

Filter Summary Report: TIA,simple,Z1,Z3,ZL

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Contents

1 Examined $H(z)$ for TIA simple Z1 Z3 ZL: $\frac{Z_1 Z_3 Z_L g_m}{Z_1 Z_3 g_m + Z_1 Z_L g_m + Z_3 + Z_L}$

$$H(z) = \frac{Z_1 Z_3 Z_L g_m}{Z_1 Z_3 g_m + Z_1 Z_L g_m + Z_3 + Z_L}$$

2 HP

3 BP

3.1 BP-1 $Z(s) = \left(R_1, \infty, R_3, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} \right)$

$$H(s) = \frac{L_L R_1 R_3 g_m s}{(R_1 g_m + 1)(C_L L_L R_3 s^2 + L_L s + R_3)}$$

Parameters:

Q: $C_L R_3 \sqrt{\frac{1}{C_L L_L}}$
 wo: $\sqrt{\frac{1}{C_L L_L}}$
 bandwidth: $\frac{1}{C_L R_3}$
 K-LP: 0
 K-HP: 0
 K-BP: $\frac{R_1 R_3 g_m}{R_1 g_m + 1}$
 Qz: 0
 Wz: None

3.2 BP-2 $Z(s) = \left(R_1, \infty, R_3, \infty, \infty, \frac{L_L R_L s}{C_L L_L R_L s^2 + L_L s + R_L} \right)$

$$H(s) = \frac{L_L R_1 R_3 R_L g_m s}{(R_1 g_m + 1)(C_L L_L R_3 R_L s^2 + L_L R_3 s + L_L R_L s + R_3 R_L)}$$

Parameters:

Q: $\frac{C_L R_3 R_L \sqrt{\frac{1}{C_L L_L}}}{R_3 + R_L}$
 wo: $\sqrt{\frac{1}{C_L L_L}}$
 bandwidth: $\frac{R_3 + R_L}{C_L R_3 R_L}$
 K-LP: 0
 K-HP: 0
 K-BP: $\frac{R_1 R_3 R_L g_m}{(R_3 + R_L)(R_1 g_m + 1)}$
 Qz: 0
 Wz: None

3.3 BP-3 $Z(s) = \left(R_1, \infty, \frac{1}{C_3 s}, \infty, \infty, \frac{L_L R_L s}{C_L L_L R_L s^2 + L_L s + R_L} \right)$

$$H(s) = \frac{L_L R_1 R_L g_m s}{(R_1 g_m + 1)(C_3 L_L R_L s^2 + C_L L_L R_L s^2 + L_L s + R_L)}$$

Parameters:

Q: $R_L \sqrt{\frac{1}{L_L(C_3 + C_L)}} (C_3 + C_L)$
 wo: $\sqrt{\frac{1}{L_L(C_3 + C_L)}}$
 bandwidth: $\frac{1}{R_L(C_3 + C_L)}$
 K-LP: 0
 K-HP: 0
 K-BP: $\frac{R_1 R_L g_m}{R_1 g_m + 1}$
 Qz: 0

Wz: None

$$\mathbf{3.4 \quad BP-4} \quad Z(s) = \left(R_1, \quad \infty, \quad \frac{R_3}{C_3 R_3 s + 1}, \quad \infty, \quad \infty, \quad \frac{L_L s}{C_L L_L s^2 + 1} \right)$$

$$H(s) = \frac{L_L R_1 R_3 g_m s}{(R_1 g_m + 1) (C_3 L_L R_3 s^2 + C_L L_L R_3 s^2 + L_L s + R_3)}$$

Parameters:

$$\text{Q: } R_3 \sqrt{\frac{1}{L_L (C_3 + C_L)}} (C_3 + C_L)$$

$$\text{wo: } \sqrt{\frac{1}{L_L (C_3 + C_L)}}$$

$$\text{bandwidth: } \frac{1}{R_3 (C_3 + C_L)}$$

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

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

$$\text{K-BP: } \frac{R_1 R_3 g_m}{R_1 g_m + 1}$$

$$\text{Qz: } 0$$

$$\text{Wz: None}$$

$$\mathbf{3.5 \quad BP-5} \quad Z(s) = \left(R_1, \quad \infty, \quad \frac{R_3}{C_3 R_3 s + 1}, \quad \infty, \quad \infty, \quad \frac{L_L R_L s}{C_L L_L R_L s^2 + L_L s + R_L} \right)$$

$$H(s) = \frac{L_L R_1 R_3 R_L g_m s}{(R_1 g_m + 1) (C_3 L_L R_3 R_L s^2 + C_L L_L R_3 R_L s^2 + L_L R_3 s + L_L R_L s + R_3 R_L)}$$

Parameters:

$$\text{Q: } \frac{R_3 R_L \sqrt{\frac{1}{L_L (C_3 + C_L)}} (C_3 + C_L)}{R_3 + R_L}$$

$$\text{wo: } \sqrt{\frac{1}{L_L (C_3 + C_L)}}$$

$$\text{bandwidth: } \frac{R_3 + R_L}{R_3 R_L (C_3 + C_L)}$$

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

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

$$\text{K-BP: } \frac{R_1 R_3 R_L g_m}{R_1 R_3 g_m + R_1 R_L g_m + R_3 + R_L}$$

$$\text{Qz: } 0$$

$$\text{Wz: None}$$

$$\mathbf{3.6 \quad BP-6} \quad Z(s) = \left(R_1, \quad \infty, \quad \frac{L_3 s}{C_3 L_3 s^2 + 1}, \quad \infty, \quad \infty, \quad R_L \right)$$

$$H(s) = \frac{L_3 R_1 R_L g_m s}{(R_1 g_m + 1) (C_3 L_3 R_L s^2 + L_3 s + R_L)}$$

Parameters:

$$\text{Q: } C_3 R_L \sqrt{\frac{1}{C_3 L_3}}$$

$$\text{wo: } \sqrt{\frac{1}{C_3 L_3}}$$

$$\text{bandwidth: } \frac{1}{C_3 R_L}$$

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

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

$$\text{K-BP: } \frac{R_1 R_L g_m}{R_1 g_m + 1}$$

$$\text{Qz: } 0$$

$$\text{Wz: None}$$

$$\mathbf{3.7 \quad BP-7} \quad Z(s) = \left(R_1, \quad \infty, \quad \frac{L_3 s}{C_3 L_3 s^2 + 1}, \quad \infty, \quad \infty, \quad \frac{R_L}{C_L R_L s + 1} \right)$$

$$H(s) = \frac{L_3 R_1 R_L g_m s}{(R_1 g_m + 1) (C_3 L_3 R_L s^2 + C_L L_3 R_L s^2 + L_3 s + R_L)}$$

Parameters:

Q: $R_L \sqrt{\frac{1}{L_3(C_3+C_L)}} (C_3 + C_L)$
 wo: $\sqrt{\frac{1}{L_3(C_3+C_L)}}$
 bandwidth: $\frac{1}{R_L(C_3+C_L)}$
 K-LP: 0
 K-HP: 0
 K-BP: $\frac{R_1 R_L g_m}{R_1 g_m + 1}$
 Qz: 0
 Wz: None

3.8 BP-8 $Z(s) = \left(R_1, \infty, \frac{L_3 s}{C_3 L_3 s^2 + 1}, \infty, \infty, \frac{L_L R_L s}{C_L L_L R_L s^2 + L_L s + R_L} \right)$

$$H(s) = \frac{L_3 L_L R_1 R_L g_m s}{(R_1 g_m + 1) (C_3 L_3 L_L R_L s^2 + C_L L_3 L_L R_L s^2 + L_3 L_L s + L_3 R_L + L_L R_L)}$$

Parameters:

Q: $R_L \sqrt{\frac{L_3 + L_L}{L_3 L_L (C_3 + C_L)}} (C_3 + C_L)$
 wo: $\sqrt{\frac{L_3 + L_L}{L_3 L_L (C_3 + C_L)}}$
 bandwidth: $\frac{1}{R_L (C_3 + C_L)}$
 K-LP: 0
 K-HP: 0
 K-BP: $\frac{R_1 R_L g_m}{R_1 g_m + 1}$
 Qz: 0
 Wz: None

3.9 BP-9 $Z(s) = \left(R_1, \infty, \frac{L_3 R_3 s}{C_3 L_3 R_3 s^2 + L_3 s + R_3}, \infty, \infty, R_L \right)$

$$H(s) = \frac{L_3 R_1 R_3 R_L g_m s}{(R_1 g_m + 1) (C_3 L_3 R_3 R_L s^2 + L_3 R_3 s + L_3 R_L s + R_3 R_L)}$$

Parameters:

Q: $\frac{C_3 R_3 R_L \sqrt{\frac{1}{C_3 L_3}}}{R_3 + R_L}$
 wo: $\sqrt{\frac{1}{C_3 L_3}}$
 bandwidth: $\frac{R_3 + R_L}{C_3 R_3 R_L}$
 K-LP: 0
 K-HP: 0
 K-BP: $\frac{R_1 R_3 R_L g_m}{(R_3 + R_L)(R_1 g_m + 1)}$
 Qz: 0
 Wz: None

3.10 BP-10 $Z(s) = \left(R_1, \infty, \frac{L_3 R_3 s}{C_3 L_3 R_3 s^2 + L_3 s + R_3}, \infty, \infty, \frac{1}{C_L s} \right)$

$$H(s) = \frac{L_3 R_1 R_3 g_m s}{(R_1 g_m + 1) (C_3 L_3 R_3 s^2 + C_L L_3 R_3 s^2 + L_3 s + R_3)}$$

Parameters:

Q: $R_3 \sqrt{\frac{1}{L_3(C_3+C_L)}} (C_3 + C_L)$
 wo: $\sqrt{\frac{1}{L_3(C_3+C_L)}}$
 bandwidth: $\frac{1}{R_3(C_3+C_L)}$
 K-LP: 0
 K-HP: 0
 K-BP: $\frac{R_1 R_3 g_m}{R_1 g_m + 1}$
 Qz: 0
 Wz: None

3.11 BP-11 $Z(s) = \left(R_1, \infty, \frac{L_3 R_3 s}{C_3 L_3 R_3 s^2 + L_3 s + R_3}, \infty, \infty, \frac{R_L}{C_L R_L s + 1} \right)$

$$H(s) = \frac{L_3 R_1 R_3 R_L g_m s}{(R_1 g_m + 1) (C_3 L_3 R_3 R_L s^2 + C_L L_3 R_3 R_L s^2 + L_3 R_3 s + L_3 R_L s + R_3 R_L)}$$

Parameters:

Q: $\frac{R_3 R_L \sqrt{\frac{1}{L_3 (C_3 + C_L)}} (C_3 + C_L)}{R_3 + R_L}$
 wo: $\sqrt{\frac{1}{L_3 (C_3 + C_L)}}$
 bandwidth: $\frac{R_3 + R_L}{R_3 R_L (C_3 + C_L)}$
 K-LP: 0
 K-HP: 0
 K-BP: $\frac{R_1 R_3 R_L g_m}{R_1 R_3 g_m + R_1 R_L g_m + R_3 + R_L}$
 Qz: 0
 Wz: None

3.12 BP-12 $Z(s) = \left(R_1, \infty, \frac{L_3 R_3 s}{C_3 L_3 R_3 s^2 + L_3 s + R_3}, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} \right)$

$$H(s) = \frac{L_3 L_L R_1 R_3 g_m s}{(R_1 g_m + 1) (C_3 L_3 L_L R_3 s^2 + C_L L_3 L_L R_3 s^2 + L_3 L_L s + L_3 R_3 + L_L R_3)}$$

Parameters:

Q: $R_3 \sqrt{\frac{L_3 + L_L}{L_3 L_L (C_3 + C_L)}} (C_3 + C_L)$
 wo: $\sqrt{\frac{L_3 + L_L}{L_3 L_L (C_3 + C_L)}}$
 bandwidth: $\frac{1}{R_3 (C_3 + C_L)}$
 K-LP: 0
 K-HP: 0
 K-BP: $\frac{R_1 R_3 g_m}{R_1 g_m + 1}$
 Qz: 0
 Wz: None

3.13 BP-13 $Z(s) = \left(R_1, \infty, \frac{L_3 R_3 s}{C_3 L_3 R_3 s^2 + L_3 s + R_3}, \infty, \infty, \frac{L_L R_L s}{C_L L_L R_L s^2 + L_L s + R_L} \right)$

$$H(s) = \frac{L_3 L_L R_1 R_3 R_L g_m s}{(R_1 g_m + 1) (C_3 L_3 L_L R_3 R_L s^2 + C_L L_3 L_L R_3 R_L s^2 + L_3 L_L R_3 s + L_3 L_L R_L s + L_3 R_3 R_L + L_L R_3 R_L)}$$

Parameters:

Q: $\frac{R_3 R_L \sqrt{\frac{L_3 + L_L}{L_3 L_L (C_3 + C_L)}} (C_3 + C_L)}{R_3 + R_L}$
 wo: $\sqrt{\frac{L_3 + L_L}{L_3 L_L (C_3 + C_L)}}$
 bandwidth: $\frac{R_3 + R_L}{R_3 R_L (C_3 + C_L)}$
 K-LP: 0
 K-HP: 0
 K-BP: $\frac{R_1 R_3 R_L g_m}{R_1 R_3 g_m + R_1 R_L g_m + R_3 + R_L}$
 Qz: 0
 Wz: None

3.14 BP-14 $Z(s) = \left(L_1 s, \infty, R_3, \infty, \infty, \frac{1}{C_L s} \right)$

$$H(s) = \frac{L_1 R_3 g_m s}{(C_L R_3 s + 1) (L_1 g_m s + 1)}$$

Parameters:

Q: $\frac{C_L L_1 R_3 g_m \sqrt{\frac{1}{C_L L_1 R_3 g_m}}}{C_L R_3 + L_1 g_m}$

wo: $\sqrt{\frac{1}{C_L L_1 R_3 g_m}}$
bandwidth: $\frac{C_L R_3 + L_1 g_m}{C_L L_1 R_3 g_m}$
K-LP: 0
K-HP: 0
K-BP: $\frac{L_1 R_3 g_m}{C_L R_3 + L_1 g_m}$
Qz: 0
Wz: None

3.15 BP-15 $Z(s) = \left(L_1 s, \infty, R_3, \infty, \infty, \frac{R_L}{C_L R_L s + 1} \right)$

Parameters:

Q: $\frac{C_L L_1 R_3 R_L g_m \sqrt{\frac{R_3 + R_L}{C_L L_1 R_3 R_L g_m}}}{C_L R_3 R_L + L_1 R_3 g_m + L_1 R_L g_m}$
wo: $\sqrt{\frac{R_3 + R_L}{C_L L_1 R_3 R_L g_m}}$
bandwidth: $\frac{C_L R_3 R_L + L_1 R_3 g_m + L_1 R_L g_m}{C_L L_1 R_3 R_L g_m}$
K-LP: 0
K-HP: 0
K-BP: $\frac{L_1 R_3 R_L g_m}{C_L R_3 R_L + L_1 R_3 g_m + L_1 R_L g_m}$
Qz: 0
Wz: None

3.16 BP-16 $Z(s) = \left(L_1 s, \infty, \frac{1}{C_3 s}, \infty, \infty, R_L \right)$

Parameters:

Q: $\frac{C_3 L_1 R_L g_m \sqrt{\frac{1}{C_3 L_1 R_L g_m}}}{C_3 R_L + L_1 g_m}$
wo: $\sqrt{\frac{1}{C_3 L_1 R_L g_m}}$
bandwidth: $\frac{C_3 R_L + L_1 g_m}{C_3 L_1 R_L g_m}$
K-LP: 0
K-HP: 0
K-BP: $\frac{L_1 R_L g_m}{C_3 R_L + L_1 g_m}$
Qz: 0
Wz: None

3.17 BP-17 $Z(s) = \left(L_1 s, \infty, \frac{1}{C_3 s}, \infty, \infty, \frac{R_L}{C_L R_L s + 1} \right)$

Parameters:

Q: $\frac{L_1 R_L g_m \sqrt{\frac{1}{L_1 R_L g_m (C_3 + C_L)}} (C_3 + C_L)}{C_3 R_L + C_L R_L + L_1 g_m}$
wo: $\sqrt{\frac{1}{L_1 R_L g_m (C_3 + C_L)}}$
bandwidth: $\frac{C_3 R_L + C_L R_L + L_1 g_m}{L_1 R_L g_m (C_3 + C_L)}$
K-LP: 0
K-HP: 0
K-BP: $\frac{L_1 R_L g_m}{C_3 R_L + C_L R_L + L_1 g_m}$
Qz: 0
Wz: None

$$H(s) = \frac{L_1 R_3 R_L g_m s}{(L_1 g_m s + 1) (C_L R_3 R_L s + R_3 + R_L)}$$

$$H(s) = \frac{L_1 R_L g_m s}{(C_3 R_L s + 1) (L_1 g_m s + 1)}$$

$$H(s) = \frac{L_1 R_L g_m s}{(L_1 g_m s + 1) (C_3 R_L s + C_L R_L s + 1)}$$

$$\mathbf{3.18} \quad \mathbf{BP-18} \quad Z(s) = \left(L_1 s, \infty, \frac{R_3}{C_3 R_3 s + 1}, \infty, \infty, R_L \right)$$

Parameters:

$$\begin{aligned} \text{Q: } & \frac{C_3 L_1 R_3 R_L g_m \sqrt{\frac{R_3 + R_L}{C_3 L_1 R_3 R_L g_m}}}{C_3 R_3 R_L + L_1 R_3 g_m + L_1 R_L g_m} \\ \text{wo: } & \sqrt{\frac{R_3 + R_L}{C_3 L_1 R_3 R_L g_m}} \\ \text{bandwidth: } & \frac{C_3 R_3 R_L + L_1 R_3 g_m + L_1 R_L g_m}{C_3 L_1 R_3 R_L g_m} \\ \text{K-LP: } & 0 \\ \text{K-HP: } & 0 \\ \text{K-BP: } & \frac{L_1 R_3 R_L g_m}{C_3 R_3 R_L + L_1 R_3 g_m + L_1 R_L g_m} \\ \text{Qz: } & 0 \\ \text{Wz: } & \text{None} \end{aligned}$$

$$\mathbf{3.19} \quad \mathbf{BP-19} \quad Z(s) = \left(L_1 s, \infty, \frac{R_3}{C_3 R_3 s + 1}, \infty, \infty, \frac{1}{C_L s} \right)$$

Parameters:

$$\begin{aligned} \text{Q: } & \frac{L_1 R_3 g_m \sqrt{\frac{1}{L_1 R_3 g_m (C_3 + C_L)}} (C_3 + C_L)}{C_3 R_3 + C_L R_3 + L_1 g_m} \\ \text{wo: } & \sqrt{\frac{1}{L_1 R_3 g_m (C_3 + C_L)}} \\ \text{bandwidth: } & \frac{C_3 R_3 + C_L R_3 + L_1 g_m}{L_1 R_3 g_m (C_3 + C_L)} \\ \text{K-LP: } & 0 \\ \text{K-HP: } & 0 \\ \text{K-BP: } & \frac{L_1 R_3 g_m}{C_3 R_3 + C_L R_3 + L_1 g_m} \\ \text{Qz: } & 0 \\ \text{Wz: } & \text{None} \end{aligned}$$

$$\mathbf{3.20} \quad \mathbf{BP-20} \quad Z(s) = \left(L_1 s, \infty, \frac{R_3}{C_3 R_3 s + 1}, \infty, \infty, \frac{R_L}{C_L R_L s + 1} \right)$$

Parameters:

$$\begin{aligned} \text{Q: } & \frac{L_1 R_3 R_L g_m \sqrt{\frac{R_3 + R_L}{L_1 R_3 R_L g_m (C_3 + C_L)}} (C_3 + C_L)}{C_3 R_3 R_L + C_L R_3 R_L + L_1 R_3 g_m + L_1 R_L g_m} \\ \text{wo: } & \sqrt{\frac{R_3 + R_L}{L_1 R_3 R_L g_m (C_3 + C_L)}} \\ \text{bandwidth: } & \frac{C_3 R_3 R_L + C_L R_3 R_L + L_1 R_3 g_m + L_1 R_L g_m}{L_1 R_3 R_L g_m (C_3 + C_L)} \\ \text{K-LP: } & 0 \\ \text{K-HP: } & 0 \\ \text{K-BP: } & \frac{L_1 R_3 R_L g_m}{C_3 R_3 R_L + C_L R_3 R_L + L_1 R_3 g_m + L_1 R_L g_m} \\ \text{Qz: } & 0 \\ \text{Wz: } & \text{None} \end{aligned}$$

$$\mathbf{3.21} \quad \mathbf{BP-21} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, R_3, \infty, \infty, R_L \right)$$

Parameters:

$$\text{Q: } \frac{C_1 \sqrt{\frac{1}{C_1 L_1}}}{g_m}$$

$$H(s) = \frac{L_1 R_3 R_L g_m s}{(L_1 g_m s + 1) (C_3 R_3 R_L s + R_3 + R_L)}$$

$$H(s) = \frac{L_1 R_3 g_m s}{(L_1 g_m s + 1) (C_3 R_3 s + C_L R_3 s + 1)}$$

$$H(s) = \frac{L_1 R_3 R_L g_m s}{(L_1 g_m s + 1) (C_3 R_3 R_L s + C_L R_3 R_L s + R_3 + R_L)}$$

$$H(s) = \frac{L_1 R_3 R_L g_m s}{(R_3 + R_L) (C_1 L_1 s^2 + L_1 g_m s + 1)}$$

wo: $\sqrt{\frac{1}{C_1 L_1}}$
bandwidth: $\frac{g_m}{C_1}$
K-LP: 0
K-HP: 0
K-BP: $\frac{R_3 R_L}{R_3 + R_L}$
Qz: 0
Wz: None

3.22 BP-22 $Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \infty, R_3, \infty, \infty, R_L \right)$

Parameters:

Q: $\frac{C_1 R_1 \sqrt{\frac{1}{C_1 L_1}}}{R_1 g_m + 1}$
wo: $\sqrt{\frac{1}{C_1 L_1}}$
bandwidth: $\frac{R_1 g_m + 1}{C_1 R_1}$
K-LP: 0
K-HP: 0
K-BP: $\frac{R_1 R_3 R_L g_m}{(R_3 + R_L)(R_1 g_m + 1)}$
Qz: 0
Wz: None

$$H(s) = \frac{L_1 R_1 R_3 R_L g_m s}{(R_3 + R_L) (C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1)}$$

4 LP

4.1 LP-1 $Z(s) = \left(\frac{1}{C_1 s}, \infty, R_3, \infty, \infty, \frac{1}{C_L s} \right)$

Parameters:

Q: $\frac{C_1 C_L R_3 \sqrt{\frac{g_m}{C_1 C_L R_3}}}{C_1 + C_L R_3 g_m}$
wo: $\sqrt{\frac{g_m}{C_1 C_L R_3}}$
bandwidth: $\frac{C_1 + C_L R_3 g_m}{C_1 C_L R_3}$
K-LP: R_3
K-HP: 0
K-BP: 0
Qz: None
Wz: None

$$H(s) = \frac{R_3 g_m}{(C_1 s + g_m) (C_L R_3 s + 1)}$$

4.2 LP-2 $Z(s) = \left(\frac{1}{C_1 s}, \infty, R_3, \infty, \infty, \frac{R_L}{C_L R_L s + 1} \right)$

Parameters:

Q: $\frac{C_1 C_L R_3 R_L \sqrt{\frac{g_m (R_3 + R_L)}{C_1 C_L R_3 R_L}}}{C_1 R_3 + C_1 R_L + C_L R_3 R_L g_m}$
wo: $\sqrt{\frac{g_m (R_3 + R_L)}{C_1 C_L R_3 R_L}}$
bandwidth: $\frac{C_1 R_3 + C_1 R_L + C_L R_3 R_L g_m}{C_1 C_L R_3 R_L}$
K-LP: $\frac{R_3 R_L}{R_3 + R_L}$
K-HP: 0
K-BP: 0

$$H(s) = \frac{R_3 R_L g_m}{(C_1 s + g_m) (C_L R_3 R_L s + R_3 + R_L)}$$

Qz: None
Wz: None

4.3 LP-3 $Z(s) = \left(\frac{1}{C_1 s}, \infty, \frac{1}{C_3 s}, \infty, \infty, R_L \right)$

Parameters:

Q: $\frac{C_1 C_3 R_L \sqrt{\frac{g_m}{C_1 C_3 R_L}}}{C_1 + C_3 R_L g_m}$
 wo: $\sqrt{\frac{g_m}{C_1 C_3 R_L}}$
 bandwidth: $\frac{C_1 + C_3 R_L g_m}{C_1 C_3 R_L}$
 K-LP: R_L
 K-HP: 0
 K-BP: 0
 Qz: None
 Wz: None

$$H(s) = \frac{R_L g_m}{(C_1 s + g_m)(C_3 R_L s + 1)}$$

4.4 LP-4 $Z(s) = \left(\frac{1}{C_1 s}, \infty, \frac{1}{C_3 s}, \infty, \infty, \frac{R_L}{C_L R_L s + 1} \right)$

Parameters:

Q: $\frac{C_1 R_L \sqrt{\frac{g_m}{C_1 R_L (C_3 + C_L)}} (C_3 + C_L)}{C_1 + C_3 R_L g_m + C_L R_L g_m}$
 wo: $\sqrt{\frac{g_m}{C_1 R_L (C_3 + C_L)}}$
 bandwidth: $\frac{C_1 + C_3 R_L g_m + C_L R_L g_m}{C_1 R_L (C_3 + C_L)}$
 K-LP: R_L
 K-HP: 0
 K-BP: 0
 Qz: None
 Wz: None

$$H(s) = \frac{R_L g_m}{(C_1 s + g_m)(C_3 R_L s + C_L R_L s + 1)}$$

4.5 LP-5 $Z(s) = \left(\frac{1}{C_1 s}, \infty, \frac{R_3}{C_3 R_3 s + 1}, \infty, \infty, R_L \right)$

Parameters:

Q: $\frac{C_1 C_3 R_3 R_L \sqrt{\frac{g_m (R_3 + R_L)}{C_1 C_3 R_3 R_L}}}{C_1 R_3 + C_1 R_L + C_3 R_3 R_L g_m}$
 wo: $\sqrt{\frac{g_m (R_3 + R_L)}{C_1 C_3 R_3 R_L}}$
 bandwidth: $\frac{C_1 R_3 + C_1 R_L + C_3 R_3 R_L g_m}{C_1 C_3 R_3 R_L}$
 K-LP: $\frac{R_3 R_L}{R_3 + R_L}$
 K-HP: 0
 K-BP: 0
 Qz: None
 Wz: None

$$H(s) = \frac{R_3 R_L g_m}{(C_1 s + g_m)(C_3 R_3 R_L s + R_3 + R_L)}$$

4.6 LP-6 $Z(s) = \left(\frac{1}{C_1 s}, \infty, \frac{R_3}{C_3 R_3 s + 1}, \infty, \infty, \frac{1}{C_L s} \right)$

Parameters:

Q: $\frac{C_1 R_3 \sqrt{\frac{g_m}{C_1 R_3 (C_3 + C_L)}} (C_3 + C_L)}{C_1 + C_3 R_3 g_m + C_L R_3 g_m}$
 wo: $\sqrt{\frac{g_m}{C_1 R_3 (C_3 + C_L)}}$
 bandwidth: $\frac{C_1 + C_3 R_3 g_m + C_L R_3 g_m}{C_1 R_3 (C_3 + C_L)}$
 K-LP: R_3
 K-HP: 0
 K-BP: 0
 Qz: None
 Wz: None

$$H(s) = \frac{R_3 g_m}{(C_1 s + g_m) (C_3 R_3 s + C_L R_3 s + 1)}$$

4.7 LP-7 $Z(s) = \left(\frac{1}{C_1 s}, \infty, \frac{R_3}{C_3 R_3 s + 1}, \infty, \infty, \frac{R_L}{C_L R_L s + 1} \right)$

Parameters:

Q: $\frac{C_1 R_3 R_L \sqrt{\frac{g_m (R_3 + R_L)}{C_1 R_3 R_L (C_3 + C_L)}} (C_3 + C_L)}{C_1 R_3 + C_1 R_L + C_3 R_3 R_L g_m + C_L R_3 R_L g_m}$
 wo: $\sqrt{\frac{g_m (R_3 + R_L)}{C_1 R_3 R_L (C_3 + C_L)}}$
 bandwidth: $\frac{C_1 R_3 + C_1 R_L + C_3 R_3 R_L g_m + C_L R_3 R_L g_m}{C_1 R_3 R_L (C_3 + C_L)}$
 K-LP: $\frac{R_3 R_L}{R_3 + R_L}$
 K-HP: 0
 K-BP: 0
 Qz: None
 Wz: None

$$H(s) = \frac{R_3 R_L g_m}{(C_1 s + g_m) (C_3 R_3 R_L s + C_L R_3 R_L s + R_3 + R_L)}$$

4.8 LP-8 $Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \infty, R_3, \infty, \infty, \frac{1}{C_L s} \right)$

Parameters:

Q: $\frac{C_1 C_L R_1 R_3 \sqrt{\frac{R_1 g_m + 1}{C_1 C_L R_1 R_3}}}{C_1 R_1 + C_L R_1 R_3 g_m + C_L R_3}$
 wo: $\sqrt{\frac{R_1 g_m + 1}{C_1 C_L R_1 R_3}}$
 bandwidth: $\frac{C_1 R_1 + C_L R_1 R_3 g_m + C_L R_3}{C_1 C_L R_1 R_3}$
 K-LP: $\frac{R_1 R_3 g_m}{R_1 g_m + 1}$
 K-HP: 0
 K-BP: 0
 Qz: None
 Wz: None

$$H(s) = \frac{R_1 R_3 g_m}{(C_L R_3 s + 1) (C_1 R_1 s + R_1 g_m + 1)}$$

4.9 LP-9 $Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \infty, R_3, \infty, \infty, \frac{R_L}{C_L R_L s + 1} \right)$

Parameters:

Q: $\frac{C_1 C_L R_1 R_3 R_L \sqrt{\frac{R_1 R_3 g_m + R_1 R_L g_m + R_3 + R_L}{C_1 C_L R_1 R_3 R_L}}}{C_1 R_1 R_3 + C_1 R_1 R_L + C_L R_1 R_3 R_L g_m + C_L R_3 R_L}$

$$H(s) = \frac{R_1 R_3 R_L g_m}{(C_1 R_1 s + R_1 g_m + 1) (C_L R_3 R_L s + R_3 + R_L)}$$

wo: $\sqrt{\frac{R_1 R_3 g_m + R_1 R_L g_m + R_3 + R_L}{C_1 C_L R_1 R_3 R_L}}$
 bandwidth: $\frac{C_1 R_1 R_3 + C_1 R_1 R_L + C_L R_1 R_3 R_L g_m + C_L R_3 R_L}{C_1 C_L R_1 R_3 R_L}$
 K-LP: $\frac{R_1 R_3 R_L g_m}{R_1 R_3 g_m + R_1 R_L g_m + R_3 + R_L}$
 K-HP: 0
 K-BP: 0
 Qz: None
 Wz: None

4.10 LP-10 $Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \infty, \frac{1}{C_3 s}, \infty, \infty, R_L \right)$

$$H(s) = \frac{R_1 R_L g_m}{(C_3 R_L s + 1)(C_1 R_1 s + R_1 g_m + 1)}$$

Parameters:

Q: $\frac{C_1 C_3 R_1 R_L \sqrt{\frac{R_1 g_m + 1}{C_1 C_3 R_1 R_L}}}{C_1 R_1 + C_3 R_1 R_L g_m + C_3 R_L}$
 wo: $\sqrt{\frac{R_1 g_m + 1}{C_1 C_3 R_1 R_L}}$
 bandwidth: $\frac{C_1 R_1 + C_3 R_1 R_L g_m + C_3 R_L}{C_1 C_3 R_1 R_L}$
 K-LP: $\frac{R_1 R_L g_m}{R_1 g_m + 1}$
 K-HP: 0
 K-BP: 0
 Qz: None
 Wz: None

4.11 LP-11 $Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \infty, \frac{1}{C_3 s}, \infty, \infty, \frac{R_L}{C_L R_L s + 1} \right)$

$$H(s) = \frac{R_1 R_L g_m}{(C_1 R_1 s + R_1 g_m + 1)(C_3 R_L s + C_L R_L s + 1)}$$

Parameters:

Q: $\frac{C_1 R_1 R_L \sqrt{\frac{R_1 g_m + 1}{C_1 R_1 R_L (C_3 + C_L)}} (C_3 + C_L)}{C_1 R_1 + C_3 R_1 R_L g_m + C_3 R_L + C_L R_1 R_L g_m + C_L R_L}$
 wo: $\sqrt{\frac{R_1 g_m + 1}{C_1 R_1 R_L (C_3 + C_L)}}$
 bandwidth: $\frac{C_1 R_1 + C_3 R_1 R_L g_m + C_3 R_L + C_L R_1 R_L g_m + C_L R_L}{C_1 R_1 R_L (C_3 + C_L)}$
 K-LP: $\frac{R_1 R_L g_m}{R_1 g_m + 1}$
 K-HP: 0
 K-BP: 0
 Qz: None
 Wz: None

4.12 LP-12 $Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \infty, \frac{R_3}{C_3 R_3 s + 1}, \infty, \infty, R_L \right)$

$$H(s) = \frac{R_1 R_3 R_L g_m}{(C_1 R_1 s + R_1 g_m + 1)(C_3 R_3 R_L s + R_3 + R_L)}$$

Parameters:

Q: $\frac{C_1 C_3 R_1 R_3 R_L \sqrt{\frac{R_1 R_3 g_m + R_1 R_L g_m + R_3 + R_L}{C_1 C_3 R_1 R_3 R_L}}}{C_1 R_1 R_3 + C_1 R_1 R_L + C_3 R_1 R_3 R_L g_m + C_3 R_3 R_L}$
 wo: $\sqrt{\frac{R_1 R_3 g_m + R_1 R_L g_m + R_3 + R_L}{C_1 C_3 R_1 R_3 R_L}}$
 bandwidth: $\frac{C_1 R_1 R_3 + C_1 R_1 R_L + C_3 R_1 R_3 R_L g_m + C_3 R_3 R_L}{C_1 C_3 R_1 R_3 R_L}$
 K-LP: $\frac{R_1 R_3 R_L g_m}{R_1 R_3 g_m + R_1 R_L g_m + R_3 + R_L}$
 K-HP: 0
 K-BP: 0
 Qz: None
 Wz: None

4.13 LP-13 $Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \infty, \frac{R_3}{C_3 R_3 s + 1}, \infty, \infty, \frac{1}{C_L s} \right)$

Parameters:

Q: $\frac{C_1 R_1 R_3 \sqrt{\frac{R_1 g_m + 1}{C_1 R_1 R_3 (C_3 + C_L)}} (C_3 + C_L)}{C_1 R_1 + C_3 R_1 R_3 g_m + C_3 R_3 + C_L R_1 R_3 g_m + C_L R_3}$
wo: $\sqrt{\frac{R_1 g_m + 1}{C_1 R_1 R_3 (C_3 + C_L)}}$
bandwidth: $\frac{C_1 R_1 + C_3 R_1 R_3 g_m + C_3 R_3 + C_L R_1 R_3 g_m + C_L R_3}{C_1 R_1 R_3 (C_3 + C_L)}$
K-LP: $\frac{R_1 R_3 g_m}{R_1 g_m + 1}$
K-HP: 0
K-BP: 0
Qz: None
Wz: None

4.14 LP-14 $Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \infty, \frac{R_3}{C_3 R_3 s + 1}, \infty, \infty, \frac{R_L}{C_L R_L s + 1} \right)$

Parameters:

Q: $\frac{C_1 R_1 R_3 R_L \sqrt{\frac{R_1 R_3 g_m + R_1 R_L g_m + R_3 + R_L}{C_1 R_1 R_3 R_L (C_3 + C_L)}} (C_3 + C_L)}{C_1 R_1 R_3 + C_1 R_1 R_L + C_3 R_1 R_3 R_L g_m + C_3 R_3 R_L + C_L R_1 R_3 R_L g_m + C_L R_3 R_L}$
wo: $\sqrt{\frac{R_1 R_3 g_m + R_1 R_L g_m + R_3 + R_L}{C_1 R_1 R_3 R_L (C_3 + C_L)}}$
bandwidth: $\frac{C_1 R_1 R_3 + C_1 R_1 R_L + C_3 R_1 R_3 R_L g_m + C_3 R_3 R_L + C_L R_1 R_3 R_L g_m + C_L R_3 R_L}{C_1 R_1 R_3 R_L (C_3 + C_L)}$
K-LP: $\frac{R_1 R_3 R_L g_m}{R_1 R_3 g_m + R_1 R_L g_m + R_3 + R_L}$
K-HP: 0
K-BP: 0
Qz: None
Wz: None

4.15 LP-15 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \frac{1}{C_3 s}, \infty, \infty, \frac{1}{C_L s} \right)$

Parameters:

Q: $\frac{C_1 \sqrt{\frac{1}{C_1 L_1}}}{g_m}$
wo: $\sqrt{\frac{1}{C_1 L_1}}$
bandwidth: $\frac{g_m}{C_1}$
K-LP: $\frac{L_1 g_m}{C_3 + C_L}$
K-HP: 0
K-BP: 0
Qz: None
Wz: None

4.16 LP-16 $Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \infty, \frac{1}{C_3 s}, \infty, \infty, \frac{1}{C_L s} \right)$

Parameters:

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

$$H(s) = \frac{R_1 R_3 g_m}{(C_1 R_1 s + R_1 g_m + 1) (C_3 R_3 s + C_L R_3 s + 1)}$$

$$H(s) = \frac{R_1 R_3 R_L g_m}{(C_1 R_1 s + R_1 g_m + 1) (C_3 R_3 R_L s + C_L R_3 R_L s + R_3 + R_L)}$$

$$H(s) = \frac{L_1 g_m}{(C_3 + C_L) (C_1 L_1 s^2 + L_1 g_m s + 1)}$$

$$H(s) = \frac{L_1 R_1 g_m}{(C_3 + C_L) (C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1)}$$

wo: $\sqrt{\frac{1}{C_1 L_1}}$
 bandwidth: $\frac{R_1 g_m + 1}{C_1 R_1}$
 K-LP: $\frac{L_1 g_m}{C_3 + C_L}$
 K-HP: 0
 K-BP: 0
 Qz: None
 Wz: None

5 BS

5.1 BS-1 $Z(s) = \left(R_1, \infty, R_3, \infty, \infty, L_L s + \frac{1}{C_L s} \right)$

$$H(s) = \frac{R_1 R_3 g_m (C_L L_L s^2 + 1)}{(R_1 g_m + 1) (C_L L_L s^2 + C_L R_3 s + 1)}$$

Parameters:

Q: $\frac{L_L \sqrt{\frac{1}{C_L L_L}}}{R_3}$
 wo: $\sqrt{\frac{1}{C_L L_L}}$
 bandwidth: $\frac{R_3}{L_L}$
 K-LP: $\frac{R_1 R_3 g_m}{R_1 g_m + 1}$
 K-HP: $\frac{R_1 R_3 g_m}{R_1 g_m + 1}$
 K-BP: 0
 Qz: None
 Wz: $\sqrt{\frac{1}{C_L L_L}}$

5.2 BS-2 $Z(s) = \left(R_1, \infty, R_3, \infty, \infty, \frac{R_L (C_L L_L s^2 + 1)}{C_L L_L s^2 + C_L R_L s + 1} \right)$

$$H(s) = \frac{R_1 R_3 R_L g_m (C_L L_L s^2 + 1)}{(R_1 g_m + 1) (C_L L_L R_3 s^2 + C_L L_L R_L s^2 + C_L R_3 R_L s + R_3 + R_L)}$$

Parameters:

Q: $\frac{L_L \sqrt{\frac{1}{C_L L_L}} (R_3 + R_L)}{R_3 R_L}$
 wo: $\sqrt{\frac{1}{C_L L_L}}$
 bandwidth: $\frac{R_3 R_L}{L_L (R_3 + R_L)}$
 K-LP: $\frac{R_1 R_3 R_L g_m}{R_1 R_3 g_m + R_1 R_L g_m + R_3 + R_L}$
 K-HP: $\frac{R_1 R_3 R_L g_m}{R_1 R_3 g_m + R_1 R_L g_m + R_3 + R_L}$
 K-BP: 0
 Qz: None
 Wz: $\sqrt{\frac{1}{C_L L_L}}$

5.3 BS-3 $Z(s) = \left(R_1, \infty, L_3 s + \frac{1}{C_3 s}, \infty, \infty, R_L \right)$

$$H(s) = \frac{R_1 R_L g_m (C_3 L_3 s^2 + 1)}{(R_1 g_m + 1) (C_3 L_3 s^2 + C_3 R_L s + 1)}$$

Parameters:

Q: $\frac{L_3 \sqrt{\frac{1}{C_3 L_3}}}{R_L}$
 wo: $\sqrt{\frac{1}{C_3 L_3}}$
 bandwidth: $\frac{R_L}{L_3}$

K-LP: $\frac{R_1 R_L g_m}{R_1 g_m + 1}$
 K-HP: $\frac{R_1 R_L g_m}{R_1 g_m + 1}$
 K-BP: 0
 Qz: None
 Wz: $\sqrt{\frac{1}{C_3 L_3}}$

$$5.4 \quad \text{BS-4} \quad Z(s) = \left(R_1, \infty, \frac{R_3(C_3 L_3 s^2 + 1)}{C_3 L_3 s^2 + C_3 R_3 s + 1}, \infty, \infty, R_L \right)$$

$$H(s) = \frac{R_1 R_3 R_L g_m (C_3 L_3 s^2 + 1)}{(R_1 g_m + 1) (C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + C_3 R_3 R_L s + R_3 + R_L)}$$

Parameters:

Q: $\frac{L_3 \sqrt{\frac{1}{C_3 L_3}} (R_3 + R_L)}{R_3 R_L}$
 wo: $\sqrt{\frac{1}{C_3 L_3}}$
 bandwidth: $\frac{R_3 R_L}{L_3 (R_3 + R_L)}$
 K-LP: $\frac{R_1 R_3 R_L g_m}{R_1 R_3 g_m + R_1 R_L g_m + R_3 + R_L}$
 K-HP: $\frac{R_1 R_3 R_L g_m}{R_1 R_3 g_m + R_1 R_L g_m + R_3 + R_L}$
 K-BP: 0
 Qz: None
 Wz: $\sqrt{\frac{1}{C_3 L_3}}$

$$5.5 \quad \text{BS-5} \quad Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \infty, R_3, \infty, \infty, R_L \right)$$

$$H(s) = \frac{R_3 R_L g_m (C_1 L_1 s^2 + 1)}{(R_3 + R_L) (C_1 L_1 g_m s^2 + C_1 s + g_m)}$$

Parameters:

Q: $L_1 g_m \sqrt{\frac{1}{C_1 L_1}}$
 wo: $\sqrt{\frac{1}{C_1 L_1}}$
 bandwidth: $\frac{1}{L_1 g_m}$
 K-LP: $\frac{R_3 R_L}{R_3 + R_L}$
 K-HP: $\frac{R_3 R_L}{R_3 + R_L}$
 K-BP: 0
 Qz: None
 Wz: $\sqrt{\frac{1}{C_1 L_1}}$

$$5.6 \quad \text{BS-6} \quad Z(s) = \left(\frac{R_1 (C_1 L_1 s^2 + 1)}{C_1 L_1 s^2 + C_1 R_1 s + 1}, \infty, R_3, \infty, \infty, R_L \right)$$

$$H(s) = \frac{R_1 R_3 R_L g_m (C_1 L_1 s^2 + 1)}{(R_3 + R_L) (C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + C_1 R_1 s + R_1 g_m + 1)}$$

Parameters:

Q: $\frac{L_1 \sqrt{\frac{1}{C_1 L_1}} (R_1 g_m + 1)}{R_1}$
 wo: $\sqrt{\frac{1}{C_1 L_1}}$
 bandwidth: $\frac{R_1}{L_1 (R_1 g_m + 1)}$
 K-LP: $\frac{R_1 R_3 R_L g_m}{R_1 R_3 g_m + R_1 R_L g_m + R_3 + R_L}$
 K-HP: $\frac{R_1 R_3 R_L g_m}{R_1 R_3 g_m + R_1 R_L g_m + R_3 + R_L}$
 K-BP: 0
 Qz: None
 Wz: $\sqrt{\frac{1}{C_1 L_1}}$

6 GE

6.1 GE-1 $Z(s) = \left(R_1, \infty, R_3, \infty, \infty, L_L s + R_L + \frac{1}{C_L s} \right)$

$$H(s) = \frac{R_1 R_3 g_m (C_L L_L s^2 + C_L R_L s + 1)}{(R_1 g_m + 1) (C_L L_L s^2 + C_L R_3 s + C_L R_L s + 1)}$$

Parameters:

$$\begin{aligned} \text{Q: } & \frac{L_L \sqrt{\frac{1}{C_L L_L}}}{R_3 + R_L} \\ \text{wo: } & \sqrt{\frac{1}{C_L L_L}} \\ \text{bandwidth: } & \frac{R_3 + R_L}{L_L} \\ \text{K-LP: } & \frac{R_1 R_3 g_m}{R_1 g_m + 1} \\ \text{K-HP: } & \frac{R_1 R_3 g_m}{R_1 g_m + 1} \\ \text{K-BP: } & \frac{R_1 R_3 R_L g_m}{(R_3 + R_L)(R_1 g_m + 1)} \\ \text{QZ: } & \frac{L_L \sqrt{\frac{1}{C_L L_L}}}{R_L} \\ \text{WZ: } & \sqrt{\frac{1}{C_L L_L}} \end{aligned}$$

6.2 GE-2 $Z(s) = \left(R_1, \infty, R_3, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$

$$H(s) = \frac{R_1 R_3 g_m (C_L L_L R_L s^2 + L_L s + R_L)}{(R_1 g_m + 1) (C_L L_L R_3 s^2 + C_L L_L R_L s^2 + L_L s + R_3 + R_L)}$$

Parameters:

$$\begin{aligned} \text{Q: } & C_L \sqrt{\frac{1}{C_L L_L}} (R_3 + R_L) \\ \text{wo: } & \sqrt{\frac{1}{C_L L_L}} \\ \text{bandwidth: } & \frac{1}{C_L (R_3 + R_L)} \\ \text{K-LP: } & \frac{R_1 R_3 R_L g_m}{R_1 R_3 g_m + R_1 R_L g_m + R_3 + R_L} \\ \text{K-HP: } & \frac{R_1 R_3 R_L g_m}{R_1 R_3 g_m + R_1 R_L g_m + R_3 + R_L} \\ \text{K-BP: } & \frac{R_1 R_3 g_m}{R_1 g_m + 1} \\ \text{QZ: } & C_L R_L \sqrt{\frac{1}{C_L L_L}} \\ \text{WZ: } & \sqrt{\frac{1}{C_L L_L}} \end{aligned}$$

6.3 GE-3 $Z(s) = \left(R_1, \infty, L_3 s + R_3 + \frac{1}{C_3 s}, \infty, \infty, R_L \right)$

$$H(s) = \frac{R_1 R_L g_m (C_3 L_3 s^2 + C_3 R_3 s + 1)}{(R_1 g_m + 1) (C_3 L_3 s^2 + C_3 R_3 s + C_3 R_L s + 1)}$$

Parameters:

$$\begin{aligned} \text{Q: } & \frac{L_3 \sqrt{\frac{1}{C_3 L_3}}}{R_3 + R_L} \\ \text{wo: } & \sqrt{\frac{1}{C_3 L_3}} \\ \text{bandwidth: } & \frac{R_3 + R_L}{L_3} \\ \text{K-LP: } & \frac{R_1 R_L g_m}{R_1 g_m + 1} \\ \text{K-HP: } & \frac{R_1 R_L g_m}{R_1 g_m + 1} \\ \text{K-BP: } & \frac{R_1 R_3 R_L g_m}{(R_3 + R_L)(R_1 g_m + 1)} \\ \text{QZ: } & \frac{L_3 \sqrt{\frac{1}{C_3 L_3}}}{R_3} \\ \text{WZ: } & \sqrt{\frac{1}{C_3 L_3}} \end{aligned}$$

6.4 GE-4 $Z(s) = \left(R_1, \infty, \frac{L_3 s}{C_3 L_3 s^2 + 1} + R_3, \infty, \infty, R_L \right)$

Parameters:

$$\begin{aligned} \text{Q: } & C_3 \sqrt{\frac{1}{C_3 L_3}} (R_3 + R_L) \\ \text{wo: } & \sqrt{\frac{1}{C_3 L_3}} \\ \text{bandwidth: } & \frac{1}{C_3 (R_3 + R_L)} \\ \text{K-LP: } & \frac{R_1 R_3 R_L g_m}{R_1 R_3 g_m + R_1 R_L g_m + R_3 + R_L} \\ \text{K-HP: } & \frac{R_1 R_3 R_L g_m}{R_1 R_3 g_m + R_1 R_L g_m + R_3 + R_L} \\ \text{K-BP: } & \frac{R_1 R_L g_m}{R_1 g_m + 1} \\ \text{Qz: } & C_3 R_3 \sqrt{\frac{1}{C_3 L_3}} \\ \text{Wz: } & \sqrt{\frac{1}{C_3 L_3}} \end{aligned}$$

6.5 GE-5 $Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s}, \infty, R_3, \infty, \infty, R_L \right)$

Parameters:

$$\begin{aligned} \text{Q: } & \frac{L_1 g_m \sqrt{\frac{1}{C_1 L_1}}}{R_1 g_m + 1} \\ \text{wo: } & \sqrt{\frac{1}{C_1 L_1}} \\ \text{bandwidth: } & \frac{R_1 g_m + 1}{L_1 g_m} \\ \text{K-LP: } & \frac{R_3 R_L}{R_3 + R_L} \\ \text{K-HP: } & \frac{R_3 R_L}{R_3 + R_L} \\ \text{K-BP: } & \frac{R_1 R_3 R_L g_m}{(R_3 + R_L)(R_1 g_m + 1)} \\ \text{Qz: } & \frac{L_1 \sqrt{\frac{1}{C_1 L_1}}}{R_1} \\ \text{Wz: } & \sqrt{\frac{1}{C_1 L_1}} \end{aligned}$$

6.6 GE-6 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, R_3, \infty, \infty, R_L \right)$

Parameters:

$$\begin{aligned} \text{Q: } & \frac{C_1 \sqrt{\frac{1}{C_1 L_1}} (R_1 g_m + 1)}{g_m} \\ \text{wo: } & \sqrt{\frac{1}{C_1 L_1}} \\ \text{bandwidth: } & \frac{g_m}{C_1 (R_1 g_m + 1)} \\ \text{K-LP: } & \frac{R_1 R_3 R_L g_m}{R_1 R_3 g_m + R_1 R_L g_m + R_3 + R_L} \\ \text{K-HP: } & \frac{R_1 R_3 R_L g_m}{R_1 R_3 g_m + R_1 R_L g_m + R_3 + R_L} \\ \text{K-BP: } & \frac{R_3 R_L}{R_3 + R_L} \\ \text{Qz: } & C_1 R_1 \sqrt{\frac{1}{C_1 L_1}} \\ \text{Wz: } & \sqrt{\frac{1}{C_1 L_1}} \end{aligned}$$

7 AP

$$H(s) = \frac{R_1 R_L g_m (C_3 L_3 R_3 s^2 + L_3 s + R_3)}{(R_1 g_m + 1) (C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + L_3 s + R_3 + R_L)}$$

$$H(s) = \frac{R_3 R_L g_m (C_1 L_1 s^2 + C_1 R_1 s + 1)}{(R_3 + R_L) (C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m)}$$

$$H(s) = \frac{R_3 R_L g_m (C_1 L_1 R_1 s^2 + L_1 s + R_1)}{(R_3 + R_L) (C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + L_1 g_m s + R_1 g_m + 1)}$$

8 INVALID-NUMER

8.1 INVALID-NUMER-1 $Z(s) = \left(R_1, \infty, \frac{R_3}{C_3 R_3 s + 1}, \infty, \infty, R_L + \frac{1}{C_L s} \right)$

$$H(s) = \frac{R_1 R_3 g_m (C_L R_L s + 1)}{(R_1 g_m + 1) (C_3 C_L R_3 R_L s^2 + C_3 R_3 s + C_L R_3 s + C_L R_L s + 1)}$$

Parameters:

Q: $\frac{C_3 C_L R_3 R_L \sqrt{\frac{1}{C_3 C_L R_3 R_L}}}{C_3 R_3 + C_L R_3 + C_L R_L}$
 wo: $\sqrt{\frac{1}{C_3 C_L R_3 R_L}}$
 bandwidth: $\frac{C_3 R_3 + C_L R_3 + C_L R_L}{C_3 C_L R_3 R_L}$
 K-LP: $\frac{R_1 R_3 g_m}{R_1 g_m + 1}$
 K-HP: 0
 K-BP: $\frac{C_L R_1 R_3 R_L g_m}{(R_1 g_m + 1)(C_3 R_3 + C_L R_3 + C_L R_L)}$
 QZ: 0
 WZ: None

8.2 INVALID-NUMER-2 $Z(s) = \left(R_1, \infty, R_3 + \frac{1}{C_3 s}, \infty, \infty, \frac{R_L}{C_L R_L s + 1} \right)$

$$H(s) = \frac{R_1 R_L g_m (C_3 R_3 s + 1)}{(R_1 g_m + 1) (C_3 C_L R_3 R_L s^2 + C_3 R_3 s + C_3 R_L s + C_L R_L s + 1)}$$

Parameters:

Q: $\frac{C_3 C_L R_3 R_L \sqrt{\frac{1}{C_3 C_L R_3 R_L}}}{C_3 R_3 + C_3 R_L + C_L R_L}$
 wo: $\sqrt{\frac{1}{C_3 C_L R_3 R_L}}$
 bandwidth: $\frac{C_3 R_3 + C_3 R_L + C_L R_L}{C_3 C_L R_3 R_L}$
 K-LP: $\frac{R_1 R_L g_m}{R_1 g_m + 1}$
 K-HP: 0
 K-BP: $\frac{C_3 R_1 R_3 R_L g_m}{(R_1 g_m + 1)(C_3 R_3 + C_3 R_L + C_L R_L)}$
 QZ: 0
 WZ: None

8.3 INVALID-NUMER-3 $Z(s) = \left(L_1 s, \infty, R_3, \infty, \infty, R_L + \frac{1}{C_L s} \right)$

$$H(s) = \frac{L_1 R_3 g_m s (C_L R_L s + 1)}{(L_1 g_m s + 1) (C_L R_3 s + C_L R_L s + 1)}$$

Parameters:

Q: $\frac{C_L L_1 g_m \sqrt{\frac{1}{C_L L_1 g_m (R_3 + R_L)}} (R_3 + R_L)}{C_L R_3 + C_L R_L + L_1 g_m}$
 wo: $\sqrt{\frac{1}{C_L L_1 g_m (R_3 + R_L)}}$
 bandwidth: $\frac{C_L R_3 + C_L R_L + L_1 g_m}{C_L L_1 g_m (R_3 + R_L)}$
 K-LP: 0
 K-HP: $\frac{R_3 R_L}{R_3 + R_L}$
 K-BP: $\frac{L_1 R_3 g_m}{C_L R_3 + C_L R_L + L_1 g_m}$
 QZ: $C_L R_L \sqrt{\frac{1}{C_L L_1 g_m (R_3 + R_L)}}$
 WZ: None

8.4 INVALID-NUMER-4 $Z(s) = \left(L_1 s, \infty, \frac{1}{C_3 s}, \infty, \infty, R_L + \frac{1}{C_L s} \right)$

Parameters:

$$\begin{aligned} \text{Q: } & \frac{C_3 C_L L_1 R_L g_m \sqrt{\frac{C_3 + C_L}{C_3 C_L L_1 R_L g_m}}}{C_3 C_L R_L + C_3 L_1 g_m + C_L L_1 g_m} \\ \text{wo: } & \sqrt{\frac{C_3 + C_L}{C_3 C_L L_1 R_L g_m}} \\ \text{bandwidth: } & \frac{C_3 C_L R_L + C_3 L_1 g_m + C_L L_1 g_m}{C_3 C_L L_1 R_L g_m} \\ \text{K-LP: } & \frac{L_1 g_m}{C_3 + C_L} \\ \text{K-HP: } & 0 \\ \text{K-BP: } & \frac{C_L L_1 R_L g_m}{C_3 C_L R_L + C_3 L_1 g_m + C_L L_1 g_m} \\ \text{QZ: } & 0 \\ \text{WZ: } & \text{None} \end{aligned}$$

8.5 INVALID-NUMER-5 $Z(s) = \left(L_1 s, \infty, R_3 + \frac{1}{C_3 s}, \infty, \infty, R_L \right)$

Parameters:

$$\begin{aligned} \text{Q: } & \frac{C_3 L_1 g_m \sqrt{\frac{1}{C_3 L_1 g_m (R_3 + R_L)}} (R_3 + R_L)}{C_3 R_3 + C_3 R_L + L_1 g_m} \\ \text{wo: } & \sqrt{\frac{1}{C_3 L_1 g_m (R_3 + R_L)}} \\ \text{bandwidth: } & \frac{C_3 R_3 + C_3 R_L + L_1 g_m}{C_3 L_1 g_m (R_3 + R_L)} \\ \text{K-LP: } & 0 \\ \text{K-HP: } & \frac{R_3 R_L}{R_3 + R_L} \\ \text{K-BP: } & \frac{L_1 R_L g_m}{C_3 R_3 + C_3 R_L + L_1 g_m} \\ \text{QZ: } & C_3 R_3 \sqrt{\frac{1}{C_3 L_1 g_m (R_3 + R_L)}} \\ \text{WZ: } & \text{None} \end{aligned}$$

8.6 INVALID-NUMER-6 $Z(s) = \left(L_1 s, \infty, R_3 + \frac{1}{C_3 s}, \infty, \infty, \frac{1}{C_L s} \right)$

Parameters:

$$\begin{aligned} \text{Q: } & \frac{C_3 C_L L_1 R_3 g_m \sqrt{\frac{C_3 + C_L}{C_3 C_L L_1 R_3 g_m}}}{C_3 C_L R_3 + C_3 L_1 g_m + C_L L_1 g_m} \\ \text{wo: } & \sqrt{\frac{C_3 + C_L}{C_3 C_L L_1 R_3 g_m}} \\ \text{bandwidth: } & \frac{C_3 C_L R_3 + C_3 L_1 g_m + C_L L_1 g_m}{C_3 C_L L_1 R_3 g_m} \\ \text{K-LP: } & \frac{L_1 g_m}{C_3 + C_L} \\ \text{K-HP: } & 0 \\ \text{K-BP: } & \frac{C_3 L_1 R_3 g_m}{C_3 C_L R_3 + C_3 L_1 g_m + C_L L_1 g_m} \\ \text{QZ: } & 0 \\ \text{WZ: } & \text{None} \end{aligned}$$

8.7 INVALID-NUMER-7 $Z(s) = \left(\frac{1}{C_1 s}, \infty, R_3, \infty, \infty, R_L + \frac{1}{C_L s} \right)$

Parameters:

$$H(s) = \frac{L_1 g_m (C_L R_L s + 1)}{(L_1 g_m s + 1) (C_3 C_L R_L s + C_3 + C_L)}$$

$$H(s) = \frac{L_1 R_L g_m s (C_3 R_3 s + 1)}{(L_1 g_m s + 1) (C_3 R_3 s + C_3 R_L s + 1)}$$

$$H(s) = \frac{L_1 g_m (C_3 R_3 s + 1)}{(L_1 g_m s + 1) (C_3 C_L R_3 s + C_3 + C_L)}$$

$$H(s) = \frac{R_3 g_m (C_L R_L s + 1)}{(C_1 s + g_m) (C_L R_3 s + C_L R_L s + 1)}$$

$$\begin{aligned} \text{Q: } & \frac{C_1 C_L \sqrt{\frac{g_m}{C_1 C_L (R_3 + R_L)}} (R_3 + R_L)}{C_1 + C_L R_3 g_m + C_L R_L g_m} \\ \text{wo: } & \sqrt{\frac{g_m}{C_1 C_L (R_3 + R_L)}} \\ \text{bandwidth: } & \frac{C_1 + C_L R_3 g_m + C_L R_L g_m}{C_1 C_L (R_3 + R_L)} \\ \text{K-LP: } & R_3 \\ \text{K-HP: } & 0 \\ \text{K-BP: } & \frac{C_L R_3 R_L g_m}{C_1 + C_L R_3 g_m + C_L R_L g_m} \\ \text{Qz: } & 0 \\ \text{Wz: } & \text{None} \end{aligned}$$

$$\mathbf{8.8 \quad INVALID-NUMER-8} \quad Z(s) = \left(\frac{1}{C_1 s}, \quad \infty, \quad R_3 + \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad R_L \right)$$

Parameters:

$$\begin{aligned} \text{Q: } & \frac{C_1 C_3 \sqrt{\frac{g_m}{C_1 C_3 (R_3 + R_L)}} (R_3 + R_L)}{C_1 + C_3 R_3 g_m + C_3 R_L g_m} \\ \text{wo: } & \sqrt{\frac{g_m}{C_1 C_3 (R_3 + R_L)}} \\ \text{bandwidth: } & \frac{C_1 + C_3 R_3 g_m + C_3 R_L g_m}{C_1 C_3 (R_3 + R_L)} \\ \text{K-LP: } & R_L \\ \text{K-HP: } & 0 \\ \text{K-BP: } & \frac{C_3 R_3 R_L g_m}{C_1 + C_3 R_3 g_m + C_3 R_L g_m} \\ \text{Qz: } & 0 \\ \text{Wz: } & \text{None} \end{aligned}$$

$$\mathbf{8.9 \quad INVALID-NUMER-9} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \quad \infty, \quad R_3, \quad \infty, \quad \infty, \quad R_L + \frac{1}{C_L s} \right)$$

Parameters:

$$\begin{aligned} \text{Q: } & \frac{C_1 C_L R_1 \sqrt{\frac{R_1 g_m + 1}{C_1 C_L R_1 (R_3 + R_L)}} (R_3 + R_L)}{C_1 R_1 + C_L R_1 R_3 g_m + C_L R_1 R_L g_m + C_L R_3 + C_L R_L} \\ \text{wo: } & \sqrt{\frac{R_1 g_m + 1}{C_1 C_L R_1 (R_3 + R_L)}} \\ \text{bandwidth: } & \frac{C_1 R_1 + C_L R_1 R_3 g_m + C_L R_1 R_L g_m + C_L R_3 + C_L R_L}{C_1 C_L R_1 (R_3 + R_L)} \\ \text{K-LP: } & \frac{R_1 R_3 g_m}{R_1 g_m + 1} \\ \text{K-HP: } & 0 \\ \text{K-BP: } & \frac{C_L R_1 R_3 R_L g_m}{C_1 R_1 + C_L R_1 R_3 g_m + C_L R_1 R_L g_m + C_L R_3 + C_L R_L} \\ \text{Qz: } & 0 \\ \text{Wz: } & \text{None} \end{aligned}$$

$$\mathbf{8.10 \quad INVALID-NUMER-10} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \quad \infty, \quad R_3 + \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad R_L \right)$$

Parameters:

$$\begin{aligned} \text{Q: } & \frac{C_1 C_3 R_1 \sqrt{\frac{R_1 g_m + 1}{C_1 C_3 R_1 (R_3 + R_L)}} (R_3 + R_L)}{C_1 R_1 + C_3 R_1 R_3 g_m + C_3 R_1 R_L g_m + C_3 R_3 + C_3 R_L} \\ \text{wo: } & \sqrt{\frac{R_1 g_m + 1}{C_1 C_3 R_1 (R_3 + R_L)}} \\ \text{bandwidth: } & \frac{C_1 R_1 + C_3 R_1 R_3 g_m + C_3 R_1 R_L g_m + C_3 R_3 + C_3 R_L}{C_1 C_3 R_1 (R_3 + R_L)} \\ \text{K-LP: } & \frac{R_1 R_L g_m}{R_1 g_m + 1} \\ \text{K-HP: } & 0 \\ \text{K-BP: } & \frac{C_3 R_1 R_3 R_L g_m}{C_1 R_1 + C_3 R_1 R_3 g_m + C_3 R_1 R_L g_m + C_3 R_3 + C_3 R_L} \end{aligned}$$

$$H(s) = \frac{R_L g_m (C_3 R_3 s + 1)}{(C_1 s + g_m) (C_3 R_3 s + C_3 R_L s + 1)}$$

$$H(s) = \frac{R_1 R_3 g_m (C_L R_L s + 1)}{(C_1 R_1 s + R_1 g_m + 1) (C_L R_3 s + C_L R_L s + 1)}$$

$$H(s) = \frac{R_1 R_L g_m (C_3 R_3 s + 1)}{(C_1 R_1 s + R_1 g_m + 1) (C_3 R_3 s + C_3 R_L s + 1)}$$

Qz: 0
Wz: None

8.11 INVALID-NUMER-11 $Z(s) = \left(R_1 + \frac{1}{C_1 s}, \infty, R_3, \infty, \infty, \frac{1}{C_L s} \right)$

$$H(s) = \frac{R_3 g_m (C_1 R_1 s + 1)}{(C_L R_3 s + 1) (C_1 R_1 g_m s + C_1 s + g_m)}$$

Parameters:

Q: $\frac{C_1 C_L R_3 \sqrt{\frac{g_m}{C_1 C_L R_3 (R_1 g_m + 1)}} (R_1 g_m + 1)}{C_1 R_1 g_m + C_1 + C_L R_3 g_m}$
 wo: $\sqrt{\frac{g_m}{C_1 C_L R_3 (R_1 g_m + 1)}}$
 bandwidth: $\frac{C_1 R_1 g_m + C_1 + C_L R_3 g_m}{C_1 C_L R_3 (R_1 g_m + 1)}$
 K-LP: R_3
 K-HP: 0
 K-BP: $\frac{C_1 R_1 R_3 g_m}{C_1 R_1 g_m + C_1 + C_L R_3 g_m}$
 Qz: 0
 Wz: None

8.12 INVALID-NUMER-12 $Z(s) = \left(R_1 + \frac{1}{C_1 s}, \infty, R_3, \infty, \infty, \frac{R_L}{C_L R_L s + 1} \right)$

$$H(s) = \frac{R_3 R_L g_m (C_1 R_1 s + 1)}{(C_1 R_1 g_m s + C_1 s + g_m) (C_L R_3 R_L s + R_3 + R_L)}$$

Parameters:

Q: $\frac{C_1 C_L R_3 R_L \sqrt{\frac{g_m (R_3 + R_L)}{C_1 C_L R_3 R_L (R_1 g_m + 1)}} (R_1 g_m + 1)}{C_1 R_1 R_3 g_m + C_1 R_1 R_L g_m + C_1 R_3 + C_1 R_L + C_L R_3 R_L g_m}$
 wo: $\sqrt{\frac{g_m (R_3 + R_L)}{C_1 C_L R_3 R_L (R_1 g_m + 1)}}$
 bandwidth: $\frac{C_1 R_1 R_3 g_m + C_1 R_1 R_L g_m + C_1 R_3 + C_1 R_L + C_L R_3 R_L g_m}{C_1 C_L R_3 R_L (R_1 g_m + 1)}$
 K-LP: $\frac{R_3 R_L}{R_3 + R_L}$
 K-HP: 0
 K-BP: $\frac{C_1 R_1 R_3 R_L g_m}{C_1 R_1 R_3 g_m + C_1 R_1 R_L g_m + C_1 R_3 + C_1 R_L + C_L R_3 R_L g_m}$
 Qz: 0
 Wz: None

8.13 INVALID-NUMER-13 $Z(s) = \left(R_1 + \frac{1}{C_1 s}, \infty, \frac{1}{C_3 s}, \infty, \infty, R_L \right)$

$$H(s) = \frac{R_L g_m (C_1 R_1 s + 1)}{(C_3 R_L s + 1) (C_1 R_1 g_m s + C_1 s + g_m)}$$

Parameters:

Q: $\frac{C_1 C_3 R_L \sqrt{\frac{g_m}{C_1 C_3 R_L (R_1 g_m + 1)}} (R_1 g_m + 1)}{C_1 R_1 g_m + C_1 + C_3 R_L g_m}$
 wo: $\sqrt{\frac{g_m}{C_1 C_3 R_L (R_1 g_m + 1)}}$
 bandwidth: $\frac{C_1 R_1 g_m + C_1 + C_3 R_L g_m}{C_1 C_3 R_L (R_1 g_m + 1)}$
 K-LP: R_L
 K-HP: 0
 K-BP: $\frac{C_1 R_1 R_L g_m}{C_1 R_1 g_m + C_1 + C_3 R_L g_m}$
 Qz: 0
 Wz: None

8.14 INVALID-NUMER-14 $Z(s) = \left(R_1 + \frac{1}{C_1 s}, \infty, \frac{1}{C_3 s}, \infty, \infty, \frac{R_L}{C_L R_L s + 1} \right)$

$$H(s) = \frac{R_L g_m (C_1 R_1 s + 1)}{(C_3 R_L s + C_L R_L s + 1) (C_1 R_1 g_m s + C_1 s + g_m)}$$

Parameters:

Q: $\frac{C_1 R_L \sqrt{\frac{g_m}{C_1 R_L (C_3 R_1 g_m + C_3 + C_L R_1 g_m + C_L)}} (C_3 R_1 g_m + C_3 + C_L R_1 g_m + C_L)}{C_1 R_1 g_m + C_1 + C_3 R_L g_m + C_L R_L g_m}$
 wo: $\sqrt{\frac{g_m}{C_1 R_L (C_3 R_1 g_m + C_3 + C_L R_1 g_m + C_L)}}$
 bandwidth: $\frac{C_1 R_1 g_m + C_1 + C_3 R_L g_m + C_L R_L g_m}{C_1 R_L (C_3 R_1 g_m + C_3 + C_L R_1 g_m + C_L)}$
 K-LP: R_L
 K-HP: 0
 K-BP: $\frac{C_1 R_1 R_L g_m}{C_1 R_1 g_m + C_1 + C_3 R_L g_m + C_L R_L g_m}$
 Qz: 0
 Wz: None

8.15 INVALID-NUMER-15 $Z(s) = \left(R_1 + \frac{1}{C_1 s}, \infty, \frac{R_3}{C_3 R_3 s + 1}, \infty, \infty, R_L \right)$

$$H(s) = \frac{R_3 R_L g_m (C_1 R_1 s + 1)}{(C_1 R_1 g_m s + C_1 s + g_m) (C_3 R_3 R_L s + R_3 + R_L)}$$

Parameters:

Q: $\frac{C_1 C_3 R_3 R_L \sqrt{\frac{g_m (R_3 + R_L)}{C_1 C_3 R_3 R_L (R_1 g_m + 1)}} (R_1 g_m + 1)}{C_1 R_1 R_3 g_m + C_1 R_1 R_L g_m + C_1 R_3 + C_1 R_L + C_3 R_3 R_L g_m}$
 wo: $\sqrt{\frac{g_m (R_3 + R_L)}{C_1 C_3 R_3 R_L (R_1 g_m + 1)}}$
 bandwidth: $\frac{C_1 R_1 R_3 g_m + C_1 R_1 R_L g_m + C_1 R_3 + C_1 R_L + C_3 R_3 R_L g_m}{C_1 C_3 R_3 R_L (R_1 g_m + 1)}$
 K-LP: $\frac{R_3 R_L}{R_3 + R_L}$
 K-HP: 0
 K-BP: $\frac{C_1 R_1 R_3 R_L g_m}{C_1 R_1 R_3 g_m + C_1 R_1 R_L g_m + C_1 R_3 + C_1 R_L + C_3 R_3 R_L g_m}$
 Qz: 0
 Wz: None

8.16 INVALID-NUMER-16 $Z(s) = \left(R_1 + \frac{1}{C_1 s}, \infty, \frac{R_3}{C_3 R_3 s + 1}, \infty, \infty, \frac{1}{C_L s} \right)$

$$H(s) = \frac{R_3 g_m (C_1 R_1 s + 1)}{(C_3 R_3 s + C_L R_3 s + 1) (C_1 R_1 g_m s + C_1 s + g_m)}$$

Parameters:

Q: $\frac{C_1 R_3 \sqrt{\frac{g_m}{C_1 R_3 (C_3 R_1 g_m + C_3 + C_L R_1 g_m + C_L)}} (C_3 R_1 g_m + C_3 + C_L R_1 g_m + C_L)}{C_1 R_1 g_m + C_1 + C_3 R_3 g_m + C_L R_3 g_m}$
 wo: $\sqrt{\frac{g_m}{C_1 R_3 (C_3 R_1 g_m + C_3 + C_L R_1 g_m + C_L)}}$
 bandwidth: $\frac{C_1 R_1 g_m + C_1 + C_3 R_3 g_m + C_L R_3 g_m}{C_1 R_3 (C_3 R_1 g_m + C_3 + C_L R_1 g_m + C_L)}$
 K-LP: R_3
 K-HP: 0
 K-BP: $\frac{C_1 R_1 R_3 g_m}{C_1 R_1 g_m + C_1 + C_3 R_3 g_m + C_L R_3 g_m}$
 Qz: 0
 Wz: None

8.17 INVALID-NUMER-17 $Z(s) = \left(R_1 + \frac{1}{C_1 s}, \infty, \frac{R_3}{C_3 R_3 s + 1}, \infty, \infty, \frac{R_L}{C_L R_L s + 1} \right)$

$$H(s) = \frac{R_3 R_L g_m (C_1 R_1 s + 1)}{(C_1 R_1 g_m s + C_1 s + g_m) (C_3 R_3 R_L s + C_L R_3 R_L s + R_3 + R_L)}$$

Parameters:

Q: $\frac{C_1 R_3 R_L \sqrt{\frac{g_m (R_3 + R_L)}{C_1 R_3 R_L (C_3 R_1 g_m + C_3 + C_L R_1 g_m + C_L)}} (C_3 R_1 g_m + C_3 + C_L R_1 g_m + C_L)}{C_1 R_1 R_3 g_m + C_1 R_1 R_L g_m + C_1 R_3 + C_1 R_L + C_3 R_3 R_L g_m + C_L R_3 R_L g_m}$

wo: $\sqrt{\frac{g_m(R_3+R_L)}{C_1 R_3 R_L (C_3 R_1 g_m + C_3 + C_L R_1 g_m + C_L)}}$
 bandwidth: $\frac{C_1 R_1 R_3 g_m + C_1 R_1 R_L g_m + C_1 R_3 + C_1 R_L + C_3 R_3 R_L g_m + C_L R_3 R_L g_m}{C_1 R_3 R_L (C_3 R_1 g_m + C_3 + C_L R_1 g_m + C_L)}$
 K-LP: $\frac{R_3 R_L}{R_3 + R_L}$
 K-HP: 0
 K-BP: $\frac{C_1 R_1 R_3 R_L g_m}{C_1 R_1 R_3 g_m + C_1 R_1 R_L g_m + C_1 R_3 + C_1 R_L + C_3 R_3 R_L g_m + C_L R_3 R_L g_m}$
 QZ: 0
 WZ: None

9 INVALID-WZ

9.1 INVALID-WZ-1 $Z(s) = \left(L_1 s, \infty, R_3 + \frac{1}{C_3 s}, \infty, \infty, R_L + \frac{1}{C_L s} \right)$

$$H(s) = \frac{L_1 g_m (C_3 R_3 s + 1) (C_L R_L s + 1)}{(L_1 g_m s + 1) (C_3 C_L R_3 s + C_3 C_L R_L s + C_3 + C_L)}$$

Parameters:

Q: $\frac{C_3 C_L L_1 g_m \sqrt{\frac{C_3 + C_L}{C_3 C_L L_1 g_m (R_3 + R_L)}} (R_3 + R_L)}{C_3 C_L R_3 + C_3 C_L R_L + C_3 L_1 g_m + C_L L_1 g_m}$
 wo: $\sqrt{\frac{C_3 + C_L}{C_3 C_L L_1 g_m (R_3 + R_L)}}$
 bandwidth: $\frac{C_3 C_L R_3 + C_3 C_L R_L + C_3 L_1 g_m + C_L L_1 g_m}{C_3 C_L L_1 g_m (R_3 + R_L)}$
 K-LP: $\frac{L_1 g_m}{C_3 + C_L}$
 K-HP: $\frac{R_3 R_L}{R_3 + R_L}$
 K-BP: $\frac{L_1 g_m (C_3 R_3 + C_L R_L)}{C_3 C_L R_3 + C_3 C_L R_L + C_3 L_1 g_m + C_L L_1 g_m}$
 QZ: $\frac{C_3 C_L R_3 R_L \sqrt{\frac{C_3 + C_L}{C_3 C_L L_1 g_m (R_3 + R_L)}}}{C_3 R_3 + C_L R_L}$
 WZ: $\sqrt{\frac{1}{C_3 C_L R_3 R_L}}$

9.2 INVALID-WZ-2 $Z(s) = \left(R_1 + \frac{1}{C_1 s}, \infty, R_3, \infty, \infty, R_L + \frac{1}{C_L s} \right)$

$$H(s) = \frac{R_3 g_m (C_1 R_1 s + 1) (C_L R_L s + 1)}{(C_L R_3 s + C_L R_L s + 1) (C_1 R_1 g_m s + C_1 s + g_m)}$$

Parameters:

Q: $\frac{C_1 C_L \sqrt{\frac{g_m}{C_1 C_L (R_1 R_3 g_m + R_1 R_L g_m + R_3 + R_L)}} (R_1 R_3 g_m + R_1 R_L g_m + R_3 + R_L)}{C_1 R_1 g_m + C_1 + C_L R_3 g_m + C_L R_L g_m}$
 wo: $\sqrt{\frac{g_m}{C_1 C_L (R_1 R_3 g_m + R_1 R_L g_m + R_3 + R_L)}}$
 bandwidth: $\frac{C_1 R_1 g_m + C_1 + C_L R_3 g_m + C_L R_L g_m}{C_1 C_L (R_1 R_3 g_m + R_1 R_L g_m + R_3 + R_L)}$
 K-LP: R_3
 K-HP: $\frac{R_1 R_3 R_L g_m}{R_1 R_3 g_m + R_1 R_L g_m + R_3 + R_L}$
 K-BP: $\frac{R_3 g_m (C_1 R_1 + C_L R_L)}{C_1 R_1 g_m + C_1 + C_L R_3 g_m + C_L R_L g_m}$
 QZ: $\frac{C_1 C_L R_1 R_L \sqrt{\frac{g_m}{C_1 C_L (R_1 R_3 g_m + R_1 R_L g_m + R_3 + R_L)}}}{C_1 R_1 + C_L R_L}$
 WZ: $\sqrt{\frac{1}{C_1 C_L R_1 R_L}}$

9.3 INVALID-WZ-3 $Z(s) = \left(R_1 + \frac{1}{C_1 s}, \infty, R_3 + \frac{1}{C_3 s}, \infty, \infty, R_L \right)$

$$H(s) = \frac{R_L g_m (C_1 R_1 s + 1) (C_3 R_3 s + 1)}{(C_3 R_3 s + C_3 R_L s + 1) (C_1 R_1 g_m s + C_1 s + g_m)}$$

Parameters:

Q: $\frac{C_1 C_3 \sqrt{\frac{g_m}{C_1 C_3 (R_1 R_3 g_m + R_1 R_L g_m + R_3 + R_L)}} (R_1 R_3 g_m + R_1 R_L g_m + R_3 + R_L)}{C_1 R_1 g_m + C_1 + C_3 R_3 g_m + C_3 R_L g_m}$
 wo: $\sqrt{\frac{g_m}{C_1 C_3 (R_1 R_3 g_m + R_1 R_L g_m + R_3 + R_L)}}$

$$\begin{aligned}
&\text{bandwidth: } \frac{C_1 R_1 g_m + C_1 + C_3 R_3 g_m + C_3 R_L g_m}{C_1 C_3 (R_1 R_3 g_m + R_1 R_L g_m + R_3 + R_L)} \\
&\text{K-LP: } R_L \\
&\text{K-HP: } \frac{R_1 R_3 R_L g_m}{R_1 R_3 g_m + R_1 R_L g_m + R_3 + R_L} \\
&\text{K-BP: } \frac{R_L g_m (C_1 R_1 + C_3 R_3)}{C_1 R_1 g_m + C_1 + C_3 R_3 g_m + C_3 R_L g_m} \\
&\text{QZ: } \frac{C_1 C_3 R_1 R_3 \sqrt{\frac{g_m}{C_1 C_3 (R_1 R_3 g_m + R_1 R_L g_m + R_3 + R_L)}}}{C_1 R_1 + C_3 R_3} \\
&\text{WZ: } \sqrt{\frac{1}{C_1 C_3 R_1 R_3}}
\end{aligned}$$

10 INVALID-ORDER

10.1 INVALID-ORDER-1 $Z(s) = (R_1, \infty, R_3, \infty, \infty, R_L)$

$$H(s) = \frac{R_1 R_3 R_L g_m}{(R_3 + R_L)(R_1 g_m + 1)}$$

10.2 INVALID-ORDER-2 $Z(s) = \left(R_1, \infty, R_3, \infty, \infty, \frac{1}{C_L s}\right)$

$$H(s) = \frac{R_1 R_3 g_m}{(R_1 g_m + 1)(C_L R_3 s + 1)}$$

10.3 INVALID-ORDER-3 $Z(s) = \left(R_1, \infty, R_3, \infty, \infty, \frac{R_L}{C_L R_L s + 1}\right)$

$$H(s) = \frac{R_1 R_3 R_L g_m}{(R_1 g_m + 1)(C_L R_3 R_L s + R_3 + R_L)}$$

10.4 INVALID-ORDER-4 $Z(s) = \left(R_1, \infty, R_3, \infty, \infty, R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{R_1 R_3 g_m (C_L R_L s + 1)}{(R_1 g_m + 1)(C_L R_3 s + C_L R_L s + 1)}$$

10.5 INVALID-ORDER-5 $Z(s) = \left(R_1, \infty, \frac{1}{C_3 s}, \infty, \infty, R_L\right)$

$$H(s) = \frac{R_1 R_L g_m}{(R_1 g_m + 1)(C_3 R_L s + 1)}$$

10.6 INVALID-ORDER-6 $Z(s) = \left(R_1, \infty, \frac{1}{C_3 s}, \infty, \infty, \frac{1}{C_L s}\right)$

$$H(s) = \frac{R_1 g_m}{s(C_3 + C_L)(R_1 g_m + 1)}$$

10.7 INVALID-ORDER-7 $Z(s) = \left(R_1, \infty, \frac{1}{C_3 s}, \infty, \infty, \frac{R_L}{C_L R_L s + 1}\right)$

$$H(s) = \frac{R_1 R_L g_m}{(R_1 g_m + 1)(C_3 R_L s + C_L R_L s + 1)}$$

10.8 INVALID-ORDER-8 $Z(s) = \left(R_1, \infty, \frac{1}{C_3 s}, \infty, \infty, R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{R_1 g_m (C_L R_L s + 1)}{s(R_1 g_m + 1)(C_3 C_L R_L s + C_3 + C_L)}$$

$$\mathbf{10.9 \quad INVALID-ORDER-9} \quad Z(s) = \left(R_1, \infty, \frac{1}{C_3 s}, \infty, \infty, L_L s + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{R_1 g_m (C_L L_L s^2 + 1)}{s (R_1 g_m + 1) (C_3 C_L L_L s^2 + C_3 + C_L)}$$

$$\mathbf{10.10 \quad INVALID-ORDER-10} \quad Z(s) = \left(R_1, \infty, \frac{1}{C_3 s}, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} \right)$$

$$H(s) = \frac{L_L R_1 g_m s}{(R_1 g_m + 1) (C_3 L_L s^2 + C_L L_L s^2 + 1)}$$

$$\mathbf{10.11 \quad INVALID-ORDER-11} \quad Z(s) = \left(R_1, \infty, \frac{1}{C_3 s}, \infty, \infty, L_L s + R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{R_1 g_m (C_L L_L s^2 + C_L R_L s + 1)}{s (R_1 g_m + 1) (C_3 C_L L_L s^2 + C_3 C_L R_L s + C_3 + C_L)}$$

$$\mathbf{10.12 \quad INVALID-ORDER-12} \quad Z(s) = \left(R_1, \infty, \frac{1}{C_3 s}, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$$

$$H(s) = \frac{R_1 g_m (C_L L_L R_L s^2 + L_L s + R_L)}{(R_1 g_m + 1) (C_3 C_L L_L R_L s^3 + C_3 L_L s^2 + C_3 R_L s + C_L L_L s^2 + 1)}$$

$$\mathbf{10.13 \quad INVALID-ORDER-13} \quad Z(s) = \left(R_1, \infty, \frac{1}{C_3 s}, \infty, \infty, \frac{R_L (C_L L_L s^2 + 1)}{C_L L_L s^2 + C_L R_L s + 1} \right)$$

$$H(s) = \frac{R_1 R_L g_m (C_L L_L s^2 + 1)}{(R_1 g_m + 1) (C_3 C_L L_L R_L s^3 + C_3 R_L s + C_L L_L s^2 + C_L R_L s + 1)}$$

$$\mathbf{10.14 \quad INVALID-ORDER-14} \quad Z(s) = \left(R_1, \infty, \frac{R_3}{C_3 R_3 s + 1}, \infty, \infty, R_L \right)$$

$$H(s) = \frac{R_1 R_3 R_L g_m}{(R_1 g_m + 1) (C_3 R_3 R_L s + R_3 + R_L)}$$

$$\mathbf{10.15 \quad INVALID-ORDER-15} \quad Z(s) = \left(R_1, \infty, \frac{R_3}{C_3 R_3 s + 1}, \infty, \infty, \frac{1}{C_L s} \right)$$

$$H(s) = \frac{R_1 R_3 g_m}{(R_1 g_m + 1) (C_3 R_3 s + C_L R_3 s + 1)}$$

$$\mathbf{10.16 \quad INVALID-ORDER-16} \quad Z(s) = \left(R_1, \infty, \frac{R_3}{C_3 R_3 s + 1}, \infty, \infty, \frac{R_L}{C_L R_L s + 1} \right)$$

$$H(s) = \frac{R_1 R_3 R_L g_m}{(R_1 g_m + 1) (C_3 R_3 R_L s + C_L R_3 R_L s + R_3 + R_L)}$$

$$\mathbf{10.17 \quad INVALID-ORDER-17} \quad Z(s) = \left(R_1, \infty, \frac{R_3}{C_3 R_3 s + 1}, \infty, \infty, L_L s + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{R_1 R_3 g_m (C_L L_L s^2 + 1)}{(R_1 g_m + 1) (C_3 C_L L_L R_3 s^3 + C_3 R_3 s + C_L L_L s^2 + C_L R_3 s + 1)}$$

$$10.18 \quad \text{INVALID-ORDER-18} \quad Z(s) = \left(R_1, \infty, \frac{R_3}{C_3 R_3 s + 1}, \infty, \infty, L_L s + R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{R_1 R_3 g_m (C_L L_L s^2 + C_L R_L s + 1)}{(R_1 g_m + 1) (C_3 C_L L_L R_3 s^3 + C_3 C_L R_3 R_L s^2 + C_3 R_3 s + C_L L_L s^2 + C_L R_3 s + C_L R_L s + 1)}$$

$$10.19 \quad \text{INVALID-ORDER-19} \quad Z(s) = \left(R_1, \infty, \frac{R_3}{C_3 R_3 s + 1}, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$$

$$H(s) = \frac{R_1 R_3 g_m (C_L L_L R_L s^2 + L_L s + R_L)}{(R_1 g_m + 1) (C_3 C_L L_L R_3 R_L s^3 + C_3 L_L R_3 s^2 + C_3 R_3 R_L s + C_L L_L R_3 s^2 + C_L L_L R_L s^2 + L_L s + R_3 + R_L)}$$

$$10.20 \quad \text{INVALID-ORDER-20} \quad Z(s) = \left(R_1, \infty, \frac{R_3}{C_3 R_3 s + 1}, \infty, \infty, \frac{R_L (C_L L_L s^2 + 1)}{C_L L_L s^2 + C_L R_L s + 1} \right)$$

$$H(s) = \frac{R_1 R_3 R_L g_m (C_L L_L s^2 + 1)}{(R_1 g_m + 1) (C_3 C_L L_L R_3 R_L s^3 + C_3 R_3 R_L s + C_L L_L R_3 s^2 + C_L L_L R_L s^2 + C_L R_3 R_L s + R_3 + R_L)}$$

$$10.21 \quad \text{INVALID-ORDER-21} \quad Z(s) = \left(R_1, \infty, R_3 + \frac{1}{C_3 s}, \infty, \infty, R_L \right)$$

$$H(s) = \frac{R_1 R_L g_m (C_3 R_3 s + 1)}{(R_1 g_m + 1) (C_3 R_3 s + C_3 R_L s + 1)}$$

$$10.22 \quad \text{INVALID-ORDER-22} \quad Z(s) = \left(R_1, \infty, R_3 + \frac{1}{C_3 s}, \infty, \infty, \frac{1}{C_L s} \right)$$

$$H(s) = \frac{R_1 g_m (C_3 R_3 s + 1)}{s (R_1 g_m + 1) (C_3 C_L R_3 s + C_3 + C_L)}$$

$$10.23 \quad \text{INVALID-ORDER-23} \quad Z(s) = \left(R_1, \infty, R_3 + \frac{1}{C_3 s}, \infty, \infty, R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{R_1 g_m (C_3 R_3 s + 1) (C_L R_L s + 1)}{s (R_1 g_m + 1) (C_3 C_L R_3 s + C_3 C_L R_L s + C_3 + C_L)}$$

$$10.24 \quad \text{INVALID-ORDER-24} \quad Z(s) = \left(R_1, \infty, R_3 + \frac{1}{C_3 s}, \infty, \infty, L_L s + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{R_1 g_m (C_3 R_3 s + 1) (C_L L_L s^2 + 1)}{s (R_1 g_m + 1) (C_3 C_L L_L s^2 + C_3 C_L R_3 s + C_3 + C_L)}$$

$$10.25 \quad \text{INVALID-ORDER-25} \quad Z(s) = \left(R_1, \infty, R_3 + \frac{1}{C_3 s}, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} \right)$$

$$H(s) = \frac{L_L R_1 g_m s (C_3 R_3 s + 1)}{(R_1 g_m + 1) (C_3 C_L L_L R_3 s^3 + C_3 L_L s^2 + C_3 R_3 s + C_L L_L s^2 + 1)}$$

$$10.26 \quad \text{INVALID-ORDER-26} \quad Z(s) = \left(R_1, \infty, R_3 + \frac{1}{C_3 s}, \infty, \infty, L_L s + R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{R_1 g_m (C_3 R_3 s + 1) (C_L L_L s^2 + C_L R_L s + 1)}{s (R_1 g_m + 1) (C_3 C_L L_L s^2 + C_3 C_L R_3 s + C_3 C_L R_L s + C_3 + C_L)}$$

$$10.27 \quad \text{INVALID-ORDER-27} \quad Z(s) = \left(R_1, \infty, R_3 + \frac{1}{C_3 s}, \infty, \infty, \frac{L_L R_L s}{C_L L_L R_L s^2 + L_L s + R_L} \right)$$

$$H(s) = \frac{L_L R_1 R_L g_m s (C_3 R_3 s + 1)}{(R_1 g_m + 1) (C_3 C_L L_L R_3 R_L s^3 + C_3 L_L R_3 s^2 + C_3 L_L R_L s^2 + C_3 R_3 R_L s + C_L L_L R_L s^2 + L_L s + R_L)}$$

$$10.28 \quad \text{INVALID-ORDER-28} \quad Z(s) = \left(R_1, \infty, R_3 + \frac{1}{C_3 s}, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$$

$$H(s) = \frac{R_1 g_m (C_3 R_3 s + 1) (C_L L_L R_L s^2 + L_L s + R_L)}{(R_1 g_m + 1) (C_3 C_L L_L R_3 s^3 + C_3 C_L L_L R_L s^3 + C_3 L_L s^2 + C_3 R_3 s + C_3 R_L s + C_L L_L s^2 + 1)}$$

$$10.29 \quad \text{INVALID-ORDER-29} \quad Z(s) = \left(R_1, \infty, R_3 + \frac{1}{C_3 s}, \infty, \infty, \frac{R_L (C_L L_L s^2 + 1)}{C_L L_L s^2 + C_L R_L s + 1} \right)$$

$$H(s) = \frac{R_1 R_L g_m (C_3 R_3 s + 1) (C_L L_L s^2 + 1)}{(R_1 g_m + 1) (C_3 C_L L_L R_3 s^3 + C_3 C_L L_L R_L s^3 + C_3 C_L R_3 R_L s^2 + C_3 R_3 s + C_3 R_L s + C_L L_L s^2 + C_L R_L s + 1)}$$

$$10.30 \quad \text{INVALID-ORDER-30} \quad Z(s) = \left(R_1, \infty, L_3 s + \frac{1}{C_3 s}, \infty, \infty, \frac{1}{C_L s} \right)$$

$$H(s) = \frac{R_1 g_m (C_3 L_3 s^2 + 1)}{s (R_1 g_m + 1) (C_3 C_L L_3 s^2 + C_3 + C_L)}$$

$$10.31 \quad \text{INVALID-ORDER-31} \quad Z(s) = \left(R_1, \infty, L_3 s + \frac{1}{C_3 s}, \infty, \infty, \frac{R_L}{C_L R_L s + 1} \right)$$

$$H(s) = \frac{R_1 R_L g_m (C_3 L_3 s^2 + 1)}{(R_1 g_m + 1) (C_3 C_L L_3 R_L s^3 + C_3 L_3 s^2 + C_3 R_L s + C_L R_L s + 1)}$$

$$10.32 \quad \text{INVALID-ORDER-32} \quad Z(s) = \left(R_1, \infty, L_3 s + \frac{1}{C_3 s}, \infty, \infty, R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{R_1 g_m (C_3 L_3 s^2 + 1) (C_L R_L s + 1)}{s (R_1 g_m + 1) (C_3 C_L L_3 s^2 + C_3 C_L R_L s + C_3 + C_L)}$$

$$10.33 \quad \text{INVALID-ORDER-33} \quad Z(s) = \left(R_1, \infty, L_3 s + \frac{1}{C_3 s}, \infty, \infty, L_L s + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{R_1 g_m (C_3 L_3 s^2 + 1) (C_L L_L s^2 + 1)}{s (R_1 g_m + 1) (C_3 C_L L_3 s^2 + C_3 C_L L_L s^2 + C_3 + C_L)}$$

$$10.34 \quad \text{INVALID-ORDER-34} \quad Z(s) = \left(R_1, \infty, L_3 s + \frac{1}{C_3 s}, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} \right)$$

$$H(s) = \frac{L_L R_1 g_m s (C_3 L_3 s^2 + 1)}{(R_1 g_m + 1) (C_3 C_L L_3 L_L s^4 + C_3 L_3 s^2 + C_3 L_L s^2 + C_L L_L s^2 + 1)}$$

$$10.35 \quad \text{INVALID-ORDER-35} \quad Z(s) = \left(R_1, \infty, L_3 s + \frac{1}{C_3 s}, \infty, \infty, L_L s + R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{R_1 g_m (C_3 L_3 s^2 + 1) (C_L L_L s^2 + C_L R_L s + 1)}{s (R_1 g_m + 1) (C_3 C_L L_3 s^2 + C_3 C_L L_L s^2 + C_3 C_L R_L s + C_3 + C_L)}$$

$$10.36 \quad \text{INVALID-ORDER-36} \quad Z(s) = \left(R_1, \infty, L_3s + \frac{1}{C_3s}, \infty, \infty, \frac{L_LR_Ls}{C_LL_LR_Ls^2+L_Ls+R_L} \right)$$

$$H(s) = \frac{L_LR_1R_Lg_ms(C_3L_3s^2+1)}{(R_1g_m+1)(C_3C_LL_3L_LR_Ls^4+C_3L_3L_Ls^3+C_3L_3R_Ls^2+C_3L_LR_Ls^2+C_LL_LR_Ls^2+L_Ls+R_L)}$$

$$10.37 \quad \text{INVALID-ORDER-37} \quad Z(s) = \left(R_1, \infty, L_3s + \frac{1}{C_3s}, \infty, \infty, \frac{L_Ls}{C_LL_Ls^2+1} + R_L \right)$$

$$H(s) = \frac{R_1g_m(C_3L_3s^2+1)(C_LL_LR_Ls^2+L_Ls+R_L)}{(R_1g_m+1)(C_3C_LL_3L_Ls^4+C_3C_LL_LR_Ls^3+C_3L_3s^2+C_3L_Ls^2+C_3R_Ls+C_LL_Ls^2+1)}$$

$$10.38 \quad \text{INVALID-ORDER-38} \quad Z(s) = \left(R_1, \infty, L_3s + \frac{1}{C_3s}, \infty, \infty, \frac{R_L(C_LL_Ls^2+1)}{C_LL_Ls^2+C_LR_Ls+1} \right)$$

$$H(s) = \frac{R_1R_Lg_m(C_3L_3s^2+1)(C_LL_Ls^2+1)}{(R_1g_m+1)(C_3C_LL_3L_Ls^4+C_3C_LL_3R_Ls^3+C_3C_LL_LR_Ls^3+C_3L_3s^2+C_3R_Ls+C_LL_Ls^2+C_LR_Ls+1)}$$

$$10.39 \quad \text{INVALID-ORDER-39} \quad Z(s) = \left(R_1, \infty, \frac{L_3s}{C_3L_3s^2+1}, \infty, \infty, \frac{1}{C_Ls} \right)$$

$$H(s) = \frac{L_3R_1g_ms}{(R_1g_m+1)(C_3L_3s^2+C_LL_3s^2+1)}$$

$$10.40 \quad \text{INVALID-ORDER-40} \quad Z(s) = \left(R_1, \infty, \frac{L_3s}{C_3L_3s^2+1}, \infty, \infty, R_L + \frac{1}{C_Ls} \right)$$

$$H(s) = \frac{L_3R_1g_ms(C_LR_Ls+1)}{(R_1g_m+1)(C_3C_LL_3R_Ls^3+C_3L_3s^2+C_LL_3s^2+C_LR_Ls+1)}$$

$$10.41 \quad \text{INVALID-ORDER-41} \quad Z(s) = \left(R_1, \infty, \frac{L_3s}{C_3L_3s^2+1}, \infty, \infty, L_Ls + \frac{1}{C_Ls} \right)$$

$$H(s) = \frac{L_3R_1g_ms(C_LL_Ls^2+1)}{(R_1g_m+1)(C_3C_LL_3L_Ls^4+C_3L_3s^2+C_LL_3s^2+C_LL_Ls^2+1)}$$

$$10.42 \quad \text{INVALID-ORDER-42} \quad Z(s) = \left(R_1, \infty, \frac{L_3s}{C_3L_3s^2+1}, \infty, \infty, \frac{L_Ls}{C_LL_Ls^2+1} \right)$$

$$H(s) = \frac{L_3L_LR_1g_ms}{(R_1g_m+1)(C_3L_3L_Ls^2+C_LL_3L_Ls^2+L_3+L_L)}$$

$$10.43 \quad \text{INVALID-ORDER-43} \quad Z(s) = \left(R_1, \infty, \frac{L_3s}{C_3L_3s^2+1}, \infty, \infty, L_Ls + R_L + \frac{1}{C_Ls} \right)$$

$$H(s) = \frac{L_3R_1g_ms(C_LL_Ls^2+C_LR_Ls+1)}{(R_1g_m+1)(C_3C_LL_3L_Ls^4+C_3C_LL_3R_Ls^3+C_3L_3s^2+C_LL_3s^2+C_LL_Ls^2+C_LR_Ls+1)}$$

$$10.44 \quad \text{INVALID-ORDER-44} \quad Z(s) = \left(R_1, \infty, \frac{L_3s}{C_3L_3s^2+1}, \infty, \infty, \frac{L_Ls}{C_LL_Ls^2+1} + R_L \right)$$

$$H(s) = \frac{L_3R_1g_ms(C_LL_LR_Ls^2+L_Ls+R_L)}{(R_1g_m+1)(C_3C_LL_3L_LR_Ls^4+C_3L_3L_Ls^3+C_3L_3R_Ls^2+C_LL_3L_Ls^3+C_LL_LR_Ls^2+L_3s+L_Ls+R_L)}$$

$$10.45 \quad \text{INVALID-ORDER-45} \quad Z(s) = \left(R_1, \infty, \frac{L_3 s}{C_3 L_3 s^2 + 1}, \infty, \infty, \frac{R_L (C_L L_L s^2 + 1)}{C_L L_L s^2 + C_L R_L s + 1} \right)$$

$$H(s) = \frac{L_3 R_1 R_L g_m s (C_L L_L s^2 + 1)}{(R_1 g_m + 1) (C_3 C_L L_3 L_L R_L s^4 + C_3 L_3 R_L s^2 + C_L L_3 L_L s^3 + C_L L_3 R_L s^2 + C_L L_L R_L s^2 + L_3 s + R_L)}$$

$$10.46 \quad \text{INVALID-ORDER-46} \quad Z(s) = \left(R_1, \infty, L_3 s + R_3 + \frac{1}{C_3 s}, \infty, \infty, \frac{1}{C_L s} \right)$$

$$H(s) = \frac{R_1 g_m (C_3 L_3 s^2 + C_3 R_3 s + 1)}{s (R_1 g_m + 1) (C_3 C_L L_3 s^2 + C_3 C_L R_3 s + C_3 + C_L)}$$

$$10.47 \quad \text{INVALID-ORDER-47} \quad Z(s) = \left(R_1, \infty, L_3 s + R_3 + \frac{1}{C_3 s}, \infty, \infty, \frac{R_L}{C_L R_L s + 1} \right)$$

$$H(s) = \frac{R_1 R_L g_m (C_3 L_3 s^2 + C_3 R_3 s + 1)}{(R_1 g_m + 1) (C_3 C_L L_3 R_L s^3 + C_3 C_L R_3 R_L s^2 + C_3 L_3 s^2 + C_3 R_3 s + C_3 R_L s + C_L R_L s + 1)}$$

$$10.48 \quad \text{INVALID-ORDER-48} \quad Z(s) = \left(R_1, \infty, L_3 s + R_3 + \frac{1}{C_3 s}, \infty, \infty, R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{R_1 g_m (C_L R_L s + 1) (C_3 L_3 s^2 + C_3 R_3 s + 1)}{s (R_1 g_m + 1) (C_3 C_L L_3 s^2 + C_3 C_L R_3 s + C_3 C_L R_L s + C_3 + C_L)}$$

$$10.49 \quad \text{INVALID-ORDER-49} \quad Z(s) = \left(R_1, \infty, L_3 s + R_3 + \frac{1}{C_3 s}, \infty, \infty, L_L s + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{R_1 g_m (C_L L_L s^2 + 1) (C_3 L_3 s^2 + C_3 R_3 s + 1)}{s (R_1 g_m + 1) (C_3 C_L L_3 s^2 + C_3 C_L L_L s^2 + C_3 C_L R_3 s + C_3 + C_L)}$$

$$10.50 \quad \text{INVALID-ORDER-50} \quad Z(s) = \left(R_1, \infty, L_3 s + R_3 + \frac{1}{C_3 s}, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} \right)$$

$$H(s) = \frac{L_L R_1 g_m s (C_3 L_3 s^2 + C_3 R_3 s + 1)}{(R_1 g_m + 1) (C_3 C_L L_3 L_L s^4 + C_3 C_L L_L R_3 s^3 + C_3 L_3 s^2 + C_3 L_L s^2 + C_3 R_3 s + C_L L_L s^2 + 1)}$$

$$10.51 \quad \text{INVALID-ORDER-51} \quad Z(s) = \left(R_1, \infty, L_3 s + R_3 + \frac{1}{C_3 s}, \infty, \infty, L_L s + R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{R_1 g_m (C_3 L_3 s^2 + C_3 R_3 s + 1) (C_L L_L s^2 + C_L R_L s + 1)}{s (R_1 g_m + 1) (C_3 C_L L_3 s^2 + C_3 C_L L_L s^2 + C_3 C_L R_3 s + C_3 C_L R_L s + C_3 + C_L)}$$

$$10.52 \quad \text{INVALID-ORDER-52} \quad Z(s) = \left(R_1, \infty, L_3 s + R_3 + \frac{1}{C_3 s}, \infty, \infty, \frac{L_L R_L s}{C_L L_L R_L s^2 + L_L s + R_L} \right)$$

$$H(s) = \frac{L_L R_1 R_L g_m s (C_3 L_3 s^2 + C_3 R_3 s + 1)}{(R_1 g_m + 1) (C_3 C_L L_3 L_L R_L s^4 + C_3 C_L L_L R_3 R_L s^3 + C_3 L_3 L_L s^3 + C_3 L_3 R_L s^2 + C_3 L_L R_3 s^2 + C_3 L_L R_L s^2 + C_3 R_3 R_L s + C_L L_L R_L s^2 + L_L s + R_L)}$$

$$10.53 \quad \text{INVALID-ORDER-53} \quad Z(s) = \left(R_1, \infty, L_3 s + R_3 + \frac{1}{C_3 s}, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$$

$$H(s) = \frac{R_1 g_m (C_3 L_3 s^2 + C_3 R_3 s + 1) (C_L L_L R_L s^2 + L_L s + R_L)}{(R_1 g_m + 1) (C_3 C_L L_3 L_L s^4 + C_3 C_L L_L R_3 s^3 + C_3 C_L L_L R_L s^3 + C_3 L_3 s^2 + C_3 L_L s^2 + C_3 R_3 s + C_3 R_L s + C_L L_L s^2 + 1)}$$

$$10.54 \quad \text{INVALID-ORDER-54} \quad Z(s) = \left(R_1, \infty, L_3s + R_3 + \frac{1}{C_3s}, \infty, \infty, \frac{R_L(C_LL_Ls^2+1)}{C_LL_Ls^2+C_LR_Ls+1} \right)$$

$$H(s) = \frac{R_1R_Lg_m(C_LL_Ls^2+1)(C_3L_3s^2+C_3R_3s+1)}{(R_1g_m+1)(C_3C_LL_3L_Ls^4+C_3C_LL_3R_Ls^3+C_3C_LL_LR_3s^3+C_3C_LL_LR_Ls^3+C_3C_LR_3R_Ls^2+C_3L_3s^2+C_3R_3s+C_3R_Ls+C_LL_Ls^2+C_LR_Ls+1)}$$

$$10.55 \quad \text{INVALID-ORDER-55} \quad Z(s) = \left(R_1, \infty, \frac{L_3R_3s}{C_3L_3R_3s^2+L_3s+R_3}, \infty, \infty, R_L + \frac{1}{C_Ls} \right)$$

$$H(s) = \frac{L_3R_1R_3g_ms(C_LR_Ls+1)}{(R_1g_m+1)(C_3C_LL_3R_3R_Ls^3+C_3L_3R_3s^2+C_LL_3R_3s^2+C_LL_3R_Ls^2+C_LR_3R_Ls+L_3s+R_3)}$$

$$10.56 \quad \text{INVALID-ORDER-56} \quad Z(s) = \left(R_1, \infty, \frac{L_3R_3s}{C_3L_3R_3s^2+L_3s+R_3}, \infty, \infty, L_Ls + \frac{1}{C_Ls} \right)$$

$$H(s) = \frac{L_3R_1R_3g_ms(C_LL_Ls^2+1)}{(R_1g_m+1)(C_3C_LL_3L_LR_3s^4+C_3L_3R_3s^2+C_LL_3L_Ls^3+C_LL_3R_3s^2+C_LL_LR_3s^2+L_3s+R_3)}$$

$$10.57 \quad \text{INVALID-ORDER-57} \quad Z(s) = \left(R_1, \infty, \frac{L_3R_3s}{C_3L_3R_3s^2+L_3s+R_3}, \infty, \infty, L_Ls + R_L + \frac{1}{C_Ls} \right)$$

$$H(s) = \frac{L_3R_1R_3g_ms(C_LL_Ls^2+C_LR_Ls+1)}{(R_1g_m+1)(C_3C_LL_3L_LR_3s^4+C_3C_LL_3R_3R_Ls^3+C_3L_3R_3s^2+C_LL_3L_Ls^3+C_LL_3R_3s^2+C_LL_3R_Ls^2+C_LL_LR_3s^2+C_LR_3R_Ls+L_3s+R_3)}$$

$$10.58 \quad \text{INVALID-ORDER-58} \quad Z(s) = \left(R_1, \infty, \frac{L_3R_3s}{C_3L_3R_3s^2+L_3s+R_3}, \infty, \infty, \frac{L_Ls}{C_LL_Ls^2+1} + R_L \right)$$

$$H(s) = \frac{L_3R_1R_3g_ms(C_LL_LR_Ls^2+L_Ls+R_L)}{(R_1g_m+1)(C_3C_LL_3L_LR_3R_Ls^4+C_3L_3L_LR_3s^3+C_3L_3R_3R_Ls^2+C_LL_3L_LR_3s^3+C_LL_3L_LR_Ls^3+C_LL_LR_3R_Ls^2+L_3L_Ls^2+L_3R_3s+L_3R_Ls+L_LR_3s+R_3R_L)}$$

$$10.59 \quad \text{INVALID-ORDER-59} \quad Z(s) = \left(R_1, \infty, \frac{L_3R_3s}{C_3L_3R_3s^2+L_3s+R_3}, \infty, \infty, \frac{R_L(C_LL_Ls^2+1)}{C_LL_Ls^2+C_LR_Ls+1} \right)$$

$$H(s) = \frac{L_3R_1R_3R_Lg_ms(C_LL_Ls^2+1)}{(R_1g_m+1)(C_3C_LL_3L_LR_3R_Ls^4+C_3L_3R_3R_Ls^2+C_LL_3L_LR_3s^3+C_LL_3L_LR_Ls^3+C_LL_3R_3R_Ls^2+C_LL_LR_3R_Ls^2+L_3R_3s+L_3R_Ls+R_3R_L)}$$

$$10.60 \quad \text{INVALID-ORDER-60} \quad Z(s) = \left(R_1, \infty, \frac{L_3s}{C_3L_3s^2+1} + R_3, \infty, \infty, \frac{1}{C_Ls} \right)$$

$$H(s) = \frac{R_1g_m(C_3L_3R_3s^2+L_3s+R_3)}{(R_1g_m+1)(C_3C_LL_3R_3s^3+C_3L_3s^2+C_LL_3s^2+C_LR_3s+1)}$$

$$10.61 \quad \text{INVALID-ORDER-61} \quad Z(s) = \left(R_1, \infty, \frac{L_3s}{C_3L_3s^2+1} + R_3, \infty, \infty, \frac{R_L}{C_LR_Ls+1} \right)$$

$$H(s) = \frac{R_1R_Lg_m(C_3L_3R_3s^2+L_3s+R_3)}{(R_1g_m+1)(C_3C_LL_3R_3R_Ls^3+C_3L_3R_3s^2+C_3L_3R_Ls^2+C_LL_3R_Ls^2+C_LR_3R_Ls+L_3s+R_3+R_L)}$$

$$10.62 \quad \text{INVALID-ORDER-62} \quad Z(s) = \left(R_1, \infty, \frac{L_3s}{C_3L_3s^2+1} + R_3, \infty, \infty, R_L + \frac{1}{C_Ls} \right)$$

$$H(s) = \frac{R_1g_m(C_LR_Ls+1)(C_3L_3R_3s^2+L_3s+R_3)}{(R_1g_m+1)(C_3C_LL_3R_3s^3+C_3C_LL_3R_Ls^3+C_3L_3s^2+C_LL_3s^2+C_LR_3s+C_LR_Ls+1)}$$

$$10.63 \quad \text{INVALID-ORDER-63} \quad Z(s) = \left(R_1, \quad \infty, \quad \frac{L_3 s}{C_3 L_3 s^2 + 1} + R_3, \quad \infty, \quad \infty, \quad L_L s + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{R_1 g_m (C_L L_L s^2 + 1) (C_3 L_3 R_3 s^2 + L_3 s + R_3)}{(R_1 g_m + 1) (C_3 C_L L_3 L_L s^4 + C_3 C_L L_3 R_3 s^3 + C_3 L_3 s^2 + C_L L_3 s^2 + C_L L_L s^2 + C_L R_3 s + 1)}$$

$$10.64 \quad \text{INVALID-ORDER-64} \quad Z(s) = \left(R_1, \quad \infty, \quad \frac{L_3 s}{C_3 L_3 s^2 + 1} + R_3, \quad \infty, \quad \infty, \quad \frac{L_L s}{C_L L_L s^2 + 1} \right)$$

$$H(s) = \frac{L_L R_1 g_m s (C_3 L_3 R_3 s^2 + L_3 s + R_3)}{(R_1 g_m + 1) (C_3 C_L L_3 L_L R_3 s^4 + C_3 L_3 L_L s^3 + C_3 L_3 R_3 s^2 + C_L L_3 L_L s^3 + C_L L_L R_3 s^2 + L_3 s + L_L s + R_3)}$$

$$10.65 \quad \text{INVALID-ORDER-65} \quad Z(s) = \left(R_1, \quad \infty, \quad \frac{L_3 s}{C_3 L_3 s^2 + 1} + R_3, \quad \infty, \quad \infty, \quad L_L s + R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{R_1 g_m (C_L L_L s^2 + C_L R_L s + 1) (C_3 L_3 R_3 s^2 + L_3 s + R_3)}{(R_1 g_m + 1) (C_3 C_L L_3 L_L s^4 + C_3 C_L L_3 R_3 s^3 + C_3 C_L L_3 R_L s^3 + C_3 L_3 s^2 + C_L L_3 s^2 + C_L L_L s^2 + C_L R_3 s + C_L R_L s + 1)}$$

$$10.66 \quad \text{INVALID-ORDER-66} \quad Z(s) = \left(R_1, \quad \infty, \quad \frac{L_3 s}{C_3 L_3 s^2 + 1} + R_3, \quad \infty, \quad \infty, \quad \frac{L_L R_L s}{C_L L_L R_L s^2 + L_L s + R_L} \right)$$

$$H(s) = \frac{L_L R_1 R_L g_m s (C_3 L_3 R_3 s^2 + L_3 s + R_3)}{(R_1 g_m + 1) (C_3 C_L L_3 L_L R_3 R_L s^4 + C_3 L_3 L_L R_3 s^3 + C_3 L_3 L_L R_L s^3 + C_3 L_3 R_3 R_L s^2 + C_L L_3 L_L R_L s^3 + C_L L_L R_3 R_L s^2 + L_3 L_L s^2 + L_3 R_L s + L_L R_3 s + L_L R_L s + R_3 R_L)}$$

$$10.67 \quad \text{INVALID-ORDER-67} \quad Z(s) = \left(R_1, \quad \infty, \quad \frac{L_3 s}{C_3 L_3 s^2 + 1} + R_3, \quad \infty, \quad \infty, \quad \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$$

$$H(s) = \frac{R_1 g_m (C_3 L_3 R_3 s^2 + L_3 s + R_3) (C_L L_L R_L s^2 + L_L s + R_L)}{(R_1 g_m + 1) (C_3 C_L L_3 L_L R_3 s^4 + C_3 C_L L_3 L_L R_L s^4 + C_3 L_3 L_L s^3 + C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + C_L L_3 L_L s^3 + C_L L_L R_3 s^2 + C_L L_L R_L s^2 + L_3 s + L_L s + R_3 + R_L)}$$

$$10.68 \quad \text{INVALID-ORDER-68} \quad Z(s) = \left(R_1, \quad \infty, \quad \frac{L_3 s}{C_3 L_3 s^2 + 1} + R_3, \quad \infty, \quad \infty, \quad \frac{R_L (C_L L_L s^2 + 1)}{C_L L_L s^2 + C_L R_L s + 1} \right)$$

$$H(s) = \frac{R_1 R_L g_m (C_L L_L s^2 + 1) (C_3 L_3 R_3 s^2 + L_3 s + R_3)}{(R_1 g_m + 1) (C_3 C_L L_3 L_L R_3 s^4 + C_3 C_L L_3 L_L R_L s^4 + C_3 C_L L_3 R_3 R_L s^3 + C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + C_L L_3 L_L s^3 + C_L L_3 R_L s^2 + C_L L_L R_3 s^2 + C_L L_L R_L s^2 + C_L R_3 R_L s + L_3 s + R_3 + R_L)}$$

$$10.69 \quad \text{INVALID-ORDER-69} \quad Z(s) = \left(R_1, \quad \infty, \quad \frac{R_3 (C_3 L_3 s^2 + 1)}{C_3 L_3 s^2 + C_3 R_3 s + 1}, \quad \infty, \quad \infty, \quad \frac{1}{C_L s} \right)$$

$$H(s) = \frac{R_1 R_3 g_m (C_3 L_3 s^2 + 1)}{(R_1 g_m + 1) (C_3 C_L L_3 R_3 s^3 + C_3 L_3 s^2 + C_3 R_3 s + C_L R_3 s + 1)}$$

$$10.70 \quad \text{INVALID-ORDER-70} \quad Z(s) = \left(R_1, \quad \infty, \quad \frac{R_3 (C_3 L_3 s^2 + 1)}{C_3 L_3 s^2 + C_3 R_3 s + 1}, \quad \infty, \quad \infty, \quad \frac{R_L}{C_L R_L s + 1} \right)$$

$$H(s) = \frac{R_1 R_3 R_L g_m (C_3 L_3 s^2 + 1)}{(R_1 g_m + 1) (C_3 C_L L_3 R_3 R_L s^3 + C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + C_3 R_3 R_L s + C_L R_3 R_L s + R_3 + R_L)}$$

$$10.71 \quad \text{INVALID-ORDER-71} \quad Z(s) = \left(R_1, \quad \infty, \quad \frac{R_3 (C_3 L_3 s^2 + 1)}{C_3 L_3 s^2 + C_3 R_3 s + 1}, \quad \infty, \quad \infty, \quad R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{R_1 R_3 g_m (C_3 L_3 s^2 + 1) (C_L R_L s + 1)}{(R_1 g_m + 1) (C_3 C_L L_3 R_3 s^3 + C_3 C_L L_3 R_L s^3 + C_3 C_L R_3 R_L s^2 + C_3 L_3 s^2 + C_3 R_3 s + C_L R_3 s + C_L R_L s + 1)}$$

$$10.72 \quad \text{INVALID-ORDER-72} \quad Z(s) = \left(R_1, \infty, \frac{R_3(C_3L_3s^2+1)}{C_3L_3s^2+C_3R_3s+1}, \infty, \infty, L_Ls + \frac{1}{C_Ls} \right)$$

$$H(s) = \frac{R_1R_3g_m(C_3L_3s^2+1)(C_LL_Ls^2+1)}{(R_1g_m+1)(C_3C_LL_3L_Ls^4+C_3C_LL_3R_3s^3+C_3C_LL_LR_3s^3+C_3L_3s^2+C_3R_3s+C_LL_Ls^2+C_LR_3s+1)}$$

$$10.73 \quad \text{INVALID-ORDER-73} \quad Z(s) = \left(R_1, \infty, \frac{R_3(C_3L_3s^2+1)}{C_3L_3s^2+C_3R_3s+1}, \infty, \infty, \frac{L_Ls}{C_LL_Ls^2+1} \right)$$

$$H(s) = \frac{L_LR_1R_3g_ms(C_3L_3s^2+1)}{(R_1g_m+1)(C_3C_LL_3L_LR_3s^4+C_3L_3L_Ls^3+C_3L_3R_3s^2+C_3L_LR_3s^2+C_LL_LR_3s^2+L_Ls+R_3)}$$

$$10.74 \quad \text{INVALID-ORDER-74} \quad Z(s) = \left(R_1, \infty, \frac{R_3(C_3L_3s^2+1)}{C_3L_3s^2+C_3R_3s+1}, \infty, \infty, L_Ls + R_L + \frac{1}{C_Ls} \right)$$

$$H(s) = \frac{R_1R_3g_m(C_3L_3s^2+1)(C_LL_Ls^2+C_LR_Ls+1)}{(R_1g_m+1)(C_3C_LL_3L_Ls^4+C_3C_LL_3R_3s^3+C_3C_LL_3R_Ls^3+C_3C_LL_LR_3s^3+C_3C_LR_3R_Ls^2+C_3L_3s^2+C_3R_3s+C_LL_Ls^2+C_LR_3s+C_LR_Ls+1)}$$

$$10.75 \quad \text{INVALID-ORDER-75} \quad Z(s) = \left(R_1, \infty, \frac{R_3(C_3L_3s^2+1)}{C_3L_3s^2+C_3R_3s+1}, \infty, \infty, \frac{L_LR_Ls}{C_LL_LR_Ls^2+L_Ls+R_L} \right)$$

$$H(s) = \frac{L_LR_1R_3R_Lg_ms(C_3L_3s^2+1)}{(R_1g_m+1)(C_3C_LL_3L_LR_3R_Ls^4+C_3L_3L_LR_3s^3+C_3L_3L_LR_Ls^3+C_3L_3R_3R_Ls^2+C_3L_LR_3R_Ls^2+C_LL_LR_3R_Ls^2+L_LR_3s+L_LR_Ls+R_3R_L)}$$

$$10.76 \quad \text{INVALID-ORDER-76} \quad Z(s) = \left(R_1, \infty, \frac{R_3(C_3L_3s^2+1)}{C_3L_3s^2+C_3R_3s+1}, \infty, \infty, \frac{L_Ls}{C_LL_Ls^2+1} + R_L \right)$$

$$H(s) = \frac{R_1R_3g_m(C_3L_3s^2+1)(C_LL_LR_Ls^2+L_Ls+R_L)}{(R_1g_m+1)(C_3C_LL_3L_LR_3s^4+C_3C_LL_3L_LR_Ls^4+C_3C_LL_LR_3R_Ls^3+C_3L_3L_Ls^3+C_3L_3R_3s^2+C_3L_3R_Ls^2+C_3L_LR_3s^2+C_3R_3R_Ls+C_LL_LR_3s^2+C_LL_LR_Ls^2+L_Ls+R_3+R_L)}$$

$$10.77 \quad \text{INVALID-ORDER-77} \quad Z(s) = \left(R_1, \infty, \frac{R_3(C_3L_3s^2+1)}{C_3L_3s^2+C_3R_3s+1}, \infty, \infty, \frac{R_L(C_LL_Ls^2+1)}{C_LL_Ls^2+C_LR_Ls+1} \right)$$

$$H(s) = \frac{R_1R_3R_Lg_m(C_3L_3s^2+1)(C_LL_Ls^2+1)}{(R_1g_m+1)(C_3C_LL_3L_LR_3s^4+C_3C_LL_3L_LR_Ls^4+C_3C_LL_3R_3R_Ls^3+C_3C_LL_LR_3R_Ls^3+C_3L_3R_3s^2+C_3L_3R_Ls^2+C_3R_3R_Ls+C_LL_LR_3s^2+C_LL_LR_Ls^2+C_LR_3R_Ls+R_3+R_L)}$$

$$10.78 \quad \text{INVALID-ORDER-78} \quad Z(s) = (L_1s, \infty, R_3, \infty, \infty, R_L)$$

$$H(s) = \frac{L_1R_3R_Lg_ms}{(R_3+R_L)(L_1g_ms+1)}$$

$$10.79 \quad \text{INVALID-ORDER-79} \quad Z(s) = \left(L_1s, \infty, R_3, \infty, \infty, L_Ls + \frac{1}{C_Ls} \right)$$

$$H(s) = \frac{L_1R_3g_ms(C_LL_Ls^2+1)}{(L_1g_ms+1)(C_LL_Ls^2+C_LR_3s+1)}$$

$$10.80 \quad \text{INVALID-ORDER-80} \quad Z(s) = \left(L_1s, \infty, R_3, \infty, \infty, \frac{L_Ls}{C_LL_Ls^2+1} \right)$$

$$H(s) = \frac{L_1L_LR_3g_ms^2}{(L_1g_ms+1)(C_LL_LR_3s^2+L_Ls+R_3)}$$

$$10.81 \quad \text{INVALID-ORDER-81} \quad Z(s) = \left(L_1 s, \quad \infty, \quad R_3, \quad \infty, \quad \infty, \quad L_L s + R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_1 R_3 g_m s (C_L L_L s^2 + C_L R_L s + 1)}{(L_1 g_m s + 1) (C_L L_L s^2 + C_L R_3 s + C_L R_L s + 1)}$$

$$10.82 \quad \text{INVALID-ORDER-82} \quad Z(s) = \left(L_1 s, \quad \infty, \quad R_3, \quad \infty, \quad \infty, \quad \frac{L_L R_L s}{C_L L_L R_L s^2 + L_L s + R_L} \right)$$

$$H(s) = \frac{L_1 L_L R_3 R_L g_m s^2}{(L_1 g_m s + 1) (C_L L_L R_3 R_L s^2 + L_L R_3 s + L_L R_L s + R_3 R_L)}$$

$$10.83 \quad \text{INVALID-ORDER-83} \quad Z(s) = \left(L_1 s, \quad \infty, \quad R_3, \quad \infty, \quad \infty, \quad \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$$

$$H(s) = \frac{L_1 R_3 g_m s (C_L L_L R_L s^2 + L_L s + R_L)}{(L_1 g_m s + 1) (C_L L_L R_3 s^2 + C_L L_L R_L s^2 + L_L s + R_3 + R_L)}$$

$$10.84 \quad \text{INVALID-ORDER-84} \quad Z(s) = \left(L_1 s, \quad \infty, \quad R_3, \quad \infty, \quad \infty, \quad \frac{R_L (C_L L_L s^2 + 1)}{C_L L_L s^2 + C_L R_L s + 1} \right)$$

$$H(s) = \frac{L_1 R_3 R_L g_m s (C_L L_L s^2 + 1)}{(L_1 g_m s + 1) (C_L L_L R_3 s^2 + C_L L_L R_L s^2 + C_L R_3 R_L s + R_3 + R_L)}$$

$$10.85 \quad \text{INVALID-ORDER-85} \quad Z(s) = \left(L_1 s, \quad \infty, \quad \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_1 g_m}{(C_3 + C_L) (L_1 g_m s + 1)}$$

$$10.86 \quad \text{INVALID-ORDER-86} \quad Z(s) = \left(L_1 s, \quad \infty, \quad \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad L_L s + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_1 g_m (C_L L_L s^2 + 1)}{(L_1 g_m s + 1) (C_3 C_L L_L s^2 + C_3 + C_L)}$$

$$10.87 \quad \text{INVALID-ORDER-87} \quad Z(s) = \left(L_1 s, \quad \infty, \quad \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad \frac{L_L s}{C_L L_L s^2 + 1} \right)$$

$$H(s) = \frac{L_1 L_L g_m s^2}{(L_1 g_m s + 1) (C_3 L_L s^2 + C_L L_L s^2 + 1)}$$

$$10.88 \quad \text{INVALID-ORDER-88} \quad Z(s) = \left(L_1 s, \quad \infty, \quad \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad L_L s + R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_1 g_m (C_L L_L s^2 + C_L R_L s + 1)}{(L_1 g_m s + 1) (C_3 C_L L_L s^2 + C_3 C_L R_L s + C_3 + C_L)}$$

$$10.89 \quad \text{INVALID-ORDER-89} \quad Z(s) = \left(L_1 s, \quad \infty, \quad \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad \frac{L_L R_L s}{C_L L_L R_L s^2 + L_L s + R_L} \right)$$

$$H(s) = \frac{L_1 L_L R_L g_m s^2}{(L_1 g_m s + 1) (C_3 L_L R_L s^2 + C_L L_L R_L s^2 + L_L s + R_L)}$$

$$\mathbf{10.90 \quad INVALID-ORDER-90} \quad Z(s) = \left(L_1 s, \quad \infty, \quad \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$$

$$H(s) = \frac{L_1 g_m s (C_L L_L R_L s^2 + L_L s + R_L)}{(L_1 g_m s + 1) (C_3 C_L L_L R_L s^3 + C_3 L_L s^2 + C_3 R_L s + C_L L_L s^2 + 1)}$$

$$\mathbf{10.91 \quad INVALID-ORDER-91} \quad Z(s) = \left(L_1 s, \quad \infty, \quad \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad \frac{R_L (C_L L_L s^2 + 1)}{C_L L_L s^2 + C_L R_L s + 1} \right)$$

$$H(s) = \frac{L_1 R_L g_m s (C_L L_L s^2 + 1)}{(L_1 g_m s + 1) (C_3 C_L L_L R_L s^3 + C_3 R_L s + C_L L_L s^2 + C_L R_L s + 1)}$$

$$\mathbf{10.92 \quad INVALID-ORDER-92} \quad Z(s) = \left(L_1 s, \quad \infty, \quad \frac{R_3}{C_3 R_3 s + 1}, \quad \infty, \quad \infty, \quad R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_1 R_3 g_m s (C_L R_L s + 1)}{(L_1 g_m s + 1) (C_3 C_L R_3 R_L s^2 + C_3 R_3 s + C_L R_3 s + C_L R_L s + 1)}$$

$$\mathbf{10.93 \quad INVALID-ORDER-93} \quad Z(s) = \left(L_1 s, \quad \infty, \quad \frac{R_3}{C_3 R_3 s + 1}, \quad \infty, \quad \infty, \quad L_L s + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_1 R_3 g_m s (C_L L_L s^2 + 1)}{(L_1 g_m s + 1) (C_3 C_L L_L R_3 s^3 + C_3 R_3 s + C_L L_L s^2 + C_L R_3 s + 1)}$$

$$\mathbf{10.94 \quad INVALID-ORDER-94} \quad Z(s) = \left(L_1 s, \quad \infty, \quad \frac{R_3}{C_3 R_3 s + 1}, \quad \infty, \quad \infty, \quad \frac{L_L s}{C_L L_L s^2 + 1} \right)$$

$$H(s) = \frac{L_1 L_L R_3 g_m s^2}{(L_1 g_m s + 1) (C_3 L_L R_3 s^2 + C_L L_L R_3 s^2 + L_L s + R_3)}$$

$$\mathbf{10.95 \quad INVALID-ORDER-95} \quad Z(s) = \left(L_1 s, \quad \infty, \quad \frac{R_3}{C_3 R_3 s + 1}, \quad \infty, \quad \infty, \quad L_L s + R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_1 R_3 g_m s (C_L L_L s^2 + C_L R_L s + 1)}{(L_1 g_m s + 1) (C_3 C_L L_L R_3 s^3 + C_3 C_L R_3 R_L s^2 + C_3 R_3 s + C_L L_L s^2 + C_L R_3 s + C_L R_L s + 1)}$$

$$\mathbf{10.96 \quad INVALID-ORDER-96} \quad Z(s) = \left(L_1 s, \quad \infty, \quad \frac{R_3}{C_3 R_3 s + 1}, \quad \infty, \quad \infty, \quad \frac{L_L R_L s}{C_L L_L R_L s^2 + L_L s + R_L} \right)$$

$$H(s) = \frac{L_1 L_L R_3 R_L g_m s^2}{(L_1 g_m s + 1) (C_3 L_L R_3 R_L s^2 + C_L L_L R_3 R_L s^2 + L_L R_3 s + L_L R_L s + R_3 R_L)}$$

$$\mathbf{10.97 \quad INVALID-ORDER-97} \quad Z(s) = \left(L_1 s, \quad \infty, \quad \frac{R_3}{C_3 R_3 s + 1}, \quad \infty, \quad \infty, \quad \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$$

$$H(s) = \frac{L_1 R_3 g_m s (C_L L_L R_L s^2 + L_L s + R_L)}{(L_1 g_m s + 1) (C_3 C_L L_L R_3 R_L s^3 + C_3 L_L R_3 s^2 + C_3 R_3 R_L s + C_L L_L R_3 s^2 + C_L L_L R_L s^2 + L_L s + R_3 + R_L)}$$

$$\mathbf{10.98 \quad INVALID-ORDER-98} \quad Z(s) = \left(L_1 s, \quad \infty, \quad \frac{R_3}{C_3 R_3 s + 1}, \quad \infty, \quad \infty, \quad \frac{R_L (C_L L_L s^2 + 1)}{C_L L_L s^2 + C_L R_L s + 1} \right)$$

$$H(s) = \frac{L_1 R_3 R_L g_m s (C_L L_L s^2 + 1)}{(L_1 g_m s + 1) (C_3 C_L L_L R_3 R_L s^3 + C_3 R_3 R_L s + C_L L_L R_3 s^2 + C_L L_L R_L s^2 + C_L R_3 R_L s + R_3 + R_L)}$$

$$10.99 \quad \text{INVALID-ORDER-99} \quad Z(s) = \left(L_1 s, \quad \infty, \quad R_3 + \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad \frac{R_L}{C_L R_L s + 1} \right)$$

$$H(s) = \frac{L_1 R_L g_m s (C_3 R_3 s + 1)}{(L_1 g_m s + 1) (C_3 C_L R_3 R_L s^2 + C_3 R_3 s + C_3 R_L s + C_L R_L s + 1)}$$

$$10.100 \quad \text{INVALID-ORDER-100} \quad Z(s) = \left(L_1 s, \quad \infty, \quad R_3 + \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad L_L s + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_1 g_m (C_3 R_3 s + 1) (C_L L_L s^2 + 1)}{(L_1 g_m s + 1) (C_3 C_L L_L s^2 + C_3 C_L R_3 s + C_3 + C_L)}$$

$$10.101 \quad \text{INVALID-ORDER-101} \quad Z(s) = \left(L_1 s, \quad \infty, \quad R_3 + \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad \frac{L_L s}{C_L L_L s^2 + 1} \right)$$

$$H(s) = \frac{L_1 L_L g_m s^2 (C_3 R_3 s + 1)}{(L_1 g_m s + 1) (C_3 C_L L_L R_3 s^3 + C_3 L_L s^2 + C_3 R_3 s + C_L L_L s^2 + 1)}$$

$$10.102 \quad \text{INVALID-ORDER-102} \quad Z(s) = \left(L_1 s, \quad \infty, \quad R_3 + \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad L_L s + R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_1 g_m (C_3 R_3 s + 1) (C_L L_L s^2 + C_L R_L s + 1)}{(L_1 g_m s + 1) (C_3 C_L L_L s^2 + C_3 C_L R_3 s + C_3 C_L R_L s + C_3 + C_L)}$$

$$10.103 \quad \text{INVALID-ORDER-103} \quad Z(s) = \left(L_1 s, \quad \infty, \quad R_3 + \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad \frac{L_L R_L s}{C_L L_L R_L s^2 + L_L s + R_L} \right)$$

$$H(s) = \frac{L_1 L_L R_L g_m s^2 (C_3 R_3 s + 1)}{(L_1 g_m s + 1) (C_3 C_L L_L R_3 R_L s^3 + C_3 L_L R_3 s^2 + C_3 L_L R_L s^2 + C_3 R_3 R_L s + C_L L_L R_L s^2 + L_L s + R_L)}$$

$$10.104 \quad \text{INVALID-ORDER-104} \quad Z(s) = \left(L_1 s, \quad \infty, \quad R_3 + \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$$

$$H(s) = \frac{L_1 g_m s (C_3 R_3 s + 1) (C_L L_L R_L s^2 + L_L s + R_L)}{(L_1 g_m s + 1) (C_3 C_L L_L R_3 s^3 + C_3 C_L L_L R_L s^3 + C_3 L_L s^2 + C_3 R_3 s + C_3 R_L s + C_L L_L s^2 + 1)}$$

$$10.105 \quad \text{INVALID-ORDER-105} \quad Z(s) = \left(L_1 s, \quad \infty, \quad R_3 + \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad \frac{R_L (C_L L_L s^2 + 1)}{C_L L_L s^2 + C_L R_L s + 1} \right)$$

$$H(s) = \frac{L_1 R_L g_m s (C_3 R_3 s + 1) (C_L L_L s^2 + 1)}{(L_1 g_m s + 1) (C_3 C_L L_L R_3 s^3 + C_3 C_L L_L R_L s^3 + C_3 C_L R_3 R_L s^2 + C_3 R_3 s + C_3 R_L s + C_L L_L s^2 + C_L R_L s + 1)}$$

$$10.106 \quad \text{INVALID-ORDER-106} \quad Z(s) = \left(L_1 s, \quad \infty, \quad L_3 s + \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad R_L \right)$$

$$H(s) = \frac{L_1 R_L g_m s (C_3 L_3 s^2 + 1)}{(L_1 g_m s + 1) (C_3 L_3 s^2 + C_3 R_L s + 1)}$$

$$10.107 \quad \text{INVALID-ORDER-107} \quad Z(s) = \left(L_1 s, \quad \infty, \quad L_3 s + \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_1 g_m (C_3 L_3 s^2 + 1)}{(L_1 g_m s + 1) (C_3 C_L L_3 s^2 + C_3 + C_L)}$$

$$10.108 \quad \text{INVALID-ORDER-108} \quad Z(s) = \left(L_1 s, \quad \infty, \quad L_3 s + \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad \frac{R_L}{C_L R_L s + 1} \right)$$

$$H(s) = \frac{L_1 R_L g_m s (C_3 L_3 s^2 + 1)}{(L_1 g_m s + 1) (C_3 C_L L_3 R_L s^3 + C_3 L_3 s^2 + C_3 R_L s + C_L R_L s + 1)}$$

$$10.109 \quad \text{INVALID-ORDER-109} \quad Z(s) = \left(L_1 s, \quad \infty, \quad L_3 s + \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_1 g_m (C_3 L_3 s^2 + 1) (C_L R_L s + 1)}{(L_1 g_m s + 1) (C_3 C_L L_3 s^2 + C_3 C_L R_L s + C_3 + C_L)}$$

$$10.110 \quad \text{INVALID-ORDER-110} \quad Z(s) = \left(L_1 s, \quad \infty, \quad L_3 s + \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad L_L s + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_1 g_m (C_3 L_3 s^2 + 1) (C_L L_L s^2 + 1)}{(L_1 g_m s + 1) (C_3 C_L L_3 s^2 + C_3 C_L L_L s^2 + C_3 + C_L)}$$

$$10.111 \quad \text{INVALID-ORDER-111} \quad Z(s) = \left(L_1 s, \quad \infty, \quad L_3 s + \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad \frac{L_L s}{C_L L_L s^2 + 1} \right)$$

$$H(s) = \frac{L_1 L_L g_m s^2 (C_3 L_3 s^2 + 1)}{(L_1 g_m s + 1) (C_3 C_L L_3 L_L s^4 + C_3 L_3 s^2 + C_3 L_L s^2 + C_L L_L s^2 + 1)}$$

$$10.112 \quad \text{INVALID-ORDER-112} \quad Z(s) = \left(L_1 s, \quad \infty, \quad L_3 s + \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad L_L s + R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_1 g_m (C_3 L_3 s^2 + 1) (C_L L_L s^2 + C_L R_L s + 1)}{(L_1 g_m s + 1) (C_3 C_L L_3 s^2 + C_3 C_L L_L s^2 + C_3 C_L R_L s + C_3 + C_L)}$$

$$10.113 \quad \text{INVALID-ORDER-113} \quad Z(s) = \left(L_1 s, \quad \infty, \quad L_3 s + \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad \frac{L_L R_L s}{C_L L_L R_L s^2 + L_L s + R_L} \right)$$

$$H(s) = \frac{L_1 L_L R_L g_m s^2 (C_3 L_3 s^2 + 1)}{(L_1 g_m s + 1) (C_3 C_L L_3 L_L R_L s^4 + C_3 L_3 L_L s^3 + C_3 L_3 R_L s^2 + C_3 L_L R_L s^2 + C_L L_L R_L s^2 + L_L s + R_L)}$$

$$10.114 \quad \text{INVALID-ORDER-114} \quad Z(s) = \left(L_1 s, \quad \infty, \quad L_3 s + \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$$

$$H(s) = \frac{L_1 g_m s (C_3 L_3 s^2 + 1) (C_L L_L R_L s^2 + L_L s + R_L)}{(L_1 g_m s + 1) (C_3 C_L L_3 L_L s^4 + C_3 C_L L_L R_L s^3 + C_3 L_3 s^2 + C_3 L_L s^2 + C_3 R_L s + C_L L_L s^2 + 1)}$$

$$10.115 \quad \text{INVALID-ORDER-115} \quad Z(s) = \left(L_1 s, \quad \infty, \quad L_3 s + \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad \frac{R_L (C_L L_L s^2 + 1)}{C_L L_L s^2 + C_L R_L s + 1} \right)$$

$$H(s) = \frac{L_1 R_L g_m s (C_3 L_3 s^2 + 1) (C_L L_L s^2 + 1)}{(L_1 g_m s + 1) (C_3 C_L L_3 L_L s^4 + C_3 C_L L_3 R_L s^3 + C_3 C_L L_L R_L s^3 + C_3 L_3 s^2 + C_3 R_L s + C_L L_L s^2 + C_L R_L s + 1)}$$

$$10.116 \quad \text{INVALID-ORDER-116} \quad Z(s) = \left(L_1 s, \quad \infty, \quad \frac{L_3 s}{C_3 L_3 s^2 + 1}, \quad \infty, \quad \infty, \quad R_L \right)$$

$$H(s) = \frac{L_1 L_3 R_L g_m s^2}{(L_1 g_m s + 1) (C_3 L_3 R_L s^2 + L_3 s + R_L)}$$

$$10.117 \quad \text{INVALID-ORDER-117} \quad Z(s) = \left(L_1 s, \quad \infty, \quad \frac{L_3 s}{C_3 L_3 s^2 + 1}, \quad \infty, \quad \infty, \quad \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_1 L_3 g_m s^2}{(L_1 g_m s + 1) (C_3 L_3 s^2 + C_L L_3 s^2 + 1)}$$

$$10.118 \quad \text{INVALID-ORDER-118} \quad Z(s) = \left(L_1 s, \quad \infty, \quad \frac{L_3 s}{C_3 L_3 s^2 + 1}, \quad \infty, \quad \infty, \quad \frac{R_L}{C_L R_L s + 1} \right)$$

$$H(s) = \frac{L_1 L_3 R_L g_m s^2}{(L_1 g_m s + 1) (C_3 L_3 R_L s^2 + C_L L_3 R_L s^2 + L_3 s + R_L)}$$

$$10.119 \quad \text{INVALID-ORDER-119} \quad Z(s) = \left(L_1 s, \quad \infty, \quad \frac{L_3 s}{C_3 L_3 s^2 + 1}, \quad \infty, \quad \infty, \quad R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_1 L_3 g_m s^2 (C_L R_L s + 1)}{(L_1 g_m s + 1) (C_3 C_L L_3 R_L s^3 + C_3 L_3 s^2 + C_L L_3 s^2 + C_L R_L s + 1)}$$

$$10.120 \quad \text{INVALID-ORDER-120} \quad Z(s) = \left(L_1 s, \quad \infty, \quad \frac{L_3 s}{C_3 L_3 s^2 + 1}, \quad \infty, \quad \infty, \quad L_L s + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_1 L_3 g_m s^2 (C_L L_L s^2 + 1)}{(L_1 g_m s + 1) (C_3 C_L L_3 L_L s^4 + C_3 L_3 s^2 + C_L L_3 s^2 + C_L L_L s^2 + 1)}$$

$$10.121 \quad \text{INVALID-ORDER-121} \quad Z(s) = \left(L_1 s, \quad \infty, \quad \frac{L_3 s}{C_3 L_3 s^2 + 1}, \quad \infty, \quad \infty, \quad \frac{L_L s}{C_L L_L s^2 + 1} \right)$$

$$H(s) = \frac{L_1 L_3 L_L g_m s^2}{(L_1 g_m s + 1) (C_3 L_3 L_L s^2 + C_L L_3 L_L s^2 + L_3 + L_L)}$$

$$10.122 \quad \text{INVALID-ORDER-122} \quad Z(s) = \left(L_1 s, \quad \infty, \quad \frac{L_3 s}{C_3 L_3 s^2 + 1}, \quad \infty, \quad \infty, \quad L_L s + R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_1 L_3 g_m s^2 (C_L L_L s^2 + C_L R_L s + 1)}{(L_1 g_m s + 1) (C_3 C_L L_3 L_L s^4 + C_3 C_L L_3 R_L s^3 + C_3 L_3 s^2 + C_L L_3 s^2 + C_L L_L s^2 + C_L R_L s + 1)}$$

$$10.123 \quad \text{INVALID-ORDER-123} \quad Z(s) = \left(L_1 s, \quad \infty, \quad \frac{L_3 s}{C_3 L_3 s^2 + 1}, \quad \infty, \quad \infty, \quad \frac{L_L R_L s}{C_L L_L R_L s^2 + L_L s + R_L} \right)$$

$$H(s) = \frac{L_1 L_3 L_L R_L g_m s^2}{(L_1 g_m s + 1) (C_3 L_3 L_L R_L s^2 + C_L L_3 L_L R_L s^2 + L_3 L_L s + L_3 R_L + L_L R_L)}$$

$$10.124 \quad \text{INVALID-ORDER-124} \quad Z(s) = \left(L_1 s, \quad \infty, \quad \frac{L_3 s}{C_3 L_3 s^2 + 1}, \quad \infty, \quad \infty, \quad \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$$

$$H(s) = \frac{L_1 L_3 g_m s^2 (C_L L_L R_L s^2 + L_L s + R_L)}{(L_1 g_m s + 1) (C_3 C_L L_3 L_L R_L s^4 + C_3 L_3 L_L s^3 + C_3 L_3 R_L s^2 + C_L L_3 L_L s^3 + C_L L_L R_L s^2 + L_3 s + L_L s + R_L)}$$

$$10.125 \quad \text{INVALID-ORDER-125} \quad Z(s) = \left(L_1 s, \quad \infty, \quad \frac{L_3 s}{C_3 L_3 s^2 + 1}, \quad \infty, \quad \infty, \quad \frac{R_L (C_L L_L s^2 + 1)}{C_L L_L s^2 + C_L R_L s + 1} \right)$$

$$H(s) = \frac{L_1 L_3 R_L g_m s^2 (C_L L_L s^2 + 1)}{(L_1 g_m s + 1) (C_3 C_L L_3 L_L R_L s^4 + C_3 L_3 R_L s^2 + C_L L_3 L_L s^3 + C_L L_3 R_L s^2 + C_L L_L R_L s^2 + L_3 s + R_L)}$$

$$10.126 \quad \text{INVALID-ORDER-126} \quad Z(s) = \left(L_1 s, \quad \infty, \quad L_3 s + R_3 + \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad R_L \right)$$

$$H(s) = \frac{L_1 R_L g_m s (C_3 L_3 s^2 + C_3 R_3 s + 1)}{(L_1 g_m s + 1) (C_3 L_3 s^2 + C_3 R_3 s + C_3 R_L s + 1)}$$

$$10.127 \quad \text{INVALID-ORDER-127} \quad Z(s) = \left(L_1 s, \quad \infty, \quad L_3 s + R_3 + \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_1 g_m (C_3 L_3 s^2 + C_3 R_3 s + 1)}{(L_1 g_m s + 1) (C_3 C_L L_3 s^2 + C_3 C_L R_3 s + C_3 + C_L)}$$

$$10.128 \quad \text{INVALID-ORDER-128} \quad Z(s) = \left(L_1 s, \quad \infty, \quad L_3 s + R_3 + \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad \frac{R_L}{C_L R_L s + 1} \right)$$

$$H(s) = \frac{L_1 R_L g_m s (C_3 L_3 s^2 + C_3 R_3 s + 1)}{(L_1 g_m s + 1) (C_3 C_L L_3 R_L s^3 + C_3 C_L R_3 R_L s^2 + C_3 L_3 s^2 + C_3 R_3 s + C_3 R_L s + C_L R_L s + 1)}$$

$$10.129 \quad \text{INVALID-ORDER-129} \quad Z(s) = \left(L_1 s, \quad \infty, \quad L_3 s + R_3 + \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_1 g_m (C_L R_L s + 1) (C_3 L_3 s^2 + C_3 R_3 s + 1)}{(L_1 g_m s + 1) (C_3 C_L L_3 s^2 + C_3 C_L R_3 s + C_3 C_L R_L s + C_3 + C_L)}$$

$$10.130 \quad \text{INVALID-ORDER-130} \quad Z(s) = \left(L_1 s, \quad \infty, \quad L_3 s + R_3 + \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad L_L s + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_1 g_m (C_L L_L s^2 + 1) (C_3 L_3 s^2 + C_3 R_3 s + 1)}{(L_1 g_m s + 1) (C_3 C_L L_3 s^2 + C_3 C_L L_L s^2 + C_3 C_L R_3 s + C_3 + C_L)}$$

$$10.131 \quad \text{INVALID-ORDER-131} \quad Z(s) = \left(L_1 s, \quad \infty, \quad L_3 s + R_3 + \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad \frac{L_L s}{C_L L_L s^2 + 1} \right)$$

$$H(s) = \frac{L_1 L_L g_m s^2 (C_3 L_3 s^2 + C_3 R_3 s + 1)}{(L_1 g_m s + 1) (C_3 C_L L_3 L_L s^4 + C_3 C_L L_L R_3 s^3 + C_3 L_3 s^2 + C_3 L_L s^2 + C_3 R_3 s + C_L L_L s^2 + 1)}$$

$$10.132 \quad \text{INVALID-ORDER-132} \quad Z(s) = \left(L_1 s, \quad \infty, \quad L_3 s + R_3 + \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad L_L s + R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_1 g_m (C_3 L_3 s^2 + C_3 R_3 s + 1) (C_L L_L s^2 + C_L R_L s + 1)}{(L_1 g_m s + 1) (C_3 C_L L_3 s^2 + C_3 C_L L_L s^2 + C_3 C_L R_3 s + C_3 C_L R_L s + C_3 + C_L)}$$

$$10.133 \quad \text{INVALID-ORDER-133} \quad Z(s) = \left(L_1 s, \quad \infty, \quad L_3 s + R_3 + \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad \frac{L_L R_L s}{C_L L_L R_L s^2 + L_L s + R_L} \right)$$

$$H(s) = \frac{L_1 L_L R_L g_m s^2 (C_3 L_3 s^2 + C_3 R_3 s + 1)}{(L_1 g_m s + 1) (C_3 C_L L_3 L_L R_L s^4 + C_3 C_L L_L R_3 R_L s^3 + C_3 L_3 L_L s^3 + C_3 L_3 R_L s^2 + C_3 L_L R_3 s^2 + C_3 L_L R_L s^2 + C_3 R_3 R_L s + C_L L_L R_L s^2 + L_L s + R_L)}$$

$$10.134 \quad \text{INVALID-ORDER-134} \quad Z(s) = \left(L_1 s, \quad \infty, \quad L_3 s + R_3 + \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$$

$$H(s) = \frac{L_1 g_m s (C_3 L_3 s^2 + C_3 R_3 s + 1) (C_L L_L R_L s^2 + L_L s + R_L)}{(L_1 g_m s + 1) (C_3 C_L L_3 L_L s^4 + C_3 C_L L_L R_3 s^3 + C_3 C_L L_L R_L s^3 + C_3 L_3 s^2 + C_3 L_L s^2 + C_3 R_3 s + C_3 R_L s + C_L L_L s^2 + 1)}$$

$$10.135 \quad \text{INVALID-ORDER-135} \quad Z(s) = \left(L_1 s, \quad \infty, \quad L_3 s + R_3 + \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad \frac{R_L(C_L L_L s^2 + 1)}{C_L L_L s^2 + C_L R_L s + 1} \right)$$

$$H(s) = \frac{L_1 R_L g_m s (C_L L_L s^2 + 1) (C_3 L_3 s^2 + C_3 R_3 s + 1)}{(L_1 g_m s + 1) (C_3 C_L L_3 L_L s^4 + C_3 C_L L_3 R_L s^3 + C_3 C_L L_L R_3 s^3 + C_3 C_L L_L R_L s^3 + C_3 C_L R_3 R_L s^2 + C_3 L_3 s^2 + C_3 R_3 s + C_3 R_L s + C_L L_L s^2 + C_L R_L s + 1)}$$

$$10.136 \quad \text{INVALID-ORDER-136} \quad Z(s) = \left(L_1 s, \quad \infty, \quad \frac{L_3 R_3 s}{C_3 L_3 R_3 s^2 + L_3 s + R_3}, \quad \infty, \quad \infty, \quad R_L \right)$$

$$H(s) = \frac{L_1 L_3 R_3 R_L g_m s^2}{(L_1 g_m s + 1) (C_3 L_3 R_3 R_L s^2 + L_3 R_3 s + L_3 R_L s + R_3 R_L)}$$

$$10.137 \quad \text{INVALID-ORDER-137} \quad Z(s) = \left(L_1 s, \quad \infty, \quad \frac{L_3 R_3 s}{C_3 L_3 R_3 s^2 + L_3 s + R_3}, \quad \infty, \quad \infty, \quad \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_1 L_3 R_3 g_m s^2}{(L_1 g_m s + 1) (C_3 L_3 R_3 s^2 + C_L L_3 R_3 s^2 + L_3 s + R_3)}$$

$$10.138 \quad \text{INVALID-ORDER-138} \quad Z(s) = \left(L_1 s, \quad \infty, \quad \frac{L_3 R_3 s}{C_3 L_3 R_3 s^2 + L_3 s + R_3}, \quad \infty, \quad \infty, \quad \frac{R_L}{C_L R_L s + 1} \right)$$

$$H(s) = \frac{L_1 L_3 R_3 R_L g_m s^2}{(L_1 g_m s + 1) (C_3 L_3 R_3 R_L s^2 + C_L L_3 R_3 R_L s^2 + L_3 R_3 s + L_3 R_L s + R_3 R_L)}$$

$$10.139 \quad \text{INVALID-ORDER-139} \quad Z(s) = \left(L_1 s, \quad \infty, \quad \frac{L_3 R_3 s}{C_3 L_3 R_3 s^2 + L_3 s + R_3}, \quad \infty, \quad \infty, \quad R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_1 L_3 R_3 g_m s^2 (C_L R_L s + 1)}{(L_1 g_m s + 1) (C_3 C_L L_3 R_3 R_L s^3 + C_3 L_3 R_3 s^2 + C_L L_3 R_3 s^2 + C_L L_3 R_L s^2 + C_L R_3 R_L s + L_3 s + R_3)}$$

$$10.140 \quad \text{INVALID-ORDER-140} \quad Z(s) = \left(L_1 s, \quad \infty, \quad \frac{L_3 R_3 s}{C_3 L_3 R_3 s^2 + L_3 s + R_3}, \quad \infty, \quad \infty, \quad L_L s + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_1 L_3 R_3 g_m s^2 (C_L L_L s^2 + 1)}{(L_1 g_m s + 1) (C_3 C_L L_3 L_L R_3 s^4 + C_3 L_3 R_3 s^2 + C_L L_3 L_L s^3 + C_L L_3 R_3 s^2 + C_L L_L R_3 s^2 + L_3 s + R_3)}$$

$$10.141 \quad \text{INVALID-ORDER-141} \quad Z(s) = \left(L_1 s, \quad \infty, \quad \frac{L_3 R_3 s}{C_3 L_3 R_3 s^2 + L_3 s + R_3}, \quad \infty, \quad \infty, \quad \frac{L_L s}{C_L L_L s^2 + 1} \right)$$

$$H(s) = \frac{L_1 L_3 L_L R_3 g_m s^2}{(L_1 g_m s + 1) (C_3 L_3 L_L R_3 s^2 + C_L L_3 L_L R_3 s^2 + L_3 L_L s + L_3 R_3 + L_L R_3)}$$

$$10.142 \quad \text{INVALID-ORDER-142} \quad Z(s) = \left(L_1 s, \quad \infty, \quad \frac{L_3 R_3 s}{C_3 L_3 R_3 s^2 + L_3 s + R_3}, \quad \infty, \quad \infty, \quad L_L s + R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_1 L_3 R_3 g_m s^2 (C_L L_L s^2 + C_L R_L s + 1)}{(L_1 g_m s + 1) (C_3 C_L L_3 L_L R_3 s^4 + C_3 C_L L_3 R_3 R_L s^3 + C_3 L_3 R_3 s^2 + C_L L_3 L_L s^3 + C_L L_3 R_3 s^2 + C_L L_3 R_L s^2 + C_L L_L R_3 s^2 + C_L R_3 R_L s + L_3 s + R_3)}$$

$$10.143 \quad \text{INVALID-ORDER-143} \quad Z(s) = \left(L_1 s, \quad \infty, \quad \frac{L_3 R_3 s}{C_3 L_3 R_3 s^2 + L_3 s + R_3}, \quad \infty, \quad \infty, \quad \frac{L_L R_L s}{C_L L_L R_L s^2 + L_L s + R_L} \right)$$

$$H(s) = \frac{L_1 L_3 L_L R_3 R_L g_m s^2}{(L_1 g_m s + 1) (C_3 L_3 L_L R_3 R_L s^2 + C_L L_3 L_L R_3 R_L s^2 + L_3 L_L R_3 s + L_3 L_L R_L s + L_3 R_3 R_L + L_L R_3 R_L)}$$

$$10.144 \quad \text{INVALID-ORDER-144} \quad Z(s) = \left(L_1 s, \quad \infty, \quad \frac{L_3 R_3 s}{C_3 L_3 R_3 s^2 + L_3 s + R_3}, \quad \infty, \quad \infty, \quad \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$$

$$H(s) = \frac{L_1 L_3 R_3 g_m s^2 (C_L L_L R_L s^2 + L_L s + R_L)}{(L_1 g_m s + 1) (C_3 C_L L_3 L_L R_3 R_L s^4 + C_3 L_3 L_L R_3 s^3 + C_3 L_3 R_3 R_L s^2 + C_L L_3 L_L R_3 s^3 + C_L L_3 L_L R_L s^3 + C_L L_L R_3 R_L s^2 + L_3 L_L s^2 + L_3 R_3 s + L_3 R_L s + L_L R_3 s + R_3 R_L)}$$

$$10.145 \quad \text{INVALID-ORDER-145} \quad Z(s) = \left(L_1 s, \quad \infty, \quad \frac{L_3 R_3 s}{C_3 L_3 R_3 s^2 + L_3 s + R_3}, \quad \infty, \quad \infty, \quad \frac{R_L (C_L L_L s^2 + 1)}{C_L L_L s^2 + C_L R_L s + 1} \right)$$

$$H(s) = \frac{L_1 L_3 R_3 R_L g_m s^2 (C_L L_L s^2 + 1)}{(L_1 g_m s + 1) (C_3 C_L L_3 L_L R_3 R_L s^4 + C_3 L_3 R_3 R_L s^2 + C_L L_3 L_L R_3 s^3 + C_L L_3 L_L R_L s^3 + C_L L_3 R_3 R_L s^2 + C_L L_L R_3 R_L s^2 + L_3 R_3 s + L_3 R_L s + R_3 R_L)}$$

$$10.146 \quad \text{INVALID-ORDER-146} \quad Z(s) = \left(L_1 s, \quad \infty, \quad \frac{L_3 s}{C_3 L_3 s^2 + 1} + R_3, \quad \infty, \quad \infty, \quad R_L \right)$$

$$H(s) = \frac{L_1 R_L g_m s (C_3 L_3 R_3 s^2 + L_3 s + R_3)}{(L_1 g_m s + 1) (C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + L_3 s + R_3 + R_L)}$$

$$10.147 \quad \text{INVALID-ORDER-147} \quad Z(s) = \left(L_1 s, \quad \infty, \quad \frac{L_3 s}{C_3 L_3 s^2 + 1} + R_3, \quad \infty, \quad \infty, \quad \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_1 g_m s (C_3 L_3 R_3 s^2 + L_3 s + R_3)}{(L_1 g_m s + 1) (C_3 C_L L_3 R_3 s^3 + C_3 L_3 s^2 + C_L L_3 s^2 + C_L R_3 s + 1)}$$

$$10.148 \quad \text{INVALID-ORDER-148} \quad Z(s) = \left(L_1 s, \quad \infty, \quad \frac{L_3 s}{C_3 L_3 s^2 + 1} + R_3, \quad \infty, \quad \infty, \quad \frac{R_L}{C_L R_L s + 1} \right)$$

$$H(s) = \frac{L_1 R_L g_m s (C_3 L_3 R_3 s^2 + L_3 s + R_3)}{(L_1 g_m s + 1) (C_3 C_L L_3 R_3 R_L s^3 + C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + C_L L_3 R_L s^2 + C_L R_3 R_L s + L_3 s + R_3 + R_L)}$$

$$10.149 \quad \text{INVALID-ORDER-149} \quad Z(s) = \left(L_1 s, \quad \infty, \quad \frac{L_3 s}{C_3 L_3 s^2 + 1} + R_3, \quad \infty, \quad \infty, \quad R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_1 g_m s (C_L R_L s + 1) (C_3 L_3 R_3 s^2 + L_3 s + R_3)}{(L_1 g_m s + 1) (C_3 C_L L_3 R_3 s^3 + C_3 C_L L_3 R_L s^3 + C_3 L_3 s^2 + C_L L_3 s^2 + C_L R_3 s + C_L R_L s + 1)}$$

$$10.150 \quad \text{INVALID-ORDER-150} \quad Z(s) = \left(L_1 s, \quad \infty, \quad \frac{L_3 s}{C_3 L_3 s^2 + 1} + R_3, \quad \infty, \quad \infty, \quad L_L s + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_1 g_m s (C_L L_L s^2 + 1) (C_3 L_3 R_3 s^2 + L_3 s + R_3)}{(L_1 g_m s + 1) (C_3 C_L L_3 L_L s^4 + C_3 C_L L_3 R_3 s^3 + C_3 L_3 s^2 + C_L L_3 s^2 + C_L L_L s^2 + C_L R_3 s + 1)}$$

$$10.151 \quad \text{INVALID-ORDER-151} \quad Z(s) = \left(L_1 s, \quad \infty, \quad \frac{L_3 s}{C_3 L_3 s^2 + 1} + R_3, \quad \infty, \quad \infty, \quad \frac{L_L s}{C_L L_L s^2 + 1} \right)$$

$$H(s) = \frac{L_1 L_L g_m s^2 (C_3 L_3 R_3 s^2 + L_3 s + R_3)}{(L_1 g_m s + 1) (C_3 C_L L_3 L_L R_3 s^4 + C_3 L_3 L_L s^3 + C_3 L_3 R_3 s^2 + C_L L_3 L_L s^3 + C_L L_L R_3 s^2 + L_3 s + L_L s + R_3)}$$

$$10.152 \quad \text{INVALID-ORDER-152} \quad Z(s) = \left(L_1 s, \quad \infty, \quad \frac{L_3 s}{C_3 L_3 s^2 + 1} + R_3, \quad \infty, \quad \infty, \quad L_L s + R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_1 g_m s (C_L L_L s^2 + C_L R_L s + 1) (C_3 L_3 R_3 s^2 + L_3 s + R_3)}{(L_1 g_m s + 1) (C_3 C_L L_3 L_L s^4 + C_3 C_L L_3 R_3 s^3 + C_3 C_L L_3 R_L s^3 + C_3 L_3 s^2 + C_L L_3 s^2 + C_L L_L s^2 + C_L R_3 s + C_L R_L s + 1)}$$

$$10.153 \quad \text{INVALID-ORDER-153} \quad Z(s) = \left(L_1 s, \quad \infty, \quad \frac{L_3 s}{C_3 L_3 s^2 + 1} + R_3, \quad \infty, \quad \infty, \quad \frac{L_L R_L s}{C_L L_L R_L s^2 + L_L s + R_L} \right)$$

$$H(s) = \frac{L_1 L_L R_L g_m s^2 (C_3 L_3 R_3 s^2 + L_3 s + R_3)}{(L_1 g_m s + 1) (C_3 C_L L_3 L_L R_3 R_L s^4 + C_3 L_3 L_L R_3 s^3 + C_3 L_3 L_L R_L s^3 + C_3 L_3 R_3 R_L s^2 + C_L L_3 L_L R_L s^3 + C_L L_L R_3 R_L s^2 + L_3 L_L s^2 + L_3 R_L s + L_L R_3 s + L_L R_L s + R_3 R_L)}$$

$$10.154 \quad \text{INVALID-ORDER-154} \quad Z(s) = \left(L_1 s, \quad \infty, \quad \frac{L_3 s}{C_3 L_3 s^2 + 1} + R_3, \quad \infty, \quad \infty, \quad \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$$

$$H(s) = \frac{L_1 g_m s (C_3 L_3 R_3 s^2 + L_3 s + R_3) (C_L L_L R_L s^2 + L_L s + R_L)}{(L_1 g_m s + 1) (C_3 C_L L_3 L_L R_3 s^4 + C_3 C_L L_3 L_L R_L s^4 + C_3 L_3 L_L s^3 + C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + C_L L_3 L_L s^3 + C_L L_L R_3 s^2 + C_L L_L R_L s^2 + L_3 s + L_L s + R_3 + R_L)}$$

$$10.155 \quad \text{INVALID-ORDER-155} \quad Z(s) = \left(L_1 s, \quad \infty, \quad \frac{L_3 s}{C_3 L_3 s^2 + 1} + R_3, \quad \infty, \quad \infty, \quad \frac{R_L (C_L L_L s^2 + 1)}{C_L L_L s^2 + C_L R_L s + 1} \right)$$

$$H(s) = \frac{L_1 R_L g_m s (C_L L_L s^2 + 1) (C_3 L_3 R_3 s^2 + L_3 s + R_3)}{(L_1 g_m s + 1) (C_3 C_L L_3 L_L R_3 s^4 + C_3 C_L L_3 L_L R_L s^4 + C_3 C_L L_3 R_3 R_L s^3 + C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + C_L L_3 L_L s^3 + C_L L_3 R_L s^2 + C_L L_L R_3 s^2 + C_L L_L R_L s^2 + C_L R_3 R_L s + L_3 s + R_3 + R_L)}$$

$$10.156 \quad \text{INVALID-ORDER-156} \quad Z(s) = \left(L_1 s, \quad \infty, \quad \frac{R_3 (C_3 L_3 s^2 + 1)}{C_3 L_3 s^2 + C_3 R_3 s + 1}, \quad \infty, \quad \infty, \quad R_L \right)$$

$$H(s) = \frac{L_1 R_3 R_L g_m s (C_3 L_3 s^2 + 1)}{(L_1 g_m s + 1) (C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + C_3 R_3 R_L s + R_3 + R_L)}$$

$$10.157 \quad \text{INVALID-ORDER-157} \quad Z(s) = \left(L_1 s, \quad \infty, \quad \frac{R_3 (C_3 L_3 s^2 + 1)}{C_3 L_3 s^2 + C_3 R_3 s + 1}, \quad \infty, \quad \infty, \quad \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_1 R_3 g_m s (C_3 L_3 s^2 + 1)}{(L_1 g_m s + 1) (C_3 C_L L_3 R_3 s^3 + C_3 L_3 s^2 + C_3 R_3 s + C_L R_3 s + 1)}$$

$$10.158 \quad \text{INVALID-ORDER-158} \quad Z(s) = \left(L_1 s, \quad \infty, \quad \frac{R_3 (C_3 L_3 s^2 + 1)}{C_3 L_3 s^2 + C_3 R_3 s + 1}, \quad \infty, \quad \infty, \quad \frac{R_L}{C_L R_L s + 1} \right)$$

$$H(s) = \frac{L_1 R_3 R_L g_m s (C_3 L_3 s^2 + 1)}{(L_1 g_m s + 1) (C_3 C_L L_3 R_3 R_L s^3 + C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + C_3 R_3 R_L s + C_L R_3 R_L s + R_3 + R_L)}$$

$$10.159 \quad \text{INVALID-ORDER-159} \quad Z(s) = \left(L_1 s, \quad \infty, \quad \frac{R_3 (C_3 L_3 s^2 + 1)}{C_3 L_3 s^2 + C_3 R_3 s + 1}, \quad \infty, \quad \infty, \quad R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_1 R_3 g_m s (C_3 L_3 s^2 + 1) (C_L R_L s + 1)}{(L_1 g_m s + 1) (C_3 C_L L_3 R_3 s^3 + C_3 C_L L_3 R_L s^3 + C_3 C_L R_3 R_L s^2 + C_3 L_3 s^2 + C_3 R_3 s + C_L R_3 s + C_L R_L s + 1)}$$

$$10.160 \quad \text{INVALID-ORDER-160} \quad Z(s) = \left(L_1 s, \quad \infty, \quad \frac{R_3 (C_3 L_3 s^2 + 1)}{C_3 L_3 s^2 + C_3 R_3 s + 1}, \quad \infty, \quad \infty, \quad L_L s + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_1 R_3 g_m s (C_3 L_3 s^2 + 1) (C_L L_L s^2 + 1)}{(L_1 g_m s + 1) (C_3 C_L L_3 L_L s^4 + C_3 C_L L_3 R_3 s^3 + C_3 C_L L_L R_3 s^3 + C_3 L_3 s^2 + C_3 R_3 s + C_L L_L s^2 + C_L R_3 s + 1)}$$

$$10.161 \quad \text{INVALID-ORDER-161} \quad Z(s) = \left(L_1 s, \quad \infty, \quad \frac{R_3 (C_3 L_3 s^2 + 1)}{C_3 L_3 s^2 + C_3 R_3 s + 1}, \quad \infty, \quad \infty, \quad \frac{L_L s}{C_L L_L s^2 + 1} \right)$$

$$H(s) = \frac{L_1 L_L R_3 g_m s^2 (C_3 L_3 s^2 + 1)}{(L_1 g_m s + 1) (C_3 C_L L_3 L_L R_3 s^4 + C_3 L_3 L_L s^3 + C_3 L_3 R_3 s^2 + C_3 L_L R_3 s^2 + C_L L_L R_3 s^2 + L_L s + R_3)}$$

$$10.162 \quad \text{INVALID-ORDER-162} \quad Z(s) = \left(L_1 s, \quad \infty, \quad \frac{R_3(C_3 L_3 s^2 + 1)}{C_3 L_3 s^2 + C_3 R_3 s + 1}, \quad \infty, \quad \infty, \quad L_L s + R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_1 R_3 g_m s (C_3 L_3 s^2 + 1) (C_L L_L s^2 + C_L R_L s + 1)}{(L_1 g_m s + 1) (C_3 C_L L_3 L_L s^4 + C_3 C_L L_3 R_3 s^3 + C_3 C_L L_3 R_L s^3 + C_3 C_L L_L R_3 s^3 + C_3 C_L R_3 R_L s^2 + C_3 L_3 s^2 + C_3 R_3 s + C_L L_L s^2 + C_L R_3 s + C_L R_L s + 1)}$$

$$10.163 \quad \text{INVALID-ORDER-163} \quad Z(s) = \left(L_1 s, \quad \infty, \quad \frac{R_3(C_3 L_3 s^2 + 1)}{C_3 L_3 s^2 + C_3 R_3 s + 1}, \quad \infty, \quad \infty, \quad \frac{L_L R_L s}{C_L L_L R_L s^2 + L_L s + R_L} \right)$$

$$H(s) = \frac{L_1 L_L R_3 R_L g_m s^2 (C_3 L_3 s^2 + 1)}{(L_1 g_m s + 1) (C_3 C_L L_3 L_L R_3 R_L s^4 + C_3 L_3 L_L R_3 s^3 + C_3 L_3 L_L R_L s^3 + C_3 L_3 R_3 R_L s^2 + C_3 L_L R_3 R_L s^2 + C_L L_L R_3 R_L s^2 + L_L R_3 s + L_L R_L s + R_3 R_L)}$$

$$10.164 \quad \text{INVALID-ORDER-164} \quad Z(s) = \left(L_1 s, \quad \infty, \quad \frac{R_3(C_3 L_3 s^2 + 1)}{C_3 L_3 s^2 + C_3 R_3 s + 1}, \quad \infty, \quad \infty, \quad \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$$

$$H(s) = \frac{L_1 R_3 g_m s (C_3 L_3 s^2 + 1) (C_L L_L R_L s^2 + L_L s + R_L)}{(L_1 g_m s + 1) (C_3 C_L L_3 L_L R_3 s^4 + C_3 C_L L_3 L_L R_L s^4 + C_3 C_L L_L R_3 R_L s^3 + C_3 L_3 L_L s^3 + C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + C_3 L_L R_3 s^2 + C_3 R_3 R_L s + C_L L_L R_3 s^2 + C_L L_L R_L s^2 + L_L s + R_3 + R_L)}$$

$$10.165 \quad \text{INVALID-ORDER-165} \quad Z(s) = \left(L_1 s, \quad \infty, \quad \frac{R_3(C_3 L_3 s^2 + 1)}{C_3 L_3 s^2 + C_3 R_3 s + 1}, \quad \infty, \quad \infty, \quad \frac{R_L (C_L L_L s^2 + 1)}{C_L L_L s^2 + C_L R_L s + 1} \right)$$

$$H(s) = \frac{L_1 R_3 R_L g_m s (C_3 L_3 s^2 + 1) (C_L L_L s^2 + 1)}{(L_1 g_m s + 1) (C_3 C_L L_3 L_L R_3 s^4 + C_3 C_L L_3 L_L R_L s^4 + C_3 C_L L_3 R_3 R_L s^3 + C_3 C_L L_L R_3 R_L s^3 + C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + C_3 R_3 R_L s + C_L L_L R_3 s^2 + C_L L_L R_L s^2 + C_L R_3 R_L s + R_3 + R_L)}$$

$$10.166 \quad \text{INVALID-ORDER-166} \quad Z(s) = \left(\frac{1}{C_1 s}, \quad \infty, \quad R_3, \quad \infty, \quad \infty, \quad R_L \right)$$

$$H(s) = \frac{R_3 R_L g_m}{(R_3 + R_L) (C_1 s + g_m)}$$

$$10.167 \quad \text{INVALID-ORDER-167} \quad Z(s) = \left(\frac{1}{C_1 s}, \quad \infty, \quad R_3, \quad \infty, \quad \infty, \quad L_L s + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{R_3 g_m (C_L L_L s^2 + 1)}{(C_1 s + g_m) (C_L L_L s^2 + C_L R_3 s + 1)}$$

$$10.168 \quad \text{INVALID-ORDER-168} \quad Z(s) = \left(\frac{1}{C_1 s}, \quad \infty, \quad R_3, \quad \infty, \quad \infty, \quad \frac{L_L s}{C_L L_L s^2 + 1} \right)$$

$$H(s) = \frac{L_L R_3 g_m s}{(C_1 s + g_m) (C_L L_L R_3 s^2 + L_L s + R_3)}$$

$$10.169 \quad \text{INVALID-ORDER-169} \quad Z(s) = \left(\frac{1}{C_1 s}, \quad \infty, \quad R_3, \quad \infty, \quad \infty, \quad L_L s + R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{R_3 g_m (C_L L_L s^2 + C_L R_L s + 1)}{(C_1 s + g_m) (C_L L_L s^2 + C_L R_3 s + C_L R_L s + 1)}$$

$$10.170 \quad \text{INVALID-ORDER-170} \quad Z(s) = \left(\frac{1}{C_1 s}, \quad \infty, \quad R_3, \quad \infty, \quad \infty, \quad \frac{L_L R_L s}{C_L L_L R_L s^2 + L_L s + R_L} \right)$$

$$H(s) = \frac{L_L R_3 R_L g_m s}{(C_1 s + g_m) (C_L L_L R_3 R_L s^2 + L_L R_3 s + L_L R_L s + R_3 R_L)}$$

$$\mathbf{10.171 \quad INVALID-ORDER-171} \quad Z(s) = \left(\frac{1}{C_1 s}, \infty, R_3, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$$

$$H(s) = \frac{R_3 g_m (C_L L_L R_L s^2 + L_L s + R_L)}{(C_1 s + g_m) (C_L L_L R_3 s^2 + C_L L_L R_L s^2 + L_L s + R_3 + R_L)}$$

$$\mathbf{10.172 \quad INVALID-ORDER-172} \quad Z(s) = \left(\frac{1}{C_1 s}, \infty, R_3, \infty, \infty, \frac{R_L (C_L L_L s^2 + 1)}{C_L L_L s^2 + C_L R_L s + 1} \right)$$

$$H(s) = \frac{R_3 R_L g_m (C_L L_L s^2 + 1)}{(C_1 s + g_m) (C_L L_L R_3 s^2 + C_L L_L R_L s^2 + C_L R_3 R_L s + R_3 + R_L)}$$

$$\mathbf{10.173 \quad INVALID-ORDER-173} \quad Z(s) = \left(\frac{1}{C_1 s}, \infty, \frac{1}{C_3 s}, \infty, \infty, \frac{1}{C_L s} \right)$$

$$H(s) = \frac{g_m}{s (C_3 + C_L) (C_1 s + g_m)}$$

$$\mathbf{10.174 \quad INVALID-ORDER-174} \quad Z(s) = \left(\frac{1}{C_1 s}, \infty, \frac{1}{C_3 s}, \infty, \infty, R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{g_m (C_L R_L s + 1)}{s (C_1 s + g_m) (C_3 C_L R_L s + C_3 + C_L)}$$

$$\mathbf{10.175 \quad INVALID-ORDER-175} \quad Z(s) = \left(\frac{1}{C_1 s}, \infty, \frac{1}{C_3 s}, \infty, \infty, L_L s + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{g_m (C_L L_L s^2 + 1)}{s (C_1 s + g_m) (C_3 C_L L_L s^2 + C_3 + C_L)}$$

$$\mathbf{10.176 \quad INVALID-ORDER-176} \quad Z(s) = \left(\frac{1}{C_1 s}, \infty, \frac{1}{C_3 s}, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} \right)$$

$$H(s) = \frac{L_L g_m s}{(C_1 s + g_m) (C_3 L_L s^2 + C_L L_L s^2 + 1)}$$

$$\mathbf{10.177 \quad INVALID-ORDER-177} \quad Z(s) = \left(\frac{1}{C_1 s}, \infty, \frac{1}{C_3 s}, \infty, \infty, L_L s + R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{g_m (C_L L_L s^2 + C_L R_L s + 1)}{s (C_1 s + g_m) (C_3 C_L L_L s^2 + C_3 C_L R_L s + C_3 + C_L)}$$

$$\mathbf{10.178 \quad INVALID-ORDER-178} \quad Z(s) = \left(\frac{1}{C_1 s}, \infty, \frac{1}{C_3 s}, \infty, \infty, \frac{L_L R_L s}{C_L L_L R_L s^2 + L_L s + R_L} \right)$$

$$H(s) = \frac{L_L R_L g_m s}{(C_1 s + g_m) (C_3 L_L R_L s^2 + C_L L_L R_L s^2 + L_L s + R_L)}$$

$$\mathbf{10.179 \quad INVALID-ORDER-179} \quad Z(s) = \left(\frac{1}{C_1 s}, \infty, \frac{1}{C_3 s}, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$$

$$H(s) = \frac{g_m (C_L L_L R_L s^2 + L_L s + R_L)}{(C_1 s + g_m) (C_3 C_L L_L R_L s^3 + C_3 L_L s^2 + C_3 R_L s + C_L L_L s^2 + 1)}$$

$$10.180 \quad \text{INVALID-ORDER-180} \quad Z(s) = \left(\frac{1}{C_1 s}, \quad \infty, \quad \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad \frac{R_L(C_L L_L s^2 + 1)}{C_L L_L s^2 + C_L R_L s + 1} \right)$$

$$H(s) = \frac{R_L g_m (C_L L_L s^2 + 1)}{(C_1 s + g_m) (C_3 C_L L_L R_L s^3 + C_3 R_L s + C_L L_L s^2 + C_L R_L s + 1)}$$

$$10.181 \quad \text{INVALID-ORDER-181} \quad Z(s) = \left(\frac{1}{C_1 s}, \quad \infty, \quad \frac{R_3}{C_3 R_3 s + 1}, \quad \infty, \quad \infty, \quad R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{R_3 g_m (C_L R_L s + 1)}{(C_1 s + g_m) (C_3 C_L R_3 R_L s^2 + C_3 R_3 s + C_L R_3 s + C_L R_L s + 1)}$$

$$10.182 \quad \text{INVALID-ORDER-182} \quad Z(s) = \left(\frac{1}{C_1 s}, \quad \infty, \quad \frac{R_3}{C_3 R_3 s + 1}, \quad \infty, \quad \infty, \quad L_L s + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{R_3 g_m (C_L L_L s^2 + 1)}{(C_1 s + g_m) (C_3 C_L L_L R_3 s^3 + C_3 R_3 s + C_L L_L s^2 + C_L R_3 s + 1)}$$

$$10.183 \quad \text{INVALID-ORDER-183} \quad Z(s) = \left(\frac{1}{C_1 s}, \quad \infty, \quad \frac{R_3}{C_3 R_3 s + 1}, \quad \infty, \quad \infty, \quad \frac{L_L s}{C_L L_L s^2 + 1} \right)$$

$$H(s) = \frac{L_L R_3 g_m s}{(C_1 s + g_m) (C_3 L_L R_3 s^2 + C_L L_L R_3 s^2 + L_L s + R_3)}$$

$$10.184 \quad \text{INVALID-ORDER-184} \quad Z(s) = \left(\frac{1}{C_1 s}, \quad \infty, \quad \frac{R_3}{C_3 R_3 s + 1}, \quad \infty, \quad \infty, \quad L_L s + R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{R_3 g_m (C_L L_L s^2 + C_L R_L s + 1)}{(C_1 s + g_m) (C_3 C_L L_L R_3 s^3 + C_3 C_L R_3 R_L s^2 + C_3 R_3 s + C_L L_L s^2 + C_L R_3 s + C_L R_L s + 1)}$$

$$10.185 \quad \text{INVALID-ORDER-185} \quad Z(s) = \left(\frac{1}{C_1 s}, \quad \infty, \quad \frac{R_3}{C_3 R_3 s + 1}, \quad \infty, \quad \infty, \quad \frac{L_L R_L s}{C_L L_L R_L s^2 + L_L s + R_L} \right)$$

$$H(s) = \frac{L_L R_3 R_L g_m s}{(C_1 s + g_m) (C_3 L_L R_3 R_L s^2 + C_L L_L R_3 R_L s^2 + L_L R_3 s + L_L R_L s + R_3 R_L)}$$

$$10.186 \quad \text{INVALID-ORDER-186} \quad Z(s) = \left(\frac{1}{C_1 s}, \quad \infty, \quad \frac{R_3}{C_3 R_3 s + 1}, \quad \infty, \quad \infty, \quad \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$$

$$H(s) = \frac{R_3 g_m (C_L L_L R_L s^2 + L_L s + R_L)}{(C_1 s + g_m) (C_3 C_L L_L R_3 R_L s^3 + C_3 L_L R_3 s^2 + C_3 R_3 R_L s + C_L L_L R_3 s^2 + C_L L_L R_L s^2 + L_L s + R_3 + R_L)}$$

$$10.187 \quad \text{INVALID-ORDER-187} \quad Z(s) = \left(\frac{1}{C_1 s}, \quad \infty, \quad \frac{R_3}{C_3 R_3 s + 1}, \quad \infty, \quad \infty, \quad \frac{R_L (C_L L_L s^2 + 1)}{C_L L_L s^2 + C_L R_L s + 1} \right)$$

$$H(s) = \frac{R_3 R_L g_m (C_L L_L s^2 + 1)}{(C_1 s + g_m) (C_3 C_L L_L R_3 R_L s^3 + C_3 R_3 R_L s + C_L L_L R_3 s^2 + C_L L_L R_L s^2 + C_L R_3 R_L s + R_3 + R_L)}$$

$$10.188 \quad \text{INVALID-ORDER-188} \quad Z(s) = \left(\frac{1}{C_1 s}, \quad \infty, \quad R_3 + \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad \frac{1}{C_L s} \right)$$

$$H(s) = \frac{g_m (C_3 R_3 s + 1)}{s (C_1 s + g_m) (C_3 C_L R_3 s + C_3 + C_L)}$$

$$10.189 \quad \text{INVALID-ORDER-189} \quad Z(s) = \left(\frac{1}{C_1 s}, \infty, R_3 + \frac{1}{C_3 s}, \infty, \infty, \frac{R_L}{C_L R_L s + 1} \right)$$

$$H(s) = \frac{R_L g_m (C_3 R_3 s + 1)}{(C_1 s + g_m) (C_3 C_L R_3 R_L s^2 + C_3 R_3 s + C_3 R_L s + C_L R_L s + 1)}$$

$$10.190 \quad \text{INVALID-ORDER-190} \quad Z(s) = \left(\frac{1}{C_1 s}, \infty, R_3 + \frac{1}{C_3 s}, \infty, \infty, R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{g_m (C_3 R_3 s + 1) (C_L R_L s + 1)}{s (C_1 s + g_m) (C_3 C_L R_3 s + C_3 C_L R_L s + C_3 + C_L)}$$

$$10.191 \quad \text{INVALID-ORDER-191} \quad Z(s) = \left(\frac{1}{C_1 s}, \infty, R_3 + \frac{1}{C_3 s}, \infty, \infty, L_L s + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{g_m (C_3 R_3 s + 1) (C_L L_L s^2 + 1)}{s (C_1 s + g_m) (C_3 C_L L_L s^2 + C_3 C_L R_3 s + C_3 + C_L)}$$

$$10.192 \quad \text{INVALID-ORDER-192} \quad Z(s) = \left(\frac{1}{C_1 s}, \infty, R_3 + \frac{1}{C_3 s}, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} \right)$$

$$H(s) = \frac{L_L g_m s (C_3 R_3 s + 1)}{(C_1 s + g_m) (C_3 C_L L_L R_3 s^3 + C_3 L_L s^2 + C_3 R_3 s + C_L L_L s^2 + 1)}$$

$$10.193 \quad \text{INVALID-ORDER-193} \quad Z(s) = \left(\frac{1}{C_1 s}, \infty, R_3 + \frac{1}{C_3 s}, \infty, \infty, L_L s + R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{g_m (C_3 R_3 s + 1) (C_L L_L s^2 + C_L R_L s + 1)}{s (C_1 s + g_m) (C_3 C_L L_L s^2 + C_3 C_L R_3 s + C_3 C_L R_L s + C_3 + C_L)}$$

$$10.194 \quad \text{INVALID-ORDER-194} \quad Z(s) = \left(\frac{1}{C_1 s}, \infty, R_3 + \frac{1}{C_3 s}, \infty, \infty, \frac{L_L R_L s}{C_L L_L R_L s^2 + L_L s + R_L} \right)$$

$$H(s) = \frac{L_L R_L g_m s (C_3 R_3 s + 1)}{(C_1 s + g_m) (C_3 C_L L_L R_3 R_L s^3 + C_3 L_L R_3 s^2 + C_3 L_L R_L s^2 + C_3 R_3 R_L s + C_L L_L R_L s^2 + L_L s + R_L)}$$

$$10.195 \quad \text{INVALID-ORDER-195} \quad Z(s) = \left(\frac{1}{C_1 s}, \infty, R_3 + \frac{1}{C_3 s}, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$$

$$H(s) = \frac{g_m (C_3 R_3 s + 1) (C_L L_L R_L s^2 + L_L s + R_L)}{(C_1 s + g_m) (C_3 C_L L_L R_3 s^3 + C_3 C_L L_L R_L s^3 + C_3 L_L s^2 + C_3 R_3 s + C_3 R_L s + C_L L_L s^2 + 1)}$$

$$10.196 \quad \text{INVALID-ORDER-196} \quad Z(s) = \left(\frac{1}{C_1 s}, \infty, R_3 + \frac{1}{C_3 s}, \infty, \infty, \frac{R_L (C_L L_L s^2 + 1)}{C_L L_L s^2 + C_L R_L s + 1} \right)$$

$$H(s) = \frac{R_L g_m (C_3 R_3 s + 1) (C_L L_L s^2 + 1)}{(C_1 s + g_m) (C_3 C_L L_L R_3 s^3 + C_3 C_L L_L R_L s^3 + C_3 C_L R_3 R_L s^2 + C_3 R_3 s + C_3 R_L s + C_L L_L s^2 + C_L R_L s + 1)}$$

$$10.197 \quad \text{INVALID-ORDER-197} \quad Z(s) = \left(\frac{1}{C_1 s}, \infty, L_3 s + \frac{1}{C_3 s}, \infty, \infty, R_L \right)$$

$$H(s) = \frac{R_L g_m (C_3 L_3 s^2 + 1)}{(C_1 s + g_m) (C_3 L_3 s^2 + C_3 R_L s + 1)}$$

$$10.198 \quad \text{INVALID-ORDER-198} \quad Z(s) = \left(\frac{1}{C_1 s}, \infty, L_3 s + \frac{1}{C_3 s}, \infty, \infty, \frac{1}{C_L s} \right)$$

$$H(s) = \frac{g_m (C_3 L_3 s^2 + 1)}{s (C_1 s + g_m) (C_3 C_L L_3 s^2 + C_3 + C_L)}$$

$$10.199 \quad \text{INVALID-ORDER-199} \quad Z(s) = \left(\frac{1}{C_1 s}, \infty, L_3 s + \frac{1}{C_3 s}, \infty, \infty, \frac{R_L}{C_L R_L s + 1} \right)$$

$$H(s) = \frac{R_L g_m (C_3 L_3 s^2 + 1)}{(C_1 s + g_m) (C_3 C_L L_3 R_L s^3 + C_3 L_3 s^2 + C_3 R_L s + C_L R_L s + 1)}$$

$$10.200 \quad \text{INVALID-ORDER-200} \quad Z(s) = \left(\frac{1}{C_1 s}, \infty, L_3 s + \frac{1}{C_3 s}, \infty, \infty, R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{g_m (C_3 L_3 s^2 + 1) (C_L R_L s + 1)}{s (C_1 s + g_m) (C_3 C_L L_3 s^2 + C_3 C_L R_L s + C_3 + C_L)}$$

$$10.201 \quad \text{INVALID-ORDER-201} \quad Z(s) = \left(\frac{1}{C_1 s}, \infty, L_3 s + \frac{1}{C_3 s}, \infty, \infty, L_L s + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{g_m (C_3 L_3 s^2 + 1) (C_L L_L s^2 + 1)}{s (C_1 s + g_m) (C_3 C_L L_3 s^2 + C_3 C_L L_L s^2 + C_3 + C_L)}$$

$$10.202 \quad \text{INVALID-ORDER-202} \quad Z(s) = \left(\frac{1}{C_1 s}, \infty, L_3 s + \frac{1}{C_3 s}, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} \right)$$

$$H(s) = \frac{L_L g_m s (C_3 L_3 s^2 + 1)}{(C_1 s + g_m) (C_3 C_L L_3 L_L s^4 + C_3 L_3 s^2 + C_3 L_L s^2 + C_L L_L s^2 + 1)}$$

$$10.203 \quad \text{INVALID-ORDER-203} \quad Z(s) = \left(\frac{1}{C_1 s}, \infty, L_3 s + \frac{1}{C_3 s}, \infty, \infty, L_L s + R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{g_m (C_3 L_3 s^2 + 1) (C_L L_L s^2 + C_L R_L s + 1)}{s (C_1 s + g_m) (C_3 C_L L_3 s^2 + C_3 C_L L_L s^2 + C_3 C_L R_L s + C_3 + C_L)}$$

$$10.204 \quad \text{INVALID-ORDER-204} \quad Z(s) = \left(\frac{1}{C_1 s}, \infty, L_3 s + \frac{1}{C_3 s}, \infty, \infty, \frac{L_L R_L s}{C_L L_L R_L s^2 + L_L s + R_L} \right)$$

$$H(s) = \frac{L_L R_L g_m s (C_3 L_3 s^2 + 1)}{(C_1 s + g_m) (C_3 C_L L_3 L_L R_L s^4 + C_3 L_3 L_L s^3 + C_3 L_3 R_L s^2 + C_3 L_L R_L s^2 + C_L L_L R_L s^2 + L_L s + R_L)}$$

$$10.205 \quad \text{INVALID-ORDER-205} \quad Z(s) = \left(\frac{1}{C_1 s}, \infty, L_3 s + \frac{1}{C_3 s}, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$$

$$H(s) = \frac{g_m (C_3 L_3 s^2 + 1) (C_L L_L R_L s^2 + L_L s + R_L)}{(C_1 s + g_m) (C_3 C_L L_3 L_L s^4 + C_3 C_L L_L R_L s^3 + C_3 L_3 s^2 + C_3 L_L s^2 + C_3 R_L s + C_L L_L s^2 + 1)}$$

$$10.206 \quad \text{INVALID-ORDER-206} \quad Z(s) = \left(\frac{1}{C_1 s}, \infty, L_3 s + \frac{1}{C_3 s}, \infty, \infty, \frac{R_L (C_L L_L s^2 + 1)}{C_L L_L s^2 + C_L R_L s + 1} \right)$$

$$H(s) = \frac{R_L g_m (C_3 L_3 s^2 + 1) (C_L L_L s^2 + 1)}{(C_1 s + g_m) (C_3 C_L L_3 L_L s^4 + C_3 C_L L_3 R_L s^3 + C_3 C_L L_L R_L s^3 + C_3 L_3 s^2 + C_3 R_L s + C_L L_L s^2 + C_L R_L s + 1)}$$

$$10.207 \quad \text{INVALID-ORDER-207} \quad Z(s) = \left(\frac{1}{C_1 s}, \quad \infty, \quad \frac{L_3 s}{C_3 L_3 s^2 + 1}, \quad \infty, \quad \infty, \quad R_L \right)$$

$$H(s) = \frac{L_3 R_L g_m s}{(C_1 s + g_m)(C_3 L_3 R_L s^2 + L_3 s + R_L)}$$

$$10.208 \quad \text{INVALID-ORDER-208} \quad Z(s) = \left(\frac{1}{C_1 s}, \quad \infty, \quad \frac{L_3 s}{C_3 L_3 s^2 + 1}, \quad \infty, \quad \infty, \quad \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_3 g_m s}{(C_1 s + g_m)(C_3 L_3 s^2 + C_L L_3 s^2 + 1)}$$

$$10.209 \quad \text{INVALID-ORDER-209} \quad Z(s) = \left(\frac{1}{C_1 s}, \quad \infty, \quad \frac{L_3 s}{C_3 L_3 s^2 + 1}, \quad \infty, \quad \infty, \quad \frac{R_L}{C_L R_L s + 1} \right)$$

$$H(s) = \frac{L_3 R_L g_m s}{(C_1 s + g_m)(C_3 L_3 R_L s^2 + C_L L_3 R_L s^2 + L_3 s + R_L)}$$

$$10.210 \quad \text{INVALID-ORDER-210} \quad Z(s) = \left(\frac{1}{C_1 s}, \quad \infty, \quad \frac{L_3 s}{C_3 L_3 s^2 + 1}, \quad \infty, \quad \infty, \quad R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_3 g_m s (C_L R_L s + 1)}{(C_1 s + g_m)(C_3 C_L L_3 R_L s^3 + C_3 L_3 s^2 + C_L L_3 s^2 + C_L R_L s + 1)}$$

$$10.211 \quad \text{INVALID-ORDER-211} \quad Z(s) = \left(\frac{1}{C_1 s}, \quad \infty, \quad \frac{L_3 s}{C_3 L_3 s^2 + 1}, \quad \infty, \quad \infty, \quad L_L s + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_3 g_m s (C_L L_L s^2 + 1)}{(C_1 s + g_m)(C_3 C_L L_3 L_L s^4 + C_3 L_3 s^2 + C_L L_3 s^2 + C_L L_L s^2 + 1)}$$

$$10.212 \quad \text{INVALID-ORDER-212} \quad Z(s) = \left(\frac{1}{C_1 s}, \quad \infty, \quad \frac{L_3 s}{C_3 L_3 s^2 + 1}, \quad \infty, \quad \infty, \quad \frac{L_L s}{C_L L_L s^2 + 1} \right)$$

$$H(s) = \frac{L_3 L_L g_m s}{(C_1 s + g_m)(C_3 L_3 L_L s^2 + C_L L_3 L_L s^2 + L_3 + L_L)}$$

$$10.213 \quad \text{INVALID-ORDER-213} \quad Z(s) = \left(\frac{1}{C_1 s}, \quad \infty, \quad \frac{L_3 s}{C_3 L_3 s^2 + 1}, \quad \infty, \quad \infty, \quad L_L s + R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_3 g_m s (C_L L_L s^2 + C_L R_L s + 1)}{(C_1 s + g_m)(C_3 C_L L_3 L_L s^4 + C_3 C_L L_3 R_L s^3 + C_3 L_3 s^2 + C_L L_3 s^2 + C_L L_L s^2 + C_L R_L s + 1)}$$

$$10.214 \quad \text{INVALID-ORDER-214} \quad Z(s) = \left(\frac{1}{C_1 s}, \quad \infty, \quad \frac{L_3 s}{C_3 L_3 s^2 + 1}, \quad \infty, \quad \infty, \quad \frac{L_L R_L s}{C_L L_L R_L s^2 + L_L s + R_L} \right)$$

$$H(s) = \frac{L_3 L_L R_L g_m s}{(C_1 s + g_m)(C_3 L_3 L_L R_L s^2 + C_L L_3 L_L R_L s^2 + L_3 L_L s + L_3 R_L + L_L R_L)}$$

$$10.215 \quad \text{INVALID-ORDER-215} \quad Z(s) = \left(\frac{1}{C_1 s}, \quad \infty, \quad \frac{L_3 s}{C_3 L_3 s^2 + 1}, \quad \infty, \quad \infty, \quad \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$$

$$H(s) = \frac{L_3 g_m s (C_L L_L R_L s^2 + L_L s + R_L)}{(C_1 s + g_m)(C_3 C_L L_3 L_L R_L s^4 + C_3 L_3 L_L s^3 + C_3 L_3 R_L s^2 + C_L L_3 L_L s^3 + C_L L_L R_L s^2 + L_3 s + L_L s + R_L)}$$

$$10.216 \quad \text{INVALID-ORDER-216} \quad Z(s) = \left(\frac{1}{C_1 s}, \quad \infty, \quad \frac{L_3 s}{C_3 L_3 s^2 + 1}, \quad \infty, \quad \infty, \quad \frac{R_L (C_L L_L s^2 + 1)}{C_L L_L s^2 + C_L R_L s + 1} \right)$$

$$H(s) = \frac{L_3 R_L g_m s (C_L L_L s^2 + 1)}{(C_1 s + g_m)(C_3 C_L L_3 L_L R_L s^4 + C_3 L_3 R_L s^2 + C_L L_3 L_L s^3 + C_L L_3 R_L s^2 + C_L L_L R_L s^2 + L_3 s + R_L)}$$

$$10.217 \quad \text{INVALID-ORDER-217} \quad Z(s) = \left(\frac{1}{C_1 s}, \infty, L_3 s + R_3 + \frac{1}{C_3 s}, \infty, \infty, R_L \right)$$

$$H(s) = \frac{R_L g_m (C_3 L_3 s^2 + C_3 R_3 s + 1)}{(C_1 s + g_m) (C_3 L_3 s^2 + C_3 R_3 s + C_3 R_L s + 1)}$$

$$10.218 \quad \text{INVALID-ORDER-218} \quad Z(s) = \left(\frac{1}{C_1 s}, \infty, L_3 s + R_3 + \frac{1}{C_3 s}, \infty, \infty, \frac{1}{C_L s} \right)$$

$$H(s) = \frac{g_m (C_3 L_3 s^2 + C_3 R_3 s + 1)}{s (C_1 s + g_m) (C_3 C_L L_3 s^2 + C_3 C_L R_3 s + C_3 + C_L)}$$

$$10.219 \quad \text{INVALID-ORDER-219} \quad Z(s) = \left(\frac{1}{C_1 s}, \infty, L_3 s + R_3 + \frac{1}{C_3 s}, \infty, \infty, \frac{R_L}{C_L R_L s + 1} \right)$$

$$H(s) = \frac{R_L g_m (C_3 L_3 s^2 + C_3 R_3 s + 1)}{(C_1 s + g_m) (C_3 C_L L_3 R_L s^3 + C_3 C_L R_3 R_L s^2 + C_3 L_3 s^2 + C_3 R_3 s + C_3 R_L s + C_L R_L s + 1)}$$

$$10.220 \quad \text{INVALID-ORDER-220} \quad Z(s) = \left(\frac{1}{C_1 s}, \infty, L_3 s + R_3 + \frac{1}{C_3 s}, \infty, \infty, R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{g_m (C_L R_L s + 1) (C_3 L_3 s^2 + C_3 R_3 s + 1)}{s (C_1 s + g_m) (C_3 C_L L_3 s^2 + C_3 C_L R_3 s + C_3 C_L R_L s + C_3 + C_L)}$$

$$10.221 \quad \text{INVALID-ORDER-221} \quad Z(s) = \left(\frac{1}{C_1 s}, \infty, L_3 s + R_3 + \frac{1}{C_3 s}, \infty, \infty, L_L s + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{g_m (C_L L_L s^2 + 1) (C_3 L_3 s^2 + C_3 R_3 s + 1)}{s (C_1 s + g_m) (C_3 C_L L_3 s^2 + C_3 C_L L_L s^2 + C_3 C_L R_3 s + C_3 + C_L)}$$

$$10.222 \quad \text{INVALID-ORDER-222} \quad Z(s) = \left(\frac{1}{C_1 s}, \infty, L_3 s + R_3 + \frac{1}{C_3 s}, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} \right)$$

$$H(s) = \frac{L_L g_m s (C_3 L_3 s^2 + C_3 R_3 s + 1)}{(C_1 s + g_m) (C_3 C_L L_3 L_L s^4 + C_3 C_L L_L R_3 s^3 + C_3 L_3 s^2 + C_3 L_L s^2 + C_3 R_3 s + C_L L_L s^2 + 1)}$$

$$10.223 \quad \text{INVALID-ORDER-223} \quad Z(s) = \left(\frac{1}{C_1 s}, \infty, L_3 s + R_3 + \frac{1}{C_3 s}, \infty, \infty, L_L s + R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{g_m (C_3 L_3 s^2 + C_3 R_3 s + 1) (C_L L_L s^2 + C_L R_L s + 1)}{s (C_1 s + g_m) (C_3 C_L L_3 s^2 + C_3 C_L L_L s^2 + C_3 C_L R_3 s + C_3 C_L R_L s + C_3 + C_L)}$$

$$10.224 \quad \text{INVALID-ORDER-224} \quad Z(s) = \left(\frac{1}{C_1 s}, \infty, L_3 s + R_3 + \frac{1}{C_3 s}, \infty, \infty, \frac{L_L R_L s}{C_L L_L R_L s^2 + L_L s + R_L} \right)$$

$$H(s) = \frac{L_L R_L g_m s (C_3 L_3 s^2 + C_3 R_3 s + 1)}{(C_1 s + g_m) (C_3 C_L L_3 L_L R_L s^4 + C_3 C_L L_L R_3 R_L s^3 + C_3 L_3 L_L s^3 + C_3 L_3 R_L s^2 + C_3 L_L R_3 s^2 + C_3 L_L R_L s^2 + C_3 R_3 R_L s + C_L L_L R_L s^2 + L_L s + R_L)}$$

$$10.225 \quad \text{INVALID-ORDER-225} \quad Z(s) = \left(\frac{1}{C_1 s}, \infty, L_3 s + R_3 + \frac{1}{C_3 s}, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$$

$$H(s) = \frac{g_m (C_3 L_3 s^2 + C_3 R_3 s + 1) (C_L L_L R_L s^2 + L_L s + R_L)}{(C_1 s + g_m) (C_3 C_L L_3 L_L s^4 + C_3 C_L L_L R_3 s^3 + C_3 C_L L_L R_L s^3 + C_3 L_3 s^2 + C_3 L_L s^2 + C_3 R_3 s + C_3 R_L s + C_L L_L s^2 + 1)}$$

$$10.226 \quad \text{INVALID-ORDER-226} \quad Z(s) = \left(\frac{1}{C_1 s}, \quad \infty, \quad L_3 s + R_3 + \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad \frac{R_L(C_L L_L s^2 + 1)}{C_L L_L s^2 + C_L R_L s + 1} \right)$$

$$H(s) = \frac{R_L g_m (C_L L_L s^2 + 1) (C_3 L_3 s^2 + C_3 R_3 s + 1)}{(C_1 s + g_m) (C_3 C_L L_3 L_L s^4 + C_3 C_L L_3 R_L s^3 + C_3 C_L L_L R_3 s^3 + C_3 C_L L_L R_L s^3 + C_3 C_L R_3 R_L s^2 + C_3 L_3 s^2 + C_3 R_3 s + C_3 R_L s + C_L L_L s^2 + C_L R_L s + 1)}$$

$$10.227 \quad \text{INVALID-ORDER-227} \quad Z(s) = \left(\frac{1}{C_1 s}, \quad \infty, \quad \frac{L_3 R_3 s}{C_3 L_3 R_3 s^2 + L_3 s + R_3}, \quad \infty, \quad \infty, \quad R_L \right)$$

$$H(s) = \frac{L_3 R_3 R_L g_m s}{(C_1 s + g_m) (C_3 L_3 R_3 R_L s^2 + L_3 R_3 s + L_3 R_L s + R_3 R_L)}$$

$$10.228 \quad \text{INVALID-ORDER-228} \quad Z(s) = \left(\frac{1}{C_1 s}, \quad \infty, \quad \frac{L_3 R_3 s}{C_3 L_3 R_3 s^2 + L_3 s + R_3}, \quad \infty, \quad \infty, \quad \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_3 R_3 g_m s}{(C_1 s + g_m) (C_3 L_3 R_3 s^2 + C_L L_3 R_3 s^2 + L_3 s + R_3)}$$

$$10.229 \quad \text{INVALID-ORDER-229} \quad Z(s) = \left(\frac{1}{C_1 s}, \quad \infty, \quad \frac{L_3 R_3 s}{C_3 L_3 R_3 s^2 + L_3 s + R_3}, \quad \infty, \quad \infty, \quad \frac{R_L}{C_L R_L s + 1} \right)$$

$$H(s) = \frac{L_3 R_3 R_L g_m s}{(C_1 s + g_m) (C_3 L_3 R_3 R_L s^2 + C_L L_3 R_3 R_L s^2 + L_3 R_3 s + L_3 R_L s + R_3 R_L)}$$

$$10.230 \quad \text{INVALID-ORDER-230} \quad Z(s) = \left(\frac{1}{C_1 s}, \quad \infty, \quad \frac{L_3 R_3 s}{C_3 L_3 R_3 s^2 + L_3 s + R_3}, \quad \infty, \quad \infty, \quad R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_3 R_3 g_m s (C_L R_L s + 1)}{(C_1 s + g_m) (C_3 C_L L_3 R_3 R_L s^3 + C_3 L_3 R_3 s^2 + C_L L_3 R_3 s^2 + C_L L_3 R_L s^2 + C_L R_3 R_L s + L_3 s + R_3)}$$

$$10.231 \quad \text{INVALID-ORDER-231} \quad Z(s) = \left(\frac{1}{C_1 s}, \quad \infty, \quad \frac{L_3 R_3 s}{C_3 L_3 R_3 s^2 + L_3 s + R_3}, \quad \infty, \quad \infty, \quad L_L s + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_3 R_3 g_m s (C_L L_L s^2 + 1)}{(C_1 s + g_m) (C_3 C_L L_3 L_L R_3 s^4 + C_3 L_3 R_3 s^2 + C_L L_3 L_L s^3 + C_L L_3 R_3 s^2 + C_L L_L R_3 s^2 + L_3 s + R_3)}$$

$$10.232 \quad \text{INVALID-ORDER-232} \quad Z(s) = \left(\frac{1}{C_1 s}, \quad \infty, \quad \frac{L_3 R_3 s}{C_3 L_3 R_3 s^2 + L_3 s + R_3}, \quad \infty, \quad \infty, \quad \frac{L_L s}{C_L L_L s^2 + 1} \right)$$

$$H(s) = \frac{L_3 L_L R_3 g_m s}{(C_1 s + g_m) (C_3 L_3 L_L R_3 s^2 + C_L L_3 L_L R_3 s^2 + L_3 L_L s + L_3 R_3 + L_L R_3)}$$

$$10.233 \quad \text{INVALID-ORDER-233} \quad Z(s) = \left(\frac{1}{C_1 s}, \quad \infty, \quad \frac{L_3 R_3 s}{C_3 L_3 R_3 s^2 + L_3 s + R_3}, \quad \infty, \quad \infty, \quad L_L s + R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_3 R_3 g_m s (C_L L_L s^2 + C_L R_L s + 1)}{(C_1 s + g_m) (C_3 C_L L_3 L_L R_3 s^4 + C_3 C_L L_3 R_3 R_L s^3 + C_3 L_3 R_3 s^2 + C_L L_3 L_L s^3 + C_L L_3 R_3 s^2 + C_L L_3 R_L s^2 + C_L L_L R_3 s^2 + C_L R_3 R_L s + L_3 s + R_3)}$$

$$10.234 \quad \text{INVALID-ORDER-234} \quad Z(s) = \left(\frac{1}{C_1 s}, \quad \infty, \quad \frac{L_3 R_3 s}{C_3 L_3 R_3 s^2 + L_3 s + R_3}, \quad \infty, \quad \infty, \quad \frac{L_L R_L s}{C_L L_L R_L s^2 + L_L s + R_L} \right)$$

$$H(s) = \frac{L_3 L_L R_3 R_L g_m s}{(C_1 s + g_m) (C_3 L_3 L_L R_3 R_L s^2 + C_L L_3 L_L R_3 R_L s^2 + L_3 L_L R_3 s + L_3 L_L R_L s + L_3 R_3 R_L + L_L R_3 R_L)}$$

$$10.235 \quad \text{INVALID-ORDER-235} \quad Z(s) = \left(\frac{1}{C_1 s}, \quad \infty, \quad \frac{L_3 R_3 s}{C_3 L_3 R_3 s^2 + L_3 s + R_3}, \quad \infty, \quad \infty, \quad \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$$

$$H(s) = \frac{L_3 R_3 g_m s (C_L L_L R_L s^2 + L_L s + R_L)}{(C_1 s + g_m) (C_3 C_L L_3 L_L R_3 R_L s^4 + C_3 L_3 L_L R_3 s^3 + C_3 L_3 R_3 R_L s^2 + C_L L_3 L_L R_3 s^3 + C_L L_3 L_L R_L s^3 + C_L L_L R_3 R_L s^2 + L_3 L_L s^2 + L_3 R_3 s + L_3 R_L s + L_L R_3 s + R_3 R_L)}$$

$$10.236 \quad \text{INVALID-ORDER-236} \quad Z(s) = \left(\frac{1}{C_1 s}, \quad \infty, \quad \frac{L_3 R_3 s}{C_3 L_3 R_3 s^2 + L_3 s + R_3}, \quad \infty, \quad \infty, \quad \frac{R_L (C_L L_L s^2 + 1)}{C_L L_L s^2 + C_L R_L s + 1} \right)$$

$$H(s) = \frac{L_3 R_3 R_L g_m s (C_L L_L s^2 + 1)}{(C_1 s + g_m) (C_3 C_L L_3 L_L R_3 R_L s^4 + C_3 L_3 R_3 R_L s^2 + C_L L_3 L_L R_3 s^3 + C_L L_3 L_L R_L s^3 + C_L L_3 R_3 R_L s^2 + C_L L_L R_3 R_L s^2 + L_3 R_3 s + L_3 R_L s + R_3 R_L)}$$

$$10.237 \quad \text{INVALID-ORDER-237} \quad Z(s) = \left(\frac{1}{C_1 s}, \quad \infty, \quad \frac{L_3 s}{C_3 L_3 s^2 + 1} + R_3, \quad \infty, \quad \infty, \quad R_L \right)$$

$$H(s) = \frac{R_L g_m (C_3 L_3 R_3 s^2 + L_3 s + R_3)}{(C_1 s + g_m) (C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + L_3 s + R_3 + R_L)}$$

$$10.238 \quad \text{INVALID-ORDER-238} \quad Z(s) = \left(\frac{1}{C_1 s}, \quad \infty, \quad \frac{L_3 s}{C_3 L_3 s^2 + 1} + R_3, \quad \infty, \quad \infty, \quad \frac{1}{C_L s} \right)$$

$$H(s) = \frac{g_m (C_3 L_3 R_3 s^2 + L_3 s + R_3)}{(C_1 s + g_m) (C_3 C_L L_3 R_3 s^3 + C_3 L_3 s^2 + C_L L_3 s^2 + C_L R_3 s + 1)}$$

$$10.239 \quad \text{INVALID-ORDER-239} \quad Z(s) = \left(\frac{1}{C_1 s}, \quad \infty, \quad \frac{L_3 s}{C_3 L_3 s^2 + 1} + R_3, \quad \infty, \quad \infty, \quad \frac{R_L}{C_L R_L s + 1} \right)$$

$$H(s) = \frac{R_L g_m (C_3 L_3 R_3 s^2 + L_3 s + R_3)}{(C_1 s + g_m) (C_3 C_L L_3 R_3 R_L s^3 + C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + C_L L_3 R_L s^2 + C_L R_3 R_L s + L_3 s + R_3 + R_L)}$$

$$10.240 \quad \text{INVALID-ORDER-240} \quad Z(s) = \left(\frac{1}{C_1 s}, \quad \infty, \quad \frac{L_3 s}{C_3 L_3 s^2 + 1} + R_3, \quad \infty, \quad \infty, \quad R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{g_m (C_L R_L s + 1) (C_3 L_3 R_3 s^2 + L_3 s + R_3)}{(C_1 s + g_m) (C_3 C_L L_3 R_3 s^3 + C_3 C_L L_3 R_L s^3 + C_3 L_3 s^2 + C_L L_3 s^2 + C_L R_3 s + C_L R_L s + 1)}$$

$$10.241 \quad \text{INVALID-ORDER-241} \quad Z(s) = \left(\frac{1}{C_1 s}, \quad \infty, \quad \frac{L_3 s}{C_3 L_3 s^2 + 1} + R_3, \quad \infty, \quad \infty, \quad L_L s + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{g_m (C_L L_L s^2 + 1) (C_3 L_3 R_3 s^2 + L_3 s + R_3)}{(C_1 s + g_m) (C_3 C_L L_3 L_L s^4 + C_3 C_L L_3 R_3 s^3 + C_3 L_3 s^2 + C_L L_3 s^2 + C_L L_L s^2 + C_L R_3 s + 1)}$$

$$10.242 \quad \text{INVALID-ORDER-242} \quad Z(s) = \left(\frac{1}{C_1 s}, \quad \infty, \quad \frac{L_3 s}{C_3 L_3 s^2 + 1} + R_3, \quad \infty, \quad \infty, \quad \frac{L_L s}{C_L L_L s^2 + 1} \right)$$

$$H(s) = \frac{L_L g_m s (C_3 L_3 R_3 s^2 + L_3 s + R_3)}{(C_1 s + g_m) (C_3 C_L L_3 L_L R_3 s^4 + C_3 L_3 L_L s^3 + C_3 L_3 R_3 s^2 + C_L L_3 L_L s^3 + C_L L_L R_3 s^2 + L_3 s + L_L s + R_3)}$$

$$10.243 \quad \text{INVALID-ORDER-243} \quad Z(s) = \left(\frac{1}{C_1 s}, \quad \infty, \quad \frac{L_3 s}{C_3 L_3 s^2 + 1} + R_3, \quad \infty, \quad \infty, \quad L_L s + R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{g_m (C_L L_L s^2 + C_L R_L s + 1) (C_3 L_3 R_3 s^2 + L_3 s + R_3)}{(C_1 s + g_m) (C_3 C_L L_3 L_L s^4 + C_3 C_L L_3 R_3 s^3 + C_3 C_L L_3 R_L s^3 + C_3 L_3 s^2 + C_L L_3 s^2 + C_L L_L s^2 + C_L R_3 s + C_L R_L s + 1)}$$

$$10.244 \quad \text{INVALID-ORDER-244} \quad Z(s) = \left(\frac{1}{C_1 s}, \quad \infty, \quad \frac{L_3 s}{C_3 L_3 s^2 + 1} + R_3, \quad \infty, \quad \infty, \quad \frac{L_L R_L s}{C_L L_L R_L s^2 + L_L s + R_L} \right)$$

$$H(s) = \frac{L_L R_L g_m s (C_3 L_3 R_3 s^2 + L_3 s + R_3)}{(C_1 s + g_m) (C_3 C_L L_3 L_L R_3 R_L s^4 + C_3 L_3 L_L R_3 s^3 + C_3 L_3 L_L R_L s^3 + C_3 L_3 R_3 R_L s^2 + C_L L_3 L_L R_L s^3 + C_L L_L R_3 R_L s^2 + L_3 L_L s^2 + L_3 R_L s + L_L R_3 s + L_L R_L s + R_3 R_L)}$$

$$10.245 \quad \text{INVALID-ORDER-245} \quad Z(s) = \left(\frac{1}{C_1 s}, \quad \infty, \quad \frac{L_3 s}{C_3 L_3 s^2 + 1} + R_3, \quad \infty, \quad \infty, \quad \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$$

$$H(s) = \frac{g_m (C_3 L_3 R_3 s^2 + L_3 s + R_3) (C_L L_L R_L s^2 + L_L s + R_L)}{(C_1 s + g_m) (C_3 C_L L_3 L_L R_3 s^4 + C_3 C_L L_3 L_L R_L s^4 + C_3 L_3 L_L s^3 + C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + C_L L_3 L_L s^3 + C_L L_L R_3 s^2 + C_L L_L R_L s^2 + L_3 s + L_L s + R_3 + R_L)}$$

$$10.246 \quad \text{INVALID-ORDER-246} \quad Z(s) = \left(\frac{1}{C_1 s}, \quad \infty, \quad \frac{L_3 s}{C_3 L_3 s^2 + 1} + R_3, \quad \infty, \quad \infty, \quad \frac{R_L (C_L L_L s^2 + 1)}{C_L L_L s^2 + C_L R_L s + 1} \right)$$

$$H(s) = \frac{R_L g_m (C_L L_L s^2 + 1) (C_3 L_3 R_3 s^2 + L_3 s + R_3)}{(C_1 s + g_m) (C_3 C_L L_3 L_L R_3 s^4 + C_3 C_L L_3 L_L R_L s^4 + C_3 C_L L_3 R_3 R_L s^3 + C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + C_L L_3 L_L s^3 + C_L L_3 R_L s^2 + C_L L_L R_3 s^2 + C_L L_L R_L s^2 + C_L R_3 R_L s + L_3 s + R_3 + R_L)}$$

$$10.247 \quad \text{INVALID-ORDER-247} \quad Z(s) = \left(\frac{1}{C_1 s}, \quad \infty, \quad \frac{R_3 (C_3 L_3 s^2 + 1)}{C_3 L_3 s^2 + C_3 R_3 s + 1}, \quad \infty, \quad \infty, \quad R_L \right)$$

$$H(s) = \frac{R_3 R_L g_m (C_3 L_3 s^2 + 1)}{(C_1 s + g_m) (C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + C_3 R_3 R_L s + R_3 + R_L)}$$

$$10.248 \quad \text{INVALID-ORDER-248} \quad Z(s) = \left(\frac{1}{C_1 s}, \quad \infty, \quad \frac{R_3 (C_3 L_3 s^2 + 1)}{C_3 L_3 s^2 + C_3 R_3 s + 1}, \quad \infty, \quad \infty, \quad \frac{1}{C_L s} \right)$$

$$H(s) = \frac{R_3 g_m (C_3 L_3 s^2 + 1)}{(C_1 s + g_m) (C_3 C_L L_3 R_3 s^3 + C_3 L_3 s^2 + C_3 R_3 s + C_L R_3 s + 1)}$$

$$10.249 \quad \text{INVALID-ORDER-249} \quad Z(s) = \left(\frac{1}{C_1 s}, \quad \infty, \quad \frac{R_3 (C_3 L_3 s^2 + 1)}{C_3 L_3 s^2 + C_3 R_3 s + 1}, \quad \infty, \quad \infty, \quad \frac{R_L}{C_L R_L s + 1} \right)$$

$$H(s) = \frac{R_3 R_L g_m (C_3 L_3 s^2 + 1)}{(C_1 s + g_m) (C_3 C_L L_3 R_3 R_L s^3 + C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + C_3 R_3 R_L s + C_L R_3 R_L s + R_3 + R_L)}$$

$$10.250 \quad \text{INVALID-ORDER-250} \quad Z(s) = \left(\frac{1}{C_1 s}, \quad \infty, \quad \frac{R_3 (C_3 L_3 s^2 + 1)}{C_3 L_3 s^2 + C_3 R_3 s + 1}, \quad \infty, \quad \infty, \quad R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{R_3 g_m (C_3 L_3 s^2 + 1) (C_L R_L s + 1)}{(C_1 s + g_m) (C_3 C_L L_3 R_3 s^3 + C_3 C_L L_3 R_L s^3 + C_3 C_L R_3 R_L s^2 + C_3 L_3 s^2 + C_3 R_3 s + C_L R_3 s + C_L R_L s + 1)}$$

$$10.251 \quad \text{INVALID-ORDER-251} \quad Z(s) = \left(\frac{1}{C_1 s}, \quad \infty, \quad \frac{R_3 (C_3 L_3 s^2 + 1)}{C_3 L_3 s^2 + C_3 R_3 s + 1}, \quad \infty, \quad \infty, \quad L_L s + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{R_3 g_m (C_3 L_3 s^2 + 1) (C_L L_L s^2 + 1)}{(C_1 s + g_m) (C_3 C_L L_3 L_L s^4 + C_3 C_L L_3 R_3 s^3 + C_3 C_L L_L R_3 s^3 + C_3 L_3 s^2 + C_3 R_3 s + C_L L_L s^2 + C_L R_3 s + 1)}$$

$$10.252 \quad \text{INVALID-ORDER-252} \quad Z(s) = \left(\frac{1}{C_1 s}, \quad \infty, \quad \frac{R_3 (C_3 L_3 s^2 + 1)}{C_3 L_3 s^2 + C_3 R_3 s + 1}, \quad \infty, \quad \infty, \quad \frac{L_L s}{C_L L_L s^2 + 1} \right)$$

$$H(s) = \frac{L_L R_3 g_m s (C_3 L_3 s^2 + 1)}{(C_1 s + g_m) (C_3 C_L L_3 L_L R_3 s^4 + C_3 L_3 L_L s^3 + C_3 L_3 R_3 s^2 + C_3 L_L R_3 s^2 + C_L L_L R_3 s^2 + L_L s + R_3)}$$

$$10.253 \quad \text{INVALID-ORDER-253} \quad Z(s) = \left(\frac{1}{C_1 s}, \quad \infty, \quad \frac{R_3 (C_3 L_3 s^2 + 1)}{C_3 L_3 s^2 + C_3 R_3 s + 1}, \quad \infty, \quad \infty, \quad L_L s + R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{R_3 g_m (C_3 L_3 s^2 + 1) (C_L L_L s^2 + C_L R_L s + 1)}{(C_1 s + g_m) (C_3 C_L L_3 L_L s^4 + C_3 C_L L_3 R_3 s^3 + C_3 C_L L_3 R_L s^3 + C_3 C_L L_L R_3 s^3 + C_3 C_L R_3 R_L s^2 + C_3 L_3 s^2 + C_3 R_3 s + C_L L_L s^2 + C_L R_3 s + C_L R_L s + 1)}$$

$$10.254 \quad \text{INVALID-ORDER-254} \quad Z(s) = \left(\frac{1}{C_1 s}, \quad \infty, \quad \frac{R_3(C_3 L_3 s^2 + 1)}{C_3 L_3 s^2 + C_3 R_3 s + 1}, \quad \infty, \quad \infty, \quad \frac{L_L R_L s}{C_L L_L R_L s^2 + L_L s + R_L} \right)$$

$$H(s) = \frac{L_L R_3 R_L g_m s (C_3 L_3 s^2 + 1)}{(C_1 s + g_m) (C_3 C_L L_3 L_L R_3 R_L s^4 + C_3 L_3 L_L R_3 s^3 + C_3 L_3 L_L R_L s^3 + C_3 L_3 R_3 R_L s^2 + C_3 L_L R_3 R_L s^2 + C_L L_L R_3 R_L s^2 + L_L R_3 s + L_L R_L s + R_3 R_L)}$$

$$10.255 \quad \text{INVALID-ORDER-255} \quad Z(s) = \left(\frac{1}{C_1 s}, \quad \infty, \quad \frac{R_3(C_3 L_3 s^2 + 1)}{C_3 L_3 s^2 + C_3 R_3 s + 1}, \quad \infty, \quad \infty, \quad \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$$

$$H(s) = \frac{R_3 g_m (C_3 L_3 s^2 + 1) (C_L L_L R_L s^2 + L_L s + R_L)}{(C_1 s + g_m) (C_3 C_L L_3 L_L R_3 s^4 + C_3 C_L L_3 L_L R_L s^4 + C_3 C_L L_L R_3 R_L s^3 + C_3 L_3 L_L s^3 + C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + C_3 L_L R_3 s^2 + C_3 R_3 R_L s + C_L L_L R_3 s^2 + C_L L_L R_L s^2 + L_L s + R_3 + R_L)}$$

$$10.256 \quad \text{INVALID-ORDER-256} \quad Z(s) = \left(\frac{1}{C_1 s}, \quad \infty, \quad \frac{R_3(C_3 L_3 s^2 + 1)}{C_3 L_3 s^2 + C_3 R_3 s + 1}, \quad \infty, \quad \infty, \quad \frac{R_L (C_L L_L s^2 + 1)}{C_L L_L s^2 + C_L R_L s + 1} \right)$$

$$H(s) = \frac{R_3 R_L g_m (C_3 L_3 s^2 + 1) (C_L L_L s^2 + 1)}{(C_1 s + g_m) (C_3 C_L L_3 L_L R_3 s^4 + C_3 C_L L_3 L_L R_L s^4 + C_3 C_L L_3 R_3 R_L s^3 + C_3 C_L L_L R_3 R_L s^3 + C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + C_3 R_3 R_L s + C_L L_L R_3 s^2 + C_L L_L R_L s^2 + C_L R_3 R_L s + R_3 + R_L)}$$

$$10.257 \quad \text{INVALID-ORDER-257} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \quad \infty, \quad R_3, \quad \infty, \quad \infty, \quad R_L \right)$$

$$H(s) = \frac{R_1 R_3 R_L g_m}{(R_3 + R_L) (C_1 R_1 s + R_1 g_m + 1)}$$

$$10.258 \quad \text{INVALID-ORDER-258} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \quad \infty, \quad R_3, \quad \infty, \quad \infty, \quad L_L s + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{R_1 R_3 g_m (C_L L_L s^2 + 1)}{(C_1 R_1 s + R_1 g_m + 1) (C_L L_L s^2 + C_L R_3 s + 1)}$$

$$10.259 \quad \text{INVALID-ORDER-259} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \quad \infty, \quad R_3, \quad \infty, \quad \infty, \quad \frac{L_L s}{C_L L_L s^2 + 1} \right)$$

$$H(s) = \frac{L_L R_1 R_3 g_m s}{(C_1 R_1 s + R_1 g_m + 1) (C_L L_L R_3 s^2 + L_L s + R_3)}$$

$$10.260 \quad \text{INVALID-ORDER-260} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \quad \infty, \quad R_3, \quad \infty, \quad \infty, \quad L_L s + R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{R_1 R_3 g_m (C_L L_L s^2 + C_L R_L s + 1)}{(C_1 R_1 s + R_1 g_m + 1) (C_L L_L s^2 + C_L R_3 s + C_L R_L s + 1)}$$

$$10.261 \quad \text{INVALID-ORDER-261} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \quad \infty, \quad R_3, \quad \infty, \quad \infty, \quad \frac{L_L R_L s}{C_L L_L R_L s^2 + L_L s + R_L} \right)$$

$$H(s) = \frac{L_L R_1 R_3 R_L g_m s}{(C_1 R_1 s + R_1 g_m + 1) (C_L L_L R_3 R_L s^2 + L_L R_3 s + L_L R_L s + R_3 R_L)}$$

$$10.262 \quad \text{INVALID-ORDER-262} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \quad \infty, \quad R_3, \quad \infty, \quad \infty, \quad \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$$

$$H(s) = \frac{R_1 R_3 g_m (C_L L_L R_L s^2 + L_L s + R_L)}{(C_1 R_1 s + R_1 g_m + 1) (C_L L_L R_3 s^2 + C_L L_L R_L s^2 + L_L s + R_3 + R_L)}$$

$$10.263 \quad \text{INVALID-ORDER-263} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \infty, R_3, \infty, \infty, \frac{R_L(C_L L_L s^2 + 1)}{C_L L_L s^2 + C_L R_L s + 1} \right)$$

$$H(s) = \frac{R_1 R_3 R_L g_m (C_L L_L s^2 + 1)}{(C_1 R_1 s + R_1 g_m + 1)(C_L L_L R_3 s^2 + C_L L_L R_L s^2 + C_L R_3 R_L s + R_3 + R_L)}$$

$$10.264 \quad \text{INVALID-ORDER-264} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \infty, \frac{1}{C_3 s}, \infty, \infty, \frac{1}{C_L s} \right)$$

$$H(s) = \frac{R_1 g_m}{s(C_3 + C_L)(C_1 R_1 s + R_1 g_m + 1)}$$

$$10.265 \quad \text{INVALID-ORDER-265} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \infty, \frac{1}{C_3 s}, \infty, \infty, R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{R_1 g_m (C_L R_L s + 1)}{s(C_1 R_1 s + R_1 g_m + 1)(C_3 C_L R_L s + C_3 + C_L)}$$

$$10.266 \quad \text{INVALID-ORDER-266} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \infty, \frac{1}{C_3 s}, \infty, \infty, L_L s + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{R_1 g_m (C_L L_L s^2 + 1)}{s(C_1 R_1 s + R_1 g_m + 1)(C_3 C_L L_L s^2 + C_3 + C_L)}$$

$$10.267 \quad \text{INVALID-ORDER-267} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \infty, \frac{1}{C_3 s}, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} \right)$$

$$H(s) = \frac{L_L R_1 g_m s}{(C_1 R_1 s + R_1 g_m + 1)(C_3 L_L s^2 + C_L L_L s^2 + 1)}$$

$$10.268 \quad \text{INVALID-ORDER-268} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \infty, \frac{1}{C_3 s}, \infty, \infty, L_L s + R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{R_1 g_m (C_L L_L s^2 + C_L R_L s + 1)}{s(C_1 R_1 s + R_1 g_m + 1)(C_3 C_L L_L s^2 + C_3 C_L R_L s + C_3 + C_L)}$$

$$10.269 \quad \text{INVALID-ORDER-269} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \infty, \frac{1}{C_3 s}, \infty, \infty, \frac{L_L R_L s}{C_L L_L R_L s^2 + L_L s + R_L} \right)$$

$$H(s) = \frac{L_L R_1 R_L g_m s}{(C_1 R_1 s + R_1 g_m + 1)(C_3 L_L R_L s^2 + C_L L_L R_L s^2 + L_L s + R_L)}$$

$$10.270 \quad \text{INVALID-ORDER-270} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \infty, \frac{1}{C_3 s}, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$$

$$H(s) = \frac{R_1 g_m (C_L L_L R_L s^2 + L_L s + R_L)}{(C_1 R_1 s + R_1 g_m + 1)(C_3 C_L L_L R_L s^3 + C_3 L_L s^2 + C_3 R_L s + C_L L_L s^2 + 1)}$$

$$10.271 \quad \text{INVALID-ORDER-271} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \infty, \frac{1}{C_3 s}, \infty, \infty, \frac{R_L(C_L L_L s^2 + 1)}{C_L L_L s^2 + C_L R_L s + 1} \right)$$

$$H(s) = \frac{R_1 R_L g_m (C_L L_L s^2 + 1)}{(C_1 R_1 s + R_1 g_m + 1)(C_3 C_L L_L R_L s^3 + C_3 R_L s + C_L L_L s^2 + C_L R_L s + 1)}$$

$$10.272 \quad \text{INVALID-ORDER-272} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \quad \infty, \quad \frac{R_3}{C_3 R_3 s + 1}, \quad \infty, \quad \infty, \quad R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{R_1 R_3 g_m (C_L R_L s + 1)}{(C_1 R_1 s + R_1 g_m + 1) (C_3 C_L R_3 R_L s^2 + C_3 R_3 s + C_L R_3 s + C_L R_L s + 1)}$$

$$10.273 \quad \text{INVALID-ORDER-273} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \quad \infty, \quad \frac{R_3}{C_3 R_3 s + 1}, \quad \infty, \quad \infty, \quad L_L s + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{R_1 R_3 g_m (C_L L_L s^2 + 1)}{(C_1 R_1 s + R_1 g_m + 1) (C_3 C_L L_L R_3 s^3 + C_3 R_3 s + C_L L_L s^2 + C_L R_3 s + 1)}$$

$$10.274 \quad \text{INVALID-ORDER-274} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \quad \infty, \quad \frac{R_3}{C_3 R_3 s + 1}, \quad \infty, \quad \infty, \quad \frac{L_L s}{C_L L_L s^2 + 1} \right)$$

$$H(s) = \frac{L_L R_1 R_3 g_m s}{(C_1 R_1 s + R_1 g_m + 1) (C_3 L_L R_3 s^2 + C_L L_L R_3 s^2 + L_L s + R_3)}$$

$$10.275 \quad \text{INVALID-ORDER-275} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \quad \infty, \quad \frac{R_3}{C_3 R_3 s + 1}, \quad \infty, \quad \infty, \quad L_L s + R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{R_1 R_3 g_m (C_L L_L s^2 + C_L R_L s + 1)}{(C_1 R_1 s + R_1 g_m + 1) (C_3 C_L L_L R_3 s^3 + C_3 C_L R_3 R_L s^2 + C_3 R_3 s + C_L L_L s^2 + C_L R_3 s + C_L R_L s + 1)}$$

$$10.276 \quad \text{INVALID-ORDER-276} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \quad \infty, \quad \frac{R_3}{C_3 R_3 s + 1}, \quad \infty, \quad \infty, \quad \frac{L_L R_L s}{C_L L_L R_L s^2 + L_L s + R_L} \right)$$

$$H(s) = \frac{L_L R_1 R_3 R_L g_m s}{(C_1 R_1 s + R_1 g_m + 1) (C_3 L_L R_3 R_L s^2 + C_L L_L R_3 R_L s^2 + L_L R_3 s + L_L R_L s + R_3 R_L)}$$

$$10.277 \quad \text{INVALID-ORDER-277} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \quad \infty, \quad \frac{R_3}{C_3 R_3 s + 1}, \quad \infty, \quad \infty, \quad \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$$

$$H(s) = \frac{R_1 R_3 g_m (C_L L_L R_L s^2 + L_L s + R_L)}{(C_1 R_1 s + R_1 g_m + 1) (C_3 C_L L_L R_3 R_L s^3 + C_3 L_L R_3 s^2 + C_3 R_3 R_L s + C_L L_L R_3 s^2 + C_L L_L R_L s^2 + L_L s + R_3 + R_L)}$$

$$10.278 \quad \text{INVALID-ORDER-278} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \quad \infty, \quad \frac{R_3}{C_3 R_3 s + 1}, \quad \infty, \quad \infty, \quad \frac{R_L (C_L L_L s^2 + 1)}{C_L L_L s^2 + C_L R_L s + 1} \right)$$

$$H(s) = \frac{R_1 R_3 R_L g_m (C_L L_L s^2 + 1)}{(C_1 R_1 s + R_1 g_m + 1) (C_3 C_L L_L R_3 R_L s^3 + C_3 R_3 R_L s + C_L L_L R_3 s^2 + C_L L_L R_L s^2 + C_L R_3 R_L s + R_3 + R_L)}$$

$$10.279 \quad \text{INVALID-ORDER-279} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \quad \infty, \quad R_3 + \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad \frac{1}{C_L s} \right)$$

$$H(s) = \frac{R_1 g_m (C_3 R_3 s + 1)}{s (C_1 R_1 s + R_1 g_m + 1) (C_3 C_L R_3 s + C_3 + C_L)}$$

$$10.280 \quad \text{INVALID-ORDER-280} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \quad \infty, \quad R_3 + \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad \frac{R_L}{C_L R_L s + 1} \right)$$

$$H(s) = \frac{R_1 R_L g_m (C_3 R_3 s + 1)}{(C_1 R_1 s + R_1 g_m + 1) (C_3 C_L R_3 R_L s^2 + C_3 R_3 s + C_3 R_L s + C_L R_L s + 1)}$$

$$10.281 \quad \text{INVALID-ORDER-281} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \quad \infty, \quad R_3 + \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{R_1 g_m (C_3 R_3 s + 1) (C_L R_L s + 1)}{s (C_1 R_1 s + R_1 g_m + 1) (C_3 C_L R_3 s + C_3 C_L R_L s + C_3 + C_L)}$$

$$10.282 \quad \text{INVALID-ORDER-282} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \quad \infty, \quad R_3 + \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad L_L s + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{R_1 g_m (C_3 R_3 s + 1) (C_L L_L s^2 + 1)}{s (C_1 R_1 s + R_1 g_m + 1) (C_3 C_L L_L s^2 + C_3 C_L R_3 s + C_3 + C_L)}$$

$$10.283 \quad \text{INVALID-ORDER-283} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \quad \infty, \quad R_3 + \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad \frac{L_L s}{C_L L_L s^2 + 1} \right)$$

$$H(s) = \frac{L_L R_1 g_m s (C_3 R_3 s + 1)}{(C_1 R_1 s + R_1 g_m + 1) (C_3 C_L L_L R_3 s^3 + C_3 L_L s^2 + C_3 R_3 s + C_L L_L s^2 + 1)}$$

$$10.284 \quad \text{INVALID-ORDER-284} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \quad \infty, \quad R_3 + \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad L_L s + R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{R_1 g_m (C_3 R_3 s + 1) (C_L L_L s^2 + C_L R_L s + 1)}{s (C_1 R_1 s + R_1 g_m + 1) (C_3 C_L L_L s^2 + C_3 C_L R_3 s + C_3 C_L R_L s + C_3 + C_L)}$$

$$10.285 \quad \text{INVALID-ORDER-285} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \quad \infty, \quad R_3 + \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad \frac{L_L R_L s}{C_L L_L R_L s^2 + L_L s + R_L} \right)$$

$$H(s) = \frac{L_L R_1 R_L g_m s (C_3 R_3 s + 1)}{(C_1 R_1 s + R_1 g_m + 1) (C_3 C_L L_L R_3 R_L s^3 + C_3 L_L R_3 s^2 + C_3 L_L R_L s^2 + C_3 R_3 R_L s + C_L L_L R_L s^2 + L_L s + R_L)}$$

$$10.286 \quad \text{INVALID-ORDER-286} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \quad \infty, \quad R_3 + \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$$

$$H(s) = \frac{R_1 g_m (C_3 R_3 s + 1) (C_L L_L R_L s^2 + L_L s + R_L)}{(C_1 R_1 s + R_1 g_m + 1) (C_3 C_L L_L R_3 s^3 + C_3 C_L L_L R_L s^3 + C_3 L_L s^2 + C_3 R_3 s + C_3 R_L s + C_L L_L s^2 + 1)}$$

$$10.287 \quad \text{INVALID-ORDER-287} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \quad \infty, \quad R_3 + \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad \frac{R_L (C_L L_L s^2 + 1)}{C_L L_L s^2 + C_L R_L s + 1} \right)$$

$$H(s) = \frac{R_1 R_L g_m (C_3 R_3 s + 1) (C_L L_L s^2 + 1)}{(C_1 R_1 s + R_1 g_m + 1) (C_3 C_L L_L R_3 s^3 + C_3 C_L L_L R_L s^3 + C_3 C_L R_3 R_L s^2 + C_3 R_3 s + C_3 R_L s + C_L L_L s^2 + C_L R_L s + 1)}$$

$$10.288 \quad \text{INVALID-ORDER-288} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \quad \infty, \quad L_3 s + \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad R_L \right)$$

$$H(s) = \frac{R_1 R_L g_m (C_3 L_3 s^2 + 1)}{(C_1 R_1 s + R_1 g_m + 1) (C_3 L_3 s^2 + C_3 R_L s + 1)}$$

$$10.289 \quad \text{INVALID-ORDER-289} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \quad \infty, \quad L_3 s + \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad \frac{1}{C_L s} \right)$$

$$H(s) = \frac{R_1 g_m (C_3 L_3 s^2 + 1)}{s (C_1 R_1 s + R_1 g_m + 1) (C_3 C_L L_3 s^2 + C_3 + C_L)}$$

$$10.290 \quad \text{INVALID-ORDER-290} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \quad \infty, \quad L_3 s + \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad \frac{R_L}{C_L R_L s + 1} \right)$$

$$H(s) = \frac{R_1 R_L g_m (C_3 L_3 s^2 + 1)}{(C_1 R_1 s + R_1 g_m + 1) (C_3 C_L L_3 R_L s^3 + C_3 L_3 s^2 + C_3 R_L s + C_L R_L s + 1)}$$

$$10.291 \quad \text{INVALID-ORDER-291} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \quad \infty, \quad L_3 s + \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{R_1 g_m (C_3 L_3 s^2 + 1) (C_L R_L s + 1)}{s (C_1 R_1 s + R_1 g_m + 1) (C_3 C_L L_3 s^2 + C_3 C_L R_L s + C_3 + C_L)}$$

$$10.292 \quad \text{INVALID-ORDER-292} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \quad \infty, \quad L_3 s + \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad L_L s + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{R_1 g_m (C_3 L_3 s^2 + 1) (C_L L_L s^2 + 1)}{s (C_1 R_1 s + R_1 g_m + 1) (C_3 C_L L_3 s^2 + C_3 C_L L_L s^2 + C_3 + C_L)}$$

$$10.293 \quad \text{INVALID-ORDER-293} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \quad \infty, \quad L_3 s + \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad \frac{L_L s}{C_L L_L s^2 + 1} \right)$$

$$H(s) = \frac{L_L R_1 g_m s (C_3 L_3 s^2 + 1)}{(C_1 R_1 s + R_1 g_m + 1) (C_3 C_L L_3 L_L s^4 + C_3 L_3 s^2 + C_3 L_L s^2 + C_L L_L s^2 + 1)}$$

$$10.294 \quad \text{INVALID-ORDER-294} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \quad \infty, \quad L_3 s + \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad L_L s + R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{R_1 g_m (C_3 L_3 s^2 + 1) (C_L L_L s^2 + C_L R_L s + 1)}{s (C_1 R_1 s + R_1 g_m + 1) (C_3 C_L L_3 s^2 + C_3 C_L L_L s^2 + C_3 C_L R_L s + C_3 + C_L)}$$

$$10.295 \quad \text{INVALID-ORDER-295} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \quad \infty, \quad L_3 s + \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad \frac{L_L R_L s}{C_L L_L R_L s^2 + L_L s + R_L} \right)$$

$$H(s) = \frac{L_L R_1 R_L g_m s (C_3 L_3 s^2 + 1)}{(C_1 R_1 s + R_1 g_m + 1) (C_3 C_L L_3 L_L R_L s^4 + C_3 L_3 L_L s^3 + C_3 L_3 R_L s^2 + C_3 L_L R_L s^2 + C_L L_L R_L s^2 + L_L s + R_L)}$$

$$10.296 \quad \text{INVALID-ORDER-296} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \quad \infty, \quad L_3 s + \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$$

$$H(s) = \frac{R_1 g_m (C_3 L_3 s^2 + 1) (C_L L_L R_L s^2 + L_L s + R_L)}{(C_1 R_1 s + R_1 g_m + 1) (C_3 C_L L_3 L_L s^4 + C_3 C_L L_L R_L s^3 + C_3 L_3 s^2 + C_3 L_L s^2 + C_3 R_L s + C_L L_L s^2 + 1)}$$

$$10.297 \quad \text{INVALID-ORDER-297} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \quad \infty, \quad L_3 s + \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad \frac{R_L (C_L L_L s^2 + 1)}{C_L L_L s^2 + C_L R_L s + 1} \right)$$

$$H(s) = \frac{R_1 R_L g_m (C_3 L_3 s^2 + 1) (C_L L_L s^2 + 1)}{(C_1 R_1 s + R_1 g_m + 1) (C_3 C_L L_3 L_L s^4 + C_3 C_L L_3 R_L s^3 + C_3 C_L L_L R_L s^3 + C_3 L_3 s^2 + C_3 R_L s + C_L L_L s^2 + C_L R_L s + 1)}$$

$$10.298 \quad \text{INVALID-ORDER-298} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \quad \infty, \quad \frac{L_3 s}{C_3 L_3 s^2 + 1}, \quad \infty, \quad \infty, \quad R_L \right)$$

$$H(s) = \frac{L_3 R_1 R_L g_m s}{(C_1 R_1 s + R_1 g_m + 1) (C_3 L_3 R_L s^2 + L_3 s + R_L)}$$

$$10.299 \quad \text{INVALID-ORDER-299} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \quad \infty, \quad \frac{L_3 s}{C_3 L_3 s^2 + 1}, \quad \infty, \quad \infty, \quad \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_3 R_1 g_m s}{(C_1 R_1 s + R_1 g_m + 1) (C_3 L_3 s^2 + C_L L_3 s^2 + 1)}$$

$$10.300 \quad \text{INVALID-ORDER-300} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \quad \infty, \quad \frac{L_3 s}{C_3 L_3 s^2 + 1}, \quad \infty, \quad \infty, \quad \frac{R_L}{C_L R_L s + 1} \right)$$

$$H(s) = \frac{L_3 R_1 R_L g_m s}{(C_1 R_1 s + R_1 g_m + 1) (C_3 L_3 R_L s^2 + C_L L_3 R_L s^2 + L_3 s + R_L)}$$

$$10.301 \quad \text{INVALID-ORDER-301} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \quad \infty, \quad \frac{L_3 s}{C_3 L_3 s^2 + 1}, \quad \infty, \quad \infty, \quad R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_3 R_1 g_m s (C_L R_L s + 1)}{(C_1 R_1 s + R_1 g_m + 1) (C_3 C_L L_3 R_L s^3 + C_3 L_3 s^2 + C_L L_3 s^2 + C_L R_L s + 1)}$$

$$10.302 \quad \text{INVALID-ORDER-302} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \quad \infty, \quad \frac{L_3 s}{C_3 L_3 s^2 + 1}, \quad \infty, \quad \infty, \quad L_L s + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_3 R_1 g_m s (C_L L_L s^2 + 1)}{(C_1 R_1 s + R_1 g_m + 1) (C_3 C_L L_3 L_L s^4 + C_3 L_3 s^2 + C_L L_3 s^2 + C_L L_L s^2 + 1)}$$

$$10.303 \quad \text{INVALID-ORDER-303} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \quad \infty, \quad \frac{L_3 s}{C_3 L_3 s^2 + 1}, \quad \infty, \quad \infty, \quad \frac{L_L s}{C_L L_L s^2 + 1} \right)$$

$$H(s) = \frac{L_3 L_L R_1 g_m s}{(C_1 R_1 s + R_1 g_m + 1) (C_3 L_3 L_L s^2 + C_L L_3 L_L s^2 + L_3 + L_L)}$$

$$10.304 \quad \text{INVALID-ORDER-304} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \quad \infty, \quad \frac{L_3 s}{C_3 L_3 s^2 + 1}, \quad \infty, \quad \infty, \quad L_L s + R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_3 R_1 g_m s (C_L L_L s^2 + C_L R_L s + 1)}{(C_1 R_1 s + R_1 g_m + 1) (C_3 C_L L_3 L_L s^4 + C_3 C_L L_3 R_L s^3 + C_3 L_3 s^2 + C_L L_3 s^2 + C_L L_L s^2 + C_L R_L s + 1)}$$

$$10.305 \quad \text{INVALID-ORDER-305} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \quad \infty, \quad \frac{L_3 s}{C_3 L_3 s^2 + 1}, \quad \infty, \quad \infty, \quad \frac{L_L R_L s}{C_L L_L R_L s^2 + L_L s + R_L} \right)$$

$$H(s) = \frac{L_3 L_L R_1 R_L g_m s}{(C_1 R_1 s + R_1 g_m + 1) (C_3 L_3 L_L R_L s^2 + C_L L_3 L_L R_L s^2 + L_3 L_L s + L_3 R_L + L_L R_L)}$$

$$10.306 \quad \text{INVALID-ORDER-306} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \quad \infty, \quad \frac{L_3 s}{C_3 L_3 s^2 + 1}, \quad \infty, \quad \infty, \quad \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$$

$$H(s) = \frac{L_3 R_1 g_m s (C_L L_L R_L s^2 + L_L s + R_L)}{(C_1 R_1 s + R_1 g_m + 1) (C_3 C_L L_3 L_L R_L s^4 + C_3 L_3 L_L s^3 + C_3 L_3 R_L s^2 + C_L L_3 L_L s^3 + C_L L_L R_L s^2 + L_3 s + L_L s + R_L)}$$

$$10.307 \quad \text{INVALID-ORDER-307} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \quad \infty, \quad \frac{L_3 s}{C_3 L_3 s^2 + 1}, \quad \infty, \quad \infty, \quad \frac{R_L (C_L L_L s^2 + 1)}{C_L L_L s^2 + C_L R_L s + 1} \right)$$

$$H(s) = \frac{L_3 R_1 R_L g_m s (C_L L_L s^2 + 1)}{(C_1 R_1 s + R_1 g_m + 1) (C_3 C_L L_3 L_L R_L s^4 + C_3 L_3 R_L s^2 + C_L L_3 L_L s^3 + C_L L_3 R_L s^2 + C_L L_L R_L s^2 + L_3 s + R_L)}$$

$$10.308 \quad \text{INVALID-ORDER-308} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \quad \infty, \quad L_3 s + R_3 + \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad R_L \right)$$

$$H(s) = \frac{R_1 R_L g_m (C_3 L_3 s^2 + C_3 R_3 s + 1)}{(C_1 R_1 s + R_1 g_m + 1) (C_3 L_3 s^2 + C_3 R_3 s + C_3 R_L s + 1)}$$

$$10.309 \quad \text{INVALID-ORDER-309} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \quad \infty, \quad L_3 s + R_3 + \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad \frac{1}{C_L s} \right)$$

$$H(s) = \frac{R_1 g_m (C_3 L_3 s^2 + C_3 R_3 s + 1)}{s (C_1 R_1 s + R_1 g_m + 1) (C_3 C_L L_3 s^2 + C_3 C_L R_3 s + C_3 + C_L)}$$

$$10.310 \quad \text{INVALID-ORDER-310} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \quad \infty, \quad L_3 s + R_3 + \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad \frac{R_L}{C_L R_L s + 1} \right)$$

$$H(s) = \frac{R_1 R_L g_m (C_3 L_3 s^2 + C_3 R_3 s + 1)}{(C_1 R_1 s + R_1 g_m + 1) (C_3 C_L L_3 R_L s^3 + C_3 C_L R_3 R_L s^2 + C_3 L_3 s^2 + C_3 R_3 s + C_3 R_L s + C_L R_L s + 1)}$$

$$10.311 \quad \text{INVALID-ORDER-311} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \quad \infty, \quad L_3 s + R_3 + \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{R_1 g_m (C_L R_L s + 1) (C_3 L_3 s^2 + C_3 R_3 s + 1)}{s (C_1 R_1 s + R_1 g_m + 1) (C_3 C_L L_3 s^2 + C_3 C_L R_3 s + C_3 C_L R_L s + C_3 + C_L)}$$

$$10.312 \quad \text{INVALID-ORDER-312} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \quad \infty, \quad L_3 s + R_3 + \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad L_L s + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{R_1 g_m (C_L L_L s^2 + 1) (C_3 L_3 s^2 + C_3 R_3 s + 1)}{s (C_1 R_1 s + R_1 g_m + 1) (C_3 C_L L_3 s^2 + C_3 C_L L_L s^2 + C_3 C_L R_3 s + C_3 + C_L)}$$

$$10.313 \quad \text{INVALID-ORDER-313} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \quad \infty, \quad L_3 s + R_3 + \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad \frac{L_L s}{C_L L_L s^2 + 1} \right)$$

$$H(s) = \frac{L_L R_1 g_m s (C_3 L_3 s^2 + C_3 R_3 s + 1)}{(C_1 R_1 s + R_1 g_m + 1) (C_3 C_L L_3 L_L s^4 + C_3 C_L L_L R_3 s^3 + C_3 L_3 s^2 + C_3 L_L s^2 + C_3 R_3 s + C_L L_L s^2 + 1)}$$

$$10.314 \quad \text{INVALID-ORDER-314} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \quad \infty, \quad L_3 s + R_3 + \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad L_L s + R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{R_1 g_m (C_3 L_3 s^2 + C_3 R_3 s + 1) (C_L L_L s^2 + C_L R_L s + 1)}{s (C_1 R_1 s + R_1 g_m + 1) (C_3 C_L L_3 s^2 + C_3 C_L L_L s^2 + C_3 C_L R_3 s + C_3 C_L R_L s + C_3 + C_L)}$$

$$10.315 \quad \text{INVALID-ORDER-315} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \quad \infty, \quad L_3 s + R_3 + \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad \frac{L_L R_L s}{C_L L_L R_L s^2 + L_L s + R_L} \right)$$

$$H(s) = \frac{L_L R_1 R_L g_m s (C_3 L_3 s^2 + C_3 R_3 s + 1)}{(C_1 R_1 s + R_1 g_m + 1) (C_3 C_L L_3 L_L R_L s^4 + C_3 C_L L_L R_3 R_L s^3 + C_3 L_3 L_L s^3 + C_3 L_3 R_L s^2 + C_3 L_L R_3 s^2 + C_3 L_L R_L s^2 + C_3 R_3 R_L s + C_L L_L R_L s^2 + L_L s + R_L)}$$

$$10.316 \quad \text{INVALID-ORDER-316} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \quad \infty, \quad L_3 s + R_3 + \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$$

$$H(s) = \frac{R_1 g_m (C_3 L_3 s^2 + C_3 R_3 s + 1) (C_L L_L R_L s^2 + L_L s + R_L)}{(C_1 R_1 s + R_1 g_m + 1) (C_3 C_L L_3 L_L s^4 + C_3 C_L L_L R_3 s^3 + C_3 C_L L_L R_L s^3 + C_3 L_3 s^2 + C_3 L_L s^2 + C_3 R_3 s + C_3 R_L s + C_L L_L s^2 + 1)}$$

$$10.317 \quad \text{INVALID-ORDER-317} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \quad \infty, \quad L_3 s + R_3 + \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad \frac{R_L (C_L L_L s^2 + 1)}{C_L L_L s^2 + C_L R_L s + 1} \right)$$

$$H(s) = \frac{R_1 R_L g_m (C_L L_L s^2 + 1) (C_3 L_3 s^2 + C_3 R_3 s + 1)}{(C_1 R_1 s + R_1 g_m + 1) (C_3 C_L L_3 L_L s^4 + C_3 C_L L_3 R_L s^3 + C_3 C_L L_L R_3 s^3 + C_3 C_L L_L R_L s^3 + C_3 C_L R_3 R_L s^2 + C_3 L_3 s^2 + C_3 R_3 s + C_3 R_L s + C_L L_L s^2 + C_L R_L s + 1)}$$

$$10.318 \quad \text{INVALID-ORDER-318} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \quad \infty, \quad \frac{L_3 R_3 s}{C_3 L_3 R_3 s^2 + L_3 s + R_3}, \quad \infty, \quad \infty, \quad R_L \right)$$

$$H(s) = \frac{L_3 R_1 R_3 R_L g_m s}{(C_1 R_1 s + R_1 g_m + 1) (C_3 L_3 R_3 R_L s^2 + L_3 R_3 s + L_3 R_L s + R_3 R_L)}$$

$$10.319 \quad \text{INVALID-ORDER-319} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \quad \infty, \quad \frac{L_3 R_3 s}{C_3 L_3 R_3 s^2 + L_3 s + R_3}, \quad \infty, \quad \infty, \quad \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_3 R_1 R_3 g_m s}{(C_1 R_1 s + R_1 g_m + 1) (C_3 L_3 R_3 s^2 + C_L L_3 R_3 s^2 + L_3 s + R_3)}$$

$$10.320 \quad \text{INVALID-ORDER-320} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \quad \infty, \quad \frac{L_3 R_3 s}{C_3 L_3 R_3 s^2 + L_3 s + R_3}, \quad \infty, \quad \infty, \quad \frac{R_L}{C_L R_L s + 1} \right)$$

$$H(s) = \frac{L_3 R_1 R_3 R_L g_m s}{(C_1 R_1 s + R_1 g_m + 1) (C_3 L_3 R_3 R_L s^2 + C_L L_3 R_3 R_L s^2 + L_3 R_3 s + L_3 R_L s + R_3 R_L)}$$

$$10.321 \quad \text{INVALID-ORDER-321} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \quad \infty, \quad \frac{L_3 R_3 s}{C_3 L_3 R_3 s^2 + L_3 s + R_3}, \quad \infty, \quad \infty, \quad R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_3 R_1 R_3 g_m s (C_L R_L s + 1)}{(C_1 R_1 s + R_1 g_m + 1) (C_3 C_L L_3 R_3 R_L s^3 + C_3 L_3 R_3 s^2 + C_L L_3 R_3 s^2 + C_L L_3 R_L s^2 + C_L R_3 R_L s + L_3 s + R_3)}$$

$$10.322 \quad \text{INVALID-ORDER-322} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \quad \infty, \quad \frac{L_3 R_3 s}{C_3 L_3 R_3 s^2 + L_3 s + R_3}, \quad \infty, \quad \infty, \quad L_L s + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_3 R_1 R_3 g_m s (C_L L_L s^2 + 1)}{(C_1 R_1 s + R_1 g_m + 1) (C_3 C_L L_3 L_L R_3 s^4 + C_3 L_3 R_3 s^2 + C_L L_3 L_L s^3 + C_L L_3 R_3 s^2 + C_L L_L R_3 s^2 + L_3 s + R_3)}$$

$$10.323 \quad \text{INVALID-ORDER-323} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \quad \infty, \quad \frac{L_3 R_3 s}{C_3 L_3 R_3 s^2 + L_3 s + R_3}, \quad \infty, \quad \infty, \quad \frac{L_L s}{C_L L_L s^2 + 1} \right)$$

$$H(s) = \frac{L_3 L_L R_1 R_3 g_m s}{(C_1 R_1 s + R_1 g_m + 1) (C_3 L_3 L_L R_3 s^2 + C_L L_3 L_L R_3 s^2 + L_3 L_L s + L_3 R_3 + L_L R_3)}$$

$$10.324 \quad \text{INVALID-ORDER-324} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \quad \infty, \quad \frac{L_3 R_3 s}{C_3 L_3 R_3 s^2 + L_3 s + R_3}, \quad \infty, \quad \infty, \quad L_L s + R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_3 R_1 R_3 g_m s (C_L L_L s^2 + C_L R_L s + 1)}{(C_1 R_1 s + R_1 g_m + 1) (C_3 C_L L_3 L_L R_3 s^4 + C_3 C_L L_3 R_3 R_L s^3 + C_3 L_3 R_3 s^2 + C_L L_3 L_L s^3 + C_L L_3 R_3 s^2 + C_L L_3 R_L s^2 + C_L L_L R_3 s^2 + C_L R_3 R_L s + L_3 s + R_3)}$$

$$10.325 \quad \text{INVALID-ORDER-325} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \quad \infty, \quad \frac{L_3 R_3 s}{C_3 L_3 R_3 s^2 + L_3 s + R_3}, \quad \infty, \quad \infty, \quad \frac{L_L R_L s}{C_L L_L R_L s^2 + L_L s + R_L} \right)$$

$$H(s) = \frac{L_3 L_L R_1 R_3 R_L g_m s}{(C_1 R_1 s + R_1 g_m + 1) (C_3 L_3 L_L R_3 R_L s^2 + C_L L_3 L_L R_3 R_L s^2 + L_3 L_L R_3 s + L_3 L_L R_L s + L_3 R_3 R_L + L_L R_3 R_L)}$$

$$10.326 \quad \text{INVALID-ORDER-326} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \quad \infty, \quad \frac{L_3 R_3 s}{C_3 L_3 R_3 s^2 + L_3 s + R_3}, \quad \infty, \quad \infty, \quad \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$$

$$H(s) = \frac{L_3 R_1 R_3 g_m s (C_L L_L R_L s^2 + L_L s + R_L)}{(C_1 R_1 s + R_1 g_m + 1) (C_3 C_L L_3 L_L R_3 R_L s^4 + C_3 L_3 L_L R_3 s^3 + C_3 L_3 R_3 R_L s^2 + C_L L_3 L_L R_3 s^3 + C_L L_3 L_L R_L s^3 + C_L L_L R_3 R_L s^2 + L_3 L_L s^2 + L_3 R_3 s + L_3 R_L s + L_L R_3 s + R_3 R_L)}$$

$$10.327 \quad \text{INVALID-ORDER-327} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \quad \infty, \quad \frac{L_3 R_3 s}{C_3 L_3 R_3 s^2 + L_3 s + R_3}, \quad \infty, \quad \infty, \quad \frac{R_L (C_L L_L s^2 + 1)}{C_L L_L s^2 + C_L R_L s + 1} \right)$$

$$H(s) = \frac{L_3 R_1 R_3 R_L g_m s (C_L L_L s^2 + 1)}{(C_1 R_1 s + R_1 g_m + 1) (C_3 C_L L_3 L_L R_3 R_L s^4 + C_3 L_3 R_3 R_L s^2 + C_L L_3 L_L R_3 s^3 + C_L L_3 L_L R_L s^3 + C_L L_3 R_3 R_L s^2 + C_L L_L R_3 R_L s^2 + L_3 R_3 s + L_3 R_L s + R_3 R_L)}$$

$$10.328 \quad \text{INVALID-ORDER-328} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \quad \infty, \quad \frac{L_3 s}{C_3 L_3 s^2 + 1} + R_3, \quad \infty, \quad \infty, \quad R_L \right)$$

$$H(s) = \frac{R_1 R_L g_m (C_3 L_3 R_3 s^2 + L_3 s + R_3)}{(C_1 R_1 s + R_1 g_m + 1) (C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + L_3 s + R_3 + R_L)}$$

$$10.329 \quad \text{INVALID-ORDER-329} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \quad \infty, \quad \frac{L_3 s}{C_3 L_3 s^2 + 1} + R_3, \quad \infty, \quad \infty, \quad \frac{1}{C_L s} \right)$$

$$H(s) = \frac{R_1 g_m (C_3 L_3 R_3 s^2 + L_3 s + R_3)}{(C_1 R_1 s + R_1 g_m + 1) (C_3 C_L L_3 R_3 s^3 + C_3 L_3 s^2 + C_L L_3 s^2 + C_L R_3 s + 1)}$$

$$10.330 \quad \text{INVALID-ORDER-330} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \quad \infty, \quad \frac{L_3 s}{C_3 L_3 s^2 + 1} + R_3, \quad \infty, \quad \infty, \quad \frac{R_L}{C_L R_L s + 1} \right)$$

$$H(s) = \frac{R_1 R_L g_m (C_3 L_3 R_3 s^2 + L_3 s + R_3)}{(C_1 R_1 s + R_1 g_m + 1) (C_3 C_L L_3 R_3 R_L s^3 + C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + C_L L_3 R_L s^2 + C_L R_3 R_L s + L_3 s + R_3 + R_L)}$$

$$10.331 \quad \text{INVALID-ORDER-331} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \quad \infty, \quad \frac{L_3 s}{C_3 L_3 s^2 + 1} + R_3, \quad \infty, \quad \infty, \quad R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{R_1 g_m (C_L R_L s + 1) (C_3 L_3 R_3 s^2 + L_3 s + R_3)}{(C_1 R_1 s + R_1 g_m + 1) (C_3 C_L L_3 R_3 s^3 + C_3 C_L L_3 R_L s^3 + C_3 L_3 s^2 + C_L L_3 s^2 + C_L R_3 s + C_L R_L s + 1)}$$

$$10.332 \quad \text{INVALID-ORDER-332} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \quad \infty, \quad \frac{L_3 s}{C_3 L_3 s^2 + 1} + R_3, \quad \infty, \quad \infty, \quad L_L s + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{R_1 g_m (C_L L_L s^2 + 1) (C_3 L_3 R_3 s^2 + L_3 s + R_3)}{(C_1 R_1 s + R_1 g_m + 1) (C_3 C_L L_3 L_L s^4 + C_3 C_L L_3 R_3 s^3 + C_3 L_3 s^2 + C_L L_3 s^2 + C_L L_L s^2 + C_L R_3 s + 1)}$$

$$10.333 \quad \text{INVALID-ORDER-333} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \quad \infty, \quad \frac{L_3 s}{C_3 L_3 s^2 + 1} + R_3, \quad \infty, \quad \infty, \quad \frac{L_L s}{C_L L_L s^2 + 1} \right)$$

$$H(s) = \frac{L_L R_1 g_m s (C_3 L_3 R_3 s^2 + L_3 s + R_3)}{(C_1 R_1 s + R_1 g_m + 1) (C_3 C_L L_3 L_L R_3 s^4 + C_3 L_3 L_L s^3 + C_3 L_3 R_3 s^2 + C_L L_3 L_L s^3 + C_L L_L R_3 s^2 + L_3 s + L_L s + R_3)}$$

$$10.334 \quad \text{INVALID-ORDER-334} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \quad \infty, \quad \frac{L_3 s}{C_3 L_3 s^2 + 1} + R_3, \quad \infty, \quad \infty, \quad L_L s + R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{R_1 g_m (C_L L_L s^2 + C_L R_L s + 1) (C_3 L_3 R_3 s^2 + L_3 s + R_3)}{(C_1 R_1 s + R_1 g_m + 1) (C_3 C_L L_3 L_L s^4 + C_3 C_L L_3 R_3 s^3 + C_3 C_L L_3 R_L s^3 + C_3 L_3 s^2 + C_L L_3 s^2 + C_L L_L s^2 + C_L R_3 s + C_L R_L s + 1)}$$

$$10.335 \quad \text{INVALID-ORDER-335} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \quad \infty, \quad \frac{L_3 s}{C_3 L_3 s^2 + 1} + R_3, \quad \infty, \quad \infty, \quad \frac{L_L R_L s}{C_L L_L R_L s^2 + L_L s + R_L} \right)$$

$$H(s) = \frac{L_L R_1 R_L g_m s (C_3 L_3 R_3 s^2 + L_3 s + R_3)}{(C_1 R_1 s + R_1 g_m + 1) (C_3 C_L L_3 L_L R_3 R_L s^4 + C_3 L_3 L_L R_3 s^3 + C_3 L_3 L_L R_L s^3 + C_3 L_3 R_3 R_L s^2 + C_L L_3 L_L R_L s^3 + C_L L_L R_3 R_L s^2 + L_3 L_L s^2 + L_3 R_L s + L_L R_3 s + L_L R_L s + R_3 R_L)}$$

$$10.336 \quad \text{INVALID-ORDER-336} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \quad \infty, \quad \frac{L_3 s}{C_3 L_3 s^2 + 1} + R_3, \quad \infty, \quad \infty, \quad \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$$

$$H(s) = \frac{R_1 g_m (C_3 L_3 R_3 s^2 + L_3 s + R_3) (C_L L_L R_L s^2 + L_L s + R_L)}{(C_1 R_1 s + R_1 g_m + 1) (C_3 C_L L_3 L_L R_3 s^4 + C_3 C_L L_3 L_L R_L s^4 + C_3 L_3 L_L s^3 + C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + C_L L_3 L_L s^3 + C_L L_L R_3 s^2 + C_L L_L R_L s^2 + L_3 s + L_L s + R_3 + R_L)}$$

10.337 INVALID-ORDER-337 $Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \infty, \frac{L_3 s}{C_3 L_3 s^2 + 1} + R_3, \infty, \infty, \frac{R_L (C_L L_L s^2 + 1)}{C_L L_L s^2 + C_L R_L s + 1} \right)$

$$H(s) = \frac{R_1 R_L g_m (C_L L_L s^2 + 1) (C_3 L_3 R_3 s^2 + L_3 s + R_3)}{(C_1 R_1 s + R_1 g_m + 1) (C_3 C_L L_3 L_L R_3 s^4 + C_3 C_L L_3 L_L R_L s^4 + C_3 C_L L_3 R_3 R_L s^3 + C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + C_L L_3 L_L s^3 + C_L L_3 R_L s^2 + C_L L_L R_3 s^2 + C_L L_L R_L s^2 + C_L R_3 R_L s + L_3 s + R_3 + R_L)}$$

10.338 INVALID-ORDER-338 $Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \infty, \frac{R_3 (C_3 L_3 s^2 + 1)}{C_3 L_3 s^2 + C_3 R_3 s + 1}, \infty, \infty, R_L \right)$

$$H(s) = \frac{R_1 R_3 R_L g_m (C_3 L_3 s^2 + 1)}{(C_1 R_1 s + R_1 g_m + 1) (C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + C_3 R_3 R_L s + R_3 + R_L)}$$

10.339 INVALID-ORDER-339 $Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \infty, \frac{R_3 (C_3 L_3 s^2 + 1)}{C_3 L_3 s^2 + C_3 R_3 s + 1}, \infty, \infty, \frac{1}{C_L s} \right)$

$$H(s) = \frac{R_1 R_3 g_m (C_3 L_3 s^2 + 1)}{(C_1 R_1 s + R_1 g_m + 1) (C_3 C_L L_3 R_3 s^3 + C_3 L_3 s^2 + C_3 R_3 s + C_L R_3 s + 1)}$$

10.340 INVALID-ORDER-340 $Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \infty, \frac{R_3 (C_3 L_3 s^2 + 1)}{C_3 L_3 s^2 + C_3 R_3 s + 1}, \infty, \infty, \frac{R_L}{C_L R_L s + 1} \right)$

$$H(s) = \frac{R_1 R_3 R_L g_m (C_3 L_3 s^2 + 1)}{(C_1 R_1 s + R_1 g_m + 1) (C_3 C_L L_3 R_3 R_L s^3 + C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + C_3 R_3 R_L s + C_L R_3 R_L s + R_3 + R_L)}$$

10.341 INVALID-ORDER-341 $Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \infty, \frac{R_3 (C_3 L_3 s^2 + 1)}{C_3 L_3 s^2 + C_3 R_3 s + 1}, \infty, \infty, R_L + \frac{1}{C_L s} \right)$

$$H(s) = \frac{R_1 R_3 g_m (C_3 L_3 s^2 + 1) (C_L R_L s + 1)}{(C_1 R_1 s + R_1 g_m + 1) (C_3 C_L L_3 R_3 s^3 + C_3 C_L L_3 R_L s^3 + C_3 C_L R_3 R_L s^2 + C_3 L_3 s^2 + C_3 R_3 s + C_L R_3 s + C_L R_L s + 1)}$$

10.342 INVALID-ORDER-342 $Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \infty, \frac{R_3 (C_3 L_3 s^2 + 1)}{C_3 L_3 s^2 + C_3 R_3 s + 1}, \infty, \infty, L_L s + \frac{1}{C_L s} \right)$

$$H(s) = \frac{R_1 R_3 g_m (C_3 L_3 s^2 + 1) (C_L L_L s^2 + 1)}{(C_1 R_1 s + R_1 g_m + 1) (C_3 C_L L_3 L_L s^4 + C_3 C_L L_3 R_3 s^3 + C_3 C_L L_L R_3 s^3 + C_3 L_3 s^2 + C_3 R_3 s + C_L L_L s^2 + C_L R_3 s + 1)}$$

10.343 INVALID-ORDER-343 $Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \infty, \frac{R_3 (C_3 L_3 s^2 + 1)}{C_3 L_3 s^2 + C_3 R_3 s + 1}, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} \right)$

$$H(s) = \frac{L_L R_1 R_3 g_m s (C_3 L_3 s^2 + 1)}{(C_1 R_1 s + R_1 g_m + 1) (C_3 C_L L_3 L_L R_3 s^4 + C_3 L_3 L_L s^3 + C_3 L_3 R_3 s^2 + C_3 L_L R_3 s^2 + C_L L_L R_3 s^2 + L_L s + R_3)}$$

10.344 INVALID-ORDER-344 $Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \infty, \frac{R_3 (C_3 L_3 s^2 + 1)}{C_3 L_3 s^2 + C_3 R_3 s + 1}, \infty, \infty, L_L s + R_L + \frac{1}{C_L s} \right)$

$$H(s) = \frac{R_1 R_3 g_m (C_3 L_3 s^2 + 1) (C_L L_L s^2 + C_L R_L s + 1)}{(C_1 R_1 s + R_1 g_m + 1) (C_3 C_L L_3 L_L s^4 + C_3 C_L L_3 R_3 s^3 + C_3 C_L L_3 R_L s^3 + C_3 C_L L_L R_3 s^3 + C_3 C_L R_3 R_L s^2 + C_3 L_3 s^2 + C_3 R_3 s + C_L L_L s^2 + C_L R_3 s + C_L R_L s + 1)}$$

10.345 INVALID-ORDER-345 $Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \infty, \frac{R_3 (C_3 L_3 s^2 + 1)}{C_3 L_3 s^2 + C_3 R_3 s + 1}, \infty, \infty, \frac{L_L R_L s}{C_L L_L R_L s^2 + L_L s + R_L} \right)$

$$H(s) = \frac{L_L R_1 R_3 R_L g_m s (C_3 L_3 s^2 + 1)}{(C_1 R_1 s + R_1 g_m + 1) (C_3 C_L L_3 L_L R_3 R_L s^4 + C_3 L_3 L_L R_3 s^3 + C_3 L_3 L_L R_L s^3 + C_3 L_3 R_3 R_L s^2 + C_3 L_L R_3 R_L s^2 + C_L L_L R_3 R_L s^2 + L_L R_3 s + L_L R_L s + R_3 R_L)}$$

10.346 INVALID-ORDER-346 $Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \infty, \frac{R_3(C_3 L_3 s^2 + 1)}{C_3 L_3 s^2 + C_3 R_3 s + 1}, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$

$$H(s) = \frac{R_1 R_3 g_m (C_3 L_3 s^2 + 1) (C_L L_L R_L s^2 + L_L s + R_L)}{(C_1 R_1 s + R_1 g_m + 1) (C_3 C_L L_3 L_L R_3 s^4 + C_3 C_L L_3 L_L R_L s^4 + C_3 C_L L_L R_3 R_L s^3 + C_3 L_3 L_L s^3 + C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + C_3 L_L R_3 s^2 + C_3 R_3 R_L s + C_L L_L R_3 s^2 + C_L L_L R_L s^2 + L_L s + R_3 + R_L)}$$

10.347 INVALID-ORDER-347 $Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \infty, \frac{R_3(C_3 L_3 s^2 + 1)}{C_3 L_3 s^2 + C_3 R_3 s + 1}, \infty, \infty, \frac{R_L(C_L L_L s^2 + 1)}{C_L L_L s^2 + C_L R_L s + 1} \right)$

$$H(s) = \frac{R_1 R_3 R_L g_m (C_3 L_3 s^2 + 1) (C_L L_L s^2 + 1)}{(C_1 R_1 s + R_1 g_m + 1) (C_3 C_L L_3 L_L R_3 s^4 + C_3 C_L L_3 L_L R_L s^4 + C_3 C_L L_3 R_3 R_L s^3 + C_3 C_L L_L R_3 R_L s^3 + C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + C_3 R_3 R_L s + C_L L_L R_3 s^2 + C_L L_L R_L s^2 + C_L R_3 R_L s + R_3 + R_L)}$$

10.348 INVALID-ORDER-348 $Z(s) = \left(R_1 + \frac{1}{C_1 s}, \infty, R_3, \infty, \infty, R_L \right)$

$$H(s) = \frac{R_3 R_L g_m (C_1 R_1 s + 1)}{(R_3 + R_L) (C_1 R_1 g_m s + C_1 s + g_m)}$$

10.349 INVALID-ORDER-349 $Z(s) = \left(R_1 + \frac{1}{C_1 s}, \infty, R_3, \infty, \infty, L_L s + \frac{1}{C_L s} \right)$

$$H(s) = \frac{R_3 g_m (C_1 R_1 s + 1) (C_L L_L s^2 + 1)}{(C_L L_L s^2 + C_L R_3 s + 1) (C_1 R_1 g_m s + C_1 s + g_m)}$$

10.350 INVALID-ORDER-350 $Z(s) = \left(R_1 + \frac{1}{C_1 s}, \infty, R_3, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} \right)$

$$H(s) = \frac{L_L R_3 g_m s (C_1 R_1 s + 1)}{(C_1 R_1 g_m s + C_1 s + g_m) (C_L L_L R_3 s^2 + L_L s + R_3)}$$

10.351 INVALID-ORDER-351 $Z(s) = \left(R_1 + \frac{1}{C_1 s}, \infty, R_3, \infty, \infty, L_L s + R_L + \frac{1}{C_L s} \right)$

$$H(s) = \frac{R_3 g_m (C_1 R_1 s + 1) (C_L L_L s^2 + C_L R_L s + 1)}{(C_1 R_1 g_m s + C_1 s + g_m) (C_L L_L s^2 + C_L R_3 s + C_L R_L s + 1)}$$

10.352 INVALID-ORDER-352 $Z(s) = \left(R_1 + \frac{1}{C_1 s}, \infty, R_3, \infty, \infty, \frac{L_L R_L s}{C_L L_L R_L s^2 + L_L s + R_L} \right)$

$$H(s) = \frac{L_L R_3 R_L g_m s (C_1 R_1 s + 1)}{(C_1 R_1 g_m s + C_1 s + g_m) (C_L L_L R_3 R_L s^2 + L_L R_3 s + L_L R_L s + R_3 R_L)}$$

10.353 INVALID-ORDER-353 $Z(s) = \left(R_1 + \frac{1}{C_1 s}, \infty, R_3, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$

$$H(s) = \frac{R_3 g_m (C_1 R_1 s + 1) (C_L L_L R_L s^2 + L_L s + R_L)}{(C_1 R_1 g_m s + C_1 s + g_m) (C_L L_L R_3 s^2 + C_L L_L R_L s^2 + L_L s + R_3 + R_L)}$$

10.354 INVALID-ORDER-354 $Z(s) = \left(R_1 + \frac{1}{C_1 s}, \infty, R_3, \infty, \infty, \frac{R_L(C_L L_L s^2 + 1)}{C_L L_L s^2 + C_L R_L s + 1} \right)$

$$H(s) = \frac{R_3 R_L g_m (C_1 R_1 s + 1) (C_L L_L s^2 + 1)}{(C_1 R_1 g_m s + C_1 s + g_m) (C_L L_L R_3 s^2 + C_L L_L R_L s^2 + C_L R_3 R_L s + R_3 + R_L)}$$

$$10.355 \quad \text{INVALID-ORDER-355} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad \frac{1}{C_L s} \right)$$

$$H(s) = \frac{g_m (C_1 R_1 s + 1)}{s (C_3 + C_L) (C_1 R_1 g_m s + C_1 s + g_m)}$$

$$10.356 \quad \text{INVALID-ORDER-356} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{g_m (C_1 R_1 s + 1) (C_L R_L s + 1)}{s (C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L R_L s + C_3 + C_L)}$$

$$10.357 \quad \text{INVALID-ORDER-357} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad L_L s + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{g_m (C_1 R_1 s + 1) (C_L L_L s^2 + 1)}{s (C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_L s^2 + C_3 + C_L)}$$

$$10.358 \quad \text{INVALID-ORDER-358} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad \frac{L_L s}{C_L L_L s^2 + 1} \right)$$

$$H(s) = \frac{L_L g_m s (C_1 R_1 s + 1)}{(C_3 L_L s^2 + C_L L_L s^2 + 1) (C_1 R_1 g_m s + C_1 s + g_m)}$$

$$10.359 \quad \text{INVALID-ORDER-359} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad L_L s + R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{g_m (C_1 R_1 s + 1) (C_L L_L s^2 + C_L R_L s + 1)}{s (C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_L s^2 + C_3 C_L R_L s + C_3 + C_L)}$$

$$10.360 \quad \text{INVALID-ORDER-360} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad \frac{L_L R_L s}{C_L L_L R_L s^2 + L_L s + R_L} \right)$$

$$H(s) = \frac{L_L R_L g_m s (C_1 R_1 s + 1)}{(C_1 R_1 g_m s + C_1 s + g_m) (C_3 L_L R_L s^2 + C_L L_L R_L s^2 + L_L s + R_L)}$$

$$10.361 \quad \text{INVALID-ORDER-361} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$$

$$H(s) = \frac{g_m (C_1 R_1 s + 1) (C_L L_L R_L s^2 + L_L s + R_L)}{(C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_L R_L s^3 + C_3 L_L s^2 + C_3 R_L s + C_L L_L s^2 + 1)}$$

$$10.362 \quad \text{INVALID-ORDER-362} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad \frac{R_L (C_L L_L s^2 + 1)}{C_L L_L s^2 + C_L R_L s + 1} \right)$$

$$H(s) = \frac{R_L g_m (C_1 R_1 s + 1) (C_L L_L s^2 + 1)}{(C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_L R_L s^3 + C_3 R_L s + C_L L_L s^2 + C_L R_L s + 1)}$$

$$10.363 \quad \text{INVALID-ORDER-363} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \frac{R_3}{C_3 R_3 s + 1}, \quad \infty, \quad \infty, \quad R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{R_3 g_m (C_1 R_1 s + 1) (C_L R_L s + 1)}{(C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L R_3 R_L s^2 + C_3 R_3 s + C_L R_3 s + C_L R_L s + 1)}$$

$$10.364 \quad \text{INVALID-ORDER-364} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \frac{R_3}{C_3 R_3 s + 1}, \quad \infty, \quad \infty, \quad L_L s + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{R_3 g_m (C_1 R_1 s + 1) (C_L L_L s^2 + 1)}{(C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_L R_3 s^3 + C_3 R_3 s + C_L L_L s^2 + C_L R_3 s + 1)}$$

$$10.365 \quad \text{INVALID-ORDER-365} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \frac{R_3}{C_3 R_3 s + 1}, \quad \infty, \quad \infty, \quad \frac{L_L s}{C_L L_L s^2 + 1} \right)$$

$$H(s) = \frac{L_L R_3 g_m s (C_1 R_1 s + 1)}{(C_1 R_1 g_m s + C_1 s + g_m) (C_3 L_L R_3 s^2 + C_L L_L R_3 s^2 + L_L s + R_3)}$$

$$10.366 \quad \text{INVALID-ORDER-366} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \frac{R_3}{C_3 R_3 s + 1}, \quad \infty, \quad \infty, \quad L_L s + R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{R_3 g_m (C_1 R_1 s + 1) (C_L L_L s^2 + C_L R_L s + 1)}{(C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_L R_3 s^3 + C_3 C_L R_3 R_L s^2 + C_3 R_3 s + C_L L_L s^2 + C_L R_3 s + C_L R_L s + 1)}$$

$$10.367 \quad \text{INVALID-ORDER-367} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \frac{R_3}{C_3 R_3 s + 1}, \quad \infty, \quad \infty, \quad \frac{L_L R_L s}{C_L L_L R_L s^2 + L_L s + R_L} \right)$$

$$H(s) = \frac{L_L R_3 R_L g_m s (C_1 R_1 s + 1)}{(C_1 R_1 g_m s + C_1 s + g_m) (C_3 L_L R_3 R_L s^2 + C_L L_L R_3 R_L s^2 + L_L R_3 s + L_L R_L s + R_3 R_L)}$$

$$10.368 \quad \text{INVALID-ORDER-368} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \frac{R_3}{C_3 R_3 s + 1}, \quad \infty, \quad \infty, \quad \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$$

$$H(s) = \frac{R_3 g_m (C_1 R_1 s + 1) (C_L L_L R_L s^2 + L_L s + R_L)}{(C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_L R_3 R_L s^3 + C_3 L_L R_3 s^2 + C_3 R_3 R_L s + C_L L_L R_3 s^2 + C_L L_L R_L s^2 + L_L s + R_3 + R_L)}$$

$$10.369 \quad \text{INVALID-ORDER-369} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \frac{R_3}{C_3 R_3 s + 1}, \quad \infty, \quad \infty, \quad \frac{R_L (C_L L_L s^2 + 1)}{C_L L_L s^2 + C_L R_L s + 1} \right)$$

$$H(s) = \frac{R_3 R_L g_m (C_1 R_1 s + 1) (C_L L_L s^2 + 1)}{(C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_L R_3 R_L s^3 + C_3 R_3 R_L s + C_L L_L R_3 s^2 + C_L L_L R_L s^2 + C_L R_3 R_L s + R_3 + R_L)}$$

$$10.370 \quad \text{INVALID-ORDER-370} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \quad \infty, \quad R_3 + \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad \frac{1}{C_L s} \right)$$

$$H(s) = \frac{g_m (C_1 R_1 s + 1) (C_3 R_3 s + 1)}{s (C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L R_3 s + C_3 + C_L)}$$

$$10.371 \quad \text{INVALID-ORDER-371} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \quad \infty, \quad R_3 + \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad \frac{R_L}{C_L R_L s + 1} \right)$$

$$H(s) = \frac{R_L g_m (C_1 R_1 s + 1) (C_3 R_3 s + 1)}{(C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L R_3 R_L s^2 + C_3 R_3 s + C_3 R_L s + C_L R_L s + 1)}$$

$$10.372 \quad \text{INVALID-ORDER-372} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \quad \infty, \quad R_3 + \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{g_m (C_1 R_1 s + 1) (C_3 R_3 s + 1) (C_L R_L s + 1)}{s (C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L R_3 s + C_3 C_L R_L s + C_3 + C_L)}$$

$$\mathbf{10.373 \quad INVALID-ORDER-373} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \infty, R_3 + \frac{1}{C_3 s}, \infty, \infty, L_L s + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{g_m (C_1 R_1 s + 1) (C_3 R_3 s + 1) (C_L L_L s^2 + 1)}{s (C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_L s^2 + C_3 C_L R_3 s + C_3 + C_L)}$$

$$\mathbf{10.374 \quad INVALID-ORDER-374} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \infty, R_3 + \frac{1}{C_3 s}, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} \right)$$

$$H(s) = \frac{L_L g_m s (C_1 R_1 s + 1) (C_3 R_3 s + 1)}{(C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_L R_3 s^3 + C_3 L_L s^2 + C_3 R_3 s + C_L L_L s^2 + 1)}$$

$$\mathbf{10.375 \quad INVALID-ORDER-375} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \infty, R_3 + \frac{1}{C_3 s}, \infty, \infty, L_L s + R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{g_m (C_1 R_1 s + 1) (C_3 R_3 s + 1) (C_L L_L s^2 + C_L R_L s + 1)}{s (C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_L s^2 + C_3 C_L R_3 s + C_3 C_L R_L s + C_3 + C_L)}$$

$$\mathbf{10.376 \quad INVALID-ORDER-376} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \infty, R_3 + \frac{1}{C_3 s}, \infty, \infty, \frac{L_L R_L s}{C_L L_L R_L s^2 + L_L s + R_L} \right)$$

$$H(s) = \frac{L_L R_L g_m s (C_1 R_1 s + 1) (C_3 R_3 s + 1)}{(C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_L R_3 R_L s^3 + C_3 L_L R_3 s^2 + C_3 L_L R_L s^2 + C_3 R_3 R_L s + C_L L_L R_L s^2 + L_L s + R_L)}$$

$$\mathbf{10.377 \quad INVALID-ORDER-377} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \infty, R_3 + \frac{1}{C_3 s}, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$$

$$H(s) = \frac{g_m (C_1 R_1 s + 1) (C_3 R_3 s + 1) (C_L L_L R_L s^2 + L_L s + R_L)}{(C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_L R_3 s^3 + C_3 C_L L_L R_L s^3 + C_3 L_L s^2 + C_3 R_3 s + C_3 R_L s + C_L L_L s^2 + 1)}$$

$$\mathbf{10.378 \quad INVALID-ORDER-378} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \infty, R_3 + \frac{1}{C_3 s}, \infty, \infty, \frac{R_L (C_L L_L s^2 + 1)}{C_L L_L s^2 + C_L R_L s + 1} \right)$$

$$H(s) = \frac{R_L g_m (C_1 R_1 s + 1) (C_3 R_3 s + 1) (C_L L_L s^2 + 1)}{(C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_L R_3 s^3 + C_3 C_L L_L R_L s^3 + C_3 C_L R_3 R_L s^2 + C_3 R_3 s + C_3 R_L s + C_L L_L s^2 + C_L R_L s + 1)}$$

$$\mathbf{10.379 \quad INVALID-ORDER-379} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \infty, L_3 s + \frac{1}{C_3 s}, \infty, \infty, R_L \right)$$

$$H(s) = \frac{R_L g_m (C_1 R_1 s + 1) (C_3 L_3 s^2 + 1)}{(C_3 L_3 s^2 + C_3 R_L s + 1) (C_1 R_1 g_m s + C_1 s + g_m)}$$

$$\mathbf{10.380 \quad INVALID-ORDER-380} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \infty, L_3 s + \frac{1}{C_3 s}, \infty, \infty, \frac{1}{C_L s} \right)$$

$$H(s) = \frac{g_m (C_1 R_1 s + 1) (C_3 L_3 s^2 + 1)}{s (C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_3 s^2 + C_3 + C_L)}$$

$$\mathbf{10.381 \quad INVALID-ORDER-381} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \infty, L_3 s + \frac{1}{C_3 s}, \infty, \infty, \frac{R_L}{C_L R_L s + 1} \right)$$

$$H(s) = \frac{R_L g_m (C_1 R_1 s + 1) (C_3 L_3 s^2 + 1)}{(C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_3 R_L s^3 + C_3 L_3 s^2 + C_3 R_L s + C_L R_L s + 1)}$$

$$10.382 \quad \text{INVALID-ORDER-382} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \infty, L_3 s + \frac{1}{C_3 s}, \infty, \infty, R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{g_m (C_1 R_1 s + 1) (C_3 L_3 s^2 + 1) (C_L R_L s + 1)}{s (C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_3 s^2 + C_3 C_L R_L s + C_3 + C_L)}$$

$$10.383 \quad \text{INVALID-ORDER-383} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \infty, L_3 s + \frac{1}{C_3 s}, \infty, \infty, L_L s + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{g_m (C_1 R_1 s + 1) (C_3 L_3 s^2 + 1) (C_L L_L s^2 + 1)}{s (C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_3 s^2 + C_3 C_L L_L s^2 + C_3 + C_L)}$$

$$10.384 \quad \text{INVALID-ORDER-384} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \infty, L_3 s + \frac{1}{C_3 s}, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} \right)$$

$$H(s) = \frac{L_L g_m s (C_1 R_1 s + 1) (C_3 L_3 s^2 + 1)}{(C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_3 L_L s^4 + C_3 L_3 s^2 + C_3 L_L s^2 + C_L L_L s^2 + 1)}$$

$$10.385 \quad \text{INVALID-ORDER-385} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \infty, L_3 s + \frac{1}{C_3 s}, \infty, \infty, L_L s + R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{g_m (C_1 R_1 s + 1) (C_3 L_3 s^2 + 1) (C_L L_L s^2 + C_L R_L s + 1)}{s (C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_3 s^2 + C_3 C_L L_L s^2 + C_3 C_L R_L s + C_3 + C_L)}$$

$$10.386 \quad \text{INVALID-ORDER-386} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \infty, L_3 s + \frac{1}{C_3 s}, \infty, \infty, \frac{L_L R_L s}{C_L L_L R_L s^2 + L_L s + R_L} \right)$$

$$H(s) = \frac{L_L R_L g_m s (C_1 R_1 s + 1) (C_3 L_3 s^2 + 1)}{(C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_3 L_L R_L s^4 + C_3 L_3 L_L s^3 + C_3 L_3 R_L s^2 + C_3 L_L R_L s^2 + C_L L_L R_L s^2 + L_L s + R_L)}$$

$$10.387 \quad \text{INVALID-ORDER-387} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \infty, L_3 s + \frac{1}{C_3 s}, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$$

$$H(s) = \frac{g_m (C_1 R_1 s + 1) (C_3 L_3 s^2 + 1) (C_L L_L R_L s^2 + L_L s + R_L)}{(C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_3 L_L s^4 + C_3 C_L L_L R_L s^3 + C_3 L_3 s^2 + C_3 L_L s^2 + C_3 R_L s + C_L L_L s^2 + 1)}$$

$$10.388 \quad \text{INVALID-ORDER-388} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \infty, L_3 s + \frac{1}{C_3 s}, \infty, \infty, \frac{R_L (C_L L_L s^2 + 1)}{C_L L_L s^2 + C_L R_L s + 1} \right)$$

$$H(s) = \frac{R_L g_m (C_1 R_1 s + 1) (C_3 L_3 s^2 + 1) (C_L L_L s^2 + 1)}{(C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_3 L_L s^4 + C_3 C_L L_3 R_L s^3 + C_3 C_L L_L R_L s^3 + C_3 L_3 s^2 + C_3 R_L s + C_L L_L s^2 + C_L R_L s + 1)}$$

$$10.389 \quad \text{INVALID-ORDER-389} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \infty, \frac{L_3 s}{C_3 L_3 s^2 + 1}, \infty, \infty, R_L \right)$$

$$H(s) = \frac{L_3 R_L g_m s (C_1 R_1 s + 1)}{(C_1 R_1 g_m s + C_1 s + g_m) (C_3 L_3 R_L s^2 + L_3 s + R_L)}$$

$$10.390 \quad \text{INVALID-ORDER-390} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \infty, \frac{L_3 s}{C_3 L_3 s^2 + 1}, \infty, \infty, \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_3 g_m s (C_1 R_1 s + 1)}{(C_3 L_3 s^2 + C_L L_3 s^2 + 1) (C_1 R_1 g_m s + C_1 s + g_m)}$$

$$10.391 \quad \text{INVALID-ORDER-391} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \frac{L_3 s}{C_3 L_3 s^2 + 1}, \quad \infty, \quad \infty, \quad \frac{R_L}{C_L R_L s + 1} \right)$$

$$H(s) = \frac{L_3 R_L g_m s (C_1 R_1 s + 1)}{(C_1 R_1 g_m s + C_1 s + g_m) (C_3 L_3 R_L s^2 + C_L L_3 R_L s^2 + L_3 s + R_L)}$$

$$10.392 \quad \text{INVALID-ORDER-392} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \frac{L_3 s}{C_3 L_3 s^2 + 1}, \quad \infty, \quad \infty, \quad R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_3 g_m s (C_1 R_1 s + 1) (C_L R_L s + 1)}{(C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_3 R_L s^3 + C_3 L_3 s^2 + C_L L_3 s^2 + C_L R_L s + 1)}$$

$$10.393 \quad \text{INVALID-ORDER-393} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \frac{L_3 s}{C_3 L_3 s^2 + 1}, \quad \infty, \quad \infty, \quad L_L s + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_3 g_m s (C_1 R_1 s + 1) (C_L L_L s^2 + 1)}{(C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_3 L_L s^4 + C_3 L_3 s^2 + C_L L_3 s^2 + C_L L_L s^2 + 1)}$$

$$10.394 \quad \text{INVALID-ORDER-394} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \frac{L_3 s}{C_3 L_3 s^2 + 1}, \quad \infty, \quad \infty, \quad \frac{L_L s}{C_L L_L s^2 + 1} \right)$$

$$H(s) = \frac{L_3 L_L g_m s (C_1 R_1 s + 1)}{(C_1 R_1 g_m s + C_1 s + g_m) (C_3 L_3 L_L s^2 + C_L L_3 L_L s^2 + L_3 + L_L)}$$

$$10.395 \quad \text{INVALID-ORDER-395} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \frac{L_3 s}{C_3 L_3 s^2 + 1}, \quad \infty, \quad \infty, \quad L_L s + R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_3 g_m s (C_1 R_1 s + 1) (C_L L_L s^2 + C_L R_L s + 1)}{(C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_3 L_L s^4 + C_3 C_L L_3 R_L s^3 + C_3 L_3 s^2 + C_L L_3 s^2 + C_L L_L s^2 + C_L R_L s + 1)}$$

$$10.396 \quad \text{INVALID-ORDER-396} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \frac{L_3 s}{C_3 L_3 s^2 + 1}, \quad \infty, \quad \infty, \quad \frac{L_L R_L s}{C_L L_L R_L s^2 + L_L s + R_L} \right)$$

$$H(s) = \frac{L_3 L_L R_L g_m s (C_1 R_1 s + 1)}{(C_1 R_1 g_m s + C_1 s + g_m) (C_3 L_3 L_L R_L s^2 + C_L L_3 L_L R_L s^2 + L_3 L_L s + L_3 R_L + L_L R_L)}$$

$$10.397 \quad \text{INVALID-ORDER-397} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \frac{L_3 s}{C_3 L_3 s^2 + 1}, \quad \infty, \quad \infty, \quad \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$$

$$H(s) = \frac{L_3 g_m s (C_1 R_1 s + 1) (C_L L_L R_L s^2 + L_L s + R_L)}{(C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_3 L_L R_L s^4 + C_3 L_3 L_L s^3 + C_3 L_3 R_L s^2 + C_L L_3 L_L s^3 + C_L L_L R_L s^2 + L_3 s + L_L s + R_L)}$$

$$10.398 \quad \text{INVALID-ORDER-398} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \frac{L_3 s}{C_3 L_3 s^2 + 1}, \quad \infty, \quad \infty, \quad \frac{R_L (C_L L_L s^2 + 1)}{C_L L_L s^2 + C_L R_L s + 1} \right)$$

$$H(s) = \frac{L_3 R_L g_m s (C_1 R_1 s + 1) (C_L L_L s^2 + 1)}{(C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_3 L_L R_L s^4 + C_3 L_3 R_L s^2 + C_L L_3 L_L s^3 + C_L L_3 R_L s^2 + C_L L_L R_L s^2 + L_3 s + R_L)}$$

$$10.399 \quad \text{INVALID-ORDER-399} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \quad \infty, \quad L_3 s + R_3 + \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad R_L \right)$$

$$H(s) = \frac{R_L g_m (C_1 R_1 s + 1) (C_3 L_3 s^2 + C_3 R_3 s + 1)}{(C_1 R_1 g_m s + C_1 s + g_m) (C_3 L_3 s^2 + C_3 R_3 s + C_3 R_L s + 1)}$$

$$10.400 \quad \text{INVALID-ORDER-400} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \quad \infty, \quad L_3 s + R_3 + \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad \frac{1}{C_L s} \right)$$

$$H(s) = \frac{g_m (C_1 R_1 s + 1) (C_3 L_3 s^2 + C_3 R_3 s + 1)}{s (C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_3 s^2 + C_3 C_L R_3 s + C_3 + C_L)}$$

$$10.401 \quad \text{INVALID-ORDER-401} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \quad \infty, \quad L_3 s + R_3 + \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad \frac{R_L}{C_L R_L s + 1} \right)$$

$$H(s) = \frac{R_L g_m (C_1 R_1 s + 1) (C_3 L_3 s^2 + C_3 R_3 s + 1)}{(C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_3 R_L s^3 + C_3 C_L R_3 R_L s^2 + C_3 L_3 s^2 + C_3 R_3 s + C_3 R_L s + C_L R_L s + 1)}$$

$$10.402 \quad \text{INVALID-ORDER-402} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \quad \infty, \quad L_3 s + R_3 + \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{g_m (C_1 R_1 s + 1) (C_L R_L s + 1) (C_3 L_3 s^2 + C_3 R_3 s + 1)}{s (C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_3 s^2 + C_3 C_L R_3 s + C_3 C_L R_L s + C_3 + C_L)}$$

$$10.403 \quad \text{INVALID-ORDER-403} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \quad \infty, \quad L_3 s + R_3 + \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad L_L s + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{g_m (C_1 R_1 s + 1) (C_L L_L s^2 + 1) (C_3 L_3 s^2 + C_3 R_3 s + 1)}{s (C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_3 s^2 + C_3 C_L L_L s^2 + C_3 C_L R_3 s + C_3 + C_L)}$$

$$10.404 \quad \text{INVALID-ORDER-404} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \quad \infty, \quad L_3 s + R_3 + \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad \frac{L_L s}{C_L L_L s^2 + 1} \right)$$

$$H(s) = \frac{L_L g_m s (C_1 R_1 s + 1) (C_3 L_3 s^2 + C_3 R_3 s + 1)}{(C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_3 L_L s^4 + C_3 C_L L_L R_3 s^3 + C_3 L_3 s^2 + C_3 L_L s^2 + C_3 R_3 s + C_L L_L s^2 + 1)}$$

$$10.405 \quad \text{INVALID-ORDER-405} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \quad \infty, \quad L_3 s + R_3 + \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad L_L s + R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{g_m (C_1 R_1 s + 1) (C_3 L_3 s^2 + C_3 R_3 s + 1) (C_L L_L s^2 + C_L R_L s + 1)}{s (C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_3 s^2 + C_3 C_L L_L s^2 + C_3 C_L R_3 s + C_3 C_L R_L s + C_3 + C_L)}$$

$$10.406 \quad \text{INVALID-ORDER-406} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \quad \infty, \quad L_3 s + R_3 + \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad \frac{L_L R_L s}{C_L L_L R_L s^2 + L_L s + R_L} \right)$$

$$H(s) = \frac{L_L R_L g_m s (C_1 R_1 s + 1) (C_3 L_3 s^2 + C_3 R_3 s + 1)}{(C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_3 L_L R_L s^4 + C_3 C_L L_L R_3 R_L s^3 + C_3 L_3 L_L s^3 + C_3 L_3 R_L s^2 + C_3 L_L R_3 s^2 + C_3 L_L R_L s^2 + C_3 R_3 R_L s + C_L L_L R_L s^2 + L_L s + R_L)}$$

$$10.407 \quad \text{INVALID-ORDER-407} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \quad \infty, \quad L_3 s + R_3 + \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$$

$$H(s) = \frac{g_m (C_1 R_1 s + 1) (C_3 L_3 s^2 + C_3 R_3 s + 1) (C_L L_L R_L s^2 + L_L s + R_L)}{(C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_3 L_L s^4 + C_3 C_L L_L R_3 s^3 + C_3 C_L L_L R_L s^3 + C_3 L_3 s^2 + C_3 L_L s^2 + C_3 R_3 s + C_3 R_L s + C_L L_L s^2 + 1)}$$

$$10.408 \quad \text{INVALID-ORDER-408} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \quad \infty, \quad L_3 s + R_3 + \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad \frac{R_L (C_L L_L s^2 + 1)}{C_L L_L s^2 + C_L R_L s + 1} \right)$$

$$H(s) = \frac{R_L g_m (C_1 R_1 s + 1) (C_L L_L s^2 + 1) (C_3 L_3 s^2 + C_3 R_3 s + 1)}{(C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_3 L_L s^4 + C_3 C_L L_3 R_L s^3 + C_3 C_L L_L R_3 s^3 + C_3 C_L L_L R_L s^3 + C_3 C_L R_3 R_L s^2 + C_3 L_3 s^2 + C_3 R_3 s + C_3 R_L s + C_L L_L s^2 + C_L R_L s + 1)}$$

$$10.409 \quad \text{INVALID-ORDER-409} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \frac{L_3 R_3 s}{C_3 L_3 R_3 s^2 + L_3 s + R_3}, \quad \infty, \quad \infty, \quad R_L \right)$$

$$H(s) = \frac{L_3 R_3 R_L g_m s (C_1 R_1 s + 1)}{(C_1 R_1 g_m s + C_1 s + g_m) (C_3 L_3 R_3 R_L s^2 + L_3 R_3 s + L_3 R_L s + R_3 R_L)}$$

$$10.410 \quad \text{INVALID-ORDER-410} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \frac{L_3 R_3 s}{C_3 L_3 R_3 s^2 + L_3 s + R_3}, \quad \infty, \quad \infty, \quad \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_3 R_3 g_m s (C_1 R_1 s + 1)}{(C_1 R_1 g_m s + C_1 s + g_m) (C_3 L_3 R_3 s^2 + C_L L_3 R_3 s^2 + L_3 s + R_3)}$$

$$10.411 \quad \text{INVALID-ORDER-411} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \frac{L_3 R_3 s}{C_3 L_3 R_3 s^2 + L_3 s + R_3}, \quad \infty, \quad \infty, \quad \frac{R_L}{C_L R_L s + 1} \right)$$

$$H(s) = \frac{L_3 R_3 R_L g_m s (C_1 R_1 s + 1)}{(C_1 R_1 g_m s + C_1 s + g_m) (C_3 L_3 R_3 R_L s^2 + C_L L_3 R_3 R_L s^2 + L_3 R_3 s + L_3 R_L s + R_3 R_L)}$$

$$10.412 \quad \text{INVALID-ORDER-412} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \frac{L_3 R_3 s}{C_3 L_3 R_3 s^2 + L_3 s + R_3}, \quad \infty, \quad \infty, \quad R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_3 R_3 g_m s (C_1 R_1 s + 1) (C_L R_L s + 1)}{(C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_3 R_3 R_L s^3 + C_3 L_3 R_3 s^2 + C_L L_3 R_3 s^2 + C_L L_3 R_L s^2 + C_L R_3 R_L s + L_3 s + R_3)}$$

$$10.413 \quad \text{INVALID-ORDER-413} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \frac{L_3 R_3 s}{C_3 L_3 R_3 s^2 + L_3 s + R_3}, \quad \infty, \quad \infty, \quad L_L s + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_3 R_3 g_m s (C_1 R_1 s + 1) (C_L L_L s^2 + 1)}{(C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_3 L_L R_3 s^4 + C_3 L_3 R_3 s^2 + C_L L_3 L_L s^3 + C_L L_3 R_3 s^2 + C_L L_L R_3 s^2 + L_3 s + R_3)}$$

$$10.414 \quad \text{INVALID-ORDER-414} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \frac{L_3 R_3 s}{C_3 L_3 R_3 s^2 + L_3 s + R_3}, \quad \infty, \quad \infty, \quad \frac{L_L s}{C_L L_L s^2 + 1} \right)$$

$$H(s) = \frac{L_3 L_L R_3 g_m s (C_1 R_1 s + 1)}{(C_1 R_1 g_m s + C_1 s + g_m) (C_3 L_3 L_L R_3 s^2 + C_L L_3 L_L R_3 s^2 + L_3 L_L s + L_3 R_3 + L_L R_3)}$$

$$10.415 \quad \text{INVALID-ORDER-415} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \frac{L_3 R_3 s}{C_3 L_3 R_3 s^2 + L_3 s + R_3}, \quad \infty, \quad \infty, \quad L_L s + R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_3 R_3 g_m s (C_1 R_1 s + 1) (C_L L_L s^2 + C_L R_L s + 1)}{(C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_3 L_L R_3 s^4 + C_3 C_L L_3 R_3 R_L s^3 + C_3 L_3 R_3 s^2 + C_L L_3 L_L s^3 + C_L L_3 R_3 s^2 + C_L L_3 R_L s^2 + C_L L_L R_3 s^2 + C_L R_3 R_L s + L_3 s + R_3)}$$

$$10.416 \quad \text{INVALID-ORDER-416} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \frac{L_3 R_3 s}{C_3 L_3 R_3 s^2 + L_3 s + R_3}, \quad \infty, \quad \infty, \quad \frac{L_L R_L s}{C_L L_L R_L s^2 + L_L s + R_L} \right)$$

$$H(s) = \frac{L_3 L_L R_3 R_L g_m s (C_1 R_1 s + 1)}{(C_1 R_1 g_m s + C_1 s + g_m) (C_3 L_3 L_L R_3 R_L s^2 + C_L L_3 L_L R_3 R_L s^2 + L_3 L_L R_3 s + L_3 L_L R_L s + L_3 R_3 R_L + L_L R_3 R_L)}$$

$$10.417 \quad \text{INVALID-ORDER-417} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \frac{L_3 R_3 s}{C_3 L_3 R_3 s^2 + L_3 s + R_3}, \quad \infty, \quad \infty, \quad \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$$

$$H(s) = \frac{L_3 R_3 g_m s (C_1 R_1 s + 1) (C_L L_L R_L s^2 + L_L s + R_L)}{(C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_3 L_L R_3 R_L s^4 + C_3 L_3 L_L R_3 s^3 + C_3 L_3 R_3 R_L s^2 + C_L L_3 L_L R_3 s^3 + C_L L_3 L_L R_L s^3 + C_L L_L R_3 R_L s^2 + L_3 L_L s^2 + L_3 R_3 s + L_3 R_L s + L_L R_3 s + R_3 R_L)}$$

$$10.418 \quad \text{INVALID-ORDER-418} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \frac{L_3 R_3 s}{C_3 L_3 R_3 s^2 + L_3 s + R_3}, \quad \infty, \quad \infty, \quad \frac{R_L (C_L L_L s^2 + 1)}{C_L L_L s^2 + C_L R_L s + 1} \right)$$

$$H(s) = \frac{L_3 R_3 R_L g_m s (C_1 R_1 s + 1) (C_L L_L s^2 + 1)}{(C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_3 L_L R_3 R_L s^4 + C_3 L_3 R_3 R_L s^2 + C_L L_3 L_L R_3 s^3 + C_L L_3 L_L R_L s^3 + C_L L_3 R_3 R_L s^2 + C_L L_L R_3 R_L s^2 + L_3 R_3 s + L_3 R_L s + R_3 R_L)}$$

$$10.419 \quad \text{INVALID-ORDER-419} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \frac{L_3 s}{C_3 L_3 s^2 + 1} + R_3, \quad \infty, \quad \infty, \quad R_L \right)$$

$$H(s) = \frac{R_L g_m (C_1 R_1 s + 1) (C_3 L_3 R_3 s^2 + L_3 s + R_3)}{(C_1 R_1 g_m s + C_1 s + g_m) (C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + L_3 s + R_3 + R_L)}$$

$$10.420 \quad \text{INVALID-ORDER-420} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \frac{L_3 s}{C_3 L_3 s^2 + 1} + R_3, \quad \infty, \quad \infty, \quad \frac{1}{C_L s} \right)$$

$$H(s) = \frac{g_m (C_1 R_1 s + 1) (C_3 L_3 R_3 s^2 + L_3 s + R_3)}{(C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_3 R_3 s^3 + C_3 L_3 s^2 + C_L L_3 s^2 + C_L R_3 s + 1)}$$

$$10.421 \quad \text{INVALID-ORDER-421} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \frac{L_3 s}{C_3 L_3 s^2 + 1} + R_3, \quad \infty, \quad \infty, \quad \frac{R_L}{C_L R_L s + 1} \right)$$

$$H(s) = \frac{R_L g_m (C_1 R_1 s + 1) (C_3 L_3 R_3 s^2 + L_3 s + R_3)}{(C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_3 R_3 R_L s^3 + C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + C_L L_3 R_L s^2 + C_L R_3 R_L s + L_3 s + R_3 + R_L)}$$

$$10.422 \quad \text{INVALID-ORDER-422} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \frac{L_3 s}{C_3 L_3 s^2 + 1} + R_3, \quad \infty, \quad \infty, \quad R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{g_m (C_1 R_1 s + 1) (C_L R_L s + 1) (C_3 L_3 R_3 s^2 + L_3 s + R_3)}{(C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_3 R_3 s^3 + C_3 C_L L_3 R_L s^3 + C_3 L_3 s^2 + C_L L_3 s^2 + C_L R_3 s + C_L R_L s + 1)}$$

$$10.423 \quad \text{INVALID-ORDER-423} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \frac{L_3 s}{C_3 L_3 s^2 + 1} + R_3, \quad \infty, \quad \infty, \quad L_L s + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{g_m (C_1 R_1 s + 1) (C_L L_L s^2 + 1) (C_3 L_3 R_3 s^2 + L_3 s + R_3)}{(C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_3 L_L s^4 + C_3 C_L L_3 R_3 s^3 + C_3 L_3 s^2 + C_L L_3 s^2 + C_L L_L s^2 + C_L R_3 s + 1)}$$

$$10.424 \quad \text{INVALID-ORDER-424} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \frac{L_3 s}{C_3 L_3 s^2 + 1} + R_3, \quad \infty, \quad \infty, \quad \frac{L_L s}{C_L L_L s^2 + 1} \right)$$

$$H(s) = \frac{L_L g_m s (C_1 R_1 s + 1) (C_3 L_3 R_3 s^2 + L_3 s + R_3)}{(C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_3 L_L R_3 s^4 + C_3 L_3 L_L s^3 + C_3 L_3 R_3 s^2 + C_L L_3 L_L s^3 + C_L L_L R_3 s^2 + L_3 s + L_L s + R_3)}$$

$$10.425 \quad \text{INVALID-ORDER-425} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \frac{L_3 s}{C_3 L_3 s^2 + 1} + R_3, \quad \infty, \quad \infty, \quad L_L s + R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{g_m (C_1 R_1 s + 1) (C_L L_L s^2 + C_L R_L s + 1) (C_3 L_3 R_3 s^2 + L_3 s + R_3)}{(C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_3 L_L s^4 + C_3 C_L L_3 R_3 s^3 + C_3 C_L L_3 R_L s^3 + C_3 L_3 s^2 + C_L L_3 s^2 + C_L L_L s^2 + C_L R_3 s + C_L R_L s + 1)}$$

$$10.426 \quad \text{INVALID-ORDER-426} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \frac{L_3 s}{C_3 L_3 s^2 + 1} + R_3, \quad \infty, \quad \infty, \quad \frac{L_L R_L s}{C_L L_L R_L s^2 + L_L s + R_L} \right)$$

$$H(s) = \frac{L_L R_L g_m s (C_1 R_1 s + 1) (C_3 L_3 R_3 s^2 + L_3 s + R_3)}{(C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_3 L_L R_3 R_L s^4 + C_3 L_3 L_L R_3 s^3 + C_3 L_3 L_L R_L s^3 + C_3 L_3 R_3 R_L s^2 + C_L L_3 L_L R_L s^3 + C_L L_L R_3 R_L s^2 + L_3 L_L s^2 + L_3 R_L s + L_L R_3 s + L_L R_L s + R_3 R_L)}$$

$$10.427 \quad \text{INVALID-ORDER-427} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \frac{L_3 s}{C_3 L_3 s^2 + 1} + R_3, \quad \infty, \quad \infty, \quad \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$$

$$H(s) = \frac{g_m (C_1 R_1 s + 1) (C_3 L_3 R_3 s^2 + L_3 s + R_3) (C_L L_L R_L s^2 + L_L s + R_L)}{(C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_3 L_L R_3 s^4 + C_3 C_L L_3 L_L R_L s^4 + C_3 L_3 L_L s^3 + C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + C_L L_3 L_L s^3 + C_L L_L R_3 s^2 + C_L L_L R_L s^2 + L_3 s + L_L s + R_3 + R_L)}$$

$$10.428 \quad \text{INVALID-ORDER-428} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \frac{L_3 s}{C_3 L_3 s^2 + 1} + R_3, \quad \infty, \quad \infty, \quad \frac{R_L (C_L L_L s^2 + 1)}{C_L L_L s^2 + C_L R_L s + 1} \right)$$

$$H(s) = \frac{R_L g_m (C_1 R_1 s + 1) (C_L L_L s^2 + 1) (C_3 L_3 R_3 s^2 + L_3 s + R_3)}{(C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_3 L_L R_3 s^4 + C_3 C_L L_3 L_L R_L s^4 + C_3 C_L L_3 R_3 R_L s^3 + C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + C_L L_3 L_L s^3 + C_L L_3 R_L s^2 + C_L L_L R_3 s^2 + C_L L_L R_L s^2 + C_L R_3 R_L s + L_3 s + R_3 + R_L)}$$

$$10.429 \quad \text{INVALID-ORDER-429} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \frac{R_3 (C_3 L_3 s^2 + 1)}{C_3 L_3 s^2 + C_3 R_3 s + 1}, \quad \infty, \quad \infty, \quad R_L \right)$$

$$H(s) = \frac{R_3 R_L g_m (C_1 R_1 s + 1) (C_3 L_3 s^2 + 1)}{(C_1 R_1 g_m s + C_1 s + g_m) (C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + C_3 R_3 R_L s + R_3 + R_L)}$$

$$10.430 \quad \text{INVALID-ORDER-430} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \frac{R_3 (C_3 L_3 s^2 + 1)}{C_3 L_3 s^2 + C_3 R_3 s + 1}, \quad \infty, \quad \infty, \quad \frac{1}{C_L s} \right)$$

$$H(s) = \frac{R_3 g_m (C_1 R_1 s + 1) (C_3 L_3 s^2 + 1)}{(C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_3 R_3 s^3 + C_3 L_3 s^2 + C_3 R_3 s + C_L R_3 s + 1)}$$

$$10.431 \quad \text{INVALID-ORDER-431} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \frac{R_3 (C_3 L_3 s^2 + 1)}{C_3 L_3 s^2 + C_3 R_3 s + 1}, \quad \infty, \quad \infty, \quad \frac{R_L}{C_L R_L s + 1} \right)$$

$$H(s) = \frac{R_3 R_L g_m (C_1 R_1 s + 1) (C_3 L_3 s^2 + 1)}{(C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_3 R_3 R_L s^3 + C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + C_3 R_3 R_L s + C_L R_3 R_L s + R_3 + R_L)}$$

$$10.432 \quad \text{INVALID-ORDER-432} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \frac{R_3 (C_3 L_3 s^2 + 1)}{C_3 L_3 s^2 + C_3 R_3 s + 1}, \quad \infty, \quad \infty, \quad R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{R_3 g_m (C_1 R_1 s + 1) (C_3 L_3 s^2 + 1) (C_L R_L s + 1)}{(C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_3 R_3 s^3 + C_3 C_L L_3 R_L s^3 + C_3 C_L R_3 R_L s^2 + C_3 L_3 s^2 + C_3 R_3 s + C_L R_3 s + C_L R_L s + 1)}$$

$$10.433 \quad \text{INVALID-ORDER-433} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \frac{R_3 (C_3 L_3 s^2 + 1)}{C_3 L_3 s^2 + C_3 R_3 s + 1}, \quad \infty, \quad \infty, \quad L_L s + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{R_3 g_m (C_1 R_1 s + 1) (C_3 L_3 s^2 + 1) (C_L L_L s^2 + 1)}{(C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_3 L_L s^4 + C_3 C_L L_3 R_3 s^3 + C_3 C_L L_L R_3 s^3 + C_3 L_3 s^2 + C_3 R_3 s + C_L L_L s^2 + C_L R_3 s + 1)}$$

$$10.434 \quad \text{INVALID-ORDER-434} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \frac{R_3 (C_3 L_3 s^2 + 1)}{C_3 L_3 s^2 + C_3 R_3 s + 1}, \quad \infty, \quad \infty, \quad \frac{L_L s}{C_L L_L s^2 + 1} \right)$$

$$H(s) = \frac{L_L R_3 g_m s (C_1 R_1 s + 1) (C_3 L_3 s^2 + 1)}{(C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_3 L_L R_3 s^4 + C_3 L_3 L_L s^3 + C_3 L_3 R_3 s^2 + C_3 L_L R_3 s^2 + C_L L_L R_3 s^2 + L_L s + R_3)}$$

$$10.435 \quad \text{INVALID-ORDER-435} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \frac{R_3 (C_3 L_3 s^2 + 1)}{C_3 L_3 s^2 + C_3 R_3 s + 1}, \quad \infty, \quad \infty, \quad L_L s + R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{R_3 g_m (C_1 R_1 s + 1) (C_3 L_3 s^2 + 1) (C_L L_L s^2 + C_L R_L s + 1)}{(C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_3 L_L s^4 + C_3 C_L L_3 R_3 s^3 + C_3 C_L L_3 R_L s^3 + C_3 C_L L_L R_3 s^3 + C_3 C_L R_3 R_L s^2 + C_3 L_3 s^2 + C_3 R_3 s + C_L L_L s^2 + C_L R_3 s + C_L R_L s + 1)}$$

$$10.436 \quad \text{INVALID-ORDER-436} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \frac{R_3 (C_3 L_3 s^2 + 1)}{C_3 L_3 s^2 + C_3 R_3 s + 1}, \quad \infty, \quad \infty, \quad \frac{L_L R_L s}{C_L L_L R_L s^2 + L_L s + R_L} \right)$$

$$H(s) = \frac{L_L R_3 R_L g_m s (C_1 R_1 s + 1) (C_3 L_3 s^2 + 1)}{(C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_3 L_L R_3 R_L s^4 + C_3 L_3 L_L R_3 s^3 + C_3 L_3 L_L R_L s^3 + C_3 L_3 R_3 R_L s^2 + C_3 L_L R_3 R_L s^2 + C_L L_L R_3 R_L s^2 + L_L R_3 s + L_L R_L s + R_3 R_L)}$$

$$10.437 \quad \text{INVALID-ORDER-437} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \frac{R_3(C_3 L_3 s^2 + 1)}{C_3 L_3 s^2 + C_3 R_3 s + 1}, \quad \infty, \quad \infty, \quad \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$$

$$H(s) = \frac{R_3 g_m (C_1 R_1 s + 1) (C_3 L_3 s^2 + 1) (C_L L_L R_L s^2 + L_L s + R_L)}{(C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_3 L_L R_3 s^4 + C_3 C_L L_3 L_L R_L s^4 + C_3 C_L L_L R_3 R_L s^3 + C_3 L_3 L_L s^3 + C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + C_3 L_L R_3 s^2 + C_3 R_3 R_L s + C_L L_L R_3 s^2 + C_L L_L R_L s^2 + L_L s + R_3 + R_L)}$$

$$10.438 \quad \text{INVALID-ORDER-438} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \frac{R_3(C_3 L_3 s^2 + 1)}{C_3 L_3 s^2 + C_3 R_3 s + 1}, \quad \infty, \quad \infty, \quad \frac{R_L(C_L L_L s^2 + 1)}{C_L L_L s^2 + C_L R_L s + 1} \right)$$

$$H(s) = \frac{R_3 R_L g_m (C_1 R_1 s + 1) (C_3 L_3 s^2 + 1) (C_L L_L s^2 + 1)}{(C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_3 L_L R_3 s^4 + C_3 C_L L_3 L_L R_L s^4 + C_3 C_L L_3 R_3 R_L s^3 + C_3 C_L L_L R_3 R_L s^3 + C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + C_3 R_3 R_L s + C_L L_L R_3 s^2 + C_L L_L R_L s^2 + C_L R_3 R_L s + R_3 + R_L)}$$

$$10.439 \quad \text{INVALID-ORDER-439} \quad Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \quad \infty, \quad R_3, \quad \infty, \quad \infty, \quad \frac{1}{C_L s} \right)$$

$$H(s) = \frac{R_3 g_m (C_1 L_1 s^2 + 1)}{(C_L R_3 s + 1) (C_1 L_1 g_m s^2 + C_1 s + g_m)}$$

$$10.440 \quad \text{INVALID-ORDER-440} \quad Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \quad \infty, \quad R_3, \quad \infty, \quad \infty, \quad \frac{R_L}{C_L R_L s + 1} \right)$$

$$H(s) = \frac{R_3 R_L g_m (C_1 L_1 s^2 + 1)}{(C_1 L_1 g_m s^2 + C_1 s + g_m) (C_L R_3 R_L s + R_3 + R_L)}$$

$$10.441 \quad \text{INVALID-ORDER-441} \quad Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \quad \infty, \quad R_3, \quad \infty, \quad \infty, \quad R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{R_3 g_m (C_1 L_1 s^2 + 1) (C_L R_L s + 1)}{(C_L R_3 s + C_L R_L s + 1) (C_1 L_1 g_m s^2 + C_1 s + g_m)}$$

$$10.442 \quad \text{INVALID-ORDER-442} \quad Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \quad \infty, \quad R_3, \quad \infty, \quad \infty, \quad L_L s + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{R_3 g_m (C_1 L_1 s^2 + 1) (C_L L_L s^2 + 1)}{(C_L L_L s^2 + C_L R_3 s + 1) (C_1 L_1 g_m s^2 + C_1 s + g_m)}$$

$$10.443 \quad \text{INVALID-ORDER-443} \quad Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \quad \infty, \quad R_3, \quad \infty, \quad \infty, \quad \frac{L_L s}{C_L L_L s^2 + 1} \right)$$

$$H(s) = \frac{L_L R_3 g_m s (C_1 L_1 s^2 + 1)}{(C_1 L_1 g_m s^2 + C_1 s + g_m) (C_L L_L R_3 s^2 + L_L s + R_3)}$$

$$10.444 \quad \text{INVALID-ORDER-444} \quad Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \quad \infty, \quad R_3, \quad \infty, \quad \infty, \quad L_L s + R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{R_3 g_m (C_1 L_1 s^2 + 1) (C_L L_L s^2 + C_L R_L s + 1)}{(C_1 L_1 g_m s^2 + C_1 s + g_m) (C_L L_L s^2 + C_L R_3 s + C_L R_L s + 1)}$$

$$10.445 \quad \text{INVALID-ORDER-445} \quad Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \quad \infty, \quad R_3, \quad \infty, \quad \infty, \quad \frac{L_L R_L s}{C_L L_L R_L s^2 + L_L s + R_L} \right)$$

$$H(s) = \frac{L_L R_3 R_L g_m s (C_1 L_1 s^2 + 1)}{(C_1 L_1 g_m s^2 + C_1 s + g_m) (C_L L_L R_3 R_L s^2 + L_L R_3 s + L_L R_L s + R_3 R_L)}$$

$$10.446 \quad \text{INVALID-ORDER-446} \quad Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \quad \infty, \quad R_3, \quad \infty, \quad \infty, \quad \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$$

$$H(s) = \frac{R_3 g_m (C_1 L_1 s^2 + 1) (C_L L_L R_L s^2 + L_L s + R_L)}{(C_1 L_1 g_m s^2 + C_1 s + g_m) (C_L L_L R_3 s^2 + C_L L_L R_L s^2 + L_L s + R_3 + R_L)}$$

$$10.447 \quad \text{INVALID-ORDER-447} \quad Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \quad \infty, \quad R_3, \quad \infty, \quad \infty, \quad \frac{R_L (C_L L_L s^2 + 1)}{C_L L_L s^2 + C_L R_L s + 1} \right)$$

$$H(s) = \frac{R_3 R_L g_m (C_1 L_1 s^2 + 1) (C_L L_L s^2 + 1)}{(C_1 L_1 g_m s^2 + C_1 s + g_m) (C_L L_L R_3 s^2 + C_L L_L R_L s^2 + C_L R_3 R_L s + R_3 + R_L)}$$

$$10.448 \quad \text{INVALID-ORDER-448} \quad Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \quad \infty, \quad \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad R_L \right)$$

$$H(s) = \frac{R_L g_m (C_1 L_1 s^2 + 1)}{(C_3 R_L s + 1) (C_1 L_1 g_m s^2 + C_1 s + g_m)}$$

$$10.449 \quad \text{INVALID-ORDER-449} \quad Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \quad \infty, \quad \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad \frac{1}{C_L s} \right)$$

$$H(s) = \frac{g_m (C_1 L_1 s^2 + 1)}{s (C_3 + C_L) (C_1 L_1 g_m s^2 + C_1 s + g_m)}$$

$$10.450 \quad \text{INVALID-ORDER-450} \quad Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \quad \infty, \quad \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad \frac{R_L}{C_L R_L s + 1} \right)$$

$$H(s) = \frac{R_L g_m (C_1 L_1 s^2 + 1)}{(C_3 R_L s + C_L R_L s + 1) (C_1 L_1 g_m s^2 + C_1 s + g_m)}$$

$$10.451 \quad \text{INVALID-ORDER-451} \quad Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \quad \infty, \quad \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{g_m (C_1 L_1 s^2 + 1) (C_L R_L s + 1)}{s (C_1 L_1 g_m s^2 + C_1 s + g_m) (C_3 C_L R_L s + C_3 + C_L)}$$

$$10.452 \quad \text{INVALID-ORDER-452} \quad Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \quad \infty, \quad \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad L_L s + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{g_m (C_1 L_1 s^2 + 1) (C_L L_L s^2 + 1)}{s (C_1 L_1 g_m s^2 + C_1 s + g_m) (C_3 C_L L_L s^2 + C_3 + C_L)}$$

$$10.453 \quad \text{INVALID-ORDER-453} \quad Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \quad \infty, \quad \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad \frac{L_L s}{C_L L_L s^2 + 1} \right)$$

$$H(s) = \frac{L_L g_m s (C_1 L_1 s^2 + 1)}{(C_3 L_L s^2 + C_L L_L s^2 + 1) (C_1 L_1 g_m s^2 + C_1 s + g_m)}$$

$$10.454 \quad \text{INVALID-ORDER-454} \quad Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \quad \infty, \quad \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad L_L s + R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{g_m (C_1 L_1 s^2 + 1) (C_L L_L s^2 + C_L R_L s + 1)}{s (C_1 L_1 g_m s^2 + C_1 s + g_m) (C_3 C_L L_L s^2 + C_3 C_L R_L s + C_3 + C_L)}$$

$$10.455 \quad \text{INVALID-ORDER-455} \quad Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \quad \infty, \quad \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad \frac{L_L R_L s}{C_L L_L R_L s^2 + L_L s + R_L} \right)$$

$$H(s) = \frac{L_L R_L g_m s (C_1 L_1 s^2 + 1)}{(C_1 L_1 g_m s^2 + C_1 s + g_m) (C_3 L_L R_L s^2 + C_L L_L R_L s^2 + L_L s + R_L)}$$

$$10.456 \quad \text{INVALID-ORDER-456} \quad Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \quad \infty, \quad \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$$

$$H(s) = \frac{g_m (C_1 L_1 s^2 + 1) (C_L L_L R_L s^2 + L_L s + R_L)}{(C_1 L_1 g_m s^2 + C_1 s + g_m) (C_3 C_L L_L R_L s^3 + C_3 L_L s^2 + C_3 R_L s + C_L L_L s^2 + 1)}$$

$$10.457 \quad \text{INVALID-ORDER-457} \quad Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \quad \infty, \quad \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad \frac{R_L (C_L L_L s^2 + 1)}{C_L L_L s^2 + C_L R_L s + 1} \right)$$

$$H(s) = \frac{R_L g_m (C_1 L_1 s^2 + 1) (C_L L_L s^2 + 1)}{(C_1 L_1 g_m s^2 + C_1 s + g_m) (C_3 C_L L_L R_L s^3 + C_3 R_L s + C_L L_L s^2 + C_L R_L s + 1)}$$

$$10.458 \quad \text{INVALID-ORDER-458} \quad Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \quad \infty, \quad \frac{R_3}{C_3 R_3 s + 1}, \quad \infty, \quad \infty, \quad R_L \right)$$

$$H(s) = \frac{R_3 R_L g_m (C_1 L_1 s^2 + 1)}{(C_1 L_1 g_m s^2 + C_1 s + g_m) (C_3 R_3 R_L s + R_3 + R_L)}$$

$$10.459 \quad \text{INVALID-ORDER-459} \quad Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \quad \infty, \quad \frac{R_3}{C_3 R_3 s + 1}, \quad \infty, \quad \infty, \quad \frac{1}{C_L s} \right)$$

$$H(s) = \frac{R_3 g_m (C_1 L_1 s^2 + 1)}{(C_3 R_3 s + C_L R_3 s + 1) (C_1 L_1 g_m s^2 + C_1 s + g_m)}$$

$$10.460 \quad \text{INVALID-ORDER-460} \quad Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \quad \infty, \quad \frac{R_3}{C_3 R_3 s + 1}, \quad \infty, \quad \infty, \quad \frac{R_L}{C_L R_L s + 1} \right)$$

$$H(s) = \frac{R_3 R_L g_m (C_1 L_1 s^2 + 1)}{(C_1 L_1 g_m s^2 + C_1 s + g_m) (C_3 R_3 R_L s + C_L R_3 R_L s + R_3 + R_L)}$$

$$10.461 \quad \text{INVALID-ORDER-461} \quad Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \quad \infty, \quad \frac{R_3}{C_3 R_3 s + 1}, \quad \infty, \quad \infty, \quad R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{R_3 g_m (C_1 L_1 s^2 + 1) (C_L R_L s + 1)}{(C_1 L_1 g_m s^2 + C_1 s + g_m) (C_3 C_L R_3 R_L s^2 + C_3 R_3 s + C_L R_3 s + C_L R_L s + 1)}$$

$$10.462 \quad \text{INVALID-ORDER-462} \quad Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \quad \infty, \quad \frac{R_3}{C_3 R_3 s + 1}, \quad \infty, \quad \infty, \quad L_L s + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{R_3 g_m (C_1 L_1 s^2 + 1) (C_L L_L s^2 + 1)}{(C_1 L_1 g_m s^2 + C_1 s + g_m) (C_3 C_L L_L R_3 s^3 + C_3 R_3 s + C_L L_L s^2 + C_L R_3 s + 1)}$$

$$10.463 \quad \text{INVALID-ORDER-463} \quad Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \quad \infty, \quad \frac{R_3}{C_3 R_3 s + 1}, \quad \infty, \quad \infty, \quad \frac{L_L s}{C_L L_L s^2 + 1} \right)$$

$$H(s) = \frac{L_L R_3 g_m s (C_1 L_1 s^2 + 1)}{(C_1 L_1 g_m s^2 + C_1 s + g_m) (C_3 L_L R_3 s^2 + C_L L_L R_3 s^2 + L_L s + R_3)}$$

$$10.464 \quad \text{INVALID-ORDER-464} \quad Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \quad \infty, \quad \frac{R_3}{C_3 R_3 s + 1}, \quad \infty, \quad \infty, \quad L_L s + R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{R_3 g_m (C_1 L_1 s^2 + 1) (C_L L_L s^2 + C_L R_L s + 1)}{(C_1 L_1 g_m s^2 + C_1 s + g_m) (C_3 C_L L_L R_3 s^3 + C_3 C_L R_3 R_L s^2 + C_3 R_3 s + C_L L_L s^2 + C_L R_3 s + C_L R_L s + 1)}$$

$$10.465 \quad \text{INVALID-ORDER-465} \quad Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \quad \infty, \quad \frac{R_3}{C_3 R_3 s + 1}, \quad \infty, \quad \infty, \quad \frac{L_L R_L s}{C_L L_L R_L s^2 + L_L s + R_L} \right)$$

$$H(s) = \frac{L_L R_3 R_L g_m s (C_1 L_1 s^2 + 1)}{(C_1 L_1 g_m s^2 + C_1 s + g_m) (C_3 L_L R_3 R_L s^2 + C_L L_L R_3 R_L s^2 + L_L R_3 s + L_L R_L s + R_3 R_L)}$$

$$10.466 \quad \text{INVALID-ORDER-466} \quad Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \quad \infty, \quad \frac{R_3}{C_3 R_3 s + 1}, \quad \infty, \quad \infty, \quad \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$$

$$H(s) = \frac{R_3 g_m (C_1 L_1 s^2 + 1) (C_L L_L R_L s^2 + L_L s + R_L)}{(C_1 L_1 g_m s^2 + C_1 s + g_m) (C_3 C_L L_L R_3 R_L s^3 + C_3 L_L R_3 s^2 + C_3 R_3 R_L s + C_L L_L R_3 s^2 + C_L L_L R_L s^2 + L_L s + R_3 + R_L)}$$

$$10.467 \quad \text{INVALID-ORDER-467} \quad Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \quad \infty, \quad \frac{R_3}{C_3 R_3 s + 1}, \quad \infty, \quad \infty, \quad \frac{R_L (C_L L_L s^2 + 1)}{C_L L_L s^2 + C_L R_L s + 1} \right)$$

$$H(s) = \frac{R_3 R_L g_m (C_1 L_1 s^2 + 1) (C_L L_L s^2 + 1)}{(C_1 L_1 g_m s^2 + C_1 s + g_m) (C_3 C_L L_L R_3 R_L s^3 + C_3 R_3 R_L s + C_L L_L R_3 s^2 + C_L L_L R_L s^2 + C_L R_3 R_L s + R_3 + R_L)}$$

$$10.468 \quad \text{INVALID-ORDER-468} \quad Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \quad \infty, \quad R_3 + \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad R_L \right)$$

$$H(s) = \frac{R_L g_m (C_1 L_1 s^2 + 1) (C_3 R_3 s + 1)}{(C_3 R_3 s + C_3 R_L s + 1) (C_1 L_1 g_m s^2 + C_1 s + g_m)}$$

$$10.469 \quad \text{INVALID-ORDER-469} \quad Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \quad \infty, \quad R_3 + \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad \frac{1}{C_L s} \right)$$

$$H(s) = \frac{g_m (C_1 L_1 s^2 + 1) (C_3 R_3 s + 1)}{s (C_1 L_1 g_m s^2 + C_1 s + g_m) (C_3 C_L R_3 s + C_3 + C_L)}$$

$$10.470 \quad \text{INVALID-ORDER-470} \quad Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \quad \infty, \quad R_3 + \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad \frac{R_L}{C_L R_L s + 1} \right)$$

$$H(s) = \frac{R_L g_m (C_1 L_1 s^2 + 1) (C_3 R_3 s + 1)}{(C_1 L_1 g_m s^2 + C_1 s + g_m) (C_3 C_L R_3 R_L s^2 + C_3 R_3 s + C_3 R_L s + C_L R_L s + 1)}$$

$$10.471 \quad \text{INVALID-ORDER-471} \quad Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \quad \infty, \quad R_3 + \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{g_m (C_1 L_1 s^2 + 1) (C_3 R_3 s + 1) (C_L R_L s + 1)}{s (C_1 L_1 g_m s^2 + C_1 s + g_m) (C_3 C_L R_3 s + C_3 C_L R_L s + C_3 + C_L)}$$

$$10.472 \quad \text{INVALID-ORDER-472} \quad Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \quad \infty, \quad R_3 + \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad L_L s + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{g_m (C_1 L_1 s^2 + 1) (C_3 R_3 s + 1) (C_L L_L s^2 + 1)}{s (C_1 L_1 g_m s^2 + C_1 s + g_m) (C_3 C_L L_L s^2 + C_3 C_L R_3 s + C_3 + C_L)}$$

$$10.473 \quad \text{INVALID-ORDER-473} \quad Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \infty, R_3 + \frac{1}{C_3 s}, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} \right)$$

$$H(s) = \frac{L_L g_m s (C_1 L_1 s^2 + 1) (C_3 R_3 s + 1)}{(C_1 L_1 g_m s^2 + C_1 s + g_m) (C_3 C_L L_L R_3 s^3 + C_3 L_L s^2 + C_3 R_3 s + C_L L_L s^2 + 1)}$$

$$10.474 \quad \text{INVALID-ORDER-474} \quad Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \infty, R_3 + \frac{1}{C_3 s}, \infty, \infty, L_L s + R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{g_m (C_1 L_1 s^2 + 1) (C_3 R_3 s + 1) (C_L L_L s^2 + C_L R_L s + 1)}{s (C_1 L_1 g_m s^2 + C_1 s + g_m) (C_3 C_L L_L s^2 + C_3 C_L R_3 s + C_3 C_L R_L s + C_3 + C_L)}$$

$$10.475 \quad \text{INVALID-ORDER-475} \quad Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \infty, R_3 + \frac{1}{C_3 s}, \infty, \infty, \frac{L_L R_L s}{C_L L_L R_L s^2 + L_L s + R_L} \right)$$

$$H(s) = \frac{L_L R_L g_m s (C_1 L_1 s^2 + 1) (C_3 R_3 s + 1)}{(C_1 L_1 g_m s^2 + C_1 s + g_m) (C_3 C_L L_L R_3 R_L s^3 + C_3 L_L R_3 s^2 + C_3 L_L R_L s^2 + C_3 R_3 R_L s + C_L L_L R_L s^2 + L_L s + R_L)}$$

$$10.476 \quad \text{INVALID-ORDER-476} \quad Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \infty, R_3 + \frac{1}{C_3 s}, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$$

$$H(s) = \frac{g_m (C_1 L_1 s^2 + 1) (C_3 R_3 s + 1) (C_L L_L R_L s^2 + L_L s + R_L)}{(C_1 L_1 g_m s^2 + C_1 s + g_m) (C_3 C_L L_L R_3 s^3 + C_3 C_L L_L R_L s^3 + C_3 L_L s^2 + C_3 R_3 s + C_3 R_L s + C_L L_L s^2 + 1)}$$

$$10.477 \quad \text{INVALID-ORDER-477} \quad Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \infty, R_3 + \frac{1}{C_3 s}, \infty, \infty, \frac{R_L (C_L L_L s^2 + 1)}{C_L L_L s^2 + C_L R_L s + 1} \right)$$

$$H(s) = \frac{R_L g_m (C_1 L_1 s^2 + 1) (C_3 R_3 s + 1) (C_L L_L s^2 + 1)}{(C_1 L_1 g_m s^2 + C_1 s + g_m) (C_3 C_L L_L R_3 s^3 + C_3 C_L L_L R_L s^3 + C_3 C_L R_3 R_L s^2 + C_3 R_3 s + C_3 R_L s + C_L L_L s^2 + C_L R_L s + 1)}$$

$$10.478 \quad \text{INVALID-ORDER-478} \quad Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \infty, L_3 s + \frac{1}{C_3 s}, \infty, \infty, R_L \right)$$

$$H(s) = \frac{R_L g_m (C_1 L_1 s^2 + 1) (C_3 L_3 s^2 + 1)}{(C_3 L_3 s^2 + C_3 R_L s + 1) (C_1 L_1 g_m s^2 + C_1 s + g_m)}$$

$$10.479 \quad \text{INVALID-ORDER-479} \quad Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \infty, L_3 s + \frac{1}{C_3 s}, \infty, \infty, \frac{1}{C_L s} \right)$$

$$H(s) = \frac{g_m (C_1 L_1 s^2 + 1) (C_3 L_3 s^2 + 1)}{s (C_1 L_1 g_m s^2 + C_1 s + g_m) (C_3 C_L L_3 s^2 + C_3 + C_L)}$$

$$10.480 \quad \text{INVALID-ORDER-480} \quad Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \infty, L_3 s + \frac{1}{C_3 s}, \infty, \infty, \frac{R_L}{C_L R_L s + 1} \right)$$

$$H(s) = \frac{R_L g_m (C_1 L_1 s^2 + 1) (C_3 L_3 s^2 + 1)}{(C_1 L_1 g_m s^2 + C_1 s + g_m) (C_3 C_L L_3 R_L s^3 + C_3 L_3 s^2 + C_3 R_L s + C_L R_L s + 1)}$$

$$10.481 \quad \text{INVALID-ORDER-481} \quad Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \infty, L_3 s + \frac{1}{C_3 s}, \infty, \infty, R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{g_m (C_1 L_1 s^2 + 1) (C_3 L_3 s^2 + 1) (C_L R_L s + 1)}{s (C_1 L_1 g_m s^2 + C_1 s + g_m) (C_3 C_L L_3 s^2 + C_3 C_L R_L s + C_3 + C_L)}$$

$$10.482 \quad \text{INVALID-ORDER-482} \quad Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \quad \infty, \quad L_3 s + \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad L_L s + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{g_m (C_1 L_1 s^2 + 1) (C_3 L_3 s^2 + 1) (C_L L_L s^2 + 1)}{s (C_1 L_1 g_m s^2 + C_1 s + g_m) (C_3 C_L L_3 s^2 + C_3 C_L L_L s^2 + C_3 + C_L)}$$

$$10.483 \quad \text{INVALID-ORDER-483} \quad Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \quad \infty, \quad L_3 s + \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad \frac{L_L s}{C_L L_L s^2 + 1} \right)$$

$$H(s) = \frac{L_L g_m s (C_1 L_1 s^2 + 1) (C_3 L_3 s^2 + 1)}{(C_1 L_1 g_m s^2 + C_1 s + g_m) (C_3 C_L L_3 L_L s^4 + C_3 L_3 s^2 + C_3 L_L s^2 + C_L L_L s^2 + 1)}$$

$$10.484 \quad \text{INVALID-ORDER-484} \quad Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \quad \infty, \quad L_3 s + \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad L_L s + R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{g_m (C_1 L_1 s^2 + 1) (C_3 L_3 s^2 + 1) (C_L L_L s^2 + C_L R_L s + 1)}{s (C_1 L_1 g_m s^2 + C_1 s + g_m) (C_3 C_L L_3 s^2 + C_3 C_L L_L s^2 + C_3 C_L R_L s + C_3 + C_L)}$$

$$10.485 \quad \text{INVALID-ORDER-485} \quad Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \quad \infty, \quad L_3 s + \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad \frac{L_L R_L s}{C_L L_L R_L s^2 + L_L s + R_L} \right)$$

$$H(s) = \frac{L_L R_L g_m s (C_1 L_1 s^2 + 1) (C_3 L_3 s^2 + 1)}{(C_1 L_1 g_m s^2 + C_1 s + g_m) (C_3 C_L L_3 L_L R_L s^4 + C_3 L_3 L_L s^3 + C_3 L_3 R_L s^2 + C_3 L_L R_L s^2 + C_L L_L R_L s^2 + L_L s + R_L)}$$

$$10.486 \quad \text{INVALID-ORDER-486} \quad Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \quad \infty, \quad L_3 s + \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$$

$$H(s) = \frac{g_m (C_1 L_1 s^2 + 1) (C_3 L_3 s^2 + 1) (C_L L_L R_L s^2 + L_L s + R_L)}{(C_1 L_1 g_m s^2 + C_1 s + g_m) (C_3 C_L L_3 L_L s^4 + C_3 C_L L_L R_L s^3 + C_3 L_3 s^2 + C_3 L_L s^2 + C_3 R_L s + C_L L_L s^2 + 1)}$$

$$10.487 \quad \text{INVALID-ORDER-487} \quad Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \quad \infty, \quad L_3 s + \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad \frac{R_L (C_L L_L s^2 + 1)}{C_L L_L s^2 + C_L R_L s + 1} \right)$$

$$H(s) = \frac{R_L g_m (C_1 L_1 s^2 + 1) (C_3 L_3 s^2 + 1) (C_L L_L s^2 + 1)}{(C_1 L_1 g_m s^2 + C_1 s + g_m) (C_3 C_L L_3 L_L s^4 + C_3 C_L L_3 R_L s^3 + C_3 C_L L_L R_L s^3 + C_3 L_3 s^2 + C_3 R_L s + C_L L_L s^2 + C_L R_L s + 1)}$$

$$10.488 \quad \text{INVALID-ORDER-488} \quad Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \quad \infty, \quad \frac{L_3 s}{C_3 L_3 s^2 + 1}, \quad \infty, \quad \infty, \quad R_L \right)$$

$$H(s) = \frac{L_3 R_L g_m s (C_1 L_1 s^2 + 1)}{(C_1 L_1 g_m s^2 + C_1 s + g_m) (C_3 L_3 R_L s^2 + L_3 s + R_L)}$$

$$10.489 \quad \text{INVALID-ORDER-489} \quad Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \quad \infty, \quad \frac{L_3 s}{C_3 L_3 s^2 + 1}, \quad \infty, \quad \infty, \quad \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_3 g_m s (C_1 L_1 s^2 + 1)}{(C_3 L_3 s^2 + C_L L_3 s^2 + 1) (C_1 L_1 g_m s^2 + C_1 s + g_m)}$$

$$10.490 \quad \text{INVALID-ORDER-490} \quad Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \quad \infty, \quad \frac{L_3 s}{C_3 L_3 s^2 + 1}, \quad \infty, \quad \infty, \quad \frac{R_L}{C_L R_L s + 1} \right)$$

$$H(s) = \frac{L_3 R_L g_m s (C_1 L_1 s^2 + 1)}{(C_1 L_1 g_m s^2 + C_1 s + g_m) (C_3 L_3 R_L s^2 + C_L L_3 R_L s^2 + L_3 s + R_L)}$$

$$10.491 \quad \text{INVALID-ORDER-491} \quad Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \quad \infty, \quad \frac{L_3 s}{C_3 L_3 s^2 + 1}, \quad \infty, \quad \infty, \quad R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_3 g_m s (C_1 L_1 s^2 + 1) (C_L R_L s + 1)}{(C_1 L_1 g_m s^2 + C_1 s + g_m) (C_3 C_L L_3 R_L s^3 + C_3 L_3 s^2 + C_L L_3 s^2 + C_L R_L s + 1)}$$

$$10.492 \quad \text{INVALID-ORDER-492} \quad Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \quad \infty, \quad \frac{L_3 s}{C_3 L_3 s^2 + 1}, \quad \infty, \quad \infty, \quad L_L s + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_3 g_m s (C_1 L_1 s^2 + 1) (C_L L_L s^2 + 1)}{(C_1 L_1 g_m s^2 + C_1 s + g_m) (C_3 C_L L_3 L_L s^4 + C_3 L_3 s^2 + C_L L_3 s^2 + C_L L_L s^2 + 1)}$$

$$10.493 \quad \text{INVALID-ORDER-493} \quad Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \quad \infty, \quad \frac{L_3 s}{C_3 L_3 s^2 + 1}, \quad \infty, \quad \infty, \quad \frac{L_L s}{C_L L_L s^2 + 1} \right)$$

$$H(s) = \frac{L_3 L_L g_m s (C_1 L_1 s^2 + 1)}{(C_1 L_1 g_m s^2 + C_1 s + g_m) (C_3 L_3 L_L s^2 + C_L L_3 L_L s^2 + L_3 + L_L)}$$

$$10.494 \quad \text{INVALID-ORDER-494} \quad Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \quad \infty, \quad \frac{L_3 s}{C_3 L_3 s^2 + 1}, \quad \infty, \quad \infty, \quad L_L s + R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_3 g_m s (C_1 L_1 s^2 + 1) (C_L L_L s^2 + C_L R_L s + 1)}{(C_1 L_1 g_m s^2 + C_1 s + g_m) (C_3 C_L L_3 L_L s^4 + C_3 C_L L_3 R_L s^3 + C_3 L_3 s^2 + C_L L_3 s^2 + C_L L_L s^2 + C_L R_L s + 1)}$$

$$10.495 \quad \text{INVALID-ORDER-495} \quad Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \quad \infty, \quad \frac{L_3 s}{C_3 L_3 s^2 + 1}, \quad \infty, \quad \infty, \quad \frac{L_L R_L s}{C_L L_L R_L s^2 + L_L s + R_L} \right)$$

$$H(s) = \frac{L_3 L_L R_L g_m s (C_1 L_1 s^2 + 1)}{(C_1 L_1 g_m s^2 + C_1 s + g_m) (C_3 L_3 L_L R_L s^2 + C_L L_3 L_L R_L s^2 + L_3 L_L s + L_3 R_L + L_L R_L)}$$

$$10.496 \quad \text{INVALID-ORDER-496} \quad Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \quad \infty, \quad \frac{L_3 s}{C_3 L_3 s^2 + 1}, \quad \infty, \quad \infty, \quad \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$$

$$H(s) = \frac{L_3 g_m s (C_1 L_1 s^2 + 1) (C_L L_L R_L s^2 + L_L s + R_L)}{(C_1 L_1 g_m s^2 + C_1 s + g_m) (C_3 C_L L_3 L_L R_L s^4 + C_3 L_3 L_L s^3 + C_3 L_3 R_L s^2 + C_L L_3 L_L s^3 + C_L L_L R_L s^2 + L_3 s + L_L s + R_L)}$$

$$10.497 \quad \text{INVALID-ORDER-497} \quad Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \quad \infty, \quad \frac{L_3 s}{C_3 L_3 s^2 + 1}, \quad \infty, \quad \infty, \quad \frac{R_L (C_L L_L s^2 + 1)}{C_L L_L s^2 + C_L R_L s + 1} \right)$$

$$H(s) = \frac{L_3 R_L g_m s (C_1 L_1 s^2 + 1) (C_L L_L s^2 + 1)}{(C_1 L_1 g_m s^2 + C_1 s + g_m) (C_3 C_L L_3 L_L R_L s^4 + C_3 L_3 R_L s^2 + C_L L_3 L_L s^3 + C_L L_3 R_L s^2 + C_L L_L R_L s^2 + L_3 s + R_L)}$$

$$10.498 \quad \text{INVALID-ORDER-498} \quad Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \quad \infty, \quad L_3 s + R_3 + \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad R_L \right)$$

$$H(s) = \frac{R_L g_m (C_1 L_1 s^2 + 1) (C_3 L_3 s^2 + C_3 R_3 s + 1)}{(C_1 L_1 g_m s^2 + C_1 s + g_m) (C_3 L_3 s^2 + C_3 R_3 s + C_3 R_L s + 1)}$$

$$10.499 \quad \text{INVALID-ORDER-499} \quad Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \quad \infty, \quad L_3 s + R_3 + \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad \frac{1}{C_L s} \right)$$

$$H(s) = \frac{g_m (C_1 L_1 s^2 + 1) (C_3 L_3 s^2 + C_3 R_3 s + 1)}{s (C_1 L_1 g_m s^2 + C_1 s + g_m) (C_3 C_L L_3 s^2 + C_3 C_L R_3 s + C_3 + C_L)}$$

$$10.500 \quad \text{INVALID-ORDER-500} \quad Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \quad \infty, \quad L_3 s + R_3 + \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad \frac{R_L}{C_L R_L s + 1} \right)$$

$$H(s) = \frac{R_L g_m (C_1 L_1 s^2 + 1) (C_3 L_3 s^2 + C_3 R_3 s + 1)}{(C_1 L_1 g_m s^2 + C_1 s + g_m) (C_3 C_L L_3 R_L s^3 + C_3 C_L R_3 R_L s^2 + C_3 L_3 s^2 + C_3 R_3 s + C_3 R_L s + C_L R_L s + 1)}$$

$$10.501 \quad \text{INVALID-ORDER-501} \quad Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \quad \infty, \quad L_3 s + R_3 + \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{g_m (C_1 L_1 s^2 + 1) (C_L R_L s + 1) (C_3 L_3 s^2 + C_3 R_3 s + 1)}{s (C_1 L_1 g_m s^2 + C_1 s + g_m) (C_3 C_L L_3 s^2 + C_3 C_L R_3 s + C_3 C_L R_L s + C_3 + C_L)}$$

$$10.502 \quad \text{INVALID-ORDER-502} \quad Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \quad \infty, \quad L_3 s + R_3 + \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad L_L s + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{g_m (C_1 L_1 s^2 + 1) (C_L L_L s^2 + 1) (C_3 L_3 s^2 + C_3 R_3 s + 1)}{s (C_1 L_1 g_m s^2 + C_1 s + g_m) (C_3 C_L L_3 s^2 + C_3 C_L L_L s^2 + C_3 C_L R_3 s + C_3 + C_L)}$$

$$10.503 \quad \text{INVALID-ORDER-503} \quad Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \quad \infty, \quad L_3 s + R_3 + \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad \frac{L_L s}{C_L L_L s^2 + 1} \right)$$

$$H(s) = \frac{L_L g_m s (C_1 L_1 s^2 + 1) (C_3 L_3 s^2 + C_3 R_3 s + 1)}{(C_1 L_1 g_m s^2 + C_1 s + g_m) (C_3 C_L L_3 L_L s^4 + C_3 C_L L_L R_3 s^3 + C_3 L_3 s^2 + C_3 L_L s^2 + C_3 R_3 s + C_L L_L s^2 + 1)}$$

$$10.504 \quad \text{INVALID-ORDER-504} \quad Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \quad \infty, \quad L_3 s + R_3 + \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad L_L s + R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{g_m (C_1 L_1 s^2 + 1) (C_3 L_3 s^2 + C_3 R_3 s + 1) (C_L L_L s^2 + C_L R_L s + 1)}{s (C_1 L_1 g_m s^2 + C_1 s + g_m) (C_3 C_L L_3 s^2 + C_3 C_L L_L s^2 + C_3 C_L R_3 s + C_3 C_L R_L s + C_3 + C_L)}$$

$$10.505 \quad \text{INVALID-ORDER-505} \quad Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \quad \infty, \quad L_3 s + R_3 + \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad \frac{L_L R_L s}{C_L L_L R_L s^2 + L_L s + R_L} \right)$$

$$H(s) = \frac{L_L R_L g_m s (C_1 L_1 s^2 + 1) (C_3 L_3 s^2 + C_3 R_3 s + 1)}{(C_1 L_1 g_m s^2 + C_1 s + g_m) (C_3 C_L L_3 L_L R_L s^4 + C_3 C_L L_L R_3 R_L s^3 + C_3 L_3 L_L s^3 + C_3 L_3 R_L s^2 + C_3 L_L R_3 s^2 + C_3 L_L R_L s^2 + C_3 R_3 R_L s + C_L L_L R_L s^2 + L_L s + R_L)}$$

$$10.506 \quad \text{INVALID-ORDER-506} \quad Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \quad \infty, \quad L_3 s + R_3 + \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$$

$$H(s) = \frac{g_m (C_1 L_1 s^2 + 1) (C_3 L_3 s^2 + C_3 R_3 s + 1) (C_L L_L R_L s^2 + L_L s + R_L)}{(C_1 L_1 g_m s^2 + C_1 s + g_m) (C_3 C_L L_3 L_L s^4 + C_3 C_L L_L R_3 s^3 + C_3 C_L L_L R_L s^3 + C_3 L_3 s^2 + C_3 L_L s^2 + C_3 R_3 s + C_3 R_L s + C_L L_L s^2 + 1)}$$

$$10.507 \quad \text{INVALID-ORDER-507} \quad Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \quad \infty, \quad L_3 s + R_3 + \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad \frac{R_L (C_L L_L s^2 + 1)}{C_L L_L s^2 + C_L R_L s + 1} \right)$$

$$H(s) = \frac{R_L g_m (C_1 L_1 s^2 + 1) (C_L L_L s^2 + 1) (C_3 L_3 s^2 + C_3 R_3 s + 1)}{(C_1 L_1 g_m s^2 + C_1 s + g_m) (C_3 C_L L_3 L_L s^4 + C_3 C_L L_3 R_L s^3 + C_3 C_L L_L R_3 s^3 + C_3 C_L L_L R_L s^3 + C_3 C_L R_3 R_L s^2 + C_3 L_3 s^2 + C_3 R_3 s + C_3 R_L s + C_L L_L s^2 + C_L R_L s + 1)}$$

$$10.508 \quad \text{INVALID-ORDER-508} \quad Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \quad \infty, \quad \frac{L_3 R_3 s}{C_3 L_3 R_3 s^2 + L_3 s + R_3}, \quad \infty, \quad \infty, \quad R_L \right)$$

$$H(s) = \frac{L_3 R_3 R_L g_m s (C_1 L_1 s^2 + 1)}{(C_1 L_1 g_m s^2 + C_1 s + g_m) (C_3 L_3 R_3 R_L s^2 + L_3 R_3 s + L_3 R_L s + R_3 R_L)}$$

$$10.509 \quad \text{INVALID-ORDER-509} \quad Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \quad \infty, \quad \frac{L_3 R_3 s}{C_3 L_3 R_3 s^2 + L_3 s + R_3}, \quad \infty, \quad \infty, \quad \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_3 R_3 g_m s (C_1 L_1 s^2 + 1)}{(C_1 L_1 g_m s^2 + C_1 s + g_m) (C_3 L_3 R_3 s^2 + C_L L_3 R_3 s^2 + L_3 s + R_3)}$$

$$10.510 \quad \text{INVALID-ORDER-510} \quad Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \quad \infty, \quad \frac{L_3 R_3 s}{C_3 L_3 R_3 s^2 + L_3 s + R_3}, \quad \infty, \quad \infty, \quad \frac{R_L}{C_L R_L s + 1} \right)$$

$$H(s) = \frac{L_3 R_3 R_L g_m s (C_1 L_1 s^2 + 1)}{(C_1 L_1 g_m s^2 + C_1 s + g_m) (C_3 L_3 R_3 R_L s^2 + C_L L_3 R_3 R_L s^2 + L_3 R_3 s + L_3 R_L s + R_3 R_L)}$$

$$10.511 \quad \text{INVALID-ORDER-511} \quad Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \quad \infty, \quad \frac{L_3 R_3 s}{C_3 L_3 R_3 s^2 + L_3 s + R_3}, \quad \infty, \quad \infty, \quad R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_3 R_3 g_m s (C_1 L_1 s^2 + 1) (C_L R_L s + 1)}{(C_1 L_1 g_m s^2 + C_1 s + g_m) (C_3 C_L L_3 R_3 R_L s^3 + C_3 L_3 R_3 s^2 + C_L L_3 R_3 s^2 + C_L L_3 R_L s^2 + C_L R_3 R_L s + L_3 s + R_3)}$$

$$10.512 \quad \text{INVALID-ORDER-512} \quad Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \quad \infty, \quad \frac{L_3 R_3 s}{C_3 L_3 R_3 s^2 + L_3 s + R_3}, \quad \infty, \quad \infty, \quad L_L s + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_3 R_3 g_m s (C_1 L_1 s^2 + 1) (C_L L_L s^2 + 1)}{(C_1 L_1 g_m s^2 + C_1 s + g_m) (C_3 C_L L_3 L_L R_3 s^4 + C_3 L_3 R_3 s^2 + C_L L_3 L_L s^3 + C_L L_3 R_3 s^2 + C_L L_L R_3 s^2 + L_3 s + R_3)}$$

$$10.513 \quad \text{INVALID-ORDER-513} \quad Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \quad \infty, \quad \frac{L_3 R_3 s}{C_3 L_3 R_3 s^2 + L_3 s + R_3}, \quad \infty, \quad \infty, \quad \frac{L_L s}{C_L L_L s^2 + 1} \right)$$

$$H(s) = \frac{L_3 L_L R_3 g_m s (C_1 L_1 s^2 + 1)}{(C_1 L_1 g_m s^2 + C_1 s + g_m) (C_3 L_3 L_L R_3 s^2 + C_L L_3 L_L R_3 s^2 + L_3 L_L s + L_3 R_3 + L_L R_3)}$$

$$10.514 \quad \text{INVALID-ORDER-514} \quad Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \quad \infty, \quad \frac{L_3 R_3 s}{C_3 L_3 R_3 s^2 + L_3 s + R_3}, \quad \infty, \quad \infty, \quad L_L s + R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_3 R_3 g_m s (C_1 L_1 s^2 + 1) (C_L L_L s^2 + C_L R_L s + 1)}{(C_1 L_1 g_m s^2 + C_1 s + g_m) (C_3 C_L L_3 L_L R_3 s^4 + C_3 C_L L_3 R_3 R_L s^3 + C_3 L_3 R_3 s^2 + C_L L_3 L_L s^3 + C_L L_3 R_3 s^2 + C_L L_3 R_L s^2 + C_L L_L R_3 s^2 + C_L R_3 R_L s + L_3 s + R_3)}$$

$$10.515 \quad \text{INVALID-ORDER-515} \quad Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \quad \infty, \quad \frac{L_3 R_3 s}{C_3 L_3 R_3 s^2 + L_3 s + R_3}, \quad \infty, \quad \infty, \quad \frac{L_L R_L s}{C_L L_L R_L s^2 + L_L s + R_L} \right)$$

$$H(s) = \frac{L_3 L_L R_3 R_L g_m s (C_1 L_1 s^2 + 1)}{(C_1 L_1 g_m s^2 + C_1 s + g_m) (C_3 L_3 L_L R_3 R_L s^2 + C_L L_3 L_L R_3 R_L s^2 + L_3 L_L R_3 s + L_3 L_L R_L s + L_3 R_3 R_L + L_L R_3 R_L)}$$

$$10.516 \quad \text{INVALID-ORDER-516} \quad Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \quad \infty, \quad \frac{L_3 R_3 s}{C_3 L_3 R_3 s^2 + L_3 s + R_3}, \quad \infty, \quad \infty, \quad \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$$

$$H(s) = \frac{L_3 R_3 g_m s (C_1 L_1 s^2 + 1) (C_L L_L R_L s^2 + L_L s + R_L)}{(C_1 L_1 g_m s^2 + C_1 s + g_m) (C_3 C_L L_3 L_L R_3 R_L s^4 + C_3 L_3 L_L R_3 s^3 + C_3 L_3 R_3 R_L s^2 + C_L L_3 L_L R_3 s^3 + C_L L_3 L_L R_L s^3 + C_L L_L R_3 R_L s^2 + L_3 L_L s^2 + L_3 R_3 s + L_3 R_L s + L_L R_3 s + R_3 R_L)}$$

$$10.517 \quad \text{INVALID-ORDER-517} \quad Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \quad \infty, \quad \frac{L_3 R_3 s}{C_3 L_3 R_3 s^2 + L_3 s + R_3}, \quad \infty, \quad \infty, \quad \frac{R_L (C_L L_L s^2 + 1)}{C_L L_L s^2 + C_L R_L s + 1} \right)$$

$$H(s) = \frac{L_3 R_3 R_L g_m s (C_1 L_1 s^2 + 1) (C_L L_L s^2 + 1)}{(C_1 L_1 g_m s^2 + C_1 s + g_m) (C_3 C_L L_3 L_L R_3 R_L s^4 + C_3 L_3 R_3 R_L s^2 + C_L L_3 L_L R_3 s^3 + C_L L_3 L_L R_L s^3 + C_L L_3 R_3 R_L s^2 + C_L L_L R_3 R_L s^2 + L_3 R_3 s + L_3 R_L s + R_3 R_L)}$$

$$10.518 \quad \text{INVALID-ORDER-518} \quad Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \quad \infty, \quad \frac{L_3 s}{C_3 L_3 s^2 + 1} + R_3, \quad \infty, \quad \infty, \quad R_L \right)$$

$$H(s) = \frac{R_L g_m (C_1 L_1 s^2 + 1) (C_3 L_3 R_3 s^2 + L_3 s + R_3)}{(C_1 L_1 g_m s^2 + C_1 s + g_m) (C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + L_3 s + R_3 + R_L)}$$

$$10.519 \quad \text{INVALID-ORDER-519} \quad Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \quad \infty, \quad \frac{L_3 s}{C_3 L_3 s^2 + 1} + R_3, \quad \infty, \quad \infty, \quad \frac{1}{C_L s} \right)$$

$$H(s) = \frac{g_m (C_1 L_1 s^2 + 1) (C_3 L_3 R_3 s^2 + L_3 s + R_3)}{(C_1 L_1 g_m s^2 + C_1 s + g_m) (C_3 C_L L_3 R_3 s^3 + C_3 L_3 s^2 + C_L L_3 s^2 + C_L R_3 s + 1)}$$

$$10.520 \quad \text{INVALID-ORDER-520} \quad Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \quad \infty, \quad \frac{L_3 s}{C_3 L_3 s^2 + 1} + R_3, \quad \infty, \quad \infty, \quad \frac{R_L}{C_L R_L s + 1} \right)$$

$$H(s) = \frac{R_L g_m (C_1 L_1 s^2 + 1) (C_3 L_3 R_3 s^2 + L_3 s + R_3)}{(C_1 L_1 g_m s^2 + C_1 s + g_m) (C_3 C_L L_3 R_3 R_L s^3 + C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + C_L L_3 R_L s^2 + C_L R_3 R_L s + L_3 s + R_3 + R_L)}$$

$$10.521 \quad \text{INVALID-ORDER-521} \quad Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \quad \infty, \quad \frac{L_3 s}{C_3 L_3 s^2 + 1} + R_3, \quad \infty, \quad \infty, \quad R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{g_m (C_1 L_1 s^2 + 1) (C_L R_L s + 1) (C_3 L_3 R_3 s^2 + L_3 s + R_3)}{(C_1 L_1 g_m s^2 + C_1 s + g_m) (C_3 C_L L_3 R_3 s^3 + C_3 C_L L_3 R_L s^3 + C_3 L_3 s^2 + C_L L_3 s^2 + C_L R_3 s + C_L R_L s + 1)}$$

$$10.522 \quad \text{INVALID-ORDER-522} \quad Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \quad \infty, \quad \frac{L_3 s}{C_3 L_3 s^2 + 1} + R_3, \quad \infty, \quad \infty, \quad L_L s + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{g_m (C_1 L_1 s^2 + 1) (C_L L_L s^2 + 1) (C_3 L_3 R_3 s^2 + L_3 s + R_3)}{(C_1 L_1 g_m s^2 + C_1 s + g_m) (C_3 C_L L_3 L_L s^4 + C_3 C_L L_3 R_3 s^3 + C_3 L_3 s^2 + C_L L_3 s^2 + C_L L_L s^2 + C_L R_3 s + 1)}$$

$$10.523 \quad \text{INVALID-ORDER-523} \quad Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \quad \infty, \quad \frac{L_3 s}{C_3 L_3 s^2 + 1} + R_3, \quad \infty, \quad \infty, \quad \frac{L_L s}{C_L L_L s^2 + 1} \right)$$

$$H(s) = \frac{L_L g_m s (C_1 L_1 s^2 + 1) (C_3 L_3 R_3 s^2 + L_3 s + R_3)}{(C_1 L_1 g_m s^2 + C_1 s + g_m) (C_3 C_L L_3 L_L R_3 s^4 + C_3 L_3 L_L s^3 + C_3 L_3 R_3 s^2 + C_L L_3 L_L s^3 + C_L L_L R_3 s^2 + L_3 s + L_L s + R_3)}$$

$$10.524 \quad \text{INVALID-ORDER-524} \quad Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \quad \infty, \quad \frac{L_3 s}{C_3 L_3 s^2 + 1} + R_3, \quad \infty, \quad \infty, \quad L_L s + R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{g_m (C_1 L_1 s^2 + 1) (C_L L_L s^2 + C_L R_L s + 1) (C_3 L_3 R_3 s^2 + L_3 s + R_3)}{(C_1 L_1 g_m s^2 + C_1 s + g_m) (C_3 C_L L_3 L_L s^4 + C_3 C_L L_3 R_3 s^3 + C_3 C_L L_3 R_L s^3 + C_3 L_3 s^2 + C_L L_3 s^2 + C_L L_L s^2 + C_L R_3 s + C_L R_L s + 1)}$$

$$10.525 \quad \text{INVALID-ORDER-525} \quad Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \quad \infty, \quad \frac{L_3 s}{C_3 L_3 s^2 + 1} + R_3, \quad \infty, \quad \infty, \quad \frac{L_L R_L s}{C_L L_L R_L s^2 + L_L s + R_L} \right)$$

$$H(s) = \frac{L_L R_L g_m s (C_1 L_1 s^2 + 1) (C_3 L_3 R_3 s^2 + L_3 s + R_3)}{(C_1 L_1 g_m s^2 + C_1 s + g_m) (C_3 C_L L_3 L_L R_3 R_L s^4 + C_3 L_3 L_L R_3 s^3 + C_3 L_3 L_L R_L s^3 + C_3 L_3 R_3 R_L s^2 + C_L L_3 L_L R_L s^3 + C_L L_L R_3 R_L s^2 + L_3 L_L s^2 + L_3 R_L s + L_L R_3 s + L_L R_L s + R_3 R_L)}$$

$$10.526 \quad \text{INVALID-ORDER-526} \quad Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \quad \infty, \quad \frac{L_3 s}{C_3 L_3 s^2 + 1} + R_3, \quad \infty, \quad \infty, \quad \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$$

$$H(s) = \frac{g_m (C_1 L_1 s^2 + 1) (C_3 L_3 R_3 s^2 + L_3 s + R_3) (C_L L_L R_L s^2 + L_L s + R_L)}{(C_1 L_1 g_m s^2 + C_1 s + g_m) (C_3 C_L L_3 L_L R_3 s^4 + C_3 C_L L_3 L_L R_L s^4 + C_3 L_3 L_L s^3 + C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + C_L L_3 L_L s^3 + C_L L_L R_3 s^2 + C_L L_L R_L s^2 + L_3 s + L_L s + R_3 + R_L)}$$

$$10.527 \quad \text{INVALID-ORDER-527} \quad Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \quad \infty, \quad \frac{L_3 s}{C_3 L_3 s^2 + 1} + R_3, \quad \infty, \quad \infty, \quad \frac{R_L (C_L L_L s^2 + 1)}{C_L L_L s^2 + C_L R_L s + 1} \right)$$

$$H(s) = \frac{R_L g_m (C_1 L_1 s^2 + 1) (C_L L_L s^2 + 1) (C_3 L_3 R_3 s^2 + L_3 s + R_3)}{(C_1 L_1 g_m s^2 + C_1 s + g_m) (C_3 C_L L_3 L_L R_3 s^4 + C_3 C_L L_3 L_L R_L s^4 + C_3 C_L L_3 R_3 R_L s^3 + C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + C_L L_3 L_L s^3 + C_L L_3 R_L s^2 + C_L L_L R_3 s^2 + C_L L_L R_L s^2 + C_L R_3 R_L s + L_3 s + R_3 + R_L)}$$

$$10.528 \quad \text{INVALID-ORDER-528} \quad Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \quad \infty, \quad \frac{R_3 (C_3 L_3 s^2 + 1)}{C_3 L_3 s^2 + C_3 R_3 s + 1}, \quad \infty, \quad \infty, \quad R_L \right)$$

$$H(s) = \frac{R_3 R_L g_m (C_1 L_1 s^2 + 1) (C_3 L_3 s^2 + 1)}{(C_1 L_1 g_m s^2 + C_1 s + g_m) (C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + C_3 R_3 R_L s + R_3 + R_L)}$$

$$10.529 \quad \text{INVALID-ORDER-529} \quad Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \quad \infty, \quad \frac{R_3 (C_3 L_3 s^2 + 1)}{C_3 L_3 s^2 + C_3 R_3 s + 1}, \quad \infty, \quad \infty, \quad \frac{1}{C_L s} \right)$$

$$H(s) = \frac{R_3 g_m (C_1 L_1 s^2 + 1) (C_3 L_3 s^2 + 1)}{(C_1 L_1 g_m s^2 + C_1 s + g_m) (C_3 C_L L_3 R_3 s^3 + C_3 L_3 s^2 + C_3 R_3 s + C_L R_3 s + 1)}$$

$$10.530 \quad \text{INVALID-ORDER-530} \quad Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \quad \infty, \quad \frac{R_3 (C_3 L_3 s^2 + 1)}{C_3 L_3 s^2 + C_3 R_3 s + 1}, \quad \infty, \quad \infty, \quad \frac{R_L}{C_L R_L s + 1} \right)$$

$$H(s) = \frac{R_3 R_L g_m (C_1 L_1 s^2 + 1) (C_3 L_3 s^2 + 1)}{(C_1 L_1 g_m s^2 + C_1 s + g_m) (C_3 C_L L_3 R_3 R_L s^3 + C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + C_3 R_3 R_L s + C_L R_3 R_L s + R_3 + R_L)}$$

$$10.531 \quad \text{INVALID-ORDER-531} \quad Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \quad \infty, \quad \frac{R_3 (C_3 L_3 s^2 + 1)}{C_3 L_3 s^2 + C_3 R_3 s + 1}, \quad \infty, \quad \infty, \quad R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{R_3 g_m (C_1 L_1 s^2 + 1) (C_3 L_3 s^2 + 1) (C_L R_L s + 1)}{(C_1 L_1 g_m s^2 + C_1 s + g_m) (C_3 C_L L_3 R_3 s^3 + C_3 C_L L_3 R_L s^3 + C_3 C_L R_3 R_L s^2 + C_3 L_3 s^2 + C_3 R_3 s + C_L R_3 s + C_L R_L s + 1)}$$

$$10.532 \quad \text{INVALID-ORDER-532} \quad Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \quad \infty, \quad \frac{R_3 (C_3 L_3 s^2 + 1)}{C_3 L_3 s^2 + C_3 R_3 s + 1}, \quad \infty, \quad \infty, \quad L_L s + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{R_3 g_m (C_1 L_1 s^2 + 1) (C_3 L_3 s^2 + 1) (C_L L_L s^2 + 1)}{(C_1 L_1 g_m s^2 + C_1 s + g_m) (C_3 C_L L_3 L_L s^4 + C_3 C_L L_3 R_3 s^3 + C_3 C_L L_L R_3 s^3 + C_3 L_3 s^2 + C_3 R_3 s + C_L L_L s^2 + C_L R_3 s + 1)}$$

$$10.533 \quad \text{INVALID-ORDER-533} \quad Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \quad \infty, \quad \frac{R_3 (C_3 L_3 s^2 + 1)}{C_3 L_3 s^2 + C_3 R_3 s + 1}, \quad \infty, \quad \infty, \quad \frac{L_L s}{C_L L_L s^2 + 1} \right)$$

$$H(s) = \frac{L_L R_3 g_m s (C_1 L_1 s^2 + 1) (C_3 L_3 s^2 + 1)}{(C_1 L_1 g_m s^2 + C_1 s + g_m) (C_3 C_L L_3 L_L R_3 s^4 + C_3 L_3 L_L s^3 + C_3 L_3 R_3 s^2 + C_3 L_L R_3 s^2 + C_L L_L R_3 s^2 + L_L s + R_3)}$$

$$10.534 \quad \text{INVALID-ORDER-534} \quad Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \quad \infty, \quad \frac{R_3 (C_3 L_3 s^2 + 1)}{C_3 L_3 s^2 + C_3 R_3 s + 1}, \quad \infty, \quad \infty, \quad L_L s + R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{R_3 g_m (C_1 L_1 s^2 + 1) (C_3 L_3 s^2 + 1) (C_L L_L s^2 + C_L R_L s + 1)}{(C_1 L_1 g_m s^2 + C_1 s + g_m) (C_3 C_L L_3 L_L s^4 + C_3 C_L L_3 R_3 s^3 + C_3 C_L L_3 R_L s^3 + C_3 C_L L_L R_3 s^3 + C_3 C_L R_3 R_L s^2 + C_3 L_3 s^2 + C_3 R_3 s + C_L L_L s^2 + C_L R_3 s + C_L R_L s + 1)}$$

$$10.535 \quad \text{INVALID-ORDER-535} \quad Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \quad \infty, \quad \frac{R_3 (C_3 L_3 s^2 + 1)}{C_3 L_3 s^2 + C_3 R_3 s + 1}, \quad \infty, \quad \infty, \quad \frac{L_L R_L s}{C_L L_L R_L s^2 + L_L s + R_L} \right)$$

$$H(s) = \frac{L_L R_3 R_L g_m s (C_1 L_1 s^2 + 1) (C_3 L_3 s^2 + 1)}{(C_1 L_1 g_m s^2 + C_1 s + g_m) (C_3 C_L L_3 L_L R_3 R_L s^4 + C_3 L_3 L_L R_3 s^3 + C_3 L_3 L_L R_L s^3 + C_3 L_3 R_3 R_L s^2 + C_3 L_L R_3 R_L s^2 + C_L L_L R_3 R_L s^2 + L_L R_3 s + L_L R_L s + R_3 R_L)}$$

$$10.536 \quad \text{INVALID-ORDER-536} \quad Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \quad \infty, \quad \frac{R_3(C_3 L_3 s^2 + 1)}{C_3 L_3 s^2 + C_3 R_3 s + 1}, \quad \infty, \quad \infty, \quad \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$$

$$H(s) = \frac{R_3 g_m (C_1 L_1 s^2 + 1) (C_3 L_3 s^2 + 1) (C_L L_L R_L s^2 + L_L s + R_L)}{(C_1 L_1 g_m s^2 + C_1 s + g_m) (C_3 C_L L_3 L_L R_3 s^4 + C_3 C_L L_3 L_L R_L s^4 + C_3 C_L L_L R_3 R_L s^3 + C_3 L_3 L_L s^3 + C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + C_3 L_L R_3 s^2 + C_3 R_3 R_L s + C_L L_L R_3 s^2 + C_L L_L R_L s^2 + L_L s + R_3 + R_L)}$$

$$10.537 \quad \text{INVALID-ORDER-537} \quad Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \quad \infty, \quad \frac{R_3(C_3 L_3 s^2 + 1)}{C_3 L_3 s^2 + C_3 R_3 s + 1}, \quad \infty, \quad \infty, \quad \frac{R_L(C_L L_L s^2 + 1)}{C_L L_L s^2 + C_L R_L s + 1} \right)$$

$$H(s) = \frac{R_3 R_L g_m (C_1 L_1 s^2 + 1) (C_3 L_3 s^2 + 1) (C_L L_L s^2 + 1)}{(C_1 L_1 g_m s^2 + C_1 s + g_m) (C_3 C_L L_3 L_L R_3 s^4 + C_3 C_L L_3 L_L R_L s^4 + C_3 C_L L_3 R_3 R_L s^3 + C_3 C_L L_L R_3 R_L s^3 + C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + C_3 R_3 R_L s + C_L L_L R_3 s^2 + C_L L_L R_L s^2 + C_L R_3 R_L s + R_3 + R_L)}$$

$$10.538 \quad \text{INVALID-ORDER-538} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \quad \infty, \quad R_3, \quad \infty, \quad \infty, \quad \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_1 R_3 g_m s}{(C_L R_3 s + 1) (C_1 L_1 s^2 + L_1 g_m s + 1)}$$

$$10.539 \quad \text{INVALID-ORDER-539} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \quad \infty, \quad R_3, \quad \infty, \quad \infty, \quad \frac{R_L}{C_L R_L s + 1} \right)$$

$$H(s) = \frac{L_1 R_3 R_L g_m s}{(C_1 L_1 s^2 + L_1 g_m s + 1) (C_L R_3 R_L s + R_3 + R_L)}$$

$$10.540 \quad \text{INVALID-ORDER-540} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \quad \infty, \quad R_3, \quad \infty, \quad \infty, \quad R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_1 R_3 g_m s (C_L R_L s + 1)}{(C_1 L_1 s^2 + L_1 g_m s + 1) (C_L R_3 s + C_L R_L s + 1)}$$

$$10.541 \quad \text{INVALID-ORDER-541} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \quad \infty, \quad R_3, \quad \infty, \quad \infty, \quad L_L s + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_1 R_3 g_m s (C_L L_L s^2 + 1)}{(C_1 L_1 s^2 + L_1 g_m s + 1) (C_L L_L s^2 + C_L R_3 s + 1)}$$

$$10.542 \quad \text{INVALID-ORDER-542} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \quad \infty, \quad R_3, \quad \infty, \quad \infty, \quad \frac{L_L s}{C_L L_L s^2 + 1} \right)$$

$$H(s) = \frac{L_1 L_L R_3 g_m s^2}{(C_1 L_1 s^2 + L_1 g_m s + 1) (C_L L_L R_3 s^2 + L_L s + R_3)}$$

$$10.543 \quad \text{INVALID-ORDER-543} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \quad \infty, \quad R_3, \quad \infty, \quad \infty, \quad L_L s + R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_1 R_3 g_m s (C_L L_L s^2 + C_L R_L s + 1)}{(C_1 L_1 s^2 + L_1 g_m s + 1) (C_L L_L s^2 + C_L R_3 s + C_L R_L s + 1)}$$

$$10.544 \quad \text{INVALID-ORDER-544} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \quad \infty, \quad R_3, \quad \infty, \quad \infty, \quad \frac{L_L R_L s}{C_L L_L R_L s^2 + L_L s + R_L} \right)$$

$$H(s) = \frac{L_1 L_L R_3 R_L g_m s^2}{(C_1 L_1 s^2 + L_1 g_m s + 1) (C_L L_L R_3 R_L s^2 + L_L R_3 s + L_L R_L s + R_3 R_L)}$$

$$10.545 \quad \text{INVALID-ORDER-545} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, R_3, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$$

$$H(s) = \frac{L_1 R_3 g_m s (C_L L_L R_L s^2 + L_L s + R_L)}{(C_1 L_1 s^2 + L_1 g_m s + 1) (C_L L_L R_3 s^2 + C_L L_L R_L s^2 + L_L s + R_3 + R_L)}$$

$$10.546 \quad \text{INVALID-ORDER-546} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, R_3, \infty, \infty, \frac{R_L (C_L L_L s^2 + 1)}{C_L L_L s^2 + C_L R_L s + 1} \right)$$

$$H(s) = \frac{L_1 R_3 R_L g_m s (C_L L_L s^2 + 1)}{(C_1 L_1 s^2 + L_1 g_m s + 1) (C_L L_L R_3 s^2 + C_L L_L R_L s^2 + C_L R_3 R_L s + R_3 + R_L)}$$

$$10.547 \quad \text{INVALID-ORDER-547} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \frac{1}{C_3 s}, \infty, \infty, R_L \right)$$

$$H(s) = \frac{L_1 R_L g_m s}{(C_3 R_L s + 1) (C_1 L_1 s^2 + L_1 g_m s + 1)}$$

$$10.548 \quad \text{INVALID-ORDER-548} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \frac{1}{C_3 s}, \infty, \infty, \frac{R_L}{C_L R_L s + 1} \right)$$

$$H(s) = \frac{L_1 R_L g_m s}{(C_1 L_1 s^2 + L_1 g_m s + 1) (C_3 R_L s + C_L R_L s + 1)}$$

$$10.549 \quad \text{INVALID-ORDER-549} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \frac{1}{C_3 s}, \infty, \infty, R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_1 g_m (C_L R_L s + 1)}{(C_1 L_1 s^2 + L_1 g_m s + 1) (C_3 C_L R_L s + C_3 + C_L)}$$

$$10.550 \quad \text{INVALID-ORDER-550} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \frac{1}{C_3 s}, \infty, \infty, L_L s + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_1 g_m (C_L L_L s^2 + 1)}{(C_1 L_1 s^2 + L_1 g_m s + 1) (C_3 C_L L_L s^2 + C_3 + C_L)}$$

$$10.551 \quad \text{INVALID-ORDER-551} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \frac{1}{C_3 s}, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} \right)$$

$$H(s) = \frac{L_1 L_L g_m s^2}{(C_1 L_1 s^2 + L_1 g_m s + 1) (C_3 L_L s^2 + C_L L_L s^2 + 1)}$$

$$10.552 \quad \text{INVALID-ORDER-552} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \frac{1}{C_3 s}, \infty, \infty, L_L s + R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_1 g_m (C_L L_L s^2 + C_L R_L s + 1)}{(C_1 L_1 s^2 + L_1 g_m s + 1) (C_3 C_L L_L s^2 + C_3 C_L R_L s + C_3 + C_L)}$$

$$10.553 \quad \text{INVALID-ORDER-553} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \frac{1}{C_3 s}, \infty, \infty, \frac{L_L R_L s}{C_L L_L R_L s^2 + L_L s + R_L} \right)$$

$$H(s) = \frac{L_1 L_L R_L g_m s^2}{(C_1 L_1 s^2 + L_1 g_m s + 1) (C_3 L_L R_L s^2 + C_L L_L R_L s^2 + L_L s + R_L)}$$

$$10.554 \quad \text{INVALID-ORDER-554} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \frac{1}{C_3 s}, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$$

$$H(s) = \frac{L_1 g_m s (C_L L_L R_L s^2 + L_L s + R_L)}{(C_1 L_1 s^2 + L_1 g_m s + 1) (C_3 C_L L_L R_L s^3 + C_3 L_L s^2 + C_3 R_L s + C_L L_L s^2 + 1)}$$

$$10.555 \quad \text{INVALID-ORDER-555} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \frac{1}{C_3 s}, \infty, \infty, \frac{R_L (C_L L_L s^2 + 1)}{C_L L_L s^2 + C_L R_L s + 1} \right)$$

$$H(s) = \frac{L_1 R_L g_m s (C_L L_L s^2 + 1)}{(C_1 L_1 s^2 + L_1 g_m s + 1) (C_3 C_L L_L R_L s^3 + C_3 R_L s + C_L L_L s^2 + C_L R_L s + 1)}$$

$$10.556 \quad \text{INVALID-ORDER-556} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \frac{R_3}{C_3 R_3 s + 1}, \infty, \infty, R_L \right)$$

$$H(s) = \frac{L_1 R_3 R_L g_m s}{(C_1 L_1 s^2 + L_1 g_m s + 1) (C_3 R_3 R_L s + R_3 + R_L)}$$

$$10.557 \quad \text{INVALID-ORDER-557} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \frac{R_3}{C_3 R_3 s + 1}, \infty, \infty, \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_1 R_3 g_m s}{(C_1 L_1 s^2 + L_1 g_m s + 1) (C_3 R_3 s + C_L R_3 s + 1)}$$

$$10.558 \quad \text{INVALID-ORDER-558} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \frac{R_3}{C_3 R_3 s + 1}, \infty, \infty, \frac{R_L}{C_L R_L s + 1} \right)$$

$$H(s) = \frac{L_1 R_3 R_L g_m s}{(C_1 L_1 s^2 + L_1 g_m s + 1) (C_3 R_3 R_L s + C_L R_3 R_L s + R_3 + R_L)}$$

$$10.559 \quad \text{INVALID-ORDER-559} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \frac{R_3}{C_3 R_3 s + 1}, \infty, \infty, R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_1 R_3 g_m s (C_L R_L s + 1)}{(C_1 L_1 s^2 + L_1 g_m s + 1) (C_3 C_L R_3 R_L s^2 + C_3 R_3 s + C_L R_3 s + C_L R_L s + 1)}$$

$$10.560 \quad \text{INVALID-ORDER-560} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \frac{R_3}{C_3 R_3 s + 1}, \infty, \infty, L_L s + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_1 R_3 g_m s (C_L L_L s^2 + 1)}{(C_1 L_1 s^2 + L_1 g_m s + 1) (C_3 C_L L_L R_3 s^3 + C_3 R_3 s + C_L L_L s^2 + C_L R_3 s + 1)}$$

$$10.561 \quad \text{INVALID-ORDER-561} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \frac{R_3}{C_3 R_3 s + 1}, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} \right)$$

$$H(s) = \frac{L_1 L_L R_3 g_m s^2}{(C_1 L_1 s^2 + L_1 g_m s + 1) (C_3 L_L R_3 s^2 + C_L L_L R_3 s^2 + L_L s + R_3)}$$

$$10.562 \quad \text{INVALID-ORDER-562} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \frac{R_3}{C_3 R_3 s + 1}, \infty, \infty, L_L s + R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_1 R_3 g_m s (C_L L_L s^2 + C_L R_L s + 1)}{(C_1 L_1 s^2 + L_1 g_m s + 1) (C_3 C_L L_L R_3 s^3 + C_3 C_L R_3 R_L s^2 + C_3 R_3 s + C_L L_L s^2 + C_L R_3 s + C_L R_L s + 1)}$$

$$10.563 \quad \text{INVALID-ORDER-563} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \frac{R_3}{C_3 R_3 s + 1}, \infty, \infty, \frac{L_L R_L s}{C_L L_L R_L s^2 + L_L s + R_L} \right)$$

$$H(s) = \frac{L_1 L_L R_3 R_L g_m s^2}{(C_1 L_1 s^2 + L_1 g_m s + 1)(C_3 L_L R_3 R_L s^2 + C_L L_L R_3 R_L s^2 + L_L R_3 s + L_L R_L s + R_3 R_L)}$$

$$10.564 \quad \text{INVALID-ORDER-564} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \frac{R_3}{C_3 R_3 s + 1}, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$$

$$H(s) = \frac{L_1 R_3 g_m s (C_L L_L R_L s^2 + L_L s + R_L)}{(C_1 L_1 s^2 + L_1 g_m s + 1)(C_3 C_L L_L R_3 R_L s^3 + C_3 L_L R_3 s^2 + C_3 R_3 R_L s + C_L L_L R_3 s^2 + C_L L_L R_L s^2 + L_L s + R_3 + R_L)}$$

$$10.565 \quad \text{INVALID-ORDER-565} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \frac{R_3}{C_3 R_3 s + 1}, \infty, \infty, \frac{R_L (C_L L_L s^2 + 1)}{C_L L_L s^2 + C_L R_L s + 1} \right)$$

$$H(s) = \frac{L_1 R_3 R_L g_m s (C_L L_L s^2 + 1)}{(C_1 L_1 s^2 + L_1 g_m s + 1)(C_3 C_L L_L R_3 R_L s^3 + C_3 R_3 R_L s + C_L L_L R_3 s^2 + C_L L_L R_L s^2 + C_L R_3 R_L s + R_3 + R_L)}$$

$$10.566 \quad \text{INVALID-ORDER-566} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, R_3 + \frac{1}{C_3 s}, \infty, \infty, R_L \right)$$

$$H(s) = \frac{L_1 R_L g_m s (C_3 R_3 s + 1)}{(C_1 L_1 s^2 + L_1 g_m s + 1)(C_3 R_3 s + C_3 R_L s + 1)}$$

$$10.567 \quad \text{INVALID-ORDER-567} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, R_3 + \frac{1}{C_3 s}, \infty, \infty, \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_1 g_m (C_3 R_3 s + 1)}{(C_1 L_1 s^2 + L_1 g_m s + 1)(C_3 C_L R_3 s + C_3 + C_L)}$$

$$10.568 \quad \text{INVALID-ORDER-568} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, R_3 + \frac{1}{C_3 s}, \infty, \infty, \frac{R_L}{C_L R_L s + 1} \right)$$

$$H(s) = \frac{L_1 R_L g_m s (C_3 R_3 s + 1)}{(C_1 L_1 s^2 + L_1 g_m s + 1)(C_3 C_L R_3 R_L s^2 + C_3 R_3 s + C_3 R_L s + C_L R_L s + 1)}$$

$$10.569 \quad \text{INVALID-ORDER-569} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, R_3 + \frac{1}{C_3 s}, \infty, \infty, R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_1 g_m (C_3 R_3 s + 1)(C_L R_L s + 1)}{(C_1 L_1 s^2 + L_1 g_m s + 1)(C_3 C_L R_3 s + C_3 C_L R_L s + C_3 + C_L)}$$

$$10.570 \quad \text{INVALID-ORDER-570} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, R_3 + \frac{1}{C_3 s}, \infty, \infty, L_L s + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_1 g_m (C_3 R_3 s + 1)(C_L L_L s^2 + 1)}{(C_1 L_1 s^2 + L_1 g_m s + 1)(C_3 C_L L_L s^2 + C_3 C_L R_3 s + C_3 + C_L)}$$

$$10.571 \quad \text{INVALID-ORDER-571} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, R_3 + \frac{1}{C_3 s}, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} \right)$$

$$H(s) = \frac{L_1 L_L g_m s^2 (C_3 R_3 s + 1)}{(C_1 L_1 s^2 + L_1 g_m s + 1)(C_3 C_L L_L R_3 s^3 + C_3 L_L s^2 + C_3 R_3 s + C_L L_L s^2 + 1)}$$

$$\mathbf{10.572 \quad INVALID-ORDER-572} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, R_3 + \frac{1}{C_3 s}, \infty, \infty, L_L s + R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_1 g_m (C_3 R_3 s + 1) (C_L L_L s^2 + C_L R_L s + 1)}{(C_1 L_1 s^2 + L_1 g_m s + 1) (C_3 C_L L_L s^2 + C_3 C_L R_3 s + C_3 C_L R_L s + C_3 + C_L)}$$

$$\mathbf{10.573 \quad INVALID-ORDER-573} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, R_3 + \frac{1}{C_3 s}, \infty, \infty, \frac{L_L R_L s}{C_L L_L R_L s^2 + L_L s + R_L} \right)$$

$$H(s) = \frac{L_1 L_L R_L g_m s^2 (C_3 R_3 s + 1)}{(C_1 L_1 s^2 + L_1 g_m s + 1) (C_3 C_L L_L R_3 R_L s^3 + C_3 L_L R_3 s^2 + C_3 L_L R_L s^2 + C_3 R_3 R_L s + C_L L_L R_L s^2 + L_L s + R_L)}$$

$$\mathbf{10.574 \quad INVALID-ORDER-574} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, R_3 + \frac{1}{C_3 s}, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$$

$$H(s) = \frac{L_1 g_m s (C_3 R_3 s + 1) (C_L L_L R_L s^2 + L_L s + R_L)}{(C_1 L_1 s^2 + L_1 g_m s + 1) (C_3 C_L L_L R_3 s^3 + C_3 C_L L_L R_L s^3 + C_3 L_L s^2 + C_3 R_3 s + C_3 R_L s + C_L L_L s^2 + 1)}$$

$$\mathbf{10.575 \quad INVALID-ORDER-575} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, R_3 + \frac{1}{C_3 s}, \infty, \infty, \frac{R_L (C_L L_L s^2 + 1)}{C_L L_L s^2 + C_L R_L s + 1} \right)$$

$$H(s) = \frac{L_1 R_L g_m s (C_3 R_3 s + 1) (C_L L_L s^2 + 1)}{(C_1 L_1 s^2 + L_1 g_m s + 1) (C_3 C_L L_L R_3 s^3 + C_3 C_L L_L R_L s^3 + C_3 C_L R_3 R_L s^2 + C_3 R_3 s + C_3 R_L s + C_L L_L s^2 + C_L R_L s + 1)}$$

$$\mathbf{10.576 \quad INVALID-ORDER-576} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, L_3 s + \frac{1}{C_3 s}, \infty, \infty, R_L \right)$$

$$H(s) = \frac{L_1 R_L g_m s (C_3 L_3 s^2 + 1)}{(C_1 L_1 s^2 + L_1 g_m s + 1) (C_3 L_3 s^2 + C_3 R_L s + 1)}$$

$$\mathbf{10.577 \quad INVALID-ORDER-577} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, L_3 s + \frac{1}{C_3 s}, \infty, \infty, \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_1 g_m (C_3 L_3 s^2 + 1)}{(C_1 L_1 s^2 + L_1 g_m s + 1) (C_3 C_L L_3 s^2 + C_3 + C_L)}$$

$$\mathbf{10.578 \quad INVALID-ORDER-578} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, L_3 s + \frac{1}{C_3 s}, \infty, \infty, \frac{R_L}{C_L R_L s + 1} \right)$$

$$H(s) = \frac{L_1 R_L g_m s (C_3 L_3 s^2 + 1)}{(C_1 L_1 s^2 + L_1 g_m s + 1) (C_3 C_L L_3 R_L s^3 + C_3 L_3 s^2 + C_3 R_L s + C_L R_L s + 1)}$$

$$\mathbf{10.579 \quad INVALID-ORDER-579} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, L_3 s + \frac{1}{C_3 s}, \infty, \infty, R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_1 g_m (C_3 L_3 s^2 + 1) (C_L R_L s + 1)}{(C_1 L_1 s^2 + L_1 g_m s + 1) (C_3 C_L L_3 s^2 + C_3 C_L R_L s + C_3 + C_L)}$$

$$\mathbf{10.580 \quad INVALID-ORDER-580} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, L_3 s + \frac{1}{C_3 s}, \infty, \infty, L_L s + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_1 g_m (C_3 L_3 s^2 + 1) (C_L L_L s^2 + 1)}{(C_1 L_1 s^2 + L_1 g_m s + 1) (C_3 C_L L_3 s^2 + C_3 C_L L_L s^2 + C_3 + C_L)}$$

$$10.581 \quad \text{INVALID-ORDER-581} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, L_3 s + \frac{1}{C_3 s}, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} \right)$$

$$H(s) = \frac{L_1 L_L g_m s^2 (C_3 L_3 s^2 + 1)}{(C_1 L_1 s^2 + L_1 g_m s + 1) (C_3 C_L L_3 L_L s^4 + C_3 L_3 s^2 + C_3 L_L s^2 + C_L L_L s^2 + 1)}$$

$$10.582 \quad \text{INVALID-ORDER-582} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, L_3 s + \frac{1}{C_3 s}, \infty, \infty, L_L s + R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_1 g_m (C_3 L_3 s^2 + 1) (C_L L_L s^2 + C_L R_L s + 1)}{(C_1 L_1 s^2 + L_1 g_m s + 1) (C_3 C_L L_3 s^2 + C_3 C_L L_L s^2 + C_3 C_L R_L s + C_3 + C_L)}$$

$$10.583 \quad \text{INVALID-ORDER-583} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, L_3 s + \frac{1}{C_3 s}, \infty, \infty, \frac{L_L R_L s}{C_L L_L R_L s^2 + L_L s + R_L} \right)$$

$$H(s) = \frac{L_1 L_L R_L g_m s^2 (C_3 L_3 s^2 + 1)}{(C_1 L_1 s^2 + L_1 g_m s + 1) (C_3 C_L L_3 L_L R_L s^4 + C_3 L_3 L_L s^3 + C_3 L_3 R_L s^2 + C_3 L_L R_L s^2 + C_L L_L R_L s^2 + L_L s + R_L)}$$

$$10.584 \quad \text{INVALID-ORDER-584} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, L_3 s + \frac{1}{C_3 s}, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$$

$$H(s) = \frac{L_1 g_m s (C_3 L_3 s^2 + 1) (C_L L_L R_L s^2 + L_L s + R_L)}{(C_1 L_1 s^2 + L_1 g_m s + 1) (C_3 C_L L_3 L_L s^4 + C_3 C_L L_L R_L s^3 + C_3 L_3 s^2 + C_3 L_L s^2 + C_3 R_L s + C_L L_L s^2 + 1)}$$

$$10.585 \quad \text{INVALID-ORDER-585} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, L_3 s + \frac{1}{C_3 s}, \infty, \infty, \frac{R_L (C_L L_L s^2 + 1)}{C_L L_L s^2 + C_L R_L s + 1} \right)$$

$$H(s) = \frac{L_1 R_L g_m s (C_3 L_3 s^2 + 1) (C_L L_L s^2 + 1)}{(C_1 L_1 s^2 + L_1 g_m s + 1) (C_3 C_L L_3 L_L s^4 + C_3 C_L L_3 R_L s^3 + C_3 C_L L_L R_L s^3 + C_3 L_3 s^2 + C_3 R_L s + C_L L_L s^2 + C_L R_L s + 1)}$$

$$10.586 \quad \text{INVALID-ORDER-586} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \frac{L_3 s}{C_3 L_3 s^2 + 1}, \infty, \infty, R_L \right)$$

$$H(s) = \frac{L_1 L_3 R_L g_m s^2}{(C_1 L_1 s^2 + L_1 g_m s + 1) (C_3 L_3 R_L s^2 + L_3 s + R_L)}$$

$$10.587 \quad \text{INVALID-ORDER-587} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \frac{L_3 s}{C_3 L_3 s^2 + 1}, \infty, \infty, \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_1 L_3 g_m s^2}{(C_1 L_1 s^2 + L_1 g_m s + 1) (C_3 L_3 s^2 + C_L L_3 s^2 + 1)}$$

$$10.588 \quad \text{INVALID-ORDER-588} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \frac{L_3 s}{C_3 L_3 s^2 + 1}, \infty, \infty, \frac{R_L}{C_L R_L s + 1} \right)$$

$$H(s) = \frac{L_1 L_3 R_L g_m s^2}{(C_1 L_1 s^2 + L_1 g_m s + 1) (C_3 L_3 R_L s^2 + C_L L_3 R_L s^2 + L_3 s + R_L)}$$

$$10.589 \quad \text{INVALID-ORDER-589} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \frac{L_3 s}{C_3 L_3 s^2 + 1}, \infty, \infty, R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_1 L_3 g_m s^2 (C_L R_L s + 1)}{(C_1 L_1 s^2 + L_1 g_m s + 1) (C_3 C_L L_3 R_L s^3 + C_3 L_3 s^2 + C_L L_3 s^2 + C_L R_L s + 1)}$$

$$10.590 \quad \text{INVALID-ORDER-590} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \frac{L_3 s}{C_3 L_3 s^2 + 1}, \infty, \infty, L_L s + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_1 L_3 g_m s^2 (C_L L_L s^2 + 1)}{(C_1 L_1 s^2 + L_1 g_m s + 1) (C_3 C_L L_3 L_L s^4 + C_3 L_3 s^2 + C_L L_3 s^2 + C_L L_L s^2 + 1)}$$

$$10.591 \quad \text{INVALID-ORDER-591} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \frac{L_3 s}{C_3 L_3 s^2 + 1}, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} \right)$$

$$H(s) = \frac{L_1 L_3 L_L g_m s^2}{(C_1 L_1 s^2 + L_1 g_m s + 1) (C_3 L_3 L_L s^2 + C_L L_3 L_L s^2 + L_3 + L_L)}$$

$$10.592 \quad \text{INVALID-ORDER-592} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \frac{L_3 s}{C_3 L_3 s^2 + 1}, \infty, \infty, L_L s + R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_1 L_3 g_m s^2 (C_L L_L s^2 + C_L R_L s + 1)}{(C_1 L_1 s^2 + L_1 g_m s + 1) (C_3 C_L L_3 L_L s^4 + C_3 C_L L_3 R_L s^3 + C_3 L_3 s^2 + C_L L_3 s^2 + C_L L_L s^2 + C_L R_L s + 1)}$$

$$10.593 \quad \text{INVALID-ORDER-593} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \frac{L_3 s}{C_3 L_3 s^2 + 1}, \infty, \infty, \frac{L_L R_L s}{C_L L_L R_L s^2 + L_L s + R_L} \right)$$

$$H(s) = \frac{L_1 L_3 L_L R_L g_m s^2}{(C_1 L_1 s^2 + L_1 g_m s + 1) (C_3 L_3 L_L R_L s^2 + C_L L_3 L_L R_L s^2 + L_3 L_L s + L_3 R_L + L_L R_L)}$$

$$10.594 \quad \text{INVALID-ORDER-594} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \frac{L_3 s}{C_3 L_3 s^2 + 1}, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$$

$$H(s) = \frac{L_1 L_3 g_m s^2 (C_L L_L R_L s^2 + L_L s + R_L)}{(C_1 L_1 s^2 + L_1 g_m s + 1) (C_3 C_L L_3 L_L R_L s^4 + C_3 L_3 L_L s^3 + C_3 L_3 R_L s^2 + C_L L_3 L_L s^3 + C_L L_L R_L s^2 + L_3 s + L_L s + R_L)}$$

$$10.595 \quad \text{INVALID-ORDER-595} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \frac{L_3 s}{C_3 L_3 s^2 + 1}, \infty, \infty, \frac{R_L (C_L L_L s^2 + 1)}{C_L L_L s^2 + C_L R_L s + 1} \right)$$

$$H(s) = \frac{L_1 L_3 R_L g_m s^2 (C_L L_L s^2 + 1)}{(C_1 L_1 s^2 + L_1 g_m s + 1) (C_3 C_L L_3 L_L R_L s^4 + C_3 L_3 R_L s^2 + C_L L_3 L_L s^3 + C_L L_3 R_L s^2 + C_L L_L R_L s^2 + L_3 s + R_L)}$$

$$10.596 \quad \text{INVALID-ORDER-596} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, L_3 s + R_3 + \frac{1}{C_3 s}, \infty, \infty, R_L \right)$$

$$H(s) = \frac{L_1 R_L g_m s (C_3 L_3 s^2 + C_3 R_3 s + 1)}{(C_1 L_1 s^2 + L_1 g_m s + 1) (C_3 L_3 s^2 + C_3 R_3 s + C_3 R_L s + 1)}$$

$$10.597 \quad \text{INVALID-ORDER-597} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, L_3 s + R_3 + \frac{1}{C_3 s}, \infty, \infty, \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_1 g_m (C_3 L_3 s^2 + C_3 R_3 s + 1)}{(C_1 L_1 s^2 + L_1 g_m s + 1) (C_3 C_L L_3 s^2 + C_3 C_L R_3 s + C_3 + C_L)}$$

$$10.598 \quad \text{INVALID-ORDER-598} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, L_3 s + R_3 + \frac{1}{C_3 s}, \infty, \infty, \frac{R_L}{C_L R_L s + 1} \right)$$

$$H(s) = \frac{L_1 R_L g_m s (C_3 L_3 s^2 + C_3 R_3 s + 1)}{(C_1 L_1 s^2 + L_1 g_m s + 1) (C_3 C_L L_3 R_L s^3 + C_3 C_L R_3 R_L s^2 + C_3 L_3 s^2 + C_3 R_3 s + C_3 R_L s + C_L R_L s + 1)}$$

$$10.599 \quad \text{INVALID-ORDER-599} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, L_3 s + R_3 + \frac{1}{C_3 s}, \infty, \infty, R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_1 g_m (C_L R_L s + 1) (C_3 L_3 s^2 + C_3 R_3 s + 1)}{(C_1 L_1 s^2 + L_1 g_m s + 1) (C_3 C_L L_3 s^2 + C_3 C_L R_3 s + C_3 C_L R_L s + C_3 + C_L)}$$

$$10.600 \quad \text{INVALID-ORDER-600} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, L_3 s + R_3 + \frac{1}{C_3 s}, \infty, \infty, L_L s + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_1 g_m (C_L L_L s^2 + 1) (C_3 L_3 s^2 + C_3 R_3 s + 1)}{(C_1 L_1 s^2 + L_1 g_m s + 1) (C_3 C_L L_3 s^2 + C_3 C_L L_L s^2 + C_3 C_L R_3 s + C_3 + C_L)}$$

$$10.601 \quad \text{INVALID-ORDER-601} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, L_3 s + R_3 + \frac{1}{C_3 s}, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} \right)$$

$$H(s) = \frac{L_1 L_L g_m s^2 (C_3 L_3 s^2 + C_3 R_3 s + 1)}{(C_1 L_1 s^2 + L_1 g_m s + 1) (C_3 C_L L_3 L_L s^4 + C_3 C_L L_L R_3 s^3 + C_3 L_3 s^2 + C_3 L_L s^2 + C_3 R_3 s + C_L L_L s^2 + 1)}$$

$$10.602 \quad \text{INVALID-ORDER-602} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, L_3 s + R_3 + \frac{1}{C_3 s}, \infty, \infty, L_L s + R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_1 g_m (C_3 L_3 s^2 + C_3 R_3 s + 1) (C_L L_L s^2 + C_L R_L s + 1)}{(C_1 L_1 s^2 + L_1 g_m s + 1) (C_3 C_L L_3 s^2 + C_3 C_L L_L s^2 + C_3 C_L R_3 s + C_3 C_L R_L s + C_3 + C_L)}$$

$$10.603 \quad \text{INVALID-ORDER-603} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, L_3 s + R_3 + \frac{1}{C_3 s}, \infty, \infty, \frac{L_L R_L s}{C_L L_L R_L s^2 + L_L s + R_L} \right)$$

$$H(s) = \frac{L_1 L_L R_L g_m s^2 (C_3 L_3 s^2 + C_3 R_3 s + 1)}{(C_1 L_1 s^2 + L_1 g_m s + 1) (C_3 C_L L_3 L_L R_L s^4 + C_3 C_L L_L R_3 R_L s^3 + C_3 L_3 L_L s^3 + C_3 L_3 R_L s^2 + C_3 L_L R_3 s^2 + C_3 L_L R_L s^2 + C_3 R_3 R_L s + C_L L_L R_L s^2 + L_L s + R_L)}$$

$$10.604 \quad \text{INVALID-ORDER-604} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, L_3 s + R_3 + \frac{1}{C_3 s}, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$$

$$H(s) = \frac{L_1 g_m s (C_3 L_3 s^2 + C_3 R_3 s + 1) (C_L L_L R_L s^2 + L_L s + R_L)}{(C_1 L_1 s^2 + L_1 g_m s + 1) (C_3 C_L L_3 L_L s^4 + C_3 C_L L_L R_3 s^3 + C_3 C_L L_L R_L s^3 + C_3 L_3 s^2 + C_3 L_L s^2 + C_3 R_3 s + C_3 R_L s + C_L L_L s^2 + 1)}$$

$$10.605 \quad \text{INVALID-ORDER-605} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, L_3 s + R_3 + \frac{1}{C_3 s}, \infty, \infty, \frac{R_L (C_L L_L s^2 + 1)}{C_L L_L s^2 + C_L R_L s + 1} \right)$$

$$H(s) = \frac{L_1 R_L g_m s (C_L L_L s^2 + 1) (C_3 L_3 s^2 + C_3 R_3 s + 1)}{(C_1 L_1 s^2 + L_1 g_m s + 1) (C_3 C_L L_3 L_L s^4 + C_3 C_L L_3 R_L s^3 + C_3 C_L L_L R_3 s^3 + C_3 C_L L_L R_L s^3 + C_3 C_L R_3 R_L s^2 + C_3 L_3 s^2 + C_3 R_3 s + C_3 R_L s + C_L L_L s^2 + C_L R_L s + 1)}$$

$$10.606 \quad \text{INVALID-ORDER-606} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \frac{L_3 R_3 s}{C_3 L_3 R_3 s^2 + L_3 s + R_3}, \infty, \infty, R_L \right)$$

$$H(s) = \frac{L_1 L_3 R_3 R_L g_m s^2}{(C_1 L_1 s^2 + L_1 g_m s + 1) (C_3 L_3 R_3 R_L s^2 + L_3 R_3 s + L_3 R_L s + R_3 R_L)}$$

$$10.607 \quad \text{INVALID-ORDER-607} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \frac{L_3 R_3 s}{C_3 L_3 R_3 s^2 + L_3 s + R_3}, \infty, \infty, \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_1 L_3 R_3 g_m s^2}{(C_1 L_1 s^2 + L_1 g_m s + 1) (C_3 L_3 R_3 s^2 + C_L L_3 R_3 s^2 + L_3 s + R_3)}$$

$$10.608 \quad \text{INVALID-ORDER-608} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \frac{L_3 R_3 s}{C_3 L_3 R_3 s^2 + L_3 s + R_3}, \infty, \infty, \frac{R_L}{C_L R_L s + 1} \right)$$

$$H(s) = \frac{L_1 L_3 R_3 R_L g_m s^2}{(C_1 L_1 s^2 + L_1 g_m s + 1)(C_3 L_3 R_3 R_L s^2 + C_L L_3 R_3 R_L s^2 + L_3 R_3 s + L_3 R_L s + R_3 R_L)}$$

$$10.609 \quad \text{INVALID-ORDER-609} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \frac{L_3 R_3 s}{C_3 L_3 R_3 s^2 + L_3 s + R_3}, \infty, \infty, R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_1 L_3 R_3 g_m s^2 (C_L R_L s + 1)}{(C_1 L_1 s^2 + L_1 g_m s + 1)(C_3 C_L L_3 R_3 R_L s^3 + C_3 L_3 R_3 s^2 + C_L L_3 R_3 s^2 + C_L L_3 R_L s^2 + C_L R_3 R_L s + L_3 s + R_3)}$$

$$10.610 \quad \text{INVALID-ORDER-610} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \frac{L_3 R_3 s}{C_3 L_3 R_3 s^2 + L_3 s + R_3}, \infty, \infty, L_L s + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_1 L_3 R_3 g_m s^2 (C_L L_L s^2 + 1)}{(C_1 L_1 s^2 + L_1 g_m s + 1)(C_3 C_L L_3 L_L R_3 s^4 + C_3 L_3 R_3 s^2 + C_L L_3 L_L s^3 + C_L L_3 R_3 s^2 + C_L L_L R_3 s^2 + L_3 s + R_3)}$$

$$10.611 \quad \text{INVALID-ORDER-611} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \frac{L_3 R_3 s}{C_3 L_3 R_3 s^2 + L_3 s + R_3}, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} \right)$$

$$H(s) = \frac{L_1 L_3 L_L R_3 g_m s^2}{(C_1 L_1 s^2 + L_1 g_m s + 1)(C_3 L_3 L_L R_3 s^2 + C_L L_3 L_L R_3 s^2 + L_3 L_L s + L_3 R_3 + L_L R_3)}$$

$$10.612 \quad \text{INVALID-ORDER-612} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \frac{L_3 R_3 s}{C_3 L_3 R_3 s^2 + L_3 s + R_3}, \infty, \infty, L_L s + R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_1 L_3 R_3 g_m s^2 (C_L L_L s^2 + C_L R_L s + 1)}{(C_1 L_1 s^2 + L_1 g_m s + 1)(C_3 C_L L_3 L_L R_3 s^4 + C_3 C_L L_3 R_3 R_L s^3 + C_3 L_3 R_3 s^2 + C_L L_3 L_L s^3 + C_L L_3 R_3 s^2 + C_L L_3 R_L s^2 + C_L L_L R_3 s^2 + C_L R_3 R_L s + L_3 s + R_3)}$$

$$10.613 \quad \text{INVALID-ORDER-613} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \frac{L_3 R_3 s}{C_3 L_3 R_3 s^2 + L_3 s + R_3}, \infty, \infty, \frac{L_L R_L s}{C_L L_L R_L s^2 + L_L s + R_L} \right)$$

$$H(s) = \frac{L_1 L_3 L_L R_3 R_L g_m s^2}{(C_1 L_1 s^2 + L_1 g_m s + 1)(C_3 L_3 L_L R_3 R_L s^2 + C_L L_3 L_L R_3 R_L s^2 + L_3 L_L R_3 s + L_3 L_L R_L s + L_3 R_3 R_L + L_L R_3 R_L)}$$

$$10.614 \quad \text{INVALID-ORDER-614} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \frac{L_3 R_3 s}{C_3 L_3 R_3 s^2 + L_3 s + R_3}, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$$

$$H(s) = \frac{L_1 L_3 R_3 g_m s^2 (C_L L_L R_L s^2 + L_L s + R_L)}{(C_1 L_1 s^2 + L_1 g_m s + 1)(C_3 C_L L_3 L_L R_3 R_L s^4 + C_3 L_3 L_L R_3 s^3 + C_3 L_3 R_3 R_L s^2 + C_L L_3 L_L R_3 s^3 + C_L L_3 L_L R_L s^3 + C_L L_L R_3 R_L s^2 + L_3 L_L s^2 + L_3 R_3 s + L_3 R_L s + L_L R_3 s + R_3 R_L)}$$

$$10.615 \quad \text{INVALID-ORDER-615} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \frac{L_3 R_3 s}{C_3 L_3 R_3 s^2 + L_3 s + R_3}, \infty, \infty, \frac{R_L (C_L L_L s^2 + 1)}{C_L L_L s^2 + C_L R_L s + 1} \right)$$

$$H(s) = \frac{L_1 L_3 R_3 R_L g_m s^2 (C_L L_L s^2 + 1)}{(C_1 L_1 s^2 + L_1 g_m s + 1)(C_3 C_L L_3 L_L R_3 R_L s^4 + C_3 L_3 R_3 R_L s^2 + C_L L_3 L_L R_3 s^3 + C_L L_3 L_L R_L s^3 + C_L L_3 R_3 R_L s^2 + C_L L_L R_3 R_L s^2 + L_3 R_3 s + L_3 R_L s + R_3 R_L)}$$

$$10.616 \quad \text{INVALID-ORDER-616} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \frac{L_3 s}{C_3 L_3 s^2 + 1} + R_3, \infty, \infty, R_L \right)$$

$$H(s) = \frac{L_1 R_L g_m s (C_3 L_3 R_3 s^2 + L_3 s + R_3)}{(C_1 L_1 s^2 + L_1 g_m s + 1)(C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + L_3 s + R_3 + R_L)}$$

$$10.617 \quad \text{INVALID-ORDER-617} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \quad \infty, \quad \frac{L_3 s}{C_3 L_3 s^2 + 1} + R_3, \quad \infty, \quad \infty, \quad \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_1 g_m s (C_3 L_3 R_3 s^2 + L_3 s + R_3)}{(C_1 L_1 s^2 + L_1 g_m s + 1) (C_3 C_L L_3 R_3 s^3 + C_3 L_3 s^2 + C_L L_3 s^2 + C_L R_3 s + 1)}$$

$$10.618 \quad \text{INVALID-ORDER-618} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \quad \infty, \quad \frac{L_3 s}{C_3 L_3 s^2 + 1} + R_3, \quad \infty, \quad \infty, \quad \frac{R_L}{C_L R_L s + 1} \right)$$

$$H(s) = \frac{L_1 R_L g_m s (C_3 L_3 R_3 s^2 + L_3 s + R_3)}{(C_1 L_1 s^2 + L_1 g_m s + 1) (C_3 C_L L_3 R_3 R_L s^3 + C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + C_L L_3 R_L s^2 + C_L R_3 R_L s + L_3 s + R_3 + R_L)}$$

$$10.619 \quad \text{INVALID-ORDER-619} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \quad \infty, \quad \frac{L_3 s}{C_3 L_3 s^2 + 1} + R_3, \quad \infty, \quad \infty, \quad R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_1 g_m s (C_L R_L s + 1) (C_3 L_3 R_3 s^2 + L_3 s + R_3)}{(C_1 L_1 s^2 + L_1 g_m s + 1) (C_3 C_L L_3 R_3 s^3 + C_3 C_L L_3 R_L s^3 + C_3 L_3 s^2 + C_L L_3 s^2 + C_L R_3 s + C_L R_L s + 1)}$$

$$10.620 \quad \text{INVALID-ORDER-620} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \quad \infty, \quad \frac{L_3 s}{C_3 L_3 s^2 + 1} + R_3, \quad \infty, \quad \infty, \quad L_L s + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_1 g_m s (C_L L_L s^2 + 1) (C_3 L_3 R_3 s^2 + L_3 s + R_3)}{(C_1 L_1 s^2 + L_1 g_m s + 1) (C_3 C_L L_3 L_L s^4 + C_3 C_L L_3 R_3 s^3 + C_3 L_3 s^2 + C_L L_3 s^2 + C_L L_L s^2 + C_L R_3 s + 1)}$$

$$10.621 \quad \text{INVALID-ORDER-621} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \quad \infty, \quad \frac{L_3 s}{C_3 L_3 s^2 + 1} + R_3, \quad \infty, \quad \infty, \quad \frac{L_L s}{C_L L_L s^2 + 1} \right)$$

$$H(s) = \frac{L_1 L_L g_m s^2 (C_3 L_3 R_3 s^2 + L_3 s + R_3)}{(C_1 L_1 s^2 + L_1 g_m s + 1) (C_3 C_L L_3 L_L R_3 s^4 + C_3 L_3 L_L s^3 + C_3 L_3 R_3 s^2 + C_L L_3 L_L s^3 + C_L L_L R_3 s^2 + L_3 s + L_L s + R_3)}$$

$$10.622 \quad \text{INVALID-ORDER-622} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \quad \infty, \quad \frac{L_3 s}{C_3 L_3 s^2 + 1} + R_3, \quad \infty, \quad \infty, \quad L_L s + R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_1 g_m s (C_L L_L s^2 + C_L R_L s + 1) (C_3 L_3 R_3 s^2 + L_3 s + R_3)}{(C_1 L_1 s^2 + L_1 g_m s + 1) (C_3 C_L L_3 L_L s^4 + C_3 C_L L_3 R_3 s^3 + C_3 C_L L_3 R_L s^3 + C_3 L_3 s^2 + C_L L_3 s^2 + C_L L_L s^2 + C_L R_3 s + C_L R_L s + 1)}$$

$$10.623 \quad \text{INVALID-ORDER-623} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \quad \infty, \quad \frac{L_3 s}{C_3 L_3 s^2 + 1} + R_3, \quad \infty, \quad \infty, \quad \frac{L_L R_L s}{C_L L_L R_L s^2 + L_L s + R_L} \right)$$

$$H(s) = \frac{L_1 L_L R_L g_m s^2 (C_3 L_3 R_3 s^2 + L_3 s + R_3)}{(C_1 L_1 s^2 + L_1 g_m s + 1) (C_3 C_L L_3 L_L R_3 R_L s^4 + C_3 L_3 L_L R_3 s^3 + C_3 L_3 L_L R_L s^3 + C_3 L_3 R_3 R_L s^2 + C_L L_3 L_L R_L s^3 + C_L L_L R_3 R_L s^2 + L_3 L_L s^2 + L_3 R_L s + L_L R_3 s + L_L R_L s + R_3 R_L)}$$

$$10.624 \quad \text{INVALID-ORDER-624} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \quad \infty, \quad \frac{L_3 s}{C_3 L_3 s^2 + 1} + R_3, \quad \infty, \quad \infty, \quad \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$$

$$H(s) = \frac{L_1 g_m s (C_3 L_3 R_3 s^2 + L_3 s + R_3) (C_L L_L R_L s^2 + L_L s + R_L)}{(C_1 L_1 s^2 + L_1 g_m s + 1) (C_3 C_L L_3 L_L R_3 s^4 + C_3 C_L L_3 L_L R_L s^4 + C_3 L_3 L_L s^3 + C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + C_L L_3 L_L s^3 + C_L L_L R_3 s^2 + C_L L_L R_L s^2 + L_3 s + L_L s + R_3 + R_L)}$$

$$10.625 \quad \text{INVALID-ORDER-625} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \quad \infty, \quad \frac{L_3 s}{C_3 L_3 s^2 + 1} + R_3, \quad \infty, \quad \infty, \quad \frac{R_L (C_L L_L s^2 + 1)}{C_L L_L s^2 + C_L R_L s + 1} \right)$$

$$H(s) = \frac{L_1 R_L g_m s (C_L L_L s^2 + 1) (C_3 L_3 R_3 s^2 + L_3 s + R_3)}{(C_1 L_1 s^2 + L_1 g_m s + 1) (C_3 C_L L_3 L_L R_3 s^4 + C_3 C_L L_3 L_L R_L s^4 + C_3 C_L L_3 R_3 R_L s^3 + C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + C_L L_3 L_L s^3 + C_L L_3 R_L s^2 + C_L L_L R_3 s^2 + C_L L_L R_L s^2 + C_L R_3 R_L s + L_3 s + R_3 + R_L)}$$

$$10.626 \quad \text{INVALID-ORDER-626} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \quad \infty, \quad \frac{R_3(C_3 L_3 s^2 + 1)}{C_3 L_3 s^2 + C_3 R_3 s + 1}, \quad \infty, \quad \infty, \quad R_L \right)$$

$$H(s) = \frac{L_1 R_3 R_L g_m s (C_3 L_3 s^2 + 1)}{(C_1 L_1 s^2 + L_1 g_m s + 1) (C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + C_3 R_3 R_L s + R_3 + R_L)}$$

$$10.627 \quad \text{INVALID-ORDER-627} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \quad \infty, \quad \frac{R_3(C_3 L_3 s^2 + 1)}{C_3 L_3 s^2 + C_3 R_3 s + 1}, \quad \infty, \quad \infty, \quad \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_1 R_3 g_m s (C_3 L_3 s^2 + 1)}{(C_1 L_1 s^2 + L_1 g_m s + 1) (C_3 C_L L_3 R_3 s^3 + C_3 L_3 s^2 + C_3 R_3 s + C_L R_3 s + 1)}$$

$$10.628 \quad \text{INVALID-ORDER-628} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \quad \infty, \quad \frac{R_3(C_3 L_3 s^2 + 1)}{C_3 L_3 s^2 + C_3 R_3 s + 1}, \quad \infty, \quad \infty, \quad \frac{R_L}{C_L R_L s + 1} \right)$$

$$H(s) = \frac{L_1 R_3 R_L g_m s (C_3 L_3 s^2 + 1)}{(C_1 L_1 s^2 + L_1 g_m s + 1) (C_3 C_L L_3 R_3 R_L s^3 + C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + C_3 R_3 R_L s + C_L R_3 R_L s + R_3 + R_L)}$$

$$10.629 \quad \text{INVALID-ORDER-629} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \quad \infty, \quad \frac{R_3(C_3 L_3 s^2 + 1)}{C_3 L_3 s^2 + C_3 R_3 s + 1}, \quad \infty, \quad \infty, \quad R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_1 R_3 g_m s (C_3 L_3 s^2 + 1) (C_L R_L s + 1)}{(C_1 L_1 s^2 + L_1 g_m s + 1) (C_3 C_L L_3 R_3 s^3 + C_3 C_L L_3 R_L s^3 + C_3 C_L R_3 R_L s^2 + C_3 L_3 s^2 + C_3 R_3 s + C_L R_3 s + C_L R_L s + 1)}$$

$$10.630 \quad \text{INVALID-ORDER-630} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \quad \infty, \quad \frac{R_3(C_3 L_3 s^2 + 1)}{C_3 L_3 s^2 + C_3 R_3 s + 1}, \quad \infty, \quad \infty, \quad L_L s + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_1 R_3 g_m s (C_3 L_3 s^2 + 1) (C_L L_L s^2 + 1)}{(C_1 L_1 s^2 + L_1 g_m s + 1) (C_3 C_L L_3 L_L s^4 + C_3 C_L L_3 R_3 s^3 + C_3 C_L L_L R_3 s^3 + C_3 L_3 s^2 + C_3 R_3 s + C_L L_L s^2 + C_L R_3 s + 1)}$$

$$10.631 \quad \text{INVALID-ORDER-631} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \quad \infty, \quad \frac{R_3(C_3 L_3 s^2 + 1)}{C_3 L_3 s^2 + C_3 R_3 s + 1}, \quad \infty, \quad \infty, \quad \frac{L_L s}{C_L L_L s^2 + 1} \right)$$

$$H(s) = \frac{L_1 L_L R_3 g_m s^2 (C_3 L_3 s^2 + 1)}{(C_1 L_1 s^2 + L_1 g_m s + 1) (C_3 C_L L_3 L_L R_3 s^4 + C_3 L_3 L_L s^3 + C_3 L_3 R_3 s^2 + C_3 L_L R_3 s^2 + C_L L_L R_3 s^2 + L_L s + R_3)}$$

$$10.632 \quad \text{INVALID-ORDER-632} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \quad \infty, \quad \frac{R_3(C_3 L_3 s^2 + 1)}{C_3 L_3 s^2 + C_3 R_3 s + 1}, \quad \infty, \quad \infty, \quad L_L s + R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_1 R_3 g_m s (C_3 L_3 s^2 + 1) (C_L L_L s^2 + C_L R_L s + 1)}{(C_1 L_1 s^2 + L_1 g_m s + 1) (C_3 C_L L_3 L_L s^4 + C_3 C_L L_3 R_3 s^3 + C_3 C_L L_3 R_L s^3 + C_3 C_L L_L R_3 s^3 + C_3 C_L R_3 R_L s^2 + C_3 L_3 s^2 + C_3 R_3 s + C_L L_L s^2 + C_L R_3 s + C_L R_L s + 1)}$$

$$10.633 \quad \text{INVALID-ORDER-633} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \quad \infty, \quad \frac{R_3(C_3 L_3 s^2 + 1)}{C_3 L_3 s^2 + C_3 R_3 s + 1}, \quad \infty, \quad \infty, \quad \frac{L_L R_L s}{C_L L_L R_L s^2 + L_L s + R_L} \right)$$

$$H(s) = \frac{L_1 L_L R_3 R_L g_m s^2 (C_3 L_3 s^2 + 1)}{(C_1 L_1 s^2 + L_1 g_m s + 1) (C_3 C_L L_3 L_L R_3 R_L s^4 + C_3 L_3 L_L R_3 s^3 + C_3 L_3 L_L R_L s^3 + C_3 L_3 R_3 R_L s^2 + C_3 L_L R_3 R_L s^2 + C_L L_L R_3 R_L s^2 + L_L R_3 s + L_L R_L s + R_3 R_L)}$$

$$10.634 \quad \text{INVALID-ORDER-634} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \quad \infty, \quad \frac{R_3(C_3 L_3 s^2 + 1)}{C_3 L_3 s^2 + C_3 R_3 s + 1}, \quad \infty, \quad \infty, \quad \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$$

$$H(s) = \frac{L_1 R_3 g_m s (C_3 L_3 s^2 + 1) (C_L L_L R_L s^2 + L_L s + R_L)}{(C_1 L_1 s^2 + L_1 g_m s + 1) (C_3 C_L L_3 L_L R_3 s^4 + C_3 C_L L_3 L_L R_L s^4 + C_3 C_L L_L R_3 R_L s^3 + C_3 L_3 L_L s^3 + C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + C_3 L_L R_3 s^2 + C_3 R_3 R_L s + C_L L_L R_3 s^2 + C_L L_L R_L s^2 + L_L s + R_3 + R_L)}$$

$$10.635 \quad \text{INVALID-ORDER-635} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \quad \infty, \quad \frac{R_3 (C_3 L_3 s^2 + 1)}{C_3 L_3 s^2 + C_3 R_3 s + 1}, \quad \infty, \quad \infty, \quad \frac{R_L (C_L L_L s^2 + 1)}{C_L L_L s^2 + C_L R_L s + 1} \right)$$

$$H(s) = \frac{L_1 R_3 R_L g_m s (C_3 L_3 s^2 + 1) (C_L L_L s^2 + 1)}{(C_1 L_1 s^2 + L_1 g_m s + 1) (C_3 C_L L_3 L_L R_3 s^4 + C_3 C_L L_3 L_L R_L s^4 + C_3 C_L L_3 R_3 R_L s^3 + C_3 C_L L_L R_3 R_L s^3 + C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + C_3 R_3 R_L s + C_L L_L R_3 s^2 + C_L L_L R_L s^2 + C_L R_3 R_L s + R_3 + R_L)}$$

$$10.636 \quad \text{INVALID-ORDER-636} \quad Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s}, \quad \infty, \quad R_3, \quad \infty, \quad \infty, \quad \frac{1}{C_L s} \right)$$

$$H(s) = \frac{R_3 g_m (C_1 L_1 s^2 + C_1 R_1 s + 1)}{(C_L R_3 s + 1) (C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m)}$$

$$10.637 \quad \text{INVALID-ORDER-637} \quad Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s}, \quad \infty, \quad R_3, \quad \infty, \quad \infty, \quad \frac{R_L}{C_L R_L s + 1} \right)$$

$$H(s) = \frac{R_3 R_L g_m (C_1 L_1 s^2 + C_1 R_1 s + 1)}{(C_L R_3 R_L s + R_3 + R_L) (C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m)}$$

$$10.638 \quad \text{INVALID-ORDER-638} \quad Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s}, \quad \infty, \quad R_3, \quad \infty, \quad \infty, \quad R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{R_3 g_m (C_L R_L s + 1) (C_1 L_1 s^2 + C_1 R_1 s + 1)}{(C_L R_3 s + C_L R_L s + 1) (C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m)}$$

$$10.639 \quad \text{INVALID-ORDER-639} \quad Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s}, \quad \infty, \quad R_3, \quad \infty, \quad \infty, \quad L_L s + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{R_3 g_m (C_L L_L s^2 + 1) (C_1 L_1 s^2 + C_1 R_1 s + 1)}{(C_L L_L s^2 + C_L R_3 s + 1) (C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m)}$$

$$10.640 \quad \text{INVALID-ORDER-640} \quad Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s}, \quad \infty, \quad R_3, \quad \infty, \quad \infty, \quad \frac{L_L s}{C_L L_L s^2 + 1} \right)$$

$$H(s) = \frac{L_L R_3 g_m s (C_1 L_1 s^2 + C_1 R_1 s + 1)}{(C_L L_L R_3 s^2 + L_L s + R_3) (C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m)}$$

$$10.641 \quad \text{INVALID-ORDER-641} \quad Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s}, \quad \infty, \quad R_3, \quad \infty, \quad \infty, \quad L_L s + R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{R_3 g_m (C_1 L_1 s^2 + C_1 R_1 s + 1) (C_L L_L s^2 + C_L R_L s + 1)}{(C_L L_L s^2 + C_L R_3 s + C_L R_L s + 1) (C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m)}$$

$$10.642 \quad \text{INVALID-ORDER-642} \quad Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s}, \quad \infty, \quad R_3, \quad \infty, \quad \infty, \quad \frac{L_L R_L s}{C_L L_L R_L s^2 + L_L s + R_L} \right)$$

$$H(s) = \frac{L_L R_3 R_L g_m s (C_1 L_1 s^2 + C_1 R_1 s + 1)}{(C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m) (C_L L_L R_3 R_L s^2 + L_L R_3 s + L_L R_L s + R_3 R_L)}$$

$$10.643 \quad \text{INVALID-ORDER-643} \quad Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s}, \quad \infty, \quad R_3, \quad \infty, \quad \infty, \quad \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$$

$$H(s) = \frac{R_3 g_m (C_1 L_1 s^2 + C_1 R_1 s + 1) (C_L L_L R_L s^2 + L_L s + R_L)}{(C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m) (C_L L_L R_3 s^2 + C_L L_L R_L s^2 + L_L s + R_3 + R_L)}$$

$$10.644 \quad \text{INVALID-ORDER-644} \quad Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s}, \quad \infty, \quad R_3, \quad \infty, \quad \infty, \quad \frac{R_L (C_L L_L s^2 + 1)}{C_L L_L s^2 + C_L R_L s + 1} \right)$$

$$H(s) = \frac{R_3 R_L g_m (C_L L_L s^2 + 1) (C_1 L_1 s^2 + C_1 R_1 s + 1)}{(C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m) (C_L L_L R_3 s^2 + C_L L_L R_L s^2 + C_L R_3 R_L s + R_3 + R_L)}$$

$$10.645 \quad \text{INVALID-ORDER-645} \quad Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad R_L \right)$$

$$H(s) = \frac{R_L g_m (C_1 L_1 s^2 + C_1 R_1 s + 1)}{(C_3 R_L s + 1) (C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m)}$$

$$10.646 \quad \text{INVALID-ORDER-646} \quad Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad \frac{1}{C_L s} \right)$$

$$H(s) = \frac{g_m (C_1 L_1 s^2 + C_1 R_1 s + 1)}{s (C_3 + C_L) (C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m)}$$

$$10.647 \quad \text{INVALID-ORDER-647} \quad Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad \frac{R_L}{C_L R_L s + 1} \right)$$

$$H(s) = \frac{R_L g_m (C_1 L_1 s^2 + C_1 R_1 s + 1)}{(C_3 R_L s + C_L R_L s + 1) (C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m)}$$

$$10.648 \quad \text{INVALID-ORDER-648} \quad Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{g_m (C_L R_L s + 1) (C_1 L_1 s^2 + C_1 R_1 s + 1)}{s (C_3 C_L R_L s + C_3 + C_L) (C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m)}$$

$$10.649 \quad \text{INVALID-ORDER-649} \quad Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad L_L s + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{g_m (C_L L_L s^2 + 1) (C_1 L_1 s^2 + C_1 R_1 s + 1)}{s (C_3 C_L L_L s^2 + C_3 + C_L) (C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m)}$$

$$10.650 \quad \text{INVALID-ORDER-650} \quad Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad \frac{L_L s}{C_L L_L s^2 + 1} \right)$$

$$H(s) = \frac{L_L g_m s (C_1 L_1 s^2 + C_1 R_1 s + 1)}{(C_3 L_L s^2 + C_L L_L s^2 + 1) (C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m)}$$

$$10.651 \quad \text{INVALID-ORDER-651} \quad Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad L_L s + R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{g_m (C_1 L_1 s^2 + C_1 R_1 s + 1) (C_L L_L s^2 + C_L R_L s + 1)}{s (C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_L s^2 + C_3 C_L R_L s + C_3 + C_L)}$$

$$10.652 \quad \text{INVALID-ORDER-652} \quad Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad \frac{L_L R_L s}{C_L L_L R_L s^2 + L_L s + R_L} \right)$$

$$H(s) = \frac{L_L R_L g_m s (C_1 L_1 s^2 + C_1 R_1 s + 1)}{(C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m) (C_3 L_L R_L s^2 + C_L L_L R_L s^2 + L_L s + R_L)}$$

$$\mathbf{10.653 \quad INVALID-ORDER-653} \quad Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$$

$$H(s) = \frac{g_m (C_1 L_1 s^2 + C_1 R_1 s + 1) (C_L L_L R_L s^2 + L_L s + R_L)}{(C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_L R_L s^3 + C_3 L_L s^2 + C_3 R_L s + C_L L_L s^2 + 1)}$$

$$\mathbf{10.654 \quad INVALID-ORDER-654} \quad Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad \frac{R_L (C_L L_L s^2 + 1)}{C_L L_L s^2 + C_L R_L s + 1} \right)$$

$$H(s) = \frac{R_L g_m (C_L L_L s^2 + 1) (C_1 L_1 s^2 + C_1 R_1 s + 1)}{(C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_L R_L s^3 + C_3 R_L s + C_L L_L s^2 + C_L R_L s + 1)}$$

$$\mathbf{10.655 \quad INVALID-ORDER-655} \quad Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \frac{R_3}{C_3 R_3 s + 1}, \quad \infty, \quad \infty, \quad R_L \right)$$

$$H(s) = \frac{R_3 R_L g_m (C_1 L_1 s^2 + C_1 R_1 s + 1)}{(C_3 R_3 R_L s + R_3 + R_L) (C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m)}$$

$$\mathbf{10.656 \quad INVALID-ORDER-656} \quad Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \frac{R_3}{C_3 R_3 s + 1}, \quad \infty, \quad \infty, \quad \frac{1}{C_L s} \right)$$

$$H(s) = \frac{R_3 g_m (C_1 L_1 s^2 + C_1 R_1 s + 1)}{(C_3 R_3 s + C_L R_3 s + 1) (C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m)}$$

$$\mathbf{10.657 \quad INVALID-ORDER-657} \quad Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \frac{R_3}{C_3 R_3 s + 1}, \quad \infty, \quad \infty, \quad \frac{R_L}{C_L R_L s + 1} \right)$$

$$H(s) = \frac{R_3 R_L g_m (C_1 L_1 s^2 + C_1 R_1 s + 1)}{(C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m) (C_3 R_3 R_L s + C_L R_3 R_L s + R_3 + R_L)}$$

$$\mathbf{10.658 \quad INVALID-ORDER-658} \quad Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \frac{R_3}{C_3 R_3 s + 1}, \quad \infty, \quad \infty, \quad R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{R_3 g_m (C_L R_L s + 1) (C_1 L_1 s^2 + C_1 R_1 s + 1)}{(C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L R_3 R_L s^2 + C_3 R_3 s + C_L R_3 s + C_L R_L s + 1)}$$

$$\mathbf{10.659 \quad INVALID-ORDER-659} \quad Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \frac{R_3}{C_3 R_3 s + 1}, \quad \infty, \quad \infty, \quad L_L s + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{R_3 g_m (C_L L_L s^2 + 1) (C_1 L_1 s^2 + C_1 R_1 s + 1)}{(C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_L R_3 s^3 + C_3 R_3 s + C_L L_L s^2 + C_L R_3 s + 1)}$$

$$\mathbf{10.660 \quad INVALID-ORDER-660} \quad Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \frac{R_3}{C_3 R_3 s + 1}, \quad \infty, \quad \infty, \quad \frac{L_L s}{C_L L_L s^2 + 1} \right)$$

$$H(s) = \frac{L_L R_3 g_m s (C_1 L_1 s^2 + C_1 R_1 s + 1)}{(C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m) (C_3 L_L R_3 s^2 + C_L L_L R_3 s^2 + L_L s + R_3)}$$

$$\mathbf{10.661 \quad INVALID-ORDER-661} \quad Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \frac{R_3}{C_3 R_3 s + 1}, \quad \infty, \quad \infty, \quad L_L s + R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{R_3 g_m (C_1 L_1 s^2 + C_1 R_1 s + 1) (C_L L_L s^2 + C_L R_L s + 1)}{(C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_L R_3 s^3 + C_3 C_L R_3 R_L s^2 + C_3 R_3 s + C_L L_L s^2 + C_L R_3 s + C_L R_L s + 1)}$$

$$10.662 \quad \text{INVALID-ORDER-662} \quad Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \frac{R_3}{C_3 R_3 s + 1}, \quad \infty, \quad \infty, \quad \frac{L_L R_L s}{C_L L_L R_L s^2 + L_L s + R_L} \right)$$

$$H(s) = \frac{L_L R_3 R_L g_m s (C_1 L_1 s^2 + C_1 R_1 s + 1)}{(C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m) (C_3 L_L R_3 R_L s^2 + C_L L_L R_3 R_L s^2 + L_L R_3 s + L_L R_L s + R_3 R_L)}$$

$$10.663 \quad \text{INVALID-ORDER-663} \quad Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \frac{R_3}{C_3 R_3 s + 1}, \quad \infty, \quad \infty, \quad \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$$

$$H(s) = \frac{R_3 g_m (C_1 L_1 s^2 + C_1 R_1 s + 1) (C_L L_L R_L s^2 + L_L s + R_L)}{(C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_L R_3 R_L s^3 + C_3 L_L R_3 s^2 + C_3 R_3 R_L s + C_L L_L R_3 s^2 + C_L L_L R_L s^2 + L_L s + R_3 + R_L)}$$

$$10.664 \quad \text{INVALID-ORDER-664} \quad Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \frac{R_3}{C_3 R_3 s + 1}, \quad \infty, \quad \infty, \quad \frac{R_L (C_L L_L s^2 + 1)}{C_L L_L s^2 + C_L R_L s + 1} \right)$$

$$H(s) = \frac{R_3 R_L g_m (C_L L_L s^2 + 1) (C_1 L_1 s^2 + C_1 R_1 s + 1)}{(C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_L R_3 R_L s^3 + C_3 R_3 R_L s + C_L L_L R_3 s^2 + C_L L_L R_L s^2 + C_L R_3 R_L s + R_3 + R_L)}$$

$$10.665 \quad \text{INVALID-ORDER-665} \quad Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s}, \quad \infty, \quad R_3 + \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad R_L \right)$$

$$H(s) = \frac{R_L g_m (C_3 R_3 s + 1) (C_1 L_1 s^2 + C_1 R_1 s + 1)}{(C_3 R_3 s + C_3 R_L s + 1) (C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m)}$$

$$10.666 \quad \text{INVALID-ORDER-666} \quad Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s}, \quad \infty, \quad R_3 + \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad \frac{1}{C_L s} \right)$$

$$H(s) = \frac{g_m (C_3 R_3 s + 1) (C_1 L_1 s^2 + C_1 R_1 s + 1)}{s (C_3 C_L R_3 s + C_3 + C_L) (C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m)}$$

$$10.667 \quad \text{INVALID-ORDER-667} \quad Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s}, \quad \infty, \quad R_3 + \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad \frac{R_L}{C_L R_L s + 1} \right)$$

$$H(s) = \frac{R_L g_m (C_3 R_3 s + 1) (C_1 L_1 s^2 + C_1 R_1 s + 1)}{(C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L R_3 R_L s^2 + C_3 R_3 s + C_3 R_L s + C_L R_L s + 1)}$$

$$10.668 \quad \text{INVALID-ORDER-668} \quad Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s}, \quad \infty, \quad R_3 + \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{g_m (C_3 R_3 s + 1) (C_L R_L s + 1) (C_1 L_1 s^2 + C_1 R_1 s + 1)}{s (C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L R_3 s + C_3 C_L R_L s + C_3 + C_L)}$$

$$10.669 \quad \text{INVALID-ORDER-669} \quad Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s}, \quad \infty, \quad R_3 + \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad L_L s + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{g_m (C_3 R_3 s + 1) (C_L L_L s^2 + 1) (C_1 L_1 s^2 + C_1 R_1 s + 1)}{s (C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_L s^2 + C_3 C_L R_3 s + C_3 + C_L)}$$

$$10.670 \quad \text{INVALID-ORDER-670} \quad Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s}, \quad \infty, \quad R_3 + \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad \frac{L_L s}{C_L L_L s^2 + 1} \right)$$

$$H(s) = \frac{L_L g_m s (C_3 R_3 s + 1) (C_1 L_1 s^2 + C_1 R_1 s + 1)}{(C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_L R_3 s^3 + C_3 L_L s^2 + C_3 R_3 s + C_L L_L s^2 + 1)}$$

$$10.671 \quad \text{INVALID-ORDER-671} \quad Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s}, \quad \infty, \quad R_3 + \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad L_L s + R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{g_m (C_3 R_3 s + 1) (C_1 L_1 s^2 + C_1 R_1 s + 1) (C_L L_L s^2 + C_L R_L s + 1)}{s (C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_L s^2 + C_3 C_L R_3 s + C_3 C_L R_L s + C_3 + C_L)}$$

$$10.672 \quad \text{INVALID-ORDER-672} \quad Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s}, \quad \infty, \quad R_3 + \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad \frac{L_L R_L s}{C_L L_L R_L s^2 + L_L s + R_L} \right)$$

$$H(s) = \frac{L_L R_L g_m s (C_3 R_3 s + 1) (C_1 L_1 s^2 + C_1 R_1 s + 1)}{(C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_L R_3 R_L s^3 + C_3 L_L R_3 s^2 + C_3 L_L R_L s^2 + C_3 R_3 R_L s + C_L L_L R_L s^2 + L_L s + R_L)}$$

$$10.673 \quad \text{INVALID-ORDER-673} \quad Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s}, \quad \infty, \quad R_3 + \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$$

$$H(s) = \frac{g_m (C_3 R_3 s + 1) (C_1 L_1 s^2 + C_1 R_1 s + 1) (C_L L_L R_L s^2 + L_L s + R_L)}{(C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_L R_3 s^3 + C_3 C_L L_L R_L s^3 + C_3 L_L s^2 + C_3 R_3 s + C_3 R_L s + C_L L_L s^2 + 1)}$$

$$10.674 \quad \text{INVALID-ORDER-674} \quad Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s}, \quad \infty, \quad R_3 + \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad \frac{R_L (C_L L_L s^2 + 1)}{C_L L_L s^2 + C_L R_L s + 1} \right)$$

$$H(s) = \frac{R_L g_m (C_3 R_3 s + 1) (C_L L_L s^2 + 1) (C_1 L_1 s^2 + C_1 R_1 s + 1)}{(C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_L R_3 s^3 + C_3 C_L L_L R_L s^3 + C_3 C_L R_3 R_L s^2 + C_3 R_3 s + C_3 R_L s + C_L L_L s^2 + C_L R_L s + 1)}$$

$$10.675 \quad \text{INVALID-ORDER-675} \quad Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s}, \quad \infty, \quad L_3 s + \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad R_L \right)$$

$$H(s) = \frac{R_L g_m (C_3 L_3 s^2 + 1) (C_1 L_1 s^2 + C_1 R_1 s + 1)}{(C_3 L_3 s^2 + C_3 R_L s + 1) (C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m)}$$

$$10.676 \quad \text{INVALID-ORDER-676} \quad Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s}, \quad \infty, \quad L_3 s + \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad \frac{1}{C_L s} \right)$$

$$H(s) = \frac{g_m (C_3 L_3 s^2 + 1) (C_1 L_1 s^2 + C_1 R_1 s + 1)}{s (C_3 C_L L_3 s^2 + C_3 + C_L) (C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m)}$$

$$10.677 \quad \text{INVALID-ORDER-677} \quad Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s}, \quad \infty, \quad L_3 s + \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad \frac{R_L}{C_L R_L s + 1} \right)$$

$$H(s) = \frac{R_L g_m (C_3 L_3 s^2 + 1) (C_1 L_1 s^2 + C_1 R_1 s + 1)}{(C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_3 R_L s^3 + C_3 L_3 s^2 + C_3 R_L s + C_L R_L s + 1)}$$

$$10.678 \quad \text{INVALID-ORDER-678} \quad Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s}, \quad \infty, \quad L_3 s + \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{g_m (C_3 L_3 s^2 + 1) (C_L R_L s + 1) (C_1 L_1 s^2 + C_1 R_1 s + 1)}{s (C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_3 s^2 + C_3 C_L R_L s + C_3 + C_L)}$$

$$10.679 \quad \text{INVALID-ORDER-679} \quad Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s}, \quad \infty, \quad L_3 s + \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad L_L s + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{g_m (C_3 L_3 s^2 + 1) (C_L L_L s^2 + 1) (C_1 L_1 s^2 + C_1 R_1 s + 1)}{s (C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_3 s^2 + C_3 C_L L_L s^2 + C_3 + C_L)}$$

$$10.680 \quad \text{INVALID-ORDER-680} \quad Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s}, \quad \infty, \quad L_3 s + \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad \frac{L_L s}{C_L L_L s^2 + 1} \right)$$

$$H(s) = \frac{L_L g_m s (C_3 L_3 s^2 + 1) (C_1 L_1 s^2 + C_1 R_1 s + 1)}{(C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_3 L_L s^4 + C_3 L_3 s^2 + C_3 L_L s^2 + C_L L_L s^2 + 1)}$$

$$10.681 \quad \text{INVALID-ORDER-681} \quad Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s}, \quad \infty, \quad L_3 s + \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad L_L s + R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{g_m (C_3 L_3 s^2 + 1) (C_1 L_1 s^2 + C_1 R_1 s + 1) (C_L L_L s^2 + C_L R_L s + 1)}{s (C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_3 s^2 + C_3 C_L L_L s^2 + C_3 C_L R_L s + C_3 + C_L)}$$

$$10.682 \quad \text{INVALID-ORDER-682} \quad Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s}, \quad \infty, \quad L_3 s + \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad \frac{L_L R_L s}{C_L L_L R_L s^2 + L_L s + R_L} \right)$$

$$H(s) = \frac{L_L R_L g_m s (C_3 L_3 s^2 + 1) (C_1 L_1 s^2 + C_1 R_1 s + 1)}{(C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_3 L_L R_L s^4 + C_3 L_3 L_L s^3 + C_3 L_3 R_L s^2 + C_3 L_L R_L s^2 + C_L L_L R_L s^2 + L_L s + R_L)}$$

$$10.683 \quad \text{INVALID-ORDER-683} \quad Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s}, \quad \infty, \quad L_3 s + \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$$

$$H(s) = \frac{g_m (C_3 L_3 s^2 + 1) (C_1 L_1 s^2 + C_1 R_1 s + 1) (C_L L_L R_L s^2 + L_L s + R_L)}{(C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_3 L_L s^4 + C_3 C_L L_L R_L s^3 + C_3 L_3 s^2 + C_3 L_L s^2 + C_3 R_L s + C_L L_L s^2 + 1)}$$

$$10.684 \quad \text{INVALID-ORDER-684} \quad Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s}, \quad \infty, \quad L_3 s + \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad \frac{R_L (C_L L_L s^2 + 1)}{C_L L_L s^2 + C_L R_L s + 1} \right)$$

$$H(s) = \frac{R_L g_m (C_3 L_3 s^2 + 1) (C_L L_L s^2 + 1) (C_1 L_1 s^2 + C_1 R_1 s + 1)}{(C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_3 L_L s^4 + C_3 C_L L_3 R_L s^3 + C_3 C_L L_L R_L s^3 + C_3 L_3 s^2 + C_3 R_L s + C_L L_L s^2 + C_L R_L s + 1)}$$

$$10.685 \quad \text{INVALID-ORDER-685} \quad Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \frac{L_3 s}{C_3 L_3 s^2 + 1}, \quad \infty, \quad \infty, \quad R_L \right)$$

$$H(s) = \frac{L_3 R_L g_m s (C_1 L_1 s^2 + C_1 R_1 s + 1)}{(C_3 L_3 R_L s^2 + L_3 s + R_L) (C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m)}$$

$$10.686 \quad \text{INVALID-ORDER-686} \quad Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \frac{L_3 s}{C_3 L_3 s^2 + 1}, \quad \infty, \quad \infty, \quad \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_3 g_m s (C_1 L_1 s^2 + C_1 R_1 s + 1)}{(C_3 L_3 s^2 + C_L L_3 s^2 + 1) (C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m)}$$

$$10.687 \quad \text{INVALID-ORDER-687} \quad Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \frac{L_3 s}{C_3 L_3 s^2 + 1}, \quad \infty, \quad \infty, \quad \frac{R_L}{C_L R_L s + 1} \right)$$

$$H(s) = \frac{L_3 R_L g_m s (C_1 L_1 s^2 + C_1 R_1 s + 1)}{(C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m) (C_3 L_3 R_L s^2 + C_L L_3 R_L s^2 + L_3 s + R_L)}$$

$$10.688 \quad \text{INVALID-ORDER-688} \quad Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \frac{L_3 s}{C_3 L_3 s^2 + 1}, \quad \infty, \quad \infty, \quad R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_3 g_m s (C_L R_L s + 1) (C_1 L_1 s^2 + C_1 R_1 s + 1)}{(C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_3 R_L s^3 + C_3 L_3 s^2 + C_L L_3 s^2 + C_L R_L s + 1)}$$

$$\mathbf{10.689 \quad INVALID-ORDER-689} \quad Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \frac{L_3 s}{C_3 L_3 s^2 + 1}, \quad \infty, \quad \infty, \quad L_L s + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_3 g_m s (C_L L_L s^2 + 1) (C_1 L_1 s^2 + C_1 R_1 s + 1)}{(C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_3 L_L s^4 + C_3 L_3 s^2 + C_L L_3 s^2 + C_L L_L s^2 + 1)}$$

$$\mathbf{10.690 \quad INVALID-ORDER-690} \quad Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \frac{L_3 s}{C_3 L_3 s^2 + 1}, \quad \infty, \quad \infty, \quad \frac{L_L s}{C_L L_L s^2 + 1} \right)$$

$$H(s) = \frac{L_3 L_L g_m s (C_1 L_1 s^2 + C_1 R_1 s + 1)}{(C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m) (C_3 L_3 L_L s^2 + C_L L_3 L_L s^2 + L_3 + L_L)}$$

$$\mathbf{10.691 \quad INVALID-ORDER-691} \quad Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \frac{L_3 s}{C_3 L_3 s^2 + 1}, \quad \infty, \quad \infty, \quad L_L s + R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_3 g_m s (C_1 L_1 s^2 + C_1 R_1 s + 1) (C_L L_L s^2 + C_L R_L s + 1)}{(C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_3 L_L s^4 + C_3 C_L L_3 R_L s^3 + C_3 L_3 s^2 + C_L L_3 s^2 + C_L L_L s^2 + C_L R_L s + 1)}$$

$$\mathbf{10.692 \quad INVALID-ORDER-692} \quad Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \frac{L_3 s}{C_3 L_3 s^2 + 1}, \quad \infty, \quad \infty, \quad \frac{L_L R_L s}{C_L L_L R_L s^2 + L_L s + R_L} \right)$$

$$H(s) = \frac{L_3 L_L R_L g_m s (C_1 L_1 s^2 + C_1 R_1 s + 1)}{(C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m) (C_3 L_3 L_L R_L s^2 + C_L L_3 L_L R_L s^2 + L_3 L_L s + L_3 R_L + L_L R_L)}$$

$$\mathbf{10.693 \quad INVALID-ORDER-693} \quad Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \frac{L_3 s}{C_3 L_3 s^2 + 1}, \quad \infty, \quad \infty, \quad \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$$

$$H(s) = \frac{L_3 g_m s (C_1 L_1 s^2 + C_1 R_1 s + 1) (C_L L_L R_L s^2 + L_L s + R_L)}{(C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_3 L_L R_L s^4 + C_3 L_3 L_L s^3 + C_3 L_3 R_L s^2 + C_L L_3 L_L s^3 + C_L L_L R_L s^2 + L_3 s + L_L s + R_L)}$$

$$\mathbf{10.694 \quad INVALID-ORDER-694} \quad Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \frac{L_3 s}{C_3 L_3 s^2 + 1}, \quad \infty, \quad \infty, \quad \frac{R_L (C_L L_L s^2 + 1)}{C_L L_L s^2 + C_L R_L s + 1} \right)$$

$$H(s) = \frac{L_3 R_L g_m s (C_L L_L s^2 + 1) (C_1 L_1 s^2 + C_1 R_1 s + 1)}{(C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_3 L_L R_L s^4 + C_3 L_3 R_L s^2 + C_L L_3 L_L s^3 + C_L L_3 R_L s^2 + C_L L_L R_L s^2 + L_3 s + R_L)}$$

$$\mathbf{10.695 \quad INVALID-ORDER-695} \quad Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s}, \quad \infty, \quad L_3 s + R_3 + \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad R_L \right)$$

$$H(s) = \frac{R_L g_m (C_1 L_1 s^2 + C_1 R_1 s + 1) (C_3 L_3 s^2 + C_3 R_3 s + 1)}{(C_3 L_3 s^2 + C_3 R_3 s + C_3 R_L s + 1) (C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m)}$$

$$\mathbf{10.696 \quad INVALID-ORDER-696} \quad Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s}, \quad \infty, \quad L_3 s + R_3 + \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad \frac{1}{C_L s} \right)$$

$$H(s) = \frac{g_m (C_1 L_1 s^2 + C_1 R_1 s + 1) (C_3 L_3 s^2 + C_3 R_3 s + 1)}{s (C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_3 s^2 + C_3 C_L R_3 s + C_3 + C_L)}$$

$$\mathbf{10.697 \quad INVALID-ORDER-697} \quad Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s}, \quad \infty, \quad L_3 s + R_3 + \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad \frac{R_L}{C_L R_L s + 1} \right)$$

$$H(s) = \frac{R_L g_m (C_1 L_1 s^2 + C_1 R_1 s + 1) (C_3 L_3 s^2 + C_3 R_3 s + 1)}{(C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_3 R_L s^3 + C_3 C_L R_3 R_L s^2 + C_3 L_3 s^2 + C_3 R_3 s + C_3 R_L s + C_L R_L s + 1)}$$

$$10.698 \quad \text{INVALID-ORDER-698} \quad Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s}, \quad \infty, \quad L_3 s + R_3 + \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{g_m (C_L R_L s + 1) (C_1 L_1 s^2 + C_1 R_1 s + 1) (C_3 L_3 s^2 + C_3 R_3 s + 1)}{s (C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_3 s^2 + C_3 C_L R_3 s + C_3 C_L R_L s + C_3 + C_L)}$$

$$10.699 \quad \text{INVALID-ORDER-699} \quad Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s}, \quad \infty, \quad L_3 s + R_3 + \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad L_L s + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{g_m (C_L L_L s^2 + 1) (C_1 L_1 s^2 + C_1 R_1 s + 1) (C_3 L_3 s^2 + C_3 R_3 s + 1)}{s (C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_3 s^2 + C_3 C_L L_L s^2 + C_3 C_L R_3 s + C_3 + C_L)}$$

$$10.700 \quad \text{INVALID-ORDER-700} \quad Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s}, \quad \infty, \quad L_3 s + R_3 + \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad \frac{L_L s}{C_L L_L s^2 + 1} \right)$$

$$H(s) = \frac{L_L g_m s (C_1 L_1 s^2 + C_1 R_1 s + 1) (C_3 L_3 s^2 + C_3 R_3 s + 1)}{(C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_3 L_L s^4 + C_3 C_L L_L R_3 s^3 + C_3 L_3 s^2 + C_3 L_L s^2 + C_3 R_3 s + C_L L_L s^2 + 1)}$$

$$10.701 \quad \text{INVALID-ORDER-701} \quad Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s}, \quad \infty, \quad L_3 s + R_3 + \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad L_L s + R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{g_m (C_1 L_1 s^2 + C_1 R_1 s + 1) (C_3 L_3 s^2 + C_3 R_3 s + 1) (C_L L_L s^2 + C_L R_L s + 1)}{s (C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_3 s^2 + C_3 C_L L_L s^2 + C_3 C_L R_3 s + C_3 C_L R_L s + C_3 + C_L)}$$

$$10.702 \quad \text{INVALID-ORDER-702} \quad Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s}, \quad \infty, \quad L_3 s + R_3 + \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad \frac{L_L R_L s}{C_L L_L R_L s^2 + L_L s + R_L} \right)$$

$$H(s) = \frac{L_L R_L g_m s (C_1 L_1 s^2 + C_1 R_1 s + 1) (C_3 L_3 s^2 + C_3 R_3 s + 1)}{(C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_3 L_L R_L s^4 + C_3 C_L L_L R_3 R_L s^3 + C_3 L_3 L_L s^3 + C_3 L_3 R_L s^2 + C_3 L_L R_3 s^2 + C_3 L_L R_L s^2 + C_3 R_3 R_L s + C_L L_L R_L s^2 + L_L s + R_L)}$$

$$10.703 \quad \text{INVALID-ORDER-703} \quad Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s}, \quad \infty, \quad L_3 s + R_3 + \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$$

$$H(s) = \frac{g_m (C_1 L_1 s^2 + C_1 R_1 s + 1) (C_3 L_3 s^2 + C_3 R_3 s + 1) (C_L L_L R_L s^2 + L_L s + R_L)}{(C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_3 L_L s^4 + C_3 C_L L_L R_3 s^3 + C_3 C_L L_L R_L s^3 + C_3 L_3 s^2 + C_3 L_L s^2 + C_3 R_3 s + C_3 R_L s + C_L L_L s^2 + 1)}$$

$$10.704 \quad \text{INVALID-ORDER-704} \quad Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s}, \quad \infty, \quad L_3 s + R_3 + \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad \frac{R_L (C_L L_L s^2 + 1)}{C_L L_L s^2 + C_L R_L s + 1} \right)$$

$$H(s) = \frac{R_L g_m (C_L L_L s^2 + 1) (C_1 L_1 s^2 + C_1 R_1 s + 1) (C_3 L_3 s^2 + C_3 R_3 s + 1)}{(C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_3 L_L s^4 + C_3 C_L L_3 R_L s^3 + C_3 C_L L_L R_3 s^3 + C_3 C_L L_L R_L s^3 + C_3 C_L R_3 R_L s^2 + C_3 L_3 s^2 + C_3 R_3 s + C_3 R_L s + C_L L_L s^2 + C_L R_L s + 1)}$$

$$10.705 \quad \text{INVALID-ORDER-705} \quad Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \frac{L_3 R_3 s}{C_3 L_3 R_3 s^2 + L_3 s + R_3}, \quad \infty, \quad \infty, \quad R_L \right)$$

$$H(s) = \frac{L_3 R_3 R_L g_m s (C_1 L_1 s^2 + C_1 R_1 s + 1)}{(C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m) (C_3 L_3 R_3 R_L s^2 + L_3 R_3 s + L_3 R_L s + R_3 R_L)}$$

$$10.706 \quad \text{INVALID-ORDER-706} \quad Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \frac{L_3 R_3 s}{C_3 L_3 R_3 s^2 + L_3 s + R_3}, \quad \infty, \quad \infty, \quad \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_3 R_3 g_m s (C_1 L_1 s^2 + C_1 R_1 s + 1)}{(C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m) (C_3 L_3 R_3 s^2 + C_L L_3 R_3 s^2 + L_3 s + R_3)}$$

$$10.707 \quad \text{INVALID-ORDER-707} \quad Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \frac{L_3 R_3 s}{C_3 L_3 R_3 s^2 + L_3 s + R_3}, \quad \infty, \quad \infty, \quad \frac{R_L}{C_L R_L s + 1} \right)$$

$$H(s) = \frac{L_3 R_3 R_L g_m s (C_1 L_1 s^2 + C_1 R_1 s + 1)}{(C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m) (C_3 L_3 R_3 R_L s^2 + C_L L_3 R_3 R_L s^2 + L_3 R_3 s + L_3 R_L s + R_3 R_L)}$$

$$10.708 \quad \text{INVALID-ORDER-708} \quad Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \frac{L_3 R_3 s}{C_3 L_3 R_3 s^2 + L_3 s + R_3}, \quad \infty, \quad \infty, \quad R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_3 R_3 g_m s (C_L R_L s + 1) (C_1 L_1 s^2 + C_1 R_1 s + 1)}{(C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_3 R_3 R_L s^3 + C_3 L_3 R_3 s^2 + C_L L_3 R_3 s^2 + C_L L_3 R_L s^2 + C_L R_3 R_L s + L_3 s + R_3)}$$

$$10.709 \quad \text{INVALID-ORDER-709} \quad Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \frac{L_3 R_3 s}{C_3 L_3 R_3 s^2 + L_3 s + R_3}, \quad \infty, \quad \infty, \quad L_L s + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_3 R_3 g_m s (C_L L_L s^2 + 1) (C_1 L_1 s^2 + C_1 R_1 s + 1)}{(C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_3 L_L R_3 s^4 + C_3 L_3 R_3 s^2 + C_L L_3 L_L s^3 + C_L L_3 R_3 s^2 + C_L L_L R_3 s^2 + L_3 s + R_3)}$$

$$10.710 \quad \text{INVALID-ORDER-710} \quad Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \frac{L_3 R_3 s}{C_3 L_3 R_3 s^2 + L_3 s + R_3}, \quad \infty, \quad \infty, \quad \frac{L_L s}{C_L L_L s^2 + 1} \right)$$

$$H(s) = \frac{L_3 L_L R_3 g_m s (C_1 L_1 s^2 + C_1 R_1 s + 1)}{(C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m) (C_3 L_3 L_L R_3 s^2 + C_L L_3 L_L R_3 s^2 + L_3 L_L s + L_3 R_3 + L_L R_3)}$$

$$10.711 \quad \text{INVALID-ORDER-711} \quad Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \frac{L_3 R_3 s}{C_3 L_3 R_3 s^2 + L_3 s + R_3}, \quad \infty, \quad \infty, \quad L_L s + R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_3 R_3 g_m s (C_1 L_1 s^2 + C_1 R_1 s + 1) (C_L L_L s^2 + C_L R_L s + 1)}{(C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_3 L_L R_3 s^4 + C_3 C_L L_3 R_3 R_L s^3 + C_3 L_3 R_3 s^2 + C_L L_3 L_L s^3 + C_L L_3 R_3 s^2 + C_L L_3 R_L s^2 + C_L L_L R_3 s^2 + C_L R_3 R_L s + L_3 s + R_3)}$$

$$10.712 \quad \text{INVALID-ORDER-712} \quad Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \frac{L_3 R_3 s}{C_3 L_3 R_3 s^2 + L_3 s + R_3}, \quad \infty, \quad \infty, \quad \frac{L_L R_L s}{C_L L_L R_L s^2 + L_L s + R_L} \right)$$

$$H(s) = \frac{L_3 L_L R_3 R_L g_m s (C_1 L_1 s^2 + C_1 R_1 s + 1)}{(C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m) (C_3 L_3 L_L R_3 R_L s^2 + C_L L_3 L_L R_3 R_L s^2 + L_3 L_L R_3 s + L_3 L_L R_L s + L_3 R_3 R_L + L_L R_3 R_L)}$$

$$10.713 \quad \text{INVALID-ORDER-713} \quad Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \frac{L_3 R_3 s}{C_3 L_3 R_3 s^2 + L_3 s + R_3}, \quad \infty, \quad \infty, \quad \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$$

$$H(s) = \frac{L_3 R_3 g_m s (C_1 L_1 s^2 + C_1 R_1 s + 1) (C_L L_L R_L s^2 + L_L s + R_L)}{(C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_3 L_L R_3 R_L s^4 + C_3 L_3 L_L R_3 s^3 + C_3 L_3 R_3 R_L s^2 + C_L L_3 L_L R_3 s^3 + C_L L_3 L_L R_L s^3 + C_L L_L R_3 R_L s^2 + L_3 L_L s^2 + L_3 R_3 s + L_3 R_L s + L_L R_3 s + R_3 R_L)}$$

$$10.714 \quad \text{INVALID-ORDER-714} \quad Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \frac{L_3 R_3 s}{C_3 L_3 R_3 s^2 + L_3 s + R_3}, \quad \infty, \quad \infty, \quad \frac{R_L (C_L L_L s^2 + 1)}{C_L L_L s^2 + C_L R_L s + 1} \right)$$

$$H(s) = \frac{L_3 R_3 R_L g_m s (C_L L_L s^2 + 1) (C_1 L_1 s^2 + C_1 R_1 s + 1)}{(C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_3 L_L R_3 R_L s^4 + C_3 L_3 R_3 R_L s^2 + C_L L_3 L_L R_3 s^3 + C_L L_3 L_L R_L s^3 + C_L L_3 R_3 R_L s^2 + C_L L_L R_3 R_L s^2 + L_3 R_3 s + L_3 R_L s + R_3 R_L)}$$

$$10.715 \quad \text{INVALID-ORDER-715} \quad Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \frac{L_3 s}{C_3 L_3 s^2 + 1} + R_3, \quad \infty, \quad \infty, \quad R_L \right)$$

$$H(s) = \frac{R_L g_m (C_1 L_1 s^2 + C_1 R_1 s + 1) (C_3 L_3 R_3 s^2 + L_3 s + R_3)}{(C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m) (C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + L_3 s + R_3 + R_L)}$$

$$\mathbf{10.716 \quad INVALID-ORDER-716} \quad Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \frac{L_3 s}{C_3 L_3 s^2 + 1} + R_3, \quad \infty, \quad \infty, \quad \frac{1}{C_L s} \right)$$

$$H(s) = \frac{g_m (C_1 L_1 s^2 + C_1 R_1 s + 1) (C_3 L_3 R_3 s^2 + L_3 s + R_3)}{(C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_3 R_3 s^3 + C_3 L_3 s^2 + C_L L_3 s^2 + C_L R_3 s + 1)}$$

$$\mathbf{10.717 \quad INVALID-ORDER-717} \quad Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \frac{L_3 s}{C_3 L_3 s^2 + 1} + R_3, \quad \infty, \quad \infty, \quad \frac{R_L}{C_L R_L s + 1} \right)$$

$$H(s) = \frac{R_L g_m (C_1 L_1 s^2 + C_1 R_1 s + 1) (C_3 L_3 R_3 s^2 + L_3 s + R_3)}{(C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_3 R_3 R_L s^3 + C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + C_L L_3 R_L s^2 + C_L R_3 R_L s + L_3 s + R_3 + R_L)}$$

$$\mathbf{10.718 \quad INVALID-ORDER-718} \quad Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \frac{L_3 s}{C_3 L_3 s^2 + 1} + R_3, \quad \infty, \quad \infty, \quad R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{g_m (C_L R_L s + 1) (C_1 L_1 s^2 + C_1 R_1 s + 1) (C_3 L_3 R_3 s^2 + L_3 s + R_3)}{(C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_3 R_3 s^3 + C_3 C_L L_3 R_L s^3 + C_3 L_3 s^2 + C_L L_3 s^2 + C_L R_3 s + C_L R_L s + 1)}$$

$$\mathbf{10.719 \quad INVALID-ORDER-719} \quad Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \frac{L_3 s}{C_3 L_3 s^2 + 1} + R_3, \quad \infty, \quad \infty, \quad L_L s + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{g_m (C_L L_L s^2 + 1) (C_1 L_1 s^2 + C_1 R_1 s + 1) (C_3 L_3 R_3 s^2 + L_3 s + R_3)}{(C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_3 L_L s^4 + C_3 C_L L_3 R_3 s^3 + C_3 L_3 s^2 + C_L L_3 s^2 + C_L L_L s^2 + C_L R_3 s + 1)}$$

$$\mathbf{10.720 \quad INVALID-ORDER-720} \quad Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \frac{L_3 s}{C_3 L_3 s^2 + 1} + R_3, \quad \infty, \quad \infty, \quad \frac{L_L s}{C_L L_L s^2 + 1} \right)$$

$$H(s) = \frac{L_L g_m s (C_1 L_1 s^2 + C_1 R_1 s + 1) (C_3 L_3 R_3 s^2 + L_3 s + R_3)}{(C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_3 L_L R_3 s^4 + C_3 L_3 L_L s^3 + C_3 L_3 R_3 s^2 + C_L L_3 L_L s^3 + C_L L_L R_3 s^2 + L_3 s + L_L s + R_3)}$$

$$\mathbf{10.721 \quad INVALID-ORDER-721} \quad Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \frac{L_3 s}{C_3 L_3 s^2 + 1} + R_3, \quad \infty, \quad \infty, \quad L_L s + R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{g_m (C_1 L_1 s^2 + C_1 R_1 s + 1) (C_L L_L s^2 + C_L R_L s + 1) (C_3 L_3 R_3 s^2 + L_3 s + R_3)}{(C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_3 L_L s^4 + C_3 C_L L_3 R_3 s^3 + C_3 C_L L_3 R_L s^3 + C_3 L_3 s^2 + C_L L_3 s^2 + C_L L_L s^2 + C_L R_3 s + C_L R_L s + 1)}$$

$$\mathbf{10.722 \quad INVALID-ORDER-722} \quad Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \frac{L_3 s}{C_3 L_3 s^2 + 1} + R_3, \quad \infty, \quad \infty, \quad \frac{L_L R_L s}{C_L L_L R_L s^2 + L_L s + R_L} \right)$$

$$H(s) = \frac{L_L R_L g_m s (C_1 L_1 s^2 + C_1 R_1 s + 1) (C_3 L_3 R_3 s^2 + L_3 s + R_3)}{(C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_3 L_L R_3 R_L s^4 + C_3 L_3 L_L R_3 s^3 + C_3 L_3 L_L R_L s^3 + C_3 L_3 R_3 R_L s^2 + C_L L_3 L_L R_L s^3 + C_L L_L R_3 R_L s^2 + L_3 L_L s^2 + L_3 R_L s + L_L R_3 s + L_L R_L s + R_3 R_L)}$$

$$\mathbf{10.723 \quad INVALID-ORDER-723} \quad Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \frac{L_3 s}{C_3 L_3 s^2 + 1} + R_3, \quad \infty, \quad \infty, \quad \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$$

$$H(s) = \frac{g_m (C_1 L_1 s^2 + C_1 R_1 s + 1) (C_3 L_3 R_3 s^2 + L_3 s + R_3) (C_L L_L R_L s^2 + L_L s + R_L)}{(C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_3 L_L R_3 s^4 + C_3 C_L L_3 L_L R_L s^4 + C_3 L_3 L_L s^3 + C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + C_L L_3 L_L s^3 + C_L L_L R_3 s^2 + C_L L_L R_L s^2 + L_3 s + L_L s + R_3 + R_L)}$$

$$\mathbf{10.724 \quad INVALID-ORDER-724} \quad Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \frac{L_3 s}{C_3 L_3 s^2 + 1} + R_3, \quad \infty, \quad \infty, \quad \frac{R_L (C_L L_L s^2 + 1)}{C_L L_L s^2 + C_L R_L s + 1} \right)$$

$$H(s) = \frac{R_L g_m (C_L L_L s^2 + 1) (C_1 L_1 s^2 + C_1 R_1 s + 1) (C_3 L_3 R_3 s^2 + L_3 s + R_3)}{(C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_3 L_L R_3 s^4 + C_3 C_L L_3 L_L R_L s^4 + C_3 C_L L_3 R_3 R_L s^3 + C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + C_L L_3 L_L s^3 + C_L L_3 R_3 s^2 + C_L L_L R_3 s^2 + C_L L_L R_L s^2 + C_L R_3 R_L s + L_3 s + R_3 + R_L)}$$

$$10.725 \quad \text{INVALID-ORDER-725} \quad Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \frac{R_3(C_3 L_3 s^2 + 1)}{C_3 L_3 s^2 + C_3 R_3 s + 1}, \quad \infty, \quad \infty, \quad R_L \right)$$

$$H(s) = \frac{R_3 R_L g_m (C_3 L_3 s^2 + 1) (C_1 L_1 s^2 + C_1 R_1 s + 1)}{(C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m) (C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + C_3 R_3 R_L s + R_3 + R_L)}$$

$$10.726 \quad \text{INVALID-ORDER-726} \quad Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \frac{R_3(C_3 L_3 s^2 + 1)}{C_3 L_3 s^2 + C_3 R_3 s + 1}, \quad \infty, \quad \infty, \quad \frac{1}{C_L s} \right)$$

$$H(s) = \frac{R_3 g_m (C_3 L_3 s^2 + 1) (C_1 L_1 s^2 + C_1 R_1 s + 1)}{(C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_3 R_3 s^3 + C_3 L_3 s^2 + C_3 R_3 s + C_L R_3 s + 1)}$$

$$10.727 \quad \text{INVALID-ORDER-727} \quad Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \frac{R_3(C_3 L_3 s^2 + 1)}{C_3 L_3 s^2 + C_3 R_3 s + 1}, \quad \infty, \quad \infty, \quad \frac{R_L}{C_L R_L s + 1} \right)$$

$$H(s) = \frac{R_3 R_L g_m (C_3 L_3 s^2 + 1) (C_1 L_1 s^2 + C_1 R_1 s + 1)}{(C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_3 R_3 R_L s^3 + C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + C_3 R_3 R_L s + C_L R_3 R_L s + R_3 + R_L)}$$

$$10.728 \quad \text{INVALID-ORDER-728} \quad Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \frac{R_3(C_3 L_3 s^2 + 1)}{C_3 L_3 s^2 + C_3 R_3 s + 1}, \quad \infty, \quad \infty, \quad R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{R_3 g_m (C_3 L_3 s^2 + 1) (C_L R_L s + 1) (C_1 L_1 s^2 + C_1 R_1 s + 1)}{(C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_3 R_3 s^3 + C_3 C_L L_3 R_L s^3 + C_3 C_L R_3 R_L s^2 + C_3 L_3 s^2 + C_3 R_3 s + C_L R_3 s + C_L R_L s + 1)}$$

$$10.729 \quad \text{INVALID-ORDER-729} \quad Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \frac{R_3(C_3 L_3 s^2 + 1)}{C_3 L_3 s^2 + C_3 R_3 s + 1}, \quad \infty, \quad \infty, \quad L_L s + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{R_3 g_m (C_3 L_3 s^2 + 1) (C_L L_L s^2 + 1) (C_1 L_1 s^2 + C_1 R_1 s + 1)}{(C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_3 L_L s^4 + C_3 C_L L_3 R_3 s^3 + C_3 C_L L_L R_3 s^3 + C_3 L_3 s^2 + C_3 R_3 s + C_L L_L s^2 + C_L R_3 s + 1)}$$

$$10.730 \quad \text{INVALID-ORDER-730} \quad Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \frac{R_3(C_3 L_3 s^2 + 1)}{C_3 L_3 s^2 + C_3 R_3 s + 1}, \quad \infty, \quad \infty, \quad \frac{L_L s}{C_L L_L s^2 + 1} \right)$$

$$H(s) = \frac{L_L R_3 g_m s (C_3 L_3 s^2 + 1) (C_1 L_1 s^2 + C_1 R_1 s + 1)}{(C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_3 L_L R_3 s^4 + C_3 L_3 L_L s^3 + C_3 L_3 R_3 s^2 + C_3 L_L R_3 s^2 + C_L L_L R_3 s^2 + L_L s + R_3)}$$

$$10.731 \quad \text{INVALID-ORDER-731} \quad Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \frac{R_3(C_3 L_3 s^2 + 1)}{C_3 L_3 s^2 + C_3 R_3 s + 1}, \quad \infty, \quad \infty, \quad L_L s + R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{R_3 g_m (C_3 L_3 s^2 + 1) (C_1 L_1 s^2 + C_1 R_1 s + 1) (C_L L_L s^2 + C_L R_L s + 1)}{(C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_3 L_L s^4 + C_3 C_L L_3 R_3 s^3 + C_3 C_L L_3 R_L s^3 + C_3 C_L L_L R_3 s^3 + C_3 C_L R_3 R_L s^2 + C_3 L_3 s^2 + C_3 R_3 s + C_L L_L s^2 + C_L R_3 s + C_L R_L s + 1)}$$

$$10.732 \quad \text{INVALID-ORDER-732} \quad Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \frac{R_3(C_3 L_3 s^2 + 1)}{C_3 L_3 s^2 + C_3 R_3 s + 1}, \quad \infty, \quad \infty, \quad \frac{L_L R_L s}{C_L L_L R_L s^2 + L_L s + R_L} \right)$$

$$H(s) = \frac{L_L R_3 R_L g_m s (C_3 L_3 s^2 + 1) (C_1 L_1 s^2 + C_1 R_1 s + 1)}{(C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_3 L_L R_3 R_L s^4 + C_3 L_3 L_L R_3 s^3 + C_3 L_3 L_L R_L s^3 + C_3 L_3 R_3 R_L s^2 + C_3 L_L R_3 R_L s^2 + C_L L_L R_3 R_L s^2 + L_L R_3 s + L_L R_L s + R_3 R_L)}$$

$$10.733 \quad \text{INVALID-ORDER-733} \quad Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \frac{R_3(C_3 L_3 s^2 + 1)}{C_3 L_3 s^2 + C_3 R_3 s + 1}, \quad \infty, \quad \infty, \quad \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$$

$$H(s) = \frac{R_3 g_m (C_3 L_3 s^2 + 1) (C_1 L_1 s^2 + C_1 R_1 s + 1) (C_L L_L R_L s^2 + L_L s + R_L)}{(C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_3 L_L R_3 s^4 + C_3 C_L L_3 L_L R_L s^4 + C_3 C_L L_L R_3 R_L s^3 + C_3 L_3 L_L s^3 + C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + C_3 L_L R_3 s^2 + C_3 R_3 R_L s + C_L L_L R_3 s^2 + C_L L_L R_L s^2 + L_L s + R_3 + R_L)}$$

10.734 INVALID-ORDER-734 $Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s}, \infty, \frac{R_3(C_3 L_3 s^2 + 1)}{C_3 L_3 s^2 + C_3 R_3 s + 1}, \infty, \infty, \frac{R_L(C_L L_L s^2 + 1)}{C_L L_L s^2 + C_L R_L s + 1} \right)$

$$H(s) = \frac{R_3 R_L g_m (C_3 L_3 s^2 + 1) (C_L L_L s^2 + 1) (C_1 L_1 s^2 + C_1 R_1 s + 1)}{(C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_3 L_L R_3 s^4 + C_3 C_L L_3 L_L R_L s^4 + C_3 C_L L_3 R_3 R_L s^3 + C_3 C_L L_L R_3 R_L s^3 + C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + C_3 R_3 R_L s + C_L L_L R_3 s^2 + C_L L_L R_L s^2 + C_L R_3 R_L s + R_3 + R_L)}$$

10.735 INVALID-ORDER-735 $Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \infty, R_3, \infty, \infty, \frac{1}{C_L s} \right)$

$$H(s) = \frac{L_1 R_1 R_3 g_m s}{(C_L R_3 s + 1) (C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1)}$$

10.736 INVALID-ORDER-736 $Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \infty, R_3, \infty, \infty, \frac{R_L}{C_L R_L s + 1} \right)$

$$H(s) = \frac{L_1 R_1 R_3 R_L g_m s}{(C_L R_3 R_L s + R_3 + R_L) (C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1)}$$

10.737 INVALID-ORDER-737 $Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \infty, R_3, \infty, \infty, R_L + \frac{1}{C_L s} \right)$

$$H(s) = \frac{L_1 R_1 R_3 g_m s (C_L R_L s + 1)}{(C_L R_3 s + C_L R_L s + 1) (C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1)}$$

10.738 INVALID-ORDER-738 $Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \infty, R_3, \infty, \infty, L_L s + \frac{1}{C_L s} \right)$

$$H(s) = \frac{L_1 R_1 R_3 g_m s (C_L L_L s^2 + 1)}{(C_L L_L s^2 + C_L R_3 s + 1) (C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1)}$$

10.739 INVALID-ORDER-739 $Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \infty, R_3, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} \right)$

$$H(s) = \frac{L_1 L_L R_1 R_3 g_m s^2}{(C_L L_L R_3 s^2 + L_L s + R_3) (C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1)}$$

10.740 INVALID-ORDER-740 $Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \infty, R_3, \infty, \infty, L_L s + R_L + \frac{1}{C_L s} \right)$

$$H(s) = \frac{L_1 R_1 R_3 g_m s (C_L L_L s^2 + C_L R_L s + 1)}{(C_L L_L s^2 + C_L R_3 s + C_L R_L s + 1) (C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1)}$$

10.741 INVALID-ORDER-741 $Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \infty, R_3, \infty, \infty, \frac{L_L R_L s}{C_L L_L R_L s^2 + L_L s + R_L} \right)$

$$H(s) = \frac{L_1 L_L R_1 R_3 R_L g_m s^2}{(C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1) (C_L L_L R_3 R_L s^2 + L_L R_3 s + L_L R_L s + R_3 R_L)}$$

10.742 INVALID-ORDER-742 $Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \infty, R_3, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$

$$H(s) = \frac{L_1 R_1 R_3 g_m s (C_L L_L R_L s^2 + L_L s + R_L)}{(C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1) (C_L L_L R_3 s^2 + C_L L_L R_L s^2 + L_L s + R_3 + R_L)}$$

$$10.743 \quad \text{INVALID-ORDER-743} \quad Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \infty, R_3, \infty, \infty, \frac{R_L (C_L L_L s^2 + 1)}{C_L L_L s^2 + C_L R_L s + 1} \right)$$

$$H(s) = \frac{L_1 R_1 R_3 R_L g_m s (C_L L_L s^2 + 1)}{(C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1) (C_L L_L R_3 s^2 + C_L L_L R_L s^2 + C_L R_3 R_L s + R_3 + R_L)}$$

$$10.744 \quad \text{INVALID-ORDER-744} \quad Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \infty, \frac{1}{C_3 s}, \infty, \infty, R_L \right)$$

$$H(s) = \frac{L_1 R_1 R_L g_m s}{(C_3 R_L s + 1) (C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1)}$$

$$10.745 \quad \text{INVALID-ORDER-745} \quad Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \infty, \frac{1}{C_3 s}, \infty, \infty, \frac{R_L}{C_L R_L s + 1} \right)$$

$$H(s) = \frac{L_1 R_1 R_L g_m s}{(C_3 R_L s + C_L R_L s + 1) (C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1)}$$

$$10.746 \quad \text{INVALID-ORDER-746} \quad Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \infty, \frac{1}{C_3 s}, \infty, \infty, R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_1 R_1 g_m (C_L R_L s + 1)}{(C_3 C_L R_L s + C_3 + C_L) (C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1)}$$

$$10.747 \quad \text{INVALID-ORDER-747} \quad Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \infty, \frac{1}{C_3 s}, \infty, \infty, L_L s + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_1 R_1 g_m (C_L L_L s^2 + 1)}{(C_3 C_L L_L s^2 + C_3 + C_L) (C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1)}$$

$$10.748 \quad \text{INVALID-ORDER-748} \quad Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \infty, \frac{1}{C_3 s}, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} \right)$$

$$H(s) = \frac{L_1 L_L R_1 g_m s^2}{(C_3 L_L s^2 + C_L L_L s^2 + 1) (C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1)}$$

$$10.749 \quad \text{INVALID-ORDER-749} \quad Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \infty, \frac{1}{C_3 s}, \infty, \infty, L_L s + R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_1 R_1 g_m (C_L L_L s^2 + C_L R_L s + 1)}{(C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1) (C_3 C_L L_L s^2 + C_3 C_L R_L s + C_3 + C_L)}$$

$$10.750 \quad \text{INVALID-ORDER-750} \quad Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \infty, \frac{1}{C_3 s}, \infty, \infty, \frac{L_L R_L s}{C_L L_L R_L s^2 + L_L s + R_L} \right)$$

$$H(s) = \frac{L_1 L_L R_1 R_L g_m s^2}{(C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1) (C_3 L_L R_L s^2 + C_L L_L R_L s^2 + L_L s + R_L)}$$

$$10.751 \quad \text{INVALID-ORDER-751} \quad Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \infty, \frac{1}{C_3 s}, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$$

$$H(s) = \frac{L_1 R_1 g_m s (C_L L_L R_L s^2 + L_L s + R_L)}{(C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1) (C_3 C_L L_L R_L s^3 + C_3 L_L s^2 + C_3 R_L s + C_L L_L s^2 + 1)}$$

$$10.752 \quad \text{INVALID-ORDER-752} \quad Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \quad \infty, \quad \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad \frac{R_L (C_L L_L s^2 + 1)}{C_L L_L s^2 + C_L R_L s + 1} \right)$$

$$H(s) = \frac{L_1 R_1 R_L g_m s (C_L L_L s^2 + 1)}{(C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1) (C_3 C_L L_L R_L s^3 + C_3 R_L s + C_L L_L s^2 + C_L R_L s + 1)}$$

$$10.753 \quad \text{INVALID-ORDER-753} \quad Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \quad \infty, \quad \frac{R_3}{C_3 R_3 s + 1}, \quad \infty, \quad \infty, \quad R_L \right)$$

$$H(s) = \frac{L_1 R_1 R_3 R_L g_m s}{(C_3 R_3 R_L s + R_3 + R_L) (C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1)}$$

$$10.754 \quad \text{INVALID-ORDER-754} \quad Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \quad \infty, \quad \frac{R_3}{C_3 R_3 s + 1}, \quad \infty, \quad \infty, \quad \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_1 R_1 R_3 g_m s}{(C_3 R_3 s + C_L R_3 s + 1) (C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1)}$$

$$10.755 \quad \text{INVALID-ORDER-755} \quad Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \quad \infty, \quad \frac{R_3}{C_3 R_3 s + 1}, \quad \infty, \quad \infty, \quad \frac{R_L}{C_L R_L s + 1} \right)$$

$$H(s) = \frac{L_1 R_1 R_3 R_L g_m s}{(C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1) (C_3 R_3 R_L s + C_L R_3 R_L s + R_3 + R_L)}$$

$$10.756 \quad \text{INVALID-ORDER-756} \quad Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \quad \infty, \quad \frac{R_3}{C_3 R_3 s + 1}, \quad \infty, \quad \infty, \quad R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_1 R_1 R_3 g_m s (C_L R_L s + 1)}{(C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1) (C_3 C_L R_3 R_L s^2 + C_3 R_3 s + C_L R_3 s + C_L R_L s + 1)}$$

$$10.757 \quad \text{INVALID-ORDER-757} \quad Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \quad \infty, \quad \frac{R_3}{C_3 R_3 s + 1}, \quad \infty, \quad \infty, \quad L_L s + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_1 R_1 R_3 g_m s (C_L L_L s^2 + 1)}{(C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1) (C_3 C_L L_L R_3 s^3 + C_3 R_3 s + C_L L_L s^2 + C_L R_3 s + 1)}$$

$$10.758 \quad \text{INVALID-ORDER-758} \quad Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \quad \infty, \quad \frac{R_3}{C_3 R_3 s + 1}, \quad \infty, \quad \infty, \quad \frac{L_L s}{C_L L_L s^2 + 1} \right)$$

$$H(s) = \frac{L_1 L_L R_1 R_3 g_m s^2}{(C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1) (C_3 L_L R_3 s^2 + C_L L_L R_3 s^2 + L_L s + R_3)}$$

$$10.759 \quad \text{INVALID-ORDER-759} \quad Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \quad \infty, \quad \frac{R_3}{C_3 R_3 s + 1}, \quad \infty, \quad \infty, \quad L_L s + R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_1 R_1 R_3 g_m s (C_L L_L s^2 + C_L R_L s + 1)}{(C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1) (C_3 C_L L_L R_3 s^3 + C_3 C_L R_3 R_L s^2 + C_3 R_3 s + C_L L_L s^2 + C_L R_3 s + C_L R_L s + 1)}$$

$$10.760 \quad \text{INVALID-ORDER-760} \quad Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \quad \infty, \quad \frac{R_3}{C_3 R_3 s + 1}, \quad \infty, \quad \infty, \quad \frac{L_L R_L s}{C_L L_L R_L s^2 + L_L s + R_L} \right)$$

$$H(s) = \frac{L_1 L_L R_1 R_3 R_L g_m s^2}{(C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1) (C_3 L_L R_3 R_L s^2 + C_L L_L R_3 R_L s^2 + L_L R_3 s + L_L R_L s + R_3 R_L)}$$

$$10.761 \quad \text{INVALID-ORDER-761} \quad Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \quad \infty, \quad \frac{R_3}{C_3 R_3 s + 1}, \quad \infty, \quad \infty, \quad \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$$

$$H(s) = \frac{L_1 R_1 R_3 g_m s (C_L L_L R_L s^2 + L_L s + R_L)}{(C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1) (C_3 C_L L_L R_3 R_L s^3 + C_3 L_L R_3 s^2 + C_3 R_3 R_L s + C_L L_L R_3 s^2 + C_L L_L R_L s^2 + L_L s + R_3 + R_L)}$$

$$10.762 \quad \text{INVALID-ORDER-762} \quad Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \quad \infty, \quad \frac{R_3}{C_3 R_3 s + 1}, \quad \infty, \quad \infty, \quad \frac{R_L (C_L L_L s^2 + 1)}{C_L L_L s^2 + C_L R_L s + 1} \right)$$

$$H(s) = \frac{L_1 R_1 R_3 R_L g_m s (C_L L_L s^2 + 1)}{(C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1) (C_3 C_L L_L R_3 R_L s^3 + C_3 R_3 R_L s + C_L L_L R_3 s^2 + C_L L_L R_L s^2 + C_L R_3 R_L s + R_3 + R_L)}$$

$$10.763 \quad \text{INVALID-ORDER-763} \quad Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \quad \infty, \quad R_3 + \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad R_L \right)$$

$$H(s) = \frac{L_1 R_1 R_L g_m s (C_3 R_3 s + 1)}{(C_3 R_3 s + C_3 R_L s + 1) (C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1)}$$

$$10.764 \quad \text{INVALID-ORDER-764} \quad Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \quad \infty, \quad R_3 + \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_1 R_1 g_m (C_3 R_3 s + 1)}{(C_3 C_L R_3 s + C_3 + C_L) (C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1)}$$

$$10.765 \quad \text{INVALID-ORDER-765} \quad Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \quad \infty, \quad R_3 + \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad \frac{R_L}{C_L R_L s + 1} \right)$$

$$H(s) = \frac{L_1 R_1 R_L g_m s (C_3 R_3 s + 1)}{(C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1) (C_3 C_L R_3 R_L s^2 + C_3 R_3 s + C_3 R_L s + C_L R_L s + 1)}$$

$$10.766 \quad \text{INVALID-ORDER-766} \quad Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \quad \infty, \quad R_3 + \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_1 R_1 g_m (C_3 R_3 s + 1) (C_L R_L s + 1)}{(C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1) (C_3 C_L R_3 s + C_3 C_L R_L s + C_3 + C_L)}$$

$$10.767 \quad \text{INVALID-ORDER-767} \quad Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \quad \infty, \quad R_3 + \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad L_L s + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_1 R_1 g_m (C_3 R_3 s + 1) (C_L L_L s^2 + 1)}{(C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1) (C_3 C_L L_L s^2 + C_3 C_L R_3 s + C_3 + C_L)}$$

$$10.768 \quad \text{INVALID-ORDER-768} \quad Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \quad \infty, \quad R_3 + \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad \frac{L_L s}{C_L L_L s^2 + 1} \right)$$

$$H(s) = \frac{L_1 L_L R_1 g_m s^2 (C_3 R_3 s + 1)}{(C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1) (C_3 C_L L_L R_3 s^3 + C_3 L_L s^2 + C_3 R_3 s + C_L L_L s^2 + 1)}$$

$$10.769 \quad \text{INVALID-ORDER-769} \quad Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \quad \infty, \quad R_3 + \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad L_L s + R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_1 R_1 g_m (C_3 R_3 s + 1) (C_L L_L s^2 + C_L R_L s + 1)}{(C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1) (C_3 C_L L_L s^2 + C_3 C_L R_3 s + C_3 C_L R_L s + C_3 + C_L)}$$

$$10.770 \quad \text{INVALID-ORDER-770} \quad Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \quad \infty, \quad R_3 + \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad \frac{L_L R_L s}{C_L L_L R_L s^2 + L_L s + R_L} \right)$$

$$H(s) = \frac{L_1 L_L R_1 R_L g_m s^2 (C_3 R_3 s + 1)}{(C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1) (C_3 C_L L_L R_3 R_L s^3 + C_3 L_L R_3 s^2 + C_3 L_L R_L s^2 + C_3 R_3 R_L s + C_L L_L R_L s^2 + L_L s + R_L)}$$

$$10.771 \quad \text{INVALID-ORDER-771} \quad Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \quad \infty, \quad R_3 + \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$$

$$H(s) = \frac{L_1 R_1 g_m s (C_3 R_3 s + 1) (C_L L_L R_L s^2 + L_L s + R_L)}{(C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1) (C_3 C_L L_L R_3 s^3 + C_3 C_L L_L R_L s^3 + C_3 L_L s^2 + C_3 R_3 s + C_3 R_L s + C_L L_L s^2 + 1)}$$

$$10.772 \quad \text{INVALID-ORDER-772} \quad Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \quad \infty, \quad R_3 + \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad \frac{R_L (C_L L_L s^2 + 1)}{C_L L_L s^2 + C_L R_L s + 1} \right)$$

$$H(s) = \frac{L_1 R_1 R_L g_m s (C_3 R_3 s + 1) (C_L L_L s^2 + 1)}{(C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1) (C_3 C_L L_L R_3 s^3 + C_3 C_L L_L R_L s^3 + C_3 C_L R_3 R_L s^2 + C_3 R_3 s + C_3 R_L s + C_L L_L s^2 + C_L R_L s + 1)}$$

$$10.773 \quad \text{INVALID-ORDER-773} \quad Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \quad \infty, \quad L_3 s + \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad R_L \right)$$

$$H(s) = \frac{L_1 R_1 R_L g_m s (C_3 L_3 s^2 + 1)}{(C_3 L_3 s^2 + C_3 R_L s + 1) (C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1)}$$

$$10.774 \quad \text{INVALID-ORDER-774} \quad Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \quad \infty, \quad L_3 s + \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_1 R_1 g_m (C_3 L_3 s^2 + 1)}{(C_3 C_L L_3 s^2 + C_3 + C_L) (C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1)}$$

$$10.775 \quad \text{INVALID-ORDER-775} \quad Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \quad \infty, \quad L_3 s + \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad \frac{R_L}{C_L R_L s + 1} \right)$$

$$H(s) = \frac{L_1 R_1 R_L g_m s (C_3 L_3 s^2 + 1)}{(C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1) (C_3 C_L L_3 R_L s^3 + C_3 L_3 s^2 + C_3 R_L s + C_L R_L s + 1)}$$

$$10.776 \quad \text{INVALID-ORDER-776} \quad Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \quad \infty, \quad L_3 s + \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_1 R_1 g_m (C_3 L_3 s^2 + 1) (C_L R_L s + 1)}{(C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1) (C_3 C_L L_3 s^2 + C_3 C_L R_L s + C_3 + C_L)}$$

$$10.777 \quad \text{INVALID-ORDER-777} \quad Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \quad \infty, \quad L_3 s + \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad L_L s + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_1 R_1 g_m (C_3 L_3 s^2 + 1) (C_L L_L s^2 + 1)}{(C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1) (C_3 C_L L_3 s^2 + C_3 C_L L_L s^2 + C_3 + C_L)}$$

$$10.778 \quad \text{INVALID-ORDER-778} \quad Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \quad \infty, \quad L_3 s + \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad \frac{L_L s}{C_L L_L s^2 + 1} \right)$$

$$H(s) = \frac{L_1 L_L R_1 g_m s^2 (C_3 L_3 s^2 + 1)}{(C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1) (C_3 C_L L_3 L_L s^4 + C_3 L_3 s^2 + C_3 L_L s^2 + C_L L_L s^2 + 1)}$$

$$10.779 \quad \text{INVALID-ORDER-779} \quad Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \quad \infty, \quad L_3 s + \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad L_L s + R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_1 R_1 g_m (C_3 L_3 s^2 + 1) (C_L L_L s^2 + C_L R_L s + 1)}{(C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1) (C_3 C_L L_3 s^2 + C_3 C_L L_L s^2 + C_3 C_L R_L s + C_3 + C_L)}$$

10.780 INVALID-ORDER-780 $Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \infty, L_3 s + \frac{1}{C_3 s}, \infty, \infty, \frac{L_L R_L s}{C_L L_L R_L s^2 + L_L s + R_L} \right)$

$$H(s) = \frac{L_1 L_L R_1 R_L g_m s^2 (C_3 L_3 s^2 + 1)}{(C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1) (C_3 C_L L_3 L_L R_L s^4 + C_3 L_3 L_L s^3 + C_3 L_3 R_L s^2 + C_3 L_L R_L s^2 + C_L L_L R_L s^2 + L_L s + R_L)}$$

10.781 INVALID-ORDER-781 $Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \infty, L_3 s + \frac{1}{C_3 s}, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$

$$H(s) = \frac{L_1 R_1 g_m s (C_3 L_3 s^2 + 1) (C_L L_L R_L s^2 + L_L s + R_L)}{(C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1) (C_3 C_L L_3 L_L s^4 + C_3 C_L L_L R_L s^3 + C_3 L_3 s^2 + C_3 L_L s^2 + C_3 R_L s + C_L L_L s^2 + 1)}$$

10.782 INVALID-ORDER-782 $Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \infty, L_3 s + \frac{1}{C_3 s}, \infty, \infty, \frac{R_L (C_L L_L s^2 + 1)}{C_L L_L s^2 + C_L R_L s + 1} \right)$

$$H(s) = \frac{L_1 R_1 R_L g_m s (C_3 L_3 s^2 + 1) (C_L L_L s^2 + 1)}{(C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1) (C_3 C_L L_3 L_L s^4 + C_3 C_L L_3 R_L s^3 + C_3 C_L L_L R_L s^3 + C_3 L_3 s^2 + C_3 R_L s + C_L L_L s^2 + C_L R_L s + 1)}$$

10.783 INVALID-ORDER-783 $Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \infty, \frac{L_3 s}{C_3 L_3 s^2 + 1}, \infty, \infty, R_L \right)$

$$H(s) = \frac{L_1 L_3 R_1 R_L g_m s^2}{(C_3 L_3 R_L s^2 + L_3 s + R_L) (C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1)}$$

10.784 INVALID-ORDER-784 $Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \infty, \frac{L_3 s}{C_3 L_3 s^2 + 1}, \infty, \infty, \frac{1}{C_L s} \right)$

$$H(s) = \frac{L_1 L_3 R_1 g_m s^2}{(C_3 L_3 s^2 + C_L L_3 s^2 + 1) (C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1)}$$

10.785 INVALID-ORDER-785 $Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \infty, \frac{L_3 s}{C_3 L_3 s^2 + 1}, \infty, \infty, \frac{R_L}{C_L R_L s + 1} \right)$

$$H(s) = \frac{L_1 L_3 R_1 R_L g_m s^2}{(C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1) (C_3 L_3 R_L s^2 + C_L L_3 R_L s^2 + L_3 s + R_L)}$$

10.786 INVALID-ORDER-786 $Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \infty, \frac{L_3 s}{C_3 L_3 s^2 + 1}, \infty, \infty, R_L + \frac{1}{C_L s} \right)$

$$H(s) = \frac{L_1 L_3 R_1 g_m s^2 (C_L R_L s + 1)}{(C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1) (C_3 C_L L_3 R_L s^3 + C_3 L_3 s^2 + C_L L_3 s^2 + C_L R_L s + 1)}$$

10.787 INVALID-ORDER-787 $Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \infty, \frac{L_3 s}{C_3 L_3 s^2 + 1}, \infty, \infty, L_L s + \frac{1}{C_L s} \right)$

$$H(s) = \frac{L_1 L_3 R_1 g_m s^2 (C_L L_L s^2 + 1)}{(C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1) (C_3 C_L L_3 L_L s^4 + C_3 L_3 s^2 + C_L L_3 s^2 + C_L L_L s^2 + 1)}$$

10.788 INVALID-ORDER-788 $Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \infty, \frac{L_3 s}{C_3 L_3 s^2 + 1}, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} \right)$

$$H(s) = \frac{L_1 L_3 L_L R_1 g_m s^2}{(C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1) (C_3 L_3 L_L s^2 + C_L L_3 L_L s^2 + L_3 + L_L)}$$

$$\mathbf{10.789 \quad INVALID-ORDER-789} \quad Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \quad \infty, \quad \frac{L_3 s}{C_3 L_3 s^2 + 1}, \quad \infty, \quad \infty, \quad L_L s + R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_1 L_3 R_1 g_m s^2 (C_L L_L s^2 + C_L R_L s + 1)}{(C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1) (C_3 C_L L_3 L_L s^4 + C_3 C_L L_3 R_L s^3 + C_3 L_3 s^2 + C_L L_3 s^2 + C_L L_L s^2 + C_L R_L s + 1)}$$

$$\mathbf{10.790 \quad INVALID-ORDER-790} \quad Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \quad \infty, \quad \frac{L_3 s}{C_3 L_3 s^2 + 1}, \quad \infty, \quad \infty, \quad \frac{L_L R_L s}{C_L L_L R_L s^2 + L_L s + R_L} \right)$$

$$H(s) = \frac{L_1 L_3 L_L R_1 R_L g_m s^2}{(C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1) (C_3 L_3 L_L R_L s^2 + C_L L_3 L_L R_L s^2 + L_3 L_L s + L_3 R_L + L_L R_L)}$$

$$\mathbf{10.791 \quad INVALID-ORDER-791} \quad Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \quad \infty, \quad \frac{L_3 s}{C_3 L_3 s^2 + 1}, \quad \infty, \quad \infty, \quad \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$$

$$H(s) = \frac{L_1 L_3 R_1 g_m s^2 (C_L L_L R_L s^2 + L_L s + R_L)}{(C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1) (C_3 C_L L_3 L_L R_L s^4 + C_3 L_3 L_L s^3 + C_3 L_3 R_L s^2 + C_L L_3 L_L s^3 + C_L L_L R_L s^2 + L_3 s + L_L s + R_L)}$$

$$\mathbf{10.792 \quad INVALID-ORDER-792} \quad Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \quad \infty, \quad \frac{L_3 s}{C_3 L_3 s^2 + 1}, \quad \infty, \quad \infty, \quad \frac{R_L (C_L L_L s^2 + 1)}{C_L L_L s^2 + C_L R_L s + 1} \right)$$

$$H(s) = \frac{L_1 L_3 R_1 R_L g_m s^2 (C_L L_L s^2 + 1)}{(C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1) (C_3 C_L L_3 L_L R_L s^4 + C_3 L_3 R_L s^2 + C_L L_3 L_L s^3 + C_L L_3 R_L s^2 + C_L L_L R_L s^2 + L_3 s + R_L)}$$

$$\mathbf{10.793 \quad INVALID-ORDER-793} \quad Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \quad \infty, \quad L_3 s + R_3 + \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad R_L \right)$$

$$H(s) = \frac{L_1 R_1 R_L g_m s (C_3 L_3 s^2 + C_3 R_3 s + 1)}{(C_3 L_3 s^2 + C_3 R_3 s + C_3 R_L s + 1) (C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1)}$$

$$\mathbf{10.794 \quad INVALID-ORDER-794} \quad Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \quad \infty, \quad L_3 s + R_3 + \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_1 R_1 g_m (C_3 L_3 s^2 + C_3 R_3 s + 1)}{(C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1) (C_3 C_L L_3 s^2 + C_3 C_L R_3 s + C_3 + C_L)}$$

$$\mathbf{10.795 \quad INVALID-ORDER-795} \quad Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \quad \infty, \quad L_3 s + R_3 + \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad \frac{R_L}{C_L R_L s + 1} \right)$$

$$H(s) = \frac{L_1 R_1 R_L g_m s (C_3 L_3 s^2 + C_3 R_3 s + 1)}{(C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1) (C_3 C_L L_3 R_L s^3 + C_3 C_L R_3 R_L s^2 + C_3 L_3 s^2 + C_3 R_3 s + C_3 R_L s + C_L R_L s + 1)}$$

$$\mathbf{10.796 \quad INVALID-ORDER-796} \quad Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \quad \infty, \quad L_3 s + R_3 + \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_1 R_1 g_m (C_L R_L s + 1) (C_3 L_3 s^2 + C_3 R_3 s + 1)}{(C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1) (C_3 C_L L_3 s^2 + C_3 C_L R_3 s + C_3 C_L R_L s + C_3 + C_L)}$$

$$\mathbf{10.797 \quad INVALID-ORDER-797} \quad Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \quad \infty, \quad L_3 s + R_3 + \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad L_L s + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_1 R_1 g_m (C_L L_L s^2 + 1) (C_3 L_3 s^2 + C_3 R_3 s + 1)}{(C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1) (C_3 C_L L_3 s^2 + C_3 C_L L_L s^2 + C_3 C_L R_3 s + C_3 + C_L)}$$

$$10.798 \quad \text{INVALID-ORDER-798} \quad Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \quad \infty, \quad L_3 s + R_3 + \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad \frac{L_L s}{C_L L_L s^2 + 1} \right)$$

$$H(s) = \frac{L_1 L_L R_1 g_m s^2 (C_3 L_3 s^2 + C_3 R_3 s + 1)}{(C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1) (C_3 C_L L_3 L_L s^4 + C_3 C_L L_L R_3 s^3 + C_3 L_3 s^2 + C_3 L_L s^2 + C_3 R_3 s + C_L L_L s^2 + 1)}$$

$$10.799 \quad \text{INVALID-ORDER-799} \quad Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \quad \infty, \quad L_3 s + R_3 + \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad L_L s + R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_1 R_1 g_m (C_3 L_3 s^2 + C_3 R_3 s + 1) (C_L L_L s^2 + C_L R_L s + 1)}{(C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1) (C_3 C_L L_3 s^2 + C_3 C_L L_L s^2 + C_3 C_L R_3 s + C_3 C_L R_L s + C_3 + C_L)}$$

$$10.800 \quad \text{INVALID-ORDER-800} \quad Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \quad \infty, \quad L_3 s + R_3 + \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad \frac{L_L R_L s}{C_L L_L R_L s^2 + L_L s + R_L} \right)$$

$$H(s) = \frac{L_1 L_L R_1 R_L g_m s^2 (C_3 L_3 s^2 + C_3 R_3 s + 1)}{(C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1) (C_3 C_L L_3 L_L R_L s^4 + C_3 C_L L_L R_3 R_L s^3 + C_3 L_3 L_L s^3 + C_3 L_3 R_L s^2 + C_3 L_L R_3 s^2 + C_3 L_L R_L s^2 + C_3 R_3 R_L s + C_L L_L R_L s^2 + L_L s + R_L)}$$

$$10.801 \quad \text{INVALID-ORDER-801} \quad Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \quad \infty, \quad L_3 s + R_3 + \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$$

$$H(s) = \frac{L_1 R_1 g_m s (C_3 L_3 s^2 + C_3 R_3 s + 1) (C_L L_L R_L s^2 + L_L s + R_L)}{(C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1) (C_3 C_L L_3 L_L s^4 + C_3 C_L L_L R_3 s^3 + C_3 C_L L_L R_L s^3 + C_3 L_3 s^2 + C_3 L_L s^2 + C_3 R_3 s + C_3 R_L s + C_L L_L s^2 + 1)}$$

$$10.802 \quad \text{INVALID-ORDER-802} \quad Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \quad \infty, \quad L_3 s + R_3 + \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad \frac{R_L (C_L L_L s^2 + 1)}{C_L L_L s^2 + C_L R_L s + 1} \right)$$

$$H(s) = \frac{L_1 R_1 R_L g_m s (C_L L_L s^2 + 1) (C_3 L_3 s^2 + C_3 R_3 s + 1)}{(C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1) (C_3 C_L L_3 L_L s^4 + C_3 C_L L_3 R_L s^3 + C_3 C_L L_L R_3 s^3 + C_3 C_L L_L R_L s^3 + C_3 C_L R_3 R_L s^2 + C_3 L_3 s^2 + C_3 R_3 s + C_3 R_L s + C_L L_L s^2 + C_L R_L s + 1)}$$

$$10.803 \quad \text{INVALID-ORDER-803} \quad Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \quad \infty, \quad \frac{L_3 R_3 s}{C_3 L_3 R_3 s^2 + L_3 s + R_3}, \quad \infty, \quad \infty, \quad R_L \right)$$

$$H(s) = \frac{L_1 L_3 R_1 R_3 R_L g_m s^2}{(C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1) (C_3 L_3 R_3 R_L s^2 + L_3 R_3 s + L_3 R_L s + R_3 R_L)}$$

$$10.804 \quad \text{INVALID-ORDER-804} \quad Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \quad \infty, \quad \frac{L_3 R_3 s}{C_3 L_3 R_3 s^2 + L_3 s + R_3}, \quad \infty, \quad \infty, \quad \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_1 L_3 R_1 R_3 g_m s^2}{(C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1) (C_3 L_3 R_3 s^2 + C_L L_3 R_3 s^2 + L_3 s + R_3)}$$

$$10.805 \quad \text{INVALID-ORDER-805} \quad Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \quad \infty, \quad \frac{L_3 R_3 s}{C_3 L_3 R_3 s^2 + L_3 s + R_3}, \quad \infty, \quad \infty, \quad \frac{R_L}{C_L R_L s + 1} \right)$$

$$H(s) = \frac{L_1 L_3 R_1 R_3 R_L g_m s^2}{(C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1) (C_3 L_3 R_3 R_L s^2 + C_L L_3 R_3 R_L s^2 + L_3 R_3 s + L_3 R_L s + R_3 R_L)}$$

$$10.806 \quad \text{INVALID-ORDER-806} \quad Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \quad \infty, \quad \frac{L_3 R_3 s}{C_3 L_3 R_3 s^2 + L_3 s + R_3}, \quad \infty, \quad \infty, \quad R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_1 L_3 R_1 R_3 g_m s^2 (C_L R_L s + 1)}{(C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1) (C_3 C_L L_3 R_3 R_L s^3 + C_3 L_3 R_3 s^2 + C_L L_3 R_3 s^2 + C_L L_3 R_L s^2 + C_L R_3 R_L s + L_3 s + R_3)}$$

$$10.807 \quad \text{INVALID-ORDER-807} \quad Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \quad \infty, \quad \frac{L_3 R_3 s}{C_3 L_3 R_3 s^2 + L_3 s + R_3}, \quad \infty, \quad \infty, \quad L_L s + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_1 L_3 R_1 R_3 g_m s^2 (C_L L_L s^2 + 1)}{(C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1) (C_3 C_L L_3 L_L R_3 s^4 + C_3 L_3 R_3 s^2 + C_L L_3 L_L s^3 + C_L L_3 R_3 s^2 + C_L L_L R_3 s^2 + L_3 s + R_3)}$$

$$10.808 \quad \text{INVALID-ORDER-808} \quad Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \quad \infty, \quad \frac{L_3 R_3 s}{C_3 L_3 R_3 s^2 + L_3 s + R_3}, \quad \infty, \quad \infty, \quad \frac{L_L s}{C_L L_L s^2 + 1} \right)$$

$$H(s) = \frac{L_1 L_3 L_L R_1 R_3 g_m s^2}{(C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1) (C_3 L_3 L_L R_3 s^2 + C_L L_3 L_L R_3 s^2 + L_3 L_L s + L_3 R_3 + L_L R_3)}$$

$$10.809 \quad \text{INVALID-ORDER-809} \quad Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \quad \infty, \quad \frac{L_3 R_3 s}{C_3 L_3 R_3 s^2 + L_3 s + R_3}, \quad \infty, \quad \infty, \quad L_L s + R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_1 L_3 R_1 R_3 g_m s^2 (C_L L_L s^2 + C_L R_L s + 1)}{(C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1) (C_3 C_L L_3 L_L R_3 s^4 + C_3 C_L L_3 R_3 R_L s^3 + C_3 L_3 R_3 s^2 + C_L L_3 L_L s^3 + C_L L_3 R_3 s^2 + C_L L_3 R_L s^2 + C_L L_L R_3 s^2 + C_L R_3 R_L s + L_3 s + R_3)}$$

$$10.810 \quad \text{INVALID-ORDER-810} \quad Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \quad \infty, \quad \frac{L_3 R_3 s}{C_3 L_3 R_3 s^2 + L_3 s + R_3}, \quad \infty, \quad \infty, \quad \frac{L_L R_L s}{C_L L_L R_L s^2 + L_L s + R_L} \right)$$

$$H(s) = \frac{L_1 L_3 L_L R_1 R_3 R_L g_m s^2}{(C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1) (C_3 L_3 L_L R_3 R_L s^2 + C_L L_3 L_L R_3 R_L s^2 + L_3 L_L R_3 s + L_3 L_L R_L s + L_3 R_3 R_L + L_L R_3 R_L)}$$

$$10.811 \quad \text{INVALID-ORDER-811} \quad Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \quad \infty, \quad \frac{L_3 R_3 s}{C_3 L_3 R_3 s^2 + L_3 s + R_3}, \quad \infty, \quad \infty, \quad \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$$

$$H(s) = \frac{L_1 L_3 R_1 R_3 g_m s^2 (C_L L_L R_L s^2 + L_L s + R_L)}{(C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1) (C_3 C_L L_3 L_L R_3 R_L s^4 + C_3 L_3 L_L R_3 s^3 + C_3 L_3 R_3 R_L s^2 + C_L L_3 L_L R_3 s^3 + C_L L_3 L_L R_L s^3 + C_L L_L R_3 R_L s^2 + L_3 L_L s^2 + L_3 R_3 s + L_3 R_L s + L_L R_3 s + R_3 R_L)}$$

$$10.812 \quad \text{INVALID-ORDER-812} \quad Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \quad \infty, \quad \frac{L_3 R_3 s}{C_3 L_3 R_3 s^2 + L_3 s + R_3}, \quad \infty, \quad \infty, \quad \frac{R_L (C_L L_L s^2 + 1)}{C_L L_L s^2 + C_L R_L s + 1} \right)$$

$$H(s) = \frac{L_1 L_3 R_1 R_3 R_L g_m s^2 (C_L L_L s^2 + 1)}{(C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1) (C_3 C_L L_3 L_L R_3 R_L s^4 + C_3 L_3 R_3 R_L s^2 + C_L L_3 L_L R_3 s^3 + C_L L_3 L_L R_L s^3 + C_L L_3 R_3 R_L s^2 + C_L L_L R_3 R_L s^2 + L_3 R_3 s + L_3 R_L s + R_3 R_L)}$$

$$10.813 \quad \text{INVALID-ORDER-813} \quad Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \quad \infty, \quad \frac{L_3 s}{C_3 L_3 s^2 + 1} + R_3, \quad \infty, \quad \infty, \quad R_L \right)$$

$$H(s) = \frac{L_1 R_1 R_L g_m s (C_3 L_3 R_3 s^2 + L_3 s + R_3)}{(C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1) (C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + L_3 s + R_3 + R_L)}$$

$$10.814 \quad \text{INVALID-ORDER-814} \quad Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \quad \infty, \quad \frac{L_3 s}{C_3 L_3 s^2 + 1} + R_3, \quad \infty, \quad \infty, \quad \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_1 R_1 g_m s (C_3 L_3 R_3 s^2 + L_3 s + R_3)}{(C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1) (C_3 C_L L_3 R_3 s^3 + C_3 L_3 s^2 + C_L L_3 s^2 + C_L R_3 s + 1)}$$

$$10.815 \quad \text{INVALID-ORDER-815} \quad Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \quad \infty, \quad \frac{L_3 s}{C_3 L_3 s^2 + 1} + R_3, \quad \infty, \quad \infty, \quad \frac{R_L}{C_L R_L s + 1} \right)$$

$$H(s) = \frac{L_1 R_1 R_L g_m s (C_3 L_3 R_3 s^2 + L_3 s + R_3)}{(C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1) (C_3 C_L L_3 R_3 R_L s^3 + C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + C_L L_3 R_L s^2 + C_L R_3 R_L s + L_3 s + R_3 + R_L)}$$

$$10.816 \quad \text{INVALID-ORDER-816} \quad Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \quad \infty, \quad \frac{L_3 s}{C_3 L_3 s^2 + 1} + R_3, \quad \infty, \quad \infty, \quad R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_1 R_1 g_m s (C_L R_L s + 1) (C_3 L_3 R_3 s^2 + L_3 s + R_3)}{(C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1) (C_3 C_L L_3 R_3 s^3 + C_3 C_L L_3 R_L s^3 + C_3 L_3 s^2 + C_L L_3 s^2 + C_L R_3 s + C_L R_L s + 1)}$$

$$10.817 \quad \text{INVALID-ORDER-817} \quad Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \quad \infty, \quad \frac{L_3 s}{C_3 L_3 s^2 + 1} + R_3, \quad \infty, \quad \infty, \quad L_L s + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_1 R_1 g_m s (C_L L_L s^2 + 1) (C_3 L_3 R_3 s^2 + L_3 s + R_3)}{(C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1) (C_3 C_L L_3 L_L s^4 + C_3 C_L L_3 R_3 s^3 + C_3 L_3 s^2 + C_L L_3 s^2 + C_L L_L s^2 + C_L R_3 s + 1)}$$

$$10.818 \quad \text{INVALID-ORDER-818} \quad Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \quad \infty, \quad \frac{L_3 s}{C_3 L_3 s^2 + 1} + R_3, \quad \infty, \quad \infty, \quad \frac{L_L s}{C_L L_L s^2 + 1} \right)$$

$$H(s) = \frac{L_1 L_L R_1 g_m s^2 (C_3 L_3 R_3 s^2 + L_3 s + R_3)}{(C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1) (C_3 C_L L_3 L_L R_3 s^4 + C_3 L_3 L_L s^3 + C_3 L_3 R_3 s^2 + C_L L_3 L_L s^3 + C_L L_L R_3 s^2 + L_3 s + L_L s + R_3)}$$

$$10.819 \quad \text{INVALID-ORDER-819} \quad Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \quad \infty, \quad \frac{L_3 s}{C_3 L_3 s^2 + 1} + R_3, \quad \infty, \quad \infty, \quad L_L s + R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_1 R_1 g_m s (C_L L_L s^2 + C_L R_L s + 1) (C_3 L_3 R_3 s^2 + L_3 s + R_3)}{(C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1) (C_3 C_L L_3 L_L s^4 + C_3 C_L L_3 R_3 s^3 + C_3 C_L L_3 R_L s^3 + C_3 L_3 s^2 + C_L L_3 s^2 + C_L L_L s^2 + C_L R_3 s + C_L R_L s + 1)}$$

$$10.820 \quad \text{INVALID-ORDER-820} \quad Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \quad \infty, \quad \frac{L_3 s}{C_3 L_3 s^2 + 1} + R_3, \quad \infty, \quad \infty, \quad \frac{L_L R_L s}{C_L L_L R_L s^2 + L_L s + R_L} \right)$$

$$H(s) = \frac{L_1 L_L R_1 R_L g_m s^2 (C_3 L_3 R_3 s^2 + L_3 s + R_3)}{(C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1) (C_3 C_L L_3 L_L R_3 R_L s^4 + C_3 L_3 L_L R_3 s^3 + C_3 L_3 L_L R_L s^3 + C_3 L_3 R_3 R_L s^2 + C_L L_3 L_L R_L s^3 + C_L L_L R_3 R_L s^2 + L_3 L_L s^2 + L_3 R_L s + L_L R_3 s + L_L R_L s + R_3 R_L)}$$

$$10.821 \quad \text{INVALID-ORDER-821} \quad Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \quad \infty, \quad \frac{L_3 s}{C_3 L_3 s^2 + 1} + R_3, \quad \infty, \quad \infty, \quad \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$$

$$H(s) = \frac{L_1 R_1 g_m s (C_3 L_3 R_3 s^2 + L_3 s + R_3) (C_L L_L R_L s^2 + L_L s + R_L)}{(C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1) (C_3 C_L L_3 L_L R_3 s^4 + C_3 C_L L_3 L_L R_L s^4 + C_3 L_3 L_L s^3 + C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + C_L L_3 L_L s^3 + C_L L_L R_3 s^2 + C_L L_L R_L s^2 + L_3 s + L_L s + R_3 + R_L)}$$

$$10.822 \quad \text{INVALID-ORDER-822} \quad Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \quad \infty, \quad \frac{L_3 s}{C_3 L_3 s^2 + 1} + R_3, \quad \infty, \quad \infty, \quad \frac{R_L (C_L L_L s^2 + 1)}{C_L L_L s^2 + C_L R_L s + 1} \right)$$

$$H(s) = \frac{L_1 R_1 R_L g_m s (C_L L_L s^2 + 1) (C_3 L_3 R_3 s^2 + L_3 s + R_3)}{(C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1) (C_3 C_L L_3 L_L R_3 s^4 + C_3 C_L L_3 L_L R_L s^4 + C_3 C_L L_3 R_3 R_L s^3 + C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + C_L L_3 L_L s^3 + C_L L_3 R_L s^2 + C_L L_L R_3 s^2 + C_L L_L R_L s^2 + C_L R_3 R_L s + L_3 s + R_3 + R_L)}$$

$$10.823 \quad \text{INVALID-ORDER-823} \quad Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \quad \infty, \quad \frac{R_3 (C_3 L_3 s^2 + 1)}{C_3 L_3 s^2 + C_3 R_3 s + 1}, \quad \infty, \quad \infty, \quad R_L \right)$$

$$H(s) = \frac{L_1 R_1 R_3 R_L g_m s (C_3 L_3 s^2 + 1)}{(C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1) (C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + C_3 R_3 R_L s + R_3 + R_L)}$$

$$10.824 \quad \text{INVALID-ORDER-824} \quad Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \quad \infty, \quad \frac{R_3 (C_3 L_3 s^2 + 1)}{C_3 L_3 s^2 + C_3 R_3 s + 1}, \quad \infty, \quad \infty, \quad \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_1 R_1 R_3 g_m s (C_3 L_3 s^2 + 1)}{(C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1) (C_3 C_L L_3 R_3 s^3 + C_3 L_3 s^2 + C_3 R_3 s + C_L R_3 s + 1)}$$

$$10.825 \quad \text{INVALID-ORDER-825} \quad Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \quad \infty, \quad \frac{R_3 (C_3 L_3 s^2 + 1)}{C_3 L_3 s^2 + C_3 R_3 s + 1}, \quad \infty, \quad \infty, \quad \frac{R_L}{C_L R_L s + 1} \right)$$

$$H(s) = \frac{L_1 R_1 R_3 R_L g_m s (C_3 L_3 s^2 + 1)}{(C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1) (C_3 C_L L_3 R_3 R_L s^3 + C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + C_3 R_3 R_L s + C_L R_3 R_L s + R_3 + R_L)}$$

$$10.826 \quad \text{INVALID-ORDER-826} \quad Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \quad \infty, \quad \frac{R_3 (C_3 L_3 s^2 + 1)}{C_3 L_3 s^2 + C_3 R_3 s + 1}, \quad \infty, \quad \infty, \quad R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_1 R_1 R_3 g_m s (C_3 L_3 s^2 + 1) (C_L R_L s + 1)}{(C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1) (C_3 C_L L_3 R_3 s^3 + C_3 C_L L_3 R_L s^3 + C_3 C_L R_3 R_L s^2 + C_3 L_3 s^2 + C_3 R_3 s + C_L R_3 s + C_L R_L s + 1)}$$

$$10.827 \quad \text{INVALID-ORDER-827} \quad Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \quad \infty, \quad \frac{R_3 (C_3 L_3 s^2 + 1)}{C_3 L_3 s^2 + C_3 R_3 s + 1}, \quad \infty, \quad \infty, \quad L_L s + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_1 R_1 R_3 g_m s (C_3 L_3 s^2 + 1) (C_L L_L s^2 + 1)}{(C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1) (C_3 C_L L_3 L_L s^4 + C_3 C_L L_3 R_3 s^3 + C_3 C_L L_L R_3 s^3 + C_3 L_3 s^2 + C_3 R_3 s + C_L L_L s^2 + C_L R_3 s + 1)}$$

$$10.828 \quad \text{INVALID-ORDER-828} \quad Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \quad \infty, \quad \frac{R_3 (C_3 L_3 s^2 + 1)}{C_3 L_3 s^2 + C_3 R_3 s + 1}, \quad \infty, \quad \infty, \quad \frac{L_L s}{C_L L_L s^2 + 1} \right)$$

$$H(s) = \frac{L_1 L_L R_1 R_3 g_m s^2 (C_3 L_3 s^2 + 1)}{(C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1) (C_3 C_L L_3 L_L R_3 s^4 + C_3 L_3 L_L s^3 + C_3 L_3 R_3 s^2 + C_3 L_L R_3 s^2 + C_L L_L R_3 s^2 + L_L s + R_3)}$$

$$10.829 \quad \text{INVALID-ORDER-829} \quad Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \quad \infty, \quad \frac{R_3 (C_3 L_3 s^2 + 1)}{C_3 L_3 s^2 + C_3 R_3 s + 1}, \quad \infty, \quad \infty, \quad L_L s + R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_1 R_1 R_3 g_m s (C_3 L_3 s^2 + 1) (C_L L_L s^2 + C_L R_L s + 1)}{(C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1) (C_3 C_L L_3 L_L s^4 + C_3 C_L L_3 R_3 s^3 + C_3 C_L L_3 R_L s^3 + C_3 C_L L_L R_3 s^3 + C_3 C_L R_3 R_L s^2 + C_3 L_3 s^2 + C_3 R_3 s + C_L L_L s^2 + C_L R_3 s + C_L R_L s + 1)}$$

$$10.830 \quad \text{INVALID-ORDER-830} \quad Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \quad \infty, \quad \frac{R_3 (C_3 L_3 s^2 + 1)}{C_3 L_3 s^2 + C_3 R_3 s + 1}, \quad \infty, \quad \infty, \quad \frac{L_L R_L s}{C_L L_L R_L s^2 + L_L s + R_L} \right)$$

$$H(s) = \frac{L_1 L_L R_1 R_3 R_L g_m s^2 (C_3 L_3 s^2 + 1)}{(C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1) (C_3 C_L L_3 L_L R_3 R_L s^4 + C_3 L_3 L_L R_3 s^3 + C_3 L_3 L_L R_L s^3 + C_3 L_3 R_3 R_L s^2 + C_3 L_L R_3 R_L s^2 + C_L L_L R_3 R_L s^2 + L_L R_3 s + L_L R_L s + R_3 R_L)}$$

$$10.831 \quad \text{INVALID-ORDER-831} \quad Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \quad \infty, \quad \frac{R_3 (C_3 L_3 s^2 + 1)}{C_3 L_3 s^2 + C_3 R_3 s + 1}, \quad \infty, \quad \infty, \quad \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$$

$$H(s) = \frac{L_1 R_1 R_3 g_m s (C_3 L_3 s^2 + 1) (C_L L_L R_L s^2 + L_L s + R_L)}{(C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1) (C_3 C_L L_3 L_L R_3 s^4 + C_3 C_L L_3 L_L R_L s^4 + C_3 C_L L_L R_3 R_L s^3 + C_3 L_3 L_L s^3 + C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + C_3 L_L R_3 s^2 + C_3 R_3 R_L s + C_L L_L R_3 s^2 + C_L L_L R_L s^2 + L_L s + R_3 + R_L)}$$

$$10.832 \quad \text{INVALID-ORDER-832} \quad Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1}, \quad \infty, \quad \frac{R_3 (C_3 L_3 s^2 + 1)}{C_3 L_3 s^2 + C_3 R_3 s + 1}, \quad \infty, \quad \infty, \quad \frac{R_L (C_L L_L s^2 + 1)}{C_L L_L s^2 + C_L R_L s + 1} \right)$$

$$H(s) = \frac{L_1 R_1 R_3 R_L g_m s (C_3 L_3 s^2 + 1) (C_L L_L s^2 + 1)}{(C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1) (C_3 C_L L_3 L_L R_3 s^4 + C_3 C_L L_3 L_L R_L s^4 + C_3 C_L L_3 R_3 R_L s^3 + C_3 C_L L_L R_3 R_L s^3 + C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + C_3 R_3 R_L s + C_L L_L R_3 s^2 + C_L L_L R_L s^2 + C_L R_3 R_L s + R_3 + R_L)}$$

$$10.833 \quad \text{INVALID-ORDER-833} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \quad \infty, \quad R_3, \quad \infty, \quad \infty, \quad \frac{1}{C_L s} \right)$$

$$H(s) = \frac{R_3 g_m (C_1 L_1 R_1 s^2 + L_1 s + R_1)}{(C_L R_3 s + 1) (C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + L_1 g_m s + R_1 g_m + 1)}$$

$$10.834 \quad \text{INVALID-ORDER-834} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \quad \infty, \quad R_3, \quad \infty, \quad \infty, \quad \frac{R_L}{C_L R_L s + 1} \right)$$

$$H(s) = \frac{R_3 R_L g_m (C_1 L_1 R_1 s^2 + L_1 s + R_1)}{(C_L R_3 R_L s + R_3 + R_L) (C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + L_1 g_m s + R_1 g_m + 1)}$$

$$10.835 \quad \text{INVALID-ORDER-835} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \quad \infty, \quad R_3, \quad \infty, \quad \infty, \quad R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{R_3 g_m (C_L R_L s + 1) (C_1 L_1 R_1 s^2 + L_1 s + R_1)}{(C_L R_3 s + C_L R_L s + 1) (C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + L_1 g_m s + R_1 g_m + 1)}$$

$$10.836 \quad \text{INVALID-ORDER-836} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \quad \infty, \quad R_3, \quad \infty, \quad \infty, \quad L_L s + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{R_3 g_m (C_L L_L s^2 + 1) (C_1 L_1 R_1 s^2 + L_1 s + R_1)}{(C_L L_L s^2 + C_L R_3 s + 1) (C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + L_1 g_m s + R_1 g_m + 1)}$$

$$10.837 \quad \text{INVALID-ORDER-837} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \quad \infty, \quad R_3, \quad \infty, \quad \infty, \quad \frac{L_L s}{C_L L_L s^2 + 1} \right)$$

$$H(s) = \frac{L_L R_3 g_m s (C_1 L_1 R_1 s^2 + L_1 s + R_1)}{(C_L L_L R_3 s^2 + L_L s + R_3) (C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + L_1 g_m s + R_1 g_m + 1)}$$

$$10.838 \quad \text{INVALID-ORDER-838} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \quad \infty, \quad R_3, \quad \infty, \quad \infty, \quad L_L s + R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{R_3 g_m (C_L L_L s^2 + C_L R_L s + 1) (C_1 L_1 R_1 s^2 + L_1 s + R_1)}{(C_L L_L s^2 + C_L R_3 s + C_L R_L s + 1) (C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + L_1 g_m s + R_1 g_m + 1)}$$

$$10.839 \quad \text{INVALID-ORDER-839} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \quad \infty, \quad R_3, \quad \infty, \quad \infty, \quad \frac{L_L R_L s}{C_L L_L R_L s^2 + L_L s + R_L} \right)$$

$$H(s) = \frac{L_L R_3 R_L g_m s (C_1 L_1 R_1 s^2 + L_1 s + R_1)}{(C_L L_L R_3 R_L s^2 + L_L R_3 s + L_L R_L s + R_3 R_L) (C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + L_1 g_m s + R_1 g_m + 1)}$$

$$10.840 \quad \text{INVALID-ORDER-840} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \quad \infty, \quad R_3, \quad \infty, \quad \infty, \quad \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$$

$$H(s) = \frac{R_3 g_m (C_1 L_1 R_1 s^2 + L_1 s + R_1) (C_L L_L R_L s^2 + L_L s + R_L)}{(C_L L_L R_3 s^2 + C_L L_L R_L s^2 + L_L s + R_3 + R_L) (C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + L_1 g_m s + R_1 g_m + 1)}$$

$$10.841 \quad \text{INVALID-ORDER-841} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \quad \infty, \quad R_3, \quad \infty, \quad \infty, \quad \frac{R_L (C_L L_L s^2 + 1)}{C_L L_L s^2 + C_L R_L s + 1} \right)$$

$$H(s) = \frac{R_3 R_L g_m (C_L L_L s^2 + 1) (C_1 L_1 R_1 s^2 + L_1 s + R_1)}{(C_L L_L R_3 s^2 + C_L L_L R_L s^2 + C_L R_3 R_L s + R_3 + R_L) (C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + L_1 g_m s + R_1 g_m + 1)}$$

$$10.842 \quad \text{INVALID-ORDER-842} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \quad \infty, \quad \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad R_L \right)$$

$$H(s) = \frac{R_L g_m (C_1 L_1 R_1 s^2 + L_1 s + R_1)}{(C_3 R_L s + 1) (C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + L_1 g_m s + R_1 g_m + 1)}$$

$$10.843 \quad \text{INVALID-ORDER-843} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \quad \infty, \quad \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad \frac{1}{C_L s} \right)$$

$$H(s) = \frac{g_m (C_1 L_1 R_1 s^2 + L_1 s + R_1)}{s (C_3 + C_L) (C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + L_1 g_m s + R_1 g_m + 1)}$$

$$10.844 \quad \text{INVALID-ORDER-844} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \quad \infty, \quad \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad \frac{R_L}{C_L R_L s + 1} \right)$$

$$H(s) = \frac{R_L g_m (C_1 L_1 R_1 s^2 + L_1 s + R_1)}{(C_3 R_L s + C_L R_L s + 1) (C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + L_1 g_m s + R_1 g_m + 1)}$$

$$10.845 \quad \text{INVALID-ORDER-845} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \quad \infty, \quad \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{g_m (C_L R_L s + 1) (C_1 L_1 R_1 s^2 + L_1 s + R_1)}{s (C_3 C_L R_L s + C_3 + C_L) (C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + L_1 g_m s + R_1 g_m + 1)}$$

$$10.846 \quad \text{INVALID-ORDER-846} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \quad \infty, \quad \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad L_L s + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{g_m (C_L L_L s^2 + 1) (C_1 L_1 R_1 s^2 + L_1 s + R_1)}{s (C_3 C_L L_L s^2 + C_3 + C_L) (C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + L_1 g_m s + R_1 g_m + 1)}$$

$$10.847 \quad \text{INVALID-ORDER-847} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \quad \infty, \quad \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad \frac{L_L s}{C_L L_L s^2 + 1} \right)$$

$$H(s) = \frac{L_L g_m s (C_1 L_1 R_1 s^2 + L_1 s + R_1)}{(C_3 L_L s^2 + C_L L_L s^2 + 1) (C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + L_1 g_m s + R_1 g_m + 1)}$$

$$10.848 \quad \text{INVALID-ORDER-848} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \quad \infty, \quad \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad L_L s + R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{g_m (C_L L_L s^2 + C_L R_L s + 1) (C_1 L_1 R_1 s^2 + L_1 s + R_1)}{s (C_3 C_L L_L s^2 + C_3 C_L R_L s + C_3 + C_L) (C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + L_1 g_m s + R_1 g_m + 1)}$$

$$10.849 \quad \text{INVALID-ORDER-849} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \quad \infty, \quad \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad \frac{L_L R_L s}{C_L L_L R_L s^2 + L_L s + R_L} \right)$$

$$H(s) = \frac{L_L R_L g_m s (C_1 L_1 R_1 s^2 + L_1 s + R_1)}{(C_3 L_L R_L s^2 + C_L L_L R_L s^2 + L_L s + R_L) (C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + L_1 g_m s + R_1 g_m + 1)}$$

$$10.850 \quad \text{INVALID-ORDER-850} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \quad \infty, \quad \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$$

$$H(s) = \frac{g_m (C_1 L_1 R_1 s^2 + L_1 s + R_1) (C_L L_L R_L s^2 + L_L s + R_L)}{(C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + L_1 g_m s + R_1 g_m + 1) (C_3 C_L L_L R_L s^3 + C_3 L_L s^2 + C_3 R_L s + C_L L_L s^2 + 1)}$$

$$10.851 \quad \text{INVALID-ORDER-851} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \quad \infty, \quad \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad \frac{R_L (C_L L_L s^2 + 1)}{C_L L_L s^2 + C_L R_L s + 1} \right)$$

$$H(s) = \frac{R_L g_m (C_L L_L s^2 + 1) (C_1 L_1 R_1 s^2 + L_1 s + R_1)}{(C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + L_1 g_m s + R_1 g_m + 1) (C_3 C_L L_L R_L s^3 + C_3 R_L s + C_L L_L s^2 + C_L R_L s + 1)}$$

$$10.852 \quad \text{INVALID-ORDER-852} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \quad \infty, \quad \frac{R_3}{C_3 R_3 s + 1}, \quad \infty, \quad \infty, \quad R_L \right)$$

$$H(s) = \frac{R_3 R_L g_m (C_1 L_1 R_1 s^2 + L_1 s + R_1)}{(C_3 R_3 R_L s + R_3 + R_L) (C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + L_1 g_m s + R_1 g_m + 1)}$$

$$10.853 \quad \text{INVALID-ORDER-853} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \quad \infty, \quad \frac{R_3}{C_3 R_3 s + 1}, \quad \infty, \quad \infty, \quad \frac{1}{C_L s} \right)$$

$$H(s) = \frac{R_3 g_m (C_1 L_1 R_1 s^2 + L_1 s + R_1)}{(C_3 R_3 s + C_L R_3 s + 1) (C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + L_1 g_m s + R_1 g_m + 1)}$$

$$10.854 \quad \text{INVALID-ORDER-854} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \quad \infty, \quad \frac{R_3}{C_3 R_3 s + 1}, \quad \infty, \quad \infty, \quad \frac{R_L}{C_L R_L s + 1} \right)$$

$$H(s) = \frac{R_3 R_L g_m (C_1 L_1 R_1 s^2 + L_1 s + R_1)}{(C_3 R_3 R_L s + C_L R_3 R_L s + R_3 + R_L) (C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + L_1 g_m s + R_1 g_m + 1)}$$

$$10.855 \quad \text{INVALID-ORDER-855} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \quad \infty, \quad \frac{R_3}{C_3 R_3 s + 1}, \quad \infty, \quad \infty, \quad R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{R_3 g_m (C_L R_L s + 1) (C_1 L_1 R_1 s^2 + L_1 s + R_1)}{(C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + L_1 g_m s + R_1 g_m + 1) (C_3 C_L R_3 R_L s^2 + C_3 R_3 s + C_L R_3 s + C_L R_L s + 1)}$$

$$10.856 \quad \text{INVALID-ORDER-856} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \quad \infty, \quad \frac{R_3}{C_3 R_3 s + 1}, \quad \infty, \quad \infty, \quad L_L s + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{R_3 g_m (C_L L_L s^2 + 1) (C_1 L_1 R_1 s^2 + L_1 s + R_1)}{(C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + L_1 g_m s + R_1 g_m + 1) (C_3 C_L L_L R_3 s^3 + C_3 R_3 s + C_L L_L s^2 + C_L R_3 s + 1)}$$

$$10.857 \quad \text{INVALID-ORDER-857} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \quad \infty, \quad \frac{R_3}{C_3 R_3 s + 1}, \quad \infty, \quad \infty, \quad \frac{L_L s}{C_L L_L s^2 + 1} \right)$$

$$H(s) = \frac{L_L R_3 g_m s (C_1 L_1 R_1 s^2 + L_1 s + R_1)}{(C_3 L_L R_3 s^2 + C_L L_L R_3 s^2 + L_L s + R_3) (C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + L_1 g_m s + R_1 g_m + 1)}$$

$$10.858 \quad \text{INVALID-ORDER-858} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \quad \infty, \quad \frac{R_3}{C_3 R_3 s + 1}, \quad \infty, \quad \infty, \quad L_L s + R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{R_3 g_m (C_L L_L s^2 + C_L R_L s + 1) (C_1 L_1 R_1 s^2 + L_1 s + R_1)}{(C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + L_1 g_m s + R_1 g_m + 1) (C_3 C_L L_L R_3 s^3 + C_3 C_L R_3 R_L s^2 + C_3 R_3 s + C_L L_L s^2 + C_L R_3 s + C_L R_L s + 1)}$$

$$10.859 \quad \text{INVALID-ORDER-859} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \quad \infty, \quad \frac{R_3}{C_3 R_3 s + 1}, \quad \infty, \quad \infty, \quad \frac{L_L R_L s}{C_L L_L R_L s^2 + L_L s + R_L} \right)$$

$$H(s) = \frac{L_L R_3 R_L g_m s (C_1 L_1 R_1 s^2 + L_1 s + R_1)}{(C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + L_1 g_m s + R_1 g_m + 1) (C_3 L_L R_3 R_L s^2 + C_L L_L R_3 R_L s^2 + L_L R_3 s + L_L R_L s + R_3 R_L)}$$

$$10.860 \quad \text{INVALID-ORDER-860} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \quad \infty, \quad \frac{R_3}{C_3 R_3 s + 1}, \quad \infty, \quad \infty, \quad \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$$

$$H(s) = \frac{R_3 g_m (C_1 L_1 R_1 s^2 + L_1 s + R_1) (C_L L_L R_L s^2 + L_L s + R_L)}{(C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + L_1 g_m s + R_1 g_m + 1) (C_3 C_L L_L R_3 R_L s^3 + C_3 L_L R_3 s^2 + C_3 R_3 R_L s + C_L L_L R_3 s^2 + C_L L_L R_L s^2 + L_L s + R_3 + R_L)}$$

$$10.861 \quad \text{INVALID-ORDER-861} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \frac{R_3}{C_3 R_3 s + 1}, \infty, \infty, \frac{R_L (C_L L_L s^2 + 1)}{C_L L_L s^2 + C_L R_L s + 1} \right)$$

$$H(s) = \frac{R_3 R_L g_m (C_L L_L s^2 + 1) (C_1 L_1 R_1 s^2 + L_1 s + R_1)}{(C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + L_1 g_m s + R_1 g_m + 1) (C_3 C_L L_L R_3 R_L s^3 + C_3 R_3 R_L s + C_L L_L R_3 s^2 + C_L L_L R_L s^2 + C_L R_3 R_L s + R_3 + R_L)}$$

$$10.862 \quad \text{INVALID-ORDER-862} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, R_3 + \frac{1}{C_3 s}, \infty, \infty, R_L \right)$$

$$H(s) = \frac{R_L g_m (C_3 R_3 s + 1) (C_1 L_1 R_1 s^2 + L_1 s + R_1)}{(C_3 R_3 s + C_3 R_L s + 1) (C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + L_1 g_m s + R_1 g_m + 1)}$$

$$10.863 \quad \text{INVALID-ORDER-863} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, R_3 + \frac{1}{C_3 s}, \infty, \infty, \frac{1}{C_L s} \right)$$

$$H(s) = \frac{g_m (C_3 R_3 s + 1) (C_1 L_1 R_1 s^2 + L_1 s + R_1)}{s (C_3 C_L R_3 s + C_3 + C_L) (C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + L_1 g_m s + R_1 g_m + 1)}$$

$$10.864 \quad \text{INVALID-ORDER-864} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, R_3 + \frac{1}{C_3 s}, \infty, \infty, \frac{R_L}{C_L R_L s + 1} \right)$$

$$H(s) = \frac{R_L g_m (C_3 R_3 s + 1) (C_1 L_1 R_1 s^2 + L_1 s + R_1)}{(C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + L_1 g_m s + R_1 g_m + 1) (C_3 C_L R_3 R_L s^2 + C_3 R_3 s + C_3 R_L s + C_L R_L s + 1)}$$

$$10.865 \quad \text{INVALID-ORDER-865} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, R_3 + \frac{1}{C_3 s}, \infty, \infty, R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{g_m (C_3 R_3 s + 1) (C_L R_L s + 1) (C_1 L_1 R_1 s^2 + L_1 s + R_1)}{s (C_3 C_L R_3 s + C_3 C_L R_L s + C_3 + C_L) (C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + L_1 g_m s + R_1 g_m + 1)}$$

$$10.866 \quad \text{INVALID-ORDER-866} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, R_3 + \frac{1}{C_3 s}, \infty, \infty, L_L s + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{g_m (C_3 R_3 s + 1) (C_L L_L s^2 + 1) (C_1 L_1 R_1 s^2 + L_1 s + R_1)}{s (C_3 C_L L_L s^2 + C_3 C_L R_3 s + C_3 + C_L) (C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + L_1 g_m s + R_1 g_m + 1)}$$

$$10.867 \quad \text{INVALID-ORDER-867} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, R_3 + \frac{1}{C_3 s}, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} \right)$$

$$H(s) = \frac{L_L g_m s (C_3 R_3 s + 1) (C_1 L_1 R_1 s^2 + L_1 s + R_1)}{(C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + L_1 g_m s + R_1 g_m + 1) (C_3 C_L L_L R_3 s^3 + C_3 L_L s^2 + C_3 R_3 s + C_L L_L s^2 + 1)}$$

$$10.868 \quad \text{INVALID-ORDER-868} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, R_3 + \frac{1}{C_3 s}, \infty, \infty, L_L s + R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{g_m (C_3 R_3 s + 1) (C_L L_L s^2 + C_L R_L s + 1) (C_1 L_1 R_1 s^2 + L_1 s + R_1)}{s (C_3 C_L L_L s^2 + C_3 C_L R_3 s + C_3 C_L R_L s + C_3 + C_L) (C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + L_1 g_m s + R_1 g_m + 1)}$$

$$10.869 \quad \text{INVALID-ORDER-869} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, R_3 + \frac{1}{C_3 s}, \infty, \infty, \frac{L_L R_L s}{C_L L_L R_L s^2 + L_L s + R_L} \right)$$

$$H(s) = \frac{L_L R_L g_m s (C_3 R_3 s + 1) (C_1 L_1 R_1 s^2 + L_1 s + R_1)}{(C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + L_1 g_m s + R_1 g_m + 1) (C_3 C_L L_L R_3 R_L s^3 + C_3 L_L R_3 s^2 + C_3 L_L R_L s^2 + C_3 R_3 R_L s + C_L L_L R_L s^2 + L_L s + R_L)}$$

10.870 INVALID-ORDER-870 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, R_3 + \frac{1}{C_3 s}, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$

$$H(s) = \frac{g_m (C_3 R_3 s + 1) (C_1 L_1 R_1 s^2 + L_1 s + R_1) (C_L L_L R_L s^2 + L_L s + R_L)}{(C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + L_1 g_m s + R_1 g_m + 1) (C_3 C_L L_L R_3 s^3 + C_3 C_L L_L R_L s^3 + C_3 L_L s^2 + C_3 R_3 s + C_3 R_L s + C_L L_L s^2 + 1)}$$

10.871 INVALID-ORDER-871 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, R_3 + \frac{1}{C_3 s}, \infty, \infty, \frac{R_L (C_L L_L s^2 + 1)}{C_L L_L s^2 + C_L R_L s + 1} \right)$

$$H(s) = \frac{R_L g_m (C_3 R_3 s + 1) (C_L L_L s^2 + 1) (C_1 L_1 R_1 s^2 + L_1 s + R_1)}{(C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + L_1 g_m s + R_1 g_m + 1) (C_3 C_L L_L R_3 s^3 + C_3 C_L L_L R_L s^3 + C_3 C_L R_3 R_L s^2 + C_3 R_3 s + C_3 R_L s + C_L L_L s^2 + C_L R_L s + 1)}$$

10.872 INVALID-ORDER-872 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, L_3 s + \frac{1}{C_3 s}, \infty, \infty, R_L \right)$

$$H(s) = \frac{R_L g_m (C_3 L_3 s^2 + 1) (C_1 L_1 R_1 s^2 + L_1 s + R_1)}{(C_3 L_3 s^2 + C_3 R_L s + 1) (C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + L_1 g_m s + R_1 g_m + 1)}$$

10.873 INVALID-ORDER-873 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, L_3 s + \frac{1}{C_3 s}, \infty, \infty, \frac{1}{C_L s} \right)$

$$H(s) = \frac{g_m (C_3 L_3 s^2 + 1) (C_1 L_1 R_1 s^2 + L_1 s + R_1)}{s (C_3 C_L L_3 s^2 + C_3 + C_L) (C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + L_1 g_m s + R_1 g_m + 1)}$$

10.874 INVALID-ORDER-874 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, L_3 s + \frac{1}{C_3 s}, \infty, \infty, \frac{R_L}{C_L R_L s + 1} \right)$

$$H(s) = \frac{R_L g_m (C_3 L_3 s^2 + 1) (C_1 L_1 R_1 s^2 + L_1 s + R_1)}{(C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + L_1 g_m s + R_1 g_m + 1) (C_3 C_L L_3 R_L s^3 + C_3 L_3 s^2 + C_3 R_L s + C_L R_L s + 1)}$$

10.875 INVALID-ORDER-875 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, L_3 s + \frac{1}{C_3 s}, \infty, \infty, R_L + \frac{1}{C_L s} \right)$

$$H(s) = \frac{g_m (C_3 L_3 s^2 + 1) (C_L R_L s + 1) (C_1 L_1 R_1 s^2 + L_1 s + R_1)}{s (C_3 C_L L_3 s^2 + C_3 C_L R_L s + C_3 + C_L) (C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + L_1 g_m s + R_1 g_m + 1)}$$

10.876 INVALID-ORDER-876 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, L_3 s + \frac{1}{C_3 s}, \infty, \infty, L_L s + \frac{1}{C_L s} \right)$

$$H(s) = \frac{g_m (C_3 L_3 s^2 + 1) (C_L L_L s^2 + 1) (C_1 L_1 R_1 s^2 + L_1 s + R_1)}{s (C_3 C_L L_3 s^2 + C_3 C_L L_L s^2 + C_3 + C_L) (C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + L_1 g_m s + R_1 g_m + 1)}$$

10.877 INVALID-ORDER-877 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, L_3 s + \frac{1}{C_3 s}, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} \right)$

$$H(s) = \frac{L_L g_m s (C_3 L_3 s^2 + 1) (C_1 L_1 R_1 s^2 + L_1 s + R_1)}{(C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + L_1 g_m s + R_1 g_m + 1) (C_3 C_L L_3 L_L s^4 + C_3 L_3 s^2 + C_3 L_L s^2 + C_L L_L s^2 + 1)}$$

10.878 INVALID-ORDER-878 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, L_3 s + \frac{1}{C_3 s}, \infty, \infty, L_L s + R_L + \frac{1}{C_L s} \right)$

$$H(s) = \frac{g_m (C_3 L_3 s^2 + 1) (C_L L_L s^2 + C_L R_L s + 1) (C_1 L_1 R_1 s^2 + L_1 s + R_1)}{s (C_3 C_L L_3 s^2 + C_3 C_L L_L s^2 + C_3 C_L R_L s + C_3 + C_L) (C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + L_1 g_m s + R_1 g_m + 1)}$$

$$10.879 \quad \text{INVALID-ORDER-879} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \quad \infty, \quad L_3 s + \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad \frac{L_L R_L s}{C_L L_L R_L s^2 + L_L s + R_L} \right)$$

$$H(s) = \frac{L_L R_L g_m s (C_3 L_3 s^2 + 1) (C_1 L_1 R_1 s^2 + L_1 s + R_1)}{(C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + L_1 g_m s + R_1 g_m + 1) (C_3 C_L L_3 L_L R_L s^4 + C_3 L_3 L_L s^3 + C_3 L_3 R_L s^2 + C_3 L_L R_L s^2 + C_L L_L R_L s^2 + L_L s + R_L)}$$

$$10.880 \quad \text{INVALID-ORDER-880} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \quad \infty, \quad L_3 s + \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$$

$$H(s) = \frac{g_m (C_3 L_3 s^2 + 1) (C_1 L_1 R_1 s^2 + L_1 s + R_1) (C_L L_L R_L s^2 + L_L s + R_L)}{(C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + L_1 g_m s + R_1 g_m + 1) (C_3 C_L L_3 L_L s^4 + C_3 C_L L_L R_L s^3 + C_3 L_3 s^2 + C_3 L_L s^2 + C_3 R_L s + C_L L_L s^2 + 1)}$$

$$10.881 \quad \text{INVALID-ORDER-881} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \quad \infty, \quad L_3 s + \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad \frac{R_L (C_L L_L s^2 + 1)}{C_L L_L s^2 + C_L R_L s + 1} \right)$$

$$H(s) = \frac{R_L g_m (C_3 L_3 s^2 + 1) (C_L L_L s^2 + 1) (C_1 L_1 R_1 s^2 + L_1 s + R_1)}{(C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + L_1 g_m s + R_1 g_m + 1) (C_3 C_L L_3 L_L s^4 + C_3 C_L L_3 R_L s^3 + C_3 C_L L_L R_L s^3 + C_3 L_3 s^2 + C_3 R_L s + C_L L_L s^2 + C_L R_L s + 1)}$$

$$10.882 \quad \text{INVALID-ORDER-882} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \quad \infty, \quad \frac{L_3 s}{C_3 L_3 s^2 + 1}, \quad \infty, \quad \infty, \quad R_L \right)$$

$$H(s) = \frac{L_3 R_L g_m s (C_1 L_1 R_1 s^2 + L_1 s + R_1)}{(C_3 L_3 R_L s^2 + L_3 s + R_L) (C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + L_1 g_m s + R_1 g_m + 1)}$$

$$10.883 \quad \text{INVALID-ORDER-883} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \quad \infty, \quad \frac{L_3 s}{C_3 L_3 s^2 + 1}, \quad \infty, \quad \infty, \quad \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_3 g_m s (C_1 L_1 R_1 s^2 + L_1 s + R_1)}{(C_3 L_3 s^2 + C_L L_3 s^2 + 1) (C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + L_1 g_m s + R_1 g_m + 1)}$$

$$10.884 \quad \text{INVALID-ORDER-884} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \quad \infty, \quad \frac{L_3 s}{C_3 L_3 s^2 + 1}, \quad \infty, \quad \infty, \quad \frac{R_L}{C_L R_L s + 1} \right)$$

$$H(s) = \frac{L_3 R_L g_m s (C_1 L_1 R_1 s^2 + L_1 s + R_1)}{(C_3 L_3 R_L s^2 + C_L L_3 R_L s^2 + L_3 s + R_L) (C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + L_1 g_m s + R_1 g_m + 1)}$$

$$10.885 \quad \text{INVALID-ORDER-885} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \quad \infty, \quad \frac{L_3 s}{C_3 L_3 s^2 + 1}, \quad \infty, \quad \infty, \quad R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_3 g_m s (C_L R_L s + 1) (C_1 L_1 R_1 s^2 + L_1 s + R_1)}{(C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + L_1 g_m s + R_1 g_m + 1) (C_3 C_L L_3 R_L s^3 + C_3 L_3 s^2 + C_L L_3 s^2 + C_L R_L s + 1)}$$

$$10.886 \quad \text{INVALID-ORDER-886} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \quad \infty, \quad \frac{L_3 s}{C_3 L_3 s^2 + 1}, \quad \infty, \quad \infty, \quad L_L s + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_3 g_m s (C_L L_L s^2 + 1) (C_1 L_1 R_1 s^2 + L_1 s + R_1)}{(C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + L_1 g_m s + R_1 g_m + 1) (C_3 C_L L_3 L_L s^4 + C_3 L_3 s^2 + C_L L_3 s^2 + C_L L_L s^2 + 1)}$$

$$10.887 \quad \text{INVALID-ORDER-887} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \quad \infty, \quad \frac{L_3 s}{C_3 L_3 s^2 + 1}, \quad \infty, \quad \infty, \quad \frac{L_L s}{C_L L_L s^2 + 1} \right)$$

$$H(s) = \frac{L_3 L_L g_m s (C_1 L_1 R_1 s^2 + L_1 s + R_1)}{(C_3 L_3 L_L s^2 + C_L L_3 L_L s^2 + L_3 + L_L) (C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + L_1 g_m s + R_1 g_m + 1)}$$

10.888 INVALID-ORDER-888 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \frac{L_3 s}{C_3 L_3 s^2 + 1}, \infty, \infty, L_L s + R_L + \frac{1}{C_L s} \right)$

$$H(s) = \frac{L_3 g_m s (C_L L_L s^2 + C_L R_L s + 1) (C_1 L_1 R_1 s^2 + L_1 s + R_1)}{(C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + L_1 g_m s + R_1 g_m + 1) (C_3 C_L L_3 L_L s^4 + C_3 C_L L_3 R_L s^3 + C_3 L_3 s^2 + C_L L_3 s^2 + C_L L_L s^2 + C_L R_L s + 1)}$$

10.889 INVALID-ORDER-889 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \frac{L_3 s}{C_3 L_3 s^2 + 1}, \infty, \infty, \frac{L_L R_L s}{C_L L_L R_L s^2 + L_L s + R_L} \right)$

$$H(s) = \frac{L_3 L_L R_L g_m s (C_1 L_1 R_1 s^2 + L_1 s + R_1)}{(C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + L_1 g_m s + R_1 g_m + 1) (C_3 L_3 L_L R_L s^2 + C_L L_3 L_L R_L s^2 + L_3 L_L s + L_3 R_L + L_L R_L)}$$

10.890 INVALID-ORDER-890 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \frac{L_3 s}{C_3 L_3 s^2 + 1}, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$

$$H(s) = \frac{L_3 g_m s (C_1 L_1 R_1 s^2 + L_1 s + R_1) (C_L L_L R_L s^2 + L_L s + R_L)}{(C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + L_1 g_m s + R_1 g_m + 1) (C_3 C_L L_3 L_L R_L s^4 + C_3 L_3 L_L s^3 + C_3 L_3 R_L s^2 + C_L L_3 L_L s^3 + C_L L_L R_L s^2 + L_3 s + L_L s + R_L)}$$

10.891 INVALID-ORDER-891 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, \frac{L_3 s}{C_3 L_3 s^2 + 1}, \infty, \infty, \frac{R_L (C_L L_L s^2 + 1)}{C_L L_L s^2 + C_L R_L s + 1} \right)$

$$H(s) = \frac{L_3 R_L g_m s (C_L L_L s^2 + 1) (C_1 L_1 R_1 s^2 + L_1 s + R_1)}{(C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + L_1 g_m s + R_1 g_m + 1) (C_3 C_L L_3 L_L R_L s^4 + C_3 L_3 R_L s^2 + C_L L_3 L_L s^3 + C_L L_3 R_L s^2 + C_L L_L R_L s^2 + L_3 s + R_L)}$$

10.892 INVALID-ORDER-892 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, L_3 s + R_3 + \frac{1}{C_3 s}, \infty, \infty, R_L \right)$

$$H(s) = \frac{R_L g_m (C_3 L_3 s^2 + C_3 R_3 s + 1) (C_1 L_1 R_1 s^2 + L_1 s + R_1)}{(C_3 L_3 s^2 + C_3 R_3 s + C_3 R_L s + 1) (C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + L_1 g_m s + R_1 g_m + 1)}$$

10.893 INVALID-ORDER-893 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, L_3 s + R_3 + \frac{1}{C_3 s}, \infty, \infty, \frac{1}{C_L s} \right)$

$$H(s) = \frac{g_m (C_3 L_3 s^2 + C_3 R_3 s + 1) (C_1 L_1 R_1 s^2 + L_1 s + R_1)}{s (C_3 C_L L_3 s^2 + C_3 C_L R_3 s + C_3 + C_L) (C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + L_1 g_m s + R_1 g_m + 1)}$$

10.894 INVALID-ORDER-894 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, L_3 s + R_3 + \frac{1}{C_3 s}, \infty, \infty, \frac{R_L}{C_L R_L s + 1} \right)$

$$H(s) = \frac{R_L g_m (C_3 L_3 s^2 + C_3 R_3 s + 1) (C_1 L_1 R_1 s^2 + L_1 s + R_1)}{(C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + L_1 g_m s + R_1 g_m + 1) (C_3 C_L L_3 R_L s^3 + C_3 C_L R_3 R_L s^2 + C_3 L_3 s^2 + C_3 R_3 s + C_3 R_L s + C_L R_L s + 1)}$$

10.895 INVALID-ORDER-895 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, L_3 s + R_3 + \frac{1}{C_3 s}, \infty, \infty, R_L + \frac{1}{C_L s} \right)$

$$H(s) = \frac{g_m (C_L R_L s + 1) (C_3 L_3 s^2 + C_3 R_3 s + 1) (C_1 L_1 R_1 s^2 + L_1 s + R_1)}{s (C_3 C_L L_3 s^2 + C_3 C_L R_3 s + C_3 C_L R_L s + C_3 + C_L) (C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + L_1 g_m s + R_1 g_m + 1)}$$

10.896 INVALID-ORDER-896 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \infty, L_3 s + R_3 + \frac{1}{C_3 s}, \infty, \infty, L_L s + \frac{1}{C_L s} \right)$

$$H(s) = \frac{g_m (C_L L_L s^2 + 1) (C_3 L_3 s^2 + C_3 R_3 s + 1) (C_1 L_1 R_1 s^2 + L_1 s + R_1)}{s (C_3 C_L L_3 s^2 + C_3 C_L L_L s^2 + C_3 C_L R_3 s + C_3 + C_L) (C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + L_1 g_m s + R_1 g_m + 1)}$$

$$10.897 \quad \text{INVALID-ORDER-897} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \quad \infty, \quad L_3 s + R_3 + \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad \frac{L_L s}{C_L L_L s^2 + 1} \right)$$

$$H(s) = \frac{L_L g_m s (C_3 L_3 s^2 + C_3 R_3 s + 1) (C_1 L_1 R_1 s^2 + L_1 s + R_1)}{(C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + L_1 g_m s + R_1 g_m + 1) (C_3 C_L L_3 L_L s^4 + C_3 C_L L_L R_3 s^3 + C_3 L_3 s^2 + C_3 L_L s^2 + C_3 R_3 s + C_L L_L s^2 + 1)}$$

$$10.898 \quad \text{INVALID-ORDER-898} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \quad \infty, \quad L_3 s + R_3 + \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad L_L s + R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{g_m (C_3 L_3 s^2 + C_3 R_3 s + 1) (C_L L_L s^2 + C_L R_L s + 1) (C_1 L_1 R_1 s^2 + L_1 s + R_1)}{s (C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + L_1 g_m s + R_1 g_m + 1) (C_3 C_L L_3 s^2 + C_3 C_L L_L s^2 + C_3 C_L R_3 s + C_3 C_L R_L s + C_3 + C_L)}$$

$$10.899 \quad \text{INVALID-ORDER-899} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \quad \infty, \quad L_3 s + R_3 + \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad \frac{L_L R_L s}{C_L L_L R_L s^2 + L_L s + R_L} \right)$$

$$H(s) = \frac{L_L R_L g_m s (C_3 L_3 s^2 + C_3 R_3 s + 1) (C_1 L_1 R_1 s^2 + L_1 s + R_1)}{(C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + L_1 g_m s + R_1 g_m + 1) (C_3 C_L L_3 L_L R_L s^4 + C_3 C_L L_L R_3 R_L s^3 + C_3 L_3 L_L s^3 + C_3 L_3 R_L s^2 + C_3 L_L R_3 s^2 + C_3 L_L R_L s^2 + C_3 R_3 R_L s + C_L L_L R_L s^2 + L_L s + R_L)}$$

$$10.900 \quad \text{INVALID-ORDER-900} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \quad \infty, \quad L_3 s + R_3 + \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$$

$$H(s) = \frac{g_m (C_3 L_3 s^2 + C_3 R_3 s + 1) (C_1 L_1 R_1 s^2 + L_1 s + R_1) (C_L L_L R_L s^2 + L_L s + R_L)}{(C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + L_1 g_m s + R_1 g_m + 1) (C_3 C_L L_3 L_L s^4 + C_3 C_L L_L R_3 s^3 + C_3 C_L L_L R_L s^3 + C_3 L_3 s^2 + C_3 L_L s^2 + C_3 R_3 s + C_3 R_L s + C_L L_L s^2 + 1)}$$

$$10.901 \quad \text{INVALID-ORDER-901} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \quad \infty, \quad L_3 s + R_3 + \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad \frac{R_L (C_L L_L s^2 + 1)}{C_L L_L s^2 + C_L R_L s + 1} \right)$$

$$H(s) = \frac{R_L g_m (C_L L_L s^2 + 1) (C_3 L_3 s^2 + C_3 R_3 s + 1) (C_1 L_1 R_1 s^2 + L_1 s + R_1)}{(C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + L_1 g_m s + R_1 g_m + 1) (C_3 C_L L_3 L_L s^4 + C_3 C_L L_3 R_L s^3 + C_3 C_L L_L R_3 s^3 + C_3 C_L L_L R_L s^3 + C_3 C_L R_3 R_L s^2 + C_3 L_3 s^2 + C_3 R_3 s + C_3 R_L s + C_L L_L s^2 + C_L R_L s + 1)}$$

$$10.902 \quad \text{INVALID-ORDER-902} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \quad \infty, \quad \frac{L_3 R_3 s}{C_3 L_3 R_3 s^2 + L_3 s + R_3}, \quad \infty, \quad \infty, \quad R_L \right)$$

$$H(s) = \frac{L_3 R_3 R_L g_m s (C_1 L_1 R_1 s^2 + L_1 s + R_1)}{(C_3 L_3 R_3 R_L s^2 + L_3 R_3 s + L_3 R_L s + R_3 R_L) (C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + L_1 g_m s + R_1 g_m + 1)}$$

$$10.903 \quad \text{INVALID-ORDER-903} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \quad \infty, \quad \frac{L_3 R_3 s}{C_3 L_3 R_3 s^2 + L_3 s + R_3}, \quad \infty, \quad \infty, \quad \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_3 R_3 g_m s (C_1 L_1 R_1 s^2 + L_1 s + R_1)}{(C_3 L_3 R_3 s^2 + C_L L_3 R_3 s^2 + L_3 s + R_3) (C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + L_1 g_m s + R_1 g_m + 1)}$$

$$10.904 \quad \text{INVALID-ORDER-904} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \quad \infty, \quad \frac{L_3 R_3 s}{C_3 L_3 R_3 s^2 + L_3 s + R_3}, \quad \infty, \quad \infty, \quad \frac{R_L}{C_L R_L s + 1} \right)$$

$$H(s) = \frac{L_3 R_3 R_L g_m s (C_1 L_1 R_1 s^2 + L_1 s + R_1)}{(C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + L_1 g_m s + R_1 g_m + 1) (C_3 L_3 R_3 R_L s^2 + C_L L_3 R_3 R_L s^2 + L_3 R_3 s + L_3 R_L s + R_3 R_L)}$$

$$10.905 \quad \text{INVALID-ORDER-905} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \quad \infty, \quad \frac{L_3 R_3 s}{C_3 L_3 R_3 s^2 + L_3 s + R_3}, \quad \infty, \quad \infty, \quad R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_3 R_3 g_m s (C_L R_L s + 1) (C_1 L_1 R_1 s^2 + L_1 s + R_1)}{(C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + L_1 g_m s + R_1 g_m + 1) (C_3 C_L L_3 R_3 R_L s^3 + C_3 L_3 R_3 s^2 + C_L L_3 R_3 s^2 + C_L L_3 R_L s^2 + C_L R_3 R_L s + L_3 s + R_3)}$$

$$\mathbf{10.906 \quad INVALID-ORDER-906} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \quad \infty, \quad \frac{L_3 R_3 s}{C_3 L_3 R_3 s^2 + L_3 s + R_3}, \quad \infty, \quad \infty, \quad L_L s + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_3 R_3 g_m s (C_L L_L s^2 + 1) (C_1 L_1 R_1 s^2 + L_1 s + R_1)}{(C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + L_1 g_m s + R_1 g_m + 1) (C_3 C_L L_3 L_L R_3 s^4 + C_3 L_3 R_3 s^2 + C_L L_3 L_L s^3 + C_L L_3 R_3 s^2 + C_L L_L R_3 s^2 + L_3 s + R_3)}$$

$$\mathbf{10.907 \quad INVALID-ORDER-907} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \quad \infty, \quad \frac{L_3 R_3 s}{C_3 L_3 R_3 s^2 + L_3 s + R_3}, \quad \infty, \quad \infty, \quad \frac{L_L s}{C_L L_L s^2 + 1} \right)$$

$$H(s) = \frac{L_3 L_L R_3 g_m s (C_1 L_1 R_1 s^2 + L_1 s + R_1)}{(C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + L_1 g_m s + R_1 g_m + 1) (C_3 L_3 L_L R_3 s^2 + C_L L_3 L_L R_3 s^2 + L_3 L_L s + L_3 R_3 + L_L R_3)}$$

$$\mathbf{10.908 \quad INVALID-ORDER-908} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \quad \infty, \quad \frac{L_3 R_3 s}{C_3 L_3 R_3 s^2 + L_3 s + R_3}, \quad \infty, \quad \infty, \quad L_L s + R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_3 R_3 g_m s (C_L L_L s^2 + C_L R_L s + 1) (C_1 L_1 R_1 s^2 + L_1 s + R_1)}{(C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + L_1 g_m s + R_1 g_m + 1) (C_3 C_L L_3 L_L R_3 s^4 + C_3 C_L L_3 R_3 R_L s^3 + C_3 L_3 R_3 s^2 + C_L L_3 L_L s^3 + C_L L_3 R_3 s^2 + C_L L_3 R_L s^2 + C_L L_L R_3 s^2 + C_L R_3 R_L s + L_3 s + R_3)}$$

$$\mathbf{10.909 \quad INVALID-ORDER-909} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \quad \infty, \quad \frac{L_3 R_3 s}{C_3 L_3 R_3 s^2 + L_3 s + R_3}, \quad \infty, \quad \infty, \quad \frac{L_L R_L s}{C_L L_L R_L s^2 + L_L s + R_L} \right)$$

$$H(s) = \frac{L_3 L_L R_3 R_L g_m s (C_1 L_1 R_1 s^2 + L_1 s + R_1)}{(C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + L_1 g_m s + R_1 g_m + 1) (C_3 L_3 L_L R_3 R_L s^2 + C_L L_3 L_L R_3 R_L s^2 + L_3 L_L R_3 s + L_3 L_L R_L s + L_3 R_3 R_L + L_L R_3 R_L)}$$

$$\mathbf{10.910 \quad INVALID-ORDER-910} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \quad \infty, \quad \frac{L_3 R_3 s}{C_3 L_3 R_3 s^2 + L_3 s + R_3}, \quad \infty, \quad \infty, \quad \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$$

$$H(s) = \frac{L_3 R_3 g_m s (C_1 L_1 R_1 s^2 + L_1 s + R_1) (C_L L_L R_L s^2 + L_L s + R_L)}{(C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + L_1 g_m s + R_1 g_m + 1) (C_3 C_L L_3 L_L R_3 R_L s^4 + C_3 L_3 L_L R_3 s^3 + C_3 L_3 R_3 R_L s^2 + C_L L_3 L_L R_3 s^3 + C_L L_3 L_L R_L s^3 + C_L L_L R_3 R_L s^2 + L_3 L_L s^2 + L_3 R_3 s + L_3 R_L s + L_L R_3 s + R_3 R_L)}$$

$$\mathbf{10.911 \quad INVALID-ORDER-911} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \quad \infty, \quad \frac{L_3 R_3 s}{C_3 L_3 R_3 s^2 + L_3 s + R_3}, \quad \infty, \quad \infty, \quad \frac{R_L (C_L L_L s^2 + 1)}{C_L L_L s^2 + C_L R_L s + 1} \right)$$

$$H(s) = \frac{L_3 R_3 R_L g_m s (C_L L_L s^2 + 1) (C_1 L_1 R_1 s^2 + L_1 s + R_1)}{(C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + L_1 g_m s + R_1 g_m + 1) (C_3 C_L L_3 L_L R_3 R_L s^4 + C_3 L_3 R_3 R_L s^2 + C_L L_3 L_L R_3 s^3 + C_L L_3 L_L R_L s^3 + C_L L_3 R_3 R_L s^2 + C_L L_L R_3 R_L s^2 + L_3 R_3 s + L_3 R_L s + R_3 R_L)}$$

$$\mathbf{10.912 \quad INVALID-ORDER-912} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \quad \infty, \quad \frac{L_3 s}{C_3 L_3 s^2 + 1} + R_3, \quad \infty, \quad \infty, \quad R_L \right)$$

$$H(s) = \frac{R_L g_m (C_1 L_1 R_1 s^2 + L_1 s + R_1) (C_3 L_3 R_3 s^2 + L_3 s + R_3)}{(C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + L_3 s + R_3 + R_L) (C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + L_1 g_m s + R_1 g_m + 1)}$$

$$\mathbf{10.913 \quad INVALID-ORDER-913} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \quad \infty, \quad \frac{L_3 s}{C_3 L_3 s^2 + 1} + R_3, \quad \infty, \quad \infty, \quad \frac{1}{C_L s} \right)$$

$$H(s) = \frac{g_m (C_1 L_1 R_1 s^2 + L_1 s + R_1) (C_3 L_3 R_3 s^2 + L_3 s + R_3)}{(C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + L_1 g_m s + R_1 g_m + 1) (C_3 C_L L_3 R_3 s^3 + C_3 L_3 s^2 + C_L L_3 s^2 + C_L R_3 s + 1)}$$

$$\mathbf{10.914 \quad INVALID-ORDER-914} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \quad \infty, \quad \frac{L_3 s}{C_3 L_3 s^2 + 1} + R_3, \quad \infty, \quad \infty, \quad \frac{R_L}{C_L R_L s + 1} \right)$$

$$H(s) = \frac{R_L g_m (C_1 L_1 R_1 s^2 + L_1 s + R_1) (C_3 L_3 R_3 s^2 + L_3 s + R_3)}{(C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + L_1 g_m s + R_1 g_m + 1) (C_3 C_L L_3 R_3 R_L s^3 + C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + C_L L_3 R_L s^2 + C_L R_3 R_L s + L_3 s + R_3 + R_L)}$$

$$\mathbf{10.915 \quad INVALID-ORDER-915} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \quad \infty, \quad \frac{L_3 s}{C_3 L_3 s^2 + 1} + R_3, \quad \infty, \quad \infty, \quad R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{g_m (C_L R_L s + 1) (C_1 L_1 R_1 s^2 + L_1 s + R_1) (C_3 L_3 R_3 s^2 + L_3 s + R_3)}{(C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + L_1 g_m s + R_1 g_m + 1) (C_3 C_L L_3 R_3 s^3 + C_3 C_L L_3 R_L s^3 + C_3 L_3 s^2 + C_L L_3 s^2 + C_L R_3 s + C_L R_L s + 1)}$$

$$\mathbf{10.916 \quad INVALID-ORDER-916} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \quad \infty, \quad \frac{L_3 s}{C_3 L_3 s^2 + 1} + R_3, \quad \infty, \quad \infty, \quad L_L s + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{g_m (C_L L_L s^2 + 1) (C_1 L_1 R_1 s^2 + L_1 s + R_1) (C_3 L_3 R_3 s^2 + L_3 s + R_3)}{(C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + L_1 g_m s + R_1 g_m + 1) (C_3 C_L L_3 L_L s^4 + C_3 C_L L_3 R_3 s^3 + C_3 L_3 s^2 + C_L L_3 s^2 + C_L L_L s^2 + C_L R_3 s + 1)}$$

$$\mathbf{10.917 \quad INVALID-ORDER-917} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \quad \infty, \quad \frac{L_3 s}{C_3 L_3 s^2 + 1} + R_3, \quad \infty, \quad \infty, \quad \frac{L_L s}{C_L L_L s^2 + 1} \right)$$

$$H(s) = \frac{L_L g_m s (C_1 L_1 R_1 s^2 + L_1 s + R_1) (C_3 L_3 R_3 s^2 + L_3 s + R_3)}{(C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + L_1 g_m s + R_1 g_m + 1) (C_3 C_L L_3 L_L R_3 s^4 + C_3 L_3 L_L s^3 + C_3 L_3 R_3 s^2 + C_L L_3 L_L s^3 + C_L L_L R_3 s^2 + L_3 s + L_L s + R_3)}$$

$$\mathbf{10.918 \quad INVALID-ORDER-918} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \quad \infty, \quad \frac{L_3 s}{C_3 L_3 s^2 + 1} + R_3, \quad \infty, \quad \infty, \quad L_L s + R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{g_m (C_L L_L s^2 + C_L R_L s + 1) (C_1 L_1 R_1 s^2 + L_1 s + R_1) (C_3 L_3 R_3 s^2 + L_3 s + R_3)}{(C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + L_1 g_m s + R_1 g_m + 1) (C_3 C_L L_3 L_L s^4 + C_3 C_L L_3 R_3 s^3 + C_3 C_L L_3 R_L s^3 + C_3 L_3 s^2 + C_L L_3 s^2 + C_L L_L s^2 + C_L R_3 s + C_L R_L s + 1)}$$

$$\mathbf{10.919 \quad INVALID-ORDER-919} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \quad \infty, \quad \frac{L_3 s}{C_3 L_3 s^2 + 1} + R_3, \quad \infty, \quad \infty, \quad \frac{L_L R_L s}{C_L L_L R_L s^2 + L_L s + R_L} \right)$$

$$H(s) = \frac{L_L R_L g_m s (C_1 L_1 R_1 s^2 + L_1 s + R_1) (C_3 L_3 R_3 s^2 + L_3 s + R_3)}{(C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + L_1 g_m s + R_1 g_m + 1) (C_3 C_L L_3 L_L R_3 R_L s^4 + C_3 L_3 L_L R_3 s^3 + C_3 L_3 L_L R_L s^3 + C_3 L_3 R_3 R_L s^2 + C_L L_3 L_L R_L s^3 + C_L L_L R_3 R_L s^2 + L_3 L_L s^2 + L_3 R_L s + L_L R_3 s + L_L R_L s + R_3 R_L)}$$

$$\mathbf{10.920 \quad INVALID-ORDER-920} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \quad \infty, \quad \frac{L_3 s}{C_3 L_3 s^2 + 1} + R_3, \quad \infty, \quad \infty, \quad \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$$

$$H(s) = \frac{g_m (C_1 L_1 R_1 s^2 + L_1 s + R_1) (C_3 L_3 R_3 s^2 + L_3 s + R_3) (C_L L_L R_L s^2 + L_L s + R_L)}{(C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + L_1 g_m s + R_1 g_m + 1) (C_3 C_L L_3 L_L R_3 s^4 + C_3 C_L L_3 L_L R_L s^4 + C_3 L_3 L_L s^3 + C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + C_L L_3 L_L s^3 + C_L L_L R_3 s^2 + C_L L_L R_L s^2 + L_3 s + L_L s + R_3 + R_L)}$$

$$\mathbf{10.921 \quad INVALID-ORDER-921} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \quad \infty, \quad \frac{L_3 s}{C_3 L_3 s^2 + 1} + R_3, \quad \infty, \quad \infty, \quad \frac{R_L (C_L L_L s^2 + 1)}{C_L L_L s^2 + C_L R_L s + 1} \right)$$

$$H(s) = \frac{R_L g_m (C_L L_L s^2 + 1) (C_1 L_1 R_1 s^2 + L_1 s + R_1) (C_3 L_3 R_3 s^2 + L_3 s + R_3)}{(C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + L_1 g_m s + R_1 g_m + 1) (C_3 C_L L_3 L_L R_3 s^4 + C_3 C_L L_3 L_L R_L s^4 + C_3 C_L L_3 R_3 R_L s^3 + C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + C_L L_3 L_L s^3 + C_L L_3 R_L s^2 + C_L L_L R_3 s^2 + C_L L_L R_L s^2 + C_L R_3 R_L s + L_3 s + R_3 + R_L)}$$

$$\mathbf{10.922 \quad INVALID-ORDER-922} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \quad \infty, \quad \frac{R_3 (C_3 L_3 s^2 + 1)}{C_3 L_3 s^2 + C_3 R_3 s + 1}, \quad \infty, \quad \infty, \quad R_L \right)$$

$$H(s) = \frac{R_3 R_L g_m (C_3 L_3 s^2 + 1) (C_1 L_1 R_1 s^2 + L_1 s + R_1)}{(C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + C_3 R_3 R_L s + R_3 + R_L) (C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + L_1 g_m s + R_1 g_m + 1)}$$

$$\mathbf{10.923 \quad INVALID-ORDER-923} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \quad \infty, \quad \frac{R_3 (C_3 L_3 s^2 + 1)}{C_3 L_3 s^2 + C_3 R_3 s + 1}, \quad \infty, \quad \infty, \quad \frac{1}{C_L s} \right)$$

$$H(s) = \frac{R_3 g_m (C_3 L_3 s^2 + 1) (C_1 L_1 R_1 s^2 + L_1 s + R_1)}{(C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + L_1 g_m s + R_1 g_m + 1) (C_3 C_L L_3 R_3 s^3 + C_3 L_3 s^2 + C_3 R_3 s + C_L R_3 s + 1)}$$

$$10.924 \quad \text{INVALID-ORDER-924} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \quad \infty, \quad \frac{R_3(C_3 L_3 s^2 + 1)}{C_3 L_3 s^2 + C_3 R_3 s + 1}, \quad \infty, \quad \infty, \quad \frac{R_L}{C_L R_L s + 1} \right)$$

$$H(s) = \frac{R_3 R_L g_m (C_3 L_3 s^2 + 1) (C_1 L_1 R_1 s^2 + L_1 s + R_1)}{(C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + L_1 g_m s + R_1 g_m + 1) (C_3 C_L L_3 R_3 R_L s^3 + C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + C_3 R_3 R_L s + C_L R_3 R_L s + R_3 + R_L)}$$

$$10.925 \quad \text{INVALID-ORDER-925} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \quad \infty, \quad \frac{R_3(C_3 L_3 s^2 + 1)}{C_3 L_3 s^2 + C_3 R_3 s + 1}, \quad \infty, \quad \infty, \quad R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{R_3 g_m (C_3 L_3 s^2 + 1) (C_L R_L s + 1) (C_1 L_1 R_1 s^2 + L_1 s + R_1)}{(C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + L_1 g_m s + R_1 g_m + 1) (C_3 C_L L_3 R_3 s^3 + C_3 C_L L_3 R_L s^3 + C_3 C_L R_3 R_L s^2 + C_3 L_3 s^2 + C_3 R_3 s + C_L R_3 s + C_L R_L s + 1)}$$

$$10.926 \quad \text{INVALID-ORDER-926} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \quad \infty, \quad \frac{R_3(C_3 L_3 s^2 + 1)}{C_3 L_3 s^2 + C_3 R_3 s + 1}, \quad \infty, \quad \infty, \quad L_L s + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{R_3 g_m (C_3 L_3 s^2 + 1) (C_L L_L s^2 + 1) (C_1 L_1 R_1 s^2 + L_1 s + R_1)}{(C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + L_1 g_m s + R_1 g_m + 1) (C_3 C_L L_3 L_L s^4 + C_3 C_L L_3 R_3 s^3 + C_3 C_L L_L R_3 s^3 + C_3 L_3 s^2 + C_3 R_3 s + C_L L_L s^2 + C_L R_3 s + 1)}$$

$$10.927 \quad \text{INVALID-ORDER-927} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \quad \infty, \quad \frac{R_3(C_3 L_3 s^2 + 1)}{C_3 L_3 s^2 + C_3 R_3 s + 1}, \quad \infty, \quad \infty, \quad \frac{L_L s}{C_L L_L s^2 + 1} \right)$$

$$H(s) = \frac{L_L R_3 g_m s (C_3 L_3 s^2 + 1) (C_1 L_1 R_1 s^2 + L_1 s + R_1)}{(C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + L_1 g_m s + R_1 g_m + 1) (C_3 C_L L_3 L_L R_3 s^4 + C_3 L_3 L_L s^3 + C_3 L_3 R_3 s^2 + C_3 L_L R_3 s^2 + C_L L_L R_3 s^2 + L_L s + R_3)}$$

$$10.928 \quad \text{INVALID-ORDER-928} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \quad \infty, \quad \frac{R_3(C_3 L_3 s^2 + 1)}{C_3 L_3 s^2 + C_3 R_3 s + 1}, \quad \infty, \quad \infty, \quad L_L s + R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{R_3 g_m (C_3 L_3 s^2 + 1) (C_L L_L s^2 + C_L R_L s + 1) (C_1 L_1 R_1 s^2 + L_1 s + R_1)}{(C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + L_1 g_m s + R_1 g_m + 1) (C_3 C_L L_3 L_L s^4 + C_3 C_L L_3 R_3 s^3 + C_3 C_L L_3 R_L s^3 + C_3 C_L L_L R_3 s^3 + C_3 C_L R_3 R_L s^2 + C_3 L_3 s^2 + C_3 R_3 s + C_L L_L s^2 + C_L R_3 s + C_L R_L s + 1)}$$

$$10.929 \quad \text{INVALID-ORDER-929} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \quad \infty, \quad \frac{R_3(C_3 L_3 s^2 + 1)}{C_3 L_3 s^2 + C_3 R_3 s + 1}, \quad \infty, \quad \infty, \quad \frac{L_L R_L s}{C_L L_L R_L s^2 + L_L s + R_L} \right)$$

$$H(s) = \frac{L_L R_3 R_L g_m s (C_3 L_3 s^2 + 1) (C_1 L_1 R_1 s^2 + L_1 s + R_1)}{(C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + L_1 g_m s + R_1 g_m + 1) (C_3 C_L L_3 L_L R_3 R_L s^4 + C_3 L_3 L_L R_3 s^3 + C_3 L_3 L_L R_L s^3 + C_3 L_3 R_3 R_L s^2 + C_3 L_L R_3 R_L s^2 + C_L L_L R_3 R_L s^2 + L_L R_3 s + L_L R_L s + R_3 R_L)}$$

$$10.930 \quad \text{INVALID-ORDER-930} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \quad \infty, \quad \frac{R_3(C_3 L_3 s^2 + 1)}{C_3 L_3 s^2 + C_3 R_3 s + 1}, \quad \infty, \quad \infty, \quad \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$$

$$H(s) = \frac{R_3 g_m (C_3 L_3 s^2 + 1) (C_1 L_1 R_1 s^2 + L_1 s + R_1) (C_L L_L R_L s^2 + L_L s + R_L)}{(C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + L_1 g_m s + R_1 g_m + 1) (C_3 C_L L_3 L_L R_3 s^4 + C_3 C_L L_3 L_L R_L s^4 + C_3 C_L L_L R_3 R_L s^3 + C_3 L_3 L_L s^3 + C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + C_3 L_L R_3 s^2 + C_3 R_3 R_L s + C_L L_L R_3 s^2 + C_L L_L R_L s^2 + L_L s + R_3 + R_L)}$$

$$10.931 \quad \text{INVALID-ORDER-931} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1} + R_1, \quad \infty, \quad \frac{R_3(C_3 L_3 s^2 + 1)}{C_3 L_3 s^2 + C_3 R_3 s + 1}, \quad \infty, \quad \infty, \quad \frac{R_L (C_L L_L s^2 + 1)}{C_L L_L s^2 + C_L R_L s + 1} \right)$$

$$H(s) = \frac{R_3 R_L g_m (C_3 L_3 s^2 + 1) (C_L L_L s^2 + 1) (C_1 L_1 R_1 s^2 + L_1 s + R_1)}{(C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + L_1 g_m s + R_1 g_m + 1) (C_3 C_L L_3 L_L R_3 s^4 + C_3 C_L L_3 L_L R_L s^4 + C_3 C_L L_3 R_3 R_L s^3 + C_3 C_L L_L R_3 R_L s^3 + C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + C_3 R_3 R_L s + C_L L_L R_3 s^2 + C_L L_L R_L s^2 + C_L R_3 R_L s + R_3 + R_L)}$$

$$10.932 \quad \text{INVALID-ORDER-932} \quad Z(s) = \left(\frac{R_1 (C_1 L_1 s^2 + 1)}{C_1 L_1 s^2 + C_1 R_1 s + 1}, \quad \infty, \quad R_3, \quad \infty, \quad \infty, \quad \frac{1}{C_L s} \right)$$

$$H(s) = \frac{R_1 R_3 g_m (C_1 L_1 s^2 + 1)}{(C_L R_3 s + 1) (C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + C_1 R_1 s + R_1 g_m + 1)}$$

$$\mathbf{10.933 \quad INVALID-ORDER-933} \quad Z(s) = \left(\frac{R_1(C_1L_1s^2+1)}{C_1L_1s^2+C_1R_1s+1}, \infty, R_3, \infty, \infty, \frac{R_L}{C_LR_Ls+1} \right)$$

$$H(s) = \frac{R_1R_3R_Lg_m(C_1L_1s^2+1)}{(C_LR_3R_Ls+R_3+R_L)(C_1L_1R_1g_ms^2+C_1L_1s^2+C_1R_1s+R_1g_m+1)}$$

$$\mathbf{10.934 \quad INVALID-ORDER-934} \quad Z(s) = \left(\frac{R_1(C_1L_1s^2+1)}{C_1L_1s^2+C_1R_1s+1}, \infty, R_3, \infty, \infty, R_L + \frac{1}{C_Ls} \right)$$

$$H(s) = \frac{R_1R_3g_m(C_1L_1s^2+1)(C_LR_Ls+1)}{(C_LR_3s+C_LR_Ls+1)(C_1L_1R_1g_ms^2+C_1L_1s^2+C_1R_1s+R_1g_m+1)}$$

$$\mathbf{10.935 \quad INVALID-ORDER-935} \quad Z(s) = \left(\frac{R_1(C_1L_1s^2+1)}{C_1L_1s^2+C_1R_1s+1}, \infty, R_3, \infty, \infty, L_Ls + \frac{1}{C_Ls} \right)$$

$$H(s) = \frac{R_1R_3g_m(C_1L_1s^2+1)(C_LL_Ls^2+1)}{(C_LL_Ls^2+C_LR_3s+1)(C_1L_1R_1g_ms^2+C_1L_1s^2+C_1R_1s+R_1g_m+1)}$$

$$\mathbf{10.936 \quad INVALID-ORDER-936} \quad Z(s) = \left(\frac{R_1(C_1L_1s^2+1)}{C_1L_1s^2+C_1R_1s+1}, \infty, R_3, \infty, \infty, \frac{L_Ls}{C_LL_Ls^2+1} \right)$$

$$H(s) = \frac{L_LR_1R_3g_ms(C_1L_1s^2+1)}{(C_LL_LR_3s^2+L_Ls+R_3)(C_1L_1R_1g_ms^2+C_1L_1s^2+C_1R_1s+R_1g_m+1)}$$

$$\mathbf{10.937 \quad INVALID-ORDER-937} \quad Z(s) = \left(\frac{R_1(C_1L_1s^2+1)}{C_1L_1s^2+C_1R_1s+1}, \infty, R_3, \infty, \infty, L_Ls + R_L + \frac{1}{C_Ls} \right)$$

$$H(s) = \frac{R_1R_3g_m(C_1L_1s^2+1)(C_LL_Ls^2+C_LR_Ls+1)}{(C_LL_Ls^2+C_LR_3s+C_LR_Ls+1)(C_1L_1R_1g_ms^2+C_1L_1s^2+C_1R_1s+R_1g_m+1)}$$

$$\mathbf{10.938 \quad INVALID-ORDER-938} \quad Z(s) = \left(\frac{R_1(C_1L_1s^2+1)}{C_1L_1s^2+C_1R_1s+1}, \infty, R_3, \infty, \infty, \frac{L_LR_Ls}{C_LL_LR_Ls^2+L_Ls+R_L} \right)$$

$$H(s) = \frac{L_LR_1R_3R_Lg_ms(C_1L_1s^2+1)}{(C_LL_LR_3R_Ls^2+L_LR_3s+L_LR_Ls+R_3R_L)(C_1L_1R_1g_ms^2+C_1L_1s^2+C_1R_1s+R_1g_m+1)}$$

$$\mathbf{10.939 \quad INVALID-ORDER-939} \quad Z(s) = \left(\frac{R_1(C_1L_1s^2+1)}{C_1L_1s^2+C_1R_1s+1}, \infty, R_3, \infty, \infty, \frac{L_Ls}{C_LL_Ls^2+1} + R_L \right)$$

$$H(s) = \frac{R_1R_3g_m(C_1L_1s^2+1)(C_LL_LR_Ls^2+L_Ls+R_L)}{(C_LL_LR_3s^2+C_LL_LR_Ls^2+L_Ls+R_3+R_L)(C_1L_1R_1g_ms^2+C_1L_1s^2+C_1R_1s+R_1g_m+1)}$$

$$\mathbf{10.940 \quad INVALID-ORDER-940} \quad Z(s) = \left(\frac{R_1(C_1L_1s^2+1)}{C_1L_1s^2+C_1R_1s+1}, \infty, R_3, \infty, \infty, \frac{R_L(C_LL_Ls^2+1)}{C_LL_Ls^2+C_LR_Ls+1} \right)$$

$$H(s) = \frac{R_1R_3R_Lg_m(C_1L_1s^2+1)(C_LL_Ls^2+1)}{(C_LL_LR_3s^2+C_LL_LR_Ls^2+C_LR_3R_Ls+R_3+R_L)(C_1L_1R_1g_ms^2+C_1L_1s^2+C_1R_1s+R_1g_m+1)}$$

$$\mathbf{10.941 \quad INVALID-ORDER-941} \quad Z(s) = \left(\frac{R_1(C_1L_1s^2+1)}{C_1L_1s^2+C_1R_1s+1}, \infty, \frac{1}{C_3s}, \infty, \infty, R_L \right)$$

$$H(s) = \frac{R_1R_Lg_m(C_1L_1s^2+1)}{(C_3R_Ls+1)(C_1L_1R_1g_ms^2+C_1L_1s^2+C_1R_1s+R_1g_m+1)}$$

$$\begin{aligned}
10.942 \quad \text{INVALID-ORDER-942} \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}, \infty, \frac{1}{C_3 s}, \infty, \infty, \frac{1}{C_L s} \right) \\
H(s) &= \frac{R_1 g_m (C_1 L_1 s^2 + 1)}{s (C_3 + C_L) (C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + C_1 R_1 s + R_1 g_m + 1)} \\
10.943 \quad \text{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}, \infty, \frac{1}{C_3 s}, \infty, \infty, \frac{R_L}{C_L R_L s + 1} \right) \\
H(s) &= \frac{R_1 R_L g_m (C_1 L_1 s^2 + 1)}{(C_3 R_L s + C_L R_L s + 1) (C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + C_1 R_1 s + R_1 g_m + 1)} \\
10.944 \quad \text{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}, \infty, \frac{1}{C_3 s}, \infty, \infty, R_L + \frac{1}{C_L s} \right) \\
H(s) &= \frac{R_1 g_m (C_1 L_1 s^2 + 1) (C_L R_L s + 1)}{s (C_3 C_L R_L s + C_3 + C_L) (C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + C_1 R_1 s + R_1 g_m + 1)} \\
10.945 \quad \text{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}, \infty, \frac{1}{C_3 s}, \infty, \infty, L_L s + \frac{1}{C_L s} \right) \\
H(s) &= \frac{R_1 g_m (C_1 L_1 s^2 + 1) (C_L L_L s^2 + 1)}{s (C_3 C_L L_L s^2 + C_3 + C_L) (C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + C_1 R_1 s + R_1 g_m + 1)} \\
10.946 \quad \text{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}, \infty, \frac{1}{C_3 s}, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} \right) \\
H(s) &= \frac{L_L R_1 g_m s (C_1 L_1 s^2 + 1)}{(C_3 L_L s^2 + C_L L_L s^2 + 1) (C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + C_1 R_1 s + R_1 g_m + 1)} \\
10.947 \quad \text{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}, \infty, \frac{1}{C_3 s}, \infty, \infty, L_L s + R_L + \frac{1}{C_L s} \right) \\
H(s) &= \frac{R_1 g_m (C_1 L_1 s^2 + 1) (C_L L_L s^2 + C_L R_L s + 1)}{s (C_3 C_L L_L s^2 + C_3 C_L R_L s + C_3 + C_L) (C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + C_1 R_1 s + R_1 g_m + 1)} \\
10.948 \quad \text{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}, \infty, \frac{1}{C_3 s}, \infty, \infty, \frac{L_L R_L s}{C_L L_L R_L s^2 + L_L s + R_L} \right) \\
H(s) &= \frac{L_L R_1 R_L g_m s (C_1 L_1 s^2 + 1)}{(C_3 L_L R_L s^2 + C_L L_L R_L s^2 + L_L s + R_L) (C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + C_1 R_1 s + R_1 g_m + 1)} \\
10.949 \quad \text{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}, \infty, \frac{1}{C_3 s}, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right) \\
H(s) &= \frac{R_1 g_m (C_1 L_1 s^2 + 1) (C_L L_L R_L s^2 + L_L s + R_L)}{(C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + C_1 R_1 s + R_1 g_m + 1) (C_3 C_L L_L R_L s^3 + C_3 L_L s^2 + C_3 R_L s + C_L L_L s^2 + 1)} \\
10.950 \quad \text{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}, \infty, \frac{1}{C_3 s}, \infty, \infty, \frac{R_L (C_L L_L s^2 + 1)}{C_L L_L s^2 + C_L R_L s + 1} \right) \\
H(s) &= \frac{R_1 R_L g_m (C_1 L_1 s^2 + 1) (C_L L_L s^2 + 1)}{(C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + C_1 R_1 s + R_1 g_m + 1) (C_3 C_L L_L R_L s^3 + C_3 R_L s + C_L L_L s^2 + C_L R_L s + 1)}
\end{aligned}$$

$$10.951 \quad \text{INVALID-ORDER-951} \quad Z(s) = \left(\frac{R_1(C_1 L_1 s^2 + 1)}{C_1 L_1 s^2 + C_1 R_1 s + 1}, \infty, \frac{R_3}{C_3 R_3 s + 1}, \infty, \infty, R_L \right)$$

$$H(s) = \frac{R_1 R_3 R_L g_m (C_1 L_1 s^2 + 1)}{(C_3 R_3 R_L s + R_3 + R_L) (C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + C_1 R_1 s + R_1 g_m + 1)}$$

$$10.952 \quad \text{INVALID-ORDER-952} \quad Z(s) = \left(\frac{R_1(C_1 L_1 s^2 + 1)}{C_1 L_1 s^2 + C_1 R_1 s + 1}, \infty, \frac{R_3}{C_3 R_3 s + 1}, \infty, \infty, \frac{1}{C_L s} \right)$$

$$H(s) = \frac{R_1 R_3 g_m (C_1 L_1 s^2 + 1)}{(C_3 R_3 s + C_L R_3 s + 1) (C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + C_1 R_1 s + R_1 g_m + 1)}$$

$$10.953 \quad \text{INVALID-ORDER-953} \quad Z(s) = \left(\frac{R_1(C_1 L_1 s^2 + 1)}{C_1 L_1 s^2 + C_1 R_1 s + 1}, \infty, \frac{R_3}{C_3 R_3 s + 1}, \infty, \infty, \frac{R_L}{C_L R_L s + 1} \right)$$

$$H(s) = \frac{R_1 R_3 R_L g_m (C_1 L_1 s^2 + 1)}{(C_3 R_3 R_L s + C_L R_3 R_L s + R_3 + R_L) (C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + C_1 R_1 s + R_1 g_m + 1)}$$

$$10.954 \quad \text{INVALID-ORDER-954} \quad Z(s) = \left(\frac{R_1(C_1 L_1 s^2 + 1)}{C_1 L_1 s^2 + C_1 R_1 s + 1}, \infty, \frac{R_3}{C_3 R_3 s + 1}, \infty, \infty, R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{R_1 R_3 g_m (C_1 L_1 s^2 + 1) (C_L R_L s + 1)}{(C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + C_1 R_1 s + R_1 g_m + 1) (C_3 C_L R_3 R_L s^2 + C_3 R_3 s + C_L R_3 s + C_L R_L s + 1)}$$

$$10.955 \quad \text{INVALID-ORDER-955} \quad Z(s) = \left(\frac{R_1(C_1 L_1 s^2 + 1)}{C_1 L_1 s^2 + C_1 R_1 s + 1}, \infty, \frac{R_3}{C_3 R_3 s + 1}, \infty, \infty, L_L s + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{R_1 R_3 g_m (C_1 L_1 s^2 + 1) (C_L L_L s^2 + 1)}{(C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + C_1 R_1 s + R_1 g_m + 1) (C_3 C_L L_L R_3 s^3 + C_3 R_3 s + C_L L_L s^2 + C_L R_3 s + 1)}$$

$$10.956 \quad \text{INVALID-ORDER-956} \quad Z(s) = \left(\frac{R_1(C_1 L_1 s^2 + 1)}{C_1 L_1 s^2 + C_1 R_1 s + 1}, \infty, \frac{R_3}{C_3 R_3 s + 1}, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} \right)$$

$$H(s) = \frac{L_L R_1 R_3 g_m s (C_1 L_1 s^2 + 1)}{(C_3 L_L R_3 s^2 + C_L L_L R_3 s^2 + L_L s + R_3) (C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + C_1 R_1 s + R_1 g_m + 1)}$$

$$10.957 \quad \text{INVALID-ORDER-957} \quad Z(s) = \left(\frac{R_1(C_1 L_1 s^2 + 1)}{C_1 L_1 s^2 + C_1 R_1 s + 1}, \infty, \frac{R_3}{C_3 R_3 s + 1}, \infty, \infty, L_L s + R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{R_1 R_3 g_m (C_1 L_1 s^2 + 1) (C_L L_L s^2 + C_L R_L s + 1)}{(C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + C_1 R_1 s + R_1 g_m + 1) (C_3 C_L L_L R_3 s^3 + C_3 C_L R_3 R_L s^2 + C_3 R_3 s + C_L L_L s^2 + C_L R_3 s + C_L R_L s + 1)}$$

$$10.958 \quad \text{INVALID-ORDER-958} \quad Z(s) = \left(\frac{R_1(C_1 L_1 s^2 + 1)}{C_1 L_1 s^2 + C_1 R_1 s + 1}, \infty, \frac{R_3}{C_3 R_3 s + 1}, \infty, \infty, \frac{L_L R_L s}{C_L L_L R_L s^2 + L_L s + R_L} \right)$$

$$H(s) = \frac{L_L R_1 R_3 R_L g_m s (C_1 L_1 s^2 + 1)}{(C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + C_1 R_1 s + R_1 g_m + 1) (C_3 L_L R_3 R_L s^2 + C_L L_L R_3 R_L s^2 + L_L R_3 s + L_L R_L s + R_3 R_L)}$$

$$10.959 \quad \text{INVALID-ORDER-959} \quad Z(s) = \left(\frac{R_1(C_1 L_1 s^2 + 1)}{C_1 L_1 s^2 + C_1 R_1 s + 1}, \infty, \frac{R_3}{C_3 R_3 s + 1}, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$$

$$H(s) = \frac{R_1 R_3 g_m (C_1 L_1 s^2 + 1) (C_L L_L R_L s^2 + L_L s + R_L)}{(C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + C_1 R_1 s + R_1 g_m + 1) (C_3 C_L L_L R_3 R_L s^3 + C_3 L_L R_3 s^2 + C_3 R_3 R_L s + C_L L_L R_3 s^2 + C_L L_L R_L s^2 + L_L s + R_3 + R_L)}$$

$$\begin{aligned}
10.960 \quad \text{INVALID-ORDER-960} \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}, \infty, \frac{R_3}{C_3 R_3 s + 1}, \infty, \infty, \frac{R_L(C_L L_L s^2 + 1)}{C_L L_L s^2 + C_L R_L s + 1} \right) \\
H(s) &= \frac{R_1 R_3 R_L g_m (C_1 L_1 s^2 + 1) (C_L L_L s^2 + 1)}{(C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + C_1 R_1 s + R_1 g_m + 1) (C_3 C_L L_L R_3 R_L s^3 + C_3 R_3 R_L s + C_L L_L R_3 s^2 + C_L L_L R_L s^2 + C_L R_3 R_L s + R_3 + R_L)} \\
10.961 \quad \text{INVALID-ORDER-961} \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}, \infty, R_3 + \frac{1}{C_3 s}, \infty, \infty, R_L \right) \\
H(s) &= \frac{R_1 R_L g_m (C_1 L_1 s^2 + 1) (C_3 R_3 s + 1)}{(C_3 R_3 s + C_3 R_L s + 1) (C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + C_1 R_1 s + R_1 g_m + 1)} \\
10.962 \quad \text{INVALID-ORDER-962} \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}, \infty, R_3 + \frac{1}{C_3 s}, \infty, \infty, \frac{1}{C_L s} \right) \\
H(s) &= \frac{R_1 g_m (C_1 L_1 s^2 + 1) (C_3 R_3 s + 1)}{s (C_3 C_L R_3 s + C_3 + C_L) (C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + C_1 R_1 s + R_1 g_m + 1)} \\
10.963 \quad \text{INVALID-ORDER-963} \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}, \infty, R_3 + \frac{1}{C_3 s}, \infty, \infty, \frac{R_L}{C_L R_L s + 1} \right) \\
H(s) &= \frac{R_1 R_L g_m (C_1 L_1 s^2 + 1) (C_3 R_3 s + 1)}{(C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + C_1 R_1 s + R_1 g_m + 1) (C_3 C_L R_3 R_L s^2 + C_3 R_3 s + C_3 R_L s + C_L R_L s + 1)} \\
10.964 \quad \text{INVALID-ORDER-964} \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}, \infty, R_3 + \frac{1}{C_3 s}, \infty, \infty, R_L + \frac{1}{C_L s} \right) \\
H(s) &= \frac{R_1 g_m (C_1 L_1 s^2 + 1) (C_3 R_3 s + 1) (C_L R_L s + 1)}{s (C_3 C_L R_3 s + C_3 C_L R_L s + C_3 + C_L) (C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + C_1 R_1 s + R_1 g_m + 1)} \\
10.965 \quad \text{INVALID-ORDER-965} \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}, \infty, R_3 + \frac{1}{C_3 s}, \infty, \infty, L_L s + \frac{1}{C_L s} \right) \\
H(s) &= \frac{R_1 g_m (C_1 L_1 s^2 + 1) (C_3 R_3 s + 1) (C_L L_L s^2 + 1)}{s (C_3 C_L L_L s^2 + C_3 C_L R_3 s + C_3 + C_L) (C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + C_1 R_1 s + R_1 g_m + 1)} \\
10.966 \quad \text{INVALID-ORDER-966} \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}, \infty, R_3 + \frac{1}{C_3 s}, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} \right) \\
H(s) &= \frac{L_L R_1 g_m s (C_1 L_1 s^2 + 1) (C_3 R_3 s + 1)}{(C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + C_1 R_1 s + R_1 g_m + 1) (C_3 C_L L_L R_3 s^3 + C_3 L_L s^2 + C_3 R_3 s + C_L L_L s^2 + 1)} \\
10.967 \quad \text{INVALID-ORDER-967} \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}, \infty, R_3 + \frac{1}{C_3 s}, \infty, \infty, L_L s + R_L + \frac{1}{C_L s} \right) \\
H(s) &= \frac{R_1 g_m (C_1 L_1 s^2 + 1) (C_3 R_3 s + 1) (C_L L_L s^2 + C_L R_L s + 1)}{s (C_3 C_L L_L s^2 + C_3 C_L R_3 s + C_3 C_L R_L s + C_3 + C_L) (C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + C_1 R_1 s + R_1 g_m + 1)} \\
10.968 \quad \text{INVALID-ORDER-968} \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}, \infty, R_3 + \frac{1}{C_3 s}, \infty, \infty, \frac{L_L R_L s}{C_L L_L R_L s^2 + L_L s + R_L} \right) \\
H(s) &= \frac{L_L R_1 R_L g_m s (C_1 L_1 s^2 + 1) (C_3 R_3 s + 1)}{(C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + C_1 R_1 s + R_1 g_m + 1) (C_3 C_L L_L R_3 R_L s^3 + C_3 L_L R_3 s^2 + C_3 L_L R_L s^2 + C_3 R_3 R_L s + C_L L_L R_L s^2 + L_L s + R_L)}
\end{aligned}$$

10.969 INVALID-ORDER-969 $Z(s) = \left(\frac{R_1(C_1L_1s^2+1)}{C_1L_1s^2+C_1R_1s+1}, \infty, R_3 + \frac{1}{C_3s}, \infty, \infty, \frac{L_Ls}{C_LL_Ls^2+1} + R_L \right)$

$$H(s) = \frac{R_1g_m(C_1L_1s^2+1)(C_3R_3s+1)(C_LL_LR_Ls^2+L_Ls+R_L)}{(C_1L_1R_1g_ms^2+C_1L_1s^2+C_1R_1s+R_1g_m+1)(C_3C_LL_LR_3s^3+C_3C_LL_LR_Ls^3+C_3L_Ls^2+C_3R_3s+C_3R_Ls+C_LL_Ls^2+1)}$$

10.970 INVALID-ORDER-970 $Z(s) = \left(\frac{R_1(C_1L_1s^2+1)}{C_1L_1s^2+C_1R_1s+1}, \infty, R_3 + \frac{1}{C_3s}, \infty, \infty, \frac{R_L(C_LL_Ls^2+1)}{C_LL_Ls^2+C_LR_Ls+1} \right)$

$$H(s) = \frac{R_1R_Lg_m(C_1L_1s^2+1)(C_3R_3s+1)(C_LL_Ls^2+1)}{(C_1L_1R_1g_ms^2+C_1L_1s^2+C_1R_1s+R_1g_m+1)(C_3C_LL_LR_3s^3+C_3C_LL_LR_Ls^3+C_3C_LR_3R_Ls^2+C_3R_3s+C_3R_Ls+C_LL_Ls^2+C_LR_Ls+1)}$$

10.971 INVALID-ORDER-971 $Z(s) = \left(\frac{R_1(C_1L_1s^2+1)}{C_1L_1s^2+C_1R_1s+1}, \infty, L_3s + \frac{1}{C_3s}, \infty, \infty, R_L \right)$

$$H(s) = \frac{R_1R_Lg_m(C_1L_1s^2+1)(C_3L_3s^2+1)}{(C_3L_3s^2+C_3R_Ls+1)(C_1L_1R_1g_ms^2+C_1L_1s^2+C_1R_1s+R_1g_m+1)}$$

10.972 INVALID-ORDER-972 $Z(s) = \left(\frac{R_1(C_1L_1s^2+1)}{C_1L_1s^2+C_1R_1s+1}, \infty, L_3s + \frac{1}{C_3s}, \infty, \infty, \frac{1}{C_Ls} \right)$

$$H(s) = \frac{R_1g_m(C_1L_1s^2+1)(C_3L_3s^2+1)}{s(C_3C_LL_3s^2+C_3+C_L)(C_1L_1R_1g_ms^2+C_1L_1s^2+C_1R_1s+R_1g_m+1)}$$

10.973 INVALID-ORDER-973 $Z(s) = \left(\frac{R_1(C_1L_1s^2+1)}{C_1L_1s^2+C_1R_1s+1}, \infty, L_3s + \frac{1}{C_3s}, \infty, \infty, \frac{R_L}{C_LR_Ls+1} \right)$

$$H(s) = \frac{R_1R_Lg_m(C_1L_1s^2+1)(C_3L_3s^2+1)}{(C_1L_1R_1g_ms^2+C_1L_1s^2+C_1R_1s+R_1g_m+1)(C_3C_LL_3R_Ls^3+C_3L_3s^2+C_3R_Ls+C_LR_Ls+1)}$$

10.974 INVALID-ORDER-974 $Z(s) = \left(\frac{R_1(C_1L_1s^2+1)}{C_1L_1s^2+C_1R_1s+1}, \infty, L_3s + \frac{1}{C_3s}, \infty, \infty, R_L + \frac{1}{C_Ls} \right)$

$$H(s) = \frac{R_1g_m(C_1L_1s^2+1)(C_3L_3s^2+1)(C_LR_Ls+1)}{s(C_3C_LL_3s^2+C_3C_LR_Ls+C_3+C_L)(C_1L_1R_1g_ms^2+C_1L_1s^2+C_1R_1s+R_1g_m+1)}$$

10.975 INVALID-ORDER-975 $Z(s) = \left(\frac{R_1(C_1L_1s^2+1)}{C_1L_1s^2+C_1R_1s+1}, \infty, L_3s + \frac{1}{C_3s}, \infty, \infty, L_Ls + \frac{1}{C_Ls} \right)$

$$H(s) = \frac{R_1g_m(C_1L_1s^2+1)(C_3L_3s^2+1)(C_LL_Ls^2+1)}{s(C_3C_LL_3s^2+C_3C_LL_Ls^2+C_3+C_L)(C_1L_1R_1g_ms^2+C_1L_1s^2+C_1R_1s+R_1g_m+1)}$$

10.976 INVALID-ORDER-976 $Z(s) = \left(\frac{R_1(C_1L_1s^2+1)}{C_1L_1s^2+C_1R_1s+1}, \infty, L_3s + \frac{1}{C_3s}, \infty, \infty, \frac{L_Ls}{C_LL_Ls^2+1} \right)$

$$H(s) = \frac{L_LR_1g_ms(C_1L_1s^2+1)(C_3L_3s^2+1)}{(C_1L_1R_1g_ms^2+C_1L_1s^2+C_1R_1s+R_1g_m+1)(C_3C_LL_3L_Ls^4+C_3L_3s^2+C_3L_Ls^2+C_LL_Ls^2+1)}$$

10.977 INVALID-ORDER-977 $Z(s) = \left(\frac{R_1(C_1L_1s^2+1)}{C_1L_1s^2+C_1R_1s+1}, \infty, L_3s + \frac{1}{C_3s}, \infty, \infty, L_Ls + R_L + \frac{1}{C_Ls} \right)$

$$H(s) = \frac{R_1g_m(C_1L_1s^2+1)(C_3L_3s^2+1)(C_LL_Ls^2+C_LR_Ls+1)}{s(C_3C_LL_3s^2+C_3C_LL_Ls^2+C_3C_LR_Ls+C_3+C_L)(C_1L_1R_1g_ms^2+C_1L_1s^2+C_1R_1s+R_1g_m+1)}$$

$$10.978 \quad \text{INVALID-ORDER-978} \quad Z(s) = \left(\frac{R_1(C_1 L_1 s^2 + 1)}{C_1 L_1 s^2 + C_1 R_1 s + 1}, \quad \infty, \quad L_3 s + \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad \frac{L_L R_L s}{C_L L_L R_L s^2 + L_L s + R_L} \right)$$

$$H(s) = \frac{L_L R_1 R_L g_m s (C_1 L_1 s^2 + 1) (C_3 L_3 s^2 + 1)}{(C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + C_1 R_1 s + R_1 g_m + 1) (C_3 C_L L_3 L_L R_L s^4 + C_3 L_3 L_L s^3 + C_3 L_3 R_L s^2 + C_3 L_L R_L s^2 + C_L L_L R_L s^2 + L_L s + R_L)}$$

$$10.979 \quad \text{INVALID-ORDER-979} \quad Z(s) = \left(\frac{R_1(C_1 L_1 s^2 + 1)}{C_1 L_1 s^2 + C_1 R_1 s + 1}, \quad \infty, \quad L_3 s + \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$$

$$H(s) = \frac{R_1 g_m (C_1 L_1 s^2 + 1) (C_3 L_3 s^2 + 1) (C_L L_L R_L s^2 + L_L s + R_L)}{(C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + C_1 R_1 s + R_1 g_m + 1) (C_3 C_L L_3 L_L s^4 + C_3 C_L L_L R_L s^3 + C_3 L_3 s^2 + C_3 L_L s^2 + C_3 R_L s + C_L L_L s^2 + 1)}$$

$$10.980 \quad \text{INVALID-ORDER-980} \quad Z(s) = \left(\frac{R_1(C_1 L_1 s^2 + 1)}{C_1 L_1 s^2 + C_1 R_1 s + 1}, \quad \infty, \quad L_3 s + \frac{1}{C_3 s}, \quad \infty, \quad \infty, \quad \frac{R_L (C_L L_L s^2 + 1)}{C_L L_L s^2 + C_L R_L s + 1} \right)$$

$$H(s) = \frac{R_1 R_L g_m (C_1 L_1 s^2 + 1) (C_3 L_3 s^2 + 1) (C_L L_L s^2 + 1)}{(C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + C_1 R_1 s + R_1 g_m + 1) (C_3 C_L L_3 L_L s^4 + C_3 C_L L_3 R_L s^3 + C_3 C_L L_L R_L s^3 + C_3 L_3 s^2 + C_3 R_L s + C_L L_L s^2 + C_L R_L s + 1)}$$

$$10.981 \quad \text{INVALID-ORDER-981} \quad Z(s) = \left(\frac{R_1(C_1 L_1 s^2 + 1)}{C_1 L_1 s^2 + C_1 R_1 s + 1}, \quad \infty, \quad \frac{L_3 s}{C_3 L_3 s^2 + 1}, \quad \infty, \quad \infty, \quad R_L \right)$$

$$H(s) = \frac{L_3 R_1 R_L g_m s (C_1 L_1 s^2 + 1)}{(C_3 L_3 R_L s^2 + L_3 s + R_L) (C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + C_1 R_1 s + R_1 g_m + 1)}$$

$$10.982 \quad \text{INVALID-ORDER-982} \quad Z(s) = \left(\frac{R_1(C_1 L_1 s^2 + 1)}{C_1 L_1 s^2 + C_1 R_1 s + 1}, \quad \infty, \quad \frac{L_3 s}{C_3 L_3 s^2 + 1}, \quad \infty, \quad \infty, \quad \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_3 R_1 g_m s (C_1 L_1 s^2 + 1)}{(C_3 L_3 s^2 + C_L L_3 s^2 + 1) (C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + C_1 R_1 s + R_1 g_m + 1)}$$

$$10.983 \quad \text{INVALID-ORDER-983} \quad Z(s) = \left(\frac{R_1(C_1 L_1 s^2 + 1)}{C_1 L_1 s^2 + C_1 R_1 s + 1}, \quad \infty, \quad \frac{L_3 s}{C_3 L_3 s^2 + 1}, \quad \infty, \quad \infty, \quad \frac{R_L}{C_L R_L s + 1} \right)$$

$$H(s) = \frac{L_3 R_1 R_L g_m s (C_1 L_1 s^2 + 1)}{(C_3 L_3 R_L s^2 + C_L L_3 R_L s^2 + L_3 s + R_L) (C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + C_1 R_1 s + R_1 g_m + 1)}$$

$$10.984 \quad \text{INVALID-ORDER-984} \quad Z(s) = \left(\frac{R_1(C_1 L_1 s^2 + 1)}{C_1 L_1 s^2 + C_1 R_1 s + 1}, \quad \infty, \quad \frac{L_3 s}{C_3 L_3 s^2 + 1}, \quad \infty, \quad \infty, \quad R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_3 R_1 g_m s (C_1 L_1 s^2 + 1) (C_L R_L s + 1)}{(C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + C_1 R_1 s + R_1 g_m + 1) (C_3 C_L L_3 R_L s^3 + C_3 L_3 s^2 + C_L L_3 s^2 + C_L R_L s + 1)}$$

$$10.985 \quad \text{INVALID-ORDER-985} \quad Z(s) = \left(\frac{R_1(C_1 L_1 s^2 + 1)}{C_1 L_1 s^2 + C_1 R_1 s + 1}, \quad \infty, \quad \frac{L_3 s}{C_3 L_3 s^2 + 1}, \quad \infty, \quad \infty, \quad L_L s + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_3 R_1 g_m s (C_1 L_1 s^2 + 1) (C_L L_L s^2 + 1)}{(C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + C_1 R_1 s + R_1 g_m + 1) (C_3 C_L L_3 L_L s^4 + C_3 L_3 s^2 + C_L L_3 s^2 + C_L L_L s^2 + 1)}$$

$$10.986 \quad \text{INVALID-ORDER-986} \quad Z(s) = \left(\frac{R_1(C_1 L_1 s^2 + 1)}{C_1 L_1 s^2 + C_1 R_1 s + 1}, \quad \infty, \quad \frac{L_3 s}{C_3 L_3 s^2 + 1}, \quad \infty, \quad \infty, \quad \frac{L_L s}{C_L L_L s^2 + 1} \right)$$

$$H(s) = \frac{L_3 L_L R_1 g_m s (C_1 L_1 s^2 + 1)}{(C_3 L_3 L_L s^2 + C_L L_3 L_L s^2 + L_3 + L_L) (C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + C_1 R_1 s + R_1 g_m + 1)}$$

$$\begin{aligned}
10.987 \quad \text{INVALID-ORDER-987} \quad Z(s) &= \left(\frac{R_1(C_1L_1s^2+1)}{C_1L_1s^2+C_1R_1s+1}, \infty, \frac{L_3s}{C_3L_3s^2+1}, \infty, \infty, L_Ls + R_L + \frac{1}{C_Ls} \right) \\
H(s) &= \frac{L_3R_1g_ms(C_1L_1s^2+1)(C_LL_Ls^2+C_LR_Ls+1)}{(C_1L_1R_1g_ms^2+C_1L_1s^2+C_1R_1s+R_1g_m+1)(C_3C_LL_3L_Ls^4+C_3C_LL_3R_Ls^3+C_3L_3s^2+C_LL_3s^2+C_LL_Ls^2+C_LR_Ls+1)} \\
10.988 \quad \text{INVALID-ORDER-988} \quad Z(s) &= \left(\frac{R_1(C_1L_1s^2+1)}{C_1L_1s^2+C_1R_1s+1}, \infty, \frac{L_3s}{C_3L_3s^2+1}, \infty, \infty, \frac{L_LR_Ls}{C_LL_LR_Ls^2+L_Ls+R_L} \right) \\
H(s) &= \frac{L_3L_LR_1R_Lg_ms(C_1L_1s^2+1)}{(C_1L_1R_1g_ms^2+C_1L_1s^2+C_1R_1s+R_1g_m+1)(C_3L_3L_LR_Ls^2+C_LL_3L_LR_Ls^2+L_3L_Ls+L_3R_L+L_LR_L)} \\
10.989 \quad \text{INVALID-ORDER-989} \quad Z(s) &= \left(\frac{R_1(C_1L_1s^2+1)}{C_1L_1s^2+C_1R_1s+1}, \infty, \frac{L_3s}{C_3L_3s^2+1}, \infty, \infty, \frac{L_Ls}{C_LL_Ls^2+1} + R_L \right) \\
H(s) &= \frac{L_3R_1g_ms(C_1L_1s^2+1)(C_LL_LR_Ls^2+L_Ls+R_L)}{(C_1L_1R_1g_ms^2+C_1L_1s^2+C_1R_1s+R_1g_m+1)(C_3C_LL_3L_LR_Ls^4+C_3L_3L_Ls^3+C_3L_3R_Ls^2+C_LL_3L_Ls^3+C_LL_LR_Ls^2+L_3s+L_Ls+R_L)} \\
10.990 \quad \text{INVALID-ORDER-990} \quad Z(s) &= \left(\frac{R_1(C_1L_1s^2+1)}{C_1L_1s^2+C_1R_1s+1}, \infty, \frac{L_3s}{C_3L_3s^2+1}, \infty, \infty, \frac{R_L(C_LL_Ls^2+1)}{C_LL_Ls^2+C_LR_Ls+1} \right) \\
H(s) &= \frac{L_3R_1R_Lg_ms(C_1L_1s^2+1)(C_LL_Ls^2+1)}{(C_1L_1R_1g_ms^2+C_1L_1s^2+C_1R_1s+R_1g_m+1)(C_3C_LL_3L_LR_Ls^4+C_3L_3R_Ls^2+C_LL_3L_Ls^3+C_LL_3R_Ls^2+C_LL_LR_Ls^2+L_3s+R_L)} \\
10.991 \quad \text{INVALID-ORDER-991} \quad Z(s) &= \left(\frac{R_1(C_1L_1s^2+1)}{C_1L_1s^2+C_1R_1s+1}, \infty, L_3s + R_3 + \frac{1}{C_3s}, \infty, \infty, R_L \right) \\
H(s) &= \frac{R_1R_Lg_m(C_1L_1s^2+1)(C_3L_3s^2+C_3R_3s+1)}{(C_3L_3s^2+C_3R_3s+C_3R_Ls+1)(C_1L_1R_1g_ms^2+C_1L_1s^2+C_1R_1s+R_1g_m+1)} \\
10.992 \quad \text{INVALID-ORDER-992} \quad Z(s) &= \left(\frac{R_1(C_1L_1s^2+1)}{C_1L_1s^2+C_1R_1s+1}, \infty, L_3s + R_3 + \frac{1}{C_3s}, \infty, \infty, \frac{1}{C_Ls} \right) \\
H(s) &= \frac{R_1g_m(C_1L_1s^2+1)(C_3L_3s^2+C_3R_3s+1)}{s(C_3C_LL_3s^2+C_3C_LR_3s+C_3+C_L)(C_1L_1R_1g_ms^2+C_1L_1s^2+C_1R_1s+R_1g_m+1)} \\
10.993 \quad \text{INVALID-ORDER-993} \quad Z(s) &= \left(\frac{R_1(C_1L_1s^2+1)}{C_1L_1s^2+C_1R_1s+1}, \infty, L_3s + R_3 + \frac{1}{C_3s}, \infty, \infty, \frac{R_L}{C_LR_Ls+1} \right) \\
H(s) &= \frac{R_1R_Lg_m(C_1L_1s^2+1)(C_3L_3s^2+C_3R_3s+1)}{(C_1L_1R_1g_ms^2+C_1L_1s^2+C_1R_1s+R_1g_m+1)(C_3C_LL_3R_Ls^3+C_3C_LR_3R_Ls^2+C_3L_3s^2+C_3R_3s+C_3R_Ls+C_LR_Ls+1)} \\
10.994 \quad \text{INVALID-ORDER-994} \quad Z(s) &= \left(\frac{R_1(C_1L_1s^2+1)}{C_1L_1s^2+C_1R_1s+1}, \infty, L_3s + R_3 + \frac{1}{C_3s}, \infty, \infty, R_L + \frac{1}{C_Ls} \right) \\
H(s) &= \frac{R_1g_m(C_1L_1s^2+1)(C_LR_Ls+1)(C_3L_3s^2+C_3R_3s+1)}{s(C_3C_LL_3s^2+C_3C_LR_3s+C_3C_LR_Ls+C_3+C_L)(C_1L_1R_1g_ms^2+C_1L_1s^2+C_1R_1s+R_1g_m+1)} \\
10.995 \quad \text{INVALID-ORDER-995} \quad Z(s) &= \left(\frac{R_1(C_1L_1s^2+1)}{C_1L_1s^2+C_1R_1s+1}, \infty, L_3s + R_3 + \frac{1}{C_3s}, \infty, \infty, L_Ls + \frac{1}{C_Ls} \right) \\
H(s) &= \frac{R_1g_m(C_1L_1s^2+1)(C_LL_Ls^2+1)(C_3L_3s^2+C_3R_3s+1)}{s(C_3C_LL_3s^2+C_3C_LL_Ls^2+C_3C_LR_3s+C_3+C_L)(C_1L_1R_1g_ms^2+C_1L_1s^2+C_1R_1s+R_1g_m+1)}
\end{aligned}$$

$$10.996 \quad \text{INVALID-ORDER-996} \quad Z(s) = \left(\frac{R_1(C_1L_1s^2+1)}{C_1L_1s^2+C_1R_1s+1}, \quad \infty, \quad L_3s + R_3 + \frac{1}{C_3s}, \quad \infty, \quad \infty, \quad \frac{L_Ls}{C_LL_Ls^2+1} \right)$$

$$H(s) = \frac{L_LR_1g_ms(C_1L_1s^2+1)(C_3L_3s^2+C_3R_3s+1)}{(C_1L_1R_1g_ms^2+C_1L_1s^2+C_1R_1s+R_1g_m+1)(C_3C_LL_3L_Ls^4+C_3C_LL_LR_3s^3+C_3L_3s^2+C_3L_Ls^2+C_3R_3s+C_LL_Ls^2+1)}$$

$$10.997 \quad \text{INVALID-ORDER-997} \quad Z(s) = \left(\frac{R_1(C_1L_1s^2+1)}{C_1L_1s^2+C_1R_1s+1}, \quad \infty, \quad L_3s + R_3 + \frac{1}{C_3s}, \quad \infty, \quad \infty, \quad L_Ls + R_L + \frac{1}{C_Ls} \right)$$

$$H(s) = \frac{R_1g_m(C_1L_1s^2+1)(C_3L_3s^2+C_3R_3s+1)(C_LL_Ls^2+C_LR_Ls+1)}{s(C_1L_1R_1g_ms^2+C_1L_1s^2+C_1R_1s+R_1g_m+1)(C_3C_LL_3s^2+C_3C_LL_Ls^2+C_3C_LR_3s+C_3C_LR_Ls+C_3+C_L)}$$

$$10.998 \quad \text{INVALID-ORDER-998} \quad Z(s) = \left(\frac{R_1(C_1L_1s^2+1)}{C_1L_1s^2+C_1R_1s+1}, \quad \infty, \quad L_3s + R_3 + \frac{1}{C_3s}, \quad \infty, \quad \infty, \quad \frac{L_LR_Ls}{C_LL_LR_Ls^2+L_Ls+R_L} \right)$$

$$H(s) = \frac{L_LR_1R_Lg_ms(C_1L_1s^2+1)(C_3L_3s^2+C_3R_3s+1)}{(C_1L_1R_1g_ms^2+C_1L_1s^2+C_1R_1s+R_1g_m+1)(C_3C_LL_3L_LR_Ls^4+C_3C_LL_LR_3R_Ls^3+C_3L_3L_Ls^3+C_3L_3R_Ls^2+C_3L_LR_3s^2+C_3L_LR_Ls^2+C_3R_3R_Ls+C_LL_LR_Ls^2+L_Ls+R_L)}$$

$$10.999 \quad \text{INVALID-ORDER-999} \quad Z(s) = \left(\frac{R_1(C_1L_1s^2+1)}{C_1L_1s^2+C_1R_1s+1}, \quad \infty, \quad L_3s + R_3 + \frac{1}{C_3s}, \quad \infty, \quad \infty, \quad \frac{L_Ls}{C_LL_Ls^2+1} + R_L \right)$$

$$H(s) = \frac{R_1g_m(C_1L_1s^2+1)(C_3L_3s^2+C_3R_3s+1)(C_LL_LR_Ls^2+L_Ls+R_L)}{(C_1L_1R_1g_ms^2+C_1L_1s^2+C_1R_1s+R_1g_m+1)(C_3C_LL_3L_Ls^4+C_3C_LL_LR_3s^3+C_3C_LL_LR_Ls^3+C_3L_3s^2+C_3L_Ls^2+C_3R_3s+C_3R_Ls+C_LL_Ls^2+1)}$$

$$10.1000 \quad \text{INVALID-ORDER-1000} \quad Z(s) = \left(\frac{R_1(C_1L_1s^2+1)}{C_1L_1s^2+C_1R_1s+1}, \quad \infty, \quad L_3s + R_3 + \frac{1}{C_3s}, \quad \infty, \quad \infty, \quad \frac{R_L(C_LL_Ls^2+1)}{C_LL_Ls^2+C_LR_Ls+1} \right)$$

$$H(s) = \frac{R_1R_Lg_m(C_1L_1s^2+1)(C_LL_Ls^2+1)(C_3L_3s^2+C_3R_3s+1)}{(C_1L_1R_1g_ms^2+C_1L_1s^2+C_1R_1s+R_1g_m+1)(C_3C_LL_3L_Ls^4+C_3C_LL_3R_Ls^3+C_3C_LL_LR_3s^3+C_3C_LL_LR_Ls^3+C_3C_LR_3R_Ls^2+C_3L_3s^2+C_3R_3s+C_3R_Ls+C_LL_Ls^2+C_LR_Ls+1)}$$

$$10.1001 \quad \text{INVALID-ORDER-1001} \quad Z(s) = \left(\frac{R_1(C_1L_1s^2+1)}{C_1L_1s^2+C_1R_1s+1}, \quad \infty, \quad \frac{L_3R_3s}{C_3L_3R_3s^2+L_3s+R_3}, \quad \infty, \quad \infty, \quad R_L \right)$$

$$H(s) = \frac{L_3R_1R_3R_Lg_ms(C_1L_1s^2+1)}{(C_3L_3R_3R_Ls^2+L_3R_3s+L_3R_Ls+R_3R_L)(C_1L_1R_1g_ms^2+C_1L_1s^2+C_1R_1s+R_1g_m+1)}$$

$$10.1002 \quad \text{INVALID-ORDER-1002} \quad Z(s) = \left(\frac{R_1(C_1L_1s^2+1)}{C_1L_1s^2+C_1R_1s+1}, \quad \infty, \quad \frac{L_3R_3s}{C_3L_3R_3s^2+L_3s+R_3}, \quad \infty, \quad \infty, \quad \frac{1}{C_Ls} \right)$$

$$H(s) = \frac{L_3R_1R_3g_ms(C_1L_1s^2+1)}{(C_3L_3R_3s^2+C_LL_3R_3s^2+L_3s+R_3)(C_1L_1R_1g_ms^2+C_1L_1s^2+C_1R_1s+R_1g_m+1)}$$

$$10.1003 \quad \text{INVALID-ORDER-1003} \quad Z(s) = \left(\frac{R_1(C_1L_1s^2+1)}{C_1L_1s^2+C_1R_1s+1}, \quad \infty, \quad \frac{L_3R_3s}{C_3L_3R_3s^2+L_3s+R_3}, \quad \infty, \quad \infty, \quad \frac{R_L}{C_LR_Ls+1} \right)$$

$$H(s) = \frac{L_3R_1R_3R_Lg_ms(C_1L_1s^2+1)}{(C_1L_1R_1g_ms^2+C_1L_1s^2+C_1R_1s+R_1g_m+1)(C_3L_3R_3R_Ls^2+C_LL_3R_3R_Ls^2+L_3R_3s+L_3R_Ls+R_3R_L)}$$

$$10.1004 \quad \text{INVALID-ORDER-1004} \quad Z(s) = \left(\frac{R_1(C_1L_1s^2+1)}{C_1L_1s^2+C_1R_1s+1}, \quad \infty, \quad \frac{L_3R_3s}{C_3L_3R_3s^2+L_3s+R_3}, \quad \infty, \quad \infty, \quad R_L + \frac{1}{C_Ls} \right)$$

$$H(s) = \frac{L_3R_1R_3g_ms(C_1L_1s^2+1)(C_LR_Ls+1)}{(C_1L_1R_1g_ms^2+C_1L_1s^2+C_1R_1s+R_1g_m+1)(C_3C_LL_3R_3R_Ls^3+C_3L_3R_3s^2+C_LL_3R_3s^2+C_LL_3R_Ls^2+C_LR_3R_Ls+L_3s+R_3)}$$

$$\begin{aligned}
10.1005 \quad \text{INVALID-ORDER-1005} \quad Z(s) &= \left(\frac{R_1(C_1L_1s^2+1)}{C_1L_1s^2+C_1R_1s+1}, \quad \infty, \quad \frac{L_3R_3s}{C_3L_3R_3s^2+L_3s+R_3}, \quad \infty, \quad \infty, \quad L_Ls + \frac{1}{C_Ls} \right) \\
H(s) &= \frac{L_3R_1R_3g_ms(C_1L_1s^2+1)(C_LL_Ls^2+1)}{(C_1L_1R_1g_ms^2+C_1L_1s^2+C_1R_1s+R_1g_m+1)(C_3C_LL_3L_LR_3s^4+C_3L_3R_3s^2+C_LL_3L_Ls^3+C_LL_3R_3s^2+C_LL_LR_3s^2+L_3s+R_3)} \\
10.1006 \quad \text{INVALID-ORDER-1006} \quad Z(s) &= \left(\frac{R_1(C_1L_1s^2+1)}{C_1L_1s^2+C_1R_1s+1}, \quad \infty, \quad \frac{L_3R_3s}{C_3L_3R_3s^2+L_3s+R_3}, \quad \infty, \quad \infty, \quad \frac{L_Ls}{C_LL_Ls^2+1} \right) \\
H(s) &= \frac{L_3L_LR_1R_3g_ms(C_1L_1s^2+1)}{(C_1L_1R_1g_ms^2+C_1L_1s^2+C_1R_1s+R_1g_m+1)(C_3L_3L_LR_3s^2+C_LL_3L_LR_3s^2+L_3L_Ls+L_3R_3+L_LR_3)} \\
10.1007 \quad \text{INVALID-ORDER-1007} \quad Z(s) &= \left(\frac{R_1(C_1L_1s^2+1)}{C_1L_1s^2+C_1R_1s+1}, \quad \infty, \quad \frac{L_3R_3s}{C_3L_3R_3s^2+L_3s+R_3}, \quad \infty, \quad \infty, \quad L_Ls + R_L + \frac{1}{C_Ls} \right) \\
H(s) &= \frac{L_3R_1R_3g_ms(C_1L_1s^2+1)(C_LL_Ls^2+C_LR_Ls+1)}{(C_1L_1R_1g_ms^2+C_1L_1s^2+C_1R_1s+R_1g_m+1)(C_3C_LL_3L_LR_3s^4+C_3C_LL_3R_3R_Ls^3+C_3L_3R_3s^2+C_LL_3L_Ls^3+C_LL_3R_3s^2+C_LL_3R_Ls^2+C_LL_LR_3s^2+C_LR_3R_Ls+L_3s+R_3)} \\
10.1008 \quad \text{INVALID-ORDER-1008} \quad Z(s) &= \left(\frac{R_1(C_1L_1s^2+1)}{C_1L_1s^2+C_1R_1s+1}, \quad \infty, \quad \frac{L_3R_3s}{C_3L_3R_3s^2+L_3s+R_3}, \quad \infty, \quad \infty, \quad \frac{L_LR_Ls}{C_LL_LR_Ls^2+L_Ls+R_L} \right) \\
H(s) &= \frac{L_3L_LR_1R_3R_Lg_ms(C_1L_1s^2+1)}{(C_1L_1R_1g_ms^2+C_1L_1s^2+C_1R_1s+R_1g_m+1)(C_3L_3L_LR_3R_Ls^2+C_LL_3L_LR_3R_Ls^2+L_3L_LR_3s+L_3L_LR_Ls+L_3R_3R_L+L_LR_3R_L)} \\
10.1009 \quad \text{INVALID-ORDER-1009} \quad Z(s) &= \left(\frac{R_1(C_1L_1s^2+1)}{C_1L_1s^2+C_1R_1s+1}, \quad \infty, \quad \frac{L_3R_3s}{C_3L_3R_3s^2+L_3s+R_3}, \quad \infty, \quad \infty, \quad \frac{L_Ls}{C_LL_Ls^2+1} + R_L \right) \\
H(s) &= \frac{L_3R_1R_3g_ms(C_1L_1s^2+1)(C_LL_LR_Ls^2+L_Ls+R_L)}{(C_1L_1R_1g_ms^2+C_1L_1s^2+C_1R_1s+R_1g_m+1)(C_3C_LL_3L_LR_3R_Ls^4+C_3L_3L_LR_3s^3+C_3L_3R_3R_Ls^2+C_LL_3L_LR_3s^3+C_LL_3L_LR_Ls^3+C_LL_LR_3R_Ls^2+L_3L_Ls^2+L_3R_3s+L_3R_Ls+L_LR_3s+R_3R_L)} \\
10.1010 \quad \text{INVALID-ORDER-1010} \quad Z(s) &= \left(\frac{R_1(C_1L_1s^2+1)}{C_1L_1s^2+C_1R_1s+1}, \quad \infty, \quad \frac{L_3R_3s}{C_3L_3R_3s^2+L_3s+R_3}, \quad \infty, \quad \infty, \quad \frac{R_L(C_LL_Ls^2+1)}{C_LL_Ls^2+C_LR_Ls+1} \right) \\
H(s) &= \frac{L_3R_1R_3R_Lg_ms(C_1L_1s^2+1)(C_LL_Ls^2+1)}{(C_1L_1R_1g_ms^2+C_1L_1s^2+C_1R_1s+R_1g_m+1)(C_3C_LL_3L_LR_3R_Ls^4+C_3L_3R_3R_Ls^2+C_LL_3L_LR_3s^3+C_LL_3L_LR_Ls^3+C_LL_3R_3R_Ls^2+C_LL_LR_3R_Ls^2+L_3R_3s+L_3R_Ls+R_3R_L)} \\
10.1011 \quad \text{INVALID-ORDER-1011} \quad Z(s) &= \left(\frac{R_1(C_1L_1s^2+1)}{C_1L_1s^2+C_1R_1s+1}, \quad \infty, \quad \frac{L_3s}{C_3L_3s^2+1} + R_3, \quad \infty, \quad \infty, \quad R_L \right) \\
H(s) &= \frac{R_1R_Lg_m(C_1L_1s^2+1)(C_3L_3R_3s^2+L_3s+R_3)}{(C_3L_3R_3s^2+C_3L_3R_Ls^2+L_3s+R_3+R_L)(C_1L_1R_1g_ms^2+C_1L_1s^2+C_1R_1s+R_1g_m+1)} \\
10.1012 \quad \text{INVALID-ORDER-1012} \quad Z(s) &= \left(\frac{R_1(C_1L_1s^2+1)}{C_1L_1s^2+C_1R_1s+1}, \quad \infty, \quad \frac{L_3s}{C_3L_3s^2+1} + R_3, \quad \infty, \quad \infty, \quad \frac{1}{C_Ls} \right) \\
H(s) &= \frac{R_1g_m(C_1L_1s^2+1)(C_3L_3R_3s^2+L_3s+R_3)}{(C_1L_1R_1g_ms^2+C_1L_1s^2+C_1R_1s+R_1g_m+1)(C_3C_LL_3R_3s^3+C_3L_3s^2+C_LL_3s^2+C_LR_3s+1)} \\
10.1013 \quad \text{INVALID-ORDER-1013} \quad Z(s) &= \left(\frac{R_1(C_1L_1s^2+1)}{C_1L_1s^2+C_1R_1s+1}, \quad \infty, \quad \frac{L_3s}{C_3L_3s^2+1} + R_3, \quad \infty, \quad \infty, \quad \frac{R_L}{C_LR_Ls+1} \right) \\
H(s) &= \frac{R_1R_Lg_m(C_1L_1s^2+1)(C_3L_3R_3s^2+L_3s+R_3)}{(C_1L_1R_1g_ms^2+C_1L_1s^2+C_1R_1s+R_1g_m+1)(C_3C_LL_3R_3R_Ls^3+C_3L_3R_3s^2+C_3L_3R_Ls^2+C_LL_3R_Ls^2+C_LR_3R_Ls+L_3s+R_3+R_L)}
\end{aligned}$$

$$10.1014 \quad \text{INVALID-ORDER-1014} \quad Z(s) = \left(\frac{R_1(C_1L_1s^2+1)}{C_1L_1s^2+C_1R_1s+1}, \quad \infty, \quad \frac{L_3s}{C_3L_3s^2+1} + R_3, \quad \infty, \quad \infty, \quad R_L + \frac{1}{C_Ls} \right)$$

$$H(s) = \frac{R_1g_m(C_1L_1s^2+1)(C_LR_Ls+1)(C_3L_3R_3s^2+L_3s+R_3)}{(C_1L_1R_1g_ms^2+C_1L_1s^2+C_1R_1s+R_1g_m+1)(C_3C_LL_3R_3s^3+C_3C_LL_3R_Ls^3+C_3L_3s^2+C_LL_3s^2+C_LR_3s+C_LR_Ls+1)}$$

$$10.1015 \quad \text{INVALID-ORDER-1015} \quad Z(s) = \left(\frac{R_1(C_1L_1s^2+1)}{C_1L_1s^2+C_1R_1s+1}, \quad \infty, \quad \frac{L_3s}{C_3L_3s^2+1} + R_3, \quad \infty, \quad \infty, \quad L_Ls + \frac{1}{C_Ls} \right)$$

$$H(s) = \frac{R_1g_m(C_1L_1s^2+1)(C_LL_Ls^2+1)(C_3L_3R_3s^2+L_3s+R_3)}{(C_1L_1R_1g_ms^2+C_1L_1s^2+C_1R_1s+R_1g_m+1)(C_3C_LL_3L_Ls^4+C_3C_LL_3R_3s^3+C_3L_3s^2+C_LL_3s^2+C_LL_Ls^2+C_LR_3s+1)}$$

$$10.1016 \quad \text{INVALID-ORDER-1016} \quad Z(s) = \left(\frac{R_1(C_1L_1s^2+1)}{C_1L_1s^2+C_1R_1s+1}, \quad \infty, \quad \frac{L_3s}{C_3L_3s^2+1} + R_3, \quad \infty, \quad \infty, \quad \frac{L_Ls}{C_LL_Ls^2+1} \right)$$

$$H(s) = \frac{L_LR_1g_ms(C_1L_1s^2+1)(C_3L_3R_3s^2+L_3s+R_3)}{(C_1L_1R_1g_ms^2+C_1L_1s^2+C_1R_1s+R_1g_m+1)(C_3C_LL_3L_LR_3s^4+C_3L_3L_Ls^3+C_3L_3R_3s^2+C_LL_3L_Ls^3+C_LL_LR_3s^2+L_3s+L_Ls+R_3)}$$

$$10.1017 \quad \text{INVALID-ORDER-1017} \quad Z(s) = \left(\frac{R_1(C_1L_1s^2+1)}{C_1L_1s^2+C_1R_1s+1}, \quad \infty, \quad \frac{L_3s}{C_3L_3s^2+1} + R_3, \quad \infty, \quad \infty, \quad L_Ls + R_L + \frac{1}{C_Ls} \right)$$

$$H(s) = \frac{R_1g_m(C_1L_1s^2+1)(C_LL_Ls^2+C_LR_Ls+1)(C_3L_3R_3s^2+L_3s+R_3)}{(C_1L_1R_1g_ms^2+C_1L_1s^2+C_1R_1s+R_1g_m+1)(C_3C_LL_3L_Ls^4+C_3C_LL_3R_3s^3+C_3C_LL_3R_Ls^3+C_3L_3s^2+C_LL_3s^2+C_LL_Ls^2+C_LR_3s+C_LR_Ls+1)}$$

$$10.1018 \quad \text{INVALID-ORDER-1018} \quad Z(s) = \left(\frac{R_1(C_1L_1s^2+1)}{C_1L_1s^2+C_1R_1s+1}, \quad \infty, \quad \frac{L_3s}{C_3L_3s^2+1} + R_3, \quad \infty, \quad \infty, \quad \frac{L_LR_Ls}{C_LL_LR_Ls^2+L_Ls+R_L} \right)$$

$$H(s) = \frac{L_LR_1R_Lg_ms(C_1L_1s^2+1)(C_3L_3R_3s^2+L_3s+R_3)}{(C_1L_1R_1g_ms^2+C_1L_1s^2+C_1R_1s+R_1g_m+1)(C_3C_LL_3L_LR_3R_Ls^4+C_3L_3L_LR_3s^3+C_3L_3L_LR_Ls^3+C_3L_3R_3R_Ls^2+C_LL_3L_LR_Ls^3+C_LL_LR_3R_Ls^2+L_3L_Ls^2+L_3R_Ls+L_LR_3s+L_LR_Ls+R_3R_L)}$$

$$10.1019 \quad \text{INVALID-ORDER-1019} \quad Z(s) = \left(\frac{R_1(C_1L_1s^2+1)}{C_1L_1s^2+C_1R_1s+1}, \quad \infty, \quad \frac{L_3s}{C_3L_3s^2+1} + R_3, \quad \infty, \quad \infty, \quad \frac{L_Ls}{C_LL_Ls^2+1} + R_L \right)$$

$$H(s) = \frac{R_1g_m(C_1L_1s^2+1)(C_3L_3R_3s^2+L_3s+R_3)(C_LL_LR_Ls^2+L_Ls+R_L)}{(C_1L_1R_1g_ms^2+C_1L_1s^2+C_1R_1s+R_1g_m+1)(C_3C_LL_3L_LR_3s^4+C_3C_LL_3L_LR_Ls^4+C_3L_3L_Ls^3+C_3L_3R_3s^2+C_3L_3R_Ls^2+C_LL_3L_Ls^3+C_LL_LR_3s^2+C_LL_LR_Ls^2+L_3s+L_Ls+R_3+R_L)}$$

$$10.1020 \quad \text{INVALID-ORDER-1020} \quad Z(s) = \left(\frac{R_1(C_1L_1s^2+1)}{C_1L_1s^2+C_1R_1s+1}, \quad \infty, \quad \frac{L_3s}{C_3L_3s^2+1} + R_3, \quad \infty, \quad \infty, \quad \frac{R_L(C_LL_Ls^2+1)}{C_LL_Ls^2+C_LR_Ls+1} \right)$$

$$H(s) = \frac{R_1R_Lg_m(C_1L_1s^2+1)(C_LL_Ls^2+1)(C_3L_3R_3s^2+L_3s+R_3)}{(C_1L_1R_1g_ms^2+C_1L_1s^2+C_1R_1s+R_1g_m+1)(C_3C_LL_3L_LR_3s^4+C_3C_LL_3L_LR_Ls^4+C_3C_LL_3R_3R_Ls^3+C_3L_3R_3s^2+C_3L_3R_Ls^2+C_LL_3L_Ls^3+C_LL_3R_Ls^2+C_LL_LR_3s^2+C_LL_LR_Ls^2+C_LR_3R_Ls+L_3s+R_3+R_L)}$$

$$10.1021 \quad \text{INVALID-ORDER-1021} \quad Z(s) = \left(\frac{R_1(C_1L_1s^2+1)}{C_1L_1s^2+C_1R_1s+1}, \quad \infty, \quad \frac{R_3(C_3L_3s^2+1)}{C_3L_3s^2+C_3R_3s+1}, \quad \infty, \quad \infty, \quad R_L \right)$$

$$H(s) = \frac{R_1R_3R_Lg_m(C_1L_1s^2+1)(C_3L_3s^2+1)}{(C_3L_3R_3s^2+C_3L_3R_Ls^2+C_3R_3R_Ls+R_3+R_L)(C_1L_1R_1g_ms^2+C_1L_1s^2+C_1R_1s+R_1g_m+1)}$$

$$10.1022 \quad \text{INVALID-ORDER-1022} \quad Z(s) = \left(\frac{R_1(C_1L_1s^2+1)}{C_1L_1s^2+C_1R_1s+1}, \quad \infty, \quad \frac{R_3(C_3L_3s^2+1)}{C_3L_3s^2+C_3R_3s+1}, \quad \infty, \quad \infty, \quad \frac{1}{C_Ls} \right)$$

$$H(s) = \frac{R_1R_3g_m(C_1L_1s^2+1)(C_3L_3s^2+1)}{(C_1L_1R_1g_ms^2+C_1L_1s^2+C_1R_1s+R_1g_m+1)(C_3C_LL_3R_3s^3+C_3L_3s^2+C_3R_3s+C_LR_3s+1)}$$

10.1023 INVALID-ORDER-1023 $Z(s) = \left(\frac{R_1(C_1L_1s^2+1)}{C_1L_1s^2+C_1R_1s+1}, \infty, \frac{R_3(C_3L_3s^2+1)}{C_3L_3s^2+C_3R_3s+1}, \infty, \infty, \frac{R_L}{C_LR_Ls+1} \right)$

$$H(s) = \frac{R_1R_3R_Lg_m(C_1L_1s^2+1)(C_3L_3s^2+1)}{(C_1L_1R_1g_ms^2+C_1L_1s^2+C_1R_1s+R_1g_m+1)(C_3C_LL_3R_3R_Ls^3+C_3L_3R_3s^2+C_3L_3R_Ls^2+C_3R_3R_Ls+C_LR_3R_Ls+R_3+R_L)}$$

10.1024 INVALID-ORDER-1024 $Z(s) = \left(\frac{R_1(C_1L_1s^2+1)}{C_1L_1s^2+C_1R_1s+1}, \infty, \frac{R_3(C_3L_3s^2+1)}{C_3L_3s^2+C_3R_3s+1}, \infty, \infty, R_L + \frac{1}{C_Ls} \right)$

$$H(s) = \frac{R_1R_3g_m(C_1L_1s^2+1)(C_3L_3s^2+1)(C_LR_Ls+1)}{(C_1L_1R_1g_ms^2+C_1L_1s^2+C_1R_1s+R_1g_m+1)(C_3C_LL_3R_3s^3+C_3C_LL_3R_Ls^3+C_3C_LR_3R_Ls^2+C_3L_3s^2+C_3R_3s+C_LR_3s+C_LR_Ls+1)}$$

10.1025 INVALID-ORDER-1025 $Z(s) = \left(\frac{R_1(C_1L_1s^2+1)}{C_1L_1s^2+C_1R_1s+1}, \infty, \frac{R_3(C_3L_3s^2+1)}{C_3L_3s^2+C_3R_3s+1}, \infty, \infty, L_Ls + \frac{1}{C_Ls} \right)$

$$H(s) = \frac{R_1R_3g_m(C_1L_1s^2+1)(C_3L_3s^2+1)(C_LL_Ls^2+1)}{(C_1L_1R_1g_ms^2+C_1L_1s^2+C_1R_1s+R_1g_m+1)(C_3C_LL_3L_Ls^4+C_3C_LL_3R_3s^3+C_3C_LL_LR_3s^3+C_3L_3s^2+C_3R_3s+C_LL_Ls^2+C_LR_3s+1)}$$

10.1026 INVALID-ORDER-1026 $Z(s) = \left(\frac{R_1(C_1L_1s^2+1)}{C_1L_1s^2+C_1R_1s+1}, \infty, \frac{R_3(C_3L_3s^2+1)}{C_3L_3s^2+C_3R_3s+1}, \infty, \infty, \frac{L_Ls}{C_LL_Ls^2+1} \right)$

$$H(s) = \frac{L_LR_1R_3g_ms(C_1L_1s^2+1)(C_3L_3s^2+1)}{(C_1L_1R_1g_ms^2+C_1L_1s^2+C_1R_1s+R_1g_m+1)(C_3C_LL_3L_LR_3s^4+C_3L_3L_Ls^3+C_3L_3R_3s^2+C_3L_LR_3s^2+C_LL_LR_3s^2+L_Ls+R_3)}$$

10.1027 INVALID-ORDER-1027 $Z(s) = \left(\frac{R_1(C_1L_1s^2+1)}{C_1L_1s^2+C_1R_1s+1}, \infty, \frac{R_3(C_3L_3s^2+1)}{C_3L_3s^2+C_3R_3s+1}, \infty, \infty, L_Ls + R_L + \frac{1}{C_Ls} \right)$

$$H(s) = \frac{R_1R_3g_m(C_1L_1s^2+1)(C_3L_3s^2+1)(C_LL_Ls^2+C_LR_Ls+1)}{(C_1L_1R_1g_ms^2+C_1L_1s^2+C_1R_1s+R_1g_m+1)(C_3C_LL_3L_Ls^4+C_3C_LL_3R_3s^3+C_3C_LL_3R_Ls^3+C_3C_LL_LR_3s^3+C_3C_LR_3R_Ls^2+C_3L_3s^2+C_3R_3s+C_LL_Ls^2+C_LR_3s+C_LR_Ls+1)}$$

10.1028 INVALID-ORDER-1028 $Z(s) = \left(\frac{R_1(C_1L_1s^2+1)}{C_1L_1s^2+C_1R_1s+1}, \infty, \frac{R_3(C_3L_3s^2+1)}{C_3L_3s^2+C_3R_3s+1}, \infty, \infty, \frac{L_LR_Ls}{C_LL_LR_Ls^2+L_Ls+R_L} \right)$

$$H(s) = \frac{L_LR_1R_3R_Lg_ms(C_1L_1s^2+1)(C_3L_3s^2+1)}{(C_1L_1R_1g_ms^2+C_1L_1s^2+C_1R_1s+R_1g_m+1)(C_3C_LL_3L_LR_3R_Ls^4+C_3L_3L_LR_3s^3+C_3L_3L_LR_Ls^3+C_3L_3R_3R_Ls^2+C_3L_LR_3R_Ls^2+C_LL_LR_3R_Ls^2+L_LR_3s+L_LR_Ls+R_3R_L)}$$

10.1029 INVALID-ORDER-1029 $Z(s) = \left(\frac{R_1(C_1L_1s^2+1)}{C_1L_1s^2+C_1R_1s+1}, \infty, \frac{R_3(C_3L_3s^2+1)}{C_3L_3s^2+C_3R_3s+1}, \infty, \infty, \frac{L_Ls}{C_LL_Ls^2+1} + R_L \right)$

$$H(s) = \frac{R_1R_3g_m(C_1L_1s^2+1)(C_3L_3s^2+1)(C_LL_LR_Ls^2+L_Ls+R_L)}{(C_1L_1R_1g_ms^2+C_1L_1s^2+C_1R_1s+R_1g_m+1)(C_3C_LL_3L_LR_3s^4+C_3C_LL_3L_LR_Ls^4+C_3C_LL_LR_3R_Ls^3+C_3L_3L_Ls^3+C_3L_3R_3s^2+C_3L_3R_Ls^2+C_3L_LR_3s^2+C_3R_3R_Ls+C_LL_LR_3s^2+C_LL_LR_Ls^2+L_Ls+R_3+R_L)}$$

10.1030 INVALID-ORDER-1030 $Z(s) = \left(\frac{R_1(C_1L_1s^2+1)}{C_1L_1s^2+C_1R_1s+1}, \infty, \frac{R_3(C_3L_3s^2+1)}{C_3L_3s^2+C_3R_3s+1}, \infty, \infty, \frac{R_L(C_LL_Ls^2+1)}{C_LL_Ls^2+C_LR_Ls+1} \right)$

$$H(s) = \frac{R_1R_3R_Lg_m(C_1L_1s^2+1)(C_3L_3s^2+1)(C_LL_Ls^2+1)}{(C_1L_1R_1g_ms^2+C_1L_1s^2+C_1R_1s+R_1g_m+1)(C_3C_LL_3L_LR_3s^4+C_3C_LL_3L_LR_Ls^4+C_3C_LL_LR_3R_Ls^3+C_3C_LL_LR_3R_Ls^3+C_3L_3R_3s^2+C_3L_3R_Ls^2+C_3R_3R_Ls+C_LL_LR_3s^2+C_LL_LR_Ls^2+C_LR_3R_Ls+R_3+R_L)}$$

11 PolynomialError