

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

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

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

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

Parameters:

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

$$\mathbf{3.3 \quad BP-3} \quad Z(s) = \left(L_1 s, \infty, \infty, \infty, \infty, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$$

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

Parameters:

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

$$\mathbf{3.4 \quad BP-4} \quad Z(s) = \left(\frac{1}{C_1 s}, \infty, \infty, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} \right)$$

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

Parameters:

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

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

3.5 BP-5 $Z(s) = \left(\frac{1}{C_1 s}, \infty, \infty, \infty, \infty, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$

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

Parameters:

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

3.6 BP-6 $Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \infty, \infty, \infty, \infty, R_L \right)$

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

Parameters:

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

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

3.7 BP-7 $Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \infty, \infty, \infty, \infty, \frac{R_L}{C_L R_L s + 1} \right)$

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

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 $Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \infty, \infty, \infty, \infty, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$

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

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

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

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 $Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \infty, \frac{1}{C_L s} \right)$

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

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 $Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \infty, \frac{R_L}{C_L R_L s + 1} \right)$

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

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 $Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} \right)$

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

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

$$\mathbf{3.13 \quad BP-13} \quad Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s}, \quad \infty, \quad \infty, \quad \infty, \quad \infty, \quad \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$$

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

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

$$\mathbf{3.14 \quad BP-14} \quad Z(s) = \left(\frac{R_1 (L_1 s + \frac{1}{C_1 s})}{L_1 s + R_1 + \frac{1}{C_1 s}}, \quad \infty, \quad \infty, \quad \infty, \quad \infty, \quad \frac{1}{C_L s} \right)$$

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

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 $Z(s) = \left(\frac{R_1 \left(L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, \infty, \frac{R_L}{C_L R_L s + 1} \right)$

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

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

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

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 $Z(s) = \left(\infty, R_2, \infty, \infty, \infty, \frac{R_L}{C_L R_L s + 1} \right)$

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

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

3.18 BP-18 $Z(s) = \left(\infty, \frac{1}{C_2 s}, \infty, \infty, \infty, R_L \right)$

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

Parameters:

Q: $\frac{C_3 L_1 R_3 R_L g_m \sqrt{\frac{R_3 + R_L}{C_3 L_1 R_3 R_L g_m}}}{C_3 R_3 R_L + L_1 R_3 g_m + L_1 R_L g_m}$
 wo: $\sqrt{\frac{R_3 + R_L}{C_3 L_1 R_3 R_L g_m}}$
 bandwidth: $\frac{C_3 R_3 R_L + L_1 R_3 g_m + L_1 R_L g_m}{C_3 L_1 R_3 R_L g_m}$
 K-LP: 0
 K-HP: 0
 K-BP: $\frac{L_1 R_3 R_L g_m}{C_3 R_3 R_L + L_1 R_3 g_m + L_1 R_L g_m}$
 Qz: 0

Wz: None

3.19 BP-19 $Z(s) = \left(\infty, \frac{1}{C_2 s}, \infty, \infty, \infty, \frac{1}{C_L s} \right)$

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

Parameters:

$$Q: \frac{L_1 R_3 g_m \sqrt{\frac{1}{L_1 R_3 g_m (C_3 + C_L)}} (C_3 + C_L)}{C_3 R_3 + C_L R_3 + L_1 g_m}$$

$$\text{wo: } \sqrt{\frac{1}{L_1 R_3 g_m (C_3 + C_L)}}$$

$$\text{bandwidth: } \frac{C_3 R_3 + C_L R_3 + L_1 g_m}{L_1 R_3 g_m (C_3 + C_L)}$$

K-LP: 0

K-HP: 0

$$\text{K-BP: } \frac{L_1 R_3 g_m}{C_3 R_3 + C_L R_3 + L_1 g_m}$$

QZ: 0

Wz: None

3.20 BP-20 $Z(s) = \left(\infty, \frac{1}{C_2 s}, \infty, \infty, \infty, \frac{R_L}{C_L R_L s + 1} \right)$

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

Parameters:

$$Q: \frac{L_1 R_3 R_L g_m \sqrt{\frac{R_3 + R_L}{L_1 R_3 R_L g_m (C_3 + C_L)}} (C_3 + C_L)}{C_3 R_3 R_L + C_L R_3 R_L + L_1 R_3 g_m + L_1 R_L g_m}$$

$$\text{wo: } \sqrt{\frac{R_3 + R_L}{L_1 R_3 R_L g_m (C_3 + C_L)}}$$

$$\text{bandwidth: } \frac{C_3 R_3 R_L + C_L R_3 R_L + L_1 R_3 g_m + L_1 R_L g_m}{L_1 R_3 R_L g_m (C_3 + C_L)}$$

K-LP: 0

K-HP: 0

$$\text{K-BP: } \frac{L_1 R_3 R_L g_m}{C_3 R_3 R_L + C_L R_3 R_L + L_1 R_3 g_m + L_1 R_L g_m}$$

QZ: 0

Wz: None

3.21 BP-21 $Z(s) = \left(L_1 s, R_2 + \frac{1}{C_2 s}, \infty, \infty, \infty, R_L \right)$

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

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: 0
 K-HP: 0
 K-BP: $\frac{R_3 R_L}{R_3 + R_L}$
 Qz: 0
 Wz: None

3.22 BP-22 $Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \frac{R_2 \left(L_2 s + \frac{1}{C_2 s} \right)}{L_2 s + R_2 + \frac{1}{C_2 s}}, \infty, \infty, \infty, R_L \right)$

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

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

4 LP

4.1 LP-1 $Z(s) = \left(\infty, \infty, \frac{1}{C_3 s}, \infty, \infty, \frac{1}{C_L s} \right)$

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

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

4.2 LP-2 $Z(s) = \left(\infty, \infty, \frac{1}{C_3 s}, \infty, \infty, \frac{R_L}{C_L R_L s + 1} \right)$

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

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
 Qz: None
 Wz: None

4.3 LP-3 $Z(s) = \left(\infty, \infty, \frac{R_3}{C_3 R_3 s + 1}, \infty, \infty, R_L \right)$

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

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

4.4 LP-4 $Z(s) = \left(\infty, \infty, \frac{R_3}{C_3 R_3 s + 1}, \infty, \infty, \frac{R_L}{C_L R_L s + 1} \right)$

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

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

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

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

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

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

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

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

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

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

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

4.8 LP-8 $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s}, \infty, \frac{1}{C_L s} \right)$

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

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

4.9 LP-9 $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s}, \infty, \frac{R_L}{C_L R_L s + 1} \right)$

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

Parameters:

Q: $\frac{C_1 C_L R_1 R_3 R_L \sqrt{\frac{R_1 R_3 g_m + R_1 R_L g_m + R_3 + R_L}{C_1 C_L R_1 R_3 R_L}}}{C_1 R_1 R_3 + C_1 R_1 R_L + C_L R_1 R_3 R_L g_m + C_L R_3 R_L}$
 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 $Z(s) = \left(\infty, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, \infty, R_L \right)$

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

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

$$4.11 \quad \text{LP-11} \quad Z(s) = \left(\infty, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, \infty, \frac{R_L}{C_L R_L s + 1} \right)$$

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

Parameters:

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

$$4.12 \quad \text{LP-12} \quad Z(s) = \left(\infty, \infty, \infty, R_4 + \frac{1}{C_4 s}, \infty, R_L \right)$$

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

Parameters:

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

Qz: None

Wz: None

4.13 LP-13 $Z(s) = \left(\infty, \infty, \infty, R_4 + \frac{1}{C_4 s}, \infty, \frac{1}{C_L s} \right)$

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

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 $Z(s) = \left(\infty, \infty, \infty, R_4 + \frac{1}{C_4 s}, \infty, \frac{R_L}{C_L R_L s + 1} \right)$

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

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 $Z(s) = \left(L_1 s, L_2 s + \frac{1}{C_2 s}, \infty, \infty, \infty, \frac{1}{C_L s} \right)$

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

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 $Z(s) = \left(R_1 + \frac{1}{C_1 s}, R_2, \infty, \infty, \infty, \frac{1}{C_L s} \right)$

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

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: $\frac{L_1 g_m}{C_3 + C_L}$

K-HP: 0

K-BP: 0

Qz: None

Wz: None

5 BS

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

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

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

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

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: $\frac{R_3 R_L}{L_L (R_3 + R_L)}$

$$\begin{aligned}
\text{K-LP: } & \frac{R_1 R_3 R_L g_m}{R_1 R_3 g_m + R_1 R_L g_m + R_3 + R_L} \\
\text{K-HP: } & \frac{R_1 R_3 R_L g_m}{R_1 R_3 g_m + R_1 R_L g_m + R_3 + R_L} \\
\text{K-BP: } & 0 \\
\text{QZ: } & \text{None} \\
\text{Wz: } & \sqrt{\frac{1}{C_L L_L}}
\end{aligned}$$

5.3 BS-3 $Z(s) = \left(R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \infty, R_L \right)$

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

Parameters:

$$\begin{aligned}
\text{Q: } & \frac{L_3 \sqrt{\frac{1}{C_3 L_3}}}{R_L} \\
\text{wo: } & \sqrt{\frac{1}{C_3 L_3}} \\
\text{bandwidth: } & \frac{R_L}{L_3} \\
\text{K-LP: } & \frac{R_1 R_L g_m}{R_1 g_m + 1} \\
\text{K-HP: } & \frac{R_1 R_L g_m}{R_1 g_m + 1} \\
\text{K-BP: } & 0 \\
\text{QZ: } & \text{None} \\
\text{Wz: } & \sqrt{\frac{1}{C_3 L_3}}
\end{aligned}$$

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

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

Parameters:

$$\begin{aligned}
\text{Q: } & \frac{L_3 \sqrt{\frac{1}{C_3 L_3}} (R_3 + R_L)}{R_3 R_L} \\
\text{wo: } & \sqrt{\frac{1}{C_3 L_3}} \\
\text{bandwidth: } & \frac{R_3 R_L}{L_3 (R_3 + R_L)}
\end{aligned}$$

$$\begin{aligned}
\text{K-LP: } & \frac{R_1 R_3 R_L g_m}{R_1 R_3 g_m + R_1 R_L g_m + R_3 + R_L} \\
\text{K-HP: } & \frac{R_1 R_3 R_L g_m}{R_1 R_3 g_m + R_1 R_L g_m + R_3 + R_L} \\
\text{K-BP: } & 0 \\
\text{Qz: } & \text{None} \\
\text{Wz: } & \sqrt{\frac{1}{C_3 L_3}}
\end{aligned}$$

5.5 BS-5 $Z(s) = \left(R_1, \frac{1}{C_2 s}, \infty, \infty, \infty, R_L \right)$

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

Parameters:

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

5.6 BS-6 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, R_2 + \frac{1}{C_2 s}, \infty, \infty, \infty, R_L \right)$

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

Parameters:

$$\begin{aligned}
\text{Q: } & \frac{L_1 \sqrt{\frac{1}{C_1 L_1}} (R_1 g_m + 1)}{R_1} \\
\text{wo: } & \sqrt{\frac{1}{C_1 L_1}} \\
\text{bandwidth: } & \frac{R_1}{L_1 (R_1 g_m + 1)}
\end{aligned}$$

$$\begin{aligned}
\text{K-LP: } & \frac{R_1 R_3 R_L g_m}{R_1 R_3 g_m + R_1 R_L g_m + R_3 + R_L} \\
\text{K-HP: } & \frac{R_1 R_3 R_L g_m}{R_1 R_3 g_m + R_1 R_L g_m + R_3 + R_L} \\
\text{K-BP: } & 0 \\
\text{QZ: } & \text{None} \\
\text{Wz: } & \sqrt{\frac{1}{C_1 L_1}}
\end{aligned}$$

6 GE

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

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

Parameters:

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

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

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

Parameters:

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

$$\text{wo: } \sqrt{\frac{1}{C_L L_L}}$$

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

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

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

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

$$\text{QZ: } C_L R_L \sqrt{\frac{1}{C_L L_L}}$$

$$\text{WZ: } \sqrt{\frac{1}{C_L L_L}}$$

$$\mathbf{6.3 \quad GE-3} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, \infty, R_L \right)$$

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

Parameters:

$$\text{Q: } \frac{L_3 \sqrt{\frac{1}{C_3 L_3}}}{R_3 + R_L}$$

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

$$\text{bandwidth: } \frac{R_3 + R_L}{L_3}$$

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

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

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

$$\text{QZ: } \frac{L_3 \sqrt{\frac{1}{C_3 L_3}}}{R_3}$$

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

6.4 GE-4 $Z(s) = \left(\frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, \infty, R_L \right)$

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

Parameters:

Q: $C_3 \sqrt{\frac{1}{C_3 L_3}} (R_3 + R_L)$

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

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

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: $\frac{R_1 R_L g_m}{R_1 g_m + 1}$

QZ: $C_3 R_3 \sqrt{\frac{1}{C_3 L_3}}$

WZ: $\sqrt{\frac{1}{C_3 L_3}}$

6.5 GE-5 $Z(s) = \left(\frac{1}{C_1 s}, L_2 s + R_2 + \frac{1}{C_2 s}, \infty, \infty, \infty, R_L \right)$

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

Parameters:

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

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

bandwidth: $\frac{R_1 g_m + 1}{L_1 g_m}$

K-LP: $\frac{R_3 R_L}{R_3 + R_L}$

K-HP: $\frac{R_3 R_L}{R_3 + R_L}$

K-BP: $\frac{R_1 R_3 R_L g_m}{(R_3 + R_L) (R_1 g_m + 1)}$

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

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

$$\mathbf{6.6 \quad GE-6} \quad Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \frac{1}{C_2 s}, \infty, \infty, \infty, R_L \right)$$

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

Parameters:

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

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

$$\text{bandwidth: } \frac{g_m}{C_1 (R_1 g_m + 1)}$$

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

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

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

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

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

7 AP

8 INVALID-NUMER

$$\mathbf{8.1 \quad INVALID-NUMER-1} \quad Z(s) = \left(\frac{1}{C_1 s}, \infty, \infty, \infty, \infty, R_L + \frac{1}{C_L s} \right)$$

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

Parameters:

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

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

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

Parameters:

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

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

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

Parameters:

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

8.4 INVALID-NUMER-4 $Z(s) = \left(\infty, R_2, \infty, \infty, \infty, R_L + \frac{1}{C_L s} \right)$

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

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 $Z(s) = \left(\infty, \frac{R_2}{C_2 R_2 s + 1}, \infty, \infty, \infty, R_L \right)$

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

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 $Z(s) = \left(\infty, \frac{R_2}{C_2 R_2 s + 1}, \infty, \infty, \infty, \frac{1}{C_L s} \right)$

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

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 $Z(s) = \left(\infty, \infty, \frac{1}{C_3 s}, \infty, \infty, R_L + \frac{1}{C_L s} \right)$

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

Parameters:

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

8.8 INVALID-NUMER-8 $Z(s) = \left(\infty, \infty, L_3 s + \frac{1}{C_3 s}, \infty, \infty, R_L \right)$

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

Parameters:

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

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

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

Parameters:

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

8.10 INVALID-NUMER-10 $Z(s) = \left(\infty, \infty, \infty, L_4 s + \frac{1}{C_4 s}, \infty, R_L \right)$

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

Parameters:

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

8.11 INVALID-NUMER-11 $Z(s) = \left(\infty, \infty, \infty, \infty, \frac{1}{C_4 s}, \frac{1}{C_L s} \right)$

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

Parameters:

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

8.12 INVALID-NUMER-12 $Z(s) = \left(\infty, \infty, \infty, \infty, \frac{1}{C_4 s}, \frac{R_L}{C_L R_L s + 1} \right)$

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

Parameters:

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

8.13 INVALID-NUMER-13 $Z(s) = \left(\infty, \infty, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, R_L \right)$

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

Parameters:

$$\begin{aligned}
\text{Q: } & \frac{C_1 C_3 R_L \sqrt{\frac{g_m}{C_1 C_3 R_L (R_1 g_m + 1)}} (R_1 g_m + 1)}{C_1 R_1 g_m + C_1 + C_3 R_L g_m} \\
\text{wo: } & \sqrt{\frac{g_m}{C_1 C_3 R_L (R_1 g_m + 1)}} \\
\text{bandwidth: } & \frac{C_1 R_1 g_m + C_1 + C_3 R_L g_m}{C_1 C_3 R_L (R_1 g_m + 1)} \\
\text{K-LP: } & R_L \\
\text{K-HP: } & 0 \\
\text{K-BP: } & \frac{C_1 R_1 R_L g_m}{C_1 R_1 g_m + C_1 + C_3 R_L g_m} \\
\text{QZ: } & 0 \\
\text{Wz: } & \text{None}
\end{aligned}$$

8.14 INVALID-NUMER-14 $Z(s) = \left(\infty, \infty, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, \frac{R_L}{C_L R_L s + 1} \right)$

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

Parameters:

$$\begin{aligned}
\text{Q: } & \frac{C_1 R_L \sqrt{\frac{g_m}{C_1 R_L (C_3 R_1 g_m + C_3 + C_L R_1 g_m + C_L)}} (C_3 R_1 g_m + C_3 + C_L R_1 g_m + C_L)}{C_1 R_1 g_m + C_1 + C_3 R_L g_m + C_L R_L g_m} \\
\text{wo: } & \sqrt{\frac{g_m}{C_1 R_L (C_3 R_1 g_m + C_3 + C_L R_1 g_m + C_L)}} \\
\text{bandwidth: } & \frac{C_1 R_1 g_m + C_1 + C_3 R_L g_m + C_L R_L g_m}{C_1 R_L (C_3 R_1 g_m + C_3 + C_L R_1 g_m + C_L)} \\
\text{K-LP: } & R_L \\
\text{K-HP: } & 0 \\
\text{K-BP: } & \frac{C_1 R_1 R_L g_m}{C_1 R_1 g_m + C_1 + C_3 R_L g_m + C_L R_L g_m} \\
\text{QZ: } & 0 \\
\text{Wz: } & \text{None}
\end{aligned}$$

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

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

Parameters:

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

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

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

Parameters:

$$\begin{aligned}
\text{Q: } & \frac{C_1 R_3 \sqrt{\frac{g_m}{C_1 R_3 (C_3 R_1 g_m + C_3 + C_L R_1 g_m + C_L)}} (C_3 R_1 g_m + C_3 + C_L R_1 g_m + C_L)}{C_1 R_1 g_m + C_1 + C_3 R_3 g_m + C_L R_3 g_m} \\
\text{wo: } & \sqrt{\frac{g_m}{C_1 R_3 (C_3 R_1 g_m + C_3 + C_L R_1 g_m + C_L)}} \\
\text{bandwidth: } & \frac{C_1 R_1 g_m + C_1 + C_3 R_3 g_m + C_L R_3 g_m}{C_1 R_3 (C_3 R_1 g_m + C_3 + C_L R_1 g_m + C_L)} \\
\text{K-LP: } & R_3 \\
\text{K-HP: } & 0 \\
\text{K-BP: } & \frac{C_1 R_1 R_3 g_m}{C_1 R_1 g_m + C_1 + C_3 R_3 g_m + C_L R_3 g_m} \\
\text{QZ: } & 0 \\
\text{Wz: } & \text{None}
\end{aligned}$$

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

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

Parameters:

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

9 INVALID-WZ

9.1 INVALID-WZ-1

$$Z(s) = \left(\infty, \frac{R_2}{C_2 R_2 s + 1}, \infty, \infty, \infty, R_L + \frac{1}{C_L s} \right)$$

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

Parameters:

$$\begin{aligned}
\text{Q: } & \frac{C_3 C_L L_1 g_m \sqrt{\frac{C_3 + C_L}{C_3 C_L L_1 g_m (R_3 + R_L)}} (R_3 + R_L)}{C_3 C_L R_3 + C_3 C_L R_L + C_3 L_1 g_m + C_L L_1 g_m} \\
\text{wo: } & \sqrt{\frac{C_3 + C_L}{C_3 C_L L_1 g_m (R_3 + R_L)}} \\
\text{bandwidth: } & \frac{C_3 C_L R_3 + C_3 C_L R_L + C_3 L_1 g_m + C_L L_1 g_m}{C_3 C_L L_1 g_m (R_3 + R_L)} \\
\text{K-LP: } & \frac{L_1 g_m}{C_3 + C_L} \\
\text{K-HP: } & \frac{R_3 R_L}{R_3 + R_L} \\
\text{K-BP: } & \frac{L_1 g_m (C_3 R_3 + C_L R_L)}{C_3 C_L R_3 + C_3 C_L R_L + C_3 L_1 g_m + C_L L_1 g_m} \\
\text{QZ: } & \frac{C_3 C_L R_3 R_L \sqrt{\frac{C_3 + C_L}{C_3 C_L L_1 g_m (R_3 + R_L)}}}{C_3 R_3 + C_L R_L} \\
\text{Wz: } & \sqrt{\frac{1}{C_3 C_L R_3 R_L}}
\end{aligned}$$

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

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

Parameters:

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

9.3 INVALID-WZ-3 $Z(s) = \left(\infty, \infty, \infty, \infty, L_4 s + \frac{1}{C_4 s}, R_L \right)$

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

Parameters:

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

$$W_Z: \sqrt{\frac{1}{C_1 C_3 R_1 R_3}}$$

10 INVALID-ORDER

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

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

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

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

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

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

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

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

10.5 INVALID-ORDER-5 $Z(s) = (L_1 s, \infty, \infty, \infty, \infty, R_L)$

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

10.6 INVALID-ORDER-6 $Z(s) = \left(L_1 s, \infty, \infty, \infty, \infty, \frac{1}{C_L s} \right)$

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

10.7 INVALID-ORDER-7 $Z(s) = \left(L_1 s, \infty, \infty, \infty, \infty, \frac{R_L}{C_L R_L s + 1} \right)$

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

10.8 INVALID-ORDER-8 $Z(s) = \left(L_1 s, \infty, \infty, \infty, \infty, R_L + \frac{1}{C_L s} \right)$

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

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

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

10.10 INVALID-ORDER-10 $Z(s) = \left(L_1 s, \infty, \infty, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} \right)$

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

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

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

10.12 INVALID-ORDER-12 $Z(s) = \left(L_1 s, \infty, \infty, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$

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

10.13 INVALID-ORDER-13 $Z(s) = \left(L_1 s, \infty, \infty, \infty, \infty, \frac{R_L \left(L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$

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

10.14 INVALID-ORDER-14 $Z(s) = \left(\frac{1}{C_1 s}, \infty, \infty, \infty, \infty, R_L \right)$

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

10.15 INVALID-ORDER-15 $Z(s) = \left(\frac{1}{C_1 s}, \infty, \infty, \infty, \infty, \frac{1}{C_L s} \right)$

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

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

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

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

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

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

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

10.19 INVALID-ORDER-19 $Z(s) = \left(\frac{1}{C_1 s}, \infty, \infty, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$

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

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

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

10.21 INVALID-ORDER-21 $Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, \infty, R_L \right)$

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

10.22 INVALID-ORDER-22 $Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, \infty, \frac{1}{C_L s} \right)$

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

10.23 INVALID-ORDER-23 $Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, \infty, R_L + \frac{1}{C_L s} \right)$

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

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

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

10.25 INVALID-ORDER-25 $Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} \right)$

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

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

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

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

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

10.28 INVALID-ORDER-28 $Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$

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

10.29 INVALID-ORDER-29 $Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \infty, \infty, \infty, \infty, \frac{R_L \left(L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$

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

10.30 INVALID-ORDER-30 $Z(s) = \left(R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \infty, \frac{1}{C_L s} \right)$

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

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

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

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

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

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

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

10.34 INVALID-ORDER-34 $Z(s) = \left(R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} \right)$

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

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

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

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

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

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

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

10.38 INVALID-ORDER-38 $Z(s) = \left(R_1 + \frac{1}{C_1 s}, \infty, \infty, \infty, \infty, \frac{R_L (L_L s + \frac{1}{C_L s})}{L_L s + R_L + \frac{1}{C_L s}} \right)$

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

10.39 INVALID-ORDER-39 $Z(s) = \left(L_1s + \frac{1}{C_1s}, \infty, \infty, \infty, \infty, \frac{1}{C_Ls} \right)$

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

10.40 INVALID-ORDER-40 $Z(s) = \left(L_1s + \frac{1}{C_1s}, \infty, \infty, \infty, \infty, R_L + \frac{1}{C_Ls} \right)$

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

10.41 INVALID-ORDER-41 $Z(s) = \left(L_1s + \frac{1}{C_1s}, \infty, \infty, \infty, \infty, L_Ls + \frac{1}{C_Ls} \right)$

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

10.42 INVALID-ORDER-42 $Z(s) = \left(L_1s + \frac{1}{C_1s}, \infty, \infty, \infty, \infty, \frac{L_Ls}{C_LL_Ls^2 + 1} \right)$

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

10.43 INVALID-ORDER-43 $Z(s) = \left(L_1s + \frac{1}{C_1s}, \infty, \infty, \infty, \infty, L_Ls + R_L + \frac{1}{C_Ls} \right)$

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

10.44 INVALID-ORDER-44 $Z(s) = \left(L_1s + \frac{1}{C_1s}, \infty, \infty, \infty, \infty, \frac{L_Ls}{C_LL_Ls^2 + 1} + R_L \right)$

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

10.55 INVALID-ORDER-55 $Z(s) = \left(L_1s + R_1 + \frac{1}{C_1s}, \infty, \infty, \infty, \infty, R_L + \frac{1}{C_Ls} \right)$

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

10.56 INVALID-ORDER-56 $Z(s) = \left(L_1s + R_1 + \frac{1}{C_1s}, \infty, \infty, \infty, \infty, L_Ls + \frac{1}{C_Ls} \right)$

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

10.57 INVALID-ORDER-57 $Z(s) = \left(L_1s + R_1 + \frac{1}{C_1s}, \infty, \infty, \infty, \infty, L_Ls + R_L + \frac{1}{C_Ls} \right)$

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

10.58 INVALID-ORDER-58 $Z(s) = \left(L_1s + R_1 + \frac{1}{C_1s}, \infty, \infty, \infty, \infty, \frac{L_Ls}{C_LL_Ls^2 + 1} + R_L \right)$

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

10.59 INVALID-ORDER-59 $Z(s) = \left(L_1s + R_1 + \frac{1}{C_1s}, \infty, \infty, \infty, \infty, \frac{R_L(L_Ls + \frac{1}{C_Ls})}{L_Ls + R_L + \frac{1}{C_Ls}} \right)$

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

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

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

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

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

10.62 INVALID-ORDER-62 $Z(s) = \left(\frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, \infty, R_L + \frac{1}{C_L s} \right)$

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

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

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

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

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

$$10.65 \quad \text{INVALID-ORDER-65} \quad Z(s) = \left(\frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, \infty, L_L s + R_L + \frac{1}{C_L s} \right)$$

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

$$10.66 \quad \text{INVALID-ORDER-66} \quad Z(s) = \left(\frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, \infty, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$$

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

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

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

$$10.68 \quad \text{INVALID-ORDER-68} \quad Z(s) = \left(\frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1 s}}, \infty, \infty, \infty, \infty, \frac{R_L (L_L s + \frac{1}{C_L s})}{L_L s + R_L + \frac{1}{C_L s}} \right)$$

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

$$\mathbf{10.79 \quad INVALID-ORDER-79} \quad Z(s) = \left(\frac{R_1 (L_1 s + \frac{1}{C_1 s})}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, \infty, L_L s + \frac{1}{C_L s} \right)$$

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

$$10.80 \quad \text{INVALID-ORDER-80} \quad Z(s) = \left(\frac{R_1 \left(L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} \right)$$

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

$$10.81 \quad \text{INVALID-ORDER-81} \quad Z(s) = \left(\frac{R_1 \left(L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, \infty, L_L s + R_L + \frac{1}{C_L s} \right)$$

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

$$10.82 \quad \text{INVALID-ORDER-82} \quad Z(s) = \left(\frac{R_1 \left(L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, \infty, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$$

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

$$10.83 \quad \text{INVALID-ORDER-83} \quad Z(s) = \left(\frac{R_1 \left(L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$$

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

$$10.84 \quad \text{INVALID-ORDER-84} \quad Z(s) = \left(\frac{R_1 \left(L_1 s + \frac{1}{C_1 s} \right)}{L_1 s + R_1 + \frac{1}{C_1 s}}, \infty, \infty, \infty, \infty, \frac{R_L \left(L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$$

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

10.85 INVALID-ORDER-85 $Z(s) = \left(\infty, R_2, \infty, \infty, \infty, \frac{1}{C_L s} \right)$

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

10.86 INVALID-ORDER-86 $Z(s) = \left(\infty, R_2, \infty, \infty, \infty, L_L s + \frac{1}{C_L s} \right)$

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

10.87 INVALID-ORDER-87 $Z(s) = \left(\infty, R_2, \infty, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} \right)$

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

10.88 INVALID-ORDER-88 $Z(s) = \left(\infty, R_2, \infty, \infty, \infty, L_L s + R_L + \frac{1}{C_L s} \right)$

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

10.89 INVALID-ORDER-89 $Z(s) = \left(\infty, R_2, \infty, \infty, \infty, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$

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

10.90 INVALID-ORDER-90 $Z(s) = \left(\infty, R_2, \infty, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$

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

10.91 INVALID-ORDER-91 $Z(s) = \left(\infty, R_2, \infty, \infty, \infty, \frac{R_L \left(L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$

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

10.92 INVALID-ORDER-92 $Z(s) = \left(\infty, \frac{1}{C_2 s}, \infty, \infty, \infty, R_L + \frac{1}{C_L s} \right)$

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

10.93 INVALID-ORDER-93 $Z(s) = \left(\infty, \frac{1}{C_2 s}, \infty, \infty, \infty, L_L s + \frac{1}{C_L s} \right)$

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

10.94 INVALID-ORDER-94 $Z(s) = \left(\infty, \frac{1}{C_2 s}, \infty, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} \right)$

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

10.95 INVALID-ORDER-95 $Z(s) = \left(\infty, \frac{1}{C_2 s}, \infty, \infty, \infty, L_L s + R_L + \frac{1}{C_L s} \right)$

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

10.96 INVALID-ORDER-96 $Z(s) = \left(\infty, \frac{1}{C_2 s}, \infty, \infty, \infty, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$

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

10.97 INVALID-ORDER-97 $Z(s) = \left(\infty, \frac{1}{C_2 s}, \infty, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$

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

10.98 INVALID-ORDER-98 $Z(s) = \left(\infty, \frac{1}{C_2 s}, \infty, \infty, \infty, \frac{R_L (L_L s + \frac{1}{C_L s})}{L_L s + R_L + \frac{1}{C_L s}} \right)$

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

10.99 INVALID-ORDER-99 $Z(s) = \left(\infty, \frac{R_2}{C_2 R_2 s + 1}, \infty, \infty, \infty, \frac{R_L}{C_L R_L s + 1} \right)$

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

10.100 INVALID-ORDER-100 $Z(s) = \left(\infty, \frac{R_2}{C_2 R_2 s + 1}, \infty, \infty, \infty, L_L s + \frac{1}{C_L s} \right)$

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

10.101 INVALID-ORDER-101 $Z(s) = \left(\infty, \frac{R_2}{C_2 R_2 s + 1}, \infty, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} \right)$

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

10.102 INVALID-ORDER-102 $Z(s) = \left(\infty, \frac{R_2}{C_2 R_2 s + 1}, \infty, \infty, \infty, L_L s + R_L + \frac{1}{C_L s} \right)$

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

10.103 INVALID-ORDER-103 $Z(s) = \left(\infty, \frac{R_2}{C_2 R_2 s + 1}, \infty, \infty, \infty, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$

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

10.104 INVALID-ORDER-104 $Z(s) = \left(\infty, \frac{R_2}{C_2 R_2 s + 1}, \infty, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$

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

10.105 INVALID-ORDER-105 $Z(s) = \left(\infty, \frac{R_2}{C_2 R_2 s + 1}, \infty, \infty, \infty, \frac{R_L (L_L s + \frac{1}{C_L s})}{L_L s + R_L + \frac{1}{C_L s}} \right)$

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

10.106 INVALID-ORDER-106 $Z(s) = \left(\infty, R_2 + \frac{1}{C_2 s}, \infty, \infty, \infty, R_L \right)$

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

10.107 INVALID-ORDER-107 $Z(s) = \left(\infty, R_2 + \frac{1}{C_2 s}, \infty, \infty, \infty, \frac{1}{C_L s} \right)$

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

10.108 INVALID-ORDER-108 $Z(s) = \left(\infty, R_2 + \frac{1}{C_2 s}, \infty, \infty, \infty, \frac{R_L}{C_L R_L s + 1} \right)$

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

10.109 INVALID-ORDER-109 $Z(s) = \left(\infty, R_2 + \frac{1}{C_2 s}, \infty, \infty, \infty, R_L + \frac{1}{C_L s} \right)$

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

10.110 INVALID-ORDER-110 $Z(s) = \left(\infty, R_2 + \frac{1}{C_2 s}, \infty, \infty, \infty, L_L s + \frac{1}{C_L s} \right)$

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

10.111 INVALID-ORDER-111 $Z(s) = \left(\infty, R_2 + \frac{1}{C_2 s}, \infty, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} \right)$

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

10.112 **INVALID-ORDER-112** $Z(s) = \left(\infty, R_2 + \frac{1}{C_2s}, \infty, \infty, \infty, L_Ls + R_L + \frac{1}{C_Ls} \right)$

$$H(s) = \frac{L_1g_m (C_3L_3s^2 + 1) (C_LL_Ls^2 + C_LR_Ls + 1)}{(L_1g_ms + 1) (C_3C_LL_3s^2 + C_3C_LL_Ls^2 + C_3C_LR_Ls + C_3 + C_L)}$$

10.113 **INVALID-ORDER-113** $Z(s) = \left(\infty, R_2 + \frac{1}{C_2s}, \infty, \infty, \infty, \frac{1}{C_Ls + \frac{1}{R_L} + \frac{1}{L_Ls}} \right)$

$$H(s) = \frac{L_1L_LR_Lg_ms^2 (C_3L_3s^2 + 1)}{(L_1g_ms + 1) (C_3C_LL_3L_LR_Ls^4 + C_3L_3L_Ls^3 + C_3L_3R_Ls^2 + C_3L_LR_Ls^2 + C_LL_LR_Ls^2 + L_Ls + R_L)}$$

10.114 **INVALID-ORDER-114** $Z(s) = \left(\infty, R_2 + \frac{1}{C_2s}, \infty, \infty, \infty, \frac{L_Ls}{C_LL_Ls^2 + 1} + R_L \right)$

$$H(s) = \frac{L_1g_ms (C_3L_3s^2 + 1) (C_LL_LR_Ls^2 + L_Ls + R_L)}{(L_1g_ms + 1) (C_3C_LL_3L_Ls^4 + C_3C_LL_LR_Ls^3 + C_3L_3s^2 + C_3L_Ls^2 + C_3R_Ls + C_LL_Ls^2 + 1)}$$

10.115 **INVALID-ORDER-115** $Z(s) = \left(\infty, R_2 + \frac{1}{C_2s}, \infty, \infty, \infty, \frac{R_L(L_Ls + \frac{1}{C_Ls})}{L_Ls + R_L + \frac{1}{C_Ls}} \right)$

$$H(s) = \frac{L_1R_Lg_ms (C_3L_3s^2 + 1) (C_LL_Ls^2 + 1)}{(L_1g_ms + 1) (C_3C_LL_3L_Ls^4 + C_3C_LL_3R_Ls^3 + C_3C_LL_LR_Ls^3 + C_3L_3s^2 + C_3R_Ls + C_LL_Ls^2 + C_LR_Ls + 1)}$$

10.116 **INVALID-ORDER-116** $Z(s) = \left(\infty, L_2s + \frac{1}{C_2s}, \infty, \infty, \infty, R_L \right)$

$$H(s) = \frac{L_1L_3R_Lg_ms^2}{(L_1g_ms + 1) (C_3L_3R_Ls^2 + L_3s + R_L)}$$

10.117 **INVALID-ORDER-117** $Z(s) = \left(\infty, L_2s + \frac{1}{C_2s}, \infty, \infty, \infty, \frac{1}{C_Ls} \right)$

$$H(s) = \frac{L_1L_3g_ms^2}{(L_1g_ms + 1)(C_3L_3s^2 + C_LL_3s^2 + 1)}$$

10.118 **INVALID-ORDER-118** $Z(s) = \left(\infty, L_2s + \frac{1}{C_2s}, \infty, \infty, \infty, \frac{R_L}{C_LR_Ls+1} \right)$

$$H(s) = \frac{L_1L_3R_Lg_ms^2}{(L_1g_ms + 1)(C_3L_3R_Ls^2 + C_LL_3R_Ls^2 + L_3s + R_L)}$$

10.119 **INVALID-ORDER-119** $Z(s) = \left(\infty, L_2s + \frac{1}{C_2s}, \infty, \infty, \infty, R_L + \frac{1}{C_Ls} \right)$

$$H(s) = \frac{L_1L_3g_ms^2(C_LR_Ls + 1)}{(L_1g_ms + 1)(C_3C_LL_3R_Ls^3 + C_3L_3s^2 + C_LL_3s^2 + C_LR_Ls + 1)}$$

10.120 **INVALID-ORDER-120** $Z(s) = \left(\infty, L_2s + \frac{1}{C_2s}, \infty, \infty, \infty, L_Ls + \frac{1}{C_Ls} \right)$

$$H(s) = \frac{L_1L_3g_ms^2(C_LL_Ls^2 + 1)}{(L_1g_ms + 1)(C_3C_LL_3L_Ls^4 + C_3L_3s^2 + C_LL_3s^2 + C_LL_Ls^2 + 1)}$$

10.121 **INVALID-ORDER-121** $Z(s) = \left(\infty, L_2s + \frac{1}{C_2s}, \infty, \infty, \infty, \frac{L_Ls}{C_LL_Ls^2+1} \right)$

$$H(s) = \frac{L_1L_3L_Lg_ms^2}{(L_1g_ms + 1)(C_3L_3L_Ls^2 + C_LL_3L_Ls^2 + L_3 + L_L)}$$

10.122 **INVALID-ORDER-122** $Z(s) = \left(\infty, L_2s + \frac{1}{C_2s}, \infty, \infty, \infty, L_Ls + R_L + \frac{1}{C_Ls} \right)$

$$H(s) = \frac{L_1L_3g_ms^2(C_LL_Ls^2 + C_LR_Ls + 1)}{(L_1g_ms + 1)(C_3C_LL_3L_Ls^4 + C_3C_LL_3R_Ls^3 + C_3L_3s^2 + C_LL_3s^2 + C_LL_Ls^2 + C_LR_Ls + 1)}$$

10.123 INVALID-ORDER-123 $Z(s) = \left(\infty, L_2s + \frac{1}{C_2s}, \infty, \infty, \infty, \frac{1}{C_Ls + \frac{1}{R_L} + \frac{1}{L_Ls}} \right)$

$$H(s) = \frac{L_1L_3L_LR_Lg_ms^2}{(L_1g_ms + 1)(C_3L_3L_LR_Ls^2 + C_LL_3L_LR_Ls^2 + L_3L_Ls + L_3R_L + L_LR_L)}$$

10.124 INVALID-ORDER-124 $Z(s) = \left(\infty, L_2s + \frac{1}{C_2s}, \infty, \infty, \infty, \frac{L_Ls}{C_LL_Ls^2 + 1} + R_L \right)$

$$H(s) = \frac{L_1L_3g_ms^2(C_LL_LR_Ls^2 + L_Ls + R_L)}{(L_1g_ms + 1)(C_3C_LL_3L_LR_Ls^4 + C_3L_3L_Ls^3 + C_3L_3R_Ls^2 + C_LL_3L_Ls^3 + C_LL_LR_Ls^2 + L_3s + L_Ls + R_L)}$$

10.125 INVALID-ORDER-125 $Z(s) = \left(\infty, L_2s + \frac{1}{C_2s}, \infty, \infty, \infty, \frac{R_L(L_Ls + \frac{1}{C_Ls})}{L_Ls + R_L + \frac{1}{C_Ls}} \right)$

$$H(s) = \frac{L_1L_3R_Lg_ms^2(C_LL_Ls^2 + 1)}{(L_1g_ms + 1)(C_3C_LL_3L_LR_Ls^4 + C_3L_3R_Ls^2 + C_LL_3L_Ls^3 + C_LL_3R_Ls^2 + C_LL_LR_Ls^2 + L_3s + R_L)}$$

10.126 INVALID-ORDER-126 $Z(s) = \left(\infty, L_2s + R_2 + \frac{1}{C_2s}, \infty, \infty, \infty, R_L \right)$

$$H(s) = \frac{L_1R_Lg_ms(C_3L_3s^2 + C_3R_3s + 1)}{(L_1g_ms + 1)(C_3L_3s^2 + C_3R_3s + C_3R_Ls + 1)}$$

10.127 INVALID-ORDER-127 $Z(s) = \left(\infty, L_2s + R_2 + \frac{1}{C_2s}, \infty, \infty, \infty, \frac{1}{C_Ls} \right)$

$$H(s) = \frac{L_1g_m(C_3L_3s^2 + C_3R_3s + 1)}{(L_1g_ms + 1)(C_3C_LL_3s^2 + C_3C_LR_3s + C_3 + C_L)}$$

10.128 INVALID-ORDER-128 $Z(s) = \left(\infty, L_2s + R_2 + \frac{1}{C_2s}, \infty, \infty, \infty, \frac{R_L}{C_LR_Ls+1} \right)$

$$H(s) = \frac{L_1R_Lg_ms(C_3L_3s^2 + C_3R_3s + 1)}{(L_1g_ms + 1)(C_3C_LL_3R_Ls^3 + C_3C_LR_3R_Ls^2 + C_3L_3s^2 + C_3R_3s + C_3R_Ls + C_LR_Ls + 1)}$$

10.129 INVALID-ORDER-129 $Z(s) = \left(\infty, L_2s + R_2 + \frac{1}{C_2s}, \infty, \infty, \infty, R_L + \frac{1}{C_Ls} \right)$

$$H(s) = \frac{L_1g_m(C_LR_Ls + 1)(C_3L_3s^2 + C_3R_3s + 1)}{(L_1g_ms + 1)(C_3C_LL_3s^2 + C_3C_LR_3s + C_3C_LR_Ls + C_3 + C_L)}$$

10.130 INVALID-ORDER-130 $Z(s) = \left(\infty, L_2s + R_2 + \frac{1}{C_2s}, \infty, \infty, \infty, L_Ls + \frac{1}{C_Ls} \right)$

$$H(s) = \frac{L_1g_m(C_LL_Ls^2 + 1)(C_3L_3s^2 + C_3R_3s + 1)}{(L_1g_ms + 1)(C_3C_LL_3s^2 + C_3C_LL_Ls^2 + C_3C_LR_3s + C_3 + C_L)}$$

10.131 INVALID-ORDER-131 $Z(s) = \left(\infty, L_2s + R_2 + \frac{1}{C_2s}, \infty, \infty, \infty, \frac{L_Ls}{C_LL_Ls^2+1} \right)$

$$H(s) = \frac{L_1L_Lg_ms^2(C_3L_3s^2 + C_3R_3s + 1)}{(L_1g_ms + 1)(C_3C_LL_3L_Ls^4 + C_3C_LL_LR_3s^3 + C_3L_3s^2 + C_3L_Ls^2 + C_3R_3s + C_LL_Ls^2 + 1)}$$

10.132 INVALID-ORDER-132 $Z(s) = \left(\infty, L_2s + R_2 + \frac{1}{C_2s}, \infty, \infty, \infty, L_Ls + R_L + \frac{1}{C_Ls} \right)$

$$H(s) = \frac{L_1g_m(C_3L_3s^2 + C_3R_3s + 1)(C_LL_Ls^2 + C_LR_Ls + 1)}{(L_1g_ms + 1)(C_3C_LL_3s^2 + C_3C_LL_Ls^2 + C_3C_LR_3s + C_3C_LR_Ls + C_3 + C_L)}$$

$$10.133 \quad \text{INVALID-ORDER-133} \quad Z(s) = \left(\infty, L_2s + R_2 + \frac{1}{C_2s}, \infty, \infty, \infty, \frac{1}{C_Ls + \frac{1}{R_L} + \frac{1}{L_Ls}} \right)$$

$$H(s) = \frac{L_1L_LR_Lg_ms^2 (C_3L_3s^2 + C_3R_3s + 1)}{(L_1g_ms + 1) (C_3C_LL_3L_LR_Ls^4 + C_3C_LL_LR_3R_Ls^3 + C_3L_3L_Ls^3 + C_3L_3R_Ls^2 + C_3L_LR_3s^2 + C_3L_LR_Ls^2 + C_3R_3R_Ls + C_LL_LR_Ls^2 + L_Ls + R_L)}$$

$$10.134 \quad \text{INVALID-ORDER-134} \quad Z(s) = \left(\infty, L_2s + R_2 + \frac{1}{C_2s}, \infty, \infty, \infty, \frac{L_Ls}{C_LL_Ls^2 + 1} + R_L \right)$$

$$H(s) = \frac{L_1g_ms (C_3L_3s^2 + C_3R_3s + 1) (C_LL_LR_Ls^2 + L_Ls + R_L)}{(L_1g_ms + 1) (C_3C_LL_3L_Ls^4 + C_3C_LL_LR_3s^3 + C_3C_LL_LR_Ls^3 + C_3L_3s^2 + C_3L_Ls^2 + C_3R_3s + C_3R_Ls + C_LL_Ls^2 + 1)}$$

$$10.135 \quad \text{INVALID-ORDER-135} \quad Z(s) = \left(\infty, L_2s + R_2 + \frac{1}{C_2s}, \infty, \infty, \infty, \frac{R_L(L_Ls + \frac{1}{C_Ls})}{L_Ls + R_L + \frac{1}{C_Ls}} \right)$$

$$H(s) = \frac{L_1R_Lg_ms (C_LL_Ls^2 + 1) (C_3L_3s^2 + C_3R_3s + 1)}{(L_1g_ms + 1) (C_3C_LL_3L_Ls^4 + C_3C_LL_3R_Ls^3 + C_3C_LL_LR_3s^3 + C_3C_LL_LR_Ls^3 + C_3C_LR_3R_Ls^2 + C_3L_3s^2 + C_3R_3s + C_3R_Ls + C_LL_Ls^2 + C_LR_Ls + 1)}$$

$$10.136 \quad \text{INVALID-ORDER-136} \quad Z(s) = \left(\infty, \frac{L_2s}{C_2L_2s^2 + 1} + R_2, \infty, \infty, \infty, R_L \right)$$

$$H(s) = \frac{L_1L_3R_3R_Lg_ms^2}{(L_1g_ms + 1) (C_3L_3R_3R_Ls^2 + L_3R_3s + L_3R_Ls + R_3R_L)}$$

$$10.137 \quad \text{INVALID-ORDER-137} \quad Z(s) = \left(\infty, \frac{L_2s}{C_2L_2s^2 + 1} + R_2, \infty, \infty, \infty, \frac{1}{C_Ls} \right)$$

$$H(s) = \frac{L_1L_3R_3g_ms^2}{(L_1g_ms + 1) (C_3L_3R_3s^2 + C_LL_3R_3s^2 + L_3s + R_3)}$$

10.138 INVALID-ORDER-138 $Z(s) = \left(\infty, \frac{L_2 s}{C_2 L_2 s^2 + 1} + R_2, \infty, \infty, \infty, \frac{R_L}{C_L R_L s + 1} \right)$

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

10.139 INVALID-ORDER-139 $Z(s) = \left(\infty, \frac{L_2 s}{C_2 L_2 s^2 + 1} + R_2, \infty, \infty, \infty, R_L + \frac{1}{C_L s} \right)$

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

10.140 INVALID-ORDER-140 $Z(s) = \left(\infty, \frac{L_2 s}{C_2 L_2 s^2 + 1} + R_2, \infty, \infty, \infty, L_L s + \frac{1}{C_L s} \right)$

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

10.141 INVALID-ORDER-141 $Z(s) = \left(\infty, \frac{L_2 s}{C_2 L_2 s^2 + 1} + R_2, \infty, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} \right)$

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

10.142 INVALID-ORDER-142 $Z(s) = \left(\infty, \frac{L_2 s}{C_2 L_2 s^2 + 1} + R_2, \infty, \infty, \infty, L_L s + R_L + \frac{1}{C_L s} \right)$

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

10.143 INVALID-ORDER-143 $Z(s) = \left(\infty, \frac{L_2 s}{C_2 L_2 s^2 + 1} + R_2, \infty, \infty, \infty, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$

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

10.144 INVALID-ORDER-144 $Z(s) = \left(\infty, \frac{L_2 s}{C_2 L_2 s^2 + 1} + R_2, \infty, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$

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

10.145 INVALID-ORDER-145 $Z(s) = \left(\infty, \frac{L_2 s}{C_2 L_2 s^2 + 1} + R_2, \infty, \infty, \infty, \frac{R_L (L_L s + \frac{1}{C_L s})}{L_L s + R_L + \frac{1}{C_L s}} \right)$

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

10.146 INVALID-ORDER-146 $Z(s) = \left(\infty, \frac{R_2 (L_2 s + \frac{1}{C_2 s})}{L_2 s + R_2 + \frac{1}{C_2 s}}, \infty, \infty, \infty, R_L \right)$

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

10.147 INVALID-ORDER-147 $Z(s) = \left(\infty, \frac{R_2 (L_2 s + \frac{1}{C_2 s})}{L_2 s + R_2 + \frac{1}{C_2 s}}, \infty, \infty, \infty, \frac{1}{C_L s} \right)$

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

10.148 INVALID-ORDER-148 $Z(s) = \left(\infty, \frac{R_2 (L_2 s + \frac{1}{C_2 s})}{L_2 s + R_2 + \frac{1}{C_2 s}}, \infty, \infty, \infty, \frac{R_L}{C_L R_L s + 1} \right)$

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

$$10.149 \quad \text{INVALID-ORDER-149} \quad Z(s) = \left(\infty, \frac{R_2 \left(L_2 s + \frac{1}{C_2 s} \right)}{L_2 s + R_2 + \frac{1}{C_2 s}}, \infty, \infty, \infty, R_L + \frac{1}{C_L s} \right)$$

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

$$10.150 \quad \text{INVALID-ORDER-150} \quad Z(s) = \left(\infty, \frac{R_2 \left(L_2 s + \frac{1}{C_2 s} \right)}{L_2 s + R_2 + \frac{1}{C_2 s}}, \infty, \infty, \infty, L_L s + \frac{1}{C_L s} \right)$$

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

$$10.151 \quad \text{INVALID-ORDER-151} \quad Z(s) = \left(\infty, \frac{R_2 \left(L_2 s + \frac{1}{C_2 s} \right)}{L_2 s + R_2 + \frac{1}{C_2 s}}, \infty, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} \right)$$

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

$$10.152 \quad \text{INVALID-ORDER-152} \quad Z(s) = \left(\infty, \frac{R_2 \left(L_2 s + \frac{1}{C_2 s} \right)}{L_2 s + R_2 + \frac{1}{C_2 s}}, \infty, \infty, \infty, L_L s + R_L + \frac{1}{C_L s} \right)$$

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

$$10.153 \quad \text{INVALID-ORDER-153} \quad Z(s) = \left(\infty, \frac{R_2 \left(L_2 s + \frac{1}{C_2 s} \right)}{L_2 s + R_2 + \frac{1}{C_2 s}}, \infty, \infty, \infty, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$$

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

$$10.154 \quad \text{INVALID-ORDER-154} \quad Z(s) = \left(\infty, \frac{R_2 \left(L_2 s + \frac{1}{C_2 s} \right)}{L_2 s + R_2 + \frac{1}{C_2 s}}, \infty, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$$

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

$$10.155 \quad \text{INVALID-ORDER-155} \quad Z(s) = \left(\infty, \frac{R_2 \left(L_2 s + \frac{1}{C_2 s} \right)}{L_2 s + R_2 + \frac{1}{C_2 s}}, \infty, \infty, \infty, \frac{R_L \left(L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$$

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

$$10.156 \quad \text{INVALID-ORDER-156} \quad Z(s) = (\infty, \infty, R_3, \infty, \infty, R_L)$$

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

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

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

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

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

10.159 INVALID-ORDER-159 $Z(s) = \left(\infty, \infty, R_3, \infty, \infty, R_L + \frac{1}{C_L s} \right)$

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

10.160 INVALID-ORDER-160 $Z(s) = \left(\infty, \infty, R_3, \infty, \infty, L_L s + \frac{1}{C_L s} \right)$

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

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

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

10.162 INVALID-ORDER-162 $Z(s) = \left(\infty, \infty, R_3, \infty, \infty, L_L s + R_L + \frac{1}{C_L s} \right)$

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

10.163 INVALID-ORDER-163 $Z(s) = \left(\infty, \infty, R_3, \infty, \infty, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$

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

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

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

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

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

$$10.166 \quad \text{INVALID-ORDER-166} \quad Z(s) = \left(\infty, \infty, \frac{1}{C_3 s}, \infty, \infty, R_L \right)$$

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

$$10.167 \quad \text{INVALID-ORDER-167} \quad Z(s) = \left(\infty, \infty, \frac{1}{C_3 s}, \infty, \infty, L_L s + \frac{1}{C_L s} \right)$$

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

$$10.168 \quad \text{INVALID-ORDER-168} \quad Z(s) = \left(\infty, \infty, \frac{1}{C_3 s}, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} \right)$$

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

$$10.169 \quad \text{INVALID-ORDER-169} \quad Z(s) = \left(\infty, \infty, \frac{1}{C_3 s}, \infty, \infty, L_L s + R_L + \frac{1}{C_L s} \right)$$

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

$$10.170 \quad \text{INVALID-ORDER-170} \quad Z(s) = \left(\infty, \infty, \frac{1}{C_3 s}, \infty, \infty, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$$

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

$$10.171 \quad \text{INVALID-ORDER-171} \quad Z(s) = \left(\infty, \infty, \frac{1}{C_3 s}, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$$

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

$$10.172 \quad \text{INVALID-ORDER-172} \quad Z(s) = \left(\infty, \infty, \frac{1}{C_3 s}, \infty, \infty, \frac{R_L (L_L s + \frac{1}{C_L s})}{L_L s + R_L + \frac{1}{C_L s}} \right)$$

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

$$10.173 \quad \text{INVALID-ORDER-173} \quad Z(s) = \left(\infty, \infty, \frac{R_3}{C_3 R_3 s + 1}, \infty, \infty, \frac{1}{C_L s} \right)$$

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

$$10.174 \quad \text{INVALID-ORDER-174} \quad Z(s) = \left(\infty, \infty, \frac{R_3}{C_3 R_3 s + 1}, \infty, \infty, R_L + \frac{1}{C_L s} \right)$$

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

$$10.175 \quad \text{INVALID-ORDER-175} \quad Z(s) = \left(\infty, \infty, \frac{R_3}{C_3 R_3 s + 1}, \infty, \infty, L_L s + \frac{1}{C_L s} \right)$$

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

10.176 INVALID-ORDER-176 $Z(s) = \left(\infty, \infty, \frac{R_3}{C_3 R_3 s + 1}, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} \right)$

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

10.177 INVALID-ORDER-177 $Z(s) = \left(\infty, \infty, \frac{R_3}{C_3 R_3 s + 1}, \infty, \infty, L_L s + R_L + \frac{1}{C_L s} \right)$

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

10.178 INVALID-ORDER-178 $Z(s) = \left(\infty, \infty, \frac{R_3}{C_3 R_3 s + 1}, \infty, \infty, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$

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

10.179 INVALID-ORDER-179 $Z(s) = \left(\infty, \infty, \frac{R_3}{C_3 R_3 s + 1}, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$

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

10.180 INVALID-ORDER-180 $Z(s) = \left(\infty, \infty, \frac{R_3}{C_3 R_3 s + 1}, \infty, \infty, \frac{R_L (L_L s + \frac{1}{C_L s})}{L_L s + R_L + \frac{1}{C_L s}} \right)$

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

$$10.188 \quad \text{INVALID-ORDER-188} \quad Z(s) = \left(\infty, \infty, L_3 s + \frac{1}{C_3 s}, \infty, \infty, \frac{1}{C_L s} \right)$$

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

$$10.189 \quad \text{INVALID-ORDER-189} \quad Z(s) = \left(\infty, \infty, L_3 s + \frac{1}{C_3 s}, \infty, \infty, \frac{R_L}{C_L R_L s + 1} \right)$$

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

$$10.190 \quad \text{INVALID-ORDER-190} \quad Z(s) = \left(\infty, \infty, L_3 s + \frac{1}{C_3 s}, \infty, \infty, R_L + \frac{1}{C_L s} \right)$$

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

$$10.191 \quad \text{INVALID-ORDER-191} \quad Z(s) = \left(\infty, \infty, L_3 s + \frac{1}{C_3 s}, \infty, \infty, L_L s + \frac{1}{C_L s} \right)$$

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

$$10.192 \quad \text{INVALID-ORDER-192} \quad Z(s) = \left(\infty, \infty, L_3 s + \frac{1}{C_3 s}, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} \right)$$

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

10.193 INVALID-ORDER-193 $Z(s) = \left(\infty, \infty, L_3s + \frac{1}{C_3s}, \infty, \infty, L_Ls + R_L + \frac{1}{C_Ls} \right)$

$$H(s) = \frac{g_m (C_3R_3s + 1) (C_LL_Ls^2 + C_LR_Ls + 1)}{s(C_1s + g_m) (C_3C_LL_Ls^2 + C_3C_LR_3s + C_3C_LR_Ls + C_3 + C_L)}$$

10.194 INVALID-ORDER-194 $Z(s) = \left(\infty, \infty, L_3s + \frac{1}{C_3s}, \infty, \infty, \frac{1}{C_Ls + \frac{1}{R_L} + \frac{1}{L_Ls}} \right)$

$$H(s) = \frac{L_LR_Lg_ms(C_3R_3s + 1)}{(C_1s + g_m) (C_3C_LL_LR_3R_Ls^3 + C_3L_LR_3s^2 + C_3L_LR_Ls^2 + C_3R_3R_Ls + C_LL_LR_Ls^2 + L_Ls + R_L)}$$

10.195 INVALID-ORDER-195 $Z(s) = \left(\infty, \infty, L_3s + \frac{1}{C_3s}, \infty, \infty, \frac{L_Ls}{C_LL_Ls^2 + 1} + R_L \right)$

$$H(s) = \frac{g_m (C_3R_3s + 1) (C_LL_LR_Ls^2 + L_Ls + R_L)}{(C_1s + g_m) (C_3C_LL_LR_3s^3 + C_3C_LL_LR_Ls^3 + C_3L_Ls^2 + C_3R_3s + C_3R_Ls + C_LL_Ls^2 + 1)}$$

10.196 INVALID-ORDER-196 $Z(s) = \left(\infty, \infty, L_3s + \frac{1}{C_3s}, \infty, \infty, \frac{R_L \left(L_Ls + \frac{1}{C_Ls} \right)}{L_Ls + R_L + \frac{1}{C_Ls}} \right)$

$$H(s) = \frac{R_Lg_m (C_3R_3s + 1) (C_LL_Ls^2 + 1)}{(C_1s + g_m) (C_3C_LL_LR_3s^3 + C_3C_LL_LR_Ls^3 + C_3C_LR_3R_Ls^2 + C_3R_3s + C_3R_Ls + C_LL_Ls^2 + C_LR_Ls + 1)}$$

10.197 INVALID-ORDER-197 $Z(s) = \left(\infty, \infty, \frac{L_3s}{C_3L_3s^2 + 1}, \infty, \infty, R_L \right)$

$$H(s) = \frac{R_Lg_m (C_3L_3s^2 + 1)}{(C_1s + g_m) (C_3L_3s^2 + C_3R_Ls + 1)}$$

10.198 INVALID-ORDER-198 $Z(s) = \left(\infty, \infty, \frac{L_3 s}{C_3 L_3 s^2 + 1}, \infty, \infty, \frac{1}{C_L s} \right)$

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

10.199 INVALID-ORDER-199 $Z(s) = \left(\infty, \infty, \frac{L_3 s}{C_3 L_3 s^2 + 1}, \infty, \infty, \frac{R_L}{C_L R_L s + 1} \right)$

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

10.200 INVALID-ORDER-200 $Z(s) = \left(\infty, \infty, \frac{L_3 s}{C_3 L_3 s^2 + 1}, \infty, \infty, R_L + \frac{1}{C_L s} \right)$

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

10.201 INVALID-ORDER-201 $Z(s) = \left(\infty, \infty, \frac{L_3 s}{C_3 L_3 s^2 + 1}, \infty, \infty, L_L s + \frac{1}{C_L s} \right)$

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

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

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

10.203 INVALID-ORDER-203 $Z(s) = \left(\infty, \infty, \frac{L_3 s}{C_3 L_3 s^2 + 1}, \infty, \infty, L_L s + R_L + \frac{1}{C_L s} \right)$

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

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

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

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

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

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

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

10.207 INVALID-ORDER-207 $Z(s) = \left(\infty, \infty, L_3 s + R_3 + \frac{1}{C_3 s}, \infty, \infty, R_L \right)$

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

10.208 INVALID-ORDER-208 $Z(s) = \left(\infty, \infty, L_3 s + R_3 + \frac{1}{C_3 s}, \infty, \infty, \frac{1}{C_L s} \right)$

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

10.209 INVALID-ORDER-209 $Z(s) = \left(\infty, \infty, L_3s + R_3 + \frac{1}{C_3s}, \infty, \infty, \frac{R_L}{C_LR_Ls+1} \right)$

$$H(s) = \frac{L_3R_Lg_ms}{(C_1s + g_m)(C_3L_3R_Ls^2 + C_LR_3R_Ls^2 + L_3s + R_L)}$$

10.210 INVALID-ORDER-210 $Z(s) = \left(\infty, \infty, L_3s + R_3 + \frac{1}{C_3s}, \infty, \infty, R_L + \frac{1}{C_Ls} \right)$

$$H(s) = \frac{L_3g_ms(C_LR_Ls + 1)}{(C_1s + g_m)(C_3C_LL_3R_Ls^3 + C_3L_3s^2 + C_LL_3s^2 + C_LR_Ls + 1)}$$

10.211 INVALID-ORDER-211 $Z(s) = \left(\infty, \infty, L_3s + R_3 + \frac{1}{C_3s}, \infty, \infty, L_Ls + \frac{1}{C_Ls} \right)$

$$H(s) = \frac{L_3g_ms(C_LL_Ls^2 + 1)}{(C_1s + g_m)(C_3C_LL_3L_Ls^4 + C_3L_3s^2 + C_LL_3s^2 + C_LL_Ls^2 + 1)}$$

10.212 INVALID-ORDER-212 $Z(s) = \left(\infty, \infty, L_3s + R_3 + \frac{1}{C_3s}, \infty, \infty, \frac{L_Ls}{C_LL_Ls^2+1} \right)$

$$H(s) = \frac{L_3L_Lg_ms}{(C_1s + g_m)(C_3L_3L_Ls^2 + C_LL_3L_Ls^2 + L_3 + L_L)}$$

10.213 INVALID-ORDER-213 $Z(s) = \left(\infty, \infty, L_3s + R_3 + \frac{1}{C_3s}, \infty, \infty, L_Ls + R_L + \frac{1}{C_Ls} \right)$

$$H(s) = \frac{L_3g_ms(C_LL_Ls^2 + C_LR_Ls + 1)}{(C_1s + g_m)(C_3C_LL_3L_Ls^4 + C_3C_LL_3R_Ls^3 + C_3L_3s^2 + C_LL_3s^2 + C_LL_Ls^2 + C_LR_Ls + 1)}$$

10.214 INVALID-ORDER-214 $Z(s) = \left(\infty, \infty, L_3s + R_3 + \frac{1}{C_3s}, \infty, \infty, \frac{1}{C_Ls + \frac{1}{R_L} + \frac{1}{L_Ls}} \right)$

$$H(s) = \frac{L_3L_LR_Lg_ms}{(C_1s + g_m)(C_3L_3L_LR_Ls^2 + C_LL_3L_LR_Ls^2 + L_3L_Ls + L_3R_L + L_LR_L)}$$

10.215 INVALID-ORDER-215 $Z(s) = \left(\infty, \infty, L_3s + R_3 + \frac{1}{C_3s}, \infty, \infty, \frac{L_Ls}{C_LL_Ls^2+1} + R_L \right)$

$$H(s) = \frac{L_3g_ms (C_LL_LR_Ls^2 + L_Ls + R_L)}{(C_1s + g_m)(C_3C_LL_3L_LR_Ls^4 + C_3L_3L_Ls^3 + C_3L_3R_Ls^2 + C_LL_3L_Ls^3 + C_LL_LR_Ls^2 + L_3s + L_Ls + R_L)}$$

10.216 INVALID-ORDER-216 $Z(s) = \left(\infty, \infty, L_3s + R_3 + \frac{1}{C_3s}, \infty, \infty, \frac{R_L(L_Ls + \frac{1}{C_Ls})}{L_Ls + R_L + \frac{1}{C_Ls}} \right)$

$$H(s) = \frac{L_3R_Lg_ms (C_LL_Ls^2 + 1)}{(C_1s + g_m)(C_3C_LL_3L_LR_Ls^4 + C_3L_3R_Ls^2 + C_LL_3L_Ls^3 + C_LL_3R_Ls^2 + C_LL_LR_Ls^2 + L_3s + R_L)}$$

10.217 INVALID-ORDER-217 $Z(s) = \left(\infty, \infty, \frac{1}{C_3s + \frac{1}{R_3} + \frac{1}{L_3s}}, \infty, \infty, R_L \right)$

$$H(s) = \frac{R_Lg_m (C_3L_3s^2 + C_3R_3s + 1)}{(C_1s + g_m)(C_3L_3s^2 + C_3R_3s + C_3R_Ls + 1)}$$

10.218 INVALID-ORDER-218 $Z(s) = \left(\infty, \infty, \frac{1}{C_3s + \frac{1}{R_3} + \frac{1}{L_3s}}, \infty, \infty, \frac{1}{C_Ls} \right)$

$$H(s) = \frac{g_m (C_3L_3s^2 + C_3R_3s + 1)}{s(C_1s + g_m)(C_3C_LL_3s^2 + C_3C_LR_3s + C_3 + C_L)}$$

10.219 INVALID-ORDER-219 $Z(s) = \left(\infty, \infty, \frac{1}{C_3s + \frac{1}{R_3} + \frac{1}{L_3s}}, \infty, \infty, \frac{R_L}{C_LR_Ls+1} \right)$

$$H(s) = \frac{R_Lg_m (C_3L_3s^2 + C_3R_3s + 1)}{(C_1s + g_m)(C_3C_LL_3R_Ls^3 + C_3C_LR_3R_Ls^2 + C_3L_3s^2 + C_3R_3s + C_3R_Ls + C_LR_Ls + 1)}$$

10.220 INVALID-ORDER-220 $Z(s) = \left(\infty, \infty, \frac{1}{C_3s + \frac{1}{R_3} + \frac{1}{L_3s}}, \infty, \infty, R_L + \frac{1}{C_Ls} \right)$

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

10.221 INVALID-ORDER-221 $Z(s) = \left(\infty, \infty, \frac{1}{C_3s + \frac{1}{R_3} + \frac{1}{L_3s}}, \infty, \infty, L_L s + \frac{1}{C_Ls} \right)$

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

10.222 INVALID-ORDER-222 $Z(s) = \left(\infty, \infty, \frac{1}{C_3s + \frac{1}{R_3} + \frac{1}{L_3s}}, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} \right)$

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

10.223 INVALID-ORDER-223 $Z(s) = \left(\infty, \infty, \frac{1}{C_3s + \frac{1}{R_3} + \frac{1}{L_3s}}, \infty, \infty, L_L s + R_L + \frac{1}{C_Ls} \right)$

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

10.224 INVALID-ORDER-224 $Z(s) = \left(\infty, \infty, \frac{1}{C_3s + \frac{1}{R_3} + \frac{1}{L_3s}}, \infty, \infty, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$

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

10.225 INVALID-ORDER-225 $Z(s) = \left(\infty, \infty, \frac{1}{C_3s + \frac{1}{R_3} + \frac{1}{L_3s}}, \infty, \infty, \frac{L_Ls}{C_L L_L s^2 + 1} + R_L \right)$

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

10.226 INVALID-ORDER-226 $Z(s) = \left(\infty, \infty, \frac{1}{C_3s + \frac{1}{R_3} + \frac{1}{L_3s}}, \infty, \infty, \frac{R_L (L_L s + \frac{1}{C_L s})}{L_L s + R_L + \frac{1}{C_L s}} \right)$

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

10.227 INVALID-ORDER-227 $Z(s) = \left(\infty, \infty, \frac{L_3s}{C_3 L_3 s^2 + 1} + R_3, \infty, \infty, R_L \right)$

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

10.228 INVALID-ORDER-228 $Z(s) = \left(\infty, \infty, \frac{L_3s}{C_3 L_3 s^2 + 1} + R_3, \infty, \infty, \frac{1}{C_L s} \right)$

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

10.229 INVALID-ORDER-229 $Z(s) = \left(\infty, \infty, \frac{L_3s}{C_3 L_3 s^2 + 1} + R_3, \infty, \infty, \frac{R_L}{C_L R_L s + 1} \right)$

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

10.230 INVALID-ORDER-230 $Z(s) = \left(\infty, \infty, \frac{L_3s}{C_3 L_3 s^2 + 1} + R_3, \infty, \infty, R_L + \frac{1}{C_L s} \right)$

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

10.247 INVALID-ORDER-247 $Z(s) = (\infty, \infty, \infty, R_4, \infty, R_L)$

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

10.248 INVALID-ORDER-248 $Z(s) = \left(\infty, \infty, \infty, R_4, \infty, \frac{1}{C_L s} \right)$

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

10.249 INVALID-ORDER-249 $Z(s) = \left(\infty, \infty, \infty, R_4, \infty, \frac{R_L}{C_L R_L s + 1} \right)$

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

10.250 INVALID-ORDER-250 $Z(s) = \left(\infty, \infty, \infty, R_4, \infty, R_L + \frac{1}{C_L s} \right)$

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

10.251 INVALID-ORDER-251 $Z(s) = \left(\infty, \infty, \infty, R_4, \infty, L_L s + \frac{1}{C_L s} \right)$

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

10.252 INVALID-ORDER-252 $Z(s) = \left(\infty, \infty, \infty, R_4, \infty, \frac{L_L s}{C_L L_L s^2 + 1} \right)$

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

10.253 INVALID-ORDER-253 $Z(s) = \left(\infty, \infty, \infty, R_4, \infty, L_L s + R_L + \frac{1}{C_L s} \right)$

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

10.254 INVALID-ORDER-254 $Z(s) = \left(\infty, \infty, \infty, R_4, \infty, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$

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

10.255 INVALID-ORDER-255 $Z(s) = \left(\infty, \infty, \infty, R_4, \infty, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$

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

$$10.256 \quad \text{INVALID-ORDER-256} \quad Z(s) = \left(\infty, \infty, \infty, R_4, \infty, \frac{R_L \left(L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$$

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

$$10.257 \quad \text{INVALID-ORDER-257} \quad Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s}, \infty, R_L \right)$$

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

$$10.258 \quad \text{INVALID-ORDER-258} \quad Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s}, \infty, L_L s + \frac{1}{C_L s} \right)$$

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

$$10.259 \quad \text{INVALID-ORDER-259} \quad Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s}, \infty, \frac{L_L s}{C_L L_L s^2 + 1} \right)$$

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

$$10.260 \quad \text{INVALID-ORDER-260} \quad Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s}, \infty, L_L s + R_L + \frac{1}{C_L s} \right)$$

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

10.261 INVALID-ORDER-261 $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s}, \infty, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$

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

10.262 INVALID-ORDER-262 $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s}, \infty, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$

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

10.263 INVALID-ORDER-263 $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4 s}, \infty, \frac{R_L (L_L s + \frac{1}{C_L s})}{L_L s + R_L + \frac{1}{C_L s}} \right)$

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

10.264 INVALID-ORDER-264 $Z(s) = \left(\infty, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, \infty, \frac{1}{C_L s} \right)$

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

10.265 INVALID-ORDER-265 $Z(s) = \left(\infty, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, \infty, R_L + \frac{1}{C_L s} \right)$

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

10.266 INVALID-ORDER-266 $Z(s) = \left(\infty, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, \infty, L_L s + \frac{1}{C_L s} \right)$

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

10.267 INVALID-ORDER-267 $Z(s) = \left(\infty, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, \infty, \frac{L_L s}{C_L L_L s^2 + 1} \right)$

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

10.268 INVALID-ORDER-268 $Z(s) = \left(\infty, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, \infty, L_L s + R_L + \frac{1}{C_L s} \right)$

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

10.269 INVALID-ORDER-269 $Z(s) = \left(\infty, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, \infty, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$

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

10.270 INVALID-ORDER-270 $Z(s) = \left(\infty, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, \infty, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$

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

10.271 INVALID-ORDER-271 $Z(s) = \left(\infty, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, \infty, \frac{R_L \left(L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$

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

10.272 INVALID-ORDER-272 $Z(s) = \left(\infty, \infty, \infty, R_4 + \frac{1}{C_4 s}, \infty, R_L + \frac{1}{C_L s} \right)$

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

10.273 INVALID-ORDER-273 $Z(s) = \left(\infty, \infty, \infty, R_4 + \frac{1}{C_4 s}, \infty, L_L s + \frac{1}{C_L s} \right)$

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

10.274 INVALID-ORDER-274 $Z(s) = \left(\infty, \infty, \infty, R_4 + \frac{1}{C_4 s}, \infty, \frac{L_L s}{C_L L_L s^2 + 1} \right)$

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

10.275 INVALID-ORDER-275 $Z(s) = \left(\infty, \infty, \infty, R_4 + \frac{1}{C_4 s}, \infty, L_L s + R_L + \frac{1}{C_L s} \right)$

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

10.276 INVALID-ORDER-276 $Z(s) = \left(\infty, \infty, \infty, R_4 + \frac{1}{C_4 s}, \infty, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$

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

10.277 INVALID-ORDER-277 $Z(s) = \left(\infty, \infty, \infty, R_4 + \frac{1}{C_4 s}, \infty, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$

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

10.278 INVALID-ORDER-278 $Z(s) = \left(\infty, \infty, \infty, R_4 + \frac{1}{C_4 s}, \infty, \frac{R_L (L_L s + \frac{1}{C_L s})}{L_L s + R_L + \frac{1}{C_L s}} \right)$

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

10.279 INVALID-ORDER-279 $Z(s) = \left(\infty, \infty, \infty, L_4 s + \frac{1}{C_4 s}, \infty, \frac{1}{C_L s} \right)$

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

10.280 INVALID-ORDER-280 $Z(s) = \left(\infty, \infty, \infty, L_4 s + \frac{1}{C_4 s}, \infty, \frac{R_L}{C_L R_L s + 1} \right)$

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

10.281 INVALID-ORDER-281 $Z(s) = \left(\infty, \infty, \infty, L_4s + \frac{1}{C_4s}, \infty, R_L + \frac{1}{C_Ls} \right)$

$$H(s) = \frac{R_1g_m(C_3R_3s+1)(C_LR_Ls+1)}{s(C_1R_1s+R_1g_m+1)(C_3C_LR_3s+C_3C_LR_Ls+C_3+C_L)}$$

10.282 INVALID-ORDER-282 $Z(s) = \left(\infty, \infty, \infty, L_4s + \frac{1}{C_4s}, \infty, L_Ls + \frac{1}{C_Ls} \right)$

$$H(s) = \frac{R_1g_m(C_3R_3s+1)(C_LL_Ls^2+1)}{s(C_1R_1s+R_1g_m+1)(C_3C_LL_Ls^2+C_3C_LR_3s+C_3+C_L)}$$

10.283 INVALID-ORDER-283 $Z(s) = \left(\infty, \infty, \infty, L_4s + \frac{1}{C_4s}, \infty, \frac{L_Ls}{C_LL_Ls^2+1} \right)$

$$H(s) = \frac{L_LR_1g_ms(C_3R_3s+1)}{(C_1R_1s+R_1g_m+1)(C_3C_LL_LR_3s^3+C_3L_Ls^2+C_3R_3s+C_LL_Ls^2+1)}$$

10.284 INVALID-ORDER-284 $Z(s) = \left(\infty, \infty, \infty, L_4s + \frac{1}{C_4s}, \infty, L_Ls + R_L + \frac{1}{C_Ls} \right)$

$$H(s) = \frac{R_1g_m(C_3R_3s+1)(C_LL_Ls^2+C_LR_Ls+1)}{s(C_1R_1s+R_1g_m+1)(C_3C_LL_Ls^2+C_3C_LR_3s+C_3C_LR_Ls+C_3+C_L)}$$

10.285 INVALID-ORDER-285 $Z(s) = \left(\infty, \infty, \infty, L_4s + \frac{1}{C_4s}, \infty, \frac{1}{C_Ls + \frac{1}{R_L} + \frac{1}{L_Ls}} \right)$

$$H(s) = \frac{L_LR_1R_Lg_ms(C_3R_3s+1)}{(C_1R_1s+R_1g_m+1)(C_3C_LL_LR_3R_Ls^3+C_3L_LR_3s^2+C_3L_LR_Ls^2+C_3R_3R_Ls+C_LL_LR_Ls^2+L_Ls+R_L)}$$

10.286 INVALID-ORDER-286 $Z(s) = \left(\infty, \infty, \infty, L_4s + \frac{1}{C_4s}, \infty, \frac{L_Ls}{C_LL_Ls^2+1} + R_L \right)$

$$H(s) = \frac{R_1g_m(C_3R_3s+1)(C_LL_LR_Ls^2+L_Ls+R_L)}{(C_1R_1s+R_1g_m+1)(C_3C_LL_LR_3s^3+C_3C_LL_LR_Ls^3+C_3L_Ls^2+C_3R_3s+C_3R_Ls+C_LL_Ls^2+1)}$$

$$10.287 \quad \text{INVALID-ORDER-287} \quad Z(s) = \left(\infty, \infty, \infty, L_4 s + \frac{1}{C_4 s}, \infty, \frac{R_L \left(L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$$

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

$$10.288 \quad \text{INVALID-ORDER-288} \quad Z(s) = \left(\infty, \infty, \infty, \frac{L_4 s}{C_4 L_4 s^2 + 1}, \infty, R_L \right)$$

$$H(s) = \frac{R_1 R_L g_m (C_3 L_3 s^2 + 1)}{(C_1 R_1 s + R_1 g_m + 1) (C_3 L_3 s^2 + C_3 R_L s + 1)}$$

$$10.289 \quad \text{INVALID-ORDER-289} \quad Z(s) = \left(\infty, \infty, \infty, \frac{L_4 s}{C_4 L_4 s^2 + 1}, \infty, \frac{1}{C_L s} \right)$$

$$H(s) = \frac{R_1 g_m (C_3 L_3 s^2 + 1)}{s (C_1 R_1 s + R_1 g_m + 1) (C_3 C_L L_3 s^2 + C_3 + C_L)}$$

$$10.290 \quad \text{INVALID-ORDER-290} \quad Z(s) = \left(\infty, \infty, \infty, \frac{L_4 s}{C_4 L_4 s^2 + 1}, \infty, \frac{R_L}{C_L R_L s + 1} \right)$$

$$H(s) = \frac{R_1 R_L g_m (C_3 L_3 s^2 + 1)}{(C_1 R_1 s + R_1 g_m + 1) (C_3 C_L L_3 R_L s^3 + C_3 L_3 s^2 + C_3 R_L s + C_L R_L s + 1)}$$

$$10.291 \quad \text{INVALID-ORDER-291} \quad Z(s) = \left(\infty, \infty, \infty, \frac{L_4 s}{C_4 L_4 s^2 + 1}, \infty, R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{R_1 g_m (C_3 L_3 s^2 + 1) (C_L R_L s + 1)}{s (C_1 R_1 s + R_1 g_m + 1) (C_3 C_L L_3 s^2 + C_3 C_L R_L s + C_3 + C_L)}$$

10.292 INVALID-ORDER-292 $Z(s) = \left(\infty, \infty, \infty, \frac{L_4 s}{C_4 L_4 s^2 + 1}, \infty, L_L s + \frac{1}{C_L s} \right)$

$$H(s) = \frac{R_1 g_m (C_3 L_3 s^2 + 1) (C_L L_L s^2 + 1)}{s (C_1 R_1 s + R_1 g_m + 1) (C_3 C_L L_3 s^2 + C_3 C_L L_L s^2 + C_3 + C_L)}$$

10.293 INVALID-ORDER-293 $Z(s) = \left(\infty, \infty, \infty, \frac{L_4 s}{C_4 L_4 s^2 + 1}, \infty, \frac{L_L s}{C_L L_L s^2 + 1} \right)$

$$H(s) = \frac{L_L R_1 g_m s (C_3 L_3 s^2 + 1)}{(C_1 R_1 s + R_1 g_m + 1) (C_3 C_L L_3 L_L s^4 + C_3 L_3 s^2 + C_3 L_L s^2 + C_L L_L s^2 + 1)}$$

10.294 INVALID-ORDER-294 $Z(s) = \left(\infty, \infty, \infty, \frac{L_4 s}{C_4 L_4 s^2 + 1}, \infty, L_L s + R_L + \frac{1}{C_L s} \right)$

$$H(s) = \frac{R_1 g_m (C_3 L_3 s^2 + 1) (C_L L_L s^2 + C_L R_L s + 1)}{s (C_1 R_1 s + R_1 g_m + 1) (C_3 C_L L_3 s^2 + C_3 C_L L_L s^2 + C_3 C_L R_L s + C_3 + C_L)}$$

10.295 INVALID-ORDER-295 $Z(s) = \left(\infty, \infty, \infty, \frac{L_4 s}{C_4 L_4 s^2 + 1}, \infty, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$

$$H(s) = \frac{L_L R_1 R_L g_m s (C_3 L_3 s^2 + 1)}{(C_1 R_1 s + R_1 g_m + 1) (C_3 C_L L_3 L_L R_L s^4 + C_3 L_3 L_L s^3 + C_3 L_3 R_L s^2 + C_3 L_L R_L s^2 + C_L L_L R_L s^2 + L_L s + R_L)}$$

10.296 INVALID-ORDER-296 $Z(s) = \left(\infty, \infty, \infty, \frac{L_4 s}{C_4 L_4 s^2 + 1}, \infty, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$

$$H(s) = \frac{R_1 g_m (C_3 L_3 s^2 + 1) (C_L L_L R_L s^2 + L_L s + R_L)}{(C_1 R_1 s + R_1 g_m + 1) (C_3 C_L L_3 L_L s^4 + C_3 C_L L_L R_L s^3 + C_3 L_3 s^2 + C_3 L_L s^2 + C_3 R_L s + C_L L_L s^2 + 1)}$$

10.297 INVALID-ORDER-297 $Z(s) = \left(\infty, \infty, \infty, \frac{L_4 s}{C_4 L_4 s^2 + 1}, \infty, \frac{R_L \left(L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$

$$H(s) = \frac{R_1 R_L g_m (C_3 L_3 s^2 + 1) (C_L L_L s^2 + 1)}{(C_1 R_1 s + R_1 g_m + 1) (C_3 C_L L_3 L_L s^4 + C_3 C_L L_3 R_L s^3 + C_3 C_L L_L R_L s^3 + C_3 L_3 s^2 + C_3 R_L s + C_L L_L s^2 + C_L R_L s + 1)}$$

10.298 INVALID-ORDER-298 $Z(s) = \left(\infty, \infty, \infty, L_4 s + R_4 + \frac{1}{C_4 s}, \infty, R_L \right)$

$$H(s) = \frac{L_3 R_1 R_L g_m s}{(C_1 R_1 s + R_1 g_m + 1) (C_3 L_3 R_L s^2 + L_3 s + R_L)}$$

10.299 INVALID-ORDER-299 $Z(s) = \left(\infty, \infty, \infty, L_4 s + R_4 + \frac{1}{C_4 s}, \infty, \frac{1}{C_L s} \right)$

$$H(s) = \frac{L_3 R_1 g_m s}{(C_1 R_1 s + R_1 g_m + 1) (C_3 L_3 s^2 + C_L L_3 s^2 + 1)}$$

10.300 INVALID-ORDER-300 $Z(s) = \left(\infty, \infty, \infty, L_4 s + R_4 + \frac{1}{C_4 s}, \infty, \frac{R_L}{C_L R_L s + 1} \right)$

$$H(s) = \frac{L_3 R_1 R_L g_m s}{(C_1 R_1 s + R_1 g_m + 1) (C_3 L_3 R_L s^2 + C_L L_3 R_L s^2 + L_3 s + R_L)}$$

10.301 INVALID-ORDER-301 $Z(s) = \left(\infty, \infty, \infty, L_4 s + R_4 + \frac{1}{C_4 s}, \infty, R_L + \frac{1}{C_L s} \right)$

$$H(s) = \frac{L_3 R_1 g_m s (C_L R_L s + 1)}{(C_1 R_1 s + R_1 g_m + 1) (C_3 C_L L_3 R_L s^3 + C_3 L_3 s^2 + C_L L_3 s^2 + C_L R_L s + 1)}$$

10.302 INVALID-ORDER-302 $Z(s) = \left(\infty, \infty, \infty, L_4 s + R_4 + \frac{1}{C_4 s}, \infty, L_L s + \frac{1}{C_L s} \right)$

$$H(s) = \frac{L_3 R_1 g_m s (C_L L_L s^2 + 1)}{(C_1 R_1 s + R_1 g_m + 1) (C_3 C_L L_3 L_L s^4 + C_3 L_3 s^2 + C_L L_3 s^2 + C_L L_L s^2 + 1)}$$

10.303 INVALID-ORDER-303 $Z(s) = \left(\infty, \infty, \infty, L_4s + R_4 + \frac{1}{C_4s}, \infty, \frac{L_Ls}{C_LL_Ls^2+1} \right)$

$$H(s) = \frac{L_3L_LR_1g_ms}{(C_1R_1s + R_1g_m + 1)(C_3L_3L_Ls^2 + C_LL_3L_Ls^2 + L_3 + L_L)}$$

10.304 INVALID-ORDER-304 $Z(s) = \left(\infty, \infty, \infty, L_4s + R_4 + \frac{1}{C_4s}, \infty, L_Ls + R_L + \frac{1}{C_Ls} \right)$

$$H(s) = \frac{L_3R_1g_ms(C_LL_Ls^2 + C_LR_Ls + 1)}{(C_1R_1s + R_1g_m + 1)(C_3C_LL_3L_Ls^4 + C_3C_LL_3R_Ls^3 + C_3L_3s^2 + C_LL_3s^2 + C_LL_Ls^2 + C_LR_Ls + 1)}$$

10.305 INVALID-ORDER-305 $Z(s) = \left(\infty, \infty, \infty, L_4s + R_4 + \frac{1}{C_4s}, \infty, \frac{1}{C_Ls + \frac{1}{R_L} + \frac{1}{L_Ls}} \right)$

$$H(s) = \frac{L_3L_LR_1R_Lg_ms}{(C_1R_1s + R_1g_m + 1)(C_3L_3L_LR_Ls^2 + C_LL_3L_LR_Ls^2 + L_3L_Ls + L_3R_L + L_LR_L)}$$

10.306 INVALID-ORDER-306 $Z(s) = \left(\infty, \infty, \infty, L_4s + R_4 + \frac{1}{C_4s}, \infty, \frac{L_Ls}{C_LL_Ls^2+1} + R_L \right)$

$$H(s) = \frac{L_3R_1g_ms(C_LL_LR_Ls^2 + L_Ls + R_L)}{(C_1R_1s + R_1g_m + 1)(C_3C_LL_3L_LR_Ls^4 + C_3L_3L_Ls^3 + C_3L_3R_Ls^2 + C_LL_3L_Ls^3 + C_LL_LR_Ls^2 + L_3s + L_Ls + R_L)}$$

10.307 INVALID-ORDER-307 $Z(s) = \left(\infty, \infty, \infty, L_4s + R_4 + \frac{1}{C_4s}, \infty, \frac{R_L(L_Ls + \frac{1}{C_Ls})}{L_Ls + R_L + \frac{1}{C_Ls}} \right)$

$$H(s) = \frac{L_3R_1R_Lg_ms(C_LL_Ls^2 + 1)}{(C_1R_1s + R_1g_m + 1)(C_3C_LL_3L_LR_Ls^4 + C_3L_3R_Ls^2 + C_LL_3L_Ls^3 + C_LL_3R_Ls^2 + C_LL_LR_Ls^2 + L_3s + R_L)}$$

10.308 INVALID-ORDER-308 $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4s + \frac{1}{R_4} + \frac{1}{L_4s}}, \infty, R_L \right)$

$$H(s) = \frac{R_1 R_L g_m (C_3 L_3 s^2 + C_3 R_3 s + 1)}{(C_1 R_1 s + R_1 g_m + 1) (C_3 L_3 s^2 + C_3 R_3 s + C_3 R_L s + 1)}$$

10.309 INVALID-ORDER-309 $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4s + \frac{1}{R_4} + \frac{1}{L_4s}}, \infty, \frac{1}{C_L s} \right)$

$$H(s) = \frac{R_1 g_m (C_3 L_3 s^2 + C_3 R_3 s + 1)}{s (C_1 R_1 s + R_1 g_m + 1) (C_3 C_L L_3 s^2 + C_3 C_L R_3 s + C_3 + C_L)}$$

10.310 INVALID-ORDER-310 $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4s + \frac{1}{R_4} + \frac{1}{L_4s}}, \infty, \frac{R_L}{C_L R_L s + 1} \right)$

$$H(s) = \frac{R_1 R_L g_m (C_3 L_3 s^2 + C_3 R_3 s + 1)}{(C_1 R_1 s + R_1 g_m + 1) (C_3 C_L L_3 R_L s^3 + C_3 C_L R_3 R_L s^2 + C_3 L_3 s^2 + C_3 R_3 s + C_3 R_L s + C_L R_L s + 1)}$$

10.311 INVALID-ORDER-311 $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4s + \frac{1}{R_4} + \frac{1}{L_4s}}, \infty, R_L + \frac{1}{C_L s} \right)$

$$H(s) = \frac{R_1 g_m (C_L R_L s + 1) (C_3 L_3 s^2 + C_3 R_3 s + 1)}{s (C_1 R_1 s + R_1 g_m + 1) (C_3 C_L L_3 s^2 + C_3 C_L R_3 s + C_3 C_L R_L s + C_3 + C_L)}$$

10.312 INVALID-ORDER-312 $Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4s + \frac{1}{R_4} + \frac{1}{L_4s}}, \infty, L_L s + \frac{1}{C_L s} \right)$

$$H(s) = \frac{R_1 g_m (C_L L_L s^2 + 1) (C_3 L_3 s^2 + C_3 R_3 s + 1)}{s (C_1 R_1 s + R_1 g_m + 1) (C_3 C_L L_3 s^2 + C_3 C_L L_L s^2 + C_3 C_L R_3 s + C_3 + C_L)}$$

$$10.313 \quad \text{INVALID-ORDER-313} \quad Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4s + \frac{1}{R_4} + \frac{1}{L_4s}}, \infty, \frac{L_Ls}{C_L L_L s^2 + 1} \right)$$

$$H(s) = \frac{L_L R_1 g_m s (C_3 L_3 s^2 + C_3 R_3 s + 1)}{(C_1 R_1 s + R_1 g_m + 1) (C_3 C_L L_3 L_L s^4 + C_3 C_L L_L R_3 s^3 + C_3 L_3 s^2 + C_3 L_L s^2 + C_3 R_3 s + C_L L_L s^2 + 1)}$$

$$10.314 \quad \text{INVALID-ORDER-314} \quad Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4s + \frac{1}{R_4} + \frac{1}{L_4s}}, \infty, L_L s + R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{R_1 g_m (C_3 L_3 s^2 + C_3 R_3 s + 1) (C_L L_L s^2 + C_L R_L s + 1)}{s (C_1 R_1 s + R_1 g_m + 1) (C_3 C_L L_3 s^2 + C_3 C_L L_L s^2 + C_3 C_L R_3 s + C_3 C_L R_L s + C_3 + C_L)}$$

$$10.315 \quad \text{INVALID-ORDER-315} \quad Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4s + \frac{1}{R_4} + \frac{1}{L_4s}}, \infty, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$$

$$H(s) = \frac{L_L R_1 R_L g_m s (C_3 L_3 s^2 + C_3 R_3 s + 1)}{(C_1 R_1 s + R_1 g_m + 1) (C_3 C_L L_3 L_L R_L s^4 + C_3 C_L L_L R_3 R_L s^3 + C_3 L_3 L_L s^3 + C_3 L_3 R_L s^2 + C_3 L_L R_3 s^2 + C_3 L_L R_L s^2 + C_3 R_3 R_L s + C_L L_L R_L s^2 + L_L s + R_L)}$$

$$10.316 \quad \text{INVALID-ORDER-316} \quad Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4s + \frac{1}{R_4} + \frac{1}{L_4s}}, \infty, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$$

$$H(s) = \frac{R_1 g_m (C_3 L_3 s^2 + C_3 R_3 s + 1) (C_L L_L R_L s^2 + L_L s + R_L)}{(C_1 R_1 s + R_1 g_m + 1) (C_3 C_L L_3 L_L s^4 + C_3 C_L L_L R_3 s^3 + C_3 C_L L_L R_L s^3 + C_3 L_3 s^2 + C_3 L_L s^2 + C_3 R_3 s + C_3 R_L s + C_L L_L s^2 + 1)}$$

$$10.317 \quad \text{INVALID-ORDER-317} \quad Z(s) = \left(\infty, \infty, \infty, \frac{1}{C_4s + \frac{1}{R_4} + \frac{1}{L_4s}}, \infty, \frac{R_L (L_L s + \frac{1}{C_L s})}{L_L s + R_L + \frac{1}{C_L s}} \right)$$

$$H(s) = \frac{R_1 R_L g_m (C_L L_L s^2 + 1) (C_3 L_3 s^2 + C_3 R_3 s + 1)}{(C_1 R_1 s + R_1 g_m + 1) (C_3 C_L L_3 L_L s^4 + C_3 C_L L_3 R_L s^3 + C_3 C_L L_L R_3 s^3 + C_3 C_L L_L R_L s^3 + C_3 C_L R_3 R_L s^2 + C_3 L_3 s^2 + C_3 R_3 s + C_3 R_L s + C_L L_L s^2 + C_L R_L s + 1)}$$

10.318 INVALID-ORDER-318 $Z(s) = \left(\infty, \infty, \infty, \frac{L_4 s}{C_4 L_4 s^2 + 1} + R_4, \infty, R_L \right)$

$$H(s) = \frac{L_3 R_1 R_3 R_L g_m s}{(C_1 R_1 s + R_1 g_m + 1)(C_3 L_3 R_3 R_L s^2 + L_3 R_3 s + L_3 R_L s + R_3 R_L)}$$

10.319 INVALID-ORDER-319 $Z(s) = \left(\infty, \infty, \infty, \frac{L_4 s}{C_4 L_4 s^2 + 1} + R_4, \infty, \frac{1}{C_L s} \right)$

$$H(s) = \frac{L_3 R_1 R_3 g_m s}{(C_1 R_1 s + R_1 g_m + 1)(C_3 L_3 R_3 s^2 + C_L L_3 R_3 s^2 + L_3 s + R_3)}$$

10.320 INVALID-ORDER-320 $Z(s) = \left(\infty, \infty, \infty, \frac{L_4 s}{C_4 L_4 s^2 + 1} + R_4, \infty, \frac{R_L}{C_L R_L s + 1} \right)$

$$H(s) = \frac{L_3 R_1 R_3 R_L g_m s}{(C_1 R_1 s + R_1 g_m + 1)(C_3 L_3 R_3 R_L s^2 + C_L L_3 R_3 R_L s^2 + L_3 R_3 s + L_3 R_L s + R_3 R_L)}$$

10.321 INVALID-ORDER-321 $Z(s) = \left(\infty, \infty, \infty, \frac{L_4 s}{C_4 L_4 s^2 + 1} + R_4, \infty, R_L + \frac{1}{C_L s} \right)$

$$H(s) = \frac{L_3 R_1 R_3 g_m s (C_L R_L s + 1)}{(C_1 R_1 s + R_1 g_m + 1)(C_3 C_L L_3 R_3 R_L s^3 + C_3 L_3 R_3 s^2 + C_L L_3 R_3 s^2 + C_L L_3 R_L s^2 + C_L R_3 R_L s + L_3 s + R_3)}$$

10.322 INVALID-ORDER-322 $Z(s) = \left(\infty, \infty, \infty, \frac{L_4 s}{C_4 L_4 s^2 + 1} + R_4, \infty, L_L s + \frac{1}{C_L s} \right)$

$$H(s) = \frac{L_3 R_1 R_3 g_m s (C_L L_L s^2 + 1)}{(C_1 R_1 s + R_1 g_m + 1)(C_3 C_L L_3 L_L R_3 s^4 + C_3 L_3 R_3 s^2 + C_L L_3 L_L s^3 + C_L L_3 R_3 s^2 + C_L L_L R_3 s^2 + L_3 s + R_3)}$$

10.323 INVALID-ORDER-323 $Z(s) = \left(\infty, \infty, \infty, \frac{L_4 s}{C_4 L_4 s^2 + 1} + R_4, \infty, \frac{L_L s}{C_L L_L s^2 + 1} \right)$

$$H(s) = \frac{L_3 L_L R_1 R_3 g_m s}{(C_1 R_1 s + R_1 g_m + 1)(C_3 L_3 L_L R_3 s^2 + C_L L_3 L_L R_3 s^2 + L_3 L_L s + L_3 R_3 + L_L R_3)}$$

10.324 INVALID-ORDER-324 $Z(s) = \left(\infty, \infty, \infty, \frac{L_4 s}{C_4 L_4 s^2 + 1} + R_4, \infty, L_L s + R_L + \frac{1}{C_L s} \right)$

$$H(s) = \frac{L_3 R_1 R_3 g_m s (C_L L_L s^2 + C_L R_L s + 1)}{(C_1 R_1 s + R_1 g_m + 1) (C_3 C_L L_3 L_L R_3 s^4 + C_3 C_L L_3 R_3 R_L s^3 + C_3 L_3 R_3 s^2 + C_L L_3 L_L s^3 + C_L L_3 R_3 s^2 + C_L L_3 R_L s^2 + C_L L_L R_3 s^2 + C_L R_3 R_L s + L_3 s + R_3)}$$

10.325 INVALID-ORDER-325 $Z(s) = \left(\infty, \infty, \infty, \frac{L_4 s}{C_4 L_4 s^2 + 1} + R_4, \infty, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$

$$H(s) = \frac{L_3 L_L R_1 R_3 R_L g_m s}{(C_1 R_1 s + R_1 g_m + 1) (C_3 L_3 L_L R_3 R_L s^2 + C_L L_3 L_L R_3 R_L s^2 + L_3 L_L R_3 s + L_3 L_L R_L s + L_3 R_3 R_L + L_L R_3 R_L)}$$

10.326 INVALID-ORDER-326 $Z(s) = \left(\infty, \infty, \infty, \frac{L_4 s}{C_4 L_4 s^2 + 1} + R_4, \infty, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$

$$H(s) = \frac{L_3 R_1 R_3 g_m s (C_L L_L R_L s^2 + L_L s + R_L)}{(C_1 R_1 s + R_1 g_m + 1) (C_3 C_L L_3 L_L R_3 R_L s^4 + C_3 L_3 L_L R_3 s^3 + C_3 L_3 R_3 R_L s^2 + C_L L_3 L_L R_3 s^3 + C_L L_3 L_L R_L s^3 + C_L L_L R_3 R_L s^2 + L_3 L_L s^2 + L_3 R_3 s + L_3 R_L s + L_L R_3 s + R_3 R_L)}$$

10.327 INVALID-ORDER-327 $Z(s) = \left(\infty, \infty, \infty, \frac{L_4 s}{C_4 L_4 s^2 + 1} + R_4, \infty, \frac{R_L \left(L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$

$$H(s) = \frac{L_3 R_1 R_3 R_L g_m s (C_L L_L s^2 + 1)}{(C_1 R_1 s + R_1 g_m + 1) (C_3 C_L L_3 L_L R_3 R_L s^4 + C_3 L_3 R_3 R_L s^2 + C_L L_3 L_L R_3 s^3 + C_L L_3 L_L R_L s^3 + C_L L_3 R_3 R_L s^2 + C_L L_L R_3 R_L s^2 + L_3 R_3 s + L_3 R_L s + R_3 R_L)}$$

10.328 INVALID-ORDER-328 $Z(s) = \left(\infty, \infty, \infty, \frac{R_4 \left(L_4 s + \frac{1}{C_4 s} \right)}{L_4 s + R_4 + \frac{1}{C_4 s}}, \infty, R_L \right)$

$$H(s) = \frac{R_1 R_L g_m (C_3 L_3 R_3 s^2 + L_3 s + R_3)}{(C_1 R_1 s + R_1 g_m + 1) (C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + L_3 s + R_3 + R_L)}$$

$$10.329 \quad \text{INVALID-ORDER-329} \quad Z(s) = \left(\infty, \infty, \infty, \frac{R_4 \left(L_4 s + \frac{1}{C_4 s} \right)}{L_4 s + R_4 + \frac{1}{C_4 s}}, \infty, \frac{1}{C_L s} \right)$$

$$H(s) = \frac{R_1 g_m (C_3 L_3 R_3 s^2 + L_3 s + R_3)}{(C_1 R_1 s + R_1 g_m + 1) (C_3 C_L L_3 R_3 s^3 + C_3 L_3 s^2 + C_L L_3 s^2 + C_L R_3 s + 1)}$$

$$10.330 \quad \text{INVALID-ORDER-330} \quad Z(s) = \left(\infty, \infty, \infty, \frac{R_4 \left(L_4 s + \frac{1}{C_4 s} \right)}{L_4 s + R_4 + \frac{1}{C_4 s}}, \infty, \frac{R_L}{C_L R_L s + 1} \right)$$

$$H(s) = \frac{R_1 R_L g_m (C_3 L_3 R_3 s^2 + L_3 s + R_3)}{(C_1 R_1 s + R_1 g_m + 1) (C_3 C_L L_3 R_3 R_L s^3 + C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + C_L L_3 R_L s^2 + C_L R_3 R_L s + L_3 s + R_3 + R_L)}$$

$$10.331 \quad \text{INVALID-ORDER-331} \quad Z(s) = \left(\infty, \infty, \infty, \frac{R_4 \left(L_4 s + \frac{1}{C_4 s} \right)}{L_4 s + R_4 + \frac{1}{C_4 s}}, \infty, R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{R_1 g_m (C_L R_L s + 1) (C_3 L_3 R_3 s^2 + L_3 s + R_3)}{(C_1 R_1 s + R_1 g_m + 1) (C_3 C_L L_3 R_3 s^3 + C_3 C_L L_3 R_L s^3 + C_3 L_3 s^2 + C_L L_3 s^2 + C_L R_3 s + C_L R_L s + 1)}$$

$$10.332 \quad \text{INVALID-ORDER-332} \quad Z(s) = \left(\infty, \infty, \infty, \frac{R_4 \left(L_4 s + \frac{1}{C_4 s} \right)}{L_4 s + R_4 + \frac{1}{C_4 s}}, \infty, L_L s + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{R_1 g_m (C_L L_L s^2 + 1) (C_3 L_3 R_3 s^2 + L_3 s + R_3)}{(C_1 R_1 s + R_1 g_m + 1) (C_3 C_L L_3 L_L s^4 + C_3 C_L L_3 R_3 s^3 + C_3 L_3 s^2 + C_L L_3 s^2 + C_L L_L s^2 + C_L R_3 s + 1)}$$

$$10.333 \quad \text{INVALID-ORDER-333} \quad Z(s) = \left(\infty, \infty, \infty, \frac{R_4 \left(L_4 s + \frac{1}{C_4 s} \right)}{L_4 s + R_4 + \frac{1}{C_4 s}}, \infty, \frac{L_L s}{C_L L_L s^2 + 1} \right)$$

$$H(s) = \frac{L_L R_1 g_m s (C_3 L_3 R_3 s^2 + L_3 s + R_3)}{(C_1 R_1 s + R_1 g_m + 1) (C_3 C_L L_3 L_L R_3 s^4 + C_3 L_3 L_L s^3 + C_3 L_3 R_3 s^2 + C_L L_3 L_L s^3 + C_L L_L R_3 s^2 + L_3 s + L_L s + R_3)}$$

10.334 INVALID-ORDER-334 $Z(s) = \left(\infty, \infty, \infty, \frac{R_4 \left(L_4 s + \frac{1}{C_4 s} \right)}{L_4 s + R_4 + \frac{1}{C_4 s}}, \infty, L_L s + R_L + \frac{1}{C_L s} \right)$

$$H(s) = \frac{R_1 g_m (C_L L_L s^2 + C_L R_L s + 1) (C_3 L_3 R_3 s^2 + L_3 s + R_3)}{(C_1 R_1 s + R_1 g_m + 1) (C_3 C_L L_3 L_L s^4 + C_3 C_L L_3 R_3 s^3 + C_3 C_L L_3 R_L s^3 + C_3 L_3 s^2 + C_L L_3 s^2 + C_L L_L s^2 + C_L R_3 s + C_L R_L s + 1)}$$

10.335 INVALID-ORDER-335 $Z(s) = \left(\infty, \infty, \infty, \frac{R_4 \left(L_4 s + \frac{1}{C_4 s} \right)}{L_4 s + R_4 + \frac{1}{C_4 s}}, \infty, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$

$$H(s) = \frac{L_L R_1 R_L g_m s (C_3 L_3 R_3 s^2 + L_3 s + R_3)}{(C_1 R_1 s + R_1 g_m + 1) (C_3 C_L L_3 L_L R_3 R_L s^4 + C_3 L_3 L_L R_3 s^3 + C_3 L_3 L_L R_L s^3 + C_3 L_3 R_3 R_L s^2 + C_L L_3 L_L R_L s^3 + C_L L_L R_3 R_L s^2 + L_3 L_L s^2 + L_3 R_L s + L_L R_3 s + L_L R_L s + R_3 R_L)}$$

10.336 INVALID-ORDER-336 $Z(s) = \left(\infty, \infty, \infty, \frac{R_4 \left(L_4 s + \frac{1}{C_4 s} \right)}{L_4 s + R_4 + \frac{1}{C_4 s}}, \infty, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$

$$H(s) = \frac{R_1 g_m (C_3 L_3 R_3 s^2 + L_3 s + R_3) (C_L L_L R_L s^2 + L_L s + R_L)}{(C_1 R_1 s + R_1 g_m + 1) (C_3 C_L L_3 L_L R_3 s^4 + C_3 C_L L_3 L_L R_L s^4 + C_3 L_3 L_L s^3 + C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + C_L L_3 L_L s^3 + C_L L_L R_3 s^2 + C_L L_L R_L s^2 + L_3 s + L_L s + R_3 + R_L)}$$

10.337 INVALID-ORDER-337 $Z(s) = \left(\infty, \infty, \infty, \frac{R_4 \left(L_4 s + \frac{1}{C_4 s} \right)}{L_4 s + R_4 + \frac{1}{C_4 s}}, \infty, \frac{R_L \left(L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$

$$H(s) = \frac{R_1 R_L g_m (C_L L_L s^2 + 1) (C_3 L_3 R_3 s^2 + L_3 s + R_3)}{(C_1 R_1 s + R_1 g_m + 1) (C_3 C_L L_3 L_L R_3 s^4 + C_3 C_L L_3 L_L R_L s^4 + C_3 C_L L_3 R_3 R_L s^3 + C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + C_L L_3 L_L s^3 + C_L L_3 R_L s^2 + C_L L_L R_3 s^2 + C_L L_L R_L s^2 + C_L R_3 R_L)}$$

10.338 INVALID-ORDER-338 $Z(s) = (\infty, \infty, \infty, \infty, R_4, R_L)$

$$H(s) = \frac{R_1 R_3 R_L g_m (C_3 L_3 s^2 + 1)}{(C_1 R_1 s + R_1 g_m + 1) (C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + C_3 R_3 R_L s + R_3 + R_L)}$$

10.339 INVALID-ORDER-339 $Z(s) = \left(\infty, \infty, \infty, \infty, R_4, \frac{1}{C_L s} \right)$

$$H(s) = \frac{R_1 R_3 g_m (C_3 L_3 s^2 + 1)}{(C_1 R_1 s + R_1 g_m + 1) (C_3 C_L L_3 R_3 s^3 + C_3 L_3 s^2 + C_3 R_3 s + C_L R_3 s + 1)}$$

10.340 INVALID-ORDER-340 $Z(s) = \left(\infty, \infty, \infty, \infty, R_4, \frac{R_L}{C_L R_L s + 1} \right)$

$$H(s) = \frac{R_1 R_3 R_L g_m (C_3 L_3 s^2 + 1)}{(C_1 R_1 s + R_1 g_m + 1) (C_3 C_L L_3 R_3 R_L s^3 + C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + C_3 R_3 R_L s + C_L R_3 R_L s + R_3 + R_L)}$$

10.341 INVALID-ORDER-341 $Z(s) = \left(\infty, \infty, \infty, \infty, R_4, R_L + \frac{1}{C_L s} \right)$

$$H(s) = \frac{R_1 R_3 g_m (C_3 L_3 s^2 + 1) (C_L R_L s + 1)}{(C_1 R_1 s + R_1 g_m + 1) (C_3 C_L L_3 R_3 s^3 + C_3 C_L L_3 R_L s^3 + C_3 C_L R_3 R_L s^2 + C_3 L_3 s^2 + C_3 R_3 s + C_L R_3 s + C_L R_L s + 1)}$$

10.342 INVALID-ORDER-342 $Z(s) = \left(\infty, \infty, \infty, \infty, R_4, L_L s + \frac{1}{C_L s} \right)$

$$H(s) = \frac{R_1 R_3 g_m (C_3 L_3 s^2 + 1) (C_L L_L s^2 + 1)}{(C_1 R_1 s + R_1 g_m + 1) (C_3 C_L L_3 L_L s^4 + C_3 C_L L_3 R_3 s^3 + C_3 C_L L_L R_3 s^3 + C_3 L_3 s^2 + C_3 R_3 s + C_L L_L s^2 + C_L R_3 s + 1)}$$

10.343 INVALID-ORDER-343 $Z(s) = \left(\infty, \infty, \infty, \infty, R_4, \frac{L_L s}{C_L L_L s^2 + 1} \right)$

$$H(s) = \frac{L_L R_1 R_3 g_m s (C_3 L_3 s^2 + 1)}{(C_1 R_1 s + R_1 g_m + 1) (C_3 C_L L_3 L_L R_3 s^4 + C_3 L_3 L_L s^3 + C_3 L_3 R_3 s^2 + C_3 L_L R_3 s^2 + C_L L_L R_3 s^2 + L_L s + R_3)}$$

10.344 INVALID-ORDER-344 $Z(s) = \left(\infty, \infty, \infty, \infty, R_4, L_L s + R_L + \frac{1}{C_L s} \right)$

$$H(s) = \frac{R_1 R_3 g_m (C_3 L_3 s^2 + 1) (C_L L_L s^2 + C_L R_L s + 1)}{(C_1 R_1 s + R_1 g_m + 1) (C_3 C_L L_3 L_L s^4 + C_3 C_L L_3 R_3 s^3 + C_3 C_L L_3 R_L s^3 + C_3 C_L L_L R_3 s^3 + C_3 C_L R_3 R_L s^2 + C_3 L_3 s^2 + C_3 R_3 s + C_L L_L s^2 + C_L R_3 s + C_L R_L s + 1)}$$

$$10.345 \quad \text{INVALID-ORDER-345} \quad Z(s) = \left(\infty, \infty, \infty, \infty, R_4, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$$

$$H(s) = \frac{L_L R_1 R_3 R_L g_m s (C_3 L_3 s^2 + 1)}{(C_1 R_1 s + R_1 g_m + 1) (C_3 C_L L_3 L_L R_3 R_L s^4 + C_3 L_3 L_L R_3 s^3 + C_3 L_3 L_L R_L s^3 + C_3 L_3 R_3 R_L s^2 + C_3 L_L R_3 R_L s^2 + C_L L_L R_3 R_L s^2 + L_L R_3 s + L_L R_L s + R_3 R_L)}$$

$$10.346 \quad \text{INVALID-ORDER-346} \quad Z(s) = \left(\infty, \infty, \infty, \infty, R_4, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$$

$$H(s) = \frac{R_1 R_3 g_m (C_3 L_3 s^2 + 1) (C_L L_L R_L s^2 + L_L s + R_L)}{(C_1 R_1 s + R_1 g_m + 1) (C_3 C_L L_3 L_L R_3 s^4 + C_3 C_L L_3 L_L R_L s^4 + C_3 C_L L_L R_3 R_L s^3 + C_3 L_3 L_L s^3 + C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + C_3 L_L R_3 s^2 + C_3 R_3 R_L s + C_L L_L R_3 s^2 + C_L L_L R_L s^2 + C_L L_L R_L s^2)}$$

$$10.347 \quad \text{INVALID-ORDER-347} \quad Z(s) = \left(\infty, \infty, \infty, \infty, R_4, \frac{R_L (L_L s + \frac{1}{C_L s})}{L_L s + R_L + \frac{1}{C_L s}} \right)$$

$$H(s) = \frac{R_1 R_3 R_L g_m (C_3 L_3 s^2 + 1) (C_L L_L s^2 + 1)}{(C_1 R_1 s + R_1 g_m + 1) (C_3 C_L L_3 L_L R_3 s^4 + C_3 C_L L_3 L_L R_L s^4 + C_3 C_L L_3 R_3 R_L s^3 + C_3 C_L L_L R_3 R_L s^3 + C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + C_3 R_3 R_L s + C_L L_L R_3 s^2 + C_L L_L R_L s^2 + C_L L_L R_L s^2)}$$

$$10.348 \quad \text{INVALID-ORDER-348} \quad Z(s) = \left(\infty, \infty, \infty, \infty, \frac{1}{C_4 s}, R_L \right)$$

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

$$10.349 \quad \text{INVALID-ORDER-349} \quad Z(s) = \left(\infty, \infty, \infty, \infty, \frac{1}{C_4 s}, L_L s + \frac{1}{C_L s} \right)$$

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

10.350 INVALID-ORDER-350 $Z(s) = \left(\infty, \infty, \infty, \infty, \frac{1}{C_4 s}, \frac{L_L s}{C_L L_L s^2 + 1} \right)$

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

10.351 INVALID-ORDER-351 $Z(s) = \left(\infty, \infty, \infty, \infty, \frac{1}{C_4 s}, L_L s + R_L + \frac{1}{C_L s} \right)$

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

10.352 INVALID-ORDER-352 $Z(s) = \left(\infty, \infty, \infty, \infty, \frac{1}{C_4 s}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$

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

10.353 INVALID-ORDER-353 $Z(s) = \left(\infty, \infty, \infty, \infty, \frac{1}{C_4 s}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$

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

10.354 INVALID-ORDER-354 $Z(s) = \left(\infty, \infty, \infty, \infty, \frac{1}{C_4 s}, \frac{R_L \left(L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$

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

10.355 INVALID-ORDER-355 $Z(s) = \left(\infty, \infty, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, \frac{1}{C_L s} \right)$

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

10.356 INVALID-ORDER-356 $Z(s) = \left(\infty, \infty, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, R_L + \frac{1}{C_L s} \right)$

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

10.357 INVALID-ORDER-357 $Z(s) = \left(\infty, \infty, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, L_L s + \frac{1}{C_L s} \right)$

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

10.358 INVALID-ORDER-358 $Z(s) = \left(\infty, \infty, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, \frac{L_L s}{C_L L_L s^2 + 1} \right)$

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

10.359 INVALID-ORDER-359 $Z(s) = \left(\infty, \infty, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, L_L s + R_L + \frac{1}{C_L s} \right)$

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

10.360 INVALID-ORDER-360 $Z(s) = \left(\infty, \infty, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$

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

10.361 INVALID-ORDER-361 $Z(s) = \left(\infty, \infty, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$

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

10.362 INVALID-ORDER-362 $Z(s) = \left(\infty, \infty, \infty, \infty, \frac{R_4}{C_4 R_4 s + 1}, \frac{R_L (L_L s + \frac{1}{C_L s})}{L_L s + R_L + \frac{1}{C_L s}} \right)$

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

10.363 INVALID-ORDER-363 $Z(s) = \left(\infty, \infty, \infty, \infty, R_4 + \frac{1}{C_4 s}, R_L + \frac{1}{C_L s} \right)$

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

10.364 INVALID-ORDER-364 $Z(s) = \left(\infty, \infty, \infty, \infty, R_4 + \frac{1}{C_4 s}, L_L s + \frac{1}{C_L s} \right)$

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

10.365 INVALID-ORDER-365 $Z(s) = \left(\infty, \infty, \infty, \infty, R_4 + \frac{1}{C_4 s}, \frac{L_L s}{C_L L_L s^2 + 1} \right)$

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

10.366 INVALID-ORDER-366 $Z(s) = \left(\infty, \infty, \infty, \infty, R_4 + \frac{1}{C_4s}, L_Ls + R_L + \frac{1}{C_Ls} \right)$

$$H(s) = \frac{R_3g_m(C_1R_1s+1)(C_LL_Ls^2+C_LR_Ls+1)}{(C_1R_1g_ms+C_1s+g_m)(C_3C_LL_LR_3s^3+C_3C_LR_3R_Ls^2+C_3R_3s+C_LL_Ls^2+C_LR_3s+C_LR_Ls+1)}$$

10.367 INVALID-ORDER-367 $Z(s) = \left(\infty, \infty, \infty, \infty, R_4 + \frac{1}{C_4s}, \frac{1}{C_Ls + \frac{1}{R_L} + \frac{1}{L_Ls}} \right)$

$$H(s) = \frac{L_LR_3R_Lg_ms(C_1R_1s+1)}{(C_1R_1g_ms+C_1s+g_m)(C_3L_LR_3R_Ls^2+C_LL_LR_3R_Ls^2+L_LR_3s+L_LR_Ls+R_3R_L)}$$

10.368 INVALID-ORDER-368 $Z(s) = \left(\infty, \infty, \infty, \infty, R_4 + \frac{1}{C_4s}, \frac{L_Ls}{C_LL_Ls^2+1} + R_L \right)$

$$H(s) = \frac{R_3g_m(C_1R_1s+1)(C_LL_LR_Ls^2+L_Ls+R_L)}{(C_1R_1g_ms+C_1s+g_m)(C_3C_LL_LR_3R_Ls^3+C_3L_LR_3s^2+C_3R_3R_Ls+C_LL_LR_3s^2+C_LL_LR_Ls^2+L_Ls+R_3+R_L)}$$

10.369 INVALID-ORDER-369 $Z(s) = \left(\infty, \infty, \infty, \infty, R_4 + \frac{1}{C_4s}, \frac{R_L(L_Ls + \frac{1}{C_Ls})}{L_Ls + R_L + \frac{1}{C_Ls}} \right)$

$$H(s) = \frac{R_3R_Lg_m(C_1R_1s+1)(C_LL_Ls^2+1)}{(C_1R_1g_ms+C_1s+g_m)(C_3C_LL_LR_3R_Ls^3+C_3R_3R_Ls+C_LL_LR_3s^2+C_LL_LR_Ls^2+C_LR_3R_Ls+R_3+R_L)}$$

10.370 INVALID-ORDER-370 $Z(s) = \left(\infty, \infty, \infty, \infty, L_4s + \frac{1}{C_4s}, \frac{1}{C_Ls} \right)$

$$H(s) = \frac{g_m(C_1R_1s+1)(C_3R_3s+1)}{s(C_1R_1g_ms+C_1s+g_m)(C_3C_LR_3s+C_3+C_L)}$$

10.371 INVALID-ORDER-371 $Z(s) = \left(\infty, \infty, \infty, \infty, L_4s + \frac{1}{C_4s}, \frac{R_L}{C_LR_Ls+1} \right)$

$$H(s) = \frac{R_Lg_m(C_1R_1s+1)(C_3R_3s+1)}{(C_1R_1g_ms+C_1s+g_m)(C_3C_LR_3R_Ls^2+C_3R_3s+C_3R_Ls+C_LR_Ls+1)}$$

10.372 INVALID-ORDER-372 $Z(s) = \left(\infty, \infty, \infty, \infty, L_4s + \frac{1}{C_4s}, R_L + \frac{1}{C_Ls} \right)$

$$H(s) = \frac{g_m(C_1R_1s+1)(C_3R_3s+1)(C_LR_Ls+1)}{s(C_1R_1g_ms+C_1s+g_m)(C_3C_LR_3s+C_3C_LR_Ls+C_3+C_L)}$$

10.373 INVALID-ORDER-373 $Z(s) = \left(\infty, \infty, \infty, \infty, L_4s + \frac{1}{C_4s}, L_Ls + \frac{1}{C_Ls} \right)$

$$H(s) = \frac{g_m(C_1R_1s+1)(C_3R_3s+1)(C_LL_Ls^2+1)}{s(C_1R_1g_ms+C_1s+g_m)(C_3C_LL_Ls^2+C_3C_LR_3s+C_3+C_L)}$$

10.374 INVALID-ORDER-374 $Z(s) = \left(\infty, \infty, \infty, \infty, L_4s + \frac{1}{C_4s}, \frac{L_Ls}{C_LL_Ls^2+1} \right)$

$$H(s) = \frac{L_Lg_ms(C_1R_1s+1)(C_3R_3s+1)}{(C_1R_1g_ms+C_1s+g_m)(C_3C_LL_LR_3s^3+C_3L_Ls^2+C_3R_3s+C_LL_Ls^2+1)}$$

10.375 INVALID-ORDER-375 $Z(s) = \left(\infty, \infty, \infty, \infty, L_4s + \frac{1}{C_4s}, L_Ls + R_L + \frac{1}{C_Ls} \right)$

$$H(s) = \frac{g_m(C_1R_1s+1)(C_3R_3s+1)(C_LL_Ls^2+C_LR_Ls+1)}{s(C_1R_1g_ms+C_1s+g_m)(C_3C_LL_Ls^2+C_3C_LR_3s+C_3C_LR_Ls+C_3+C_L)}$$

10.376 INVALID-ORDER-376 $Z(s) = \left(\infty, \infty, \infty, \infty, L_4s + \frac{1}{C_4s}, \frac{1}{C_Ls + \frac{1}{R_L} + \frac{1}{L_Ls}} \right)$

$$H(s) = \frac{L_LR_Lg_ms(C_1R_1s+1)(C_3R_3s+1)}{(C_1R_1g_ms+C_1s+g_m)(C_3C_LL_LR_3R_Ls^3+C_3L_LR_3s^2+C_3L_LR_Ls^2+C_3R_3R_Ls+C_LL_LR_Ls^2+L_Ls+R_L)}$$

10.377 INVALID-ORDER-377 $Z(s) = \left(\infty, \infty, \infty, \infty, L_4s + \frac{1}{C_4s}, \frac{L_Ls}{C_LL_Ls^2+1} + R_L \right)$

$$H(s) = \frac{g_m (C_1R_1s + 1) (C_3R_3s + 1) (C_LL_LR_Ls^2 + L_Ls + R_L)}{(C_1R_1g_ms + C_1s + g_m) (C_3C_LL_LR_3s^3 + C_3C_LL_LR_Ls^3 + C_3L_Ls^2 + C_3R_3s + C_3R_Ls + C_LL_Ls^2 + 1)}$$

10.378 INVALID-ORDER-378 $Z(s) = \left(\infty, \infty, \infty, \infty, L_4s + \frac{1}{C_4s}, \frac{R_L(L_Ls + \frac{1}{C_Ls})}{L_Ls + R_L + \frac{1}{C_Ls}} \right)$

$$H(s) = \frac{R_Lg_m (C_1R_1s + 1) (C_3R_3s + 1) (C_LL_Ls^2 + 1)}{(C_1R_1g_ms + C_1s + g_m) (C_3C_LL_LR_3s^3 + C_3C_LL_LR_Ls^3 + C_3C_LR_3R_Ls^2 + C_3R_3s + C_3R_Ls + C_LL_Ls^2 + C_LR_Ls + 1)}$$

10.379 INVALID-ORDER-379 $Z(s) = \left(\infty, \infty, \infty, \infty, \frac{L_4s}{C_4L_4s^2+1}, R_L \right)$

$$H(s) = \frac{R_Lg_m (C_1R_1s + 1) (C_3L_3s^2 + 1)}{(C_3L_3s^2 + C_3R_Ls + 1) (C_1R_1g_ms + C_1s + g_m)}$$

10.380 INVALID-ORDER-380 $Z(s) = \left(\infty, \infty, \infty, \infty, \frac{L_4s}{C_4L_4s^2+1}, \frac{1}{C_Ls} \right)$

$$H(s) = \frac{g_m (C_1R_1s + 1) (C_3L_3s^2 + 1)}{s (C_1R_1g_ms + C_1s + g_m) (C_3C_LL_3s^2 + C_3 + C_L)}$$

10.381 INVALID-ORDER-381 $Z(s) = \left(\infty, \infty, \infty, \infty, \frac{L_4s}{C_4L_4s^2+1}, \frac{R_L}{C_LR_Ls+1} \right)$

$$H(s) = \frac{R_Lg_m (C_1R_1s + 1) (C_3L_3s^2 + 1)}{(C_1R_1g_ms + C_1s + g_m) (C_3C_LL_3R_Ls^3 + C_3L_3s^2 + C_3R_Ls + C_LR_Ls + 1)}$$

10.382 INVALID-ORDER-382 $Z(s) = \left(\infty, \infty, \infty, \infty, \frac{L_4 s}{C_4 L_4 s^2 + 1}, R_L + \frac{1}{C_L s} \right)$

$$H(s) = \frac{g_m (C_1 R_1 s + 1) (C_3 L_3 s^2 + 1) (C_L R_L s + 1)}{s (C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_3 s^2 + C_3 C_L R_L s + C_3 + C_L)}$$

10.383 INVALID-ORDER-383 $Z(s) = \left(\infty, \infty, \infty, \infty, \frac{L_4 s}{C_4 L_4 s^2 + 1}, L_L s + \frac{1}{C_L s} \right)$

$$H(s) = \frac{g_m (C_1 R_1 s + 1) (C_3 L_3 s^2 + 1) (C_L L_L s^2 + 1)}{s (C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_3 s^2 + C_3 C_L L_L s^2 + C_3 + C_L)}$$

10.384 INVALID-ORDER-384 $Z(s) = \left(\infty, \infty, \infty, \infty, \frac{L_4 s}{C_4 L_4 s^2 + 1}, \frac{L_L s}{C_L L_L s^2 + 1} \right)$

$$H(s) = \frac{L_L g_m s (C_1 R_1 s + 1) (C_3 L_3 s^2 + 1)}{(C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_3 L_L s^4 + C_3 L_3 s^2 + C_3 L_L s^2 + C_L L_L s^2 + 1)}$$

10.385 INVALID-ORDER-385 $Z(s) = \left(\infty, \infty, \infty, \infty, \frac{L_4 s}{C_4 L_4 s^2 + 1}, L_L s + R_L + \frac{1}{C_L s} \right)$

$$H(s) = \frac{g_m (C_1 R_1 s + 1) (C_3 L_3 s^2 + 1) (C_L L_L s^2 + C_L R_L s + 1)}{s (C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_3 s^2 + C_3 C_L L_L s^2 + C_3 C_L R_L s + C_3 + C_L)}$$

10.386 INVALID-ORDER-386 $Z(s) = \left(\infty, \infty, \infty, \infty, \frac{L_4 s}{C_4 L_4 s^2 + 1}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$

$$H(s) = \frac{L_L R_L g_m s (C_1 R_1 s + 1) (C_3 L_3 s^2 + 1)}{(C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_3 L_L R_L s^4 + C_3 L_3 L_L s^3 + C_3 L_3 R_L s^2 + C_3 L_L R_L s^2 + C_L L_L R_L s^2 + L_L s + R_L)}$$

10.387 INVALID-ORDER-387 $Z(s) = \left(\infty, \infty, \infty, \infty, \frac{L_4 s}{C_4 L_4 s^2 + 1}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$

$$H(s) = \frac{g_m (C_1 R_1 s + 1) (C_3 L_3 s^2 + 1) (C_L L_L R_L s^2 + L_L s + R_L)}{(C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_3 L_L s^4 + C_3 C_L L_L R_L s^3 + C_3 L_3 s^2 + C_3 L_L s^2 + C_3 R_L s + C_L L_L s^2 + 1)}$$

10.388 INVALID-ORDER-388 $Z(s) = \left(\infty, \infty, \infty, \infty, \frac{L_4 s}{C_4 L_4 s^2 + 1}, \frac{R_L (L_L s + \frac{1}{C_L s})}{L_L s + R_L + \frac{1}{C_L s}} \right)$

$$H(s) = \frac{R_L g_m (C_1 R_1 s + 1) (C_3 L_3 s^2 + 1) (C_L L_L s^2 + 1)}{(C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_3 L_L s^4 + C_3 C_L L_3 R_L s^3 + C_3 C_L L_L R_L s^3 + C_3 L_3 s^2 + C_3 R_L s + C_L L_L s^2 + C_L R_L s + 1)}$$

10.389 INVALID-ORDER-389 $Z(s) = \left(\infty, \infty, \infty, \infty, L_4 s + R_4 + \frac{1}{C_4 s}, R_L \right)$

$$H(s) = \frac{L_3 R_L g_m s (C_1 R_1 s + 1)}{(C_1 R_1 g_m s + C_1 s + g_m) (C_3 L_3 R_L s^2 + L_3 s + R_L)}$$

10.390 INVALID-ORDER-390 $Z(s) = \left(\infty, \infty, \infty, \infty, L_4 s + R_4 + \frac{1}{C_4 s}, \frac{1}{C_L s} \right)$

$$H(s) = \frac{L_3 g_m s (C_1 R_1 s + 1)}{(C_3 L_3 s^2 + C_L L_3 s^2 + 1) (C_1 R_1 g_m s + C_1 s + g_m)}$$

10.391 INVALID-ORDER-391 $Z(s) = \left(\infty, \infty, \infty, \infty, L_4 s + R_4 + \frac{1}{C_4 s}, \frac{R_L}{C_L R_L s + 1} \right)$

$$H(s) = \frac{L_3 R_L g_m s (C_1 R_1 s + 1)}{(C_1 R_1 g_m s + C_1 s + g_m) (C_3 L_3 R_L s^2 + C_L L_3 R_L s^2 + L_3 s + R_L)}$$

10.392 INVALID-ORDER-392 $Z(s) = \left(\infty, \infty, \infty, \infty, L_4 s + R_4 + \frac{1}{C_4 s}, R_L + \frac{1}{C_L s} \right)$

$$H(s) = \frac{L_3 g_m s (C_1 R_1 s + 1) (C_L R_L s + 1)}{(C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_3 R_L s^3 + C_3 L_3 s^2 + C_L L_3 s^2 + C_L R_L s + 1)}$$

10.393 INVALID-ORDER-393 $Z(s) = \left(\infty, \infty, \infty, \infty, L_4s + R_4 + \frac{1}{C_4s}, L_Ls + \frac{1}{C_Ls} \right)$

$$H(s) = \frac{L_3g_ms(C_1R_1s+1)(C_LL_Ls^2+1)}{(C_1R_1g_ms+C_1s+g_m)(C_3C_LL_3L_Ls^4+C_3L_3s^2+C_LL_3s^2+C_LL_Ls^2+1)}$$

10.394 INVALID-ORDER-394 $Z(s) = \left(\infty, \infty, \infty, \infty, L_4s + R_4 + \frac{1}{C_4s}, \frac{L_Ls}{C_LL_Ls^2+1} \right)$

$$H(s) = \frac{L_3L_Lg_ms(C_1R_1s+1)}{(C_1R_1g_ms+C_1s+g_m)(C_3L_3L_Ls^2+C_LL_3L_Ls^2+L_3+L_L)}$$

10.395 INVALID-ORDER-395 $Z(s) = \left(\infty, \infty, \infty, \infty, L_4s + R_4 + \frac{1}{C_4s}, L_Ls + R_L + \frac{1}{C_Ls} \right)$

$$H(s) = \frac{L_3g_ms(C_1R_1s+1)(C_LL_Ls^2+C_LR_Ls+1)}{(C_1R_1g_ms+C_1s+g_m)(C_3C_LL_3L_Ls^4+C_3C_LL_3R_Ls^3+C_3L_3s^2+C_LL_3s^2+C_LL_Ls^2+C_LR_Ls+1)}$$

10.396 INVALID-ORDER-396 $Z(s) = \left(\infty, \infty, \infty, \infty, L_4s + R_4 + \frac{1}{C_4s}, \frac{1}{C_Ls+\frac{1}{R_L}+\frac{1}{L_Ls}} \right)$

$$H(s) = \frac{L_3L_LR_Lg_ms(C_1R_1s+1)}{(C_1R_1g_ms+C_1s+g_m)(C_3L_3L_LR_Ls^2+C_LL_3L_LR_Ls^2+L_3L_Ls+L_3R_L+L_LR_L)}$$

10.397 INVALID-ORDER-397 $Z(s) = \left(\infty, \infty, \infty, \infty, L_4s + R_4 + \frac{1}{C_4s}, \frac{L_Ls}{C_LL_Ls^2+1} + R_L \right)$

$$H(s) = \frac{L_3g_ms(C_1R_1s+1)(C_LL_LR_Ls^2+L_Ls+R_L)}{(C_1R_1g_ms+C_1s+g_m)(C_3C_LL_3L_LR_Ls^4+C_3L_3L_Ls^3+C_3L_3R_Ls^2+C_LL_3L_LR_Ls^3+C_LL_LR_Ls^2+L_3s+L_Ls+R_L)}$$

$$10.398 \quad \text{INVALID-ORDER-398} \quad Z(s) = \left(\infty, \infty, \infty, \infty, L_4 s + R_4 + \frac{1}{C_4 s}, \frac{R_L \left(L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$$

$$H(s) = \frac{L_3 R_L g_m s (C_1 R_1 s + 1) (C_L L_L s^2 + 1)}{(C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_3 L_L R_L s^4 + C_3 L_3 R_L s^2 + C_L L_3 L_L s^3 + C_L L_3 R_L s^2 + C_L L_L R_L s^2 + L_3 s + R_L)}$$

$$10.399 \quad \text{INVALID-ORDER-399} \quad Z(s) = \left(\infty, \infty, \infty, \infty, \frac{1}{C_4 s + \frac{1}{R_4} + \frac{1}{L_4 s}}, R_L \right)$$

$$H(s) = \frac{R_L g_m (C_1 R_1 s + 1) (C_3 L_3 s^2 + C_3 R_3 s + 1)}{(C_1 R_1 g_m s + C_1 s + g_m) (C_3 L_3 s^2 + C_3 R_3 s + C_3 R_L s + 1)}$$

$$10.400 \quad \text{INVALID-ORDER-400} \quad Z(s) = \left(\infty, \infty, \infty, \infty, \frac{1}{C_4 s + \frac{1}{R_4} + \frac{1}{L_4 s}}, \frac{1}{C_L s} \right)$$

$$H(s) = \frac{g_m (C_1 R_1 s + 1) (C_3 L_3 s^2 + C_3 R_3 s + 1)}{s (C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_3 s^2 + C_3 C_L R_3 s + C_3 + C_L)}$$

$$10.401 \quad \text{INVALID-ORDER-401} \quad Z(s) = \left(\infty, \infty, \infty, \infty, \frac{1}{C_4 s + \frac{1}{R_4} + \frac{1}{L_4 s}}, \frac{R_L}{C_L R_L s + 1} \right)$$

$$H(s) = \frac{R_L g_m (C_1 R_1 s + 1) (C_3 L_3 s^2 + C_3 R_3 s + 1)}{(C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_3 R_L s^3 + C_3 C_L R_3 R_L s^2 + C_3 L_3 s^2 + C_3 R_3 s + C_3 R_L s + C_L R_L s + 1)}$$

$$10.402 \quad \text{INVALID-ORDER-402} \quad Z(s) = \left(\infty, \infty, \infty, \infty, \frac{1}{C_4 s + \frac{1}{R_4} + \frac{1}{L_4 s}}, R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{g_m (C_1 R_1 s + 1) (C_L R_L s + 1) (C_3 L_3 s^2 + C_3 R_3 s + 1)}{s (C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_3 s^2 + C_3 C_L R_3 s + C_3 C_L R_L s + C_3 + C_L)}$$

10.403 INVALID-ORDER-403 $Z(s) = \left(\infty, \infty, \infty, \infty, \frac{1}{C_4s + \frac{1}{R_4} + \frac{1}{L_4s}}, L_Ls + \frac{1}{C_Ls} \right)$

$$H(s) = \frac{g_m (C_1R_1s + 1) (C_L L_L s^2 + 1) (C_3 L_3 s^2 + C_3 R_3 s + 1)}{s (C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_3 s^2 + C_3 C_L L_L s^2 + C_3 C_L R_3 s + C_3 + C_L)}$$

10.404 INVALID-ORDER-404 $Z(s) = \left(\infty, \infty, \infty, \infty, \frac{1}{C_4s + \frac{1}{R_4} + \frac{1}{L_4s}}, \frac{L_L s}{C_L L_L s^2 + 1} \right)$

$$H(s) = \frac{L_L g_m s (C_1 R_1 s + 1) (C_3 L_3 s^2 + C_3 R_3 s + 1)}{(C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_3 L_L s^4 + C_3 C_L L_L R_3 s^3 + C_3 L_3 s^2 + C_3 L_L s^2 + C_3 R_3 s + C_L L_L s^2 + 1)}$$

10.405 INVALID-ORDER-405 $Z(s) = \left(\infty, \infty, \infty, \infty, \frac{1}{C_4s + \frac{1}{R_4} + \frac{1}{L_4s}}, L_Ls + R_L + \frac{1}{C_Ls} \right)$

$$H(s) = \frac{g_m (C_1 R_1 s + 1) (C_3 L_3 s^2 + C_3 R_3 s + 1) (C_L L_L s^2 + C_L R_L s + 1)}{s (C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_3 s^2 + C_3 C_L L_L s^2 + C_3 C_L R_3 s + C_3 C_L R_L s + C_3 + C_L)}$$

10.406 INVALID-ORDER-406 $Z(s) = \left(\infty, \infty, \infty, \infty, \frac{1}{C_4s + \frac{1}{R_4} + \frac{1}{L_4s}}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$

$$H(s) = \frac{L_L R_L g_m s (C_1 R_1 s + 1) (C_3 L_3 s^2 + C_3 R_3 s + 1)}{(C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_3 L_L R_L s^4 + C_3 C_L L_L R_3 R_L s^3 + C_3 L_3 L_L s^3 + C_3 L_3 R_L s^2 + C_3 L_L R_3 s^2 + C_3 L_L R_L s^2 + C_3 R_3 R_L s + C_L L_L R_L s^2 + L_L s + R_L)}$$

10.407 INVALID-ORDER-407 $Z(s) = \left(\infty, \infty, \infty, \infty, \frac{1}{C_4s + \frac{1}{R_4} + \frac{1}{L_4s}}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$

$$H(s) = \frac{g_m (C_1 R_1 s + 1) (C_3 L_3 s^2 + C_3 R_3 s + 1) (C_L L_L R_L s^2 + L_L s + R_L)}{(C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_3 L_L s^4 + C_3 C_L L_L R_3 s^3 + C_3 C_L L_L R_L s^3 + C_3 L_3 s^2 + C_3 L_L s^2 + C_3 R_3 s + C_3 R_L s + C_L L_L s^2 + 1)}$$

$$10.408 \quad \text{INVALID-ORDER-408} \quad Z(s) = \left(\infty, \infty, \infty, \infty, \frac{1}{C_4 s + \frac{1}{R_4} + \frac{1}{L_4 s}}, \frac{R_L \left(L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$$

$$H(s) = \frac{R_L g_m (C_1 R_1 s + 1) (C_L L_L s^2 + 1) (C_3 L_3 s^2 + C_3 R_3 s + 1)}{(C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_3 L_L s^4 + C_3 C_L L_3 R_L s^3 + C_3 C_L L_L R_3 s^3 + C_3 C_L L_L R_L s^3 + C_3 C_L R_3 R_L s^2 + C_3 L_3 s^2 + C_3 R_3 s + C_3 R_L s + C_L L_L s^2 + C_L R_L s + 1)}$$

$$10.409 \quad \text{INVALID-ORDER-409} \quad Z(s) = \left(\infty, \infty, \infty, \infty, \frac{L_4 s}{C_4 L_4 s^2 + 1} + R_4, R_L \right)$$

$$H(s) = \frac{L_3 R_3 R_L g_m s (C_1 R_1 s + 1)}{(C_1 R_1 g_m s + C_1 s + g_m) (C_3 L_3 R_3 R_L s^2 + L_3 R_3 s + L_3 R_L s + R_3 R_L)}$$

$$10.410 \quad \text{INVALID-ORDER-410} \quad Z(s) = \left(\infty, \infty, \infty, \infty, \frac{L_4 s}{C_4 L_4 s^2 + 1} + R_4, \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_3 R_3 g_m s (C_1 R_1 s + 1)}{(C_1 R_1 g_m s + C_1 s + g_m) (C_3 L_3 R_3 s^2 + C_L L_3 R_3 s^2 + L_3 s + R_3)}$$

$$10.411 \quad \text{INVALID-ORDER-411} \quad Z(s) = \left(\infty, \infty, \infty, \infty, \frac{L_4 s}{C_4 L_4 s^2 + 1} + R_4, \frac{R_L}{C_L R_L s + 1} \right)$$

$$H(s) = \frac{L_3 R_3 R_L g_m s (C_1 R_1 s + 1)}{(C_1 R_1 g_m s + C_1 s + g_m) (C_3 L_3 R_3 R_L s^2 + C_L L_3 R_3 R_L s^2 + L_3 R_3 s + L_3 R_L s + R_3 R_L)}$$

$$10.412 \quad \text{INVALID-ORDER-412} \quad Z(s) = \left(\infty, \infty, \infty, \infty, \frac{L_4 s}{C_4 L_4 s^2 + 1} + R_4, R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_3 R_3 g_m s (C_1 R_1 s + 1) (C_L R_L s + 1)}{(C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_3 R_3 R_L s^3 + C_3 L_3 R_3 s^2 + C_L L_3 R_3 s^2 + C_L L_3 R_L s^2 + C_L R_3 R_L s + L_3 s + R_3)}$$

$$10.413 \quad \text{INVALID-ORDER-413} \quad Z(s) = \left(\infty, \infty, \infty, \infty, \frac{L_4 s}{C_4 L_4 s^2 + 1} + R_4, L_L s + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_3 R_3 g_m s (C_1 R_1 s + 1) (C_L L_L s^2 + 1)}{(C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_3 L_L R_3 s^4 + C_3 L_3 R_3 s^2 + C_L L_3 L_L s^3 + C_L L_3 R_3 s^2 + C_L L_L R_3 s^2 + L_3 s + R_3)}$$

$$10.414 \quad \text{INVALID-ORDER-414} \quad Z(s) = \left(\infty, \infty, \infty, \infty, \frac{L_4 s}{C_4 L_4 s^2 + 1} + R_4, \frac{L_L s}{C_L L_L s^2 + 1} \right)$$

$$H(s) = \frac{L_3 L_L R_3 g_m s (C_1 R_1 s + 1)}{(C_1 R_1 g_m s + C_1 s + g_m) (C_3 L_3 L_L R_3 s^2 + C_L L_3 L_L R_3 s^2 + L_3 L_L s + L_3 R_3 + L_L R_3)}$$

$$10.415 \quad \text{INVALID-ORDER-415} \quad Z(s) = \left(\infty, \infty, \infty, \infty, \frac{L_4 s}{C_4 L_4 s^2 + 1} + R_4, L_L s + R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_3 R_3 g_m s (C_1 R_1 s + 1) (C_L L_L s^2 + C_L R_L s + 1)}{(C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_3 L_L R_3 s^4 + C_3 C_L L_3 R_3 R_L s^3 + C_3 L_3 R_3 s^2 + C_L L_3 L_L s^3 + C_L L_3 R_3 s^2 + C_L L_3 R_L s^2 + C_L L_L R_3 s^2 + C_L R_3 R_L s + L_3 s + R_3)}$$

$$10.416 \quad \text{INVALID-ORDER-416} \quad Z(s) = \left(\infty, \infty, \infty, \infty, \frac{L_4 s}{C_4 L_4 s^2 + 1} + R_4, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$$

$$H(s) = \frac{L_3 L_L R_3 R_L g_m s (C_1 R_1 s + 1)}{(C_1 R_1 g_m s + C_1 s + g_m) (C_3 L_3 L_L R_3 R_L s^2 + C_L L_3 L_L R_3 R_L s^2 + L_3 L_L R_3 s + L_3 L_L R_L s + L_3 R_3 R_L + L_L R_3 R_L)}$$

$$10.417 \quad \text{INVALID-ORDER-417} \quad Z(s) = \left(\infty, \infty, \infty, \infty, \frac{L_4 s}{C_4 L_4 s^2 + 1} + R_4, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$$

$$H(s) = \frac{L_3 R_3 g_m s (C_1 R_1 s + 1) (C_L L_L R_L s^2 + L_L s + R_L)}{(C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_3 L_L R_3 R_L s^4 + C_3 L_3 L_L R_3 s^3 + C_3 L_3 R_3 R_L s^2 + C_L L_3 L_L R_3 s^3 + C_L L_3 L_L R_L s^3 + C_L L_L R_3 R_L s^2 + L_3 L_L s^2 + L_3 R_3 s + L_3 R_L s + L_L R_3 s + R_3)}$$

$$10.418 \quad \text{INVALID-ORDER-418} \quad Z(s) = \left(\infty, \infty, \infty, \infty, \frac{L_4 s}{C_4 L_4 s^2 + 1} + R_4, \frac{R_L (L_L s + \frac{1}{C_L s})}{L_L s + R_L + \frac{1}{C_L s}} \right)$$

$$H(s) = \frac{L_3 R_3 R_L g_m s (C_1 R_1 s + 1) (C_L L_L s^2 + 1)}{(C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_3 L_L R_3 R_L s^4 + C_3 L_3 R_3 R_L s^2 + C_L L_3 L_L R_3 s^3 + C_L L_3 L_L R_L s^3 + C_L L_3 R_3 R_L s^2 + C_L L_L R_3 R_L s^2 + L_3 R_3 s + L_3 R_L s + R_3 R_L)}$$

10.419 INVALID-ORDER-419 $Z(s) = \left(\infty, \infty, \infty, \infty, \frac{R_4 \left(L_4 s + \frac{1}{C_4 s} \right)}{L_4 s + R_4 + \frac{1}{C_4 s}}, R_L \right)$

$$H(s) = \frac{R_L g_m (C_1 R_1 s + 1) (C_3 L_3 R_3 s^2 + L_3 s + R_3)}{(C_1 R_1 g_m s + C_1 s + g_m) (C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + L_3 s + R_3 + R_L)}$$

10.420 INVALID-ORDER-420 $Z(s) = \left(\infty, \infty, \infty, \infty, \frac{R_4 \left(L_4 s + \frac{1}{C_4 s} \right)}{L_4 s + R_4 + \frac{1}{C_4 s}}, \frac{1}{C_L s} \right)$

$$H(s) = \frac{g_m (C_1 R_1 s + 1) (C_3 L_3 R_3 s^2 + L_3 s + R_3)}{(C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_3 R_3 s^3 + C_3 L_3 s^2 + C_L L_3 s^2 + C_L R_3 s + 1)}$$

10.421 INVALID-ORDER-421 $Z(s) = \left(\infty, \infty, \infty, \infty, \frac{R_4 \left(L_4 s + \frac{1}{C_4 s} \right)}{L_4 s + R_4 + \frac{1}{C_4 s}}, \frac{R_L}{C_L R_L s + 1} \right)$

$$H(s) = \frac{R_L g_m (C_1 R_1 s + 1) (C_3 L_3 R_3 s^2 + L_3 s + R_3)}{(C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_3 R_3 R_L s^3 + C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + C_L L_3 R_L s^2 + C_L R_3 R_L s + L_3 s + R_3 + R_L)}$$

10.422 INVALID-ORDER-422 $Z(s) = \left(\infty, \infty, \infty, \infty, \frac{R_4 \left(L_4 s + \frac{1}{C_4 s} \right)}{L_4 s + R_4 + \frac{1}{C_4 s}}, R_L + \frac{1}{C_L s} \right)$

$$H(s) = \frac{g_m (C_1 R_1 s + 1) (C_L R_L s + 1) (C_3 L_3 R_3 s^2 + L_3 s + R_3)}{(C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_3 R_3 s^3 + C_3 C_L L_3 R_L s^3 + C_3 L_3 s^2 + C_L L_3 s^2 + C_L R_3 s + C_L R_L s + 1)}$$

10.423 INVALID-ORDER-423 $Z(s) = \left(\infty, \infty, \infty, \infty, \frac{R_4 \left(L_4 s + \frac{1}{C_4 s} \right)}{L_4 s + R_4 + \frac{1}{C_4 s}}, L_L s + \frac{1}{C_L s} \right)$

$$H(s) = \frac{g_m (C_1 R_1 s + 1) (C_L L_L s^2 + 1) (C_3 L_3 R_3 s^2 + L_3 s + R_3)}{(C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_3 L_L s^4 + C_3 C_L L_3 R_3 s^3 + C_3 L_3 s^2 + C_L L_3 s^2 + C_L L_L s^2 + C_L R_3 s + 1)}$$

$$10.424 \quad \text{INVALID-ORDER-424} \quad Z(s) = \left(\infty, \infty, \infty, \infty, \frac{R_4 \left(L_4 s + \frac{1}{C_4 s} \right)}{L_4 s + R_4 + \frac{1}{C_4 s}}, \frac{L_L s}{C_L L_L s^2 + 1} \right)$$

$$H(s) = \frac{L_L g_m s (C_1 R_1 s + 1) (C_3 L_3 R_3 s^2 + L_3 s + R_3)}{(C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_3 L_L R_3 s^4 + C_3 L_3 L_L s^3 + C_3 L_3 R_3 s^2 + C_L L_3 L_L s^3 + C_L L_L R_3 s^2 + L_3 s + L_L s + R_3)}$$

$$10.425 \quad \text{INVALID-ORDER-425} \quad Z(s) = \left(\infty, \infty, \infty, \infty, \frac{R_4 \left(L_4 s + \frac{1}{C_4 s} \right)}{L_4 s + R_4 + \frac{1}{C_4 s}}, L_L s + R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{g_m (C_1 R_1 s + 1) (C_L L_L s^2 + C_L R_L s + 1) (C_3 L_3 R_3 s^2 + L_3 s + R_3)}{(C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_3 L_L s^4 + C_3 C_L L_3 R_3 s^3 + C_3 C_L L_3 R_L s^3 + C_3 L_3 s^2 + C_L L_3 s^2 + C_L L_L s^2 + C_L R_3 s + C_L R_L s + 1)}$$

$$10.426 \quad \text{INVALID-ORDER-426} \quad Z(s) = \left(\infty, \infty, \infty, \infty, \frac{R_4 \left(L_4 s + \frac{1}{C_4 s} \right)}{L_4 s + R_4 + \frac{1}{C_4 s}}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$$

$$H(s) = \frac{L_L R_L g_m s (C_1 R_1 s + 1) (C_3 L_3 R_3 s^2 + L_3 s + R_3)}{(C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_3 L_L R_3 R_L s^4 + C_3 L_3 L_L R_3 s^3 + C_3 L_3 L_L R_L s^3 + C_3 L_3 R_3 R_L s^2 + C_L L_3 L_L R_L s^3 + C_L L_L R_3 R_L s^2 + L_3 L_L s^2 + L_3 R_L s + L_L R_3 s + L_L R_L s + R_3)}$$

$$10.427 \quad \text{INVALID-ORDER-427} \quad Z(s) = \left(\infty, \infty, \infty, \infty, \frac{R_4 \left(L_4 s + \frac{1}{C_4 s} \right)}{L_4 s + R_4 + \frac{1}{C_4 s}}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$$

$$H(s) = \frac{g_m (C_1 R_1 s + 1) (C_3 L_3 R_3 s^2 + L_3 s + R_3) (C_L L_L R_L s^2 + L_L s + R_L)}{(C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_3 L_L R_3 s^4 + C_3 C_L L_3 L_L R_L s^4 + C_3 L_3 L_L s^3 + C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + C_L L_3 L_L s^3 + C_L L_L R_3 s^2 + C_L L_L R_L s^2 + L_3 s + L_L s + R_3 + R_L)}$$

$$10.428 \quad \text{INVALID-ORDER-428} \quad Z(s) = \left(\infty, \infty, \infty, \infty, \frac{R_4 \left(L_4 s + \frac{1}{C_4 s} \right)}{L_4 s + R_4 + \frac{1}{C_4 s}}, \frac{R_L \left(L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$$

$$H(s) = \frac{R_L g_m (C_1 R_1 s + 1) (C_L L_L s^2 + 1) (C_3 L_3 R_3 s^2 + L_3 s + R_3)}{(C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_3 L_L R_3 s^4 + C_3 C_L L_3 L_L R_L s^4 + C_3 C_L L_3 R_3 R_L s^3 + C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + C_L L_3 L_L s^3 + C_L L_3 R_L s^2 + C_L L_L R_3 s^2 + C_L L_L R_L s^2 + C_L R_3 s)}$$

10.429 INVALID-ORDER-429 $Z(s) = (R_1, R_2, \infty, \infty, \infty, R_L)$

$$H(s) = \frac{R_3 R_L g_m (C_1 R_1 s + 1) (C_3 L_3 s^2 + 1)}{(C_1 R_1 g_m s + C_1 s + g_m) (C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + C_3 R_3 R_L s + R_3 + R_L)}$$

10.430 INVALID-ORDER-430 $Z(s) = \left(R_1, R_2, \infty, \infty, \infty, \frac{1}{C_L s} \right)$

$$H(s) = \frac{R_3 g_m (C_1 R_1 s + 1) (C_3 L_3 s^2 + 1)}{(C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_3 R_3 s^3 + C_3 L_3 s^2 + C_3 R_3 s + C_L R_3 s + 1)}$$

10.431 INVALID-ORDER-431 $Z(s) = \left(R_1, R_2, \infty, \infty, \infty, \frac{R_L}{C_L R_L s + 1} \right)$

$$H(s) = \frac{R_3 R_L g_m (C_1 R_1 s + 1) (C_3 L_3 s^2 + 1)}{(C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_3 R_3 R_L s^3 + C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + C_3 R_3 R_L s + C_L R_3 R_L s + R_3 + R_L)}$$

10.432 INVALID-ORDER-432 $Z(s) = \left(R_1, R_2, \infty, \infty, \infty, R_L + \frac{1}{C_L s} \right)$

$$H(s) = \frac{R_3 g_m (C_1 R_1 s + 1) (C_3 L_3 s^2 + 1) (C_L R_L s + 1)}{(C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_3 R_3 s^3 + C_3 C_L L_3 R_L s^3 + C_3 C_L R_3 R_L s^2 + C_3 L_3 s^2 + C_3 R_3 s + C_L R_3 s + C_L R_L s + 1)}$$

10.433 INVALID-ORDER-433 $Z(s) = \left(R_1, R_2, \infty, \infty, \infty, L_L s + \frac{1}{C_L s} \right)$

$$H(s) = \frac{R_3 g_m (C_1 R_1 s + 1) (C_3 L_3 s^2 + 1) (C_L L_L s^2 + 1)}{(C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_3 L_L s^4 + C_3 C_L L_3 R_3 s^3 + C_3 C_L L_L R_3 s^3 + C_3 L_3 s^2 + C_3 R_3 s + C_L L_L s^2 + C_L R_3 s + 1)}$$

10.434 INVALID-ORDER-434 $Z(s) = \left(R_1, R_2, \infty, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} \right)$

$$H(s) = \frac{L_L R_3 g_m s (C_1 R_1 s + 1) (C_3 L_3 s^2 + 1)}{(C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_3 L_L R_3 s^4 + C_3 L_3 L_L s^3 + C_3 L_3 R_3 s^2 + C_3 L_L R_3 s^2 + C_L L_L R_3 s^2 + L_L s + R_3)}$$

10.435 INVALID-ORDER-435 $Z(s) = \left(R_1, R_2, \infty, \infty, \infty, L_L s + R_L + \frac{1}{C_L s} \right)$

$$H(s) = \frac{R_3 g_m (C_1 R_1 s + 1) (C_3 L_3 s^2 + 1) (C_L L_L s^2 + C_L R_L s + 1)}{(C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_3 L_L s^4 + C_3 C_L L_3 R_3 s^3 + C_3 C_L L_3 R_L s^3 + C_3 C_L L_L R_3 s^3 + C_3 C_L R_3 R_L s^2 + C_3 L_3 s^2 + C_3 R_3 s + C_L L_L s^2 + C_L R_3 s + C_L R_L s + 1)}$$

10.436 INVALID-ORDER-436 $Z(s) = \left(R_1, R_2, \infty, \infty, \infty, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$

$$H(s) = \frac{L_L R_3 R_L g_m s (C_1 R_1 s + 1) (C_3 L_3 s^2 + 1)}{(C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_3 L_L R_3 R_L s^4 + C_3 L_3 L_L R_3 s^3 + C_3 L_3 L_L R_L s^3 + C_3 L_3 R_3 R_L s^2 + C_3 L_L R_3 R_L s^2 + C_L L_L R_3 R_L s^2 + L_L R_3 s + L_L R_L s + R_3 R_L)}$$

10.437 INVALID-ORDER-437 $Z(s) = \left(R_1, R_2, \infty, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$

$$H(s) = \frac{R_3 g_m (C_1 R_1 s + 1) (C_3 L_3 s^2 + 1) (C_L L_L R_L s^2 + L_L s + R_L)}{(C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_3 L_L R_3 s^4 + C_3 C_L L_3 L_L R_L s^4 + C_3 C_L L_L R_3 R_L s^3 + C_3 L_3 L_L s^3 + C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + C_3 L_L R_3 s^2 + C_3 R_3 R_L s + C_L L_L R_3 s^2 + C_L L_L R_L s + C_L L_L R_L s + 1)}$$

10.438 INVALID-ORDER-438 $Z(s) = \left(R_1, R_2, \infty, \infty, \infty, \frac{R_L (L_L s + \frac{1}{C_L s})}{L_L s + R_L + \frac{1}{C_L s}} \right)$

$$H(s) = \frac{R_3 R_L g_m (C_1 R_1 s + 1) (C_3 L_3 s^2 + 1) (C_L L_L s^2 + 1)}{(C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_3 L_L R_3 s^4 + C_3 C_L L_3 L_L R_L s^4 + C_3 C_L L_3 R_3 R_L s^3 + C_3 C_L L_L R_3 R_L s^3 + C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + C_3 R_3 R_L s + C_L L_L R_3 s^2 + C_L L_L R_L s^2 + C_L L_L R_L s + 1)}$$

10.439 INVALID-ORDER-439 $Z(s) = \left(R_1, \frac{1}{C_2 s}, \infty, \infty, \infty, \frac{1}{C_L s} \right)$

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

10.440 INVALID-ORDER-440 $Z(s) = \left(R_1, \frac{1}{C_2 s}, \infty, \infty, \infty, \frac{R_L}{C_L R_L s + 1} \right)$

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

10.441 INVALID-ORDER-441 $Z(s) = \left(R_1, \frac{1}{C_2 s}, \infty, \infty, \infty, R_L + \frac{1}{C_L s} \right)$

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

10.442 INVALID-ORDER-442 $Z(s) = \left(R_1, \frac{1}{C_2 s}, \infty, \infty, \infty, L_L s + \frac{1}{C_L s} \right)$

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

10.443 INVALID-ORDER-443 $Z(s) = \left(R_1, \frac{1}{C_2 s}, \infty, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} \right)$

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

10.444 INVALID-ORDER-444 $Z(s) = \left(R_1, \frac{1}{C_2 s}, \infty, \infty, \infty, L_L s + R_L + \frac{1}{C_L s} \right)$

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

10.445 INVALID-ORDER-445 $Z(s) = \left(R_1, \frac{1}{C_2 s}, \infty, \infty, \infty, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$

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

10.446 INVALID-ORDER-446 $Z(s) = \left(R_1, \frac{1}{C_2 s}, \infty, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$

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

10.447 INVALID-ORDER-447 $Z(s) = \left(R_1, \frac{1}{C_2 s}, \infty, \infty, \infty, \frac{R_L (L_L s + \frac{1}{C_L s})}{L_L s + R_L + \frac{1}{C_L s}} \right)$

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

10.448 INVALID-ORDER-448 $Z(s) = \left(R_1, \frac{R_2}{C_2 R_2 s + 1}, \infty, \infty, \infty, R_L \right)$

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

10.449 INVALID-ORDER-449 $Z(s) = \left(R_1, \frac{R_2}{C_2 R_2 s + 1}, \infty, \infty, \infty, \frac{1}{C_L s} \right)$

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

10.450 INVALID-ORDER-450 $Z(s) = \left(R_1, \frac{R_2}{C_2 R_2 s + 1}, \infty, \infty, \infty, \frac{R_L}{C_L R_L s + 1} \right)$

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

10.451 INVALID-ORDER-451 $Z(s) = \left(R_1, \frac{R_2}{C_2 R_2 s + 1}, \infty, \infty, \infty, R_L + \frac{1}{C_L s} \right)$

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

10.452 INVALID-ORDER-452 $Z(s) = \left(R_1, \frac{R_2}{C_2 R_2 s + 1}, \infty, \infty, \infty, L_L s + \frac{1}{C_L s} \right)$

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

10.453 INVALID-ORDER-453 $Z(s) = \left(R_1, \frac{R_2}{C_2 R_2 s + 1}, \infty, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} \right)$

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

10.454 INVALID-ORDER-454 $Z(s) = \left(R_1, \frac{R_2}{C_2 R_2 s + 1}, \infty, \infty, \infty, L_L s + R_L + \frac{1}{C_L s} \right)$

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

10.455 INVALID-ORDER-455 $Z(s) = \left(R_1, \frac{R_2}{C_2 R_2 s + 1}, \infty, \infty, \infty, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$

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

10.456 INVALID-ORDER-456 $Z(s) = \left(R_1, \frac{R_2}{C_2 R_2 s + 1}, \infty, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$

$$H(s) = \frac{g_m (C_1 L_1 s^2 + 1) (C_L L_L R_L s^2 + L_L s + R_L)}{(C_1 L_1 g_m s^2 + C_1 s + g_m) (C_3 C_L L_L R_L s^3 + C_3 L_L s^2 + C_3 R_L s + C_L L_L s^2 + 1)}$$

10.457 INVALID-ORDER-457 $Z(s) = \left(R_1, \frac{R_2}{C_2 R_2 s + 1}, \infty, \infty, \infty, \frac{R_L (L_L s + \frac{1}{C_L s})}{L_L s + R_L + \frac{1}{C_L s}} \right)$

$$H(s) = \frac{R_L g_m (C_1 L_1 s^2 + 1) (C_L L_L s^2 + 1)}{(C_1 L_1 g_m s^2 + C_1 s + g_m) (C_3 C_L L_L R_L s^3 + C_3 R_L s + C_L L_L s^2 + C_L R_L s + 1)}$$

10.458 INVALID-ORDER-458 $Z(s) = \left(R_1, R_2 + \frac{1}{C_2 s}, \infty, \infty, \infty, R_L \right)$

$$H(s) = \frac{R_3 R_L g_m (C_1 L_1 s^2 + 1)}{(C_1 L_1 g_m s^2 + C_1 s + g_m) (C_3 R_3 R_L s + R_3 + R_L)}$$

10.459 INVALID-ORDER-459 $Z(s) = \left(R_1, R_2 + \frac{1}{C_2 s}, \infty, \infty, \infty, \frac{1}{C_L s} \right)$

$$H(s) = \frac{R_3 g_m (C_1 L_1 s^2 + 1)}{(C_3 R_3 s + C_L R_3 s + 1) (C_1 L_1 g_m s^2 + C_1 s + g_m)}$$

10.460 INVALID-ORDER-460 $Z(s) = \left(R_1, R_2 + \frac{1}{C_2 s}, \infty, \infty, \infty, \frac{R_L}{C_L R_L s + 1} \right)$

$$H(s) = \frac{R_3 R_L g_m (C_1 L_1 s^2 + 1)}{(C_1 L_1 g_m s^2 + C_1 s + g_m) (C_3 R_3 R_L s + C_L R_3 R_L s + R_3 + R_L)}$$

10.461 INVALID-ORDER-461 $Z(s) = \left(R_1, R_2 + \frac{1}{C_2 s}, \infty, \infty, \infty, R_L + \frac{1}{C_L s} \right)$

$$H(s) = \frac{R_3 g_m (C_1 L_1 s^2 + 1) (C_L R_L s + 1)}{(C_1 L_1 g_m s^2 + C_1 s + g_m) (C_3 C_L R_3 R_L s^2 + C_3 R_3 s + C_L R_3 s + C_L R_L s + 1)}$$

10.462 INVALID-ORDER-462 $Z(s) = \left(R_1, R_2 + \frac{1}{C_2 s}, \infty, \infty, \infty, L_L s + \frac{1}{C_L s} \right)$

$$H(s) = \frac{R_3 g_m (C_1 L_1 s^2 + 1) (C_L L_L s^2 + 1)}{(C_1 L_1 g_m s^2 + C_1 s + g_m) (C_3 C_L L_L R_3 s^3 + C_3 R_3 s + C_L L_L s^2 + C_L R_3 s + 1)}$$

10.463 INVALID-ORDER-463 $Z(s) = \left(R_1, R_2 + \frac{1}{C_2 s}, \infty, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} \right)$

$$H(s) = \frac{L_L R_3 g_m s (C_1 L_1 s^2 + 1)}{(C_1 L_1 g_m s^2 + C_1 s + g_m) (C_3 L_L R_3 s^2 + C_L L_L R_3 s^2 + L_L s + R_3)}$$

10.464 INVALID-ORDER-464 $Z(s) = \left(R_1, R_2 + \frac{1}{C_2 s}, \infty, \infty, \infty, L_L s + R_L + \frac{1}{C_L s} \right)$

$$H(s) = \frac{R_3 g_m (C_1 L_1 s^2 + 1) (C_L L_L s^2 + C_L R_L s + 1)}{(C_1 L_1 g_m s^2 + C_1 s + g_m) (C_3 C_L L_L R_3 s^3 + C_3 C_L R_3 R_L s^2 + C_3 R_3 s + C_L L_L s^2 + C_L R_3 s + C_L R_L s + 1)}$$

10.465 INVALID-ORDER-465 $Z(s) = \left(R_1, R_2 + \frac{1}{C_2 s}, \infty, \infty, \infty, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$

$$H(s) = \frac{L_L R_3 R_L g_m s (C_1 L_1 s^2 + 1)}{(C_1 L_1 g_m s^2 + C_1 s + g_m) (C_3 L_L R_3 R_L s^2 + C_L L_L R_3 R_L s^2 + L_L R_3 s + L_L R_L s + R_3 R_L)}$$

10.466 INVALID-ORDER-466 $Z(s) = \left(R_1, R_2 + \frac{1}{C_2 s}, \infty, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$

$$H(s) = \frac{R_3 g_m (C_1 L_1 s^2 + 1) (C_L L_L R_L s^2 + L_L s + R_L)}{(C_1 L_1 g_m s^2 + C_1 s + g_m) (C_3 C_L L_L R_3 R_L s^3 + C_3 L_L R_3 s^2 + C_3 R_3 R_L s + C_L L_L R_3 s^2 + C_L L_L R_L s^2 + L_L s + R_3 + R_L)}$$

10.467 INVALID-ORDER-467 $Z(s) = \left(R_1, R_2 + \frac{1}{C_2 s}, \infty, \infty, \infty, \frac{R_L (L_L s + \frac{1}{C_L s})}{L_L s + R_L + \frac{1}{C_L s}} \right)$

$$H(s) = \frac{R_3 R_L g_m (C_1 L_1 s^2 + 1) (C_L L_L s^2 + 1)}{(C_1 L_1 g_m s^2 + C_1 s + g_m) (C_3 C_L L_L R_3 R_L s^3 + C_3 R_3 R_L s + C_L L_L R_3 s^2 + C_L L_L R_L s^2 + C_L R_3 R_L s + R_3 + R_L)}$$

10.468 INVALID-ORDER-468 $Z(s) = \left(R_1, L_2 s + \frac{1}{C_2 s}, \infty, \infty, \infty, R_L \right)$

$$H(s) = \frac{R_L g_m (C_1 L_1 s^2 + 1) (C_3 R_3 s + 1)}{(C_3 R_3 s + C_3 R_L s + 1) (C_1 L_1 g_m s^2 + C_1 s + g_m)}$$

10.469 INVALID-ORDER-469 $Z(s) = \left(R_1, L_2 s + \frac{1}{C_2 s}, \infty, \infty, \infty, \frac{1}{C_L s} \right)$

$$H(s) = \frac{g_m (C_1 L_1 s^2 + 1) (C_3 R_3 s + 1)}{s (C_1 L_1 g_m s^2 + C_1 s + g_m) (C_3 C_L R_3 s + C_3 + C_L)}$$

10.470 INVALID-ORDER-470 $Z(s) = \left(R_1, L_2s + \frac{1}{C_2s}, \infty, \infty, \infty, \frac{R_L}{C_LR_Ls+1} \right)$

$$H(s) = \frac{R_L g_m (C_1 L_1 s^2 + 1) (C_3 R_3 s + 1)}{(C_1 L_1 g_m s^2 + C_1 s + g_m) (C_3 C_L R_3 R_L s^2 + C_3 R_3 s + C_3 R_L s + C_L R_L s + 1)}$$

10.471 INVALID-ORDER-471 $Z(s) = \left(R_1, L_2s + \frac{1}{C_2s}, \infty, \infty, \infty, R_L + \frac{1}{C_Ls} \right)$

$$H(s) = \frac{g_m (C_1 L_1 s^2 + 1) (C_3 R_3 s + 1) (C_L R_L s + 1)}{s (C_1 L_1 g_m s^2 + C_1 s + g_m) (C_3 C_L R_3 s + C_3 C_L R_L s + C_3 + C_L)}$$

10.472 INVALID-ORDER-472 $Z(s) = \left(R_1, L_2s + \frac{1}{C_2s}, \infty, \infty, \infty, L_Ls + \frac{1}{C_Ls} \right)$

$$H(s) = \frac{g_m (C_1 L_1 s^2 + 1) (C_3 R_3 s + 1) (C_L L_L s^2 + 1)}{s (C_1 L_1 g_m s^2 + C_1 s + g_m) (C_3 C_L L_L s^2 + C_3 C_L R_3 s + C_3 + C_L)}$$

10.473 INVALID-ORDER-473 $Z(s) = \left(R_1, L_2s + \frac{1}{C_2s}, \infty, \infty, \infty, \frac{L_Ls}{C_LL_Ls^2+1} \right)$

$$H(s) = \frac{L_L g_m s (C_1 L_1 s^2 + 1) (C_3 R_3 s + 1)}{(C_1 L_1 g_m s^2 + C_1 s + g_m) (C_3 C_L L_L R_3 s^3 + C_3 L_L s^2 + C_3 R_3 s + C_L L_L s^2 + 1)}$$

10.474 INVALID-ORDER-474 $Z(s) = \left(R_1, L_2s + \frac{1}{C_2s}, \infty, \infty, \infty, L_Ls + R_L + \frac{1}{C_Ls} \right)$

$$H(s) = \frac{g_m (C_1 L_1 s^2 + 1) (C_3 R_3 s + 1) (C_L L_L s^2 + C_L R_L s + 1)}{s (C_1 L_1 g_m s^2 + C_1 s + g_m) (C_3 C_L L_L s^2 + C_3 C_L R_3 s + C_3 C_L R_L s + C_3 + C_L)}$$

$$10.475 \quad \text{INVALID-ORDER-475} \quad Z(s) = \left(R_1, \quad L_2 s + \frac{1}{C_2 s}, \quad \infty, \quad \infty, \quad \infty, \quad \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$$

$$H(s) = \frac{L_L R_L g_m s (C_1 L_1 s^2 + 1) (C_3 R_3 s + 1)}{(C_1 L_1 g_m s^2 + C_1 s + g_m) (C_3 C_L L_L R_3 R_L s^3 + C_3 L_L R_3 s^2 + C_3 L_L R_L s^2 + C_3 R_3 R_L s + C_L L_L R_L s^2 + L_L s + R_L)}$$

$$10.476 \quad \text{INVALID-ORDER-476} \quad Z(s) = \left(R_1, \quad L_2 s + \frac{1}{C_2 s}, \quad \infty, \quad \infty, \quad \infty, \quad \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$$

$$H(s) = \frac{g_m (C_1 L_1 s^2 + 1) (C_3 R_3 s + 1) (C_L L_L R_L s^2 + L_L s + R_L)}{(C_1 L_1 g_m s^2 + C_1 s + g_m) (C_3 C_L L_L R_3 s^3 + C_3 C_L L_L R_L s^3 + C_3 L_L s^2 + C_3 R_3 s + C_3 R_L s + C_L L_L s^2 + 1)}$$

$$10.477 \quad \text{INVALID-ORDER-477} \quad Z(s) = \left(R_1, \quad L_2 s + \frac{1}{C_2 s}, \quad \infty, \quad \infty, \quad \infty, \quad \frac{R_L (L_L s + \frac{1}{C_L s})}{L_L s + R_L + \frac{1}{C_L s}} \right)$$

$$H(s) = \frac{R_L g_m (C_1 L_1 s^2 + 1) (C_3 R_3 s + 1) (C_L L_L s^2 + 1)}{(C_1 L_1 g_m s^2 + C_1 s + g_m) (C_3 C_L L_L R_3 s^3 + C_3 C_L L_L R_L s^3 + C_3 C_L R_3 R_L s^2 + C_3 R_3 s + C_3 R_L s + C_L L_L s^2 + C_L R_L s + 1)}$$

$$10.478 \quad \text{INVALID-ORDER-478} \quad Z(s) = \left(R_1, \quad L_2 s + R_2 + \frac{1}{C_2 s}, \quad \infty, \quad \infty, \quad \infty, \quad R_L \right)$$

$$H(s) = \frac{R_L g_m (C_1 L_1 s^2 + 1) (C_3 L_3 s^2 + 1)}{(C_3 L_3 s^2 + C_3 R_L s + 1) (C_1 L_1 g_m s^2 + C_1 s + g_m)}$$

$$10.479 \quad \text{INVALID-ORDER-479} \quad Z(s) = \left(R_1, \quad L_2 s + R_2 + \frac{1}{C_2 s}, \quad \infty, \quad \infty, \quad \infty, \quad \frac{1}{C_L s} \right)$$

$$H(s) = \frac{g_m (C_1 L_1 s^2 + 1) (C_3 L_3 s^2 + 1)}{s (C_1 L_1 g_m s^2 + C_1 s + g_m) (C_3 C_L L_3 s^2 + C_3 + C_L)}$$

10.480 INVALID-ORDER-480 $Z(s) = \left(R_1, L_2s + R_2 + \frac{1}{C_2s}, \infty, \infty, \infty, \frac{R_L}{C_LR_Ls+1} \right)$

$$H(s) = \frac{R_L g_m (C_1 L_1 s^2 + 1) (C_3 L_3 s^2 + 1)}{(C_1 L_1 g_m s^2 + C_1 s + g_m) (C_3 C_L L_3 R_L s^3 + C_3 L_3 s^2 + C_3 R_L s + C_L R_L s + 1)}$$

10.481 INVALID-ORDER-481 $Z(s) = \left(R_1, L_2s + R_2 + \frac{1}{C_2s}, \infty, \infty, \infty, R_L + \frac{1}{C_Ls} \right)$

$$H(s) = \frac{g_m (C_1 L_1 s^2 + 1) (C_3 L_3 s^2 + 1) (C_L R_L s + 1)}{s (C_1 L_1 g_m s^2 + C_1 s + g_m) (C_3 C_L L_3 s^2 + C_3 C_L R_L s + C_3 + C_L)}$$

10.482 INVALID-ORDER-482 $Z(s) = \left(R_1, L_2s + R_2 + \frac{1}{C_2s}, \infty, \infty, \infty, L_Ls + \frac{1}{C_Ls} \right)$

$$H(s) = \frac{g_m (C_1 L_1 s^2 + 1) (C_3 L_3 s^2 + 1) (C_L L_L s^2 + 1)}{s (C_1 L_1 g_m s^2 + C_1 s + g_m) (C_3 C_L L_3 s^2 + C_3 C_L L_L s^2 + C_3 + C_L)}$$

10.483 INVALID-ORDER-483 $Z(s) = \left(R_1, L_2s + R_2 + \frac{1}{C_2s}, \infty, \infty, \infty, \frac{L_Ls}{C_LL_Ls^2+1} \right)$

$$H(s) = \frac{L_L g_m s (C_1 L_1 s^2 + 1) (C_3 L_3 s^2 + 1)}{(C_1 L_1 g_m s^2 + C_1 s + g_m) (C_3 C_L L_3 L_L s^4 + C_3 L_3 s^2 + C_3 L_L s^2 + C_L L_L s^2 + 1)}$$

10.484 INVALID-ORDER-484 $Z(s) = \left(R_1, L_2s + R_2 + \frac{1}{C_2s}, \infty, \infty, \infty, L_Ls + R_L + \frac{1}{C_Ls} \right)$

$$H(s) = \frac{g_m (C_1 L_1 s^2 + 1) (C_3 L_3 s^2 + 1) (C_L L_L s^2 + C_L R_L s + 1)}{s (C_1 L_1 g_m s^2 + C_1 s + g_m) (C_3 C_L L_3 s^2 + C_3 C_L L_L s^2 + C_3 C_L R_L s + C_3 + C_L)}$$

10.485 INVALID-ORDER-485 $Z(s) = \left(R_1, L_2s + R_2 + \frac{1}{C_2s}, \infty, \infty, \infty, \frac{1}{C_Ls + \frac{1}{R_L} + \frac{1}{L_Ls}} \right)$

$$H(s) = \frac{L_LR_Lg_ms(C_1L_1s^2 + 1)(C_3L_3s^2 + 1)}{(C_1L_1g_ms^2 + C_1s + g_m)(C_3C_LL_3L_LR_Ls^4 + C_3L_3L_Ls^3 + C_3L_3R_Ls^2 + C_3L_LR_Ls^2 + C_LL_LR_Ls^2 + L_Ls + R_L)}$$

10.486 INVALID-ORDER-486 $Z(s) = \left(R_1, L_2s + R_2 + \frac{1}{C_2s}, \infty, \infty, \infty, \frac{L_Ls}{C_LL_Ls^2 + 1} + R_L \right)$

$$H(s) = \frac{g_m(C_1L_1s^2 + 1)(C_3L_3s^2 + 1)(C_LL_LR_Ls^2 + L_Ls + R_L)}{(C_1L_1g_ms^2 + C_1s + g_m)(C_3C_LL_3L_LR_Ls^4 + C_3C_LL_LR_Ls^3 + C_3L_3s^2 + C_3L_Ls^2 + C_3R_Ls + C_LL_Ls^2 + 1)}$$

10.487 INVALID-ORDER-487 $Z(s) = \left(R_1, L_2s + R_2 + \frac{1}{C_2s}, \infty, \infty, \infty, \frac{R_L(L_Ls + \frac{1}{C_Ls})}{L_Ls + R_L + \frac{1}{C_Ls}} \right)$

$$H(s) = \frac{R_Lg_m(C_1L_1s^2 + 1)(C_3L_3s^2 + 1)(C_LL_Ls^2 + 1)}{(C_1L_1g_ms^2 + C_1s + g_m)(C_3C_LL_3L_LR_Ls^4 + C_3C_LL_3R_Ls^3 + C_3C_LL_LR_Ls^3 + C_3L_3s^2 + C_3R_Ls + C_LL_Ls^2 + C_LR_Ls + 1)}$$

10.488 INVALID-ORDER-488 $Z(s) = \left(R_1, \frac{L_2s}{C_2L_2s^2 + 1} + R_2, \infty, \infty, \infty, R_L \right)$

$$H(s) = \frac{L_3R_Lg_ms(C_1L_1s^2 + 1)}{(C_1L_1g_ms^2 + C_1s + g_m)(C_3L_3R_Ls^2 + L_3s + R_L)}$$

10.489 INVALID-ORDER-489 $Z(s) = \left(R_1, \frac{L_2s}{C_2L_2s^2 + 1} + R_2, \infty, \infty, \infty, \frac{1}{C_Ls} \right)$

$$H(s) = \frac{L_3g_ms(C_1L_1s^2 + 1)}{(C_3L_3s^2 + C_LL_3s^2 + 1)(C_1L_1g_ms^2 + C_1s + g_m)}$$

10.490 INVALID-ORDER-490 $Z(s) = \left(R_1, \frac{L_2 s}{C_2 L_2 s^2 + 1} + R_2, \infty, \infty, \infty, \frac{R_L}{C_L R_L s + 1} \right)$

$$H(s) = \frac{L_3 R_L g_m s (C_1 L_1 s^2 + 1)}{(C_1 L_1 g_m s^2 + C_1 s + g_m) (C_3 L_3 R_L s^2 + C_L L_3 R_L s^2 + L_3 s + R_L)}$$

10.491 INVALID-ORDER-491 $Z(s) = \left(R_1, \frac{L_2 s}{C_2 L_2 s^2 + 1} + R_2, \infty, \infty, \infty, R_L + \frac{1}{C_L s} \right)$

$$H(s) = \frac{L_3 g_m s (C_1 L_1 s^2 + 1) (C_L R_L s + 1)}{(C_1 L_1 g_m s^2 + C_1 s + g_m) (C_3 C_L L_3 R_L s^3 + C_3 L_3 s^2 + C_L L_3 s^2 + C_L R_L s + 1)}$$

10.492 INVALID-ORDER-492 $Z(s) = \left(R_1, \frac{L_2 s}{C_2 L_2 s^2 + 1} + R_2, \infty, \infty, \infty, L_L s + \frac{1}{C_L s} \right)$

$$H(s) = \frac{L_3 g_m s (C_1 L_1 s^2 + 1) (C_L L_L s^2 + 1)}{(C_1 L_1 g_m s^2 + C_1 s + g_m) (C_3 C_L L_3 L_L s^4 + C_3 L_3 s^2 + C_L L_3 s^2 + C_L L_L s^2 + 1)}$$

10.493 INVALID-ORDER-493 $Z(s) = \left(R_1, \frac{L_2 s}{C_2 L_2 s^2 + 1} + R_2, \infty, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} \right)$

$$H(s) = \frac{L_3 L_L g_m s (C_1 L_1 s^2 + 1)}{(C_1 L_1 g_m s^2 + C_1 s + g_m) (C_3 L_3 L_L s^2 + C_L L_3 L_L s^2 + L_3 + L_L)}$$

10.494 INVALID-ORDER-494 $Z(s) = \left(R_1, \frac{L_2 s}{C_2 L_2 s^2 + 1} + R_2, \infty, \infty, \infty, L_L s + R_L + \frac{1}{C_L s} \right)$

$$H(s) = \frac{L_3 g_m s (C_1 L_1 s^2 + 1) (C_L L_L s^2 + C_L R_L s + 1)}{(C_1 L_1 g_m s^2 + C_1 s + g_m) (C_3 C_L L_3 L_L s^4 + C_3 C_L L_3 R_L s^3 + C_3 L_3 s^2 + C_L L_3 s^2 + C_L L_L s^2 + C_L R_L s + 1)}$$

10.495 INVALID-ORDER-495 $Z(s) = \left(R_1, \frac{L_2 s}{C_2 L_2 s^2 + 1} + R_2, \infty, \infty, \infty, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$

$$H(s) = \frac{L_3 L_L R_L g_m s (C_1 L_1 s^2 + 1)}{(C_1 L_1 g_m s^2 + C_1 s + g_m) (C_3 L_3 L_L R_L s^2 + C_L L_3 L_L R_L s^2 + L_3 L_L s + L_3 R_L + L_L R_L)}$$

10.496 INVALID-ORDER-496 $Z(s) = \left(R_1, \frac{L_2 s}{C_2 L_2 s^2 + 1} + R_2, \infty, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$

$$H(s) = \frac{L_3 g_m s (C_1 L_1 s^2 + 1) (C_L L_L R_L s^2 + L_L s + R_L)}{(C_1 L_1 g_m s^2 + C_1 s + g_m) (C_3 C_L L_3 L_L R_L s^4 + C_3 L_3 L_L s^3 + C_3 L_3 R_L s^2 + C_L L_3 L_L s^3 + C_L L_L R_L s^2 + L_3 s + L_L s + R_L)}$$

10.497 INVALID-ORDER-497 $Z(s) = \left(R_1, \frac{L_2 s}{C_2 L_2 s^2 + 1} + R_2, \infty, \infty, \infty, \frac{R_L (L_L s + \frac{1}{C_L s})}{L_L s + R_L + \frac{1}{C_L s}} \right)$

$$H(s) = \frac{L_3 R_L g_m s (C_1 L_1 s^2 + 1) (C_L L_L s^2 + 1)}{(C_1 L_1 g_m s^2 + C_1 s + g_m) (C_3 C_L L_3 L_L R_L s^4 + C_3 L_3 R_L s^2 + C_L L_3 L_L s^3 + C_L L_3 R_L s^2 + C_L L_L R_L s^2 + L_3 s + R_L)}$$

10.498 INVALID-ORDER-498 $Z(s) = \left(R_1, \frac{R_2 (L_2 s + \frac{1}{C_2 s})}{L_2 s + R_2 + \frac{1}{C_2 s}}, \infty, \infty, \infty, R_L \right)$

$$H(s) = \frac{R_L g_m (C_1 L_1 s^2 + 1) (C_3 L_3 s^2 + C_3 R_3 s + 1)}{(C_1 L_1 g_m s^2 + C_1 s + g_m) (C_3 L_3 s^2 + C_3 R_3 s + C_3 R_L s + 1)}$$

10.499 INVALID-ORDER-499 $Z(s) = \left(R_1, \frac{R_2 (L_2 s + \frac{1}{C_2 s})}{L_2 s + R_2 + \frac{1}{C_2 s}}, \infty, \infty, \infty, \frac{1}{C_L s} \right)$

$$H(s) = \frac{g_m (C_1 L_1 s^2 + 1) (C_3 L_3 s^2 + C_3 R_3 s + 1)}{s (C_1 L_1 g_m s^2 + C_1 s + g_m) (C_3 C_L L_3 s^2 + C_3 C_L R_3 s + C_3 + C_L)}$$

$$10.500 \quad \text{INVALID-ORDER-500} \quad Z(s) = \left(R_1, \frac{R_2 \left(L_2 s + \frac{1}{C_2 s} \right)}{L_2 s + R_2 + \frac{1}{C_2 s}}, \infty, \infty, \infty, \frac{R_L}{C_L R_L s + 1} \right)$$

$$H(s) = \frac{R_L g_m (C_1 L_1 s^2 + 1) (C_3 L_3 s^2 + C_3 R_3 s + 1)}{(C_1 L_1 g_m s^2 + C_1 s + g_m) (C_3 C_L L_3 R_L s^3 + C_3 C_L R_3 R_L s^2 + C_3 L_3 s^2 + C_3 R_3 s + C_3 R_L s + C_L R_L s + 1)}$$

$$10.501 \quad \text{INVALID-ORDER-501} \quad Z(s) = \left(R_1, \frac{R_2 \left(L_2 s + \frac{1}{C_2 s} \right)}{L_2 s + R_2 + \frac{1}{C_2 s}}, \infty, \infty, \infty, R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{g_m (C_1 L_1 s^2 + 1) (C_L R_L s + 1) (C_3 L_3 s^2 + C_3 R_3 s + 1)}{s (C_1 L_1 g_m s^2 + C_1 s + g_m) (C_3 C_L L_3 s^2 + C_3 C_L R_3 s + C_3 C_L R_L s + C_3 + C_L)}$$

$$10.502 \quad \text{INVALID-ORDER-502} \quad Z(s) = \left(R_1, \frac{R_2 \left(L_2 s + \frac{1}{C_2 s} \right)}{L_2 s + R_2 + \frac{1}{C_2 s}}, \infty, \infty, \infty, L_L s + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{g_m (C_1 L_1 s^2 + 1) (C_L L_L s^2 + 1) (C_3 L_3 s^2 + C_3 R_3 s + 1)}{s (C_1 L_1 g_m s^2 + C_1 s + g_m) (C_3 C_L L_3 s^2 + C_3 C_L L_L s^2 + C_3 C_L R_3 s + C_3 + C_L)}$$

$$10.503 \quad \text{INVALID-ORDER-503} \quad Z(s) = \left(R_1, \frac{R_2 \left(L_2 s + \frac{1}{C_2 s} \right)}{L_2 s + R_2 + \frac{1}{C_2 s}}, \infty, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} \right)$$

$$H(s) = \frac{L_L g_m s (C_1 L_1 s^2 + 1) (C_3 L_3 s^2 + C_3 R_3 s + 1)}{(C_1 L_1 g_m s^2 + C_1 s + g_m) (C_3 C_L L_3 L_L s^4 + C_3 C_L L_L R_3 s^3 + C_3 L_3 s^2 + C_3 L_L s^2 + C_3 R_3 s + C_L L_L s^2 + 1)}$$

$$10.504 \quad \text{INVALID-ORDER-504} \quad Z(s) = \left(R_1, \frac{R_2 \left(L_2 s + \frac{1}{C_2 s} \right)}{L_2 s + R_2 + \frac{1}{C_2 s}}, \infty, \infty, \infty, L_L s + R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{g_m (C_1 L_1 s^2 + 1) (C_3 L_3 s^2 + C_3 R_3 s + 1) (C_L L_L s^2 + C_L R_L s + 1)}{s (C_1 L_1 g_m s^2 + C_1 s + g_m) (C_3 C_L L_3 s^2 + C_3 C_L L_L s^2 + C_3 C_L R_3 s + C_3 C_L R_L s + C_3 + C_L)}$$

$$10.505 \quad \text{INVALID-ORDER-505} \quad Z(s) = \left(R_1, \frac{R_2 \left(L_2 s + \frac{1}{C_2 s} \right)}{L_2 s + R_2 + \frac{1}{C_2 s}}, \infty, \infty, \infty, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$$

$$H(s) = \frac{L_L R_L g_m s (C_1 L_1 s^2 + 1) (C_3 L_3 s^2 + C_3 R_3 s + 1)}{(C_1 L_1 g_m s^2 + C_1 s + g_m) (C_3 C_L L_3 L_L R_L s^4 + C_3 C_L L_L R_3 R_L s^3 + C_3 L_3 L_L s^3 + C_3 L_3 R_L s^2 + C_3 L_L R_3 s^2 + C_3 L_L R_L s^2 + C_3 R_3 R_L s + C_L L_L R_L s^2 + L_L s + R_L)}$$

$$10.506 \quad \text{INVALID-ORDER-506} \quad Z(s) = \left(R_1, \frac{R_2 \left(L_2 s + \frac{1}{C_2 s} \right)}{L_2 s + R_2 + \frac{1}{C_2 s}}, \infty, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$$

$$H(s) = \frac{g_m (C_1 L_1 s^2 + 1) (C_3 L_3 s^2 + C_3 R_3 s + 1) (C_L L_L R_L s^2 + L_L s + R_L)}{(C_1 L_1 g_m s^2 + C_1 s + g_m) (C_3 C_L L_3 L_L s^4 + C_3 C_L L_L R_3 s^3 + C_3 C_L L_L R_L s^3 + C_3 L_3 s^2 + C_3 L_L s^2 + C_3 R_3 s + C_3 R_L s + C_L L_L s^2 + 1)}$$

$$10.507 \quad \text{INVALID-ORDER-507} \quad Z(s) = \left(R_1, \frac{R_2 \left(L_2 s + \frac{1}{C_2 s} \right)}{L_2 s + R_2 + \frac{1}{C_2 s}}, \infty, \infty, \infty, \frac{R_L \left(L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$$

$$H(s) = \frac{R_L g_m (C_1 L_1 s^2 + 1) (C_L L_L s^2 + 1) (C_3 L_3 s^2 + C_3 R_3 s + 1)}{(C_1 L_1 g_m s^2 + C_1 s + g_m) (C_3 C_L L_3 L_L s^4 + C_3 C_L L_3 R_L s^3 + C_3 C_L L_L R_3 s^3 + C_3 C_L L_L R_L s^3 + C_3 C_L R_3 R_L s^2 + C_3 L_3 s^2 + C_3 R_3 s + C_3 R_L s + C_L L_L s^2 + C_L R_L s + 1)}$$

$$10.508 \quad \text{INVALID-ORDER-508} \quad Z(s) = (L_1 s, R_2, \infty, \infty, \infty, R_L)$$

$$H(s) = \frac{L_3 R_3 R_L g_m s (C_1 L_1 s^2 + 1)}{(C_1 L_1 g_m s^2 + C_1 s + g_m) (C_3 L_3 R_3 R_L s^2 + L_3 R_3 s + L_3 R_L s + R_3 R_L)}$$

$$10.509 \quad \text{INVALID-ORDER-509} \quad Z(s) = \left(L_1 s, R_2, \infty, \infty, \infty, \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_3 R_3 g_m s (C_1 L_1 s^2 + 1)}{(C_1 L_1 g_m s^2 + C_1 s + g_m) (C_3 L_3 R_3 s^2 + C_L L_3 R_3 s^2 + L_3 s + R_3)}$$

10.510 INVALID-ORDER-510 $Z(s) = \left(L_1 s, R_2, \infty, \infty, \infty, \frac{R_L}{C_L R_L s + 1} \right)$

$$H(s) = \frac{L_3 R_3 R_L g_m s (C_1 L_1 s^2 + 1)}{(C_1 L_1 g_m s^2 + C_1 s + g_m) (C_3 L_3 R_3 R_L s^2 + C_L L_3 R_3 R_L s^2 + L_3 R_3 s + L_3 R_L s + R_3 R_L)}$$

10.511 INVALID-ORDER-511 $Z(s) = \left(L_1 s, R_2, \infty, \infty, \infty, R_L + \frac{1}{C_L s} \right)$

$$H(s) = \frac{L_3 R_3 g_m s (C_1 L_1 s^2 + 1) (C_L R_L s + 1)}{(C_1 L_1 g_m s^2 + C_1 s + g_m) (C_3 C_L L_3 R_3 R_L s^3 + C_3 L_3 R_3 s^2 + C_L L_3 R_3 s^2 + C_L L_3 R_L s^2 + C_L R_3 R_L s + L_3 s + R_3)}$$

10.512 INVALID-ORDER-512 $Z(s) = \left(L_1 s, R_2, \infty, \infty, \infty, L_L s + \frac{1}{C_L s} \right)$

$$H(s) = \frac{L_3 R_3 g_m s (C_1 L_1 s^2 + 1) (C_L L_L s^2 + 1)}{(C_1 L_1 g_m s^2 + C_1 s + g_m) (C_3 C_L L_3 L_L R_3 s^4 + C_3 L_3 R_3 s^2 + C_L L_3 L_L s^3 + C_L L_3 R_3 s^2 + C_L L_L R_3 s^2 + L_3 s + R_3)}$$

10.513 INVALID-ORDER-513 $Z(s) = \left(L_1 s, R_2, \infty, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} \right)$

$$H(s) = \frac{L_3 L_L R_3 g_m s (C_1 L_1 s^2 + 1)}{(C_1 L_1 g_m s^2 + C_1 s + g_m) (C_3 L_3 L_L R_3 s^2 + C_L L_3 L_L R_3 s^2 + L_3 L_L s + L_3 R_3 + L_L R_3)}$$

10.514 INVALID-ORDER-514 $Z(s) = \left(L_1 s, R_2, \infty, \infty, \infty, L_L s + R_L + \frac{1}{C_L s} \right)$

$$H(s) = \frac{L_3 R_3 g_m s (C_1 L_1 s^2 + 1) (C_L L_L s^2 + C_L R_L s + 1)}{(C_1 L_1 g_m s^2 + C_1 s + g_m) (C_3 C_L L_3 L_L R_3 s^4 + C_3 C_L L_3 R_3 R_L s^3 + C_3 L_3 R_3 s^2 + C_L L_3 L_L s^3 + C_L L_3 R_3 s^2 + C_L L_3 R_L s^2 + C_L L_L R_3 s^2 + C_L R_3 R_L s + L_3 s + R_3)}$$

$$10.515 \quad \text{INVALID-ORDER-515} \quad Z(s) = \left(L_1 s, \quad R_2, \quad \infty, \quad \infty, \quad \infty, \quad \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$$

$$H(s) = \frac{L_3 L_L R_3 R_L g_m s (C_1 L_1 s^2 + 1)}{(C_1 L_1 g_m s^2 + C_1 s + g_m) (C_3 L_3 L_L R_3 R_L s^2 + C_L L_3 L_L R_3 R_L s^2 + L_3 L_L R_3 s + L_3 L_L R_L s + L_3 R_3 R_L + L_L R_3 R_L)}$$

$$10.516 \quad \text{INVALID-ORDER-516} \quad Z(s) = \left(L_1 s, \quad R_2, \quad \infty, \quad \infty, \quad \infty, \quad \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$$

$$H(s) = \frac{L_3 R_3 g_m s (C_1 L_1 s^2 + 1) (C_L L_L R_L s^2 + L_L s + R_L)}{(C_1 L_1 g_m s^2 + C_1 s + g_m) (C_3 C_L L_3 L_L R_3 R_L s^4 + C_3 L_3 L_L R_3 s^3 + C_3 L_3 R_3 R_L s^2 + C_L L_3 L_L R_3 s^3 + C_L L_3 L_L R_L s^3 + C_L L_L R_3 R_L s^2 + L_3 L_L s^2 + L_3 R_3 s + L_3 R_L s + L_L R_3 s + R_L)}$$

$$10.517 \quad \text{INVALID-ORDER-517} \quad Z(s) = \left(L_1 s, \quad R_2, \quad \infty, \quad \infty, \quad \infty, \quad \frac{R_L (L_L s + \frac{1}{C_L s})}{L_L s + R_L + \frac{1}{C_L s}} \right)$$

$$H(s) = \frac{L_3 R_3 R_L g_m s (C_1 L_1 s^2 + 1) (C_L L_L s^2 + 1)}{(C_1 L_1 g_m s^2 + C_1 s + g_m) (C_3 C_L L_3 L_L R_3 R_L s^4 + C_3 L_3 R_3 R_L s^2 + C_L L_3 L_L R_3 s^3 + C_L L_3 L_L R_L s^3 + C_L L_3 R_3 R_L s^2 + C_L L_L R_3 R_L s^2 + L_3 R_3 s + L_3 R_L s + R_3 R_L)}$$

$$10.518 \quad \text{INVALID-ORDER-518} \quad Z(s) = \left(L_1 s, \quad \frac{1}{C_2 s}, \quad \infty, \quad \infty, \quad \infty, \quad R_L \right)$$

$$H(s) = \frac{R_L g_m (C_1 L_1 s^2 + 1) (C_3 L_3 R_3 s^2 + L_3 s + R_3)}{(C_1 L_1 g_m s^2 + C_1 s + g_m) (C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + L_3 s + R_3 + R_L)}$$

$$10.519 \quad \text{INVALID-ORDER-519} \quad Z(s) = \left(L_1 s, \quad \frac{1}{C_2 s}, \quad \infty, \quad \infty, \quad \infty, \quad \frac{1}{C_L s} \right)$$

$$H(s) = \frac{g_m (C_1 L_1 s^2 + 1) (C_3 L_3 R_3 s^2 + L_3 s + R_3)}{(C_1 L_1 g_m s^2 + C_1 s + g_m) (C_3 C_L L_3 R_3 s^3 + C_3 L_3 s^2 + C_L L_3 s^2 + C_L R_3 s + 1)}$$

10.520 INVALID-ORDER-520 $Z(s) = \left(L_1 s, \frac{1}{C_2 s}, \infty, \infty, \infty, \frac{R_L}{C_L R_L s + 1} \right)$

$$H(s) = \frac{R_L g_m (C_1 L_1 s^2 + 1) (C_3 L_3 R_3 s^2 + L_3 s + R_3)}{(C_1 L_1 g_m s^2 + C_1 s + g_m) (C_3 C_L L_3 R_3 R_L s^3 + C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + C_L L_3 R_L s^2 + C_L R_3 R_L s + L_3 s + R_3 + R_L)}$$

10.521 INVALID-ORDER-521 $Z(s) = \left(L_1 s, \frac{1}{C_2 s}, \infty, \infty, \infty, R_L + \frac{1}{C_L s} \right)$

$$H(s) = \frac{g_m (C_1 L_1 s^2 + 1) (C_L R_L s + 1) (C_3 L_3 R_3 s^2 + L_3 s + R_3)}{(C_1 L_1 g_m s^2 + C_1 s + g_m) (C_3 C_L L_3 R_3 s^3 + C_3 C_L L_3 R_L s^3 + C_3 L_3 s^2 + C_L L_3 s^2 + C_L R_3 s + C_L R_L s + 1)}$$

10.522 INVALID-ORDER-522 $Z(s) = \left(L_1 s, \frac{1}{C_2 s}, \infty, \infty, \infty, L_L s + \frac{1}{C_L s} \right)$

$$H(s) = \frac{g_m (C_1 L_1 s^2 + 1) (C_L L_L s^2 + 1) (C_3 L_3 R_3 s^2 + L_3 s + R_3)}{(C_1 L_1 g_m s^2 + C_1 s + g_m) (C_3 C_L L_3 L_L s^4 + C_3 C_L L_3 R_3 s^3 + C_3 L_3 s^2 + C_L L_3 s^2 + C_L L_L s^2 + C_L R_3 s + 1)}$$

10.523 INVALID-ORDER-523 $Z(s) = \left(L_1 s, \frac{1}{C_2 s}, \infty, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} \right)$

$$H(s) = \frac{L_L g_m s (C_1 L_1 s^2 + 1) (C_3 L_3 R_3 s^2 + L_3 s + R_3)}{(C_1 L_1 g_m s^2 + C_1 s + g_m) (C_3 C_L L_3 L_L R_3 s^4 + C_3 L_3 L_L s^3 + C_3 L_3 R_3 s^2 + C_L L_3 L_L s^3 + C_L L_L R_3 s^2 + L_3 s + L_L s + R_3)}$$

10.524 INVALID-ORDER-524 $Z(s) = \left(L_1 s, \frac{1}{C_2 s}, \infty, \infty, \infty, L_L s + R_L + \frac{1}{C_L s} \right)$

$$H(s) = \frac{g_m (C_1 L_1 s^2 + 1) (C_L L_L s^2 + C_L R_L s + 1) (C_3 L_3 R_3 s^2 + L_3 s + R_3)}{(C_1 L_1 g_m s^2 + C_1 s + g_m) (C_3 C_L L_3 L_L s^4 + C_3 C_L L_3 R_3 s^3 + C_3 C_L L_3 R_L s^3 + C_3 L_3 s^2 + C_L L_3 s^2 + C_L L_L s^2 + C_L R_3 s + C_L R_L s + 1)}$$

$$\mathbf{10.525 \quad INVALID-ORDER-525} \quad Z(s) = \left(L_1 s, \frac{1}{C_2 s}, \infty, \infty, \infty, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$$

$$H(s) = \frac{L_L R_L g_m s (C_1 L_1 s^2 + 1) (C_3 L_3 R_3 s^2 + L_3 s + R_3)}{(C_1 L_1 g_m s^2 + C_1 s + g_m) (C_3 C_L L_3 L_L R_3 R_L s^4 + C_3 L_3 L_L R_3 s^3 + C_3 L_3 L_L R_L s^3 + C_3 L_3 R_3 R_L s^2 + C_L L_3 L_L R_L s^3 + C_L L_L R_3 R_L s^2 + L_3 L_L s^2 + L_3 R_L s + L_L R_3 s + L_L R_L s + R_3)}$$

$$\mathbf{10.526 \quad INVALID-ORDER-526} \quad Z(s) = \left(L_1 s, \frac{1}{C_2 s}, \infty, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$$

$$H(s) = \frac{g_m (C_1 L_1 s^2 + 1) (C_3 L_3 R_3 s^2 + L_3 s + R_3) (C_L L_L R_L s^2 + L_L s + R_L)}{(C_1 L_1 g_m s^2 + C_1 s + g_m) (C_3 C_L L_3 L_L R_3 s^4 + C_3 C_L L_3 L_L R_L s^4 + C_3 L_3 L_L s^3 + C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + C_L L_3 L_L s^3 + C_L L_L R_3 s^2 + C_L L_L R_L s^2 + L_3 s + L_L s + R_3 + R_L)}$$

$$\mathbf{10.527 \quad INVALID-ORDER-527} \quad Z(s) = \left(L_1 s, \frac{1}{C_2 s}, \infty, \infty, \infty, \frac{R_L (L_L s + \frac{1}{C_L s})}{L_L s + R_L + \frac{1}{C_L s}} \right)$$

$$H(s) = \frac{R_L g_m (C_1 L_1 s^2 + 1) (C_L L_L s^2 + 1) (C_3 L_3 R_3 s^2 + L_3 s + R_3)}{(C_1 L_1 g_m s^2 + C_1 s + g_m) (C_3 C_L L_3 L_L R_3 s^4 + C_3 C_L L_3 L_L R_L s^4 + C_3 C_L L_3 R_3 R_L s^3 + C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + C_L L_3 L_L s^3 + C_L L_3 R_L s^2 + C_L L_L R_3 s^2 + C_L L_L R_L s^2 + C_L R_3 s + R_L)}$$

$$\mathbf{10.528 \quad INVALID-ORDER-528} \quad Z(s) = \left(L_1 s, \frac{R_2}{C_2 R_2 s + 1}, \infty, \infty, \infty, R_L \right)$$

$$H(s) = \frac{R_3 R_L g_m (C_1 L_1 s^2 + 1) (C_3 L_3 s^2 + 1)}{(C_1 L_1 g_m s^2 + C_1 s + g_m) (C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + C_3 R_3 R_L s + R_3 + R_L)}$$

$$\mathbf{10.529 \quad INVALID-ORDER-529} \quad Z(s) = \left(L_1 s, \frac{R_2}{C_2 R_2 s + 1}, \infty, \infty, \infty, \frac{1}{C_L s} \right)$$

$$H(s) = \frac{R_3 g_m (C_1 L_1 s^2 + 1) (C_3 L_3 s^2 + 1)}{(C_1 L_1 g_m s^2 + C_1 s + g_m) (C_3 C_L L_3 R_3 s^3 + C_3 L_3 s^2 + C_3 R_3 s + C_L R_3 s + 1)}$$

10.530 INVALID-ORDER-530 $Z(s) = \left(L_1 s, \frac{R_2}{C_2 R_2 s + 1}, \infty, \infty, \infty, \frac{R_L}{C_L R_L s + 1} \right)$

$$H(s) = \frac{R_3 R_L g_m (C_1 L_1 s^2 + 1) (C_3 L_3 s^2 + 1)}{(C_1 L_1 g_m s^2 + C_1 s + g_m) (C_3 C_L L_3 R_3 R_L s^3 + C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + C_3 R_3 R_L s + C_L R_3 R_L s + R_3 + R_L)}$$

10.531 INVALID-ORDER-531 $Z(s) = \left(L_1 s, \frac{R_2}{C_2 R_2 s + 1}, \infty, \infty, \infty, R_L + \frac{1}{C_L s} \right)$

$$H(s) = \frac{R_3 g_m (C_1 L_1 s^2 + 1) (C_3 L_3 s^2 + 1) (C_L R_L s + 1)}{(C_1 L_1 g_m s^2 + C_1 s + g_m) (C_3 C_L L_3 R_3 s^3 + C_3 C_L L_3 R_L s^3 + C_3 C_L R_3 R_L s^2 + C_3 L_3 s^2 + C_3 R_3 s + C_L R_3 s + C_L R_L s + 1)}$$

10.532 INVALID-ORDER-532 $Z(s) = \left(L_1 s, \frac{R_2}{C_2 R_2 s + 1}, \infty, \infty, \infty, L_L s + \frac{1}{C_L s} \right)$

$$H(s) = \frac{R_3 g_m (C_1 L_1 s^2 + 1) (C_3 L_3 s^2 + 1) (C_L L_L s^2 + 1)}{(C_1 L_1 g_m s^2 + C_1 s + g_m) (C_3 C_L L_3 L_L s^4 + C_3 C_L L_3 R_3 s^3 + C_3 C_L L_L R_3 s^3 + C_3 L_3 s^2 + C_3 R_3 s + C_L L_L s^2 + C_L R_3 s + 1)}$$

10.533 INVALID-ORDER-533 $Z(s) = \left(L_1 s, \frac{R_2}{C_2 R_2 s + 1}, \infty, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} \right)$

$$H(s) = \frac{L_L R_3 g_m s (C_1 L_1 s^2 + 1) (C_3 L_3 s^2 + 1)}{(C_1 L_1 g_m s^2 + C_1 s + g_m) (C_3 C_L L_3 L_L R_3 s^4 + C_3 L_3 L_L s^3 + C_3 L_3 R_3 s^2 + C_3 L_L R_3 s^2 + C_L L_L R_3 s^2 + L_L s + R_3)}$$

10.534 INVALID-ORDER-534 $Z(s) = \left(L_1 s, \frac{R_2}{C_2 R_2 s + 1}, \infty, \infty, \infty, L_L s + R_L + \frac{1}{C_L s} \right)$

$$H(s) = \frac{R_3 g_m (C_1 L_1 s^2 + 1) (C_3 L_3 s^2 + 1) (C_L L_L s^2 + C_L R_L s + 1)}{(C_1 L_1 g_m s^2 + C_1 s + g_m) (C_3 C_L L_3 L_L s^4 + C_3 C_L L_3 R_3 s^3 + C_3 C_L L_3 R_L s^3 + C_3 C_L L_L R_3 s^3 + C_3 C_L R_3 R_L s^2 + C_3 L_3 s^2 + C_3 R_3 s + C_L L_L s^2 + C_L R_3 s + C_L R_L s + 1)}$$

10.535 INVALID-ORDER-535 $Z(s) = \left(L_1 s, \frac{R_2}{C_2 R_2 s + 1}, \infty, \infty, \infty, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$

$$H(s) = \frac{L_L R_3 R_L g_m s (C_1 L_1 s^2 + 1) (C_3 L_3 s^2 + 1)}{(C_1 L_1 g_m s^2 + C_1 s + g_m) (C_3 C_L L_3 L_L R_3 R_L s^4 + C_3 L_3 L_L R_3 s^3 + C_3 L_3 L_L R_L s^3 + C_3 L_3 R_3 R_L s^2 + C_3 L_L R_3 R_L s^2 + C_L L_L R_3 R_L s^2 + L_L R_3 s + L_L R_L s + R_3 R_L)}$$

10.536 INVALID-ORDER-536 $Z(s) = \left(L_1 s, \frac{R_2}{C_2 R_2 s + 1}, \infty, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$

$$H(s) = \frac{R_3 g_m (C_1 L_1 s^2 + 1) (C_3 L_3 s^2 + 1) (C_L L_L R_L s^2 + L_L s + R_L)}{(C_1 L_1 g_m s^2 + C_1 s + g_m) (C_3 C_L L_3 L_L R_3 s^4 + C_3 C_L L_3 L_L R_L s^4 + C_3 C_L L_L R_3 R_L s^3 + C_3 L_3 L_L s^3 + C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + C_3 L_L R_3 s^2 + C_3 R_3 R_L s + C_L L_L R_3 s^2 + C_L L_L R_L s + C_L R_L)}$$

10.537 INVALID-ORDER-537 $Z(s) = \left(L_1 s, \frac{R_2}{C_2 R_2 s + 1}, \infty, \infty, \infty, \frac{R_L \left(L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$

$$H(s) = \frac{R_3 R_L g_m (C_1 L_1 s^2 + 1) (C_3 L_3 s^2 + 1) (C_L L_L s^2 + 1)}{(C_1 L_1 g_m s^2 + C_1 s + g_m) (C_3 C_L L_3 L_L R_3 s^4 + C_3 C_L L_3 L_L R_L s^4 + C_3 C_L L_3 R_3 R_L s^3 + C_3 C_L L_L R_3 R_L s^3 + C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + C_3 R_3 R_L s + C_L L_L R_3 s^2 + C_L L_L R_L s^2 + C_L R_3 s + C_L R_L)}$$

10.538 INVALID-ORDER-538 $Z(s) = \left(L_1 s, R_2 + \frac{1}{C_2 s}, \infty, \infty, \infty, \frac{1}{C_L s} \right)$

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

10.539 INVALID-ORDER-539 $Z(s) = \left(L_1 s, R_2 + \frac{1}{C_2 s}, \infty, \infty, \infty, \frac{R_L}{C_L R_L s + 1} \right)$

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

10.540 INVALID-ORDER-540 $Z(s) = \left(L_1 s, R_2 + \frac{1}{C_2 s}, \infty, \infty, \infty, R_L + \frac{1}{C_L s} \right)$

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

10.541 INVALID-ORDER-541 $Z(s) = \left(L_1 s, R_2 + \frac{1}{C_2 s}, \infty, \infty, \infty, L_L s + \frac{1}{C_L s} \right)$

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

10.542 INVALID-ORDER-542 $Z(s) = \left(L_1 s, R_2 + \frac{1}{C_2 s}, \infty, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} \right)$

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

10.543 INVALID-ORDER-543 $Z(s) = \left(L_1 s, R_2 + \frac{1}{C_2 s}, \infty, \infty, \infty, L_L s + R_L + \frac{1}{C_L s} \right)$

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

10.544 INVALID-ORDER-544 $Z(s) = \left(L_1 s, R_2 + \frac{1}{C_2 s}, \infty, \infty, \infty, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$

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

10.545 INVALID-ORDER-545 $Z(s) = \left(L_1 s, R_2 + \frac{1}{C_2 s}, \infty, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$

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

10.546 INVALID-ORDER-546 $Z(s) = \left(L_1 s, R_2 + \frac{1}{C_2 s}, \infty, \infty, \infty, \frac{R_L \left(L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$

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

10.547 INVALID-ORDER-547 $Z(s) = \left(L_1 s, L_2 s + \frac{1}{C_2 s}, \infty, \infty, \infty, R_L \right)$

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

10.548 INVALID-ORDER-548 $Z(s) = \left(L_1 s, L_2 s + \frac{1}{C_2 s}, \infty, \infty, \infty, \frac{R_L}{C_L R_L s + 1} \right)$

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

10.549 INVALID-ORDER-549 $Z(s) = \left(L_1 s, L_2 s + \frac{1}{C_2 s}, \infty, \infty, \infty, R_L + \frac{1}{C_L s} \right)$

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

10.550 INVALID-ORDER-550 $Z(s) = \left(L_1 s, L_2 s + \frac{1}{C_2 s}, \infty, \infty, \infty, L_L s + \frac{1}{C_L s} \right)$

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

10.551 INVALID-ORDER-551 $Z(s) = \left(L_1 s, L_2 s + \frac{1}{C_2 s}, \infty, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} \right)$

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

10.552 INVALID-ORDER-552 $Z(s) = \left(L_1 s, L_2 s + \frac{1}{C_2 s}, \infty, \infty, \infty, L_L s + R_L + \frac{1}{C_L s} \right)$

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

10.553 INVALID-ORDER-553 $Z(s) = \left(L_1 s, L_2 s + \frac{1}{C_2 s}, \infty, \infty, \infty, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$

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

10.554 INVALID-ORDER-554 $Z(s) = \left(L_1 s, L_2 s + \frac{1}{C_2 s}, \infty, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$

$$H(s) = \frac{L_1 g_m s (C_L L_L R_L s^2 + L_L s + R_L)}{(C_1 L_1 s^2 + L_1 g_m s + 1) (C_3 C_L L_L R_L s^3 + C_3 L_L s^2 + C_3 R_L s + C_L L_L s^2 + 1)}$$

10.555 INVALID-ORDER-555 $Z(s) = \left(L_1 s, L_2 s + \frac{1}{C_2 s}, \infty, \infty, \infty, \frac{R_L (L_L s + \frac{1}{C_L s})}{L_L s + R_L + \frac{1}{C_L s}} \right)$

$$H(s) = \frac{L_1 R_L g_m s (C_L L_L s^2 + 1)}{(C_1 L_1 s^2 + L_1 g_m s + 1) (C_3 C_L L_L R_L s^3 + C_3 R_L s + C_L L_L s^2 + C_L R_L s + 1)}$$

10.556 INVALID-ORDER-556 $Z(s) = \left(L_1 s, L_2 s + R_2 + \frac{1}{C_2 s}, \infty, \infty, \infty, R_L \right)$

$$H(s) = \frac{L_1 R_3 R_L g_m s}{(C_1 L_1 s^2 + L_1 g_m s + 1) (C_3 R_3 R_L s + R_3 + R_L)}$$

10.557 INVALID-ORDER-557 $Z(s) = \left(L_1s, L_2s + R_2 + \frac{1}{C_2s}, \infty, \infty, \infty, \frac{1}{C_Ls} \right)$

$$H(s) = \frac{L_1R_3g_ms}{(C_1L_1s^2 + L_1g_ms + 1)(C_3R_3s + C_LR_3s + 1)}$$

10.558 INVALID-ORDER-558 $Z(s) = \left(L_1s, L_2s + R_2 + \frac{1}{C_2s}, \infty, \infty, \infty, \frac{R_L}{C_LR_Ls+1} \right)$

$$H(s) = \frac{L_1R_3R_Lg_ms}{(C_1L_1s^2 + L_1g_ms + 1)(C_3R_3R_Ls + C_LR_3R_Ls + R_3 + R_L)}$$

10.559 INVALID-ORDER-559 $Z(s) = \left(L_1s, L_2s + R_2 + \frac{1}{C_2s}, \infty, \infty, \infty, R_L + \frac{1}{C_Ls} \right)$

$$H(s) = \frac{L_1R_3g_ms(C_LR_Ls + 1)}{(C_1L_1s^2 + L_1g_ms + 1)(C_3C_LR_3R_Ls^2 + C_3R_3s + C_LR_3s + C_LR_Ls + 1)}$$

10.560 INVALID-ORDER-560 $Z(s) = \left(L_1s, L_2s + R_2 + \frac{1}{C_2s}, \infty, \infty, \infty, L_Ls + \frac{1}{C_Ls} \right)$

$$H(s) = \frac{L_1R_3g_ms(C_LL_Ls^2 + 1)}{(C_1L_1s^2 + L_1g_ms + 1)(C_3C_LL_LR_3s^3 + C_3R_3s + C_LL_Ls^2 + C_LR_3s + 1)}$$

10.561 INVALID-ORDER-561 $Z(s) = \left(L_1s, L_2s + R_2 + \frac{1}{C_2s}, \infty, \infty, \infty, \frac{L_Ls}{C_LL_Ls^2+1} \right)$

$$H(s) = \frac{L_1L_LR_3g_ms^2}{(C_1L_1s^2 + L_1g_ms + 1)(C_3L_LR_3s^2 + C_LL_LR_3s^2 + L_Ls + R_3)}$$

10.562 INVALID-ORDER-562 $Z(s) = \left(L_1s, L_2s + R_2 + \frac{1}{C_2s}, \infty, \infty, \infty, L_Ls + R_L + \frac{1}{C_Ls} \right)$

$$H(s) = \frac{L_1R_3g_ms(C_LL_Ls^2 + C_LR_Ls + 1)}{(C_1L_1s^2 + L_1g_ms + 1)(C_3C_LL_LR_3s^3 + C_3C_LR_3R_Ls^2 + C_3R_3s + C_LL_Ls^2 + C_LR_3s + C_LR_Ls + 1)}$$

10.563 INVALID-ORDER-563 $Z(s) = \left(L_1s, L_2s + R_2 + \frac{1}{C_2s}, \infty, \infty, \infty, \frac{1}{C_Ls + \frac{1}{R_L} + \frac{1}{L_Ls}} \right)$

$$H(s) = \frac{L_1L_LR_3R_Lg_ms^2}{(C_1L_1s^2 + L_1g_ms + 1)(C_3L_LR_3R_Ls^2 + C_LL_LR_3R_Ls^2 + L_LR_3s + L_LR_Ls + R_3R_L)}$$

10.564 INVALID-ORDER-564 $Z(s) = \left(L_1s, L_2s + R_2 + \frac{1}{C_2s}, \infty, \infty, \infty, \frac{L_Ls}{C_LL_Ls^2 + 1} + R_L \right)$

$$H(s) = \frac{L_1R_3g_ms(C_LL_LR_Ls^2 + L_Ls + R_L)}{(C_1L_1s^2 + L_1g_ms + 1)(C_3C_LL_LR_3R_Ls^3 + C_3L_LR_3s^2 + C_3R_3R_Ls + C_LL_LR_3s^2 + C_LL_LR_Ls^2 + L_Ls + R_3 + R_L)}$$

10.565 INVALID-ORDER-565 $Z(s) = \left(L_1s, L_2s + R_2 + \frac{1}{C_2s}, \infty, \infty, \infty, \frac{R_L(L_Ls + \frac{1}{C_Ls})}{L_Ls + R_L + \frac{1}{C_Ls}} \right)$

$$H(s) = \frac{L_1R_3R_Lg_ms(C_LL_Ls^2 + 1)}{(C_1L_1s^2 + L_1g_ms + 1)(C_3C_LL_LR_3R_Ls^3 + C_3R_3R_Ls + C_LL_LR_3s^2 + C_LL_LR_Ls^2 + C_LR_3R_Ls + R_3 + R_L)}$$

10.566 INVALID-ORDER-566 $Z(s) = \left(L_1s, \frac{L_2s}{C_2L_2s^2 + 1} + R_2, \infty, \infty, \infty, R_L \right)$

$$H(s) = \frac{L_1R_Lg_ms(C_3R_3s + 1)}{(C_1L_1s^2 + L_1g_ms + 1)(C_3R_3s + C_3R_Ls + 1)}$$

10.567 INVALID-ORDER-567 $Z(s) = \left(L_1s, \frac{L_2s}{C_2L_2s^2 + 1} + R_2, \infty, \infty, \infty, \frac{1}{C_Ls} \right)$

$$H(s) = \frac{L_1g_m(C_3R_3s + 1)}{(C_1L_1s^2 + L_1g_ms + 1)(C_3C_LR_3s + C_3 + C_L)}$$

10.568 INVALID-ORDER-568 $Z(s) = \left(L_1 s, \frac{L_2 s}{C_2 L_2 s^2 + 1} + R_2, \infty, \infty, \infty, \frac{R_L}{C_L R_L s + 1} \right)$

$$H(s) = \frac{L_1 R_L g_m s (C_3 R_3 s + 1)}{(C_1 L_1 s^2 + L_1 g_m s + 1) (C_3 C_L R_3 R_L s^2 + C_3 R_3 s + C_3 R_L s + C_L R_L s + 1)}$$

10.569 INVALID-ORDER-569 $Z(s) = \left(L_1 s, \frac{L_2 s}{C_2 L_2 s^2 + 1} + R_2, \infty, \infty, \infty, R_L + \frac{1}{C_L s} \right)$

$$H(s) = \frac{L_1 g_m (C_3 R_3 s + 1) (C_L R_L s + 1)}{(C_1 L_1 s^2 + L_1 g_m s + 1) (C_3 C_L R_3 s + C_3 C_L R_L s + C_3 + C_L)}$$

10.570 INVALID-ORDER-570 $Z(s) = \left(L_1 s, \frac{L_2 s}{C_2 L_2 s^2 + 1} + R_2, \infty, \infty, \infty, L_L s + \frac{1}{C_L s} \right)$

$$H(s) = \frac{L_1 g_m (C_3 R_3 s + 1) (C_L L_L s^2 + 1)}{(C_1 L_1 s^2 + L_1 g_m s + 1) (C_3 C_L L_L s^2 + C_3 C_L R_3 s + C_3 + C_L)}$$

10.571 INVALID-ORDER-571 $Z(s) = \left(L_1 s, \frac{L_2 s}{C_2 L_2 s^2 + 1} + R_2, \infty, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} \right)$

$$H(s) = \frac{L_1 L_L g_m s^2 (C_3 R_3 s + 1)}{(C_1 L_1 s^2 + L_1 g_m s + 1) (C_3 C_L L_L R_3 s^3 + C_3 L_L s^2 + C_3 R_3 s + C_L L_L s^2 + 1)}$$

10.572 INVALID-ORDER-572 $Z(s) = \left(L_1 s, \frac{L_2 s}{C_2 L_2 s^2 + 1} + R_2, \infty, \infty, \infty, L_L s + R_L + \frac{1}{C_L s} \right)$

$$H(s) = \frac{L_1 g_m (C_3 R_3 s + 1) (C_L L_L s^2 + C_L R_L s + 1)}{(C_1 L_1 s^2 + L_1 g_m s + 1) (C_3 C_L L_L s^2 + C_3 C_L R_3 s + C_3 C_L R_L s + C_3 + C_L)}$$

10.573 INVALID-ORDER-573 $Z(s) = \left(L_1 s, \frac{L_2 s}{C_2 L_2 s^2 + 1} + R_2, \infty, \infty, \infty, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$

$$H(s) = \frac{L_1 L_L R_L g_m s^2 (C_3 R_3 s + 1)}{(C_1 L_1 s^2 + L_1 g_m s + 1) (C_3 C_L L_L R_3 R_L s^3 + C_3 L_L R_3 s^2 + C_3 L_L R_L s^2 + C_3 R_3 R_L s + C_L L_L R_L s^2 + L_L s + R_L)}$$

10.574 INVALID-ORDER-574 $Z(s) = \left(L_1 s, \frac{L_2 s}{C_2 L_2 s^2 + 1} + R_2, \infty, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$

$$H(s) = \frac{L_1 g_m s (C_3 R_3 s + 1) (C_L L_L R_L s^2 + L_L s + R_L)}{(C_1 L_1 s^2 + L_1 g_m s + 1) (C_3 C_L L_L R_3 s^3 + C_3 C_L L_L R_L s^3 + C_3 L_L s^2 + C_3 R_3 s + C_3 R_L s + C_L L_L s^2 + 1)}$$

10.575 INVALID-ORDER-575 $Z(s) = \left(L_1 s, \frac{L_2 s}{C_2 L_2 s^2 + 1} + R_2, \infty, \infty, \infty, \frac{R_L (L_L s + \frac{1}{C_L s})}{L_L s + R_L + \frac{1}{C_L s}} \right)$

$$H(s) = \frac{L_1 R_L g_m s (C_3 R_3 s + 1) (C_L L_L s^2 + 1)}{(C_1 L_1 s^2 + L_1 g_m s + 1) (C_3 C_L L_L R_3 s^3 + C_3 C_L L_L R_L s^3 + C_3 C_L R_3 R_L s^2 + C_3 R_3 s + C_3 R_L s + C_L L_L s^2 + C_L R_L s + 1)}$$

10.576 INVALID-ORDER-576 $Z(s) = \left(L_1 s, \frac{R_2 (L_2 s + \frac{1}{C_2 s})}{L_2 s + R_2 + \frac{1}{C_2 s}}, \infty, \infty, \infty, R_L \right)$

$$H(s) = \frac{L_1 R_L g_m s (C_3 L_3 s^2 + 1)}{(C_1 L_1 s^2 + L_1 g_m s + 1) (C_3 L_3 s^2 + C_3 R_L s + 1)}$$

10.577 INVALID-ORDER-577 $Z(s) = \left(L_1 s, \frac{R_2 (L_2 s + \frac{1}{C_2 s})}{L_2 s + R_2 + \frac{1}{C_2 s}}, \infty, \infty, \infty, \frac{1}{C_L s} \right)$

$$H(s) = \frac{L_1 g_m (C_3 L_3 s^2 + 1)}{(C_1 L_1 s^2 + L_1 g_m s + 1) (C_3 C_L L_3 s^2 + C_3 + C_L)}$$

10.578 INVALID-ORDER-578 $Z(s) = \left(L_1 s, \frac{R_2 (L_2 s + \frac{1}{C_2 s})}{L_2 s + R_2 + \frac{1}{C_2 s}}, \infty, \infty, \infty, \frac{R_L}{C_L R_L s + 1} \right)$

$$H(s) = \frac{L_1 R_L g_m s (C_3 L_3 s^2 + 1)}{(C_1 L_1 s^2 + L_1 g_m s + 1) (C_3 C_L L_3 R_L s^3 + C_3 L_3 s^2 + C_3 R_L s + C_L R_L s + 1)}$$

10.579 INVALID-ORDER-579 $Z(s) = \left(L_1 s, \frac{R_2 \left(L_2 s + \frac{1}{C_2 s} \right)}{L_2 s + R_2 + \frac{1}{C_2 s}}, \infty, \infty, \infty, R_L + \frac{1}{C_L s} \right)$

$$H(s) = \frac{L_1 g_m (C_3 L_3 s^2 + 1) (C_L R_L s + 1)}{(C_1 L_1 s^2 + L_1 g_m s + 1) (C_3 C_L L_3 s^2 + C_3 C_L R_L s + C_3 + C_L)}$$

10.580 INVALID-ORDER-580 $Z(s) = \left(L_1 s, \frac{R_2 \left(L_2 s + \frac{1}{C_2 s} \right)}{L_2 s + R_2 + \frac{1}{C_2 s}}, \infty, \infty, \infty, L_L s + \frac{1}{C_L s} \right)$

$$H(s) = \frac{L_1 g_m (C_3 L_3 s^2 + 1) (C_L L_L s^2 + 1)}{(C_1 L_1 s^2 + L_1 g_m s + 1) (C_3 C_L L_3 s^2 + C_3 C_L L_L s^2 + C_3 + C_L)}$$

10.581 INVALID-ORDER-581 $Z(s) = \left(L_1 s, \frac{R_2 \left(L_2 s + \frac{1}{C_2 s} \right)}{L_2 s + R_2 + \frac{1}{C_2 s}}, \infty, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} \right)$

$$H(s) = \frac{L_1 L_L g_m s^2 (C_3 L_3 s^2 + 1)}{(C_1 L_1 s^2 + L_1 g_m s + 1) (C_3 C_L L_3 L_L s^4 + C_3 L_3 s^2 + C_3 L_L s^2 + C_L L_L s^2 + 1)}$$

10.582 INVALID-ORDER-582 $Z(s) = \left(L_1 s, \frac{R_2 \left(L_2 s + \frac{1}{C_2 s} \right)}{L_2 s + R_2 + \frac{1}{C_2 s}}, \infty, \infty, \infty, L_L s + R_L + \frac{1}{C_L s} \right)$

$$H(s) = \frac{L_1 g_m (C_3 L_3 s^2 + 1) (C_L L_L s^2 + C_L R_L s + 1)}{(C_1 L_1 s^2 + L_1 g_m s + 1) (C_3 C_L L_3 s^2 + C_3 C_L L_L s^2 + C_3 C_L R_L s + C_3 + C_L)}$$

10.583 INVALID-ORDER-583 $Z(s) = \left(L_1 s, \frac{R_2 \left(L_2 s + \frac{1}{C_2 s} \right)}{L_2 s + R_2 + \frac{1}{C_2 s}}, \infty, \infty, \infty, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$

$$H(s) = \frac{L_1 L_L R_L g_m s^2 (C_3 L_3 s^2 + 1)}{(C_1 L_1 s^2 + L_1 g_m s + 1) (C_3 C_L L_3 L_L R_L s^4 + C_3 L_3 L_L s^3 + C_3 L_3 R_L s^2 + C_3 L_L R_L s^2 + C_L L_L R_L s^2 + L_L s + R_L)}$$

10.584 INVALID-ORDER-584 $Z(s) = \left(L_1 s, \frac{R_2 \left(L_2 s + \frac{1}{C_2 s} \right)}{L_2 s + R_2 + \frac{1}{C_2 s}}, \infty, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$

$$H(s) = \frac{L_1 g_m s (C_3 L_3 s^2 + 1) (C_L L_L R_L s^2 + L_L s + R_L)}{(C_1 L_1 s^2 + L_1 g_m s + 1) (C_3 C_L L_3 L_L s^4 + C_3 C_L L_L R_L s^3 + C_3 L_3 s^2 + C_3 L_L s^2 + C_3 R_L s + C_L L_L s^2 + 1)}$$

10.585 INVALID-ORDER-585 $Z(s) = \left(L_1 s, \frac{R_2 \left(L_2 s + \frac{1}{C_2 s} \right)}{L_2 s + R_2 + \frac{1}{C_2 s}}, \infty, \infty, \infty, \frac{R_L \left(L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$

$$H(s) = \frac{L_1 R_L g_m s (C_3 L_3 s^2 + 1) (C_L L_L s^2 + 1)}{(C_1 L_1 s^2 + L_1 g_m s + 1) (C_3 C_L L_3 L_L s^4 + C_3 C_L L_3 R_L s^3 + C_3 C_L L_L R_L s^3 + C_3 L_3 s^2 + C_3 R_L s + C_L L_L s^2 + C_L R_L s + 1)}$$

10.586 INVALID-ORDER-586 $Z(s) = \left(\frac{1}{C_1 s}, R_2, \infty, \infty, \infty, R_L \right)$

$$H(s) = \frac{L_1 L_3 R_L g_m s^2}{(C_1 L_1 s^2 + L_1 g_m s + 1) (C_3 L_3 R_L s^2 + L_3 s + R_L)}$$

10.587 INVALID-ORDER-587 $Z(s) = \left(\frac{1}{C_1 s}, R_2, \infty, \infty, \infty, \frac{1}{C_L s} \right)$

$$H(s) = \frac{L_1 L_3 g_m s^2}{(C_1 L_1 s^2 + L_1 g_m s + 1) (C_3 L_3 s^2 + C_L L_3 s^2 + 1)}$$

10.588 INVALID-ORDER-588 $Z(s) = \left(\frac{1}{C_1 s}, R_2, \infty, \infty, \infty, \frac{R_L}{C_L R_L s + 1} \right)$

$$H(s) = \frac{L_1 L_3 R_L g_m s^2}{(C_1 L_1 s^2 + L_1 g_m s + 1) (C_3 L_3 R_L s^2 + C_L L_3 R_L s^2 + L_3 s + R_L)}$$

10.589 INVALID-ORDER-589 $Z(s) = \left(\frac{1}{C_1 s}, R_2, \infty, \infty, \infty, R_L + \frac{1}{C_L s} \right)$

$$H(s) = \frac{L_1 L_3 g_m s^2 (C_L R_L s + 1)}{(C_1 L_1 s^2 + L_1 g_m s + 1) (C_3 C_L L_3 R_L s^3 + C_3 L_3 s^2 + C_L L_3 s^2 + C_L R_L s + 1)}$$

10.590 INVALID-ORDER-590 $Z(s) = \left(\frac{1}{C_1 s}, R_2, \infty, \infty, \infty, L_L s + \frac{1}{C_L s} \right)$

$$H(s) = \frac{L_1 L_3 g_m s^2 (C_L L_L s^2 + 1)}{(C_1 L_1 s^2 + L_1 g_m s + 1) (C_3 C_L L_3 L_L s^4 + C_3 L_3 s^2 + C_L L_3 s^2 + C_L L_L s^2 + 1)}$$

10.591 INVALID-ORDER-591 $Z(s) = \left(\frac{1}{C_1 s}, R_2, \infty, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} \right)$

$$H(s) = \frac{L_1 L_3 L_L g_m s^2}{(C_1 L_1 s^2 + L_1 g_m s + 1) (C_3 L_3 L_L s^2 + C_L L_3 L_L s^2 + L_3 + L_L)}$$

10.592 INVALID-ORDER-592 $Z(s) = \left(\frac{1}{C_1 s}, R_2, \infty, \infty, \infty, L_L s + R_L + \frac{1}{C_L s} \right)$

$$H(s) = \frac{L_1 L_3 g_m s^2 (C_L L_L s^2 + C_L R_L s + 1)}{(C_1 L_1 s^2 + L_1 g_m s + 1) (C_3 C_L L_3 L_L s^4 + C_3 C_L L_3 R_L s^3 + C_3 L_3 s^2 + C_L L_3 s^2 + C_L L_L s^2 + C_L R_L s + 1)}$$

10.593 INVALID-ORDER-593 $Z(s) = \left(\frac{1}{C_1 s}, R_2, \infty, \infty, \infty, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$

$$H(s) = \frac{L_1 L_3 L_L R_L g_m s^2}{(C_1 L_1 s^2 + L_1 g_m s + 1) (C_3 L_3 L_L R_L s^2 + C_L L_3 L_L R_L s^2 + L_3 L_L s + L_3 R_L + L_L R_L)}$$

10.594 INVALID-ORDER-594 $Z(s) = \left(\frac{1}{C_1 s}, R_2, \infty, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$

$$H(s) = \frac{L_1 L_3 g_m s^2 (C_L L_L R_L s^2 + L_L s + R_L)}{(C_1 L_1 s^2 + L_1 g_m s + 1) (C_3 C_L L_3 L_L R_L s^4 + C_3 L_3 L_L s^3 + C_3 L_3 R_L s^2 + C_L L_3 L_L s^3 + C_L L_L R_L s^2 + L_3 s + L_L s + R_L)}$$

10.595 INVALID-ORDER-595 $Z(s) = \left(\frac{1}{C_1 s}, R_2, \infty, \infty, \infty, \frac{R_L (L_L s + \frac{1}{C_L s})}{L_L s + R_L + \frac{1}{C_L s}} \right)$

$$H(s) = \frac{L_1 L_3 R_L g_m s^2 (C_L L_L s^2 + 1)}{(C_1 L_1 s^2 + L_1 g_m s + 1) (C_3 C_L L_3 L_L R_L s^4 + C_3 L_3 R_L s^2 + C_L L_3 L_L s^3 + C_L L_3 R_L s^2 + C_L L_L R_L s^2 + L_3 s + R_L)}$$

10.596 INVALID-ORDER-596 $Z(s) = \left(\frac{1}{C_1 s}, \frac{1}{C_2 s}, \infty, \infty, \infty, R_L \right)$

$$H(s) = \frac{L_1 R_L g_m s (C_3 L_3 s^2 + C_3 R_3 s + 1)}{(C_1 L_1 s^2 + L_1 g_m s + 1) (C_3 L_3 s^2 + C_3 R_3 s + C_3 R_L s + 1)}$$

10.597 INVALID-ORDER-597 $Z(s) = \left(\frac{1}{C_1 s}, \frac{1}{C_2 s}, \infty, \infty, \infty, \frac{1}{C_L s} \right)$

$$H(s) = \frac{L_1 g_m (C_3 L_3 s^2 + C_3 R_3 s + 1)}{(C_1 L_1 s^2 + L_1 g_m s + 1) (C_3 C_L L_3 s^2 + C_3 C_L R_3 s + C_3 + C_L)}$$

10.598 INVALID-ORDER-598 $Z(s) = \left(\frac{1}{C_1 s}, \frac{1}{C_2 s}, \infty, \infty, \infty, \frac{R_L}{C_L R_L s + 1} \right)$

$$H(s) = \frac{L_1 R_L g_m s (C_3 L_3 s^2 + C_3 R_3 s + 1)}{(C_1 L_1 s^2 + L_1 g_m s + 1) (C_3 C_L L_3 R_L s^3 + C_3 C_L R_3 R_L s^2 + C_3 L_3 s^2 + C_3 R_3 s + C_3 R_L s + C_L R_L s + 1)}$$

10.599 INVALID-ORDER-599 $Z(s) = \left(\frac{1}{C_1 s}, \frac{1}{C_2 s}, \infty, \infty, \infty, R_L + \frac{1}{C_L s} \right)$

$$H(s) = \frac{L_1 g_m (C_L R_L s + 1) (C_3 L_3 s^2 + C_3 R_3 s + 1)}{(C_1 L_1 s^2 + L_1 g_m s + 1) (C_3 C_L L_3 s^2 + C_3 C_L R_3 s + C_3 C_L R_L s + C_3 + C_L)}$$

10.600 INVALID-ORDER-600 $Z(s) = \left(\frac{1}{C_1 s}, \frac{1}{C_2 s}, \infty, \infty, \infty, L_L s + \frac{1}{C_L s} \right)$

$$H(s) = \frac{L_1 g_m (C_L L_L s^2 + 1) (C_3 L_3 s^2 + C_3 R_3 s + 1)}{(C_1 L_1 s^2 + L_1 g_m s + 1) (C_3 C_L L_3 s^2 + C_3 C_L L_L s^2 + C_3 C_L R_3 s + C_3 + C_L)}$$

10.601 INVALID-ORDER-601 $Z(s) = \left(\frac{1}{C_1 s}, \frac{1}{C_2 s}, \infty, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} \right)$

$$H(s) = \frac{L_1 L_L g_m s^2 (C_3 L_3 s^2 + C_3 R_3 s + 1)}{(C_1 L_1 s^2 + L_1 g_m s + 1) (C_3 C_L L_3 L_L s^4 + C_3 C_L L_L R_3 s^3 + C_3 L_3 s^2 + C_3 L_L s^2 + C_3 R_3 s + C_L L_L s^2 + 1)}$$

10.602 INVALID-ORDER-602 $Z(s) = \left(\frac{1}{C_1 s}, \frac{1}{C_2 s}, \infty, \infty, \infty, L_L s + R_L + \frac{1}{C_L s} \right)$

$$H(s) = \frac{L_1 g_m (C_3 L_3 s^2 + C_3 R_3 s + 1) (C_L L_L s^2 + C_L R_L s + 1)}{(C_1 L_1 s^2 + L_1 g_m s + 1) (C_3 C_L L_3 s^2 + C_3 C_L L_L s^2 + C_3 C_L R_3 s + C_3 C_L R_L s + C_3 + C_L)}$$

10.603 INVALID-ORDER-603 $Z(s) = \left(\frac{1}{C_1 s}, \frac{1}{C_2 s}, \infty, \infty, \infty, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$

$$H(s) = \frac{L_1 L_L R_L g_m s^2 (C_3 L_3 s^2 + C_3 R_3 s + 1)}{(C_1 L_1 s^2 + L_1 g_m s + 1) (C_3 C_L L_3 L_L R_L s^4 + C_3 C_L L_L R_3 R_L s^3 + C_3 L_3 L_L s^3 + C_3 L_3 R_L s^2 + C_3 L_L R_3 s^2 + C_3 L_L R_L s^2 + C_3 R_3 R_L s + C_L L_L R_L s^2 + L_L s + R_L)}$$

10.604 INVALID-ORDER-604 $Z(s) = \left(\frac{1}{C_1 s}, \frac{1}{C_2 s}, \infty, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$

$$H(s) = \frac{L_1 g_m s (C_3 L_3 s^2 + C_3 R_3 s + 1) (C_L L_L R_L s^2 + L_L s + R_L)}{(C_1 L_1 s^2 + L_1 g_m s + 1) (C_3 C_L L_3 L_L s^4 + C_3 C_L L_L R_3 s^3 + C_3 C_L L_L R_L s^3 + C_3 L_3 s^2 + C_3 L_L s^2 + C_3 R_3 s + C_3 R_L s + C_L L_L s^2 + 1)}$$

10.605 INVALID-ORDER-605 $Z(s) = \left(\frac{1}{C_1 s}, \frac{1}{C_2 s}, \infty, \infty, \infty, \frac{R_L (L_L s + \frac{1}{C_L s})}{L_L s + R_L + \frac{1}{C_L s}} \right)$

$$H(s) = \frac{L_1 R_L g_m s (C_L L_L s^2 + 1) (C_3 L_3 s^2 + C_3 R_3 s + 1)}{(C_1 L_1 s^2 + L_1 g_m s + 1) (C_3 C_L L_3 L_L s^4 + C_3 C_L L_3 R_L s^3 + C_3 C_L L_L R_3 s^3 + C_3 C_L L_L R_L s^3 + C_3 C_L R_3 R_L s^2 + C_3 L_3 s^2 + C_3 R_3 s + C_3 R_L s + C_L L_L s^2 + C_L R_L s + 1)}$$

10.606 INVALID-ORDER-606 $Z(s) = \left(\frac{1}{C_1 s}, \frac{R_2}{C_2 R_2 s + 1}, \infty, \infty, \infty, R_L \right)$

$$H(s) = \frac{L_1 L_3 R_3 R_L g_m s^2}{(C_1 L_1 s^2 + L_1 g_m s + 1) (C_3 L_3 R_3 R_L s^2 + L_3 R_3 s + L_3 R_L s + R_3 R_L)}$$

10.607 INVALID-ORDER-607 $Z(s) = \left(\frac{1}{C_1 s}, \frac{R_2}{C_2 R_2 s + 1}, \infty, \infty, \infty, \frac{1}{C_L s} \right)$

$$H(s) = \frac{L_1 L_3 R_3 g_m s^2}{(C_1 L_1 s^2 + L_1 g_m s + 1) (C_3 L_3 R_3 s^2 + C_L L_3 R_3 s^2 + L_3 s + R_3)}$$

10.608 INVALID-ORDER-608 $Z(s) = \left(\frac{1}{C_1 s}, \frac{R_2}{C_2 R_2 s + 1}, \infty, \infty, \infty, \frac{R_L}{C_L R_L s + 1} \right)$

$$H(s) = \frac{L_1 L_3 R_3 R_L g_m s^2}{(C_1 L_1 s^2 + L_1 g_m s + 1) (C_3 L_3 R_3 R_L s^2 + C_L L_3 R_3 R_L s^2 + L_3 R_3 s + L_3 R_L s + R_3 R_L)}$$

10.609 INVALID-ORDER-609 $Z(s) = \left(\frac{1}{C_1 s}, \frac{R_2}{C_2 R_2 s + 1}, \infty, \infty, \infty, R_L + \frac{1}{C_L s} \right)$

$$H(s) = \frac{L_1 L_3 R_3 g_m s^2 (C_L R_L s + 1)}{(C_1 L_1 s^2 + L_1 g_m s + 1) (C_3 C_L L_3 R_3 R_L s^3 + C_3 L_3 R_3 s^2 + C_L L_3 R_3 s^2 + C_L L_3 R_L s^2 + C_L R_3 R_L s + L_3 s + R_3)}$$

10.610 INVALID-ORDER-610 $Z(s) = \left(\frac{1}{C_1 s}, \frac{R_2}{C_2 R_2 s + 1}, \infty, \infty, \infty, L_L s + \frac{1}{C_L s} \right)$

$$H(s) = \frac{L_1 L_3 R_3 g_m s^2 (C_L L_L s^2 + 1)}{(C_1 L_1 s^2 + L_1 g_m s + 1) (C_3 C_L L_3 L_L R_3 s^4 + C_3 L_3 R_3 s^2 + C_L L_3 L_L s^3 + C_L L_3 R_3 s^2 + C_L L_L R_3 s^2 + L_3 s + R_3)}$$

10.611 INVALID-ORDER-611 $Z(s) = \left(\frac{1}{C_1 s}, \frac{R_2}{C_2 R_2 s + 1}, \infty, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} \right)$

$$H(s) = \frac{L_1 L_3 L_L R_3 g_m s^2}{(C_1 L_1 s^2 + L_1 g_m s + 1) (C_3 L_3 L_L R_3 s^2 + C_L L_3 L_L R_3 s^2 + L_3 L_L s + L_3 R_3 + L_L R_3)}$$

10.612 INVALID-ORDER-612 $Z(s) = \left(\frac{1}{C_1 s}, \frac{R_2}{C_2 R_2 s + 1}, \infty, \infty, \infty, L_L s + R_L + \frac{1}{C_L s} \right)$

$$H(s) = \frac{L_1 L_3 R_3 g_m s^2 (C_L L_L s^2 + C_L R_L s + 1)}{(C_1 L_1 s^2 + L_1 g_m s + 1) (C_3 C_L L_3 L_L R_3 s^4 + C_3 C_L L_3 R_3 R_L s^3 + C_3 L_3 R_3 s^2 + C_L L_3 L_L s^3 + C_L L_3 R_3 s^2 + C_L L_3 R_L s^2 + C_L L_L R_3 s^2 + C_L R_3 R_L s + L_3 s + R_3)}$$

10.613 INVALID-ORDER-613 $Z(s) = \left(\frac{1}{C_1 s}, \frac{R_2}{C_2 R_2 s + 1}, \infty, \infty, \infty, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$

$$H(s) = \frac{L_1 L_3 L_L R_3 R_L g_m s^2}{(C_1 L_1 s^2 + L_1 g_m s + 1) (C_3 L_3 L_L R_3 R_L s^2 + C_L L_3 L_L R_3 R_L s^2 + L_3 L_L R_3 s + L_3 L_L R_L s + L_3 R_3 R_L + L_L R_3 R_L)}$$

$$10.614 \quad \text{INVALID-ORDER-614} \quad Z(s) = \left(\frac{1}{C_1 s}, \frac{R_2}{C_2 R_2 s + 1}, \infty, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$$

$$H(s) = \frac{L_1 L_3 R_3 g_m s^2 (C_L L_L R_L s^2 + L_L s + R_L)}{(C_1 L_1 s^2 + L_1 g_m s + 1) (C_3 C_L L_3 L_L R_3 R_L s^4 + C_3 L_3 L_L R_3 s^3 + C_3 L_3 R_3 R_L s^2 + C_L L_3 L_L R_3 s^3 + C_L L_3 L_L R_L s^3 + C_L L_L R_3 R_L s^2 + L_3 L_L s^2 + L_3 R_3 s + L_3 R_L s + L_L R_3 s + R_3)}$$

$$10.615 \quad \text{INVALID-ORDER-615} \quad Z(s) = \left(\frac{1}{C_1 s}, \frac{R_2}{C_2 R_2 s + 1}, \infty, \infty, \infty, \frac{R_L (L_L s + \frac{1}{C_L s})}{L_L s + R_L + \frac{1}{C_L s}} \right)$$

$$H(s) = \frac{L_1 L_3 R_3 R_L g_m s^2 (C_L L_L s^2 + 1)}{(C_1 L_1 s^2 + L_1 g_m s + 1) (C_3 C_L L_3 L_L R_3 R_L s^4 + C_3 L_3 R_3 R_L s^2 + C_L L_3 L_L R_3 s^3 + C_L L_3 L_L R_L s^3 + C_L L_3 R_3 R_L s^2 + C_L L_L R_3 R_L s^2 + L_3 R_3 s + L_3 R_L s + R_3 R_L)}$$

$$10.616 \quad \text{INVALID-ORDER-616} \quad Z(s) = \left(\frac{1}{C_1 s}, R_2 + \frac{1}{C_2 s}, \infty, \infty, \infty, R_L \right)$$

$$H(s) = \frac{L_1 R_L g_m s (C_3 L_3 R_3 s^2 + L_3 s + R_3)}{(C_1 L_1 s^2 + L_1 g_m s + 1) (C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + L_3 s + R_3 + R_L)}$$

$$10.617 \quad \text{INVALID-ORDER-617} \quad Z(s) = \left(\frac{1}{C_1 s}, R_2 + \frac{1}{C_2 s}, \infty, \infty, \infty, \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_1 g_m s (C_3 L_3 R_3 s^2 + L_3 s + R_3)}{(C_1 L_1 s^2 + L_1 g_m s + 1) (C_3 C_L L_3 R_3 s^3 + C_3 L_3 s^2 + C_L L_3 s^2 + C_L R_3 s + 1)}$$

$$10.618 \quad \text{INVALID-ORDER-618} \quad Z(s) = \left(\frac{1}{C_1 s}, R_2 + \frac{1}{C_2 s}, \infty, \infty, \infty, \frac{R_L}{C_L R_L s + 1} \right)$$

$$H(s) = \frac{L_1 R_L g_m s (C_3 L_3 R_3 s^2 + L_3 s + R_3)}{(C_1 L_1 s^2 + L_1 g_m s + 1) (C_3 C_L L_3 R_3 R_L s^3 + C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + C_L L_3 R_L s^2 + C_L R_3 R_L s + L_3 s + R_3 + R_L)}$$

10.619 INVALID-ORDER-619 $Z(s) = \left(\frac{1}{C_1 s}, R_2 + \frac{1}{C_2 s}, \infty, \infty, \infty, R_L + \frac{1}{C_L s} \right)$

$$H(s) = \frac{L_1 g_m s (C_L R_L s + 1) (C_3 L_3 R_3 s^2 + L_3 s + R_3)}{(C_1 L_1 s^2 + L_1 g_m s + 1) (C_3 C_L L_3 R_3 s^3 + C_3 C_L L_3 R_L s^3 + C_3 L_3 s^2 + C_L L_3 s^2 + C_L R_3 s + C_L R_L s + 1)}$$

10.620 INVALID-ORDER-620 $Z(s) = \left(\frac{1}{C_1 s}, R_2 + \frac{1}{C_2 s}, \infty, \infty, \infty, L_L s + \frac{1}{C_L s} \right)$

$$H(s) = \frac{L_1 g_m s (C_L L_L s^2 + 1) (C_3 L_3 R_3 s^2 + L_3 s + R_3)}{(C_1 L_1 s^2 + L_1 g_m s + 1) (C_3 C_L L_3 L_L s^4 + C_3 C_L L_3 R_3 s^3 + C_3 L_3 s^2 + C_L L_3 s^2 + C_L L_L s^2 + C_L R_3 s + 1)}$$

10.621 INVALID-ORDER-621 $Z(s) = \left(\frac{1}{C_1 s}, R_2 + \frac{1}{C_2 s}, \infty, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} \right)$

$$H(s) = \frac{L_1 L_L g_m s^2 (C_3 L_3 R_3 s^2 + L_3 s + R_3)}{(C_1 L_1 s^2 + L_1 g_m s + 1) (C_3 C_L L_3 L_L R_3 s^4 + C_3 L_3 L_L s^3 + C_3 L_3 R_3 s^2 + C_L L_3 L_L s^3 + C_L L_L R_3 s^2 + L_3 s + L_L s + R_3)}$$

10.622 INVALID-ORDER-622 $Z(s) = \left(\frac{1}{C_1 s}, R_2 + \frac{1}{C_2 s}, \infty, \infty, \infty, L_L s + R_L + \frac{1}{C_L s} \right)$

$$H(s) = \frac{L_1 g_m s (C_L L_L s^2 + C_L R_L s + 1) (C_3 L_3 R_3 s^2 + L_3 s + R_3)}{(C_1 L_1 s^2 + L_1 g_m s + 1) (C_3 C_L L_3 L_L s^4 + C_3 C_L L_3 R_3 s^3 + C_3 C_L L_3 R_L s^3 + C_3 L_3 s^2 + C_L L_3 s^2 + C_L L_L s^2 + C_L R_3 s + C_L R_L s + 1)}$$

10.623 INVALID-ORDER-623 $Z(s) = \left(\frac{1}{C_1 s}, R_2 + \frac{1}{C_2 s}, \infty, \infty, \infty, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$

$$H(s) = \frac{L_1 L_L R_L g_m s^2 (C_3 L_3 R_3 s^2 + L_3 s + R_3)}{(C_1 L_1 s^2 + L_1 g_m s + 1) (C_3 C_L L_3 L_L R_3 R_L s^4 + C_3 L_3 L_L R_3 s^3 + C_3 L_3 L_L R_L s^3 + C_3 L_3 R_3 R_L s^2 + C_L L_3 L_L R_L s^3 + C_L L_L R_3 R_L s^2 + L_3 L_L s^2 + L_3 R_L s + L_L R_3 s + L_L R_L s + R_3)}$$

$$10.624 \quad \text{INVALID-ORDER-624} \quad Z(s) = \left(\frac{1}{C_1 s}, R_2 + \frac{1}{C_2 s}, \infty, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$$

$$H(s) = \frac{L_1 g_m s (C_3 L_3 R_3 s^2 + L_3 s + R_3) (C_L L_L R_L s^2 + L_L s + R_L)}{(C_1 L_1 s^2 + L_1 g_m s + 1) (C_3 C_L L_3 L_L R_3 s^4 + C_3 C_L L_3 L_L R_L s^4 + C_3 L_3 L_L s^3 + C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + C_L L_3 L_L s^3 + C_L L_L R_3 s^2 + C_L L_L R_L s^2 + L_3 s + L_L s + R_3 + R_L)}$$

$$10.625 \quad \text{INVALID-ORDER-625} \quad Z(s) = \left(\frac{1}{C_1 s}, R_2 + \frac{1}{C_2 s}, \infty, \infty, \infty, \frac{R_L (L_L s + \frac{1}{C_L s})}{L_L s + R_L + \frac{1}{C_L s}} \right)$$

$$H(s) = \frac{L_1 R_L g_m s (C_L L_L s^2 + 1) (C_3 L_3 R_3 s^2 + L_3 s + R_3)}{(C_1 L_1 s^2 + L_1 g_m s + 1) (C_3 C_L L_3 L_L R_3 s^4 + C_3 C_L L_3 L_L R_L s^4 + C_3 C_L L_3 R_3 R_L s^3 + C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + C_L L_3 L_L s^3 + C_L L_3 R_L s^2 + C_L L_L R_3 s^2 + C_L L_L R_L s^2 + C_L R_3 R_L s + R_L)}$$

$$10.626 \quad \text{INVALID-ORDER-626} \quad Z(s) = \left(\frac{1}{C_1 s}, L_2 s + \frac{1}{C_2 s}, \infty, \infty, \infty, R_L \right)$$

$$H(s) = \frac{L_1 R_3 R_L g_m s (C_3 L_3 s^2 + 1)}{(C_1 L_1 s^2 + L_1 g_m s + 1) (C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + C_3 R_3 R_L s + R_3 + R_L)}$$

$$10.627 \quad \text{INVALID-ORDER-627} \quad Z(s) = \left(\frac{1}{C_1 s}, L_2 s + \frac{1}{C_2 s}, \infty, \infty, \infty, \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_1 R_3 g_m s (C_3 L_3 s^2 + 1)}{(C_1 L_1 s^2 + L_1 g_m s + 1) (C_3 C_L L_3 R_3 s^3 + C_3 L_3 s^2 + C_3 R_3 s + C_L R_3 s + 1)}$$

$$10.628 \quad \text{INVALID-ORDER-628} \quad Z(s) = \left(\frac{1}{C_1 s}, L_2 s + \frac{1}{C_2 s}, \infty, \infty, \infty, \frac{R_L}{C_L R_L s + 1} \right)$$

$$H(s) = \frac{L_1 R_3 R_L g_m s (C_3 L_3 s^2 + 1)}{(C_1 L_1 s^2 + L_1 g_m s + 1) (C_3 C_L L_3 R_3 R_L s^3 + C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + C_3 R_3 R_L s + C_L R_3 R_L s + R_3 + R_L)}$$

10.629 INVALID-ORDER-629 $Z(s) = \left(\frac{1}{C_1 s}, L_2 s + \frac{1}{C_2 s}, \infty, \infty, \infty, R_L + \frac{1}{C_L s} \right)$

$$H(s) = \frac{L_1 R_3 g_m s (C_3 L_3 s^2 + 1) (C_L R_L s + 1)}{(C_1 L_1 s^2 + L_1 g_m s + 1) (C_3 C_L L_3 R_3 s^3 + C_3 C_L L_3 R_L s^3 + C_3 C_L R_3 R_L s^2 + C_3 L_3 s^2 + C_3 R_3 s + C_L R_3 s + C_L R_L s + 1)}$$

10.630 INVALID-ORDER-630 $Z(s) = \left(\frac{1}{C_1 s}, L_2 s + \frac{1}{C_2 s}, \infty, \infty, \infty, L_L s + \frac{1}{C_L s} \right)$

$$H(s) = \frac{L_1 R_3 g_m s (C_3 L_3 s^2 + 1) (C_L L_L s^2 + 1)}{(C_1 L_1 s^2 + L_1 g_m s + 1) (C_3 C_L L_3 L_L s^4 + C_3 C_L L_3 R_3 s^3 + C_3 C_L L_L R_3 s^3 + C_3 L_3 s^2 + C_3 R_3 s + C_L L_L s^2 + C_L R_3 s + 1)}$$

10.631 INVALID-ORDER-631 $Z(s) = \left(\frac{1}{C_1 s}, L_2 s + \frac{1}{C_2 s}, \infty, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} \right)$

$$H(s) = \frac{L_1 L_L R_3 g_m s^2 (C_3 L_3 s^2 + 1)}{(C_1 L_1 s^2 + L_1 g_m s + 1) (C_3 C_L L_3 L_L R_3 s^4 + C_3 L_3 L_L s^3 + C_3 L_3 R_3 s^2 + C_3 L_L R_3 s^2 + C_L L_L R_3 s^2 + L_L s + R_3)}$$

10.632 INVALID-ORDER-632 $Z(s) = \left(\frac{1}{C_1 s}, L_2 s + \frac{1}{C_2 s}, \infty, \infty, \infty, L_L s + R_L + \frac{1}{C_L s} \right)$

$$H(s) = \frac{L_1 R_3 g_m s (C_3 L_3 s^2 + 1) (C_L L_L s^2 + C_L R_L s + 1)}{(C_1 L_1 s^2 + L_1 g_m s + 1) (C_3 C_L L_3 L_L s^4 + C_3 C_L L_3 R_3 s^3 + C_3 C_L L_3 R_L s^3 + C_3 C_L L_L R_3 s^3 + C_3 C_L R_3 R_L s^2 + C_3 L_3 s^2 + C_3 R_3 s + C_L L_L s^2 + C_L R_3 s + C_L R_L s + 1)}$$

10.633 INVALID-ORDER-633 $Z(s) = \left(\frac{1}{C_1 s}, L_2 s + \frac{1}{C_2 s}, \infty, \infty, \infty, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$

$$H(s) = \frac{L_1 L_L R_3 R_L g_m s^2 (C_3 L_3 s^2 + 1)}{(C_1 L_1 s^2 + L_1 g_m s + 1) (C_3 C_L L_3 L_L R_3 R_L s^4 + C_3 L_3 L_L R_3 s^3 + C_3 L_3 L_L R_L s^3 + C_3 L_3 R_3 R_L s^2 + C_3 L_L R_3 R_L s^2 + C_L L_L R_3 R_L s^2 + L_L R_3 s + L_L R_L s + R_3 R_L)}$$

10.634 INVALID-ORDER-634 $Z(s) = \left(\frac{1}{C_1 s}, L_2 s + \frac{1}{C_2 s}, \infty, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$

$$H(s) = \frac{L_1 R_3 g_m s (C_3 L_3 s^2 + 1) (C_L L_L R_L s^2 + L_L s + R_L)}{(C_1 L_1 s^2 + L_1 g_m s + 1) (C_3 C_L L_3 L_L R_3 s^4 + C_3 C_L L_3 L_L R_L s^4 + C_3 C_L L_L R_3 R_L s^3 + C_3 L_3 L_L s^3 + C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + C_3 L_L R_3 s^2 + C_3 R_3 R_L s + C_L L_L R_3 s^2 + C_L L_L R_L s + R_L)}$$

10.635 INVALID-ORDER-635 $Z(s) = \left(\frac{1}{C_{1s}}, L_2s + \frac{1}{C_{2s}}, \infty, \infty, \infty, \frac{R_L \left(L_Ls + \frac{1}{C_{Ls}} \right)}{L_Ls + R_L + \frac{1}{C_{Ls}}} \right)$

$$H(s) = \frac{L_1 R_3 R_L g_m s (C_3 L_3 s^2 + 1) (C_L L_L s^2 + 1)}{(C_1 L_1 s^2 + L_1 g_m s + 1) (C_3 C_L L_3 L_L R_3 s^4 + C_3 C_L L_3 L_L R_L s^4 + C_3 C_L L_3 R_3 R_L s^3 + C_3 C_L L_L R_3 R_L s^3 + C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + C_3 R_3 R_L s + C_L L_L R_3 s^2 + C_L L_L R_L s^2 + C_L R_3 s + C_L R_L)}$$

10.636 INVALID-ORDER-636 $Z(s) = \left(\frac{1}{C_1 s}, L_2 s + R_2 + \frac{1}{C_2 s}, \infty, \infty, \infty, \frac{1}{C_L s} \right)$

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

10.637 INVALID-ORDER-637 $Z(s) = \left(\frac{1}{C_1 s}, L_2 s + R_2 + \frac{1}{C_2 s}, \infty, \infty, \infty, \frac{R_L}{C_L R_L s + 1} \right)$

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

10.638 INVALID-ORDER-638 $Z(s) = \left(\frac{1}{C_1 s}, L_2 s + R_2 + \frac{1}{C_2 s}, \infty, \infty, \infty, R_L + \frac{1}{C_L s} \right)$

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

10.639 INVALID-ORDER-639 $Z(s) = \left(\frac{1}{C_1 s}, L_2 s + R_2 + \frac{1}{C_2 s}, \infty, \infty, \infty, L_L s + \frac{1}{C_L s} \right)$

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

10.640 INVALID-ORDER-640 $Z(s) = \left(\frac{1}{C_1 s}, L_2 s + R_2 + \frac{1}{C_2 s}, \infty, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} \right)$

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

10.641 INVALID-ORDER-641 $Z(s) = \left(\frac{1}{C_1 s}, L_2 s + R_2 + \frac{1}{C_2 s}, \infty, \infty, \infty, L_L s + R_L + \frac{1}{C_L s} \right)$

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

10.642 INVALID-ORDER-642 $Z(s) = \left(\frac{1}{C_1 s}, L_2 s + R_2 + \frac{1}{C_2 s}, \infty, \infty, \infty, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$

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

10.643 INVALID-ORDER-643 $Z(s) = \left(\frac{1}{C_1 s}, L_2 s + R_2 + \frac{1}{C_2 s}, \infty, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$

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

10.644 **INVALID-ORDER-644** $Z(s) = \left(\frac{1}{C_1 s}, L_2 s + R_2 + \frac{1}{C_2 s}, \infty, \infty, \infty, \frac{R_L \left(L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$

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

10.645 **INVALID-ORDER-645** $Z(s) = \left(\frac{1}{C_1 s}, \frac{L_2 s}{C_2 L_2 s^2 + 1} + R_2, \infty, \infty, \infty, R_L \right)$

$$H(s) = \frac{R_L g_m (C_1 L_1 s^2 + C_1 R_1 s + 1)}{(C_3 R_L s + 1) (C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m)}$$

10.646 **INVALID-ORDER-646** $Z(s) = \left(\frac{1}{C_1 s}, \frac{L_2 s}{C_2 L_2 s^2 + 1} + R_2, \infty, \infty, \infty, \frac{1}{C_L s} \right)$

$$H(s) = \frac{g_m (C_1 L_1 s^2 + C_1 R_1 s + 1)}{s (C_3 + C_L) (C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m)}$$

10.647 **INVALID-ORDER-647** $Z(s) = \left(\frac{1}{C_1 s}, \frac{L_2 s}{C_2 L_2 s^2 + 1} + R_2, \infty, \infty, \infty, \frac{R_L}{C_L R_L s + 1} \right)$

$$H(s) = \frac{R_L g_m (C_1 L_1 s^2 + C_1 R_1 s + 1)}{(C_3 R_L s + C_L R_L s + 1) (C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m)}$$

10.648 **INVALID-ORDER-648** $Z(s) = \left(\frac{1}{C_1 s}, \frac{L_2 s}{C_2 L_2 s^2 + 1} + R_2, \infty, \infty, \infty, R_L + \frac{1}{C_L s} \right)$

$$H(s) = \frac{g_m (C_L R_L s + 1) (C_1 L_1 s^2 + C_1 R_1 s + 1)}{s (C_3 C_L R_L s + C_3 + C_L) (C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m)}$$

10.649 INVALID-ORDER-649 $Z(s) = \left(\frac{1}{C_1 s}, \frac{L_2 s}{C_2 L_2 s^2 + 1} + R_2, \infty, \infty, \infty, L_L s + \frac{1}{C_L s} \right)$

$$H(s) = \frac{g_m (C_L L_L s^2 + 1) (C_1 L_1 s^2 + C_1 R_1 s + 1)}{s (C_3 C_L L_L s^2 + C_3 + C_L) (C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m)}$$

10.650 INVALID-ORDER-650 $Z(s) = \left(\frac{1}{C_1 s}, \frac{L_2 s}{C_2 L_2 s^2 + 1} + R_2, \infty, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} \right)$

$$H(s) = \frac{L_L g_m s (C_1 L_1 s^2 + C_1 R_1 s + 1)}{(C_3 L_L s^2 + C_L L_L s^2 + 1) (C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m)}$$

10.651 INVALID-ORDER-651 $Z(s) = \left(\frac{1}{C_1 s}, \frac{L_2 s}{C_2 L_2 s^2 + 1} + R_2, \infty, \infty, \infty, L_L s + R_L + \frac{1}{C_L s} \right)$

$$H(s) = \frac{g_m (C_1 L_1 s^2 + C_1 R_1 s + 1) (C_L L_L s^2 + C_L R_L s + 1)}{s (C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_L s^2 + C_3 C_L R_L s + C_3 + C_L)}$$

10.652 INVALID-ORDER-652 $Z(s) = \left(\frac{1}{C_1 s}, \frac{L_2 s}{C_2 L_2 s^2 + 1} + R_2, \infty, \infty, \infty, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$

$$H(s) = \frac{L_L R_L g_m s (C_1 L_1 s^2 + C_1 R_1 s + 1)}{(C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m) (C_3 L_L R_L s^2 + C_L L_L R_L s^2 + L_L s + R_L)}$$

10.653 INVALID-ORDER-653 $Z(s) = \left(\frac{1}{C_1 s}, \frac{L_2 s}{C_2 L_2 s^2 + 1} + R_2, \infty, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$

$$H(s) = \frac{g_m (C_1 L_1 s^2 + C_1 R_1 s + 1) (C_L L_L R_L s^2 + L_L s + R_L)}{(C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_L R_L s^3 + C_3 L_L s^2 + C_3 R_L s + C_L L_L s^2 + 1)}$$

10.654 INVALID-ORDER-654 $Z(s) = \left(\frac{1}{C_1 s}, \frac{L_2 s}{C_2 L_2 s^2 + 1} + R_2, \infty, \infty, \infty, \frac{R_L \left(L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$

$$H(s) = \frac{R_L g_m (C_L L_L s^2 + 1) (C_1 L_1 s^2 + C_1 R_1 s + 1)}{(C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_L R_L s^3 + C_3 R_L s + C_L L_L s^2 + C_L R_L s + 1)}$$

10.655 INVALID-ORDER-655 $Z(s) = \left(\frac{1}{C_1 s}, \frac{R_2 \left(L_2 s + \frac{1}{C_2 s} \right)}{L_2 s + R_2 + \frac{1}{C_2 s}}, \infty, \infty, \infty, R_L \right)$

$$H(s) = \frac{R_3 R_L g_m (C_1 L_1 s^2 + C_1 R_1 s + 1)}{(C_3 R_3 R_L s + R_3 + R_L) (C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m)}$$

10.656 INVALID-ORDER-656 $Z(s) = \left(\frac{1}{C_1 s}, \frac{R_2 \left(L_2 s + \frac{1}{C_2 s} \right)}{L_2 s + R_2 + \frac{1}{C_2 s}}, \infty, \infty, \infty, \frac{1}{C_L s} \right)$

$$H(s) = \frac{R_3 g_m (C_1 L_1 s^2 + C_1 R_1 s + 1)}{(C_3 R_3 s + C_L R_3 s + 1) (C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m)}$$

10.657 INVALID-ORDER-657 $Z(s) = \left(\frac{1}{C_1 s}, \frac{R_2 \left(L_2 s + \frac{1}{C_2 s} \right)}{L_2 s + R_2 + \frac{1}{C_2 s}}, \infty, \infty, \infty, \frac{R_L}{C_L R_L s + 1} \right)$

$$H(s) = \frac{R_3 R_L g_m (C_1 L_1 s^2 + C_1 R_1 s + 1)}{(C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m) (C_3 R_3 R_L s + C_L R_3 R_L s + R_3 + R_L)}$$

10.658 INVALID-ORDER-658 $Z(s) = \left(\frac{1}{C_1 s}, \frac{R_2 \left(L_2 s + \frac{1}{C_2 s} \right)}{L_2 s + R_2 + \frac{1}{C_2 s}}, \infty, \infty, \infty, R_L + \frac{1}{C_L s} \right)$

$$H(s) = \frac{R_3 g_m (C_L R_L s + 1) (C_1 L_1 s^2 + C_1 R_1 s + 1)}{(C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L R_3 R_L s^2 + C_3 R_3 s + C_L R_3 s + C_L R_L s + 1)}$$

$$10.659 \quad \text{INVALID-ORDER-659} \quad Z(s) = \left(\frac{1}{C_1 s}, \frac{R_2 \left(L_2 s + \frac{1}{C_2 s} \right)}{L_2 s + R_2 + \frac{1}{C_2 s}}, \infty, \infty, \infty, L_L s + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{R_3 g_m (C_L L_L s^2 + 1) (C_1 L_1 s^2 + C_1 R_1 s + 1)}{(C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_L R_3 s^3 + C_3 R_3 s + C_L L_L s^2 + C_L R_3 s + 1)}$$

$$10.660 \quad \text{INVALID-ORDER-660} \quad Z(s) = \left(\frac{1}{C_1 s}, \frac{R_2 \left(L_2 s + \frac{1}{C_2 s} \right)}{L_2 s + R_2 + \frac{1}{C_2 s}}, \infty, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} \right)$$

$$H(s) = \frac{L_L R_3 g_m s (C_1 L_1 s^2 + C_1 R_1 s + 1)}{(C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m) (C_3 L_L R_3 s^2 + C_L L_L R_3 s^2 + L_L s + R_3)}$$

$$10.661 \quad \text{INVALID-ORDER-661} \quad Z(s) = \left(\frac{1}{C_1 s}, \frac{R_2 \left(L_2 s + \frac{1}{C_2 s} \right)}{L_2 s + R_2 + \frac{1}{C_2 s}}, \infty, \infty, \infty, L_L s + R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{R_3 g_m (C_1 L_1 s^2 + C_1 R_1 s + 1) (C_L L_L s^2 + C_L R_L s + 1)}{(C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_L R_3 s^3 + C_3 C_L R_3 R_L s^2 + C_3 R_3 s + C_L L_L s^2 + C_L R_3 s + C_L R_L s + 1)}$$

$$10.662 \quad \text{INVALID-ORDER-662} \quad Z(s) = \left(\frac{1}{C_1 s}, \frac{R_2 \left(L_2 s + \frac{1}{C_2 s} \right)}{L_2 s + R_2 + \frac{1}{C_2 s}}, \infty, \infty, \infty, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$$

$$H(s) = \frac{L_L R_3 R_L g_m s (C_1 L_1 s^2 + C_1 R_1 s + 1)}{(C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m) (C_3 L_L R_3 R_L s^2 + C_L L_L R_3 R_L s^2 + L_L R_3 s + L_L R_L s + R_3 R_L)}$$

$$10.663 \quad \text{INVALID-ORDER-663} \quad Z(s) = \left(\frac{1}{C_1 s}, \frac{R_2 \left(L_2 s + \frac{1}{C_2 s} \right)}{L_2 s + R_2 + \frac{1}{C_2 s}}, \infty, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$$

$$H(s) = \frac{R_3 g_m (C_1 L_1 s^2 + C_1 R_1 s + 1) (C_L L_L R_L s^2 + L_L s + R_L)}{(C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_L R_3 R_L s^3 + C_3 L_L R_3 s^2 + C_3 R_3 R_L s + C_L L_L R_3 s^2 + C_L L_L R_L s^2 + L_L s + R_3 + R_L)}$$

10.664 INVALID-ORDER-664 $Z(s) = \left(\frac{1}{C_1 s}, \frac{R_2 \left(L_2 s + \frac{1}{C_2 s} \right)}{L_2 s + R_2 + \frac{1}{C_2 s}}, \infty, \infty, \infty, \frac{R_L \left(L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$

$$H(s) = \frac{R_3 R_L g_m (C_L L_L s^2 + 1) (C_1 L_1 s^2 + C_1 R_1 s + 1)}{(C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_L R_3 R_L s^3 + C_3 R_3 R_L s + C_L L_L R_3 s^2 + C_L L_L R_L s^2 + C_L R_3 R_L s + R_3 + R_L)}$$

10.665 INVALID-ORDER-665 $Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, R_2, \infty, \infty, \infty, R_L \right)$

$$H(s) = \frac{R_L g_m (C_3 R_3 s + 1) (C_1 L_1 s^2 + C_1 R_1 s + 1)}{(C_3 R_3 s + C_3 R_L s + 1) (C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m)}$$

10.666 INVALID-ORDER-666 $Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, R_2, \infty, \infty, \infty, \frac{1}{C_L s} \right)$

$$H(s) = \frac{g_m (C_3 R_3 s + 1) (C_1 L_1 s^2 + C_1 R_1 s + 1)}{s (C_3 C_L R_3 s + C_3 + C_L) (C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m)}$$

10.667 INVALID-ORDER-667 $Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, R_2, \infty, \infty, \infty, \frac{R_L}{C_L R_L s + 1} \right)$

$$H(s) = \frac{R_L g_m (C_3 R_3 s + 1) (C_1 L_1 s^2 + C_1 R_1 s + 1)}{(C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L R_3 R_L s^2 + C_3 R_3 s + C_3 R_L s + C_L R_L s + 1)}$$

10.668 INVALID-ORDER-668 $Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, R_2, \infty, \infty, \infty, R_L + \frac{1}{C_L s} \right)$

$$H(s) = \frac{g_m (C_3 R_3 s + 1) (C_L R_L s + 1) (C_1 L_1 s^2 + C_1 R_1 s + 1)}{s (C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L R_3 s + C_3 C_L R_L s + C_3 + C_L)}$$

10.669 INVALID-ORDER-669 $Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, R_2, \infty, \infty, \infty, L_L s + \frac{1}{C_L s} \right)$

$$H(s) = \frac{g_m (C_3 R_3 s + 1) (C_L L_L s^2 + 1) (C_1 L_1 s^2 + C_1 R_1 s + 1)}{s (C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_L s^2 + C_3 C_L R_3 s + C_3 + C_L)}$$

10.670 INVALID-ORDER-670 $Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, R_2, \infty, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} \right)$

$$H(s) = \frac{L_L g_m s (C_3 R_3 s + 1) (C_1 L_1 s^2 + C_1 R_1 s + 1)}{(C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_L R_3 s^3 + C_3 L_L s^2 + C_3 R_3 s + C_L L_L s^2 + 1)}$$

10.671 INVALID-ORDER-671 $Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, R_2, \infty, \infty, \infty, L_L s + R_L + \frac{1}{C_L s} \right)$

$$H(s) = \frac{g_m (C_3 R_3 s + 1) (C_1 L_1 s^2 + C_1 R_1 s + 1) (C_L L_L s^2 + C_L R_L s + 1)}{s (C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_L s^2 + C_3 C_L R_3 s + C_3 C_L R_L s + C_3 + C_L)}$$

10.672 INVALID-ORDER-672 $Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, R_2, \infty, \infty, \infty, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$

$$H(s) = \frac{L_L R_L g_m s (C_3 R_3 s + 1) (C_1 L_1 s^2 + C_1 R_1 s + 1)}{(C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_L R_3 R_L s^3 + C_3 L_L R_3 s^2 + C_3 L_L R_L s^2 + C_3 R_3 R_L s + C_L L_L R_L s^2 + L_L s + R_L)}$$

10.673 INVALID-ORDER-673 $Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, R_2, \infty, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$

$$H(s) = \frac{g_m (C_3 R_3 s + 1) (C_1 L_1 s^2 + C_1 R_1 s + 1) (C_L L_L R_L s^2 + L_L s + R_L)}{(C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_L R_3 s^3 + C_3 C_L L_L R_L s^3 + C_3 L_L s^2 + C_3 R_3 s + C_3 R_L s + C_L L_L s^2 + 1)}$$

10.674 INVALID-ORDER-674 $Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, R_2, \infty, \infty, \infty, \frac{R_L \left(L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$

$$H(s) = \frac{R_L g_m (C_3 R_3 s + 1) (C_L L_L s^2 + 1) (C_1 L_1 s^2 + C_1 R_1 s + 1)}{(C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_L R_3 s^3 + C_3 C_L L_L R_L s^3 + C_3 C_L R_3 R_L s^2 + C_3 R_3 s + C_3 R_L s + C_L L_L s^2 + C_L R_L s + 1)}$$

10.675 INVALID-ORDER-675 $Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \frac{1}{C_2 s}, \infty, \infty, \infty, R_L \right)$

$$H(s) = \frac{R_L g_m (C_3 L_3 s^2 + 1) (C_1 L_1 s^2 + C_1 R_1 s + 1)}{(C_3 L_3 s^2 + C_3 R_L s + 1) (C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m)}$$

10.676 INVALID-ORDER-676 $Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \frac{1}{C_2 s}, \infty, \infty, \infty, \frac{1}{C_L s} \right)$

$$H(s) = \frac{g_m (C_3 L_3 s^2 + 1) (C_1 L_1 s^2 + C_1 R_1 s + 1)}{s (C_3 C_L L_3 s^2 + C_3 + C_L) (C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m)}$$

10.677 INVALID-ORDER-677 $Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \frac{1}{C_2 s}, \infty, \infty, \infty, \frac{R_L}{C_L R_L s + 1} \right)$

$$H(s) = \frac{R_L g_m (C_3 L_3 s^2 + 1) (C_1 L_1 s^2 + C_1 R_1 s + 1)}{(C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_3 R_L s^3 + C_3 L_3 s^2 + C_3 R_L s + C_L R_L s + 1)}$$

10.678 INVALID-ORDER-678 $Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \frac{1}{C_2 s}, \infty, \infty, \infty, R_L + \frac{1}{C_L s} \right)$

$$H(s) = \frac{g_m (C_3 L_3 s^2 + 1) (C_L R_L s + 1) (C_1 L_1 s^2 + C_1 R_1 s + 1)}{s (C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_3 s^2 + C_3 C_L R_L s + C_3 + C_L)}$$

10.679 INVALID-ORDER-679 $Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \frac{1}{C_2 s}, \infty, \infty, \infty, L_L s + \frac{1}{C_L s} \right)$

$$H(s) = \frac{g_m (C_3 L_3 s^2 + 1) (C_L L_L s^2 + 1) (C_1 L_1 s^2 + C_1 R_1 s + 1)}{s (C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_3 s^2 + C_3 C_L L_L s^2 + C_3 + C_L)}$$

10.680 INVALID-ORDER-680 $Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \frac{1}{C_2 s}, \infty, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} \right)$

$$H(s) = \frac{L_L g_m s (C_3 L_3 s^2 + 1) (C_1 L_1 s^2 + C_1 R_1 s + 1)}{(C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_3 L_L s^4 + C_3 L_3 s^2 + C_3 L_L s^2 + C_L L_L s^2 + 1)}$$

10.681 INVALID-ORDER-681 $Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \frac{1}{C_2 s}, \infty, \infty, \infty, L_L s + R_L + \frac{1}{C_L s} \right)$

$$H(s) = \frac{g_m (C_3 L_3 s^2 + 1) (C_1 L_1 s^2 + C_1 R_1 s + 1) (C_L L_L s^2 + C_L R_L s + 1)}{s (C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_3 s^2 + C_3 C_L L_L s^2 + C_3 C_L R_L s + C_3 + C_L)}$$

10.682 INVALID-ORDER-682 $Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \frac{1}{C_2 s}, \infty, \infty, \infty, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$

$$H(s) = \frac{L_L R_L g_m s (C_3 L_3 s^2 + 1) (C_1 L_1 s^2 + C_1 R_1 s + 1)}{(C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_3 L_L R_L s^4 + C_3 L_3 L_L s^3 + C_3 L_3 R_L s^2 + C_3 L_L R_L s^2 + C_L L_L R_L s^2 + L_L s + R_L)}$$

10.683 INVALID-ORDER-683 $Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \frac{1}{C_2 s}, \infty, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$

$$H(s) = \frac{g_m (C_3 L_3 s^2 + 1) (C_1 L_1 s^2 + C_1 R_1 s + 1) (C_L L_L R_L s^2 + L_L s + R_L)}{(C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_3 L_L s^4 + C_3 C_L L_L R_L s^3 + C_3 L_3 s^2 + C_3 L_L s^2 + C_3 R_L s + C_L L_L s^2 + 1)}$$

10.684 INVALID-ORDER-684 $Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \frac{1}{C_2 s}, \infty, \infty, \infty, \frac{R_L \left(L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$

$$H(s) = \frac{R_L g_m (C_3 L_3 s^2 + 1) (C_L L_L s^2 + 1) (C_1 L_1 s^2 + C_1 R_1 s + 1)}{(C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_3 L_L s^4 + C_3 C_L L_3 R_L s^3 + C_3 C_L L_L R_L s^3 + C_3 L_3 s^2 + C_3 R_L s + C_L L_L s^2 + C_L R_L s + 1)}$$

10.685 INVALID-ORDER-685 $Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \frac{R_2}{C_2 R_2 s + 1}, \infty, \infty, \infty, R_L \right)$

$$H(s) = \frac{L_3 R_L g_m s (C_1 L_1 s^2 + C_1 R_1 s + 1)}{(C_3 L_3 R_L s^2 + L_3 s + R_L) (C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m)}$$

10.686 INVALID-ORDER-686 $Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \frac{R_2}{C_2 R_2 s + 1}, \infty, \infty, \infty, \frac{1}{C_L s} \right)$

$$H(s) = \frac{L_3 g_m s (C_1 L_1 s^2 + C_1 R_1 s + 1)}{(C_3 L_3 s^2 + C_L L_3 s^2 + 1) (C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m)}$$

10.687 INVALID-ORDER-687 $Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \frac{R_2}{C_2 R_2 s + 1}, \infty, \infty, \infty, \frac{R_L}{C_L R_L s + 1} \right)$

$$H(s) = \frac{L_3 R_L g_m s (C_1 L_1 s^2 + C_1 R_1 s + 1)}{(C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m) (C_3 L_3 R_L s^2 + C_L L_3 R_L s^2 + L_3 s + R_L)}$$

10.688 INVALID-ORDER-688 $Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \frac{R_2}{C_2 R_2 s + 1}, \infty, \infty, \infty, R_L + \frac{1}{C_L s} \right)$

$$H(s) = \frac{L_3 g_m s (C_L R_L s + 1) (C_1 L_1 s^2 + C_1 R_1 s + 1)}{(C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_3 R_L s^3 + C_3 L_3 s^2 + C_L L_3 s^2 + C_L R_L s + 1)}$$

10.689 INVALID-ORDER-689 $Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \frac{R_2}{C_2 R_2 s + 1}, \infty, \infty, \infty, L_L s + \frac{1}{C_L s} \right)$

$$H(s) = \frac{L_3 g_m s (C_L L_L s^2 + 1) (C_1 L_1 s^2 + C_1 R_1 s + 1)}{(C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_3 L_L s^4 + C_3 L_3 s^2 + C_L L_3 s^2 + C_L L_L s^2 + 1)}$$

10.690 INVALID-ORDER-690 $Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \frac{R_2}{C_2 R_2 s + 1}, \infty, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} \right)$

$$H(s) = \frac{L_3 L_L g_m s (C_1 L_1 s^2 + C_1 R_1 s + 1)}{(C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m) (C_3 L_3 L_L s^2 + C_L L_3 L_L s^2 + L_3 + L_L)}$$

10.691 INVALID-ORDER-691 $Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \frac{R_2}{C_2 R_2 s + 1}, \infty, \infty, \infty, L_L s + R_L + \frac{1}{C_L s} \right)$

$$H(s) = \frac{L_3 g_m s (C_1 L_1 s^2 + C_1 R_1 s + 1) (C_L L_L s^2 + C_L R_L s + 1)}{(C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_3 L_L s^4 + C_3 C_L L_3 R_L s^3 + C_3 L_3 s^2 + C_L L_3 s^2 + C_L L_L s^2 + C_L R_L s + 1)}$$

10.692 INVALID-ORDER-692 $Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \frac{R_2}{C_2 R_2 s + 1}, \infty, \infty, \infty, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$

$$H(s) = \frac{L_3 L_L R_L g_m s (C_1 L_1 s^2 + C_1 R_1 s + 1)}{(C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m) (C_3 L_3 L_L R_L s^2 + C_L L_3 L_L R_L s^2 + L_3 L_L s + L_3 R_L + L_L R_L)}$$

10.693 INVALID-ORDER-693 $Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \frac{R_2}{C_2 R_2 s + 1}, \infty, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$

$$H(s) = \frac{L_3 g_m s (C_1 L_1 s^2 + C_1 R_1 s + 1) (C_L L_L R_L s^2 + L_L s + R_L)}{(C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_3 L_L R_L s^4 + C_3 L_3 L_L s^3 + C_3 L_3 R_L s^2 + C_L L_3 L_L s^3 + C_L L_L R_L s^2 + L_3 s + L_L s + R_L)}$$

10.694 INVALID-ORDER-694 $Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \frac{R_2}{C_2 R_2 s + 1}, \infty, \infty, \infty, \frac{R_L \left(L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$

$$H(s) = \frac{L_3 R_L g_m s (C_L L_L s^2 + 1) (C_1 L_1 s^2 + C_1 R_1 s + 1)}{(C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_3 L_L R_L s^4 + C_3 L_3 R_L s^2 + C_L L_3 L_L s^3 + C_L L_3 R_L s^2 + C_L L_L R_L s^2 + L_3 s + R_L)}$$

10.695 INVALID-ORDER-695 $Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, R_2 + \frac{1}{C_2 s}, \infty, \infty, \infty, R_L \right)$

$$H(s) = \frac{R_L g_m (C_1 L_1 s^2 + C_1 R_1 s + 1) (C_3 L_3 s^2 + C_3 R_3 s + 1)}{(C_3 L_3 s^2 + C_3 R_3 s + C_3 R_L s + 1) (C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m)}$$

10.696 INVALID-ORDER-696 $Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, R_2 + \frac{1}{C_2 s}, \infty, \infty, \infty, \frac{1}{C_L s} \right)$

$$H(s) = \frac{g_m (C_1 L_1 s^2 + C_1 R_1 s + 1) (C_3 L_3 s^2 + C_3 R_3 s + 1)}{s (C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_3 s^2 + C_3 C_L R_3 s + C_3 + C_L)}$$

10.697 INVALID-ORDER-697 $Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, R_2 + \frac{1}{C_2 s}, \infty, \infty, \infty, \frac{R_L}{C_L R_L s + 1} \right)$

$$H(s) = \frac{R_L g_m (C_1 L_1 s^2 + C_1 R_1 s + 1) (C_3 L_3 s^2 + C_3 R_3 s + 1)}{(C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_3 R_L s^3 + C_3 C_L R_3 R_L s^2 + C_3 L_3 s^2 + C_3 R_3 s + C_3 R_L s + C_L R_L s + 1)}$$

10.698 INVALID-ORDER-698 $Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, R_2 + \frac{1}{C_2 s}, \infty, \infty, \infty, R_L + \frac{1}{C_L s} \right)$

$$H(s) = \frac{g_m (C_L R_L s + 1) (C_1 L_1 s^2 + C_1 R_1 s + 1) (C_3 L_3 s^2 + C_3 R_3 s + 1)}{s (C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_3 s^2 + C_3 C_L R_3 s + C_3 C_L R_L s + C_3 + C_L)}$$

10.699 INVALID-ORDER-699 $Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, R_2 + \frac{1}{C_2 s}, \infty, \infty, \infty, L_L s + \frac{1}{C_L s} \right)$

$$H(s) = \frac{g_m (C_L L_L s^2 + 1) (C_1 L_1 s^2 + C_1 R_1 s + 1) (C_3 L_3 s^2 + C_3 R_3 s + 1)}{s (C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_3 s^2 + C_3 C_L L_L s^2 + C_3 C_L R_3 s + C_3 + C_L)}$$

10.700 INVALID-ORDER-700 $Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, R_2 + \frac{1}{C_2 s}, \infty, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} \right)$

$$H(s) = \frac{L_L g_m s (C_1 L_1 s^2 + C_1 R_1 s + 1) (C_3 L_3 s^2 + C_3 R_3 s + 1)}{(C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_3 L_L s^4 + C_3 C_L L_L R_3 s^3 + C_3 L_3 s^2 + C_3 L_L s^2 + C_3 R_3 s + C_L L_L s^2 + 1)}$$

10.701 INVALID-ORDER-701 $Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, R_2 + \frac{1}{C_2 s}, \infty, \infty, \infty, L_L s + R_L + \frac{1}{C_L s} \right)$

$$H(s) = \frac{g_m (C_1 L_1 s^2 + C_1 R_1 s + 1) (C_3 L_3 s^2 + C_3 R_3 s + 1) (C_L L_L s^2 + C_L R_L s + 1)}{s (C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_3 s^2 + C_3 C_L L_L s^2 + C_3 C_L R_3 s + C_3 C_L R_L s + C_3 + C_L)}$$

10.702 INVALID-ORDER-702 $Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, R_2 + \frac{1}{C_2 s}, \infty, \infty, \infty, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$

$$H(s) = \frac{L_L R_L g_m s (C_1 L_1 s^2 + C_1 R_1 s + 1) (C_3 L_3 s^2 + C_3 R_3 s + 1)}{(C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_3 L_L R_L s^4 + C_3 C_L L_L R_3 R_L s^3 + C_3 L_3 L_L s^3 + C_3 L_3 R_L s^2 + C_3 L_L R_3 s^2 + C_3 L_L R_L s^2 + C_3 R_3 R_L s + C_L L_L R_L s^2 + L_L s + R_L)}$$

10.703 INVALID-ORDER-703 $Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, R_2 + \frac{1}{C_2 s}, \infty, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$

$$H(s) = \frac{g_m (C_1 L_1 s^2 + C_1 R_1 s + 1) (C_3 L_3 s^2 + C_3 R_3 s + 1) (C_L L_L R_L s^2 + L_L s + R_L)}{(C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_3 L_L s^4 + C_3 C_L L_L R_3 s^3 + C_3 C_L L_L R_L s^3 + C_3 L_3 s^2 + C_3 L_L s^2 + C_3 R_3 s + C_3 R_L s + C_L L_L s^2 + 1)}$$

$$10.704 \quad \text{INVALID-ORDER-704} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, R_2 + \frac{1}{C_2 s}, \infty, \infty, \infty, \frac{R_L \left(L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$$

$$H(s) = \frac{R_L g_m (C_L L_L s^2 + 1) (C_1 L_1 s^2 + C_1 R_1 s + 1) (C_3 L_3 s^2 + C_3 R_3 s + 1)}{(C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_3 L_L s^4 + C_3 C_L L_3 R_L s^3 + C_3 C_L L_L R_3 s^3 + C_3 C_L L_L R_L s^3 + C_3 C_L R_3 R_L s^2 + C_3 L_3 s^2 + C_3 R_3 s + C_3 R_L s + C_L L_L s^2 + C_L R_L s +$$

$$10.705 \quad \text{INVALID-ORDER-705} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, L_2 s + \frac{1}{C_2 s}, \infty, \infty, \infty, R_L \right)$$

$$H(s) = \frac{L_3 R_3 R_L g_m s (C_1 L_1 s^2 + C_1 R_1 s + 1)}{(C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m) (C_3 L_3 R_3 R_L s^2 + L_3 R_3 s + L_3 R_L s + R_3 R_L)}$$

$$10.706 \quad \text{INVALID-ORDER-706} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, L_2 s + \frac{1}{C_2 s}, \infty, \infty, \infty, \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_3 R_3 g_m s (C_1 L_1 s^2 + C_1 R_1 s + 1)}{(C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m) (C_3 L_3 R_3 s^2 + C_L L_3 R_3 s^2 + L_3 s + R_3)}$$

$$10.707 \quad \text{INVALID-ORDER-707} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, L_2 s + \frac{1}{C_2 s}, \infty, \infty, \infty, \frac{R_L}{C_L R_L s + 1} \right)$$

$$H(s) = \frac{L_3 R_3 R_L g_m s (C_1 L_1 s^2 + C_1 R_1 s + 1)}{(C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m) (C_3 L_3 R_3 R_L s^2 + C_L L_3 R_3 R_L s^2 + L_3 R_3 s + L_3 R_L s + R_3 R_L)}$$

$$10.708 \quad \text{INVALID-ORDER-708} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, L_2 s + \frac{1}{C_2 s}, \infty, \infty, \infty, R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_3 R_3 g_m s (C_L R_L s + 1) (C_1 L_1 s^2 + C_1 R_1 s + 1)}{(C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_3 R_3 R_L s^3 + C_3 L_3 R_3 s^2 + C_L L_3 R_3 s^2 + C_L L_3 R_L s^2 + C_L R_3 R_L s + L_3 s + R_3)}$$

10.709 INVALID-ORDER-709 $Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, L_2 s + \frac{1}{C_2 s}, \infty, \infty, \infty, L_L s + \frac{1}{C_L s} \right)$

$$H(s) = \frac{L_3 R_3 g_m s (C_L L_L s^2 + 1) (C_1 L_1 s^2 + C_1 R_1 s + 1)}{(C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_3 L_L R_3 s^4 + C_3 L_3 R_3 s^2 + C_L L_3 L_L s^3 + C_L L_3 R_3 s^2 + C_L L_L R_3 s^2 + L_3 s + R_3)}$$

10.710 INVALID-ORDER-710 $Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, L_2 s + \frac{1}{C_2 s}, \infty, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} \right)$

$$H(s) = \frac{L_3 L_L R_3 g_m s (C_1 L_1 s^2 + C_1 R_1 s + 1)}{(C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m) (C_3 L_3 L_L R_3 s^2 + C_L L_3 L_L R_3 s^2 + L_3 L_L s + L_3 R_3 + L_L R_3)}$$

10.711 INVALID-ORDER-711 $Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, L_2 s + \frac{1}{C_2 s}, \infty, \infty, \infty, L_L s + R_L + \frac{1}{C_L s} \right)$

$$H(s) = \frac{L_3 R_3 g_m s (C_1 L_1 s^2 + C_1 R_1 s + 1) (C_L L_L s^2 + C_L R_L s + 1)}{(C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_3 L_L R_3 s^4 + C_3 C_L L_3 R_3 R_L s^3 + C_3 L_3 R_3 s^2 + C_L L_3 L_L s^3 + C_L L_3 R_3 s^2 + C_L L_3 R_L s^2 + C_L L_L R_3 s^2 + C_L R_3 R_L s + L_3 s + R_3)}$$

10.712 INVALID-ORDER-712 $Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, L_2 s + \frac{1}{C_2 s}, \infty, \infty, \infty, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$

$$H(s) = \frac{L_3 L_L R_3 R_L g_m s (C_1 L_1 s^2 + C_1 R_1 s + 1)}{(C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m) (C_3 L_3 L_L R_3 R_L s^2 + C_L L_3 L_L R_3 R_L s^2 + L_3 L_L R_3 s + L_3 L_L R_L s + L_3 R_3 R_L + L_L R_3 R_L)}$$

10.713 INVALID-ORDER-713 $Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, L_2 s + \frac{1}{C_2 s}, \infty, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$

$$H(s) = \frac{L_3 R_3 g_m s (C_1 L_1 s^2 + C_1 R_1 s + 1) (C_L L_L R_L s^2 + L_L s + R_L)}{(C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_3 L_L R_3 R_L s^4 + C_3 L_3 L_L R_3 s^3 + C_3 L_3 R_3 R_L s^2 + C_L L_3 L_L R_3 s^3 + C_L L_3 L_L R_L s^3 + C_L L_L R_3 R_L s^2 + L_3 L_L s^2 + L_3 R_3 s + L_3 R_L s + R_L)}$$

$$10.714 \quad \text{INVALID-ORDER-714} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, L_2 s + \frac{1}{C_2 s}, \infty, \infty, \infty, \frac{R_L \left(L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$$

$$H(s) = \frac{L_3 R_3 R_L g_m s (C_L L_L s^2 + 1) (C_1 L_1 s^2 + C_1 R_1 s + 1)}{(C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_3 L_L R_3 R_L s^4 + C_3 L_3 R_3 R_L s^2 + C_L L_3 L_L R_3 s^3 + C_L L_3 L_L R_L s^3 + C_L L_3 R_3 R_L s^2 + C_L L_L R_3 R_L s^2 + L_3 R_3 s + L_3 R_L s + R_3 R_L)}$$

$$10.715 \quad \text{INVALID-ORDER-715} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, L_2 s + R_2 + \frac{1}{C_2 s}, \infty, \infty, \infty, R_L \right)$$

$$H(s) = \frac{R_L g_m (C_1 L_1 s^2 + C_1 R_1 s + 1) (C_3 L_3 R_3 s^2 + L_3 s + R_3)}{(C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m) (C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + L_3 s + R_3 + R_L)}$$

$$10.716 \quad \text{INVALID-ORDER-716} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, L_2 s + R_2 + \frac{1}{C_2 s}, \infty, \infty, \infty, \frac{1}{C_L s} \right)$$

$$H(s) = \frac{g_m (C_1 L_1 s^2 + C_1 R_1 s + 1) (C_3 L_3 R_3 s^2 + L_3 s + R_3)}{(C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_3 R_3 s^3 + C_3 L_3 s^2 + C_L L_3 s^2 + C_L R_3 s + 1)}$$

$$10.717 \quad \text{INVALID-ORDER-717} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, L_2 s + R_2 + \frac{1}{C_2 s}, \infty, \infty, \infty, \frac{R_L}{C_L R_L s + 1} \right)$$

$$H(s) = \frac{R_L g_m (C_1 L_1 s^2 + C_1 R_1 s + 1) (C_3 L_3 R_3 s^2 + L_3 s + R_3)}{(C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_3 R_3 R_L s^3 + C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + C_L L_3 R_L s^2 + C_L R_3 R_L s + L_3 s + R_3 + R_L)}$$

$$10.718 \quad \text{INVALID-ORDER-718} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, L_2 s + R_2 + \frac{1}{C_2 s}, \infty, \infty, \infty, R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{g_m (C_L R_L s + 1) (C_1 L_1 s^2 + C_1 R_1 s + 1) (C_3 L_3 R_3 s^2 + L_3 s + R_3)}{(C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_3 R_3 s^3 + C_3 C_L L_3 R_L s^3 + C_3 L_3 s^2 + C_L L_3 s^2 + C_L R_3 s + C_L R_L s + 1)}$$

10.719 INVALID-ORDER-719 $Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, L_2 s + R_2 + \frac{1}{C_2 s}, \infty, \infty, \infty, L_L s + \frac{1}{C_L s} \right)$

$$H(s) = \frac{g_m (C_L L_L s^2 + 1) (C_1 L_1 s^2 + C_1 R_1 s + 1) (C_3 L_3 R_3 s^2 + L_3 s + R_3)}{(C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_3 L_L s^4 + C_3 C_L L_3 R_3 s^3 + C_3 L_3 s^2 + C_L L_3 s^2 + C_L L_L s^2 + C_L R_3 s + 1)}$$

10.720 INVALID-ORDER-720 $Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, L_2 s + R_2 + \frac{1}{C_2 s}, \infty, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} \right)$

$$H(s) = \frac{L_L g_m s (C_1 L_1 s^2 + C_1 R_1 s + 1) (C_3 L_3 R_3 s^2 + L_3 s + R_3)}{(C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_3 L_L R_3 s^4 + C_3 L_3 L_L s^3 + C_3 L_3 R_3 s^2 + C_L L_3 L_L s^3 + C_L L_L R_3 s^2 + L_3 s + L_L s + R_3)}$$

10.721 INVALID-ORDER-721 $Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, L_2 s + R_2 + \frac{1}{C_2 s}, \infty, \infty, \infty, L_L s + R_L + \frac{1}{C_L s} \right)$

$$H(s) = \frac{g_m (C_1 L_1 s^2 + C_1 R_1 s + 1) (C_L L_L s^2 + C_L R_L s + 1) (C_3 L_3 R_3 s^2 + L_3 s + R_3)}{(C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_3 L_L s^4 + C_3 C_L L_3 R_3 s^3 + C_3 C_L L_3 R_L s^3 + C_3 L_3 s^2 + C_L L_3 s^2 + C_L L_L s^2 + C_L R_3 s + C_L R_L s + 1)}$$

10.722 INVALID-ORDER-722 $Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, L_2 s + R_2 + \frac{1}{C_2 s}, \infty, \infty, \infty, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$

$$H(s) = \frac{L_L R_L g_m s (C_1 L_1 s^2 + C_1 R_1 s + 1) (C_3 L_3 R_3 s^2 + L_3 s + R_3)}{(C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_3 L_L R_3 R_L s^4 + C_3 L_3 L_L R_3 s^3 + C_3 L_3 L_L R_L s^3 + C_3 L_3 R_3 R_L s^2 + C_L L_3 L_L R_L s^3 + C_L L_L R_3 R_L s^2 + L_3 L_L s^2 + L_3 R_L s + L_L R_3 s + 1)}$$

10.723 INVALID-ORDER-723 $Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, L_2 s + R_2 + \frac{1}{C_2 s}, \infty, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$

$$H(s) = \frac{g_m (C_1 L_1 s^2 + C_1 R_1 s + 1) (C_3 L_3 R_3 s^2 + L_3 s + R_3) (C_L L_L R_L s^2 + L_L s + R_L)}{(C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_3 L_L R_3 s^4 + C_3 C_L L_3 L_L R_L s^4 + C_3 L_3 L_L s^3 + C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + C_L L_3 L_L s^3 + C_L L_L R_3 s^2 + C_L L_L R_L s^2 + L_3 s + L_L s + R_L)}$$

$$10.724 \quad \text{INVALID-ORDER-724} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, L_2 s + R_2 + \frac{1}{C_2 s}, \infty, \infty, \infty, \frac{R_L \left(L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$$

$$H(s) = \frac{R_L g_m (C_L L_L s^2 + 1) (C_1 L_1 s^2 + C_1 R_1 s + 1) (C_3 L_3 R_3 s^2 + L_3 s + R_3)}{(C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_3 L_L R_3 s^4 + C_3 C_L L_3 L_L R_L s^4 + C_3 C_L L_3 R_3 R_L s^3 + C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + C_L L_3 L_L s^3 + C_L L_3 R_L s^2 + C_L L_L R_3 s^2 + C_L L_L R_L s^2)}$$

$$10.725 \quad \text{INVALID-ORDER-725} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \frac{L_2 s}{C_2 L_2 s^2 + 1} + R_2, \infty, \infty, \infty, R_L \right)$$

$$H(s) = \frac{R_3 R_L g_m (C_3 L_3 s^2 + 1) (C_1 L_1 s^2 + C_1 R_1 s + 1)}{(C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m) (C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + C_3 R_3 R_L s + R_3 + R_L)}$$

$$10.726 \quad \text{INVALID-ORDER-726} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \frac{L_2 s}{C_2 L_2 s^2 + 1} + R_2, \infty, \infty, \infty, \frac{1}{C_L s} \right)$$

$$H(s) = \frac{R_3 g_m (C_3 L_3 s^2 + 1) (C_1 L_1 s^2 + C_1 R_1 s + 1)}{(C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_3 R_3 s^3 + C_3 L_3 s^2 + C_3 R_3 s + C_L R_3 s + 1)}$$

$$10.727 \quad \text{INVALID-ORDER-727} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \frac{L_2 s}{C_2 L_2 s^2 + 1} + R_2, \infty, \infty, \infty, \frac{R_L}{C_L R_L s + 1} \right)$$

$$H(s) = \frac{R_3 R_L g_m (C_3 L_3 s^2 + 1) (C_1 L_1 s^2 + C_1 R_1 s + 1)}{(C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_3 R_3 R_L s^3 + C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + C_3 R_3 R_L s + C_L R_3 R_L s + R_3 + R_L)}$$

$$10.728 \quad \text{INVALID-ORDER-728} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \frac{L_2 s}{C_2 L_2 s^2 + 1} + R_2, \infty, \infty, \infty, R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{R_3 g_m (C_3 L_3 s^2 + 1) (C_L R_L s + 1) (C_1 L_1 s^2 + C_1 R_1 s + 1)}{(C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_3 R_3 s^3 + C_3 C_L L_3 R_L s^3 + C_3 C_L R_3 R_L s^2 + C_3 L_3 s^2 + C_3 R_3 s + C_L R_3 s + C_L R_L s + 1)}$$

10.729 INVALID-ORDER-729 $Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \frac{L_2 s}{C_2 L_2 s^2 + 1} + R_2, \infty, \infty, \infty, L_L s + \frac{1}{C_L s} \right)$

$$H(s) = \frac{R_3 g_m (C_3 L_3 s^2 + 1) (C_L L_L s^2 + 1) (C_1 L_1 s^2 + C_1 R_1 s + 1)}{(C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_3 L_L s^4 + C_3 C_L L_3 R_3 s^3 + C_3 C_L L_L R_3 s^3 + C_3 L_3 s^2 + C_3 R_3 s + C_L L_L s^2 + C_L R_3 s + 1)}$$

10.730 INVALID-ORDER-730 $Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \frac{L_2 s}{C_2 L_2 s^2 + 1} + R_2, \infty, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} \right)$

$$H(s) = \frac{L_L R_3 g_m s (C_3 L_3 s^2 + 1) (C_1 L_1 s^2 + C_1 R_1 s + 1)}{(C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_3 L_L R_3 s^4 + C_3 L_3 L_L s^3 + C_3 L_3 R_3 s^2 + C_3 L_L R_3 s^2 + C_L L_L R_3 s^2 + L_L s + R_3)}$$

10.731 INVALID-ORDER-731 $Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \frac{L_2 s}{C_2 L_2 s^2 + 1} + R_2, \infty, \infty, \infty, L_L s + R_L + \frac{1}{C_L s} \right)$

$$H(s) = \frac{R_3 g_m (C_3 L_3 s^2 + 1) (C_1 L_1 s^2 + C_1 R_1 s + 1) (C_L L_L s^2 + C_L R_L s + 1)}{(C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_3 L_L s^4 + C_3 C_L L_3 R_3 s^3 + C_3 C_L L_3 R_L s^3 + C_3 C_L L_L R_3 s^3 + C_3 C_L R_3 R_L s^2 + C_3 L_3 s^2 + C_3 R_3 s + C_L L_L s^2 + C_L R_3 s + C_L R_L s + 1)}$$

10.732 INVALID-ORDER-732 $Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \frac{L_2 s}{C_2 L_2 s^2 + 1} + R_2, \infty, \infty, \infty, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$

$$H(s) = \frac{L_L R_3 R_L g_m s (C_3 L_3 s^2 + 1) (C_1 L_1 s^2 + C_1 R_1 s + 1)}{(C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_3 L_L R_3 R_L s^4 + C_3 L_3 L_L R_3 s^3 + C_3 L_3 L_L R_L s^3 + C_3 L_3 R_3 R_L s^2 + C_3 L_L R_3 R_L s^2 + C_L L_L R_3 R_L s^2 + L_L R_3 s + L_L R_L s + R_3 R_L)}$$

10.733 INVALID-ORDER-733 $Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \frac{L_2 s}{C_2 L_2 s^2 + 1} + R_2, \infty, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$

$$H(s) = \frac{R_3 g_m (C_3 L_3 s^2 + 1) (C_1 L_1 s^2 + C_1 R_1 s + 1) (C_L L_L R_L s^2 + L_L s + R_L)}{(C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_3 L_L R_3 s^4 + C_3 C_L L_3 L_L R_L s^4 + C_3 C_L L_L R_3 R_L s^3 + C_3 L_3 L_L s^3 + C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + C_3 L_L R_3 s^2 + C_3 R_3 R_L s + C_L L_L R_3)}$$

$$10.734 \quad \text{INVALID-ORDER-734} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \frac{L_2 s}{C_2 L_2 s^2 + 1} + R_2, \infty, \infty, \infty, \frac{R_L \left(L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$$

$$H(s) = \frac{R_3 R_L g_m (C_3 L_3 s^2 + 1) (C_L L_L s^2 + 1) (C_1 L_1 s^2 + C_1 R_1 s + 1)}{(C_1 L_1 g_m s^2 + C_1 R_1 g_m s + C_1 s + g_m) (C_3 C_L L_3 L_L R_3 s^4 + C_3 C_L L_3 L_L R_L s^4 + C_3 C_L L_3 R_3 R_L s^3 + C_3 C_L L_L R_3 R_L s^3 + C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + C_3 R_3 R_L s + C_L L_L R_3 s^2 + C_L L_L R_L s + C_L R_3 s + C_L R_L s + C_L s + 1)}$$

$$10.735 \quad \text{INVALID-ORDER-735} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \frac{R_2 \left(L_2 s + \frac{1}{C_2 s} \right)}{L_2 s + R_2 + \frac{1}{C_2 s}}, \infty, \infty, \infty, \frac{1}{C_L s} \right)$$

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

$$10.736 \quad \text{INVALID-ORDER-736} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \frac{R_2 \left(L_2 s + \frac{1}{C_2 s} \right)}{L_2 s + R_2 + \frac{1}{C_2 s}}, \infty, \infty, \infty, \frac{R_L}{C_L R_L s + 1} \right)$$

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

$$10.737 \quad \text{INVALID-ORDER-737} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \frac{R_2 \left(L_2 s + \frac{1}{C_2 s} \right)}{L_2 s + R_2 + \frac{1}{C_2 s}}, \infty, \infty, \infty, R_L + \frac{1}{C_L s} \right)$$

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

$$10.738 \quad \text{INVALID-ORDER-738} \quad Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \frac{R_2 \left(L_2 s + \frac{1}{C_2 s} \right)}{L_2 s + R_2 + \frac{1}{C_2 s}}, \infty, \infty, \infty, L_L s + \frac{1}{C_L s} \right)$$

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

10.739 INVALID-ORDER-739 $Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \frac{R_2 \left(L_2 s + \frac{1}{C_2 s} \right)}{L_2 s + R_2 + \frac{1}{C_2 s}}, \infty, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} \right)$

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

10.740 INVALID-ORDER-740 $Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \frac{R_2 \left(L_2 s + \frac{1}{C_2 s} \right)}{L_2 s + R_2 + \frac{1}{C_2 s}}, \infty, \infty, \infty, L_L s + R_L + \frac{1}{C_L s} \right)$

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

10.741 INVALID-ORDER-741 $Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \frac{R_2 \left(L_2 s + \frac{1}{C_2 s} \right)}{L_2 s + R_2 + \frac{1}{C_2 s}}, \infty, \infty, \infty, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$

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

10.742 INVALID-ORDER-742 $Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \frac{R_2 \left(L_2 s + \frac{1}{C_2 s} \right)}{L_2 s + R_2 + \frac{1}{C_2 s}}, \infty, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$

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

10.743 INVALID-ORDER-743 $Z(s) = \left(\frac{R_1}{C_1 R_1 s + 1}, \frac{R_2 \left(L_2 s + \frac{1}{C_2 s} \right)}{L_2 s + R_2 + \frac{1}{C_2 s}}, \infty, \infty, \infty, \frac{R_L \left(L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$

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

10.744 INVALID-ORDER-744 $Z(s) = \left(R_1 + \frac{1}{C_1 s}, R_2, \infty, \infty, \infty, R_L \right)$

$$H(s) = \frac{L_1 R_1 R_L g_m s}{(C_3 R_L s + 1)(C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1)}$$

10.745 INVALID-ORDER-745 $Z(s) = \left(R_1 + \frac{1}{C_1 s}, R_2, \infty, \infty, \infty, \frac{R_L}{C_L R_L s + 1} \right)$

$$H(s) = \frac{L_1 R_1 R_L g_m s}{(C_3 R_L s + C_L R_L s + 1)(C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1)}$$

10.746 INVALID-ORDER-746 $Z(s) = \left(R_1 + \frac{1}{C_1 s}, R_2, \infty, \infty, \infty, R_L + \frac{1}{C_L s} \right)$

$$H(s) = \frac{L_1 R_1 g_m (C_L R_L s + 1)}{(C_3 C_L R_L s + C_3 + C_L)(C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1)}$$

10.747 INVALID-ORDER-747 $Z(s) = \left(R_1 + \frac{1}{C_1 s}, R_2, \infty, \infty, \infty, L_L s + \frac{1}{C_L s} \right)$

$$H(s) = \frac{L_1 R_1 g_m (C_L L_L s^2 + 1)}{(C_3 C_L L_L s^2 + C_3 + C_L)(C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1)}$$

10.748 INVALID-ORDER-748 $Z(s) = \left(R_1 + \frac{1}{C_1 s}, R_2, \infty, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} \right)$

$$H(s) = \frac{L_1 L_L R_1 g_m s^2}{(C_3 L_L s^2 + C_L L_L s^2 + 1)(C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1)}$$

10.749 INVALID-ORDER-749 $Z(s) = \left(R_1 + \frac{1}{C_1 s}, R_2, \infty, \infty, \infty, L_L s + R_L + \frac{1}{C_L s} \right)$

$$H(s) = \frac{L_1 R_1 g_m (C_L L_L s^2 + C_L R_L s + 1)}{(C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1)(C_3 C_L L_L s^2 + C_3 C_L R_L s + C_3 + C_L)}$$

10.750 INVALID-ORDER-750 $Z(s) = \left(R_1 + \frac{1}{C_1 s}, R_2, \infty, \infty, \infty, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$

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

10.751 INVALID-ORDER-751 $Z(s) = \left(R_1 + \frac{1}{C_1 s}, R_2, \infty, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$

$$H(s) = \frac{L_1 R_1 g_m s (C_L L_L R_L s^2 + L_L s + R_L)}{(C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1) (C_3 C_L L_L R_L s^3 + C_3 L_L s^2 + C_3 R_L s + C_L L_L s^2 + 1)}$$

10.752 INVALID-ORDER-752 $Z(s) = \left(R_1 + \frac{1}{C_1 s}, R_2, \infty, \infty, \infty, \frac{R_L (L_L s + \frac{1}{C_L s})}{L_L s + R_L + \frac{1}{C_L s}} \right)$

$$H(s) = \frac{L_1 R_1 R_L g_m s (C_L L_L s^2 + 1)}{(C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1) (C_3 C_L L_L R_L s^3 + C_3 R_L s + C_L L_L s^2 + C_L R_L s + 1)}$$

10.753 INVALID-ORDER-753 $Z(s) = \left(R_1 + \frac{1}{C_1 s}, \frac{1}{C_2 s}, \infty, \infty, \infty, R_L \right)$

$$H(s) = \frac{L_1 R_1 R_3 R_L g_m s}{(C_3 R_3 R_L s + R_3 + R_L) (C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1)}$$

10.754 INVALID-ORDER-754 $Z(s) = \left(R_1 + \frac{1}{C_1 s}, \frac{1}{C_2 s}, \infty, \infty, \infty, \frac{1}{C_L s} \right)$

$$H(s) = \frac{L_1 R_1 R_3 g_m s}{(C_3 R_3 s + C_L R_3 s + 1) (C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1)}$$

10.755 INVALID-ORDER-755 $Z(s) = \left(R_1 + \frac{1}{C_1 s}, \frac{1}{C_2 s}, \infty, \infty, \infty, \frac{R_L}{C_L R_L s + 1} \right)$

$$H(s) = \frac{L_1 R_1 R_3 R_L g_m s}{(C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1) (C_3 R_3 R_L s + C_L R_3 R_L s + R_3 + R_L)}$$

10.756 INVALID-ORDER-756 $Z(s) = \left(R_1 + \frac{1}{C_1 s}, \frac{1}{C_2 s}, \infty, \infty, \infty, R_L + \frac{1}{C_L s} \right)$

$$H(s) = \frac{L_1 R_1 R_3 g_m s (C_L R_L s + 1)}{(C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1) (C_3 C_L R_3 R_L s^2 + C_3 R_3 s + C_L R_3 s + C_L R_L s + 1)}$$

10.757 INVALID-ORDER-757 $Z(s) = \left(R_1 + \frac{1}{C_1 s}, \frac{1}{C_2 s}, \infty, \infty, \infty, L_L s + \frac{1}{C_L s} \right)$

$$H(s) = \frac{L_1 R_1 R_3 g_m s (C_L L_L s^2 + 1)}{(C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1) (C_3 C_L L_L R_3 s^3 + C_3 R_3 s + C_L L_L s^2 + C_L R_3 s + 1)}$$

10.758 INVALID-ORDER-758 $Z(s) = \left(R_1 + \frac{1}{C_1 s}, \frac{1}{C_2 s}, \infty, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} \right)$

$$H(s) = \frac{L_1 L_L R_1 R_3 g_m s^2}{(C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1) (C_3 L_L R_3 s^2 + C_L L_L R_3 s^2 + L_L s + R_3)}$$

10.759 INVALID-ORDER-759 $Z(s) = \left(R_1 + \frac{1}{C_1 s}, \frac{1}{C_2 s}, \infty, \infty, \infty, L_L s + R_L + \frac{1}{C_L s} \right)$

$$H(s) = \frac{L_1 R_1 R_3 g_m s (C_L L_L s^2 + C_L R_L s + 1)}{(C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1) (C_3 C_L L_L R_3 s^3 + C_3 C_L R_3 R_L s^2 + C_3 R_3 s + C_L L_L s^2 + C_L R_3 s + C_L R_L s + 1)}$$

10.760 INVALID-ORDER-760 $Z(s) = \left(R_1 + \frac{1}{C_1 s}, \frac{1}{C_2 s}, \infty, \infty, \infty, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$

$$H(s) = \frac{L_1 L_L R_1 R_3 R_L g_m s^2}{(C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1) (C_3 L_L R_3 R_L s^2 + C_L L_L R_3 R_L s^2 + L_L R_3 s + L_L R_L s + R_3 R_L)}$$

10.761 INVALID-ORDER-761 $Z(s) = \left(R_1 + \frac{1}{C_1 s}, \frac{1}{C_2 s}, \infty, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$

$$H(s) = \frac{L_1 R_1 R_3 g_m s (C_L L_L R_L s^2 + L_L s + R_L)}{(C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1) (C_3 C_L L_L R_3 R_L s^3 + C_3 L_L R_3 s^2 + C_3 R_3 R_L s + C_L L_L R_3 s^2 + C_L L_L R_L s^2 + L_L s + R_3 + R_L)}$$

10.762 INVALID-ORDER-762 $Z(s) = \left(R_1 + \frac{1}{C_1 s}, \frac{1}{C_2 s}, \infty, \infty, \infty, \frac{R_L (L_L s + \frac{1}{C_L s})}{L_L s + R_L + \frac{1}{C_L s}} \right)$

$$H(s) = \frac{L_1 R_1 R_3 R_L g_m s (C_L L_L s^2 + 1)}{(C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1) (C_3 C_L L_L R_3 R_L s^3 + C_3 R_3 R_L s + C_L L_L R_3 s^2 + C_L L_L R_L s^2 + C_L R_3 R_L s + R_3 + R_L)}$$

10.763 INVALID-ORDER-763 $Z(s) = \left(R_1 + \frac{1}{C_1 s}, \frac{R_2}{C_2 R_2 s + 1}, \infty, \infty, \infty, R_L \right)$

$$H(s) = \frac{L_1 R_1 R_L g_m s (C_3 R_3 s + 1)}{(C_3 R_3 s + C_3 R_L s + 1) (C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1)}$$

10.764 INVALID-ORDER-764 $Z(s) = \left(R_1 + \frac{1}{C_1 s}, \frac{R_2}{C_2 R_2 s + 1}, \infty, \infty, \infty, \frac{1}{C_L s} \right)$

$$H(s) = \frac{L_1 R_1 g_m (C_3 R_3 s + 1)}{(C_3 C_L R_3 s + C_3 + C_L) (C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1)}$$

10.765 INVALID-ORDER-765 $Z(s) = \left(R_1 + \frac{1}{C_1 s}, \frac{R_2}{C_2 R_2 s + 1}, \infty, \infty, \infty, \frac{R_L}{C_L R_L s + 1} \right)$

$$H(s) = \frac{L_1 R_1 R_L g_m s (C_3 R_3 s + 1)}{(C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1) (C_3 C_L R_3 R_L s^2 + C_3 R_3 s + C_3 R_L s + C_L R_L s + 1)}$$

10.766 INVALID-ORDER-766 $Z(s) = \left(R_1 + \frac{1}{C_1 s}, \frac{R_2}{C_2 R_2 s + 1}, \infty, \infty, \infty, R_L + \frac{1}{C_L s} \right)$

$$H(s) = \frac{L_1 R_1 g_m (C_3 R_3 s + 1) (C_L R_L s + 1)}{(C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1) (C_3 C_L R_3 s + C_3 C_L R_L s + C_3 + C_L)}$$

10.767 INVALID-ORDER-767 $Z(s) = \left(R_1 + \frac{1}{C_1 s}, \frac{R_2}{C_2 R_2 s + 1}, \infty, \infty, \infty, L_L s + \frac{1}{C_L s} \right)$

$$H(s) = \frac{L_1 R_1 g_m (C_3 R_3 s + 1) (C_L L_L s^2 + 1)}{(C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1) (C_3 C_L L_L s^2 + C_3 C_L R_3 s + C_3 + C_L)}$$

10.768 INVALID-ORDER-768 $Z(s) = \left(R_1 + \frac{1}{C_1 s}, \frac{R_2}{C_2 R_2 s + 1}, \infty, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} \right)$

$$H(s) = \frac{L_1 L_L R_1 g_m s^2 (C_3 R_3 s + 1)}{(C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1) (C_3 C_L L_L R_3 s^3 + C_3 L_L s^2 + C_3 R_3 s + C_L L_L s^2 + 1)}$$

10.769 INVALID-ORDER-769 $Z(s) = \left(R_1 + \frac{1}{C_1 s}, \frac{R_2}{C_2 R_2 s + 1}, \infty, \infty, \infty, L_L s + R_L + \frac{1}{C_L s} \right)$

$$H(s) = \frac{L_1 R_1 g_m (C_3 R_3 s + 1) (C_L L_L s^2 + C_L R_L s + 1)}{(C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1) (C_3 C_L L_L s^2 + C_3 C_L R_3 s + C_3 C_L R_L s + C_3 + C_L)}$$

10.770 INVALID-ORDER-770 $Z(s) = \left(R_1 + \frac{1}{C_1 s}, \frac{R_2}{C_2 R_2 s + 1}, \infty, \infty, \infty, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$

$$H(s) = \frac{L_1 L_L R_1 R_L g_m s^2 (C_3 R_3 s + 1)}{(C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1) (C_3 C_L L_L R_3 R_L s^3 + C_3 L_L R_3 s^2 + C_3 L_L R_L s^2 + C_3 R_3 R_L s + C_L L_L R_L s^2 + L_L s + R_L)}$$

10.771 INVALID-ORDER-771 $Z(s) = \left(R_1 + \frac{1}{C_1 s}, \frac{R_2}{C_2 R_2 s + 1}, \infty, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$

$$H(s) = \frac{L_1 R_1 g_m s (C_3 R_3 s + 1) (C_L L_L R_L s^2 + L_L s + R_L)}{(C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1) (C_3 C_L L_L R_3 s^3 + C_3 C_L L_L R_L s^3 + C_3 L_L s^2 + C_3 R_3 s + C_3 R_L s + C_L L_L s^2 + 1)}$$

$$10.772 \quad \text{INVALID-ORDER-772} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \frac{R_2}{C_2 R_2 s + 1}, \infty, \infty, \infty, \frac{R_L \left(L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$$

$$H(s) = \frac{L_1 R_1 R_L g_m s (C_3 R_3 s + 1) (C_L L_L s^2 + 1)}{(C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1) (C_3 C_L L_L R_3 s^3 + C_3 C_L L_L R_L s^3 + C_3 C_L R_3 R_L s^2 + C_3 R_3 s + C_3 R_L s + C_L L_L s^2 + C_L R_L s + 1)}$$

$$10.773 \quad \text{INVALID-ORDER-773} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, R_2 + \frac{1}{C_2 s}, \infty, \infty, \infty, R_L \right)$$

$$H(s) = \frac{L_1 R_1 R_L g_m s (C_3 L_3 s^2 + 1)}{(C_3 L_3 s^2 + C_3 R_L s + 1) (C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1)}$$

$$10.774 \quad \text{INVALID-ORDER-774} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, R_2 + \frac{1}{C_2 s}, \infty, \infty, \infty, \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_1 R_1 g_m (C_3 L_3 s^2 + 1)}{(C_3 C_L L_3 s^2 + C_3 + C_L) (C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1)}$$

$$10.775 \quad \text{INVALID-ORDER-775} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, R_2 + \frac{1}{C_2 s}, \infty, \infty, \infty, \frac{R_L}{C_L R_L s + 1} \right)$$

$$H(s) = \frac{L_1 R_1 R_L g_m s (C_3 L_3 s^2 + 1)}{(C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1) (C_3 C_L L_3 R_L s^3 + C_3 L_3 s^2 + C_3 R_L s + C_L R_L s + 1)}$$

$$10.776 \quad \text{INVALID-ORDER-776} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, R_2 + \frac{1}{C_2 s}, \infty, \infty, \infty, R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_1 R_1 g_m (C_3 L_3 s^2 + 1) (C_L R_L s + 1)}{(C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1) (C_3 C_L L_3 s^2 + C_3 C_L R_L s + C_3 + C_L)}$$

10.777 INVALID-ORDER-777 $Z(s) = \left(R_1 + \frac{1}{C_1 s}, R_2 + \frac{1}{C_2 s}, \infty, \infty, \infty, L_L s + \frac{1}{C_L s} \right)$

$$H(s) = \frac{L_1 R_1 g_m (C_3 L_3 s^2 + 1) (C_L L_L s^2 + 1)}{(C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1) (C_3 C_L L_3 s^2 + C_3 C_L L_L s^2 + C_3 + C_L)}$$

10.778 INVALID-ORDER-778 $Z(s) = \left(R_1 + \frac{1}{C_1 s}, R_2 + \frac{1}{C_2 s}, \infty, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} \right)$

$$H(s) = \frac{L_1 L_L R_1 g_m s^2 (C_3 L_3 s^2 + 1)}{(C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1) (C_3 C_L L_3 L_L s^4 + C_3 L_3 s^2 + C_3 L_L s^2 + C_L L_L s^2 + 1)}$$

10.779 INVALID-ORDER-779 $Z(s) = \left(R_1 + \frac{1}{C_1 s}, R_2 + \frac{1}{C_2 s}, \infty, \infty, \infty, L_L s + R_L + \frac{1}{C_L s} \right)$

$$H(s) = \frac{L_1 R_1 g_m (C_3 L_3 s^2 + 1) (C_L L_L s^2 + C_L R_L s + 1)}{(C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1) (C_3 C_L L_3 s^2 + C_3 C_L L_L s^2 + C_3 C_L R_L s + C_3 + C_L)}$$

10.780 INVALID-ORDER-780 $Z(s) = \left(R_1 + \frac{1}{C_1 s}, R_2 + \frac{1}{C_2 s}, \infty, \infty, \infty, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$

$$H(s) = \frac{L_1 L_L R_1 R_L g_m s^2 (C_3 L_3 s^2 + 1)}{(C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1) (C_3 C_L L_3 L_L R_L s^4 + C_3 L_3 L_L s^3 + C_3 L_3 R_L s^2 + C_3 L_L R_L s^2 + C_L L_L R_L s^2 + L_L s + R_L)}$$

10.781 INVALID-ORDER-781 $Z(s) = \left(R_1 + \frac{1}{C_1 s}, R_2 + \frac{1}{C_2 s}, \infty, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$

$$H(s) = \frac{L_1 R_1 g_m s (C_3 L_3 s^2 + 1) (C_L L_L R_L s^2 + L_L s + R_L)}{(C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1) (C_3 C_L L_3 L_L s^4 + C_3 C_L L_L R_L s^3 + C_3 L_3 s^2 + C_3 L_L s^2 + C_3 R_L s + C_L L_L s^2 + 1)}$$

10.782 INVALID-ORDER-782 $Z(s) = \left(R_1 + \frac{1}{C_1 s}, R_2 + \frac{1}{C_2 s}, \infty, \infty, \infty, \frac{R_L \left(L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$

$$H(s) = \frac{L_1 R_1 R_L g_m s (C_3 L_3 s^2 + 1) (C_L L_L s^2 + 1)}{(C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1) (C_3 C_L L_3 L_L s^4 + C_3 C_L L_3 R_L s^3 + C_3 C_L L_L R_L s^3 + C_3 L_3 s^2 + C_3 R_L s + C_L L_L s^2 + C_L R_L s + 1)}$$

10.783 INVALID-ORDER-783 $Z(s) = \left(R_1 + \frac{1}{C_1 s}, L_2 s + \frac{1}{C_2 s}, \infty, \infty, \infty, R_L \right)$

$$H(s) = \frac{L_1 L_3 R_1 R_L g_m s^2}{(C_3 L_3 R_L s^2 + L_3 s + R_L) (C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1)}$$

10.784 INVALID-ORDER-784 $Z(s) = \left(R_1 + \frac{1}{C_1 s}, L_2 s + \frac{1}{C_2 s}, \infty, \infty, \infty, \frac{1}{C_L s} \right)$

$$H(s) = \frac{L_1 L_3 R_1 g_m s^2}{(C_3 L_3 s^2 + C_L L_3 s^2 + 1) (C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1)}$$

10.785 INVALID-ORDER-785 $Z(s) = \left(R_1 + \frac{1}{C_1 s}, L_2 s + \frac{1}{C_2 s}, \infty, \infty, \infty, \frac{R_L}{C_L R_L s + 1} \right)$

$$H(s) = \frac{L_1 L_3 R_1 R_L g_m s^2}{(C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1) (C_3 L_3 R_L s^2 + C_L L_3 R_L s^2 + L_3 s + R_L)}$$

10.786 INVALID-ORDER-786 $Z(s) = \left(R_1 + \frac{1}{C_1 s}, L_2 s + \frac{1}{C_2 s}, \infty, \infty, \infty, R_L + \frac{1}{C_L s} \right)$

$$H(s) = \frac{L_1 L_3 R_1 g_m s^2 (C_L R_L s + 1)}{(C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1) (C_3 C_L L_3 R_L s^3 + C_3 L_3 s^2 + C_L L_3 s^2 + C_L R_L s + 1)}$$

10.787 INVALID-ORDER-787 $Z(s) = \left(R_1 + \frac{1}{C_1 s}, L_2 s + \frac{1}{C_2 s}, \infty, \infty, \infty, L_L s + \frac{1}{C_L s} \right)$

$$H(s) = \frac{L_1 L_3 R_1 g_m s^2 (C_L L_L s^2 + 1)}{(C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1) (C_3 C_L L_3 L_L s^4 + C_3 L_3 s^2 + C_L L_3 s^2 + C_L L_L s^2 + 1)}$$

10.788 INVALID-ORDER-788 $Z(s) = \left(R_1 + \frac{1}{C_1 s}, L_2 s + \frac{1}{C_2 s}, \infty, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} \right)$

$$H(s) = \frac{L_1 L_3 L_L R_1 g_m s^2}{(C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1) (C_3 L_3 L_L s^2 + C_L L_3 L_L s^2 + L_3 + L_L)}$$

10.789 INVALID-ORDER-789 $Z(s) = \left(R_1 + \frac{1}{C_1 s}, L_2 s + \frac{1}{C_2 s}, \infty, \infty, \infty, L_L s + R_L + \frac{1}{C_L s} \right)$

$$H(s) = \frac{L_1 L_3 R_1 g_m s^2 (C_L L_L s^2 + C_L R_L s + 1)}{(C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1) (C_3 C_L L_3 L_L s^4 + C_3 C_L L_3 R_L s^3 + C_3 L_3 s^2 + C_L L_3 s^2 + C_L L_L s^2 + C_L R_L s + 1)}$$

10.790 INVALID-ORDER-790 $Z(s) = \left(R_1 + \frac{1}{C_1 s}, L_2 s + \frac{1}{C_2 s}, \infty, \infty, \infty, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$

$$H(s) = \frac{L_1 L_3 L_L R_1 R_L g_m s^2}{(C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1) (C_3 L_3 L_L R_L s^2 + C_L L_3 L_L R_L s^2 + L_3 L_L s + L_3 R_L + L_L R_L)}$$

10.791 INVALID-ORDER-791 $Z(s) = \left(R_1 + \frac{1}{C_1 s}, L_2 s + \frac{1}{C_2 s}, \infty, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$

$$H(s) = \frac{L_1 L_3 R_1 g_m s^2 (C_L L_L R_L s^2 + L_L s + R_L)}{(C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1) (C_3 C_L L_3 L_L R_L s^4 + C_3 L_3 L_L s^3 + C_3 L_3 R_L s^2 + C_L L_3 L_L s^3 + C_L L_L R_L s^2 + L_3 s + L_L s + R_L)}$$

10.792 INVALID-ORDER-792 $Z(s) = \left(R_1 + \frac{1}{C_1 s}, L_2 s + \frac{1}{C_2 s}, \infty, \infty, \infty, \frac{R_L \left(L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$

$$H(s) = \frac{L_1 L_3 R_1 R_L g_m s^2 (C_L L_L s^2 + 1)}{(C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1) (C_3 C_L L_3 L_L R_L s^4 + C_3 L_3 R_L s^2 + C_L L_3 L_L s^3 + C_L L_3 R_L s^2 + C_L L_L R_L s^2 + L_3 s + R_L)}$$

10.793 INVALID-ORDER-793 $Z(s) = \left(R_1 + \frac{1}{C_1 s}, L_2 s + R_2 + \frac{1}{C_2 s}, \infty, \infty, \infty, R_L \right)$

$$H(s) = \frac{L_1 R_1 R_L g_m s (C_3 L_3 s^2 + C_3 R_3 s + 1)}{(C_3 L_3 s^2 + C_3 R_3 s + C_3 R_L s + 1) (C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1)}$$

10.794 INVALID-ORDER-794 $Z(s) = \left(R_1 + \frac{1}{C_1 s}, L_2 s + R_2 + \frac{1}{C_2 s}, \infty, \infty, \infty, \frac{1}{C_L s} \right)$

$$H(s) = \frac{L_1 R_1 g_m (C_3 L_3 s^2 + C_3 R_3 s + 1)}{(C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1) (C_3 C_L L_3 s^2 + C_3 C_L R_3 s + C_3 + C_L)}$$

10.795 INVALID-ORDER-795 $Z(s) = \left(R_1 + \frac{1}{C_1 s}, L_2 s + R_2 + \frac{1}{C_2 s}, \infty, \infty, \infty, \frac{R_L}{C_L R_L s + 1} \right)$

$$H(s) = \frac{L_1 R_1 R_L g_m s (C_3 L_3 s^2 + C_3 R_3 s + 1)}{(C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1) (C_3 C_L L_3 R_L s^3 + C_3 C_L R_3 R_L s^2 + C_3 L_3 s^2 + C_3 R_3 s + C_3 R_L s + C_L R_L s + 1)}$$

10.796 INVALID-ORDER-796 $Z(s) = \left(R_1 + \frac{1}{C_1 s}, L_2 s + R_2 + \frac{1}{C_2 s}, \infty, \infty, \infty, R_L + \frac{1}{C_L s} \right)$

$$H(s) = \frac{L_1 R_1 g_m (C_L R_L s + 1) (C_3 L_3 s^2 + C_3 R_3 s + 1)}{(C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1) (C_3 C_L L_3 s^2 + C_3 C_L R_3 s + C_3 C_L R_L s + C_3 + C_L)}$$

10.797 INVALID-ORDER-797 $Z(s) = \left(R_1 + \frac{1}{C_1 s}, L_2 s + R_2 + \frac{1}{C_2 s}, \infty, \infty, \infty, L_L s + \frac{1}{C_L s} \right)$

$$H(s) = \frac{L_1 R_1 g_m (C_L L_L s^2 + 1) (C_3 L_3 s^2 + C_3 R_3 s + 1)}{(C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1) (C_3 C_L L_3 s^2 + C_3 C_L L_L s^2 + C_3 C_L R_3 s + C_3 + C_L)}$$

10.798 INVALID-ORDER-798 $Z(s) = \left(R_1 + \frac{1}{C_1 s}, L_2 s + R_2 + \frac{1}{C_2 s}, \infty, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} \right)$

$$H(s) = \frac{L_1 L_L R_1 g_m s^2 (C_3 L_3 s^2 + C_3 R_3 s + 1)}{(C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1) (C_3 C_L L_3 L_L s^4 + C_3 C_L L_L R_3 s^3 + C_3 L_3 s^2 + C_3 L_L s^2 + C_3 R_3 s + C_L L_L s^2 + 1)}$$

10.799 INVALID-ORDER-799 $Z(s) = \left(R_1 + \frac{1}{C_1 s}, L_2 s + R_2 + \frac{1}{C_2 s}, \infty, \infty, \infty, L_L s + R_L + \frac{1}{C_L s} \right)$

$$H(s) = \frac{L_1 R_1 g_m (C_3 L_3 s^2 + C_3 R_3 s + 1) (C_L L_L s^2 + C_L R_L s + 1)}{(C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1) (C_3 C_L L_3 s^2 + C_3 C_L L_L s^2 + C_3 C_L R_3 s + C_3 C_L R_L s + C_3 + C_L)}$$

10.800 INVALID-ORDER-800 $Z(s) = \left(R_1 + \frac{1}{C_1 s}, L_2 s + R_2 + \frac{1}{C_2 s}, \infty, \infty, \infty, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$

$$H(s) = \frac{L_1 L_L R_1 R_L g_m s^2 (C_3 L_3 s^2 + C_3 R_3 s + 1)}{(C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1) (C_3 C_L L_3 L_L R_L s^4 + C_3 C_L L_L R_3 R_L s^3 + C_3 L_3 L_L s^3 + C_3 L_3 R_L s^2 + C_3 L_L R_3 s^2 + C_3 L_L R_L s^2 + C_3 R_3 R_L s + C_L L_L R_L s^2 + L_L s + R_L)}$$

10.801 INVALID-ORDER-801 $Z(s) = \left(R_1 + \frac{1}{C_1 s}, L_2 s + R_2 + \frac{1}{C_2 s}, \infty, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$

$$H(s) = \frac{L_1 R_1 g_m s (C_3 L_3 s^2 + C_3 R_3 s + 1) (C_L L_L R_L s^2 + L_L s + R_L)}{(C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1) (C_3 C_L L_3 L_L s^4 + C_3 C_L L_L R_3 s^3 + C_3 C_L L_L R_L s^3 + C_3 L_3 s^2 + C_3 L_L s^2 + C_3 R_3 s + C_3 R_L s + C_L L_L s^2 + 1)}$$

10.802 INVALID-ORDER-802 $Z(s) = \left(R_1 + \frac{1}{C_1 s}, L_2 s + R_2 + \frac{1}{C_2 s}, \infty, \infty, \infty, \frac{R_L (L_L s + \frac{1}{C_L s})}{L_L s + R_L + \frac{1}{C_L s}} \right)$

$$H(s) = \frac{L_1 R_1 R_L g_m s (C_L L_L s^2 + 1) (C_3 L_3 s^2 + C_3 R_3 s + 1)}{(C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1) (C_3 C_L L_3 L_L s^4 + C_3 C_L L_3 R_L s^3 + C_3 C_L L_L R_3 s^3 + C_3 C_L L_L R_L s^3 + C_3 C_L R_3 R_L s^2 + C_3 L_3 s^2 + C_3 R_3 s + C_3 R_L s + C_L L_L s^2 + C_L R_L s +)}$$

10.803 INVALID-ORDER-803 $Z(s) = \left(R_1 + \frac{1}{C_1 s}, \frac{L_2 s}{C_2 L_2 s^2 + 1} + R_2, \infty, \infty, \infty, R_L \right)$

$$H(s) = \frac{L_1 L_3 R_1 R_3 R_L g_m s^2}{(C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1) (C_3 L_3 R_3 R_L s^2 + L_3 R_3 s + L_3 R_L s + R_3 R_L)}$$

10.804 INVALID-ORDER-804 $Z(s) = \left(R_1 + \frac{1}{C_1 s}, \frac{L_2 s}{C_2 L_2 s^2 + 1} + R_2, \infty, \infty, \infty, \frac{1}{C_L s} \right)$

$$H(s) = \frac{L_1 L_3 R_1 R_3 g_m s^2}{(C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1)(C_3 L_3 R_3 s^2 + C_L L_3 R_3 s^2 + L_3 s + R_3)}$$

10.805 INVALID-ORDER-805 $Z(s) = \left(R_1 + \frac{1}{C_1 s}, \frac{L_2 s}{C_2 L_2 s^2 + 1} + R_2, \infty, \infty, \infty, \frac{R_L}{C_L R_L s + 1} \right)$

$$H(s) = \frac{L_1 L_3 R_1 R_3 R_L g_m s^2}{(C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1)(C_3 L_3 R_3 R_L s^2 + C_L L_3 R_3 R_L s^2 + L_3 R_3 s + L_3 R_L s + R_3 R_L)}$$

10.806 INVALID-ORDER-806 $Z(s) = \left(R_1 + \frac{1}{C_1 s}, \frac{L_2 s}{C_2 L_2 s^2 + 1} + R_2, \infty, \infty, \infty, R_L + \frac{1}{C_L s} \right)$

$$H(s) = \frac{L_1 L_3 R_1 R_3 g_m s^2 (C_L R_L s + 1)}{(C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1)(C_3 C_L L_3 R_3 R_L s^3 + C_3 L_3 R_3 s^2 + C_L L_3 R_3 s^2 + C_L L_3 R_L s^2 + C_L R_3 R_L s + L_3 s + R_3)}$$

10.807 INVALID-ORDER-807 $Z(s) = \left(R_1 + \frac{1}{C_1 s}, \frac{L_2 s}{C_2 L_2 s^2 + 1} + R_2, \infty, \infty, \infty, L_L s + \frac{1}{C_L s} \right)$

$$H(s) = \frac{L_1 L_3 R_1 R_3 g_m s^2 (C_L L_L s^2 + 1)}{(C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1)(C_3 C_L L_3 L_L R_3 s^4 + C_3 L_3 R_3 s^2 + C_L L_3 L_L s^3 + C_L L_3 R_3 s^2 + C_L L_L R_3 s^2 + L_3 s + R_3)}$$

10.808 INVALID-ORDER-808 $Z(s) = \left(R_1 + \frac{1}{C_1 s}, \frac{L_2 s}{C_2 L_2 s^2 + 1} + R_2, \infty, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} \right)$

$$H(s) = \frac{L_1 L_3 L_L R_1 R_3 g_m s^2}{(C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1)(C_3 L_3 L_L R_3 s^2 + C_L L_3 L_L R_3 s^2 + L_3 L_L s + L_3 R_3 + L_L R_3)}$$

10.809 INVALID-ORDER-809 $Z(s) = \left(R_1 + \frac{1}{C_1 s}, \frac{L_2 s}{C_2 L_2 s^2 + 1} + R_2, \infty, \infty, \infty, L_L s + R_L + \frac{1}{C_L s} \right)$

$$H(s) = \frac{L_1 L_3 R_1 R_3 g_m s^2 (C_L L_L s^2 + C_L R_L s + 1)}{(C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1)(C_3 C_L L_3 L_L R_3 s^4 + C_3 C_L L_3 R_3 R_L s^3 + C_3 L_3 R_3 s^2 + C_L L_3 L_L s^3 + C_L L_3 R_3 s^2 + C_L L_3 R_L s^2 + C_L L_L R_3 s^2 + C_L R_3 R_L s + L_3 s + R_3)}$$

$$10.810 \quad \text{INVALID-ORDER-810} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \frac{L_2 s}{C_2 L_2 s^2 + 1} + R_2, \infty, \infty, \infty, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$$

$$H(s) = \frac{L_1 L_3 L_L R_1 R_3 R_L g_m s^2}{(C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1) (C_3 L_3 L_L R_3 R_L s^2 + C_L L_3 L_L R_3 R_L s^2 + L_3 L_L R_3 s + L_3 L_L R_L s + L_3 R_3 R_L + L_L R_3 R_L)}$$

$$10.811 \quad \text{INVALID-ORDER-811} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \frac{L_2 s}{C_2 L_2 s^2 + 1} + R_2, \infty, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$$

$$H(s) = \frac{L_1 L_3 R_1 R_3 g_m s^2 (C_L L_L R_L s^2 + L_L s + R_L)}{(C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1) (C_3 C_L L_3 L_L R_3 R_L s^4 + C_3 L_3 L_L R_3 s^3 + C_3 L_3 R_3 R_L s^2 + C_L L_3 L_L R_3 s^3 + C_L L_3 L_L R_L s^3 + C_L L_L R_3 R_L s^2 + L_3 L_L s^2 + L_3 R_3 s + L_3 R_L s + R_3 R_L)}$$

$$10.812 \quad \text{INVALID-ORDER-812} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \frac{L_2 s}{C_2 L_2 s^2 + 1} + R_2, \infty, \infty, \infty, \frac{R_L (L_L s + \frac{1}{C_L s})}{L_L s + R_L + \frac{1}{C_L s}} \right)$$

$$H(s) = \frac{L_1 L_3 R_1 R_3 R_L g_m s^2 (C_L L_L s^2 + 1)}{(C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1) (C_3 C_L L_3 L_L R_3 R_L s^4 + C_3 L_3 R_3 R_L s^2 + C_L L_3 L_L R_3 s^3 + C_L L_3 L_L R_L s^3 + C_L L_3 R_3 R_L s^2 + C_L L_L R_3 R_L s^2 + L_3 R_3 s + L_3 R_L s + R_3 R_L)}$$

$$10.813 \quad \text{INVALID-ORDER-813} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \frac{R_2 (L_2 s + \frac{1}{C_2 s})}{L_2 s + R_2 + \frac{1}{C_2 s}}, \infty, \infty, \infty, R_L \right)$$

$$H(s) = \frac{L_1 R_1 R_L g_m s (C_3 L_3 R_3 s^2 + L_3 s + R_3)}{(C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1) (C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + L_3 s + R_3 + R_L)}$$

$$10.814 \quad \text{INVALID-ORDER-814} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \frac{R_2 (L_2 s + \frac{1}{C_2 s})}{L_2 s + R_2 + \frac{1}{C_2 s}}, \infty, \infty, \infty, \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_1 R_1 g_m s (C_3 L_3 R_3 s^2 + L_3 s + R_3)}{(C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1) (C_3 C_L L_3 R_3 s^3 + C_3 L_3 s^2 + C_L L_3 s^2 + C_L R_3 s + 1)}$$

$$10.815 \quad \text{INVALID-ORDER-815} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \frac{R_2 \left(L_2 s + \frac{1}{C_2 s} \right)}{L_2 s + R_2 + \frac{1}{C_2 s}}, \infty, \infty, \infty, \frac{R_L}{C_L R_L s + 1} \right)$$

$$H(s) = \frac{L_1 R_1 R_L g_m s (C_3 L_3 R_3 s^2 + L_3 s + R_3)}{(C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1) (C_3 C_L L_3 R_3 R_L s^3 + C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + C_L L_3 R_L s^2 + C_L R_3 R_L s + L_3 s + R_3 + R_L)}$$

$$10.816 \quad \text{INVALID-ORDER-816} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \frac{R_2 \left(L_2 s + \frac{1}{C_2 s} \right)}{L_2 s + R_2 + \frac{1}{C_2 s}}, \infty, \infty, \infty, R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_1 R_1 g_m s (C_L R_L s + 1) (C_3 L_3 R_3 s^2 + L_3 s + R_3)}{(C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1) (C_3 C_L L_3 R_3 s^3 + C_3 C_L L_3 R_L s^3 + C_3 L_3 s^2 + C_L L_3 s^2 + C_L R_3 s + C_L R_L s + 1)}$$

$$10.817 \quad \text{INVALID-ORDER-817} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \frac{R_2 \left(L_2 s + \frac{1}{C_2 s} \right)}{L_2 s + R_2 + \frac{1}{C_2 s}}, \infty, \infty, \infty, L_L s + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_1 R_1 g_m s (C_L L_L s^2 + 1) (C_3 L_3 R_3 s^2 + L_3 s + R_3)}{(C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1) (C_3 C_L L_3 L_L s^4 + C_3 C_L L_3 R_3 s^3 + C_3 L_3 s^2 + C_L L_3 s^2 + C_L L_L s^2 + C_L R_3 s + 1)}$$

$$10.818 \quad \text{INVALID-ORDER-818} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \frac{R_2 \left(L_2 s + \frac{1}{C_2 s} \right)}{L_2 s + R_2 + \frac{1}{C_2 s}}, \infty, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} \right)$$

$$H(s) = \frac{L_1 L_L R_1 g_m s^2 (C_3 L_3 R_3 s^2 + L_3 s + R_3)}{(C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1) (C_3 C_L L_3 L_L R_3 s^4 + C_3 L_3 L_L s^3 + C_3 L_3 R_3 s^2 + C_L L_3 L_L s^3 + C_L L_L R_3 s^2 + L_3 s + L_L s + R_3)}$$

$$10.819 \quad \text{INVALID-ORDER-819} \quad Z(s) = \left(R_1 + \frac{1}{C_1 s}, \frac{R_2 \left(L_2 s + \frac{1}{C_2 s} \right)}{L_2 s + R_2 + \frac{1}{C_2 s}}, \infty, \infty, \infty, L_L s + R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_1 R_1 g_m s (C_L L_L s^2 + C_L R_L s + 1) (C_3 L_3 R_3 s^2 + L_3 s + R_3)}{(C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1) (C_3 C_L L_3 L_L s^4 + C_3 C_L L_3 R_3 s^3 + C_3 C_L L_3 R_L s^3 + C_3 L_3 s^2 + C_L L_3 s^2 + C_L L_L s^2 + C_L R_3 s + C_L R_L s + 1)}$$

10.820 INVALID-ORDER-820 $Z(s) = \left(R_1 + \frac{1}{C_1 s}, \frac{R_2 \left(L_2 s + \frac{1}{C_2 s} \right)}{L_2 s + R_2 + \frac{1}{C_2 s}}, \infty, \infty, \infty, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$

$$H(s) = \frac{L_1 L_L R_1 R_L g_m s^2 (C_3 L_3 R_3 s^2 + L_3 s + R_3)}{(C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1) (C_3 C_L L_3 L_L R_3 R_L s^4 + C_3 L_3 L_L R_3 s^3 + C_3 L_3 L_L R_L s^3 + C_3 L_3 R_3 R_L s^2 + C_L L_3 L_L R_L s^3 + C_L L_L R_3 R_L s^2 + L_3 L_L s^2 + L_3 R_L s + L_L R_3 s + R_L)}$$

10.821 INVALID-ORDER-821 $Z(s) = \left(R_1 + \frac{1}{C_1 s}, \frac{R_2 \left(L_2 s + \frac{1}{C_2 s} \right)}{L_2 s + R_2 + \frac{1}{C_2 s}}, \infty, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$

$$H(s) = \frac{L_1 R_1 g_m s (C_3 L_3 R_3 s^2 + L_3 s + R_3) (C_L L_L R_L s^2 + L_L s + R_L)}{(C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1) (C_3 C_L L_3 L_L R_3 s^4 + C_3 C_L L_3 L_L R_L s^4 + C_3 L_3 L_L s^3 + C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + C_L L_3 L_L s^3 + C_L L_L R_3 s^2 + C_L L_L R_L s^2 + L_3 s + L_L s + R_L)}$$

10.822 INVALID-ORDER-822 $Z(s) = \left(R_1 + \frac{1}{C_1 s}, \frac{R_2 \left(L_2 s + \frac{1}{C_2 s} \right)}{L_2 s + R_2 + \frac{1}{C_2 s}}, \infty, \infty, \infty, \frac{R_L \left(L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$

$$H(s) = \frac{L_1 R_1 R_L g_m s (C_L L_L s^2 + 1) (C_3 L_3 R_3 s^2 + L_3 s + R_3)}{(C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1) (C_3 C_L L_3 L_L R_3 s^4 + C_3 C_L L_3 L_L R_L s^4 + C_3 C_L L_3 R_3 R_L s^3 + C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + C_L L_3 L_L s^3 + C_L L_3 R_L s^2 + C_L L_L R_3 s^2 + C_L L_L R_L s^2 + L_3 s + L_L s + R_L)}$$

10.823 INVALID-ORDER-823 $Z(s) = \left(L_1 s + \frac{1}{C_1 s}, R_2, \infty, \infty, \infty, R_L \right)$

$$H(s) = \frac{L_1 R_1 R_3 R_L g_m s (C_3 L_3 s^2 + 1)}{(C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1) (C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + C_3 R_3 R_L s + R_3 + R_L)}$$

10.824 INVALID-ORDER-824 $Z(s) = \left(L_1 s + \frac{1}{C_1 s}, R_2, \infty, \infty, \infty, \frac{1}{C_L s} \right)$

$$H(s) = \frac{L_1 R_1 R_3 g_m s (C_3 L_3 s^2 + 1)}{(C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1) (C_3 C_L L_3 R_3 s^3 + C_3 L_3 s^2 + C_3 R_3 s + C_L R_3 s + 1)}$$

10.825 INVALID-ORDER-825 $Z(s) = \left(L_1s + \frac{1}{C_1s}, R_2, \infty, \infty, \infty, \frac{R_L}{C_LR_Ls+1} \right)$

$$H(s) = \frac{L_1R_1R_3R_Lg_ms(C_3L_3s^2+1)}{(C_1L_1R_1s^2+L_1R_1g_ms+L_1s+R_1)(C_3C_LL_3R_3R_Ls^3+C_3L_3R_3s^2+C_3L_3R_Ls^2+C_3R_3R_Ls+C_LR_3R_Ls+R_3+R_L)}$$

10.826 INVALID-ORDER-826 $Z(s) = \left(L_1s + \frac{1}{C_1s}, R_2, \infty, \infty, \infty, R_L + \frac{1}{C_Ls} \right)$

$$H(s) = \frac{L_1R_1R_3g_ms(C_3L_3s^2+1)(C_LR_Ls+1)}{(C_1L_1R_1s^2+L_1R_1g_ms+L_1s+R_1)(C_3C_LL_3R_3s^3+C_3C_LL_3R_Ls^3+C_3C_LR_3R_Ls^2+C_3L_3s^2+C_3R_3s+C_LR_3s+C_LR_Ls+1)}$$

10.827 INVALID-ORDER-827 $Z(s) = \left(L_1s + \frac{1}{C_1s}, R_2, \infty, \infty, \infty, L_Ls + \frac{1}{C_Ls} \right)$

$$H(s) = \frac{L_1R_1R_3g_ms(C_3L_3s^2+1)(C_LL_Ls^2+1)}{(C_1L_1R_1s^2+L_1R_1g_ms+L_1s+R_1)(C_3C_LL_3L_Ls^4+C_3C_LL_3R_3s^3+C_3C_LL_LR_3s^3+C_3L_3s^2+C_3R_3s+C_LL_Ls^2+C_LR_3s+1)}$$

10.828 INVALID-ORDER-828 $Z(s) = \left(L_1s + \frac{1}{C_1s}, R_2, \infty, \infty, \infty, \frac{L_Ls}{C_LL_Ls^2+1} \right)$

$$H(s) = \frac{L_1L_LR_1R_3g_ms^2(C_3L_3s^2+1)}{(C_1L_1R_1s^2+L_1R_1g_ms+L_1s+R_1)(C_3C_LL_3L_LR_3s^4+C_3L_3L_Ls^3+C_3L_3R_3s^2+C_3L_LR_3s^2+C_LL_LR_3s^2+L_Ls+R_3)}$$

10.829 INVALID-ORDER-829 $Z(s) = \left(L_1s + \frac{1}{C_1s}, R_2, \infty, \infty, \infty, L_Ls + R_L + \frac{1}{C_Ls} \right)$

$$H(s) = \frac{L_1R_1R_3g_ms(C_3L_3s^2+1)(C_LL_Ls^2+C_LR_Ls+1)}{(C_1L_1R_1s^2+L_1R_1g_ms+L_1s+R_1)(C_3C_LL_3L_Ls^4+C_3C_LL_3R_3s^3+C_3C_LL_3R_Ls^3+C_3C_LL_LR_3s^3+C_3C_LR_3R_Ls^2+C_3L_3s^2+C_3R_3s+C_LL_Ls^2+C_LR_3s+C_LR_Ls+1)}$$

$$\mathbf{10.830 \quad INVALID-ORDER-830} \quad Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \quad R_2, \quad \infty, \quad \infty, \quad \infty, \quad \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$$

$$H(s) = \frac{L_1 L_L R_1 R_3 R_L g_m s^2 (C_3 L_3 s^2 + 1)}{(C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1) (C_3 C_L L_3 L_L R_3 R_L s^4 + C_3 L_3 L_L R_3 s^3 + C_3 L_3 L_L R_L s^3 + C_3 L_3 R_3 R_L s^2 + C_3 L_L R_3 R_L s^2 + C_L L_L R_3 R_L s^2 + L_L R_3 s + L_L R_L s + R_3 R_L)}$$

$$\mathbf{10.831 \quad INVALID-ORDER-831} \quad Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \quad R_2, \quad \infty, \quad \infty, \quad \infty, \quad \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$$

$$H(s) = \frac{L_1 R_1 R_3 g_m s (C_3 L_3 s^2 + 1) (C_L L_L R_L s^2 + L_L s + R_L)}{(C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1) (C_3 C_L L_3 L_L R_3 s^4 + C_3 C_L L_3 L_L R_L s^4 + C_3 C_L L_L R_3 R_L s^3 + C_3 L_3 L_L s^3 + C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + C_3 L_L R_3 s^2 + C_3 R_3 R_L s + C_L L_L R_3)}$$

$$\mathbf{10.832 \quad INVALID-ORDER-832} \quad Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \quad R_2, \quad \infty, \quad \infty, \quad \infty, \quad \frac{R_L (L_L s + \frac{1}{C_L s})}{L_L s + R_L + \frac{1}{C_L s}} \right)$$

$$H(s) = \frac{L_1 R_1 R_3 R_L g_m s (C_3 L_3 s^2 + 1) (C_L L_L s^2 + 1)}{(C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1) (C_3 C_L L_3 L_L R_3 s^4 + C_3 C_L L_3 L_L R_L s^4 + C_3 C_L L_3 R_3 R_L s^3 + C_3 C_L L_L R_3 R_L s^3 + C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + C_3 R_3 R_L s + C_L L_L R_3 s^2 + C_L L_L R_3)}$$

$$\mathbf{10.833 \quad INVALID-ORDER-833} \quad Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \quad \frac{1}{C_2 s}, \quad \infty, \quad \infty, \quad \infty, \quad \frac{1}{C_L s} \right)$$

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

$$\mathbf{10.834 \quad INVALID-ORDER-834} \quad Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \quad \frac{1}{C_2 s}, \quad \infty, \quad \infty, \quad \infty, \quad \frac{R_L}{C_L R_L s + 1} \right)$$

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

10.835 INVALID-ORDER-835 $Z(s) = \left(L_1s + \frac{1}{C_1s}, \frac{1}{C_2s}, \infty, \infty, \infty, R_L + \frac{1}{C_Ls} \right)$

$$H(s) = \frac{R_3g_m (C_LR_Ls + 1) (C_1L_1R_1s^2 + L_1s + R_1)}{(C_LR_3s + C_LR_Ls + 1) (C_1L_1R_1g_ms^2 + C_1L_1s^2 + L_1g_ms + R_1g_m + 1)}$$

10.836 INVALID-ORDER-836 $Z(s) = \left(L_1s + \frac{1}{C_1s}, \frac{1}{C_2s}, \infty, \infty, \infty, L_Ls + \frac{1}{C_Ls} \right)$

$$H(s) = \frac{R_3g_m (C_LL_Ls^2 + 1) (C_1L_1R_1s^2 + L_1s + R_1)}{(C_LL_Ls^2 + C_LR_3s + 1) (C_1L_1R_1g_ms^2 + C_1L_1s^2 + L_1g_ms + R_1g_m + 1)}$$

10.837 INVALID-ORDER-837 $Z(s) = \left(L_1s + \frac{1}{C_1s}, \frac{1}{C_2s}, \infty, \infty, \infty, \frac{L_Ls}{C_LL_Ls^2 + 1} \right)$

$$H(s) = \frac{L_LR_3g_ms (C_1L_1R_1s^2 + L_1s + R_1)}{(C_LL_LR_3s^2 + L_Ls + R_3) (C_1L_1R_1g_ms^2 + C_1L_1s^2 + L_1g_ms + R_1g_m + 1)}$$

10.838 INVALID-ORDER-838 $Z(s) = \left(L_1s + \frac{1}{C_1s}, \frac{1}{C_2s}, \infty, \infty, \infty, L_Ls + R_L + \frac{1}{C_Ls} \right)$

$$H(s) = \frac{R_3g_m (C_LL_Ls^2 + C_LR_Ls + 1) (C_1L_1R_1s^2 + L_1s + R_1)}{(C_LL_Ls^2 + C_LR_3s + C_LR_Ls + 1) (C_1L_1R_1g_ms^2 + C_1L_1s^2 + L_1g_ms + R_1g_m + 1)}$$

10.839 INVALID-ORDER-839 $Z(s) = \left(L_1s + \frac{1}{C_1s}, \frac{1}{C_2s}, \infty, \infty, \infty, \frac{1}{C_Ls + \frac{1}{R_L} + \frac{1}{L_Ls}} \right)$

$$H(s) = \frac{L_LR_3R_Lg_ms (C_1L_1R_1s^2 + L_1s + R_1)}{(C_LL_LR_3R_Ls^2 + L_LR_3s + L_LR_Ls + R_3R_L) (C_1L_1R_1g_ms^2 + C_1L_1s^2 + L_1g_ms + R_1g_m + 1)}$$

10.840 INVALID-ORDER-840 $Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \frac{1}{C_2 s}, \infty, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$

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

10.841 INVALID-ORDER-841 $Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \frac{1}{C_2 s}, \infty, \infty, \infty, \frac{R_L (L_L s + \frac{1}{C_L s})}{L_L s + R_L + \frac{1}{C_L s}} \right)$

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

10.842 INVALID-ORDER-842 $Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \frac{R_2}{C_2 R_2 s + 1}, \infty, \infty, \infty, R_L \right)$

$$H(s) = \frac{R_L g_m (C_1 L_1 R_1 s^2 + L_1 s + R_1)}{(C_3 R_L s + 1) (C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + L_1 g_m s + R_1 g_m + 1)}$$

10.843 INVALID-ORDER-843 $Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \frac{R_2}{C_2 R_2 s + 1}, \infty, \infty, \infty, \frac{1}{C_L s} \right)$

$$H(s) = \frac{g_m (C_1 L_1 R_1 s^2 + L_1 s + R_1)}{s (C_3 + C_L) (C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + L_1 g_m s + R_1 g_m + 1)}$$

10.844 INVALID-ORDER-844 $Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \frac{R_2}{C_2 R_2 s + 1}, \infty, \infty, \infty, \frac{R_L}{C_L R_L s + 1} \right)$

$$H(s) = \frac{R_L g_m (C_1 L_1 R_1 s^2 + L_1 s + R_1)}{(C_3 R_L s + C_L R_L s + 1) (C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + L_1 g_m s + R_1 g_m + 1)}$$

10.845 INVALID-ORDER-845 $Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \frac{R_2}{C_2 R_2 s + 1}, \infty, \infty, \infty, R_L + \frac{1}{C_L s} \right)$

$$H(s) = \frac{g_m (C_L R_L s + 1) (C_1 L_1 R_1 s^2 + L_1 s + R_1)}{s (C_3 C_L R_L s + C_3 + C_L) (C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + L_1 g_m s + R_1 g_m + 1)}$$

10.846 INVALID-ORDER-846 $Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \frac{R_2}{C_2 R_2 s + 1}, \infty, \infty, \infty, L_L s + \frac{1}{C_L s} \right)$

$$H(s) = \frac{g_m (C_L L_L s^2 + 1) (C_1 L_1 R_1 s^2 + L_1 s + R_1)}{s (C_3 C_L L_L s^2 + C_3 + C_L) (C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + L_1 g_m s + R_1 g_m + 1)}$$

10.847 INVALID-ORDER-847 $Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \frac{R_2}{C_2 R_2 s + 1}, \infty, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} \right)$

$$H(s) = \frac{L_L g_m s (C_1 L_1 R_1 s^2 + L_1 s + R_1)}{(C_3 L_L s^2 + C_L L_L s^2 + 1) (C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + L_1 g_m s + R_1 g_m + 1)}$$

10.848 INVALID-ORDER-848 $Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \frac{R_2}{C_2 R_2 s + 1}, \infty, \infty, \infty, L_L s + R_L + \frac{1}{C_L s} \right)$

$$H(s) = \frac{g_m (C_L L_L s^2 + C_L R_L s + 1) (C_1 L_1 R_1 s^2 + L_1 s + R_1)}{s (C_3 C_L L_L s^2 + C_3 C_L R_L s + C_3 + C_L) (C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + L_1 g_m s + R_1 g_m + 1)}$$

10.849 INVALID-ORDER-849 $Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \frac{R_2}{C_2 R_2 s + 1}, \infty, \infty, \infty, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$

$$H(s) = \frac{L_L R_L g_m s (C_1 L_1 R_1 s^2 + L_1 s + R_1)}{(C_3 L_L R_L s^2 + C_L L_L R_L s + L_L s + R_L) (C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + L_1 g_m s + R_1 g_m + 1)}$$

10.850 INVALID-ORDER-850 $Z(s) = \left(L_1s + \frac{1}{C_1s}, \frac{R_2}{C_2R_2s+1}, \infty, \infty, \infty, \frac{L_Ls}{C_LL_Ls^2+1} + R_L \right)$

$$H(s) = \frac{g_m (C_1L_1R_1s^2 + L_1s + R_1) (C_LL_LR_Ls^2 + L_Ls + R_L)}{(C_1L_1R_1g_ms^2 + C_1L_1s^2 + L_1g_ms + R_1g_m + 1) (C_3C_LL_LR_Ls^3 + C_3L_Ls^2 + C_3R_Ls + C_LL_Ls^2 + 1)}$$

10.851 INVALID-ORDER-851 $Z(s) = \left(L_1s + \frac{1}{C_1s}, \frac{R_2}{C_2R_2s+1}, \infty, \infty, \infty, \frac{R_L(L_Ls + \frac{1}{C_Ls})}{L_Ls + R_L + \frac{1}{C_Ls}} \right)$

$$H(s) = \frac{R_Lg_m (C_LL_Ls^2 + 1) (C_1L_1R_1s^2 + L_1s + R_1)}{(C_1L_1R_1g_ms^2 + C_1L_1s^2 + L_1g_ms + R_1g_m + 1) (C_3C_LL_LR_Ls^3 + C_3R_Ls + C_LL_Ls^2 + C_LR_Ls + 1)}$$

10.852 INVALID-ORDER-852 $Z(s) = \left(L_1s + \frac{1}{C_1s}, R_2 + \frac{1}{C_2s}, \infty, \infty, \infty, R_L \right)$

$$H(s) = \frac{R_3R_Lg_m (C_1L_1R_1s^2 + L_1s + R_1)}{(C_3R_3R_Ls + R_3 + R_L) (C_1L_1R_1g_ms^2 + C_1L_1s^2 + L_1g_ms + R_1g_m + 1)}$$

10.853 INVALID-ORDER-853 $Z(s) = \left(L_1s + \frac{1}{C_1s}, R_2 + \frac{1}{C_2s}, \infty, \infty, \infty, \frac{1}{C_Ls} \right)$

$$H(s) = \frac{R_3g_m (C_1L_1R_1s^2 + L_1s + R_1)}{(C_3R_3s + C_LR_3s + 1) (C_1L_1R_1g_ms^2 + C_1L_1s^2 + L_1g_ms + R_1g_m + 1)}$$

10.854 INVALID-ORDER-854 $Z(s) = \left(L_1s + \frac{1}{C_1s}, R_2 + \frac{1}{C_2s}, \infty, \infty, \infty, \frac{R_L}{C_LR_Ls+1} \right)$

$$H(s) = \frac{R_3R_Lg_m (C_1L_1R_1s^2 + L_1s + R_1)}{(C_3R_3R_Ls + C_LR_3R_Ls + R_3 + R_L) (C_1L_1R_1g_ms^2 + C_1L_1s^2 + L_1g_ms + R_1g_m + 1)}$$

10.855 INVALID-ORDER-855 $Z(s) = \left(L_1s + \frac{1}{C_1s}, R_2 + \frac{1}{C_2s}, \infty, \infty, \infty, R_L + \frac{1}{C_Ls} \right)$

$$H(s) = \frac{R_3g_m (C_LR_Ls + 1) (C_1L_1R_1s^2 + L_1s + R_1)}{(C_1L_1R_1g_ms^2 + C_1L_1s^2 + L_1g_ms + R_1g_m + 1) (C_3C_LR_3R_Ls^2 + C_3R_3s + C_LR_3s + C_LR_Ls + 1)}$$

10.856 INVALID-ORDER-856 $Z(s) = \left(L_1s + \frac{1}{C_1s}, R_2 + \frac{1}{C_2s}, \infty, \infty, \infty, L_Ls + \frac{1}{C_Ls} \right)$

$$H(s) = \frac{R_3g_m (C_LL_Ls^2 + 1) (C_1L_1R_1s^2 + L_1s + R_1)}{(C_1L_1R_1g_ms^2 + C_1L_1s^2 + L_1g_ms + R_1g_m + 1) (C_3C_LL_LR_3s^3 + C_3R_3s + C_LL_Ls^2 + C_LR_3s + 1)}$$

10.857 INVALID-ORDER-857 $Z(s) = \left(L_1s + \frac{1}{C_1s}, R_2 + \frac{1}{C_2s}, \infty, \infty, \infty, \frac{L_Ls}{C_LL_Ls^2 + 1} \right)$

$$H(s) = \frac{L_LR_3g_ms (C_1L_1R_1s^2 + L_1s + R_1)}{(C_3L_LR_3s^2 + C_LL_LR_3s^2 + L_Ls + R_3) (C_1L_1R_1g_ms^2 + C_1L_1s^2 + L_1g_ms + R_1g_m + 1)}$$

10.858 INVALID-ORDER-858 $Z(s) = \left(L_1s + \frac{1}{C_1s}, R_2 + \frac{1}{C_2s}, \infty, \infty, \infty, L_Ls + R_L + \frac{1}{C_Ls} \right)$

$$H(s) = \frac{R_3g_m (C_LL_Ls^2 + C_LR_Ls + 1) (C_1L_1R_1s^2 + L_1s + R_1)}{(C_1L_1R_1g_ms^2 + C_1L_1s^2 + L_1g_ms + R_1g_m + 1) (C_3C_LL_LR_3s^3 + C_3C_LR_3R_Ls^2 + C_3R_3s + C_LL_Ls^2 + C_LR_3s + C_LR_Ls + 1)}$$

10.859 INVALID-ORDER-859 $Z(s) = \left(L_1s + \frac{1}{C_1s}, R_2 + \frac{1}{C_2s}, \infty, \infty, \infty, \frac{1}{C_Ls + \frac{1}{R_L} + \frac{1}{L_Ls}} \right)$

$$H(s) = \frac{L_LR_3R_Lg_ms (C_1L_1R_1s^2 + L_1s + R_1)}{(C_1L_1R_1g_ms^2 + C_1L_1s^2 + L_1g_ms + R_1g_m + 1) (C_3L_LR_3R_Ls^2 + C_LL_LR_3R_Ls^2 + L_LR_3s + L_LR_Ls + R_3R_L)}$$

10.860 INVALID-ORDER-860 $Z(s) = \left(L_1s + \frac{1}{C_1s}, R_2 + \frac{1}{C_2s}, \infty, \infty, \infty, \frac{L_Ls}{C_LL_Ls^2+1} + R_L \right)$

$$H(s) = \frac{R_3g_m (C_1L_1R_1s^2 + L_1s + R_1) (C_LL_LR_Ls^2 + L_Ls + R_L)}{(C_1L_1R_1g_ms^2 + C_1L_1s^2 + L_1g_ms + R_1g_m + 1) (C_3C_LL_LR_3R_Ls^3 + C_3L_LR_3s^2 + C_3R_3R_Ls + C_LL_LR_3s^2 + C_LL_LR_Ls^2 + L_Ls + R_3 + R_L)}$$

10.861 INVALID-ORDER-861 $Z(s) = \left(L_1s + \frac{1}{C_1s}, R_2 + \frac{1}{C_2s}, \infty, \infty, \infty, \frac{R_L(L_Ls + \frac{1}{C_Ls})}{L_Ls + R_L + \frac{1}{C_Ls}} \right)$

$$H(s) = \frac{R_3R_Lg_m (C_LL_Ls^2 + 1) (C_1L_1R_1s^2 + L_1s + R_1)}{(C_1L_1R_1g_ms^2 + C_1L_1s^2 + L_1g_ms + R_1g_m + 1) (C_3C_LL_LR_3R_Ls^3 + C_3R_3R_Ls + C_LL_LR_3s^2 + C_LL_LR_Ls^2 + C_LR_3R_Ls + R_3 + R_L)}$$

10.862 INVALID-ORDER-862 $Z(s) = \left(L_1s + \frac{1}{C_1s}, L_2s + \frac{1}{C_2s}, \infty, \infty, \infty, R_L \right)$

$$H(s) = \frac{R_Lg_m (C_3R_3s + 1) (C_1L_1R_1s^2 + L_1s + R_1)}{(C_3R_3s + C_3R_Ls + 1) (C_1L_1R_1g_ms^2 + C_1L_1s^2 + L_1g_ms + R_1g_m + 1)}$$

10.863 INVALID-ORDER-863 $Z(s) = \left(L_1s + \frac{1}{C_1s}, L_2s + \frac{1}{C_2s}, \infty, \infty, \infty, \frac{1}{C_Ls} \right)$

$$H(s) = \frac{g_m (C_3R_3s + 1) (C_1L_1R_1s^2 + L_1s + R_1)}{s (C_3C_LR_3s + C_3 + C_L) (C_1L_1R_1g_ms^2 + C_1L_1s^2 + L_1g_ms + R_1g_m + 1)}$$

10.864 INVALID-ORDER-864 $Z(s) = \left(L_1s + \frac{1}{C_1s}, L_2s + \frac{1}{C_2s}, \infty, \infty, \infty, \frac{R_L}{C_LR_Ls+1} \right)$

$$H(s) = \frac{R_Lg_m (C_3R_3s + 1) (C_1L_1R_1s^2 + L_1s + R_1)}{(C_1L_1R_1g_ms^2 + C_1L_1s^2 + L_1g_ms + R_1g_m + 1) (C_3C_LR_3R_Ls^2 + C_3R_3s + C_3R_Ls + C_LR_Ls + 1)}$$

10.865 INVALID-ORDER-865 $Z(s) = \left(L_1s + \frac{1}{C_1s}, L_2s + \frac{1}{C_2s}, \infty, \infty, \infty, R_L + \frac{1}{C_Ls} \right)$

$$H(s) = \frac{g_m (C_3R_3s + 1) (C_LR_Ls + 1) (C_1L_1R_1s^2 + L_1s + R_1)}{s (C_3C_LR_3s + C_3C_LR_Ls + C_3 + C_L) (C_1L_1R_1g_ms^2 + C_1L_1s^2 + L_1g_ms + R_1g_m + 1)}$$

10.866 INVALID-ORDER-866 $Z(s) = \left(L_1s + \frac{1}{C_1s}, L_2s + \frac{1}{C_2s}, \infty, \infty, \infty, L_Ls + \frac{1}{C_Ls} \right)$

$$H(s) = \frac{g_m (C_3R_3s + 1) (C_LL_Ls^2 + 1) (C_1L_1R_1s^2 + L_1s + R_1)}{s (C_3C_LL_Ls^2 + C_3C_LR_3s + C_3 + C_L) (C_1L_1R_1g_ms^2 + C_1L_1s^2 + L_1g_ms + R_1g_m + 1)}$$

10.867 INVALID-ORDER-867 $Z(s) = \left(L_1s + \frac{1}{C_1s}, L_2s + \frac{1}{C_2s}, \infty, \infty, \infty, \frac{L_Ls}{C_LL_Ls^2 + 1} \right)$

$$H(s) = \frac{L_Lg_ms (C_3R_3s + 1) (C_1L_1R_1s^2 + L_1s + R_1)}{(C_1L_1R_1g_ms^2 + C_1L_1s^2 + L_1g_ms + R_1g_m + 1) (C_3C_LL_LR_3s^3 + C_3L_Ls^2 + C_3R_3s + C_LL_Ls^2 + 1)}$$

10.868 INVALID-ORDER-868 $Z(s) = \left(L_1s + \frac{1}{C_1s}, L_2s + \frac{1}{C_2s}, \infty, \infty, \infty, L_Ls + R_L + \frac{1}{C_Ls} \right)$

$$H(s) = \frac{g_m (C_3R_3s + 1) (C_LL_Ls^2 + C_LR_Ls + 1) (C_1L_1R_1s^2 + L_1s + R_1)}{s (C_3C_LL_Ls^2 + C_3C_LR_3s + C_3C_LR_Ls + C_3 + C_L) (C_1L_1R_1g_ms^2 + C_1L_1s^2 + L_1g_ms + R_1g_m + 1)}$$

10.869 INVALID-ORDER-869 $Z(s) = \left(L_1s + \frac{1}{C_1s}, L_2s + \frac{1}{C_2s}, \infty, \infty, \infty, \frac{1}{C_Ls + \frac{1}{R_L} + \frac{1}{L_Ls}} \right)$

$$H(s) = \frac{L_LR_Lg_ms (C_3R_3s + 1) (C_1L_1R_1s^2 + L_1s + R_1)}{(C_1L_1R_1g_ms^2 + C_1L_1s^2 + L_1g_ms + R_1g_m + 1) (C_3C_LL_LR_3R_Ls^3 + C_3L_LR_3s^2 + C_3L_LR_Ls^2 + C_3R_3R_Ls + C_LL_LR_Ls^2 + L_Ls + R_L)}$$

10.870 INVALID-ORDER-870 $Z(s) = \left(L_1s + \frac{1}{C_1s}, L_2s + \frac{1}{C_2s}, \infty, \infty, \infty, \frac{L_Ls}{C_LL_Ls^2+1} + R_L \right)$

$$H(s) = \frac{g_m (C_3R_3s + 1) (C_1L_1R_1s^2 + L_1s + R_1) (C_LL_LR_Ls^2 + L_Ls + R_L)}{(C_1L_1R_1g_ms^2 + C_1L_1s^2 + L_1g_ms + R_1g_m + 1) (C_3C_LL_LR_3s^3 + C_3C_LL_LR_Ls^3 + C_3L_Ls^2 + C_3R_3s + C_3R_Ls + C_LL_Ls^2 + 1)}$$

10.871 INVALID-ORDER-871 $Z(s) = \left(L_1s + \frac{1}{C_1s}, L_2s + \frac{1}{C_2s}, \infty, \infty, \infty, \frac{R_L(L_Ls + \frac{1}{C_Ls})}{L_Ls + R_L + \frac{1}{C_Ls}} \right)$

$$H(s) = \frac{R_Lg_m (C_3R_3s + 1) (C_LL_Ls^2 + 1) (C_1L_1R_1s^2 + L_1s + R_1)}{(C_1L_1R_1g_ms^2 + C_1L_1s^2 + L_1g_ms + R_1g_m + 1) (C_3C_LL_LR_3s^3 + C_3C_LL_LR_Ls^3 + C_3C_LR_3R_Ls^2 + C_3R_3s + C_3R_Ls + C_LL_Ls^2 + C_LR_Ls + 1)}$$

10.872 INVALID-ORDER-872 $Z(s) = \left(L_1s + \frac{1}{C_1s}, L_2s + R_2 + \frac{1}{C_2s}, \infty, \infty, \infty, R_L \right)$

$$H(s) = \frac{R_Lg_m (C_3L_3s^2 + 1) (C_1L_1R_1s^2 + L_1s + R_1)}{(C_3L_3s^2 + C_3R_Ls + 1) (C_1L_1R_1g_ms^2 + C_1L_1s^2 + L_1g_ms + R_1g_m + 1)}$$

10.873 INVALID-ORDER-873 $Z(s) = \left(L_1s + \frac{1}{C_1s}, L_2s + R_2 + \frac{1}{C_2s}, \infty, \infty, \infty, \frac{1}{C_Ls} \right)$

$$H(s) = \frac{g_m (C_3L_3s^2 + 1) (C_1L_1R_1s^2 + L_1s + R_1)}{s (C_3C_LL_3s^2 + C_3 + C_L) (C_1L_1R_1g_ms^2 + C_1L_1s^2 + L_1g_ms + R_1g_m + 1)}$$

10.874 INVALID-ORDER-874 $Z(s) = \left(L_1s + \frac{1}{C_1s}, L_2s + R_2 + \frac{1}{C_2s}, \infty, \infty, \infty, \frac{R_L}{C_LR_Ls+1} \right)$

$$H(s) = \frac{R_Lg_m (C_3L_3s^2 + 1) (C_1L_1R_1s^2 + L_1s + R_1)}{(C_1L_1R_1g_ms^2 + C_1L_1s^2 + L_1g_ms + R_1g_m + 1) (C_3C_LL_3R_Ls^3 + C_3L_3s^2 + C_3R_Ls + C_LR_Ls + 1)}$$

10.875 INVALID-ORDER-875 $Z(s) = \left(L_1s + \frac{1}{C_1s}, L_2s + R_2 + \frac{1}{C_2s}, \infty, \infty, \infty, R_L + \frac{1}{C_Ls} \right)$

$$H(s) = \frac{g_m (C_3L_3s^2 + 1) (C_LR_Ls + 1) (C_1L_1R_1s^2 + L_1s + R_1)}{s (C_3C_LL_3s^2 + C_3C_LR_Ls + C_3 + C_L) (C_1L_1R_1g_ms^2 + C_1L_1s^2 + L_1g_ms + R_1g_m + 1)}$$

10.876 INVALID-ORDER-876 $Z(s) = \left(L_1s + \frac{1}{C_1s}, L_2s + R_2 + \frac{1}{C_2s}, \infty, \infty, \infty, L_Ls + \frac{1}{C_Ls} \right)$

$$H(s) = \frac{g_m (C_3L_3s^2 + 1) (C_LL_Ls^2 + 1) (C_1L_1R_1s^2 + L_1s + R_1)}{s (C_3C_LL_3s^2 + C_3C_LL_Ls^2 + C_3 + C_L) (C_1L_1R_1g_ms^2 + C_1L_1s^2 + L_1g_ms + R_1g_m + 1)}$$

10.877 INVALID-ORDER-877 $Z(s) = \left(L_1s + \frac{1}{C_1s}, L_2s + R_2 + \frac{1}{C_2s}, \infty, \infty, \infty, \frac{L_Ls}{C_LL_Ls^2 + 1} \right)$

$$H(s) = \frac{L_Lg_ms (C_3L_3s^2 + 1) (C_1L_1R_1s^2 + L_1s + R_1)}{(C_1L_1R_1g_ms^2 + C_1L_1s^2 + L_1g_ms + R_1g_m + 1) (C_3C_LL_3L_Ls^4 + C_3L_3s^2 + C_3L_Ls^2 + C_LL_Ls^2 + 1)}$$

10.878 INVALID-ORDER-878 $Z(s) = \left(L_1s + \frac{1}{C_1s}, L_2s + R_2 + \frac{1}{C_2s}, \infty, \infty, \infty, L_Ls + R_L + \frac{1}{C_Ls} \right)$

$$H(s) = \frac{g_m (C_3L_3s^2 + 1) (C_LL_Ls^2 + C_LR_Ls + 1) (C_1L_1R_1s^2 + L_1s + R_1)}{s (C_3C_LL_3s^2 + C_3C_LL_Ls^2 + C_3C_LR_Ls + C_3 + C_L) (C_1L_1R_1g_ms^2 + C_1L_1s^2 + L_1g_ms + R_1g_m + 1)}$$

10.879 INVALID-ORDER-879 $Z(s) = \left(L_1s + \frac{1}{C_1s}, L_2s + R_2 + \frac{1}{C_2s}, \infty, \infty, \infty, \frac{1}{C_Ls + \frac{1}{R_L} + \frac{1}{L_Ls}} \right)$

$$H(s) = \frac{L_LR_Lg_ms (C_3L_3s^2 + 1) (C_1L_1R_1s^2 + L_1s + R_1)}{(C_1L_1R_1g_ms^2 + C_1L_1s^2 + L_1g_ms + R_1g_m + 1) (C_3C_LL_3L_LR_Ls^4 + C_3L_3L_Ls^3 + C_3L_3R_Ls^2 + C_3L_LR_Ls^2 + C_LL_LR_Ls^2 + L_Ls + R_L)}$$

10.880 INVALID-ORDER-880 $Z(s) = \left(L_1s + \frac{1}{C_1s}, L_2s + R_2 + \frac{1}{C_2s}, \infty, \infty, \infty, \frac{L_Ls}{C_LL_Ls^2+1} + R_L \right)$

$$H(s) = \frac{g_m (C_3L_3s^2 + 1) (C_1L_1R_1s^2 + L_1s + R_1) (C_LL_LR_Ls^2 + L_Ls + R_L)}{(C_1L_1R_1g_ms^2 + C_1L_1s^2 + L_1g_ms + R_1g_m + 1) (C_3C_LL_3L_Ls^4 + C_3C_LL_LR_Ls^3 + C_3L_3s^2 + C_3L_Ls^2 + C_3R_Ls + C_LL_Ls^2 + 1)}$$

10.881 INVALID-ORDER-881 $Z(s) = \left(L_1s + \frac{1}{C_1s}, L_2s + R_2 + \frac{1}{C_2s}, \infty, \infty, \infty, \frac{R_L(L_Ls + \frac{1}{C_Ls})}{L_Ls + R_L + \frac{1}{C_Ls}} \right)$

$$H(s) = \frac{R_Lg_m (C_3L_3s^2 + 1) (C_LL_Ls^2 + 1) (C_1L_1R_1s^2 + L_1s + R_1)}{(C_1L_1R_1g_ms^2 + C_1L_1s^2 + L_1g_ms + R_1g_m + 1) (C_3C_LL_3L_Ls^4 + C_3C_LL_3R_Ls^3 + C_3C_LL_LR_Ls^3 + C_3L_3s^2 + C_3R_Ls + C_LL_Ls^2 + C_LR_Ls + 1)}$$

10.882 INVALID-ORDER-882 $Z(s) = \left(L_1s + \frac{1}{C_1s}, \frac{L_2s}{C_2L_2s^2+1} + R_2, \infty, \infty, \infty, R_L \right)$

$$H(s) = \frac{L_3R_Lg_ms (C_1L_1R_1s^2 + L_1s + R_1)}{(C_3L_3R_Ls^2 + L_3s + R_L) (C_1L_1R_1g_ms^2 + C_1L_1s^2 + L_1g_ms + R_1g_m + 1)}$$

10.883 INVALID-ORDER-883 $Z(s) = \left(L_1s + \frac{1}{C_1s}, \frac{L_2s}{C_2L_2s^2+1} + R_2, \infty, \infty, \infty, \frac{1}{C_Ls} \right)$

$$H(s) = \frac{L_3g_ms (C_1L_1R_1s^2 + L_1s + R_1)}{(C_3L_3s^2 + C_LL_3s^2 + 1) (C_1L_1R_1g_ms^2 + C_1L_1s^2 + L_1g_ms + R_1g_m + 1)}$$

10.884 INVALID-ORDER-884 $Z(s) = \left(L_1s + \frac{1}{C_1s}, \frac{L_2s}{C_2L_2s^2+1} + R_2, \infty, \infty, \infty, \frac{R_L}{C_LR_Ls+1} \right)$

$$H(s) = \frac{L_3R_Lg_ms (C_1L_1R_1s^2 + L_1s + R_1)}{(C_3L_3R_Ls^2 + C_LL_3R_Ls^2 + L_3s + R_L) (C_1L_1R_1g_ms^2 + C_1L_1s^2 + L_1g_ms + R_1g_m + 1)}$$

10.885 INVALID-ORDER-885 $Z(s) = \left(L_1s + \frac{1}{C_1s}, \frac{L_2s}{C_2L_2s^2+1} + R_2, \infty, \infty, \infty, R_L + \frac{1}{C_Ls} \right)$

$$H(s) = \frac{L_3g_ms(C_LR_Ls+1)(C_1L_1R_1s^2+L_1s+R_1)}{(C_1L_1R_1g_ms^2+C_1L_1s^2+L_1g_ms+R_1g_m+1)(C_3C_LL_3R_Ls^3+C_3L_3s^2+C_LL_3s^2+C_LR_Ls+1)}$$

10.886 INVALID-ORDER-886 $Z(s) = \left(L_1s + \frac{1}{C_1s}, \frac{L_2s}{C_2L_2s^2+1} + R_2, \infty, \infty, \infty, L_Ls + \frac{1}{C_Ls} \right)$

$$H(s) = \frac{L_3g_ms(C_LL_Ls^2+1)(C_1L_1R_1s^2+L_1s+R_1)}{(C_1L_1R_1g_ms^2+C_1L_1s^2+L_1g_ms+R_1g_m+1)(C_3C_LL_3L_Ls^4+C_3L_3s^2+C_LL_3s^2+C_LL_Ls^2+1)}$$

10.887 INVALID-ORDER-887 $Z(s) = \left(L_1s + \frac{1}{C_1s}, \frac{L_2s}{C_2L_2s^2+1} + R_2, \infty, \infty, \infty, \frac{L_Ls}{C_LL_Ls^2+1} \right)$

$$H(s) = \frac{L_3L_Lg_ms(C_1L_1R_1s^2+L_1s+R_1)}{(C_3L_3L_Ls^2+C_LL_3L_Ls^2+L_3+L_L)(C_1L_1R_1g_ms^2+C_1L_1s^2+L_1g_ms+R_1g_m+1)}$$

10.888 INVALID-ORDER-888 $Z(s) = \left(L_1s + \frac{1}{C_1s}, \frac{L_2s}{C_2L_2s^2+1} + R_2, \infty, \infty, \infty, L_Ls + R_L + \frac{1}{C_Ls} \right)$

$$H(s) = \frac{L_3g_ms(C_LL_Ls^2+C_LR_Ls+1)(C_1L_1R_1s^2+L_1s+R_1)}{(C_1L_1R_1g_ms^2+C_1L_1s^2+L_1g_ms+R_1g_m+1)(C_3C_LL_3L_Ls^4+C_3C_LL_3R_Ls^3+C_3L_3s^2+C_LL_3s^2+C_LL_Ls^2+C_LR_Ls+1)}$$

10.889 INVALID-ORDER-889 $Z(s) = \left(L_1s + \frac{1}{C_1s}, \frac{L_2s}{C_2L_2s^2+1} + R_2, \infty, \infty, \infty, \frac{1}{C_Ls+\frac{1}{R_L}+\frac{1}{L_Ls}} \right)$

$$H(s) = \frac{L_3L_LR_Lg_ms(C_1L_1R_1s^2+L_1s+R_1)}{(C_1L_1R_1g_ms^2+C_1L_1s^2+L_1g_ms+R_1g_m+1)(C_3L_3L_LR_Ls^2+C_LL_3L_LR_Ls^2+L_3L_Ls+L_3R_L+L_LR_L)}$$

10.890 INVALID-ORDER-890 $Z(s) = \left(L_1s + \frac{1}{C_1s}, \frac{L_2s}{C_2L_2s^2+1} + R_2, \infty, \infty, \infty, \frac{L_Ls}{C_LL_Ls^2+1} + R_L \right)$

$$H(s) = \frac{L_3g_ms (C_1L_1R_1s^2 + L_1s + R_1) (C_LL_LR_Ls^2 + L_Ls + R_L)}{(C_1L_1R_1g_ms^2 + C_1L_1s^2 + L_1g_ms + R_1g_m + 1) (C_3C_LL_3L_LR_Ls^4 + C_3L_3L_Ls^3 + C_3L_3R_Ls^2 + C_LL_3L_Ls^3 + C_LL_LR_Ls^2 + L_3s + L_Ls + R_L)}$$

10.891 INVALID-ORDER-891 $Z(s) = \left(L_1s + \frac{1}{C_1s}, \frac{L_2s}{C_2L_2s^2+1} + R_2, \infty, \infty, \infty, \frac{R_L(L_Ls + \frac{1}{C_Ls})}{L_Ls + R_L + \frac{1}{C_Ls}} \right)$

$$H(s) = \frac{L_3R_Lg_ms (C_LL_Ls^2 + 1) (C_1L_1R_1s^2 + L_1s + R_1)}{(C_1L_1R_1g_ms^2 + C_1L_1s^2 + L_1g_ms + R_1g_m + 1) (C_3C_LL_3L_LR_Ls^4 + C_3L_3R_Ls^2 + C_LL_3L_Ls^3 + C_LL_3R_Ls^2 + C_LL_LR_Ls^2 + L_3s + R_L)}$$

10.892 INVALID-ORDER-892 $Z(s) = \left(L_1s + \frac{1}{C_1s}, \frac{R_2(L_2s + \frac{1}{C_2s})}{L_2s + R_2 + \frac{1}{C_2s}}, \infty, \infty, \infty, R_L \right)$

$$H(s) = \frac{R_Lg_m (C_3L_3s^2 + C_3R_3s + 1) (C_1L_1R_1s^2 + L_1s + R_1)}{(C_3L_3s^2 + C_3R_3s + C_3R_Ls + 1) (C_1L_1R_1g_ms^2 + C_1L_1s^2 + L_1g_ms + R_1g_m + 1)}$$

10.893 INVALID-ORDER-893 $Z(s) = \left(L_1s + \frac{1}{C_1s}, \frac{R_2(L_2s + \frac{1}{C_2s})}{L_2s + R_2 + \frac{1}{C_2s}}, \infty, \infty, \infty, \frac{1}{C_Ls} \right)$

$$H(s) = \frac{g_m (C_3L_3s^2 + C_3R_3s + 1) (C_1L_1R_1s^2 + L_1s + R_1)}{s (C_3C_LL_3s^2 + C_3C_LL_3R_3s + C_3 + C_L) (C_1L_1R_1g_ms^2 + C_1L_1s^2 + L_1g_ms + R_1g_m + 1)}$$

10.894 INVALID-ORDER-894 $Z(s) = \left(L_1s + \frac{1}{C_1s}, \frac{R_2(L_2s + \frac{1}{C_2s})}{L_2s + R_2 + \frac{1}{C_2s}}, \infty, \infty, \infty, \frac{R_L}{C_LR_Ls+1} \right)$

$$H(s) = \frac{R_Lg_m (C_3L_3s^2 + C_3R_3s + 1) (C_1L_1R_1s^2 + L_1s + R_1)}{(C_1L_1R_1g_ms^2 + C_1L_1s^2 + L_1g_ms + R_1g_m + 1) (C_3C_LL_3R_Ls^3 + C_3C_LL_3R_3R_Ls^2 + C_3L_3s^2 + C_3R_3s + C_3R_Ls + C_LR_Ls + 1)}$$

$$10.895 \quad \text{INVALID-ORDER-895} \quad Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \frac{R_2 \left(L_2 s + \frac{1}{C_2 s} \right)}{L_2 s + R_2 + \frac{1}{C_2 s}}, \infty, \infty, \infty, R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{g_m (C_L R_L s + 1) (C_3 L_3 s^2 + C_3 R_3 s + 1) (C_1 L_1 R_1 s^2 + L_1 s + R_1)}{s (C_3 C_L L_3 s^2 + C_3 C_L R_3 s + C_3 C_L R_L s + C_3 + C_L) (C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + L_1 g_m s + R_1 g_m + 1)}$$

$$10.896 \quad \text{INVALID-ORDER-896} \quad Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \frac{R_2 \left(L_2 s + \frac{1}{C_2 s} \right)}{L_2 s + R_2 + \frac{1}{C_2 s}}, \infty, \infty, \infty, L_L s + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{g_m (C_L L_L s^2 + 1) (C_3 L_3 s^2 + C_3 R_3 s + 1) (C_1 L_1 R_1 s^2 + L_1 s + R_1)}{s (C_3 C_L L_3 s^2 + C_3 C_L L_L s^2 + C_3 C_L R_3 s + C_3 + C_L) (C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + L_1 g_m s + R_1 g_m + 1)}$$

$$10.897 \quad \text{INVALID-ORDER-897} \quad Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \frac{R_2 \left(L_2 s + \frac{1}{C_2 s} \right)}{L_2 s + R_2 + \frac{1}{C_2 s}}, \infty, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} \right)$$

$$H(s) = \frac{L_L g_m s (C_3 L_3 s^2 + C_3 R_3 s + 1) (C_1 L_1 R_1 s^2 + L_1 s + R_1)}{(C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + L_1 g_m s + R_1 g_m + 1) (C_3 C_L L_3 L_L s^4 + C_3 C_L L_L R_3 s^3 + C_3 L_3 s^2 + C_3 L_L s^2 + C_3 R_3 s + C_L L_L s^2 + 1)}$$

$$10.898 \quad \text{INVALID-ORDER-898} \quad Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \frac{R_2 \left(L_2 s + \frac{1}{C_2 s} \right)}{L_2 s + R_2 + \frac{1}{C_2 s}}, \infty, \infty, \infty, L_L s + R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{g_m (C_3 L_3 s^2 + C_3 R_3 s + 1) (C_L L_L s^2 + C_L R_L s + 1) (C_1 L_1 R_1 s^2 + L_1 s + R_1)}{s (C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + L_1 g_m s + R_1 g_m + 1) (C_3 C_L L_3 s^2 + C_3 C_L L_L s^2 + C_3 C_L R_3 s + C_3 C_L R_L s + C_3 + C_L)}$$

$$10.899 \quad \text{INVALID-ORDER-899} \quad Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \frac{R_2 \left(L_2 s + \frac{1}{C_2 s} \right)}{L_2 s + R_2 + \frac{1}{C_2 s}}, \infty, \infty, \infty, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$$

$$H(s) = \frac{L_L R_L g_m s (C_3 L_3 s^2 + C_3 R_3 s + 1) (C_1 L_1 R_1 s^2 + L_1 s + R_1)}{(C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + L_1 g_m s + R_1 g_m + 1) (C_3 C_L L_3 L_L R_L s^4 + C_3 C_L L_L R_3 R_L s^3 + C_3 L_3 L_L s^3 + C_3 L_3 R_L s^2 + C_3 L_L R_3 s^2 + C_3 L_L R_L s^2 + C_3 R_3 R_L s + C_L L_L R_L s^2 + L_L)}$$

$$10.900 \quad \text{INVALID-ORDER-900} \quad Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \frac{R_2 \left(L_2 s + \frac{1}{C_2 s} \right)}{L_2 s + R_2 + \frac{1}{C_2 s}}, \infty, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$$

$$H(s) = \frac{g_m (C_3 L_3 s^2 + C_3 R_3 s + 1) (C_1 L_1 R_1 s^2 + L_1 s + R_1) (C_L L_L R_L s^2 + L_L s + R_L)}{(C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + L_1 g_m s + R_1 g_m + 1) (C_3 C_L L_3 L_L s^4 + C_3 C_L L_L R_3 s^3 + C_3 C_L L_L R_L s^3 + C_3 L_3 s^2 + C_3 L_L s^2 + C_3 R_3 s + C_3 R_L s + C_L L_L s^2 + 1)}$$

$$10.901 \quad \text{INVALID-ORDER-901} \quad Z(s) = \left(L_1 s + \frac{1}{C_1 s}, \frac{R_2 \left(L_2 s + \frac{1}{C_2 s} \right)}{L_2 s + R_2 + \frac{1}{C_2 s}}, \infty, \infty, \infty, \frac{R_L \left(L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$$

$$H(s) = \frac{R_L g_m (C_L L_L s^2 + 1) (C_3 L_3 s^2 + C_3 R_3 s + 1) (C_1 L_1 R_1 s^2 + L_1 s + R_1)}{(C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + L_1 g_m s + R_1 g_m + 1) (C_3 C_L L_3 L_L s^4 + C_3 C_L L_3 R_L s^3 + C_3 C_L L_L R_3 s^3 + C_3 C_L L_L R_L s^3 + C_3 C_L R_3 R_L s^2 + C_3 L_3 s^2 + C_3 R_3 s + C_3 R_L s + C_L L_L s^2 + 1)}$$

$$10.902 \quad \text{INVALID-ORDER-902} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, R_2, \infty, \infty, \infty, R_L \right)$$

$$H(s) = \frac{L_3 R_3 R_L g_m s (C_1 L_1 R_1 s^2 + L_1 s + R_1)}{(C_3 L_3 R_3 R_L s^2 + L_3 R_3 s + L_3 R_L s + R_3 R_L) (C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + L_1 g_m s + R_1 g_m + 1)}$$

$$10.903 \quad \text{INVALID-ORDER-903} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, R_2, \infty, \infty, \infty, \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_3 R_3 g_m s (C_1 L_1 R_1 s^2 + L_1 s + R_1)}{(C_3 L_3 R_3 s^2 + C_L L_3 R_3 s^2 + L_3 s + R_3) (C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + L_1 g_m s + R_1 g_m + 1)}$$

$$10.904 \quad \text{INVALID-ORDER-904} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, R_2, \infty, \infty, \infty, \frac{R_L}{C_L R_L s + 1} \right)$$

$$H(s) = \frac{L_3 R_3 R_L g_m s (C_1 L_1 R_1 s^2 + L_1 s + R_1)}{(C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + L_1 g_m s + R_1 g_m + 1) (C_3 L_3 R_3 R_L s^2 + C_L L_3 R_3 R_L s^2 + L_3 R_3 s + L_3 R_L s + R_3 R_L)}$$

10.905 INVALID-ORDER-905 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, R_2, \infty, \infty, \infty, R_L + \frac{1}{C_L s} \right)$

$$H(s) = \frac{L_3 R_3 g_m s (C_L R_L s + 1) (C_1 L_1 R_1 s^2 + L_1 s + R_1)}{(C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + L_1 g_m s + R_1 g_m + 1) (C_3 C_L L_3 R_3 R_L s^3 + C_3 L_3 R_3 s^2 + C_L L_3 R_3 s^2 + C_L L_3 R_L s^2 + C_L R_3 R_L s + L_3 s + R_3)}$$

10.906 INVALID-ORDER-906 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, R_2, \infty, \infty, \infty, L_L s + \frac{1}{C_L s} \right)$

$$H(s) = \frac{L_3 R_3 g_m s (C_L L_L s^2 + 1) (C_1 L_1 R_1 s^2 + L_1 s + R_1)}{(C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + L_1 g_m s + R_1 g_m + 1) (C_3 C_L L_3 L_L R_3 s^4 + C_3 L_3 R_3 s^2 + C_L L_3 L_L s^3 + C_L L_3 R_3 s^2 + C_L L_L R_3 s^2 + L_3 s + R_3)}$$

10.907 INVALID-ORDER-907 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, R_2, \infty, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} \right)$

$$H(s) = \frac{L_3 L_L R_3 g_m s (C_1 L_1 R_1 s^2 + L_1 s + R_1)}{(C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + L_1 g_m s + R_1 g_m + 1) (C_3 L_3 L_L R_3 s^2 + C_L L_3 L_L R_3 s^2 + L_3 L_L s + L_3 R_3 + L_L R_3)}$$

10.908 INVALID-ORDER-908 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, R_2, \infty, \infty, \infty, L_L s + R_L + \frac{1}{C_L s} \right)$

$$H(s) = \frac{L_3 R_3 g_m s (C_L L_L s^2 + C_L R_L s + 1) (C_1 L_1 R_1 s^2 + L_1 s + R_1)}{(C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + L_1 g_m s + R_1 g_m + 1) (C_3 C_L L_3 L_L R_3 s^4 + C_3 C_L L_3 R_3 R_L s^3 + C_3 L_3 R_3 s^2 + C_L L_3 L_L s^3 + C_L L_3 R_3 s^2 + C_L L_3 R_L s^2 + C_L L_L R_3 s^2 + C_L R_3 R_L s + L_3 s)}$$

10.909 INVALID-ORDER-909 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, R_2, \infty, \infty, \infty, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$

$$H(s) = \frac{L_3 L_L R_3 R_L g_m s (C_1 L_1 R_1 s^2 + L_1 s + R_1)}{(C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + L_1 g_m s + R_1 g_m + 1) (C_3 L_3 L_L R_3 R_L s^2 + C_L L_3 L_L R_3 R_L s^2 + L_3 L_L R_3 s + L_3 L_L R_L s + L_3 R_3 R_L + L_L R_3 R_L)}$$

10.910 INVALID-ORDER-910 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, R_2, \infty, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$

$$H(s) = \frac{L_3 R_3 g_m s (C_1 L_1 R_1 s^2 + L_1 s + R_1) (C_L L_L R_L s^2 + L_L s + R_L)}{(C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + L_1 g_m s + R_1 g_m + 1) (C_3 C_L L_3 L_L R_3 R_L s^4 + C_3 L_3 L_L R_3 s^3 + C_3 L_3 R_3 R_L s^2 + C_L L_3 L_L R_3 s^3 + C_L L_3 L_L R_L s^3 + C_L L_L R_3 R_L s^2 + L_3 L_L s^2 + L_3 R_3 s + L_3 R_L s)}$$

10.911 INVALID-ORDER-911 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, R_2, \infty, \infty, \infty, \frac{R_L (L_L s + \frac{1}{C_L s})}{L_L s + R_L + \frac{1}{C_L s}} \right)$

$$H(s) = \frac{L_3 R_3 R_L g_m s (C_L L_L s^2 + 1) (C_1 L_1 R_1 s^2 + L_1 s + R_1)}{(C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + L_1 g_m s + R_1 g_m + 1) (C_3 C_L L_3 L_L R_3 R_L s^4 + C_3 L_3 R_3 R_L s^2 + C_L L_3 L_L R_3 s^3 + C_L L_3 L_L R_L s^3 + C_L L_3 R_3 R_L s^2 + C_L L_L R_3 R_L s^2 + L_3 R_3 s + L_3 R_L s)}$$

10.912 INVALID-ORDER-912 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \frac{1}{C_2 s}, \infty, \infty, \infty, R_L \right)$

$$H(s) = \frac{R_L g_m (C_1 L_1 R_1 s^2 + L_1 s + R_1) (C_3 L_3 R_3 s^2 + L_3 s + R_3)}{(C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + L_3 s + R_3 + R_L) (C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + L_1 g_m s + R_1 g_m + 1)}$$

10.913 INVALID-ORDER-913 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \frac{1}{C_2 s}, \infty, \infty, \infty, \frac{1}{C_L s} \right)$

$$H(s) = \frac{g_m (C_1 L_1 R_1 s^2 + L_1 s + R_1) (C_3 L_3 R_3 s^2 + L_3 s + R_3)}{(C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + L_1 g_m s + R_1 g_m + 1) (C_3 C_L L_3 R_3 s^3 + C_3 L_3 s^2 + C_L L_3 s^2 + C_L R_3 s + 1)}$$

10.914 INVALID-ORDER-914 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \frac{1}{C_2 s}, \infty, \infty, \infty, \frac{R_L}{C_L R_L s + 1} \right)$

$$H(s) = \frac{R_L g_m (C_1 L_1 R_1 s^2 + L_1 s + R_1) (C_3 L_3 R_3 s^2 + L_3 s + R_3)}{(C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + L_1 g_m s + R_1 g_m + 1) (C_3 C_L L_3 R_3 R_L s^3 + C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + C_L L_3 R_L s^2 + C_L R_3 R_L s + L_3 s + R_3 + R_L)}$$

10.915 INVALID-ORDER-915 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \frac{1}{C_2 s}, \infty, \infty, \infty, R_L + \frac{1}{C_L s} \right)$

$$H(s) = \frac{g_m (C_L R_L s + 1) (C_1 L_1 R_1 s^2 + L_1 s + R_1) (C_3 L_3 R_3 s^2 + L_3 s + R_3)}{(C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + L_1 g_m s + R_1 g_m + 1) (C_3 C_L L_3 R_3 s^3 + C_3 C_L L_3 R_L s^3 + C_3 L_3 s^2 + C_L L_3 s^2 + C_L R_3 s + C_L R_L s + 1)}$$

10.916 INVALID-ORDER-916 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \frac{1}{C_2 s}, \infty, \infty, \infty, L_L s + \frac{1}{C_L s} \right)$

$$H(s) = \frac{g_m (C_L L_L s^2 + 1) (C_1 L_1 R_1 s^2 + L_1 s + R_1) (C_3 L_3 R_3 s^2 + L_3 s + R_3)}{(C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + L_1 g_m s + R_1 g_m + 1) (C_3 C_L L_3 L_L s^4 + C_3 C_L L_3 R_3 s^3 + C_3 L_3 s^2 + C_L L_3 s^2 + C_L L_L s^2 + C_L R_3 s + 1)}$$

10.917 INVALID-ORDER-917 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \frac{1}{C_2 s}, \infty, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} \right)$

$$H(s) = \frac{L_L g_m s (C_1 L_1 R_1 s^2 + L_1 s + R_1) (C_3 L_3 R_3 s^2 + L_3 s + R_3)}{(C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + L_1 g_m s + R_1 g_m + 1) (C_3 C_L L_3 L_L R_3 s^4 + C_3 L_3 L_L s^3 + C_3 L_3 R_3 s^2 + C_L L_3 L_L s^3 + C_L L_L R_3 s^2 + L_3 s + L_L s + R_3)}$$

10.918 INVALID-ORDER-918 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \frac{1}{C_2 s}, \infty, \infty, \infty, L_L s + R_L + \frac{1}{C_L s} \right)$

$$H(s) = \frac{g_m (C_L L_L s^2 + C_L R_L s + 1) (C_1 L_1 R_1 s^2 + L_1 s + R_1) (C_3 L_3 R_3 s^2 + L_3 s + R_3)}{(C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + L_1 g_m s + R_1 g_m + 1) (C_3 C_L L_3 L_L s^4 + C_3 C_L L_3 R_3 s^3 + C_3 C_L L_3 R_L s^3 + C_3 L_3 s^2 + C_L L_3 s^2 + C_L L_L s^2 + C_L R_3 s + C_L R_L s + 1)}$$

10.919 INVALID-ORDER-919 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \frac{1}{C_2 s}, \infty, \infty, \infty, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$

$$H(s) = \frac{L_L R_L g_m s (C_1 L_1 R_1 s^2 + L_1 s + R_1) (C_3 L_3 R_3 s^2 + L_3 s + R_3)}{(C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + L_1 g_m s + R_1 g_m + 1) (C_3 C_L L_3 L_L R_3 R_L s^4 + C_3 L_3 L_L R_3 s^3 + C_3 L_3 L_L R_L s^3 + C_3 L_3 R_3 R_L s^2 + C_L L_3 L_L R_L s^3 + C_L L_L R_3 R_L s^2 + L_3 L_L s^2 + L_3 R_L s)}$$

$$\mathbf{10.920 \quad INVALID-ORDER-920} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \frac{1}{C_2 s}, \infty, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$$

$$H(s) = \frac{g_m (C_1 L_1 R_1 s^2 + L_1 s + R_1) (C_3 L_3 R_3 s^2 + L_3 s + R_3) (C_L L_L R_L s^2 + L_L s + R_L)}{(C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + L_1 g_m s + R_1 g_m + 1) (C_3 C_L L_3 L_L R_3 s^4 + C_3 C_L L_3 L_L R_L s^4 + C_3 L_3 L_L s^3 + C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + C_L L_3 L_L s^3 + C_L L_L R_3 s^2 + C_L L_L R_L s^2 + L_3 s^2 + L_L s^2 + R_3 s^2 + R_L s^2)}$$

$$\mathbf{10.921 \quad INVALID-ORDER-921} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \frac{1}{C_2 s}, \infty, \infty, \infty, \frac{R_L (L_L s + \frac{1}{C_L s})}{L_L s + R_L + \frac{1}{C_L s}} \right)$$

$$H(s) = \frac{R_L g_m (C_L L_L s^2 + 1) (C_1 L_1 R_1 s^2 + L_1 s + R_1) (C_3 L_3 R_3 s^2 + L_3 s + R_3)}{(C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + L_1 g_m s + R_1 g_m + 1) (C_3 C_L L_3 L_L R_3 s^4 + C_3 C_L L_3 L_L R_L s^4 + C_3 C_L L_3 R_3 R_L s^3 + C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + C_L L_3 L_L s^3 + C_L L_3 R_L s^2 + C_L L_L R_3 s^2 + C_L L_L R_3 s^2)}$$

$$\mathbf{10.922 \quad INVALID-ORDER-922} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \frac{R_2}{C_2 R_2 s + 1}, \infty, \infty, \infty, R_L \right)$$

$$H(s) = \frac{R_3 R_L g_m (C_3 L_3 s^2 + 1) (C_1 L_1 R_1 s^2 + L_1 s + R_1)}{(C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + C_3 R_3 R_L s + R_3 + R_L) (C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + L_1 g_m s + R_1 g_m + 1)}$$

$$\mathbf{10.923 \quad INVALID-ORDER-923} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \frac{R_2}{C_2 R_2 s + 1}, \infty, \infty, \infty, \frac{1}{C_L s} \right)$$

$$H(s) = \frac{R_3 g_m (C_3 L_3 s^2 + 1) (C_1 L_1 R_1 s^2 + L_1 s + R_1)}{(C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + L_1 g_m s + R_1 g_m + 1) (C_3 C_L L_3 R_3 s^3 + C_3 L_3 s^2 + C_3 R_3 s + C_L R_3 s + 1)}$$

$$\mathbf{10.924 \quad INVALID-ORDER-924} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \frac{R_2}{C_2 R_2 s + 1}, \infty, \infty, \infty, \frac{R_L}{C_L R_L s + 1} \right)$$

$$H(s) = \frac{R_3 R_L g_m (C_3 L_3 s^2 + 1) (C_1 L_1 R_1 s^2 + L_1 s + R_1)}{(C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + L_1 g_m s + R_1 g_m + 1) (C_3 C_L L_3 R_3 R_L s^3 + C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + C_3 R_3 R_L s + C_L R_3 R_L s + R_3 + R_L)}$$

$$10.925 \quad \text{INVALID-ORDER-925} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \frac{R_2}{C_2 R_2 s + 1}, \infty, \infty, \infty, R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{R_3 g_m (C_3 L_3 s^2 + 1) (C_L R_L s + 1) (C_1 L_1 R_1 s^2 + L_1 s + R_1)}{(C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + L_1 g_m s + R_1 g_m + 1) (C_3 C_L L_3 R_3 s^3 + C_3 C_L L_3 R_L s^3 + C_3 C_L R_3 R_L s^2 + C_3 L_3 s^2 + C_3 R_3 s + C_L R_3 s + C_L R_L s + 1)}$$

$$10.926 \quad \text{INVALID-ORDER-926} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \frac{R_2}{C_2 R_2 s + 1}, \infty, \infty, \infty, L_L s + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{R_3 g_m (C_3 L_3 s^2 + 1) (C_L L_L s^2 + 1) (C_1 L_1 R_1 s^2 + L_1 s + R_1)}{(C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + L_1 g_m s + R_1 g_m + 1) (C_3 C_L L_3 L_L s^4 + C_3 C_L L_3 R_3 s^3 + C_3 C_L L_L R_3 s^3 + C_3 L_3 s^2 + C_3 R_3 s + C_L L_L s^2 + C_L R_3 s + 1)}$$

$$10.927 \quad \text{INVALID-ORDER-927} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \frac{R_2}{C_2 R_2 s + 1}, \infty, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} \right)$$

$$H(s) = \frac{L_L R_3 g_m s (C_3 L_3 s^2 + 1) (C_1 L_1 R_1 s^2 + L_1 s + R_1)}{(C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + L_1 g_m s + R_1 g_m + 1) (C_3 C_L L_3 L_L R_3 s^4 + C_3 L_3 L_L s^3 + C_3 L_3 R_3 s^2 + C_3 L_L R_3 s^2 + C_L L_L R_3 s^2 + L_L s + R_3)}$$

$$10.928 \quad \text{INVALID-ORDER-928} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \frac{R_2}{C_2 R_2 s + 1}, \infty, \infty, \infty, L_L s + R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{R_3 g_m (C_3 L_3 s^2 + 1) (C_L L_L s^2 + C_L R_L s + 1) (C_1 L_1 R_1 s^2 + L_1 s + R_1)}{(C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + L_1 g_m s + R_1 g_m + 1) (C_3 C_L L_3 L_L s^4 + C_3 C_L L_3 R_3 s^3 + C_3 C_L L_3 R_L s^3 + C_3 C_L L_L R_3 s^3 + C_3 C_L R_3 R_L s^2 + C_3 L_3 s^2 + C_3 R_3 s + C_L L_L s^2 + C_L R_3 s + 1)}$$

$$10.929 \quad \text{INVALID-ORDER-929} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \frac{R_2}{C_2 R_2 s + 1}, \infty, \infty, \infty, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$$

$$H(s) = \frac{L_L R_3 R_L g_m s (C_3 L_3 s^2 + 1) (C_1 L_1 R_1 s^2 + L_1 s + R_1)}{(C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + L_1 g_m s + R_1 g_m + 1) (C_3 C_L L_3 L_L R_3 R_L s^4 + C_3 L_3 L_L R_3 s^3 + C_3 L_3 L_L R_L s^3 + C_3 L_3 R_3 R_L s^2 + C_3 L_L R_3 R_L s^2 + C_L L_L R_3 R_L s^2 + L_L R_3 s + L_L R_L s + 1)}$$

10.930 INVALID-ORDER-930 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \frac{R_2}{C_2 R_2 s + 1}, \infty, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$

$$H(s) = \frac{R_3 g_m (C_3 L_3 s^2 + 1) (C_1 L_1 R_1 s^2 + L_1 s + R_1) (C_L L_L R_L s^2 + L_L s + R_L)}{(C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + L_1 g_m s + R_1 g_m + 1) (C_3 C_L L_3 L_L R_3 s^4 + C_3 C_L L_3 L_L R_L s^4 + C_3 C_L L_L R_3 R_L s^3 + C_3 L_3 L_L s^3 + C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + C_3 L_L R_3 s^2 + C_3 R_3 R_L s + C_L L_L R_3 s^2 + C_L L_L R_L s + C_L R_3 s + C_L R_L)}$$

10.931 INVALID-ORDER-931 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \frac{R_2}{C_2 R_2 s + 1}, \infty, \infty, \infty, \frac{R_L (L_L s + \frac{1}{C_L s})}{L_L s + R_L + \frac{1}{C_L s}} \right)$

$$H(s) = \frac{R_3 R_L g_m (C_3 L_3 s^2 + 1) (C_L L_L s^2 + 1) (C_1 L_1 R_1 s^2 + L_1 s + R_1)}{(C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + L_1 g_m s + R_1 g_m + 1) (C_3 C_L L_3 L_L R_3 s^4 + C_3 C_L L_3 L_L R_L s^4 + C_3 C_L L_3 R_3 R_L s^3 + C_3 C_L L_L R_3 R_L s^3 + C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + C_3 R_3 R_L s + C_L L_L R_3 s^2 + C_L L_L R_L s + C_L R_3 s + C_L R_L)}$$

10.932 INVALID-ORDER-932 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, R_2 + \frac{1}{C_2 s}, \infty, \infty, \infty, \frac{1}{C_L s} \right)$

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

10.933 INVALID-ORDER-933 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, R_2 + \frac{1}{C_2 s}, \infty, \infty, \infty, \frac{R_L}{C_L R_L s + 1} \right)$

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

10.934 INVALID-ORDER-934 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, R_2 + \frac{1}{C_2 s}, \infty, \infty, \infty, R_L + \frac{1}{C_L s} \right)$

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

10.935 INVALID-ORDER-935 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, R_2 + \frac{1}{C_2 s}, \infty, \infty, \infty, L_L s + \frac{1}{C_L s} \right)$

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

10.936 INVALID-ORDER-936 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, R_2 + \frac{1}{C_2 s}, \infty, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} \right)$

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

10.937 INVALID-ORDER-937 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, R_2 + \frac{1}{C_2 s}, \infty, \infty, \infty, L_L s + R_L + \frac{1}{C_L s} \right)$

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

10.938 INVALID-ORDER-938 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, R_2 + \frac{1}{C_2 s}, \infty, \infty, \infty, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$

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

10.939 INVALID-ORDER-939 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, R_2 + \frac{1}{C_2 s}, \infty, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$

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

10.940 INVALID-ORDER-940 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, R_2 + \frac{1}{C_2 s}, \infty, \infty, \infty, \frac{R_L \left(L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$

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

10.941 INVALID-ORDER-941 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, L_2 s + \frac{1}{C_2 s}, \infty, \infty, \infty, R_L \right)$

$$H(s) = \frac{R_1 R_L g_m (C_1 L_1 s^2 + 1)}{(C_3 R_L s + 1) (C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + C_1 R_1 s + R_1 g_m + 1)}$$

10.942 INVALID-ORDER-942 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, L_2 s + \frac{1}{C_2 s}, \infty, \infty, \infty, \frac{1}{C_L s} \right)$

$$H(s) = \frac{R_1 g_m (C_1 L_1 s^2 + 1)}{s (C_3 + C_L) (C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + C_1 R_1 s + R_1 g_m + 1)}$$

10.943 INVALID-ORDER-943 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, L_2 s + \frac{1}{C_2 s}, \infty, \infty, \infty, \frac{R_L}{C_L R_L s + 1} \right)$

$$H(s) = \frac{R_1 R_L g_m (C_1 L_1 s^2 + 1)}{(C_3 R_L s + C_L R_L s + 1) (C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + C_1 R_1 s + R_1 g_m + 1)}$$

10.944 INVALID-ORDER-944 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, L_2 s + \frac{1}{C_2 s}, \infty, \infty, \infty, R_L + \frac{1}{C_L s} \right)$

$$H(s) = \frac{R_1 g_m (C_1 L_1 s^2 + 1) (C_L R_L s + 1)}{s (C_3 C_L R_L s + C_3 + C_L) (C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + C_1 R_1 s + R_1 g_m + 1)}$$

10.945 INVALID-ORDER-945 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, L_2 s + \frac{1}{C_2 s}, \infty, \infty, \infty, L_L s + \frac{1}{C_L s} \right)$

$$H(s) = \frac{R_1 g_m (C_1 L_1 s^2 + 1) (C_L L_L s^2 + 1)}{s (C_3 C_L L_L s^2 + C_3 + C_L) (C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + C_1 R_1 s + R_1 g_m + 1)}$$

10.946 INVALID-ORDER-946 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, L_2 s + \frac{1}{C_2 s}, \infty, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} \right)$

$$H(s) = \frac{L_L R_1 g_m s (C_1 L_1 s^2 + 1)}{(C_3 L_L s^2 + C_L L_L s^2 + 1) (C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + C_1 R_1 s + R_1 g_m + 1)}$$

10.947 INVALID-ORDER-947 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, L_2 s + \frac{1}{C_2 s}, \infty, \infty, \infty, L_L s + R_L + \frac{1}{C_L s} \right)$

$$H(s) = \frac{R_1 g_m (C_1 L_1 s^2 + 1) (C_L L_L s^2 + C_L R_L s + 1)}{s (C_3 C_L L_L s^2 + C_3 C_L R_L s + C_3 + C_L) (C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + C_1 R_1 s + R_1 g_m + 1)}$$

10.948 INVALID-ORDER-948 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, L_2 s + \frac{1}{C_2 s}, \infty, \infty, \infty, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$

$$H(s) = \frac{L_L R_1 R_L g_m s (C_1 L_1 s^2 + 1)}{(C_3 L_L R_L s^2 + C_L L_L R_L s^2 + L_L s + R_L) (C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + C_1 R_1 s + R_1 g_m + 1)}$$

10.949 INVALID-ORDER-949 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, L_2 s + \frac{1}{C_2 s}, \infty, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$

$$H(s) = \frac{R_1 g_m (C_1 L_1 s^2 + 1) (C_L L_L R_L s^2 + L_L s + R_L)}{(C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + C_1 R_1 s + R_1 g_m + 1) (C_3 C_L L_L R_L s^3 + C_3 L_L s^2 + C_3 R_L s + C_L L_L s^2 + 1)}$$

10.950 INVALID-ORDER-950 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, L_2 s + \frac{1}{C_2 s}, \infty, \infty, \infty, \frac{R_L \left(L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$

$$H(s) = \frac{R_1 R_L g_m (C_1 L_1 s^2 + 1) (C_L L_L s^2 + 1)}{(C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + C_1 R_1 s + R_1 g_m + 1) (C_3 C_L L_L R_L s^3 + C_3 R_L s + C_L L_L s^2 + C_L R_L s + 1)}$$

10.951 INVALID-ORDER-951 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, L_2 s + R_2 + \frac{1}{C_2 s}, \infty, \infty, \infty, R_L \right)$

$$H(s) = \frac{R_1 R_3 R_L g_m (C_1 L_1 s^2 + 1)}{(C_3 R_3 R_L s + R_3 + R_L) (C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + C_1 R_1 s + R_1 g_m + 1)}$$

10.952 INVALID-ORDER-952 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, L_2 s + R_2 + \frac{1}{C_2 s}, \infty, \infty, \infty, \frac{1}{C_L s} \right)$

$$H(s) = \frac{R_1 R_3 g_m (C_1 L_1 s^2 + 1)}{(C_3 R_3 s + C_L R_3 s + 1) (C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + C_1 R_1 s + R_1 g_m + 1)}$$

10.953 INVALID-ORDER-953 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, L_2 s + R_2 + \frac{1}{C_2 s}, \infty, \infty, \infty, \frac{R_L}{C_L R_L s + 1} \right)$

$$H(s) = \frac{R_1 R_3 R_L g_m (C_1 L_1 s^2 + 1)}{(C_3 R_3 R_L s + C_L R_3 R_L s + R_3 + R_L) (C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + C_1 R_1 s + R_1 g_m + 1)}$$

10.954 INVALID-ORDER-954 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, L_2 s + R_2 + \frac{1}{C_2 s}, \infty, \infty, \infty, R_L + \frac{1}{C_L s} \right)$

$$H(s) = \frac{R_1 R_3 g_m (C_1 L_1 s^2 + 1) (C_L R_L s + 1)}{(C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + C_1 R_1 s + R_1 g_m + 1) (C_3 C_L R_3 R_L s^2 + C_3 R_3 s + C_L R_3 s + C_L R_L s + 1)}$$

10.955 INVALID-ORDER-955 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, L_2 s + R_2 + \frac{1}{C_2 s}, \infty, \infty, \infty, L_L s + \frac{1}{C_L s} \right)$

$$H(s) = \frac{R_1 R_3 g_m (C_1 L_1 s^2 + 1) (C_L L_L s^2 + 1)}{(C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + C_1 R_1 s + R_1 g_m + 1) (C_3 C_L L_L R_3 s^3 + C_3 R_3 s + C_L L_L s^2 + C_L R_3 s + 1)}$$

10.956 INVALID-ORDER-956 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, L_2 s + R_2 + \frac{1}{C_2 s}, \infty, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} \right)$

$$H(s) = \frac{L_L R_1 R_3 g_m s (C_1 L_1 s^2 + 1)}{(C_3 L_L R_3 s^2 + C_L L_L R_3 s^2 + L_L s + R_3) (C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + C_1 R_1 s + R_1 g_m + 1)}$$

10.957 INVALID-ORDER-957 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, L_2 s + R_2 + \frac{1}{C_2 s}, \infty, \infty, \infty, L_L s + R_L + \frac{1}{C_L s} \right)$

$$H(s) = \frac{R_1 R_3 g_m (C_1 L_1 s^2 + 1) (C_L L_L s^2 + C_L R_L s + 1)}{(C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + C_1 R_1 s + R_1 g_m + 1) (C_3 C_L L_L R_3 s^3 + C_3 C_L R_3 R_L s^2 + C_3 R_3 s + C_L L_L s^2 + C_L R_3 s + C_L R_L s + 1)}$$

10.958 INVALID-ORDER-958 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, L_2 s + R_2 + \frac{1}{C_2 s}, \infty, \infty, \infty, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$

$$H(s) = \frac{L_L R_1 R_3 R_L g_m s (C_1 L_1 s^2 + 1)}{(C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + C_1 R_1 s + R_1 g_m + 1) (C_3 L_L R_3 R_L s^2 + C_L L_L R_3 R_L s^2 + L_L R_3 s + L_L R_L s + R_3 R_L)}$$

10.959 INVALID-ORDER-959 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, L_2 s + R_2 + \frac{1}{C_2 s}, \infty, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$

$$H(s) = \frac{R_1 R_3 g_m (C_1 L_1 s^2 + 1) (C_L L_L R_L s^2 + L_L s + R_L)}{(C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + C_1 R_1 s + R_1 g_m + 1) (C_3 C_L L_L R_3 R_L s^3 + C_3 L_L R_3 s^2 + C_3 R_3 R_L s + C_L L_L R_3 s^2 + C_L L_L R_L s^2 + L_L s + R_3 + R_L)}$$

10.960 INVALID-ORDER-960 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, L_2 s + R_2 + \frac{1}{C_2 s}, \infty, \infty, \infty, \frac{R_L \left(L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$

$$H(s) = \frac{R_1 R_3 R_L g_m (C_1 L_1 s^2 + 1) (C_L L_L s^2 + 1)}{(C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + C_1 R_1 s + R_1 g_m + 1) (C_3 C_L L_L R_3 R_L s^3 + C_3 R_3 R_L s + C_L L_L R_3 s^2 + C_L L_L R_L s^2 + C_L R_3 R_L s + R_3 + R_L)}$$

10.961 INVALID-ORDER-961 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \frac{L_2 s}{C_2 L_2 s^2 + 1} + R_2, \infty, \infty, \infty, R_L \right)$

$$H(s) = \frac{R_1 R_L g_m (C_1 L_1 s^2 + 1) (C_3 R_3 s + 1)}{(C_3 R_3 s + C_3 R_L s + 1) (C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + C_1 R_1 s + R_1 g_m + 1)}$$

10.962 INVALID-ORDER-962 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \frac{L_2 s}{C_2 L_2 s^2 + 1} + R_2, \infty, \infty, \infty, \frac{1}{C_L s} \right)$

$$H(s) = \frac{R_1 g_m (C_1 L_1 s^2 + 1) (C_3 R_3 s + 1)}{s (C_3 C_L R_3 s + C_3 + C_L) (C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + C_1 R_1 s + R_1 g_m + 1)}$$

10.963 INVALID-ORDER-963 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \frac{L_2 s}{C_2 L_2 s^2 + 1} + R_2, \infty, \infty, \infty, \frac{R_L}{C_L R_L s + 1} \right)$

$$H(s) = \frac{R_1 R_L g_m (C_1 L_1 s^2 + 1) (C_3 R_3 s + 1)}{(C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + C_1 R_1 s + R_1 g_m + 1) (C_3 C_L R_3 R_L s^2 + C_3 R_3 s + C_3 R_L s + C_L R_L s + 1)}$$

10.964 INVALID-ORDER-964 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \frac{L_2 s}{C_2 L_2 s^2 + 1} + R_2, \infty, \infty, \infty, R_L + \frac{1}{C_L s} \right)$

$$H(s) = \frac{R_1 g_m (C_1 L_1 s^2 + 1) (C_3 R_3 s + 1) (C_L R_L s + 1)}{s (C_3 C_L R_3 s + C_3 C_L R_L s + C_3 + C_L) (C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + C_1 R_1 s + R_1 g_m + 1)}$$

10.965 INVALID-ORDER-965 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \frac{L_2 s}{C_2 L_2 s^2 + 1} + R_2, \infty, \infty, \infty, L_L s + \frac{1}{C_L s} \right)$

$$H(s) = \frac{R_1 g_m (C_1 L_1 s^2 + 1) (C_3 R_3 s + 1) (C_L L_L s^2 + 1)}{s (C_3 C_L L_L s^2 + C_3 C_L R_3 s + C_3 + C_L) (C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + C_1 R_1 s + R_1 g_m + 1)}$$

10.966 INVALID-ORDER-966 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \frac{L_2 s}{C_2 L_2 s^2 + 1} + R_2, \infty, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} \right)$

$$H(s) = \frac{L_L R_1 g_m s (C_1 L_1 s^2 + 1) (C_3 R_3 s + 1)}{(C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + C_1 R_1 s + R_1 g_m + 1) (C_3 C_L L_L R_3 s^3 + C_3 L_L s^2 + C_3 R_3 s + C_L L_L s^2 + 1)}$$

10.967 INVALID-ORDER-967 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \frac{L_2 s}{C_2 L_2 s^2 + 1} + R_2, \infty, \infty, \infty, L_L s + R_L + \frac{1}{C_L s} \right)$

$$H(s) = \frac{R_1 g_m (C_1 L_1 s^2 + 1) (C_3 R_3 s + 1) (C_L L_L s^2 + C_L R_L s + 1)}{s (C_3 C_L L_L s^2 + C_3 C_L R_3 s + C_3 C_L R_L s + C_3 + C_L) (C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + C_1 R_1 s + R_1 g_m + 1)}$$

10.968 INVALID-ORDER-968 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \frac{L_2 s}{C_2 L_2 s^2 + 1} + R_2, \infty, \infty, \infty, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$

$$H(s) = \frac{L_L R_1 R_L g_m s (C_1 L_1 s^2 + 1) (C_3 R_3 s + 1)}{(C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + C_1 R_1 s + R_1 g_m + 1) (C_3 C_L L_L R_3 R_L s^3 + C_3 L_L R_3 s^2 + C_3 L_L R_L s^2 + C_3 R_3 R_L s + C_L L_L R_L s^2 + L_L s + R_L)}$$

10.969 INVALID-ORDER-969 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \frac{L_2 s}{C_2 L_2 s^2 + 1} + R_2, \infty, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$

$$H(s) = \frac{R_1 g_m (C_1 L_1 s^2 + 1) (C_3 R_3 s + 1) (C_L L_L R_L s^2 + L_L s + R_L)}{(C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + C_1 R_1 s + R_1 g_m + 1) (C_3 C_L L_L R_3 s^3 + C_3 C_L L_L R_L s^3 + C_3 L_L s^2 + C_3 R_3 s + C_3 R_L s + C_L L_L s^2 + 1)}$$

$$10.970 \quad \text{INVALID-ORDER-970} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \frac{L_2 s}{C_2 L_2 s^2 + 1} + R_2, \infty, \infty, \infty, \frac{R_L \left(L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$$

$$H(s) = \frac{R_1 R_L g_m (C_1 L_1 s^2 + 1) (C_3 R_3 s + 1) (C_L L_L s^2 + 1)}{(C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + C_1 R_1 s + R_1 g_m + 1) (C_3 C_L L_L R_3 s^3 + C_3 C_L L_L R_L s^3 + C_3 C_L R_3 R_L s^2 + C_3 R_3 s + C_3 R_L s + C_L L_L s^2 + C_L R_L s + 1)}$$

$$10.971 \quad \text{INVALID-ORDER-971} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \frac{R_2 \left(L_2 s + \frac{1}{C_2 s} \right)}{L_2 s + R_2 + \frac{1}{C_2 s}}, \infty, \infty, \infty, R_L \right)$$

$$H(s) = \frac{R_1 R_L g_m (C_1 L_1 s^2 + 1) (C_3 L_3 s^2 + 1)}{(C_3 L_3 s^2 + C_3 R_L s + 1) (C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + C_1 R_1 s + R_1 g_m + 1)}$$

$$10.972 \quad \text{INVALID-ORDER-972} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \frac{R_2 \left(L_2 s + \frac{1}{C_2 s} \right)}{L_2 s + R_2 + \frac{1}{C_2 s}}, \infty, \infty, \infty, \frac{1}{C_L s} \right)$$

$$H(s) = \frac{R_1 g_m (C_1 L_1 s^2 + 1) (C_3 L_3 s^2 + 1)}{s (C_3 C_L L_3 s^2 + C_3 + C_L) (C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + C_1 R_1 s + R_1 g_m + 1)}$$

$$10.973 \quad \text{INVALID-ORDER-973} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \frac{R_2 \left(L_2 s + \frac{1}{C_2 s} \right)}{L_2 s + R_2 + \frac{1}{C_2 s}}, \infty, \infty, \infty, \frac{R_L}{C_L R_L s + 1} \right)$$

$$H(s) = \frac{R_1 R_L g_m (C_1 L_1 s^2 + 1) (C_3 L_3 s^2 + 1)}{(C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + C_1 R_1 s + R_1 g_m + 1) (C_3 C_L L_3 R_L s^3 + C_3 L_3 s^2 + C_3 R_L s + C_L R_L s + 1)}$$

$$10.974 \quad \text{INVALID-ORDER-974} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \frac{R_2 \left(L_2 s + \frac{1}{C_2 s} \right)}{L_2 s + R_2 + \frac{1}{C_2 s}}, \infty, \infty, \infty, R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{R_1 g_m (C_1 L_1 s^2 + 1) (C_3 L_3 s^2 + 1) (C_L R_L s + 1)}{s (C_3 C_L L_3 s^2 + C_3 C_L R_L s + C_3 + C_L) (C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + C_1 R_1 s + R_1 g_m + 1)}$$

10.975 INVALID-ORDER-975 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \frac{R_2 \left(L_2 s + \frac{1}{C_2 s} \right)}{L_2 s + R_2 + \frac{1}{C_2 s}}, \infty, \infty, \infty, L_L s + \frac{1}{C_L s} \right)$

$$H(s) = \frac{R_1 g_m (C_1 L_1 s^2 + 1) (C_3 L_3 s^2 + 1) (C_L L_L s^2 + 1)}{s (C_3 C_L L_3 s^2 + C_3 C_L L_L s^2 + C_3 + C_L) (C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + C_1 R_1 s + R_1 g_m + 1)}$$

10.976 INVALID-ORDER-976 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \frac{R_2 \left(L_2 s + \frac{1}{C_2 s} \right)}{L_2 s + R_2 + \frac{1}{C_2 s}}, \infty, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} \right)$

$$H(s) = \frac{L_L R_1 g_m s (C_1 L_1 s^2 + 1) (C_3 L_3 s^2 + 1)}{(C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + C_1 R_1 s + R_1 g_m + 1) (C_3 C_L L_3 L_L s^4 + C_3 L_3 s^2 + C_3 L_L s^2 + C_L L_L s^2 + 1)}$$

10.977 INVALID-ORDER-977 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \frac{R_2 \left(L_2 s + \frac{1}{C_2 s} \right)}{L_2 s + R_2 + \frac{1}{C_2 s}}, \infty, \infty, \infty, L_L s + R_L + \frac{1}{C_L s} \right)$

$$H(s) = \frac{R_1 g_m (C_1 L_1 s^2 + 1) (C_3 L_3 s^2 + 1) (C_L L_L s^2 + C_L R_L s + 1)}{s (C_3 C_L L_3 s^2 + C_3 C_L L_L s^2 + C_3 C_L R_L s + C_3 + C_L) (C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + C_1 R_1 s + R_1 g_m + 1)}$$

10.978 INVALID-ORDER-978 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \frac{R_2 \left(L_2 s + \frac{1}{C_2 s} \right)}{L_2 s + R_2 + \frac{1}{C_2 s}}, \infty, \infty, \infty, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$

$$H(s) = \frac{L_L R_1 R_L g_m s (C_1 L_1 s^2 + 1) (C_3 L_3 s^2 + 1)}{(C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + C_1 R_1 s + R_1 g_m + 1) (C_3 C_L L_3 L_L R_L s^4 + C_3 L_3 L_L s^3 + C_3 L_3 R_L s^2 + C_3 L_L R_L s^2 + C_L L_L R_L s^2 + L_L s + R_L)}$$

10.979 INVALID-ORDER-979 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \frac{R_2 \left(L_2 s + \frac{1}{C_2 s} \right)}{L_2 s + R_2 + \frac{1}{C_2 s}}, \infty, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$

$$H(s) = \frac{R_1 g_m (C_1 L_1 s^2 + 1) (C_3 L_3 s^2 + 1) (C_L L_L R_L s^2 + L_L s + R_L)}{(C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + C_1 R_1 s + R_1 g_m + 1) (C_3 C_L L_3 L_L s^4 + C_3 C_L L_L R_L s^3 + C_3 L_3 s^2 + C_3 L_L s^2 + C_3 R_L s + C_L L_L s^2 + 1)}$$

$$10.980 \quad \text{INVALID-ORDER-980} \quad Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2 + 1}, \frac{R_2 \left(L_2 s + \frac{1}{C_2 s} \right)}{L_2 s + R_2 + \frac{1}{C_2 s}}, \infty, \infty, \infty, \frac{R_L \left(L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$$

$$H(s) = \frac{R_1 R_L g_m (C_1 L_1 s^2 + 1) (C_3 L_3 s^2 + 1) (C_L L_L s^2 + 1)}{(C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + C_1 R_1 s + R_1 g_m + 1) (C_3 C_L L_3 L_L s^4 + C_3 C_L L_3 R_L s^3 + C_3 C_L L_L R_L s^3 + C_3 L_3 s^2 + C_3 R_L s + C_L L_L s^2 + C_L R_L s + 1)}$$

$$10.981 \quad \text{INVALID-ORDER-981} \quad Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s}, R_2, \infty, \infty, \infty, R_L \right)$$

$$H(s) = \frac{L_3 R_1 R_L g_m s (C_1 L_1 s^2 + 1)}{(C_3 L_3 R_L s^2 + L_3 s + R_L) (C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + C_1 R_1 s + R_1 g_m + 1)}$$

$$10.982 \quad \text{INVALID-ORDER-982} \quad Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s}, R_2, \infty, \infty, \infty, \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_3 R_1 g_m s (C_1 L_1 s^2 + 1)}{(C_3 L_3 s^2 + C_L L_3 s^2 + 1) (C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + C_1 R_1 s + R_1 g_m + 1)}$$

$$10.983 \quad \text{INVALID-ORDER-983} \quad Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s}, R_2, \infty, \infty, \infty, \frac{R_L}{C_L R_L s + 1} \right)$$

$$H(s) = \frac{L_3 R_1 R_L g_m s (C_1 L_1 s^2 + 1)}{(C_3 L_3 R_L s^2 + C_L L_3 R_L s^2 + L_3 s + R_L) (C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + C_1 R_1 s + R_1 g_m + 1)}$$

$$10.984 \quad \text{INVALID-ORDER-984} \quad Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s}, R_2, \infty, \infty, \infty, R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_3 R_1 g_m s (C_1 L_1 s^2 + 1) (C_L R_L s + 1)}{(C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + C_1 R_1 s + R_1 g_m + 1) (C_3 C_L L_3 R_L s^3 + C_3 L_3 s^2 + C_L L_3 s^2 + C_L R_L s + 1)}$$

10.985 INVALID-ORDER-985 $Z(s) = \left(L_1s + R_1 + \frac{1}{C_1s}, R_2, \infty, \infty, \infty, L_Ls + \frac{1}{C_Ls} \right)$

$$H(s) = \frac{L_3R_1g_ms (C_1L_1s^2 + 1) (C_LL_Ls^2 + 1)}{(C_1L_1R_1g_ms^2 + C_1L_1s^2 + C_1R_1s + R_1g_m + 1) (C_3C_LL_3L_Ls^4 + C_3L_3s^2 + C_LL_3s^2 + C_LL_Ls^2 + 1)}$$

10.986 INVALID-ORDER-986 $Z(s) = \left(L_1s + R_1 + \frac{1}{C_1s}, R_2, \infty, \infty, \infty, \frac{L_Ls}{C_LL_Ls^2+1} \right)$

$$H(s) = \frac{L_3L_LR_1g_ms (C_1L_1s^2 + 1)}{(C_3L_3L_Ls^2 + C_LL_3L_Ls^2 + L_3 + L_L) (C_1L_1R_1g_ms^2 + C_1L_1s^2 + C_1R_1s + R_1g_m + 1)}$$

10.987 INVALID-ORDER-987 $Z(s) = \left(L_1s + R_1 + \frac{1}{C_1s}, R_2, \infty, \infty, \infty, L_Ls + R_L + \frac{1}{C_Ls} \right)$

$$H(s) = \frac{L_3R_1g_ms (C_1L_1s^2 + 1) (C_LL_Ls^2 + C_LR_Ls + 1)}{(C_1L_1R_1g_ms^2 + C_1L_1s^2 + C_1R_1s + R_1g_m + 1) (C_3C_LL_3L_Ls^4 + C_3C_LL_3R_Ls^3 + C_3L_3s^2 + C_LL_3s^2 + C_LL_Ls^2 + C_LR_Ls + 1)}$$

10.988 INVALID-ORDER-988 $Z(s) = \left(L_1s + R_1 + \frac{1}{C_1s}, R_2, \infty, \infty, \infty, \frac{1}{C_Ls + \frac{1}{R_L} + \frac{1}{L_Ls}} \right)$

$$H(s) = \frac{L_3L_LR_1R_Lg_ms (C_1L_1s^2 + 1)}{(C_1L_1R_1g_ms^2 + C_1L_1s^2 + C_1R_1s + R_1g_m + 1) (C_3L_3L_LR_Ls^2 + C_LL_3L_LR_Ls^2 + L_3L_Ls + L_3R_L + L_LR_L)}$$

10.989 INVALID-ORDER-989 $Z(s) = \left(L_1s + R_1 + \frac{1}{C_1s}, R_2, \infty, \infty, \infty, \frac{L_Ls}{C_LL_Ls^2+1} + R_L \right)$

$$H(s) = \frac{L_3R_1g_ms (C_1L_1s^2 + 1) (C_LL_LR_Ls^2 + L_Ls + R_L)}{(C_1L_1R_1g_ms^2 + C_1L_1s^2 + C_1R_1s + R_1g_m + 1) (C_3C_LL_3L_LR_Ls^4 + C_3L_3L_Ls^3 + C_3L_3R_Ls^2 + C_LL_3L_Ls^3 + C_LL_LR_Ls^2 + L_3s + L_Ls + R_L)}$$

$$10.990 \quad \text{INVALID-ORDER-990} \quad Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s}, \quad R_2, \quad \infty, \quad \infty, \quad \infty, \quad \frac{R_L \left(L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$$

$$H(s) = \frac{L_3 R_1 R_L g_m s (C_1 L_1 s^2 + 1) (C_L L_L s^2 + 1)}{(C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + C_1 R_1 s + R_1 g_m + 1) (C_3 C_L L_3 L_L R_L s^4 + C_3 L_3 R_L s^2 + C_L L_3 L_L s^3 + C_L L_3 R_L s^2 + C_L L_L R_L s^2 + L_3 s + R_L)}$$

$$10.991 \quad \text{INVALID-ORDER-991} \quad Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s}, \quad \frac{1}{C_2 s}, \quad \infty, \quad \infty, \quad \infty, \quad R_L \right)$$

$$H(s) = \frac{R_1 R_L g_m (C_1 L_1 s^2 + 1) (C_3 L_3 s^2 + C_3 R_3 s + 1)}{(C_3 L_3 s^2 + C_3 R_3 s + C_3 R_L s + 1) (C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + C_1 R_1 s + R_1 g_m + 1)}$$

$$10.992 \quad \text{INVALID-ORDER-992} \quad Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s}, \quad \frac{1}{C_2 s}, \quad \infty, \quad \infty, \quad \infty, \quad \frac{1}{C_L s} \right)$$

$$H(s) = \frac{R_1 g_m (C_1 L_1 s^2 + 1) (C_3 L_3 s^2 + C_3 R_3 s + 1)}{s (C_3 C_L L_3 s^2 + C_3 C_L R_3 s + C_3 + C_L) (C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + C_1 R_1 s + R_1 g_m + 1)}$$

$$10.993 \quad \text{INVALID-ORDER-993} \quad Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s}, \quad \frac{1}{C_2 s}, \quad \infty, \quad \infty, \quad \infty, \quad \frac{R_L}{C_L R_L s + 1} \right)$$

$$H(s) = \frac{R_1 R_L g_m (C_1 L_1 s^2 + 1) (C_3 L_3 s^2 + C_3 R_3 s + 1)}{(C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + C_1 R_1 s + R_1 g_m + 1) (C_3 C_L L_3 R_L s^3 + C_3 C_L R_3 R_L s^2 + C_3 L_3 s^2 + C_3 R_3 s + C_3 R_L s + C_L R_L s + 1)}$$

$$10.994 \quad \text{INVALID-ORDER-994} \quad Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s}, \quad \frac{1}{C_2 s}, \quad \infty, \quad \infty, \quad \infty, \quad R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{R_1 g_m (C_1 L_1 s^2 + 1) (C_L R_L s + 1) (C_3 L_3 s^2 + C_3 R_3 s + 1)}{s (C_3 C_L L_3 s^2 + C_3 C_L R_3 s + C_3 C_L R_L s + C_3 + C_L) (C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + C_1 R_1 s + R_1 g_m + 1)}$$

10.995 INVALID-ORDER-995 $Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s}, \frac{1}{C_2 s}, \infty, \infty, \infty, L_L s + \frac{1}{C_L s} \right)$

$$H(s) = \frac{R_1 g_m (C_1 L_1 s^2 + 1) (C_L L_L s^2 + 1) (C_3 L_3 s^2 + C_3 R_3 s + 1)}{s (C_3 C_L L_3 s^2 + C_3 C_L L_L s^2 + C_3 C_L R_3 s + C_3 + C_L) (C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + C_1 R_1 s + R_1 g_m + 1)}$$

10.996 INVALID-ORDER-996 $Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s}, \frac{1}{C_2 s}, \infty, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} \right)$

$$H(s) = \frac{L_L R_1 g_m s (C_1 L_1 s^2 + 1) (C_3 L_3 s^2 + C_3 R_3 s + 1)}{(C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + C_1 R_1 s + R_1 g_m + 1) (C_3 C_L L_3 L_L s^4 + C_3 C_L L_L R_3 s^3 + C_3 L_3 s^2 + C_3 L_L s^2 + C_3 R_3 s + C_L L_L s^2 + 1)}$$

10.997 INVALID-ORDER-997 $Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s}, \frac{1}{C_2 s}, \infty, \infty, \infty, L_L s + R_L + \frac{1}{C_L s} \right)$

$$H(s) = \frac{R_1 g_m (C_1 L_1 s^2 + 1) (C_3 L_3 s^2 + C_3 R_3 s + 1) (C_L L_L s^2 + C_L R_L s + 1)}{s (C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + C_1 R_1 s + R_1 g_m + 1) (C_3 C_L L_3 s^2 + C_3 C_L L_L s^2 + C_3 C_L R_3 s + C_3 C_L R_L s + C_3 + C_L)}$$

10.998 INVALID-ORDER-998 $Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s}, \frac{1}{C_2 s}, \infty, \infty, \infty, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$

$$H(s) = \frac{L_L R_1 R_L g_m s (C_1 L_1 s^2 + 1) (C_3 L_3 s^2 + C_3 R_3 s + 1)}{(C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + C_1 R_1 s + R_1 g_m + 1) (C_3 C_L L_3 L_L R_L s^4 + C_3 C_L L_L R_3 R_L s^3 + C_3 L_3 L_L s^3 + C_3 L_3 R_L s^2 + C_3 L_L R_3 s^2 + C_3 L_L R_L s^2 + C_3 R_3 R_L s + C_L L_L R_L s^2 + L_L)}$$

10.999 INVALID-ORDER-999 $Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s}, \frac{1}{C_2 s}, \infty, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$

$$H(s) = \frac{R_1 g_m (C_1 L_1 s^2 + 1) (C_3 L_3 s^2 + C_3 R_3 s + 1) (C_L L_L R_L s^2 + L_L s + R_L)}{(C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + C_1 R_1 s + R_1 g_m + 1) (C_3 C_L L_3 L_L s^4 + C_3 C_L L_L R_3 s^3 + C_3 C_L L_L R_L s^3 + C_3 L_3 s^2 + C_3 L_L s^2 + C_3 R_3 s + C_3 R_L s + C_L L_L s^2 + 1)}$$

$$10.1000 \quad \text{INVALID-ORDER-1000} \quad Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s}, \frac{1}{C_2 s}, \infty, \infty, \infty, \frac{R_L \left(L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$$

$$H(s) = \frac{R_1 R_L g_m (C_1 L_1 s^2 + 1) (C_L L_L s^2 + 1) (C_3 L_3 s^2 + C_3 R_3 s + 1)}{(C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + C_1 R_1 s + R_1 g_m + 1) (C_3 C_L L_3 L_L s^4 + C_3 C_L L_3 R_L s^3 + C_3 C_L L_L R_3 s^3 + C_3 C_L L_L R_L s^3 + C_3 C_L R_3 R_L s^2 + C_3 L_3 s^2 + C_3 R_3 s + C_3 R_L s + C_L L_L s^2 +$$

$$10.1001 \quad \text{INVALID-ORDER-1001} \quad Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s}, \frac{R_2}{C_2 R_2 s + 1}, \infty, \infty, \infty, R_L \right)$$

$$H(s) = \frac{L_3 R_1 R_3 R_L g_m s (C_1 L_1 s^2 + 1)}{(C_3 L_3 R_3 R_L s^2 + L_3 R_3 s + L_3 R_L s + R_3 R_L) (C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + C_1 R_1 s + R_1 g_m + 1)}$$

$$10.1002 \quad \text{INVALID-ORDER-1002} \quad Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s}, \frac{R_2}{C_2 R_2 s + 1}, \infty, \infty, \infty, \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_3 R_1 R_3 g_m s (C_1 L_1 s^2 + 1)}{(C_3 L_3 R_3 s^2 + C_L L_3 R_3 s^2 + L_3 s + R_3) (C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + C_1 R_1 s + R_1 g_m + 1)}$$

$$10.1003 \quad \text{INVALID-ORDER-1003} \quad Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s}, \frac{R_2}{C_2 R_2 s + 1}, \infty, \infty, \infty, \frac{R_L}{C_L R_L s + 1} \right)$$

$$H(s) = \frac{L_3 R_1 R_3 R_L g_m s (C_1 L_1 s^2 + 1)}{(C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + C_1 R_1 s + R_1 g_m + 1) (C_3 L_3 R_3 R_L s^2 + C_L L_3 R_3 R_L s^2 + L_3 R_3 s + L_3 R_L s + R_3 R_L)}$$

$$10.1004 \quad \text{INVALID-ORDER-1004} \quad Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s}, \frac{R_2}{C_2 R_2 s + 1}, \infty, \infty, \infty, R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_3 R_1 R_3 g_m s (C_1 L_1 s^2 + 1) (C_L R_L s + 1)}{(C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + C_1 R_1 s + R_1 g_m + 1) (C_3 C_L L_3 R_3 R_L s^3 + C_3 L_3 R_3 s^2 + C_L L_3 R_3 s^2 + C_L L_3 R_L s^2 + C_L R_3 R_L s + L_3 s + R_3)}$$

$$10.1005 \quad \text{INVALID-ORDER-1005} \quad Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s}, \quad \frac{R_2}{C_2 R_2 s + 1}, \quad \infty, \quad \infty, \quad \infty, \quad L_L s + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_3 R_1 R_3 g_m s (C_1 L_1 s^2 + 1) (C_L L_L s^2 + 1)}{(C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + C_1 R_1 s + R_1 g_m + 1) (C_3 C_L L_3 L_L R_3 s^4 + C_3 L_3 R_3 s^2 + C_L L_3 L_L s^3 + C_L L_3 R_3 s^2 + C_L L_L R_3 s^2 + L_3 s + R_3)}$$

$$10.1006 \quad \text{INVALID-ORDER-1006} \quad Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s}, \quad \frac{R_2}{C_2 R_2 s + 1}, \quad \infty, \quad \infty, \quad \infty, \quad \frac{L_L s}{C_L L_L s^2 + 1} \right)$$

$$H(s) = \frac{L_3 L_L R_1 R_3 g_m s (C_1 L_1 s^2 + 1)}{(C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + C_1 R_1 s + R_1 g_m + 1) (C_3 L_3 L_L R_3 s^2 + C_L L_3 L_L R_3 s^2 + L_3 L_L s + L_3 R_3 + L_L R_3)}$$

$$10.1007 \quad \text{INVALID-ORDER-1007} \quad Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s}, \quad \frac{R_2}{C_2 R_2 s + 1}, \quad \infty, \quad \infty, \quad \infty, \quad L_L s + R_L + \frac{1}{C_L s} \right)$$

$$H(s) = \frac{L_3 R_1 R_3 g_m s (C_1 L_1 s^2 + 1) (C_L L_L s^2 + C_L R_L s + 1)}{(C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + C_1 R_1 s + R_1 g_m + 1) (C_3 C_L L_3 L_L R_3 s^4 + C_3 C_L L_3 R_3 R_L s^3 + C_3 L_3 R_3 s^2 + C_L L_3 L_L s^3 + C_L L_3 R_3 s^2 + C_L L_3 R_L s^2 + C_L L_L R_3 s^2 + C_L R_3 R_L s + L_3 s)}$$

$$10.1008 \quad \text{INVALID-ORDER-1008} \quad Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s}, \quad \frac{R_2}{C_2 R_2 s + 1}, \quad \infty, \quad \infty, \quad \infty, \quad \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$$

$$H(s) = \frac{L_3 L_L R_1 R_3 R_L g_m s (C_1 L_1 s^2 + 1)}{(C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + C_1 R_1 s + R_1 g_m + 1) (C_3 L_3 L_L R_3 R_L s^2 + C_L L_3 L_L R_3 R_L s^2 + L_3 L_L R_3 s + L_3 L_L R_L s + L_3 R_3 R_L + L_L R_3 R_L)}$$

$$10.1009 \quad \text{INVALID-ORDER-1009} \quad Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s}, \quad \frac{R_2}{C_2 R_2 s + 1}, \quad \infty, \quad \infty, \quad \infty, \quad \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$$

$$H(s) = \frac{L_3 R_1 R_3 g_m s (C_1 L_1 s^2 + 1) (C_L L_L R_L s^2 + L_L s + R_L)}{(C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + C_1 R_1 s + R_1 g_m + 1) (C_3 C_L L_3 L_L R_3 R_L s^4 + C_3 L_3 L_L R_3 s^3 + C_3 L_3 R_3 R_L s^2 + C_L L_3 L_L R_3 s^3 + C_L L_3 L_L R_L s^3 + C_L L_L R_3 R_L s^2 + L_3 L_L s^2 + L_3 R_3 s)}$$

10.1010 INVALID-ORDER-1010 $Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s}, \frac{R_2}{C_2 R_2 s + 1}, \infty, \infty, \infty, \frac{R_L \left(L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$

$$H(s) = \frac{L_3 R_1 R_3 R_L g_m s (C_1 L_1 s^2 + 1) (C_L L_L s^2 + 1)}{(C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + C_1 R_1 s + R_1 g_m + 1) (C_3 C_L L_3 L_L R_3 R_L s^4 + C_3 L_3 R_3 R_L s^2 + C_L L_3 L_L R_3 s^3 + C_L L_3 L_L R_L s^3 + C_L L_3 R_3 R_L s^2 + C_L L_L R_3 R_L s^2 + L_3 R_3 s + L_3 R_L s)}$$

10.1011 INVALID-ORDER-1011 $Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s}, R_2 + \frac{1}{C_2 s}, \infty, \infty, \infty, R_L \right)$

$$H(s) = \frac{R_1 R_L g_m (C_1 L_1 s^2 + 1) (C_3 L_3 R_3 s^2 + L_3 s + R_3)}{(C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + L_3 s + R_3 + R_L) (C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + C_1 R_1 s + R_1 g_m + 1)}$$

10.1012 INVALID-ORDER-1012 $Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s}, R_2 + \frac{1}{C_2 s}, \infty, \infty, \infty, \frac{1}{C_L s} \right)$

$$H(s) = \frac{R_1 g_m (C_1 L_1 s^2 + 1) (C_3 L_3 R_3 s^2 + L_3 s + R_3)}{(C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + C_1 R_1 s + R_1 g_m + 1) (C_3 C_L L_3 R_3 s^3 + C_3 L_3 s^2 + C_L L_3 s^2 + C_L R_3 s + 1)}$$

10.1013 INVALID-ORDER-1013 $Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s}, R_2 + \frac{1}{C_2 s}, \infty, \infty, \infty, \frac{R_L}{C_L R_L s + 1} \right)$

$$H(s) = \frac{R_1 R_L g_m (C_1 L_1 s^2 + 1) (C_3 L_3 R_3 s^2 + L_3 s + R_3)}{(C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + C_1 R_1 s + R_1 g_m + 1) (C_3 C_L L_3 R_3 R_L s^3 + C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + C_L L_3 R_L s^2 + C_L R_3 R_L s + L_3 s + R_3 + R_L)}$$

10.1014 INVALID-ORDER-1014 $Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s}, R_2 + \frac{1}{C_2 s}, \infty, \infty, \infty, R_L + \frac{1}{C_L s} \right)$

$$H(s) = \frac{R_1 g_m (C_1 L_1 s^2 + 1) (C_L R_L s + 1) (C_3 L_3 R_3 s^2 + L_3 s + R_3)}{(C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + C_1 R_1 s + R_1 g_m + 1) (C_3 C_L L_3 R_3 s^3 + C_3 C_L L_3 R_L s^3 + C_3 L_3 s^2 + C_L L_3 s^2 + C_L R_3 s + C_L R_L s + 1)}$$

10.1015 INVALID-ORDER-1015 $Z(s) = \left(L_1s + R_1 + \frac{1}{C_1s}, R_2 + \frac{1}{C_2s}, \infty, \infty, \infty, L_Ls + \frac{1}{C_Ls} \right)$

$$H(s) = \frac{R_1g_m (C_1L_1s^2 + 1) (C_LL_Ls^2 + 1) (C_3L_3R_3s^2 + L_3s + R_3)}{(C_1L_1R_1g_ms^2 + C_1L_1s^2 + C_1R_1s + R_1g_m + 1) (C_3C_LL_3L_Ls^4 + C_3C_LL_3R_3s^3 + C_3L_3s^2 + C_LL_3s^2 + C_LL_Ls^2 + C_LR_3s + 1)}$$

10.1016 INVALID-ORDER-1016 $Z(s) = \left(L_1s + R_1 + \frac{1}{C_1s}, R_2 + \frac{1}{C_2s}, \infty, \infty, \infty, \frac{L_Ls}{C_LL_Ls^2 + 1} \right)$

$$H(s) = \frac{L_LR_1g_ms (C_1L_1s^2 + 1) (C_3L_3R_3s^2 + L_3s + R_3)}{(C_1L_1R_1g_ms^2 + C_1L_1s^2 + C_1R_1s + R_1g_m + 1) (C_3C_LL_3L_LR_3s^4 + C_3L_3L_Ls^3 + C_3L_3R_3s^2 + C_LL_3L_Ls^3 + C_LL_LR_3s^2 + L_3s + L_Ls + R_3)}$$

10.1017 INVALID-ORDER-1017 $Z(s) = \left(L_1s + R_1 + \frac{1}{C_1s}, R_2 + \frac{1}{C_2s}, \infty, \infty, \infty, L_Ls + R_L + \frac{1}{C_Ls} \right)$

$$H(s) = \frac{R_1g_m (C_1L_1s^2 + 1) (C_LL_Ls^2 + C_LR_Ls + 1) (C_3L_3R_3s^2 + L_3s + R_3)}{(C_1L_1R_1g_ms^2 + C_1L_1s^2 + C_1R_1s + R_1g_m + 1) (C_3C_LL_3L_Ls^4 + C_3C_LL_3R_3s^3 + C_3C_LL_3R_Ls^3 + C_3L_3s^2 + C_LL_3s^2 + C_LL_Ls^2 + C_LR_3s + C_LR_Ls + 1)}$$

10.1018 INVALID-ORDER-1018 $Z(s) = \left(L_1s + R_1 + \frac{1}{C_1s}, R_2 + \frac{1}{C_2s}, \infty, \infty, \infty, \frac{1}{C_Ls + \frac{1}{R_L} + \frac{1}{L_Ls}} \right)$

$$H(s) = \frac{L_LR_1R_Lg_ms (C_1L_1s^2 + 1) (C_3L_3R_3s^2 + L_3s + R_3)}{(C_1L_1R_1g_ms^2 + C_1L_1s^2 + C_1R_1s + R_1g_m + 1) (C_3C_LL_3L_LR_3R_Ls^4 + C_3L_3L_LR_3s^3 + C_3L_3L_LR_Ls^3 + C_3L_3R_3R_Ls^2 + C_LL_3L_LR_Ls^3 + C_LL_LR_3R_Ls^2 + L_3L_Ls^2 + L_3R_Ls)}$$

10.1019 INVALID-ORDER-1019 $Z(s) = \left(L_1s + R_1 + \frac{1}{C_1s}, R_2 + \frac{1}{C_2s}, \infty, \infty, \infty, \frac{L_Ls}{C_LL_Ls^2 + 1} + R_L \right)$

$$H(s) = \frac{R_1g_m (C_1L_1s^2 + 1) (C_3L_3R_3s^2 + L_3s + R_3) (C_LL_LR_Ls^2 + L_Ls + R_L)}{(C_1L_1R_1g_ms^2 + C_1L_1s^2 + C_1R_1s + R_1g_m + 1) (C_3C_LL_3L_LR_3s^4 + C_3C_LL_3L_LR_Ls^4 + C_3L_3L_Ls^3 + C_3L_3R_3s^2 + C_3L_3R_Ls^2 + C_LL_3L_Ls^3 + C_LL_LR_3s^2 + C_LL_LR_Ls^2 + L_3)}$$

10.1020 INVALID-ORDER-1020 $Z(s) = \left(L_1s + R_1 + \frac{1}{C_1s}, R_2 + \frac{1}{C_2s}, \infty, \infty, \infty, \frac{R_L(L_Ls + \frac{1}{C_Ls})}{L_Ls + R_L + \frac{1}{C_Ls}} \right)$

$$H(s) = \frac{R_1R_Lg_m(C_1L_1s^2 + 1)(C_LL_Ls^2 + 1)(C_3L_3R_3s^2 + L_3s + R_3)}{(C_1L_1R_1g_ms^2 + C_1L_1s^2 + C_1R_1s + R_1g_m + 1)(C_3C_LL_3L_LR_3s^4 + C_3C_LL_3L_LR_Ls^4 + C_3C_LL_3R_3R_Ls^3 + C_3L_3R_3s^2 + C_3L_3R_Ls^2 + C_LL_3L_Ls^3 + C_LL_3R_Ls^2 + C_LL_LR_3s^2)}$$

10.1021 INVALID-ORDER-1021 $Z(s) = \left(L_1s + R_1 + \frac{1}{C_1s}, L_2s + \frac{1}{C_2s}, \infty, \infty, \infty, R_L \right)$

$$H(s) = \frac{R_1R_3R_Lg_m(C_1L_1s^2 + 1)(C_3L_3s^2 + 1)}{(C_3L_3R_3s^2 + C_3L_3R_Ls^2 + C_3R_3R_Ls + R_3 + R_L)(C_1L_1R_1g_ms^2 + C_1L_1s^2 + C_1R_1s + R_1g_m + 1)}$$

10.1022 INVALID-ORDER-1022 $Z(s) = \left(L_1s + R_1 + \frac{1}{C_1s}, L_2s + \frac{1}{C_2s}, \infty, \infty, \infty, \frac{1}{C_Ls} \right)$

$$H(s) = \frac{R_1R_3g_m(C_1L_1s^2 + 1)(C_3L_3s^2 + 1)}{(C_1L_1R_1g_ms^2 + C_1L_1s^2 + C_1R_1s + R_1g_m + 1)(C_3C_LL_3R_3s^3 + C_3L_3s^2 + C_3R_3s + C_LR_3s + 1)}$$

10.1023 INVALID-ORDER-1023 $Z(s) = \left(L_1s + R_1 + \frac{1}{C_1s}, L_2s + \frac{1}{C_2s}, \infty, \infty, \infty, \frac{R_L}{C_LR_Ls + 1} \right)$

$$H(s) = \frac{R_1R_3R_Lg_m(C_1L_1s^2 + 1)(C_3L_3s^2 + 1)}{(C_1L_1R_1g_ms^2 + C_1L_1s^2 + C_1R_1s + R_1g_m + 1)(C_3C_LL_3R_3R_Ls^3 + C_3L_3R_3s^2 + C_3L_3R_Ls^2 + C_3R_3R_Ls + C_LR_3R_Ls + R_3 + R_L)}$$

10.1024 INVALID-ORDER-1024 $Z(s) = \left(L_1s + R_1 + \frac{1}{C_1s}, L_2s + \frac{1}{C_2s}, \infty, \infty, \infty, R_L + \frac{1}{C_Ls} \right)$

$$H(s) = \frac{R_1R_3g_m(C_1L_1s^2 + 1)(C_3L_3s^2 + 1)(C_LR_Ls + 1)}{(C_1L_1R_1g_ms^2 + C_1L_1s^2 + C_1R_1s + R_1g_m + 1)(C_3C_LL_3R_3s^3 + C_3C_LL_3R_Ls^3 + C_3C_LL_3R_3R_Ls^2 + C_3L_3s^2 + C_3R_3s + C_LR_3s + C_LR_Ls + 1)}$$

10.1025 INVALID-ORDER-1025 $Z(s) = \left(L_1s + R_1 + \frac{1}{C_1s}, L_2s + \frac{1}{C_2s}, \infty, \infty, \infty, L_Ls + \frac{1}{C_Ls} \right)$

$$H(s) = \frac{R_1 R_3 g_m (C_1 L_1 s^2 + 1) (C_3 L_3 s^2 + 1) (C_L L_L s^2 + 1)}{(C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + C_1 R_1 s + R_1 g_m + 1) (C_3 C_L L_3 L_L s^4 + C_3 C_L L_3 R_3 s^3 + C_3 C_L L_L R_3 s^3 + C_3 L_3 s^2 + C_3 R_3 s + C_L L_L s^2 + C_L R_3 s + 1)}$$

10.1026 INVALID-ORDER-1026 $Z(s) = \left(L_1s + R_1 + \frac{1}{C_1s}, L_2s + \frac{1}{C_2s}, \infty, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} \right)$

$$H(s) = \frac{L_L R_1 R_3 g_m s (C_1 L_1 s^2 + 1) (C_3 L_3 s^2 + 1)}{(C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + C_1 R_1 s + R_1 g_m + 1) (C_3 C_L L_3 L_L R_3 s^4 + C_3 L_3 L_L s^3 + C_3 L_3 R_3 s^2 + C_3 L_L R_3 s^2 + C_L L_L R_3 s^2 + L_L s + R_3)}$$

10.1027 INVALID-ORDER-1027 $Z(s) = \left(L_1s + R_1 + \frac{1}{C_1s}, L_2s + \frac{1}{C_2s}, \infty, \infty, \infty, L_Ls + R_L + \frac{1}{C_Ls} \right)$

$$H(s) = \frac{R_1 R_3 g_m (C_1 L_1 s^2 + 1) (C_3 L_3 s^2 + 1) (C_L L_L s^2 + C_L R_L s + 1)}{(C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + C_1 R_1 s + R_1 g_m + 1) (C_3 C_L L_3 L_L s^4 + C_3 C_L L_3 R_3 s^3 + C_3 C_L L_3 R_L s^3 + C_3 C_L L_L R_3 s^3 + C_3 C_L R_3 R_L s^2 + C_3 L_3 s^2 + C_3 R_3 s + C_L L_L s^2 + C_L R_3 s + 1)}$$

10.1028 INVALID-ORDER-1028 $Z(s) = \left(L_1s + R_1 + \frac{1}{C_1s}, L_2s + \frac{1}{C_2s}, \infty, \infty, \infty, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$

$$H(s) = \frac{L_L R_1 R_3 R_L g_m s (C_1 L_1 s^2 + 1) (C_3 L_3 s^2 + 1)}{(C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + C_1 R_1 s + R_1 g_m + 1) (C_3 C_L L_3 L_L R_3 R_L s^4 + C_3 L_3 L_L R_3 s^3 + C_3 L_3 L_L R_L s^3 + C_3 L_3 R_3 R_L s^2 + C_3 L_L R_3 R_L s^2 + C_L L_L R_3 R_L s^2 + L_L R_3 s + L_L R_L s + 1)}$$

10.1029 INVALID-ORDER-1029 $Z(s) = \left(L_1s + R_1 + \frac{1}{C_1s}, L_2s + \frac{1}{C_2s}, \infty, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} + R_L \right)$

$$H(s) = \frac{R_1 R_3 g_m (C_1 L_1 s^2 + 1) (C_3 L_3 s^2 + 1) (C_L L_L R_L s^2 + L_L s + R_L)}{(C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + C_1 R_1 s + R_1 g_m + 1) (C_3 C_L L_3 L_L R_3 s^4 + C_3 C_L L_3 L_L R_L s^4 + C_3 C_L L_L R_3 R_L s^3 + C_3 L_3 L_L s^3 + C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + C_3 L_L R_3 s^2 + C_3 R_3 R_L s + 1)}$$

10.1030 INVALID-ORDER-1030 $Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s}, \quad L_2 s + \frac{1}{C_2 s}, \quad \infty, \quad \infty, \quad \infty, \quad \frac{R_L \left(L_L s + \frac{1}{C_L s} \right)}{L_L s + R_L + \frac{1}{C_L s}} \right)$

$$H(s) = \frac{R_1 R_3 R_L g_m (C_1 L_1 s^2 + 1) (C_3 L_3 s^2 + 1) (C_L L_L s^2 + 1)}{(C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + C_1 R_1 s + R_1 g_m + 1) (C_3 C_L L_3 L_L R_3 s^4 + C_3 C_L L_3 L_L R_L s^4 + C_3 C_L L_3 R_3 R_L s^3 + C_3 C_L L_L R_3 R_L s^3 + C_3 L_3 R_3 s^2 + C_3 L_3 R_L s^2 + C_3 R_3 R_L s + C_L L_L)}$$