$$

10.918 INVALID-ORDER-918 $Z(s) = \left(\frac{C_1 L_1 R_1 s^2 + L_1 s + R_1}{C_1 L_1 s^2 + 1}, \infty, \infty, \frac{L_4 R_4 s}{C_4 L_4 R_4 s^2 + L_4 s + R_4}, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \infty \right)$

$$H(s) = \frac{2C_1C_4C_5L_1L_4L_5R_1R_4s^6 + 2R_1R_4 + s^5(2C_1C_4L_1L_4L_5R_1R_4g_m + 2C_1C_4L_1L_4L_5R_4 + 2C_1C_5L_1L_4L_5R_1R_4g_m + 2C_1C_5L_1L_4L_5R_1 + C_1C_5L_1L_4L_5R_4 + 2C_4C_5L_1L_4L_5R_4) + s^4(2C_1C_4L_1L_4R_1R_4 + 2C_1C_5L_1L_5R_1R_4 + 2C_1L_1L_4L_5R_1g_m + 2C_1L_1L_4L_5 + 2C_4C_5L_4L_5R_1R_4)}{2C_1C_4C_5L_1L_4L_5R_1R_4s^6 + 2R_1R_4 + s^5(2C_1C_4L_1L_4L_5R_1R_4g_m + 2C_1C_4L_1L_4L_5R_4 + 2C_1C_5L_1L_4L_5R_1R_4g_m + 2C_1C_5L_1L_4L_5R_1 + C_1C_5L_1L_4L_5R_4 + 2C_4C_5L_1L_4L_5R_4) + s^4(2C_1C_4L_1L_4R_1R_4 + 2C_1C_5L_1L_5R_1R_4 + 2C_1L_1L_4L_5R_1g_m + 2C_1L_1L_4L_5 + 2C_4C_5L_4L_5R_1R_4)}$$

10.919 INVALID-ORDER-919 $Z(s) = \left(\frac{C_1 L_1 R_1 s^2 + L_1 s + R_1}{C_1 L_1 s^2 + 1}, \infty, \infty, \frac{L_4 R_4 s}{C_4 L_4 R_4 s^2 + L_4 s + R_4}, L_5 s + R_5 + \frac{1}{C_5 s}, \infty \right)$

$$H(s) = \frac{2R_1R_4g_m + 2R_4 + s^6(2C_1C_4C_5L_1L_4L_5R_1R_4g_m + 2C_1C_4C_5L_1L_4L_5R_4) + s^5(2C_1C_4C_5L_1L_4R_1R_4R_5g_m + 2C_1C_4C_5L_1L_4R_1R_4 + 2C_1C_4C_5L_1L_4R_4R_5 + 2C_1C_5L_1L_4L_5R_1g_m + 2C_1C_5L_1L_4L_5 + 2C_4C_5L_1L_4L_5R_4g_m) + s^4(2C_1C_4L_1L_4R_1R_4g_m + 2C_1C_4L_1L_4R_4 +$$

10.920 INVALID-ORDER-920 $Z(s) = \left(\frac{C_1 L_1 R_1 s^2 + L_1 s + R_1}{C_1 L_1 s^2 + 1}, \infty, \infty, \frac{L_4 R_4 s}{C_4 L_4 R_4 s^2 + L_4 s + R_4}, \frac{L_5 R_5 s}{C_5 L_5 R_5 s^2 + L_5 s + R_5}, \infty \right)$

$$H(s) = \frac{2C_1C_4C_5L_1L_4L_5R_1R_4R_5s^6 + 2R_1R_4R_5 + s^5(2C_1C_4L_1L_4L_5R_1R_4R_5g_m + 2C_1C_4L_1L_4L_5R_1R_4 + 2C_1C_4L_1L_4L_5R_4R_5 + 2C_1C_5L_1L_4L_5R_1R_4R_5g_m + 2C_1C_5L_1L_4L_5R_1R_5 + C_1C_5L_1L_4L_5R_4R_5 + 2C_4C_5L_1L_4L_5R_4R_5) + s^4(2C_1C_4L_1L_4R_1R_4R_5 + 2C_1C_5L_1L_5R_1R_5)}{1}$$

10.921 INVALID-ORDER-921 $Z(s) = \left(\frac{C_1 L_1 R_1 s^2 + L_1 s + R_1}{C_1 L_1 s^2 + 1}, \infty, \infty, \frac{L_4 R_4 s}{C_4 L_4 R_4 s^2 + L_4 s + R_4}, \frac{C_5 L_5 R_5 s^2 + L_5 s + R_5}{C_5 L_5 s^2 + 1}, \infty \right)$

$$H(s) = \frac{2R_1R_4R_5g_m + 2R_1R_4 + 2R_4R_5 + s^6(2C_1C_4C_5L_1L_4L_5R_1R_4R_5g_m + 2C_1C_4C_5L_1L_4L_5R_1R_4 + 2C_1C_4C_5L_1L_4L_5R_4R_5) + s^5(2C_1C_4L_1L_4L_5R_1R_4g_m + 2C_1C_4L_1L_4L_5R_4 + 2C_1C_5L_1L_4L_5R_1R_4g_m + 2C_1C_5L_1L_4L_5R_1R_5g_m + 2C_1C_5L_1L_4L_5R_1 + C_1C_5L_1L_4L_5R_4 +$$

10.922 INVALID-ORDER-922 $Z(s) = \left(\frac{C_1 L_1 R_1 s^2 + L_1 s + R_1}{C_1 L_1 s^2 + 1}, \infty, \infty, \frac{L_4 R_4 s}{C_4 L_4 R_4 s^2 + L_4 s + R_4}, \frac{R_5 (C_5 L_5 s^2 + 1)}{C_5 L_5 s^2 + C_5 R_5 s + 1}, \infty \right)$

$$H(s) = \frac{2R_1R_4R_5g_m + 2R_1R_4 + 2R_4R_5 + s^6(2C_1C_4C_5L_1L_4L_5R_1R_4R_5g_m + 2C_1C_4C_5L_1L_4L_5R_1R_4 + 2C_1C_4C_5L_1L_4L_5R_4R_5) + s^5(2C_1C_4C_5L_1L_4R_1R_4R_5 + 2C_1C_5L_1L_4L_5R_1R_4g_m + 2C_1C_5L_1L_4L_5R_1R_5g_m + 2C_1C_5L_1L_4L_5R_1 + C_1C_5L_1L_4L_5R_4 + 2C_1C_5L_1L_4L_5R_5 +$$

$$\mathbf{10.942 \quad INVALID-ORDER-942} \quad Z(s) = \left(\frac{C_1 L_1 R_1 s^2 + L_1 s + R_1}{C_1 L_1 s^2 + 1}, \quad \infty, \quad \infty, \quad \frac{R_4 (C_4 L_4 s^2 + 1)}{C_4 L_4 s^2 + C_4 R_4 s + 1}, \quad \frac{R_5 (C_5 L_5 s^2 + 1)}{C_5 L_5 s^2 + C_5 R_5 s + 1}, \quad \infty \right)$$

$$H(s) = \frac{2R_1 R_4 g_m + 2R_1 R_5 g_m + 2R_1 + R_4 + 2R_5 + s^6 (2C_1 C_4 C_5 L_1 L_4 L_5 R_1 R_4 g_m + 2C_1 C_4 C_5 L_1 L_4 L_5 R_1 R_5 g_m + 2C_1 C_4 C_5 L_1 L_4 L_5 R_1 + C_1 C_4 C_5 L_1 L_4 L_5 R_4 + 2C_1 C_4 C_5 L_1 L_4 L_5 R_5) + s^5 (2C_1 C_4 C_5 L_1 L_4 R_1 R_4 R_5 g_m + 2C_1 C_4 C_5 L_1 L_4 R_1 R_5 + C_1 C_4 C_5 L_1 L_4 R_4 R_5 + 2C_1 C_4 C_5 L_1 L_4 R_5)}{2R_1 R_4 g_m + 2R_1 R_5 g_m + 2R_1 + R_4 + 2R_5 + s^6 (2C_1 C_4 C_5 L_1 L_4 L_5 R_1 R_4 g_m + 2C_1 C_4 C_5 L_1 L_4 L_5 R_1 R_5 g_m + 2C_1 C_4 C_5 L_1 L_4 L_5 R_1 + C_1 C_4 C_5 L_1 L_4 L_5 R_4 + 2C_1 C_4 C_5 L_1 L_4 L_5 R_5) + s^5 (2C_1 C_4 C_5 L_1 L_4 R_1 R_4 R_5 g_m + 2C_1 C_4 C_5 L_1 L_4 R_1 R_5 + C_1 C_4 C_5 L_1 L_4 R_4 R_5 + 2C_1 C_4 C_5 L_1 L_4 R_5)}$$

$$\mathbf{10.943 \quad INVALID-ORDER-943} \quad Z(s) = \left(\frac{R_1 (C_1 L_1 s^2 + 1)}{C_1 L_1 s^2 + C_1 R_1 s + 1}, \quad \infty, \quad \infty, \quad R_4, \quad \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{-C_1 C_5 L_1 R_1 R_4 s^3 + C_1 L_1 R_1 R_4 g_m s^2 - C_5 R_1 R_4 s + R_1 R_4 g_m}{2R_1 g_m + s^3 (2C_1 C_5 L_1 R_1 R_4 g_m + 2C_1 C_5 L_1 R_1 + C_1 C_5 L_1 R_4) + s^2 (C_1 C_5 R_1 R_4 + 2C_1 L_1 R_1 g_m + 2C_1 L_1) + s (2C_1 R_1 + 2C_5 R_1 R_4 g_m + 2C_5 R_1 + C_5 R_4) + 2}$$

$$\mathbf{10.944 \quad INVALID-ORDER-944} \quad Z(s) = \left(\frac{R_1 (C_1 L_1 s^2 + 1)}{C_1 L_1 s^2 + C_1 R_1 s + 1}, \quad \infty, \quad \infty, \quad R_4, \quad \frac{R_5}{C_5 R_5 s + 1}, \quad \infty \right)$$

$$H(s) = \frac{-C_1 C_5 L_1 R_1 R_4 R_5 s^3 - C_5 R_1 R_4 R_5 s + R_1 R_4 R_5 g_m - R_1 R_4 + s^2 (C_1 L_1 R_1 R_4 R_5 g_m - C_1 L_1 R_1 R_4)}{2R_1 R_4 g_m + 2R_1 R_5 g_m + 2R_1 + R_4 + 2R_5 + s^3 (2C_1 C_5 L_1 R_1 R_4 R_5 g_m + 2C_1 C_5 L_1 R_1 R_5 + C_1 C_5 L_1 R_4 R_5) + s^2 (C_1 C_5 R_1 R_4 R_5 + 2C_1 L_1 R_1 R_4 g_m + 2C_1 L_1 R_1 R_5 g_m + 2C_1 L_1 R_1 + C_1 L_1 R_4 + 2C_1 L_1 R_5) + s (C_1 R_1 R_4 + 2C_1 R_1 R_5 + 2C_5 R_1 R_4 R_5 g_m + 2C_5 R_1 R_5 + C_5 R_4 R_5)}$$

$$\mathbf{10.945 \quad INVALID-ORDER-945} \quad Z(s) = \left(\frac{R_1 (C_1 L_1 s^2 + 1)}{C_1 L_1 s^2 + C_1 R_1 s + 1}, \quad \infty, \quad \infty, \quad R_4, \quad R_5 + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{C_1 L_1 R_1 R_4 g_m s^2 + R_1 R_4 g_m + s^3 (C_1 C_5 L_1 R_1 R_4 R_5 g_m - C_1 C_5 L_1 R_1 R_4) + s (C_5 R_1 R_4 R_5 g_m - C_5 R_1 R_4)}{2R_1 g_m + s^3 (2C_1 C_5 L_1 R_1 R_4 g_m + 2C_1 C_5 L_1 R_1 R_5 g_m + 2C_1 C_5 L_1 R_1 + C_1 C_5 L_1 R_4 + 2C_1 C_5 L_1 R_5) + s^2 (C_1 C_5 R_1 R_4 + 2C_1 L_1 R_1 g_m + 2C_1 L_1) + s (2C_1 R_1 + 2C_5 R_1 R_4 g_m + 2C_5 R_1 R_5 g_m + 2C_5 R_1 + C_5 R_4 + 2C_5 R_5) + 2}$$

$$\mathbf{10.946 \quad INVALID-ORDER-946} \quad Z(s) = \left(\frac{R_1 (C_1 L_1 s^2 + 1)}{C_1 L_1 s^2 + C_1 R_1 s + 1}, \quad \infty, \quad \infty, \quad R_4, \quad L_5 s + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{C_1 C_5 L_1 L_5 R_1 R_4 g_m s^4 - C_1 C_5 L_1 R_1 R_4 s^3 - C_5 R_1 R_4 s + R_1 R_4 g_m + s^2 (C_1 L_1 R_1 R_4 g_m + C_5 L_5 R_1 R_4 g_m)}{2R_1 g_m + s^4 (2C_1 C_5 L_1 L_5 R_1 g_m + 2C_1 C_5 L_1 L_5) + s^3 (2C_1 C_5 L_1 R_1 R_4 g_m + 2C_1 C_5 L_1 R_1 + C_1 C_5 L_1 R_4 + 2C_1 C_5 L_5 R_1) + s^2 (C_1 C_5 R_1 R_4 + 2C_1 L_1 R_1 g_m + 2C_1 L_1 + 2C_5 L_5 R_1 g_m + 2C_5 L_5) + s (2C_1 R_1 + 2C_5 R_1 R_4 g_m + 2C_5 R_1 + C_5 R_4) + 2}$$

$$\mathbf{10.947 \quad INVALID-ORDER-947} \quad Z(s) = \left(\frac{R_1 (C_1 L_1 s^2 + 1)}{C_1 L_1 s^2 + C_1 R_1 s + 1}, \quad \infty, \quad \infty, \quad R_4, \quad \frac{L_5 s}{C_5 L_5 s^2 + 1}, \quad \infty \right)$$

$$H(s) = \frac{-C_1 C_5 L_1 L_5 R_1 R_4 s^4 + C_1 L_1 L_5 R_1 R_4 g_m s^3 + L_5 R_1 R_4 g_m s - R_1 R_4 + s^2 (-C_1 L_1 R_1 R_4 - C_5 L_5 R_1 R_4)}{2R_1 R_4 g_m + 2R_1 + R_4 + s^4 (2C_1 C_5 L_1 L_5 R_1 R_4 g_m + 2C_1 C_5 L_1 L_5 R_1 + C_1 C_5 L_1 L_5 R_4) + s^3 (C_1 C_5 L_5 R_1 R_4 + 2C_1 L_1 L_5 R_1 g_m + 2C_1 L_1 L_5) + s^2 (2C_1 L_1 R_1 R_4 g_m + 2C_1 L_1 R_1 + C_1 L_1 R_4 + 2C_1 L_5 R_1 + 2C_5 L_5 R_1 R_4 g_m + 2C_5 L_5 R_1 + C_5 L_5 R_4) + s (C_1 R_1 R_4 + 2L_5 R_1 g_m + 2L_5 R_1)}$$

$$\mathbf{10.948 \quad INVALID-ORDER-948} \quad Z(s) = \left(\frac{R_1 (C_1 L_1 s^2 + 1)}{C_1 L_1 s^2 + C_1 R_1 s + 1}, \quad \infty, \quad \infty, \quad R_4, \quad L_5 s + R_5 + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{C_1 C_5 L_1 L_5 R_1 R_4 g_m s^4 + R_1 R_4 g_m + s^3 (C_1 C_5 L_1 R_1 R_4 R_5 g_m - C_1 C_5 L_1 R_1 R_4) + s^2 (C_1 L_1 R_1 R_4 g_m + C_5 L_5 R_1 R_4 g_m) + s (C_5 R_1 R_4 R_5 g_m - C_5 R_1 R_4)}{2R_1 g_m + s^4 (2C_1 C_5 L_1 L_5 R_1 g_m + 2C_1 C_5 L_1 L_5) + s^3 (2C_1 C_5 L_1 R_1 R_4 g_m + 2C_1 C_5 L_1 R_1 R_5 g_m + 2C_1 C_5 L_1 R_1 + C_1 C_5 L_1 R_4 + 2C_1 C_5 L_1 R_5 + 2C_1 C_5 L_5 R_1) + s^2 (C_1 C_5 R_1 R_4 + 2C_1 C_5 R_1 R_5 + 2C_1 L_1 R_1 g_m + 2C_1 L_1 + 2C_5 L_5 R_1 g_m + 2C_5 L_5) + s (2C_1 R_1 + 2C_5 R_1 R_4 g_m + 2C_5 R_1 R_5)}$$

$$\mathbf{10.949 \quad INVALID-ORDER-949} \quad Z(s) = \left(\frac{R_1 (C_1 L_1 s^2 + 1)}{C_1 L_1 s^2 + C_1 R_1 s + 1}, \quad \infty, \quad \infty, \quad R_4, \quad \frac{L_5 R_5 s}{C_5 L_5 R_5 s^2 + L_5 s + R_5}, \quad \infty \right)$$

$$H(s) = \frac{-C_1 C_5 L_1 L_5 R_1 R_4 R_5 s^4 - R_1 R_4 R_5 + s^3 (C_1 L_1 L_5 R_1 R_4 R_5 g_m - C_1 L_1 L_5 R_1 R_4) + s^2 (-C_1 L_1 R_1 R_4 R_5 - C_5 L_5 R_1 R_4 R_5) + s (L_5 R_1 R_4 R_5 g_m - L_5 R_1 R_4 R_5)}{2R_1 R_4 R_5 g_m + 2R_1 R_5 + R_4 R_5 + s^4 (2C_1 C_5 L_1 L_5 R_1 R_4 R_5 g_m + 2C_1 C_5 L_1 L_5 R_1 R_5 + C_1 C_5 L_1 L_5 R_4 R_5) + s^3 (C_1 C_5 L_5 R_1 R_4 R_5 + 2C_1 L_1 L_5 R_1 R_4 g_m + 2C_1 L_1 L_5 R_1 R_5 g_m + 2C_1 L_1 L_5 R_1 + C_1 L_1 L_5 R_4 + 2C_1 L_1 L_5 R_5) + s^2 (2C_1 L_1 R_1 R_4 R_5 g_m + 2C_1 L_1 R_1 R_5 + C_1 L_1 R_4 R_5)}$$

$$\mathbf{10.950 \quad INVALID-ORDER-950} \quad Z(s) = \left(\frac{R_1 (C_1 L_1 s^2 + 1)}{C_1 L_1 s^2 + C_1 R_1 s + 1}, \quad \infty, \quad \infty, \quad R_4, \quad \frac{C_5 L_5 R_5 s^2 + L_5 s + R_5}{C_5 L_5 s^2 + 1}, \quad \infty \right)$$

$$H(s) = \frac{C_1 L_1 L_5 R_1 R_4 g_m s^3 + L_5 R_1 R_4 g_m s + R_1 R_4 R_5 g_m - R_1 R_4 + s^4 (C_1 C_5 L_1 L_5 R_1 R_4 R_5 g_m - C_1 C_5 L_1 L_5 R_1 R_4) + s^2 (C_1 L_1 R_1 R_4 R_5 g_m - C_1 L_1 R_1 R_4 R_5)}{2R_1 R_4 g_m + 2R_1 R_5 g_m + 2R_1 + R_4 + 2R_5 + s^4 (2C_1 C_5 L_1 L_5 R_1 R_4 g_m + 2C_1 C_5 L_1 L_5 R_1 R_5 g_m + 2C_1 C_5 L_1 L_5 R_1 + C_1 C_5 L_1 L_5 R_4 + 2C_1 C_5 L_1 L_5 R_5) + s^3 (C_1 C_5 L_5 R_1 R_4 + 2C_1 C_5 L_5 R_1 R_5 + 2C_1 L_1 L_5 R_1 g_m + 2C_1 L_1 L_5) + s^2 (2C_1 L_1 R_1 R_4 g_m + 2C_1 L_1 R_1 R_5 g_m + 2C_1 L_1 R_4 R_5)}$$

$$\mathbf{10.960 \quad INVALID-ORDER-960} \quad Z(s) = \left(\frac{R_1(C_1L_1s^2+1)}{C_1L_1s^2+C_1R_1s+1}, \quad \infty, \quad \infty, \quad \frac{1}{C_4s}, \quad \frac{C_5L_5R_5s^2+L_5s+R_5}{C_5L_5s^2+1}, \quad \infty \right)$$

$$H(s) = \frac{C_1L_1L_5R_1g_ms^3 + L_5R_1g_ms + R_1R_5g_m - R_1 + s^4(C_1C_5L_1L_5R_1R_5g_m - C_1C_5L_1L_5R_1) + s^2(C_1L_1R_1R_5g_m - C_1L_1R_1R_5)}{2R_1g_m + s^5(2C_1C_4C_5L_1L_5R_1R_5g_m + 2C_1C_4C_5L_1L_5R_1 + 2C_1C_4C_5L_1L_5R_5) + s^4(2C_1C_4C_5L_5R_1R_5 + 2C_1C_4L_1L_5R_1g_m + 2C_1C_4L_1L_5 + 2C_1C_5L_1L_5R_1g_m + C_1C_5L_1L_5) + s^3(2C_1C_4L_1R_1R_5g_m + 2C_1C_4L_1R_1 + 2C_1C_4L_1R_5 + 2C_1C_4L_5R_1 + C_1C_5L_5R_1 + 2C_4C_5L_5R_1) + s^2(2C_1C_4L_1R_1R_5 + 2C_1C_4L_1R_5 + 2C_1C_4L_5R_1 + C_1C_5L_5R_1) + s(C_1R_1R_4 + 2C_1R_1R_5 + 2C_4R_1R_4R_5g_m + 2C_4R_1R_4 + 2C_4R_1R_5) + C_1R_1R_4 + 2C_1R_1R_5 + 2C_4R_1R_4R_5g_m + 2C_4R_1R_4 + 2C_4R_1R_5}$$

$$\mathbf{10.961 \quad INVALID-ORDER-961} \quad Z(s) = \left(\frac{R_1(C_1L_1s^2+1)}{C_1L_1s^2+C_1R_1s+1}, \quad \infty, \quad \infty, \quad \frac{1}{C_4s}, \quad \frac{R_5(C_5L_5s^2+1)}{C_5L_5s^2+C_5R_5s+1}, \quad \infty \right)$$

$$H(s) = \frac{-C_1C_5L_1R_1R_5s^3 - C_5R_1R_5s + R_1R_5g_m - R_1 + s^4(C_1C_5L_1L_5R_1R_5g_m - C_1C_5L_1L_5R_1) + s^2(C_1L_1R_1R_5g_m - C_1L_1R_1R_5)}{2R_1g_m + s^5(2C_1C_4C_5L_1L_5R_1R_5g_m + 2C_1C_4C_5L_1L_5R_1 + 2C_1C_4C_5L_1L_5R_5) + s^4(2C_1C_4C_5L_1R_1R_5 + 2C_1C_4C_5L_5R_1R_5 + 2C_1C_5L_1L_5R_1g_m + C_1C_5L_1L_5) + s^3(2C_1C_4L_1R_1R_5g_m + 2C_1C_4L_1R_1 + 2C_1C_4L_1R_5 + 2C_1C_4L_5R_1 + C_1C_5L_5R_1 + 2C_4C_5L_5R_1) + s^2(2C_1C_4L_1R_1R_5 + 2C_1C_4L_1R_5 + 2C_1C_4L_5R_1 + C_1C_5L_5R_1) + s(C_1R_1R_4 + 2C_1R_1R_5 + 2C_4R_1R_4R_5g_m + 2C_4R_1R_4 + 2C_4R_1R_5) + C_1R_1R_4 + 2C_1R_1R_5 + 2C_4R_1R_4R_5g_m + 2C_4R_1R_4 + 2C_4R_1R_5}$$

$$\mathbf{10.962 \quad INVALID-ORDER-962} \quad Z(s) = \left(\frac{R_1(C_1L_1s^2+1)}{C_1L_1s^2+C_1R_1s+1}, \quad \infty, \quad \infty, \quad \frac{R_4}{C_4R_4s+1}, \quad R_5, \quad \infty \right)$$

$$H(s) = \frac{R_1R_4R_5g_m - R_1R_4 + s^2(C_1L_1R_1R_4R_5g_m - C_1L_1R_1R_4)}{2R_1R_4g_m + 2R_1R_5g_m + 2R_1 + R_4 + 2R_5 + s^3(2C_1C_4L_1R_1R_4R_5g_m + 2C_1C_4L_1R_1R_4 + 2C_1C_4L_1R_4R_5) + s^2(2C_1C_4R_1R_4R_5 + 2C_1L_1R_1R_4g_m + 2C_1L_1R_1R_5g_m + 2C_1L_1R_1 + C_1L_1R_4 + 2C_1L_1R_5) + s(C_1R_1R_4 + 2C_1R_1R_5 + 2C_4R_1R_4R_5g_m + 2C_4R_1R_4 + 2C_4R_1R_5) + C_1R_1R_4 + 2C_1R_1R_5 + 2C_4R_1R_4R_5g_m + 2C_4R_1R_4 + 2C_4R_1R_5}$$

$$\mathbf{10.963 \quad INVALID-ORDER-963} \quad Z(s) = \left(\frac{R_1(C_1L_1s^2+1)}{C_1L_1s^2+C_1R_1s+1}, \quad \infty, \quad \infty, \quad \frac{R_4}{C_4R_4s+1}, \quad \frac{1}{C_5s}, \quad \infty \right)$$

$$H(s) = \frac{-C_1C_5L_1R_1R_4s^3 + C_1L_1R_1R_4g_ms^2 - C_5R_1R_4s + R_1R_4g_m}{2C_1C_4C_5L_1R_1R_4s^4 + 2R_1g_m + s^3(2C_1C_4L_1R_1R_4g_m + 2C_1C_4L_1R_4 + 2C_1C_5L_1R_1R_4g_m + 2C_1C_5L_1R_1 + C_1C_5L_1R_4) + s^2(2C_1C_4R_1R_4 + C_1C_5R_1R_4 + 2C_1L_1R_1g_m + 2C_1L_1 + 2C_4C_5R_1R_4) + s(2C_1R_1 + 2C_4R_1R_4g_m + 2C_4R_4 + 2C_5R_1R_4g_m + 2C_5R_1 + C_5R_4) + C_1R_1R_4 + 2C_1R_1R_5 + 2C_4R_1R_4R_5g_m + 2C_4R_1R_4 + 2C_4R_1R_5}$$

$$\mathbf{10.964 \quad INVALID-ORDER-964} \quad Z(s) = \left(\frac{R_1(C_1L_1s^2+1)}{C_1L_1s^2+C_1R_1s+1}, \quad \infty, \quad \infty, \quad \frac{R_4}{C_4R_4s+1}, \quad \frac{R_5}{C_5R_5s+1}, \quad \infty \right)$$

$$H(s) = \frac{-C_1C_5L_1R_1R_4R_5s^3 - C_5R_1R_4R_5s + R_1R_4R_5g_m - R_1R_4 + s^2(C_1L_1R_1R_4R_5g_m - C_1L_1R_1R_4)}{2C_1C_4C_5L_1R_1R_4R_5s^4 + 2R_1R_4g_m + 2R_1R_5g_m + 2R_1 + R_4 + 2R_5 + s^3(2C_1C_4L_1R_1R_4R_5g_m + 2C_1C_4L_1R_1R_4 + 2C_1C_4L_1R_4R_5 + 2C_1C_5L_1R_1R_4R_5g_m + 2C_1C_5L_1R_1R_5 + C_1C_5L_1R_4R_5) + s^2(2C_1C_4R_1R_4R_5 + C_1C_5R_1R_4R_5 + 2C_1L_1R_1R_4g_m + 2C_1L_1R_1R_5g_m + 2C_1L_1R_1R_4 + 2C_1L_1R_5) + s(C_1R_1R_4 + 2C_1R_1R_5 + 2C_4R_1R_4R_5g_m + 2C_4R_1R_4 + 2C_4R_1R_5) + C_1R_1R_4 + 2C_1R_1R_5 + 2C_4R_1R_4R_5g_m + 2C_4R_1R_4 + 2C_4R_1R_5}$$

$$\mathbf{10.965 \quad INVALID-ORDER-965} \quad Z(s) = \left(\frac{R_1(C_1L_1s^2+1)}{C_1L_1s^2+C_1R_1s+1}, \quad \infty, \quad \infty, \quad \frac{R_4}{C_4R_4s+1}, \quad R_5 + \frac{1}{C_5s}, \quad \infty \right)$$

$$H(s) = \frac{C_1L_1R_1R_4g_ms^2 + R_1R_4g_m + s^3(C_1C_5L_1R_1R_4R_5g_m - C_1C_5L_1R_1R_4) + s(C_5R_1R_4R_5g_m - C_5R_1R_4R_5)}{2R_1g_m + s^4(2C_1C_4C_5L_1R_1R_4R_5g_m + 2C_1C_4C_5L_1R_1R_4 + 2C_1C_4C_5L_1R_4R_5) + s^3(2C_1C_4C_5R_1R_4R_5 + 2C_1C_4L_1R_1R_4g_m + 2C_1C_4L_1R_4 + 2C_1C_5L_1R_1R_4g_m + 2C_1C_5L_1R_1R_5g_m + 2C_1C_5L_1R_1 + C_1C_5L_1R_4 + 2C_1C_5L_1R_5) + s^2(2C_1C_4R_1R_4 + C_1C_5R_1R_4 + 2C_1L_1R_1R_4g_m + 2C_1L_1R_1R_5g_m + 2C_1L_1R_1R_4 + 2C_1L_1R_5) + s(C_1R_1R_4 + 2C_1R_1R_5 + 2C_4R_1R_4R_5g_m + 2C_4R_1R_4 + 2C_4R_1R_5) + C_1R_1R_4 + 2C_1R_1R_5 + 2C_4R_1R_4R_5g_m + 2C_4R_1R_4 + 2C_4R_1R_5}$$

$$\mathbf{10.966 \quad INVALID-ORDER-966} \quad Z(s) = \left(\frac{R_1(C_1L_1s^2+1)}{C_1L_1s^2+C_1R_1s+1}, \quad \infty, \quad \infty, \quad \frac{R_4}{C_4R_4s+1}, \quad L_5s + \frac{1}{C_5s}, \quad \infty \right)$$

$$H(s) = \frac{C_1C_5L_1L_5R_1R_4g_ms^4 - C_1C_5L_1R_1R_4s^3 - C_5R_1R_4s + R_1R_4g_m + s^2(C_1L_1R_1R_4g_m + C_1L_1R_1R_5)}{2R_1g_m + s^5(2C_1C_4C_5L_1L_5R_1R_4g_m + 2C_1C_4C_5L_1L_5R_4) + s^4(2C_1C_4C_5L_1R_1R_4 + 2C_1C_4C_5L_5R_1R_4 + 2C_1C_5L_1L_5R_1g_m + 2C_1C_5L_1L_5) + s^3(2C_1C_4L_1R_1R_4g_m + 2C_1C_4L_1R_4 + 2C_1C_5L_1R_1R_4g_m + 2C_1C_5L_1R_1 + C_1C_5L_1R_4 + 2C_1C_5L_5R_1 + 2C_4C_5L_5R_1R_4g_m + 2C_4C_5L_5R_1) + s^2(2C_1C_4L_1R_1R_4 + 2C_1C_4L_5R_1R_4 + C_1C_5L_5R_1R_4 + 2C_1L_1L_5R_1g_m + 2C_1L_1L_5 + 2C_4C_5L_5R_1R_4) + s(C_1R_1R_4 + 2C_1R_1R_5 + 2C_4R_1R_4R_5g_m + 2C_4R_1R_4 + 2C_4R_1R_5) + C_1R_1R_4 + 2C_1R_1R_5 + 2C_4R_1R_4R_5g_m + 2C_4R_1R_4 + 2C_4R_1R_5}$$

$$\mathbf{10.967 \quad INVALID-ORDER-967} \quad Z(s) = \left(\frac{R_1(C_1L_1s^2+1)}{C_1L_1s^2+C_1R_1s+1}, \quad \infty, \quad \infty, \quad \frac{R_4}{C_4R_4s+1}, \quad \frac{L_5s}{C_5L_5s^2+1}, \quad \infty \right)$$

$$H(s) = \frac{-C_1C_5L_1L_5R_1R_4s^4 + C_1L_1L_5R_1R_4g_ms^3 + L_5R_1R_4g_ms - R_1R_4 + s^2(-C_1L_1R_1R_4 - C_5L_5R_1R_4)}{2C_1C_4C_5L_1L_5R_1R_4s^5 + 2R_1R_4g_m + 2R_1 + R_4 + s^4(2C_1C_4L_1L_5R_1R_4g_m + 2C_1C_4L_1L_5R_4 + 2C_1C_5L_1L_5R_1R_4g_m + 2C_1C_5L_1L_5R_1 + C_1C_5L_1L_5R_4) + s^3(2C_1C_4L_1R_1R_4 + 2C_1C_4L_5R_1R_4 + C_1C_5L_5R_1R_4 + 2C_1L_1L_5R_1g_m + 2C_1L_1L_5 + 2C_4C_5L_5R_1R_4) + s^2(2C_1C_4L_1R_1R_4 + 2C_1C_4L_5R_1R_4 + C_1C_5L_5R_1R_4 + 2C_1L_1L_5R_1g_m + 2C_1L_1L_5 + 2C_4C_5L_5R_1R_4) + s(C_1R_1R_4 + 2C_1R_1R_5 + 2C_4R_1R_4R_5g_m + 2C_4R_1R_4 + 2C_4R_1R_5) + C_1R_1R_4 + 2C_1R_1R_5 + 2C_4R_1R_4R_5g_m + 2C_4R_1R_4 + 2C_4R_1R_5}$$

$$\mathbf{10.968 \quad INVALID-ORDER-968} \quad Z(s) = \left(\frac{R_1(C_1L_1s^2+1)}{C_1L_1s^2+C_1R_1s+1}, \quad \infty, \quad \infty, \quad \frac{R_4}{C_4R_4s+1}, \quad L_5s + R_5 + \frac{1}{C_5s}, \quad \infty \right)$$

$$H(s) = \frac{C_1C_5L_1L_5R_1R_4g_ms^3 + R_1R_4g_m + s^2(C_1L_1R_1R_4g_m + C_1L_1R_1R_5)}{2R_1g_m + s^5(2C_1C_4C_5L_1L_5R_1R_4g_m + 2C_1C_4C_5L_1L_5R_4) + s^4(2C_1C_4C_5L_1R_1R_4R_5g_m + 2C_1C_4C_5L_1R_1R_4 + 2C_1C_4C_5L_1R_4R_5 + 2C_1C_4C_5L_5R_1R_4 + 2C_1C_5L_1L_5R_1g_m + 2C_1C_5L_1L_5) + s^3(2C_1C_4C_5R_1R_4R_5 + 2C_1C_4L_1R_1R_4g_m + 2C_1C_4L_1R_4 + 2C_1C_5L_1R_1R_4g_m + 2C_1C_5L_1R_1R_5g_m + 2C_1C_5L_1R_1 + C_1C_5L_1R_4 + 2C_1C_5L_5R_1 + 2C_4C_5L_5R_1R_4g_m + 2C_4C_5L_5R_1) + s^2(2C_1C_4L_1R_1R_4 + 2C_1C_4L_5R_1R_4 + C_1C_5L_5R_1R_4 + 2C_1L_1L_5R_1g_m + 2C_1L_1L_5 + 2C_4C_5L_5R_1R_4) + s(C_1R_1R_4 + 2C_1R_1R_5 + 2C_4R_1R_4R_5g_m + 2C_4R_1R_4 + 2C_4R_1R_5) + C_1R_1R_4 + 2C_1R_1R_5 + 2C_4R_1R_4R_5g_m + 2C_4R_1R_4 + 2C_4R_1R_5}$$

$$\mathbf{10.978 \quad INVALID-ORDER-978} \quad Z(s) = \left(\frac{R_1(C_1L_1s^2+1)}{C_1L_1s^2+C_1R_1s+1}, \quad \infty, \quad \infty, \quad R_4 + \frac{1}{C_4s}, \quad L_5s + R_5 + \frac{1}{C_5s}, \quad \infty \right)$$

$$H(s) = \frac{C_1C_4C_5L_1L_5R_1R_4g_ms^5 + R_1g_m + s^4(C_1C_4C_5L_1R_1R_4R_5g_m - C_1C_4C_5L_1R_1R_4 + C_1C_5L_1L_5R_1g_m) + s^3(C_1C_4L_1R_1R_4g_m + C_1C_5L_1R_1R_5g_m - C_1C_5L_1R_1 + C_4C_5L_5R_1R_4g_m) + s^2(C_1L_1R_1R_4g_m + C_1C_5L_1R_1R_5g_m - C_1C_5L_1R_1 + C_4C_5L_5R_1R_4g_m) + s(C_1L_1R_1R_4g_m + C_1C_5L_1R_1R_5g_m - C_1C_5L_1R_1 + C_4C_5L_5R_1R_4g_m) + R_1g_m}{s^5(2C_1C_4C_5L_1L_5R_1g_m + 2C_1C_4C_5L_1L_5) + s^4(2C_1C_4C_5L_1R_1R_4g_m + 2C_1C_4C_5L_1R_1R_5g_m + 2C_1C_4C_5L_1R_1 + C_1C_4C_5L_1R_4 + 2C_1C_4C_5L_1R_5 + 2C_1C_4C_5L_5R_1) + s^3(C_1C_4C_5R_1R_4 + 2C_1C_4C_5R_1R_5 + 2C_1C_4L_1R_1g_m + 2C_1C_4L_1 + 2C_1C_5L_1R_1g_m + C_1C_5L_1 + C_4C_5L_5R_1R_4g_m) + s^2(C_1L_1R_1R_4g_m + C_1C_5L_1R_1R_5g_m - C_1C_5L_1R_1 + C_4C_5L_5R_1R_4g_m) + s(C_1L_1R_1R_4g_m + C_1C_5L_1R_1R_5g_m - C_1C_5L_1R_1 + C_4C_5L_5R_1R_4g_m) + R_1g_m}$$

$$\mathbf{10.979 \quad INVALID-ORDER-979} \quad Z(s) = \left(\frac{R_1(C_1L_1s^2+1)}{C_1L_1s^2+C_1R_1s+1}, \quad \infty, \quad \infty, \quad R_4 + \frac{1}{C_4s}, \quad \frac{L_5R_5s}{C_5L_5R_5s^2+L_5s+R_5}, \quad \infty \right)$$

$$H(s) = \frac{-C_1C_4C_5L_1L_5R_1R_4R_5s^5 - R_1R_5 + s^4(C_1C_4L_1L_5R_1R_4R_5g_m - C_1C_4C_5L_1L_5R_1R_4 + C_1C_5L_1L_5R_1g_m) + s^3(C_1C_4L_1R_1R_4g_m + C_1C_5L_1R_1R_5g_m - C_1C_5L_1R_1 + C_4C_5L_5R_1R_4g_m) + s^2(C_1L_1R_1R_4g_m + C_1C_5L_1R_1R_5g_m - C_1C_5L_1R_1 + C_4C_5L_5R_1R_4g_m) + s(C_1L_1R_1R_4g_m + C_1C_5L_1R_1R_5g_m - C_1C_5L_1R_1 + C_4C_5L_5R_1R_4g_m) + R_1g_m}{2R_1R_5g_m + R_5 + s^5(2C_1C_4C_5L_1L_5R_1R_4R_5g_m + 2C_1C_4C_5L_1L_5R_1R_5 + C_1C_4C_5L_1L_5R_4R_5) + s^4(C_1C_4C_5L_5R_1R_4R_5 + 2C_1C_4L_1L_5R_1R_4g_m + 2C_1C_4L_1L_5R_1R_5g_m + 2C_1C_4L_1L_5R_1 + C_1C_4L_1L_5R_4 + 2C_1C_4L_1L_5R_5 + 2C_1C_5L_1L_5R_1R_5g_m + C_1C_5L_1L_5R_5) + s^3(C_1C_4C_5R_1R_4 + 2C_1C_4C_5R_1R_5 + 2C_1C_4L_1R_1g_m + 2C_1C_4L_1 + 2C_1C_5L_1R_1g_m + C_1C_5L_1 + C_4C_5L_5R_1R_4g_m) + s^2(C_1L_1R_1R_4g_m + C_1C_5L_1R_1R_5g_m - C_1C_5L_1R_1 + C_4C_5L_5R_1R_4g_m) + s(C_1L_1R_1R_4g_m + C_1C_5L_1R_1R_5g_m - C_1C_5L_1R_1 + C_4C_5L_5R_1R_4g_m) + R_1g_m}$$

$$\mathbf{10.980 \quad INVALID-ORDER-980} \quad Z(s) = \left(\frac{R_1(C_1L_1s^2+1)}{C_1L_1s^2+C_1R_1s+1}, \quad \infty, \quad \infty, \quad R_4 + \frac{1}{C_4s}, \quad \frac{C_5L_5R_5s^2+L_5s+R_5}{C_5L_5s^2+1}, \quad \infty \right)$$

$$H(s) = \frac{R_1R_5g_m - R_1 + s^5(C_1C_4C_5L_1L_5R_1R_4R_5g_m - C_1C_4C_5L_1L_5R_1R_4) + s^4(C_1C_4L_1L_5R_1R_4g_m + C_1C_5L_1L_5R_1R_5g_m - C_1C_5L_1L_5R_1 + C_4C_5L_5R_1R_4g_m) + s^3(C_1C_4L_1R_1R_4g_m + C_1C_5L_1R_1R_5g_m - C_1C_5L_1R_1 + C_4C_5L_5R_1R_4g_m) + s^2(C_1L_1R_1R_4g_m + C_1C_5L_1R_1R_5g_m - C_1C_5L_1R_1 + C_4C_5L_5R_1R_4g_m) + s(C_1L_1R_1R_4g_m + C_1C_5L_1R_1R_5g_m - C_1C_5L_1R_1 + C_4C_5L_5R_1R_4g_m) + R_1g_m}{2R_1g_m + s^5(2C_1C_4C_5L_1L_5R_1R_4g_m + 2C_1C_4C_5L_1L_5R_1R_5g_m + 2C_1C_4C_5L_1L_5R_1 + C_1C_4C_5L_1L_5R_4 + 2C_1C_4C_5L_1L_5R_5) + s^4(C_1C_4C_5L_5R_1R_4 + 2C_1C_4C_5L_5R_1R_5 + 2C_1C_4L_1L_5R_1g_m + 2C_1C_4L_1L_5 + 2C_1C_5L_1L_5R_1g_m + C_1C_5L_1L_5) + s^3(2C_1C_4L_1R_1R_4g_m + 2C_1C_4L_1R_1R_5g_m - 2C_1C_4L_1R_1 + C_4C_5L_5R_1R_4g_m) + s^2(C_1L_1R_1R_4g_m + C_1C_5L_1R_1R_5g_m - C_1C_5L_1R_1 + C_4C_5L_5R_1R_4g_m) + s(C_1L_1R_1R_4g_m + C_1C_5L_1R_1R_5g_m - C_1C_5L_1R_1 + C_4C_5L_5R_1R_4g_m) + R_1g_m}$$

$$\mathbf{10.981 \quad INVALID-ORDER-981} \quad Z(s) = \left(\frac{R_1(C_1L_1s^2+1)}{C_1L_1s^2+C_1R_1s+1}, \quad \infty, \quad \infty, \quad R_4 + \frac{1}{C_4s}, \quad \frac{R_5(C_5L_5s^2+1)}{C_5L_5s^2+C_5R_5s+1}, \quad \infty \right)$$

$$H(s) = \frac{R_1R_5g_m - R_1 + s^5(C_1C_4C_5L_1L_5R_1R_4R_5g_m - C_1C_4C_5L_1L_5R_1R_4) + s^4(C_1C_4L_1L_5R_1R_4g_m + C_1C_5L_1L_5R_1R_5g_m - C_1C_5L_1L_5R_1 + C_4C_5L_5R_1R_4g_m) + s^3(C_1C_4L_1R_1R_4g_m + C_1C_5L_1R_1R_5g_m - C_1C_5L_1R_1 + C_4C_5L_5R_1R_4g_m) + s^2(C_1L_1R_1R_4g_m + C_1C_5L_1R_1R_5g_m - C_1C_5L_1R_1 + C_4C_5L_5R_1R_4g_m) + s(C_1L_1R_1R_4g_m + C_1C_5L_1R_1R_5g_m - C_1C_5L_1R_1 + C_4C_5L_5R_1R_4g_m) + R_1g_m}{2R_1g_m + s^5(2C_1C_4C_5L_1L_5R_1R_4g_m + 2C_1C_4C_5L_1L_5R_1R_5g_m + 2C_1C_4C_5L_1L_5R_1 + C_1C_4C_5L_1L_5R_4 + 2C_1C_4C_5L_1L_5R_5) + s^4(2C_1C_4C_5L_1R_1R_4R_5g_m + 2C_1C_4C_5L_1R_1R_5 + C_1C_4C_5L_1R_4R_5 + C_1C_4C_5L_5R_1R_4 + 2C_1C_4C_5L_5R_1R_5 + 2C_1C_5L_1L_5R_1g_m + C_1C_5L_1L_5) + s^3(2C_1C_4L_1R_1R_4g_m + 2C_1C_4L_1R_1R_5g_m - 2C_1C_4L_1R_1 + C_4C_5L_5R_1R_4g_m) + s^2(C_1L_1R_1R_4g_m + C_1C_5L_1R_1R_5g_m - C_1C_5L_1R_1 + C_4C_5L_5R_1R_4g_m) + s(C_1L_1R_1R_4g_m + C_1C_5L_1R_1R_5g_m - C_1C_5L_1R_1 + C_4C_5L_5R_1R_4g_m) + R_1g_m}$$

$$\mathbf{10.982 \quad INVALID-ORDER-982} \quad Z(s) = \left(\frac{R_1(C_1L_1s^2+1)}{C_1L_1s^2+C_1R_1s+1}, \quad \infty, \quad \infty, \quad L_4s + \frac{1}{C_4s}, \quad R_5, \quad \infty \right)$$

$$H(s) = \frac{R_1R_5g_m - R_1 + s^4(C_1C_4L_1L_4R_1R_5g_m - C_1C_4L_1L_4R_1) + s^2(C_1L_1R_1R_5g_m - C_1L_1R_1 + C_4L_4R_1R_5g_m - C_4L_4R_1) + s(C_1L_1R_1R_5g_m - C_1L_1R_1 + C_4L_4R_1R_5g_m - C_4L_4R_1) + R_1g_m}{2R_1g_m + s^4(2C_1C_4L_1L_4R_1g_m + C_1C_4L_1L_4) + s^3(2C_1C_4L_1R_1R_5g_m + 2C_1C_4L_1R_1 + 2C_1C_4L_1R_5 + C_1C_4L_4R_1) + s^2(2C_1C_4R_1R_5 + 2C_1L_1R_1g_m + C_1L_1 + 2C_4L_4R_1g_m + C_4L_4) + s(C_1R_1 + 2C_4R_1R_5g_m + 2C_4R_1 + 2C_4R_5) + 1}$$

$$\mathbf{10.983 \quad INVALID-ORDER-983} \quad Z(s) = \left(\frac{R_1(C_1L_1s^2+1)}{C_1L_1s^2+C_1R_1s+1}, \quad \infty, \quad \infty, \quad L_4s + \frac{1}{C_4s}, \quad \frac{1}{C_5s}, \quad \infty \right)$$

$$H(s) = \frac{-C_1C_4C_5L_1L_4R_1s^5 + C_1C_4L_1L_4R_1g_ms^4 - C_5R_1s + R_1g_m + s^3(-C_1C_5L_1R_1 - C_4C_5L_4R_1) + s^2(C_1L_1R_1g_m + C_4L_4R_1g_m) + s(C_1L_1R_1g_m + C_4L_4R_1g_m) + R_1g_m}{s^5(2C_1C_4C_5L_1L_4R_1g_m + C_1C_4C_5L_1L_4) + s^4(2C_1C_4C_5L_1R_1 + C_1C_4C_5L_4R_1) + s^3(2C_1C_4L_1R_1g_m + 2C_1C_4L_1 + 2C_1C_5L_1R_1g_m + C_1C_5L_1 + 2C_4C_5L_4R_1g_m + C_4C_5L_4) + s^2(2C_1C_4R_1 + C_1C_5R_1 + 2C_4C_5R_1) + s(2C_4R_1g_m + 2C_4 + 2C_5R_1g_m + C_5) + R_1g_m}$$

$$\mathbf{10.984 \quad INVALID-ORDER-984} \quad Z(s) = \left(\frac{R_1(C_1L_1s^2+1)}{C_1L_1s^2+C_1R_1s+1}, \quad \infty, \quad \infty, \quad L_4s + \frac{1}{C_4s}, \quad \frac{R_5}{C_5R_5s+1}, \quad \infty \right)$$

$$H(s) = \frac{-C_1C_4C_5L_1L_4R_1R_5s^5 - C_5R_1R_5s + R_1R_5g_m - R_1 + s^4(C_1C_4L_1L_4R_1R_5g_m - C_1C_4L_1L_4R_1) + s^3(-C_1C_5L_1R_1R_5 - C_4C_5L_4R_1R_5) + s^2(C_1L_1R_1R_5g_m + C_4L_4R_1R_5g_m) + s(C_1L_1R_1R_5g_m + C_4L_4R_1R_5g_m) + R_1R_5g_m}{2R_1g_m + s^5(2C_1C_4C_5L_1L_4R_1R_5g_m + C_1C_4C_5L_1L_4R_5) + s^4(2C_1C_4C_5L_1R_1R_5 + C_1C_4C_5L_4R_1R_5 + 2C_1C_4L_1L_4R_1g_m + C_1C_4L_1L_4) + s^3(2C_1C_4L_1R_1R_5g_m + 2C_1C_4L_1R_1 + 2C_1C_4L_1R_5 + C_1C_4L_4R_1 + 2C_1C_5L_1R_1R_5g_m + C_1C_5L_1R_5 + 2C_4C_5L_4R_1R_5g_m + C_4C_5L_4) + s^2(2C_1C_4R_1 + C_1C_5R_1 + 2C_4C_5R_1) + s(2C_4R_1g_m + 2C_4 + 2C_5R_1g_m + C_5) + R_1R_5g_m}$$

$$\mathbf{10.985 \quad INVALID-ORDER-985} \quad Z(s) = \left(\frac{R_1(C_1L_1s^2+1)}{C_1L_1s^2+C_1R_1s+1}, \quad \infty, \quad \infty, \quad L_4s + \frac{1}{C_4s}, \quad R_5 + \frac{1}{C_5s}, \quad \infty \right)$$

$$H(s) = \frac{C_1C_4L_1L_4R_1g_ms^4 + R_1g_m + s^5(C_1C_4C_5L_1L_4R_1R_5g_m - C_1C_4C_5L_1L_4R_1) + s^3(C_1C_5L_1R_1R_5g_m - C_1C_5L_1R_1 + C_4C_5L_4R_1R_5g_m - C_4C_5L_4R_1) + s^2(C_1L_1R_1g_m + C_4L_4R_1g_m) + s(C_5R_1R_5g_m + C_4C_5L_4R_1R_5g_m) + R_1R_5g_m}{s^5(2C_1C_4C_5L_1L_4R_1g_m + C_1C_4C_5L_1L_4) + s^4(2C_1C_4C_5L_1R_1R_5g_m + 2C_1C_4C_5L_1R_1 + 2C_1C_4C_5L_1R_5 + C_1C_4C_5L_4R_1) + s^3(2C_1C_4C_5R_1R_5 + 2C_1C_4L_1R_1g_m + 2C_1C_4L_1 + 2C_1C_5L_1R_1g_m + C_1C_5L_1 + 2C_4C_5L_4R_1g_m + C_4C_5L_4) + s^2(2C_1C_4R_1 + C_1C_5R_1 + 2C_4C_5R_1) + s(2C_4R_1g_m + 2C_4 + 2C_5R_1g_m + C_5) + R_1R_5g_m}$$

$$\mathbf{10.986 \quad INVALID-ORDER-986} \quad Z(s) = \left(\frac{R_1(C_1L_1s^2+1)}{C_1L_1s^2+C_1R_1s+1}, \quad \infty, \quad \infty, \quad L_4s + \frac{1}{C_4s}, \quad L_5s + \frac{1}{C_5s}, \quad \infty \right)$$

$$H(s) = \frac{C_1C_4C_5L_1L_4L_5R_1g_ms^6 - C_1C_4C_5L_1L_4R_1s^5 - C_5R_1s + R_1g_m + s^4(C_1C_4L_1L_4R_1g_m + C_1C_5L_1L_5R_1g_m + C_4C_5L_4L_5R_1g_m) + s^3(-C_1C_5L_1R_1 - C_4C_5L_4R_1) + s^2(C_1L_1R_1g_m + C_4L_4R_1g_m + C_5L_5R_1g_m) + s(C_1L_1R_1g_m + C_4L_4R_1g_m + C_5L_5R_1g_m) + R_1g_m}{s^5(2C_1C_4C_5L_1L_4R_1g_m + C_1C_4C_5L_1L_4 + 2C_1C_4C_5L_1L_5R_1g_m + 2C_1C_4C_5L_1L_5) + s^4(2C_1C_4C_5L_1R_1 + C_1C_4C_5L_4R_1 + 2C_1C_4C_5L_5R_1) + s^3(2C_1C_4L_1R_1g_m + 2C_1C_4L_1 + 2C_1C_5L_1R_1g_m + C_1C_5L_1 + 2C_4C_5L_4R_1g_m + C_4C_5L_4 + 2C_4C_5L_5R_1g_m + 2C_4C_5L_5) + s^2(2C_1C_4R_1 + C_1C_5R_1 + 2C_4C_5R_1) + s(2C_4R_1g_m + 2C_4 + 2C_5R_1g_m + C_5) + R_1g_m}$$

10.987 INVALID-ORDER-987 $Z(s) = \left(\frac{R_1(C_1 L_1 s^2 + 1)}{C_1 L_1 s^2 + C_1 R_1 s + 1}, \infty, \infty, L_4 s + \frac{1}{C_4 s}, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \infty \right)$

$$H(s) = \frac{-C_1 C_4 C_5 L_1 L_4 L_5 R_1 s^6 + C_1 C_4 L_1 L_4 L_5 R_1 g_m s^5 + L_5 R_1 g_m s - R_1 + s^4 (-C_1 C_4 L_1 L_4 R_1 - C_1 C_5 L_1 L_5 R_1 - C_4 C_5 L_4 L_5 R_1) + s^3 (C_1 L_1 L_5 R_1 g_m + 2C_1 C_4 C_5 L_1 L_4 L_5 R_1 g_m + C_1 C_4 C_5 L_1 L_4 L_5) + s^5 (2C_1 C_4 C_5 L_1 L_5 R_1 + C_1 C_4 C_5 L_4 L_5 R_1) + s^4 (2C_1 C_4 L_1 L_4 R_1 g_m + C_1 C_4 L_1 L_4 + 2C_1 C_4 L_1 L_5 R_1 g_m + 2C_1 C_4 L_1 L_5 + 2C_1 C_5 L_1 L_5 R_1 g_m + C_1 C_5 L_1 L_5 + 2C_4 C_5 L_4 L_5 R_1 g_m + C_4 C_5 L_4 L_5) + s^3 (2C_1 C_4 L_1 R_1 +$$

10.988 INVALID-ORDER-988 $Z(s) = \left(\frac{R_1(C_1 L_1 s^2 + 1)}{C_1 L_1 s^2 + C_1 R_1 s + 1}, \infty, \infty, L_4 s + \frac{1}{C_4 s}, L_5 s + R_5 + \frac{1}{C_5 s}, \infty \right)$

$$H(s) = \frac{C_1 C_4 C_5 L_1 L_4 L_5 R_1 g_m s^6 + R_1 g_m + s^5 (C_1 C_4 C_5 L_1 L_4 R_1 R_5 g_m - C_1 C_4 C_5 L_1 L_4 R_1) + s^4 (C_1 C_4 L_1 L_4 R_1 g_m + C_1 C_5 L_1 L_5 R_1 g_m + C_4 C_5 L_4 L_5 R_1 g_m) + s^3 (C_1 C_5 L_1 R_1 R_5 g_m - C_1 C_5 L_1 R_1 + C_4 C_5 L_4)}{s^5 (2 C_1 C_4 C_5 L_1 L_4 R_1 g_m + C_1 C_4 C_5 L_1 L_4 + 2 C_1 C_4 C_5 L_1 L_5 R_1 g_m + 2 C_1 C_4 C_5 L_1 L_5) + s^4 (2 C_1 C_4 C_5 L_1 R_1 R_5 g_m + 2 C_1 C_4 C_5 L_1 R_1 + 2 C_1 C_4 C_5 L_1 R_5 + C_1 C_4 C_5 L_4 R_1 + 2 C_1 C_4 C_5 L_5 R_1) + s^3 (2 C_1 C_4 C_5 R_1 R_5 + 2 C_1 C_4 L_1 R_1 g_m + 2 C_1 C_4 L_1 + 2 C_1 C_5 L_1 R_1 g_m + C_1 C_5 L_1 + 2 C_1 C_5 L_4)}$$

10.989 INVALID-ORDER-989 $Z(s) = \left(\frac{R_1(C_1L_1s^2+1)}{C_1L_1s^2+C_1R_1s+1}, \infty, \infty, L_4s + \frac{1}{C_4s}, \frac{L_5R_5s}{C_5L_5R_5s^2+L_5s+R_5}, \infty \right)$

$$H(s) = \frac{-C_1 C_4 C_5 L_1 L_4 L_5 R_1 R_5 s^6 - R_1 R_5 + s^5 (C_1 C_4 L_1 L_4 L_5 R_1 R_5 g_m - C_1 C_4 C_5 L_1 L_4 L_5 R_5) + s^5 (2C_1 C_4 C_5 L_1 L_5 R_1 R_5 + C_1 C_4 C_5 L_4 L_5 R_1 R_5 + 2C_1 C_4 L_1 L_4 L_5 R_1 g_m + C_1 C_4 L_1 L_4 L_5) + s^4 (2C_1 C_4 L_1 L_4 R_1 R_5 g_m + C_1 C_4 L_1 L_4 R_5 + 2C_1 C_4 L_1 L_5 R_1 R_5 g_m + 2C_1 C_4 L_1 L_5 R_1 + 2C_1 C_4 L_1 L_5 R_5 +$$

10.990 INVALID-ORDER-990 $Z(s) = \left(\frac{R_1(C_1 L_1 s^2 + 1)}{C_1 L_1 s^2 + C_1 R_1 s + 1}, \infty, \infty, L_4 s + \frac{1}{C_4 s}, \frac{C_5 L_5 R_5 s^2 + L_5 s + R_5}{C_5 L_5 s^2 + 1}, \infty \right)$

$$H(s) = \frac{C_1 C_4 L_1 L_4 L_5 R_1 g_m s^5 + L_5 R_1 g_m s + R_1 R_5 g_m - R_1 + s^6 (C_1 C_4 C_5 L_1 L_4 L_5 R_1 R_5 g_m - C_1 C_4 C_5 L_1 L_4 L_5 R_1) + s^4 (C_1 C_4 L_1 L_4 R_1 R_5 + C_1 C_4 C_5 L_1 L_4 L_5 R_1 R_5 g_m - C_1 C_4 C_5 L_1 L_4 L_5 R_1)}{2 R_1 g_m + s^6 (2 C_1 C_4 C_5 L_1 L_4 L_5 R_1 g_m + C_1 C_4 C_5 L_1 L_4 L_5) + s^5 (2 C_1 C_4 C_5 L_1 L_5 R_1 R_5 g_m + 2 C_1 C_4 C_5 L_1 L_5 R_1 + 2 C_1 C_4 C_5 L_1 L_5 R_5 + C_1 C_4 C_5 L_4 L_5 R_1) + s^4 (2 C_1 C_4 C_5 L_5 R_1 R_5 + 2 C_1 C_4 L_1 L_4 R_1 g_m + C_1 C_4 L_1 L_4 + 2 C_1 C_4 L_1 L_5 R_1 g_m + 2 C_1 C_4 L_1 L_5 + 2 C_1 C_5 L_1 L_5 R_1 g_m + 2 C_1 C_5 L_1 L_5 R_1)}$$

10.991 INVALID-ORDER-991 $Z(s) = \left(\frac{R_1(C_1L_1s^2+1)}{C_1L_1s^2+C_1R_1s+1}, \infty, \infty, L_4s + \frac{1}{C_4s}, \frac{R_5(C_5L_5s^2+1)}{C_5L_5s^2+C_5R_5s+1}, \infty \right)$

$$H(s) = \frac{-C_1 C_4 C_5 L_1 L_4 R_1 R_5 s^5 - C_5 R_1 R_5 s + R_1 R_5 g_m - R_1 + s^6 (C_1 C_4 C_5 L_1 L_4 L_5 R_1 g_m + C_1 C_4 C_5 L_1 L_4 L_5) + s^5 (2C_1 C_4 C_5 L_1 L_4 R_1 R_5 g_m + C_1 C_4 C_5 L_1 L_4 R_5 + 2C_1 C_4 C_5 L_1 L_5 R_1 R_5 g_m + 2C_1 C_4 C_5 L_1 L_5 R_1 + 2C_1 C_4 C_5 L_1 L_5 R_5 + C_1 C_4 C_5 L_4 L_5 R_1) + s^4 (2C_1 C_4 C_5 L_1 R_1 R_5 + C_1 C_4 C_5 L_4 R_1 R_5 + 2C_1 C_4 C_5 L_5 R_1 R_5 + 2C_1 C_4 C_5 L_4 R_1 R_5)}{2R_1 g_m + s^6 (2C_1 C_4 C_5 L_1 L_4 L_5 R_1 g_m + C_1 C_4 C_5 L_1 L_4 L_5) + s^5 (2C_1 C_4 C_5 L_1 L_4 R_1 R_5 g_m + C_1 C_4 C_5 L_1 L_4 R_5 + 2C_1 C_4 C_5 L_1 L_5 R_1 R_5 g_m + 2C_1 C_4 C_5 L_1 L_5 R_1 + 2C_1 C_4 C_5 L_1 L_5 R_5 + C_1 C_4 C_5 L_4 L_5 R_1) + s^4 (2C_1 C_4 C_5 L_1 R_1 R_5 + C_1 C_4 C_5 L_4 R_1 R_5 + 2C_1 C_4 C_5 L_5 R_1 R_5 + 2C_1 C_4 C_5 L_4 R_1 R_5)}$$

10.992 INVALID-ORDER-992 $Z(s) = \left(\frac{R_1(C_1L_1s^2+1)}{C_1L_1s^2+C_1R_1s+1}, \infty, \infty, \frac{L_4s}{C_4L_4s^2+1}, R_5, \infty \right)$

$$H(s) = \frac{s^3 (C_1 L_1 L_4 R_1 R_5 g_m - C_1 L_1 L_4 R_1) + s (L_4 R_1 R_5 g_m - L_4 R_1)}{2R_1 R_5 g_m + 2R_1 + 2R_5 + s^4 (2C_1 C_4 L_1 L_4 R_1 R_5 g_m + 2C_1 C_4 L_1 L_4 R_1 + 2C_1 C_4 L_1 L_4 R_5) + s^3 (2C_1 C_4 L_4 R_1 R_5 + 2C_1 L_1 L_4 R_1 g_m + C_1 L_1 L_4) + s^2 (2C_1 L_1 R_1 R_5 g_m + 2C_1 L_1 R_1 + 2C_1 L_1 R_5 + C_1 L_4 R_1 + 2C_4 L_4 R_1 R_5 g_m + 2C_4 L_4 R_1 + 2C_4 L_4 R_5) + s (2C_1 R_1 R_5 + 2L_4 R_1 g_m}$$

10.993 INVALID-ORDER-993 $Z(s) = \left(\frac{R_1(C_1 L_1 s^2 + 1)}{C_1 L_1 s^2 + C_1 R_1 s + 1}, \infty, \infty, \frac{L_4 s}{C_4 L_4 s^2 + 1}, \frac{1}{C_5 s}, \infty \right)$

$$H(s) = \frac{-C_1 C_5 L_1 L_4 R_1 s^4 + C_1 L_1 L_4 R_1 g_m s^3 - C_5 L_4 R_1 s^2 + L_4 R_1 g_m s}{2C_1 C_4 C_5 L_1 L_4 R_1 s^5 + 2R_1 g_m + s^4 (2C_1 C_4 L_1 L_4 R_1 g_m + 2C_1 C_4 L_1 L_4 + 2C_1 C_5 L_1 L_4 R_1 g_m + C_1 C_5 L_1 L_4) + s^3 (2C_1 C_4 L_4 R_1 + 2C_1 C_5 L_1 R_1 + C_1 C_5 L_4 R_1 + 2C_4 C_5 L_4 R_1) + s^2 (2C_1 L_1 R_1 g_m + 2C_1 L_1 + 2C_4 L_4 R_1 g_m + 2C_4 L_4 + 2C_5 L_4 R_1 g_m + C_5 L_4) + s (2C_1 R_1 + 2C_5 R_1)}$$

10.994 INVALID-ORDER-994 $Z(s) = \left(\frac{R_1(C_1L_1s^2+1)}{C_1L_1s^2+C_1R_1s+1}, \infty, \infty, \frac{L_4s}{C_4L_4s^2+1}, \frac{R_5}{C_5R_5s+1}, \infty \right)$

$$H(s) = \frac{-C_1 C_5 L_1 L_4 R_1 R_5 s^4 - C_5 L_4 R_1 R_5 s^2 + s^3 (C_1 L_1 L_4 R_1 R_5 g_m - C_1 L_1 L_4 R_1) + s (L_4 R_1 R_5 g_m - L_4 R_1)}{2 C_1 C_4 C_5 L_1 L_4 R_1 R_5 s^5 + 2 R_1 R_5 g_m + 2 R_1 + 2 R_5 + s^4 (2 C_1 C_4 L_1 L_4 R_1 R_5 g_m + 2 C_1 C_4 L_1 L_4 R_1 + 2 C_1 C_4 L_1 L_4 R_5 + 2 C_1 C_5 L_1 L_4 R_1 R_5 g_m + C_1 C_5 L_1 L_4 R_5) + s^3 (2 C_1 C_4 L_4 R_1 R_5 + 2 C_1 C_5 L_1 R_1 R_5 + C_1 C_5 L_4 R_1 R_5 + 2 C_1 L_1 L_4 R_1 g_m + C_1 L_1 L_4 + 2 C_4 C_5 L_4 R_1 R_5) + s^2 (2 C_1 C_4 L_1 L_4 R_1 R_5 g_m + 2 C_1 C_4 L_1 L_4 R_1 + 2 C_1 C_4 L_1 L_4 R_5 + 2 C_1 C_5 L_1 L_4 R_1 R_5 g_m + C_1 C_5 L_1 L_4 R_5) + s (L_4 R_1 R_5 g_m - L_4 R_1)}$$

10.995 INVALID-ORDER-995 $Z(s) = \left(\frac{R_1(C_1L_1s^2+1)}{C_1L_1s^2+C_1R_1s+1}, \infty, \infty, \frac{L_4s}{C_4L_4s^2+1}, R_5 + \frac{1}{C_5s}, \infty \right)$

$$H(s) = \frac{C_1 L_1 L_4 R_1 g_m s^3 + L_4 R_1 g_m s + s^4 (C_1 C_5 L_1 L_4 R_1 R_5 g_m - C_1 C_5 L_1 L_4 R_1) + s^2 (C_5 L_4 R_1 R_5 g)}{2R_1 g_m + s^5 (2C_1 C_4 C_5 L_1 L_4 R_1 R_5 g_m + 2C_1 C_4 C_5 L_1 L_4 R_1 + 2C_1 C_4 C_5 L_1 L_4 R_5) + s^4 (2C_1 C_4 C_5 L_4 R_1 R_5 + 2C_1 C_4 L_1 L_4 R_1 g_m + 2C_1 C_4 L_1 L_4 + 2C_1 C_5 L_1 L_4 R_1 g_m + C_1 C_5 L_1 L_4) + s^3 (2C_1 C_4 L_4 R_1 + 2C_1 C_5 L_1 R_1 R_5 g_m + 2C_1 C_5 L_1 R_1 + 2C_1 C_5 L_1 R_5 + C_1 C_5 L_4 R_1 + 2C_4 C$$

$$\mathbf{10.1005 \quad INVALID-ORDER-1005} \quad Z(s) = \left(\frac{R_1(C_1 L_1 s^2 + 1)}{C_1 L_1 s^2 + C_1 R_1 s + 1}, \quad \infty, \quad \infty, \quad L_4 s + R_4 + \frac{1}{C_4 s}, \quad R_5 + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{R_1 g_m + s^5 (C_1 C_4 C_5 L_1 L_4 R_1 R_5 g_m - C_1 C_4 C_5 L_1 L_4 R_1) + s^4 (C_1 C_4 C_5 L_1 R_1 R_4 R_5 g_m - C_1 C_4 C_5 L_1 R_1 R_4 + C_1 C_4 L_1 L_4 R_1 g_m) + s^3 (C_1 C_4 L_1 R_1 R_4 g_m + C_1 C_5 L_1 R_1 R_5 g_m - C_1 C_5 L_1 R_1 + C_4 C_5 L_4 R_1 R_5 g_m - C_4 C_5 L_4 R_1 R_5)}{s^5 (2C_1 C_4 C_5 L_1 L_4 R_1 g_m + C_1 C_4 C_5 L_1 L_4) + s^4 (2C_1 C_4 C_5 L_1 R_1 R_4 g_m + 2C_1 C_4 C_5 L_1 R_1 R_5 g_m + 2C_1 C_4 C_5 L_1 R_1 + C_1 C_4 C_5 L_1 R_4 + 2C_1 C_4 C_5 L_1 R_5 + C_1 C_4 C_5 L_4 R_1) + s^3 (C_1 C_4 C_5 R_1 R_4 + 2C_1 C_4 C_5 R_1 R_5 + 2C_1 C_4 L_1 R_1 g_m + 2C_1 C_4 L_1 + 2C_1 C_5 L_1 R_1 g_m + C_1 C_5 L_1 + 2C_4 C_5 L_4 R_1 R_5)}$$

$$\mathbf{10.1006 \quad INVALID-ORDER-1006} \quad Z(s) = \left(\frac{R_1(C_1 L_1 s^2 + 1)}{C_1 L_1 s^2 + C_1 R_1 s + 1}, \quad \infty, \quad \infty, \quad L_4 s + R_4 + \frac{1}{C_4 s}, \quad L_5 s + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{C_1 C_4 C_5 L_1 L_4 L_5 R_1 g_m s^6 + R_1 g_m + s^5 (-C_1 C_4 C_5 L_1 L_4 R_1 + C_1 C_4 C_5 L_1 L_5 R_1 R_4 g_m) + s^4 (-C_1 C_4 C_5 L_1 R_1 R_4 + C_1 C_4 L_1 L_4 R_1 g_m + C_1 C_5 L_1 L_5 R_1 g_m + C_4 C_5 L_4 L_5 R_1 g_m) + s^3 (C_1 C_4 L_1 R_1 R_4 g_m - C_1 C_5 L_1 R_1 - C_4 C_5 L_4 R_1 R_5)}{s^5 (2C_1 C_4 C_5 L_1 L_4 R_1 g_m + C_1 C_4 C_5 L_1 L_4 + 2C_1 C_4 C_5 L_1 L_5 R_1 g_m + 2C_1 C_4 C_5 L_1 L_5) + s^4 (2C_1 C_4 C_5 L_1 R_1 R_4 g_m + 2C_1 C_4 C_5 L_1 R_1 + C_1 C_4 C_5 L_1 R_4 + C_1 C_4 C_5 L_4 R_1 + 2C_1 C_4 C_5 L_5 R_1) + s^3 (C_1 C_4 C_5 R_1 R_4 + 2C_1 C_4 L_1 R_1 g_m + 2C_1 C_4 L_1 + 2C_1 C_5 L_1 R_1 g_m + C_1 C_5 L_1 + 2C_4 C_5 L_4 R_1 R_5)}$$

$$\mathbf{10.1007 \quad INVALID-ORDER-1007} \quad Z(s) = \left(\frac{R_1(C_1 L_1 s^2 + 1)}{C_1 L_1 s^2 + C_1 R_1 s + 1}, \quad \infty, \quad \infty, \quad L_4 s + R_4 + \frac{1}{C_4 s}, \quad \frac{L_5 s}{C_5 L_5 s^2 + 1}, \quad \infty \right)$$

$$H(s) = \frac{-C_1 C_4 C_5 L_1 L_4 L_5 R_1 s^6 - R_1 + s^5 (-C_1 C_4 C_5 L_1 L_5 R_1 R_4 + C_1 C_4 L_1 L_4 L_5 R_1 g_m) + s^4 (-C_1 C_4 L_1 L_4 R_1 + C_1 C_4 L_1 L_5 R_1 R_4 g_m - C_1 C_5 L_1 L_5 R_1 R_4 + C_4 C_5 L_4 L_5 R_1 R_5)}{2R_1 g_m + s^6 (2C_1 C_4 C_5 L_1 L_4 L_5 R_1 g_m + C_1 C_4 C_5 L_1 L_4 L_5) + s^5 (2C_1 C_4 C_5 L_1 L_5 R_1 R_4 g_m + 2C_1 C_4 C_5 L_1 L_5 R_1 + C_1 C_4 C_5 L_1 L_5 R_4 + C_1 C_4 C_5 L_4 L_5 R_1) + s^4 (C_1 C_4 C_5 L_5 R_1 R_4 + 2C_1 C_4 L_1 L_4 R_1 g_m + C_1 C_4 L_1 L_4 + 2C_1 C_4 L_1 L_5 R_1 g_m + 2C_1 C_4 L_1 L_5 + 2C_1 C_5 L_1 L_5 R_1 g_m + C_1 C_5 L_1 L_5 R_1 R_4)}$$

$$\mathbf{10.1008 \quad INVALID-ORDER-1008} \quad Z(s) = \left(\frac{R_1(C_1 L_1 s^2 + 1)}{C_1 L_1 s^2 + C_1 R_1 s + 1}, \quad \infty, \quad \infty, \quad L_4 s + R_4 + \frac{1}{C_4 s}, \quad L_5 s + R_5 + \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{C_1 C_4 C_5 L_1 L_4 L_5 R_1 g_m s^6 + R_1 g_m + s^5 (C_1 C_4 C_5 L_1 L_4 R_1 R_5 g_m - C_1 C_4 C_5 L_1 L_4 R_1 + C_1 C_4 C_5 L_1 L_5 R_1 R_4 g_m) + s^4 (C_1 C_4 C_5 L_1 R_1 R_4 R_5 g_m - C_1 C_4 C_5 L_1 R_1 R_4 + C_1 C_4 L_1 L_4 R_1 g_m + C_1 C_5 L_1 L_5 R_1 g_m + C_4 C_5 L_4 L_5 R_1 g_m) + s^3 (C_1 C_4 L_1 R_1 R_4 g_m - C_1 C_5 L_1 R_1 - C_4 C_5 L_4 R_1 R_5)}{s^5 (2C_1 C_4 C_5 L_1 L_4 R_1 g_m + C_1 C_4 C_5 L_1 L_4 + 2C_1 C_4 C_5 L_1 L_5 R_1 g_m + 2C_1 C_4 C_5 L_1 L_5) + s^4 (2C_1 C_4 C_5 L_1 R_1 R_4 g_m + 2C_1 C_4 C_5 L_1 R_1 R_5 g_m + 2C_1 C_4 C_5 L_1 R_1 + C_1 C_4 C_5 L_1 R_4 + 2C_1 C_4 C_5 L_1 R_5 + C_1 C_4 C_5 L_4 R_1 + 2C_1 C_4 C_5 L_5 R_1) + s^3 (C_1 C_4 C_5 R_1 R_4 + 2C_1 C_4 C_5 R_1 R_5 + 2C_1 C_4 L_1 R_1 g_m + 2C_1 C_4 L_1 L_4 R_1 R_5 g_m - C_1 C_5 L_1 R_1 - C_4 C_5 L_4 R_1 R_5)}$$

$$\mathbf{10.1009 \quad INVALID-ORDER-1009} \quad Z(s) = \left(\frac{R_1(C_1 L_1 s^2 + 1)}{C_1 L_1 s^2 + C_1 R_1 s + 1}, \quad \infty, \quad \infty, \quad L_4 s + R_4 + \frac{1}{C_4 s}, \quad \frac{L_5 R_5 s}{C_5 L_5 R_5 s^2 + L_5 s + R_5}, \quad \infty \right)$$

$$H(s) = \frac{2R_1 R_5 g_m + R_5 + s^6 (2C_1 C_4 C_5 L_1 L_4 L_5 R_1 R_5 g_m + C_1 C_4 C_5 L_1 L_4 L_5 R_5) + s^5 (2C_1 C_4 C_5 L_1 L_5 R_1 R_4 R_5 g_m + 2C_1 C_4 C_5 L_1 L_5 R_1 R_5 + C_1 C_4 C_5 L_1 L_5 R_4 R_5 + C_1 C_4 C_5 L_4 L_5 R_1 R_5 + 2C_1 C_4 L_1 L_4 L_5 R_1 g_m + C_1 C_4 L_1 L_4 L_5) + s^4 (C_1 C_4 C_5 L_5 R_1 R_4 R_5 + 2C_1 C_4 L_1 L_4 R_1 R_5 g_m + C_1 C_4 L_1 L_4 L_5 R_1 R_5)}{2R_1 R_5 g_m + R_5 + s^6 (2C_1 C_4 C_5 L_1 L_4 L_5 R_1 R_5 g_m + C_1 C_4 C_5 L_1 L_4 L_5 R_5) + s^5 (2C_1 C_4 C_5 L_1 L_5 R_1 R_4 R_5 g_m + 2C_1 C_4 C_5 L_1 L_5 R_1 R_5 + C_1 C_4 C_5 L_1 L_5 R_4 R_5 + C_1 C_4 C_5 L_4 L_5 R_1 R_5 + 2C_1 C_4 L_1 L_4 L_5 R_1 g_m + C_1 C_4 L_1 L_4 L_5) + s^4 (C_1 C_4 C_5 L_5 R_1 R_4 R_5 + 2C_1 C_4 L_1 L_4 R_1 R_5 g_m + C_1 C_4 L_1 L_4 L_5 R_1 R_5)}$$

$$\mathbf{10.1010 \quad INVALID-ORDER-1010} \quad Z(s) = \left(\frac{R_1(C_1 L_1 s^2 + 1)}{C_1 L_1 s^2 + C_1 R_1 s + 1}, \quad \infty, \quad \infty, \quad L_4 s + R_4 + \frac{1}{C_4 s}, \quad \frac{C_5 L_5 R_5 s^2 + L_5 s + R_5}{C_5 L_5 s^2 + 1}, \quad \infty \right)$$

$$H(s) = \frac{R_1 R_5 g_m - R_1 + s^6 (C_1 C_4 C_5 L_1 L_4 L_5 R_1 R_5 g_m - C_1 C_4 C_5 L_1 L_4 L_5 R_1) + s^5 (C_1 C_4 C_5 L_1 L_5 R_1 R_4 R_5 g_m - C_1 C_4 C_5 L_1 L_5 R_1 R_4 + C_1 C_4 L_1 L_4 L_5 R_1 g_m - C_1 C_5 L_1 L_5 R_1 R_4 + C_4 C_5 L_4 L_5 R_1 R_5)}{2R_1 R_5 g_m + s^6 (2C_1 C_4 C_5 L_1 L_4 L_5 R_1 g_m + C_1 C_4 C_5 L_1 L_4 L_5) + s^5 (2C_1 C_4 C_5 L_1 L_5 R_1 R_4 g_m + 2C_1 C_4 C_5 L_1 L_5 R_1 R_5 g_m + 2C_1 C_4 C_5 L_1 L_5 R_1 + C_1 C_4 C_5 L_1 L_5 R_4 + 2C_1 C_4 C_5 L_1 L_5 R_5 + C_1 C_4 C_5 L_4 L_5 R_1) + s^4 (C_1 C_4 C_5 L_5 R_1 R_4 + 2C_1 C_4 C_5 L_5 R_1 R_5 + 2C_1 C_4 L_1 L_4 R_1 g_m + C_1 C_4 L_1 L_4 L_5 R_1 R_5)}$$

$$\mathbf{10.1011 \quad INVALID-ORDER-1011} \quad Z(s) = \left(\frac{R_1(C_1 L_1 s^2 + 1)}{C_1 L_1 s^2 + C_1 R_1 s + 1}, \quad \infty, \quad \infty, \quad L_4 s + R_4 + \frac{1}{C_4 s}, \quad \frac{R_5(C_5 L_5 s^2 + 1)}{C_5 L_5 s^2 + C_5 R_5 s + 1}, \quad \infty \right)$$

$$H(s) = \frac{R_1 R_5 g_m - R_1 + s^6 (C_1 C_4 C_5 L_1 L_4 L_5 R_1 R_5 g_m - C_1 C_4 C_5 L_1 L_4 L_5 R_1) + s^5 (C_1 C_4 C_5 L_1 L_5 R_1 R_4 R_5 g_m - C_1 C_4 C_5 L_1 L_5 R_1 R_4 + C_1 C_4 L_1 L_4 L_5 R_1 g_m - C_1 C_5 L_1 L_5 R_1 R_4 + C_4 C_5 L_4 L_5 R_1 R_5)}{2R_1 R_5 g_m + s^6 (2C_1 C_4 C_5 L_1 L_4 L_5 R_1 g_m + C_1 C_4 C_5 L_1 L_4 L_5) + s^5 (2C_1 C_4 C_5 L_1 L_4 R_1 R_5 g_m + C_1 C_4 C_5 L_1 L_4 R_5 + 2C_1 C_4 C_5 L_1 L_5 R_1 R_4 g_m + 2C_1 C_4 C_5 L_1 L_5 R_1 R_5 g_m + 2C_1 C_4 C_5 L_1 L_5 R_1 + C_1 C_4 C_5 L_1 L_5 R_4 + 2C_1 C_4 C_5 L_1 L_5 R_5 + C_1 C_4 C_5 L_4 L_5 R_1) + s^4 (2C_1 C_4 C_5 L_1 R_1 R_4 R_5 g_m - C_1 C_5 L_1 R_1 - C_4 C_5 L_4 R_1 R_5)}$$

$$\mathbf{10.1012 \quad INVALID-ORDER-1012} \quad Z(s) = \left(\frac{R_1(C_1 L_1 s^2 + 1)}{C_1 L_1 s^2 + C_1 R_1 s + 1}, \quad \infty, \quad \infty, \quad \frac{L_4 R_4 s}{C_4 L_4 R_4 s^2 + L_4 s + R_4}, \quad R_5, \quad \infty \right)$$

$$H(s) = \frac{s^3 (C_1 L_1 L_4 R_1 R_4 R_5 g_m - C_1 L_1 L_4 R_1 R_4) + s (L_4 R_1 R_4 R_5 g_m - L_4 R_1 R_4)}{2R_1 R_4 R_5 g_m + 2R_1 R_4 + 2R_4 R_5 + s^4 (2C_1 C_4 L_1 L_4 R_1 R_4 R_5 g_m + 2C_1 C_4 L_1 L_4 R_1 R_4 + 2C_1 C_4 L_1 L_4 R_4 R_5) + s^3 (2C_1 C_4 L_4 R_1 R_4 R_5 + 2C_1 L_1 L_4 R_1 R_4 g_m + 2C_1 L_1 L_4 R_1 R_5 g_m + 2C_1 L_1 L_4 R_1 + C_1 L_1 L_4 R_4 + 2C_1 L_1 L_4 R_5) + s^2 (2C_1 L_1 R_1 R_4 R_5 g_m + 2C_1 L_1 R_1 R_4 + 2C_1 L_1 R_4 R_5)}$$

$$\mathbf{10.1013 \quad INVALID-ORDER-1013} \quad Z(s) = \left(\frac{R_1(C_1 L_1 s^2 + 1)}{C_1 L_1 s^2 + C_1 R_1 s + 1}, \quad \infty, \quad \infty, \quad \frac{L_4 R_4 s}{C_4 L_4 R_4 s^2 + L_4 s + R_4}, \quad \frac{1}{C_5 s}, \quad \infty \right)$$

$$H(s) = \frac{-C_1 C_5 L_1 L_4 R_1 R_4 s^4 + C_1 L_1 L_4 R_1 R_4 g_m s^3 - C_5 L_4 R_1 R_4 s^2 + L_4 R_1 R_4 g_m s}{2C_1 C_4 C_5 L_1 L_4 R_1 R_4 s^5 + 2R_1 R_4 g_m + 2R_4 + s^4 (2C_1 C_4 L_1 L_4 R_1 R_4 g_m + 2C_1 C_4 L_1 L_4 R_4 + 2C_1 C_5 L_1 L_4 R_1 R_4 g_m + 2C_1 C_5 L_1 L_4 R_1 + C_1 C_5 L_1 L_4 R_4) + s^3 (2C_1 C_4 L_4 R_1 R_4 + 2C_1 C_5 L_1 R_1 R_4 + C_1 C_5 L_4 R_1 R_4 + 2C_1 L_1 L_4 R_1 g_m + 2C_1 L_1 L_4 + 2C_4 C_5 L_4 R_1 R_4) + s^2 (2C_1 L_1 R_1 R_4 R_5 g_m - C_1 C_5 L_1 R_1 - C_4 C_5 L_4 R_1 R_5)}$$

10.1014 INVALID-ORDER-1014 $Z(s) = \left(\frac{R_1(C_1 L_1 s^2 + 1)}{C_1 L_1 s^2 + C_1 R_1 s + 1}, \infty, \infty, \frac{L_4 R_4 s}{C_4 L_4 R_4 s^2 + L_4 s + R_4}, \frac{R_5}{C_5 R_5 s + 1}, \infty \right)$

$$H(s) = \frac{2C_1C_4C_5L_1L_4R_1R_4R_5s^5 + 2R_1R_4R_5g_m + 2R_1R_4 + 2R_4R_5 + s^4(2C_1C_4L_1L_4R_1R_4R_5g_m + 2C_1C_4L_1L_4R_1R_4 + 2C_1C_4L_1L_4R_4R_5 + 2C_1C_5L_1L_4R_1R_4R_5g_m + 2C_1C_5L_1L_4R_1R_5 + C_1C_5L_1L_4R_4R_5) + s^3(2C_1C_4L_4R_1R_4R_5 + 2C_1C_5L_1R_1R_4R_5 + C_1C_5L_4R_1R_4R_5 +$$

10.1015 INVALID-ORDER-1015 $Z(s) = \left(\frac{R_1(C_1 L_1 s^2 + 1)}{C_1 L_1 s^2 + C_1 R_1 s + 1}, \infty, \infty, \frac{L_4 R_4 s}{C_4 L_4 R_4 s^2 + L_4 s + R_4}, R_5 + \frac{1}{C_5 s}, \infty \right)$

$$H(s) = \frac{1}{2R_1R_4g_m + 2R_4 + s^5(2C_1C_4C_5L_1L_4R_1R_4R_5g_m + 2C_1C_4C_5L_1L_4R_1R_4 + 2C_1C_4C_5L_1L_4R_4R_5) + s^4(2C_1C_4C_5L_4R_1R_4R_5 + 2C_1C_4L_1L_4R_1R_4g_m + 2C_1C_4L_1L_4R_4 + 2C_1C_5L_1L_4R_1R_4g_m + 2C_1C_5L_1L_4R_1R_5g_m + 2C_1C_5L_1L_4R_1 + C_1C_5L_1L_4R_4 + 2C_1C_5L_1L_4R_5)}$$

10.1016 INVALID-ORDER-1016 $Z(s) = \left(\frac{R_1(C_1L_1s^2+1)}{C_1L_1s^2+C_1R_1s+1}, \infty, \infty, \frac{L_4R_4s}{C_4L_4R_4s^2+L_4s+R_4}, L_5s + \frac{1}{C_5s}, \infty \right)$

$$H(s) = \frac{2R_1R_4g_m + 2R_4 + s^6(2C_1C_4C_5L_1L_4L_5R_1R_4g_m + 2C_1C_4C_5L_1L_4L_5R_4) + s^5(2C_1C_4C_5L_1L_4R_1R_4 + 2C_1C_4C_5L_4L_5R_1R_4 + 2C_1C_5L_1L_4L_5R_1g_m + 2C_1C_5L_1L_4L_5) + s^4(2C_1C_4L_1L_4R_1R_4g_m + 2C_1C_4L_1L_4R_4 + 2C_1C_5L_1L_4R_1R_4g_m + 2C_1C_5L_1L_4R_1 + C_1C_5L_1L_4)}{2R_1R_4g_m + 2R_4 + s^6(2C_1C_4C_5L_1L_4L_5R_1R_4g_m + 2C_1C_4C_5L_1L_4L_5R_4) + s^5(2C_1C_4C_5L_1L_4R_1R_4 + 2C_1C_4C_5L_4L_5R_1R_4 + 2C_1C_5L_1L_4L_5R_1g_m + 2C_1C_5L_1L_4L_5) + s^4(2C_1C_4L_1L_4R_1R_4g_m + 2C_1C_4L_1L_4R_4 + 2C_1C_5L_1L_4R_1R_4g_m + 2C_1C_5L_1L_4R_1 + C_1C_5L_1L_4)}$$

10.1017 INVALID-ORDER-1017 $Z(s) = \left(\frac{R_1(C_1 L_1 s^2 + 1)}{C_1 L_1 s^2 + C_1 R_1 s + 1}, \infty, \infty, \frac{L_4 R_4 s}{C_4 L_4 R_4 s^2 + L_4 s + R_4}, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \infty \right)$

$$H(s) = \frac{2C_1 C_4 C_5 L_1 L_4 L_5 R_1 R_4 s^6 + 2R_1 R_4 + s^5 (2C_1 C_4 L_1 L_4 L_5 R_1 R_4 g_m + 2C_1 C_4 L_1 L_4 L_5 R_4 + 2C_1 C_5 L_1 L_4 L_5 R_1 R_4 g_m + 2C_1 C_5 L_1 L_4 L_5 R_1 + C_1 C_5 L_1 L_4 L_5 R_4) + s^4 (2C_1 C_4 L_1 L_4 R_1 R_4 + 2C_1 C_4 L_4 L_5 R_1 R_4 + 2C_1 C_5 L_1 L_5 R_1 R_4 + C_1 C_5 L_4 L_5 R_1 R_4 + 2C_1 L_1 L_4 L_5 R_1 g_m + 2C_1 L_1 L_4 L_5 R_4)}{(s^2 + 1)^2}$$

10.1018 INVALID-ORDER-1018 $Z(s) = \left(\frac{R_1(C_1 L_1 s^2 + 1)}{C_1 L_1 s^2 + C_1 R_1 s + 1}, \infty, \infty, \frac{L_4 R_4 s}{C_4 L_4 R_4 s^2 + L_4 s + R_4}, L_5 s + R_5 + \frac{1}{C_5 s}, \infty \right)$

$$H(s) = \frac{2R_1 R_4 g_m + 2R_4 + s^6(2C_1 C_4 C_5 L_1 L_4 L_5 R_1 R_4 g_m + 2C_1 C_4 C_5 L_1 L_4 L_5 R_4) + s^5(2C_1 C_4 C_5 L_1 L_4 R_1 R_4 R_5 g_m + 2C_1 C_4 C_5 L_1 L_4 R_1 R_4 + 2C_1 C_4 C_5 L_1 L_4 R_4 R_5 + 2C_1 C_4 C_5 L_4 L_5 R_1 R_4 + 2C_1 C_5 L_1 L_4 L_5 R_1 g_m + 2C_1 C_5 L_1 L_4 L_5)}{2R_1 R_4 g_m + 2R_4 + s^6(2C_1 C_4 C_5 L_1 L_4 L_5 R_1 R_4 g_m + 2C_1 C_4 C_5 L_1 L_4 L_5 R_4) + s^5(2C_1 C_4 C_5 L_1 L_4 R_1 R_4 R_5 g_m + 2C_1 C_4 C_5 L_1 L_4 R_1 R_4 + 2C_1 C_4 C_5 L_1 L_4 R_4 R_5 + 2C_1 C_4 C_5 L_4 L_5 R_1 R_4 + 2C_1 C_5 L_1 L_4 L_5 R_1 g_m + 2C_1 C_5 L_1 L_4 L_5)}$$

10.1019 INVALID-ORDER-1019 $Z(s) = \left(\frac{R_1(C_1 L_1 s^2 + 1)}{C_1 L_1 s^2 + C_1 R_1 s + 1}, \infty, \infty, \frac{L_4 R_4 s}{C_4 L_4 R_4 s^2 + L_4 s + R_4}, \frac{L_5 R_5 s}{C_5 L_5 R_5 s^2 + L_5 s + R_5}, \infty \right)$

$$H(s) = \frac{2C_1C_4C_5L_1L_4L_5R_1R_4R_5s^6 + 2R_1R_4R_5 + s^5(2C_1C_4L_1L_4L_5R_1R_4R_5g_m + 2C_1C_4L_1L_4L_5R_1R_4 + 2C_1C_4L_1L_4L_5R_4R_5 + 2C_1C_5L_1L_4L_5R_1R_4R_5g_m + 2C_1C_5L_1L_4L_5R_1R_5 + C_1C_5L_1L_4L_5R_4R_5) + s^4(2C_1C_4L_1L_4R_1R_4R_5 + 2C_1C_4L_4L_5R_1R_4R_5 + 2C_1C_5L_1L_5R_1R_4R_5)}{2C_1C_4C_5L_1L_4L_5R_1R_4R_5s^6 + 2R_1R_4R_5 + s^5(2C_1C_4L_1L_4L_5R_1R_4R_5g_m + 2C_1C_4L_1L_4L_5R_1R_4 + 2C_1C_4L_1L_4L_5R_4R_5 + 2C_1C_5L_1L_4L_5R_1R_4R_5g_m + 2C_1C_5L_1L_4L_5R_1R_5 + C_1C_5L_1L_4L_5R_4R_5) + s^4(2C_1C_4L_1L_4R_1R_4R_5 + 2C_1C_4L_4L_5R_1R_4R_5 + 2C_1C_5L_1L_5R_1R_4R_5)}$$

10.1020 INVALID-ORDER-1020 $Z(s) = \left(\frac{R_1(C_1L_1s^2+1)}{C_1L_1s^2+C_1R_1s+1}, \infty, \infty, \frac{L_4R_4s}{C_4L_4R_4s^2+L_4s+R_4}, \frac{C_5L_5R_5s^2+L_5s+R_5}{C_5L_5s^2+1}, \infty \right)$

$$H(s) = \frac{2R_1R_4R_5g_m + 2R_1R_4 + 2R_4R_5 + s^6(2C_1C_4C_5L_1L_4L_5R_1R_4R_5g_m + 2C_1C_4C_5L_1L_4L_5R_1R_4 + 2C_1C_4C_5L_1L_4L_5R_4R_5) + s^5(2C_1C_4C_5L_4L_5R_1R_4R_5 + 2C_1C_4L_1L_4L_5R_1R_4g_m + 2C_1C_4L_1L_4L_5R_4 + 2C_1C_5L_1L_4L_5R_1R_4g_m + 2C_1C_5L_1L_4L_5R_1R_5g_m + 2C_1C_5L_1L_4L_5R_4R_5)}{s^6(2C_1C_4C_5L_1L_4L_5R_1R_4R_5g_m + 2C_1C_4C_5L_1L_4L_5R_1R_4 + 2C_1C_4C_5L_1L_4L_5R_4R_5) + s^5(2C_1C_4C_5L_4L_5R_1R_4R_5 + 2C_1C_4L_1L_4L_5R_1R_4g_m + 2C_1C_4L_1L_4L_5R_4 + 2C_1C_5L_1L_4L_5R_1R_4g_m + 2C_1C_5L_1L_4L_5R_1R_5g_m + 2C_1C_5L_1L_4L_5R_4R_5) + s^4(2C_1C_4C_5L_1L_4L_5R_1R_4R_5g_m + 2C_1C_4C_5L_1L_4L_5R_1R_4 + 2C_1C_4C_5L_1L_4L_5R_4R_5) + s^3(2C_1C_4C_5L_1L_4L_5R_1R_4R_5g_m + 2C_1C_4C_5L_1L_4L_5R_1R_4 + 2C_1C_4C_5L_1L_4L_5R_4R_5) + s^2(2C_1C_4C_5L_1L_4L_5R_1R_4R_5g_m + 2C_1C_4C_5L_1L_4L_5R_1R_4 + 2C_1C_4C_5L_1L_4L_5R_4R_5) + s(2C_1C_4C_5L_1L_4L_5R_1R_4R_5g_m + 2C_1C_4C_5L_1L_4L_5R_1R_4 + 2C_1C_4C_5L_1L_4L_5R_4R_5) + 2C_1C_4C_5L_1L_4L_5R_1R_4R_5g_m + 2C_1C_4C_5L_1L_4L_5R_1R_4 + 2C_1C_4C_5L_1L_4L_5R_4R_5}.$$

10.1021 INVALID-ORDER-1021 $Z(s) = \left(\frac{R_1(C_1L_1s^2+1)}{C_1L_1s^2+C_1R_1s+1}, \infty, \infty, \frac{L_4R_4s}{C_4L_4R_4s^2+L_4s+R_4}, \frac{R_5(C_5L_5s^2+1)}{C_5L_5s^2+C_5R_5s+1}, \infty \right)$

$$H(s) = \frac{2R_1 R_4 R_5 g_m + 2R_1 R_4 + 2R_4 R_5 + s^6 (2C_1 C_4 C_5 L_1 L_4 L_5 R_1 R_4 R_5 g_m + 2C_1 C_4 C_5 L_1 L_4 L_5 R_1 R_4 + 2C_1 C_4 C_5 L_1 L_4 L_5 R_4 R_5)}{2C_1 C_4 C_5 L_1 L_4 L_5 R_1 R_4 R_5 + 2C_1 C_4 C_5 L_1 L_4 L_5 R_1 R_4 R_5 + 2C_1 C_5 L_1 L_4 L_5 R_1 R_4 g_m + 2C_1 C_5 L_1 L_4 L_5 R_1 R_5 g_m + 2C_1 C_5 L_1 L_4 L_5 R_1 + C_1 C_5 L_1 L_4 L_5}$$

10.1022 INVALID-ORDER-1022 $Z(s) = \left(\frac{R_1(C_1 L_1 s^2 + 1)}{C_1 L_1 s^2 + C_1 R_1 s + 1}, \infty, \infty, \frac{C_4 L_4 R_4 s^2 + L_4 s + R_4}{C_4 L_4 s^2 + 1}, R_5, \infty \right)$

$$H(s) = \frac{R_1 R_4 R_5 g_m - R_1 R_4 + s^4 (C_1 C_4 L_1 L_4 R_1 R_4 R_5 g_m - C_1 C_4 L_1 L_4 R_1 R_4) + s^3 (C_1 L_1 L_4 R_1 R_5 g_m - C_1 L_1 L_4 R_1) + s^2 (C_1 L_1 R_1 R_4 R_5 g_m - C_1 L_1 R_1 R_4 + C_4 L_4 R_1 R_4)}{2R_1 R_4 g_m + 2R_1 R_5 g_m + 2R_1 + R_4 + 2R_5 + s^4 (2C_1 C_4 L_1 L_4 R_1 R_4 g_m + 2C_1 C_4 L_1 L_4 R_1 R_5 g_m + 2C_1 C_4 L_1 L_4 R_1 + C_1 C_4 L_1 L_4 R_4 + 2C_1 C_4 L_1 L_4 R_5) + s^3 (C_1 C_4 L_4 R_1 R_4 + 2C_1 C_4 L_4 R_1 R_5 + 2C_1 L_1 L_4 R_1 g_m + C_1 L_1 L_4) + s^2 (2C_1 L_1 R_1 R_4 g_m + 2C_1 L_1 R_1 R_5 g_m + 2C_1 L_1 R_1)}$$

10.1023 INVALID-ORDER-1023 $Z(s) = \left(\frac{R_1(C_1 L_1 s^2 + 1)}{C_1 L_1 s^2 + C_1 R_1 s + 1}, \infty, \infty, \frac{C_4 L_4 R_4 s^2 + L_4 s + R_4}{C_4 L_4 s^2 + 1}, \frac{1}{C_5 s}, \infty \right)$

$$H(s) = \frac{-C_1 C_4 C_5 L_1 L_4 R_1 R_4 s^5 + R_1 R_4 g_m + s^4 (C_1 C_4 L_1 L_4 R_1 R_4 g_m - C_1 C_5 L_1 L_4 R_1) + s^3 (-C_1 C_5 L_1 R_1 R_4 + C_1 L_1 L_4 R_1 g_m - C_4 C_5 L_4 R_1 R_4) + s^2 (C_1 L_1 R_1 g_m + C_1 C_4 C_5 L_1 L_4 R_1 R_4 g_m + 2C_1 C_4 C_5 L_1 L_4 R_1 + C_1 C_4 C_5 L_1 L_4 R_4) + s^4 (C_1 C_4 C_5 L_4 R_1 R_4 + 2C_1 C_4 L_1 L_4 R_1 g_m + 2C_1 C_4 L_1 L_4 + 2C_1 C_5 L_1 L_4 R_1 g_m + C_1 C_5 L_1 L_4) + s^3 (2C_1 C_4 L_4 R_1 + 2C_1 C_5 L_1 R_1 R_4 g_m + 2C_1 C_5 L_1 R_1 + C_1 C_5 L_1 R_4 + C_1 C_5 L_4 R_1 + 2C_4 C_5 L_4 R_1)}{2R_1 g_m + s^5 (2C_1 C_4 C_5 L_1 L_4 R_1 R_4 g_m + 2C_1 C_4 C_5 L_1 L_4 R_1 + C_1 C_4 C_5 L_1 L_4 R_4) + s^4 (C_1 C_4 C_5 L_4 R_1 R_4 + 2C_1 C_4 L_1 L_4 R_1 g_m + 2C_1 C_4 L_1 L_4 + 2C_1 C_5 L_1 L_4 R_1 g_m + C_1 C_5 L_1 L_4) + s^3 (2C_1 C_4 L_4 R_1 + 2C_1 C_5 L_1 R_1 R_4 g_m + 2C_1 C_5 L_1 R_1 + C_1 C_5 L_1 R_4 + C_1 C_5 L_4 R_1 + 2C_4 C_5 L_4 R_1)}$$

10.1024 INVALID-ORDER-1024 $Z(s) = \left(\frac{R_1(C_1L_1s^2+1)}{C_1L_1s^2+C_1R_1s+1}, \infty, \infty, \frac{C_4L_4R_4s^2+L_4s+R_4}{C_4L_4s^2+1}, \frac{R_5}{C_5R_5s+1}, \infty \right)$

$$H(s) = \frac{-C_1 C_4 C_5 L_1 L_4 R_1 R_4 R_5 s^5 + R_1 R_4 R_5}{2R_1 R_4 g_m + 2R_1 R_5 g_m + 2R_1 + R_4 + 2R_5 + s^5 (2C_1 C_4 C_5 L_1 L_4 R_1 R_4 R_5 g_m + 2C_1 C_4 C_5 L_1 L_4 R_1 R_5 + C_1 C_4 C_5 L_1 L_4 R_4 R_5) + s^4 (C_1 C_4 C_5 L_4 R_1 R_4 R_5 + 2C_1 C_4 L_1 L_4 R_1 R_4 g_m + 2C_1 C_4 L_1 L_4 R_1 R_5 g_m + 2C_1 C_4 L_1 L_4 R_1 + C_1 C_4 L_1 L_4 R_4 + 2C_1 C_4 L_1 L_4 R_5 + 2C_1 C_5 L_1 L_4 R_1 R_4)}$$

10.1025 INVALID-ORDER-1025 $Z(s) = \left(\frac{R_1(C_1 L_1 s^2 + 1)}{C_1 L_1 s^2 + C_1 R_1 s + 1}, \infty, \infty, \frac{C_4 L_4 R_4 s^2 + L_4 s + R_4}{C_4 L_4 s^2 + 1}, R_5 + \frac{1}{C_5 s}, \infty \right)$

$$H(s) = \frac{R_1 R_4 g_m + s^5 (C_1 C_4 C_5 L_1 L_4 R_1 R_4 R_5 g_m - C_1 C_4 C_5 L_1 L_4 R_1 R_4) + s^4 (C_1 C_4 L_1 L_4 R_1 R_4 g_m + C_1 C_5 L_1 L_4 R_1 R_5 g_m - C_1 C_5 L_1 L_4 R_1 R_4 g_m + C_1 C_4 C_5 L_1 L_4 R_1 R_5 g_m + 2C_1 C_4 C_5 L_1 L_4 R_1 + C_1 C_4 C_5 L_1 L_4 R_4 + 2C_1 C_4 C_5 L_1 L_4 R_5) + s^4 (C_1 C_4 C_5 L_4 R_1 R_4 + 2C_1 C_4 C_5 L_4 R_1 R_5 + 2C_1 C_4 L_1 L_4 R_1 g_m + 2C_1 C_4 L_1 L_4 + 2C_1 C_5 L_1 L_4 R_1 g_m + C_1 C_5 L_1 L_4) + s^3 (2C_1 C_4 L_4 R_1 + 2C_1 C_4 L_4 R_4 + 2C_1 C_4 L_4 R_5) + s^2 (2C_1 C_4 L_1 L_4 R_1 + 2C_1 C_4 L_1 L_4 R_4 + 2C_1 C_4 L_1 L_4 R_5) + s (2C_1 C_4 L_1 L_4 R_1 + 2C_1 C_4 L_1 L_4 R_4 + 2C_1 C_4 L_1 L_4 R_5) + C_1 C_4 L_1 L_4 R_1 + C_1 C_4 L_1 L_4 R_4 + C_1 C_4 L_1 L_4 R_5}{2R_1 g_m + s^5 (2C_1 C_4 C_5 L_1 L_4 R_1 R_4 g_m + 2C_1 C_4 C_5 L_1 L_4 R_1 R_5 g_m + 2C_1 C_4 C_5 L_1 L_4 R_1 + C_1 C_4 C_5 L_1 L_4 R_4 + 2C_1 C_4 C_5 L_1 L_4 R_5) + s^4 (C_1 C_4 C_5 L_4 R_1 R_4 + 2C_1 C_4 C_5 L_4 R_1 R_5 + 2C_1 C_4 L_1 L_4 R_1 g_m + 2C_1 C_4 L_1 L_4 + 2C_1 C_5 L_1 L_4 R_1 g_m + C_1 C_5 L_1 L_4) + s^3 (2C_1 C_4 L_4 R_1 + 2C_1 C_4 L_4 R_4 + 2C_1 C_4 L_4 R_5) + s^2 (2C_1 C_4 L_1 L_4 R_1 + 2C_1 C_4 L_1 L_4 R_4 + 2C_1 C_4 L_1 L_4 R_5) + s (2C_1 C_4 L_1 L_4 R_1 + 2C_1 C_4 L_1 L_4 R_4 + 2C_1 C_4 L_1 L_4 R_5) + C_1 C_4 L_1 L_4 R_1 + C_1 C_4 L_1 L_4 R_4 + C_1 C_4 L_1 L_4 R_5}$$

10.1026 INVALID-ORDER-1026 $Z(s) = \left(\frac{R_1(C_1L_1s^2+1)}{C_1L_1s^2+C_1R_1s+1}, \infty, \infty, \frac{C_4L_4R_4s^2+L_4s+R_4}{C_4L_4s^2+1}, L_5s + \frac{1}{C_5s}, \infty \right)$

$$H(s) = \frac{C_1 C_4 C_5 L_1 L_4 L_5 R_1 R_4 g_m s^6 + R_1 R_4 g_m + s^5 (-C_1 C_4 C_5 L_1 L_4 R_1 R_4 + C_1 C_5 L_1 L_4 L_5 R_1 g_m) + s^4 (C_1 C_4 L_1 L_4 R_1 R_4 g_m - C_1 C_5 L_1 L_4 L_5 R_1 g_m + 2 C_1 C_4 C_5 L_1 L_4 L_5 R_1 g_m + 2 C_1 C_4 C_5 L_1 L_4 L_5) + s^5 (2 C_1 C_4 C_5 L_1 L_4 R_1 R_4 g_m + 2 C_1 C_4 C_5 L_1 L_4 R_1 + C_1 C_4 C_5 L_1 L_4 R_4 + 2 C_1 C_4 C_5 L_4 L_5 R_1) + s^4 (C_1 C_4 C_5 L_4 R_1 R_4 + 2 C_1 C_4 L_1 L_4 R_1 g_m + 2 C_1 C_4 L_1 L_4 + 2 C_1 C_5 L_1 L_4 R_1 g_m + C_1 C_5 L_1 L_4 + 2 C_1 C_5 L_1 L_5 R_1 g_m + 2 C_1 C_5 L_1 L_5 R_1 g_m)}{2 R_1 g_m + s^6 (2 C_1 C_4 C_5 L_1 L_4 L_5 R_1 g_m + 2 C_1 C_4 C_5 L_1 L_4 L_5) + s^5 (2 C_1 C_4 C_5 L_1 L_4 R_1 R_4 g_m + 2 C_1 C_4 C_5 L_1 L_4 R_1 + C_1 C_4 C_5 L_1 L_4 R_4 + 2 C_1 C_4 C_5 L_4 L_5 R_1) + s^4 (C_1 C_4 C_5 L_4 R_1 R_4 + 2 C_1 C_4 L_1 L_4 R_1 g_m + 2 C_1 C_4 L_1 L_4 + 2 C_1 C_5 L_1 L_4 R_1 g_m + C_1 C_5 L_1 L_4 + 2 C_1 C_5 L_1 L_5 R_1 g_m + 2 C_1 C_5 L_1 L_5 R_1 g_m)}$$

10.1027 INVALID-ORDER-1027 $Z(s) = \left(\frac{R_1(C_1 L_1 s^2 + 1)}{C_1 L_1 s^2 + C_1 R_1 s + 1}, \infty, \infty, \frac{C_4 L_4 R_4 s^2 + L_4 s + R_4}{C_4 L_4 s^2 + 1}, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \infty \right)$

$$H(s) = \frac{-C_1 C_4 C_5 L_1 L_4 L_5 R_1 R_4 s^6 - R_1 R_4 + s^5}{2R_1 R_4 g_m + 2R_1 + R_4 + s^6 (2C_1 C_4 C_5 L_1 L_4 L_5 R_1 R_4 g_m + 2C_1 C_4 C_5 L_1 L_4 L_5 R_1 + C_1 C_4 C_5 L_1 L_4 L_5 R_4) + s^5 (C_1 C_4 C_5 L_4 L_5 R_1 R_4 + 2C_1 C_4 L_1 L_4 L_5 R_1 g_m + 2C_1 C_4 L_1 L_4 L_5 + 2C_1 C_5 L_1 L_4 L_5 R_1 g_m + C_1 C_5 L_1 L_4 L_5) + s^4 (2C_1 C_4 L_1 L_4 R_1 R_4 g_m + 2C_1 C_4 L_1 L_4 R_1 + C_1 C_4 L_1 L_4)}$$

10.1028 INVALID-ORDER-1028 $Z(s) = \left(\frac{R_1(C_1L_1s^2+1)}{C_1L_1s^2+C_1R_1s+1}, \infty, \infty, \frac{C_4L_4R_4s^2+L_4s+R_4}{C_4L_4s^2+1}, L_5s + R_5 + \frac{1}{C_5s}, \infty \right)$

$$H(s) = \frac{C_1 C_4 C_5 L_1 L_4 L_5 R_1 R_4 g_m s^6 + R_1 R_4 g_m + s^5 (C_1 C_4 C_5 L_1 L_4 R_1 R_4 R_5 g_m - C_1 C_4 C_5 L_1 L_4 R_1 R_4 + 2R_1 g_m + s^6 (2C_1 C_4 C_5 L_1 L_4 L_5 R_1 g_m + 2C_1 C_4 C_5 L_1 L_4 L_5) + s^5 (2C_1 C_4 C_5 L_1 L_4 R_1 R_4 g_m + 2C_1 C_4 C_5 L_1 L_4 R_1 R_5 g_m + 2C_1 C_4 C_5 L_1 L_4 R_1 + C_1 C_4 C_5 L_1 L_4 R_4 + 2C_1 C_4 C_5 L_1 L_4 R_5 + 2C_1 C_4 C_5 L_4 L_5 R_1) + s^4 (C_1 C_4 C_5 L_4 R_1 R_4 + 2C_1 C_4 C_5 L_4 R_1 R_5 + 2C_1 C_4 L_1 L_4 R_1 g_m + 2C$$

10.1029 INVALID-ORDER-1029 $Z(s) = \left(\frac{R_1(C_1 L_1 s^2 + 1)}{C_1 L_1 s^2 + C_1 R_1 s + 1}, \infty, \infty, \frac{C_4 L_4 R_4 s^2 + L_4 s + R_4}{C_4 L_4 s^2 + 1}, \frac{L_5 R_5 s}{C_5 L_5 R_5 s^2 + L_5 s + R_5}, \infty \right)$

$$H(s) = \frac{2R_1 R_4 R_5 g_m + 2R_1 R_5 + R_4 R_5 + s^6 (2C_1 C_4 C_5 L_1 L_4 L_5 R_1 R_4 R_5 g_m + 2C_1 C_4 C_5 L_1 L_4 L_5 R_1 R_5 + C_1 C_4 C_5 L_1 L_4 L_5 R_4 R_5)}{2R_1 R_4 R_5 g_m + 2R_1 R_5 + R_4 R_5 + s^6 (2C_1 C_4 C_5 L_1 L_4 L_5 R_1 R_4 R_5 g_m + 2C_1 C_4 C_5 L_1 L_4 L_5 R_1 R_5 + C_1 C_4 C_5 L_1 L_4 L_5 R_4 R_5)} + s^5 (C_1 C_4 C_5 L_4 L_5 R_1 R_4 R_5 + 2C_1 C_4 L_1 L_4 L_5 R_1 R_4 g_m + 2C_1 C_4 L_1 L_4 L_5 R_1 R_5 g_m + 2C_1 C_4 L_1 L_4 L_5 R_1 + C_1 C_4 L_1 L_4 L_5 R_4 + 2C_1 C_4 L_1 L_4 L_5 R_5 + 2C_1 C_4 L_1 L_4 L_5 R_5)$$

10.1030 INVALID-ORDER-1030 $Z(s) = \left(\frac{R_1(C_1 L_1 s^2 + 1)}{C_1 L_1 s^2 + C_1 R_1 s + 1}, \infty, \infty, \frac{C_4 L_4 R_4 s^2 + L_4 s + R_4}{C_4 L_4 s^2 + 1}, \frac{C_5 L_5 R_5 s^2 + L_5 s + R_5}{C_5 L_5 s^2 + 1}, \infty \right)$

$$H(s) = \frac{2R_1R_4g_m + 2R_1R_5g_m + 2R_1 + R_4 + 2R_5 + s^6(2C_1C_4C_5L_1L_4L_5R_1R_4g_m + 2C_1C_4C_5L_1L_4L_5R_1R_5g_m + 2C_1C_4C_5L_1L_4L_5R_1 + C_1C_4C_5L_1L_4L_5R_4 + 2C_1C_4C_5L_1L_4L_5R_5) + s^5(C_1C_4C_5L_4L_5R_1R_4 + 2C_1C_4C_5L_4L_5R_1R_5 + 2C_1C_4L_1L_4L_5R_1g_m + 2C_1C_4L_1L_4L_5 +$$

10.1031 INVALID-ORDER-1031 $Z(s) = \left(\frac{R_1(C_1L_1s^2+1)}{C_1L_1s^2+C_1R_1s+1}, \infty, \infty, \frac{C_4L_4R_4s^2+L_4s+R_4}{C_4L_4s^2+1}, \frac{R_5(C_5L_5s^2+1)}{C_5L_5s^2+C_5R_5s+1}, \infty \right)$

$$H(s) = \frac{2R_1R_4g_m + 2R_1R_5g_m + 2R_1 + R_4 + 2R_5 + s^6(2C_1C_4C_5L_1L_4L_5R_1R_4g_m + 2C_1C_4C_5L_1L_4L_5R_1R_5g_m + 2C_1C_4C_5L_1L_4L_5R_1 + C_1C_4C_5L_1L_4L_5R_4 + 2C_1C_4C_5L_1L_4L_5R_5) + s^5(2C_1C_4C_5L_1L_4R_1R_4R_5g_m + 2C_1C_4C_5L_1L_4R_1R_5 + C_1C_4C_5L_1L_4R_4R_5 + C_1C_4C_5L_4R_1R_5 + C_1C_4C_5L_4R_1R_4 + C_1C_4C_5L_4R_4R_5) + s^4(2C_1C_4C_5L_1L_4R_1R_4 + 2C_1C_4C_5L_1L_4R_1R_5 + C_1C_4C_5L_1L_4R_4R_5 + C_1C_4C_5L_4R_1R_4 + C_1C_4C_5L_4R_1R_5 + C_1C_4C_5L_4R_4R_5) + s^3(2C_1C_4C_5L_1L_4R_1 + C_1C_4C_5L_1L_4R_4 + C_1C_4C_5L_4R_1 + C_1C_4C_5L_4R_4) + s^2(2C_1C_4C_5L_1L_4 + C_1C_4C_5L_4L_5) + s(C_1C_4C_5L_4) + C_1C_4C_5}{2R_1R_4g_m + 2R_1R_5g_m + 2R_1 + R_4 + 2R_5 + s^6(2C_1C_4C_5L_1L_4L_5R_1R_4g_m + 2C_1C_4C_5L_1L_4L_5R_1R_5g_m + 2C_1C_4C_5L_1L_4L_5R_1 + C_1C_4C_5L_1L_4L_5R_4 + 2C_1C_4C_5L_1L_4L_5R_5) + s^5(2C_1C_4C_5L_1L_4R_1R_4R_5g_m + 2C_1C_4C_5L_1L_4R_1R_5 + C_1C_4C_5L_1L_4R_4R_5 + C_1C_4C_5L_4R_1R_5 + C_1C_4C_5L_4R_1R_4 + C_1C_4C_5L_4R_4R_5) + s^4(2C_1C_4C_5L_1L_4R_1R_4 + 2C_1C_4C_5L_1L_4R_1R_5 + C_1C_4C_5L_1L_4R_4R_5 + C_1C_4C_5L_4R_1R_4 + C_1C_4C_5L_4R_1R_5 + C_1C_4C_5L_4R_4R_5) + s^3(2C_1C_4C_5L_1L_4R_1 + C_1C_4C_5L_1L_4R_4 + C_1C_4C_5L_4R_1 + C_1C_4C_5L_4R_4) + s^2(2C_1C_4C_5L_1L_4 + C_1C_4C_5L_4L_5) + s(C_1C_4C_5L_4) + C_1C_4C_5}$$

10.1032 INVALID-ORDER-1032 $Z(s) = \left(\frac{R_1(C_1L_1s^2+1)}{C_1L_1s^2+C_1R_1s+1}, \infty, \infty, \frac{R_4(C_4L_4s^2+1)}{C_4L_4s^2+C_4R_4s+1}, R_5, \infty \right)$

$$H(s) = \frac{R_1 R_4 R_5 g_m - R_1 R_4 + s^4 (C_1 C_4 L_1 L_4 R_1 R_4 R_5 g_m - C_1 C_4 L_1 L_4 R_1 R_4) + s^2 (C_1 L_1 R_1 R_4 R_5 g_m - C_1 L_1 R_1 R_4 R_5)}{2R_1 R_4 g_m + 2R_1 R_5 g_m + 2R_1 + R_4 + 2R_5 + s^4 (2C_1 C_4 L_1 L_4 R_1 R_4 g_m + 2C_1 C_4 L_1 L_4 R_1 R_5 g_m + 2C_1 C_4 L_1 L_4 R_1 + C_1 C_4 L_1 L_4 R_4 + 2C_1 C_4 L_1 L_4 R_5) + s^3 (2C_1 C_4 L_1 R_1 R_4 R_5 g_m + 2C_1 C_4 L_1 R_1 R_4 + 2C_1 C_4 L_1 R_4 R_5 + C_1 C_4 L_4 R_1 R_4 + 2C_1 C_4 L_4 R_1 R_5) + s^2 (2C_1 C_4 R_1 R_4 R_5 g_m + 2C_1 C_4 R_1 R_4 R_5 + C_1 C_4 R_4 R_1 R_4 + C_1 C_4 R_4 R_1 R_5) + s (C_1 C_4 R_1 R_4 R_5 + C_1 C_4 R_4 R_1 R_5) + C_1 C_4 R_1 R_4 R_5}$$

10.1033 INVALID-ORDER-1033 $Z(s) = \left(\frac{R_1(C_1 L_1 s^2 + 1)}{C_1 L_1 s^2 + C_1 R_1 s + 1}, \infty, \infty, \frac{R_4(C_4 L_4 s^2 + 1)}{C_4 L_4 s^2 + C_4 R_4 s + 1}, \frac{1}{C_5 s}, \infty \right)$

$$H(s) = \frac{-C_1 C_4 C_5 L_1 L_4 R_1 R_4 s^5 + C_1 C_4 L_1 L_4 R_1 R_4 g_m s^4 - C_5 R_1 R_4 s + R_1 R_4 g_m + s^3 (-C_1 C_5 L_1 R_1 R_4 - 2C_1 C_4 C_5 L_1 L_4 R_1 R_4 g_m + 2C_1 C_4 C_5 L_1 L_4 R_1 + C_1 C_4 C_5 L_1 L_4 R_4) + s^4 (2C_1 C_4 C_5 L_1 R_1 R_4 + C_1 C_4 C_5 L_4 R_1 R_4 + 2C_1 C_4 L_1 L_4 R_1 g_m + 2C_1 C_4 L_1 L_4) + s^3 (2C_1 C_4 L_1 R_1 R_4 g_m + 2C_1 C_4 L_1 R_4 + 2C_1 C_4 L_4 R_1 + 2C_1 C_5 L_1 R_1 R_4 g_m + 2C_1 C_5 L_1 R_1 + C_1 C_5 L_1 R_4 + 2C_1 C_5 L_1 R_4 g_m)}{2R_1 g_m + s^5 (2C_1 C_4 C_5 L_1 L_4 R_1 R_4 g_m + 2C_1 C_4 C_5 L_1 L_4 R_1 + C_1 C_4 C_5 L_1 L_4 R_4) + s^4 (2C_1 C_4 C_5 L_1 R_1 R_4 + C_1 C_4 C_5 L_4 R_1 R_4 + 2C_1 C_4 L_1 L_4 R_1 g_m + 2C_1 C_4 L_1 L_4) + s^3 (2C_1 C_4 L_1 R_1 R_4 g_m + 2C_1 C_4 L_1 R_4 + 2C_1 C_4 L_4 R_1 + 2C_1 C_5 L_1 R_1 R_4 g_m + 2C_1 C_5 L_1 R_1 + C_1 C_5 L_1 R_4 + 2C_1 C_5 L_1 R_4 g_m)}$$

10.1034 INVALID-ORDER-1034 $Z(s) = \left(\frac{R_1(C_1 L_1 s^2 + 1)}{C_1 L_1 s^2 + C_1 R_1 s + 1}, \infty, \infty, \frac{R_4(C_4 L_4 s^2 + 1)}{C_4 L_4 s^2 + C_4 R_4 s + 1}, \frac{R_5}{C_5 R_5 s + 1}, \infty \right)$

$$H(s) = \frac{2R_1R_4g_m + 2R_1R_5g_m + 2R_1 + R_4 + 2R_5 + s^5(2C_1C_4C_5L_1L_4R_1R_4R_5g_m + 2C_1C_4C_5L_1L_4R_1R_5 + C_1C_4C_5L_1L_4R_4R_5) + s^4(2C_1C_4C_5L_1R_1R_4R_5 + C_1C_4C_5L_4R_1R_4R_5 + 2C_1C_4L_1L_4R_1R_4g_m + 2C_1C_4L_1L_4R_1R_5g_m + 2C_1C_4L_1L_4R_1 + C_1C_4L_1L_4R_4 + 2C_1C_4L_1L_4R_5)}{2R_1R_4g_m + 2R_1R_5g_m + 2R_1 + R_4 + 2R_5 + s^5(2C_1C_4C_5L_1L_4R_1R_4R_5g_m + 2C_1C_4C_5L_1L_4R_1R_5 + C_1C_4C_5L_1L_4R_4R_5) + s^4(2C_1C_4C_5L_1R_1R_4R_5 + C_1C_4C_5L_4R_1R_4R_5 + 2C_1C_4L_1L_4R_1R_4g_m + 2C_1C_4L_1L_4R_1R_5g_m + 2C_1C_4L_1L_4R_1 + C_1C_4L_1L_4R_4 + 2C_1C_4L_1L_4R_5)}$$

10.1035 INVALID-ORDER-1035 $Z(s) = \left(\frac{R_1(C_1 L_1 s^2 + 1)}{C_1 L_1 s^2 + C_1 R_1 s + 1}, \infty, \infty, \frac{R_4(C_4 L_4 s^2 + 1)}{C_4 L_4 s^2 + C_4 R_4 s + 1}, R_5 + \frac{1}{C_5 s}, \infty \right)$

$$H(s) = \frac{2R_1g_m + s^5(2C_1C_4C_5L_1L_4R_1R_4g_m + 2C_1C_4C_5L_1L_4R_1R_5g_m + 2C_1C_4C_5L_1L_4R_1 + C_1C_4C_5L_1L_4R_4 + 2C_1C_4C_5L_1L_4R_5) + s^4(2C_1C_4C_5L_1R_1R_4R_5g_m + 2C_1C_4C_5L_1R_1R_4 + 2C_1C_4C_5L_1R_4R_5 + C_1C_4C_5L_4R_1R_4 + 2C_1C_4C_5L_4R_1R_5 + 2C_1C_4L_1L_4R_1g_m + 2C_1C_4L_1L_4R_1 + 2C_1C_4L_1L_4R_4 + 2C_1C_4L_1L_4R_5)}{(s^2 + \frac{1}{R_1C_1})^2(s^2 + \frac{1}{R_2C_2})^2(s^2 + \frac{1}{R_3C_3})^2(s^2 + \frac{1}{R_4C_4})^2(s^2 + \frac{1}{R_5C_5})^2}$$

10.1036 INVALID-ORDER-1036 $Z(s) = \left(\frac{R_1(C_1 L_1 s^2 + 1)}{C_1 L_1 s^2 + C_1 R_1 s + 1}, \infty, \infty, \frac{R_4(C_4 L_4 s^2 + 1)}{C_4 L_4 s^2 + C_4 R_4 s + 1}, L_5 s + \frac{1}{C_5 s}, \infty \right)$

$$H(s) = \frac{2R_1g_m + s^6(2C_1C_4C_5L_1L_4L_5R_1g_m + 2C_1C_4C_5L_1L_4L_5) + s^5(2C_1C_4C_5L_1L_4R_1R_4g_m + 2C_1C_4C_5L_1L_4R_1 + C_1C_4C_5L_1L_4R_4 + 2C_1C_4C_5L_1L_5R_1R_4g_m + 2C_1C_4C_5L_1L_5R_4 + 2C_1C_4C_5L_4L_5R_1) + s^4(2C_1C_4C_5L_1R_1R_4 + C_1C_4C_5L_4R_1R_4 + 2C_1C_4C_5L_5R_1R_4 + 2C_1C_4C_5L_4L_5R_1) + s^3(2C_1C_4C_5L_1L_4R_1R_4 + 2C_1C_4C_5L_1L_4R_4 + 2C_1C_4C_5L_1L_5R_1R_4 + 2C_1C_4C_5L_1L_5R_4 + 2C_1C_4C_5L_4L_5R_1) + s^2(2C_1C_4C_5L_1L_4R_1 + C_1C_4C_5L_1L_4R_4 + 2C_1C_4C_5L_1L_5R_1 + 2C_1C_4C_5L_1L_5R_4 + 2C_1C_4C_5L_4L_5R_1) + s(C_1C_4C_5L_1L_4 + C_1C_4C_5L_1L_5 + C_1C_4C_5L_4L_5) + C_1C_4C_5}{2R_1g_m + s^6(2C_1C_4C_5L_1L_4L_5R_1g_m + 2C_1C_4C_5L_1L_4L_5) + s^5(2C_1C_4C_5L_1L_4R_1R_4g_m + 2C_1C_4C_5L_1L_4R_1 + C_1C_4C_5L_1L_4R_4 + 2C_1C_4C_5L_1L_5R_1R_4g_m + 2C_1C_4C_5L_1L_5R_4 + 2C_1C_4C_5L_4L_5R_1) + s^4(2C_1C_4C_5L_1R_1R_4 + C_1C_4C_5L_4R_1R_4 + 2C_1C_4C_5L_5R_1R_4 + 2C_1C_4C_5L_4L_5R_1) + s^3(2C_1C_4C_5L_1L_4R_1R_4 + 2C_1C_4C_5L_1L_4R_4 + 2C_1C_4C_5L_1L_5R_1R_4 + 2C_1C_4C_5L_1L_5R_4 + 2C_1C_4C_5L_4L_5R_1) + s^2(2C_1C_4C_5L_1L_4R_1 + C_1C_4C_5L_1L_4R_4 + 2C_1C_4C_5L_1L_5R_1 + 2C_1C_4C_5L_1L_5R_4 + 2C_1C_4C_5L_4L_5R_1) + s(C_1C_4C_5L_1L_4 + C_1C_4C_5L_1L_5 + C_1C_4C_5L_4L_5) + C_1C_4C_5}$$

10.1037 INVALID-ORDER-1037 $Z(s) = \left(\frac{R_1(C_1L_1s^2+1)}{C_1L_1s^2+C_1R_1s+1}, \infty, \infty, \frac{R_4(C_4L_4s^2+1)}{C_4L_4s^2+C_4R_4s+1}, \frac{L_5s}{C_5L_5s^2+1}, \infty \right)$

$$H(s) = \frac{2R_1 R_4 g_m + 2R_1 + R_4 + s^6 (2C_1 C_4 C_5 L_1 L_4 L_5 R_1 R_4 g_m + 2C_1 C_4 C_5 L_1 L_4 L_5 R_1 + C_1 C_4 C_5 L_1 L_4 L_5 R_4) + s^5 (2C_1 C_4 C_5 L_1 L_5 R_1 R_4 + C_1 C_4 C_5 L_4 L_5 R_1 R_4 + 2C_1 C_4 L_1 L_4 L_5 R_1 g_m + 2C_1 C_4 L_1 L_4 L_5) + s^4 (2C_1 C_4 L_1 L_4 R_1 R_4 g_m + 2C_1 C_4 L_1 L_4 R_1 + C_1 C_4 L_1 L_4 R_4 + 2C_1 C_4 L_1 R_1 R_4 g_m + 2C_1 C_4 L_1 R_1 R_4 + C_1 C_4 L_1 R_4 R_1 + 2C_1 C_4 L_1 R_4 R_4) + s^3 (2C_1 C_4 L_1 L_4 R_1 R_4 + 2C_1 C_4 L_1 L_4 R_4 + 2C_1 C_4 L_1 R_1 R_4 + 2C_1 C_4 L_1 R_4 R_1 + 2C_1 C_4 L_1 R_4 R_4) + s^2 (2C_1 C_4 L_1 L_4 R_1 + 2C_1 C_4 L_1 L_4 R_4 + 2C_1 C_4 L_1 R_1 R_4 + 2C_1 C_4 L_1 R_4 R_1 + 2C_1 C_4 L_1 R_4 R_4) + s (2C_1 C_4 L_1 L_4 R_1 + 2C_1 C_4 L_1 L_4 R_4 + 2C_1 C_4 L_1 R_1 R_4 + 2C_1 C_4 L_1 R_4 R_1 + 2C_1 C_4 L_1 R_4 R_4) + 2C_1 C_4 L_1 L_4 R_1 + 2C_1 C_4 L_1 L_4 R_4 + 2C_1 C_4 L_1 R_1 R_4 + 2C_1 C_4 L_1 R_4 R_1 + 2C_1 C_4 L_1 R_4 R_4}{2R_1 R_4 g_m + 2R_1 + R_4 + s^6 (2C_1 C_4 C_5 L_1 L_4 L_5 R_1 R_4 g_m + 2C_1 C_4 C_5 L_1 L_4 L_5 R_1 + C_1 C_4 C_5 L_1 L_4 L_5 R_4) + s^5 (2C_1 C_4 C_5 L_1 L_5 R_1 R_4 + C_1 C_4 C_5 L_4 L_5 R_1 R_4 + 2C_1 C_4 L_1 L_4 L_5 R_1 g_m + 2C_1 C_4 L_1 L_4 L_5) + s^4 (2C_1 C_4 L_1 L_4 R_1 R_4 g_m + 2C_1 C_4 L_1 L_4 R_1 + C_1 C_4 L_1 L_4 R_4 + 2C_1 C_4 L_1 R_1 R_4 g_m + 2C_1 C_4 L_1 R_1 R_4 + C_1 C_4 L_1 R_4 R_1 + 2C_1 C_4 L_1 R_4 R_4) + s^3 (2C_1 C_4 L_1 L_4 R_1 R_4 + 2C_1 C_4 L_1 L_4 R_4 + 2C_1 C_4 L_1 R_1 R_4 + 2C_1 C_4 L_1 R_4 R_1 + 2C_1 C_4 L_1 R_4 R_4) + s^2 (2C_1 C_4 L_1 L_4 R_1 + 2C_1 C_4 L_1 L_4 R_4 + 2C_1 C_4 L_1 R_1 R_4 + 2C_1 C_4 L_1 R_4 R_1 + 2C_1 C_4 L_1 R_4 R_4) + s (2C_1 C_4 L_1 L_4 R_1 + 2C_1 C_4 L_1 L_4 R_4 + 2C_1 C_4 L_1 R_1 R_4 + 2C_1 C_4 L_1 R_4 R_1 + 2C_1 C_4 L_1 R_4 R_4) + 2C_1 C_4 L_1 L_4 R_1 + 2C_1 C_4 L_1 L_4 R_4 + 2C_1 C_4 L_1 R_1 R_4 + 2C_1 C_4 L_1 R_4 R_1 + 2C_1 C_4 L_1 R_4 R_4}$$

10.1038 INVALID-ORDER-1038 $Z(s) = \left(\frac{R_1(C_1 L_1 s^2 + 1)}{C_1 L_1 s^2 + C_1 R_1 s + 1}, \infty, \infty, \frac{R_4(C_4 L_4 s^2 + 1)}{C_4 L_4 s^2 + C_4 R_4 s + 1}, L_5 s + R_5 + \frac{1}{C_5 s}, \infty \right)$

10.1039 INVALID-ORDER-1039 $Z(s) = \left(\frac{R_1(C_1 L_1 s^2 + 1)}{C_1 L_1 s^2 + C_1 R_1 s + 1}, \infty, \infty, \frac{R_4(C_4 L_4 s^2 + 1)}{C_4 L_4 s^2 + C_4 R_4 s + 1}, \frac{L_5 R_5 s}{C_5 L_5 R_5 s^2 + L_5 s + R_5}, \infty \right)$

$$H(s) = \frac{2R_1R_4R_5g_m + 2R_1R_5 + R_4R_5 + s^6(2C_1C_4C_5L_1L_4L_5R_1R_4R_5g_m + 2C_1C_4C_5L_1L_4L_5R_1R_5 + C_1C_4C_5L_1L_4L_5R_4R_5) + s^5(2C_1C_4C_5L_1L_5R_1R_4R_5 + C_1C_4C_5L_4L_5R_1R_4R_5 + 2C_1C_4L_1L_4L_5R_1R_4g_m + 2C_1C_4L_1L_4L_5R_1R_5g_m + 2C_1C_4L_1L_4L_5R_1 + C_1C_4L_1L_4L_5R_4)}{1 + s^6(2C_1C_4C_5L_1L_4L_5R_1R_4R_5g_m + 2C_1C_4C_5L_1L_4L_5R_1R_5 + C_1C_4C_5L_1L_4L_5R_4R_5) + s^5(2C_1C_4C_5L_1L_5R_1R_4R_5 + C_1C_4C_5L_4L_5R_1R_4R_5 + 2C_1C_4L_1L_4L_5R_1R_4g_m + 2C_1C_4L_1L_4L_5R_1R_5g_m + 2C_1C_4L_1L_4L_5R_1 + C_1C_4L_1L_4L_5R_4)}$$

10.1040 INVALID-ORDER-1040 $Z(s) = \left(\frac{R_1(C_1L_1s^2+1)}{C_1L_1s^2+C_1R_1s+1}, \infty, \infty, \frac{R_4(C_4L_4s^2+1)}{C_4L_4s^2+C_4R_4s+1}, \frac{C_5L_5R_5s^2+L_5s+R_5}{C_5L_5s^2+1}, \infty \right)$

10.1041

INVALID-ORDER-1041

$$Z(s) = \left(\frac{R_1(C_1L_1s^2+1)}{C_1L_1s^2+C_1R_1s+1}, \infty, \infty, \frac{R_4(C_4L_4s^2+1)}{C_4L_4s^2+C_4R_4s+1}, \frac{R_5(C_5L_5s^2+1)}{C_5L_5s^2+C_5R_5s+1}, \infty \right)$$

$$H(s) = \frac{}{2R_1R_4g_m + 2R_1R_5g_m + 2R_1 + R_4 + 2R_5 + s^6 (2C_1C_4C_5L_1L_4L_5R_1R_4g_m + 2C_1C_4C_5L_1L_4L_5R_1R_5g_m + 2C_1C_4C_5L_1L_4L_5R_1 + C_1C_4C_5L_1L_4L_5R_4 + 2C_1C_4C_5L_1L_4L_5R_5) + s^5 (2C_1C_4C_5L_1L_4R_1R_4R_5g_m + 2C_1C_4C_5L_1L_4R_1R_5 + C_1C_4C_5L_1L_4R_4R_5 + 2C_1C_4C_5L_1L_4R_5) + s^4 (2C_1C_4C_5L_1L_4R_1 + C_1C_4C_5L_1L_4R_4 + C_1C_4C_5L_1L_4R_5) + s^3 (2C_1C_4C_5L_1R_1 + C_1C_4C_5L_1R_4 + C_1C_4C_5L_1R_5) + s^2 (2C_1C_4C_5R_1 + C_1C_4C_5R_4 + C_1C_4C_5R_5) + s (C_1C_4C_5 + C_1C_4R_1 + C_1C_4R_4 + C_1C_4R_5) + C_1C_4}$$

11

PolynomialError