Filter Summary Report: CG,TIA,Automated,simple,Z1,Z5,ZL

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Contents

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

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

2 AP

3 BP

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

$$H(s) = \frac{s\left(L_L R_1 R_5 g_m - L_L R_1\right)}{R_1 R_5 g_m + R_1 + R_5 + s^2\left(C_L L_L R_1 R_5 g_m + C_L L_L R_1 + C_L L_L R_5\right) + s\left(2 L_L R_1 g_m + L_L\right)}$$

Parameters:

Q: $\frac{\sqrt{C_L} R_1 R_5 g_m + \sqrt{C_L} R_1 + \sqrt{C_L} R_5}{2\sqrt{L_L} R_1 g_m + \sqrt{L_L}}$
wo: $\frac{1}{\sqrt{C_L}\sqrt{L_L}}$
bandwidth: $\frac{2\sqrt{L_L} R_1 g_m + \sqrt{L_L}}{\sqrt{C_L}\sqrt{L_L}\left(\sqrt{C_L} R_1 R_5 g_m + \sqrt{C_L} R_1 + \sqrt{C_L} R_5\right)}$
K-LP: 0
K-HP: 0
K-BP: $\frac{R_1 R_5 g_m - R_1}{2 R_1 g_m + 1}$
Qz: None
Wz: None

3.2 BP-2 $Z(s) = \left(R_1,\ \infty,\ \infty,\ \infty,\ R_5,\ \frac{L_L R_L s}{C_L L_L R_L s^2 + L_L s + R_L}\right)$

$$H(s) = \frac{s\left(L_L R_1 R_5 R_L g_m - L_L R_1 R_L\right)}{R_1 R_5 R_L g_m + R_1 R_L + R_5 R_L + s^2\left(C_L L_L R_1 R_5 R_L g_m + C_L L_L R_1 R_L + C_L L_L R_5 R_L\right) + s\left(L_L R_1 R_5 g_m + 2 L_L R_1 R_L g_m + L_L R_1 + L_L R_5 + L_L R_L\right)}$$

Parameters:

Q: $\frac{\sqrt{C_L} R_1 R_5 R_L g_m + \sqrt{C_L} R_1 R_L + \sqrt{C_L} R_5 R_L}{\sqrt{L_L} R_1 R_5 g_m + 2\sqrt{L_L} R_1 R_L g_m + \sqrt{L_L} R_1 + \sqrt{L_L} R_5 + \sqrt{L_L} R_L}$
wo: $\frac{1}{\sqrt{C_L}\sqrt{L_L}}$
bandwidth: $\frac{\sqrt{L_L} R_1 R_5 g_m + 2\sqrt{L_L} R_1 R_L g_m + \sqrt{L_L} R_1 + \sqrt{L_L} R_5 + \sqrt{L_L} R_L}{\sqrt{C_L}\sqrt{L_L}\left(\sqrt{C_L} R_1 R_5 R_L g_m + \sqrt{C_L} R_1 R_L + \sqrt{C_L} R_5 R_L\right)}$
K-LP: 0
K-HP: 0
K-BP: $\frac{R_1 R_5 R_L g_m - R_1 R_L}{R_1 R_5 g_m + 2 R_1 R_L g_m + R_1 + R_5 + R_L}$
Qz: None
Wz: None

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

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

Parameters:

Q: $\frac{\sqrt{C_L}\sqrt{L_1} R_5 g_m \sqrt{\frac{1}{R_5 g_m + 1}} + \sqrt{C_L}\sqrt{L_1}\sqrt{\frac{1}{R_5 g_m + 1}}}{C_L R_5 + 2 L_1 g_m}$
wo: $\sqrt{\frac{1}{C_L L_1 R_5 g_m + C_L L_1}}$
bandwidth: $\frac{\left(C_L R_5 + 2 L_1 g_m\right)\sqrt{\frac{1}{C_L L_1 R_5 g_m + C_L L_1}}}{\sqrt{C_L}\sqrt{L_1} R_5 g_m \sqrt{\frac{1}{R_5 g_m + 1}} + \sqrt{C_L}\sqrt{L_1}\sqrt{\frac{1}{R_5 g_m + 1}}}$
K-LP: 0
K-HP: 0
K-BP: $\frac{L_1 R_5 g_m - L_1}{C_L R_5 + 2 L_1 g_m}$

Qz: None
Wz: None

3.4 BP-4 $Z(s) = \left(L_1 s,\ \infty,\ \infty,\ \infty,\ R_5,\ \frac{R_L}{C_L R_L s+1}\right)$

$$H(s) = \frac{s\left(L_1 R_5 R_L g_m - L_1 R_L\right)}{R_5 + R_L + s^2\left(C_L L_1 R_5 R_L g_m + C_L L_1 R_L\right) + s\left(C_L R_5 R_L + L_1 R_5 g_m + 2L_1 R_L g_m + L_1\right)}$$

Parameters:

Q: $\frac{\sqrt{C_L}\sqrt{L_1}R_5\sqrt{R_L}g_m\sqrt{R_5+R_L}\sqrt{\frac{1}{R_5 g_m+1}}+\sqrt{C_L}\sqrt{L_1}\sqrt{R_L}\sqrt{R_5+R_L}\sqrt{\frac{1}{R_5 g_m+1}}}{C_L R_5 R_L+L_1 R_5 g_m+2L_1 R_L g_m+L_1}$
wo: $\sqrt{R_5+R_L}\sqrt{\frac{1}{C_L L_1 R_5 R_L g_m+C_L L_1 R_L}}$
bandwidth: $\frac{\sqrt{R_5+R_L}(C_L R_5 R_L+L_1 R_5 g_m+2L_1 R_L g_m+L_1)\sqrt{\frac{1}{C_L L_1 R_5 R_L g_m+C_L L_1 R_L}}}{\sqrt{C_L}\sqrt{L_1}R_5\sqrt{R_L}g_m\sqrt{R_5+R_L}\sqrt{\frac{1}{R_5 g_m+1}}+\sqrt{C_L}\sqrt{L_1}\sqrt{R_L}\sqrt{R_5+R_L}\sqrt{\frac{1}{R_5 g_m+1}}}$
K-LP: 0
K-HP: 0
K-BP: $\frac{L_1 R_5 R_L g_m-L_1 R_L}{C_L R_5 R_L+L_1 R_5 g_m+2L_1 R_L g_m+L_1}$
Qz: None
Wz: None

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

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

Parameters:

Q: $\frac{\sqrt{C_1}R_5+\sqrt{C_1}R_L}{\sqrt{L_1}R_5 g_m+2\sqrt{L_1}R_L g_m+\sqrt{L_1}}$
wo: $\frac{1}{\sqrt{C_1}\sqrt{L_1}}$
bandwidth: $\frac{\sqrt{L_1}R_5 g_m+2\sqrt{L_1}R_L g_m+\sqrt{L_1}}{\sqrt{C_1}\sqrt{L_1}\left(\sqrt{C_1}R_5+\sqrt{C_1}R_L\right)}$
K-LP: 0
K-HP: 0
K-BP: $\frac{R_5 R_L g_m-R_L}{R_5 g_m+2R_L g_m+1}$
Qz: None
Wz: None

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

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

Parameters:

Q: $\frac{\sqrt{C_1}R_1 R_5+\sqrt{C_1}R_1 R_L}{\sqrt{L_1}R_1 R_5 g_m+2\sqrt{L_1}R_1 R_L g_m+\sqrt{L_1}R_1+\sqrt{L_1}R_5+\sqrt{L_1}R_L}$
wo: $\frac{1}{\sqrt{C_1}\sqrt{L_1}}$
bandwidth: $\frac{\sqrt{L_1}R_1 R_5 g_m+2\sqrt{L_1}R_1 R_L g_m+\sqrt{L_1}R_1+\sqrt{L_1}R_5+\sqrt{L_1}R_L}{\sqrt{C_1}\sqrt{L_1}\left(\sqrt{C_1}R_1 R_5+\sqrt{C_1}R_1 R_L\right)}$
K-LP: 0
K-HP: 0
K-BP: $\frac{R_1 R_5 R_L g_m-R_1 R_L}{R_1 R_5 g_m+2R_1 R_L g_m+R_1+R_5+R_L}$
Qz: None
Wz: None

4 BS

4.1 BS-1 $Z(s) = \left(R_1,\ \infty,\ \infty,\ \infty,\ R_5,\ L_L s + \frac{1}{C_L s}\right)$

$$H(s) = \frac{R_1 R_5 g_m - R_1 + s^2 \left(C_L L_L R_1 R_5 g_m - C_L L_L R_1\right)}{2R_1 g_m + s^2 \left(2C_L L_L R_1 g_m + C_L L_L\right) + s \left(C_L R_1 R_5 g_m + C_L R_1 + C_L R_5\right) + 1}$$

Parameters:

Q: $\frac{2\sqrt{L_L} R_1 g_m + \sqrt{L_L}}{\sqrt{C_L} R_1 R_5 g_m + \sqrt{C_L} R_1 + \sqrt{C_L} R_5}$
wo: $\frac{1}{\sqrt{C_L}\sqrt{L_L}}$
bandwidth: $\frac{\sqrt{C_L} R_1 R_5 g_m + \sqrt{C_L} R_1 + \sqrt{C_L} R_5}{\sqrt{C_L}\sqrt{L_L}\left(2\sqrt{L_L} R_1 g_m + \sqrt{L_L}\right)}$
K-LP: $\frac{R_1 R_5 g_m - R_1}{2R_1 g_m + 1}$
K-HP: $\frac{R_1 R_5 g_m - R_1}{2R_1 g_m + 1}$
K-BP: 0
Qz: None
Wz: $\frac{1}{\sqrt{C_L}\sqrt{L_L}}$

4.2 BS-2 $Z(s) = \left(R_1,\ \infty,\ \infty,\ \infty,\ R_5,\ \frac{R_L\left(C_L L_L s^2 + 1\right)}{C_L L_L s^2 + C_L R_L s + 1}\right)$

$$H(s) = \frac{R_1 R_5 R_L g_m - R_1 R_L + s^2 \left(C_L L_L R_1 R_5 R_L g_m - C_L L_L R_1 R_L\right)}{R_1 R_5 g_m + 2R_1 R_L g_m + R_1 + R_5 + R_L + s^2 \left(C_L L_L R_1 R_5 g_m + 2C_L L_L R_1 R_L g_m + C_L L_L R_1 + C_L L_L R_5 + C_L L_L R_L\right) + s \left(C_L R_1 R_5 R_L g_m + C_L R_1 R_L + C_L R_5 R_L\right)}$$

Parameters:

Q: $\frac{\sqrt{L_L} R_1 R_5 g_m + 2\sqrt{L_L} R_1 R_L g_m + \sqrt{L_L} R_1 + \sqrt{L_L} R_5 + \sqrt{L_L} R_L}{\sqrt{C_L} R_1 R_5 R_L g_m + \sqrt{C_L} R_1 R_L + \sqrt{C_L} R_5 R_L}$
wo: $\frac{1}{\sqrt{C_L}\sqrt{L_L}}$
bandwidth: $\frac{\sqrt{C_L} R_1 R_5 R_L g_m + \sqrt{C_L} R_1 R_L + \sqrt{C_L} R_5 R_L}{\sqrt{C_L}\sqrt{L_L}\left(\sqrt{L_L} R_1 R_5 g_m + 2\sqrt{L_L} R_1 R_L g_m + \sqrt{L_L} R_1 + \sqrt{L_L} R_5 + \sqrt{L_L} R_L\right)}$
K-LP: $\frac{R_1 R_5 R_L g_m - R_1 R_L}{R_1 R_5 g_m + 2R_1 R_L g_m + R_1 + R_5 + R_L}$
K-HP: $\frac{R_1 R_5 R_L g_m - R_1 R_L}{R_1 R_5 g_m + 2R_1 R_L g_m + R_1 + R_5 + R_L}$
K-BP: 0
Qz: None
Wz: $\frac{1}{\sqrt{C_L}\sqrt{L_L}}$

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

$$H(s) = \frac{R_5 R_L g_m - R_L + s^2 \left(C_1 L_1 R_5 R_L g_m - C_1 L_1 R_L\right)}{R_5 g_m + 2R_L g_m + s^2 \left(C_1 L_1 R_5 g_m + 2C_1 L_1 R_L g_m + C_1 L_1\right) + s \left(C_1 R_5 + C_1 R_L\right) + 1}$$

Parameters:

Q: $\frac{\sqrt{L_1} R_5 g_m + 2\sqrt{L_1} R_L g_m + \sqrt{L_1}}{\sqrt{C_1} R_5 + \sqrt{C_1} R_L}$
wo: $\frac{1}{\sqrt{C_1}\sqrt{L_1}}$
bandwidth: $\frac{\sqrt{C_1} R_5 + \sqrt{C_1} R_L}{\sqrt{C_1}\sqrt{L_1}\left(\sqrt{L_1} R_5 g_m + 2\sqrt{L_1} R_L g_m + \sqrt{L_1}\right)}$
K-LP: $\frac{R_5 R_L g_m - R_L}{R_5 g_m + 2R_L g_m + 1}$
K-HP: $\frac{R_5 R_L g_m - R_L}{R_5 g_m + 2R_L g_m + 1}$
K-BP: 0
Qz: None
Wz: $\frac{1}{\sqrt{C_1}\sqrt{L_1}}$

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

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

Parameters:

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

wo: $\frac{1}{\sqrt{C_1}\sqrt{L_1}}$
bandwidth: $\frac{\sqrt{C_1}R_1R_5+\sqrt{C_1}R_1R_L}{\sqrt{C_1}\sqrt{L_1}\left(\sqrt{L_1}R_1R_5g_m+2\sqrt{L_1}R_1R_Lg_m+\sqrt{L_1}R_1+\sqrt{L_1}R_5+\sqrt{L_1}R_L\right)}$
K-LP: $\frac{R_1R_5R_Lg_m-R_1R_L}{R_1R_5g_m+2R_1R_Lg_m+R_1+R_5+R_L}$
K-HP: $\frac{R_1R_5R_Lg_m-R_1R_L}{R_1R_5g_m+2R_1R_Lg_m+R_1+R_5+R_L}$
K-BP: 0
Qz: None
Wz: $\frac{1}{\sqrt{C_1}\sqrt{L_1}}$

5 GE

5.1 GE-1 $Z(s) = \left(R_1,\ \infty,\ \infty,\ \infty,\ R_5,\ L_Ls + R_L + \frac{1}{C_Ls}\right)$

$$H(s) = \frac{R_1R_5g_m - R_1 + s^2\left(C_LL_LR_1R_5g_m - C_LL_LR_1\right) + s\left(C_LR_1R_5R_Lg_m - C_LR_1R_L\right)}{2R_1g_m + s^2\left(2C_LL_LR_1g_m + C_LL_L\right) + s\left(C_LR_1R_5g_m + 2C_LR_1R_Lg_m + C_LR_1 + C_LR_5 + C_LR_L\right) + 1}$$

Parameters:

Q: $\frac{2\sqrt{L_L}R_1g_m+\sqrt{L_L}}{\sqrt{C_L}R_1R_5g_m+2\sqrt{C_L}R_1R_Lg_m+\sqrt{C_L}R_1+\sqrt{C_L}R_5+\sqrt{C_L}R_L}$
wo: $\frac{1}{\sqrt{C_L}\sqrt{L_L}}$
bandwidth: $\frac{\sqrt{C_L}R_1R_5g_m+2\sqrt{C_L}R_1R_Lg_m+\sqrt{C_L}R_1+\sqrt{C_L}R_5+\sqrt{C_L}R_L}{\sqrt{C_L}\sqrt{L_L}\left(2\sqrt{L_L}R_1g_m+\sqrt{L_L}\right)}$
K-LP: $\frac{R_1R_5g_m-R_1}{2R_1g_m+1}$
K-HP: $\frac{R_1R_5g_m-R_1}{2R_1g_m+1}$
K-BP: $\frac{R_1R_5R_Lg_m-R_1R_L}{R_1R_5g_m+2R_1R_Lg_m+R_1+R_5+R_L}$
Qz: $\frac{\sqrt{L_L}}{\sqrt{C_L}R_L}$
Wz: $\frac{1}{\sqrt{C_L}\sqrt{L_L}}$

5.2 GE-2 $Z(s) = \left(R_1,\ \infty,\ \infty,\ \infty,\ R_5,\ \frac{C_LL_LR_Ls^2+L_Ls+R_L}{C_LL_Ls^2+1}\right)$

$$H(s) = \frac{R_1R_5R_Lg_m - R_1R_L + s^2\left(C_LL_LR_1R_5R_Lg_m - C_LL_LR_1R_L\right) + s\left(L_LR_1R_5g_m - L_LR_1\right)}{R_1R_5g_m + 2R_1R_Lg_m + R_1 + R_5 + R_L + s^2\left(C_LL_LR_1R_5g_m + 2C_LL_LR_1R_Lg_m + C_LL_LR_1 + C_LL_LR_5 + C_LL_LR_L\right) + s\left(2L_LR_1g_m + L_L\right)}$$

Parameters:

Q: $\frac{\sqrt{C_L}R_1R_5g_m+2\sqrt{C_L}R_1R_Lg_m+\sqrt{C_L}R_1+\sqrt{C_L}R_5+\sqrt{C_L}R_L}{2\sqrt{L_L}R_1g_m+\sqrt{L_L}}$
wo: $\frac{1}{\sqrt{C_L}\sqrt{L_L}}$
bandwidth: $\frac{2\sqrt{L_L}R_1g_m+\sqrt{L_L}}{\sqrt{C_L}\sqrt{L_L}\left(\sqrt{C_L}R_1R_5g_m+2\sqrt{C_L}R_1R_Lg_m+\sqrt{C_L}R_1+\sqrt{C_L}R_5+\sqrt{C_L}R_L\right)}$
K-LP: $\frac{R_1R_5R_Lg_m-R_1R_L}{R_1R_5g_m+2R_1R_Lg_m+R_1+R_5+R_L}$
K-HP: $\frac{R_1R_5R_Lg_m-R_1R_L}{R_1R_5g_m+2R_1R_Lg_m+R_1+R_5+R_L}$
K-BP: $\frac{R_1R_5g_m-R_1}{2R_1g_m+1}$
Qz: $\frac{\sqrt{C_L}R_L}{\sqrt{L_L}}$
Wz: $\frac{1}{\sqrt{C_L}\sqrt{L_L}}$

5.3 GE-3 $Z(s) = \left(R_1,\ \infty,\ \infty,\ \infty,\ L_5s + \frac{1}{C_5s},\ R_L\right)$

$$H(s) = \frac{C_5L_5R_1R_Lg_ms^2 - C_5R_1R_Ls + R_1R_Lg_m}{R_1g_m + s^2\left(C_5L_5R_1g_m + C_5L_5\right) + s\left(2C_5R_1R_Lg_m + C_5R_1 + C_5R_L\right) + 1}$$

Parameters:

Q: $\frac{\sqrt{L_5}R_1g_m+\sqrt{L_5}}{2\sqrt{C_5}R_1R_Lg_m+\sqrt{C_5}R_1+\sqrt{C_5}R_L}$
wo: $\frac{1}{\sqrt{C_5}\sqrt{L_5}}$
bandwidth: $\frac{2\sqrt{C_5}R_1R_Lg_m+\sqrt{C_5}R_1+\sqrt{C_5}R_L}{\sqrt{C_5}\sqrt{L_5}\left(\sqrt{L_5}R_1g_m+\sqrt{L_5}\right)}$

K-LP: $\frac{R_1 R_L g_m}{R_1 g_m+1}$
K-HP: $\frac{R_1 R_L g_m}{R_1 g_m+1}$
K-BP: $-\frac{R_1 R_L}{2R_1 R_L g_m+R_1+R_L}$
Qz: $-\frac{\sqrt{L_5} g_m}{\sqrt{C_5}}$
Wz: $\frac{1}{\sqrt{C_5}\sqrt{L_5}}$

5.4 GE-4 $Z(s) = \left(R_1,\ \infty,\ \infty,\ \infty,\ \frac{L_5 s}{C_5 L_5 s^2+1},\ R_L\right)$

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

Parameters:

Q: $\frac{2\sqrt{C_5} R_1 R_L g_m+\sqrt{C_5} R_1+\sqrt{C_5} R_L}{\sqrt{L_5} R_1 g_m+\sqrt{L_5}}$
wo: $\frac{1}{\sqrt{C_5}\sqrt{L_5}}$
bandwidth: $\frac{\sqrt{L_5} R_1 g_m+\sqrt{L_5}}{\sqrt{C_5}\sqrt{L_5}\left(2\sqrt{C_5} R_1 R_L g_m+\sqrt{C_5} R_1+\sqrt{C_5} R_L\right)}$
K-LP: $-\frac{R_1 R_L}{2R_1 R_L g_m+R_1+R_L}$
K-HP: $-\frac{R_1 R_L}{2R_1 R_L g_m+R_1+R_L}$
K-BP: $\frac{R_1 R_L g_m}{R_1 g_m+1}$
Qz: $-\frac{\sqrt{C_5}}{\sqrt{L_5} g_m}$
Wz: $\frac{1}{\sqrt{C_5}\sqrt{L_5}}$

5.5 GE-5 $Z(s) = \left(R_1,\ \infty,\ \infty,\ \infty,\ L_5 s + R_5 + \frac{1}{C_5 s},\ R_L\right)$

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

Parameters:

Q: $\frac{\sqrt{L_5} R_1 g_m+\sqrt{L_5}}{\sqrt{C_5} R_1 R_5 g_m+2\sqrt{C_5} R_1 R_L g_m+\sqrt{C_5} R_1+\sqrt{C_5} R_5+\sqrt{C_5} R_L}$
wo: $\frac{1}{\sqrt{C_5}\sqrt{L_5}}$
bandwidth: $\frac{\sqrt{C_5} R_1 R_5 g_m+2\sqrt{C_5} R_1 R_L g_m+\sqrt{C_5} R_1+\sqrt{C_5} R_5+\sqrt{C_5} R_L}{\sqrt{C_5}\sqrt{L_5}\left(\sqrt{L_5} R_1 g_m+\sqrt{L_5}\right)}$
K-LP: $\frac{R_1 R_L g_m}{R_1 g_m+1}$
K-HP: $\frac{R_1 R_L g_m}{R_1 g_m+1}$
K-BP: $\frac{R_1 R_5 R_L g_m-R_1 R_L}{R_1 R_5 g_m+2R_1 R_L g_m+R_1+R_5+R_L}$
Qz: $\frac{\sqrt{L_5} g_m}{\sqrt{C_5} R_5 g_m-\sqrt{C_5}}$
Wz: $\frac{1}{\sqrt{C_5}\sqrt{L_5}}$

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

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

Parameters:

Q: $\frac{2\sqrt{C_5} R_1 R_5 R_L g_m+\sqrt{C_5} R_1 R_5+\sqrt{C_5} R_5 R_L}{\sqrt{L_5} R_1 R_5 g_m+2\sqrt{L_5} R_1 R_L g_m+\sqrt{L_5} R_1+\sqrt{L_5} R_5+\sqrt{L_5} R_L}$
wo: $\frac{1}{\sqrt{C_5}\sqrt{L_5}}$
bandwidth: $\frac{\sqrt{L_5} R_1 R_5 g_m+2\sqrt{L_5} R_1 R_L g_m+\sqrt{L_5} R_1+\sqrt{L_5} R_5+\sqrt{L_5} R_L}{\sqrt{C_5}\sqrt{L_5}\left(2\sqrt{C_5} R_1 R_5 R_L g_m+\sqrt{C_5} R_1 R_5+\sqrt{C_5} R_5 R_L\right)}$
K-LP: $-\frac{R_1 R_L}{2R_1 R_L g_m+R_1+R_L}$
K-HP: $-\frac{R_1 R_L}{2R_1 R_L g_m+R_1+R_L}$
K-BP: $\frac{R_1 R_5 R_L g_m-R_1 R_L}{R_1 R_5 g_m+2R_1 R_L g_m+R_1+R_5+R_L}$
Qz: $-\frac{\sqrt{C_5} R_5}{\sqrt{L_5} R_5 g_m-\sqrt{L_5}}$
Wz: $\frac{1}{\sqrt{C_5}\sqrt{L_5}}$

5.7 GE-7 $Z(s) = \left(R_1,\ \infty,\ \infty,\ \infty,\ \frac{C_5L_5R_5s^2+L_5s+R_5}{C_5L_5s^2+1},\ R_L\right)$

$$H(s) = \frac{L_5R_1R_Lg_ms + R_1R_5R_Lg_m - R_1R_L + s^2\left(C_5L_5R_1R_5R_Lg_m - C_5L_5R_1R_L\right)}{R_1R_5g_m + 2R_1R_Lg_m + R_1 + R_5 + R_L + s^2\left(C_5L_5R_1R_5g_m + 2C_5L_5R_1R_Lg_m + C_5L_5R_1 + C_5L_5R_5 + C_5L_5R_L\right) + s\left(L_5R_1g_m + L_5\right)}$$

Parameters:

Q: $\frac{\sqrt{C_5}R_1R_5g_m+2\sqrt{C_5}R_1R_Lg_m+\sqrt{C_5}R_1+\sqrt{C_5}R_5+\sqrt{C_5}R_L}{\sqrt{L_5}R_1g_m+\sqrt{L_5}}$
wo: $\frac{1}{\sqrt{C_5}\sqrt{L_5}}$
bandwidth: $\frac{\sqrt{L_5}R_1g_m+\sqrt{L_5}}{\sqrt{C_5}\sqrt{L_5}\left(\sqrt{C_5}R_1R_5g_m+2\sqrt{C_5}R_1R_Lg_m+\sqrt{C_5}R_1+\sqrt{C_5}R_5+\sqrt{C_5}R_L\right)}$
K-LP: $\frac{R_1R_5R_Lg_m-R_1R_L}{R_1R_5g_m+2R_1R_Lg_m+R_1+R_5+R_L}$
K-HP: $\frac{R_1R_5R_Lg_m-R_1R_L}{R_1R_5g_m+2R_1R_Lg_m+R_1+R_5+R_L}$
K-BP: $\frac{R_1R_Lg_m}{R_1g_m+1}$
Qz: $\frac{\sqrt{C_5}R_5g_m-\sqrt{C_5}}{\sqrt{L_5}g_m}$
Wz: $\frac{1}{\sqrt{C_5}\sqrt{L_5}}$

5.8 GE-8 $Z(s) = \left(R_1,\ \infty,\ \infty,\ \infty,\ \frac{R_5\left(C_5L_5s^2+1\right)}{C_5L_5s^2+C_5R_5s+1},\ R_L\right)$

$$H(s) = \frac{-C_5R_1R_5R_Ls + R_1R_5R_Lg_m - R_1R_L + s^2\left(C_5L_5R_1R_5R_Lg_m - C_5L_5R_1R_L\right)}{R_1R_5g_m + 2R_1R_Lg_m + R_1 + R_5 + R_L + s^2\left(C_5L_5R_1R_5g_m + 2C_5L_5R_1R_Lg_m + C_5L_5R_1 + C_5L_5R_5 + C_5L_5R_L\right) + s\left(2C_5R_1R_5R_Lg_m + C_5R_1R_5 + C_5R_5R_L\right)}$$

Parameters:

Q: $\frac{\sqrt{L_5}R_1R_5g_m+2\sqrt{L_5}R_1R_Lg_m+\sqrt{L_5}R_1+\sqrt{L_5}R_5+\sqrt{L_5}R_L}{2\sqrt{C_5}R_1R_5R_Lg_m+\sqrt{C_5}R_1R_5+\sqrt{C_5}R_5R_L}$
wo: $\frac{1}{\sqrt{C_5}\sqrt{L_5}}$
bandwidth: $\frac{2\sqrt{C_5}R_1R_5R_Lg_m+\sqrt{C_5}R_1R_5+\sqrt{C_5}R_5R_L}{\sqrt{C_5}\sqrt{L_5}\left(\sqrt{L_5}R_1R_5g_m+2\sqrt{L_5}R_1R_Lg_m+\sqrt{L_5}R_1+\sqrt{L_5}R_5+\sqrt{L_5}R_L\right)}$
K-LP: $\frac{R_1R_5R_Lg_m-R_1R_L}{R_1R_5g_m+2R_1R_Lg_m+R_1+R_5+R_L}$
K-HP: $\frac{R_1R_5R_Lg_m-R_1R_L}{R_1R_5g_m+2R_1R_Lg_m+R_1+R_5+R_L}$
K-BP: $-\frac{R_1R_L}{2R_1R_Lg_m+R_1+R_L}$
Qz: $\frac{-\sqrt{L_5}R_5g_m+\sqrt{L_5}}{\sqrt{C_5}R_5}$
Wz: $\frac{1}{\sqrt{C_5}\sqrt{L_5}}$

5.9 GE-9 $Z(s) = \left(L_1s + R_1 + \frac{1}{C_1s},\ \infty,\ \infty,\ \infty,\ R_5,\ R_L\right)$

$$H(s) = \frac{R_5R_Lg_m - R_L + s^2\left(C_1L_1R_5R_Lg_m - C_1L_1R_L\right) + s\left(C_1R_1R_5R_Lg_m - C_1R_1R_L\right)}{R_5g_m + 2R_Lg_m + s^2\left(C_1L_1R_5g_m + 2C_1L_1R_Lg_m + C_1L_1\right) + s\left(C_1R_1R_5g_m + 2C_1R_1R_Lg_m + C_1R_1 + C_1R_5 + C_1R_L\right) + 1}$$

Parameters:

Q: $\frac{\sqrt{L_1}R_5g_m+2\sqrt{L_1}R_Lg_m+\sqrt{L_1}}{\sqrt{C_1}R_1R_5g_m+2\sqrt{C_1}R_1R_Lg_m+\sqrt{C_1}R_1+\sqrt{C_1}R_5+\sqrt{C_1}R_L}$
wo: $\frac{1}{\sqrt{C_1}\sqrt{L_1}}$
bandwidth: $\frac{\sqrt{C_1}R_1R_5g_m+2\sqrt{C_1}R_1R_Lg_m+\sqrt{C_1}R_1+\sqrt{C_1}R_5+\sqrt{C_1}R_L}{\sqrt{C_1}\sqrt{L_1}\left(\sqrt{L_1}R_5g_m+2\sqrt{L_1}R_Lg_m+\sqrt{L_1}\right)}$
K-LP: $\frac{R_5R_Lg_m-R_L}{R_5g_m+2R_Lg_m+1}$
K-HP: $\frac{R_5R_Lg_m-R_L}{R_5g_m+2R_Lg_m+1}$
K-BP: $\frac{R_1R_5R_Lg_m-R_1R_L}{R_1R_5g_m+2R_1R_Lg_m+R_1+R_5+R_L}$
Qz: $\frac{\sqrt{L_1}}{\sqrt{C_1}R_1}$
Wz: $\frac{1}{\sqrt{C_1}\sqrt{L_1}}$

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

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

Parameters:

Q: $\frac{\sqrt{C_1} R_1 R_5 g_m + 2\sqrt{C_1} R_1 R_L g_m + \sqrt{C_1} R_1 + \sqrt{C_1} R_5 + \sqrt{C_1} R_L}{\sqrt{L_1} R_5 g_m + 2\sqrt{L_1} R_L g_m + \sqrt{L_1}}$
wo: $\frac{1}{\sqrt{C_1}\sqrt{L_1}}$
bandwidth: $\frac{\sqrt{L_1} R_5 g_m + 2\sqrt{L_1} R_L g_m + \sqrt{L_1}}{\sqrt{C_1}\sqrt{L_1}\left(\sqrt{C_1} R_1 R_5 g_m + 2\sqrt{C_1} R_1 R_L g_m + \sqrt{C_1} R_1 + \sqrt{C_1} R_5 + \sqrt{C_1} R_L\right)}$
K-LP: $\frac{R_1 R_5 R_L g_m - R_1 R_L}{R_1 R_5 g_m + 2 R_1 R_L g_m + R_1 + R_5 + R_L}$
K-HP: $\frac{R_1 R_5 R_L g_m - R_1 R_L}{R_1 R_5 g_m + 2 R_1 R_L g_m + R_1 + R_5 + R_L}$
K-BP: $\frac{R_5 R_L g_m - R_L}{R_5 g_m + 2 R_L g_m + 1}$
Qz: $\frac{\sqrt{C_1} R_1}{\sqrt{L_1}}$
Wz: $\frac{1}{\sqrt{C_1}\sqrt{L_1}}$

6 HP

7 LP

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

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

Parameters:

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

7.2 LP-2 $Z(s) = \left(\frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ R_5,\ \frac{R_L}{C_L R_L s + 1}\right)$

$$H(s) = \frac{R_5 R_L g_m - R_L}{C_1 C_L R_5 R_L s^2 + R_5 g_m + 2 R_L g_m + s \left(C_1 R_5 + C_1 R_L + C_L R_5 R_L g_m + C_L R_L\right) + 1}$$

Parameters:

Q: $\frac{\sqrt{C_1}\sqrt{C_L}\sqrt{R_5}\sqrt{R_L}\sqrt{R_5 g_m + 2 R_L g_m + 1}}{C_1 R_5 + C_1 R_L + C_L R_5 R_L g_m + C_L R_L}$
wo: $\frac{\sqrt{R_5 g_m + 2 R_L g_m + 1}}{\sqrt{C_1}\sqrt{C_L}\sqrt{R_5}\sqrt{R_L}}$
bandwidth: $\frac{C_1 R_5 + C_1 R_L + C_L R_5 R_L g_m + C_L R_L}{C_1 C_L R_5 R_L}$
K-LP: $\frac{R_5 R_L g_m - R_L}{R_5 g_m + 2 R_L g_m + 1}$
K-HP: 0
K-BP: 0
Qz: None
Wz: None

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

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

Parameters:

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

7.4 LP-4 $Z(s) = \left(\frac{R_1}{C_1 R_1 s+1},\ \infty,\ \infty,\ \infty,\ R_5,\ \frac{R_L}{C_L R_L s+1}\right)$

$$H(s) = \frac{R_1 R_5 R_L g_m - R_1 R_L}{C_1 C_L R_1 R_5 R_L s^2 + R_1 R_5 g_m + 2R_1 R_L g_m + R_1 + R_5 + R_L + s\left(C_1 R_1 R_5 + C_1 R_1 R_L + C_L R_1 R_5 R_L g_m + C_L R_1 R_L + C_L R_5 R_L\right)}$$

Parameters:

Q: $\frac{\sqrt{C_1}\sqrt{C_L}\sqrt{R_1}\sqrt{R_5}\sqrt{R_L}\sqrt{R_1 R_5 g_m+2R_1 R_L g_m+R_1+R_5+R_L}}{C_1 R_1 R_5+C_1 R_1 R_L+C_L R_1 R_5 R_L g_m+C_L R_1 R_L+C_L R_5 R_L}$
wo: $\frac{\sqrt{R_1 R_5 g_m+2R_1 R_L g_m+R_1+R_5+R_L}}{\sqrt{C_1}\sqrt{C_L}\sqrt{R_1}\sqrt{R_5}\sqrt{R_L}}$
bandwidth: $\frac{C_1 R_1 R_5+C_1 R_1 R_L+C_L R_1 R_5 R_L g_m+C_L R_1 R_L+C_L R_5 R_L}{C_1 C_L R_1 R_5 R_L}$
K-LP: $\frac{R_1 R_5 R_L g_m-R_1 R_L}{R_1 R_5 g_m+2R_1 R_L g_m+R_1+R_5+R_L}$
K-HP: 0
K-BP: 0
Qz: None
Wz: None

8 X-INVALID-NUMER

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

$$H(s) = \frac{-C_5 R_1 R_L s + R_1 R_L g_m}{C_5 C_L R_1 R_L s^2 + R_1 g_m + s\left(2C_5 R_1 R_L g_m + C_5 R_1 + C_5 R_L + C_L R_1 R_L g_m + C_L R_L\right) + 1}$$

Parameters:

Q: $\frac{\sqrt{C_5}\sqrt{C_L}\sqrt{R_1}\sqrt{R_L}\sqrt{R_1 g_m+1}}{2C_5 R_1 R_L g_m+C_5 R_1+C_5 R_L+C_L R_1 R_L g_m+C_L R_L}$
wo: $\frac{\sqrt{R_1 g_m+1}}{\sqrt{C_5}\sqrt{C_L}\sqrt{R_1}\sqrt{R_L}}$
bandwidth: $\frac{2C_5 R_1 R_L g_m+C_5 R_1+C_5 R_L+C_L R_1 R_L g_m+C_L R_L}{C_5 C_L R_1 R_L}$
K-LP: $\frac{R_1 R_L g_m}{R_1 g_m+1}$
K-HP: 0
K-BP: $-\frac{C_5 R_1 R_L}{2C_5 R_1 R_L g_m+C_5 R_1+C_5 R_L+C_L R_1 R_L g_m+C_L R_L}$
Qz: None
Wz: None

8.2 X-INVALID-NUMER-2 $Z(s) = \left(R_1,\ \infty,\ \infty,\ \infty,\ \frac{R_5}{C_5 R_5 s+1},\ \frac{1}{C_L s}\right)$

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

Parameters:

Q: $\frac{\sqrt{C_5}\sqrt{C_L}\sqrt{R_1}\sqrt{R_5}\sqrt{2R_1g_m+1}}{2C_5R_1R_5g_m+C_5R_5+C_LR_1R_5g_m+C_LR_1+C_LR_5}$
wo: $\frac{\sqrt{2R_1g_m+1}}{\sqrt{C_5}\sqrt{C_L}\sqrt{R_1}\sqrt{R_5}}$
bandwidth: $\frac{2C_5R_1R_5g_m+C_5R_5+C_LR_1R_5g_m+C_LR_1+C_LR_5}{C_5C_LR_1R_5}$
K-LP: $\frac{R_1R_5g_m-R_1}{2R_1g_m+1}$
K-HP: 0
K-BP: $-\frac{C_5R_1R_5}{2C_5R_1R_5g_m+C_5R_5+C_LR_1R_5g_m+C_LR_1+C_LR_5}$
Qz: None
Wz: None

8.3 X-INVALID-NUMER-3 $Z(s) = \left(R_1,\ \infty,\ \infty,\ \infty,\ \frac{R_5}{C_5R_5s+1},\ \frac{R_L}{C_LR_Ls+1}\right)$

$$H(s) = \frac{-C_5R_1R_5R_Ls + R_1R_5R_Lg_m - R_1R_L}{C_5C_LR_1R_5R_Ls^2 + R_1R_5g_m + 2R_1R_Lg_m + R_1 + R_5 + R_L + s\left(2C_5R_1R_5R_Lg_m + C_5R_1R_5 + C_5R_5R_L + C_LR_1R_5R_Lg_m + C_LR_1R_L + C_LR_5R_L\right)}$$

Parameters:

Q: $\frac{\sqrt{C_5}\sqrt{C_L}\sqrt{R_1}\sqrt{R_5}\sqrt{R_L}\sqrt{R_1R_5g_m+2R_1R_Lg_m+R_1+R_5+R_L}}{2C_5R_1R_5R_Lg_m+C_5R_1R_5+C_5R_5R_L+C_LR_1R_5R_Lg_m+C_LR_1R_L+C_LR_5R_L}$
wo: $\frac{\sqrt{R_1R_5g_m+2R_1R_Lg_m+R_1+R_5+R_L}}{\sqrt{C_5}\sqrt{C_L}\sqrt{R_1}\sqrt{R_5}\sqrt{R_L}}$
bandwidth: $\frac{2C_5R_1R_5R_Lg_m+C_5R_1R_5+C_5R_5R_L+C_LR_1R_5R_Lg_m+C_LR_1R_L+C_LR_5R_L}{C_5C_LR_1R_5R_L}$
K-LP: $\frac{R_1R_5R_Lg_m-R_1R_L}{R_1R_5g_m+2R_1R_Lg_m+R_1+R_5+R_L}$
K-HP: 0
K-BP: $-\frac{C_5R_1R_5R_L}{2C_5R_1R_5R_Lg_m+C_5R_1R_5+C_5R_5R_L+C_LR_1R_5R_Lg_m+C_LR_1R_L+C_LR_5R_L}$
Qz: None
Wz: None

8.4 X-INVALID-NUMER-4 $Z(s) = \left(R_1,\ \infty,\ \infty,\ \infty,\ R_5+\frac{1}{C_5s},\ \frac{R_L}{C_LR_Ls+1}\right)$

$$H(s) = \frac{R_1R_Lg_m + s\left(C_5R_1R_5R_Lg_m - C_5R_1R_L\right)}{R_1g_m + s^2\left(C_5C_LR_1R_5R_Lg_m + C_5C_LR_1R_L + C_5C_LR_5R_L\right) + s\left(C_5R_1R_5g_m + 2C_5R_1R_Lg_m + C_5R_1 + C_5R_5 + C_5R_L + C_LR_1R_Lg_m + C_LR_L\right) + 1}$$

Parameters:

Q: $\frac{\sqrt{C_5}\sqrt{C_L}R_1R_5\sqrt{R_L}g_m\sqrt{\frac{R_1g_m}{R_1R_5g_m+R_1+R_5}+\frac{1}{R_1R_5g_m+R_1+R_5}}+\sqrt{C_5}\sqrt{C_L}R_1\sqrt{R_L}\sqrt{\frac{R_1g_m}{R_1R_5g_m+R_1+R_5}+\frac{1}{R_1R_5g_m+R_1+R_5}}+\sqrt{C_5}\sqrt{C_L}R_5\sqrt{R_L}\sqrt{\frac{R_1g_m}{R_1R_5g_m+R_1+R_5}+\frac{1}{R_1R_5g_m+R_1+R_5}}}{C_5R_1R_5g_m+2C_5R_1R_Lg_m+C_5R_1+C_5R_5+C_5R_L+C_LR_1R_Lg_m+C_LR_L}$
wo: $\sqrt{\frac{R_1g_m+1}{C_5C_LR_1R_5R_Lg_m+C_5C_LR_1R_L+C_5C_LR_5R_L}}$
bandwidth: $\frac{\sqrt{\frac{R_1g_m+1}{C_5C_LR_1R_5R_Lg_m+C_5C_LR_1R_L+C_5C_LR_5R_L}}\left(C_5R_1R_5g_m+2C_5R_1R_Lg_m+C_5R_1+C_5R_5+C_5R_L+C_LR_1R_Lg_m+C_LR_L\right)}{\sqrt{C_5}\sqrt{C_L}R_1R_5\sqrt{R_L}g_m\sqrt{\frac{R_1g_m}{R_1R_5g_m+R_1+R_5}+\frac{1}{R_1R_5g_m+R_1+R_5}}+\sqrt{C_5}\sqrt{C_L}R_1\sqrt{R_L}\sqrt{\frac{R_1g_m}{R_1R_5g_m+R_1+R_5}+\frac{1}{R_1R_5g_m+R_1+R_5}}+\sqrt{C_5}\sqrt{C_L}R_5\sqrt{R_L}\sqrt{\frac{R_1g_m}{R_1R_5g_m+R_1+R_5}+\frac{1}{R_1R_5g_m+R_1+R_5}}}$
K-LP: $\frac{R_1R_Lg_m}{R_1g_m+1}$
K-HP: 0
K-BP: $\frac{C_5R_1R_5R_Lg_m-C_5R_1R_L}{C_5R_1R_5g_m+2C_5R_1R_Lg_m+C_5R_1+C_5R_5+C_5R_L+C_LR_1R_Lg_m+C_LR_L}$
Qz: None
Wz: None

8.5 X-INVALID-NUMER-5 $Z(s) = \left(L_1s,\ \infty,\ \infty,\ \infty,\ R_5,\ R_L+\frac{1}{C_Ls}\right)$

$$H(s) = \frac{s^2\left(C_LL_1R_5R_Lg_m - C_LL_1R_L\right) + s\left(L_1R_5g_m - L_1\right)}{s^2\left(C_LL_1R_5g_m + 2C_LL_1R_Lg_m + C_LL_1\right) + s\left(C_LR_5 + C_LR_L + 2L_1g_m\right) + 1}$$

Parameters:

Q: $\frac{\sqrt{C_L}\sqrt{L_1}R_5g_m\sqrt{\frac{1}{R_5g_m+2R_Lg_m+1}}+2\sqrt{C_L}\sqrt{L_1}R_Lg_m\sqrt{\frac{1}{R_5g_m+2R_Lg_m+1}}+\sqrt{C_L}\sqrt{L_1}\sqrt{\frac{1}{R_5g_m+2R_Lg_m+1}}}{C_LR_5+C_LR_L+2L_1g_m}$
wo: $\sqrt{\frac{1}{C_LL_1R_5g_m+2C_LL_1R_Lg_m+C_LL_1}}$
bandwidth: $\frac{\left(C_LR_5+C_LR_L+2L_1g_m\right)\sqrt{\frac{1}{C_LL_1R_5g_m+2C_LL_1R_Lg_m+C_LL_1}}}{\sqrt{C_L}\sqrt{L_1}R_5g_m\sqrt{\frac{1}{R_5g_m+2R_Lg_m+1}}+2\sqrt{C_L}\sqrt{L_1}R_Lg_m\sqrt{\frac{1}{R_5g_m+2R_Lg_m+1}}+\sqrt{C_L}\sqrt{L_1}\sqrt{\frac{1}{R_5g_m+2R_Lg_m+1}}}$
K-LP: 0
K-HP: $\frac{R_5R_Lg_m-R_L}{R_5g_m+2R_Lg_m+1}$
K-BP: $\frac{L_1R_5g_m-L_1}{C_LR_5+C_LR_L+2L_1g_m}$

Qz: None
Wz: None

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

$$H(s) = \frac{-C_5 L_1 R_L s^2 + L_1 R_L g_m s}{s^2 \left(2C_5 L_1 R_L g_m + C_5 L_1\right) + s\left(C_5 R_L + L_1 g_m\right) + 1}$$

Parameters:

Q: $\frac{2\sqrt{C_5}\sqrt{L_1}R_L g_m\sqrt{\frac{1}{2R_L g_m+1}}+\sqrt{C_5}\sqrt{L_1}\sqrt{\frac{1}{2R_L g_m+1}}}{C_5 R_L+L_1 g_m}$
wo: $\sqrt{\frac{1}{2C_5 L_1 R_L g_m+C_5 L_1}}$
bandwidth: $\frac{(C_5 R_L+L_1 g_m)\sqrt{\frac{1}{2C_5 L_1 R_L g_m+C_5 L_1}}}{2\sqrt{C_5}\sqrt{L_1}R_L g_m\sqrt{\frac{1}{2R_L g_m+1}}+\sqrt{C_5}\sqrt{L_1}\sqrt{\frac{1}{2R_L g_m+1}}}$
K-LP: 0
K-HP: $-\frac{R_L}{2R_L g_m+1}$
K-BP: $\frac{L_1 R_L g_m}{C_5 R_L+L_1 g_m}$
Qz: None
Wz: None

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

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

Parameters:

Q: $\frac{\sqrt{C_5}\sqrt{C_L}\sqrt{C_5+C_L}}{2C_5\sqrt{L_1}g_m+C_L\sqrt{L_1}g_m}$
wo: $\frac{\sqrt{C_5+C_L}}{\sqrt{C_5}\sqrt{C_L}\sqrt{L_1}}$
bandwidth: $\frac{2C_5\sqrt{L_1}g_m+C_L\sqrt{L_1}g_m}{C_5 C_L\sqrt{L_1}}$
K-LP: $\frac{L_1 g_m}{C_5+C_L}$
K-HP: 0
K-BP: $-\frac{C_5}{2C_5 g_m+C_L g_m}$
Qz: None
Wz: None

8.8 X-INVALID-NUMER-8 $Z(s) = \left(L_1 s,\ \infty,\ \infty,\ \infty,\ \frac{R_5}{C_5 R_5 s+1},\ R_L\right)$

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

Parameters:

Q: $\frac{2\sqrt{C_5}\sqrt{L_1}\sqrt{R_5}R_L g_m\sqrt{R_5+R_L}\sqrt{\frac{1}{2R_L g_m+1}}+\sqrt{C_5}\sqrt{L_1}\sqrt{R_5}\sqrt{R_5+R_L}\sqrt{\frac{1}{2R_L g_m+1}}}{C_5 R_5 R_L+L_1 R_5 g_m+2L_1 R_L g_m+L_1}$
wo: $\sqrt{R_5+R_L}\sqrt{\frac{1}{2C_5 L_1 R_5 R_L g_m+C_5 L_1 R_5}}$
bandwidth: $\frac{\sqrt{R_5+R_L}(C_5 R_5 R_L+L_1 R_5 g_m+2L_1 R_L g_m+L_1)\sqrt{\frac{1}{2C_5 L_1 R_5 R_L g_m+C_5 L_1 R_5}}}{2\sqrt{C_5}\sqrt{L_1}\sqrt{R_5}R_L g_m\sqrt{R_5+R_L}\sqrt{\frac{1}{2R_L g_m+1}}+\sqrt{C_5}\sqrt{L_1}\sqrt{R_5}\sqrt{R_5+R_L}\sqrt{\frac{1}{2R_L g_m+1}}}$
K-LP: 0
K-HP: $-\frac{R_L}{2R_L g_m+1}$
K-BP: $\frac{L_1 R_5 R_L g_m-L_1 R_L}{C_5 R_5 R_L+L_1 R_5 g_m+2L_1 R_L g_m+L_1}$
Qz: None
Wz: None

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

$$H(s) = \frac{L_1 R_L g_m s + s^2 \left(C_5 L_1 R_5 R_L g_m - C_5 L_1 R_L\right)}{s^2 \left(C_5 L_1 R_5 g_m + 2 C_5 L_1 R_L g_m + C_5 L_1\right) + s \left(C_5 R_5 + C_5 R_L + L_1 g_m\right) + 1}$$

Parameters:

Q: $\frac{\sqrt{C_5}\sqrt{L_1}R_5 g_m \sqrt{\frac{1}{R_5 g_m + 2R_L g_m + 1}} + 2\sqrt{C_5}\sqrt{L_1}R_L g_m \sqrt{\frac{1}{R_5 g_m + 2R_L g_m + 1}} + \sqrt{C_5}\sqrt{L_1}\sqrt{\frac{1}{R_5 g_m + 2R_L g_m + 1}}}{C_5 R_5 + C_5 R_L + L_1 g_m}$
wo: $\sqrt{\frac{1}{C_5 L_1 R_5 g_m + 2C_5 L_1 R_L g_m + C_5 L_1}}$
bandwidth: $\frac{(C_5 R_5 + C_5 R_L + L_1 g_m)\sqrt{\frac{1}{C_5 L_1 R_5 g_m + 2C_5 L_1 R_L g_m + C_5 L_1}}}{\sqrt{C_5}\sqrt{L_1}R_5 g_m \sqrt{\frac{1}{R_5 g_m + 2R_L g_m + 1}} + 2\sqrt{C_5}\sqrt{L_1}R_L g_m \sqrt{\frac{1}{R_5 g_m + 2R_L g_m + 1}} + \sqrt{C_5}\sqrt{L_1}\sqrt{\frac{1}{R_5 g_m + 2R_L g_m + 1}}}$
K-LP: 0
K-HP: $\frac{R_5 R_L g_m - R_L}{R_5 g_m + 2R_L g_m + 1}$
K-BP: $\frac{L_1 R_L g_m}{C_5 R_5 + C_5 R_L + L_1 g_m}$
Qz: None
Wz: None

8.10 X-INVALID-NUMER-10 $Z(s) = \left(L_1 s,\ \infty,\ \infty,\ \infty,\ R_5 + \frac{1}{C_5 s},\ \frac{1}{C_L s}\right)$

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

Parameters:

Q: $\frac{\sqrt{C_5}\sqrt{C_L}\sqrt{L_1}R_5 g_m \sqrt{C_5 + C_L}\sqrt{\frac{1}{R_5 g_m + 1}} + \sqrt{C_5}\sqrt{C_L}\sqrt{L_1}\sqrt{C_5 + C_L}\sqrt{\frac{1}{R_5 g_m + 1}}}{C_5 C_L R_5 + 2C_5 L_1 g_m + C_L L_1 g_m}$
wo: $\sqrt{C_5 + C_L}\sqrt{\frac{1}{C_5 C_L L_1 R_5 g_m + C_5 C_L L_1}}$
bandwidth: $\frac{\sqrt{C_5 + C_L}(C_5 C_L R_5 + 2C_5 L_1 g_m + C_L L_1 g_m)\sqrt{\frac{1}{C_5 C_L L_1 R_5 g_m + C_5 C_L L_1}}}{\sqrt{C_5}\sqrt{C_L}\sqrt{L_1}R_5 g_m \sqrt{C_5 + C_L}\sqrt{\frac{1}{R_5 g_m + 1}} + \sqrt{C_5}\sqrt{C_L}\sqrt{L_1}\sqrt{C_5 + C_L}\sqrt{\frac{1}{R_5 g_m + 1}}}$
K-LP: $\frac{L_1 g_m}{C_5 + C_L}$
K-HP: 0
K-BP: $\frac{C_5 L_1 R_5 g_m - C_5 L_1}{C_5 C_L R_5 + 2C_5 L_1 g_m + C_L L_1 g_m}$
Qz: None
Wz: None

8.11 X-INVALID-NUMER-11 $Z(s) = \left(\frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ R_5,\ R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{R_5 g_m + s \left(C_L R_5 R_L g_m - C_L R_L\right) - 1}{2 g_m + s^2 \left(C_1 C_L R_5 + C_1 C_L R_L\right) + s \left(C_1 + C_L R_5 g_m + 2 C_L R_L g_m + C_L\right)}$$

Parameters:

Q: $\frac{\sqrt{2}\sqrt{C_1}\sqrt{C_L}\sqrt{g_m}\sqrt{R_5 + R_L}}{C_1 + C_L R_5 g_m + 2C_L R_L g_m + C_L}$
wo: $\frac{\sqrt{2}\sqrt{g_m}}{\sqrt{C_1 C_L R_5 + C_1 C_L R_L}}$
bandwidth: $\frac{C_1 + C_L R_5 g_m + 2C_L R_L g_m + C_L}{\sqrt{C_1}\sqrt{C_L}\sqrt{R_5 + R_L}\sqrt{C_1 C_L R_5 + C_1 C_L R_L}}$
K-LP: $\frac{R_5 g_m - 1}{2 g_m}$
K-HP: 0
K-BP: $\frac{C_L R_5 R_L g_m - C_L R_L}{C_1 + C_L R_5 g_m + 2C_L R_L g_m + C_L}$
Qz: None
Wz: None

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

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

Parameters:

Q: $\frac{\sqrt{C_1}\sqrt{C_5}\sqrt{R_L}\sqrt{g_m}}{C_1+2C_5R_Lg_m+C_5}$
wo: $\frac{\sqrt{g_m}}{\sqrt{C_1}\sqrt{C_5}\sqrt{R_L}}$
bandwidth: $\frac{C_1+2C_5R_Lg_m+C_5}{C_1C_5R_L}$
K-LP: R_L
K-HP: 0
K-BP: $-\frac{C_5R_L}{C_1+2C_5R_Lg_m+C_5}$
Qz: None
Wz: None

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

$$H(s) = \frac{-C_5R_Ls + R_Lg_m}{g_m + s^2\left(C_1C_5R_L + C_1C_LR_L + C_5C_LR_L\right) + s\left(C_1 + 2C_5R_Lg_m + C_5 + C_LR_Lg_m\right)}$$

Parameters:

Q: $\frac{\sqrt{R_L}\sqrt{g_m}\sqrt{C_1C_5+C_1C_L+C_5C_L}}{C_1+2C_5R_Lg_m+C_5+C_LR_Lg_m}$
wo: $\frac{\sqrt{g_m}}{\sqrt{C_1C_5R_L+C_1C_LR_L+C_5C_LR_L}}$
bandwidth: $\frac{C_1+2C_5R_Lg_m+C_5+C_LR_Lg_m}{\sqrt{R_L}\sqrt{C_1C_5+C_1C_L+C_5C_L}\sqrt{C_1C_5R_L+C_1C_LR_L+C_5C_LR_L}}$
K-LP: R_L
K-HP: 0
K-BP: $-\frac{C_5R_L}{C_1+2C_5R_Lg_m+C_5+C_LR_Lg_m}$
Qz: None
Wz: None

8.14 X-INVALID-NUMER-14 $Z(s) = \left(\frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{R_5}{C_5R_5s+1},\ R_L\right)$

$$H(s) = \frac{-C_5R_5R_Ls + R_5R_Lg_m - R_L}{C_1C_5R_5R_Ls^2 + R_5g_m + 2R_Lg_m + s\left(C_1R_5 + C_1R_L + 2C_5R_5R_Lg_m + C_5R_5\right) + 1}$$

Parameters:

Q: $\frac{\sqrt{C_1}\sqrt{C_5}\sqrt{R_5}\sqrt{R_L}\sqrt{R_5g_m+2R_Lg_m+1}}{C_1R_5+C_1R_L+2C_5R_5R_Lg_m+C_5R_5}$
wo: $\frac{\sqrt{R_5g_m+2R_Lg_m+1}}{\sqrt{C_1}\sqrt{C_5}\sqrt{R_5}\sqrt{R_L}}$
bandwidth: $\frac{C_1R_5+C_1R_L+2C_5R_5R_Lg_m+C_5R_5}{C_1C_5R_5R_L}$
K-LP: $\frac{R_5R_Lg_m-R_L}{R_5g_m+2R_Lg_m+1}$
K-HP: 0
K-BP: $-\frac{C_5R_5R_L}{C_1R_5+C_1R_L+2C_5R_5R_Lg_m+C_5R_5}$
Qz: None
Wz: None

8.15 X-INVALID-NUMER-15 $Z(s) = \left(\frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{R_5}{C_5R_5s+1},\ \frac{1}{C_L s}\right)$

$$H(s) = \frac{-C_5R_5s + R_5g_m - 1}{2g_m + s^2\left(C_1C_5R_5 + C_1C_LR_5 + C_5C_LR_5\right) + s\left(C_1 + 2C_5R_5g_m + C_LR_5g_m + C_L\right)}$$

Parameters:

Q: $\frac{\sqrt{2}\sqrt{R_5}\sqrt{g_m}\sqrt{C_1C_5+C_1C_L+C_5C_L}}{C_1+2C_5R_5g_m+C_LR_5g_m+C_L}$
wo: $\frac{\sqrt{2}\sqrt{g_m}}{\sqrt{C_1C_5R_5+C_1C_LR_5+C_5C_LR_5}}$
bandwidth: $\frac{C_1+2C_5R_5g_m+C_LR_5g_m+C_L}{\sqrt{R_5}\sqrt{C_1C_5+C_1C_L+C_5C_L}\sqrt{C_1C_5R_5+C_1C_LR_5+C_5C_LR_5}}$
K-LP: $\frac{R_5g_m-1}{2g_m}$
K-HP: 0
K-BP: $-\frac{C_5R_5}{C_1+2C_5R_5g_m+C_LR_5g_m+C_L}$
Qz: None
Wz: None

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

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

Parameters:

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

8.17 X-INVALID-NUMER-17 $Z(s) = \left(\frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ R_5 + \frac{1}{C_5 s},\ R_L\right)$

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

Parameters:

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

8.18 X-INVALID-NUMER-18 $Z(s) = \left(\frac{R_1}{C_1 R_1 s+1},\ \infty,\ \infty,\ \infty,\ R_5,\ R_L + \frac{1}{C_L s}\right)$

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

Parameters:

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

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

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

Parameters:

Q: $\frac{\sqrt{C_1}\sqrt{C_5}\sqrt{R_1}\sqrt{R_L}\sqrt{R_1 g_m + 1}}{C_1 R_1 + 2C_5 R_1 R_L g_m + C_5 R_1 + C_5 R_L}$
wo: $\frac{\sqrt{R_1 g_m + 1}}{\sqrt{C_1}\sqrt{C_5}\sqrt{R_1}\sqrt{R_L}}$
bandwidth: $\frac{C_1 R_1 + 2C_5 R_1 R_L g_m + C_5 R_1 + C_5 R_L}{C_1 C_5 R_1 R_L}$

K-LP: $\frac{R_1 R_L g_m}{R_1 g_m+1}$
K-HP: 0
K-BP: $-\frac{C_5 R_1 R_L}{C_1 R_1+2C_5 R_1 R_L g_m+C_5 R_1+C_5 R_L}$
Qz: None
Wz: None

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

$$H(s) = \frac{-C_5 R_1 R_L s + R_1 R_L g_m}{R_1 g_m + s^2 \left(C_1 C_5 R_1 R_L + C_1 C_L R_1 R_L + C_5 C_L R_1 R_L\right) + s \left(C_1 R_1 + 2C_5 R_1 R_L g_m + C_5 R_1 + C_5 R_L + C_L R_1 R_L g_m + C_L R_L\right) + 1}$$

Parameters:

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

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

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

Parameters:

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

8.22 X-INVALID-NUMER-22 $Z(s) = \left(\frac{R_1}{C_1 R_1 s+1},\ \infty,\ \infty,\ \infty,\ \frac{R_5}{C_5 R_5 s+1},\ \frac{1}{C_L s}\right)$

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

Parameters:

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

8.23 X-INVALID-NUMER-23 $Z(s) = \left(\frac{R_1}{C_1 R_1 s+1},\ \infty,\ \infty,\ \infty,\ \frac{R_5}{C_5 R_5 s+1},\ \frac{R_L}{C_L R_L s+1}\right)$

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

Parameters:

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

8.24 X-INVALID-NUMER-24 $Z(s) = \left(\frac{R_1}{C_1 R_1 s+1},\ \infty,\ \infty,\ \infty,\ R_5 + \frac{1}{C_5 s},\ R_L\right)$

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

Parameters:

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

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

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

Parameters:

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

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

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

Parameters:

Q: $\frac{\sqrt{C_1}\sqrt{C_L}R_1 R_5\sqrt{R_L}g_m\sqrt{\frac{R_5 g_m}{R_1 R_5 g_m + R_1 + R_5} + \frac{2R_L g_m}{R_1 R_5 g_m + R_1 + R_5} + \frac{1}{R_1 R_5 g_m + R_1 + R_5}} + \sqrt{C_1}\sqrt{C_L}R_1\sqrt{R_L}\sqrt{\frac{R_5 g_m}{R_1 R_5 g_m + R_1 + R_5} + \frac{2R_L g_m}{R_1 R_5 g_m + R_1 + R_5} + \frac{1}{R_1 R_5 g_m + R_1 + R_5}} + \sqrt{C_1}\sqrt{C_L}R_5\sqrt{R_L}\sqrt{\frac{R_5 g_m}{R_1 R_5 g_m + R_1 + R_5} + \frac{2R_L g_m}{R_1 R_5 g_m + R_1 + R_5} + \frac{1}{R_1 R_5 g_m + R_1 + R_5}}}{C_1 R_1 R_5 g_m + 2C_1 R_1 R_L g_m + C_1 R_1 + C_1 R_5 + C_1 R_L + C_L R_5 R_L g_m + C_L R_L}$

wo: $\sqrt{\frac{R_5 g_m+2R_L g_m+1}{C_1C_L R_1 R_5 R_L g_m+C_1C_L R_1 R_L+C_1C_L R_5 R_L}}$
bandwidth: $\frac{\sqrt{\frac{R_5 g_m+2R_L g_m+1}{C_1C_L R_1 R_5 R_L g_m+C_1C_L R_1 R_L+C_1C_L R_5 R_L}}(C_1R_1R_5g_m+2C_1R_1R_Lg_m+C_1R_1+C_1R_5+C_1R_L+C_LR_5R_Lg_m+C_LR_L)}{\sqrt{C_1}\sqrt{C_L}R_1R_5\sqrt{R_L}g_m\sqrt{\frac{R_5g_m}{R_1R_5g_m+R_1+R_5}+\frac{2R_Lg_m}{R_1R_5g_m+R_1+R_5}+\frac{1}{R_1R_5g_m+R_1+R_5}+\sqrt{C_1}\sqrt{C_L}R_1\sqrt{R_L}\sqrt{\frac{R_5g_m}{R_1R_5g_m+R_1+R_5}+\frac{2R_Lg_m}{R_1R_5g_m+R_1+R_5}+\frac{1}{R_1R_5g_m+R_1+R_5}}+\sqrt{C_1}\sqrt{C_L}R_5\sqrt{R_L}\sqrt{\frac{R_5g_m}{R_1R_5g_m+R_1+R_5}+\frac{2R_Lg_m}{R_1R_5g_m+R_1+R_5}+\frac{1}{R_1R_5g_m+R_1+R_5}}}}$
K-LP: $\frac{R_5R_Lg_m-R_L}{R_5g_m+2R_Lg_m+1}$
K-HP: 0
K-BP: $\frac{C_1R_1R_5R_Lg_m-C_1R_1R_L}{C_1R_1R_5g_m+2C_1R_1R_Lg_m+C_1R_1+C_1R_5+C_1R_L+C_LR_5R_Lg_m+C_LR_L}$
Qz: None
Wz: None

8.27 X-INVALID-NUMER-27 $Z(s) = \left(\frac{L_1 s}{C_1L_1s^2+1},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_5 s},\ \frac{1}{C_L s}\right)$

$$H(s) = \frac{-C_5L_1s + L_1g_m}{C_5 + C_L + s^2\left(C_1C_5L_1 + C_1C_LL_1 + C_5C_LL_1\right) + s\left(2C_5L_1g_m + C_LL_1g_m\right)}$$

Parameters:

Q: $\frac{\sqrt{C_5+C_L}\sqrt{C_1C_5+C_1C_L+C_5C_L}}{2C_5\sqrt{L_1}g_m+C_L\sqrt{L_1}g_m}$
wo: $\frac{\sqrt{C_5+C_L}}{\sqrt{C_1C_5L_1+C_1C_LL_1+C_5C_LL_1}}$
bandwidth: $\frac{2C_5\sqrt{L_1}g_m+C_L\sqrt{L_1}g_m}{\sqrt{C_1C_5+C_1C_L+C_5C_L}\sqrt{C_1C_5L_1+C_1C_LL_1+C_5C_LL_1}}$
K-LP: $\frac{L_1g_m}{C_5+C_L}$
K-HP: 0
K-BP: $-\frac{C_5}{2C_5g_m+C_Lg_m}$
Qz: None
Wz: None

8.28 X-INVALID-NUMER-28 $Z(s) = \left(\frac{L_1R_1 s}{C_1L_1R_1s^2+L_1s+R_1},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_5 s},\ \frac{1}{C_L s}\right)$

$$H(s) = \frac{-C_5L_1R_1s + L_1R_1g_m}{C_5R_1 + C_LR_1 + s^2\left(C_1C_5L_1R_1 + C_1C_LL_1R_1 + C_5C_LL_1R_1\right) + s\left(2C_5L_1R_1g_m + C_5L_1 + C_LL_1R_1g_m + C_LL_1\right)}$$

Parameters:

Q: $\frac{R_1\sqrt{C_5+C_L}\sqrt{C_1C_5+C_1C_L+C_5C_L}}{2C_5\sqrt{L_1}R_1g_m+C_5\sqrt{L_1}+C_L\sqrt{L_1}R_1g_m+C_L\sqrt{L_1}}$
wo: $\frac{\sqrt{C_5+C_L}}{\sqrt{C_1C_5L_1+C_1C_LL_1+C_5C_LL_1}}$
bandwidth: $\frac{2C_5\sqrt{L_1}R_1g_m+C_5\sqrt{L_1}+C_L\sqrt{L_1}R_1g_m+C_L\sqrt{L_1}}{R_1\sqrt{C_1C_5+C_1C_L+C_5C_L}\sqrt{C_1C_5L_1+C_1C_LL_1+C_5C_LL_1}}$
K-LP: $\frac{L_1g_m}{C_5+C_L}$
K-HP: 0
K-BP: $-\frac{C_5R_1}{2C_5R_1g_m+C_5+C_LR_1g_m+C_L}$
Qz: None
Wz: None

9 X-INVALID-ORDER

9.1 X-INVALID-ORDER-1 $Z(s) = (R_1,\ \infty,\ \infty,\ \infty,\ R_5,\ R_L)$

$$H(s) = \frac{R_1R_5R_Lg_m - R_1R_L}{R_1R_5g_m + 2R_1R_Lg_m + R_1 + R_5 + R_L}$$

9.2 X-INVALID-ORDER-2 $Z(s) = \left(R_1,\ \infty,\ \infty,\ \infty,\ R_5,\ \frac{1}{C_L s}\right)$

$$H(s) = \frac{R_1R_5g_m - R_1}{2R_1g_m + s\left(C_LR_1R_5g_m + C_LR_1 + C_LR_5\right) + 1}$$

9.3 X-INVALID-ORDER-3 $Z(s) = \left(R_1,\ \infty,\ \infty,\ \infty,\ R_5,\ \frac{R_L}{C_L R_L s+1}\right)$

$$H(s) = \frac{R_1 R_5 R_L g_m - R_1 R_L}{R_1 R_5 g_m + 2R_1 R_L g_m + R_1 + R_5 + R_L + s\left(C_L R_1 R_5 R_L g_m + C_L R_1 R_L + C_L R_5 R_L\right)}$$

9.4 X-INVALID-ORDER-4 $Z(s) = \left(R_1,\ \infty,\ \infty,\ \infty,\ R_5,\ R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{R_1 R_5 g_m - R_1 + s\left(C_L R_1 R_5 R_L g_m - C_L R_1 R_L\right)}{2R_1 g_m + s\left(C_L R_1 R_5 g_m + 2C_L R_1 R_L g_m + C_L R_1 + C_L R_5 + C_L R_L\right) + 1}$$

9.5 X-INVALID-ORDER-5 $Z(s) = \left(R_1,\ \infty,\ \infty,\ \infty,\ \frac{1}{C_5 s},\ R_L\right)$

$$H(s) = \frac{-C_5 R_1 R_L s + R_1 R_L g_m}{R_1 g_m + s\left(2C_5 R_1 R_L g_m + C_5 R_1 + C_5 R_L\right) + 1}$$

9.6 X-INVALID-ORDER-6 $Z(s) = \left(R_1,\ \infty,\ \infty,\ \infty,\ \frac{1}{C_5 s},\ \frac{1}{C_L s}\right)$

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

9.7 X-INVALID-ORDER-7 $Z(s) = \left(R_1,\ \infty,\ \infty,\ \infty,\ \frac{1}{C_5 s},\ R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{-C_5 C_L R_1 R_L s^2 + R_1 g_m + s\left(-C_5 R_1 + C_L R_1 R_L g_m\right)}{s^2\left(2C_5 C_L R_1 R_L g_m + C_5 C_L R_1 + C_5 C_L R_L\right) + s\left(2C_5 R_1 g_m + C_5 + C_L R_1 g_m + C_L\right)}$$

9.8 X-INVALID-ORDER-8 $Z(s) = \left(R_1,\ \infty,\ \infty,\ \infty,\ \frac{1}{C_5 s},\ L_L s + \frac{1}{C_L s}\right)$

$$H(s) = \frac{-C_5 C_L L_L R_1 s^3 - C_5 R_1 s + C_L L_L R_1 g_m s^2 + R_1 g_m}{C_5 C_L R_1 s^2 + s^3\left(2C_5 C_L L_L R_1 g_m + C_5 C_L L_L\right) + s\left(2C_5 R_1 g_m + C_5 + C_L R_1 g_m + C_L\right)}$$

9.9 X-INVALID-ORDER-9 $Z(s) = \left(R_1,\ \infty,\ \infty,\ \infty,\ \frac{1}{C_5 s},\ \frac{L_L s}{C_L L_L s^2+1}\right)$

$$H(s) = \frac{-C_5 L_L R_1 s^2 + L_L R_1 g_m s}{C_5 C_L L_L R_1 s^3 + C_5 R_1 s + R_1 g_m + s^2\left(2C_5 L_L R_1 g_m + C_5 L_L + C_L L_L R_1 g_m + C_L L_L\right) + 1}$$

9.10 X-INVALID-ORDER-10 $Z(s) = \left(R_1,\ \infty,\ \infty,\ \infty,\ \frac{1}{C_5 s},\ L_L s + R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{-C_5 C_L L_L R_1 s^3 + R_1 g_m + s^2\left(-C_5 C_L R_1 R_L + C_L L_L R_1 g_m\right) + s\left(-C_5 R_1 + C_L R_1 R_L g_m\right)}{s^3\left(2C_5 C_L L_L R_1 g_m + C_5 C_L L_L\right) + s^2\left(2C_5 C_L R_1 R_L g_m + C_5 C_L R_1 + C_5 C_L R_L\right) + s\left(2C_5 R_1 g_m + C_5 + C_L R_1 g_m + C_L\right)}$$

9.11 X-INVALID-ORDER-11 $Z(s) = \left(R_1,\ \infty,\ \infty,\ \infty,\ \frac{1}{C_5 s},\ \frac{L_L R_L s}{C_L L_L R_L s^2+L_L s+R_L}\right)$

$$H(s) = \frac{-C_5 L_L R_1 R_L s^2 + L_L R_1 R_L g_m s}{C_5 C_L L_L R_1 R_L s^3 + R_1 R_L g_m + R_L + s^2\left(2C_5 L_L R_1 R_L g_m + C_5 L_L R_1 + C_5 L_L R_L + C_L L_L R_1 R_L g_m + C_L L_L R_L\right) + s\left(C_5 R_1 R_L + L_L R_1 g_m + L_L\right)}$$

9.12 X-INVALID-ORDER-12 $Z(s) = \left(R_1,\ \infty,\ \infty,\ \infty,\ \frac{1}{C_5 s},\ \frac{C_L L_L R_L s^2+L_L s+R_L}{C_L L_L s^2+1}\right)$

$$H(s) = \frac{-C_5 C_L L_L R_1 R_L s^3 + R_1 R_L g_m + s^2\left(-C_5 L_L R_1 + C_L L_L R_1 R_L g_m\right) + s\left(-C_5 R_1 R_L + L_L R_1 g_m\right)}{R_1 g_m + s^3\left(2C_5 C_L L_L R_1 R_L g_m + C_5 C_L L_L R_1 + C_5 C_L L_L R_L\right) + s^2\left(2C_5 L_L R_1 g_m + C_5 L_L + C_L L_L R_1 g_m + C_L L_L\right) + s\left(2C_5 R_1 R_L g_m + C_5 R_1 + C_5 R_L\right) + 1}$$

9.13 X-INVALID-ORDER-13 $Z(s) = \left(R_1,\ \infty,\ \infty,\ \infty,\ \frac{1}{C_5 s},\ \frac{R_L\left(C_L L_L s^2+1\right)}{C_L L_L s^2+C_L R_L s+1}\right)$

$$H(s) = \frac{-C_5 C_L L_L R_1 R_L s^3 - C_5 R_1 R_L s + C_L L_L R_1 R_L g_m s^2 + R_1 R_L g_m}{R_1 g_m + s^3\left(2C_5 C_L L_L R_1 R_L g_m + C_5 C_L L_L R_1 + C_5 C_L L_L R_L\right) + s^2\left(C_5 C_L R_1 R_L + C_L L_L R_1 g_m + C_L L_L\right) + s\left(2C_5 R_1 R_L g_m + C_5 R_1 + C_5 R_L + C_L R_1 R_L g_m + C_L R_L\right) + 1}$$

9.14 X-INVALID-ORDER-14 $Z(s) = \left(R_1,\ \infty,\ \infty,\ \infty,\ \frac{R_5}{C_5 R_5 s+1},\ R_L\right)$

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

9.15 X-INVALID-ORDER-15 $Z(s) = \left(R_1,\ \infty,\ \infty,\ \infty,\ \frac{R_5}{C_5 R_5 s+1},\ L_L s + \frac{1}{C_L s}\right)$

$$H(s) = \frac{-C_5 C_L L_L R_1 R_5 s^3 - C_5 R_1 R_5 s + R_1 R_5 g_m - R_1 + s^2\left(C_L L_L R_1 R_5 g_m - C_L L_L R_1\right)}{2R_1 g_m + s^3\left(2C_5 C_L L_L R_1 R_5 g_m + C_5 C_L L_L R_5\right) + s^2\left(C_5 C_L R_1 R_5 + 2C_L L_L R_1 g_m + C_L L_L\right) + s\left(2C_5 R_1 R_5 g_m + C_5 R_5 + C_L R_1 R_5 g_m + C_L R_1 + C_L R_5\right) + 1}$$

9.16 X-INVALID-ORDER-16 $Z(s) = \left(R_1,\ \infty,\ \infty,\ \infty,\ \frac{R_5}{C_5 R_5 s+1},\ \frac{L_L s}{C_L L_L s^2+1}\right)$

$$H(s) = \frac{-C_5 L_L R_1 R_5 s^2 + s\left(L_L R_1 R_5 g_m - L_L R_1\right)}{C_5 C_L L_L R_1 R_5 s^3 + R_1 R_5 g_m + R_1 + R_5 + s^2\left(2C_5 L_L R_1 R_5 g_m + C_5 L_L R_5 + C_L L_L R_1 R_5 g_m + C_L L_L R_1 + C_L L_L R_5\right) + s\left(C_5 R_1 R_5 + 2L_L R_1 g_m + L_L\right)}$$

9.17 X-INVALID-ORDER-17 $Z(s) = \left(R_1,\ \infty,\ \infty,\ \infty,\ \frac{R_5}{C_5 R_5 s+1},\ L_L s + R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{-C_5 C_L L_L R_1 R_5 s^3 + R_1 R_5 g_m - R_1 + s^2\left(-C_5 C_L R_1 R_5 R_L + C_L L_L R_1 R_5 g_m - C_L L_L R_1\right) + s\left(-C_5 R_1 R_5 + C_L R_1 R_5 R_L g_m - C_L R_1 R_L\right)}{2R_1 g_m + s^3\left(2C_5 C_L L_L R_1 R_5 g_m + C_5 C_L L_L R_5\right) + s^2\left(2C_5 C_L R_1 R_5 R_L g_m + C_5 C_L R_1 R_5 + C_5 C_L R_5 R_L + 2C_L L_L R_1 g_m + C_L L_L\right) + s\left(2C_5 R_1 R_5 g_m + C_5 R_5 + C_L R_1 R_5 g_m + 2C_L R_1 R_L g_m + C_L R_1 + C_L R_5 + C_L R_L\right) + 1}$$

9.18 X-INVALID-ORDER-18 $Z(s) = \left(R_1,\ \infty,\ \infty,\ \infty,\ \frac{R_5}{C_5 R_5 s+1},\ \frac{L_L R_L s}{C_L L_L R_L s^2+L_L s+R_L}\right)$

$$H(s) = \frac{-C_5 L_L R_1 R_5 R_L s^2 + s\left(L_L R_1 R_5 R_L g_m - L_L R_1 R_L\right)}{C_5 C_L L_L R_1 R_5 R_L s^3 + R_1 R_5 R_L g_m + R_1 R_L + R_5 R_L + s^2\left(2C_5 L_L R_1 R_5 R_L g_m + C_5 L_L R_1 R_5 + C_5 L_L R_5 R_L + C_L L_L R_1 R_5 R_L g_m + C_L L_L R_1 R_L + C_L L_L R_5 R_L\right) + s\left(C_5 R_1 R_5 R_L + L_L R_1 R_5 g_m + 2L_L R_1 R_L g_m + L_L R_1 + L_L R_5 + L_L R_L\right)}$$

9.19 X-INVALID-ORDER-19 $Z(s) = \left(R_1,\ \infty,\ \infty,\ \infty,\ \frac{R_5}{C_5 R_5 s+1},\ \frac{C_L L_L R_L s^2+L_L s+R_L}{C_L L_L s^2+1}\right)$

$$H(s) = \frac{-C_5 C_L L_L R_1 R_5 R_L s^3 + R_1 R_5 R_L g_m - R_1 R_L + s^2\left(-C_5 L_L R_1 R_5 + C_L L_L R_1 R_5 R_L g_m - C_L L_L R_1 R_L\right) + s\left(-C_5 R_1 R_5 R_L + L_L R_1 R_5 g_m - L_L R_1\right)}{R_1 R_5 g_m + 2R_1 R_L g_m + R_1 + R_5 + R_L + s^3\left(2C_5 C_L L_L R_1 R_5 R_L g_m + C_5 C_L L_L R_1 R_5 + C_5 C_L L_L R_5 R_L\right) + s^2\left(2C_5 L_L R_1 R_5 g_m + C_5 L_L R_5 + C_L L_L R_1 R_5 g_m + 2C_L L_L R_1 R_L g_m + C_L L_L R_1 + C_L L_L R_5 + C_L L_L R_L\right) + s\left(2C_5 R_1 R_5 R_L g_m + C_5 R_1 R_5 + C_5 R_5 R_L + 2L_L R_1\right.}$$

9.20 X-INVALID-ORDER-20 $Z(s) = \left(R_1,\ \infty,\ \infty,\ \infty,\ \frac{R_5}{C_5 R_5 s+1},\ \frac{R_L\left(C_L L_L s^2+1\right)}{C_L L_L s^2+C_L R_L s+1}\right)$

$$H(s) = \frac{-C_5 C_L L_L R_1 R_5 R_L s^3 - C_5 R_1 R_5 R_L s + R_1 R_5 R_L g_m - R_1 R_L + s^2\left(C_L L_L R_1 R_5 R_L g_m - C_L L_L R_1 R_L\right)}{R_1 R_5 g_m + 2R_1 R_L g_m + R_1 + R_5 + R_L + s^3\left(2C_5 C_L L_L R_1 R_5 R_L g_m + C_5 C_L L_L R_1 R_5 + C_5 C_L L_L R_5 R_L\right) + s^2\left(C_5 C_L R_1 R_5 R_L + C_L L_L R_1 R_5 g_m + 2C_L L_L R_1 R_L g_m + C_L L_L R_1 + C_L L_L R_5 + C_L L_L R_L\right) + s\left(2C_5 R_1 R_5 R_L g_m + C_5 R_1 R_5 + C_5 R_5 R_L + C_L R_1 R_5 R_L g_m + C\right.}$$

9.21 X-INVALID-ORDER-21 $Z(s) = \left(R_1,\ \infty,\ \infty,\ \infty,\ R_5 + \frac{1}{C_5 s},\ R_L\right)$

$$H(s) = \frac{R_1 R_L g_m + s\left(C_5 R_1 R_5 R_L g_m - C_5 R_1 R_L\right)}{R_1 g_m + s\left(C_5 R_1 R_5 g_m + 2C_5 R_1 R_L g_m + C_5 R_1 + C_5 R_5 + C_5 R_L\right) + 1}$$

9.22 X-INVALID-ORDER-22 $Z(s) = \left(R_1,\ \infty,\ \infty,\ \infty,\ R_5 + \frac{1}{C_5 s},\ \frac{1}{C_L s}\right)$

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

9.23 X-INVALID-ORDER-23 $Z(s) = \left(R_1,\ \infty,\ \infty,\ \infty,\ R_5 + \frac{1}{C_5 s},\ R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{R_1 g_m + s^2\left(C_5 C_L R_1 R_5 R_L g_m - C_5 C_L R_1 R_L\right) + s\left(C_5 R_1 R_5 g_m - C_5 R_1 + C_L R_1 R_L g_m\right)}{s^2\left(C_5 C_L R_1 R_5 g_m + 2C_5 C_L R_1 R_L g_m + C_5 C_L R_1 + C_5 C_L R_5 + C_5 C_L R_L\right) + s\left(2C_5 R_1 g_m + C_5 + C_L R_1 g_m + C_L\right)}$$

9.24 X-INVALID-ORDER-24 $Z(s) = \left(R_1,\ \infty,\ \infty,\ \infty,\ R_5 + \frac{1}{C_5 s},\ L_L s + \frac{1}{C_L s}\right)$

$$H(s) = \frac{C_L L_L R_1 g_m s^2 + R_1 g_m + s^3\left(C_5 C_L L_L R_1 R_5 g_m - C_5 C_L L_L R_1\right) + s\left(C_5 R_1 R_5 g_m - C_5 R_1\right)}{s^3\left(2C_5 C_L L_L R_1 g_m + C_5 C_L L_L\right) + s^2\left(C_5 C_L R_1 R_5 g_m + C_5 C_L R_1 + C_5 C_L R_5\right) + s\left(2C_5 R_1 g_m + C_5 + C_L R_1 g_m + C_L\right)}$$

9.25 X-INVALID-ORDER-25 $Z(s) = \left(R_1,\ \infty,\ \infty,\ \infty,\ R_5 + \frac{1}{C_5 s},\ \frac{L_L s}{C_L L_L s^2 + 1}\right)$

$$H(s) = \frac{L_L R_1 g_m s + s^2\left(C_5 L_L R_1 R_5 g_m - C_5 L_L R_1\right)}{R_1 g_m + s^3\left(C_5 C_L L_L R_1 R_5 g_m + C_5 C_L L_L R_1 + C_5 C_L L_L R_5\right) + s^2\left(2C_5 L_L R_1 g_m + C_5 L_L + C_L L_L R_1 g_m + C_L L_L\right) + s\left(C_5 R_1 R_5 g_m + C_5 R_1 + C_5 R_5\right) + 1}$$

9.26 X-INVALID-ORDER-26 $Z(s) = \left(R_1,\ \infty,\ \infty,\ \infty,\ R_5 + \frac{1}{C_5 s},\ L_L s + R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{R_1 g_m + s^3\left(C_5 C_L L_L R_1 R_5 g_m - C_5 C_L L_L R_1\right) + s^2\left(C_5 C_L R_1 R_5 R_L g_m - C_5 C_L R_1 R_L + C_L L_L R_1 g_m\right) + s\left(C_5 R_1 R_5 g_m - C_5 R_1 + C_L R_1 R_L g_m\right)}{s^3\left(2C_5 C_L L_L R_1 g_m + C_5 C_L L_L\right) + s^2\left(C_5 C_L R_1 R_5 g_m + 2C_5 C_L R_1 R_L g_m + C_5 C_L R_1 + C_5 C_L R_5 + C_5 C_L R_L\right) + s\left(2C_5 R_1 g_m + C_5 + C_L R_1 g_m + C_L\right)}$$

9.27 X-INVALID-ORDER-27 $Z(s) = \left(R_1,\ \infty,\ \infty,\ \infty,\ R_5 + \frac{1}{C_5 s},\ \frac{L_L R_L s}{C_L L_L R_L s^2 + L_L s + R_L}\right)$

$$H(s) = \frac{L_L R_1 R_L g_m s + s^2\left(C_5 L_L R_1 R_5 R_L g_m - C_5 L_L R_1 R_L\right)}{R_1 R_L g_m + R_L + s^3\left(C_5 C_L L_L R_1 R_5 R_L g_m + C_5 C_L L_L R_1 R_L + C_5 C_L L_L R_5 R_L\right) + s^2\left(C_5 L_L R_1 R_5 g_m + 2C_5 L_L R_1 R_L g_m + C_5 L_L R_1 + C_5 L_L R_5 + C_5 L_L R_L + C_L L_L R_1 R_L g_m + C_L L_L R_L\right) + s\left(C_5 R_1 R_5 R_L g_m + C_5 R_1 R_L + C_5 R_5 R_L + L_L R_1 g_m + L_L\right)}$$

9.28 X-INVALID-ORDER-28 $Z(s) = \left(R_1,\ \infty,\ \infty,\ \infty,\ R_5 + \frac{1}{C_5 s},\ \frac{C_L L_L R_L s^2 + L_L s + R_L}{C_L L_L s^2 + 1}\right)$

$$H(s) = \frac{R_1 R_L g_m + s^3\left(C_5 C_L L_L R_1 R_5 R_L g_m - C_5 C_L L_L R_1 R_L\right) + s^2\left(C_5 L_L R_1 R_5 g_m - C_5 L_L R_1 + C_L L_L R_1 R_L g_m\right) + s\left(C_5 R_1 R_5 R_L g_m - C_5 R_1 R_L + L_L R_1 g_m\right)}{R_1 g_m + s^3\left(C_5 C_L L_L R_1 R_5 g_m + 2C_5 C_L L_L R_1 R_L g_m + C_5 C_L L_L R_1 + C_5 C_L L_L R_5 + C_5 C_L L_L R_L\right) + s^2\left(2C_5 L_L R_1 g_m + C_5 L_L + C_L L_L R_1 g_m + C_L L_L\right) + s\left(C_5 R_1 R_5 g_m + 2C_5 R_1 R_L g_m + C_5 R_1 + C_5 R_5 + C_5 R_L\right) + 1}$$

9.29 X-INVALID-ORDER-29 $Z(s) = \left(R_1,\ \infty,\ \infty,\ \infty,\ R_5 + \frac{1}{C_5 s},\ \frac{R_L\left(C_L L_L s^2 + 1\right)}{C_L L_L s^2 + C_L R_L s + 1}\right)$

$$H(s) = \frac{C_L L_L R_1 R_L g_m s^2 + R_1 R_L g_m + s^3\left(C_5 C_L L_L R_1 R_5 R_L g_m - C_5 C_L L_L R_1 R_L\right) + s\left(C_5 R_1 R_5 R_L g_m - C_5 R_1 R_L\right)}{R_1 g_m + s^3\left(C_5 C_L L_L R_1 R_5 g_m + 2C_5 C_L L_L R_1 R_L g_m + C_5 C_L L_L R_1 + C_5 C_L L_L R_5 + C_5 C_L L_L R_L\right) + s^2\left(C_5 C_L R_1 R_5 R_L g_m + C_5 C_L R_1 R_L + C_5 C_L R_5 R_L + C_L L_L R_1 g_m + C_L L_L\right) + s\left(C_5 R_1 R_5 g_m + 2C_5 R_1 R_L g_m + C_5 R_1 + C_5 R_5 + C_5 R_L + C_L R_1 R_L g_m + C_L R_L\right) + 1}$$

9.30 X-INVALID-ORDER-30 $Z(s) = \left(R_1,\ \infty,\ \infty,\ \infty,\ L_5 s + \frac{1}{C_5 s},\ \frac{1}{C_L s}\right)$

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

9.31 X-INVALID-ORDER-31 $Z(s) = \left(R_1,\ \infty,\ \infty,\ \infty,\ L_5 s + \frac{1}{C_5 s},\ \frac{R_L}{C_L R_L s+1}\right)$

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

9.32 X-INVALID-ORDER-32 $Z(s) = \left(R_1,\ \infty,\ \infty,\ \infty,\ L_5 s + \frac{1}{C_5 s},\ R_L + \frac{1}{C_L s}\right)$

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

9.33 X-INVALID-ORDER-33 $Z(s) = \left(R_1,\ \infty,\ \infty,\ \infty,\ L_5 s + \frac{1}{C_5 s},\ L_L s + \frac{1}{C_L s}\right)$

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

9.34 X-INVALID-ORDER-34 $Z(s) = \left(R_1,\ \infty,\ \infty,\ \infty,\ L_5 s + \frac{1}{C_5 s},\ \frac{L_L s}{C_L L_L s^2+1}\right)$

$$H(s) = \frac{C_5 L_5 L_L R_1 g_m s^3 - C_5 L_L R_1 s^2 + L_L R_1 g_m s}{C_5 C_L L_L R_1 s^3 + C_5 R_1 s + R_1 g_m + s^4 (C_5 C_L L_5 L_L R_1 g_m + C_5 C_L L_5 L_L) + s^2 (C_5 L_5 R_1 g_m + C_5 L_5 + 2C_5 L_L R_1 g_m + C_5 L_L + C_L L_L R_1 g_m + C_L L_L) + 1}$$

9.35 X-INVALID-ORDER-35 $Z(s) = \left(R_1,\ \infty,\ \infty,\ \infty,\ L_5 s + \frac{1}{C_5 s},\ L_L s + R_L + \frac{1}{C_L s}\right)$

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

9.36 X-INVALID-ORDER-36 $Z(s) = \left(R_1,\ \infty,\ \infty,\ \infty,\ L_5 s + \frac{1}{C_5 s},\ \frac{L_L R_L s}{C_L L_L R_L s^2 + L_L s + R_L}\right)$

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

9.37 X-INVALID-ORDER-37 $Z(s) = \left(R_1,\ \infty,\ \infty,\ \infty,\ L_5 s + \frac{1}{C_5 s},\ \frac{C_L L_L R_L s^2 + L_L s + R_L}{C_L L_L s^2 + 1}\right)$

$$H(s) = \frac{C_5 C_L L_5 L_L R_1 R_L g_m s^4 + R_1 R_L g_m + s^3 (-C_5 C_L L_L R_1 R_L + C_5 L_5 L_L R_1 g_m) + s^2 (C_5 L_5 R_1 R_L g_m - C_5 L_L R_1 + C_L L_L R_1 R_L g_m) + s (-C_5 R_1 R_L + L_L R_1 g_m)}{R_1 g_m + s^4 (C_5 C_L L_5 L_L R_1 g_m + C_5 C_L L_5 L_L) + s^3 (2C_5 C_L L_L R_1 R_L g_m + C_5 C_L L_L R_1 + C_5 C_L L_L R_L) + s^2 (C_5 L_5 R_1 g_m + C_5 L_5 + 2C_5 L_L R_1 g_m + C_5 L_L + C_L L_L R_1 g_m + C_L L_L) + s (2C_5 R_1 R_L g_m + C_5 R_1 + C_5 R_L) + 1}$$

9.38 X-INVALID-ORDER-38 $Z(s) = \left(R_1,\ \infty,\ \infty,\ \infty,\ L_5 s + \frac{1}{C_5 s},\ \frac{R_L\left(C_L L_L s^2+1\right)}{C_L L_L s^2 + C_L R_L s + 1}\right)$

$$H(s) = \frac{C_5 C_L L_5 L_L R_1 R_L g_m s^4 - C_5 C_L L_L R_1 R_L s^3 - C_5 R_1 R_L s + R_1 R_L g_m + s^2 (C_5 L_5 R_1 R_L g_m + C_L L_L R_1 R_L g_m)}{R_1 g_m + s^4 (C_5 C_L L_5 L_L R_1 g_m + C_5 C_L L_5 L_L) + s^3 (C_5 C_L L_5 R_1 R_L g_m + C_5 C_L L_5 R_L + 2C_5 C_L L_L R_1 R_L g_m + C_5 C_L L_L R_1 + C_5 C_L L_L R_L) + s^2 (C_5 C_L R_1 R_L + C_5 L_5 R_1 g_m + C_5 L_5 + C_L L_L R_1 g_m + C_L L_L) + s (2C_5 R_1 R_L g_m + C_5 R_1 + C_5 R_L + C_L R_1 R_L g_m + C_L R_L) + 1}$$

9.39 X-INVALID-ORDER-39 $Z(s) = \left(R_1,\ \infty,\ \infty,\ \infty,\ \frac{L_5 s}{C_5 L_5 s^2+1},\ \frac{1}{C_L s}\right)$

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

9.40 X-INVALID-ORDER-40 $Z(s) = \left(R_1,\ \infty,\ \infty,\ \infty,\ \frac{L_5 s}{C_5 L_5 s^2+1},\ \frac{R_L}{C_L R_L s+1}\right)$

$$H(s) = \frac{-C_5 L_5 R_1 R_L s^2 + L_5 R_1 R_L g_m s - R_1 R_L}{C_5 C_L L_5 R_1 R_L s^3 + 2R_1 R_L g_m + R_1 + R_L + s^2 \left(2C_5 L_5 R_1 R_L g_m + C_5 L_5 R_1 + C_5 L_5 R_L + C_L L_5 R_1 R_L g_m + C_L L_5 R_L\right) + s\left(C_L R_1 R_L + L_5 R_1 g_m + L_5\right)}$$

9.41 X-INVALID-ORDER-41 $Z(s) = \left(R_1,\ \infty,\ \infty,\ \infty,\ \frac{L_5 s}{C_5 L_5 s^2+1},\ R_L + \frac{1}{C_L s}\right)$

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

9.42 X-INVALID-ORDER-42 $Z(s) = \left(R_1,\ \infty,\ \infty,\ \infty,\ \frac{L_5 s}{C_5 L_5 s^2+1},\ L_L s + \frac{1}{C_L s}\right)$

$$H(s) = \frac{-C_5 C_L L_5 L_L R_1 s^4 + C_L L_5 L_L R_1 g_m s^3 + L_5 R_1 g_m s - R_1 + s^2\left(-C_5 L_5 R_1 - C_L L_L R_1\right)}{C_5 C_L L_5 R_1 s^3 + C_L R_1 s + 2R_1 g_m + s^4\left(2C_5 C_L L_5 L_L R_1 g_m + C_5 C_L L_5 L_L\right) + s^2\left(2C_5 L_5 R_1 g_m + C_5 L_5 + C_L L_5 R_1 g_m + C_L L_5 + 2C_L L_L R_1 g_m + C_L L_L\right) + 1}$$

9.43 X-INVALID-ORDER-43 $Z(s) = \left(R_1,\ \infty,\ \infty,\ \infty,\ \frac{L_5 s}{C_5 L_5 s^2+1},\ \frac{L_L s}{C_L L_L s^2+1}\right)$

$$H(s) = \frac{-C_5 L_5 L_L R_1 s^3 + L_5 L_L R_1 g_m s^2 - L_L R_1 s}{C_5 C_L L_5 L_L R_1 s^4 + R_1 + s^3\left(2C_5 L_5 L_L R_1 g_m + C_5 L_5 L_L + C_L L_5 L_L R_1 g_m + C_L L_5 L_L\right) + s^2\left(C_5 L_5 R_1 + C_L L_L R_1\right) + s\left(L_5 R_1 g_m + L_5 + 2L_L R_1 g_m + L_L\right)}$$

9.44 X-INVALID-ORDER-44 $Z(s) = \left(R_1,\ \infty,\ \infty,\ \infty,\ \frac{L_5 s}{C_5 L_5 s^2+1},\ L_L s + R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{-C_5 C_L L_5 L_L R_1 s^4 - R_1 + s^3\left(-C_5 C_L L_5 R_1 R_L + C_L L_5 L_L R_1 g_m\right) + s^2\left(-C_5 L_5 R_1 + C_L L_5 R_1 R_L g_m - C_L L_L R_1\right) + s\left(-C_L R_1 R_L + L_5 R_1 g_m\right)}{2R_1 g_m + s^4\left(2C_5 C_L L_5 L_L R_1 g_m + C_5 C_L L_5 L_L\right) + s^3\left(2C_5 C_L L_5 R_1 R_L g_m + C_5 C_L L_5 R_1 + C_5 C_L L_5 R_L\right) + s^2\left(2C_5 L_5 R_1 g_m + C_5 L_5 + C_L L_5 R_1 g_m + C_L L_5 + 2C_L L_L R_1 g_m + C_L L_L\right) + s\left(2C_L R_1 R_L g_m + C_L R_1 + C_L R_L\right) + 1}$$

9.45 X-INVALID-ORDER-45 $Z(s) = \left(R_1,\ \infty,\ \infty,\ \infty,\ \frac{L_5 s}{C_5 L_5 s^2+1},\ \frac{L_L R_L s}{C_L L_L R_L s^2 + L_L s + R_L}\right)$

$$H(s) = \frac{-C_5 L_5 L_L R_1 R_L s^3 + L_5 L_L R_1 R_L g_m s^2 - L_L R_1 R_L s}{C_5 C_L L_5 L_L R_1 R_L s^4 + R_1 R_L + s^3\left(2C_5 L_5 L_L R_1 R_L g_m + C_5 L_5 L_L R_1 + C_5 L_5 L_L R_L + C_L L_5 L_L R_1 R_L g_m + C_L L_5 L_L R_L\right) + s^2\left(C_5 L_5 R_1 R_L + C_L L_L R_1 R_L + L_5 L_L R_1 g_m + L_5 L_L\right) + s\left(L_5 R_1 R_L g_m + L_5 R_L + 2L_L R_1 R_L g_m + L_L R_1 + L_L R_L\right)}$$

9.46 X-INVALID-ORDER-46 $Z(s) = \left(R_1,\ \infty,\ \infty,\ \infty,\ \frac{L_5 s}{C_5 L_5 s^2+1},\ \frac{C_L L_L R_L s^2 + L_L s + R_L}{C_L L_L s^2+1}\right)$

$$H(s) = \frac{-C_5 C_L L_5 L_L R_1 R_L s^4 - R_1 R_L + s^3\left(-C_5 L_5 L_L R_1 + C_L L_5 L_L R_1 R_L g_m\right) + s^2\left(-C_5 L_5 R_1 R_L - C_L L_L R_1 R_L + L_5 L_L R_1 g_m\right) + s\left(L_5 R_1 R_L g_m - L_L R_1\right)}{2R_1 R_L g_m + R_1 + R_L + s^4\left(2C_5 C_L L_5 L_L R_1 R_L g_m + C_5 C_L L_5 L_L R_1 + C_5 C_L L_5 L_L R_L\right) + s^3\left(2C_5 L_5 L_L R_1 g_m + C_5 L_5 L_L + C_L L_5 L_L R_1 g_m + C_L L_5 L_L\right) + s^2\left(2C_5 L_5 R_1 R_L g_m + C_5 L_5 R_1 + C_5 L_5 R_L + 2C_L L_L R_1 R_L g_m + C_L L_L R_1 + C_L L_L R_L\right) + s\left(L_5 R_1 g_m + L_5 + 2L_L R\right.}$$

9.47 X-INVALID-ORDER-47 $Z(s) = \left(R_1,\ \infty,\ \infty,\ \infty,\ \frac{L_5 s}{C_5 L_5 s^2+1},\ \frac{R_L\left(C_L L_L s^2+1\right)}{C_L L_L s^2 + C_L R_L s + 1}\right)$

$$H(s) = \frac{-C_5 C_L L_5 L_L R_1 R_L s^4 + C_L L_5 L_L R_1 R_L g_m s^3 + L_5 R_1 R_L g_m s - R_1 R_L + s^2\left(-C_5 L_5 R_1 R_L - C_L L_L R_1 R_L\right)}{2R_1 R_L g_m + R_1 + R_L + s^4\left(2C_5 C_L L_5 L_L R_1 R_L g_m + C_5 C_L L_5 L_L R_1 + C_5 C_L L_5 L_L R_L\right) + s^3\left(C_5 C_L L_5 R_1 R_L + C_L L_5 L_L R_1 g_m + C_L L_5 L_L\right) + s^2\left(2C_5 L_5 R_1 R_L g_m + C_5 L_5 R_1 + C_5 L_5 R_L + C_L L_5 R_1 R_L g_m + C_L L_5 R_L + 2C_L L_L R_1 R_L g_m + C_L L_L R_1 + C_L L_L R_L\right) + s\left(C_L R\right.}$$

9.48 X-INVALID-ORDER-48 $Z(s) = \left(R_1,\ \infty,\ \infty,\ \infty,\ L_5 s + R_5 + \frac{1}{C_5 s},\ \frac{1}{C_L s}\right)$

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

9.49 X-INVALID-ORDER-49 $Z(s) = \left(R_1,\ \infty,\ \infty,\ \infty,\ L_5 s + R_5 + \frac{1}{C_5 s},\ \frac{R_L}{C_L R_L s+1}\right)$

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

9.50 X-INVALID-ORDER-50 $Z(s) = \left(R_1,\ \infty,\ \infty,\ \infty,\ L_5 s + R_5 + \frac{1}{C_5 s},\ R_L + \frac{1}{C_L s}\right)$

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

9.51 X-INVALID-ORDER-51 $Z(s) = \left(R_1,\ \infty,\ \infty,\ \infty,\ L_5 s + R_5 + \frac{1}{C_5 s},\ L_L s + \frac{1}{C_L s}\right)$

$$H(s) = \frac{C_5 C_L L_5 L_L R_1 g_m s^4 + R_1 g_m + s^3\left(C_5 C_L L_L R_1 R_5 g_m - C_5 C_L L_L R_1\right) + s^2\left(C_5 L_5 R_1 g_m + C_L L_L R_1 g_m\right) + s\left(C_5 R_1 R_5 g_m - C_5 R_1\right)}{s^3\left(C_5 C_L L_5 R_1 g_m + C_5 C_L L_5 + 2C_5 C_L L_L R_1 g_m + C_5 C_L L_L\right) + s^2\left(C_5 C_L R_1 R_5 g_m + C_5 C_L R_1 + C_5 C_L R_5\right) + s\left(2C_5 R_1 g_m + C_5 + C_L R_1 g_m + C_L\right)}$$

9.52 X-INVALID-ORDER-52 $Z(s) = \left(R_1,\ \infty,\ \infty,\ \infty,\ L_5 s + R_5 + \frac{1}{C_5 s},\ \frac{L_L s}{C_L L_L s^2+1}\right)$

$$H(s) = \frac{C_5 L_5 L_L R_1 g_m s^3 + L_L R_1 g_m s + s^2\left(C_5 L_L R_1 R_5 g_m - C_5 L_L R_1\right)}{R_1 g_m + s^4\left(C_5 C_L L_5 L_L R_1 g_m + C_5 C_L L_5 L_L\right) + s^3\left(C_5 C_L L_L R_1 R_5 g_m + C_5 C_L L_L R_1 + C_5 C_L L_L R_5\right) + s^2\left(C_5 L_5 R_1 g_m + C_5 L_5 + 2C_5 L_L R_1 g_m + C_5 L_L + C_L L_L R_1 g_m + C_L L_L\right) + s\left(C_5 R_1 R_5 g_m + C_5 R_1 + C_5 R_5\right) + 1}$$

9.53 X-INVALID-ORDER-53 $Z(s) = \left(R_1,\ \infty,\ \infty,\ \infty,\ L_5 s + R_5 + \frac{1}{C_5 s},\ L_L s + R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{C_5 C_L L_5 L_L R_1 g_m s^4 + R_1 g_m + s^3\left(C_5 C_L L_5 R_1 R_L g_m + C_5 C_L L_L R_1 R_5 g_m - C_5 C_L L_L R_1\right) + s^2\left(C_5 C_L R_1 R_5 R_L g_m - C_5 C_L R_1 R_L + C_5 L_5 R_1 g_m + C_L L_L R_1 g_m\right) + s\left(C_5 R_1 R_5 g_m - C_5 R_1 + C_L R_1 R_L g_m\right)}{s^3\left(C_5 C_L L_5 R_1 g_m + C_5 C_L L_5 + 2C_5 C_L L_L R_1 g_m + C_5 C_L L_L\right) + s^2\left(C_5 C_L R_1 R_5 g_m + 2C_5 C_L R_1 R_L g_m + C_5 C_L R_1 + C_5 C_L R_5 + C_5 C_L R_L\right) + s\left(2C_5 R_1 g_m + C_5 + C_L R_1 g_m + C_L\right)}$$

9.54 X-INVALID-ORDER-54 $Z(s) = \left(R_1,\ \infty,\ \infty,\ \infty,\ L_5 s + R_5 + \frac{1}{C_5 s},\ \frac{L_L R_L s}{C_L L_L R_L s^2+L_L s+R_L}\right)$

$$H(s) = \frac{C_5 L_5 L_L R_1 R_L g_m s^3 + L_L R_1 R_L g_m s + s^2\left(C_5 L_L R_1 R_5 R_L g_m - C_5 L_L R_1 R_L\right)}{R_1 R_L g_m + R_L + s^4\left(C_5 C_L L_5 L_L R_1 R_L g_m + C_5 C_L L_5 L_L R_L\right) + s^3\left(C_5 C_L L_L R_1 R_5 R_L g_m + C_5 C_L L_L R_1 R_L + C_5 C_L L_L R_5 R_L + C_5 L_5 L_L R_1 g_m + C_5 L_5 L_L\right) + s^2\left(C_5 L_5 R_1 R_L g_m + C_5 L_5 R_L + C_5 L_L R_1 R_5 g_m + 2C_5 L_L R_1 R_L g_m + C_5 L_L R_1 + C_5 L_L R_5 + C_5 L_L R_L + C_L L_L\right.}$$

9.55 X-INVALID-ORDER-55 $Z(s) = \left(R_1,\ \infty,\ \infty,\ \infty,\ L_5 s + R_5 + \frac{1}{C_5 s},\ \frac{C_L L_L R_L s^2+L_L s+R_L}{C_L L_L s^2+1}\right)$

$$H(s) = \frac{C_5 C_L L_5 L_L R_1 R_L g_m s^4 + R_1 R_L g_m + s^3\left(C_5 C_L L_L R_1 R_5 R_L g_m - C_5 C_L L_L R_1 R_L + C_5 L_5 L_L R_1 g_m\right) + s^2\left(C_5 L_5 R_1 R_L g_m + C_5 L_L R_1 R_5 g_m - C_5 L_L R_1 + C_L L_L R_1 R_L g_m\right) + s\left(C_5 R_1 R_5 R_L g_m - C_5 R_1 R_L + L_L R_1 g_m\right)}{R_1 g_m + s^4\left(C_5 C_L L_5 L_L R_1 g_m + C_5 C_L L_5 L_L\right) + s^3\left(C_5 C_L L_L R_1 R_5 g_m + 2C_5 C_L L_L R_1 R_L g_m + C_5 C_L L_L R_1 + C_5 C_L L_L R_5 + C_5 C_L L_L R_L\right) + s^2\left(C_5 L_5 R_1 g_m + C_5 L_5 + 2C_5 L_L R_1 g_m + C_5 L_L + C_L L_L R_1 g_m + C_L L_L\right) + s\left(C_5 R_1 R_5 g_m + 2C_5 R_1 R_L g_m + C_5 R_1 + C_5 R_5 + C_5\right.}$$

9.56 X-INVALID-ORDER-56 $Z(s) = \left(R_1,\ \infty,\ \infty,\ \infty,\ L_5 s + R_5 + \frac{1}{C_5 s},\ \frac{R_L\left(C_L L_L s^2+1\right)}{C_L L_L s^2+C_L R_L s+1}\right)$

$$H(s) = \frac{C_5 C_L L_5 L_L R_1 R_L g_m s^4 + R_1 R_L g_m + s^3\left(C_5 C_L L_L R_1 R_5 R_L g_m - C_5 C_L L_L R_1 R_L\right) + s^2\left(C_5 L_5 R_1 R_L g_m + C_L L_L R_1 R_L g_m\right) + s\left(C_5 R_1 R_5 R_L g_m - C_5 R_1 R_L\right)}{R_1 g_m + s^4\left(C_5 C_L L_5 L_L R_1 g_m + C_5 C_L L_5 L_L\right) + s^3\left(C_5 C_L L_5 R_1 R_L g_m + C_5 C_L L_5 R_L + C_5 C_L L_L R_1 R_5 g_m + 2C_5 C_L L_L R_1 R_L g_m + C_5 C_L L_L R_1 + C_5 C_L L_L R_5 + C_5 C_L L_L R_L\right) + s^2\left(C_5 C_L R_1 R_5 R_L g_m + C_5 C_L R_1 R_L + C_5 C_L R_5 R_L + C_5 L_5 R_1 g_m + C_5 L_5 + C_L L_L R_1 g_m + C\right.}$$

9.57 X-INVALID-ORDER-57 $Z(s) = \left(R_1,\ \infty,\ \infty,\ \infty,\ \frac{L_5 R_5 s}{C_5 L_5 R_5 s^2+L_5 s+R_5},\ \frac{1}{C_L s}\right)$

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

9.58 X-INVALID-ORDER-58 $Z(s) = \left(R_1,\ \infty,\ \infty,\ \infty,\ \frac{L_5R_5s}{C_5L_5R_5s^2+L_5s+R_5},\ \frac{R_L}{C_LR_Ls+1}\right)$

$$H(s) = \frac{-C_5L_5R_1R_5R_Ls^2 - R_1R_5R_L + s\left(L_5R_1R_5R_Lg_m - L_5R_1R_L\right)}{C_5C_LL_5R_1R_5R_Ls^3 + 2R_1R_5R_Lg_m + R_1R_5 + R_5R_L + s^2\left(2C_5L_5R_1R_5R_Lg_m + C_5L_5R_1R_5 + C_5L_5R_5R_L + C_LL_5R_1R_5R_Lg_m + C_LL_5R_1R_L + C_LL_5R_5R_L\right) + s\left(C_LR_1R_5R_L + L_5R_1R_5g_m + 2L_5R_1R_Lg_m + L_5R_1 + L_5R_5 + L_5R_L\right)}$$

9.59 X-INVALID-ORDER-59 $Z(s) = \left(R_1,\ \infty,\ \infty,\ \infty,\ \frac{L_5R_5s}{C_5L_5R_5s^2+L_5s+R_5},\ R_L + \frac{1}{C_Ls}\right)$

$$H(s) = \frac{-C_5C_LL_5R_1R_5R_Ls^3 - R_1R_5 + s^2\left(-C_5L_5R_1R_5 + C_LL_5R_1R_5R_Lg_m - C_LL_5R_1R_L\right) + s\left(-C_LR_1R_5R_L + L_5R_1R_5g_m - L_5R_1\right)}{2R_1R_5g_m + R_5 + s^3\left(2C_5C_LL_5R_1R_5R_Lg_m + C_5C_LL_5R_1R_5 + C_5C_LL_5R_5R_L\right) + s^2\left(2C_5L_5R_1R_5g_m + C_5L_5R_5 + C_LL_5R_1R_5g_m + 2C_LL_5R_1R_Lg_m + C_LL_5R_1 + C_LL_5R_5 + C_LL_5R_L\right) + s\left(2C_LR_1R_5R_Lg_m + C_LR_1R_5 + C_LR_5R_L + 2L_5R_1g_m + L_5\right)}$$

9.60 X-INVALID-ORDER-60 $Z(s) = \left(R_1,\ \infty,\ \infty,\ \infty,\ \frac{L_5R_5s}{C_5L_5R_5s^2+L_5s+R_5},\ L_Ls + \frac{1}{C_Ls}\right)$

$$H(s) = \frac{-C_5C_LL_5L_LR_1R_5s^4 - R_1R_5 + s^3\left(C_LL_5L_LR_1R_5g_m - C_LL_5L_LR_1\right) + s^2\left(-C_5L_5R_1R_5 - C_LL_LR_1R_5\right) + s\left(L_5R_1R_5g_m - L_5R_1\right)}{2R_1R_5g_m + R_5 + s^4\left(2C_5C_LL_5L_LR_1R_5g_m + C_5C_LL_5L_LR_5\right) + s^3\left(C_5C_LL_5R_1R_5 + 2C_LL_5L_LR_1g_m + C_LL_5L_L\right) + s^2\left(2C_5L_5R_1R_5g_m + C_5L_5R_5 + C_LL_5R_1R_5g_m + C_LL_5R_1 + C_LL_5R_5 + 2C_LL_LR_1R_5g_m + C_LL_LR_5\right) + s\left(C_LR_1R_5 + 2L_5R_1g_m + L_5\right)}$$

9.61 X-INVALID-ORDER-61 $Z(s) = \left(R_1,\ \infty,\ \infty,\ \infty,\ \frac{L_5R_5s}{C_5L_5R_5s^2+L_5s+R_5},\ \frac{L_Ls}{C_LL_Ls^2+1}\right)$

$$H(s) = \frac{-C_5L_5L_LR_1R_5s^3 - L_LR_1R_5s + s^2\left(L_5L_LR_1R_5g_m - L_5L_LR_1\right)}{C_5C_LL_5L_LR_1R_5s^4 + R_1R_5 + s^3\left(2C_5L_5L_LR_1R_5g_m + C_5L_5L_LR_5 + C_LL_5L_LR_1R_5g_m + C_LL_5L_LR_1 + C_LL_5L_LR_5\right) + s^2\left(C_5L_5R_1R_5 + C_LL_LR_1R_5 + 2L_5L_LR_1g_m + L_5L_L\right) + s\left(L_5R_1R_5g_m + L_5R_1 + L_5R_5 + 2L_LR_1R_5g_m + L_LR_5\right)}$$

9.62 X-INVALID-ORDER-62 $Z(s) = \left(R_1,\ \infty,\ \infty,\ \infty,\ \frac{L_5R_5s}{C_5L_5R_5s^2+L_5s+R_5},\ L_Ls + R_L + \frac{1}{C_Ls}\right)$

$$H(s) = \frac{-C_5C_LL_5L_LR_1R_5s^4 - R_1R_5 + s^3\left(-C_5C_LL_5R_1R_5R_L + C_LL_5L_LR_1R_5g_m - C_LL_5L_LR_1\right) + s^2\left(-C_5L_5R_1R_5 + C_LL_5R_1R_5R_Lg_m - C_LL_5R_1R_L - C_LL_LR_1R_5\right) + s\left(-C_LR_1R_5R_L + L_5R_1\right.}{2R_1R_5g_m + R_5 + s^4\left(2C_5C_LL_5L_LR_1R_5g_m + C_5C_LL_5L_LR_5\right) + s^3\left(2C_5C_LL_5R_1R_5R_Lg_m + C_5C_LL_5R_1R_5 + C_5C_LL_5R_5R_L + 2C_LL_5L_LR_1g_m + C_LL_5L_L\right) + s^2\left(2C_5L_5R_1R_5g_m + C_5L_5R_5 + C_LL_5R_1R_5g_m + 2C_LL_5R_1R_Lg_m + C_LL_5R_1 + C_LL_5R_5 + C_LL_5R_L + 2C\right.}$$

9.63 X-INVALID-ORDER-63 $Z(s) = \left(R_1,\ \infty,\ \infty,\ \infty,\ \frac{L_5R_5s}{C_5L_5R_5s^2+L_5s+R_5},\ \frac{L_LR_Ls}{C_LL_LR_Ls^2+L_Ls+R_L}\right)$

$$H(s) = \frac{-C_5L_5L_LR_1R_5R_Ls^3 - L_LR_1R_5R_Ls + s^2\left(L_5L_LR_1R_5R_Lg_m - L_5L_LR_1R_L\right)}{C_5C_LL_5L_LR_1R_5R_Ls^4 + R_1R_5R_L + s^3\left(2C_5L_5L_LR_1R_5R_Lg_m + C_5L_5L_LR_1R_5 + C_5L_5L_LR_5R_L + C_LL_5L_LR_1R_5R_Lg_m + C_LL_5L_LR_1R_L + C_LL_5L_LR_5R_L\right) + s^2\left(C_5L_5R_1R_5R_L + C_LL_LR_1R_5R_L + L_5L_LR_1R_5g_m + 2L_5L_LR_1R_Lg_m + L_5L_LR_1 + L_5L_LR_5 + L_5L_LR\right.}$$

9.64 X-INVALID-ORDER-64 $Z(s) = \left(R_1,\ \infty,\ \infty,\ \infty,\ \frac{L_5R_5s}{C_5L_5R_5s^2+L_5s+R_5},\ \frac{C_LL_LR_Ls^2+L_Ls+R_L}{C_LL_Ls^2+1}\right)$

$$H(s) = \frac{-C_5C_LL_5L_LR_1R_5R_Ls^4 - R_1R_5R_L + s^3\left(-C_5L_5L_LR_1R_5 + C_LL_5L_LR_1R_5R_Lg_m - C_LL_5L_LR_1R_L\right) + s^2\left(-C_5L_5R_1R_5R_L - C_LL_LR_1R_5R_L + L_5L_LR\right.}{2R_1R_5R_Lg_m + R_1R_5 + R_5R_L + s^4\left(2C_5C_LL_5L_LR_1R_5R_Lg_m + C_5C_LL_5L_LR_1R_5 + C_5C_LL_5L_LR_5R_L\right) + s^3\left(2C_5L_5L_LR_1R_5g_m + C_5L_5L_LR_5 + C_LL_5L_LR_1R_5g_m + 2C_LL_5L_LR_1R_Lg_m + C_LL_5L_LR_1 + C_LL_5L_LR_5 + C_LL_5L_LR_L\right) + s^2\left(2C_5L_5R_1R_5R_Lg_m + C_5L_5R_1\right.}$$

9.65 X-INVALID-ORDER-65 $Z(s) = \left(R_1,\ \infty,\ \infty,\ \infty,\ \frac{L_5R_5s}{C_5L_5R_5s^2+L_5s+R_5},\ \frac{R_L\left(C_LL_Ls^2+1\right)}{C_LL_Ls^2+C_LR_Ls+1}\right)$

$$H(s) = \frac{-C_5C_LL_5L_LR_1R_5R_Ls^4 - R_1R_5R_L + s^3\left(C_LL_5L_LR_1R_5R_Lg_m - C_LL_5L_LR_1R_L\right) + s^2\left(-C_5L_5R_1R_5R_L - C_LL_LR_1R_5R\right.}{2R_1R_5R_Lg_m + R_1R_5 + R_5R_L + s^4\left(2C_5C_LL_5L_LR_1R_5R_Lg_m + C_5C_LL_5L_LR_1R_5 + C_5C_LL_5L_LR_5R_L\right) + s^3\left(C_5C_LL_5R_1R_5R_L + C_LL_5L_LR_1R_5g_m + 2C_LL_5L_LR_1R_Lg_m + C_LL_5L_LR_1 + C_LL_5L_LR_5 + C_LL_5L_LR_L\right) + s^2\left(2C_5L_5R_1R_5R_Lg_m + C_5L_5R_1R_5 + C_5L_5R_5\right.}$$

9.66 X-INVALID-ORDER-66 $Z(s) = \left(R_1,\ \infty,\ \infty,\ \infty,\ \frac{C_5L_5R_5s^2+L_5s+R_5}{C_5L_5s^2+1},\ \frac{1}{C_Ls}\right)$

$$H(s) = \frac{L_5R_1g_ms + R_1R_5g_m - R_1 + s^2\left(C_5L_5R_1R_5g_m - C_5L_5R_1\right)}{2R_1g_m + s^3\left(C_5C_LL_5R_1R_5g_m + C_5C_LL_5R_1 + C_5C_LL_5R_5\right) + s^2\left(2C_5L_5R_1g_m + C_5L_5 + C_LL_5R_1g_m + C_LL_5\right) + s\left(C_LR_1R_5g_m + C_LR_1 + C_LR_5\right) + 1}$$

9.67 X-INVALID-ORDER-67 $Z(s) = \left(R_1,\ \infty,\ \infty,\ \infty,\ \frac{C_5L_5R_5s^2+L_5s+R_5}{C_5L_5s^2+1},\ \frac{R_L}{C_LR_Ls+1}\right)$

$$H(s) = \frac{L_5R_1R_Lg_ms + R_1R_5R_Lg_m - R_1R_L + s^2\left(C_5L_5R_1R_5R_Lg_m - C_5L_5R_1R_L\right)}{R_1R_5g_m + 2R_1R_Lg_m + R_1 + R_5 + R_L + s^3\left(C_5C_LL_5R_1R_5R_Lg_m + C_5C_LL_5R_1R_L + C_5C_LL_5R_5R_L\right) + s^2\left(C_5L_5R_1R_5g_m + 2C_5L_5R_1R_Lg_m + C_5L_5R_1 + C_5L_5R_5 + C_5L_5R_L + C_LL_5R_1R_Lg_m + C_LL_5R_L\right) + s\left(C_LR_1R_5R_Lg_m + C_LR_1R_L + C_LR_5R_L + L_5R_1g_m + L\right.}$$

9.68 X-INVALID-ORDER-68 $Z(s) = \left(R_1,\ \infty,\ \infty,\ \infty,\ \frac{C_5L_5R_5s^2+L_5s+R_5}{C_5L_5s^2+1},\ R_L + \frac{1}{C_Ls}\right)$

$$H(s) = \frac{R_1R_5g_m - R_1 + s^3\left(C_5C_LL_5R_1R_5R_Lg_m - C_5C_LL_5R_1R_L\right) + s^2\left(C_5L_5R_1R_5g_m - C_5L_5R_1 + C_LL_5R_1R_Lg_m\right) + s\left(C_LR_1R_5R_Lg_m - C_LR_1R_L + L_5R_1g_m\right)}{2R_1g_m + s^3\left(C_5C_LL_5R_1R_5g_m + 2C_5C_LL_5R_1R_Lg_m + C_5C_LL_5R_1 + C_5C_LL_5R_5 + C_5C_LL_5R_L\right) + s^2\left(2C_5L_5R_1g_m + C_5L_5 + C_LL_5R_1g_m + C_LL_5\right) + s\left(C_LR_1R_5g_m + 2C_LR_1R_Lg_m + C_LR_1 + C_LR_5 + C_LR_L\right) + 1}$$

9.69 X-INVALID-ORDER-69 $Z(s) = \left(R_1,\ \infty,\ \infty,\ \infty,\ \frac{C_5L_5R_5s^2+L_5s+R_5}{C_5L_5s^2+1},\ L_Ls + \frac{1}{C_Ls}\right)$

$$H(s) = \frac{C_LL_5L_LR_1g_ms^3 + L_5R_1g_ms + R_1R_5g_m - R_1 + s^4\left(C_5C_LL_5L_LR_1R_5g_m - C_5C_LL_5L_LR_1\right) + s^2\left(C_5L_5R_1R_5g_m - C_5L_5R_1 + C_LL_LR_1R_5g_m - C_LL_LR_1\right)}{2R_1g_m + s^4\left(2C_5C_LL_5L_LR_1g_m + C_5C_LL_5L_L\right) + s^3\left(C_5C_LL_5R_1R_5g_m + C_5C_LL_5R_1 + C_5C_LL_5R_5\right) + s^2\left(2C_5L_5R_1g_m + C_5L_5 + C_LL_5R_1g_m + C_LL_5 + 2C_LL_LR_1g_m + C_LL_L\right) + s\left(C_LR_1R_5g_m + C_LR_1 + C_LR_5\right) + 1}$$

9.70 X-INVALID-ORDER-70 $Z(s) = \left(R_1,\ \infty,\ \infty,\ \infty,\ \frac{C_5L_5R_5s^2+L_5s+R_5}{C_5L_5s^2+1},\ \frac{L_Ls}{C_LL_Ls^2+1}\right)$

$$H(s) = \frac{L_5L_LR_1g_ms^2 + s^3\left(C_5L_5L_LR_1R_5g_m - C_5L_5L_LR_1\right) + s\left(L_LR_1R_5g_m - L_LR_1\right)}{R_1R_5g_m + R_1 + R_5 + s^4\left(C_5C_LL_5L_LR_1R_5g_m + C_5C_LL_5L_LR_1 + C_5C_LL_5L_LR_5\right) + s^3\left(2C_5L_5L_LR_1g_m + C_5L_5L_L + C_LL_5L_LR_1g_m + C_LL_5L_L\right) + s^2\left(C_5L_5R_1R_5g_m + C_5L_5R_1 + C_5L_5R_5 + C_LL_LR_1R_5g_m + C_LL_LR_1 + C_LL_LR_5\right) + s\left(L_5R_1g_m + L_5 + 2L_LR_1g_m + \right.}$$

9.71 X-INVALID-ORDER-71 $Z(s) = \left(R_1,\ \infty,\ \infty,\ \infty,\ \frac{C_5L_5R_5s^2+L_5s+R_5}{C_5L_5s^2+1},\ L_Ls + R_L + \frac{1}{C_Ls}\right)$

$$H(s) = \frac{R_1R_5g_m - R_1 + s^4\left(C_5C_LL_5L_LR_1R_5g_m - C_5C_LL_5L_LR_1\right) + s^3\left(C_5C_LL_5R_1R_5R_Lg_m - C_5C_LL_5R_1R_L + C_LL_5L_LR_1g_m\right) + s^2\left(C_5L_5R_1R_5g_m - C_5L_5R_1 + C_LL_5R_1R_Lg_m + C_LL_LR_1R_5g_m - C_LL_LR_1\right) + s\left(C_LR_1R_5R_Lg_m - C_LR_1R_L + L_5R_1g_m\right)}{2R_1g_m + s^4\left(2C_5C_LL_5L_LR_1g_m + C_5C_LL_5L_L\right) + s^3\left(C_5C_LL_5R_1R_5g_m + 2C_5C_LL_5R_1R_Lg_m + C_5C_LL_5R_1 + C_5C_LL_5R_5 + C_5C_LL_5R_L\right) + s^2\left(2C_5L_5R_1g_m + C_5L_5 + C_LL_5R_1g_m + C_LL_5 + 2C_LL_LR_1g_m + C_LL_L\right) + s\left(C_LR_1R_5g_m + 2C_LR_1R_Lg_m + C_LR_1 + C_LR_5 + \right.}$$

9.72 X-INVALID-ORDER-72 $Z(s) = \left(R_1,\ \infty,\ \infty,\ \infty,\ \frac{C_5L_5R_5s^2+L_5s+R_5}{C_5L_5s^2+1},\ \frac{L_LR_Ls}{C_LL_LR_Ls^2+L_Ls+R_L}\right)$

$$H(s) = \frac{L_5L_LR_1R_Lg_ms^2 + s^3\left(C_5L_5L_LR_1R_5R_Lg_m - C_5L_5L_LR_1R_L\right) + s\left(L_LR_1R_5R_Lg_m - L_LR_1R_L\right.}{R_1R_5R_Lg_m + R_1R_L + R_5R_L + s^4\left(C_5C_LL_5L_LR_1R_5R_Lg_m + C_5C_LL_5L_LR_1R_L + C_5C_LL_5L_LR_5R_L\right) + s^3\left(C_5L_5L_LR_1R_5g_m + 2C_5L_5L_LR_1R_Lg_m + C_5L_5L_LR_1 + C_5L_5L_LR_5 + C_5L_5L_LR_L + C_LL_5L_LR_1R_Lg_m + C_LL_5L_LR_L\right) + s^2\left(C_5L_5R_1R_5R_Lg_m + C_5L_5R_1R_L + \right.}$$

9.73 X-INVALID-ORDER-73 $Z(s) = \left(R_1,\ \infty,\ \infty,\ \infty,\ \frac{C_5L_5R_5s^2+L_5s+R_5}{C_5L_5s^2+1},\ \frac{C_LL_LR_Ls^2+L_Ls+R_L}{C_LL_Ls^2+1}\right)$

$$H(s) = \frac{R_1R_5R_Lg_m - R_1R_L + s^4\left(C_5C_LL_5L_LR_1R_5R_Lg_m - C_5C_LL_5L_LR_1R_L\right) + s^3\left(C_5L_5L_LR_1R_5g_m - C_5L_5L_LR_1 + C_LL_5L_LR_1R_Lg_m\right) + s^2\left(C_5L_5R_1R_5R_Lg_m - C_5L_5R_1R_L + C_LL_LR_1R_5R_Lg_m - C_LL_L\right.}{R_1R_5g_m + 2R_1R_Lg_m + R_1 + R_5 + R_L + s^4\left(C_5C_LL_5L_LR_1R_5g_m + 2C_5C_LL_5L_LR_1R_Lg_m + C_5C_LL_5L_LR_1 + C_5C_LL_5L_LR_5 + C_5C_LL_5L_LR_L\right) + s^3\left(2C_5L_5L_LR_1g_m + C_5L_5L_L + C_LL_5L_LR_1g_m + C_LL_5L_L\right) + s^2\left(C_5L_5R_1R_5g_m + 2C_5L_5R_1R_Lg_m + C_5L_5R_1 + C_5L_5\right.}$$

9.74 X-INVALID-ORDER-74 $Z(s) = \left(R_1,\ \infty,\ \infty,\ \infty,\ \frac{C_5L_5R_5s^2+L_5s+R_5}{C_5L_5s^2+1},\ \frac{R_L\left(C_LL_Ls^2+1\right)}{C_LL_Ls^2+C_LR_Ls+1}\right)$

$$H(s) = \frac{C_LL_5L_LR_1R_Lg_ms^3 + L_5R_1R_Lg_ms + R_1R_5R_Lg_m - R_1R_L + s^4\left(C_5C_LL_5L_LR_1R_5R_Lg_m - C_5C_LL_5L_LR_1R_L\right) + s^2\left(C_5L\right.}{R_1R_5g_m + 2R_1R_Lg_m + R_1 + R_5 + R_L + s^4\left(C_5C_LL_5L_LR_1R_5g_m + 2C_5C_LL_5L_LR_1R_Lg_m + C_5C_LL_5L_LR_1 + C_5C_LL_5L_LR_5 + C_5C_LL_5L_LR_L\right) + s^3\left(C_5C_LL_5R_1R_5R_Lg_m + C_5C_LL_5R_1R_L + C_5C_LL_5R_5R_L + C_LL_5L_LR_1g_m + C_LL_5L_L\right) + s^2\left(C_5L_5R_1R_5g_m + 2C_5L_5\right.}$$

9.75 X-INVALID-ORDER-75 $Z(s) = \left(R_1,\ \infty,\ \infty,\ \infty,\ \frac{R_5\left(C_5L_5s^2+1\right)}{C_5L_5s^2+C_5R_5s+1},\ \frac{1}{C_Ls}\right)$

$$H(s) = \frac{-C_5R_1R_5s + R_1R_5g_m - R_1 + s^2\left(C_5L_5R_1R_5g_m - C_5L_5R_1\right)}{2R_1g_m + s^3\left(C_5C_LL_5R_1R_5g_m + C_5C_LL_5R_1 + C_5C_LL_5R_5\right) + s^2\left(C_5C_LR_1R_5 + 2C_5L_5R_1g_m + C_5L_5\right) + s\left(2C_5R_1R_5g_m + C_5R_5 + C_LR_1R_5g_m + C_LR_1 + C_LR_5\right) + 1}$$

9.76 X-INVALID-ORDER-76 $Z(s) = \left(R_1,\ \infty,\ \infty,\ \infty,\ \frac{R_5\left(C_5L_5s^2+1\right)}{C_5L_5s^2+C_5R_5s+1},\ \frac{R_L}{C_LR_Ls+1}\right)$

$$H(s) = \frac{-C_5R_1R_5R_Ls + R_1R_5R_Lg_m - R_1R_L + s^2\left(C_5L_5R_1R_5R_Lg_m - C_5L_5R_1R_L\right)}{R_1R_5g_m + 2R_1R_Lg_m + R_1 + R_5 + R_L + s^3\left(C_5C_LL_5R_1R_5R_Lg_m + C_5C_LL_5R_1R_L + C_5C_LL_5R_5R_L\right) + s^2\left(C_5C_LR_1R_5R_L + C_5L_5R_1R_5g_m + 2C_5L_5R_1R_Lg_m + C_5L_5R_1 + C_5L_5R_5 + C_5L_5R_L\right) + s\left(2C_5R_1R_5R_Lg_m + C_5R_1R_5 + C_5R_5R_L + C_LR_1R_5R_Lg_m + C_LR_1R\right.}$$

9.77 X-INVALID-ORDER-77 $Z(s) = \left(R_1,\ \infty,\ \infty,\ \infty,\ \frac{R_5\left(C_5L_5s^2+1\right)}{C_5L_5s^2+C_5R_5s+1},\ R_L + \frac{1}{C_Ls}\right)$

$$H(s) = \frac{R_1R_5g_m - R_1 + s^3\left(C_5C_LL_5R_1R_5R_Lg_m - C_5C_LL_5R_1R_L\right) + s^2\left(-C_5C_LR_1R_5R_L + C_5L_5R_1R_5g_m - C_5L_5R_1\right) + s\left(-C_5R_1R_5 + C_LR_1R_5R_Lg_m - C_LR_1R_L\right)}{2R_1g_m + s^3\left(C_5C_LL_5R_1R_5g_m + 2C_5C_LL_5R_1R_Lg_m + C_5C_LL_5R_1 + C_5C_LL_5R_5 + C_5C_LL_5R_L\right) + s^2\left(2C_5C_LR_1R_5R_Lg_m + C_5C_LR_1R_5 + C_5C_LR_5R_L + 2C_5L_5R_1g_m + C_5L_5\right) + s\left(2C_5R_1R_5g_m + C_5R_5 + C_LR_1R_5g_m + 2C_LR_1R_Lg_m + C_LR_1 + C_LR_5 + C_LR_L\right) + 1}$$

9.78 X-INVALID-ORDER-78 $Z(s) = \left(R_1,\ \infty,\ \infty,\ \infty,\ \frac{R_5\left(C_5L_5s^2+1\right)}{C_5L_5s^2+C_5R_5s+1},\ L_Ls + \frac{1}{C_Ls}\right)$

$$H(s) = \frac{-C_5C_LL_LR_1R_5s^3 - C_5R_1R_5s + R_1R_5g_m - R_1 + s^4\left(C_5C_LL_5L_LR_1R_5g_m - C_5C_LL_5L_LR_1\right) + s^2\left(C_5L_5R_1R_5g_m - C_5L_5R_1 + C_LL_LR_1R_5g_m - C_LL_LR_1\right)}{2R_1g_m + s^4\left(2C_5C_LL_5L_LR_1g_m + C_5C_LL_5L_L\right) + s^3\left(C_5C_LL_5R_1R_5g_m + C_5C_LL_5R_1 + C_5C_LL_5R_5 + 2C_5C_LL_LR_1R_5g_m + C_5C_LL_LR_5\right) + s^2\left(C_5C_LR_1R_5 + 2C_5L_5R_1g_m + C_5L_5 + 2C_LL_LR_1g_m + C_LL_L\right) + s\left(2C_5R_1R_5g_m + C_5R_5 + C_LR_1R_5g_m + C_LR_1 + C_LR_5\right) +}$$

9.79 X-INVALID-ORDER-79 $Z(s) = \left(R_1,\ \infty,\ \infty,\ \infty,\ \frac{R_5\left(C_5L_5s^2+1\right)}{C_5L_5s^2+C_5R_5s+1},\ \frac{L_Ls}{C_LL_Ls^2+1}\right)$

$$H(s) = \frac{-C_5L_LR_1R_5s^2 + s^3\left(C_5L_5L_LR_1R_5g_m - C_5L_5L_LR_1\right) + s\left(L_LR_1R_5g_m - L_LR_1\right)}{R_1R_5g_m + R_1 + R_5 + s^4\left(C_5C_LL_5L_LR_1R_5g_m + C_5C_LL_5L_LR_1 + C_5C_LL_5L_LR_5\right) + s^3\left(C_5C_LL_LR_1R_5 + 2C_5L_5L_LR_1g_m + C_5L_5L_L\right) + s^2\left(C_5L_5R_1R_5g_m + C_5L_5R_1 + C_5L_5R_5 + 2C_5L_LR_1R_5g_m + C_5L_LR_5 + C_LL_LR_1R_5g_m + C_LL_LR_1 + C_LL_LR_5\right) + s\left(C_5R_1R_5 +\right.}$$

9.80 X-INVALID-ORDER-80 $Z(s) = \left(R_1,\ \infty,\ \infty,\ \infty,\ \frac{R_5\left(C_5L_5s^2+1\right)}{C_5L_5s^2+C_5R_5s+1},\ L_Ls + R_L + \frac{1}{C_Ls}\right)$

$$H(s) = \frac{R_1R_5g_m - R_1 + s^4\left(C_5C_LL_5L_LR_1R_5g_m - C_5C_LL_5L_LR_1\right) + s^3\left(C_5C_LL_5R_1R_5R_Lg_m - C_5C_LL_5R_1R_L - C_5C_LL_LR_1R_5\right) + s^2\left(-C_5C_LR_1R_5R_L + C_5L_5R_1R_5g_m - C_5L_5R_1 + C_LL_LR_1R_5g_m - C_LL_LR_1\right) + s}{2R_1g_m + s^4\left(2C_5C_LL_5L_LR_1g_m + C_5C_LL_5L_L\right) + s^3\left(C_5C_LL_5R_1R_5g_m + 2C_5C_LL_5R_1R_Lg_m + C_5C_LL_5R_1 + C_5C_LL_5R_5 + C_5C_LL_5R_L + 2C_5C_LL_LR_1R_5g_m + C_5C_LL_LR_5\right) + s^2\left(2C_5C_LR_1R_5R_Lg_m + C_5C_LR_1R_5 + C_5C_LR_5R_L + 2C_5L_5R_1g_m + C_5L_5 + 2C_LL_LR_1g\right.}$$

9.81 X-INVALID-ORDER-81 $Z(s) = \left(R_1,\ \infty,\ \infty,\ \infty,\ \frac{R_5\left(C_5L_5s^2+1\right)}{C_5L_5s^2+C_5R_5s+1},\ \frac{L_LR_Ls}{C_LL_LR_Ls^2+L_Ls+R_L}\right)$

$$H(s) = \frac{-C_5L_LR_1R_5R_Ls^2 + s^3\left(C_5L_5L_LR_1R_5R_Lg_m - C_5L_5L_LR_1R_L\right) + s\left(L_LR_1R_5R_Lg_m - L_LR_1\right.}{R_1R_5R_Lg_m + R_1R_L + R_5R_L + s^4\left(C_5C_LL_5L_LR_1R_5R_Lg_m + C_5C_LL_5L_LR_1R_L + C_5C_LL_5L_LR_5R_L\right) + s^3\left(C_5C_LL_LR_1R_5R_L + C_5L_5L_LR_1R_5g_m + 2C_5L_5L_LR_1R_Lg_m + C_5L_5L_LR_1 + C_5L_5L_LR_5 + C_5L_5L_LR_L\right) + s^2\left(C_5L_5R_1R_5R_Lg_m + C_5L_5R_1R_L + C_5L_5R_5R_L +\right.}$$

9.82 X-INVALID-ORDER-82 $Z(s) = \left(R_1,\ \infty,\ \infty,\ \infty,\ \frac{R_5\left(C_5L_5s^2+1\right)}{C_5L_5s^2+C_5R_5s+1},\ \frac{C_LL_LR_Ls^2+L_Ls+R_L}{C_LL_Ls^2+1}\right)$

$$H(s) = \frac{R_1R_5R_Lg_m - R_1R_L + s^4\left(C_5C_LL_5L_LR_1R_5R_Lg_m - C_5C_LL_5L_LR_1R_L\right) + s^3\left(-C_5C_LL_LR_1R_5R_L + C_5L_5L_LR_1R_5g_m - C_5L_5L_LR_1\right) + s^2\left(C_5L_5R_1R_5R_Lg_m -\right.}{R_1R_5g_m + 2R_1R_Lg_m + R_1 + R_5 + R_L + s^4\left(C_5C_LL_5L_LR_1R_5g_m + 2C_5C_LL_5L_LR_1R_Lg_m + C_5C_LL_5L_LR_1 + C_5C_LL_5L_LR_5 + C_5C_LL_5L_LR_L\right) + s^3\left(2C_5C_LL_LR_1R_5R_Lg_m + C_5C_LL_LR_1R_5 + C_5C_LL_LR_5R_L + 2C_5L_5L_LR_1g_m + C_5L_5L_L\right) + s^2\left(C_5L_5R_1R_5g_m + 2C_5\right.}$$

9.83 X-INVALID-ORDER-83 $Z(s) = \left(R_1,\ \infty,\ \infty,\ \infty,\ \frac{R_5\left(C_5L_5s^2+1\right)}{C_5L_5s^2+C_5R_5s+1},\ \frac{R_L\left(C_LL_Ls^2+1\right)}{C_LL_Ls^2+C_LR_Ls+1}\right)$

$$H(s) = \frac{-C_5C_LL_LR_1R_5R_Ls^3 - C_5R_1R_5R_Ls + R_1R_5R_Lg_m - R_1R_L + s^4\left(C_5C_LL_5L_LR_1R_5R_Lg_m - C_5C_L\right.}{R_1R_5g_m + 2R_1R_Lg_m + R_1 + R_5 + R_L + s^4\left(C_5C_LL_5L_LR_1R_5g_m + 2C_5C_LL_5L_LR_1R_Lg_m + C_5C_LL_5L_LR_1 + C_5C_LL_5L_LR_5 + C_5C_LL_5L_LR_L\right) + s^3\left(C_5C_LL_5R_1R_5R_Lg_m + C_5C_LL_5R_1R_L + C_5C_LL_5R_5R_L + 2C_5C_LL_LR_1R_5R_Lg_m + C_5C_LL_LR_1R_5 + C_5C_LL_LR_5R_L\right.}$$

9.84 X-INVALID-ORDER-84 $Z(s) = (L_1s,\ \infty,\ \infty,\ \infty,\ R_5,\ R_L)$

$$H(s) = \frac{s\left(L_1R_5R_Lg_m - L_1R_L\right)}{R_5 + R_L + s\left(L_1R_5g_m + 2L_1R_Lg_m + L_1\right)}$$

9.85 X-INVALID-ORDER-85 $Z(s) = \left(L_1 s,\ \infty,\ \infty,\ \infty,\ R_5,\ L_L s + \frac{1}{C_L s}\right)$

$$H(s) = \frac{s^3 \left(C_L L_1 L_L R_5 g_m - C_L L_1 L_L\right) + s \left(L_1 R_5 g_m - L_1\right)}{2 C_L L_1 L_L g_m s^3 + s^2 \left(C_L L_1 R_5 g_m + C_L L_1 + C_L L_L\right) + s \left(C_L R_5 + 2 L_1 g_m\right) + 1}$$

9.86 X-INVALID-ORDER-86 $Z(s) = \left(L_1 s,\ \infty,\ \infty,\ \infty,\ R_5,\ \frac{L_L s}{C_L L_L s^2 + 1}\right)$

$$H(s) = \frac{s^2 \left(L_1 L_L R_5 g_m - L_1 L_L\right)}{R_5 + s^3 \left(C_L L_1 L_L R_5 g_m + C_L L_1 L_L\right) + s^2 \left(C_L L_L R_5 + 2 L_1 L_L g_m\right) + s \left(L_1 R_5 g_m + L_1 + L_L\right)}$$

9.87 X-INVALID-ORDER-87 $Z(s) = \left(L_1 s,\ \infty,\ \infty,\ \infty,\ R_5,\ L_L s + R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{s^3 \left(C_L L_1 L_L R_5 g_m - C_L L_1 L_L\right) + s^2 \left(C_L L_1 R_5 R_L g_m - C_L L_1 R_L\right) + s \left(L_1 R_5 g_m - L_1\right)}{2 C_L L_1 L_L g_m s^3 + s^2 \left(C_L L_1 R_5 g_m + 2 C_L L_1 R_L g_m + C_L L_1 + C_L L_L\right) + s \left(C_L R_5 + C_L R_L + 2 L_1 g_m\right) + 1}$$

9.88 X-INVALID-ORDER-88 $Z(s) = \left(L_1 s,\ \infty,\ \infty,\ \infty,\ R_5,\ \frac{L_L R_L s}{C_L L_L R_L s^2 + L_L s + R_L}\right)$

$$H(s) = \frac{s^2 \left(L_1 L_L R_5 R_L g_m - L_1 L_L R_L\right)}{R_5 R_L + s^3 \left(C_L L_1 L_L R_5 R_L g_m + C_L L_1 L_L R_L\right) + s^2 \left(C_L L_L R_5 R_L + L_1 L_L R_5 g_m + 2 L_1 L_L R_L g_m + L_1 L_L\right) + s \left(L_1 R_5 R_L g_m + L_1 R_L + L_L R_5 + L_L R_L\right)}$$

9.89 X-INVALID-ORDER-89 $Z(s) = \left(L_1 s,\ \infty,\ \infty,\ \infty,\ R_5,\ \frac{C_L L_L R_L s^2 + L_L s + R_L}{C_L L_L s^2 + 1}\right)$

$$H(s) = \frac{s^3 \left(C_L L_1 L_L R_5 R_L g_m - C_L L_1 L_L R_L\right) + s^2 \left(L_1 L_L R_5 g_m - L_1 L_L\right) + s \left(L_1 R_5 R_L g_m - L_1 R_L\right)}{R_5 + R_L + s^3 \left(C_L L_1 L_L R_5 g_m + 2 C_L L_1 L_L R_L g_m + C_L L_1 L_L\right) + s^2 \left(C_L L_L R_5 + C_L L_L R_L + 2 L_1 L_L g_m\right) + s \left(L_1 R_5 g_m + 2 L_1 R_L g_m + L_1 + L_L\right)}$$

9.90 X-INVALID-ORDER-90 $Z(s) = \left(L_1 s,\ \infty,\ \infty,\ \infty,\ R_5,\ \frac{R_L\left(C_L L_L s^2 + 1\right)}{C_L L_L s^2 + C_L R_L s + 1}\right)$

$$H(s) = \frac{s^3 \left(C_L L_1 L_L R_5 R_L g_m - C_L L_1 L_L R_L\right) + s \left(L_1 R_5 R_L g_m - L_1 R_L\right)}{R_5 + R_L + s^3 \left(C_L L_1 L_L R_5 g_m + 2 C_L L_1 L_L R_L g_m + C_L L_1 L_L\right) + s^2 \left(C_L L_1 R_5 R_L g_m + C_L L_1 R_L + C_L L_L R_5 + C_L L_L R_L\right) + s \left(C_L R_5 R_L + L_1 R_5 g_m + 2 L_1 R_L g_m + L_1\right)}$$

9.91 X-INVALID-ORDER-91 $Z(s) = \left(L_1 s,\ \infty,\ \infty,\ \infty,\ \frac{1}{C_5 s},\ \frac{R_L}{C_L R_L s + 1}\right)$

$$H(s) = \frac{-C_5 L_1 R_L s^2 + L_1 R_L g_m s}{C_5 C_L L_1 R_L s^3 + s^2 \left(2 C_5 L_1 R_L g_m + C_5 L_1 + C_L L_1 R_L g_m\right) + s \left(C_5 R_L + C_L R_L + L_1 g_m\right) + 1}$$

9.92 X-INVALID-ORDER-92 $Z(s) = \left(L_1 s,\ \infty,\ \infty,\ \infty,\ \frac{1}{C_5 s},\ L_L s + \frac{1}{C_L s}\right)$

$$H(s) = \frac{-C_5 C_L L_1 L_L s^3 - C_5 L_1 s + C_L L_1 L_L g_m s^2 + L_1 g_m}{2 C_5 C_L L_1 L_L g_m s^3 + C_5 + C_L + s^2 \left(C_5 C_L L_1 + C_5 C_L L_L\right) + s \left(2 C_5 L_1 g_m + C_L L_1 g_m\right)}$$

9.93 X-INVALID-ORDER-93 $Z(s) = \left(L_1 s,\ \infty,\ \infty,\ \infty,\ \frac{1}{C_5 s},\ \frac{L_L s}{C_L L_L s^2 + 1}\right)$

$$H(s) = \frac{-C_5 L_1 L_L s^3 + L_1 L_L g_m s^2}{C_5 C_L L_1 L_L s^4 + L_1 g_m s + s^3 \left(2 C_5 L_1 L_L g_m + C_L L_1 L_L g_m\right) + s^2 \left(C_5 L_1 + C_5 L_L + C_L L_L\right) + 1}$$

9.94 X-INVALID-ORDER-94 $Z(s) = \left(L_1 s,\ \infty,\ \infty,\ \infty,\ \frac{1}{C_5 s},\ L_L s + R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{-C_5 C_L L_1 L_L s^3 + L_1 g_m + s^2 \left(-C_5 C_L L_1 R_L + C_L L_1 L_L g_m\right) + s \left(-C_5 L_1 + C_L L_1 R_L g_m\right)}{2C_5 C_L L_1 L_L g_m s^3 + C_5 + C_L + s^2 \left(2C_5 C_L L_1 R_L g_m + C_5 C_L L_1 + C_5 C_L L_L\right) + s \left(C_5 C_L R_L + 2C_5 L_1 g_m + C_L L_1 g_m\right)}$$

9.95 X-INVALID-ORDER-95 $Z(s) = \left(L_1 s,\ \infty,\ \infty,\ \infty,\ \frac{1}{C_5 s},\ \frac{L_L R_L s}{C_L L_L R_L s^2 + L_L s + R_L}\right)$

$$H(s) = \frac{-C_5 L_1 L_L R_L s^3 + L_1 L_L R_L g_m s^2}{C_5 C_L L_1 L_L R_L s^4 + R_L + s^3 \left(2C_5 L_1 L_L R_L g_m + C_5 L_1 L_L + C_L L_1 L_L R_L g_m\right) + s^2 \left(C_5 L_1 R_L + C_5 L_L R_L + C_L L_L R_L + L_1 L_L g_m\right) + s \left(L_1 R_L g_m + L_L\right)}$$

9.96 X-INVALID-ORDER-96 $Z(s) = \left(L_1 s,\ \infty,\ \infty,\ \infty,\ \frac{1}{C_5 s},\ \frac{C_L L_L R_L s^2 + L_L s + R_L}{C_L L_L s^2 + 1}\right)$

$$H(s) = \frac{-C_5 C_L L_1 L_L R_L s^4 + L_1 R_L g_m s + s^3 \left(-C_5 L_1 L_L + C_L L_1 L_L R_L g_m\right) + s^2 \left(-C_5 L_1 R_L + L_1 L_L g_m\right)}{s^4 \left(2C_5 C_L L_1 L_L R_L g_m + C_5 C_L L_1 L_L\right) + s^3 \left(C_5 C_L L_L R_L + 2C_5 L_1 L_L g_m + C_L L_1 L_L g_m\right) + s^2 \left(2C_5 L_1 R_L g_m + C_5 L_1 + C_5 L_L + C_L L_L\right) + s \left(C_5 R_L + L_1 g_m\right) + 1}$$

9.97 X-INVALID-ORDER-97 $Z(s) = \left(L_1 s,\ \infty,\ \infty,\ \infty,\ \frac{1}{C_5 s},\ \frac{R_L\left(C_L L_L s^2 + 1\right)}{C_L L_L s^2 + C_L R_L s + 1}\right)$

$$H(s) = \frac{-C_5 C_L L_1 L_L R_L s^4 - C_5 L_1 R_L s^2 + C_L L_1 L_L R_L g_m s^3 + L_1 R_L g_m s}{s^4 \left(2C_5 C_L L_1 L_L R_L g_m + C_5 C_L L_1 L_L\right) + s^3 \left(C_5 C_L L_1 R_L + C_5 C_L L_L R_L + C_L L_1 L_L g_m\right) + s^2 \left(2C_5 L_1 R_L g_m + C_5 L_1 + C_L L_1 R_L g_m + C_L L_L\right) + s \left(C_5 R_L + C_L R_L + L_1 g_m\right) + 1}$$

9.98 X-INVALID-ORDER-98 $Z(s) = \left(L_1 s,\ \infty,\ \infty,\ \infty,\ \frac{R_5}{C_5 R_5 s + 1},\ \frac{1}{C_L s}\right)$

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

9.99 X-INVALID-ORDER-99 $Z(s) = \left(L_1 s,\ \infty,\ \infty,\ \infty,\ \frac{R_5}{C_5 R_5 s + 1},\ \frac{R_L}{C_L R_L s + 1}\right)$

$$H(s) = \frac{-C_5 L_1 R_5 R_L s^2 + s \left(L_1 R_5 R_L g_m - L_1 R_L\right)}{C_5 C_L L_1 R_5 R_L s^3 + R_5 + R_L + s^2 \left(2C_5 L_1 R_5 R_L g_m + C_5 L_1 R_5 + C_L L_1 R_5 R_L g_m + C_L L_1 R_L\right) + s \left(C_5 R_5 R_L + C_L R_5 R_L + L_1 R_5 g_m + 2L_1 R_L g_m + L_1\right)}$$

9.100 X-INVALID-ORDER-100 $Z(s) = \left(L_1 s,\ \infty,\ \infty,\ \infty,\ \frac{R_5}{C_5 R_5 s + 1},\ R_L + \frac{1}{C_L s}\right)$

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

9.101 X-INVALID-ORDER-101 $Z(s) = \left(L_1 s,\ \infty,\ \infty,\ \infty,\ \frac{R_5}{C_5 R_5 s + 1},\ L_L s + \frac{1}{C_L s}\right)$

$$H(s) = \frac{-C_5 C_L L_1 L_L R_5 s^4 - C_5 L_1 R_5 s^2 + s^3 \left(C_L L_1 L_L R_5 g_m - C_L L_1 L_L\right) + s \left(L_1 R_5 g_m - L_1\right)}{2C_5 C_L L_1 L_L R_5 g_m s^4 + s^3 \left(C_5 C_L L_1 R_5 + C_5 C_L L_L R_5 + 2C_L L_1 L_L g_m\right) + s^2 \left(2C_5 L_1 R_5 g_m + C_L L_1 R_5 g_m + C_L L_1 + C_L L_L\right) + s \left(C_5 R_5 + C_L R_5 + 2L_1 g_m\right) + 1}$$

9.102 X-INVALID-ORDER-102 $Z(s) = \left(L_1 s,\ \infty,\ \infty,\ \infty,\ \frac{R_5}{C_5 R_5 s + 1},\ \frac{L_L s}{C_L L_L s^2 + 1}\right)$

$$H(s) = \frac{-C_5 L_1 L_L R_5 s^3 + s^2 \left(L_1 L_L R_5 g_m - L_1 L_L\right)}{C_5 C_L L_1 L_L R_5 s^4 + R_5 + s^3 \left(2C_5 L_1 L_L R_5 g_m + C_L L_1 L_L R_5 g_m + C_L L_1 L_L\right) + s^2 \left(C_5 L_1 R_5 + C_5 L_L R_5 + C_L L_L R_5 + 2L_1 L_L g_m\right) + s \left(L_1 R_5 g_m + L_1 + L_L\right)}$$

9.103 X-INVALID-ORDER-103 $Z(s) = \left(L_1 s,\ \infty,\ \infty,\ \infty,\ \frac{R_5}{C_5 R_5 s+1},\ L_L s + R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{-C_5 C_L L_1 L_L R_5 s^4 + s^3 \left(-C_5 C_L L_1 R_5 R_L + C_L L_1 L_L R_5 g_m - C_L L_1 L_L\right) + s^2 \left(-C_5 L_1 R_5 + C_L L_1 R_5 R_L g_m - C_L L_1 R_L\right) + s \left(L_1 R_5 g_m - L_1\right)}{2C_5 C_L L_1 L_L R_5 g_m s^4 + s^3 \left(2C_5 C_L L_1 R_5 R_L g_m + C_5 C_L L_1 R_5 + C_5 C_L L_L R_5 + 2C_L L_1 L_L g_m\right) + s^2 \left(C_5 C_L R_5 R_L + 2C_5 L_1 R_5 g_m + C_L L_1 R_5 g_m + 2C_L L_1 R_L g_m + C_L L_1 + C_L L_L\right) + s \left(C_5 R_5 + C_L R_5 + C_L R_L + 2L_1 g_m\right) + 1}$$

9.104 X-INVALID-ORDER-104 $Z(s) = \left(L_1 s,\ \infty,\ \infty,\ \infty,\ \frac{R_5}{C_5 R_5 s+1},\ \frac{L_L R_L s}{C_L L_L R_L s^2 + L_L s + R_L}\right)$

$$H(s) = \frac{-C_5 L_1 L_L R_5 R_L s^3 + s^2 \left(L_1 L_L R_5 R_L g_m - L_1 L_L R_L\right)}{C_5 C_L L_1 L_L R_5 R_L s^4 + R_5 R_L + s^3 \left(2C_5 L_1 L_L R_5 R_L g_m + C_5 L_1 L_L R_5 + C_L L_1 L_L R_5 R_L g_m + C_L L_1 L_L R_L\right) + s^2 \left(C_5 L_1 R_5 R_L + C_5 L_L R_5 R_L + C_L L_L R_5 R_L + L_1 L_L R_5 g_m + 2L_1 L_L R_L g_m + L_1 L_L\right) + s \left(L_1 R_5 R_L g_m + L_1 R_L + L_L R_5 + L_L R_L\right)}$$

9.105 X-INVALID-ORDER-105 $Z(s) = \left(L_1 s,\ \infty,\ \infty,\ \infty,\ \frac{R_5}{C_5 R_5 s+1},\ \frac{C_L L_L R_L s^2 + L_L s + R_L}{C_L L_L s^2 + 1}\right)$

$$H(s) = \frac{-C_5 C_L L_1 L_L R_5 R_L s^4 + s^3 \left(-C_5 L_1 L_L R_5 + C_L L_1 L_L R_5 R_L g_m - C_L L_1 L_L R_L\right) + s^2 \left(-C_5 L_1 R_5 R_L + L_1 L_L R_5 g_m - L_1 L_L\right) + s \left(L_1 R_5 R_L g_m - L_1 R_L\right)}{R_5 + R_L + s^4 \left(2C_5 C_L L_1 L_L R_5 R_L g_m + C_5 C_L L_1 L_L R_5\right) + s^3 \left(C_5 C_L L_L R_5 R_L + 2C_5 L_1 L_L R_5 g_m + C_L L_1 L_L R_5 g_m + 2C_L L_1 L_L R_L g_m + C_L L_1 L_L\right) + s^2 \left(2C_5 L_1 R_5 R_L g_m + C_5 L_1 R_5 + C_5 L_L R_5 + C_L L_L R_5 + C_L L_L R_L + 2L_1 L_L g_m\right) + s \left(C_5 R_5 R_L + L_1 R_5 g_m + 2L_1 R_L g_m \right.}$$

9.106 X-INVALID-ORDER-106 $Z(s) = \left(L_1 s,\ \infty,\ \infty,\ \infty,\ \frac{R_5}{C_5 R_5 s+1},\ \frac{R_L\left(C_L L_L s^2+1\right)}{C_L L_L s^2 + C_L R_L s + 1}\right)$

$$H(s) = \frac{-C_5 C_L L_1 L_L R_5 R_L s^4 - C_5 L_1 R_5 R_L s^2 + s^3 \left(C_L L_1 L_L R_5 R_L g_m - C_L L_1 L_L R_L\right) + s \left(L_1 R_5 R_L g_m - L_1 R_L\right)}{R_5 + R_L + s^4 \left(2C_5 C_L L_1 L_L R_5 R_L g_m + C_5 C_L L_1 L_L R_5\right) + s^3 \left(C_5 C_L L_1 R_5 R_L + C_5 C_L L_L R_5 R_L + C_L L_1 L_L R_5 g_m + 2C_L L_1 L_L R_L g_m + C_L L_1 L_L\right) + s^2 \left(2C_5 L_1 R_5 R_L g_m + C_5 L_1 R_5 + C_L L_1 R_5 R_L g_m + C_L L_1 R_L + C_L L_L R_5 + C_L L_L R_L\right) + s \left(C_5 R_5 R_L + C_L R_5 R_L + L_1 R_5 \right.}$$

9.107 X-INVALID-ORDER-107 $Z(s) = \left(L_1 s,\ \infty,\ \infty,\ \infty,\ R_5 + \frac{1}{C_5 s},\ \frac{R_L}{C_L R_L s+1}\right)$

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

9.108 X-INVALID-ORDER-108 $Z(s) = \left(L_1 s,\ \infty,\ \infty,\ \infty,\ R_5 + \frac{1}{C_5 s},\ L_L s + \frac{1}{C_L s}\right)$

$$H(s) = \frac{C_L L_1 L_L g_m s^2 + L_1 g_m + s^3 \left(C_5 C_L L_1 L_L R_5 g_m - C_5 C_L L_1 L_L\right) + s \left(C_5 L_1 R_5 g_m - C_5 L_1\right)}{2C_5 C_L L_1 L_L g_m s^3 + C_5 + C_L + s^2 \left(C_5 C_L L_1 R_5 g_m + C_5 C_L L_1 + C_5 C_L L_L\right) + s \left(C_5 C_L R_5 + 2C_5 L_1 g_m + C_L L_1 g_m\right)}$$

9.109 X-INVALID-ORDER-109 $Z(s) = \left(L_1 s,\ \infty,\ \infty,\ \infty,\ R_5 + \frac{1}{C_5 s},\ \frac{L_L s}{C_L L_L s^2 + 1}\right)$

$$H(s) = \frac{L_1 L_L g_m s^2 + s^3 \left(C_5 L_1 L_L R_5 g_m - C_5 L_1 L_L\right)}{s^4 \left(C_5 C_L L_1 L_L R_5 g_m + C_5 C_L L_1 L_L\right) + s^3 \left(C_5 C_L L_L R_5 + 2C_5 L_1 L_L g_m + C_L L_1 L_L g_m\right) + s^2 \left(C_5 L_1 R_5 g_m + C_5 L_1 + C_5 L_L + C_L L_L\right) + s \left(C_5 R_5 + L_1 g_m\right) + 1}$$

9.110 X-INVALID-ORDER-110 $Z(s) = \left(L_1 s,\ \infty,\ \infty,\ \infty,\ R_5 + \frac{1}{C_5 s},\ L_L s + R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{L_1 g_m + s^3 \left(C_5 C_L L_1 L_L R_5 g_m - C_5 C_L L_1 L_L\right) + s^2 \left(C_5 C_L L_1 R_5 R_L g_m - C_5 C_L L_1 R_L + C_L L_1 L_L g_m\right) + s \left(C_5 L_1 R_5 g_m - C_5 L_1 + C_L L_1 R_L g_m\right)}{2C_5 C_L L_1 L_L g_m s^3 + C_5 + C_L + s^2 \left(C_5 C_L L_1 R_5 g_m + 2C_5 C_L L_1 R_L g_m + C_5 C_L L_1 + C_5 C_L L_L\right) + s \left(C_5 C_L R_5 + C_5 C_L R_L + 2C_5 L_1 g_m + C_L L_1 g_m\right)}$$

9.111 X-INVALID-ORDER-111 $Z(s) = \left(L_1 s,\ \infty,\ \infty,\ \infty,\ R_5 + \frac{1}{C_5 s},\ \frac{L_L R_L s}{C_L L_L R_L s^2 + L_L s + R_L}\right)$

$$H(s) = \frac{L_1 L_L R_L g_m s^2 + s^3 \left(C_5 L_1 L_L R_5 R_L g_m - C_5 L_1 L_L R_L\right)}{R_L + s^4 \left(C_5 C_L L_1 L_L R_5 R_L g_m + C_5 C_L L_1 L_L R_L\right) + s^3 \left(C_5 C_L L_L R_5 R_L + C_5 L_1 L_L R_5 g_m + 2C_5 L_1 L_L R_L g_m + C_5 L_1 L_L + C_L L_1 L_L R_L g_m\right) + s^2 \left(C_5 L_1 R_5 R_L g_m + C_5 L_1 R_L + C_5 L_L R_5 + C_5 L_L R_L + C_L L_L R_L + L_1 L_L g_m\right) + s \left(C_5 R_5 R_L + L_1 R_L g_m + L_L\right)}$$

9.112 X-INVALID-ORDER-112 $Z(s) = \left(L_1 s,\ \infty,\ \infty,\ \infty,\ R_5 + \frac{1}{C_5 s},\ \frac{C_L L_L R_L s^2 + L_L s + R_L}{C_L L_L s^2 + 1}\right)$

$$H(s) = \frac{L_1 R_L g_m s + s^4 \left(C_5 C_L L_1 L_L R_5 R_L g_m - C_5 C_L L_1 L_L R_L\right) + s^3 \left(C_5 L_1 L_L R_5 g_m - C_5 L_1 L_L + C_L L_1 L_L R_L g_m\right) + s^2 \left(C_5 L_1 R_5 R_L g_m - C_5 L_1 R_L + L_1 L_L g_m\right)}{s^4 \left(C_5 C_L L_1 L_L R_5 g_m + 2 C_5 C_L L_1 L_L R_L g_m + C_5 C_L L_1 L_L\right) + s^3 \left(C_5 C_L L_L R_5 + C_5 C_L L_L R_L + 2 C_5 L_1 L_L g_m + C_L L_1 L_L g_m\right) + s^2 \left(C_5 L_1 R_5 g_m + 2 C_5 L_1 R_L g_m + C_5 L_1 + C_5 L_L + C_L L_L\right) + s \left(C_5 R_5 + C_5 R_L + L_1 g_m\right) + 1}$$

9.113 X-INVALID-ORDER-113 $Z(s) = \left(L_1 s,\ \infty,\ \infty,\ \infty,\ R_5 + \frac{1}{C_5 s},\ \frac{R_L\left(C_L L_L s^2 + 1\right)}{C_L L_L s^2 + C_L R_L s + 1}\right)$

$$H(s) = \frac{C_L L_1 L_L R_L g_m s^3 + L_1 R_L g_m s + s^4 \left(C_5 C_L L_1 L_L R_5 R_L g_m - C_5 C_L L_1 L_L R_L\right) + s^2 \left(C_5 L_1 R_5 R_L g_m - C_5 L_1 R_L\right)}{s^4 \left(C_5 C_L L_1 L_L R_5 g_m + 2 C_5 C_L L_1 L_L R_L g_m + C_5 C_L L_1 L_L\right) + s^3 \left(C_5 C_L L_1 R_5 R_L g_m + C_5 C_L L_1 R_L + C_5 C_L L_L R_5 + C_5 C_L L_L R_L + C_L L_1 L_L g_m\right) + s^2 \left(C_5 C_L R_5 R_L + C_5 L_1 R_5 g_m + 2 C_5 L_1 R_L g_m + C_5 L_1 + C_L L_1 R_L g_m + C_L L_L\right) + s \left(C_5 R_5 + C_5 R_L + C_L R_L + L_1 g_m\right) + 1}$$

9.114 X-INVALID-ORDER-114 $Z(s) = \left(L_1 s,\ \infty,\ \infty,\ \infty,\ L_5 s + \frac{1}{C_5 s},\ R_L\right)$

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

9.115 X-INVALID-ORDER-115 $Z(s) = \left(L_1 s,\ \infty,\ \infty,\ \infty,\ L_5 s + \frac{1}{C_5 s},\ \frac{1}{C_L s}\right)$

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

9.116 X-INVALID-ORDER-116 $Z(s) = \left(L_1 s,\ \infty,\ \infty,\ \infty,\ L_5 s + \frac{1}{C_5 s},\ \frac{R_L}{C_L R_L s + 1}\right)$

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

9.117 X-INVALID-ORDER-117 $Z(s) = \left(L_1 s,\ \infty,\ \infty,\ \infty,\ L_5 s + \frac{1}{C_5 s},\ R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{C_5 C_L L_1 L_5 R_L g_m s^3 + L_1 g_m + s^2 \left(-C_5 C_L L_1 R_L + C_5 L_1 L_5 g_m\right) + s \left(-C_5 L_1 + C_L L_1 R_L g_m\right)}{C_5 C_L L_1 L_5 g_m s^3 + C_5 + C_L + s^2 \left(2 C_5 C_L L_1 R_L g_m + C_5 C_L L_1 + C_5 C_L L_5\right) + s \left(C_5 C_L R_L + 2 C_5 L_1 g_m + C_L L_1 g_m\right)}$$

9.118 X-INVALID-ORDER-118 $Z(s) = \left(L_1 s,\ \infty,\ \infty,\ \infty,\ L_5 s + \frac{1}{C_5 s},\ L_L s + \frac{1}{C_L s}\right)$

$$H(s) = \frac{C_5 C_L L_1 L_5 L_L g_m s^4 - C_5 C_L L_1 L_L s^3 - C_5 L_1 s + L_1 g_m + s^2 \left(C_5 L_1 L_5 g_m + C_L L_1 L_L g_m\right)}{C_5 + C_L + s^3 \left(C_5 C_L L_1 L_5 g_m + 2 C_5 C_L L_1 L_L g_m\right) + s^2 \left(C_5 C_L L_1 + C_5 C_L L_5 + C_5 C_L L_L\right) + s \left(2 C_5 L_1 g_m + C_L L_1 g_m\right)}$$

9.119 X-INVALID-ORDER-119 $Z(s) = \left(L_1 s,\ \infty,\ \infty,\ \infty,\ L_5 s + \frac{1}{C_5 s},\ \frac{L_L s}{C_L L_L s^2 + 1}\right)$

$$H(s) = \frac{C_5 L_1 L_5 L_L g_m s^4 - C_5 L_1 L_L s^3 + L_1 L_L g_m s^2}{C_5 C_L L_1 L_5 L_L g_m s^5 + L_1 g_m s + s^4 \left(C_5 C_L L_1 L_L + C_5 C_L L_5 L_L\right) + s^3 \left(C_5 L_1 L_5 g_m + 2 C_5 L_1 L_L g_m + C_L L_1 L_L g_m\right) + s^2 \left(C_5 L_1 + C_5 L_5 + C_5 L_L + C_L L_L\right) + 1}$$

9.120 X-INVALID-ORDER-120 $Z(s) = \left(L_1 s,\ \infty,\ \infty,\ \infty,\ L_5 s + \frac{1}{C_5 s},\ L_L s + R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{C_5 C_L L_1 L_5 L_L g_m s^4 + L_1 g_m + s^3 \left(C_5 C_L L_1 L_5 R_L g_m - C_5 C_L L_1 L_L\right) + s^2 \left(-C_5 C_L L_1 R_L + C_5 L_1 L_5 g_m + C_L L_1 L_L g_m\right) + s \left(-C_5 L_1 + C_L L_1 R_L g_m\right)}{C_5 + C_L + s^3 \left(C_5 C_L L_1 L_5 g_m + 2 C_5 C_L L_1 L_L g_m\right) + s^2 \left(2 C_5 C_L L_1 R_L g_m + C_5 C_L L_1 + C_5 C_L L_5 + C_5 C_L L_L\right) + s \left(C_5 C_L R_L + 2 C_5 L_1 g_m + C_L L_1 g_m\right)}$$

9.121 X-INVALID-ORDER-121 $Z(s) = \left(L_1 s,\ \infty,\ \infty,\ \infty,\ L_5 s + \frac{1}{C_5 s},\ \frac{L_L R_L s}{C_L L_L R_L s^2 + L_L s + R_L}\right)$

$$H(s) = \frac{C_5 L_1 L_5 L_L R_L g_m s^4 - C_5 L_1 L_L R_L s^3 + L_1 L_L R_L g_m s^2}{C_5 C_L L_1 L_5 L_L R_L g_m s^5 + R_L + s^4 \left(C_5 C_L L_1 L_L R_L + C_5 C_L L_5 L_L R_L + C_5 L_1 L_5 L_L g_m\right) + s^3 \left(C_5 L_1 L_5 R_L g_m + 2 C_5 L_1 L_L R_L g_m + C_5 L_1 L_L + C_5 L_5 L_L + C_L L_1 L_L R_L g_m\right) + s^2 \left(C_5 L_1 R_L + C_5 L_5 R_L + C_5 L_L R_L + C_L L_L R_L + L_1 L_L g_m\right) + s \left(L_1 R_L g_m + L_L\right)}$$

9.122 X-INVALID-ORDER-122 $Z(s) = \left(L_1 s,\ \infty,\ \infty,\ \infty,\ L_5 s + \frac{1}{C_5 s},\ \frac{C_L L_L R_L s^2 + L_L s + R_L}{C_L L_L s^2 + 1}\right)$

$$H(s) = \frac{C_5 C_L L_1 L_5 L_L R_L g_m s^5 + L_1 R_L g_m s + s^4 \left(-C_5 C_L L_1 L_L R_L + C_5 L_1 L_5 L_L g_m\right) + s^3 \left(C_5 L_1 L_5 R_L g_m - C_5 L_1 L_L + C_L L_1 L_L R_L g_m\right) + s^2 \left(-C_5 L_1 R_L + L_1 L_L g_m\right)}{C_5 C_L L_1 L_5 L_L g_m s^5 + s^4 \left(2 C_5 C_L L_1 L_L R_L g_m + C_5 C_L L_1 L_L + C_5 C_L L_5 L_L\right) + s^3 \left(C_5 C_L L_L R_L + C_5 L_1 L_5 g_m + 2 C_5 L_1 L_L g_m + C_L L_1 L_L g_m\right) + s^2 \left(2 C_5 L_1 R_L g_m + C_5 L_1 + C_5 L_5 + C_5 L_L + C_L L_L\right) + s \left(C_5 R_L + L_1 g_m\right) + 1}$$

9.123 X-INVALID-ORDER-123 $Z(s) = \left(L_1 s,\ \infty,\ \infty,\ \infty,\ L_5 s + \frac{1}{C_5 s},\ \frac{R_L\left(C_L L_L s^2 + 1\right)}{C_L L_L s^2 + C_L R_L s + 1}\right)$

$$H(s) = \frac{C_5 C_L L_1 L_5 L_L R_L g_m s^5 - C_5 C_L L_1 L_L R_L s^4 - C_5 L_1 R_L s^2 + L_1 R_L g_m s + s^3 \left(C_5 L_1 L_5 R_L g_m + C_L L_1 L_L R_L g_m\right)}{C_5 C_L L_1 L_5 L_L g_m s^5 + s^4 \left(C_5 C_L L_1 L_5 R_L g_m + 2 C_5 C_L L_1 L_L R_L g_m + C_5 C_L L_1 L_L + C_5 C_L L_5 L_L\right) + s^3 \left(C_5 C_L L_1 R_L + C_5 C_L L_5 R_L + C_5 C_L L_L R_L + C_5 L_1 L_5 g_m + C_L L_1 L_L g_m\right) + s^2 \left(2 C_5 L_1 R_L g_m + C_5 L_1 + C_5 L_5 + C_L L_1 R_L g_m + C_L L_L\right) + s \left(C_5 R_L + C_L R_L + L_1 g_m\right) + 1}$$

9.124 X-INVALID-ORDER-124 $Z(s) = \left(L_1 s,\ \infty,\ \infty,\ \infty,\ \frac{L_5 s}{C_5 L_5 s^2 + 1},\ R_L\right)$

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

9.125 X-INVALID-ORDER-125 $Z(s) = \left(L_1 s,\ \infty,\ \infty,\ \infty,\ \frac{L_5 s}{C_5 L_5 s^2 + 1},\ \frac{1}{C_L s}\right)$

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

9.126 X-INVALID-ORDER-126 $Z(s) = \left(L_1 s,\ \infty,\ \infty,\ \infty,\ \frac{L_5 s}{C_5 L_5 s^2 + 1},\ \frac{R_L}{C_L R_L s + 1}\right)$

$$H(s) = \frac{-C_5 L_1 L_5 R_L s^3 + L_1 L_5 R_L g_m s^2 - L_1 R_L s}{C_5 C_L L_1 L_5 R_L s^4 + R_L + s^3 \left(2 C_5 L_1 L_5 R_L g_m + C_5 L_1 L_5 + C_L L_1 L_5 R_L g_m\right) + s^2 \left(C_5 L_5 R_L + C_L L_1 R_L + C_L L_5 R_L + L_1 L_5 g_m\right) + s \left(2 L_1 R_L g_m + L_1 + L_5\right)}$$

9.127 X-INVALID-ORDER-127 $Z(s) = \left(L_1 s,\ \infty,\ \infty,\ \infty,\ \frac{L_5 s}{C_5 L_5 s^2 + 1},\ R_L + \frac{1}{C_L s}\right)$

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

9.128 X-INVALID-ORDER-128 $Z(s) = \left(L_1 s,\ \infty,\ \infty,\ \infty,\ \frac{L_5 s}{C_5 L_5 s^2 + 1},\ L_L s + \frac{1}{C_L s}\right)$

$$H(s) = \frac{-C_5 C_L L_1 L_5 L_L s^5 + C_L L_1 L_5 L_L g_m s^4 + L_1 L_5 g_m s^2 - L_1 s + s^3 \left(-C_5 L_1 L_5 - C_L L_1 L_L\right)}{2 C_5 C_L L_1 L_5 L_L g_m s^5 + 2 L_1 g_m s + s^4 \left(C_5 C_L L_1 L_5 + C_5 C_L L_5 L_L\right) + s^3 \left(2 C_5 L_1 L_5 g_m + C_L L_1 L_5 g_m + 2 C_L L_1 L_L g_m\right) + s^2 \left(C_5 L_5 + C_L L_1 + C_L L_5 + C_L L_L\right) + 1}$$

9.129 X-INVALID-ORDER-129 $Z(s) = \left(L_1 s,\ \infty,\ \infty,\ \infty,\ \frac{L_5 s}{C_5 L_5 s^2 + 1},\ \frac{L_L s}{C_L L_L s^2 + 1}\right)$

$$H(s) = \frac{-C_5 L_1 L_5 L_L s^3 + L_1 L_5 L_L g_m s^2 - L_1 L_L s}{C_5 C_L L_1 L_5 L_L s^4 + L_1 + L_5 + L_L + s^3 \left(2 C_5 L_1 L_5 L_L g_m + C_L L_1 L_5 L_L g_m\right) + s^2 \left(C_5 L_1 L_5 + C_5 L_5 L_L + C_L L_1 L_L + C_L L_5 L_L\right) + s \left(L_1 L_5 g_m + 2 L_1 L_L g_m\right)}$$

9.130 X-INVALID-ORDER-130 $Z(s) = \left(L_1 s,\ \infty,\ \infty,\ \infty,\ \frac{L_5 s}{C_5 L_5 s^2+1},\ L_L s + R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{-C_5 C_L L_1 L_5 L_L s^5 - L_1 s + s^4 \left(-C_5 C_L L_1 L_5 R_L + C_L L_1 L_5 L_L g_m\right) + s^3 \left(-C_5 L_1 L_5 + C_L L_1 L_5 R_L g_m - C_L L_1 L_L\right) + s^2 \left(-C_L L_1 R_L + L_1 L_5 g_m\right)}{2C_5 C_L L_1 L_5 L_L g_m s^5 + s^4 \left(2C_5 C_L L_1 L_5 R_L g_m + C_5 C_L L_1 L_5 + C_5 C_L L_5 L_L\right) + s^3 \left(C_5 C_L L_5 R_L + 2C_5 L_1 L_5 g_m + C_L L_1 L_5 g_m + 2C_L L_1 L_L g_m\right) + s^2 \left(C_5 L_5 + 2C_L L_1 R_L g_m + C_L L_1 + C_L L_5 + C_L L_L\right) + s \left(C_L R_L + 2L_1 g_m\right) + 1}$$

9.131 X-INVALID-ORDER-131 $Z(s) = \left(L_1 s,\ \infty,\ \infty,\ \infty,\ \frac{L_5 s}{C_5 L_5 s^2+1},\ \frac{L_L R_L s}{C_L L_L R_L s^2 + L_L s + R_L}\right)$

$$H(s) = \frac{-C_5 L_1 L_5 L_L R_L s^3 + L_1 L_5 L_L R_L g_m s^2 - L_1 L_L R_L s}{C_5 C_L L_1 L_5 L_L R_L s^4 + L_1 R_L + L_5 R_L + L_L R_L + s^3 \left(2C_5 L_1 L_5 L_L R_L g_m + C_5 L_1 L_5 L_L + C_L L_1 L_5 L_L R_L g_m\right) + s^2 \left(C_5 L_1 L_5 R_L + C_5 L_5 L_L R_L + C_L L_1 L_L R_L + C_L L_5 L_L R_L + L_1 L_5 L_L g_m\right) + s \left(L_1 L_5 R_L g_m + 2L_1 L_L R_L g_m + L_1 L_L + L_5 L_L\right)}$$

9.132 X-INVALID-ORDER-132 $Z(s) = \left(L_1 s,\ \infty,\ \infty,\ \infty,\ \frac{L_5 s}{C_5 L_5 s^2+1},\ \frac{C_L L_L R_L s^2 + L_L s + R_L}{C_L L_L s^2 + 1}\right)$

$$H(s) = \frac{-C_5 C_L L_1 L_5 L_L R_L s^5 - L_1 R_L s + s^4 \left(-C_5 L_1 L_5 L_L + C_L L_1 L_5 L_L R_L g_m\right) + s^3 \left(-C_5 L_1 L_5 R_L - C_L L_1 L_L R_L + L_1 L_5 L_L g_m\right) + s^2 \left(L_1 L_5 R_L g_m - L_1 L_L\right)}{R_L + s^5 \left(2C_5 C_L L_1 L_5 L_L R_L g_m + C_5 C_L L_1 L_5 L_L\right) + s^4 \left(C_5 C_L L_5 L_L R_L + 2C_5 L_1 L_5 L_L g_m + C_L L_1 L_5 L_L g_m\right) + s^3 \left(2C_5 L_1 L_5 R_L g_m + C_5 L_1 L_5 + C_5 L_5 L_L + 2C_L L_1 L_L R_L g_m + C_L L_1 L_L + C_L L_5 L_L\right) + s^2 \left(C_5 L_5 R_L + C_L L_L R_L + L_1 L_5 g_m + 2L_1 L_L g_m\right) + s \left(2L_1 R_L g_m + L\right.}$$

9.133 X-INVALID-ORDER-133 $Z(s) = \left(L_1 s,\ \infty,\ \infty,\ \infty,\ \frac{L_5 s}{C_5 L_5 s^2+1},\ \frac{R_L\left(C_L L_L s^2+1\right)}{C_L L_L s^2 + C_L R_L s + 1}\right)$

$$H(s) = \frac{-C_5 C_L L_1 L_5 L_L R_L s^5 + C_L L_1 L_5 L_L R_L g_m s^4 + L_1 L_5 R_L g_m s^2 - L_1 R_L s + s^3 \left(-C_5 L_1 L_5 R_L - C_L L_1 L_L R_L\right)}{R_L + s^5 \left(2C_5 C_L L_1 L_5 L_L R_L g_m + C_5 C_L L_1 L_5 L_L\right) + s^4 \left(C_5 C_L L_1 L_5 R_L + C_5 C_L L_5 L_L R_L + C_L L_1 L_5 L_L g_m\right) + s^3 \left(2C_5 L_1 L_5 R_L g_m + C_5 L_1 L_5 + C_L L_1 L_5 R_L g_m + 2C_L L_1 L_L R_L g_m + C_L L_1 L_L + C_L L_5 L_L\right) + s^2 \left(C_5 L_5 R_L + C_L L_1 R_L + C_L L_5 R_L + C_L L_L R_L + L_1 L_5 g_m\right) +}$$

9.134 X-INVALID-ORDER-134 $Z(s) = \left(L_1 s,\ \infty,\ \infty,\ \infty,\ L_5 s + R_5 + \frac{1}{C_5 s},\ R_L\right)$

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

9.135 X-INVALID-ORDER-135 $Z(s) = \left(L_1 s,\ \infty,\ \infty,\ \infty,\ L_5 s + R_5 + \frac{1}{C_5 s},\ \frac{1}{C_L s}\right)$

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

9.136 X-INVALID-ORDER-136 $Z(s) = \left(L_1 s,\ \infty,\ \infty,\ \infty,\ L_5 s + R_5 + \frac{1}{C_5 s},\ \frac{R_L}{C_L R_L s + 1}\right)$

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

9.137 X-INVALID-ORDER-137 $Z(s) = \left(L_1 s,\ \infty,\ \infty,\ \infty,\ L_5 s + R_5 + \frac{1}{C_5 s},\ R_L + \frac{1}{C_L s}\right)$

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

9.138 X-INVALID-ORDER-138 $Z(s) = \left(L_1 s,\ \infty,\ \infty,\ \infty,\ L_5 s + R_5 + \frac{1}{C_5 s},\ L_L s + \frac{1}{C_L s}\right)$

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

9.139 X-INVALID-ORDER-139 $Z(s) = \left(L_1 s,\ \infty,\ \infty,\ \infty,\ L_5 s + R_5 + \frac{1}{C_5 s},\ \frac{L_L s}{C_L L_L s^2+1}\right)$

$$H(s) = \frac{C_5 L_1 L_5 L_L g_m s^4 + L_1 L_L g_m s^2 + s^3 \left(C_5 L_1 L_L R_5 g_m - C_5 L_1 L_L\right)}{C_5 C_L L_1 L_5 L_L g_m s^5 + s^4 \left(C_5 C_L L_1 L_L R_5 g_m + C_5 C_L L_1 L_L + C_5 C_L L_5 L_L\right) + s^3 \left(C_5 C_L L_L R_5 + C_5 L_1 L_5 g_m + 2C_5 L_1 L_L g_m + C_L L_1 L_L g_m\right) + s^2 \left(C_5 L_1 R_5 g_m + C_5 L_1 + C_5 L_5 + C_5 L_L + C_L L_L\right) + s \left(C_5 R_5 + L_1 g_m\right) + 1}$$

9.140 X-INVALID-ORDER-140 $Z(s) = \left(L_1 s,\ \infty,\ \infty,\ \infty,\ L_5 s + R_5 + \frac{1}{C_5 s},\ L_L s + R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{C_5 C_L L_1 L_5 L_L g_m s^4 + L_1 g_m + s^3 \left(C_5 C_L L_1 L_5 R_L g_m + C_5 C_L L_1 L_L R_5 g_m - C_5 C_L L_1 L_L\right) + s^2 \left(C_5 C_L L_1 R_5 R_L g_m - C_5 C_L L_1 R_L + C_5 L_1 L_5 g_m + C_L L_1 L_L g_m\right) + s \left(C_5 L_1 R_5 g_m - C_5 L_1 + C_L L_1 R_L g_m\right)}{C_5 + C_L + s^3 \left(C_5 C_L L_1 L_5 g_m + 2C_5 C_L L_1 L_L g_m\right) + s^2 \left(C_5 C_L L_1 R_5 g_m + 2C_5 C_L L_1 R_L g_m + C_5 C_L L_1 + C_5 C_L L_5 + C_5 C_L L_L\right) + s \left(C_5 C_L R_5 + C_5 C_L R_L + 2C_5 L_1 g_m + C_L L_1 g_m\right)}$$

9.141 X-INVALID-ORDER-141 $Z(s) = \left(L_1 s,\ \infty,\ \infty,\ \infty,\ L_5 s + R_5 + \frac{1}{C_5 s},\ \frac{L_L R_L s}{C_L L_L R_L s^2+L_L s+R_L}\right)$

$$H(s) = \frac{C_5 L_1 L_5 L_L R_L g_m s^4 + L_1 L_L R_L g_m s^2 + s^3 \left(C_5 L_1 L_L R_5 R_L g_m - C_5 L_1 L_L R_L\right)}{C_5 C_L L_1 L_5 L_L R_L g_m s^5 + R_L + s^4 \left(C_5 C_L L_1 L_L R_5 R_L g_m + C_5 C_L L_1 L_L R_L + C_5 C_L L_5 L_L R_L + C_5 L_1 L_5 L_L g_m\right) + s^3 \left(C_5 C_L L_L R_5 R_L + C_5 L_1 L_5 R_L g_m + C_5 L_1 L_L R_5 g_m + 2C_5 L_1 L_L R_L g_m + C_5 L_1 L_L + C_5 L_5 L_L + C_L L_1 L_L R_L g_m\right) + s^2 \left(C_5 L_1 R_5 R_L g_m + C_5 L_1 R_L + C_5 L_5 \cdots\right.}$$

9.142 X-INVALID-ORDER-142 $Z(s) = \left(L_1 s,\ \infty,\ \infty,\ \infty,\ L_5 s + R_5 + \frac{1}{C_5 s},\ \frac{C_L L_L R_L s^2+L_L s+R_L}{C_L L_L s^2+1}\right)$

$$H(s) = \frac{C_5 C_L L_1 L_5 L_L R_L g_m s^5 + L_1 R_L g_m s + s^4 \left(C_5 C_L L_1 L_L R_5 R_L g_m - C_5 C_L L_1 L_L R_L + C_5 L_1 L_5 L_L g_m\right) + s^3 \left(C_5 L_1 L_5 R_L g_m + C_5 L_1 L_L R_5 g_m - C_5 L_1 L_L + C_L L_1 L_L R_L g_m\right) + s^2 \left(C_5 L_1 R_5 R_L g_m - C_5 L_1 R_L + L_1 L_L g_m\right)}{C_5 C_L L_1 L_5 L_L g_m s^5 + s^4 \left(C_5 C_L L_1 L_L R_5 g_m + 2C_5 C_L L_1 L_L R_L g_m + C_5 C_L L_1 L_L + C_5 C_L L_5 L_L\right) + s^3 \left(C_5 C_L L_L R_5 + C_5 C_L L_L R_L + C_5 L_1 L_5 g_m + 2C_5 L_1 L_L g_m + C_L L_1 L_L g_m\right) + s^2 \left(C_5 L_1 R_5 g_m + 2C_5 L_1 R_L g_m + C_5 L_1 + C_5 L_5 + C_5 L_L + C_L L_L\right) + s \left(C_5 R_5 + C_5 R_L + L\cdots\right.}$$

9.143 X-INVALID-ORDER-143 $Z(s) = \left(L_1 s,\ \infty,\ \infty,\ \infty,\ L_5 s + R_5 + \frac{1}{C_5 s},\ \frac{R_L\left(C_L L_L s^2+1\right)}{C_L L_L s^2+C_L R_L s+1}\right)$

$$H(s) = \frac{C_5 C_L L_1 L_5 L_L R_L g_m s^5 + L_1 R_L g_m s + s^4 \left(C_5 C_L L_1 L_L R_5 R_L g_m - C_5 C_L L_1 L_L R_L\right) + s^3 \left(C_5 L_1 L_5 R_L g_m + C_L L_1 L_L R_L g_m\right) + s^2 \left(C_5 L_1 R_5 R_L g_m - C_5 L_1 R_L\right)}{C_5 C_L L_1 L_5 L_L g_m s^5 + s^4 \left(C_5 C_L L_1 L_5 R_L g_m + C_5 C_L L_1 L_L R_5 g_m + 2C_5 C_L L_1 L_L R_L g_m + C_5 C_L L_1 L_L + C_5 C_L L_5 L_L\right) + s^3 \left(C_5 C_L L_1 R_5 R_L g_m + C_5 C_L L_1 R_L + C_5 C_L L_5 R_L + C_5 C_L L_L R_5 + C_5 C_L L_L R_L + C_5 L_1 L_5 g_m + C_L L_1 L_L g_m\right) + s^2 \left(C_5 C_L R_5 R_L + C_5 L_1 R_5 g_m + 2C\cdots\right.}$$

9.144 X-INVALID-ORDER-144 $Z(s) = \left(L_1 s,\ \infty,\ \infty,\ \infty,\ \frac{L_5 R_5 s}{C_5 L_5 R_5 s^2+L_5 s+R_5},\ R_L\right)$

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

9.145 X-INVALID-ORDER-145 $Z(s) = \left(L_1 s,\ \infty,\ \infty,\ \infty,\ \frac{L_5 R_5 s}{C_5 L_5 R_5 s^2+L_5 s+R_5},\ \frac{1}{C_L s}\right)$

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

9.146 X-INVALID-ORDER-146 $Z(s) = \left(L_1 s,\ \infty,\ \infty,\ \infty,\ \frac{L_5 R_5 s}{C_5 L_5 R_5 s^2+L_5 s+R_5},\ \frac{R_L}{C_L R_L s+1}\right)$

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

9.147 X-INVALID-ORDER-147 $Z(s) = \left(L_1 s,\ \infty,\ \infty,\ \infty,\ \frac{L_5 R_5 s}{C_5 L_5 R_5 s^2+L_5 s+R_5},\ R_L + \frac{1}{C_L s}\right)$

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

9.148 X-INVALID-ORDER-148 $Z(s) = \left(L_1 s,\ \infty,\ \infty,\ \infty,\ \frac{L_5 R_5 s}{C_5 L_5 R_5 s^2 + L_5 s + R_5},\ L_L s + \frac{1}{C_L s}\right)$

$$H(s) = \frac{-C_5 C_L L_1 L_5 L_L R_5 s^5 - L_1 R_5 s + s^4 \left(C_L L_1 L_5 L_L R_5 g_m - C_L L_1 L_5 L_L\right) + s^3 \left(-C_5 L_1 L_5 R_5 - C_L L_1 L_L R_5\right) + s^2 \left(L_1 L_5 R_5 g_m - L_1 L_5\right)}{2C_5 C_L L_1 L_5 L_L R_5 g_m s^5 + R_5 + s^4 \left(C_5 C_L L_1 L_5 R_5 + C_5 C_L L_5 L_L R_5 + 2C_L L_1 L_5 L_L g_m\right) + s^3 \left(2C_5 L_1 L_5 R_5 g_m + C_L L_1 L_5 R_5 g_m + C_L L_1 L_5 + 2C_L L_1 L_L R_5 g_m + C_L L_5 L_L\right) + s^2 \left(C_5 L_5 R_5 + C_L L_1 R_5 + C_L L_5 R_5 + C_L L_L R_5 + 2L_1 L_5 g_m\right) + s \left(2L_1 R_5 g_m + L_5\right)}$$

9.149 X-INVALID-ORDER-149 $Z(s) = \left(L_1 s,\ \infty,\ \infty,\ \infty,\ \frac{L_5 R_5 s}{C_5 L_5 R_5 s^2 + L_5 s + R_5},\ \frac{L_L s}{C_L L_L s^2 + 1}\right)$

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

9.150 X-INVALID-ORDER-150 $Z(s) = \left(L_1 s,\ \infty,\ \infty,\ \infty,\ \frac{L_5 R_5 s}{C_5 L_5 R_5 s^2 + L_5 s + R_5},\ L_L s + R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{-C_5 C_L L_1 L_5 L_L R_5 s^5 - L_1 R_5 s + s^4 \left(-C_5 C_L L_1 L_5 R_5 R_L + C_L L_1 L_5 L_L R_5 g_m - C_L L_1 L_5 L_L\right) + s^3 \left(-C_5 L_1 L_5 R_5 + C_L L_1 L_5 R_5 R_L g_m - C_L L_1 L_5 R_L - C_L L_1 L_L R_5\right) + s^2 \left(-C_L L_1 R_5 R_L + L_1 L_5 R\right.}{2C_5 C_L L_1 L_5 L_L R_5 g_m s^5 + R_5 + s^4 \left(2C_5 C_L L_1 L_5 R_5 R_L g_m + C_5 C_L L_1 L_5 R_5 + C_5 C_L L_5 L_L R_5 + 2C_L L_1 L_5 L_L g_m\right) + s^3 \left(C_5 C_L L_5 R_5 R_L + 2C_5 L_1 L_5 R_5 g_m + C_L L_1 L_5 R_5 g_m + 2C_L L_1 L_5 R_L g_m + C_L L_1 L_5 + 2C_L L_1 L_L R_5 g_m + C_L L_5 L_L\right) + s^2 \left(C_5 L_5 R_5 + 2C_L L_1 R_5 R_L g_m + C\right.}$$

9.151 X-INVALID-ORDER-151 $Z(s) = \left(L_1 s,\ \infty,\ \infty,\ \infty,\ \frac{L_5 R_5 s}{C_5 L_5 R_5 s^2 + L_5 s + R_5},\ \frac{L_L R_L s}{C_L L_L R_L s^2 + L_L s + R_L}\right)$

$$H(s) = \frac{-C_5 L_1 L_5 L_L R_5 R_L s^3 - L_1 L_L R_5 R_L s + s^2 \left(L_1 L_5 L_L R_5 R_L g_m - L_1 L_5 L_L R_L\right)}{C_5 C_L L_1 L_5 L_L R_5 R_L s^4 + L_1 R_5 R_L + L_5 R_5 R_L + L_L R_5 R_L + s^3 \left(2C_5 L_1 L_5 L_L R_5 R_L g_m + C_5 L_1 L_5 L_L R_5 + C_L L_1 L_5 L_L R_5 R_L g_m + C_L L_1 L_5 L_L R_L\right) + s^2 \left(C_5 L_1 L_5 R_5 R_L + C_5 L_5 L_L R_5 R_L + C_L L_1 L_L R_5 R_L + C_L L_5 L_L R_5 R_L + L_1 L_5 L_L R_5 g_m + 2L_1 L_5 L_L R_L g_m + L_1 L_5 L_L\right)}$$

9.152 X-INVALID-ORDER-152 $Z(s) = \left(L_1 s,\ \infty,\ \infty,\ \infty,\ \frac{L_5 R_5 s}{C_5 L_5 R_5 s^2 + L_5 s + R_5},\ \frac{C_L L_L R_L s^2 + L_L s + R_L}{C_L L_L s^2 + 1}\right)$

$$H(s) = \frac{-C_5 C_L L_1 L_5 L_L R_5 R_L s^5 - L_1 R_5 R_L s + s^4 \left(-C_5 L_1 L_5 L_L R_5 + C_L L_1 L_5 L_L R_5 R_L g_m - C_L L_1 L_5 L_L R_L\right) + s^3 \left(-C_5 L_1 L_5 R_5 R_L - C_L L_1 L_L R_5 R_L + L_1 L_5 L\right.}{R_5 R_L + s^5 \left(2C_5 C_L L_1 L_5 L_L R_5 R_L g_m + C_5 C_L L_1 L_5 L_L R_5\right) + s^4 \left(C_5 C_L L_5 L_L R_5 R_L + 2C_5 L_1 L_5 L_L R_5 g_m + C_L L_1 L_5 L_L R_5 g_m + 2C_L L_1 L_5 L_L R_L g_m + C_L L_1 L_5 L_L\right) + s^3 \left(2C_5 L_1 L_5 R_5 R_L g_m + C_5 L_1 L_5 R_5 + C_5 L_5 L_L R_5 + 2C_L L_1 L_L R_5 R_L g_m + C_L L_1 L_L R_5 + C_L L_5 L_L R_5 + \right.}$$

9.153 X-INVALID-ORDER-153 $Z(s) = \left(L_1 s,\ \infty,\ \infty,\ \infty,\ \frac{L_5 R_5 s}{C_5 L_5 R_5 s^2 + L_5 s + R_5},\ \frac{R_L \left(C_L L_L s^2 + 1\right)}{C_L L_L s^2 + C_L R_L s + 1}\right)$

$$H(s) = \frac{-C_5 C_L L_1 L_5 L_L R_5 R_L s^5 - L_1 R_5 R_L s + s^4 \left(C_L L_1 L_5 L_L R_5 R_L g_m - C_L L_1 L_5 L_L R_L\right) + s^3 \left(-C_5 L_1 L_5 R_5 R_L - C_L L_1 L_L R_5 R\right.}{R_5 R_L + s^5 \left(2C_5 C_L L_1 L_5 L_L R_5 R_L g_m + C_5 C_L L_1 L_5 L_L R_5\right) + s^4 \left(C_5 C_L L_1 L_5 R_5 R_L + C_5 C_L L_5 L_L R_5 R_L + C_L L_1 L_5 L_L R_5 g_m + 2C_L L_1 L_5 L_L R_L g_m + C_L L_1 L_5 L_L\right) + s^3 \left(2C_5 L_1 L_5 R_5 R_L g_m + C_5 L_1 L_5 R_5 + C_5 L_5 L_L R_5 + 2C_L L_1 L_L R_5 R_L g_m + C_L L_1 L_L R_5 + C_L L_5 L_L R_5 + \right.}$$

9.154 X-INVALID-ORDER-154 $Z(s) = \left(L_1 s,\ \infty,\ \infty,\ \infty,\ \frac{C_5 L_5 R_5 s^2 + L_5 s + R_5}{C_5 L_5 s^2 + 1},\ R_L\right)$

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

9.155 X-INVALID-ORDER-155 $Z(s) = \left(L_1 s,\ \infty,\ \infty,\ \infty,\ \frac{C_5 L_5 R_5 s^2 + L_5 s + R_5}{C_5 L_5 s^2 + 1},\ \frac{1}{C_L s}\right)$

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

9.156 X-INVALID-ORDER-156 $Z(s) = \left(L_1 s,\ \infty,\ \infty,\ \infty,\ \frac{C_5 L_5 R_5 s^2 + L_5 s + R_5}{C_5 L_5 s^2 + 1},\ \frac{R_L}{C_L R_L s + 1}\right)$

$$H(s) = \frac{L_1 L_5 R_L g_m s^2 + s^3 \left(C_5 L_1 L_5 R_5 R_L g_m - C_5 L_1 L_5 R_L\right) + s \left(L_1 R_5 R_L g_m - L_1 R_L\right)}{R_5 + R_L + s^4 \left(C_5 C_L L_1 L_5 R_5 R_L g_m + C_5 C_L L_1 L_5 R_L\right) + s^3 \left(C_5 C_L L_5 R_5 R_L + C_5 L_1 L_5 R_5 g_m + 2C_5 L_1 L_5 R_L g_m + C_5 L_1 L_5 + C_L L_1 L_5 R_L g_m\right) + s^2 \left(C_5 L_5 R_5 + C_5 L_5 R_L + C_L L_1 R_5 R_L g_m + C_L L_1 R_L + C_L L_5 R_L + L_1 L_5 g_m\right) + s \left(C_L R_5 R_L + L_1 R_5 g_m + 2L_1 R_L g_m + L_1 + \right.}$$

9.157 X-INVALID-ORDER-157 $Z(s) = \left(L_1 s,\ \infty,\ \infty,\ \infty,\ \frac{C_5 L_5 R_5 s^2 + L_5 s + R_5}{C_5 L_5 s^2 + 1},\ R_L + \frac{1}{C_L s}\right)$

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

9.158 X-INVALID-ORDER-158 $Z(s) = \left(L_1 s,\ \infty,\ \infty,\ \infty,\ \frac{C_5 L_5 R_5 s^2 + L_5 s + R_5}{C_5 L_5 s^2 + 1},\ L_L s + \frac{1}{C_L s}\right)$

$$H(s) = \frac{C_L L_1 L_5 L_L g_m s^4 + L_1 L_5 g_m s^2 + s^5 \left(C_5 C_L L_1 L_5 L_L R_5 g_m - C_5 C_L L_1 L_5 L_L\right) + s^3 \left(C_5 L_1 L_5 R_5 g_m - C_5 L_1 L_5 + C_L L_1 L_L R_5 g_m - C_L L_1 L_L\right) + s \left(L_1 R_5 g_m - L_1\right)}{2 C_5 C_L L_1 L_5 L_L g_m s^5 + s^4 \left(C_5 C_L L_1 L_5 R_5 g_m + C_5 C_L L_1 L_5 + C_5 C_L L_5 L_L\right) + s^3 \left(C_5 C_L L_5 R_5 + 2 C_5 L_1 L_5 g_m + C_L L_1 L_5 g_m + 2 C_L L_1 L_L g_m\right) + s^2 \left(C_5 L_5 + C_L L_1 R_5 g_m + C_L L_1 + C_L L_5 + C_L L_L\right) + s \left(C_L R_5 + 2 L_1 g_m\right) + 1}$$

9.159 X-INVALID-ORDER-159 $Z(s) = \left(L_1 s,\ \infty,\ \infty,\ \infty,\ \frac{C_5 L_5 R_5 s^2 + L_5 s + R_5}{C_5 L_5 s^2 + 1},\ \frac{L_L s}{C_L L_L s^2 + 1}\right)$

$$H(s) = \frac{L_1 L_5 L_L g_m s^3 + s^4 \left(C_5 L_1 L_5 L_L R_5 g_m - C_5 L_1 L_5 L_L\right) + s^2 \left(L_1 L_L R_5 g_m - L_1 L_L\right)}{R_5 + s^5 \left(C_5 C_L L_1 L_5 L_L R_5 g_m + C_5 C_L L_1 L_5 L_L\right) + s^4 \left(C_5 C_L L_5 L_L R_5 + 2 C_5 L_1 L_5 L_L g_m + C_L L_1 L_5 L_L g_m\right) + s^3 \left(C_5 L_1 L_5 R_5 g_m + C_5 L_1 L_5 + C_5 L_5 L_L + C_L L_1 L_L R_5 g_m + C_L L_1 L_L + C_L L_5 L_L\right) + s^2 \left(C_5 L_5 R_5 + C_L L_L R_5 + L_1 L_5 g_m + 2 L_1 L_L g_m\right) + s \left(L_1 R_5 g_m + L_1 + L_5\right.}$$

9.160 X-INVALID-ORDER-160 $Z(s) = \left(L_1 s,\ \infty,\ \infty,\ \infty,\ \frac{C_5 L_5 R_5 s^2 + L_5 s + R_5}{C_5 L_5 s^2 + 1},\ L_L s + R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{s^5 \left(C_5 C_L L_1 L_5 L_L R_5 g_m - C_5 C_L L_1 L_5 L_L\right) + s^4 \left(C_5 C_L L_1 L_5 R_5 R_L g_m - C_5 C_L L_1 L_5 R_L + C_L L_1 L_5 L_L g_m\right) + s^3 \left(C_5 L_1 L_5 R_5 g_m - C_5 L_1 L_5 + C_L L_1 L_5 R_L g_m + C_L L_1 L_L R_5 g_m - C_L L_1 L_L\right) + s^2 \left(C_L L_1 R_5 R_L g_m - C_L L_1 R_L + L_1 L_5 g_m\right) + s \left(L_1 R_5 g_m - L_1\right)}{2 C_5 C_L L_1 L_5 L_L g_m s^5 + s^4 \left(C_5 C_L L_1 L_5 R_5 g_m + 2 C_5 C_L L_1 L_5 R_L g_m + C_5 C_L L_1 L_5 + C_5 C_L L_5 L_L\right) + s^3 \left(C_5 C_L L_5 R_5 + C_5 C_L L_5 R_L + 2 C_5 L_1 L_5 g_m + C_L L_1 L_5 g_m + 2 C_L L_1 L_L g_m\right) + s^2 \left(C_5 L_5 + C_L L_1 R_5 g_m + 2 C_L L_1 R_L g_m + C_L L_1 + C_L L_5 + C_L L_L\right) + s \left(C_L R_5 + C_L R_L +\right.}$$

9.161 X-INVALID-ORDER-161 $Z(s) = \left(L_1 s,\ \infty,\ \infty,\ \infty,\ \frac{C_5 L_5 R_5 s^2 + L_5 s + R_5}{C_5 L_5 s^2 + 1},\ \frac{L_L R_L s}{C_L L_L R_L s^2 + L_L s + R_L}\right)$

$$H(s) = \frac{L_1 L_5 L_L R_L g_m s^3 + s^4 \left(C_5 L_1 L_5 L_L R_5 R_L g_m - C_5 L_1 L_5 L_L R_L\right) + s^2 \left(L_1 L_L R_5 R_L g_m - L_1 L_L R_L\right.}{R_5 R_L + s^5 \left(C_5 C_L L_1 L_5 L_L R_5 R_L g_m + C_5 C_L L_1 L_5 L_L R_L\right) + s^4 \left(C_5 C_L L_5 L_L R_5 R_L + C_5 L_1 L_5 L_L R_5 g_m + 2 C_5 L_1 L_5 L_L R_L g_m + C_5 L_1 L_5 L_L + C_L L_1 L_5 L_L R_L g_m\right) + s^3 \left(C_5 L_1 L_5 R_5 R_L g_m + C_5 L_1 L_5 R_L + C_5 L_5 L_L R_5 + C_5 L_5 L_L R_L + C_L L_1 L_L R_5 R_L g_m + C_L L_1 L_L R_L + C_L\right.}$$

9.162 X-INVALID-ORDER-162 $Z(s) = \left(L_1 s,\ \infty,\ \infty,\ \infty,\ \frac{C_5 L_5 R_5 s^2 + L_5 s + R_5}{C_5 L_5 s^2 + 1},\ \frac{C_L L_L R_L s^2 + L_L s + R_L}{C_L L_L s^2 + 1}\right)$

$$H(s) = \frac{s^5 \left(C_5 C_L L_1 L_5 L_L R_5 R_L g_m - C_5 C_L L_1 L_5 L_L R_L\right) + s^4 \left(C_5 L_1 L_5 L_L R_5 g_m - C_5 L_1 L_5 L_L + C_L L_1 L_5 L_L R_L g_m\right) + s^3 \left(C_5 L_1 L_5 R_5 R_L g_m - C_5 L_1 L_5 R_L + C_L L_1 L_L R_5 R_L g_m - C_L L_1 L_L R_L + L_1 L_5 L_L g_m\right) + s^2}{R_5 + R_L + s^5 \left(C_5 C_L L_1 L_5 L_L R_5 g_m + 2 C_5 C_L L_1 L_5 L_L R_L g_m + C_5 C_L L_1 L_5 L_L\right) + s^4 \left(C_5 C_L L_5 L_L R_5 + C_5 C_L L_5 L_L R_L + 2 C_5 L_1 L_5 L_L g_m + C_L L_1 L_5 L_L g_m\right) + s^3 \left(C_5 L_1 L_5 R_5 g_m + 2 C_5 L_1 L_5 R_L g_m + C_5 L_1 L_5 + C_5 L_5 L_L + C_L L_1 L_L R_5 g_m + 2 C_L L_1 L_L R_L g_m + C_L L_1 L_L + C\right.}$$

9.163 X-INVALID-ORDER-163 $Z(s) = \left(L_1 s,\ \infty,\ \infty,\ \infty,\ \frac{C_5 L_5 R_5 s^2 + L_5 s + R_5}{C_5 L_5 s^2 + 1},\ \frac{R_L \left(C_L L_L s^2 + 1\right)}{C_L L_L s^2 + C_L R_L s + 1}\right)$

$$H(s) = \frac{C_L L_1 L_5 L_L R_L g_m s^4 + L_1 L_5 R_L g_m s^2 + s^5 \left(C_5 C_L L_1 L_5 L_L R_5 R_L g_m - C_5 C_L L_1 L_5 L_L R_L\right) + s^3 \left(C_5 L_1 L_5 R_5 R_L g_m - C_5 L_1 L_5\right.}{R_5 + R_L + s^5 \left(C_5 C_L L_1 L_5 L_L R_5 g_m + 2 C_5 C_L L_1 L_5 L_L R_L g_m + C_5 C_L L_1 L_5 L_L\right) + s^4 \left(C_5 C_L L_1 L_5 R_5 R_L g_m + C_5 C_L L_1 L_5 R_L + C_5 C_L L_5 L_L R_5 + C_5 C_L L_5 L_L R_L + C_L L_1 L_5 L_L g_m\right) + s^3 \left(C_5 C_L L_5 R_5 R_L + C_5 L_1 L_5 R_5 g_m + 2 C_5 L_1 L_5 R_L g_m + C_5 L_1 L_5 + C_L L_1 L_5 R_L g_m + C_L\right.}$$

9.164 X-INVALID-ORDER-164 $Z(s) = \left(L_1 s,\ \infty,\ \infty,\ \infty,\ \frac{R_5 \left(C_5 L_5 s^2 + 1\right)}{C_5 L_5 s^2 + C_5 R_5 s + 1},\ R_L\right)$

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

9.165 X-INVALID-ORDER-165 $Z(s) = \left(L_1 s,\ \infty,\ \infty,\ \infty,\ \frac{R_5 \left(C_5 L_5 s^2 + 1\right)}{C_5 L_5 s^2 + C_5 R_5 s + 1},\ \frac{1}{C_L s}\right)$

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

9.166 X-INVALID-ORDER-166 $Z(s) = \left(L_1 s,\ \infty,\ \infty,\ \infty,\ \frac{R_5\left(C_5 L_5 s^2+1\right)}{C_5 L_5 s^2+C_5 R_5 s+1},\ \frac{R_L}{C_L R_L s+1}\right)$

$$H(s) = \frac{-C_5 L_1 R_5 R_L s^2 + s^3 \left(C_5 L_1 L_5 R_5 R_L g_m - C_5 L_1 L_5 R_L\right) + s \left(L_1 R_5 R_L g_m - L_1 R_L\right)}{R_5 + R_L + s^4 \left(C_5 C_L L_1 L_5 R_5 R_L g_m + C_5 C_L L_1 L_5 R_L\right) + s^3 \left(C_5 C_L L_1 R_5 R_L + C_5 C_L L_5 R_5 R_L + C_5 L_1 L_5 R_5 g_m + 2 C_5 L_1 L_5 R_L g_m + C_5 L_1 L_5\right) + s^2 \left(2 C_5 L_1 R_5 R_L g_m + C_5 L_1 R_5 + C_5 L_5 R_5 + C_5 L_5 R_L + C_L L_1 R_5 R_L g_m + C_L L_1 R_L\right) + s \left(C_5 R_5 R_L + C_L R_5 R_L + L_1 R_5 g_m +\right.}$$

9.167 X-INVALID-ORDER-167 $Z(s) = \left(L_1 s,\ \infty,\ \infty,\ \infty,\ \frac{R_5\left(C_5 L_5 s^2+1\right)}{C_5 L_5 s^2+C_5 R_5 s+1},\ R_L + \frac{1}{C_L s}\right)$

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

9.168 X-INVALID-ORDER-168 $Z(s) = \left(L_1 s,\ \infty,\ \infty,\ \infty,\ \frac{R_5\left(C_5 L_5 s^2+1\right)}{C_5 L_5 s^2+C_5 R_5 s+1},\ L_L s + \frac{1}{C_L s}\right)$

$$H(s) = \frac{-C_5 C_L L_1 L_L R_5 s^4 - C_5 L_1 R_5 s^2 + s^5 \left(C_5 C_L L_1 L_5 L_L R_5 g_m - C_5 C_L L_1 L_5 L_L\right) + s^3 \left(C_5 L_1 L_5 R_5 g_m - C_5 L_1 L_5 + C_L L_1 L_L R_5 g_m - C_L L_1 L_L\right) + s \left(L_1 R_5 g_m - L_1\right)}{2 C_5 C_L L_1 L_5 L_L g_m s^5 + s^4 \left(C_5 C_L L_1 L_5 R_5 g_m + C_5 C_L L_1 L_5 + 2 C_5 C_L L_1 L_L R_5 g_m + C_5 C_L L_5 L_L\right) + s^3 \left(C_5 C_L L_1 R_5 + C_5 C_L L_5 R_5 + C_5 C_L L_L R_5 + 2 C_5 L_1 L_5 g_m + 2 C_L L_1 L_L g_m\right) + s^2 \left(2 C_5 L_1 R_5 g_m + C_5 L_5 + C_L L_1 R_5 g_m + C_L L_1 + C_L L_L\right) + s \left(C_5 R_5 + C_L R_5 + 2 L_1 g_m\right) +}$$

9.169 X-INVALID-ORDER-169 $Z(s) = \left(L_1 s,\ \infty,\ \infty,\ \infty,\ \frac{R_5\left(C_5 L_5 s^2+1\right)}{C_5 L_5 s^2+C_5 R_5 s+1},\ \frac{L_L s}{C_L L_L s^2+1}\right)$

$$H(s) = \frac{-C_5 L_1 L_L R_5 s^3 + s^4 \left(C_5 L_1 L_5 L_L R_5 g_m - C_5 L_1 L_5 L_L\right) + s^2 \left(L_1 L_L R_5 g_m - L_1 L_L\right)}{R_5 + s^5 \left(C_5 C_L L_1 L_5 L_L R_5 g_m + C_5 C_L L_1 L_5 L_L\right) + s^4 \left(C_5 C_L L_1 L_L R_5 + C_5 C_L L_5 L_L R_5 + 2 C_5 L_1 L_5 L_L g_m\right) + s^3 \left(C_5 L_1 L_5 R_5 g_m + C_5 L_1 L_5 + 2 C_5 L_1 L_L R_5 g_m + C_5 L_5 L_L + C_L L_1 L_L R_5 g_m + C_L L_1 L_L\right) + s^2 \left(C_5 L_1 R_5 + C_5 L_5 R_5 + C_5 L_L R_5 + C_L L_L R_5 + 2 L_1 L_L g_m\right) + s \left(L\right.}$$

9.170 X-INVALID-ORDER-170 $Z(s) = \left(L_1 s,\ \infty,\ \infty,\ \infty,\ \frac{R_5\left(C_5 L_5 s^2+1\right)}{C_5 L_5 s^2+C_5 R_5 s+1},\ L_L s + R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{s^5 \left(C_5 C_L L_1 L_5 L_L R_5 g_m - C_5 C_L L_1 L_5 L_L\right) + s^4 \left(C_5 C_L L_1 L_5 R_5 R_L g_m - C_5 C_L L_1 L_5 R_L - C_5 C_L L_1 L_L R_5\right) + s^3 \left(-C_5 C_L L_1 R_5 R_L + C_5 L_1 L_5 R_5 g_m - C_5 L_1 L_5 + C_L L_1 L_L R_5 g_m - C_L L_1 L_L\right) + s^2 \left(-C_5 L_1 R_5 + C_L L\right.}{2 C_5 C_L L_1 L_5 L_L g_m s^5 + s^4 \left(C_5 C_L L_1 L_5 R_5 g_m + 2 C_5 C_L L_1 L_5 R_L g_m + C_5 C_L L_1 L_5 + 2 C_5 C_L L_1 L_L R_5 g_m + C_5 C_L L_5 L_L\right) + s^3 \left(2 C_5 C_L L_1 R_5 R_L g_m + C_5 C_L L_1 R_5 + C_5 C_L L_5 R_5 + C_5 C_L L_5 R_L + C_5 C_L L_L R_5 + 2 C_5 L_1 L_5 g_m + 2 C_L L_1 L_L g_m\right) + s^2 \left(C_5 C_L R_5 R_L + 2 C_5 L_1 R_5 g_m -\right.}$$

9.171 X-INVALID-ORDER-171 $Z(s) = \left(L_1 s,\ \infty,\ \infty,\ \infty,\ \frac{R_5\left(C_5 L_5 s^2+1\right)}{C_5 L_5 s^2+C_5 R_5 s+1},\ \frac{L_L R_L s}{C_L L_L R_L s^2+L_L s+R_L}\right)$

$$H(s) = \frac{-C_5 L_1 L_L R_5 R_L s^3 + s^4 \left(C_5 L_1 L_5 L_L R_5 R_L g_m - C_5 L_1 L_5 L_L R_L\right) + s^2 \left(L_1 L_L R_5 R_L g_m - L_1 L_L\right.}{R_5 R_L + s^5 \left(C_5 C_L L_1 L_5 L_L R_5 R_L g_m + C_5 C_L L_1 L_5 L_L R_L\right) + s^4 \left(C_5 C_L L_1 L_L R_5 R_L + C_5 C_L L_5 L_L R_5 R_L + C_5 L_1 L_5 L_L R_5 g_m + 2 C_5 L_1 L_5 L_L R_L g_m + C_5 L_1 L_5 L_L\right) + s^3 \left(C_5 L_1 L_5 R_5 R_L g_m + C_5 L_1 L_5 R_L + 2 C_5 L_1 L_L R_5 R_L g_m + C_5 L_1 L_L R_5 + C_5 L_5 L_L R_5 + C_5 L_5 L_L R_L + C_L\right.}$$

9.172 X-INVALID-ORDER-172 $Z(s) = \left(L_1 s,\ \infty,\ \infty,\ \infty,\ \frac{R_5\left(C_5 L_5 s^2+1\right)}{C_5 L_5 s^2+C_5 R_5 s+1},\ \frac{C_L L_L R_L s^2+L_L s+R_L}{C_L L_L s^2+1}\right)$

$$H(s) = \frac{s^5 \left(C_5 C_L L_1 L_5 L_L R_5 R_L g_m - C_5 C_L L_1 L_5 L_L R_L\right) + s^4 \left(-C_5 C_L L_1 L_L R_5 R_L + C_5 L_1 L_5 L_L R_5 g_m - C_5 L_1 L_5 L_L\right) + s^3 \left(C_5 L_1 L_5 R_5 R_L g_m - C_5 L_1 L_5 R_L - C_5 L_1 L_L R\right.}{R_5 + R_L + s^5 \left(C_5 C_L L_1 L_5 L_L R_5 g_m + 2 C_5 C_L L_1 L_5 L_L R_L g_m + C_5 C_L L_1 L_5 L_L\right) + s^4 \left(2 C_5 C_L L_1 L_L R_5 R_L g_m + C_5 C_L L_1 L_L R_5 + C_5 C_L L_5 L_L R_5 + C_5 C_L L_5 L_L R_L + 2 C_5 L_1 L_5 L_L g_m\right) + s^3 \left(C_5 C_L L_L R_5 R_L + C_5 L_1 L_5 R_5 g_m + 2 C_5 L_1 L_5 R_L g_m + C_5 L_1 L_5 + 2 C_5 L_1 L_L R_5 g_m +\right.}$$

9.173 X-INVALID-ORDER-173 $Z(s) = \left(L_1 s,\ \infty,\ \infty,\ \infty,\ \frac{R_5\left(C_5 L_5 s^2+1\right)}{C_5 L_5 s^2+C_5 R_5 s+1},\ \frac{R_L\left(C_L L_L s^2+1\right)}{C_L L_L s^2+C_L R_L s+1}\right)$

$$H(s) = \frac{-C_5 C_L L_1 L_L R_5 R_L s^4 - C_5 L_1 R_5 R_L s^2 + s^5 \left(C_5 C_L L_1 L_5 L_L R_5 R_L g_m - C_5 C_L L_1 L_5 L_L R_L\right) + s^3 \left(C_5 L_1\right.}{R_5 + R_L + s^5 \left(C_5 C_L L_1 L_5 L_L R_5 g_m + 2 C_5 C_L L_1 L_5 L_L R_L g_m + C_5 C_L L_1 L_5 L_L\right) + s^4 \left(C_5 C_L L_1 L_5 R_5 R_L g_m + C_5 C_L L_1 L_5 R_L + 2 C_5 C_L L_1 L_L R_5 R_L g_m + C_5 C_L L_1 L_L R_5 + C_5 C_L L_5 L_L R_5 + C_5 C_L L_5 L_L R_L\right) + s^3 \left(C_5 C_L L_1 R_5 R_L + C_5 C_L L_5 R_5 R_L + C_5 C_L L_L R_5 R_L + C_5 L_1\right.}$$

9.174 X-INVALID-ORDER-174 $Z(s) = \left(\frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ R_5,\ R_L\right)$

$$H(s) = \frac{R_5 R_L g_m - R_L}{R_5 g_m + 2 R_L g_m + s \left(C_1 R_5 + C_1 R_L\right) + 1}$$

9.175 X-INVALID-ORDER-175 $Z(s) = \left(\frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ R_5,\ L_L s + \frac{1}{C_L s}\right)$

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

9.176 X-INVALID-ORDER-176 $Z(s) = \left(\frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ R_5,\ \frac{L_L s}{C_L L_L s^2+1}\right)$

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

9.177 X-INVALID-ORDER-177 $Z(s) = \left(\frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ R_5,\ L_L s + R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{R_5 g_m + s^2 (C_L L_L R_5 g_m - C_L L_L) + s (C_L R_5 R_L g_m - C_L R_L) - 1}{C_1 C_L L_L s^3 + 2g_m + s^2 (C_1 C_L R_5 + C_1 C_L R_L + 2C_L L_L g_m) + s (C_1 + C_L R_5 g_m + 2C_L R_L g_m + C_L)}$$

9.178 X-INVALID-ORDER-178 $Z(s) = \left(\frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ R_5,\ \frac{L_L R_L s}{C_L L_L R_L s^2+L_L s+R_L}\right)$

$$H(s) = \frac{s (L_L R_5 R_L g_m - L_L R_L)}{C_1 C_L L_L R_5 R_L s^3 + R_5 R_L g_m + R_L + s^2 (C_1 L_L R_5 + C_1 L_L R_L + C_L L_L R_5 R_L g_m + C_L L_L R_L) + s (C_1 R_5 R_L + L_L R_5 g_m + 2L_L R_L g_m + L_L)}$$

9.179 X-INVALID-ORDER-179 $Z(s) = \left(\frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ R_5,\ \frac{C_L L_L R_L s^2+L_L s+R_L}{C_L L_L s^2+1}\right)$

$$H(s) = \frac{R_5 R_L g_m - R_L + s^2 (C_L L_L R_5 R_L g_m - C_L L_L R_L) + s (L_L R_5 g_m - L_L)}{R_5 g_m + 2R_L g_m + s^3 (C_1 C_L L_L R_5 + C_1 C_L L_L R_L) + s^2 (C_1 L_L + C_L L_L R_5 g_m + 2C_L L_L R_L g_m + C_L L_L) + s (C_1 R_5 + C_1 R_L + 2L_L g_m) + 1}$$

9.180 X-INVALID-ORDER-180 $Z(s) = \left(\frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ R_5,\ \frac{R_L\left(C_L L_L s^2+1\right)}{C_L L_L s^2+C_L R_L s+1}\right)$

$$H(s) = \frac{R_5 R_L g_m - R_L + s^2 (C_L L_L R_5 R_L g_m - C_L L_L R_L)}{R_5 g_m + 2R_L g_m + s^3 (C_1 C_L L_L R_5 + C_1 C_L L_L R_L) + s^2 (C_1 C_L R_5 R_L + C_L L_L R_5 g_m + 2C_L L_L R_L g_m + C_L L_L) + s (C_1 R_5 + C_1 R_L + C_L R_5 R_L g_m + C_L R_L) + 1}$$

9.181 X-INVALID-ORDER-181 $Z(s) = \left(\frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_5 s},\ \frac{1}{C_L s}\right)$

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

9.182 X-INVALID-ORDER-182 $Z(s) = \left(\frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_5 s},\ R_L + \frac{1}{C_L s}\right)$

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

9.183 X-INVALID-ORDER-183 $Z(s) = \left(\frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_5 s},\ L_L s + \frac{1}{C_L s}\right)$

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

9.184 X-INVALID-ORDER-184 $Z(s) = \left(\frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_5 s},\ \frac{L_L s}{C_L L_L s^2+1}\right)$

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

9.185 X-INVALID-ORDER-185 $Z(s) = \left(\frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_5 s},\ L_L s + R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{-C_5 C_L L_L s^3 + g_m + s^2\left(-C_5 C_L R_L + C_L L_L g_m\right) + s\left(-C_5 + C_L R_L g_m\right)}{C_1 C_5 C_L L_L s^4 + s^3\left(C_1 C_5 C_L R_L + 2C_5 C_L L_L g_m\right) + s^2\left(C_1 C_5 + C_1 C_L + 2C_5 C_L R_L g_m + C_5 C_L\right) + s\left(2C_5 g_m + C_L g_m\right)}$$

9.186 X-INVALID-ORDER-186 $Z(s) = \left(\frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_5 s},\ \frac{L_L R_L s}{C_L L_L R_L s^2 + L_L s + R_L}\right)$

$$H(s) = \frac{-C_5 L_L R_L s^2 + L_L R_L g_m s}{R_L g_m + s^3\left(C_1 C_5 L_L R_L + C_1 C_L L_L R_L + C_5 C_L L_L R_L\right) + s^2\left(C_1 L_L + 2C_5 L_L R_L g_m + C_5 L_L + C_L L_L R_L g_m\right) + s\left(C_1 R_L + C_5 R_L + L_L g_m\right)}$$

9.187 X-INVALID-ORDER-187 $Z(s) = \left(\frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_5 s},\ \frac{C_L L_L R_L s^2 + L_L s + R_L}{C_L L_L s^2 + 1}\right)$

$$H(s) = \frac{-C_5 C_L L_L R_L s^3 + R_L g_m + s^2\left(-C_5 L_L + C_L L_L R_L g_m\right) + s\left(-C_5 R_L + L_L g_m\right)}{C_1 C_5 C_L L_L R_L s^4 + g_m + s^3\left(C_1 C_5 L_L + C_1 C_L L_L + 2C_5 C_L L_L R_L g_m + C_5 C_L L_L\right) + s^2\left(C_1 C_5 R_L + 2C_5 L_L g_m + C_L L_L g_m\right) + s\left(C_1 + 2C_5 R_L g_m + C_5\right)}$$

9.188 X-INVALID-ORDER-188 $Z(s) = \left(\frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_5 s},\ \frac{R_L\left(C_L L_L s^2 + 1\right)}{C_L L_L s^2 + C_L R_L s + 1}\right)$

$$H(s) = \frac{-C_5 C_L L_L R_L s^3 - C_5 R_L s + C_L L_L R_L g_m s^2 + R_L g_m}{C_1 C_5 C_L L_L R_L s^4 + g_m + s^3\left(C_1 C_L L_L + 2C_5 C_L L_L R_L g_m + C_5 C_L L_L\right) + s^2\left(C_1 C_5 R_L + C_1 C_L R_L + C_5 C_L R_L + C_L L_L g_m\right) + s\left(C_1 + 2C_5 R_L g_m + C_5 + C_L R_L g_m\right)}$$

9.189 X-INVALID-ORDER-189 $Z(s) = \left(\frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{R_5}{C_5 R_5 s + 1},\ R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{-C_5 C_L R_5 R_L s^2 + R_5 g_m + s\left(-C_5 R_5 + C_L R_5 R_L g_m - C_L R_L\right) - 1}{C_1 C_5 C_L R_5 R_L s^3 + 2g_m + s^2\left(C_1 C_5 R_5 + C_1 C_L R_5 + C_1 C_L R_L + 2C_5 C_L R_5 R_L g_m + C_5 C_L R_5\right) + s\left(C_1 + 2C_5 R_5 g_m + C_L R_5 g_m + 2C_L R_L g_m + C_L\right)}$$

9.190 X-INVALID-ORDER-190 $Z(s) = \left(\frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{R_5}{C_5 R_5 s + 1},\ L_L s + \frac{1}{C_L s}\right)$

$$H(s) = \frac{-C_5 C_L L_L R_5 s^3 - C_5 R_5 s + R_5 g_m + s^2\left(C_L L_L R_5 g_m - C_L L_L\right) - 1}{C_1 C_5 C_L L_L R_5 s^4 + 2g_m + s^3\left(C_1 C_L L_L + 2C_5 C_L L_L R_5 g_m\right) + s^2\left(C_1 C_5 R_5 + C_1 C_L R_5 + C_5 C_L R_5 + 2C_L L_L g_m\right) + s\left(C_1 + 2C_5 R_5 g_m + C_L R_5 g_m + C_L\right)}$$

9.191 X-INVALID-ORDER-191 $Z(s) = \left(\frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{R_5}{C_5 R_5 s + 1},\ \frac{L_L s}{C_L L_L s^2 + 1}\right)$

$$H(s) = \frac{-C_5 L_L R_5 s^2 + s\left(L_L R_5 g_m - L_L\right)}{R_5 g_m + s^3\left(C_1 C_5 L_L R_5 + C_1 C_L L_L R_5 + C_5 C_L L_L R_5\right) + s^2\left(C_1 L_L + 2C_5 L_L R_5 g_m + C_L L_L R_5 g_m + C_L L_L\right) + s\left(C_1 R_5 + C_5 R_5 + 2L_L g_m\right) + 1}$$

9.192 X-INVALID-ORDER-192 $Z(s) = \left(\frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{R_5}{C_5 R_5 s + 1},\ L_L s + R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{-C_5 C_L L_L R_5 s^3 + R_5 g_m + s^2\left(-C_5 C_L R_5 R_L + C_L L_L R_5 g_m - C_L L_L\right) + s\left(-C_5 R_5 + C_L R_5 R_L g_m - C_L R_L\right) - 1}{C_1 C_5 C_L L_L R_5 s^4 + 2g_m + s^3\left(C_1 C_5 C_L R_5 R_L + C_1 C_L L_L + 2C_5 C_L L_L R_5 g_m\right) + s^2\left(C_1 C_5 R_5 + C_1 C_L R_5 + C_1 C_L R_L + 2C_5 C_L R_5 R_L g_m + C_5 C_L R_5 + 2C_L L_L g_m\right) + s\left(C_1 + 2C_5 R_5 g_m + C_L R_5 g_m + 2C_L R_L g_m + C_L\right)}$$

9.193 X-INVALID-ORDER-193 $Z(s) = \left(\frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{R_5}{C_5 R_5 s + 1},\ \frac{L_L R_L s}{C_L L_L R_L s^2 + L_L s + R_L}\right)$

$$H(s) = \frac{-C_5 L_L R_5 R_L s^2 + s\left(L_L R_5 R_L g_m - L_L R_L\right)}{R_5 R_L g_m + R_L + s^3\left(C_1 C_5 L_L R_5 R_L + C_1 C_L L_L R_5 R_L + C_5 C_L L_L R_5 R_L\right) + s^2\left(C_1 L_L R_5 + C_1 L_L R_L + 2C_5 L_L R_5 R_L g_m + C_5 L_L R_5 + C_L L_L R_5 R_L g_m + C_L L_L R_L\right) + s\left(C_1 R_5 R_L + C_5 R_5 R_L + L_L R_5 g_m + 2L_L R_L g_m + L_L\right)}$$

9.194 X-INVALID-ORDER-194 $Z(s) = \left(\frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{R_5}{C_5 R_5 s+1},\ \frac{C_L L_L R_L s^2+L_L s+R_L}{C_L L_L s^2+1}\right)$

$$H(s) = \frac{-C_5 C_L L_L R_5 R_L s^3 + R_5 R_L g_m - R_L + s^2 \left(-C_5 L_L R_5 + C_L L_L R_5 R_L g_m - C_L L_L R_L\right) + s \left(-C_5 R_5 R_L + L_L R_5 g_m - L_L\right)}{C_1 C_5 C_L L_L R_5 R_L s^4 + R_5 g_m + 2R_L g_m + s^3 \left(C_1 C_5 L_L R_5 + C_1 C_L L_L R_5 + C_1 C_L L_L R_L + 2C_5 C_L L_L R_5 R_L g_m + C_5 C_L L_L R_5\right) + s^2 \left(C_1 C_5 R_5 R_L + C_1 L_L + 2C_5 L_L R_5 g_m + C_L L_L R_5 g_m + 2C_L L_L R_L g_m + C_L L_L\right) + s \left(C_1 R_5 + C_1 R_L + 2C_5 R_5 R_L g_m + C_5 R_5 + 2L_L g_m\right) + 1}$$

9.195 X-INVALID-ORDER-195 $Z(s) = \left(\frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{R_5}{C_5 R_5 s+1},\ \frac{R_L\left(C_L L_L s^2+1\right)}{C_L L_L s^2+C_L R_L s+1}\right)$

$$H(s) = \frac{-C_5 C_L L_L R_5 R_L s^3 - C_5 R_5 R_L s + R_5 R_L g_m - R_L + s^2 \left(C_L L_L R_5 R_L g_m - C_L L_L R_L\right)}{C_1 C_5 C_L L_L R_5 R_L s^4 + R_5 g_m + 2R_L g_m + s^3 \left(C_1 C_L L_L R_5 + C_1 C_L L_L R_L + 2C_5 C_L L_L R_5 R_L g_m + C_5 C_L L_L R_5\right) + s^2 \left(C_1 C_5 R_5 R_L + C_1 C_L R_5 R_L + C_5 C_L R_5 R_L + C_L L_L R_5 g_m + 2C_L L_L R_L g_m + C_L L_L\right) + s \left(C_1 R_5 + C_1 R_L + 2C_5 R_5 R_L g_m + C_5 R_5 + C_L R_5 R_L g_m + C_L R_L\right.}$$

9.196 X-INVALID-ORDER-196 $Z(s) = \left(\frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ R_5 + \frac{1}{C_5 s},\ \frac{1}{C_L s}\right)$

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

9.197 X-INVALID-ORDER-197 $Z(s) = \left(\frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ R_5 + \frac{1}{C_5 s},\ \frac{R_L}{C_L R_L s+1}\right)$

$$H(s) = \frac{R_L g_m + s \left(C_5 R_5 R_L g_m - C_5 R_L\right)}{C_1 C_5 C_L R_5 R_L s^3 + g_m + s^2 \left(C_1 C_5 R_5 + C_1 C_5 R_L + C_1 C_L R_L + C_5 C_L R_5 R_L g_m + C_5 C_L R_L\right) + s \left(C_1 + C_5 R_5 g_m + 2C_5 R_L g_m + C_5 + C_L R_L g_m\right)}$$

9.198 X-INVALID-ORDER-198 $Z(s) = \left(\frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ R_5 + \frac{1}{C_5 s},\ R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{g_m + s^2 \left(C_5 C_L R_5 R_L g_m - C_5 C_L R_L\right) + s \left(C_5 R_5 g_m - C_5 + C_L R_L g_m\right)}{s^3 \left(C_1 C_5 C_L R_5 + C_1 C_5 C_L R_L\right) + s^2 \left(C_1 C_5 + C_1 C_L + C_5 C_L R_5 g_m + 2C_5 C_L R_L g_m + C_5 C_L\right) + s \left(2C_5 g_m + C_L g_m\right)}$$

9.199 X-INVALID-ORDER-199 $Z(s) = \left(\frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ R_5 + \frac{1}{C_5 s},\ L_L s + \frac{1}{C_L s}\right)$

$$H(s) = \frac{C_L L_L g_m s^2 + g_m + s^3 \left(C_5 C_L L_L R_5 g_m - C_5 C_L L_L\right) + s \left(C_5 R_5 g_m - C_5\right)}{C_1 C_5 C_L L_L s^4 + s^3 \left(C_1 C_5 C_L R_5 + 2C_5 C_L L_L g_m\right) + s^2 \left(C_1 C_5 + C_1 C_L + C_5 C_L R_5 g_m + C_5 C_L\right) + s \left(2C_5 g_m + C_L g_m\right)}$$

9.200 X-INVALID-ORDER-200 $Z(s) = \left(\frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ R_5 + \frac{1}{C_5 s},\ \frac{L_L s}{C_L L_L s^2+1}\right)$

$$H(s) = \frac{L_L g_m s + s^2 \left(C_5 L_L R_5 g_m - C_5 L_L\right)}{C_1 C_5 C_L L_L R_5 s^4 + g_m + s^3 \left(C_1 C_5 L_L + C_1 C_L L_L + C_5 C_L L_L R_5 g_m + C_5 C_L L_L\right) + s^2 \left(C_1 C_5 R_5 + 2C_5 L_L g_m + C_L L_L g_m\right) + s \left(C_1 + C_5 R_5 g_m + C_5\right)}$$

9.201 X-INVALID-ORDER-201 $Z(s) = \left(\frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ R_5 + \frac{1}{C_5 s},\ L_L s + R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{g_m + s^3 \left(C_5 C_L L_L R_5 g_m - C_5 C_L L_L\right) + s^2 \left(C_5 C_L R_5 R_L g_m - C_5 C_L R_L + C_L L_L g_m\right) + s \left(C_5 R_5 g_m - C_5 + C_L R_L g_m\right)}{C_1 C_5 C_L L_L s^4 + s^3 \left(C_1 C_5 C_L R_5 + C_1 C_5 C_L R_L + 2C_5 C_L L_L g_m\right) + s^2 \left(C_1 C_5 + C_1 C_L + C_5 C_L R_5 g_m + 2C_5 C_L R_L g_m + C_5 C_L\right) + s \left(2C_5 g_m + C_L g_m\right)}$$

9.202 X-INVALID-ORDER-202 $Z(s) = \left(\frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ R_5 + \frac{1}{C_5 s},\ \frac{L_L R_L s}{C_L L_L R_L s^2+L_L s+R_L}\right)$

$$H(s) = \frac{L_L R_L g_m s + s^2 \left(C_5 L_L R_5 R_L g_m - C_5 L_L R_L\right)}{C_1 C_5 C_L L_L R_5 R_L s^4 + R_L g_m + s^3 \left(C_1 C_5 L_L R_5 + C_1 C_5 L_L R_L + C_1 C_L L_L R_L + C_5 C_L L_L R_5 R_L g_m + C_5 C_L L_L R_L\right) + s^2 \left(C_1 C_5 R_5 R_L + C_1 L_L + C_5 L_L R_5 g_m + 2C_5 L_L R_L g_m + C_5 L_L + C_L L_L R_L g_m\right) + s \left(C_1 R_L + C_5 R_5 R_L g_m + C_5 R_L + L_L g_m\right)}$$

9.203 X-INVALID-ORDER-203 $Z(s) = \left(\frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ R_5 + \frac{1}{C_5 s},\ \frac{C_L L_L R_L s^2+L_L s+R_L}{C_L L_L s^2+1}\right)$

$$H(s) = \frac{R_L g_m + s^3 \left(C_5 C_L L_L R_5 R_L g_m - C_5 C_L L_L R_L\right) + s^2 \left(C_5 L_L R_5 g_m - C_5 L_L + C_L L_L R_L g_m\right) + s \left(C_5 R_5 R_L g_m - C_5 R_L + L_L g_m\right)}{g_m + s^4 \left(C_1 C_5 C_L L_L R_5 + C_1 C_5 C_L L_L R_L\right) + s^3 \left(C_1 C_5 L_L + C_1 C_L L_L + C_5 C_L L_L R_5 g_m + 2C_5 C_L L_L R_L g_m + C_5 C_L L_L\right) + s^2 \left(C_1 C_5 R_5 + C_1 C_5 R_L + 2C_5 L_L g_m + C_L L_L g_m\right) + s \left(C_1 + C_5 R_5 g_m + 2C_5 R_L g_m + C_5\right)}$$

9.204 X-INVALID-ORDER-204 $Z(s) = \left(\frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ R_5 + \frac{1}{C_5 s},\ \frac{R_L\left(C_L L_L s^2+1\right)}{C_L L_L s^2+C_L R_L s+1}\right)$

$$H(s) = \frac{C_L L_L R_L g_m s^2 + R_L g_m + s^3\left(C_5 C_L L_L R_5 R_L g_m - C_5 C_L L_L R_L\right) + s\left(C_5 R_5 R_L g_m - C_5 R_L\right)}{g_m + s^4\left(C_1 C_5 C_L L_L R_5 + C_1 C_5 C_L L_L R_L\right) + s^3\left(C_1 C_5 C_L R_5 R_L + C_1 C_L L_L + C_5 C_L L_L R_5 g_m + 2C_5 C_L L_L R_L g_m + C_5 C_L L_L\right) + s^2\left(C_1 C_5 R_5 + C_1 C_5 R_L + C_1 C_L R_L + C_5 C_L R_5 R_L g_m + C_5 C_L R_L + C_L L_L g_m\right) + s\left(C_1 + C_5 R_5 g_m + 2C_5 R_L g_m + C_5 + C_L R_L g_m\right)}$$

9.205 X-INVALID-ORDER-205 $Z(s) = \left(\frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ L_5 s + \frac{1}{C_5 s},\ R_L\right)$

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

9.206 X-INVALID-ORDER-206 $Z(s) = \left(\frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ L_5 s + \frac{1}{C_5 s},\ \frac{1}{C_L s}\right)$

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

9.207 X-INVALID-ORDER-207 $Z(s) = \left(\frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ L_5 s + \frac{1}{C_5 s},\ \frac{R_L}{C_L R_L s+1}\right)$

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

9.208 X-INVALID-ORDER-208 $Z(s) = \left(\frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ L_5 s + \frac{1}{C_5 s},\ R_L + \frac{1}{C_L s}\right)$

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

9.209 X-INVALID-ORDER-209 $Z(s) = \left(\frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ L_5 s + \frac{1}{C_5 s},\ L_L s + \frac{1}{C_L s}\right)$

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

9.210 X-INVALID-ORDER-210 $Z(s) = \left(\frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ L_5 s + \frac{1}{C_5 s},\ \frac{L_L s}{C_L L_L s^2+1}\right)$

$$H(s) = \frac{C_5 L_5 L_L g_m s^3 - C_5 L_L s^2 + L_L g_m s}{C_1 C_5 C_L L_5 L_L s^5 + C_5 C_L L_5 L_L g_m s^4 + g_m + s^3\left(C_1 C_5 L_5 + C_1 C_5 L_L + C_1 C_L L_L + C_5 C_L L_L\right) + s^2\left(C_5 L_5 g_m + 2C_5 L_L g_m + C_L L_L g_m\right) + s\left(C_1 + C_5\right)}$$

9.211 X-INVALID-ORDER-211 $Z(s) = \left(\frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ L_5 s + \frac{1}{C_5 s},\ L_L s + R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{C_5 C_L L_5 L_L g_m s^4 + g_m + s^3\left(C_5 C_L L_5 R_L g_m - C_5 C_L L_L\right) + s^2\left(-C_5 C_L R_L + C_5 L_5 g_m + C_L L_L g_m\right) + s\left(-C_5 + C_L R_L g_m\right)}{s^4\left(C_1 C_5 C_L L_5 + C_1 C_5 C_L L_L\right) + s^3\left(C_1 C_5 C_L R_L + C_5 C_L L_5 g_m + 2C_5 C_L L_L g_m\right) + s^2\left(C_1 C_5 + C_1 C_L + 2C_5 C_L R_L g_m + C_5 C_L\right) + s\left(2C_5 g_m + C_L g_m\right)}$$

9.212 X-INVALID-ORDER-212 $Z(s) = \left(\frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ L_5 s + \frac{1}{C_5 s},\ \frac{L_L R_L s}{C_L L_L R_L s^2+L_L s+R_L}\right)$

$$H(s) = \frac{C_5 L_5 L_L R_L g_m s^3 - C_5 L_L R_L s^2 + L_L R_L g_m s}{C_1 C_5 C_L L_5 L_L R_L s^5 + R_L g_m + s^4\left(C_1 C_5 L_5 L_L + C_5 C_L L_5 L_L R_L g_m\right) + s^3\left(C_1 C_5 L_5 R_L + C_1 C_5 L_L R_L + C_1 C_L L_L R_L + C_5 C_L L_L R_L + C_5 L_5 L_L g_m\right) + s^2\left(C_1 L_L + C_5 L_5 R_L g_m + 2C_5 L_L R_L g_m + C_5 L_L + C_L L_L R_L g_m\right) + s\left(C_1 R_L + C_5 R_L + L_L g_m\right)}$$

9.213 X-INVALID-ORDER-213 $Z(s) = \left(\frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ L_5 s + \frac{1}{C_5 s},\ \frac{C_L L_L R_L s^2+L_L s+R_L}{C_L L_L s^2+1}\right)$

$$H(s) = \frac{C_5 C_L L_5 L_L R_L g_m s^4 + R_L g_m + s^3\left(-C_5 C_L L_L R_L + C_5 L_5 L_L g_m\right) + s^2\left(C_5 L_5 R_L g_m - C_5 L_L + C_L L_L R_L g_m\right) + s\left(-C_5 R_L + L_L g_m\right)}{C_1 C_5 C_L L_5 L_L s^5 + g_m + s^4\left(C_1 C_5 C_L L_L R_L + C_5 C_L L_5 L_L g_m\right) + s^3\left(C_1 C_5 L_5 + C_1 C_5 L_L + C_1 C_L L_L + 2C_5 C_L L_L R_L g_m + C_5 C_L L_L\right) + s^2\left(C_1 C_5 R_L + C_5 L_5 g_m + 2C_5 L_L g_m + C_L L_L g_m\right) + s\left(C_1 + 2C_5 R_L g_m + C_5\right)}$$

9.214 X-INVALID-ORDER-214 $Z(s) = \left(\frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ L_5 s + \frac{1}{C_5 s},\ \frac{R_L\left(C_L L_L s^2+1\right)}{C_L L_L s^2+C_L R_L s+1}\right)$

$$H(s) = \frac{C_5 C_L L_5 L_L R_L g_m s^4 - C_5 C_L L_L R_L s^3 - C_5 R_L s + R_L g_m + s^2 \left(C_5 L_5 R_L g_m + C_L L_L R_L g_m\right)}{C_1 C_5 C_L L_5 L_L s^5 + g_m + s^4 \left(C_1 C_5 C_L L_5 R_L + C_1 C_5 C_L L_L R_L + C_5 C_L L_5 L_L g_m\right) + s^3 \left(C_1 C_5 L_5 + C_1 C_L L_L + C_5 C_L L_5 R_L g_m + 2 C_5 C_L L_L R_L g_m + C_5 C_L L_L\right) + s^2 \left(C_1 C_5 R_L + C_1 C_L R_L + C_5 C_L R_L + C_5 L_5 g_m + C_L L_L g_m\right) + s \left(C_1 + 2 C_5 R_L g_m + C_5 + C_L R_L g_m\right)}$$

9.215 X-INVALID-ORDER-215 $Z(s) = \left(\frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{L_5 s}{C_5 L_5 s^2+1},\ R_L\right)$

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

9.216 X-INVALID-ORDER-216 $Z(s) = \left(\frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{L_5 s}{C_5 L_5 s^2+1},\ \frac{1}{C_L s}\right)$

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

9.217 X-INVALID-ORDER-217 $Z(s) = \left(\frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{L_5 s}{C_5 L_5 s^2+1},\ \frac{R_L}{C_L R_L s+1}\right)$

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

9.218 X-INVALID-ORDER-218 $Z(s) = \left(\frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{L_5 s}{C_5 L_5 s^2+1},\ R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{-C_5 C_L L_5 R_L s^3 + s^2 \left(-C_5 L_5 + C_L L_5 R_L g_m\right) + s \left(-C_L R_L + L_5 g_m\right) - 1}{C_1 C_5 C_L L_5 R_L s^4 + 2 g_m + s^3 \left(C_1 C_5 L_5 + C_1 C_L L_5 + 2 C_5 C_L L_5 R_L g_m + C_5 C_L L_5\right) + s^2 \left(C_1 C_L R_L + 2 C_5 L_5 g_m + C_L L_5 g_m\right) + s \left(C_1 + 2 C_L R_L g_m + C_L\right)}$$

9.219 X-INVALID-ORDER-219 $Z(s) = \left(\frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{L_5 s}{C_5 L_5 s^2+1},\ L_L s + \frac{1}{C_L s}\right)$

$$H(s) = \frac{-C_5 C_L L_5 L_L s^4 + C_L L_5 L_L g_m s^3 + L_5 g_m s + s^2 \left(-C_5 L_5 - C_L L_L\right) - 1}{C_1 C_5 C_L L_5 L_L s^5 + 2 C_5 C_L L_5 L_L g_m s^4 + 2 g_m + s^3 \left(C_1 C_5 L_5 + C_1 C_L L_5 + C_1 C_L L_L + C_5 C_L L_5\right) + s^2 \left(2 C_5 L_5 g_m + C_L L_5 g_m + 2 C_L L_L g_m\right) + s \left(C_1 + C_L\right)}$$

9.220 X-INVALID-ORDER-220 $Z(s) = \left(\frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{L_5 s}{C_5 L_5 s^2+1},\ \frac{L_L s}{C_L L_L s^2+1}\right)$

$$H(s) = \frac{-C_5 L_5 L_L s^3 + L_5 L_L g_m s^2 - L_L s}{s^4 \left(C_1 C_5 L_5 L_L + C_1 C_L L_5 L_L + C_5 C_L L_5 L_L\right) + s^3 \left(2 C_5 L_5 L_L g_m + C_L L_5 L_L g_m\right) + s^2 \left(C_1 L_5 + C_1 L_L + C_5 L_5 + C_L L_L\right) + s \left(L_5 g_m + 2 L_L g_m\right) + 1}$$

9.221 X-INVALID-ORDER-221 $Z(s) = \left(\frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{L_5 s}{C_5 L_5 s^2+1},\ L_L s + R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{-C_5 C_L L_5 L_L s^4 + s^3 \left(-C_5 C_L L_5 R_L + C_L L_5 L_L g_m\right) + s^2 \left(-C_5 L_5 + C_L L_5 R_L g_m - C_L L_L\right) + s \left(-C_L R_L + L_5 g_m\right) - 1}{C_1 C_5 C_L L_5 L_L s^5 + 2 g_m + s^4 \left(C_1 C_5 C_L L_5 R_L + 2 C_5 C_L L_5 L_L g_m\right) + s^3 \left(C_1 C_5 L_5 + C_1 C_L L_5 + C_1 C_L L_L + 2 C_5 C_L L_5 R_L g_m + C_5 C_L L_5\right) + s^2 \left(C_1 C_L R_L + 2 C_5 L_5 g_m + C_L L_5 g_m + 2 C_L L_L g_m\right) + s \left(C_1 + 2 C_L R_L g_m + C_L\right)}$$

9.222 X-INVALID-ORDER-222 $Z(s) = \left(\frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{L_5 s}{C_5 L_5 s^2+1},\ \frac{L_L R_L s}{C_L L_L R_L s^2+L_L s+R_L}\right)$

$$H(s) = \frac{-C_5 L_5 L_L R_L s^3 + L_5 L_L R_L g_m s^2 - L_L R_L s}{R_L + s^4 \left(C_1 C_5 L_5 L_L R_L + C_1 C_L L_5 L_L R_L + C_5 C_L L_5 L_L R_L\right) + s^3 \left(C_1 L_5 L_L + 2 C_5 L_5 L_L R_L g_m + C_5 L_5 L_L + C_L L_5 L_L R_L g_m\right) + s^2 \left(C_1 L_5 R_L + C_1 L_L R_L + C_5 L_5 R_L + C_L L_L R_L + L_5 L_L g_m\right) + s \left(L_5 R_L g_m + 2 L_L R_L g_m + L_L\right)}$$

9.223 X-INVALID-ORDER-223 $Z(s) = \left(\frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{L_5 s}{C_5 L_5 s^2+1},\ \frac{C_L L_L R_L s^2+L_L s+R_L}{C_L L_L s^2+1}\right)$

$$H(s) = \frac{-C_5 C_L L_5 L_L R_L s^4 - R_L + s^3 \left(-C_5 L_5 L_L + C_L L_5 L_L R_L g_m\right) + s^2 \left(-C_5 L_5 R_L - C_L L_L R_L + L_5 L_L g_m\right) + s \left(L_5 R_L g_m - L_L\right)}{C_1 C_5 C_L L_5 L_L R_L s^5 + 2 R_L g_m + s^4 \left(C_1 C_5 L_5 L_L + C_1 C_L L_5 L_L + 2 C_5 C_L L_5 L_L R_L g_m + C_5 C_L L_5 L_L\right) + s^3 \left(C_1 C_5 L_5 R_L + C_1 C_L L_L R_L + 2 C_5 L_5 L_L g_m + C_L L_5 L_L g_m\right) + s^2 \left(C_1 L_5 + C_1 L_L + 2 C_5 L_5 R_L g_m + C_5 L_5 + 2 C_L L_L R_L g_m + C_L L_L\right) + s \left(C_1 R_L + L_5 g_m + 2 L_L g_m\right) +$$

9.224 X-INVALID-ORDER-224 $Z(s) = \left(\frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{L_5 s}{C_5 L_5 s^2+1},\ \frac{R_L\left(C_L L_L s^2+1\right)}{C_L L_L s^2+C_L R_L s+1}\right)$

$$H(s) = \frac{-C_5 C_L L_5 L_L R_L s^4 + C_L L_5 L_L R_L g_m s^3 + L_5 R_L g_m s - R_L + s^2\left(-C_5 L_5 R_L - C_L L_L R_L\right)}{C_1 C_5 C_L L_5 L_L R_L s^5 + 2R_L g_m + s^4\left(C_1 C_L L_5 L_L + 2C_5 C_L L_5 L_L R_L g_m + C_5 C_L L_5 L_L\right) + s^3\left(C_1 C_5 L_5 R_L + C_1 C_L L_5 R_L + C_1 C_L L_L R_L + C_5 C_L L_5 R_L + C_L L_5 L_L g_m\right) + s^2\left(C_1 L_5 + 2C_5 L_5 R_L g_m + C_5 L_5 + C_L L_5 R_L g_m + 2C_L L_L R_L g_m + C_L L_L\right) + s\left(C_1 R_L + C_L R_L + L_5\right.}$$

9.225 X-INVALID-ORDER-225 $Z(s) = \left(\frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ L_5 s + R_5 + \frac{1}{C_5 s},\ R_L\right)$

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

9.226 X-INVALID-ORDER-226 $Z(s) = \left(\frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ L_5 s + R_5 + \frac{1}{C_5 s},\ \frac{1}{C_L s}\right)$

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

9.227 X-INVALID-ORDER-227 $Z(s) = \left(\frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ L_5 s + R_5 + \frac{1}{C_5 s},\ \frac{R_L}{C_L R_L s+1}\right)$

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

9.228 X-INVALID-ORDER-228 $Z(s) = \left(\frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ L_5 s + R_5 + \frac{1}{C_5 s},\ R_L + \frac{1}{C_L s}\right)$

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

9.229 X-INVALID-ORDER-229 $Z(s) = \left(\frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ L_5 s + R_5 + \frac{1}{C_5 s},\ L_L s + \frac{1}{C_L s}\right)$

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

9.230 X-INVALID-ORDER-230 $Z(s) = \left(\frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ L_5 s + R_5 + \frac{1}{C_5 s},\ \frac{L_L s}{C_L L_L s^2+1}\right)$

$$H(s) = \frac{C_5 L_5 L_L g_m s^3 + L_L g_m s + s^2\left(C_5 L_L R_5 g_m - C_5 L_L\right)}{C_1 C_5 C_L L_5 L_L s^5 + g_m + s^4\left(C_1 C_5 C_L L_L R_5 + C_5 C_L L_5 L_L g_m\right) + s^3\left(C_1 C_5 L_5 + C_1 C_5 L_L + C_1 C_L L_L + C_5 C_L L_L R_5 g_m + C_5 C_L L_L\right) + s^2\left(C_1 C_5 R_5 + C_5 L_5 g_m + 2C_5 L_L g_m + C_L L_L g_m\right) + s\left(C_1 + C_5 R_5 g_m + C_5\right)}$$

9.231 X-INVALID-ORDER-231 $Z(s) = \left(\frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ L_5 s + R_5 + \frac{1}{C_5 s},\ L_L s + R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{C_5 C_L L_5 L_L g_m s^4 + g_m + s^3\left(C_5 C_L L_5 R_L g_m + C_5 C_L L_L R_5 g_m - C_5 C_L L_L\right) + s^2\left(C_5 C_L R_5 R_L g_m - C_5 C_L R_L + C_5 L_5 g_m + C_L L_L g_m\right) + s\left(C_5 R_5 g_m - C_5 + C_L R_L g_m\right)}{s^4\left(C_1 C_5 C_L L_5 + C_1 C_5 C_L L_L\right) + s^3\left(C_1 C_5 C_L R_5 + C_1 C_5 C_L R_L + C_5 C_L L_5 g_m + 2C_5 C_L L_L g_m\right) + s^2\left(C_1 C_5 + C_1 C_L + C_5 C_L R_5 g_m + 2C_5 C_L R_L g_m + C_5 C_L\right) + s\left(2C_5 g_m + C_L g_m\right)}$$

9.232 X-INVALID-ORDER-232 $Z(s) = \left(\frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ L_5 s + R_5 + \frac{1}{C_5 s},\ \frac{L_L R_L s}{C_L L_L R_L s^2+L_L s+R_L}\right)$

$$H(s) = \frac{C_5 L_5 L_L R_L g_m s^3 + L_L R_L g_m s + s^2\left(C_5 L_L R_5 R_L g_m - C_5 L_L R_L\right)}{C_1 C_5 C_L L_5 L_L R_L s^5 + R_L g_m + s^4\left(C_1 C_5 C_L L_L R_5 R_L + C_1 C_5 L_5 L_L + C_5 C_L L_5 L_L R_L g_m\right) + s^3\left(C_1 C_5 L_5 R_L + C_1 C_5 L_L R_5 + C_1 C_5 L_L R_L + C_1 C_L L_L R_L + C_5 C_L L_L R_5 R_L g_m + C_5 C_L L_L R_L + C_5 L_5 L_L g_m\right) + s^2\left(C_1 C_5 R_5 R_L + C_1 L_L + C_5 L_5 R_L g_m + C_5 L_L R_5 g_m + 2C_5 L\right.}$$

9.233 X-INVALID-ORDER-233 $Z(s) = \left(\frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ L_5 s + R_5 + \frac{1}{C_5 s},\ \frac{C_L L_L R_L s^2+L_L s+R_L}{C_L L_L s^2+1}\right)$

$$H(s) = \frac{C_5 C_L L_5 L_L R_L g_m s^4 + R_L g_m + s^3\left(C_5 C_L L_L R_5 R_L g_m - C_5 C_L L_L R_L + C_5 L_5 L_L g_m\right) + s^2\left(C_5 L_5 R_L g_m + C_5 L_L R_5 g_m - C_5 L_L + C_L L_L R_L g_m\right) + s\left(C_5 R_5 R_L g_m - C_5 R_L + L_L g_m\right)}{C_1 C_5 C_L L_5 L_L s^5 + g_m + s^4\left(C_1 C_5 C_L L_L R_5 + C_1 C_5 C_L L_L R_L + C_5 C_L L_5 L_L g_m\right) + s^3\left(C_1 C_5 L_5 + C_1 C_5 L_L + C_1 C_L L_L + C_5 C_L L_L R_5 g_m + 2C_5 C_L L_L R_L g_m + C_5 C_L L_L\right) + s^2\left(C_1 C_5 R_5 + C_1 C_5 R_L + C_5 L_5 g_m + 2C_5 L_L g_m + C_L L_L g_m\right) + s\left(C_1 + C_5 R_5 g_m + 2C_5 R_L g_m + C\right.}$$

9.234 X-INVALID-ORDER-234 $Z(s) = \left(\frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ L_5 s + R_5 + \frac{1}{C_5 s},\ \frac{R_L\left(C_L L_L s^2+1\right)}{C_L L_L s^2+C_L R_L s+1}\right)$

$$H(s) = \frac{C_5 C_L L_5 L_L R_L g_m s^4 + R_L g_m + s^3\left(C_5 C_L L_L R_5 R_L g_m - C_5 C_L L_L R_L\right) + s^2\left(C_5 L_5 R_L g_m + C_L L_L R_L g_m\right) + s\left(C_5 R_5 R_L g_m - C_5 R_L\right)}{C_1 C_5 C_L L_5 L_L s^5 + g_m + s^4\left(C_1 C_5 C_L L_5 R_L + C_1 C_5 C_L L_L R_5 + C_1 C_5 C_L L_L R_L + C_5 C_L L_5 L_L g_m\right) + s^3\left(C_1 C_5 C_L R_5 R_L + C_1 C_5 L_5 + C_1 C_L L_L + C_5 C_L L_5 R_L g_m + C_5 C_L L_L R_5 g_m + 2C_5 C_L L_L R_L g_m + C_5 C_L L_L\right) + s^2\left(C_1 C_5 R_5 + C_1 C_5 R_L + C_1 C_L R_L + C_5 C_L R_5 R_L g_m +\right.}$$

9.235 X-INVALID-ORDER-235 $Z(s) = \left(\frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{L_5 R_5 s}{C_5 L_5 R_5 s^2+L_5 s+R_5},\ R_L\right)$

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

9.236 X-INVALID-ORDER-236 $Z(s) = \left(\frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{L_5 R_5 s}{C_5 L_5 R_5 s^2+L_5 s+R_5},\ \frac{1}{C_L s}\right)$

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

9.237 X-INVALID-ORDER-237 $Z(s) = \left(\frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{L_5 R_5 s}{C_5 L_5 R_5 s^2+L_5 s+R_5},\ \frac{R_L}{C_L R_L s+1}\right)$

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

9.238 X-INVALID-ORDER-238 $Z(s) = \left(\frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{L_5 R_5 s}{C_5 L_5 R_5 s^2+L_5 s+R_5},\ R_L + \frac{1}{C_L s}\right)$

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

9.239 X-INVALID-ORDER-239 $Z(s) = \left(\frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{L_5 R_5 s}{C_5 L_5 R_5 s^2+L_5 s+R_5},\ L_L s + \frac{1}{C_L s}\right)$

$$H(s) = \frac{-C_5 C_L L_5 L_L R_5 s^4 - R_5 + s^3\left(C_L L_5 L_L R_5 g_m - C_L L_5 L_L\right) + s^2\left(-C_5 L_5 R_5 - C_L L_L R_5\right) + s\left(L_5 R_5 g_m - L_5\right)}{C_1 C_5 C_L L_5 L_L R_5 s^5 + 2R_5 g_m + s^4\left(C_1 C_L L_5 L_L + 2C_5 C_L L_5 L_L R_5 g_m\right) + s^3\left(C_1 C_5 L_5 R_5 + C_1 C_L L_5 R_5 + C_1 C_L L_L R_5 + C_5 C_L L_5 R_5 + 2C_L L_5 L_L g_m\right) + s^2\left(C_1 L_5 + 2C_5 L_5 R_5 g_m + C_L L_5 R_5 g_m + C_L L_5 + 2C_L L_L R_5 g_m\right) + s\left(C_1 R_5 + C_L R_5 + 2L_5 g_m\right)}$$

9.240 X-INVALID-ORDER-240 $Z(s) = \left(\frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{L_5 R_5 s}{C_5 L_5 R_5 s^2+L_5 s+R_5},\ \frac{L_L s}{C_L L_L s^2+1}\right)$

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

9.241 X-INVALID-ORDER-241 $Z(s) = \left(\frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{L_5 R_5 s}{C_5 L_5 R_5 s^2+L_5 s+R_5},\ L_L s + R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{-C_5 C_L L_5 L_L R_5 s^4 - R_5 + s^3\left(-C_5 C_L L_5 R_5 R_L + C_L L_5 L_L R_5 g_m - C_L L_5 L_L\right) + s^2\left(-C_5 L_5 R_5 + C_L L_5 R_5 R_L g_m - C_L L_5 R_L - C_L L_L R_5\right) + s\left(-C_L R_5 R_L + L_5 R_5 g_m - L_5\right)}{C_1 C_5 C_L L_5 L_L R_5 s^5 + 2R_5 g_m + s^4\left(C_1 C_5 C_L L_5 R_5 R_L + C_1 C_L L_5 L_L + 2C_5 C_L L_5 L_L R_5 g_m\right) + s^3\left(C_1 C_5 L_5 R_5 + C_1 C_L L_5 R_5 + C_1 C_L L_5 R_L + C_1 C_L L_L R_5 + 2C_5 C_L L_5 R_5 R_L g_m + C_5 C_L L_5 R_5 + 2C_L L_5 L_L g_m\right) + s^2\left(C_1 C_L R_5 R_L + C_1 L_5 + 2C_5 L_5 R_5 g_m + C_L L_5 R_5 g_m + 2C\right.}$$

9.242 X-INVALID-ORDER-242 $Z(s) = \left(\frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{L_5 R_5 s}{C_5 L_5 R_5 s^2+L_5 s+R_5},\ \frac{L_L R_L s}{C_L L_L R_L s^2+L_L s+R_L}\right)$

$$H(s) = \frac{-C_5 L_5 L_L R_5 R_L s^3 - L_L R_5 R_L s + s^2\left(L_5 L_L R_5 R_L g_m - L_5 L_L R_L\right)}{R_5 R_L + s^4\left(C_1 C_5 L_5 L_L R_5 R_L + C_1 C_L L_5 L_L R_5 R_L + C_5 C_L L_5 L_L R_5 R_L\right) + s^3\left(C_1 L_5 L_L R_5 + C_1 L_5 L_L R_L + 2C_5 L_5 L_L R_5 R_L g_m + C_5 L_5 L_L R_5 + C_L L_5 L_L R_5 R_L g_m + C_L L_5 L_L R_L\right) + s^2\left(C_1 L_5 R_5 R_L + C_1 L_L R_5 R_L + C_5 L_5 R_5 R_L + C_L L_L R_5 R_L + L_5 L_L R_5 g_m + 2L_5 L_L R_L\right.}$$

9.243 X-INVALID-ORDER-243 $Z(s) = \left(\frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{L_5 R_5 s}{C_5 L_5 R_5 s^2+L_5 s+R_5},\ \frac{C_L L_L R_L s^2+L_L s+R_L}{C_L L_L s^2+1}\right)$

$$H(s) = \frac{-C_5 C_L L_5 L_L R_5 R_L s^4 - R_5 R_L + s^3\left(-C_5 L_5 L_L R_5 + C_L L_5 L_L R_5 R_L g_m - C_L L_5 L_L R_L\right) + s^2\left(-C_5 L_5 R_5 R_L - C_L L_L R_5 R_L + L_5 L_L R_5 g_m - L_5 L\right.}{C_1 C_5 C_L L_5 L_L R_5 R_L s^5 + 2R_5 R_L g_m + R_5 + s^4\left(C_1 C_5 L_5 L_L R_5 + C_1 C_L L_5 L_L R_5 + C_1 C_L L_5 L_L R_L + 2C_5 C_L L_5 L_L R_5 R_L g_m + C_5 C_L L_5 L_L R_5\right) + s^3\left(C_1 C_5 L_5 R_5 R_L + C_1 C_L L_L R_5 R_L + C_1 L_5 L_L + 2C_5 L_5 L_L R_5 g_m + C_L L_5 L_L R_5 g_m + 2C_L L_5 L_L R_L g_m + C_L L_5 L_L\right) + s^2\left(C_1\right.}$$

9.244 X-INVALID-ORDER-244 $Z(s) = \left(\frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{L_5 R_5 s}{C_5 L_5 R_5 s^2+L_5 s+R_5},\ \frac{R_L\left(C_L L_L s^2+1\right)}{C_L L_L s^2+C_L R_L s+1}\right)$

$$H(s) = \frac{-C_5 C_L L_5 L_L R_5 R_L s^4 - R_5 R_L + s^3 \left(C_L L_5 L_L R_5 R_L g_m - C_L L_5 L_L R_L\right) + s^2 \left(-C_5 L_5 R_5 R_L - C_L L_L R_5 R_L\right) + s \left(L_5 R_5 R_L g_m \right.}{C_1 C_5 C_L L_5 L_L R_5 R_L s^5 + 2R_5 R_L g_m + R_5 + s^4 \left(C_1 C_L L_5 L_L R_5 + C_1 C_L L_5 L_L R_L + 2C_5 C_L L_5 L_L R_5 R_L g_m + C_5 C_L L_5 L_L R_5\right) + s^3 \left(C_1 C_5 L_5 R_5 R_L + C_1 C_L L_5 R_5 R_L + C_1 C_L L_L R_5 R_L + C_5 C_L L_5 R_5 R_L + C_L L_5 L_L R_5 g_m + 2C_L L_5 L_L R_L g_m + C_L L_5 L_L\right) + s^2 \left(C_1 L_5 R_5 + C_1 \right.}$$

9.245 X-INVALID-ORDER-245 $Z(s) = \left(\frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{C_5 L_5 R_5 s^2+L_5 s+R_5}{C_5 L_5 s^2+1},\ R_L\right)$

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

9.246 X-INVALID-ORDER-246 $Z(s) = \left(\frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{C_5 L_5 R_5 s^2+L_5 s+R_5}{C_5 L_5 s^2+1},\ \frac{1}{C_L s}\right)$

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

9.247 X-INVALID-ORDER-247 $Z(s) = \left(\frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{C_5 L_5 R_5 s^2+L_5 s+R_5}{C_5 L_5 s^2+1},\ \frac{R_L}{C_L R_L s+1}\right)$

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

9.248 X-INVALID-ORDER-248 $Z(s) = \left(\frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{C_5 L_5 R_5 s^2+L_5 s+R_5}{C_5 L_5 s^2+1},\ R_L + \frac{1}{C_L s}\right)$

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

9.249 X-INVALID-ORDER-249 $Z(s) = \left(\frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{C_5 L_5 R_5 s^2+L_5 s+R_5}{C_5 L_5 s^2+1},\ L_L s + \frac{1}{C_L s}\right)$

$$H(s) = \frac{C_L L_5 L_L g_m s^3 + L_5 g_m s + R_5 g_m + s^4 \left(C_5 C_L L_5 L_L R_5 g_m - C_5 C_L L_5 L_L\right) + s^2 \left(C_5 L_5 R_5 g_m - C_5 L_5 + C_L L_L R_5 g_m - C_L L_L\right) - 1}{C_1 C_5 C_L L_5 L_L s^5 + 2g_m + s^4 \left(C_1 C_5 C_L L_5 R_5 + 2C_5 C_L L_5 L_L g_m\right) + s^3 \left(C_1 C_5 L_5 + C_1 C_L L_5 + C_1 C_L L_L + C_5 C_L L_5 R_5 g_m + C_5 C_L L_5\right) + s^2 \left(C_1 C_L R_5 + 2C_5 L_5 g_m + C_L L_5 g_m + 2C_L L_L g_m\right) + s \left(C_1 + C_L R_5 g_m + C_L\right)}$$

9.250 X-INVALID-ORDER-250 $Z(s) = \left(\frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{C_5 L_5 R_5 s^2+L_5 s+R_5}{C_5 L_5 s^2+1},\ \frac{L_L s}{C_L L_L s^2+1}\right)$

$$H(s) = \frac{L_5 L_L g_m s^2 + s^3 \left(C_5 L_5 L_L R_5 g_m - C_5 L_5 L_L\right) + s \left(L_L R_5 g_m - L_L\right)}{C_1 C_5 C_L L_5 L_L R_5 s^5 + R_5 g_m + s^4 \left(C_1 C_5 L_5 L_L + C_1 C_L L_5 L_L + C_5 C_L L_5 L_L R_5 g_m + C_5 C_L L_5 L_L\right) + s^3 \left(C_1 C_5 L_5 R_5 + C_1 C_L L_L R_5 + 2C_5 L_5 L_L g_m + C_L L_5 L_L g_m\right) + s^2 \left(C_1 L_5 + C_1 L_L + C_5 L_5 R_5 g_m + C_5 L_5 + C_L L_L R_5 g_m + C_L L_L\right) + s \left(C_1 R_5 + L_5 g_m + 2L_L g_m\right) + 1}$$

9.251 X-INVALID-ORDER-251 $Z(s) = \left(\frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{C_5 L_5 R_5 s^2+L_5 s+R_5}{C_5 L_5 s^2+1},\ L_L s + R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{R_5 g_m + s^4 \left(C_5 C_L L_5 L_L R_5 g_m - C_5 C_L L_5 L_L\right) + s^3 \left(C_5 C_L L_5 R_5 R_L g_m - C_5 C_L L_5 R_L + C_L L_5 L_L g_m\right) + s^2 \left(C_5 L_5 R_5 g_m - C_5 L_5 + C_L L_5 R_L g_m + C_L L_L R_5 g_m - C_L L_L\right) + s \left(C_L R_5 R_L g_m - C_L R_L + L_5 g_m\right) - 1}{C_1 C_5 C_L L_5 L_L s^5 + 2g_m + s^4 \left(C_1 C_5 C_L L_5 R_5 + C_1 C_5 C_L L_5 R_L + 2C_5 C_L L_5 L_L g_m\right) + s^3 \left(C_1 C_5 L_5 + C_1 C_L L_5 + C_1 C_L L_L + C_5 C_L L_5 R_5 g_m + 2C_5 C_L L_5 R_L g_m + C_5 C_L L_5\right) + s^2 \left(C_1 C_L R_5 + C_1 C_L R_L + 2C_5 L_5 g_m + C_L L_5 g_m + 2C_L L_L g_m\right) + s \left(C_1 + C_L R_5 g_m + 2C_L R_L g_m \right.}$$

9.252 X-INVALID-ORDER-252 $Z(s) = \left(\frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{C_5 L_5 R_5 s^2+L_5 s+R_5}{C_5 L_5 s^2+1},\ \frac{L_L R_L s}{C_L L_L R_L s^2+L_L s+R_L}\right)$

$$H(s) = \frac{L_5 L_L R_L g_m s^2 + s^3 \left(C_5 L_5 L_L R_5 R_L g_m - C_5 L_5 L_L R_L\right) + s \left(L_L R_5 R_L g_m - L_L R_L\right)}{C_1 C_5 C_L L_5 L_L R_5 R_L s^5 + R_5 R_L g_m + R_L + s^4 \left(C_1 C_5 L_5 L_L R_5 + C_1 C_5 L_5 L_L R_L + C_1 C_L L_5 L_L R_L + C_5 C_L L_5 L_L R_5 R_L g_m + C_5 C_L L_5 L_L R_L\right) + s^3 \left(C_1 C_5 L_5 R_5 R_L + C_1 C_L L_L R_5 R_L + C_1 L_5 L_L + C_5 L_5 L_L R_5 g_m + 2C_5 L_5 L_L R_L g_m + C_5 L_5 L_L + C_L L_5 L_L R_L g_m\right) + s^2 \left(C_1 L_5 \right.}$$

9.253 X-INVALID-ORDER-253 $Z(s) = \left(\frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{C_5 L_5 R_5 s^2+L_5 s+R_5}{C_5 L_5 s^2+1},\ \frac{C_L L_L R_L s^2+L_L s+R_L}{C_L L_L s^2+1}\right)$

$$H(s) = \frac{R_5 R_L g_m - R_L + s^4 \left(C_5 C_L L_5 L_L R_5 R_L g_m - C_5 C_L L_5 L_L R_L\right) + s^3 \left(C_5 L_5 L_L R_5 g_m - C_5 L_5 L_L + C_L L_5 L_L R_L g_m\right) + s^2 \left(C_5 L_5 R_5 R_L g_m - C_5 L_5 R_L + C_L L_L R_5 R_L g_m - C_L L_L R_L + L_5 L_L \right.}{R_5 g_m + 2R_L g_m + s^5 \left(C_1 C_5 C_L L_5 L_L R_5 + C_1 C_5 C_L L_5 L_L R_L\right) + s^4 \left(C_1 C_5 L_5 L_L + C_1 C_L L_5 L_L + C_5 C_L L_5 L_L R_5 g_m + 2C_5 C_L L_5 L_L R_L g_m + C_5 C_L L_5 L_L\right) + s^3 \left(C_1 C_5 L_5 R_5 + C_1 C_5 L_5 R_L + C_1 C_L L_L R_5 + C_1 C_L L_L R_L + 2C_5 L_5 L_L g_m + C_L L_5 L_L g_m\right) + s^2 \left(C_1 L_5 + C_1 L_L + \right.}$$

9.254 X-INVALID-ORDER-254 $Z(s) = \left(\frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{C_5 L_5 R_5 s^2+L_5 s+R_5}{C_5 L_5 s^2+1},\ \frac{R_L\left(C_L L_L s^2+1\right)}{C_L L_L s^2+C_L R_L s+1}\right)$

$$H(s) = \frac{C_L L_5 L_L R_L g_m s^3 + L_5 R_L g_m s + R_5 R_L g_m - R_L + s^4 \left(C_5 C_L L_5 L_L R_5 R_L g_m - C_5 C_L L_5 L_L R_L\right) + s^2 \left(C_5 L_5 R_5 R_L g_m \right.}{R_5 g_m + 2R_L g_m + s^5 \left(C_1 C_5 C_L L_5 L_L R_5 + C_1 C_5 C_L L_5 L_L R_L\right) + s^4 \left(C_1 C_5 C_L L_5 R_5 R_L + C_1 C_L L_5 L_L + C_5 C_L L_5 L_L R_5 g_m + 2C_5 C_L L_5 L_L R_L g_m + C_5 C_L L_5 L_L\right) + s^3 \left(C_1 C_5 L_5 R_5 + C_1 C_5 L_5 R_L + C_1 C_L L_5 R_L + C_1 C_L L_L R_5 + C_1 C_L L_L R_L + C_5 C_L L_5 R_5 R_L g_m + C_5 C_L L_5 R \right.}$$

9.255 X-INVALID-ORDER-255 $Z(s) = \left(\frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{R_5\left(C_5 L_5 s^2+1\right)}{C_5 L_5 s^2+C_5 R_5 s+1},\ R_L\right)$

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

9.256 X-INVALID-ORDER-256 $Z(s) = \left(\frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{R_5\left(C_5 L_5 s^2+1\right)}{C_5 L_5 s^2+C_5 R_5 s+1},\ \frac{1}{C_L s}\right)$

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

9.257 X-INVALID-ORDER-257 $Z(s) = \left(\frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{R_5\left(C_5 L_5 s^2+1\right)}{C_5 L_5 s^2+C_5 R_5 s+1},\ \frac{R_L}{C_L R_L s+1}\right)$

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

9.258 X-INVALID-ORDER-258 $Z(s) = \left(\frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{R_5\left(C_5 L_5 s^2+1\right)}{C_5 L_5 s^2+C_5 R_5 s+1},\ R_L + \frac{1}{C_L s}\right)$

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

9.259 X-INVALID-ORDER-259 $Z(s) = \left(\frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{R_5\left(C_5 L_5 s^2+1\right)}{C_5 L_5 s^2+C_5 R_5 s+1},\ L_L s + \frac{1}{C_L s}\right)$

$$H(s) = \frac{-C_5 C_L L_L R_5 s^3 - C_5 R_5 s + R_5 g_m + s^4 \left(C_5 C_L L_5 L_L R_5 g_m - C_5 C_L L_5 L_L\right) + s^2 \left(C_5 L_5 R_5 g_m - C_5 L_5 + C_L L_L R_5 g_m - C_L L_L\right) - 1}{C_1 C_5 C_L L_5 L_L s^5 + 2g_m + s^4 \left(C_1 C_5 C_L L_5 R_5 + C_1 C_5 C_L L_L R_5 + 2C_5 C_L L_5 L_L g_m\right) + s^3 \left(C_1 C_5 L_5 + C_1 C_L L_L + C_5 C_L L_5 R_5 g_m + C_5 C_L L_5 + 2C_5 C_L L_L R_5 g_m\right) + s^2 \left(C_1 C_5 R_5 + C_1 C_L R_5 + C_5 C_L R_5 + 2C_5 L_5 g_m + 2C_L L_L g_m\right) + s \left(C_1 + 2C_5 R_5 g_m + C_L R_5 g_m + C_L\right)}$$

9.260 X-INVALID-ORDER-260 $Z(s) = \left(\frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{R_5\left(C_5 L_5 s^2+1\right)}{C_5 L_5 s^2+C_5 R_5 s+1},\ \frac{L_L s}{C_L L_L s^2+1}\right)$

$$H(s) = \frac{-C_5 L_L R_5 s^2 + s^3 \left(C_5 L_5 L_L R_5 g_m - C_5 L_5 L_L\right) + s \left(L_L R_5 g_m - L_L\right)}{C_1 C_5 C_L L_5 L_L R_5 s^5 + R_5 g_m + s^4 \left(C_1 C_5 L_5 L_L + C_5 C_L L_5 L_L R_5 g_m + C_5 C_L L_5 L_L\right) + s^3 \left(C_1 C_5 L_5 R_5 + C_1 C_5 L_L R_5 + C_1 C_L L_L R_5 + C_5 C_L L_L R_5 + 2C_5 L_5 L_L g_m\right) + s^2 \left(C_1 L_L + C_5 L_5 R_5 g_m + C_5 L_5 + 2C_5 L_L R_5 g_m + C_L L_L R_5 g_m + C_L L_L\right) + s \left(C_1 R_5 + C_5 R_5 + 2L_L g_m\right) +}$$

9.261 X-INVALID-ORDER-261 $Z(s) = \left(\frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{R_5\left(C_5 L_5 s^2+1\right)}{C_5 L_5 s^2+C_5 R_5 s+1},\ L_L s + R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{R_5 g_m + s^4 \left(C_5 C_L L_5 L_L R_5 g_m - C_5 C_L L_5 L_L\right) + s^3 \left(C_5 C_L L_5 R_5 R_L g_m - C_5 C_L L_5 R_L - C_5 C_L L_L R_5\right) + s^2 \left(-C_5 C_L R_5 R_L + C_5 L_5 R_5 g_m - C_5 L_5 + C_L L_L R_5 g_m - C_L L_L\right) + s \left(-C_5 R_5 + C_L R_5 R_L \right.}{C_1 C_5 C_L L_5 L_L s^5 + 2g_m + s^4 \left(C_1 C_5 C_L L_5 R_5 + C_1 C_5 C_L L_5 R_L + C_1 C_5 C_L L_L R_5 + 2C_5 C_L L_5 L_L g_m\right) + s^3 \left(C_1 C_5 C_L R_5 R_L + C_1 C_5 L_5 + C_1 C_L L_L + C_5 C_L L_5 R_5 g_m + 2C_5 C_L L_5 R_L g_m + C_5 C_L L_5 + 2C_5 C_L L_L R_5 g_m\right) + s^2 \left(C_1 C_5 R_5 + C_1 C_L R_5 + C_1 C_L R_L + 2C_5 C_L R_5 R_L g_m \right.}$$

9.262 X-INVALID-ORDER-262 $Z(s) = \left(\frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{R_5\left(C_5 L_5 s^2+1\right)}{C_5 L_5 s^2+C_5 R_5 s+1},\ \frac{L_L R_L s}{C_L L_L R_L s^2+L_L s+R_L}\right)$

$$H(s) = \frac{-C_5 L_L R_5 R_L s^2 + s^3 \left(C_5 L_5 L_L R_5 R_L g_m - C_5 L_5 L_L R_L\right) + s \left(L_L R_5 R_L g_m - L_L R_L\right)}{C_1 C_5 C_L L_5 L_L R_5 R_L s^5 + R_5 R_L g_m + R_L + s^4 \left(C_1 C_5 L_5 L_L R_5 + C_1 C_5 L_5 L_L R_L + C_5 C_L L_5 L_L R_5 R_L g_m + C_5 C_L L_5 L_L R_L\right) + s^3 \left(C_1 C_5 L_5 R_5 R_L + C_1 C_5 L_L R_5 R_L + C_1 C_L L_L R_5 R_L + C_5 C_L L_L R_5 R_L + C_5 L_5 L_L R_5 g_m + 2C_5 L_5 L_L R_L g_m + C_5 L_5 L_L\right) + s^2 \left(C_1 L_L R_5 + C_1 L_L \right.}$$

9.263 X-INVALID-ORDER-263 $Z(s) = \left(\frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{R_5\left(C_5 L_5 s^2+1\right)}{C_5 L_5 s^2+C_5 R_5 s+1},\ \frac{C_L L_L R_L s^2+L_L s+R_L}{C_L L_L s^2+1}\right)$

$$H(s) = \frac{R_5 R_L g_m - R_L + s^4 \left(C_5 C_L L_5 L_L R_5 R_L g_m - C_5 C_L L_5 L_L R_L\right) + s^3 \left(-C_5 C_L L_L R_5 R_L + C_5 L_5 L_L R_5 g_m - C_5 L_5 L_L\right) + s^2 \left(C_5 L_5 R_5 R_L g_m - C_5 L_5 R \cdots\right.}{R_5 g_m + 2R_L g_m + s^5 \left(C_1 C_5 C_L L_5 L_L R_5 + C_1 C_5 C_L L_5 L_L R_L\right) + s^4 \left(C_1 C_5 C_L L_L R_5 R_L + C_1 C_5 L_5 L_L + C_5 C_L L_5 L_L R_5 g_m + 2C_5 C_L L_5 L_L R_L g_m + C_5 C_L L_5 L_L\right) + s^3 \left(C_1 C_5 L_5 R_5 + C_1 C_5 L_5 R_L + C_1 C_5 L_L R_5 + C_1 C_L L_L R_5 + C_1 C_L L_L R_L + 2C_5 C_L L_L R_5 R_L g_m + C_5 C_L L_{\cdots}\right.}$$

9.264 X-INVALID-ORDER-264 $Z(s) = \left(\frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{R_5\left(C_5 L_5 s^2+1\right)}{C_5 L_5 s^2+C_5 R_5 s+1},\ \frac{R_L\left(C_L L_L s^2+1\right)}{C_L L_L s^2+C_L R_L s+1}\right)$

$$H(s) = \frac{-C_5 C_L L_L R_5 R_L s^3 - C_5 R_5 R_L s + R_5 R_L g_m - R_L + s^4 \left(C_5 C_L L_5 L_L R_5 R_L g_m - C_5 C_L L_5 L_L R_L\right) + \cdots}{R_5 g_m + 2R_L g_m + s^5 \left(C_1 C_5 C_L L_5 L_L R_5 + C_1 C_5 C_L L_5 L_L R_L\right) + s^4 \left(C_1 C_5 C_L L_5 R_5 R_L + C_1 C_5 C_L L_L R_5 R_L + C_5 C_L L_5 L_L R_5 g_m + 2C_5 C_L L_5 L_L R_L g_m + C_5 C_L L_5 L_L\right) + s^3 \left(C_1 C_5 L_5 R_5 + C_1 C_5 L_5 R_L + C_1 C_L L_L R_5 + C_1 C_L L_L R_L + C_5 C_L L_5 R_5 R_L g_m + C_5 C_L L_5 R_L + 2C_{5\cdots}\right.}$$

9.265 X-INVALID-ORDER-265 $Z(s) = \left(\frac{R_1}{C_1 R_1 s+1},\ \infty,\ \infty,\ \infty,\ R_5,\ R_L\right)$

$$H(s) = \frac{R_1 R_5 R_L g_m - R_1 R_L}{R_1 R_5 g_m + 2R_1 R_L g_m + R_1 + R_5 + R_L + s\left(C_1 R_1 R_5 + C_1 R_1 R_L\right)}$$

9.266 X-INVALID-ORDER-266 $Z(s) = \left(\frac{R_1}{C_1 R_1 s+1},\ \infty,\ \infty,\ \infty,\ R_5,\ L_L s + \frac{1}{C_L s}\right)$

$$H(s) = \frac{R_1 R_5 g_m - R_1 + s^2 \left(C_L L_L R_1 R_5 g_m - C_L L_L R_1\right)}{C_1 C_L L_L R_1 s^3 + 2R_1 g_m + s^2 \left(C_1 C_L R_1 R_5 + 2C_L L_L R_1 g_m + C_L L_L\right) + s\left(C_1 R_1 + C_L R_1 R_5 g_m + C_L R_1 + C_L R_5\right) + 1}$$

9.267 X-INVALID-ORDER-267 $Z(s) = \left(\frac{R_1}{C_1 R_1 s+1},\ \infty,\ \infty,\ \infty,\ R_5,\ \frac{L_L s}{C_L L_L s^2+1}\right)$

$$H(s) = \frac{s\left(L_L R_1 R_5 g_m - L_L R_1\right)}{C_1 C_L L_L R_1 R_5 s^3 + R_1 R_5 g_m + R_1 + R_5 + s^2 \left(C_1 L_L R_1 + C_L L_L R_1 R_5 g_m + C_L L_L R_1 + C_L L_L R_5\right) + s\left(C_1 R_1 R_5 + 2L_L R_1 g_m + L_L\right)}$$

9.268 X-INVALID-ORDER-268 $Z(s) = \left(\frac{R_1}{C_1 R_1 s+1},\ \infty,\ \infty,\ \infty,\ R_5,\ L_L s + R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{R_1 R_5 g_m - R_1 + s^2 \left(C_L L_L R_1 R_5 g_m - C_L L_L R_1\right) + s\left(C_L R_1 R_5 R_L g_m - C_L R_1 R_L\right)}{C_1 C_L L_L R_1 s^3 + 2R_1 g_m + s^2 \left(C_1 C_L R_1 R_5 + C_1 C_L R_1 R_L + 2C_L L_L R_1 g_m + C_L L_L\right) + s\left(C_1 R_1 + C_L R_1 R_5 g_m + 2C_L R_1 R_L g_m + C_L R_1 + C_L R_5 + C_L R_L\right) + 1}$$

9.269 X-INVALID-ORDER-269 $Z(s) = \left(\frac{R_1}{C_1 R_1 s+1},\ \infty,\ \infty,\ \infty,\ R_5,\ \frac{L_L R_L s}{C_L L_L R_L s^2+L_L s+R_L}\right)$

$$H(s) = \frac{s\left(L_L R_1 R_5 R_L g_m - L_L R_1 R_L\right)}{C_1 C_L L_L R_1 R_5 R_L s^3 + R_1 R_5 R_L g_m + R_1 R_L + R_5 R_L + s^2 \left(C_1 L_L R_1 R_5 + C_1 L_L R_1 R_L + C_L L_L R_1 R_5 R_L g_m + C_L L_L R_1 R_L + C_L L_L R_5 R_L\right) + s\left(C_1 R_1 R_5 R_L + L_L R_1 R_5 g_m + 2L_L R_1 R_L g_m + L_L R_1 + L_L R_5 + L_L R_L\right)}$$

9.270 X-INVALID-ORDER-270 $Z(s) = \left(\frac{R_1}{C_1 R_1 s+1},\ \infty,\ \infty,\ \infty,\ R_5,\ \frac{C_L L_L R_L s^2+L_L s+R_L}{C_L L_L s^2+1}\right)$

$$H(s) = \frac{R_1 R_5 R_L g_m - R_1 R_L + s^2 \left(C_L L_L R_1 R_5 R_L g_m - C_L L_L R_1 R_L\right) + s\left(L_L R_1 R_5 g_m - L_L R_1\right)}{R_1 R_5 g_m + 2R_1 R_L g_m + R_1 + R_5 + R_L + s^3 \left(C_1 C_L L_L R_1 R_5 + C_1 C_L L_L R_1 R_L\right) + s^2 \left(C_1 L_L R_1 + C_L L_L R_1 R_5 g_m + 2C_L L_L R_1 R_L g_m + C_L L_L R_1 + C_L L_L R_5 + C_L L_L R_L\right) + s\left(C_1 R_1 R_5 + C_1 R_1 R_L + 2L_L R_1 g_m + L_L\right)}$$

9.271 X-INVALID-ORDER-271 $Z(s) = \left(\frac{R_1}{C_1 R_1 s+1},\ \infty,\ \infty,\ \infty,\ R_5,\ \frac{R_L\left(C_L L_L s^2+1\right)}{C_L L_L s^2+C_L R_L s+1}\right)$

$$H(s) = \frac{R_1 R_5 R_L g_m - R_1 R_L + s^2 \left(C_L L_L R_1 R_5 R_L g_m - C_L L_L R_1 R_L\right)}{R_1 R_5 g_m + 2R_1 R_L g_m + R_1 + R_5 + R_L + s^3 \left(C_1 C_L L_L R_1 R_5 + C_1 C_L L_L R_1 R_L\right) + s^2 \left(C_1 C_L R_1 R_5 R_L + C_L L_L R_1 R_5 g_m + 2C_L L_L R_1 R_L g_m + C_L L_L R_1 + C_L L_L R_5 + C_L L_L R_L\right) + s\left(C_1 R_1 R_5 + C_1 R_1 R_L + C_L R_1 R_5 R_L g_m + C_L R_1 R_L + C_L R_5 R_L\right)}$$

9.272 X-INVALID-ORDER-272 $Z(s) = \left(\frac{R_1}{C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_5s},\ \frac{1}{C_Ls}\right)$

$$H(s) = \frac{-C_5R_1s + R_1g_m}{s^2\left(C_1C_5R_1 + C_1C_LR_1 + C_5C_LR_1\right) + s\left(2C_5R_1g_m + C_5 + C_LR_1g_m + C_L\right)}$$

9.273 X-INVALID-ORDER-273 $Z(s) = \left(\frac{R_1}{C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_5s},\ R_L + \frac{1}{C_Ls}\right)$

$$H(s) = \frac{-C_5C_LR_1R_Ls^2 + R_1g_m + s\left(-C_5R_1 + C_LR_1R_Lg_m\right)}{C_1C_5C_LR_1R_Ls^3 + s^2\left(C_1C_5R_1 + C_1C_LR_1 + 2C_5C_LR_1R_Lg_m + C_5C_LR_1 + C_5C_LR_L\right) + s\left(2C_5R_1g_m + C_5 + C_LR_1g_m + C_L\right)}$$

9.274 X-INVALID-ORDER-274 $Z(s) = \left(\frac{R_1}{C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_5s},\ L_Ls + \frac{1}{C_Ls}\right)$

$$H(s) = \frac{-C_5C_LL_LR_1s^3 - C_5R_1s + C_LL_LR_1g_ms^2 + R_1g_m}{C_1C_5C_LL_LR_1s^4 + s^3\left(2C_5C_LL_LR_1g_m + C_5C_LL_L\right) + s^2\left(C_1C_5R_1 + C_1C_LR_1 + C_5C_LR_1\right) + s\left(2C_5R_1g_m + C_5 + C_LR_1g_m + C_L\right)}$$

9.275 X-INVALID-ORDER-275 $Z(s) = \left(\frac{R_1}{C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_5s},\ \frac{L_Ls}{C_LL_Ls^2+1}\right)$

$$H(s) = \frac{-C_5L_LR_1s^2 + L_LR_1g_ms}{R_1g_m + s^3\left(C_1C_5L_LR_1 + C_1C_LL_LR_1 + C_5C_LL_LR_1\right) + s^2\left(2C_5L_LR_1g_m + C_5L_L + C_LL_LR_1g_m + C_LL_L\right) + s\left(C_1R_1 + C_5R_1\right) + 1}$$

9.276 X-INVALID-ORDER-276 $Z(s) = \left(\frac{R_1}{C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_5s},\ L_Ls + R_L + \frac{1}{C_Ls}\right)$

$$H(s) = \frac{-C_5C_LL_LR_1s^3 + R_1g_m + s^2\left(-C_5C_LR_1R_L + C_LL_LR_1g_m\right) + s\left(-C_5R_1 + C_LR_1R_Lg_m\right)}{C_1C_5C_LL_LR_1s^4 + s^3\left(C_1C_5C_LR_1R_L + 2C_5C_LL_LR_1g_m + C_5C_LL_L\right) + s^2\left(C_1C_5R_1 + C_1C_LR_1 + 2C_5C_LR_1R_Lg_m + C_5C_LR_1 + C_5C_LR_L\right) + s\left(2C_5R_1g_m + C_5 + C_LR_1g_m + C_L\right)}$$

9.277 X-INVALID-ORDER-277 $Z(s) = \left(\frac{R_1}{C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_5s},\ \frac{L_LR_Ls}{C_LL_LR_Ls^2+L_Ls+R_L}\right)$

$$H(s) = \frac{-C_5L_LR_1R_Ls^2 + L_LR_1R_Lg_ms}{R_1R_Lg_m + R_L + s^3\left(C_1C_5L_LR_1R_L + C_1C_LL_LR_1R_L + C_5C_LL_LR_1R_L\right) + s^2\left(C_1L_LR_1 + 2C_5L_LR_1R_Lg_m + C_5L_LR_1 + C_5L_LR_L + C_LL_LR_1R_Lg_m + C_LL_LR_L\right) + s\left(C_1R_1R_L + C_5R_1R_L + L_LR_1g_m + L_L\right)}$$

9.278 X-INVALID-ORDER-278 $Z(s) = \left(\frac{R_1}{C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_5s},\ \frac{C_LL_LR_Ls^2+L_Ls+R_L}{C_LL_Ls^2+1}\right)$

$$H(s) = \frac{-C_5C_LL_LR_1R_Ls^3 + R_1R_Lg_m + s^2\left(-C_5L_LR_1 + C_LL_LR_1R_Lg_m\right) + s\left(-C_5R_1R_L + L_LR_1g_m\right)}{C_1C_5C_LL_LR_1R_Ls^4 + R_1g_m + s^3\left(C_1C_5L_LR_1 + C_1C_LL_LR_1 + 2C_5C_LL_LR_1R_Lg_m + C_5C_LL_LR_1 + C_5C_LL_LR_L\right) + s^2\left(C_1C_5R_1R_L + 2C_5L_LR_1g_m + C_5L_L + C_LL_LR_1g_m + C_LL_L\right) + s\left(C_1R_1 + 2C_5R_1R_Lg_m + C_5R_1 + C_5R_L\right) + 1}$$

9.279 X-INVALID-ORDER-279 $Z(s) = \left(\frac{R_1}{C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_5s},\ \frac{R_L\left(C_LL_Ls^2+1\right)}{C_LL_Ls^2+C_LR_Ls+1}\right)$

$$H(s) = \frac{-C_5C_LL_LR_1R_Ls^3 - C_5R_1R_Ls + C_LL_LR_1R_Lg_ms^2 + R_1R_Lg_m}{C_1C_5C_LL_LR_1R_Ls^4 + R_1g_m + s^3\left(C_1C_LL_LR_1 + 2C_5C_LL_LR_1R_Lg_m + C_5C_LL_LR_1 + C_5C_LL_LR_L\right) + s^2\left(C_1C_5R_1R_L + C_1C_LR_1R_L + C_5C_LR_1R_L + C_LL_LR_1g_m + C_LL_L\right) + s\left(C_1R_1 + 2C_5R_1R_Lg_m + C_5R_1 + C_5R_L + C_LR_1R_Lg_m + C_LR_L\right) + 1}$$

9.280 X-INVALID-ORDER-280 $Z(s) = \left(\frac{R_1}{C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ \frac{R_5}{C_5R_5s+1},\ R_L + \frac{1}{C_Ls}\right)$

$$H(s) = \frac{-C_5C_LR_1R_5R_Ls^2 + R_1R_5g_m - R_1 + s\left(-C_5R_1R_5 + C_LR_1R_5R_Lg_m - C_LR_1R_L\right)}{C_1C_5C_LR_1R_5R_Ls^3 + 2R_1g_m + s^2\left(C_1C_5R_1R_5 + C_1C_LR_1R_5 + C_1C_LR_1R_L + 2C_5C_LR_1R_5R_Lg_m + C_5C_LR_1R_5 + C_5C_LR_5R_L\right) + s\left(C_1R_1 + 2C_5R_1R_5g_m + C_5R_5 + C_LR_1R_5g_m + 2C_LR_1R_Lg_m + C_LR_1 + C_LR_5 + C_LR_L\right) + 1}$$

9.281 X-INVALID-ORDER-281 $Z(s) = \left(\frac{R_1}{C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ \frac{R_5}{C_5R_5s+1},\ L_Ls + \frac{1}{C_Ls}\right)$

$$H(s) = \frac{-C_5C_LL_LR_1R_5s^3 - C_5R_1R_5s + R_1R_5g_m - R_1 + s^2\left(C_LL_LR_1R_5g_m - C_LL_LR_1\right)}{C_1C_5C_LL_LR_1R_5s^4 + 2R_1g_m + s^3\left(C_1C_LL_LR_1 + 2C_5C_LL_LR_1R_5g_m + C_5C_LL_LR_5\right) + s^2\left(C_1C_5R_1R_5 + C_1C_LR_1R_5 + C_5C_LR_1R_5 + 2C_LL_LR_1g_m + C_LL_L\right) + s\left(C_1R_1 + 2C_5R_1R_5g_m + C_5R_5 + C_LR_1R_5g_m + C_LR_1 + C_LR_5\right) + 1}$$

9.282 X-INVALID-ORDER-282 $Z(s) = \left(\frac{R_1}{C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ \frac{R_5}{C_5R_5s+1},\ \frac{L_Ls}{C_LL_Ls^2+1}\right)$

$$H(s) = \frac{-C_5L_LR_1R_5s^2 + s\left(L_LR_1R_5g_m - L_LR_1\right)}{R_1R_5g_m + R_1 + R_5 + s^3\left(C_1C_5L_LR_1R_5 + C_1C_LL_LR_1R_5 + C_5C_LL_LR_1R_5\right) + s^2\left(C_1L_LR_1 + 2C_5L_LR_1R_5g_m + C_5L_LR_5 + C_LL_LR_1R_5g_m + C_LL_LR_1 + C_LL_LR_5\right) + s\left(C_1R_1R_5 + C_5R_1R_5 + 2L_LR_1g_m + L_L\right)}$$

9.283 X-INVALID-ORDER-283 $Z(s) = \left(\frac{R_1}{C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ \frac{R_5}{C_5R_5s+1},\ L_Ls + R_L + \frac{1}{C_Ls}\right)$

$$H(s) = \frac{-C_5C_LL_LR_1R_5s^3 + R_1R_5g_m - R_1 + s^2\left(-C_5C_LR_1R_5R_L + C_LL_LR_1R_5g_m - C_LL_LR_1\right) + s\left(-C_5R_1R_5 + C_LR_1R_5R_Lg_m - C_LR_1R_L\right)}{C_1C_5C_LL_LR_1R_5s^4 + 2R_1g_m + s^3\left(C_1C_5C_LR_1R_5R_L + C_1C_LL_LR_1 + 2C_5C_LL_LR_1R_5g_m + C_5C_LL_LR_5\right) + s^2\left(C_1C_5R_1R_5 + C_1C_LR_1R_5 + C_1C_LR_1R_L + 2C_5C_LR_1R_5R_Lg_m + C_5C_LR_1R_5 + C_5C_LR_5R_L + 2C_LL_LR_1g_m + C_LL_L\right) + s\left(C_1R_1 + 2C_5R_1R_5g_m + C_5R_5 +\right.}$$

9.284 X-INVALID-ORDER-284 $Z(s) = \left(\frac{R_1}{C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ \frac{R_5}{C_5R_5s+1},\ \frac{L_LR_Ls}{C_LL_LR_Ls^2+L_Ls+R_L}\right)$

$$H(s) = \frac{-C_5L_LR_1R_5R_Ls^2 + s\left(L_LR_1R_5R_Lg_m - L_LR_1R_L\right)}{R_1R_5R_Lg_m + R_1R_L + R_5R_L + s^3\left(C_1C_5L_LR_1R_5R_L + C_1C_LL_LR_1R_5R_L + C_5C_LL_LR_1R_5R_L\right) + s^2\left(C_1L_LR_1R_5 + C_1L_LR_1R_L + 2C_5L_LR_1R_5R_Lg_m + C_5L_LR_1R_5 + C_5L_LR_5R_L + C_LL_LR_1R_5R_Lg_m + C_LL_LR_1R_L + C_LL_LR_5R_L\right) + s\left(C_1R_1R_5R_L + C_5R_1R_5R_L +\right.}$$

9.285 X-INVALID-ORDER-285 $Z(s) = \left(\frac{R_1}{C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ \frac{R_5}{C_5R_5s+1},\ \frac{C_LL_LR_Ls^2+L_Ls+R_L}{C_LL_Ls^2+1}\right)$

$$H(s) = \frac{-C_5C_LL_LR_1R_5R_Ls^3 + R_1R_5R_Lg_m - R_1R_L + s^2\left(-C_5L_LR_1R_5 + C_LL_LR_1R_5R_Lg_m - C_LL_LR_1R_L\right) + s\left(-C_5R_1R_5R_L + L_LR_1R_5g_m\right.}{C_1C_5C_LL_LR_1R_5R_Ls^4 + R_1R_5g_m + 2R_1R_Lg_m + R_1 + R_5 + R_L + s^3\left(C_1C_5L_LR_1R_5 + C_1C_LL_LR_1R_5 + C_1C_LL_LR_1R_L + 2C_5C_LL_LR_1R_5R_Lg_m + C_5C_LL_LR_1R_5 + C_5C_LL_LR_5R_L\right) + s^2\left(C_1C_5R_1R_5R_L + C_1L_LR_1 + 2C_5L_LR_1R_5g_m + C_5L_LR_5 + C_LL_LR_1R_5g_m + 2\right.}$$

9.286 X-INVALID-ORDER-286 $Z(s) = \left(\frac{R_1}{C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ \frac{R_5}{C_5R_5s+1},\ \frac{R_L\left(C_LL_Ls^2+1\right)}{C_LL_Ls^2+C_LR_Ls+1}\right)$

$$H(s) = \frac{-C_5C_LL_LR_1R_5R_Ls^3 - C_5R_1R_5R_Ls + R_1R_5R_Lg_m - R_1R_L + s^2\left(C_LL_LR_1R_5R_Lg_m - C_LL_LR_1R_L\right)}{C_1C_5C_LL_LR_1R_5R_Ls^4 + R_1R_5g_m + 2R_1R_Lg_m + R_1 + R_5 + R_L + s^3\left(C_1C_LL_LR_1R_5 + C_1C_LL_LR_1R_L + 2C_5C_LL_LR_1R_5R_Lg_m + C_5C_LL_LR_1R_5 + C_5C_LL_LR_5R_L\right) + s^2\left(C_1C_5R_1R_5R_L + C_1C_LR_1R_5R_L + C_5C_LR_1R_5R_L + C_LL_LR_1R_5g_m + 2C_LL_LR_1R_Lg_m + C_LL\right.}$$

9.287 X-INVALID-ORDER-287 $Z(s) = \left(\frac{R_1}{C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ R_5 + \frac{1}{C_5s},\ \frac{1}{C_Ls}\right)$

$$H(s) = \frac{R_1g_m + s\left(C_5R_1R_5g_m - C_5R_1\right)}{C_1C_5C_LR_1R_5s^3 + s^2\left(C_1C_5R_1 + C_1C_LR_1 + C_5C_LR_1R_5g_m + C_5C_LR_1 + C_5C_LR_5\right) + s\left(2C_5R_1g_m + C_5 + C_LR_1g_m + C_L\right)}$$

9.288 X-INVALID-ORDER-288 $Z(s) = \left(\frac{R_1}{C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ R_5 + \frac{1}{C_5s},\ \frac{R_L}{C_LR_Ls+1}\right)$

$$H(s) = \frac{R_1R_Lg_m + s\left(C_5R_1R_5R_Lg_m - C_5R_1R_L\right)}{C_1C_5C_LR_1R_5R_Ls^3 + R_1g_m + s^2\left(C_1C_5R_1R_5 + C_1C_5R_1R_L + C_1C_LR_1R_L + C_5C_LR_1R_5R_Lg_m + C_5C_LR_1R_L + C_5C_LR_5R_L\right) + s\left(C_1R_1 + C_5R_1R_5g_m + 2C_5R_1R_Lg_m + C_5R_1 + C_5R_5 + C_5R_L + C_LR_1R_Lg_m + C_LR_L\right) + 1}$$

9.289 X-INVALID-ORDER-289 $Z(s) = \left(\frac{R_1}{C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ R_5 + \frac{1}{C_5s},\ R_L + \frac{1}{C_Ls}\right)$

$$H(s) = \frac{R_1g_m + s^2\left(C_5C_LR_1R_5R_Lg_m - C_5C_LR_1R_L\right) + s\left(C_5R_1R_5g_m - C_5R_1 + C_LR_1R_Lg_m\right)}{s^3\left(C_1C_5C_LR_1R_5 + C_1C_5C_LR_1R_L\right) + s^2\left(C_1C_5R_1 + C_1C_LR_1 + C_5C_LR_1R_5g_m + 2C_5C_LR_1R_Lg_m + C_5C_LR_1 + C_5C_LR_5 + C_5C_LR_L\right) + s\left(2C_5R_1g_m + C_5 + C_LR_1g_m + C_L\right)}$$

9.290 X-INVALID-ORDER-290 $Z(s) = \left(\frac{R_1}{C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ R_5 + \frac{1}{C_5s},\ L_Ls + \frac{1}{C_Ls}\right)$

$$H(s) = \frac{C_LL_LR_1g_ms^2 + R_1g_m + s^3\left(C_5C_LL_LR_1R_5g_m - C_5C_LL_LR_1\right) + s\left(C_5R_1R_5g_m - C_5R_1\right)}{C_1C_5C_LL_LR_1s^4 + s^3\left(C_1C_5C_LR_1R_5 + 2C_5C_LL_LR_1g_m + C_5C_LL_L\right) + s^2\left(C_1C_5R_1 + C_1C_LR_1 + C_5C_LR_1R_5g_m + C_5C_LR_1 + C_5C_LR_5\right) + s\left(2C_5R_1g_m + C_5 + C_LR_1g_m + C_L\right)}$$

9.291 X-INVALID-ORDER-291 $Z(s) = \left(\frac{R_1}{C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ R_5 + \frac{1}{C_5s},\ \frac{L_Ls}{C_LL_Ls^2+1}\right)$

$$H(s) = \frac{L_LR_1g_ms + s^2\left(C_5L_LR_1R_5g_m - C_5L_LR_1\right)}{C_1C_5C_LL_LR_1R_5s^4 + R_1g_m + s^3\left(C_1C_5L_LR_1 + C_1C_LL_LR_1 + C_5C_LL_LR_1R_5g_m + C_5C_LL_LR_1 + C_5C_LL_LR_5\right) + s^2\left(C_1C_5R_1R_5 + 2C_5L_LR_1g_m + C_5L_L + C_LL_LR_1g_m + C_LL_L\right) + s\left(C_1R_1 + C_5R_1R_5g_m + C_5R_1 + C_5R_5\right) + 1}$$

9.292 X-INVALID-ORDER-292 $Z(s) = \left(\frac{R_1}{C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ R_5+\frac{1}{C_5s},\ L_Ls+R_L+\frac{1}{C_Ls}\right)$

$$H(s) = \frac{R_1g_m + s^3\left(C_5C_LL_LR_1R_5g_m - C_5C_LL_LR_1\right) + s^2\left(C_5C_LR_1R_5R_Lg_m - C_5C_LR_1R_L + C_LL_LR_1g_m\right) + s\left(C_5R_1R_5g_m - C_5R_1 + C_LR_1R_Lg_m\right)}{C_1C_5C_LL_LR_1s^4 + s^3\left(C_1C_5C_LR_1R_5 + C_1C_5C_LR_1R_L + 2C_5C_LL_LR_1g_m + C_5C_LL_L\right) + s^2\left(C_1C_5R_1 + C_1C_LR_1 + C_5C_LR_1R_5g_m + 2C_5C_LR_1R_Lg_m + C_5C_LR_1 + C_5C_LR_5 + C_5C_LR_L\right) + s\left(2C_5R_1g_m + C_5 + C_LR_1g_m + C_L\right)}$$

9.293 X-INVALID-ORDER-293 $Z(s) = \left(\frac{R_1}{C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ R_5+\frac{1}{C_5s},\ \frac{L_LR_Ls}{C_LL_LR_Ls^2+L_Ls+R_L}\right)$

$$H(s) = \frac{L_LR_1R_Lg_ms + s^2\left(C_5L_LR_1R_5R_Lg_m - C_5L_LR_1R_L\right)}{C_1C_5C_LL_LR_1R_5R_Ls^4 + R_1R_Lg_m + R_L + s^3\left(C_1C_5L_LR_1R_5 + C_1C_5L_LR_1R_L + C_1C_LL_LR_1R_L + C_5C_LL_LR_1R_5R_Lg_m + C_5C_LL_LR_1R_L + C_5C_LL_LR_5R_L\right) + s^2\left(C_1C_5R_1R_5R_L + C_1L_LR_1 + C_5L_LR_1R_5g_m + 2C_5L_LR_1R_Lg_m + C_5L_LR_1 + C_5L_LR_5 + C_5L_LR_L + C_1\right.}$$

9.294 X-INVALID-ORDER-294 $Z(s) = \left(\frac{R_1}{C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ R_5+\frac{1}{C_5s},\ \frac{C_LL_LR_Ls^2+L_Ls+R_L}{C_LL_Ls^2+1}\right)$

$$H(s) = \frac{R_1R_Lg_m + s^3\left(C_5C_LL_LR_1R_5R_Lg_m - C_5C_LL_LR_1R_L\right) + s^2\left(C_5L_LR_1R_5g_m - C_5L_LR_1 + C_LL_LR_1R_Lg_m\right) + s\left(C_5R_1R_5R_Lg_m - C_5R_1R_L + L_LR_1g_m\right)}{R_1g_m + s^4\left(C_1C_5C_LL_LR_1R_5 + C_1C_5C_LL_LR_1R_L\right) + s^3\left(C_1C_5L_LR_1 + C_1C_LL_LR_1 + C_5C_LL_LR_1R_5g_m + 2C_5C_LL_LR_1R_Lg_m + C_5C_LL_LR_1 + C_5C_LL_LR_5 + C_5C_LL_LR_L\right) + s^2\left(C_1C_5R_1R_5 + C_1C_5R_1R_L + 2C_5L_LR_1g_m + C_5L_L + C_LL_LR_1g_m + C_LL_L\right) + s\left(C_1R_1 + \right.}$$

9.295 X-INVALID-ORDER-295 $Z(s) = \left(\frac{R_1}{C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ R_5+\frac{1}{C_5s},\ \frac{R_L\left(C_LL_Ls^2+1\right)}{C_LL_Ls^2+C_LR_Ls+1}\right)$

$$H(s) = \frac{C_LL_LR_1R_Lg_ms^2 + R_1R_Lg_m + s^3\left(C_5C_LL_LR_1R_5R_Lg_m - C_5C_LL_LR_1R_L\right) + s\left(C_5R_1R_5R_Lg_m - C_5R_1R_L\right)}{R_1g_m + s^4\left(C_1C_5C_LL_LR_1R_5 + C_1C_5C_LL_LR_1R_L\right) + s^3\left(C_1C_5C_LR_1R_5R_L + C_1C_LL_LR_1 + C_5C_LL_LR_1R_5g_m + 2C_5C_LL_LR_1R_Lg_m + C_5C_LL_LR_1 + C_5C_LL_LR_5 + C_5C_LL_LR_L\right) + s^2\left(C_1C_5R_1R_5 + C_1C_5R_1R_L + C_1C_LR_1R_L + C_5C_LR_1R_5R_Lg_m + C_5C_LR_1R_L + C_5\right.}$$

9.296 X-INVALID-ORDER-296 $Z(s) = \left(\frac{R_1}{C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ L_5s+\frac{1}{C_5s},\ R_L\right)$

$$H(s) = \frac{C_5L_5R_1R_Lg_ms^2 - C_5R_1R_Ls + R_1R_Lg_m}{C_1C_5L_5R_1s^3 + R_1g_m + s^2\left(C_1C_5R_1R_L + C_5L_5R_1g_m + C_5L_5\right) + s\left(C_1R_1 + 2C_5R_1R_Lg_m + C_5R_1 + C_5R_L\right) + 1}$$

9.297 X-INVALID-ORDER-297 $Z(s) = \left(\frac{R_1}{C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ L_5s+\frac{1}{C_5s},\ \frac{1}{C_Ls}\right)$

$$H(s) = \frac{C_5L_5R_1g_ms^2 - C_5R_1s + R_1g_m}{C_1C_5C_LL_5R_1s^4 + s^3\left(C_5C_LL_5R_1g_m + C_5C_LL_5\right) + s^2\left(C_1C_5R_1 + C_1C_LR_1 + C_5C_LR_1\right) + s\left(2C_5R_1g_m + C_5 + C_LR_1g_m + C_L\right)}$$

9.298 X-INVALID-ORDER-298 $Z(s) = \left(\frac{R_1}{C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ L_5s+\frac{1}{C_5s},\ \frac{R_L}{C_LR_Ls+1}\right)$

$$H(s) = \frac{C_5L_5R_1R_Lg_ms^2 - C_5R_1R_Ls + R_1R_Lg_m}{C_1C_5C_LL_5R_1R_Ls^4 + R_1g_m + s^3\left(C_1C_5L_5R_1 + C_5C_LL_5R_1R_Lg_m + C_5C_LL_5R_L\right) + s^2\left(C_1C_5R_1R_L + C_1C_LR_1R_L + C_5C_LR_1R_L + C_5L_5R_1g_m + C_5L_5\right) + s\left(C_1R_1 + 2C_5R_1R_Lg_m + C_5R_1 + C_5R_L + C_LR_1R_Lg_m + C_LR_L\right) + 1}$$

9.299 X-INVALID-ORDER-299 $Z(s) = \left(\frac{R_1}{C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ L_5s+\frac{1}{C_5s},\ R_L+\frac{1}{C_Ls}\right)$

$$H(s) = \frac{C_5C_LL_5R_1R_Lg_ms^3 + R_1g_m + s^2\left(-C_5C_LR_1R_L + C_5L_5R_1g_m\right) + s\left(-C_5R_1 + C_LR_1R_Lg_m\right)}{C_1C_5C_LL_5R_1s^4 + s^3\left(C_1C_5C_LR_1R_L + C_5C_LL_5R_1g_m + C_5C_LL_5\right) + s^2\left(C_1C_5R_1 + C_1C_LR_1 + 2C_5C_LR_1R_Lg_m + C_5C_LR_1 + C_5C_LR_L\right) + s\left(2C_5R_1g_m + C_5 + C_LR_1g_m + C_L\right)}$$

9.300 X-INVALID-ORDER-300 $Z(s) = \left(\frac{R_1}{C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ L_5s+\frac{1}{C_5s},\ L_Ls+\frac{1}{C_Ls}\right)$

$$H(s) = \frac{C_5C_LL_5L_LR_1g_ms^4 - C_5C_LL_LR_1s^3 - C_5R_1s + R_1g_m + s^2\left(C_5L_5R_1g_m + C_LL_LR_1g_m\right)}{s^4\left(C_1C_5C_LL_5R_1 + C_1C_5C_LL_LR_1\right) + s^3\left(C_5C_LL_5R_1g_m + C_5C_LL_5 + 2C_5C_LL_LR_1g_m + C_5C_LL_L\right) + s^2\left(C_1C_5R_1 + C_1C_LR_1 + C_5C_LR_1\right) + s\left(2C_5R_1g_m + C_5 + C_LR_1g_m + C_L\right)}$$

9.301 X-INVALID-ORDER-301 $Z(s) = \left(\frac{R_1}{C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ L_5s+\frac{1}{C_5s},\ \frac{L_Ls}{C_LL_Ls^2+1}\right)$

$$H(s) = \frac{C_5L_5L_LR_1g_ms^3 - C_5L_LR_1s^2 + L_LR_1g_ms}{C_1C_5C_LL_5L_LR_1s^5 + R_1g_m + s^4\left(C_5C_LL_5L_LR_1g_m + C_5C_LL_5L_L\right) + s^3\left(C_1C_5L_5R_1 + C_1C_5L_LR_1 + C_1C_LL_LR_1 + C_5C_LL_LR_1\right) + s^2\left(C_5L_5R_1g_m + C_5L_5 + 2C_5L_LR_1g_m + C_5L_L + C_LL_LR_1g_m + C_LL_L\right) + s\left(C_1R_1 + C_5R_1\right) + 1}$$

9.302 X-INVALID-ORDER-302 $Z(s) = \left(\frac{R_1}{C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ L_5s+\frac{1}{C_5s},\ L_Ls+R_L+\frac{1}{C_Ls}\right)$

$$H(s) = \frac{C_5C_LL_5L_LR_1g_ms^4 + R_1g_m + s^3\left(C_5C_LL_5R_1R_Lg_m - C_5C_LL_LR_1\right) + s^2\left(-C_5C_LR_1R_L + C_5L_5R_1g_m + C_LL_LR_1g_m\right) + s\left(-C_5R_1 + C_LR_1R_Lg_m\right)}{s^4\left(C_1C_5C_LL_5R_1 + C_1C_5C_LL_LR_1\right) + s^3\left(C_1C_5C_LR_1R_L + C_5C_LL_5R_1g_m + C_5C_LL_5 + 2C_5C_LL_LR_1g_m + C_5C_LL_L\right) + s^2\left(C_1C_5R_1 + C_1C_LR_1 + 2C_5C_LR_1R_Lg_m + C_5C_LR_1 + C_5C_LR_L\right) + s\left(2C_5R_1g_m + C_5 + C_LR_1g_m + C_L\right)}$$

9.303 X-INVALID-ORDER-303 $Z(s) = \left(\frac{R_1}{C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ L_5s+\frac{1}{C_5s},\ \frac{L_LR_Ls}{C_LL_LR_Ls^2+L_Ls+R_L}\right)$

$$H(s) = \frac{C_5L_5L_LR_1R_Lg_ms^3 - C_5L_LR_1R_Ls^2 + L_LR_1R_Lg_ms}{C_1C_5C_LL_5L_LR_1R_Ls^5 + R_1R_Lg_m + R_L + s^4\left(C_1C_5L_5L_LR_1 + C_5C_LL_5L_LR_1R_Lg_m + C_5C_LL_5L_LR_L\right) + s^3\left(C_1C_5L_5R_1R_L + C_1C_5L_LR_1R_L + C_1C_LL_LR_1R_L + C_5C_LL_LR_1R_L + C_5L_5L_LR_1g_m + C_5L_5L_L\right) + s^2\left(C_1L_LR_1 + C_5L_5R_1R_Lg_m + C_5L_5R_L + 2C_5L_LR_1R_L\right.}$$

9.304 X-INVALID-ORDER-304 $Z(s) = \left(\frac{R_1}{C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ L_5s+\frac{1}{C_5s},\ \frac{C_LL_LR_Ls^2+L_Ls+R_L}{C_LL_Ls^2+1}\right)$

$$H(s) = \frac{C_5C_LL_5L_LR_1R_Lg_ms^4 + R_1R_Lg_m + s^3\left(-C_5C_LL_LR_1R_L + C_5L_5L_LR_1g_m\right) + s^2\left(C_5L_5R_1R_Lg_m - C_5L_LR_1 + C_LL_LR_1R_Lg_m\right) + s\left(-C_5R_1R_L + L_LR_1g_m\right)}{C_1C_5C_LL_5L_LR_1s^5 + R_1g_m + s^4\left(C_1C_5C_LL_LR_1R_L + C_5C_LL_5L_LR_1g_m + C_5C_LL_5L_L\right) + s^3\left(C_1C_5L_5R_1 + C_1C_5L_LR_1 + C_1C_LL_LR_1 + 2C_5C_LL_LR_1R_Lg_m + C_5C_LL_LR_1 + C_5C_LL_LR_L\right) + s^2\left(C_1C_5R_1R_L + C_5L_5R_1g_m + C_5L_5 + 2C_5L_LR_1g_m + C_5L_L + C_LL_LR_1g_m\right.}$$

9.305 X-INVALID-ORDER-305 $Z(s) = \left(\frac{R_1}{C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ L_5s+\frac{1}{C_5s},\ \frac{R_L\left(C_LL_Ls^2+1\right)}{C_LL_Ls^2+C_LR_Ls+1}\right)$

$$H(s) = \frac{C_5C_LL_5L_LR_1R_Lg_ms^4 - C_5C_LL_LR_1R_Ls^3 - C_5R_1R_Ls + R_1R_Lg_m + s^2\left(C_5L_5R_1R_Lg_m + C_LL_LR_1R_Lg_m\right)}{C_1C_5C_LL_5L_LR_1s^5 + R_1g_m + s^4\left(C_1C_5C_LL_5R_1R_L + C_1C_5C_LL_LR_1R_L + C_5C_LL_5L_LR_1g_m + C_5C_LL_5L_L\right) + s^3\left(C_1C_5L_5R_1 + C_1C_LL_LR_1 + C_5C_LL_5R_1R_Lg_m + C_5C_LL_5R_L + 2C_5C_LL_LR_1R_Lg_m + C_5C_LL_LR_1 + C_5C_LL_LR_L\right) + s^2\left(C_1C_5R_1R_L + C_1C_LR_1R_L + C_5\right.}$$

9.306 X-INVALID-ORDER-306 $Z(s) = \left(\frac{R_1}{C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ \frac{L_5s}{C_5L_5s^2+1},\ R_L\right)$

$$H(s) = \frac{-C_5L_5R_1R_Ls^2 + L_5R_1R_Lg_ms - R_1R_L}{C_1C_5L_5R_1R_Ls^3 + 2R_1R_Lg_m + R_1 + R_L + s^2\left(C_1L_5R_1 + 2C_5L_5R_1R_Lg_m + C_5L_5R_1 + C_5L_5R_L\right) + s\left(C_1R_1R_L + L_5R_1g_m + L_5\right)}$$

9.307 X-INVALID-ORDER-307 $Z(s) = \left(\frac{R_1}{C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ \frac{L_5s}{C_5L_5s^2+1},\ \frac{1}{C_Ls}\right)$

$$H(s) = \frac{-C_5L_5R_1s^2 + L_5R_1g_ms - R_1}{2R_1g_m + s^3\left(C_1C_5L_5R_1 + C_1C_LL_5R_1 + C_5C_LL_5R_1\right) + s^2\left(2C_5L_5R_1g_m + C_5L_5 + C_LL_5R_1g_m + C_LL_5\right) + s\left(C_1R_1 + C_LR_1\right) + 1}$$

9.308 X-INVALID-ORDER-308 $Z(s) = \left(\frac{R_1}{C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ \frac{L_5s}{C_5L_5s^2+1},\ \frac{R_L}{C_LR_Ls+1}\right)$

$$H(s) = \frac{-C_5L_5R_1R_Ls^2 + L_5R_1R_Lg_ms - R_1R_L}{2R_1R_Lg_m + R_1 + R_L + s^3\left(C_1C_5L_5R_1R_L + C_1C_LL_5R_1R_L + C_5C_LL_5R_1R_L\right) + s^2\left(C_1L_5R_1 + 2C_5L_5R_1R_Lg_m + C_5L_5R_1 + C_5L_5R_L + C_LL_5R_1R_Lg_m + C_LL_5R_L\right) + s\left(C_1R_1R_L + C_LR_1R_L + L_5R_1g_m + L_5\right)}$$

9.309 X-INVALID-ORDER-309 $Z(s) = \left(\frac{R_1}{C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ \frac{L_5s}{C_5L_5s^2+1},\ R_L+\frac{1}{C_Ls}\right)$

$$H(s) = \frac{-C_5C_LL_5R_1R_Ls^3 - R_1 + s^2\left(-C_5L_5R_1 + C_LL_5R_1R_Lg_m\right) + s\left(-C_LR_1R_L + L_5R_1g_m\right)}{C_1C_5C_LL_5R_1R_Ls^4 + 2R_1g_m + s^3\left(C_1C_5L_5R_1 + C_1C_LL_5R_1 + 2C_5C_LL_5R_1R_Lg_m + C_5C_LL_5R_1 + C_5C_LL_5R_L\right) + s^2\left(C_1C_LR_1R_L + 2C_5L_5R_1g_m + C_5L_5 + C_LL_5R_1g_m + C_LL_5\right) + s\left(C_1R_1 + 2C_LR_1R_Lg_m + C_LR_1 + C_LR_L\right) + 1}$$

9.310 X-INVALID-ORDER-310 $Z(s) = \left(\frac{R_1}{C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ \frac{L_5s}{C_5L_5s^2+1},\ L_Ls+\frac{1}{C_Ls}\right)$

$$H(s) = \frac{-C_5C_LL_5L_LR_1s^4 + C_LL_5L_LR_1g_ms^3 + L_5R_1g_ms - R_1 + s^2\left(-C_5L_5R_1 - C_LL_LR_1\right)}{C_1C_5C_LL_5L_LR_1s^5 + 2R_1g_m + s^4\left(2C_5C_LL_5L_LR_1g_m + C_5C_LL_5L_L\right) + s^3\left(C_1C_5L_5R_1 + C_1C_LL_5R_1 + C_1C_LL_LR_1 + C_5C_LL_5R_1\right) + s^2\left(2C_5L_5R_1g_m + C_5L_5 + C_LL_5R_1g_m + C_LL_5 + 2C_LL_LR_1g_m + C_LL_L\right) + s\left(C_1R_1 + C_LR_1\right) + 1}$$

9.311 X-INVALID-ORDER-311 $Z(s) = \left(\frac{R_1}{C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ \frac{L_5s}{C_5L_5s^2+1},\ \frac{L_Ls}{C_LL_Ls^2+1}\right)$

$$H(s) = \frac{-C_5L_5L_LR_1s^3 + L_5L_LR_1g_ms^2 - L_LR_1s}{R_1 + s^4\left(C_1C_5L_5L_LR_1 + C_1C_LL_5L_LR_1 + C_5C_LL_5L_LR_1\right) + s^3\left(2C_5L_5L_LR_1g_m + C_5L_5L_L + C_LL_5L_LR_1g_m + C_LL_5L_L\right) + s^2\left(C_1L_5R_1 + C_1L_LR_1 + C_5L_5R_1 + C_LL_LR_1\right) + s\left(L_5R_1g_m + L_5 + 2L_LR_1g_m + L_L\right)}$$

9.312 X-INVALID-ORDER-312 $Z(s) = \left(\frac{R_1}{C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ \frac{L_5s}{C_5L_5s^2+1},\ L_Ls+R_L+\frac{1}{C_Ls}\right)$

$$H(s) = \frac{-C_5C_LL_5L_LR_1s^4 - R_1 + s^3\left(-C_5C_LL_5R_1R_L + C_LL_5L_LR_1g_m\right) + s^2\left(-C_5L_5R_1 + C_LL_5R_1R_Lg_m - C_LL_LR_1\right) + s\left(-C_LR_1R_L + L_5R_1g_m\right)}{C_1C_5C_LL_5L_LR_1s^5 + 2R_1g_m + s^4\left(C_1C_5C_LL_5R_1R_L + 2C_5C_LL_5L_LR_1g_m + C_5C_LL_5L_L\right) + s^3\left(C_1C_5L_5R_1 + C_1C_LL_5R_1 + C_1C_LL_LR_1 + 2C_5C_LL_5R_1R_Lg_m + C_5C_LL_5R_1 + C_5C_LL_5R_L\right) + s^2\left(C_1C_LR_1R_L + 2C_5L_5R_1g_m + C_5L_5 + C_LL_5R_1g_m + C_LL_5 + 2C_LL_LR_1\right.}$$

9.313 X-INVALID-ORDER-313 $Z(s) = \left(\frac{R_1}{C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ \frac{L_5s}{C_5L_5s^2+1},\ \frac{L_LR_Ls}{C_LL_LR_Ls^2+L_Ls+R_L}\right)$

$$H(s) = \frac{-C_5L_5L_LR_1R_Ls^3 + L_5L_LR_1R_Lg_ms^2 - L_LR_1R_Ls}{R_1R_L + s^4\left(C_1C_5L_5L_LR_1R_L + C_1C_LL_5L_LR_1R_L + C_5C_LL_5L_LR_1R_L\right) + s^3\left(C_1L_5L_LR_1 + 2C_5L_5L_LR_1R_Lg_m + C_5L_5L_LR_1 + C_5L_5L_LR_L + C_LL_5L_LR_1R_Lg_m + C_LL_5L_LR_L\right) + s^2\left(C_1L_5R_1R_L + C_1L_LR_1R_L + C_5L_5R_1R_L + C_LL_LR_1R_L + L_5L_LR_1g_m + L_5L_L\right) + s}$$

9.314 X-INVALID-ORDER-314 $Z(s) = \left(\frac{R_1}{C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ \frac{L_5s}{C_5L_5s^2+1},\ \frac{C_LL_LR_Ls^2+L_Ls+R_L}{C_LL_Ls^2+1}\right)$

$$H(s) = \frac{-C_5C_LL_5L_LR_1R_Ls^4 - R_1R_L + s^3\left(-C_5L_5L_LR_1 + C_LL_5L_LR_1R_Lg_m\right) + s^2\left(-C_5L_5R_1R_L - C_LL_LR_1R_L + L_5L_LR_1g_m\right) + s\left(L_5R_1R_Lg\right.}{C_1C_5C_LL_5L_LR_1R_Ls^5 + 2R_1R_Lg_m + R_1 + R_L + s^4\left(C_1C_5L_5L_LR_1 + C_1C_LL_5L_LR_1 + 2C_5C_LL_5L_LR_1R_Lg_m + C_5C_LL_5L_LR_1 + C_5C_LL_5L_LR_L\right) + s^3\left(C_1C_5L_5R_1R_L + C_1C_LL_LR_1R_L + 2C_5L_5L_LR_1g_m + C_5L_5L_L + C_LL_5L_LR_1g_m + C_LL_5L_L\right) + s^2\left(C_1L_5R_1 + C_1L\right.}$$

9.315 X-INVALID-ORDER-315 $Z(s) = \left(\frac{R_1}{C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ \frac{L_5s}{C_5L_5s^2+1},\ \frac{R_L\left(C_LL_Ls^2+1\right)}{C_LL_Ls^2+C_LR_Ls+1}\right)$

$$H(s) = \frac{-C_5C_LL_5L_LR_1R_Ls^4 + C_LL_5L_LR_1R_Lg_ms^3 + L_5R_1R_Lg_ms - R_1R_L + s^2\left(-C_5L_5R_1R_L - C_LL_LR_1R_L\right)}{C_1C_5C_LL_5L_LR_1R_Ls^5 + 2R_1R_Lg_m + R_1 + R_L + s^4\left(C_1C_LL_5L_LR_1 + 2C_5C_LL_5L_LR_1R_Lg_m + C_5C_LL_5L_LR_1 + C_5C_LL_5L_LR_L\right) + s^3\left(C_1C_5L_5R_1R_L + C_1C_LL_5R_1R_L + C_1C_LL_LR_1R_L + C_5C_LL_5R_1R_L + C_LL_5L_LR_1g_m + C_LL_5L_L\right) + s^2\left(C_1L_5R_1 + 2C_5L_5R_1R_Lg_m\right.}$$

9.316 X-INVALID-ORDER-316 $Z(s) = \left(\frac{R_1}{C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ L_5s+R_5+\frac{1}{C_5s},\ R_L\right)$

$$H(s) = \frac{C_5L_5R_1R_Lg_ms^2 + R_1R_Lg_m + s\left(C_5R_1R_5R_Lg_m - C_5R_1R_L\right)}{C_1C_5L_5R_1s^3 + R_1g_m + s^2\left(C_1C_5R_1R_5 + C_1C_5R_1R_L + C_5L_5R_1g_m + C_5L_5\right) + s\left(C_1R_1 + C_5R_1R_5g_m + 2C_5R_1R_Lg_m + C_5R_1 + C_5R_5 + C_5R_L\right) + 1}$$

9.317 X-INVALID-ORDER-317 $Z(s) = \left(\frac{R_1}{C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ L_5s+R_5+\frac{1}{C_5s},\ \frac{1}{C_Ls}\right)$

$$H(s) = \frac{C_5L_5R_1g_ms^2 + R_1g_m + s\left(C_5R_1R_5g_m - C_5R_1\right)}{C_1C_5C_LL_5R_1s^4 + s^3\left(C_1C_5C_LR_1R_5 + C_5C_LL_5R_1g_m + C_5C_LL_5\right) + s^2\left(C_1C_5R_1 + C_1C_LR_1 + C_5C_LR_1R_5g_m + C_5C_LR_1 + C_5C_LR_5\right) + s\left(2C_5R_1g_m + C_5 + C_LR_1g_m + C_L\right)}$$

9.318 X-INVALID-ORDER-318 $Z(s) = \left(\frac{R_1}{C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ L_5s+R_5+\frac{1}{C_5s},\ \frac{R_L}{C_LR_Ls+1}\right)$

$$H(s) = \frac{C_5L_5R_1R_Lg_ms^2 + R_1R_Lg_m + s\left(C_5R_1R_5R_Lg_m - C_5R_1R_L\right)}{C_1C_5C_LL_5R_1R_Ls^4 + R_1g_m + s^3\left(C_1C_5C_LR_1R_5R_L + C_1C_5L_5R_1 + C_5C_LL_5R_1R_Lg_m + C_5C_LL_5R_L\right) + s^2\left(C_1C_5R_1R_5 + C_1C_5R_1R_L + C_1C_LR_1R_L + C_5C_LR_1R_5R_Lg_m + C_5C_LR_1R_L + C_5C_LR_5R_L + C_5L_5R_1g_m + C_5L_5\right) + s\left(C_1R_1 + C_5R_1R_5g_m + 2C_5R_1R_Lg_m +\right.}$$

9.319 X-INVALID-ORDER-319 $Z(s) = \left(\frac{R_1}{C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ L_5s+R_5+\frac{1}{C_5s},\ R_L+\frac{1}{C_Ls}\right)$

$$H(s) = \frac{C_5C_LL_5R_1R_Lg_ms^3 + R_1g_m + s^2\left(C_5C_LR_1R_5R_Lg_m - C_5C_LR_1R_L + C_5L_5R_1g_m\right) + s\left(C_5R_1R_5g_m - C_5R_1 + C_LR_1R_Lg_m\right)}{C_1C_5C_LL_5R_1s^4 + s^3\left(C_1C_5C_LR_1R_5 + C_1C_5C_LR_1R_L + C_5C_LL_5R_1g_m + C_5C_LL_5\right) + s^2\left(C_1C_5R_1 + C_1C_LR_1 + C_5C_LR_1R_5g_m + 2C_5C_LR_1R_Lg_m + C_5C_LR_1 + C_5C_LR_5 + C_5C_LR_L\right) + s\left(2C_5R_1g_m + C_5 + C_LR_1g_m + C_L\right)}$$

9.320 X-INVALID-ORDER-320 $Z(s) = \left(\frac{R_1}{C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ L_5s+R_5+\frac{1}{C_5s},\ L_Ls+\frac{1}{C_Ls}\right)$

$$H(s) = \frac{C_5C_LL_5L_LR_1g_ms^4 + R_1g_m + s^3\left(C_5C_LL_LR_1R_5g_m - C_5C_LL_LR_1\right) + s^2\left(C_5L_5R_1g_m + C_LL_LR_1g_m\right) + s\left(C_5R_1R_5g_m - C_5R_1\right)}{s^4\left(C_1C_5C_LL_5R_1 + C_1C_5C_LL_LR_1\right) + s^3\left(C_1C_5C_LR_1R_5 + C_5C_LL_5R_1g_m + C_5C_LL_5 + 2C_5C_LL_LR_1g_m + C_5C_LL_L\right) + s^2\left(C_1C_5R_1 + C_1C_LR_1 + C_5C_LR_1R_5g_m + C_5C_LR_1 + C_5C_LR_5\right) + s\left(2C_5R_1g_m + C_5 + C_LR_1g_m + C_L\right)}$$

9.321 X-INVALID-ORDER-321 $Z(s) = \left(\frac{R_1}{C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ L_5s+R_5+\frac{1}{C_5s},\ \frac{L_Ls}{C_LL_Ls^2+1}\right)$

$$H(s) = \frac{C_5L_5L_LR_1g_ms^3 + L_LR_1g_ms + s^2\left(C_5L_LR_1R_5g_m - C_5L_LR_1\right)}{C_1C_5C_LL_5L_LR_1s^5 + R_1g_m + s^4\left(C_1C_5C_LL_LR_1R_5 + C_5C_LL_5L_LR_1g_m + C_5C_LL_5L_L\right) + s^3\left(C_1C_5L_5R_1 + C_1C_5L_LR_1 + C_1C_LL_LR_1 + C_5C_LL_LR_1R_5g_m + C_5C_LL_LR_1 + C_5C_LL_LR_5\right) + s^2\left(C_1C_5R_1R_5 + C_5L_5R_1g_m + C_5L_5 + 2C_5L_LR_1g_m + C_5L_L + C_LL_LR_1g_m + \right.}$$

9.322 X-INVALID-ORDER-322 $Z(s) = \left(\frac{R_1}{C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ L_5s+R_5+\frac{1}{C_5s},\ L_Ls+R_L+\frac{1}{C_Ls}\right)$

$$H(s) = \frac{C_5C_LL_5L_LR_1g_ms^4 + R_1g_m + s^3\left(C_5C_LL_5R_1R_Lg_m + C_5C_LL_LR_1R_5g_m - C_5C_LL_LR_1\right) + s^2\left(C_5C_LR_1R_5R_Lg_m - C_5C_LR_1R_L + C_5L_5R_1g_m + C_LL_LR_1g_m\right) + s\left(C_5R_1R_5g_m - C_5R_1 + C_LR_1R_Lg_m\right)}{s^4\left(C_1C_5C_LL_5R_1 + C_1C_5C_LL_LR_1\right) + s^3\left(C_1C_5C_LR_1R_5 + C_1C_5C_LR_1R_L + C_5C_LL_5R_1g_m + C_5C_LL_5 + 2C_5C_LL_LR_1g_m + C_5C_LL_L\right) + s^2\left(C_1C_5R_1 + C_1C_LR_1 + C_5C_LR_1R_5g_m + 2C_5C_LR_1R_Lg_m + C_5C_LR_1 + C_5C_LR_5 + C_5C_LR_L\right) + s\left(2C_5R_1g_m + C_5 + C_LR_1g_m\right.}$$

9.323 X-INVALID-ORDER-323 $Z(s) = \left(\frac{R_1}{C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ L_5s+R_5+\frac{1}{C_5s},\ \frac{L_LR_Ls}{C_LL_LR_Ls^2+L_Ls+R_L}\right)$

$$H(s) = \frac{C_5L_5L_LR_1R_Lg_ms^3 + L_LR_1R_Lg_ms + s^2}{C_1C_5C_LL_5L_LR_1R_Ls^5 + R_1R_Lg_m + R_L + s^4\left(C_1C_5C_LL_LR_1R_5R_L + C_1C_5L_5L_LR_1 + C_5C_LL_5L_LR_1R_Lg_m + C_5C_LL_5L_LR_L\right) + s^3\left(C_1C_5L_5R_1R_L + C_1C_5L_LR_1R_5 + C_1C_5L_LR_1R_L + C_1C_LL_LR_1R_L + C_5C_LL_LR_1R_5R_Lg_m + C_5C_LL_LR_1R_L + C_5C_LL_LR_5R_L + C_5L\right.}$$

9.324 X-INVALID-ORDER-324 $Z(s) = \left(\frac{R_1}{C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ L_5s+R_5+\frac{1}{C_5s},\ \frac{C_LL_LR_Ls^2+L_Ls+R_L}{C_LL_Ls^2+1}\right)$

$$H(s) = \frac{C_5C_LL_5L_LR_1R_Lg_ms^4 + R_1R_Lg_m + s^3\left(C_5C_LL_LR_1R_5R_Lg_m - C_5C_LL_LR_1R_L + C_5L_5L_LR_1g_m\right) + s^2\left(C_5L_5R_1R_Lg_m + C_5L_LR_1R_5g_m - C_5L_LR_1 + C_LL_LR_1R_L\right.}{C_1C_5C_LL_5L_LR_1s^5 + R_1g_m + s^4\left(C_1C_5C_LL_LR_1R_5 + C_1C_5C_LL_LR_1R_L + C_5C_LL_5L_LR_1g_m + C_5C_LL_5L_L\right) + s^3\left(C_1C_5L_5R_1 + C_1C_5L_LR_1 + C_1C_LL_LR_1 + C_5C_LL_LR_1R_5g_m + 2C_5C_LL_LR_1R_Lg_m + C_5C_LL_LR_1 + C_5C_LL_LR_5 + C_5C_LL_LR_L\right) + s^2\left(C_1C_5R_1R_5 + C_1\right.}$$

9.325 X-INVALID-ORDER-325 $Z(s) = \left(\frac{R_1}{C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ L_5s+R_5+\frac{1}{C_5s},\ \frac{R_L\left(C_LL_Ls^2+1\right)}{C_LL_Ls^2+C_LR_Ls+1}\right)$

$$H(s) = \frac{C_5C_LL_5L_LR_1R_Lg_ms^4 + R_1R_Lg_m + s^3\left(C_5C_LL_LR_1R_5R_Lg_m - C_5C_L\right.}{C_1C_5C_LL_5L_LR_1s^5 + R_1g_m + s^4\left(C_1C_5C_LL_5R_1R_L + C_1C_5C_LL_LR_1R_5 + C_1C_5C_LL_LR_1R_L + C_5C_LL_5L_LR_1g_m + C_5C_LL_5L_L\right) + s^3\left(C_1C_5C_LR_1R_5R_L + C_1C_5L_5R_1 + C_1C_LL_LR_1 + C_5C_LL_5R_1R_Lg_m + C_5C_LL_5R_L + C_5C_LL_LR_1R_5g_m + 2C_5C_LL_LR_1R_Lg_m + C_5C\right.}$$

9.326 X-INVALID-ORDER-326 $Z(s) = \left(\frac{R_1}{C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ \frac{L_5R_5s}{C_5L_5R_5s^2+L_5s+R_5},\ R_L\right)$

$$H(s) = \frac{-C_5L_5R_1R_5R_Ls^2 - R_1R_5R_L + s\left(L_5R_1R_5R_Lg_m - L_5R_1R_L\right)}{C_1C_5L_5R_1R_5R_Ls^3 + 2R_1R_5R_Lg_m + R_1R_5 + R_5R_L + s^2\left(C_1L_5R_1R_5 + C_1L_5R_1R_L + 2C_5L_5R_1R_5R_Lg_m + C_5L_5R_1R_5 + C_5L_5R_5R_L\right) + s\left(C_1R_1R_5R_L + L_5R_1R_5g_m + 2L_5R_1R_Lg_m + L_5R_1 + L_5R_5 + L_5R_L\right)}$$

9.327 X-INVALID-ORDER-327 $Z(s) = \left(\frac{R_1}{C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ \frac{L_5R_5s}{C_5L_5R_5s^2+L_5s+R_5},\ \frac{1}{C_Ls}\right)$

$$H(s) = \frac{-C_5L_5R_1R_5s^2 - R_1R_5 + s\left(L_5R_1R_5g_m - L_5R_1\right)}{2R_1R_5g_m + R_5 + s^3\left(C_1C_5L_5R_1R_5 + C_1C_LL_5R_1R_5 + C_5C_LL_5R_1R_5\right) + s^2\left(C_1L_5R_1 + 2C_5L_5R_1R_5g_m + C_5L_5R_5 + C_LL_5R_1R_5g_m + C_LL_5R_1 + C_LL_5R_5\right) + s\left(C_1R_1R_5 + C_LR_1R_5 + 2L_5R_1g_m + L_5\right)}$$

9.328 X-INVALID-ORDER-328 $Z(s) = \left(\frac{R_1}{C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ \frac{L_5R_5s}{C_5L_5R_5s^2+L_5s+R_5},\ \frac{R_L}{C_LR_Ls+1}\right)$

$$H(s) = \frac{-C_5L_5R_1R_5R_Ls^2 - R_1R_5R_L + s\left(L_5R_1R_5R_Lg_m - L_5R_1R_L\right)}{2R_1R_5R_Lg_m + R_1R_5 + R_5R_L + s^3\left(C_1C_5L_5R_1R_5R_L + C_1C_LL_5R_1R_5R_L + C_5C_LL_5R_1R_5R_L\right) + s^2\left(C_1L_5R_1R_5 + C_1L_5R_1R_L + 2C_5L_5R_1R_5R_Lg_m + C_5L_5R_1R_5 + C_5L_5R_5R_L + C_LL_5R_1R_5R_Lg_m + C_LL_5R_1R_L + C_LL_5R_5R_L\right) + s\left(C_1R_1R_5R_L + C_LR_1R_5R_L + L_5\right.}$$

9.329 X-INVALID-ORDER-329 $Z(s) = \left(\frac{R_1}{C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ \frac{L_5R_5s}{C_5L_5R_5s^2+L_5s+R_5},\ R_L + \frac{1}{C_Ls}\right)$

$$H(s) = \frac{-C_5C_LL_5R_1R_5R_Ls^3 - R_1R_5 + s^2\left(-C_5L_5R_1R_5 + C_LL_5R_1R_5R_Lg_m - C_LL_5R_1R_L\right) + s\left(-C_LR_1R_5R_L + L_5R_1R_5g_m - L_5R_1\right)}{C_1C_5C_LL_5R_1R_5R_Ls^4 + 2R_1R_5g_m + R_5 + s^3\left(C_1C_5L_5R_1R_5 + C_1C_LL_5R_1R_5 + C_1C_LL_5R_1R_L + 2C_5C_LL_5R_1R_5R_Lg_m + C_5C_LL_5R_1R_5 + C_5C_LL_5R_5R_L\right) + s^2\left(C_1C_LR_1R_5R_L + C_1L_5R_1 + 2C_5L_5R_1R_5g_m + C_5L_5R_5 + C_LL_5R_1R_5g_m + 2C_LL_5R_1R_Lg_m + C_LL_5R_1\right.}$$

9.330 X-INVALID-ORDER-330 $Z(s) = \left(\frac{R_1}{C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ \frac{L_5R_5s}{C_5L_5R_5s^2+L_5s+R_5},\ L_Ls + \frac{1}{C_Ls}\right)$

$$H(s) = \frac{-C_5C_LL_5L_LR_1R_5s^4 - R_1R_5 + s^3\left(C_LL_5L_LR_1R_5g_m - C_LL_5L_LR_1\right) + s^2\left(-C_5L_5R_1R_5 - C_LL_LR_1R_5\right) + s\left(L_5R_1R_5g_m - L_5R_1\right)}{C_1C_5C_LL_5L_LR_1R_5s^5 + 2R_1R_5g_m + R_5 + s^4\left(C_1C_LL_5L_LR_1 + 2C_5C_LL_5L_LR_1R_5g_m + C_5C_LL_5L_LR_5\right) + s^3\left(C_1C_5L_5R_1R_5 + C_1C_LL_5R_1R_5 + C_1C_LL_LR_1R_5 + C_5C_LL_5R_1R_5 + 2C_LL_5L_LR_1g_m + C_LL_5L_L\right) + s^2\left(C_1L_5R_1 + 2C_5L_5R_1R_5g_m + C_5L_5R_5 + C_LL_5R_1R_5\right.}$$

9.331 X-INVALID-ORDER-331 $Z(s) = \left(\frac{R_1}{C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ \frac{L_5R_5s}{C_5L_5R_5s^2+L_5s+R_5},\ \frac{L_Ls}{C_LL_Ls^2+1}\right)$

$$H(s) = \frac{-C_5L_5L_LR_1R_5s^3 - L_LR_1R_5s + s^2\left(L_5L_LR_1R_5g_m - L_5L_LR_1\right)}{R_1R_5 + s^4\left(C_1C_5L_5L_LR_1R_5 + C_1C_LL_5L_LR_1R_5 + C_5C_LL_5L_LR_1R_5\right) + s^3\left(C_1L_5L_LR_1 + 2C_5L_5L_LR_1R_5g_m + C_5L_5L_LR_5 + C_LL_5L_LR_1R_5g_m + C_LL_5L_LR_1 + C_LL_5L_LR_5\right) + s^2\left(C_1L_5R_1R_5 + C_1L_LR_1R_5 + C_5L_5R_1R_5 + C_LL_LR_1R_5 + 2L_5L_LR_1g_m + L_5L_L\right) + s\left(L\right.}$$

9.332 X-INVALID-ORDER-332 $Z(s) = \left(\frac{R_1}{C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ \frac{L_5R_5s}{C_5L_5R_5s^2+L_5s+R_5},\ L_Ls + R_L + \frac{1}{C_Ls}\right)$

$$H(s) = \frac{-C_5C_LL_5L_LR_1R_5s^4 - R_1R_5 + s^3\left(-C_5C_LL_5R_1R_5R_L + C_LL_5L_LR_1R_5g_m - C_LL_5L_LR_1\right) + s^2\left(-C_5L\right.}{C_1C_5C_LL_5L_LR_1R_5s^5 + 2R_1R_5g_m + R_5 + s^4\left(C_1C_5C_LL_5R_1R_5R_L + C_1C_LL_5L_LR_1 + 2C_5C_LL_5L_LR_1R_5g_m + C_5C_LL_5L_LR_5\right) + s^3\left(C_1C_5L_5R_1R_5 + C_1C_LL_5R_1R_5 + C_1C_LL_5R_1R_L + C_1C_LL_LR_1R_5 + 2C_5C_LL_5R_1R_5R_Lg_m + C_5C_LL_5R_1R_5 + C_5C_LL_5R_5R_L + 2C_L\right.}$$

9.333 X-INVALID-ORDER-333 $Z(s) = \left(\frac{R_1}{C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ \frac{L_5R_5s}{C_5L_5R_5s^2+L_5s+R_5},\ \frac{L_LR_Ls}{C_LL_LR_Ls^2+L_Ls+R_L}\right)$

$$H(s) = \frac{-C_5L_5L_LR_1R_5R_Ls^3 - L_LR_1R_5R_Ls + s^2\left(L_5L_LR_1R_5R_Lg_m - L_5L\right.}{R_1R_5R_L + s^4\left(C_1C_5L_5L_LR_1R_5R_L + C_1C_LL_5L_LR_1R_5R_L + C_5C_LL_5L_LR_1R_5R_L\right) + s^3\left(C_1L_5L_LR_1R_5 + C_1L_5L_LR_1R_L + 2C_5L_5L_LR_1R_5R_Lg_m + C_5L_5L_LR_1R_5 + C_5L_5L_LR_5R_L + C_LL_5L_LR_1R_5R_Lg_m + C_LL_5L_LR_1R_L + C_LL_5L_LR_5R_L\right) + s^2\left(C_1L_5R_1R_5R_L + C\right.}$$

9.334 X-INVALID-ORDER-334 $Z(s) = \left(\frac{R_1}{C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ \frac{L_5R_5s}{C_5L_5R_5s^2+L_5s+R_5},\ \frac{C_LL_LR_Ls^2+L_Ls+R_L}{C_LL_Ls^2+1}\right)$

$$H(s) = \frac{-C_5C_LL_5L_LR_1R_5R_Ls^4 - R_1R_5R_L + s^3\left(-C_5L_5L\right.}{C_1C_5C_LL_5L_LR_1R_5R_Ls^5 + 2R_1R_5R_Lg_m + R_1R_5 + R_5R_L + s^4\left(C_1C_5L_5L_LR_1R_5 + C_1C_LL_5L_LR_1R_5 + C_1C_LL_5L_LR_1R_L + 2C_5C_LL_5L_LR_1R_5R_Lg_m + C_5C_LL_5L_LR_1R_5 + C_5C_LL_5L_LR_5R_L\right) + s^3\left(C_1C_5L_5R_1R_5R_L + C_1C_LL_LR_1R_5R_L + C_1L_5L_LR_1 + 2C_5L_5L_LR_1\right.}$$

9.335 X-INVALID-ORDER-335 $Z(s) = \left(\frac{R_1}{C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ \frac{L_5R_5s}{C_5L_5R_5s^2+L_5s+R_5},\ \frac{R_L\left(C_LL_Ls^2+1\right)}{C_LL_Ls^2+C_LR_Ls+1}\right)$

$$H(s) = \frac{-C_5C_LL_5L_LR_1R_5R_Ls^4 - R_1R_5R\right.}{C_1C_5C_LL_5L_LR_1R_5R_Ls^5 + 2R_1R_5R_Lg_m + R_1R_5 + R_5R_L + s^4\left(C_1C_LL_5L_LR_1R_5 + C_1C_LL_5L_LR_1R_L + 2C_5C_LL_5L_LR_1R_5R_Lg_m + C_5C_LL_5L_LR_1R_5 + C_5C_LL_5L_LR_5R_L\right) + s^3\left(C_1C_5L_5R_1R_5R_L + C_1C_LL_5R_1R_5R_L + C_1C_LL_LR_1R_5R_L + C_5C_LL_5R_1R_5R_L + C_LL_5\right.}$$

9.336 X-INVALID-ORDER-336 $Z(s) = \left(\frac{R_1}{C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ \frac{C_5L_5R_5s^2+L_5s+R_5}{C_5L_5s^2+1},\ R_L\right)$

$$H(s) = \frac{L_5R_1R_Lg_ms + R_1R_5R_Lg_m - R_1R_L + s^2\left(C_5L_5R_1R_5R_Lg_m - C_5L_5R_1R_L\right)}{R_1R_5g_m + 2R_1R_Lg_m + R_1 + R_5 + R_L + s^3\left(C_1C_5L_5R_1R_5 + C_1C_5L_5R_1R_L\right) + s^2\left(C_1L_5R_1 + C_5L_5R_1R_5g_m + 2C_5L_5R_1R_Lg_m + C_5L_5R_1 + C_5L_5R_5 + C_5L_5R_L\right) + s\left(C_1R_1R_5 + C_1R_1R_L + L_5R_1g_m + L_5\right)}$$

9.337 X-INVALID-ORDER-337 $Z(s) = \left(\frac{R_1}{C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ \frac{C_5L_5R_5s^2+L_5s+R_5}{C_5L_5s^2+1},\ \frac{1}{C_Ls}\right)$

$$H(s) = \frac{L_5R_1g_ms + R_1R_5g_m - R_1 + s^2\left(C_5L_5R_1R_5g_m - C_5L_5R_1\right)}{C_1C_5C_LL_5R_1R_5s^4 + 2R_1g_m + s^3\left(C_1C_5L_5R_1 + C_1C_LL_5R_1 + C_5C_LL_5R_1R_5g_m + C_5C_LL_5R_1 + C_5C_LL_5R_5\right) + s^2\left(C_1C_LR_1R_5 + 2C_5L_5R_1g_m + C_5L_5 + C_LL_5R_1g_m + C_LL_5\right) + s\left(C_1R_1 + C_LR_1R_5g_m + C_LR_1 + C_LR_5\right) + 1}$$

9.338 X-INVALID-ORDER-338 $Z(s) = \left(\frac{R_1}{C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ \frac{C_5L_5R_5s^2+L_5s+R_5}{C_5L_5s^2+1},\ \frac{R_L}{C_LR_Ls+1}\right)$

$$H(s) = \frac{L_5R_1R_Lg_ms + R_1R_5R_Lg_m - R_1R_L + s^2\left(C_5L_5R_1R_5R_Lg_m - C_5L_5R_1R_L\right)}{C_1C_5C_LL_5R_1R_5R_Ls^4 + R_1R_5g_m + 2R_1R_Lg_m + R_1 + R_5 + R_L + s^3\left(C_1C_5L_5R_1R_5 + C_1C_5L_5R_1R_L + C_1C_LL_5R_1R_L + C_5C_LL_5R_1R_5R_Lg_m + C_5C_LL_5R_1R_L + C_5C_LL_5R_5R_L\right) + s^2\left(C_1C_LR_1R_5R_L + C_1L_5R_1 + C_5L_5R_1R_5g_m + 2C_5L_5R_1R_Lg_m + C_5L_5R_1 + C_5L_5\right.}$$

9.339 X-INVALID-ORDER-339 $Z(s) = \left(\frac{R_1}{C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ \frac{C_5L_5R_5s^2+L_5s+R_5}{C_5L_5s^2+1},\ R_L + \frac{1}{C_Ls}\right)$

$$H(s) = \frac{R_1R_5g_m - R_1 + s^3\left(C_5C_LL_5R_1R_5R_Lg_m - C_5C_LL_5R_1R_L\right) + s^2\left(C_5L_5R_1R_5g_m - C_5L_5R_1 + C_LL_5R_1R_Lg_m\right) + s\left(C_LR_1R_5R_Lg_m - C_LR_1R_L + L_5R_1g_m\right)}{2R_1g_m + s^4\left(C_1C_5C_LL_5R_1R_5 + C_1C_5C_LL_5R_1R_L\right) + s^3\left(C_1C_5L_5R_1 + C_1C_LL_5R_1 + C_5C_LL_5R_1R_5g_m + 2C_5C_LL_5R_1R_Lg_m + C_5C_LL_5R_1 + C_5C_LL_5R_5 + C_5C_LL_5R_L\right) + s^2\left(C_1C_LR_1R_5 + C_1C_LR_1R_L + 2C_5L_5R_1g_m + C_5L_5 + C_LL_5R_1g_m + C_LL_5\right) + s\left(C_1R_1 + C_L\right.}$$

9.340 X-INVALID-ORDER-340 $Z(s) = \left(\frac{R_1}{C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ \frac{C_5L_5R_5s^2+L_5s+R_5}{C_5L_5s^2+1},\ L_Ls + \frac{1}{C_Ls}\right)$

$$H(s) = \frac{C_LL_5L_LR_1g_ms^3 + L_5R_1g_ms + R_1R_5g_m - R_1 + s^4\left(C_5C_LL_5L_LR_1R_5g_m - C_5C_LL_5L_LR_1\right) + s^2\left(C_5L_5R_1R_5g_m - C_5L_5R_1 + C_LL_LR_1R_5g_m - C_LL_LR_1\right)}{C_1C_5C_LL_5L_LR_1s^5 + 2R_1g_m + s^4\left(C_1C_5C_LL_5R_1R_5 + 2C_5C_LL_5L_LR_1g_m + C_5C_LL_5L_L\right) + s^3\left(C_1C_5L_5R_1 + C_1C_LL_5R_1 + C_1C_LL_LR_1 + C_5C_LL_5R_1R_5g_m + C_5C_LL_5R_1 + C_5C_LL_5R_5\right) + s^2\left(C_1C_LR_1R_5 + 2C_5L_5R_1g_m + C_5L_5 + C_LL_5R_1g_m + C_LL_5 + 2C_LL_LR_1g_m\right.}$$

9.341 X-INVALID-ORDER-341 $Z(s) = \left(\frac{R_1}{C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ \frac{C_5L_5R_5s^2+L_5s+R_5}{C_5L_5s^2+1},\ \frac{L_Ls}{C_LL_Ls^2+1}\right)$

$$H(s) = \frac{L_5L_LR_1g_ms^2 + s^3\left(C_5L_5L_LR_1R_5g_m - C_5L_5L_LR_1\right) + s\left(L_LR_1R_5g_m - L_LR_1\right)}{C_1C_5C_LL_5L_LR_1R_5s^5 + R_1R_5g_m + R_1 + R_5 + s^4\left(C_1C_5L_5L_LR_1 + C_1C_LL_5L_LR_1 + C_5C_LL_5L_LR_1R_5g_m + C_5C_LL_5L_LR_1 + C_5C_LL_5L_LR_5\right) + s^3\left(C_1C_5L_5R_1R_5 + C_1C_LL_LR_1R_5 + 2C_5L_5L_LR_1g_m + C_5L_5L_L + C_LL_5L_LR_1g_m + C_LL_5L_L\right) + s^2\left(C_1L_5R_1 + C_1L_LR_1\right.}$$

9.342 X-INVALID-ORDER-342 $Z(s) = \left(\frac{R_1}{C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ \frac{C_5L_5R_5s^2+L_5s+R_5}{C_5L_5s^2+1},\ L_Ls + R_L + \frac{1}{C_Ls}\right)$

$$H(s) = \frac{R_1R_5g_m - R_1 + s^4\left(C_5C_LL_5L_LR_1R_5g_m - C_5C_LL_5L_LR_1\right) + s^3\left(C_5C_LL_5R_1R_5R_Lg_m - C_5C_LL_5R_1R_L + C_LL_5L_LR_1g_m\right) + s^2\left(C_5L_5R_1R_5g_m - C_5L_5R_1 + C_LL_5R_1R_Lg_m + C_LL\right.}{C_1C_5C_LL_5L_LR_1s^5 + 2R_1g_m + s^4\left(C_1C_5C_LL_5R_1R_5 + C_1C_5C_LL_5R_1R_L + 2C_5C_LL_5L_LR_1g_m + C_5C_LL_5L_L\right) + s^3\left(C_1C_5L_5R_1 + C_1C_LL_5R_1 + C_1C_LL_LR_1 + C_5C_LL_5R_1R_5g_m + 2C_5C_LL_5R_1R_Lg_m + C_5C_LL_5R_1 + C_5C_LL_5R_5 + C_5C_LL_5R_L\right) + s^2\left(C_1C_LR_1R_5 + C_1\right.}$$

9.343 X-INVALID-ORDER-343 $Z(s) = \left(\frac{R_1}{C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ \frac{C_5L_5R_5s^2+L_5s+R_5}{C_5L_5s^2+1},\ \frac{L_LR_Ls}{C_LL_LR_Ls^2+L_Ls+R_L}\right)$

$$H(s) = \frac{}{C_1C_5C_LL_5L_LR_1R_5R_Ls^5 + R_1R_5R_Lg_m + R_1R_L + R_5R_L + s^4\left(C_1C_5L_5L_LR_1R_5 + C_1C_5L_5L_LR_1R_L + C_1C_LL_5L_LR_1R_L + C_5C_LL_5L_LR_1R_5R_Lg_m + C_5C_LL_5L_LR_1R_L + C_5C_LL_5L_LR_5R_L\right) + s^3\left(C_1C_5L_5R_1R_5R_L + C_1C_LL_LR_1R_5R_L + C_1L_5L_LR_1 + C_5L_5L_LR_1R_5\right.}$$

9.344 X-INVALID-ORDER-344 $Z(s) = \left(\frac{R_1}{C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ \frac{C_5L_5R_5s^2+L_5s+R_5}{C_5L_5s^2+1},\ \frac{C_LL_LR_Ls^2+L_Ls+R_L}{C_LL_Ls^2+1}\right)$

$$H(s) = \frac{R_1R_5R_Lg_m - R_1R_L + s^4\left(C_5C_LL_5L_LR_1R_5R_Lg_m - C_5C_LL_5L_LR_1R_L\right) + s^3\left(C_5L_5L_LR_1R_5g_m - C\right.}{R_1R_5g_m + 2R_1R_Lg_m + R_1 + R_5 + R_L + s^5\left(C_1C_5C_LL_5L_LR_1R_5 + C_1C_5C_LL_5L_LR_1R_L\right) + s^4\left(C_1C_5L_5L_LR_1 + C_1C_LL_5L_LR_1 + C_5C_LL_5L_LR_1R_5g_m + 2C_5C_LL_5L_LR_1R_Lg_m + C_5C_LL_5L_LR_1 + C_5C_LL_5L_LR_5 + C_5C_LL_5L_LR_L\right) + s^3\left(C_1C_5L_5R_1R_5 + C_1C_5L_5R_1R_L\right.}$$

9.345 X-INVALID-ORDER-345 $Z(s) = \left(\frac{R_1}{C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ \frac{C_5L_5R_5s^2+L_5s+R_5}{C_5L_5s^2+1},\ \frac{R_L\left(C_LL_Ls^2+1\right)}{C_LL_Ls^2+C_LR_Ls+1}\right)$

$$H(s) = \frac{C_LL_5L}{R_1R_5g_m + 2R_1R_Lg_m + R_1 + R_5 + R_L + s^5\left(C_1C_5C_LL_5L_LR_1R_5 + C_1C_5C_LL_5L_LR_1R_L\right) + s^4\left(C_1C_5C_LL_5R_1R_5R_L + C_1C_LL_5L_LR_1 + C_5C_LL_5L_LR_1R_5g_m + 2C_5C_LL_5L_LR_1R_Lg_m + C_5C_LL_5L_LR_1 + C_5C_LL_5L_LR_5 + C_5C_LL_5L_LR_L\right) + s^3\left(C_1C_5L_5R_1R_5 + C_1C_5L_5\right.}$$

9.346 X-INVALID-ORDER-346 $Z(s) = \left(\frac{R_1}{C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ \frac{R_5\left(C_5L_5s^2+1\right)}{C_5L_5s^2+C_5R_5s+1},\ R_L\right)$

$$H(s) = \frac{-C_5R_1R_5R_Ls + R_1R_5R_Lg_m - R_1R_L + s^2\left(C_5L_5R_1R_5R_Lg_m - C_5L_5R_1R_L\right)}{R_1R_5g_m + 2R_1R_Lg_m + R_1 + R_5 + R_L + s^3\left(C_1C_5L_5R_1R_5 + C_1C_5L_5R_1R_L\right) + s^2\left(C_1C_5R_1R_5R_L + C_5L_5R_1R_5g_m + 2C_5L_5R_1R_Lg_m + C_5L_5R_1 + C_5L_5R_5 + C_5L_5R_L\right) + s\left(C_1R_1R_5 + C_1R_1R_L + 2C_5R_1R_5R_Lg_m + C_5R_1R_5 + C_5R_5R_L\right)}$$

9.347 X-INVALID-ORDER-347 $Z(s) = \left(\frac{R_1}{C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ \frac{R_5\left(C_5L_5s^2+1\right)}{C_5L_5s^2+C_5R_5s+1},\ \frac{1}{C_Ls}\right)$

$$H(s) = \frac{-C_5R_1R_5s + R_1R_5g_m - R_1 + s^2\left(C_5L_5R_1R_5g_m - C_5L_5R_1\right)}{C_1C_5C_LL_5R_1R_5s^4 + 2R_1g_m + s^3\left(C_1C_5L_5R_1 + C_5C_LL_5R_1R_5g_m + C_5C_LL_5R_1 + C_5C_LL_5R_5\right) + s^2\left(C_1C_5R_1R_5 + C_1C_LR_1R_5 + C_5C_LR_1R_5 + 2C_5L_5R_1g_m + C_5L_5\right) + s\left(C_1R_1 + 2C_5R_1R_5g_m + C_5R_5 + C_LR_1R_5g_m + C_LR_1 + C_LR_5\right) + 1}$$

9.348 X-INVALID-ORDER-348 $Z(s) = \left(\frac{R_1}{C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ \frac{R_5\left(C_5L_5s^2+1\right)}{C_5L_5s^2+C_5R_5s+1},\ \frac{R_L}{C_LR_Ls+1}\right)$

$$H(s) = \frac{-C_5R_1R_5R_Ls + R_1R_5R_Lg_m - R_1R_L + s^2\left(C_5L_5R_1R_5R_Lg_m - C_5L_5R_1R_L\right)}{C_1C_5C_LL_5R_1R_5R_Ls^4 + R_1R_5g_m + 2R_1R_Lg_m + R_1 + R_5 + R_L + s^3\left(C_1C_5L_5R_1R_5 + C_1C_5L_5R_1R_L + C_5C_LL_5R_1R_5R_Lg_m + C_5C_LL_5R_1R_L + C_5C_LL_5R_5R_L\right) + s^2\left(C_1C_5R_1R_5R_L + C_1C_LR_1R_5R_L + C_5C_LR_1R_5R_L + C_5L_5R_1R_5g_m + 2C_5L_5R_1R_Lg_m + C_5L_5R_1 +\right.}$$

9.349 X-INVALID-ORDER-349 $Z(s) = \left(\frac{R_1}{C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ \frac{R_5\left(C_5L_5s^2+1\right)}{C_5L_5s^2+C_5R_5s+1},\ R_L + \frac{1}{C_Ls}\right)$

$$H(s) = \frac{R_1R_5g_m - R_1 + s^3\left(C_5C_LL_5R_1R_5R_Lg_m - C_5C_LL_5R_1R_L\right) + s^2\left(-C_5C_LR_1R_5R_L + C_5L_5R_1R_5g_m - C_5L_5R_1\right) + s\left(-C_5R_1R_5 + C_LR_1R_5R_Lg_m -\right.}{2R_1g_m + s^4\left(C_1C_5C_LL_5R_1R_5 + C_1C_5C_LL_5R_1R_L\right) + s^3\left(C_1C_5C_LR_1R_5R_L + C_1C_5L_5R_1 + C_5C_LL_5R_1R_5g_m + 2C_5C_LL_5R_1R_Lg_m + C_5C_LL_5R_1 + C_5C_LL_5R_5 + C_5C_LL_5R_L\right) + s^2\left(C_1C_5R_1R_5 + C_1C_LR_1R_5 + C_1C_LR_1R_L + 2C_5C_LR_1R_5R_Lg_m + C_5C_LR_1R_5 + C_5C\right.}$$

9.350 X-INVALID-ORDER-350 $Z(s) = \left(\frac{R_1}{C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ \frac{R_5\left(C_5L_5s^2+1\right)}{C_5L_5s^2+C_5R_5s+1},\ L_Ls + \frac{1}{C_Ls}\right)$

$$H(s) = \frac{-C_5C_LL_LR_1R_5s^3 - C_5R_1R_5s + R_1R_5g_m - R_1 + s^4\left(C_5C_LL_5L_LR_1R_5g_m - C_5C_LL_5L_LR_1\right) + s^2\left(C_5L_5R_1R_5g_m - C_5L_5R_1 + C_LL_LR_1R_5g_m -\right.}{C_1C_5C_LL_5L_LR_1s^5 + 2R_1g_m + s^4\left(C_1C_5C_LL_5R_1R_5 + C_1C_5C_LL_LR_1R_5 + 2C_5C_LL_5L_LR_1g_m + C_5C_LL_5L_L\right) + s^3\left(C_1C_5L_5R_1 + C_1C_LL_LR_1 + C_5C_LL_5R_1R_5g_m + C_5C_LL_5R_1 + C_5C_LL_5R_5 + 2C_5C_LL_LR_1R_5g_m + C_5C_LL_LR_5\right) + s^2\left(C_1C_5R_1R_5 + C_1C_LR_1R_5 + C_5C\right.}$$

9.351 X-INVALID-ORDER-351 $Z(s) = \left(\frac{R_1}{C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ \frac{R_5\left(C_5L_5s^2+1\right)}{C_5L_5s^2+C_5R_5s+1},\ \frac{L_Ls}{C_LL_Ls^2+1}\right)$

$$H(s) = \frac{-C_5L_LR_1R_5s^2 + s^3\left(C_5L_5L_LR_1R_5g_m - C_5L_5L_LR_1\right) + s\left(L_LR_1R_5g_m - L_LR_1\right)}{C_1C_5C_LL_5L_LR_1R_5s^5 + R_1R_5g_m + R_1 + R_5 + s^4\left(C_1C_5L_5L_LR_1 + C_5C_LL_5L_LR_1R_5g_m + C_5C_LL_5L_LR_1 + C_5C_LL_5L_LR_5\right) + s^3\left(C_1C_5L_5R_1R_5 + C_1C_5L_LR_1R_5 + C_1C_LL_LR_1R_5 + C_5C_LL_LR_1R_5 + 2C_5L_5L_LR_1g_m + C_5L_5L_L\right) + s^2\left(C_1L_LR_1 + C_5L_5R_1R_5g_m + C_5\right.}$$

9.352 X-INVALID-ORDER-352 $Z(s) = \left(\frac{R_1}{C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ \frac{R_5\left(C_5L_5s^2+1\right)}{C_5L_5s^2+C_5R_5s+1},\ L_Ls + R_L + \frac{1}{C_Ls}\right)$

$$H(s) = \frac{R_1R_5g_m - R_1 + s^4\left(C_5C_LL_5L_LR_1R_5g_m - C_5C_LL_5L_LR_1\right) + s^3\left(C_5C_LL_5R_1R_5R_Lg_m - C_5C_LL_5R_1R_L - C_5C_LL_L\right.}{C_1C_5C_LL_5L_LR_1s^5 + 2R_1g_m + s^4\left(C_1C_5C_LL_5R_1R_5 + C_1C_5C_LL_5R_1R_L + C_1C_5C_LL_LR_1R_5 + 2C_5C_LL_5L_LR_1g_m + C_5C_LL_5L_L\right) + s^3\left(C_1C_5C_LR_1R_5R_L + C_1C_5L_5R_1 + C_1C_LL_LR_1 + C_5C_LL_5R_1R_5g_m + 2C_5C_LL_5R_1R_Lg_m + C_5C_LL_5R_1 + C_5C_LL_5R_5 + C_5C_LL_5R\right.}$$

9.353 X-INVALID-ORDER-353 $Z(s) = \left(\frac{R_1}{C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ \frac{R_5\left(C_5L_5s^2+1\right)}{C_5L_5s^2+C_5R_5s+1},\ \frac{L_LR_Ls}{C_LL_LR_Ls^2+L_Ls+R_L}\right)$

$$H(s) = \frac{-C_5L_{\ldots}}{C_1C_5C_LL_5L_LR_1R_5R_Ls^5 + R_1R_5R_Lg_m + R_1R_L + R_5R_L + s^4\left(C_1C_5L_5L_LR_1R_5 + C_1C_5L_5L_LR_1R_L + C_5C_LL_5L_LR_1R_5R_Lg_m + C_5C_LL_5L_LR_1R_L + C_5C_LL_5L_LR_5R_L\right) + s^3\left(C_1C_5L_5R_1R_5R_L + C_1C_5L_LR_1R_5R_L + C_1C_LL_LR_1R_5R_L + C_5C_LL_LR_1R_5R_L + C_5L_5L\right.}$$

9.354 X-INVALID-ORDER-354 $Z(s) = \left(\frac{R_1}{C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ \frac{R_5\left(C_5L_5s^2+1\right)}{C_5L_5s^2+C_5R_5s+1},\ \frac{C_LL_LR_Ls^2+L_Ls+R_L}{C_LL_Ls^2+1}\right)$

$$H(s) = \frac{R_1R_5R_Lg_m - R_1R_L + s^4\left(C_5C_LL_5L_LR_1R_5\right.}{R_1R_5g_m + 2R_1R_Lg_m + R_1 + R_5 + R_L + s^5\left(C_1C_5C_LL_5L_LR_1R_5 + C_1C_5C_LL_5L_LR_1R_L\right) + s^4\left(C_1C_5C_LL_LR_1R_5R_L + C_1C_5L_5L_LR_1 + C_5C_LL_5L_LR_1R_5g_m + 2C_5C_LL_5L_LR_1R_Lg_m + C_5C_LL_5L_LR_1 + C_5C_LL_5L_LR_5 + C_5C_LL_5L_LR_L\right) + s^3\left(C_1C_5L_5R_1R_5 + C_1C_5L_5\right.}$$

9.355 X-INVALID-ORDER-355 $Z(s) = \left(\frac{R_1}{C_1 R_1 s+1},\ \infty,\ \infty,\ \infty,\ \frac{R_5\left(C_5 L_5 s^2+1\right)}{C_5 L_5 s^2+C_5 R_5 s+1},\ \frac{R_L\left(C_L L_L s^2+1\right)}{C_L L_L s^2+C_L R_L s+1}\right)$

$$H(s) = \frac{s^2 \left(C_1 C_5 C_L L_5 L_L R_1 R_5 + C_1 C_5 C_L L_5 L_L R_1 R_L\right) + s^4 \left(C_1 C_5 C_L L_5 R_1 R_5 R_L + C_1 C_5 C_L L_L R_1 R_5 R_L + C_5 C_L L_5 L_L R_1 R_5 g_m + 2 C_5 C_L L_5 L_L R_1 R_L g_m + C_5 C_L L_5 L_L R_1 + C_5 C_L L_5 L_L R_5 + C_5 C_L L_5 L_L R_L\right) + s^3 \left(C_1 C_5 L_5 R_1 R_5 + C \cdots\right.}{R_1 R_5 g_m + 2 R_1 R_L g_m + R_1 + R_5 + R_L + s^5 \left(C_1 C_5 C_L L_5 L_L R_1 R_5 + C_1 C_5 C_L L_5 L_L R_1 R_L\right) + s^4 \left(C_1 C_5 C_L L_5 R_1 R_5 R_L + C_1 C_5 C_L L_L R_1 R_5 R_L + C_5 C_L L_5 L_L R_1 R_5 g_m + 2 C_5 C_L L_5 L_L R_1 R_L g_m + C_5 C_L L_5 L_L R_1 + C_5 C_L L_5 L_L R_5 + C_5 C_L L_5 L_L R_L\right) + s^3 \left(C_1 C_5 L_5 R_1 R_5 + C \cdots\right.}$$

9.356 X-INVALID-ORDER-356 $Z(s) = \left(R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ R_5,\ R_L\right)$

$$H(s) = \frac{R_5 R_L g_m - R_L + s\left(C_1 R_1 R_5 R_L g_m - C_1 R_1 R_L\right)}{R_5 g_m + 2 R_L g_m + s\left(C_1 R_1 R_5 g_m + 2 C_1 R_1 R_L g_m + C_1 R_1 + C_1 R_5 + C_1 R_L\right) + 1}$$

9.357 X-INVALID-ORDER-357 $Z(s) = \left(R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ R_5,\ L_L s + \frac{1}{C_L s}\right)$

$$H(s) = \frac{R_5 g_m + s^3 \left(C_1 C_L L_L R_1 R_5 g_m - C_1 C_L L_L R_1\right) + s^2 \left(C_L L_L R_5 g_m - C_L L_L\right) + s\left(C_1 R_1 R_5 g_m - C_1 R_1\right) - 1}{2 g_m + s^3 \left(2 C_1 C_L L_L R_1 g_m + C_1 C_L L_L\right) + s^2 \left(C_1 C_L R_1 R_5 g_m + C_1 C_L R_1 + C_1 C_L R_5 + 2 C_L L_L g_m\right) + s\left(2 C_1 R_1 g_m + C_1 + C_L R_5 g_m + C_L\right)}$$

9.358 X-INVALID-ORDER-358 $Z(s) = \left(R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ R_5,\ \frac{L_L s}{C_L L_L s^2+1}\right)$

$$H(s) = \frac{s^2 \left(C_1 L_L R_1 R_5 g_m - C_1 L_L R_1\right) + s\left(L_L R_5 g_m - L_L\right)}{R_5 g_m + s^3 \left(C_1 C_L L_L R_1 R_5 g_m + C_1 C_L L_L R_1 + C_1 C_L L_L R_5\right) + s^2 \left(2 C_1 L_L R_1 g_m + C_1 L_L + C_L L_L R_5 g_m + C_L L_L\right) + s\left(C_1 R_1 R_5 g_m + C_1 R_1 + C_1 R_5 + 2 L_L g_m\right) + 1}$$

9.359 X-INVALID-ORDER-359 $Z(s) = \left(R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ R_5,\ L_L s + R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{R_5 g_m + s^3 \left(C_1 C_L L_L R_1 R_5 g_m - C_1 C_L L_L R_1\right) + s^2 \left(C_1 C_L R_1 R_5 R_L g_m - C_1 C_L R_1 R_L + C_L L_L R_5 g_m - C_L L_L\right) + s\left(C_1 R_1 R_5 g_m - C_1 R_1 + C_L R_5 R_L g_m - C_L R_L\right) - 1}{2 g_m + s^3 \left(2 C_1 C_L L_L R_1 g_m + C_1 C_L L_L\right) + s^2 \left(C_1 C_L R_1 R_5 g_m + 2 C_1 C_L R_1 R_L g_m + C_1 C_L R_1 + C_1 C_L R_5 + C_1 C_L R_L + 2 C_L L_L g_m\right) + s\left(2 C_1 R_1 g_m + C_1 + C_L R_5 g_m + 2 C_L R_L g_m + C_L\right)}$$

9.360 X-INVALID-ORDER-360 $Z(s) = \left(R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ R_5,\ \frac{L_L R_L s}{C_L L_L R_L s^2+L_L s+R_L}\right)$

$$H(s) = \frac{s^2 \left(C_1 L_L R_1 R_5 R_L g_m - C_1 L_L R_1 R_L\right) + s\left(L_L R_5 R_L g_m - L_L R_L\right)}{R_5 R_L g_m + R_L + s^3 \left(C_1 C_L L_L R_1 R_5 R_L g_m + C_1 C_L L_L R_1 R_L + C_1 C_L L_L R_5 R_L\right) + s^2 \left(C_1 L_L R_1 R_5 g_m + 2 C_1 L_L R_1 R_L g_m + C_1 L_L R_1 + C_1 L_L R_5 + C_1 L_L R_L + C_L L_L R_5 R_L g_m + C_L L_L R_L\right) + s\left(C_1 R_1 R_5 R_L g_m + C_1 R_1 R_L + C_1 R_5 R_L + L_L R_5 g_m + 2 L_L R_L g_m + L_L\right)}$$

9.361 X-INVALID-ORDER-361 $Z(s) = \left(R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ R_5,\ \frac{C_L L_L R_L s^2+L_L s+R_L}{C_L L_L s^2+1}\right)$

$$H(s) = \frac{R_5 R_L g_m - R_L + s^3 \left(C_1 C_L L_L R_1 R_5 R_L g_m - C_1 C_L L_L R_1 R_L\right) + s^2 \left(C_1 L_L R_1 R_5 g_m - C_1 L_L R_1 + C_L L_L R_5 R_L g_m - C_L L_L R_L\right) + s\left(C_1 R_1 R_5 R_L g_m - C_1 R_1 R_L + L_L R_5 g_m - L_L\right)}{R_5 g_m + 2 R_L g_m + s^3 \left(C_1 C_L L_L R_1 R_5 g_m + 2 C_1 C_L L_L R_1 R_L g_m + C_1 C_L L_L R_1 + C_1 C_L L_L R_5 + C_1 C_L L_L R_L\right) + s^2 \left(2 C_1 L_L R_1 g_m + C_1 L_L + C_L L_L R_5 g_m + 2 C_L L_L R_L g_m + C_L L_L\right) + s\left(C_1 R_1 R_5 g_m + 2 C_1 R_1 R_L g_m + C_1 R_1 + C_1 R_5 + C_1 R_L + 2 L_L g_m\right) + 1}$$

9.362 X-INVALID-ORDER-362 $Z(s) = \left(R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ R_5,\ \frac{R_L\left(C_L L_L s^2+1\right)}{C_L L_L s^2+C_L R_L s+1}\right)$

$$H(s) = \frac{R_5 R_L g_m - R_L + s^3 \left(C_1 C_L L_L R_1 R_5 R_L g_m - C_1 C_L L_L R_1 R_L\right) + s^2 \left(C_L L_L R_5 R_L g_m - C_L L_L R_L\right) + s\left(C_1 R_1 R_5 R_L g_m - C_1 R_1 R_L\right)}{R_5 g_m + 2 R_L g_m + s^3 \left(C_1 C_L L_L R_1 R_5 g_m + 2 C_1 C_L L_L R_1 R_L g_m + C_1 C_L L_L R_1 + C_1 C_L L_L R_5 + C_1 C_L L_L R_L\right) + s^2 \left(C_1 C_L R_1 R_5 R_L g_m + C_1 C_L R_1 R_L + C_1 C_L R_5 R_L + C_L L_L R_5 g_m + 2 C_L L_L R_L g_m + C_L L_L\right) + s\left(C_1 R_1 R_5 g_m + 2 C_1 R_1 R_L g_m + C_1 R_1 + C_1 R_5 + C_1 R_L + C \cdots\right.}$$

9.363 X-INVALID-ORDER-363 $Z(s) = \left(R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_5 s},\ \frac{1}{C_L s}\right)$

$$H(s) = \frac{-C_1 C_5 R_1 s^2 + g_m + s\left(C_1 R_1 g_m - C_5\right)}{C_1 C_5 C_L R_1 s^3 + s^2 \left(2 C_1 C_5 R_1 g_m + C_1 C_5 + C_1 C_L R_1 g_m + C_1 C_L + C_5 C_L\right) + s\left(2 C_5 g_m + C_L g_m\right)}$$

9.364 X-INVALID-ORDER-364 $Z(s) = \left(R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_5 s},\ \frac{R_L}{C_L R_L s+1}\right)$

$$H(s) = \frac{-C_1C_5R_1R_Ls^2 + R_Lg_m + s\left(C_1R_1R_Lg_m - C_5R_L\right)}{C_1C_5C_LR_1R_Ls^3 + g_m + s^2\left(2C_1C_5R_1R_Lg_m + C_1C_5R_1 + C_1C_5R_L + C_1C_LR_1R_Lg_m + C_1C_LR_L + C_5C_LR_L\right) + s\left(C_1R_1g_m + C_1 + 2C_5R_Lg_m + C_5 + C_LR_Lg_m\right)}$$

9.365 X-INVALID-ORDER-365 $Z(s) = \left(R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_5 s},\ R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{-C_1C_5C_LR_1R_Ls^3 + g_m + s^2\left(-C_1C_5R_1 + C_1C_LR_1R_Lg_m - C_5C_LR_L\right) + s\left(C_1R_1g_m - C_5 + C_LR_Lg_m\right)}{s^3\left(2C_1C_5C_LR_1R_Lg_m + C_1C_5C_LR_1 + C_1C_5C_LR_L\right) + s^2\left(2C_1C_5R_1g_m + C_1C_5 + C_1C_LR_1g_m + C_1C_L + 2C_5C_LR_Lg_m + C_5C_L\right) + s\left(2C_5g_m + C_Lg_m\right)}$$

9.366 X-INVALID-ORDER-366 $Z(s) = \left(R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_5 s},\ L_Ls + \frac{1}{C_L s}\right)$

$$H(s) = \frac{-C_1C_5C_LL_LR_1s^4 + g_m + s^3\left(C_1C_LL_LR_1g_m - C_5C_LL_L\right) + s^2\left(-C_1C_5R_1 + C_LL_Lg_m\right) + s\left(C_1R_1g_m - C_5\right)}{s^4\left(2C_1C_5C_LL_LR_1g_m + C_1C_5C_LL_L\right) + s^3\left(C_1C_5C_LR_1 + 2C_5C_LL_Lg_m\right) + s^2\left(2C_1C_5R_1g_m + C_1C_5 + C_1C_LR_1g_m + C_1C_L + C_5C_L\right) + s\left(2C_5g_m + C_Lg_m\right)}$$

9.367 X-INVALID-ORDER-367 $Z(s) = \left(R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_5 s},\ \frac{L_Ls}{C_LL_Ls^2+1}\right)$

$$H(s) = \frac{-C_1C_5L_LR_1s^3 + L_Lg_ms + s^2\left(C_1L_LR_1g_m - C_5L_L\right)}{C_1C_5C_LL_LR_1s^4 + g_m + s^3\left(2C_1C_5L_LR_1g_m + C_1C_5L_L + C_1C_LL_LR_1g_m + C_1C_LL_L + C_5C_LL_L\right) + s^2\left(C_1C_5R_1 + 2C_5L_Lg_m + C_LL_Lg_m\right) + s\left(C_1R_1g_m + C_1 + C_5\right)}$$

9.368 X-INVALID-ORDER-368 $Z(s) = \left(R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_5 s},\ L_Ls + R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{-C_1C_5C_LL_LR_1s^4 + g_m + s^3\left(-C_1C_5C_LR_1R_L + C_1C_LL_LR_1g_m - C_5C_LL_L\right) + s^2\left(-C_1C_5R_1 + C_1C_LR_1R_Lg_m - C_5C_LR_L + C_LL_Lg_m\right) + s\left(C_1R_1g_m - C_5 + C_LR_Lg_m\right)}{s^4\left(2C_1C_5C_LL_LR_1g_m + C_1C_5C_LL_L\right) + s^3\left(2C_1C_5C_LR_1R_Lg_m + C_1C_5C_LR_1 + C_1C_5C_LR_L + 2C_5C_LL_Lg_m\right) + s^2\left(2C_1C_5R_1g_m + C_1C_5 + C_1C_LR_1g_m + C_1C_L + 2C_5C_LR_Lg_m + C_5C_L\right) + s\left(2C_5g_m + C_Lg_m\right)}$$

9.369 X-INVALID-ORDER-369 $Z(s) = \left(R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_5 s},\ \frac{L_LR_Ls}{C_LL_LR_Ls^2+L_Ls+R_L}\right)$

$$H(s) = \frac{-C_1C_5L_LR_1R_Ls^3 + L_LR_Lg_ms + s^2\left(C_1L_LR_1R_Lg_m - C_5L_LR_L\right)}{C_1C_5C_LL_LR_1R_Ls^4 + R_Lg_m + s^3\left(2C_1C_5L_LR_1R_Lg_m + C_1C_5L_LR_1 + C_1C_5L_LR_L + C_1C_LL_LR_1R_Lg_m + C_1C_LL_LR_L + C_5C_LL_LR_L\right) + s^2\left(C_1C_5R_1R_L + C_1L_LR_1g_m + C_1L_L + 2C_5L_LR_Lg_m + C_5L_L + C_LL_LR_Lg_m\right) + s\left(C_1R_1R_Lg_m + C_1R_L + C_5R_L + L_Lg_m\right)}$$

9.370 X-INVALID-ORDER-370 $Z(s) = \left(R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_5 s},\ \frac{C_LL_LR_Ls^2+L_Ls+R_L}{C_LL_Ls^2+1}\right)$

$$H(s) = \frac{-C_1C_5C_LL_LR_1R_Ls^4 + R_Lg_m + s^3\left(-C_1C_5L_LR_1 + C_1C_LL_LR_1R_Lg_m - C_5C_LL_LR_L\right) + s^2\left(-C_1C_5R_1R_L + C_1L_LR_1g_m - C_5L_L + C_LL_LR_Lg_m\right) + s\left(C_1R_1R_Lg_m - C_5R_L + L_Lg_m\right)}{g_m + s^4\left(2C_1C_5C_LL_LR_1R_Lg_m + C_1C_5C_LL_LR_1 + C_1C_5C_LL_LR_L\right) + s^3\left(2C_1C_5L_LR_1g_m + C_1C_5L_L + C_1C_LL_LR_1g_m + C_1C_LL_L + 2C_5C_LL_LR_Lg_m + C_5C_LL_L\right) + s^2\left(2C_1C_5R_1R_Lg_m + C_1C_5R_1 + C_1C_5R_L + 2C_5L_Lg_m + C_LL_Lg_m\right) + s\left(C_1R_1g_m + C_1 + 2C_5R_Lg_m \right.}$$

9.371 X-INVALID-ORDER-371 $Z(s) = \left(R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_5 s},\ \frac{R_L\left(C_LL_Ls^2+1\right)}{C_LL_Ls^2+C_LR_Ls+1}\right)$

$$H(s) = \frac{-C_1C_5C_LL_LR_1R_Ls^4 + R_Lg_m + s^3\left(C_1C_LL_LR_1R_Lg_m - C_5C_LL_LR_L\right) + s^2\left(-C_1C_5R_1R_L + C_LL_LR_Lg_m\right) + s\left(C_1R_1R_Lg_m - C_5R_L\right)}{g_m + s^4\left(2C_1C_5C_LL_LR_1R_Lg_m + C_1C_5C_LL_LR_1 + C_1C_5C_LL_LR_L\right) + s^3\left(C_1C_5C_LR_1R_L + C_1C_LL_LR_1g_m + C_1C_LL_L + 2C_5C_LL_LR_Lg_m + C_5C_LL_L\right) + s^2\left(2C_1C_5R_1R_Lg_m + C_1C_5R_1 + C_1C_5R_L + C_1C_LR_1R_Lg_m + C_1C_LR_L + C_5C_LR_L + C_LL_Lg_m\right) + s\left(C_1R_1g_m + \right.}$$

9.372 X-INVALID-ORDER-372 $Z(s) = \left(R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{R_5}{C_5R_5s+1},\ \frac{1}{C_L s}\right)$

$$H(s) = \frac{-C_1C_5R_1R_5s^2 + R_5g_m + s\left(C_1R_1R_5g_m - C_1R_1 - C_5R_5\right) - 1}{C_1C_5C_LR_1R_5s^3 + 2g_m + s^2\left(2C_1C_5R_1R_5g_m + C_1C_5R_5 + C_1C_LR_1R_5g_m + C_1C_LR_1 + C_1C_LR_5 + C_5C_LR_5\right) + s\left(2C_1R_1g_m + C_1 + 2C_5R_5g_m + C_LR_5g_m + C_L\right)}$$

9.373 X-INVALID-ORDER-373 $Z(s) = \left(R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{R_5}{C_5 R_5 s+1},\ \frac{R_L}{C_L R_L s+1}\right)$

$$H(s) = \frac{-C_1C_5R_1R_5R_Ls^2 + R_5R_Lg_m - R_L + s\left(C_1R_1R_5R_Lg_m - C_1R_1R_L - C_5R_5R_L\right)}{C_1C_5C_LR_1R_5R_Ls^3 + R_5g_m + 2R_Lg_m + s^2\left(2C_1C_5R_1R_5R_Lg_m + C_1C_5R_1R_5 + C_1C_5R_5R_L + C_1C_LR_1R_5R_Lg_m + C_1C_LR_1R_L + C_1C_LR_5R_L + C_5C_LR_5R_L\right) + s\left(C_1R_1R_5g_m + 2C_1R_1R_Lg_m + C_1R_1 + C_1R_5 + C_1R_L + 2C_5R_5R_Lg_m + C_5R_5 + C_LR_5R_Lg_m + C_LR_L\right)}$$

9.374 X-INVALID-ORDER-374 $Z(s) = \left(R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{R_5}{C_5 R_5 s+1},\ R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{-C_1C_5C_LR_1R_5R_Ls^3 + R_5g_m + s^2\left(-C_1C_5R_1R_5 + C_1C_LR_1R_5R_Lg_m - C_1C_LR_1R_L - C_5C_LR_5R_L\right) + s\left(C_1R_1R_5g_m - C_1R_1 - C_5R_5 + C_LR_5R_Lg_m - C_LR_L\right) - 1}{2g_m + s^3\left(2C_1C_5C_LR_1R_5R_Lg_m + C_1C_5C_LR_1R_5 + C_1C_5C_LR_5R_L\right) + s^2\left(2C_1C_5R_1R_5g_m + C_1C_5R_5 + C_1C_LR_1R_5g_m + 2C_1C_LR_1R_Lg_m + C_1C_LR_1 + C_1C_LR_5 + C_1C_LR_L + 2C_5C_LR_5R_Lg_m + C_5C_LR_5\right) + s\left(2C_1R_1g_m + C_1 + 2C_5R_5g_m + C_LR_5g_m + 2C_LR_Lg_m + \right.}$$

9.375 X-INVALID-ORDER-375 $Z(s) = \left(R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{R_5}{C_5 R_5 s+1},\ L_L s + \frac{1}{C_L s}\right)$

$$H(s) = \frac{-C_1C_5C_LL_LR_1R_5s^4 + R_5g_m + s^3\left(C_1C_LL_LR_1R_5g_m - C_1C_LL_LR_1 - C_5C_LL_LR_5\right) + s^2\left(-C_1C_5R_1R_5 + C_LL_LR_5g_m - C_LL_L\right) + s\left(C_1R_1R_5g_m - C_1R_1 - C_5R_5\right) - 1}{2g_m + s^4\left(2C_1C_5C_LL_LR_1R_5g_m + C_1C_5C_LL_LR_5\right) + s^3\left(C_1C_5C_LR_1R_5 + 2C_1C_LL_LR_1g_m + C_1C_LL_L + 2C_5C_LL_LR_5g_m\right) + s^2\left(2C_1C_5R_1R_5g_m + C_1C_5R_5 + C_1C_LR_1R_5g_m + C_1C_LR_1 + C_1C_LR_5 + C_5C_LR_5 + 2C_LL_Lg_m\right) + s\left(2C_1R_1g_m + C_1 + 2C_5R_5g_m + C_LR_5g_m\right.}$$

9.376 X-INVALID-ORDER-376 $Z(s) = \left(R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{R_5}{C_5 R_5 s+1},\ \frac{L_L s}{C_L L_L s^2+1}\right)$

$$H(s) = \frac{-C_1C_5L_LR_1R_5s^3 + s^2\left(C_1L_LR_1R_5g_m - C_1L_LR_1 - C_5L_LR_5\right) + s\left(L_LR_5g_m - L_L\right)}{C_1C_5C_LL_LR_1R_5s^4 + R_5g_m + s^3\left(2C_1C_5L_LR_1R_5g_m + C_1C_5L_LR_5 + C_1C_LL_LR_1R_5g_m + C_1C_LL_LR_1 + C_1C_LL_LR_5 + C_5C_LL_LR_5\right) + s^2\left(C_1C_5R_1R_5 + 2C_1L_LR_1g_m + C_1L_L + 2C_5L_LR_5g_m + C_LL_LR_5g_m + C_LL_L\right) + s\left(C_1R_1R_5g_m + C_1R_1 + C_1R_5 + C_5R_5 + 2L_Lg_m\right.}$$

9.377 X-INVALID-ORDER-377 $Z(s) = \left(R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{R_5}{C_5 R_5 s+1},\ L_L s + R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{-C_1C_5C_LL_LR_1R_5s^4 + R_5g_m + s^3\left(-C_1C_5C_LR_1R_5R_L + C_1C_LL_LR_1R_5g_m - C_1C_LL_LR_1 - C_5C_LL_LR_5\right) + s^2\left(-C_1C_5R_1R_5 + C_1C_LR_1R_5R_Lg_m - C_1C_LR_1R_L - C_5C_LR_5R_L + C_LL_LR_5g_m - C_LL_L\right) + s\left(C_1\right.}{2g_m + s^4\left(2C_1C_5C_LL_LR_1R_5g_m + C_1C_5C_LL_LR_5\right) + s^3\left(2C_1C_5C_LR_1R_5R_Lg_m + C_1C_5C_LR_1R_5 + C_1C_5C_LR_5R_L + 2C_1C_LL_LR_1g_m + C_1C_LL_L + 2C_5C_LL_LR_5g_m\right) + s^2\left(2C_1C_5R_1R_5g_m + C_1C_5R_5 + C_1C_LR_1R_5g_m + 2C_1C_LR_1R_Lg_m + C_1C_LR_1 + C_1C_LR_5 + C_1C_L\right.}$$

9.378 X-INVALID-ORDER-378 $Z(s) = \left(R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{R_5}{C_5 R_5 s+1},\ \frac{L_L R_L s}{C_L L_L R_L s^2+L_L s+R_L}\right)$

$$H(s) = \frac{-C_1C_5L_LR_1R_5R_Ls^3 + s^2\left(C_1L_LR_1R_5R_Lg_m - C_1L_LR_1R_L - C_5L_LR_5R_L\right) + s\left(L_LR_5R_Lg_m - L_LR_L\right)}{C_1C_5C_LL_LR_1R_5R_Ls^4 + R_5R_Lg_m + R_L + s^3\left(2C_1C_5L_LR_1R_5R_Lg_m + C_1C_5L_LR_1R_5 + C_1C_5L_LR_5R_L + C_1C_LL_LR_1R_5R_Lg_m + C_1C_LL_LR_1R_L + C_1C_LL_LR_5R_L + C_5C_LL_LR_5R_L\right) + s^2\left(C_1C_5R_1R_5R_L + C_1L_LR_1R_5g_m + 2C_1L_LR_1R_Lg_m + C_1L_LR_1 + C_1L_LR_5 + C\right.}$$

9.379 X-INVALID-ORDER-379 $Z(s) = \left(R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{R_5}{C_5 R_5 s+1},\ \frac{C_L L_L R_L s^2+L_L s+R_L}{C_L L_L s^2+1}\right)$

$$H(s) = \frac{-C_1C_5C_LL_LR_1R_5R_Ls^4 + R_5R_Lg_m - R_L + s^3\left(-C_1C_5L_LR_1R_5 + C_1C_LL_LR_1R_5R_Lg_m - C_1C_LL_LR_1R_L - C_5C_LL_LR_5R_L\right) + s^2\left(-C_1C_5R_1R_5R_L + C_1L_LR_1R_5g_m\right.}{R_5g_m + 2R_Lg_m + s^4\left(2C_1C_5C_LL_LR_1R_5R_Lg_m + C_1C_5C_LL_LR_1R_5 + C_1C_5C_LL_LR_5R_L\right) + s^3\left(2C_1C_5L_LR_1R_5g_m + C_1C_5L_LR_5 + C_1C_LL_LR_1R_5g_m + 2C_1C_LL_LR_1R_Lg_m + C_1C_LL_LR_1 + C_1C_LL_LR_5 + C_1C_LL_LR_L + 2C_5C_LL_LR_5R_Lg_m + C_5C_LL_LR_5\right) + s^2\left(2C_1C_5\right.}$$

9.380 X-INVALID-ORDER-380 $Z(s) = \left(R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{R_5}{C_5 R_5 s+1},\ \frac{R_L\left(C_L L_L s^2+1\right)}{C_L L_L s^2+C_L R_L s+1}\right)$

$$H(s) = \frac{-C_1C_5C_LL_LR_1R_5R_Ls^4 + R_5R_Lg_m - R_L + s^3\left(C_1C_LL_LR_1R_5R_Lg_m - C_1C_LL_LR_1R_L - C_5C_LL_LR_5R_L\right) + s^2\left(-\right.}{R_5g_m + 2R_Lg_m + s^4\left(2C_1C_5C_LL_LR_1R_5R_Lg_m + C_1C_5C_LL_LR_1R_5 + C_1C_5C_LL_LR_5R_L\right) + s^3\left(C_1C_5C_LR_1R_5R_L + C_1C_LL_LR_1R_5g_m + 2C_1C_LL_LR_1R_Lg_m + C_1C_LL_LR_1 + C_1C_LL_LR_5 + C_1C_LL_LR_L + 2C_5C_LL_LR_5R_Lg_m + C_5C_LL_LR_5\right) + s^2\left(2C_1C_5R_1R_5R_Lg_m + \right.}$$

9.381 X-INVALID-ORDER-381 $Z(s) = \left(R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ R_5 + \frac{1}{C_5 s},\ \frac{1}{C_L s}\right)$

$$H(s) = \frac{g_m + s^2\left(C_1C_5R_1R_5g_m - C_1C_5R_1\right) + s\left(C_1R_1g_m + C_5R_5g_m - C_5\right)}{s^3\left(C_1C_5C_LR_1R_5g_m + C_1C_5C_LR_1 + C_1C_5C_LR_5\right) + s^2\left(2C_1C_5R_1g_m + C_1C_5 + C_1C_LR_1g_m + C_1C_L + C_5C_LR_5g_m + C_5C_L\right) + s\left(2C_5g_m + C_Lg_m\right)}$$

9.382 X-INVALID-ORDER-382 $Z(s) = \left(R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ R_5 + \frac{1}{C_5 s},\ \frac{R_L}{C_L R_L s+1}\right)$

$$H(s) = \frac{R_L g_m + s^2 (C_1 C_5 R_1 R_5 R_L g_m - C_1 C_5 R_1 R_L) + s (C_1 R_1 R_L g_m + C_5 R_5 R_L g_m - C_5 R_L)}{g_m + s^3 (C_1 C_5 C_L R_1 R_5 R_L g_m + C_1 C_5 C_L R_1 R_L + C_1 C_5 C_L R_5 R_L) + s^2 (C_1 C_5 R_1 R_5 g_m + 2 C_1 C_5 R_1 R_L g_m + C_1 C_5 R_1 + C_1 C_5 R_5 + C_1 C_5 R_L + C_1 C_L R_1 R_L g_m + C_1 C_L R_L + C_5 C_L R_5 R_L g_m + C_5 C_L R_L) + s (C_1 R_1 g_m + C_1 + C_5 R_5 g_m + 2 C_5 R_L g_m + C_5 + C_L R_L g_m)}$$

9.383 X-INVALID-ORDER-383 $Z(s) = \left(R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ R_5 + \frac{1}{C_5 s},\ R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{g_m + s^3 (C_1 C_5 C_L R_1 R_5 R_L g_m - C_1 C_5 C_L R_1 R_L) + s^2 (C_1 C_5 R_1 R_5 g_m - C_1 C_5 R_1 + C_1 C_L R_1 R_L g_m + C_5 C_L R_5 R_L g_m - C_5 C_L R_L) + s (C_1 R_1 g_m + C_5 R_5 g_m - C_5 + C_L R_L g_m)}{s^3 (C_1 C_5 C_L R_1 R_5 g_m + 2 C_1 C_5 C_L R_1 R_L g_m + C_1 C_5 C_L R_1 + C_1 C_5 C_L R_5 + C_1 C_5 C_L R_L) + s^2 (2 C_1 C_5 R_1 g_m + C_1 C_5 + C_1 C_L R_1 g_m + C_1 C_L + C_5 C_L R_5 g_m + 2 C_5 C_L R_L g_m + C_5 C_L) + s (2 C_5 g_m + C_L g_m)}$$

9.384 X-INVALID-ORDER-384 $Z(s) = \left(R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ R_5 + \frac{1}{C_5 s},\ L_L s + \frac{1}{C_L s}\right)$

$$H(s) = \frac{g_m + s^4 (C_1 C_5 C_L L_L R_1 R_5 g_m - C_1 C_5 C_L L_L R_1) + s^3 (C_1 C_L L_L R_1 g_m + C_5 C_L L_L R_5 g_m - C_5 C_L L_L) + s^2 (C_1 C_5 R_1 R_5 g_m - C_1 C_5 R_1 + C_L L_L g_m) + s (C_1 R_1 g_m + C_5 R_5 g_m - C_5)}{s^4 (2 C_1 C_5 C_L L_L R_1 g_m + C_1 C_5 C_L L_L) + s^3 (C_1 C_5 C_L R_1 R_5 g_m + C_1 C_5 C_L R_1 + C_1 C_5 C_L R_5 + 2 C_5 C_L L_L g_m) + s^2 (2 C_1 C_5 R_1 g_m + C_1 C_5 + C_1 C_L R_1 g_m + C_1 C_L + C_5 C_L R_5 g_m + C_5 C_L) + s (2 C_5 g_m + C_L g_m)}$$

9.385 X-INVALID-ORDER-385 $Z(s) = \left(R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ R_5 + \frac{1}{C_5 s},\ \frac{L_L s}{C_L L_L s^2+1}\right)$

$$H(s) = \frac{L_L g_m s + s^3 (C_1 C_5 L_L R_1 R_5 g_m - C_1 C_5 L_L R_1) + s^2 (C_1 L_L R_1 g_m + C_5 L_L R_5 g_m - C_5 L_L)}{g_m + s^4 (C_1 C_5 C_L L_L R_1 R_5 g_m + C_1 C_5 C_L L_L R_1 + C_1 C_5 C_L L_L R_5) + s^3 (2 C_1 C_5 L_L R_1 g_m + C_1 C_5 L_L + C_1 C_L L_L R_1 g_m + C_1 C_L L_L + C_5 C_L L_L R_5 g_m + C_5 C_L L_L) + s^2 (C_1 C_5 R_1 R_5 g_m + C_1 C_5 R_1 + C_1 C_5 R_5 + 2 C_5 L_L g_m + C_L L_L g_m) + s (C_1 R_1 g_m + C_1 + C_5 R_5 g_m + C_5)}$$

9.386 X-INVALID-ORDER-386 $Z(s) = \left(R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ R_5 + \frac{1}{C_5 s},\ L_L s + R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{g_m + s^4 (C_1 C_5 C_L L_L R_1 R_5 g_m - C_1 C_5 C_L L_L R_1) + s^3 (C_1 C_5 C_L R_1 R_5 R_L g_m - C_1 C_5 C_L R_1 R_L + C_1 C_L L_L R_1 g_m + C_5 C_L L_L R_5 g_m - C_5 C_L L_L) + s^2 (C_1 C_5 R_1 R_5 g_m - C_1 C_5 R_1 + C_1 C_L R_1 R_L g_m + C_5 C_L R_5 R_L g_m - C_5 C_L R_L + C_L L_L g_m) + s (C_1 R_1 g_m + C_5 R_5 g_m - C_5 +}{s^4 (2 C_1 C_5 C_L L_L R_1 g_m + C_1 C_5 C_L L_L) + s^3 (C_1 C_5 C_L R_1 R_5 g_m + 2 C_1 C_5 C_L R_1 R_L g_m + C_1 C_5 C_L R_1 + C_1 C_5 C_L R_5 + C_1 C_5 C_L R_L + 2 C_5 C_L L_L g_m) + s^2 (2 C_1 C_5 R_1 g_m + C_1 C_5 + C_1 C_L R_1 g_m + C_1 C_L + C_5 C_L R_5 g_m + 2 C_5 C_L R_L g_m + C_5 C_L) + s (2 C_5 g_m + C_L g_m)}$$

9.387 X-INVALID-ORDER-387 $Z(s) = \left(R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ R_5 + \frac{1}{C_5 s},\ \frac{L_L R_L s}{C_L L_L R_L s^2+L_L s+R_L}\right)$

$$H(s) = \frac{L_L R_L g_m s + s^3 (C_1 C_5 L_L R_1 R_5 R_L g_m - C_1 C_5 L_L R_1 R_L) + s^2 (C_1 L_L R_1 R_L g_m + C_5 L_L R_5 R_L g_m - C_5 L_L R}{R_L g_m + s^4 (C_1 C_5 C_L L_L R_1 R_5 R_L g_m + C_1 C_5 C_L L_L R_1 R_L + C_1 C_5 C_L L_L R_5 R_L) + s^3 (C_1 C_5 L_L R_1 R_5 g_m + 2 C_1 C_5 L_L R_1 R_L g_m + C_1 C_5 L_L R_1 + C_1 C_5 L_L R_5 + C_1 C_5 L_L R_L + C_1 C_L L_L R_1 R_L g_m + C_1 C_L L_L R_L + C_5 C_L L_L R_5 R_L g_m + C_5 C_L L_L R_L) + s^2 (C_1 C_5 R_1 R_5 R_L g_m +}$$

9.388 X-INVALID-ORDER-388 $Z(s) = \left(R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ R_5 + \frac{1}{C_5 s},\ \frac{C_L L_L R_L s^2+L_L s+R_L}{C_L L_L s^2+1}\right)$

$$H(s) = \frac{R_L g_m + s^4 (C_1 C_5 C_L L_L R_1 R_5 R_L g_m - C_1 C_5 C_L L_L R_1 R_L) + s^3 (C_1 C_5 L_L R_1 R_5 g_m - C_1 C_5 L_L R_1 + C_1 C_L L_L R_1 R_L g_m + C_5 C_L L_L R_5 R_L g_m - C_5 C_L L_L R_L) + s^2 (C_1 C_5 R_1 R_5 R_L g_m - C_1 C_5 R_1 R_L + C_1 L_L R_1 g_m + C_5 L_L R_5 g_m - C_5 L_L}{g_m + s^4 (C_1 C_5 C_L L_L R_1 R_5 g_m + 2 C_1 C_5 C_L L_L R_1 R_L g_m + C_1 C_5 C_L L_L R_1 + C_1 C_5 C_L L_L R_5 + C_1 C_5 C_L L_L R_L) + s^3 (2 C_1 C_5 L_L R_1 g_m + C_1 C_5 L_L + C_1 C_L L_L R_1 g_m + C_1 C_L L_L + C_5 C_L L_L R_5 g_m + 2 C_5 C_L L_L R_L g_m + C_5 C_L L_L) + s^2 (C_1 C_5 R_1 R_5 g_m + 2 C_1 C_5 R_1 R_L g_m + C_1 C}$$

9.389 X-INVALID-ORDER-389 $Z(s) = \left(R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ R_5 + \frac{1}{C_5 s},\ \frac{R_L\left(C_L L_L s^2+1\right)}{C_L L_L s^2+C_L R_L s+1}\right)$

$$H(s) = \frac{R_L g_m + s^4 (C_1 C_5 C_L L_L R_1 R_5 R_L g_m - C_1 C_5 C_L L_L R_1 R_L) + s^3 (C_1 C_L L_L R_1 R_L g_m + C_5 C_L L_L R_5 R_L g_m - C_5 C_L L_L R_L) + s^2 (C_1 C_5 R_1 R_5 R_L g_m -}{g_m + s^4 (C_1 C_5 C_L L_L R_1 R_5 g_m + 2 C_1 C_5 C_L L_L R_1 R_L g_m + C_1 C_5 C_L L_L R_1 + C_1 C_5 C_L L_L R_5 + C_1 C_5 C_L L_L R_L) + s^3 (C_1 C_5 C_L R_1 R_5 R_L g_m + C_1 C_5 C_L R_1 R_L + C_1 C_5 C_L R_5 R_L + C_1 C_L L_L R_1 g_m + C_1 C_L L_L + C_5 C_L L_L R_5 g_m + 2 C_5 C_L L_L R_L g_m + C_5 C_L L_L) + s^2 (C_1 C_5 R_1 R_5}$$

9.390 X-INVALID-ORDER-390 $Z(s) = \left(R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ L_5 s + \frac{1}{C_5 s},\ R_L\right)$

$$H(s) = \frac{C_1 C_5 L_5 R_1 R_L g_m s^3 + R_L g_m + s^2 (-C_1 C_5 R_1 R_L + C_5 L_5 R_L g_m) + s (C_1 R_1 R_L g_m - C_5 R_L)}{g_m + s^3 (C_1 C_5 L_5 R_1 g_m + C_1 C_5 L_5) + s^2 (2 C_1 C_5 R_1 R_L g_m + C_1 C_5 R_1 + C_1 C_5 R_L + C_5 L_5 g_m) + s (C_1 R_1 g_m + C_1 + 2 C_5 R_L g_m + C_5)}$$

9.391 X-INVALID-ORDER-391 $Z(s) = \left(R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ L_5 s + \frac{1}{C_5 s},\ \frac{1}{C_L s}\right)$

$$H(s) = \frac{C_1 C_5 L_5 R_1 g_m s^3 + g_m + s^2 \left(-C_1 C_5 R_1 + C_5 L_5 g_m\right) + s \left(C_1 R_1 g_m - C_5\right)}{s^4 \left(C_1 C_5 C_L L_5 R_1 g_m + C_1 C_5 C_L L_5\right) + s^3 \left(C_1 C_5 C_L R_1 + C_5 C_L L_5 g_m\right) + s^2 \left(2 C_1 C_5 R_1 g_m + C_1 C_5 + C_1 C_L R_1 g_m + C_1 C_L + C_5 C_L\right) + s \left(2 C_5 g_m + C_L g_m\right)}$$

9.392 X-INVALID-ORDER-392 $Z(s) = \left(R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ L_5 s + \frac{1}{C_5 s},\ \frac{R_L}{C_L R_L s + 1}\right)$

$$H(s) = \frac{C_1 C_5 L_5 R_1 R_L g_m s^3 + R_L g_m + s^2 \left(-C_1 C_5 R_1 R_L + C_5 L_5 R_L g_m\right) + s \left(C_1 R_1 R_L g_m - C_5 R_L\right)}{g_m + s^4 \left(C_1 C_5 C_L L_5 R_1 R_L g_m + C_1 C_5 C_L L_5 R_L\right) + s^3 \left(C_1 C_5 C_L R_1 R_L + C_1 C_5 L_5 R_1 g_m + C_1 C_5 L_5 + C_5 C_L L_5 R_L g_m\right) + s^2 \left(2 C_1 C_5 R_1 R_L g_m + C_1 C_5 R_1 + C_1 C_5 R_L + C_1 C_L R_1 R_L g_m + C_1 C_L R_L + C_5 C_L R_L + C_5 L_5 g_m\right) + s \left(C_1 R_1 g_m + C_1 + 2 C_5 R_L g_m + C_5 + C_L R_L g_m\right)}$$

9.393 X-INVALID-ORDER-393 $Z(s) = \left(R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ L_5 s + \frac{1}{C_5 s},\ R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{C_1 C_5 C_L L_5 R_1 R_L g_m s^4 + g_m + s^3 \left(-C_1 C_5 C_L R_1 R_L + C_1 C_5 L_5 R_1 g_m + C_5 C_L L_5 R_L g_m\right) + s^2 \left(-C_1 C_5 R_1 + C_1 C_L R_1 R_L g_m - C_5 C_L R_L + C_5 L_5 g_m\right) + s \left(C_1 R_1 g_m - C_5 + C_L R_L g_m\right)}{s^4 \left(C_1 C_5 C_L L_5 R_1 g_m + C_1 C_5 C_L L_5\right) + s^3 \left(2 C_1 C_5 C_L R_1 R_L g_m + C_1 C_5 C_L R_1 + C_1 C_5 C_L R_L + C_5 C_L L_5 g_m\right) + s^2 \left(2 C_1 C_5 R_1 g_m + C_1 C_5 + C_1 C_L R_1 g_m + C_1 C_L + 2 C_5 C_L R_L g_m + C_5 C_L\right) + s \left(2 C_5 g_m + C_L g_m\right)}$$

9.394 X-INVALID-ORDER-394 $Z(s) = \left(R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ L_5 s + \frac{1}{C_5 s},\ L_L s + \frac{1}{C_L s}\right)$

$$H(s) = \frac{C_1 C_5 C_L L_5 L_L R_1 g_m s^5 + g_m + s^4 \left(-C_1 C_5 C_L L_L R_1 + C_5 C_L L_5 L_L g_m\right) + s^3 \left(C_1 C_5 L_5 R_1 g_m + C_1 C_L L_L R_1 g_m - C_5 C_L L_L\right) + s^2 \left(-C_1 C_5 R_1 + C_5 L_5 g_m + C_L L_L g_m\right) + s \left(C_1 R_1 g_m - C_5\right)}{s^4 \left(C_1 C_5 C_L L_5 R_1 g_m + C_1 C_5 C_L L_5 + 2 C_1 C_5 C_L L_L R_1 g_m + C_1 C_5 C_L L_L\right) + s^3 \left(C_1 C_5 C_L R_1 + C_5 C_L L_5 g_m + 2 C_5 C_L L_L g_m\right) + s^2 \left(2 C_1 C_5 R_1 g_m + C_1 C_5 + C_1 C_L R_1 g_m + C_1 C_L + C_5 C_L\right) + s \left(2 C_5 g_m + C_L g_m\right)}$$

9.395 X-INVALID-ORDER-395 $Z(s) = \left(R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ L_5 s + \frac{1}{C_5 s},\ \frac{L_L s}{C_L L_L s^2 + 1}\right)$

$$H(s) = \frac{C_1 C_5 L_5 L_L R_1 g_m s^4 + L_L g_m s + s^3 \left(-C_1 C_5 L_L R_1 + C_5 L_5 L_L g_m\right) + s^2 \left(C_1 L_L R_1 g_m - C_5 L_L\right)}{g_m + s^5 \left(C_1 C_5 C_L L_5 L_L R_1 g_m + C_1 C_5 C_L L_5 L_L\right) + s^4 \left(C_1 C_5 C_L L_L R_1 + C_5 C_L L_5 L_L g_m\right) + s^3 \left(C_1 C_5 L_5 R_1 g_m + C_1 C_5 L_5 + 2 C_1 C_5 L_L R_1 g_m + C_1 C_5 L_L + C_1 C_L L_L R_1 g_m + C_1 C_L L_L + C_5 C_L L_L\right) + s^2 \left(C_1 C_5 R_1 + C_5 L_5 g_m + 2 C_5 L_L g_m + C_L L_L g_m\right) + s \left(C_1 R_1 g_m + C_1 + C\right.}$$

9.396 X-INVALID-ORDER-396 $Z(s) = \left(R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ L_5 s + \frac{1}{C_5 s},\ L_L s + R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{C_1 C_5 C_L L_5 L_L R_1 g_m s^5 + g_m + s^4 \left(C_1 C_5 C_L L_5 R_1 R_L g_m - C_1 C_5 C_L L_L R_1 + C_5 C_L L_5 L_L g_m\right) + s^3 \left(-C_1 C_5 C_L R_1 R_L + C_1 C_5 L_5 R_1 g_m + C_1 C_L L_L R_1 g_m + C_5 C_L L_5 R_L g_m - C_5 C_L L_L\right) + s^2 \left(-C_1 C_5 R_1 + C_1 C_L R_1 R_L g_m - C_5 C_L R_L + C_5 L_5 g_m + C_L L_L g_m\right) + s \left(C_1 R_1 g_m - C\right.}{s^4 \left(C_1 C_5 C_L L_5 R_1 g_m + C_1 C_5 C_L L_5 + 2 C_1 C_5 C_L L_L R_1 g_m + C_1 C_5 C_L L_L\right) + s^3 \left(2 C_1 C_5 C_L R_1 R_L g_m + C_1 C_5 C_L R_1 + C_1 C_5 C_L R_L + C_5 C_L L_5 g_m + 2 C_5 C_L L_L g_m\right) + s^2 \left(2 C_1 C_5 R_1 g_m + C_1 C_5 + C_1 C_L R_1 g_m + C_1 C_L + 2 C_5 C_L R_L g_m + C_5 C_L\right) + s \left(2 C_5 g_m + C_L g\right.}$$

9.397 X-INVALID-ORDER-397 $Z(s) = \left(R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ L_5 s + \frac{1}{C_5 s},\ \frac{L_L R_L s}{C_L L_L R_L s^2 + L_L s + R_L}\right)$

$$H(s) = \frac{C_1 C_5 L_5 L_L R_1 R_L g_m s^4 + L_L R_L g_m s + s^3 \left(-C_1 C_5 L_L R_1 R_L + C_5 L_5 L_L R_L g_m\right) + s^2 \left(C_1 L_L R_1 R_L g_m - C_5 L\right.}{R_L g_m + s^5 \left(C_1 C_5 C_L L_5 L_L R_1 R_L g_m + C_1 C_5 C_L L_5 L_L R_L\right) + s^4 \left(C_1 C_5 C_L L_L R_1 R_L + C_1 C_5 L_5 L_L R_1 g_m + C_1 C_5 L_5 L_L + C_5 C_L L_5 L_L R_L g_m\right) + s^3 \left(C_1 C_5 L_5 R_1 R_L g_m + C_1 C_5 L_5 R_L + 2 C_1 C_5 L_L R_1 R_L g_m + C_1 C_5 L_L R_1 + C_1 C_5 L_L R_L + C_1 C_L L_L R_1 R_L g_m + C_1 C_L L_L R_L + C\right.}$$

9.398 X-INVALID-ORDER-398 $Z(s) = \left(R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ L_5 s + \frac{1}{C_5 s},\ \frac{C_L L_L R_L s^2 + L_L s + R_L}{C_L L_L s^2 + 1}\right)$

$$H(s) = \frac{C_1 C_5 C_L L_5 L_L R_1 R_L g_m s^5 + R_L g_m + s^4 \left(-C_1 C_5 C_L L_L R_1 R_L + C_1 C_5 L_5 L_L R_1 g_m + C_5 C_L L_5 L_L R_L g_m\right) + s^3 \left(C_1 C_5 L_5 R_1 R_L g_m - C_1 C_5 L_L R_1 + C_1 C_L L_L R_1 R_L g_m - C_5 C_L L_L R_L + C_5 L_5 L_L g_m\right) + s^2 \left(-C_1 C_5 R_1 R_L + C_1 L_L R_1 g_m + C\right.}{g_m + s^5 \left(C_1 C_5 C_L L_5 L_L R_1 g_m + C_1 C_5 C_L L_5 L_L\right) + s^4 \left(2 C_1 C_5 C_L L_L R_1 R_L g_m + C_1 C_5 C_L L_L R_1 + C_1 C_5 C_L L_L R_L + C_5 C_L L_5 L_L g_m\right) + s^3 \left(C_1 C_5 L_5 R_1 g_m + C_1 C_5 L_5 + 2 C_1 C_5 L_L R_1 g_m + C_1 C_5 L_L + C_1 C_L L_L R_1 g_m + C_1 C_L L_L + 2 C_5 C_L L_L R_L g_m + C_5 C_L L_L\right) + s^2 \left(2 C_1 C_5 R\right.}$$

9.399 X-INVALID-ORDER-399 $Z(s) = \left(R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ L_5 s + \frac{1}{C_5 s},\ \frac{R_L \left(C_L L_L s^2 + 1\right)}{C_L L_L s^2 + C_L R_L s + 1}\right)$

$$H(s) = \frac{C_1 C_5 C_L L_5 L_L R_1 R_L g_m s^5 + R_L g_m + s^4 \left(-C_1 C_5 C_L L_L R_1 R_L + C_5 C_L L_5 L_L R_L g_m\right) + s^3 \left(C_1 C_5 L_5 R_1 R_L g_m + C_1 C_L L_L R_1 R_L g_m - C_5 C_L L_L R_L\right) + s\right.}{g_m + s^5 \left(C_1 C_5 C_L L_5 L_L R_1 g_m + C_1 C_5 C_L L_5 L_L\right) + s^4 \left(C_1 C_5 C_L L_5 R_1 R_L g_m + C_1 C_5 C_L L_5 R_L + 2 C_1 C_5 C_L L_L R_1 R_L g_m + C_1 C_5 C_L L_L R_1 + C_1 C_5 C_L L_L R_L + C_5 C_L L_5 L_L g_m\right) + s^3 \left(C_1 C_5 C_L R_1 R_L + C_1 C_5 L_5 R_1 g_m + C_1 C_5 L_5 + C_1 C_L L_L R_1 g_m + C_1 C_L L_L + C_5 C_L L_5 R_L g_m\right.}$$

9.400 X-INVALID-ORDER-400 $Z(s) = \left(R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{L_5 s}{C_5 L_5 s^2+1},\ R_L\right)$

$$H(s) = \frac{-C_1C_5L_5R_1R_Ls^3 - R_L + s^2\left(C_1L_5R_1R_Lg_m - C_5L_5R_L\right) + s\left(-C_1R_1R_L + L_5R_Lg_m\right)}{2R_Lg_m + s^3\left(2C_1C_5L_5R_1R_Lg_m + C_1C_5L_5R_1 + C_1C_5L_5R_L\right) + s^2\left(C_1L_5R_1g_m + C_1L_5 + 2C_5L_5R_Lg_m + C_5L_5\right) + s\left(2C_1R_1R_Lg_m + C_1R_1 + C_1R_L + L_5g_m\right) + 1}$$

9.401 X-INVALID-ORDER-401 $Z(s) = \left(R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{L_5 s}{C_5 L_5 s^2+1},\ \frac{1}{C_L s}\right)$

$$H(s) = \frac{-C_1C_5L_5R_1s^3 + s^2\left(C_1L_5R_1g_m - C_5L_5\right) + s\left(-C_1R_1 + L_5g_m\right) - 1}{C_1C_5C_LL_5R_1s^4 + 2g_m + s^3\left(2C_1C_5L_5R_1g_m + C_1C_5L_5 + C_1C_LL_5R_1g_m + C_1C_LL_5 + C_5C_LL_5\right) + s^2\left(C_1C_LR_1 + 2C_5L_5g_m + C_LL_5g_m\right) + s\left(2C_1R_1g_m + C_1 + C_L\right)}$$

9.402 X-INVALID-ORDER-402 $Z(s) = \left(R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{L_5 s}{C_5 L_5 s^2+1},\ \frac{R_L}{C_L R_L s+1}\right)$

$$H(s) = \frac{-C_1C_5L_5R_1R_Ls^3 - R_L + s^2\left(C_1L_5R_1R_Lg_m - C_5L_5R_L\right) + s\left(-C_1R_1R_L + L_5R_Lg_m\right)}{C_1C_5C_LL_5R_1R_Ls^4 + 2R_Lg_m + s^3\left(2C_1C_5L_5R_1R_Lg_m + C_1C_5L_5R_1 + C_1C_5L_5R_L + C_1C_LL_5R_1R_Lg_m + C_1C_LL_5R_L + C_5C_LL_5R_L\right) + s^2\left(C_1C_LR_1R_L + C_1L_5R_1g_m + C_1L_5 + 2C_5L_5R_Lg_m + C_5L_5 + C_LL_5R_Lg_m\right) + s\left(2C_1R_1R_Lg_m + C_1R_1 + C_1R_L + C_LR_L + L_5g_m\right.}$$

9.403 X-INVALID-ORDER-403 $Z(s) = \left(R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{L_5 s}{C_5 L_5 s^2+1},\ R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{-C_1C_5C_LL_5R_1R_Ls^4 + s^3\left(-C_1C_5L_5R_1 + C_1C_LL_5R_1R_Lg_m - C_5C_LL_5R_L\right) + s^2\left(-C_1C_LR_1R_L + C_1L_5R_1g_m - C_5L_5 + C_LL_5R_Lg_m\right) + s\left(-C_1R_1 - C_LR_L + L_5g_m\right) - 1}{2g_m + s^4\left(2C_1C_5C_LL_5R_1R_Lg_m + C_1C_5C_LL_5R_1 + C_1C_5C_LL_5R_L\right) + s^3\left(2C_1C_5L_5R_1g_m + C_1C_5L_5 + C_1C_LL_5R_1g_m + C_1C_LL_5 + 2C_5C_LL_5R_Lg_m + C_5C_LL_5\right) + s^2\left(2C_1C_LR_1R_Lg_m + C_1C_LR_1 + C_1C_LR_L + 2C_5L_5g_m + C_LL_5g_m\right) + s\left(2C_1R_1g_m + C_1 + 2C_LR_Lg_m\right.}$$

9.404 X-INVALID-ORDER-404 $Z(s) = \left(R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{L_5 s}{C_5 L_5 s^2+1},\ L_L s + \frac{1}{C_L s}\right)$

$$H(s) = \frac{-C_1C_5C_LL_5L_LR_1s^5 + s^4\left(C_1C_LL_5L_LR_1g_m - C_5C_LL_5L_L\right) + s^3\left(-C_1C_5L_5R_1 - C_1C_LL_LR_1 + C_LL_5L_Lg_m\right) + s^2\left(C_1L_5R_1g_m - C_5L_5 - C_LL_L\right) + s\left(-C_1R_1 + L_5g_m\right) - 1}{2g_m + s^5\left(2C_1C_5C_LL_5L_LR_1g_m + C_1C_5C_LL_5L_L\right) + s^4\left(C_1C_5C_LL_5R_1 + 2C_5C_LL_5L_Lg_m\right) + s^3\left(2C_1C_5L_5R_1g_m + C_1C_5L_5 + C_1C_LL_5R_1g_m + C_1C_LL_5 + 2C_1C_LL_LR_1g_m + C_1C_LL_L + C_5C_LL_5\right) + s^2\left(C_1C_LR_1 + 2C_5L_5g_m + C_LL_5g_m + 2C_LL_Lg_m\right) + s\left(2C_1R_1g_m + C\right.}$$

9.405 X-INVALID-ORDER-405 $Z(s) = \left(R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{L_5 s}{C_5 L_5 s^2+1},\ \frac{L_L s}{C_L L_L s^2+1}\right)$

$$H(s) = \frac{-C_1C_5L_5L_LR_1s^4 - L_Ls + s^3\left(C_1L_5L_LR_1g_m - C_5L_5L_L\right) + s^2\left(-C_1L_LR_1 + L_5L_Lg_m\right)}{C_1C_5C_LL_5L_LR_1s^5 + s^4\left(2C_1C_5L_5L_LR_1g_m + C_1C_5L_5L_L + C_1C_LL_5L_LR_1g_m + C_1C_LL_5L_L + C_5C_LL_5L_L\right) + s^3\left(C_1C_5L_5R_1 + C_1C_LL_LR_1 + 2C_5L_5L_Lg_m + C_LL_5L_Lg_m\right) + s^2\left(C_1L_5R_1g_m + C_1L_5 + 2C_1L_LR_1g_m + C_1L_L + C_5L_5 + C_LL_L\right) + s\left(C_1R_1 + L_5g_m + 2L_L\right.}$$

9.406 X-INVALID-ORDER-406 $Z(s) = \left(R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{L_5 s}{C_5 L_5 s^2+1},\ L_L s + R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{-C_1C_5C_LL_5L_LR_1s^5 + s^4\left(-C_1C_5C_LL_5R_1R_L + C_1C_LL_5L_LR_1g_m - C_5C_LL_5L_L\right) + s^3\left(-C_1C_5L_5R_1 + C_1C_LL_5R_1R_Lg_m - C_1C_LL_LR_1 - C_5C_LL_5R_L + C_LL_5L_Lg_m\right) + s^2\left(-C_1C_LR_1R_L + C_1L_5R_1g_m - C_5L_5 -\right.}{2g_m + s^5\left(2C_1C_5C_LL_5L_LR_1g_m + C_1C_5C_LL_5L_L\right) + s^4\left(2C_1C_5C_LL_5R_1R_Lg_m + C_1C_5C_LL_5R_1 + C_1C_5C_LL_5R_L + 2C_5C_LL_5L_Lg_m\right) + s^3\left(2C_1C_5L_5R_1g_m + C_1C_5L_5 + C_1C_LL_5R_1g_m + C_1C_LL_5 + 2C_1C_LL_LR_1g_m + C_1C_LL_L + 2C_5C_LL_5R_Lg_m + C_5C_LL_5\right) + s^2\left(2C_1C\right.}$$

9.407 X-INVALID-ORDER-407 $Z(s) = \left(R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{L_5 s}{C_5 L_5 s^2+1},\ \frac{L_L R_L s}{C_L L_L R_L s^2 + L_L s + R_L}\right)$

$$H(s) = \frac{-C_1C_5L_5L_LR_1R_Ls^4 - L_LR_Ls + s^3\left(C_1L_5L_LR_1R_Lg_m - C_5L_5L_LR_L\right) + s^2\left(-C_1L_LR_1R_L + L_5L_LR_Lg_m\right)}{C_1C_5C_LL_5L_LR_1R_Ls^5 + R_L + s^4\left(2C_1C_5L_5L_LR_1R_Lg_m + C_1C_5L_5L_LR_1 + C_1C_5L_5L_LR_L + C_1C_LL_5L_LR_1R_Lg_m + C_1C_LL_5L_LR_L + C_5C_LL_5L_LR_L\right) + s^3\left(C_1C_5L_5R_1R_L + C_1C_LL_LR_1R_L + C_1L_5L_LR_1g_m + C_1L_5L_L + 2C_5L_5L_LR_Lg_m + C_5L_5L_L + C_LL_5L_LR_Lg_m\right.}$$

9.408 X-INVALID-ORDER-408 $Z(s) = \left(R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{L_5 s}{C_5 L_5 s^2+1},\ \frac{C_L L_L R_L s^2 + L_L s + R_L}{C_L L_L s^2+1}\right)$

$$H(s) = \frac{-C_1C_5C_LL_5L_LR_1R_Ls^5 - R_L + s^4\left(-C_1C_5L_5L_LR_1 + C_1C_LL_5L_LR_1R_Lg_m - C_5C_LL_5L_LR_L\right) + s^3\left(-C_1C_5L_5R_1R_L - C_1C_LL_LR_1R_L + C_1L_5L_LR_1g_m - C_5L_5L_L +\right.}{2R_Lg_m + s^5\left(2C_1C_5C_LL_5L_LR_1R_Lg_m + C_1C_5C_LL_5L_LR_1 + C_1C_5C_LL_5L_LR_L\right) + s^4\left(2C_1C_5L_5L_LR_1g_m + C_1C_5L_5L_L + C_1C_LL_5L_LR_1g_m + C_1C_LL_5L_L + 2C_5C_LL_5L_LR_Lg_m + C_5C_LL_5L_L\right) + s^3\left(2C_1C_5L_5R_1R_Lg_m + C_1C_5L_5R_1 + C_1C_5L_5R_L + 2C_1C_LL_LR_1R_Lg_m\right.}$$

9.409 X-INVALID-ORDER-409 $Z(s) = \left(R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{L_5 s}{C_5 L_5 s^2+1},\ \frac{R_L\left(C_L L_L s^2+1\right)}{C_L L_L s^2 + C_L R_L s+1}\right)$

$$H(s) = \frac{-C_1C_5C_LL_5L_LR_1R_Ls^5 - R_L + s^4\left(C_1C_LL_5L_LR_1R_Lg_m - C_5C_LL_5L_LR_L\right) + s^3\left(-C_1C_5L_5R_1R_L - C_1C_LL_LR_1R_L\right.}{2R_Lg_m + s^5\left(2C_1C_5C_LL_5L_LR_1R_Lg_m + C_1C_5C_LL_5L_LR_1 + C_1C_5C_LL_5L_LR_L\right) + s^4\left(C_1C_5C_LL_5R_1R_L + C_1C_LL_5L_LR_1g_m + C_1C_LL_5L_L + 2C_5C_LL_5L_LR_Lg_m + C_5C_LL_5L_L\right) + s^3\left(2C_1C_5L_5R_1R_Lg_m + C_1C_5L_5R_1 + C_1C_5L_5R_L + C_1C_LL_5R_1R_Lg_m + C_1C_LL_5R_L +\right.}$$

9.410 X-INVALID-ORDER-410 $Z(s) = \left(R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ L_5 s + R_5 + \frac{1}{C_5 s},\ R_L\right)$

$$H(s) = \frac{C_1C_5L_5R_1R_Lg_ms^3 + R_Lg_m + s^2\left(C_1C_5R_1R_5R_Lg_m - C_1C_5R_1R_L + C_5L_5R_Lg_m\right) + s\left(C_1R_1R_Lg_m + C_5R_5R_Lg_m - C_5R_L\right)}{g_m + s^3\left(C_1C_5L_5R_1g_m + C_1C_5L_5\right) + s^2\left(C_1C_5R_1R_5g_m + 2C_1C_5R_1R_Lg_m + C_1C_5R_1 + C_1C_5R_5 + C_1C_5R_L + C_5L_5g_m\right) + s\left(C_1R_1g_m + C_1 + C_5R_5g_m + 2C_5R_Lg_m + C_5\right)}$$

9.411 X-INVALID-ORDER-411 $Z(s) = \left(R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ L_5 s + R_5 + \frac{1}{C_5 s},\ \frac{1}{C_L s}\right)$

$$H(s) = \frac{C_1C_5L_5R_1g_ms^3 + g_m + s^2\left(C_1C_5R_1R_5g_m - C_1C_5R_1 + C_5L_5g_m\right) + s\left(C_1R_1g_m + C_5R_5g_m - C_5\right)}{s^4\left(C_1C_5C_LL_5R_1g_m + C_1C_5C_LL_5\right) + s^3\left(C_1C_5C_LR_1R_5g_m + C_1C_5C_LR_1 + C_1C_5C_LR_5 + C_5C_LL_5g_m\right) + s^2\left(2C_1C_5R_1g_m + C_1C_5 + C_1C_LR_1g_m + C_1C_L + C_5C_LR_5g_m + C_5C_L\right) + s\left(2C_5g_m + C_Lg_m\right)}$$

9.412 X-INVALID-ORDER-412 $Z(s) = \left(R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ L_5 s + R_5 + \frac{1}{C_5 s},\ \frac{R_L}{C_LR_Ls+1}\right)$

$$H(s) = \frac{C_1C_5L_5R_1R_Lg_ms^3 + R_Lg_m + s^2\left(C_1C_5R_1R_5R_Lg_m - C_1C_5R_1R_L + C_5L_5R_Lg_m\right) + s\left(C_1R_1R_Lg_m + C_5R_5R_Lg_m - C_5R_L\right)}{g_m + s^4\left(C_1C_5C_LL_5R_1R_Lg_m + C_1C_5C_LL_5R_L\right) + s^3\left(C_1C_5C_LR_1R_5R_Lg_m + C_1C_5C_LR_1R_L + C_1C_5C_LR_5R_L + C_1C_5L_5R_1g_m + C_1C_5L_5 + C_5C_LL_5R_Lg_m\right) + s^2\left(C_1C_5R_1R_5g_m + 2C_1C_5R_1R_Lg_m + C_1C_5R_1 + C_1C_5R_5 + C_1C_5R_L + C_1C_LR_1R_Lg_m + C_1C_LR_L + C_5\right.}$$

9.413 X-INVALID-ORDER-413 $Z(s) = \left(R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ L_5 s + R_5 + \frac{1}{C_5 s},\ R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{C_1C_5C_LL_5R_1R_Lg_ms^4 + g_m + s^3\left(C_1C_5C_LR_1R_5R_Lg_m - C_1C_5C_LR_1R_L + C_1C_5L_5R_1g_m + C_5C_LL_5R_Lg_m\right) + s^2\left(C_1C_5R_1R_5g_m - C_1C_5R_1 + C_1C_LR_1R_Lg_m + C_5C_LR_5R_Lg_m - C_5C_LR_L + C_5L_5g_m\right) + s\left(C_1R_1g_m + C_5R_5g_m - C_5 + C_LR_Lg_m\right)}{s^4\left(C_1C_5C_LL_5R_1g_m + C_1C_5C_LL_5\right) + s^3\left(C_1C_5C_LR_1R_5g_m + 2C_1C_5C_LR_1R_Lg_m + C_1C_5C_LR_1 + C_1C_5C_LR_5 + C_1C_5C_LR_L + C_5C_LL_5g_m\right) + s^2\left(2C_1C_5R_1g_m + C_1C_5 + C_1C_LR_1g_m + C_1C_L + C_5C_LR_5g_m + 2C_5C_LR_Lg_m + C_5C_L\right) + s\left(2C_5g_m + C_Lg_m\right)}$$

9.414 X-INVALID-ORDER-414 $Z(s) = \left(R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ L_5 s + R_5 + \frac{1}{C_5 s},\ L_L s + \frac{1}{C_L s}\right)$

$$H(s) = \frac{C_1C_5C_LL_5L_LR_1g_ms^5 + g_m + s^4\left(C_1C_5C_LL_LR_1R_5g_m - C_1C_5C_LL_LR_1 + C_5C_LL_5L_Lg_m\right) + s^3\left(C_1C_5L_5R_1g_m + C_1C_LL_LR_1g_m + C_5C_LL_LR_5g_m - C_5C_LL_L\right) + s^2\left(C_1C_5R_1R_5g_m - C_1C_5R_1 + C_5L_5g_m + C_LL_Lg_m\right) + s\left(C_1R_1g_m + C_5R_5g_m - C_5\right)}{s^4\left(C_1C_5C_LL_5R_1g_m + C_1C_5C_LL_5 + 2C_1C_5C_LL_LR_1g_m + C_1C_5C_LL_L\right) + s^3\left(C_1C_5C_LR_1R_5g_m + C_1C_5C_LR_1 + C_1C_5C_LR_5 + C_5C_LL_5g_m + 2C_5C_LL_Lg_m\right) + s^2\left(2C_1C_5R_1g_m + C_1C_5 + C_1C_LR_1g_m + C_1C_L + C_5C_LR_5g_m + C_5C_L\right) + s\left(2C_5g_m + C_Lg_m\right)}$$

9.415 X-INVALID-ORDER-415 $Z(s) = \left(R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ L_5 s + R_5 + \frac{1}{C_5 s},\ \frac{L_Ls}{C_LL_Ls^2+1}\right)$

$$H(s) = \frac{C_1C_5L_5L_LR_1g_ms^4 + L_Lg_ms + s^3\left(C_1C_5L_LR_1R_5g_m - C_1C_5L_LR_1 + C_5L_5L_Lg_m\right) + s^2\left(C_1L_LR_1g_m + C_5L_LR_5g_m - C_5L_L\right)}{g_m + s^5\left(C_1C_5C_LL_5L_LR_1g_m + C_1C_5C_LL_5L_L\right) + s^4\left(C_1C_5C_LL_LR_1R_5g_m + C_1C_5C_LL_LR_1 + C_1C_5C_LL_LR_5 + C_5C_LL_5L_Lg_m\right) + s^3\left(C_1C_5L_5R_1g_m + C_1C_5L_5 + 2C_1C_5L_LR_1g_m + C_1C_5L_L + C_1C_LL_LR_1g_m + C_1C_LL_L + C_5C_LL_LR_5g_m + C_5C_LL_L\right) + s^2\left(C_1C_5R_1R_5\right.}$$

9.416 X-INVALID-ORDER-416 $Z(s) = \left(R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ L_5 s + R_5 + \frac{1}{C_5 s},\ L_L s + R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{C_1C_5C_LL_5L_LR_1g_ms^5 + g_m + s^4\left(C_1C_5C_LL_5R_1R_Lg_m + C_1C_5C_LL_LR_1R_5g_m - C_1C_5C_LL_LR_1 + C_5C_LL_5L_Lg_m\right) + s^3\left(C_1C_5C_LR_1R_5R_Lg_m - C_1C_5C_LR_1R_L + C_1C_5L_5R_1g_m + C_1C_LL_LR_1g_m + C_5C_LL_5R_Lg_m + C_5C_LL_LR_5g_m - C_5C_LL_L\right) + s^2\left(C_1C_5R_1R_5g_m - C\right.}{s^4\left(C_1C_5C_LL_5R_1g_m + C_1C_5C_LL_5 + 2C_1C_5C_LL_LR_1g_m + C_1C_5C_LL_L\right) + s^3\left(C_1C_5C_LR_1R_5g_m + 2C_1C_5C_LR_1R_Lg_m + C_1C_5C_LR_1 + C_1C_5C_LR_5 + C_1C_5C_LR_L + C_5C_LL_5g_m + 2C_5C_LL_Lg_m\right) + s^2\left(2C_1C_5R_1g_m + C_1C_5 + C_1\right.}$$

9.417 X-INVALID-ORDER-417 $Z(s) = \left(R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ L_5 s + R_5 + \frac{1}{C_5 s},\ \frac{L_LR_Ls}{C_LL_LR_Ls^2+L_Ls+R_L}\right)$

$$H(s) = \frac{C_1C_5L_5L_LR_1R_Lg_ms^4 + L_LR_Lg_ms + s^3\left(\right.}{R_Lg_m + s^5\left(C_1C_5C_LL_5L_LR_1R_Lg_m + C_1C_5C_LL_5L_LR_L\right) + s^4\left(C_1C_5C_LL_LR_1R_5R_Lg_m + C_1C_5C_LL_LR_1R_L + C_1C_5C_LL_LR_5R_L + C_1C_5L_5L_LR_1g_m + C_1C_5L_5L_L + C_5C_LL_5L_LR_Lg_m\right) + s^3\left(C_1C_5L_5R_1R_Lg_m + C_1C_5L_5R_L + C_1C_5L_LR_1R_5g_m + 2C_1C_5L_LR_1R_Lg_m + \right.}$$

9.418 X-INVALID-ORDER-418 $Z(s) = \left(R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ L_5 s + R_5 + \frac{1}{C_5 s},\ \frac{C_LL_LR_Ls^2+L_Ls+R_L}{C_LL_Ls^2+1}\right)$

$$H(s) = \frac{C_1C_5C_LL_5L_LR_1R_Lg_ms^5 + R_Lg_m + s^4\left(C_1C_5C_LL_LR_1R_5R_Lg_m - C_1C_5C_LL_LR_1R_L + C_1C_5L_5L_LR_1g_m + C_5C_LL_5L_LR_Lg_m\right) + s^3\left(C_1C_5L_5R_1R_Lg_m + C_1C_5L_LR_1R_5g_m - C_1C_5L_LR_1 + C_1C_LL_LR_1R_Lg_m + C_5C_LL_LR_5R_Lg_m - C_5C_LL_L\right.}{g_m + s^5\left(C_1C_5C_LL_5L_LR_1g_m + C_1C_5C_LL_5L_L\right) + s^4\left(C_1C_5C_LL_LR_1R_5g_m + 2C_1C_5C_LL_LR_1R_Lg_m + C_1C_5C_LL_LR_1 + C_1C_5C_LL_LR_5 + C_1C_5C_LL_LR_L + C_5C_LL_5L_Lg_m\right) + s^3\left(C_1C_5L_5R_1g_m + C_1C_5L_5 + 2C_1C_5L_LR_1g_m + C_1C_5L_L + C_1C_LL_LR_1g_m + C_1C_LL_L + C_5\right.}$$

9.419 X-INVALID-ORDER-419 $Z(s) = \left(R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ L_5 s + R_5 + \frac{1}{C_5 s},\ \frac{R_L\left(C_LL_Ls^2+1\right)}{C_LL_Ls^2+C_LR_Ls+1}\right)$

$$H(s) = \frac{C_1C_5C_LL_5L_LR_1R_Lg_ms^5 + R_Lg_m + s^4\left(C_1C_5C_LL_LR_1R_5R_Lg_m - C_1C_5C_LL_LR_1R_L + C_5C_LL_5L_LR_Lg_m\right)}{g_m + s^5\left(C_1C_5C_LL_5L_LR_1g_m + C_1C_5C_LL_5L_L\right) + s^4\left(C_1C_5C_LL_5R_1R_Lg_m + C_1C_5C_LL_5R_L + C_1C_5C_LL_LR_1R_5g_m + 2C_1C_5C_LL_LR_1R_Lg_m + C_1C_5C_LL_LR_1 + C_1C_5C_LL_LR_5 + C_1C_5C_LL_LR_L + C_5C_LL_5L_Lg_m\right) + s^3\left(C_1C_5C_LR_1R_5R_Lg_m + C_1C_5C_LR_1R_L + C_1C_5C_L\right.}$$

9.420 X-INVALID-ORDER-420 $Z(s) = \left(R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{L_5 R_5 s}{C_5 L_5 R_5 s^2 + L_5 s + R_5},\ R_L\right)$

$$H(s) = \frac{-C_1 C_5 L_5 R_1 R_5 R_L s^3 - R_5 R_L + s^2 \left(C_1 L_5 R_1 R_5 R_L g_m - C_1 L_5 R_1 R_L - C_5 L_5 R_5 R_L\right) + s \left(-C_1 R_1 R_5 R_L + L_5 R_5 R_L g_m - L_5 R_L\right)}{2 R_5 R_L g_m + R_5 + s^3 \left(2 C_1 C_5 L_5 R_1 R_5 R_L g_m + C_1 C_5 L_5 R_1 R_5 + C_1 C_5 L_5 R_5 R_L\right) + s^2 \left(C_1 L_5 R_1 R_5 g_m + 2 C_1 L_5 R_1 R_L g_m + C_1 L_5 R_1 + C_1 L_5 R_5 + C_1 L_5 R_L + 2 C_5 L_5 R_5 R_L g_m + C_5 L_5 R_5\right) + s \left(2 C_1 R_1 R_5 R_L g_m + C_1 R_1 R_5 + C_1 R_5 R_L + L_5 R_5 g_m + 2 L_5 R_L g_m + L_5\right)}$$

9.421 X-INVALID-ORDER-421 $Z(s) = \left(R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{L_5 R_5 s}{C_5 L_5 R_5 s^2 + L_5 s + R_5},\ \frac{1}{C_L s}\right)$

$$H(s) = \frac{-C_1 C_5 L_5 R_1 R_5 s^3 - R_5 + s^2 \left(C_1 L_5 R_1 R_5 g_m - C_1 L_5 R_1 - C_5 L_5 R_5\right) + s \left(-C_1 R_1 R_5 + L_5 R_5 g_m - L_5\right)}{C_1 C_5 C_L L_5 R_1 R_5 s^4 + 2 R_5 g_m + s^3 \left(2 C_1 C_5 L_5 R_1 R_5 g_m + C_1 C_5 L_5 R_5 + C_1 C_L L_5 R_1 R_5 g_m + C_1 C_L L_5 R_1 + C_1 C_L L_5 R_5 + C_5 C_L L_5 R_5\right) + s^2 \left(C_1 C_L R_1 R_5 + 2 C_1 L_5 R_1 g_m + C_1 L_5 + 2 C_5 L_5 R_5 g_m + C_L L_5 R_5 g_m + C_L L_5\right) + s \left(2 C_1 R_1 R_5 g_m + C_1 R_5 + C_L R_5 + 2 L_5 g_m\right)}$$

9.422 X-INVALID-ORDER-422 $Z(s) = \left(R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{L_5 R_5 s}{C_5 L_5 R_5 s^2 + L_5 s + R_5},\ \frac{R_L}{C_L R_L s + 1}\right)$

$$H(s) = \frac{-C_1 C_5 L_5 R_1 R_5 R_L s^3 - R_5 R_L + s^2 \left(C_1 L_5 R_1 R_5 R_L g_m - C_1 L_5 R_1 R_L - C_5 L_5 R_5 R_L\right) + s \left(-C_1 R_1 R_5 R_L + L_5 R_5 R_L g_m - L}{C_1 C_5 C_L L_5 R_1 R_5 R_L s^4 + 2 R_5 R_L g_m + R_5 + s^3 \left(2 C_1 C_5 L_5 R_1 R_5 R_L g_m + C_1 C_5 L_5 R_1 R_5 + C_1 C_5 L_5 R_5 R_L + C_1 C_L L_5 R_1 R_5 R_L g_m + C_1 C_L L_5 R_1 R_L + C_1 C_L L_5 R_5 R_L + C_5 C_L L_5 R_5 R_L\right) + s^2 \left(C_1 C_L R_1 R_5 R_L + C_1 L_5 R_1 R_5 g_m + 2 C_1 L_5 R_1 R_L g_m + C_1 L_5 R_1 + C_1 L_5 R_5 + C_1 L\right.}$$

9.423 X-INVALID-ORDER-423 $Z(s) = \left(R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{L_5 R_5 s}{C_5 L_5 R_5 s^2 + L_5 s + R_5},\ R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{-C_1 C_5 C_L L_5 R_1 R_5 R_L s^4 - R_5 + s^3 \left(-C_1 C_5 L_5 R_1 R_5 + C_1 C_L L_5 R_1 R_5 R_L g_m - C_1 C_L L_5 R_1 R_L - C_5 C_L L_5 R_5 R_L\right) + s^2 \left(-C_1 C_L R_1 R_5 R_L + C_1 L_5 R_1 R_5 g_m - C_1 L_5 R_1 - C_5 L_5 R_5\right.}{2 R_5 g_m + s^4 \left(2 C_1 C_5 C_L L_5 R_1 R_5 R_L g_m + C_1 C_5 C_L L_5 R_1 R_5 + C_1 C_5 C_L L_5 R_5 R_L\right) + s^3 \left(2 C_1 C_5 L_5 R_1 R_5 g_m + C_1 C_5 L_5 R_5 + C_1 C_L L_5 R_1 R_5 g_m + 2 C_1 C_L L_5 R_1 R_L g_m + C_1 C_L L_5 R_1 + C_1 C_L L_5 R_5 + C_1 C_L L_5 R_L + 2 C_5 C_L L_5 R_5 R_L g_m + C_5 C_L L_5 R_5\right) + s^2 \left(2 C_1 C_L R_1 R_5 R_L g_m +\right.}$$

9.424 X-INVALID-ORDER-424 $Z(s) = \left(R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{L_5 R_5 s}{C_5 L_5 R_5 s^2 + L_5 s + R_5},\ L_L s + \frac{1}{C_L s}\right)$

$$H(s) = \frac{-C_1 C_5 C_L L_5 L_L R_1 R_5 s^5 - R_5 + s^4 \left(C_1 C_L L_5 L_L R_1 R_5 g_m - C_1 C_L L_5 L_L R_1 - C_5 C_L L_5 L_L R_5\right) + s^3 \left(-C_1 C_5 L_5 R_1 R_5 - C_1 C_L L_L R_1 R_5 + C_L L_5 L_L R_5 g_m - C_L L_5 L_L\right) + s^2 \left(C_1 L\right.}{2 R_5 g_m + s^5 \left(2 C_1 C_5 C_L L_5 L_L R_1 R_5 g_m + C_1 C_5 C_L L_5 L_L R_5\right) + s^4 \left(C_1 C_5 C_L L_5 R_1 R_5 + 2 C_1 C_L L_5 L_L R_1 g_m + C_1 C_L L_5 L_L + 2 C_5 C_L L_5 L_L R_5 g_m\right) + s^3 \left(2 C_1 C_5 L_5 R_1 R_5 g_m + C_1 C_5 L_5 R_5 + C_1 C_L L_5 R_1 R_5 g_m + C_1 C_L L_5 R_1 + C_1 C_L L_5 R_5 + 2 C_1 C_L L_L R_1 R_5 g_m + C_1 C_L L_L R_5 +\right.}$$

9.425 X-INVALID-ORDER-425 $Z(s) = \left(R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{L_5 R_5 s}{C_5 L_5 R_5 s^2 + L_5 s + R_5},\ \frac{L_L s}{C_L L_L s^2 + 1}\right)$

$$H(s) = \frac{-C_1 C_5 L_5 L_L R_1 R_5 s^4 - L_L R_5 s + s^3 \left(C_1 L_5 L_L R_1 R_5 g_m - C_1 L_5 L_L R_1 - C_5 L_5 L_L R_5\right) + s^2 \left(-C_1 L_L R_1 R_5 + L_5 L_L R_5 g_m -\right.}{C_1 C_5 C_L L_5 L_L R_1 R_5 s^5 + R_5 + s^4 \left(2 C_1 C_5 L_5 L_L R_1 R_5 g_m + C_1 C_5 L_5 L_L R_5 + C_1 C_L L_5 L_L R_1 R_5 g_m + C_1 C_L L_5 L_L R_1 + C_1 C_L L_5 L_L R_5 + C_5 C_L L_5 L_L R_5\right) + s^3 \left(C_1 C_5 L_5 R_1 R_5 + C_1 C_L L_L R_1 R_5 + 2 C_1 L_5 L_L R_1 g_m + C_1 L_5 L_L + 2 C_5 L_5 L_L R_5 g_m + C_L L_5 L_L R_5 g_m + C_L L_5 L_L\right) +$$

9.426 X-INVALID-ORDER-426 $Z(s) = \left(R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{L_5 R_5 s}{C_5 L_5 R_5 s^2 + L_5 s + R_5},\ L_L s + R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{-C_1 C_5 C_L L_5 L_L R_1 R_5 s^5 - R_5 + s^4 \left(-C_1 C_5 C_L L_5 R_1 R_5 R_L + C_1 C_L L_5 L_L R_1 R_5 g_m - C_1 C_L L_5 L_L R_1 - C_5 C_L L_5 L_L R_5\right) + s^3 \left(-C_1 C_5 L_5 R_1 R_5 + C_1 C_L L_5 R_1 R_5 R\right.}{2 R_5 g_m + s^5 \left(2 C_1 C_5 C_L L_5 L_L R_1 R_5 g_m + C_1 C_5 C_L L_5 L_L R_5\right) + s^4 \left(2 C_1 C_5 C_L L_5 R_1 R_5 R_L g_m + C_1 C_5 C_L L_5 R_1 R_5 + C_1 C_5 C_L L_5 R_5 R_L + 2 C_1 C_L L_5 L_L R_1 g_m + C_1 C_L L_5 L_L + 2 C_5 C_L L_5 L_L R_5 g_m\right) + s^3 \left(2 C_1 C_5 L_5 R_1 R_5 g_m + C_1 C_5 L_5 R_5 + C_1 C_L L_5 R_1 R_5 g_m + 2 C_1 C_L L_5 R_1 R_L g\right.}$$

9.427 X-INVALID-ORDER-427 $Z(s) = \left(R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{L_5 R_5 s}{C_5 L_5 R_5 s^2 + L_5 s + R_5},\ \frac{L_L R_L s}{C_L L_L R_L s^2 + L_L s + R_L}\right)$

$$H(s) = \frac{-C_1 C_5 L_5 L_L R_1 R_5 R_L s^4 -}{C_1 C_5 C_L L_5 L_L R_1 R_5 R_L s^5 + R_5 R_L + s^4 \left(2 C_1 C_5 L_5 L_L R_1 R_5 R_L g_m + C_1 C_5 L_5 L_L R_1 R_5 + C_1 C_5 L_5 L_L R_5 R_L + C_1 C_L L_5 L_L R_1 R_5 R_L g_m + C_1 C_L L_5 L_L R_1 R_L + C_1 C_L L_5 L_L R_5 R_L + C_5 C_L L_5 L_L R_5 R_L\right) + s^3 \left(C_1 C_5 L_5 R_1 R_5 R_L + C_1 C_L L_L R_1 R_5 R_L + C_1 L_5 L_L R_1 R_5 g_m + 2 C_1 L\right.}$$

9.428 X-INVALID-ORDER-428 $Z(s) = \left(R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{L_5 R_5 s}{C_5 L_5 R_5 s^2 + L_5 s + R_5},\ \frac{C_L L_L R_L s^2 + L_L s + R_L}{C_L L_L s^2 + 1}\right)$

$$H(s) = \frac{-C_1 C_5 C_L L_5 L_L R_1 R_5 R_L s^5 - R_5 R_L + s^4 \left(-C_1 C_5 L_5 L_L R_1 R_5 + C_1 C_L L_5 L_L R_1 R_5 R_L g_m -\right.}{2 R_5 R_L g_m + R_5 + s^5 \left(2 C_1 C_5 C_L L_5 L_L R_1 R_5 R_L g_m + C_1 C_5 C_L L_5 L_L R_1 R_5 + C_1 C_5 C_L L_5 L_L R_5 R_L\right) + s^4 \left(2 C_1 C_5 L_5 L_L R_1 R_5 g_m + C_1 C_5 L_5 L_L R_5 + C_1 C_L L_5 L_L R_1 R_5 g_m + 2 C_1 C_L L_5 L_L R_1 R_L g_m + C_1 C_L L_5 L_L R_1 + C_1 C_L L_5 L_L R_5 + C_1 C_L L_5 L_L R_L + 2 C_5 C_L L_5 L_L R_5 R_L g_m\right.}$$

9.429 X-INVALID-ORDER-429 $Z(s) = \left(R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{L_5 R_5 s}{C_5 L_5 R_5 s^2 + L_5 s + R_5},\ \frac{R_L \left(C_L L_L s^2 + 1\right)}{C_L L_L s^2 + C_L R_L s + 1}\right)$

$$H(s) = \frac{-C_1 C_5 C_L L_5 L_L R_1 R_5 R_L s}{2 R_5 R_L g_m + R_5 + s^5 \left(2 C_1 C_5 C_L L_5 L_L R_1 R_5 R_L g_m + C_1 C_5 C_L L_5 L_L R_1 R_5 + C_1 C_5 C_L L_5 L_L R_5 R_L\right) + s^4 \left(C_1 C_5 C_L L_5 R_1 R_5 R_L + C_1 C_L L_5 L_L R_1 R_5 g_m + 2 C_1 C_L L_5 L_L R_1 R_L g_m + C_1 C_L L_5 L_L R_1 + C_1 C_L L_5 L_L R_5 + C_1 C_L L_5 L_L R_L + 2 C_5 C_L L_5 L_L R_5 R_L g_m + C_5 C_L L_5 L_L R_5\right.}$$

9.430 X-INVALID-ORDER-430 $Z(s) = \left(R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{C_5 L_5 R_5 s^2 + L_5 s + R_5}{C_5 L_5 s^2 + 1},\ R_L\right)$

$$H(s) = \frac{R_5 R_L g_m - R_L + s^3 \left(C_1 C_5 L_5 R_1 R_5 R_L g_m - C_1 C_5 L_5 R_1 R_L\right) + s^2 \left(C_1 L_5 R_1 R_L g_m + C_5 L_5 R_5 R_L g_m - C_5 L_5 R_L\right) + s \left(C_1 R_1 R_5 R_L g_m - C_1 R_1 R_L + L_5 R_L g_m\right)}{R_5 g_m + 2R_L g_m + s^3 \left(C_1 C_5 L_5 R_1 R_5 g_m + 2C_1 C_5 L_5 R_1 R_L g_m + C_1 C_5 L_5 R_1 + C_1 C_5 L_5 R_5 + C_1 C_5 L_5 R_L\right) + s^2 \left(C_1 L_5 R_1 g_m + C_1 L_5 + C_5 L_5 R_5 g_m + 2C_5 L_5 R_L g_m + C_5 L_5\right) + s \left(C_1 R_1 R_5 g_m + 2C_1 R_1 R_L g_m + C_1 R_1 + C_1 R_5 + C_1 R_L + L_5 g_m\right) + 1}$$

9.431 X-INVALID-ORDER-431 $Z(s) = \left(R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{C_5 L_5 R_5 s^2 + L_5 s + R_5}{C_5 L_5 s^2 + 1},\ \frac{1}{C_L s}\right)$

$$H(s) = \frac{R_5 g_m + s^3 \left(C_1 C_5 L_5 R_1 R_5 g_m - C_1 C_5 L_5 R_1\right) + s^2 \left(C_1 L_5 R_1 g_m + C_5 L_5 R_5 g_m - C_5 L_5\right) + s \left(C_1 R_1 R_5 g_m - C_1 R_1 + L_5 g_m\right) - 1}{2g_m + s^4 \left(C_1 C_5 C_L L_5 R_1 R_5 g_m + C_1 C_5 C_L L_5 R_1 + C_1 C_5 C_L L_5 R_5\right) + s^3 \left(2C_1 C_5 L_5 R_1 g_m + C_1 C_5 L_5 + C_1 C_L L_5 R_1 g_m + C_1 C_L L_5 + C_5 C_L L_5 R_5 g_m + C_5 C_L L_5\right) + s^2 \left(C_1 C_L R_1 R_5 g_m + C_1 C_L R_1 + C_1 C_L R_5 + 2C_5 L_5 g_m + C_L L_5 g_m\right) + s \left(2C_1 R_1 g_m + C_1 + C_L R_5 g_m + C_L\right)}$$

9.432 X-INVALID-ORDER-432 $Z(s) = \left(R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{C_5 L_5 R_5 s^2 + L_5 s + R_5}{C_5 L_5 s^2 + 1},\ \frac{R_L}{C_L R_L s + 1}\right)$

$$H(s) = \frac{R_5 R_L g_m - R_L + s^3 \left(C_1 C_5 L_5 R_1 R_5 R_L g_m - C_1 C_5 L_5 R_1 R_L\right) + s^2 \left(C_1 L_5 R_1 R_L g_m + C_5 L_5 R_5 R_L g_m - C_5 L_5 R\right.}{R_5 g_m + 2R_L g_m + s^4 \left(C_1 C_5 C_L L_5 R_1 R_5 R_L g_m + C_1 C_5 C_L L_5 R_1 R_L + C_1 C_5 C_L L_5 R_5 R_L\right) + s^3 \left(C_1 C_5 L_5 R_1 R_5 g_m + 2C_1 C_5 L_5 R_1 R_L g_m + C_1 C_5 L_5 R_1 + C_1 C_5 L_5 R_5 + C_1 C_5 L_5 R_L + C_1 C_L L_5 R_1 R_L g_m + C_1 C_L L_5 R_L + C_5 C_L L_5 R_5 R_L g_m + C_5 C_L L_5 R_L\right) + s^2 \left(C_1 C_L R_1 R_5 R_L\right.}$$

9.433 X-INVALID-ORDER-433 $Z(s) = \left(R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{C_5 L_5 R_5 s^2 + L_5 s + R_5}{C_5 L_5 s^2 + 1},\ R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{R_5 g_m + s^4 \left(C_1 C_5 C_L L_5 R_1 R_5 R_L g_m - C_1 C_5 C_L L_5 R_1 R_L\right) + s^3 \left(C_1 C_5 L_5 R_1 R_5 g_m - C_1 C_5 L_5 R_1 + C_1 C_L L_5 R_1 R_L g_m + C_5 C_L L_5 R_5 R_L g_m - C_5 C_L L_5 R_L\right) + s^2 \left(C_1 C_L R_1 R_5 R_L g_m - C_1 C_L R_1 R_L + C_1 L_5 R_1 g_m + C_5 L_5 R_5 g_m - C_5 L_5 + C_L L\right.}{2g_m + s^4 \left(C_1 C_5 C_L L_5 R_1 R_5 g_m + 2C_1 C_5 C_L L_5 R_1 R_L g_m + C_1 C_5 C_L L_5 R_1 + C_1 C_5 C_L L_5 R_5 + C_1 C_5 C_L L_5 R_L\right) + s^3 \left(2C_1 C_5 L_5 R_1 g_m + C_1 C_5 L_5 + C_1 C_L L_5 R_1 g_m + C_1 C_L L_5 + C_5 C_L L_5 R_5 g_m + 2C_5 C_L L_5 R_L g_m + C_5 C_L L_5\right) + s^2 \left(C_1 C_L R_1 R_5 g_m + 2C_1 C_L R_1 R_L g_m + C_1 C_L\right.}$$

9.434 X-INVALID-ORDER-434 $Z(s) = \left(R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{C_5 L_5 R_5 s^2 + L_5 s + R_5}{C_5 L_5 s^2 + 1},\ L_L s + \frac{1}{C_L s}\right)$

$$H(s) = \frac{R_5 g_m + s^5 \left(C_1 C_5 C_L L_5 L_L R_1 R_5 g_m - C_1 C_5 C_L L_5 L_L R_1\right) + s^4 \left(C_1 C_L L_5 L_L R_1 g_m + C_5 C_L L_5 L_L R_5 g_m - C_5 C_L L_5 L_L\right) + s^3 \left(C_1 C_5 L_5 R_1 R_5 g_m - C_1 C_5 L_5 R_1 + C_1 C_L L_L R_1 R_5 g_m - C_1 C_L L_L R_1 + C_L L_5 L_L g_m\right) + s^2 \left(C_1 L_5 R_1 g_m + C_5 L_5 R_5 g_m\right.}{2g_m + s^5 \left(2C_1 C_5 C_L L_5 L_L R_1 g_m + C_1 C_5 C_L L_5 L_L\right) + s^4 \left(C_1 C_5 C_L L_5 R_1 R_5 g_m + C_1 C_5 C_L L_5 R_1 + C_1 C_5 C_L L_5 R_5 + 2C_5 C_L L_5 L_L g_m\right) + s^3 \left(2C_1 C_5 L_5 R_1 g_m + C_1 C_5 L_5 + C_1 C_L L_5 R_1 g_m + C_1 C_L L_5 + 2C_1 C_L L_L R_1 g_m + C_1 C_L L_L + C_5 C_L L_5 R_5 g_m + C_5 C_L L_5\right) + s^2 \left(C_1 C_L R\right.}$$

9.435 X-INVALID-ORDER-435 $Z(s) = \left(R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{C_5 L_5 R_5 s^2 + L_5 s + R_5}{C_5 L_5 s^2 + 1},\ \frac{L_L s}{C_L L_L s^2 + 1}\right)$

$$H(s) = \frac{s^4 \left(C_1 C_5 L_5 L_L R_1 R_5 g_m - C_1 C_5 L_5 L_L R_1\right) + s^3 \left(C_1 L_5 L_L R_1 g_m + C_5 L_5 L_L R_5 g_m - C_5 L_5 L_L\right) + s^2 \left(C_1 L_L R_1 R\right.}{R_5 g_m + s^5 \left(C_1 C_5 C_L L_5 L_L R_1 R_5 g_m + C_1 C_5 C_L L_5 L_L R_1 + C_1 C_5 C_L L_5 L_L R_5\right) + s^4 \left(2C_1 C_5 L_5 L_L R_1 g_m + C_1 C_5 L_5 L_L + C_1 C_L L_5 L_L R_1 g_m + C_1 C_L L_5 L_L + C_5 C_L L_5 L_L R_5 g_m + C_5 C_L L_5 L_L\right) + s^3 \left(C_1 C_5 L_5 R_1 R_5 g_m + C_1 C_5 L_5 R_1 + C_1 C_5 L_5 R_5 + C_1 C_L L_L R_1 R_5 g_m + C_1 C_L\right.}$$

9.436 X-INVALID-ORDER-436 $Z(s) = \left(R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{C_5 L_5 R_5 s^2 + L_5 s + R_5}{C_5 L_5 s^2 + 1},\ L_L s + R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{R_5 g_m + s^5 \left(C_1 C_5 C_L L_5 L_L R_1 R_5 g_m - C_1 C_5 C_L L_5 L_L R_1\right) + s^4 \left(C_1 C_5 C_L L_5 R_1 R_5 R_L g_m - C_1 C_5 C_L L_5 R_1 R_L + C_1 C_L L_5 L_L R_1 g_m + C_5 C_L L_5 L_L R_5 g_m - C_5 C_L L_5 L_L\right) + s^3 \left(C_1 C_5 L_5 R_1 R_5 g_m - C_1 C_5 L_5 R_1 + C_1 C_L L_5 R_1 R_L g_m + C_1 C_L L_L R_1 R_5 g_m - C_1 C_L L_L R_1 + C_5 C_L L_5\right.}{2g_m + s^5 \left(2C_1 C_5 C_L L_5 L_L R_1 g_m + C_1 C_5 C_L L_5 L_L\right) + s^4 \left(C_1 C_5 C_L L_5 R_1 R_5 g_m + 2C_1 C_5 C_L L_5 R_1 R_L g_m + C_1 C_5 C_L L_5 R_1 + C_1 C_5 C_L L_5 R_5 + C_1 C_5 C_L L_5 R_L + 2C_5 C_L L_5 L_L g_m\right) + s^3 \left(2C_1 C_5 L_5 R_1 g_m + C_1 C_5 L_5 + C_1 C_L L_5 R_1 g_m + C_1 C_L L_5 + 2C_1 C_L L_L R_1 g_m + C_1 C_L L\right.}$$

9.437 X-INVALID-ORDER-437 $Z(s) = \left(R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{C_5 L_5 R_5 s^2 + L_5 s + R_5}{C_5 L_5 s^2 + 1},\ \frac{L_L R_L s}{C_L L_L R_L s^2 + L_L s + R_L}\right)$

$$H(s) = \frac{}{R_5 R_L g_m + R_L + s^5 \left(C_1 C_5 C_L L_5 L_L R_1 R_5 R_L g_m + C_1 C_5 C_L L_5 L_L R_1 R_L + C_1 C_5 C_L L_5 L_L R_5 R_L\right) + s^4 \left(C_1 C_5 L_5 L_L R_1 R_5 g_m + 2C_1 C_5 L_5 L_L R_1 R_L g_m + C_1 C_5 L_5 L_L R_1 + C_1 C_5 L_5 L_L R_5 + C_1 C_5 L_5 L_L R_L + C_1 C_L L_5 L_L R_1 R_L g_m + C_1 C_L L_5 L_L R_L + C_5 C_L L_5 L_L R_5 R_L g_m + C\right.}$$

9.438 X-INVALID-ORDER-438 $Z(s) = \left(R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{C_5 L_5 R_5 s^2 + L_5 s + R_5}{C_5 L_5 s^2 + 1},\ \frac{C_L L_L R_L s^2 + L_L s + R_L}{C_L L_L s^2 + 1}\right)$

$$H(s) = \frac{R_5 R_L g_m - R_L + s^5 \left(C_1 C_5 C_L L_5 L_L R_1 R_5 R_L g_m - C_1 C_5 C_L L_5 L_L R_1 R_L\right) + s^4 \left(C_1 C_5 L_5 L_L R_1 R_5 g_m - C_1 C_5 L_5 L_L R_1 + C_1 C_L L_5 L_L R_1 R_L g_m + C_5 C_L L_5 L_L R_5 R_L g_m - C_5 C_L L_5 L_L R_L\right) +}{R_5 g_m + 2R_L g_m + s^5 \left(C_1 C_5 C_L L_5 L_L R_1 R_5 g_m + 2C_1 C_5 C_L L_5 L_L R_1 R_L g_m + C_1 C_5 C_L L_5 L_L R_1 + C_1 C_5 C_L L_5 L_L R_5 + C_1 C_5 C_L L_5 L_L R_L\right) + s^4 \left(2C_1 C_5 L_5 L_L R_1 g_m + C_1 C_5 L_5 L_L + C_1 C_L L_5 L_L R_1 g_m + C_1 C_L L_5 L_L + C_5 C_L L_5 L_L R_5 g_m + 2C_5 C_L L_5 L_L R_L g_m + C_5 C_L L_5 L_L\right)}$$

9.439 X-INVALID-ORDER-439 $Z(s) = \left(R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{C_5 L_5 R_5 s^2 + L_5 s + R_5}{C_5 L_5 s^2 + 1},\ \frac{R_L \left(C_L L_L s^2 + 1\right)}{C_L L_L s^2 + C_L R_L s + 1}\right)$

$$H(s) = \frac{R_5 R_L g_m - R_L + s^5 \left(C_1 C_5 C_L L_5 L_L R_1 R\right.}{R_5 g_m + 2R_L g_m + s^5 \left(C_1 C_5 C_L L_5 L_L R_1 R_5 g_m + 2C_1 C_5 C_L L_5 L_L R_1 R_L g_m + C_1 C_5 C_L L_5 L_L R_1 + C_1 C_5 C_L L_5 L_L R_5 + C_1 C_5 C_L L_5 L_L R_L\right) + s^4 \left(C_1 C_5 C_L L_5 R_1 R_5 R_L g_m + C_1 C_5 C_L L_5 R_1 R_L + C_1 C_5 C_L L_5 R_5 R_L + C_1 C_L L_5 L_L R_1 g_m + C_1 C_L L_5 L_L + C_5 C_L L_5 L_L R_5 g_m + 2C\right.}$$

9.440 X-INVALID-ORDER-440 $Z(s) = \left(R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{R_5\left(C_5 L_5 s^2+1\right)}{C_5 L_5 s^2+C_5 R_5 s+1},\ R_L\right)$

$$H(s) = \frac{R_5 R_L g_m - R_L + s^3\left(C_1 C_5 L_5 R_1 R_5 R_L g_m - C_1 C_5 L_5 R_1 R_L\right) + s^2\left(-C_1 C_5 R_1 R_5 R_L + C_5 L_5 R_5 R_L g_m - C_5 L_5 R_L\right) + s\left(C_1 R_1 R_5 R_L g_m - C_1 R_1 R_L - C_5 R_5 R_L\right)}{R_5 g_m + 2R_L g_m + s^3\left(C_1 C_5 L_5 R_1 R_5 g_m + 2C_1 C_5 L_5 R_1 R_L g_m + C_1 C_5 L_5 R_1 + C_1 C_5 L_5 R_5 + C_1 C_5 L_5 R_L\right) + s^2\left(2C_1 C_5 R_1 R_5 R_L g_m + C_1 C_5 R_1 R_5 + C_1 C_5 R_5 R_L + C_5 L_5 R_5 g_m + 2C_5 L_5 R_L g_m + C_5 L_5\right) + s\left(C_1 R_1 R_5 g_m + 2C_1 R_1 R_L g_m + C_1 R_1 + C_1 R_5 + C_1 R_L + 2C_5 R_5 R\right.}$$

9.441 X-INVALID-ORDER-441 $Z(s) = \left(R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{R_5\left(C_5 L_5 s^2+1\right)}{C_5 L_5 s^2+C_5 R_5 s+1},\ \frac{1}{C_L s}\right)$

$$H(s) = \frac{R_5 g_m + s^3\left(C_1 C_5 L_5 R_1 R_5 g_m - C_1 C_5 L_5 R_1\right) + s^2\left(-C_1 C_5 R_1 R_5 + C_5 L_5 R_5 g_m - C_5 L_5\right) + s\left(C_1 R_1 R_5 g_m - C_1 R_1 - C_5 R_5\right) - 1}{2g_m + s^4\left(C_1 C_5 C_L L_5 R_1 R_5 g_m + C_1 C_5 C_L L_5 R_1 + C_1 C_5 C_L L_5 R_5\right) + s^3\left(C_1 C_5 C_L R_1 R_5 + 2C_1 C_5 L_5 R_1 g_m + C_1 C_5 L_5 + C_5 C_L L_5 R_5 g_m + C_5 C_L L_5\right) + s^2\left(2C_1 C_5 R_1 R_5 g_m + C_1 C_5 R_5 + C_1 C_L R_1 R_5 g_m + C_1 C_L R_1 + C_1 C_L R_5 + C_5 C_L R_5 + 2C_5 L_5 g_m\right) + s\left(2C_1 R_1 g_m + C_1 + \right.}$$

9.442 X-INVALID-ORDER-442 $Z(s) = \left(R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{R_5\left(C_5 L_5 s^2+1\right)}{C_5 L_5 s^2+C_5 R_5 s+1},\ \frac{R_L}{C_L R_L s+1}\right)$

$$H(s) = \frac{R_5 R_L g_m - R_L + s^3\left(C_1 C_5 L_5 R_1 R_5 R_L g_m - C_1 C_5 L_5 R_1 R_L\right) + s^2\left(-C_1 C_5 R_1 R_5 R_L + C_5 L_5 R_5 \right.}{R_5 g_m + 2R_L g_m + s^4\left(C_1 C_5 C_L L_5 R_1 R_5 R_L g_m + C_1 C_5 C_L L_5 R_1 R_L + C_1 C_5 C_L L_5 R_5 R_L\right) + s^3\left(C_1 C_5 C_L R_1 R_5 R_L + C_1 C_5 L_5 R_1 R_5 g_m + 2C_1 C_5 L_5 R_1 R_L g_m + C_1 C_5 L_5 R_1 + C_1 C_5 L_5 R_5 + C_1 C_5 L_5 R_L + C_5 C_L L_5 R_5 R_L g_m + C_5 C_L L_5 R_L\right) + s^2\left(2C_1 C_5 R_1 R_5 R_L g_m + C_1 C_5 R_1\right.}$$

9.443 X-INVALID-ORDER-443 $Z(s) = \left(R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{R_5\left(C_5 L_5 s^2+1\right)}{C_5 L_5 s^2+C_5 R_5 s+1},\ R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{R_5 g_m + s^4\left(C_1 C_5 C_L L_5 R_1 R_5 R_L g_m - C_1 C_5 C_L L_5 R_1 R_L\right) + s^3\left(-C_1 C_5 C_L R_1 R_5 R_L + C_1 C_5 L_5 R_1 R_5 g_m - C_1 C_5 L_5 R_1 + C_5 C_L L_5 R_5 R_L g_m - C_5 C_L L_5 R_L\right) + s^2\left(-C_1 C_5 R_1 R_5 + C_1 C_L R_1 R_5 R_L\right.}{2g_m + s^4\left(C_1 C_5 C_L L_5 R_1 R_5 g_m + 2C_1 C_5 C_L L_5 R_1 R_L g_m + C_1 C_5 C_L L_5 R_1 + C_1 C_5 C_L L_5 R_5 + C_1 C_5 C_L L_5 R_L\right) + s^3\left(2C_1 C_5 C_L R_1 R_5 R_L g_m + C_1 C_5 C_L R_1 R_5 + C_1 C_5 C_L R_5 R_L + 2C_1 C_5 L_5 R_1 g_m + C_1 C_5 L_5 + C_5 C_L L_5 R_5 g_m + 2C_5 C_L L_5 R_L g_m + C_5 C_L L_5\right) + s^2\left(2C_1 C_5 R_1 R_5\right.}$$

9.444 X-INVALID-ORDER-444 $Z(s) = \left(R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{R_5\left(C_5 L_5 s^2+1\right)}{C_5 L_5 s^2+C_5 R_5 s+1},\ L_L s + \frac{1}{C_L s}\right)$

$$H(s) = \frac{R_5 g_m + s^5\left(C_1 C_5 C_L L_5 L_L R_1 R_5 g_m - C_1 C_5 C_L L_5 L_L R_1\right) + s^4\left(-C_1 C_5 C_L L_L R_1 R_5 + C_5 C_L L_5 L_L R_5 g_m - C_5 C_L L_5 L_L\right) + s^3\left(C_1 C_5 L_5 R_1 R_5 g_m - C_1 C_5 L_5 R_1 + C_1 C_L L_L R_1 R_5 g_m - C_1 C_L L_L R_1\right.}{2g_m + s^5\left(2C_1 C_5 C_L L_5 L_L R_1 g_m + C_1 C_5 C_L L_5 L_L\right) + s^4\left(C_1 C_5 C_L L_5 R_1 R_5 g_m + C_1 C_5 C_L L_5 R_1 + C_1 C_5 C_L L_5 R_5 + 2C_1 C_5 C_L L_L R_1 R_5 g_m + C_1 C_5 C_L L_L R_5 + 2C_5 C_L L_5 L_L g_m\right) + s^3\left(C_1 C_5 C_L R_1 R_5 + 2C_1 C_5 L_5 R_1 g_m + C_1 C_5 L_5 + 2C_1 C_L L_L R_1 g_m + C_1 C_L L_L + C_5 C_L L_5 R_5\right.}$$

9.445 X-INVALID-ORDER-445 $Z(s) = \left(R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{R_5\left(C_5 L_5 s^2+1\right)}{C_5 L_5 s^2+C_5 R_5 s+1},\ \frac{L_L s}{C_L L_L s^2+1}\right)$

$$H(s) = \frac{s^4\left(C_1 C_5 L_5 L_L R_1 R_5 g_m - C_1 C_5 L_5 L_L R_1\right) + s^3\left(-C_1 C_5 L_L R_1 R_5 + C_5 L_5 L_L R_5 g_m - C_5 L_5 L_L\right) +}{R_5 g_m + s^5\left(C_1 C_5 C_L L_5 L_L R_1 R_5 g_m + C_1 C_5 C_L L_5 L_L R_1 + C_1 C_5 C_L L_5 L_L R_5\right) + s^4\left(C_1 C_5 C_L L_L R_1 R_5 + 2C_1 C_5 L_5 L_L R_1 g_m + C_1 C_5 L_5 L_L + C_5 C_L L_5 L_L R_5 g_m + C_5 C_L L_5 L_L\right) + s^3\left(C_1 C_5 L_5 R_1 R_5 g_m + C_1 C_5 L_5 R_1 + C_1 C_5 L_5 R_5 + 2C_1 C_5 L_L R_1 R_5 g_m + C_1 C_5 L_L R_5 + C_1 C_L\right.}$$

9.446 X-INVALID-ORDER-446 $Z(s) = \left(R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{R_5\left(C_5 L_5 s^2+1\right)}{C_5 L_5 s^2+C_5 R_5 s+1},\ L_L s + R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{R_5 g_m + s^5\left(C_1 C_5 C_L L_5 L_L R_1 R_5 g_m - C_1 C_5 C_L L_5 L_L R_1\right) + s^4\left(C_1 C_5 C_L L_5 R_1 R_5 R_L g_m - C_1 C_5 C_L L_5 R_1 R_L - C_1 C_5 C_L L_L R_1 R_5 + C_5 C_L L_5 L_L R_5 g_m - C_5 C_L L_5 L_L\right) + s^3\left(-C_1 C_5 C_L R_1 R_5 R_L + C_1 C\right.}{2g_m + s^5\left(2C_1 C_5 C_L L_5 L_L R_1 g_m + C_1 C_5 C_L L_5 L_L\right) + s^4\left(C_1 C_5 C_L L_5 R_1 R_5 g_m + 2C_1 C_5 C_L L_5 R_1 R_L g_m + C_1 C_5 C_L L_5 R_1 + C_1 C_5 C_L L_5 R_5 + C_1 C_5 C_L L_5 R_L + 2C_1 C_5 C_L L_L R_1 R_5 g_m + C_1 C_5 C_L L_L R_5 + 2C_5 C_L L_5 L_L g_m\right) + s^3\left(2C_1 C_5 C_L R_1 R_5 R_L g_m + C_1 C_5 C_L R_1 R_5 + C_1 C\right.}$$

9.447 X-INVALID-ORDER-447 $Z(s) = \left(R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{R_5\left(C_5 L_5 s^2+1\right)}{C_5 L_5 s^2+C_5 R_5 s+1},\ \frac{L_L R_L s}{C_L L_L R_L s^2+L_L s+R_L}\right)$

$$H(s) = \frac{}{R_5 R_L g_m + R_L + s^5\left(C_1 C_5 C_L L_5 L_L R_1 R_5 R_L g_m + C_1 C_5 C_L L_5 L_L R_1 R_L + C_1 C_5 C_L L_5 L_L R_5 R_L\right) + s^4\left(C_1 C_5 C_L L_L R_1 R_5 R_L + C_1 C_5 L_5 L_L R_1 R_5 g_m + 2C_1 C_5 L_5 L_L R_1 R_L g_m + C_1 C_5 L_5 L_L R_1 + C_1 C_5 L_5 L_L R_5 + C_1 C_5 L_5 L_L R_L + C_5 C_L L_5 L_L R_5 R_L g_m + C_5 C_L L_5 L_L R_L\right) + s\right.}$$

9.448 X-INVALID-ORDER-448 $Z(s) = \left(R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{R_5\left(C_5 L_5 s^2+1\right)}{C_5 L_5 s^2+C_5 R_5 s+1},\ \frac{C_L L_L R_L s^2+L_L s+R_L}{C_L L_L s^2+1}\right)$

$$H(s) = \frac{R_5 R_L g_m - R_L + s^5\left(C_1 C_5 C_L L_5 L_L R_1 R_5 R_L g_m - C_1 C_5 C_L L_5 L_L R_1 R_L\right) + s^4\left(-C_1 C_5 C_L L_L R_1 R_5 R_L + C_1 C_5\right.}{R_5 g_m + 2R_L g_m + s^5\left(C_1 C_5 C_L L_5 L_L R_1 R_5 g_m + 2C_1 C_5 C_L L_5 L_L R_1 R_L g_m + C_1 C_5 C_L L_5 L_L R_1 + C_1 C_5 C_L L_5 L_L R_5 + C_1 C_5 C_L L_5 L_L R_L\right) + s^4\left(2C_1 C_5 C_L L_L R_1 R_5 R_L g_m + C_1 C_5 C_L L_L R_1 R_5 + C_1 C_5 C_L L_L R_5 R_L + 2C_1 C_5 L_5 L_L R_1 g_m + C_1 C_5 L_5 L_L + C_5 C_L L_5 L_L R_5 g_m + 2\right.}$$

9.449 X-INVALID-ORDER-449 $Z(s) = \left(R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{R_5\left(C_5 L_5 s^2+1\right)}{C_5 L_5 s^2+C_5 R_5 s+1},\ \frac{R_L\left(C_L L_L s^2+1\right)}{C_L L_L s^2+C_L R_L s+1}\right)$

$$H(s) = \frac{}{R_5 g_m + 2R_L g_m + s^5 \left(C_1 C_5 C_L L_5 L_L R_1 R_5 g_m + 2C_1 C_5 C_L L_5 L_L R_1 R_L g_m + C_1 C_5 C_L L_5 L_L R_1 + C_1 C_5 C_L L_5 L_L R_5 + C_1 C_5 C_L L_5 L_L R_L\right) + s^4 \left(C_1 C_5 C_L L_5 R_1 R_5 R_L g_m + C_1 C_5 C_L L_5 R_1 R_L + C_1 C_5 C_L L_5 R_5 R_L + 2C_1 C_5 C_L L_L R_1 R_5 R_L g_m + C_1 C_5 C_L L_L R_1 R_5 + C_1 C_5 C_L L_L\right.}$$

9.450 X-INVALID-ORDER-450 $Z(s) = \left(L_1 s + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ R_5,\ \frac{1}{C_L s}\right)$

$$H(s) = \frac{R_5 g_m + s^2 \left(C_1 L_1 R_5 g_m - C_1 L_1\right) - 1}{2g_m + s^3 \left(C_1 C_L L_1 R_5 g_m + C_1 C_L L_1\right) + s^2 \left(C_1 C_L R_5 + 2C_1 L_1 g_m\right) + s \left(C_1 + C_L R_5 g_m + C_L\right)}$$

9.451 X-INVALID-ORDER-451 $Z(s) = \left(L_1 s + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ R_5,\ \frac{R_L}{C_L R_L s+1}\right)$

$$H(s) = \frac{R_5 R_L g_m - R_L + s^2 \left(C_1 L_1 R_5 R_L g_m - C_1 L_1 R_L\right)}{R_5 g_m + 2R_L g_m + s^3 \left(C_1 C_L L_1 R_5 R_L g_m + C_1 C_L L_1 R_L\right) + s^2 \left(C_1 C_L R_5 R_L + C_1 L_1 R_5 g_m + 2C_1 L_1 R_L g_m + C_1 L_1\right) + s \left(C_1 R_5 + C_1 R_L + C_L R_5 R_L g_m + C_L R_L\right) + 1}$$

9.452 X-INVALID-ORDER-452 $Z(s) = \left(L_1 s + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ R_5,\ R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{R_5 g_m + s^3 \left(C_1 C_L L_1 R_5 R_L g_m - C_1 C_L L_1 R_L\right) + s^2 \left(C_1 L_1 R_5 g_m - C_1 L_1\right) + s \left(C_L R_5 R_L g_m - C_L R_L\right) - 1}{2g_m + s^3 \left(C_1 C_L L_1 R_5 g_m + 2C_1 C_L L_1 R_L g_m + C_1 C_L L_1\right) + s^2 \left(C_1 C_L R_5 + C_1 C_L R_L + 2C_1 L_1 g_m\right) + s \left(C_1 + C_L R_5 g_m + 2C_L R_L g_m + C_L\right)}$$

9.453 X-INVALID-ORDER-453 $Z(s) = \left(L_1 s + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ R_5,\ L_L s + \frac{1}{C_L s}\right)$

$$H(s) = \frac{R_5 g_m + s^4 \left(C_1 C_L L_1 L_L R_5 g_m - C_1 C_L L_1 L_L\right) + s^2 \left(C_1 L_1 R_5 g_m - C_1 L_1 + C_L L_L R_5 g_m - C_L L_L\right) - 1}{2C_1 C_L L_1 L_L g_m s^4 + 2g_m + s^3 \left(C_1 C_L L_1 R_5 g_m + C_1 C_L L_1 + C_1 C_L L_L\right) + s^2 \left(C_1 C_L R_5 + 2C_1 L_1 g_m + 2C_L L_L g_m\right) + s \left(C_1 + C_L R_5 g_m + C_L\right)}$$

9.454 X-INVALID-ORDER-454 $Z(s) = \left(L_1 s + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ R_5,\ \frac{L_L s}{C_L L_L s^2+1}\right)$

$$H(s) = \frac{s^3 \left(C_1 L_1 L_L R_5 g_m - C_1 L_1 L_L\right) + s \left(L_L R_5 g_m - L_L\right)}{R_5 g_m + s^4 \left(C_1 C_L L_1 L_L R_5 g_m + C_1 C_L L_1 L_L\right) + s^3 \left(C_1 C_L L_L R_5 + 2C_1 L_1 L_L g_m\right) + s^2 \left(C_1 L_1 R_5 g_m + C_1 L_1 + C_1 L_L + C_L L_L R_5 g_m + C_L L_L\right) + s \left(C_1 R_5 + 2L_L g_m\right) + 1}$$

9.455 X-INVALID-ORDER-455 $Z(s) = \left(L_1 s + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ R_5,\ L_L s + R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{R_5 g_m + s^4 \left(C_1 C_L L_1 L_L R_5 g_m - C_1 C_L L_1 L_L\right) + s^3 \left(C_1 C_L L_1 R_5 R_L g_m - C_1 C_L L_1 R_L\right) + s^2 \left(C_1 L_1 R_5 g_m - C_1 L_1 + C_L L_L R_5 g_m - C_L L_L\right) + s \left(C_L R_5 R_L g_m - C_L R_L\right) - 1}{2C_1 C_L L_1 L_L g_m s^4 + 2g_m + s^3 \left(C_1 C_L L_1 R_5 g_m + 2C_1 C_L L_1 R_L g_m + C_1 C_L L_1 + C_1 C_L L_L\right) + s^2 \left(C_1 C_L R_5 + C_1 C_L R_L + 2C_1 L_1 g_m + 2C_L L_L g_m\right) + s \left(C_1 + C_L R_5 g_m + 2C_L R_L g_m + C_L\right)}$$

9.456 X-INVALID-ORDER-456 $Z(s) = \left(L_1 s + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ R_5,\ \frac{L_L R_L s}{C_L L_L R_L s^2+L_L s+R_L}\right)$

$$H(s) = \frac{s^3 \left(C_1 L_1 L_L R_5 R_L g_m - C_1 L_1 L_L R_L\right) + s \left(L_L R_5 R_L g_m - L_L R_L\right)}{R_5 R_L g_m + R_L + s^4 \left(C_1 C_L L_1 L_L R_5 R_L g_m + C_1 C_L L_1 L_L R_L\right) + s^3 \left(C_1 C_L L_L R_5 R_L + C_1 L_1 L_L R_5 g_m + 2C_1 L_1 L_L R_L g_m + C_1 L_1 L_L\right) + s^2 \left(C_1 L_1 R_5 R_L g_m + C_1 L_1 R_L + C_1 L_L R_5 + C_1 L_L R_L + C_L L_L R_5 R_L g_m + C_L L_L R_L\right) + s \left(C_1 R_5 R_L + L_L R_5 g_m + 2L_L R_L g_m + L_L\right)}$$

9.457 X-INVALID-ORDER-457 $Z(s) = \left(L_1 s + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ R_5,\ \frac{C_L L_L R_L s^2+L_L s+R_L}{C_L L_L s^2+1}\right)$

$$H(s) = \frac{R_5 R_L g_m - R_L + s^4 \left(C_1 C_L L_1 L_L R_5 R_L g_m - C_1 C_L L_1 L_L R_L\right) + s^3 \left(C_1 L_1 L_L R_5 g_m - C_1 L_1 L_L\right) + s^2 \left(C_1 L_1 R_5 R_L g_m - C_1 L_1 R_L + C_L L_L R_5 R_L g_m - C_L L_L R_L\right) + s \left(L_L R_5 g_m - L_L\right)}{R_5 g_m + 2R_L g_m + s^4 \left(C_1 C_L L_1 L_L R_5 g_m + 2C_1 C_L L_1 L_L R_L g_m + C_1 C_L L_1 L_L\right) + s^3 \left(C_1 C_L L_L R_5 + C_1 C_L L_L R_L + 2C_1 L_1 L_L g_m\right) + s^2 \left(C_1 L_1 R_5 g_m + 2C_1 L_1 R_L g_m + C_1 L_1 + C_1 L_L + C_L L_L R_5 g_m + 2C_L L_L R_L g_m + C_L L_L\right) + s \left(C_1 R_5 + C_1 R_L + 2L_L g_m\right) + 1}$$

9.458 X-INVALID-ORDER-458 $Z(s) = \left(L_1 s + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ R_5,\ \frac{R_L\left(C_L L_L s^2+1\right)}{C_L L_L s^2+C_L R_L s+1}\right)$

$$H(s) = \frac{R_5 R_L g_m - R_L + s^4\left(C_1 C_L L_1 L_L R_5 R_L g_m - C_1 C_L L_1 L_L R_L\right) + s^2\left(C_1 L_1 R_5 R_L g_m - C_1 L_1 R_L + C_L L_L R_5 R_L g_m - C_L L_L R_L\right)}{R_5 g_m + 2R_L g_m + s^4\left(C_1 C_L L_1 L_L R_5 g_m + 2C_1 C_L L_1 L_L R_L g_m + C_1 C_L L_1 L_L\right) + s^3\left(C_1 C_L L_1 R_5 R_L g_m + C_1 C_L L_1 R_L + C_1 C_L L_L R_5 + C_1 C_L L_L R_L\right) + s^2\left(C_1 C_L R_5 R_L + C_1 L_1 R_5 g_m + 2C_1 L_1 R_L g_m + C_1 L_1 + C_L L_L R_5 g_m + 2C_L L_L R_L g_m + C_L L_L\right) + s\left(C_1 R_5 + C_1 R_L +\right.}$$

9.459 X-INVALID-ORDER-459 $Z(s) = \left(L_1 s + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_5 s},\ R_L\right)$

$$H(s) = \frac{-C_1 C_5 L_1 R_L s^3 + C_1 L_1 R_L g_m s^2 - C_5 R_L s + R_L g_m}{g_m + s^3\left(2C_1 C_5 L_1 R_L g_m + C_1 C_5 L_1\right) + s^2\left(C_1 C_5 R_L + C_1 L_1 g_m\right) + s\left(C_1 + 2C_5 R_L g_m + C_5\right)}$$

9.460 X-INVALID-ORDER-460 $Z(s) = \left(L_1 s + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_5 s},\ \frac{1}{C_L s}\right)$

$$H(s) = \frac{-C_1 C_5 L_1 s^3 + C_1 L_1 g_m s^2 - C_5 s + g_m}{C_1 C_5 C_L L_1 s^4 + s^3\left(2C_1 C_5 L_1 g_m + C_1 C_L L_1 g_m\right) + s^2\left(C_1 C_5 + C_1 C_L + C_5 C_L\right) + s\left(2C_5 g_m + C_L g_m\right)}$$

9.461 X-INVALID-ORDER-461 $Z(s) = \left(L_1 s + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_5 s},\ \frac{R_L}{C_L R_L s+1}\right)$

$$H(s) = \frac{-C_1 C_5 L_1 R_L s^3 + C_1 L_1 R_L g_m s^2 - C_5 R_L s + R_L g_m}{C_1 C_5 C_L L_1 R_L s^4 + g_m + s^3\left(2C_1 C_5 L_1 R_L g_m + C_1 C_5 L_1 + C_1 C_L L_1 R_L g_m\right) + s^2\left(C_1 C_5 R_L + C_1 C_L R_L + C_1 L_1 g_m + C_5 C_L R_L\right) + s\left(C_1 + 2C_5 R_L g_m + C_5 + C_L R_L g_m\right)}$$

9.462 X-INVALID-ORDER-462 $Z(s) = \left(L_1 s + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_5 s},\ R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{-C_1 C_5 C_L L_1 R_L s^4 + g_m + s^3\left(-C_1 C_5 L_1 + C_1 C_L L_1 R_L g_m\right) + s^2\left(C_1 L_1 g_m - C_5 C_L R_L\right) + s\left(-C_5 + C_L R_L g_m\right)}{s^4\left(2C_1 C_5 C_L L_1 R_L g_m + C_1 C_5 C_L L_1\right) + s^3\left(C_1 C_5 C_L R_L + 2C_1 C_5 L_1 g_m + C_1 C_L L_1 g_m\right) + s^2\left(C_1 C_5 + C_1 C_L + 2C_5 C_L R_L g_m + C_5 C_L\right) + s\left(2C_5 g_m + C_L g_m\right)}$$

9.463 X-INVALID-ORDER-463 $Z(s) = \left(L_1 s + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_5 s},\ L_L s + \frac{1}{C_L s}\right)$

$$H(s) = \frac{-C_1 C_5 C_L L_1 L_L s^5 + C_1 C_L L_1 L_L g_m s^4 - C_5 s + g_m + s^3\left(-C_1 C_5 L_1 - C_5 C_L L_L\right) + s^2\left(C_1 L_1 g_m + C_L L_L g_m\right)}{2C_1 C_5 C_L L_1 L_L g_m s^5 + s^4\left(C_1 C_5 C_L L_1 + C_1 C_5 C_L L_L\right) + s^3\left(2C_1 C_5 L_1 g_m + C_1 C_L L_1 g_m + 2C_5 C_L L_L g_m\right) + s^2\left(C_1 C_5 + C_1 C_L + C_5 C_L\right) + s\left(2C_5 g_m + C_L g_m\right)}$$

9.464 X-INVALID-ORDER-464 $Z(s) = \left(L_1 s + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_5 s},\ \frac{L_L s}{C_L L_L s^2+1}\right)$

$$H(s) = \frac{-C_1 C_5 L_1 L_L s^4 + C_1 L_1 L_L g_m s^3 - C_5 L_L s^2 + L_L g_m s}{C_1 C_5 C_L L_1 L_L s^5 + g_m + s^4\left(2C_1 C_5 L_1 L_L g_m + C_1 C_L L_1 L_L g_m\right) + s^3\left(C_1 C_5 L_1 + C_1 C_5 L_L + C_1 C_L L_L + C_5 C_L L_L\right) + s^2\left(C_1 L_1 g_m + 2C_5 L_L g_m + C_L L_L g_m\right) + s\left(C_1 + C_5\right)}$$

9.465 X-INVALID-ORDER-465 $Z(s) = \left(L_1 s + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_5 s},\ L_L s + R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{-C_1 C_5 C_L L_1 L_L s^5 + g_m + s^4\left(-C_1 C_5 C_L L_1 R_L + C_1 C_L L_1 L_L g_m\right) + s^3\left(-C_1 C_5 L_1 + C_1 C_L L_1 R_L g_m - C_5 C_L L_L\right) + s^2\left(C_1 L_1 g_m - C_5 C_L R_L + C_L L_L g_m\right) + s\left(-C_5 + C_L R_L g_m\right)}{2C_1 C_5 C_L L_1 L_L g_m s^5 + s^4\left(2C_1 C_5 C_L L_1 R_L g_m + C_1 C_5 C_L L_1 + C_1 C_5 C_L L_L\right) + s^3\left(C_1 C_5 C_L R_L + 2C_1 C_5 L_1 g_m + C_1 C_L L_1 g_m + 2C_5 C_L L_L g_m\right) + s^2\left(C_1 C_5 + C_1 C_L + 2C_5 C_L R_L g_m + C_5 C_L\right) + s\left(2C_5 g_m + C_L g_m\right)}$$

9.466 X-INVALID-ORDER-466 $Z(s) = \left(L_1 s + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_5 s},\ \frac{L_L R_L s}{C_L L_L R_L s^2+L_L s+R_L}\right)$

$$H(s) = \frac{-C_1 C_5 L_1 L_L R_L s^4 + C_1 L_1 L_L R_L g_m s^3 - C_5 L_L R_L s^2 + L_L R_L g_m s}{C_1 C_5 C_L L_1 L_L R_L s^5 + R_L g_m + s^4\left(2C_1 C_5 L_1 L_L R_L g_m + C_1 C_5 L_1 L_L + C_1 C_L L_1 L_L R_L g_m\right) + s^3\left(C_1 C_5 L_1 R_L + C_1 C_5 L_L R_L + C_1 C_L L_L R_L + C_1 L_1 L_L g_m + C_5 C_L L_L R_L\right) + s^2\left(C_1 L_1 R_L g_m + C_1 L_L + 2C_5 L_L R_L g_m + C_5 L_L + C_L L_L R_L g_m\right) + s\left(C_1 R_L + C_5 R_L + L_L g_m\right)}$$

9.467 X-INVALID-ORDER-467 $Z(s) = \left(L_1 s + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_5 s},\ \frac{C_L L_L R_L s^2+L_L s+R_L}{C_L L_L s^2+1}\right)$

$$H(s) = \frac{-C_1 C_5 C_L L_1 L_L R_L s^5 + R_L g_m + s^4\left(-C_1 C_5 L_1 L_L + C_1 C_L L_1 L_L R_L g_m\right) + s^3\left(-C_1 C_5 L_1 R_L + C_1 L_1 L_L g_m - C_5 C_L L_L R_L\right) + s^2\left(C_1 L_1 R_L g_m - C_5 L_L + C_L L_L R_L g_m\right) + s\left(-C_5 R_L + L_L g_m\right)}{g_m + s^5\left(2C_1 C_5 C_L L_1 L_L R_L g_m + C_1 C_5 C_L L_1 L_L\right) + s^4\left(C_1 C_5 C_L L_L R_L + 2C_1 C_5 L_1 L_L g_m + C_1 C_L L_1 L_L g_m\right) + s^3\left(2C_1 C_5 L_1 R_L g_m + C_1 C_5 L_1 + C_1 C_5 L_L + C_1 C_L L_L + 2C_5 C_L L_L R_L g_m + C_5 C_L L_L\right) + s^2\left(C_1 C_5 R_L + C_1 L_1 g_m + 2C_5 L_L g_m + C_L L_L g_m\right) + s\left(C_1 + 2C_5 R_L g\right.}$$

9.468 X-INVALID-ORDER-468 $Z(s) = \left(L_1 s + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_5 s},\ \frac{R_L\left(C_L L_L s^2+1\right)}{C_L L_L s^2+C_L R_L s+1}\right)$

$$H(s) = \frac{-C_1C_5C_LL_1L_LR_Ls^5 + C_1C_LL_1L_LR_Lg_ms^4 - C_5R_Ls + R_Lg_m + s^3\left(-C_1C_5L_1R_L - C_5C_LL_LR_L\right) + s^2\left(C_1L_1R_Lg_m + C_LL_LR_Lg_m\right)}{g_m + s^5\left(2C_1C_5C_LL_1L_LR_Lg_m + C_1C_5C_LL_1L_L\right) + s^4\left(C_1C_5C_LL_1R_L + C_1C_5C_LL_LR_L + C_1C_LL_1L_Lg_m\right) + s^3\left(2C_1C_5L_1R_Lg_m + C_1C_5L_1 + C_1C_LL_1R_Lg_m + C_1C_LL_L + 2C_5C_LL_LR_Lg_m + C_5C_LL_L\right) + s^2\left(C_1C_5R_L + C_1C_LR_L + C_1L_1g_m + C_5C_LR_L + C_LL_Lg_m\right) +}$$

9.469 X-INVALID-ORDER-469 $Z(s) = \left(L_1 s + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{R_5}{C_5R_5s+1},\ R_L\right)$

$$H(s) = \frac{-C_1C_5L_1R_5R_Ls^3 - C_5R_5R_Ls + R_5R_Lg_m - R_L + s^2\left(C_1L_1R_5R_Lg_m - C_1L_1R_L\right)}{R_5g_m + 2R_Lg_m + s^3\left(2C_1C_5L_1R_5R_Lg_m + C_1C_5L_1R_5\right) + s^2\left(C_1C_5R_5R_L + C_1L_1R_5g_m + 2C_1L_1R_Lg_m + C_1L_1\right) + s\left(C_1R_5 + C_1R_L + 2C_5R_5R_Lg_m + C_5R_5\right) + 1}$$

9.470 X-INVALID-ORDER-470 $Z(s) = \left(L_1 s + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{R_5}{C_5R_5s+1},\ \frac{1}{C_L s}\right)$

$$H(s) = \frac{-C_1C_5L_1R_5s^3 - C_5R_5s + R_5g_m + s^2\left(C_1L_1R_5g_m - C_1L_1\right) - 1}{C_1C_5C_LL_1R_5s^4 + 2g_m + s^3\left(2C_1C_5L_1R_5g_m + C_1C_LL_1R_5g_m + C_1C_LL_1\right) + s^2\left(C_1C_5R_5 + C_1C_LR_5 + 2C_1L_1g_m + C_5C_LR_5\right) + s\left(C_1 + 2C_5R_5g_m + C_LR_5g_m + C_L\right)}$$

9.471 X-INVALID-ORDER-471 $Z(s) = \left(L_1 s + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{R_5}{C_5R_5s+1},\ \frac{R_L}{C_LR_Ls+1}\right)$

$$H(s) = \frac{-C_1C_5L_1R_5R_Ls^3 - C_5R_5R_Ls + R_5R_Lg_m - R_L + s^2\left(C_1L_1R_5R_Lg_m - C_1L_1R_L\right)}{C_1C_5C_LL_1R_5R_Ls^4 + R_5g_m + 2R_Lg_m + s^3\left(2C_1C_5L_1R_5R_Lg_m + C_1C_5L_1R_5 + C_1C_LL_1R_5R_Lg_m + C_1C_LL_1R_L\right) + s^2\left(C_1C_5R_5R_L + C_1C_LR_5R_L + C_1L_1R_5g_m + 2C_1L_1R_Lg_m + C_1L_1 + C_5C_LR_5R_L\right) + s\left(C_1R_5 + C_1R_L + 2C_5R_5R_Lg_m + C_5R_5 + C_LR_5R_Lg_m + C_L\right.}$$

9.472 X-INVALID-ORDER-472 $Z(s) = \left(L_1 s + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{R_5}{C_5R_5s+1},\ R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{-C_1C_5C_LL_1R_5R_Ls^4 + R_5g_m + s^3\left(-C_1C_5L_1R_5 + C_1C_LL_1R_5R_Lg_m - C_1C_LL_1R_L\right) + s^2\left(C_1L_1R_5g_m - C_1L_1 - C_5C_LR_5R_L\right) + s\left(-C_5R_5 + C_LR_5R_Lg_m - C_LR_L\right) - 1}{2g_m + s^4\left(2C_1C_5C_LL_1R_5R_Lg_m + C_1C_5C_LL_1R_5\right) + s^3\left(C_1C_5C_LR_5R_L + 2C_1C_5L_1R_5g_m + C_1C_LL_1R_5g_m + 2C_1C_LL_1R_Lg_m + C_1C_LL_1\right) + s^2\left(C_1C_5R_5 + C_1C_LR_5 + C_1C_LR_L + 2C_1L_1g_m + 2C_5C_LR_5R_Lg_m + C_5C_LR_5\right) + s\left(C_1 + 2C_5R_5g_m + C_LR_5g_m + 2C_LR_Lg_m\right.}$$

9.473 X-INVALID-ORDER-473 $Z(s) = \left(L_1 s + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{R_5}{C_5R_5s+1},\ L_L s + \frac{1}{C_L s}\right)$

$$H(s) = \frac{-C_1C_5C_LL_1L_LR_5s^5 - C_5R_5s + R_5g_m + s^4\left(C_1C_LL_1L_LR_5g_m - C_1C_LL_1L_L\right) + s^3\left(-C_1C_5L_1R_5 - C_5C_LL_LR_5\right) + s^2\left(C_1L_1R_5g_m - C_1L_1 + C_LL_LR_5g_m - C_LL_L\right) - 1}{2C_1C_5C_LL_1L_LR_5g_ms^5 + 2g_m + s^4\left(C_1C_5C_LL_1R_5 + C_1C_5C_LL_LR_5 + 2C_1C_LL_1L_Lg_m\right) + s^3\left(2C_1C_5L_1R_5g_m + C_1C_LL_1R_5g_m + C_1C_LL_1 + C_1C_LL_L + 2C_5C_LL_LR_5g_m\right) + s^2\left(C_1C_5R_5 + C_1C_LR_5 + 2C_1L_1g_m + C_5C_LR_5 + 2C_LL_Lg_m\right) + s\left(C_1 + 2C_5R_5g_m + C_LR_5g_m\right.}$$

9.474 X-INVALID-ORDER-474 $Z(s) = \left(L_1 s + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{R_5}{C_5R_5s+1},\ \frac{L_L s}{C_LL_Ls^2+1}\right)$

$$H(s) = \frac{-C_1C_5L_1L_LR_5s^4 - C_5L_LR_5s^2 + s^3\left(C_1L_1L_LR_5g_m - C_1L_1L_L\right) + s\left(L_LR_5g_m - L_L\right)}{C_1C_5C_LL_1L_LR_5s^5 + R_5g_m + s^4\left(2C_1C_5L_1L_LR_5g_m + C_1C_LL_1L_LR_5g_m + C_1C_LL_1L_L\right) + s^3\left(C_1C_5L_1R_5 + C_1C_5L_LR_5 + C_1C_LL_LR_5 + 2C_1L_1L_Lg_m + C_5C_LL_LR_5\right) + s^2\left(C_1L_1R_5g_m + C_1L_1 + C_1L_L + 2C_5L_LR_5g_m + C_LL_LR_5g_m + C_LL_L\right) + s\left(C_1R_5 + C_5R_5 + 2L\right.}$$

9.475 X-INVALID-ORDER-475 $Z(s) = \left(L_1 s + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{R_5}{C_5R_5s+1},\ L_L s + R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{-C_1C_5C_LL_1L_LR_5s^5 + R_5g_m + s^4\left(-C_1C_5C_LL_1R_5R_L + C_1C_LL_1L_LR_5g_m - C_1C_LL_1L_L\right) + s^3\left(-C_1C_5L_1R_5 + C_1C_LL_1R_5R_Lg_m - C_1C_LL_1R_L - C_5C_LL_LR_5\right) + s^2\left(C_1L_1R_5g_m - C_1L_1 - C_5C_LR_5R_L + C_LL_L\right.}{2C_1C_5C_LL_1L_LR_5g_ms^5 + 2g_m + s^4\left(2C_1C_5C_LL_1R_5R_Lg_m + C_1C_5C_LL_1R_5 + C_1C_5C_LL_LR_5 + 2C_1C_LL_1L_Lg_m\right) + s^3\left(C_1C_5C_LR_5R_L + 2C_1C_5L_1R_5g_m + C_1C_LL_1R_5g_m + 2C_1C_LL_1R_Lg_m + C_1C_LL_1 + C_1C_LL_L + 2C_5C_LL_LR_5g_m\right) + s^2\left(C_1C_5R_5 + C_1C_LR_5 + C_1C_L\right.}$$

9.476 X-INVALID-ORDER-476 $Z(s) = \left(L_1 s + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{R_5}{C_5R_5s+1},\ \frac{L_LR_Ls}{C_LL_LR_Ls^2+L_Ls+R_L}\right)$

$$H(s) = \frac{-C_1C_5L_1L_LR_5R_Ls^4 - C_5L_LR_5R_Ls^2 + s^3\left(C_1L_1L_LR_5R_Lg_m - C_1L_1L_LR_L\right) + s\left(L_LR_5R_Lg_m - L_LR_L\right)}{C_1C_5C_LL_1L_LR_5R_Ls^5 + R_5R_Lg_m + R_L + s^4\left(2C_1C_5L_1L_LR_5R_Lg_m + C_1C_5L_1L_LR_5 + C_1C_LL_1L_LR_5R_Lg_m + C_1C_LL_1L_LR_L\right) + s^3\left(C_1C_5L_1R_5R_L + C_1C_5L_LR_5R_L + C_1C_LL_LR_5R_L + C_1L_1L_LR_5g_m + 2C_1L_1L_LR_Lg_m + C_1L_1L_L + C_5C_LL_LR_5R_L\right) + s^2\left(C_1L_1R_5R\right.}$$

9.477 X-INVALID-ORDER-477 $Z(s) = \left(L_1 s + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{R_5}{C_5R_5s+1},\ \frac{C_LL_LR_Ls^2+L_Ls+R_L}{C_LL_Ls^2+1}\right)$

$$H(s) = \frac{-C_1C_5C_LL_1L_LR_5R_Ls^5 + R_5R_Lg_m - R_L + s^4\left(-C_1C_5L_1L_LR_5 + C_1C_LL_1L_LR_5R_Lg_m - C_1C_LL_1L_LR_L\right) + s^3\left(-C_1C_5L_1R_5R_L + C_1L_1L_LR_5g_m - C_1L_1L_L - C_5C\right.}{R_5g_m + 2R_Lg_m + s^5\left(2C_1C_5C_LL_1L_LR_5R_Lg_m + C_1C_5C_LL_1L_LR_5\right) + s^4\left(C_1C_5C_LL_LR_5R_L + 2C_1C_5L_1L_LR_5g_m + C_1C_LL_1L_LR_5g_m + 2C_1C_LL_1L_LR_Lg_m + C_1C_LL_1L_L\right) + s^3\left(2C_1C_5L_1R_5R_Lg_m + C_1C_5L_1R_5 + C_1C_5L_LR_5 + C_1C_LL_LR_5 + C_1C_LL_LR_L + 2C_1L_1L\right.}$$

9.478 X-INVALID-ORDER-478 $Z(s) = \left(L_1 s + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{R_5}{C_5 R_5 s+1},\ \frac{R_L\left(C_L L_L s^2+1\right)}{C_L L_L s^2+C_L R_L s+1}\right)$

$$H(s) = \frac{-C_1C_5C_LL_1L_LR_5R_Ls^5 - C_5R_5R_Ls + R_5R_Lg_m - R_L + s^4\left(C_1C_LL_1L_LR_5R_Lg_m - C_1C_LL_1L_LR_L\right) + s^3\left(-C_1C\right.}{R_5g_m + 2R_Lg_m + s^5\left(2C_1C_5C_LL_1L_LR_5R_Lg_m + C_1C_5C_LL_1L_LR_5\right) + s^4\left(C_1C_5C_LL_1R_5R_L + C_1C_5C_LL_LR_5R_L + C_1C_LL_1L_LR_5g_m + 2C_1C_LL_1L_LR_Lg_m + C_1C_LL_1L_L\right) + s^3\left(2C_1C_5L_1R_5R_Lg_m + C_1C_5L_1R_5 + C_1C_LL_1R_5R_Lg_m + C_1C_LL_1R_L + C_1C_LL_LR_5 + C_1C\right.}$$

9.479 X-INVALID-ORDER-479 $Z(s) = \left(L_1 s + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ R_5 + \frac{1}{C_5 s},\ R_L\right)$

$$H(s) = \frac{C_1L_1R_Lg_ms^2 + R_Lg_m + s^3\left(C_1C_5L_1R_5R_Lg_m - C_1C_5L_1R_L\right) + s\left(C_5R_5R_Lg_m - C_5R_L\right)}{g_m + s^3\left(C_1C_5L_1R_5g_m + 2C_1C_5L_1R_Lg_m + C_1C_5L_1\right) + s^2\left(C_1C_5R_5 + C_1C_5R_L + C_1L_1g_m\right) + s\left(C_1 + C_5R_5g_m + 2C_5R_Lg_m + C_5\right)}$$

9.480 X-INVALID-ORDER-480 $Z(s) = \left(L_1 s + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ R_5 + \frac{1}{C_5 s},\ \frac{1}{C_L s}\right)$

$$H(s) = \frac{C_1L_1g_ms^2 + g_m + s^3\left(C_1C_5L_1R_5g_m - C_1C_5L_1\right) + s\left(C_5R_5g_m - C_5\right)}{s^4\left(C_1C_5C_LL_1R_5g_m + C_1C_5C_LL_1\right) + s^3\left(C_1C_5C_LR_5 + 2C_1C_5L_1g_m + C_1C_LL_1g_m\right) + s^2\left(C_1C_5 + C_1C_L + C_5C_LR_5g_m + C_5C_L\right) + s\left(2C_5g_m + C_Lg_m\right)}$$

9.481 X-INVALID-ORDER-481 $Z(s) = \left(L_1 s + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ R_5 + \frac{1}{C_5 s},\ \frac{R_L}{C_L R_L s+1}\right)$

$$H(s) = \frac{C_1L_1R_Lg_ms^2 + R_Lg_m + s^3\left(C_1C_5L_1R_5R_Lg_m - C_1C_5L_1R_L\right) + s\left(C_5R_5R_Lg_m - C_5R_L\right)}{g_m + s^4\left(C_1C_5C_LL_1R_5R_Lg_m + C_1C_5C_LL_1R_L\right) + s^3\left(C_1C_5C_LR_5R_L + C_1C_5L_1R_5g_m + 2C_1C_5L_1R_Lg_m + C_1C_5L_1 + C_1C_LL_1R_Lg_m\right) + s^2\left(C_1C_5R_5 + C_1C_5R_L + C_1C_LR_L + C_1L_1g_m + C_5C_LR_5R_Lg_m + C_5C_LR_L\right) + s\left(C_1 + C_5R_5g_m + 2C_5R_Lg_m + C_5 + C_LR_Lg_m\right)}$$

9.482 X-INVALID-ORDER-482 $Z(s) = \left(L_1 s + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ R_5 + \frac{1}{C_5 s},\ R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{g_m + s^4\left(C_1C_5C_LL_1R_5R_Lg_m - C_1C_5C_LL_1R_L\right) + s^3\left(C_1C_5L_1R_5g_m - C_1C_5L_1 + C_1C_LL_1R_Lg_m\right) + s^2\left(C_1L_1g_m + C_5C_LR_5R_Lg_m - C_5C_LR_L\right) + s\left(C_5R_5g_m - C_5 + C_LR_Lg_m\right)}{s^4\left(C_1C_5C_LL_1R_5g_m + 2C_1C_5C_LL_1R_Lg_m + C_1C_5C_LL_1\right) + s^3\left(C_1C_5C_LR_5 + C_1C_5C_LR_L + 2C_1C_5L_1g_m + C_1C_LL_1g_m\right) + s^2\left(C_1C_5 + C_1C_L + C_5C_LR_5g_m + 2C_5C_LR_Lg_m + C_5C_L\right) + s\left(2C_5g_m + C_Lg_m\right)}$$

9.483 X-INVALID-ORDER-483 $Z(s) = \left(L_1 s + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ R_5 + \frac{1}{C_5 s},\ L_L s + \frac{1}{C_L s}\right)$

$$H(s) = \frac{C_1C_LL_1L_Lg_ms^4 + g_m + s^5\left(C_1C_5C_LL_1L_LR_5g_m - C_1C_5C_LL_1L_L\right) + s^3\left(C_1C_5L_1R_5g_m - C_1C_5L_1 + C_5C_LL_LR_5g_m - C_5C_LL_L\right) + s^2\left(C_1L_1g_m + C_LL_Lg_m\right) + s\left(C_5R_5g_m - C_5\right)}{2C_1C_5C_LL_1L_Lg_ms^5 + s^4\left(C_1C_5C_LL_1R_5g_m + C_1C_5C_LL_1 + C_1C_5C_LL_L\right) + s^3\left(C_1C_5C_LR_5 + 2C_1C_5L_1g_m + C_1C_LL_1g_m + 2C_5C_LL_Lg_m\right) + s^2\left(C_1C_5 + C_1C_L + C_5C_LR_5g_m + C_5C_L\right) + s\left(2C_5g_m + C_Lg_m\right)}$$

9.484 X-INVALID-ORDER-484 $Z(s) = \left(L_1 s + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ R_5 + \frac{1}{C_5 s},\ \frac{L_L s}{C_L L_L s^2+1}\right)$

$$H(s) = \frac{C_1L_1L_Lg_ms^3 + L_Lg_ms + s^4\left(C_1C_5L_1L_LR_5g_m - C_1C_5L_1L_L\right) + s^2\left(C_5L_LR_5g_m - C_5L_L\right)}{g_m + s^5\left(C_1C_5C_LL_1L_LR_5g_m + C_1C_5C_LL_1L_L\right) + s^4\left(C_1C_5C_LL_LR_5 + 2C_1C_5L_1L_Lg_m + C_1C_LL_1L_Lg_m\right) + s^3\left(C_1C_5L_1R_5g_m + C_1C_5L_1 + C_1C_5L_L + C_1C_LL_L + C_5C_LL_LR_5g_m + C_5C_LL_L\right) + s^2\left(C_1C_5R_5 + C_1L_1g_m + 2C_5L_Lg_m + C_LL_Lg_m\right) + s\left(C_1 + C_5R_5g_m + C\right.}$$

9.485 X-INVALID-ORDER-485 $Z(s) = \left(L_1 s + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ R_5 + \frac{1}{C_5 s},\ L_L s + R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{g_m + s^5\left(C_1C_5C_LL_1L_LR_5g_m - C_1C_5C_LL_1L_L\right) + s^4\left(C_1C_5C_LL_1R_5R_Lg_m - C_1C_5C_LL_1R_L + C_1C_LL_1L_Lg_m\right) + s^3\left(C_1C_5L_1R_5g_m - C_1C_5L_1 + C_1C_LL_1R_Lg_m + C_5C_LL_LR_5g_m - C_5C_LL_L\right) + s^2\left(C_1L_1g_m + C_5C_LR_5R_Lg_m - C_5C_LR_L + C_LL_Lg_m\right) + s\left(C_5R_5g_m - C_5\right.}{2C_1C_5C_LL_1L_Lg_ms^5 + s^4\left(C_1C_5C_LL_1R_5g_m + 2C_1C_5C_LL_1R_Lg_m + C_1C_5C_LL_1 + C_1C_5C_LL_L\right) + s^3\left(C_1C_5C_LR_5 + C_1C_5C_LR_L + 2C_1C_5L_1g_m + C_1C_LL_1g_m + 2C_5C_LL_Lg_m\right) + s^2\left(C_1C_5 + C_1C_L + C_5C_LR_5g_m + 2C_5C_LR_Lg_m + C_5C_L\right) + s\left(2C_5g_m + C_Lg\right.}$$

9.486 X-INVALID-ORDER-486 $Z(s) = \left(L_1 s + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ R_5 + \frac{1}{C_5 s},\ \frac{L_L R_L s}{C_L L_L R_L s^2+L_L s+R_L}\right)$

$$H(s) = \frac{C_1L_1L_LR_Lg_ms^3 + L_LR_Lg_ms + s^4\left(C_1C_5L_1L_LR_5R_Lg_m - C_1C_5L_1L_LR_L\right) + s^2\left(C_5L_LR_5R_Lg_m - C_5L_L\right.}{R_Lg_m + s^5\left(C_1C_5C_LL_1L_LR_5R_Lg_m + C_1C_5C_LL_1L_LR_L\right) + s^4\left(C_1C_5C_LL_LR_5R_L + C_1C_5L_1L_LR_5g_m + 2C_1C_5L_1L_LR_Lg_m + C_1C_5L_1L_L + C_1C_LL_1L_LR_Lg_m\right) + s^3\left(C_1C_5L_1R_5R_Lg_m + C_1C_5L_1R_L + C_1C_5L_LR_5 + C_1C_5L_LR_L + C_1C_LL_LR_L + C_1L_1L_Lg_m + C_5C_LL\right.}$$

9.487 X-INVALID-ORDER-487 $Z(s) = \left(L_1 s + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ R_5 + \frac{1}{C_5 s},\ \frac{C_L L_L R_L s^2+L_L s+R_L}{C_L L_L s^2+1}\right)$

$$H(s) = \frac{R_Lg_m + s^5\left(C_1C_5C_LL_1L_LR_5R_Lg_m - C_1C_5C_LL_1L_LR_L\right) + s^4\left(C_1C_5L_1L_LR_5g_m - C_1C_5L_1L_L + C_1C_LL_1L_LR_Lg_m\right) + s^3\left(C_1C_5L_1R_5R_Lg_m - C_1C_5L_1R_L + C_1L_1L_Lg_m + C_5C_LL_LR_5R_Lg_m - C_5C_LL_LR_L\right) + s^2\left(C_1L_1R_Lg_m + C_5\right.}{g_m + s^5\left(C_1C_5C_LL_1L_LR_5g_m + 2C_1C_5C_LL_1L_LR_Lg_m + C_1C_5C_LL_1L_L\right) + s^4\left(C_1C_5C_LL_LR_5 + C_1C_5C_LL_LR_L + 2C_1C_5L_1L_Lg_m + C_1C_LL_1L_Lg_m\right) + s^3\left(C_1C_5L_1R_5g_m + 2C_1C_5L_1R_Lg_m + C_1C_5L_1 + C_1C_5L_L + C_1C_LL_L + C_5C_LL_LR_5g_m + 2C_5C_LL_LR_Lg_m + C_5C_L\right.}$$

9.488 X-INVALID-ORDER-488 $Z(s) = \left(L_1 s + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ R_5 + \frac{1}{C_5 s},\ \frac{R_L\left(C_L L_L s^2+1\right)}{C_L L_L s^2+C_L R_L s+1}\right)$

$$H(s) = \frac{C_1 C_L L_1 L_L R_L g_m s^4 + R_L g_m + s^5 \left(C_1 C_5 C_L L_1 L_L R_5 R_L g_m - C_1 C_5 C_L L_1 L_L R_L\right) + s^3 \left(C_1 C_5 L_1 R_5 R_L g_m - C_1 C_5 L_1 R_L + C_5 C_L L_L R_5 R_L g_m - C_5}{g_m + s^5 \left(C_1 C_5 C_L L_1 L_L R_5 g_m + 2C_1 C_5 C_L L_1 L_L R_L g_m + C_1 C_5 C_L L_1 L_L\right) + s^4 \left(C_1 C_5 C_L L_1 R_5 R_L g_m + C_1 C_5 C_L L_1 R_L + C_1 C_5 C_L L_L R_5 + C_1 C_5 C_L L_L R_L + C_1 C_L L_1 L_L g_m\right) + s^3 \left(C_1 C_5 C_L R_5 R_L + C_1 C_5 L_1 R_5 g_m + 2C_1 C_5 L_1 R_L g_m + C_1 C_5 L_1 + C_1 C_L L_1 R_L g_m + C_1 C_L L_1}$$

9.489 X-INVALID-ORDER-489 $Z(s) = \left(L_1 s + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ L_5 s + \frac{1}{C_5 s},\ R_L\right)$

$$H(s) = \frac{C_1 C_5 L_1 L_5 R_L g_m s^4 - C_1 C_5 L_1 R_L s^3 - C_5 R_L s + R_L g_m + s^2 \left(C_1 L_1 R_L g_m + C_5 L_5 R_L g_m\right)}{C_1 C_5 L_1 L_5 g_m s^4 + g_m + s^3 \left(2C_1 C_5 L_1 R_L g_m + C_1 C_5 L_1 + C_1 C_5 L_5\right) + s^2 \left(C_1 C_5 R_L + C_1 L_1 g_m + C_5 L_5 g_m\right) + s \left(C_1 + 2C_5 R_L g_m + C_5\right)}$$

9.490 X-INVALID-ORDER-490 $Z(s) = \left(L_1 s + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ L_5 s + \frac{1}{C_5 s},\ \frac{1}{C_L s}\right)$

$$H(s) = \frac{C_1 C_5 L_1 L_5 g_m s^4 - C_1 C_5 L_1 s^3 - C_5 s + g_m + s^2 \left(C_1 L_1 g_m + C_5 L_5 g_m\right)}{C_1 C_5 C_L L_1 L_5 g_m s^5 + s^4 \left(C_1 C_5 C_L L_1 + C_1 C_5 C_L L_5\right) + s^3 \left(2C_1 C_5 L_1 g_m + C_1 C_L L_1 g_m + C_5 C_L L_5 g_m\right) + s^2 \left(C_1 C_5 + C_1 C_L + C_5 C_L\right) + s \left(2C_5 g_m + C_L g_m\right)}$$

9.491 X-INVALID-ORDER-491 $Z(s) = \left(L_1 s + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ L_5 s + \frac{1}{C_5 s},\ \frac{R_L}{C_L R_L s+1}\right)$

$$H(s) = \frac{C_1 C_5 L_1 L_5 R_L g_m s^4 - C_1 C_5 L_1 R_L s^3 - C_5 R_L s + R_L g_m + s^2 \left(C_1 L_1 R_L g_m + C_5 L_5 R_L g_m\right)}{C_1 C_5 C_L L_1 L_5 R_L g_m s^5 + g_m + s^4 \left(C_1 C_5 C_L L_1 R_L + C_1 C_5 C_L L_5 R_L + C_1 C_5 L_1 L_5 g_m\right) + s^3 \left(2C_1 C_5 L_1 R_L g_m + C_1 C_5 L_1 + C_1 C_5 L_5 + C_1 C_L L_1 R_L g_m + C_5 C_L L_5 R_L g_m\right) + s^2 \left(C_1 C_5 R_L + C_1 C_L R_L + C_1 L_1 g_m + C_5 C_L R_L + C_5 L_5 g_m\right) + s \left(C_1 + 2C_5 R_L g_m + C_5 + C_L R_L g_m\right)}$$

9.492 X-INVALID-ORDER-492 $Z(s) = \left(L_1 s + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ L_5 s + \frac{1}{C_5 s},\ R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{C_1 C_5 C_L L_1 L_5 R_L g_m s^5 + g_m + s^4 \left(-C_1 C_5 C_L L_1 R_L + C_1 C_5 L_1 L_5 g_m\right) + s^3 \left(-C_1 C_5 L_1 + C_1 C_L L_1 R_L g_m + C_5 C_L L_5 R_L g_m\right) + s^2 \left(C_1 L_1 g_m - C_5 C_L R_L + C_5 L_5 g_m\right) + s \left(-C_5 + C_L R_L g_m\right)}{C_1 C_5 C_L L_1 L_5 g_m s^5 + s^4 \left(2C_1 C_5 C_L L_1 R_L g_m + C_1 C_5 C_L L_1 + C_1 C_5 C_L L_5\right) + s^3 \left(C_1 C_5 C_L R_L + 2C_1 C_5 L_1 g_m + C_1 C_L L_1 g_m + C_5 C_L L_5 g_m\right) + s^2 \left(C_1 C_5 + C_1 C_L + 2C_5 C_L R_L g_m + C_5 C_L\right) + s \left(2C_5 g_m + C_L g_m\right)}$$

9.493 X-INVALID-ORDER-493 $Z(s) = \left(L_1 s + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ L_5 s + \frac{1}{C_5 s},\ L_L s + \frac{1}{C_L s}\right)$

$$H(s) = \frac{C_1 C_5 C_L L_1 L_5 L_L g_m s^6 - C_1 C_5 C_L L_1 L_L s^5 - C_5 s + g_m + s^4 \left(C_1 C_5 L_1 L_5 g_m + C_1 C_L L_1 L_L g_m + C_5 C_L L_5 L_L g_m\right) + s^3 \left(-C_1 C_5 L_1 - C_5 C_L L_L\right) + s^2 \left(C_1 L_1 g_m + C_5 L_5 g_m + C_L L_L g_m\right)}{s^5 \left(C_1 C_5 C_L L_1 L_5 g_m + 2C_1 C_5 C_L L_1 L_L g_m\right) + s^4 \left(C_1 C_5 C_L L_1 + C_1 C_5 C_L L_5 + C_1 C_5 C_L L_L\right) + s^3 \left(2C_1 C_5 L_1 g_m + C_1 C_L L_1 g_m + C_5 C_L L_5 g_m + 2C_5 C_L L_L g_m\right) + s^2 \left(C_1 C_5 + C_1 C_L + C_5 C_L\right) + s \left(2C_5 g_m + C_L g_m\right)}$$

9.494 X-INVALID-ORDER-494 $Z(s) = \left(L_1 s + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ L_5 s + \frac{1}{C_5 s},\ \frac{L_L s}{C_L L_L s^2+1}\right)$

$$H(s) = \frac{C_1 C_5 L_1 L_5 L_L g_m s^5 - C_1 C_5 L_1 L_L s^4 - C_5 L_L s^2 + L_L g_m s + s^3 \left(C_1 L_1 L_L g_m + C_5 L_5 L_L g_m\right)}{C_1 C_5 C_L L_1 L_5 L_L g_m s^6 + g_m + s^5 \left(C_1 C_5 C_L L_1 L_L + C_1 C_5 C_L L_5 L_L\right) + s^4 \left(C_1 C_5 L_1 L_5 g_m + 2C_1 C_5 L_1 L_L g_m + C_1 C_L L_1 L_L g_m + C_5 C_L L_5 L_L g_m\right) + s^3 \left(C_1 C_5 L_1 + C_1 C_5 L_5 + C_1 C_5 L_L + C_1 C_L L_L + C_5 C_L L_L\right) + s^2 \left(C_1 L_1 g_m + C_5 L_5 g_m + 2C_5 L_L g_m + C_L L_L g_m\right) + s \left(C_1 + C\right.}$$

9.495 X-INVALID-ORDER-495 $Z(s) = \left(L_1 s + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ L_5 s + \frac{1}{C_5 s},\ L_L s + R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{C_1 C_5 C_L L_1 L_5 L_L g_m s^6 + g_m + s^5 \left(C_1 C_5 C_L L_1 L_5 R_L g_m - C_1 C_5 C_L L_1 L_L\right) + s^4 \left(-C_1 C_5 C_L L_1 R_L + C_1 C_5 L_1 L_5 g_m + C_1 C_L L_1 L_L g_m + C_5 C_L L_5 L_L g_m\right) + s^3 \left(-C_1 C_5 L_1 + C_1 C_L L_1 R_L g_m + C_5 C_L L_5 R_L g_m - C_5 C_L L_L\right) + s^2 \left(C_1 L_1 g_m - C_5 C_L R_L + C_5 L_5 g_m + C_L L_L g_m\right) + s}{s^5 \left(C_1 C_5 C_L L_1 L_5 g_m + 2C_1 C_5 C_L L_1 L_L g_m\right) + s^4 \left(2C_1 C_5 C_L L_1 R_L g_m + C_1 C_5 C_L L_1 + C_1 C_5 C_L L_5 + C_1 C_5 C_L L_L\right) + s^3 \left(C_1 C_5 C_L R_L + 2C_1 C_5 L_1 g_m + C_1 C_L L_1 g_m + C_5 C_L L_5 g_m + 2C_5 C_L L_L g_m\right) + s^2 \left(C_1 C_5 + C_1 C_L + 2C_5 C_L R_L g_m + C_5 C_L\right) + s \left(2C_5 g_m + C\right.}$$

9.496 X-INVALID-ORDER-496 $Z(s) = \left(L_1 s + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ L_5 s + \frac{1}{C_5 s},\ \frac{L_L R_L s}{C_L L_L R_L s^2+L_L s+R_L}\right)$

$$H(s) = \frac{C_1 C_5 L_1 L_5 L_L R_L g_m s^5 - C_1 C_5 L_1 L_L R_L s^4 - C_5 L_L R_L s^2 + L_L R_L g_m s + s^3 \left(C_1 L_1 L_L R_L g_m + C_5 L_5 L_L R\right.}{C_1 C_5 C_L L_1 L_5 L_L R_L g_m s^6 + R_L g_m + s^5 \left(C_1 C_5 C_L L_1 L_L R_L + C_1 C_5 C_L L_5 L_L R_L + C_1 C_5 L_1 L_5 L_L g_m\right) + s^4 \left(C_1 C_5 L_1 L_5 R_L g_m + 2C_1 C_5 L_1 L_L R_L g_m + C_1 C_5 L_1 L_L + C_1 C_5 L_5 L_L + C_1 C_L L_1 L_L R_L g_m + C_5 C_L L_5 L_L R_L g_m\right) + s^3 \left(C_1 C_5 L_1 R_L + C_1 C_5 L_5 R_L + C_1 C_5 L_L R_L + C\right.}$$

9.497 X-INVALID-ORDER-497 $Z(s) = \left(L_1 s + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ L_5 s + \frac{1}{C_5 s},\ \frac{C_L L_L R_L s^2+L_L s+R_L}{C_L L_L s^2+1}\right)$

$$H(s) = \frac{C_1 C_5 C_L L_1 L_5 L_L R_L g_m s^6 + R_L g_m + s^5 \left(-C_1 C_5 C_L L_1 L_L R_L + C_1 C_5 L_1 L_5 L_L g_m\right) + s^4 \left(C_1 C_5 L_1 L_5 R_L g_m - C_1 C_5 L_1 L_L + C_1 C_L L_1 L_L R_L g_m + C_5 C_L L_5 L_L R_L g_m\right) + s^3 \left(-C_1 C_5 L_1 R_L + C_1 L_1 L_L g_m - C_5 C_L L_L R_L + C_5 L_5 L_L g_m\right) + s^2 \left(C\right.}{C_1 C_5 C_L L_1 L_5 L_L g_m s^6 + g_m + s^5 \left(2C_1 C_5 C_L L_1 L_L R_L g_m + C_1 C_5 C_L L_1 L_L + C_1 C_5 C_L L_5 L_L\right) + s^4 \left(C_1 C_5 C_L L_L R_L + C_1 C_5 L_1 L_5 g_m + 2C_1 C_5 L_1 L_L g_m + C_1 C_L L_1 L_L g_m + C_5 C_L L_5 L_L g_m\right) + s^3 \left(2C_1 C_5 L_1 R_L g_m + C_1 C_5 L_1 + C_1 C_5 L_5 + C_1 C_5 L_L + C_1 C_L L_L + 2C_5 C_L L_L R\right.}$$

9.498 X-INVALID-ORDER-498 $Z(s) = \left(L_1 s + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ L_5 s + \frac{1}{C_5 s},\ \frac{R_L\left(C_L L_L s^2+1\right)}{C_L L_L s^2+C_L R_L s+1}\right)$

$$H(s) = \frac{C_1C_5C_LL_1L_5L_LR_Lg_ms^6 - C_1C_5C_LL_1L_LR_Ls^5 - C_5R_Ls + R_Lg_m + s^4\left(C_1C_5L_1L_5R_Lg_m + C_1C_LL_1L_LR_Lg_m + C_5C_LL_5L_LR_Lg_m\right) + s^3\left(-C_1C\right.}{C_1C_5C_LL_1L_5L_Lg_ms^6 + g_m + s^5\left(C_1C_5C_LL_1L_5R_Lg_m + 2C_1C_5C_LL_1L_LR_Lg_m + C_1C_5C_LL_1L_L + C_1C_5C_LL_5L_L\right) + s^4\left(C_1C_5C_LL_1R_L + C_1C_5C_LL_5R_L + C_1C_5C_LL_LR_L + C_1C_5L_1L_5g_m + C_1C_LL_1L_Lg_m + C_5C_LL_5L_Lg_m\right) + s^3\left(2C_1C_5L_1R_Lg_m + C_1C_5L_1 + C_1C_5L\right.}$$

9.499 X-INVALID-ORDER-499 $Z(s) = \left(L_1 s + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{L_5 s}{C_5 L_5 s^2+1},\ R_L\right)$

$$H(s) = \frac{-C_1C_5L_1L_5R_Ls^4 + C_1L_1L_5R_Lg_ms^3 + L_5R_Lg_ms - R_L + s^2\left(-C_1L_1R_L - C_5L_5R_L\right)}{2R_Lg_m + s^4\left(2C_1C_5L_1L_5R_Lg_m + C_1C_5L_1L_5\right) + s^3\left(C_1C_5L_5R_L + C_1L_1L_5g_m\right) + s^2\left(2C_1L_1R_Lg_m + C_1L_1 + C_1L_5 + 2C_5L_5R_Lg_m + C_5L_5\right) + s\left(C_1R_L + L_5g_m\right) + 1}$$

9.500 X-INVALID-ORDER-500 $Z(s) = \left(L_1 s + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{L_5 s}{C_5 L_5 s^2+1},\ \frac{1}{C_L s}\right)$

$$H(s) = \frac{-C_1C_5L_1L_5s^4 + C_1L_1L_5g_ms^3 + L_5g_ms + s^2\left(-C_1L_1 - C_5L_5\right) - 1}{C_1C_5C_LL_1L_5s^5 + 2g_m + s^4\left(2C_1C_5L_1L_5g_m + C_1C_LL_1L_5g_m\right) + s^3\left(C_1C_5L_5 + C_1C_LL_1 + C_1C_LL_5 + C_5C_LL_5\right) + s^2\left(2C_1L_1g_m + 2C_5L_5g_m + C_LL_5g_m\right) + s\left(C_1 + C_L\right)}$$

9.501 X-INVALID-ORDER-501 $Z(s) = \left(L_1 s + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{L_5 s}{C_5 L_5 s^2+1},\ \frac{R_L}{C_L R_L s+1}\right)$

$$H(s) = \frac{-C_1C_5L_1L_5R_Ls^4 + C_1L_1L_5R_Lg_ms^3 + L_5R_Lg_ms - R_L + s^2\left(-C_1L_1R_L - C_5L_5R_L\right)}{C_1C_5C_LL_1L_5R_Ls^5 + 2R_Lg_m + s^4\left(2C_1C_5L_1L_5R_Lg_m + C_1C_5L_1L_5 + C_1C_LL_1L_5R_Lg_m\right) + s^3\left(C_1C_5L_5R_L + C_1C_LL_1R_L + C_1C_LL_5R_L + C_1L_1L_5g_m + C_5C_LL_5R_L\right) + s^2\left(2C_1L_1R_Lg_m + C_1L_1 + C_1L_5 + 2C_5L_5R_Lg_m + C_5L_5 + C_LL_5R_Lg_m\right) + s\left(C_1R_L + C_LR_L + L\right.}$$

9.502 X-INVALID-ORDER-502 $Z(s) = \left(L_1 s + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{L_5 s}{C_5 L_5 s^2+1},\ R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{-C_1C_5C_LL_1L_5R_Ls^5 + s^4\left(-C_1C_5L_1L_5 + C_1C_LL_1L_5R_Lg_m\right) + s^3\left(-C_1C_LL_1R_L + C_1L_1L_5g_m - C_5C_LL_5R_L\right) + s^2\left(-C_1L_1 - C_5L_5 + C_LL_5R_Lg_m\right) + s\left(-C_LR_L + L_5g_m\right) - 1}{2g_m + s^5\left(2C_1C_5C_LL_1L_5R_Lg_m + C_1C_5C_LL_1L_5\right) + s^4\left(C_1C_5C_LL_5R_L + 2C_1C_5L_1L_5g_m + C_1C_LL_1L_5g_m\right) + s^3\left(C_1C_5L_5 + 2C_1C_LL_1R_Lg_m + C_1C_LL_1 + C_1C_LL_5 + 2C_5C_LL_5R_Lg_m + C_5C_LL_5\right) + s^2\left(C_1C_LR_L + 2C_1L_1g_m + 2C_5L_5g_m + C_LL_5g_m\right) + s\left(C_1 + 2C_LR_Lg\right.}$$

9.503 X-INVALID-ORDER-503 $Z(s) = \left(L_1 s + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{L_5 s}{C_5 L_5 s^2+1},\ L_L s + \frac{1}{C_L s}\right)$

$$H(s) = \frac{-C_1C_5C_LL_1L_5L_Ls^6 + C_1C_LL_1L_5L_Lg_ms^5 + L_5g_ms + s^4\left(-C_1C_5L_1L_5 - C_1C_LL_1L_L - C_5C_LL_5L_L\right) + s^3\left(C_1L_1L_5g_m + C_LL_5L_Lg_m\right) + s^2\left(-C_1L_1 - C_5L_5 - C_LL_L\right) - 1}{2C_1C_5C_LL_1L_5L_Lg_ms^6 + 2g_m + s^5\left(C_1C_5C_LL_1L_5 + C_1C_5C_LL_5L_L\right) + s^4\left(2C_1C_5L_1L_5g_m + C_1C_LL_1L_5g_m + 2C_1C_LL_1L_Lg_m + 2C_5C_LL_5L_Lg_m\right) + s^3\left(C_1C_5L_5 + C_1C_LL_1 + C_1C_LL_5 + C_1C_LL_L + C_5C_LL_5\right) + s^2\left(2C_1L_1g_m + 2C_5L_5g_m + C_LL_5g_m + 2C_LL_Lg_m\right) + s\left(\right.}$$

9.504 X-INVALID-ORDER-504 $Z(s) = \left(L_1 s + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{L_5 s}{C_5 L_5 s^2+1},\ \frac{L_L s}{C_L L_L s^2+1}\right)$

$$H(s) = \frac{-C_1C_5L_1L_5L_Ls^5 + C_1L_1L_5L_Lg_ms^4 + L_5L_Lg_ms^2 - L_Ls + s^3\left(-C_1L_1L_L - C_5L_5L_L\right)}{C_1C_5C_LL_1L_5L_Ls^6 + s^5\left(2C_1C_5L_1L_5L_Lg_m + C_1C_LL_1L_5L_Lg_m\right) + s^4\left(C_1C_5L_1L_5 + C_1C_5L_5L_L + C_1C_LL_1L_L + C_1C_LL_5L_L + C_5C_LL_5L_L\right) + s^3\left(C_1L_1L_5g_m + 2C_1L_1L_Lg_m + 2C_5L_5L_Lg_m + C_LL_5L_Lg_m\right) + s^2\left(C_1L_1 + C_1L_5 + C_1L_L + C_5L_5 + C_LL_L\right) + s\left(L_5g_m + 2\right.}$$

9.505 X-INVALID-ORDER-505 $Z(s) = \left(L_1 s + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{L_5 s}{C_5 L_5 s^2+1},\ L_L s + R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{-C_1C_5C_LL_1L_5L_Ls^6 + s^5\left(-C_1C_5C_LL_1L_5R_L + C_1C_LL_1L_5L_Lg_m\right) + s^4\left(-C_1C_5L_1L_5 + C_1C_LL_1L_5R_Lg_m - C_1C_LL_1L_L - C_5C_LL_5L_L\right) + s^3\left(-C_1C_LL_1R_L + C_1L_1L_5g_m - C_5C_LL_5R_L + C_LL_5L_Lg_m\right) + s^2\left(-C_1L\right.}{2C_1C_5C_LL_1L_5L_Lg_ms^6 + 2g_m + s^5\left(2C_1C_5C_LL_1L_5R_Lg_m + C_1C_5C_LL_1L_5 + C_1C_5C_LL_5L_L\right) + s^4\left(C_1C_5C_LL_5R_L + 2C_1C_5L_1L_5g_m + C_1C_LL_1L_5g_m + 2C_1C_LL_1L_Lg_m + 2C_5C_LL_5L_Lg_m\right) + s^3\left(C_1C_5L_5 + 2C_1C_LL_1R_Lg_m + C_1C_LL_1 + C_1C_LL_5 + C_1C_LL_L + 2C_5C_LL\right.}$$

9.506 X-INVALID-ORDER-506 $Z(s) = \left(L_1 s + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{L_5 s}{C_5 L_5 s^2+1},\ \frac{L_L R_L s}{C_L L_L R_L s^2+L_L s+R_L}\right)$

$$H(s) = \frac{-C_1C_5L_1L_5L_LR_Ls^5 + C_1L_1L_5L_LR_Lg_ms^4 + L_5L_LR_Lg_ms^2 - L_LR_Ls + s^3\left(-C_1L_1L_LR_L - C_5L_5L_LR_L\right)}{C_1C_5C_LL_1L_5L_LR_Ls^6 + R_L + s^5\left(2C_1C_5L_1L_5L_LR_Lg_m + C_1C_5L_1L_5L_L + C_1C_LL_1L_5L_LR_Lg_m\right) + s^4\left(C_1C_5L_1L_5R_L + C_1C_5L_5L_LR_L + C_1C_LL_1L_LR_L + C_1C_LL_5L_LR_L + C_1L_1L_5L_Lg_m + C_5C_LL_5L_LR_L\right) + s^3\left(C_1L_1L_5R_Lg_m + 2C_1L_1L_LR_Lg_m + C_1L_1L_L + C_1L_5\right.}$$

9.507 X-INVALID-ORDER-507 $Z(s) = \left(L_1 s + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{L_5 s}{C_5 L_5 s^2+1},\ \frac{C_L L_L R_L s^2+L_L s+R_L}{C_L L_L s^2+1}\right)$

$$H(s) = \frac{-C_1C_5C_LL_1L_5L_LR_Ls^6 - R_L + s^5\left(-C_1C_5L_1L_5L_L + C_1C_LL_1L_5L_LR_Lg_m\right) + s^4\left(-C_1C_5L_1L_5R_L - C_1C_LL_1L_LR_L + C_1L_1L_5L_Lg_m - C_5C_LL_5L_LR_L\right) + s^3\left(C_1L_1L_5\right.}{2R_Lg_m + s^6\left(2C_1C_5C_LL_1L_5L_LR_Lg_m + C_1C_5C_LL_1L_5L_L\right) + s^5\left(C_1C_5C_LL_5L_LR_L + 2C_1C_5L_1L_5L_Lg_m + C_1C_LL_1L_5L_Lg_m\right) + s^4\left(2C_1C_5L_1L_5R_Lg_m + C_1C_5L_1L_5 + C_1C_5L_5L_L + 2C_1C_LL_1L_LR_Lg_m + C_1C_LL_1L_L + C_1C_LL_5L_L + 2C_5C_LL_5L_LR_Lg_m + C_5C_LL_5L_L\right.}$$

9.508 X-INVALID-ORDER-508 $Z(s) = \left(L_1 s + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{L_5 s}{C_5 L_5 s^2+1},\ \frac{R_L\left(C_L L_L s^2+1\right)}{C_L L_L s^2+C_L R_L s+1}\right)$

$$H(s) = \frac{-C_1C_5C_LL_1L_5L_LR_Ls^6 + C_1C_LL_1L_5L_LR_Lg_ms^5 + L_5R_Lg_ms - R_L + s^4\left(-C_1C_5L_1L_5R_L - C_1C_LL_1L_LR_L - C_5\right.}{2R_Lg_m + s^6\left(2C_1C_5C_LL_1L_5L_LR_Lg_m + C_1C_5C_LL_1L_5L_L\right) + s^5\left(C_1C_5C_LL_1L_5R_L + C_1C_5C_LL_5L_LR_L + C_1C_LL_1L_5L_Lg_m\right) + s^4\left(2C_1C_5L_1L_5R_Lg_m + C_1C_5L_1L_5 + C_1C_LL_1L_5R_Lg_m + 2C_1C_LL_1L_LR_Lg_m + C_1C_LL_1L_L + C_1C_LL_5L_L + 2C_5C_LL_5L_LR_Lg_m + C_5C_LL_5\right.}$$

9.509 X-INVALID-ORDER-509 $Z(s) = \left(L_1 s + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ L_5 s + R_5 + \frac{1}{C_5 s},\ R_L\right)$

$$H(s) = \frac{C_1C_5L_1L_5R_Lg_ms^4 + R_Lg_m + s^3\left(C_1C_5L_1R_5R_Lg_m - C_1C_5L_1R_L\right) + s^2\left(C_1L_1R_Lg_m + C_5L_5R_Lg_m\right) + s\left(C_5R_5R_Lg_m - C_5R_L\right)}{C_1C_5L_1L_5g_ms^4 + g_m + s^3\left(C_1C_5L_1R_5g_m + 2C_1C_5L_1R_Lg_m + C_1C_5L_1 + C_1C_5L_5\right) + s^2\left(C_1C_5R_5 + C_1C_5R_L + C_1L_1g_m + C_5L_5g_m\right) + s\left(C_1 + C_5R_5g_m + 2C_5R_Lg_m + C_5\right)}$$

9.510 X-INVALID-ORDER-510 $Z(s) = \left(L_1 s + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ L_5 s + R_5 + \frac{1}{C_5 s},\ \frac{1}{C_L s}\right)$

$$H(s) = \frac{C_1C_5L_1L_5g_ms^4 + g_m + s^3\left(C_1C_5L_1R_5g_m - C_1C_5L_1\right) + s^2\left(C_1L_1g_m + C_5L_5g_m\right) + s\left(C_5R_5g_m - C_5\right)}{C_1C_5C_LL_1L_5g_ms^5 + s^4\left(C_1C_5C_LL_1R_5g_m + C_1C_5C_LL_1 + C_1C_5C_LL_5\right) + s^3\left(C_1C_5C_LR_5 + 2C_1C_5L_1g_m + C_1C_LL_1g_m + C_5C_LL_5g_m\right) + s^2\left(C_1C_5 + C_1C_L + C_5C_LR_5g_m + C_5C_L\right) + s\left(2C_5g_m + C_Lg_m\right)}$$

9.511 X-INVALID-ORDER-511 $Z(s) = \left(L_1 s + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ L_5 s + R_5 + \frac{1}{C_5 s},\ \frac{R_L}{C_L R_L s+1}\right)$

$$H(s) = \frac{C_1C_5L_1L_5R_Lg_ms^4 + R_Lg_m + s^3\left(C_1C_5L_1R_5R_Lg_m - C_1C_5L_1R_L\right) + s^2\left(C_1L_1R_Lg_m + C_5L_5R_Lg_m\right) + s\left(C_5R_5R_Lg_m - C_5R_L\right)}{C_1C_5C_LL_1L_5R_Lg_ms^5 + g_m + s^4\left(C_1C_5C_LL_1R_5R_Lg_m + C_1C_5C_LL_1R_L + C_1C_5C_LL_5R_L + C_1C_5L_1L_5g_m\right) + s^3\left(C_1C_5C_LR_5R_L + C_1C_5L_1R_5g_m + 2C_1C_5L_1R_Lg_m + C_1C_5L_1 + C_1C_5L_5 + C_1C_LL_1R_Lg_m + C_5C_LL_5R_Lg_m\right) + s^2\left(C_1C_5R_5 + C_1C_5R_L + C_1C_LR_L + C_1\right.}$$

9.512 X-INVALID-ORDER-512 $Z(s) = \left(L_1 s + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ L_5 s + R_5 + \frac{1}{C_5 s},\ R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{C_1C_5C_LL_1L_5R_Lg_ms^5 + g_m + s^4\left(C_1C_5C_LL_1R_5R_Lg_m - C_1C_5C_LL_1R_L + C_1C_5L_1L_5g_m\right) + s^3\left(C_1C_5L_1R_5g_m - C_1C_5L_1 + C_1C_LL_1R_Lg_m + C_5C_LL_5R_Lg_m\right) + s^2\left(C_1L_1g_m + C_5C_LR_5R_Lg_m - C_5C_LR_L + C_5L_5g_m\right) + s\left(C_5R_5g_m - C_5 + C_LR_Lg_m\right)}{C_1C_5C_LL_1L_5g_ms^5 + s^4\left(C_1C_5C_LL_1R_5g_m + 2C_1C_5C_LL_1R_Lg_m + C_1C_5C_LL_1 + C_1C_5C_LL_5\right) + s^3\left(C_1C_5C_LR_5 + C_1C_5C_LR_L + 2C_1C_5L_1g_m + C_1C_LL_1g_m + C_5C_LL_5g_m\right) + s^2\left(C_1C_5 + C_1C_L + C_5C_LR_5g_m + 2C_5C_LR_Lg_m + C_5C_L\right) + s\left(2C_5g_m + C_Lg_m\right)}$$

9.513 X-INVALID-ORDER-513 $Z(s) = \left(L_1 s + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ L_5 s + R_5 + \frac{1}{C_5 s},\ L_L s + \frac{1}{C_L s}\right)$

$$H(s) = \frac{C_1C_5C_LL_1L_5L_Lg_ms^6 + g_m + s^5\left(C_1C_5C_LL_1L_LR_5g_m - C_1C_5C_LL_1L_L\right) + s^4\left(C_1C_5L_1L_5g_m + C_1C_LL_1L_Lg_m + C_5C_LL_5L_Lg_m\right) + s^3\left(C_1C_5L_1R_5g_m - C_1C_5L_1 + C_5C_LL_LR_5g_m - C_5C_LL_L\right) + s^2\left(C_1L_1g_m + C_5L_5g_m + C_LL_Lg_m\right) + s\left(C_5R_5g_m - C_5\right)}{s^5\left(C_1C_5C_LL_1L_5g_m + 2C_1C_5C_LL_1L_Lg_m\right) + s^4\left(C_1C_5C_LL_1R_5g_m + C_1C_5C_LL_1 + C_1C_5C_LL_5 + C_1C_5C_LL_L\right) + s^3\left(C_1C_5C_LR_5 + 2C_1C_5L_1g_m + C_1C_LL_1g_m + C_5C_LL_5g_m + 2C_5C_LL_Lg_m\right) + s^2\left(C_1C_5 + C_1C_L + C_5C_LR_5g_m + C_5C_L\right) + s\left(2C_5g_m + C_Lg_m\right)}$$

9.514 X-INVALID-ORDER-514 $Z(s) = \left(L_1 s + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ L_5 s + R_5 + \frac{1}{C_5 s},\ \frac{L_L s}{C_L L_L s^2+1}\right)$

$$H(s) = \frac{C_1C_5L_1L_5L_Lg_ms^5 + L_Lg_ms + s^4\left(C_1C_5L_1L_LR_5g_m - C_1C_5L_1L_L\right) + s^3\left(C_1L_1L_Lg_m + C_5L_5L_Lg_m\right) + s^2\left(C_5L_LR_5g_m - C_5L_L\right)}{C_1C_5C_LL_1L_5L_Lg_ms^6 + g_m + s^5\left(C_1C_5C_LL_1L_LR_5g_m + C_1C_5C_LL_1L_L + C_1C_5C_LL_5L_L\right) + s^4\left(C_1C_5C_LL_LR_5 + C_1C_5L_1L_5g_m + 2C_1C_5L_1L_Lg_m + C_1C_LL_1L_Lg_m + C_5C_LL_5L_Lg_m\right) + s^3\left(C_1C_5L_1R_5g_m + C_1C_5L_1 + C_1C_5L_5 + C_1C_5L_L + C_1C_LL_L + C_5C_LL_LR_5g_m\right.}$$

9.515 X-INVALID-ORDER-515 $Z(s) = \left(L_1 s + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ L_5 s + R_5 + \frac{1}{C_5 s},\ L_L s + R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{C_1C_5C_LL_1L_5L_Lg_ms^6 + g_m + s^5\left(C_1C_5C_LL_1L_5R_Lg_m + C_1C_5C_LL_1L_LR_5g_m - C_1C_5C_LL_1L_L\right) + s^4\left(C_1C_5C_LL_1R_5R_Lg_m - C_1C_5C_LL_1R_L + C_1C_5L_1L_5g_m + C_1C_LL_1L_Lg_m + C_5C_LL_5L_Lg_m\right) + s^3\left(C_1C_5L_1R_5g_m - C_1C_5L_1 + C_1C_LL_1R_Lg_m + C_5C_LL_5R_Lg_m + C_5C\right.}{s^5\left(C_1C_5C_LL_1L_5g_m + 2C_1C_5C_LL_1L_Lg_m\right) + s^4\left(C_1C_5C_LL_1R_5g_m + 2C_1C_5C_LL_1R_Lg_m + C_1C_5C_LL_1 + C_1C_5C_LL_5 + C_1C_5C_LL_L\right) + s^3\left(C_1C_5C_LR_5 + C_1C_5C_LR_L + 2C_1C_5L_1g_m + C_1C_LL_1g_m + C_5C_LL_5g_m + 2C_5C_LL_Lg_m\right)}$$

9.516 X-INVALID-ORDER-516 $Z(s) = \left(L_1 s + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ L_5 s + R_5 + \frac{1}{C_5 s},\ \frac{L_L R_L s}{C_L L_L R_L s^2+L_L s+R_L}\right)$

$$H(s) = \frac{C_1C_5L_1L_5L_LR_Lg_ms^5 + L_LR_Lg_ms + s^4\left(C\right.}{C_1C_5C_LL_1L_5L_LR_Lg_ms^6 + R_Lg_m + s^5\left(C_1C_5C_LL_1L_LR_5R_Lg_m + C_1C_5C_LL_1L_LR_L + C_1C_5C_LL_5L_LR_L + C_1C_5L_1L_5L_Lg_m\right) + s^4\left(C_1C_5C_LL_LR_5R_L + C_1C_5L_1L_5R_Lg_m + C_1C_5L_1L_LR_5g_m + 2C_1C_5L_1L_LR_Lg_m + C_1C_5L_1L_L + C_1C_5L_5L_L + C_1C_LL_1L_LR_Lg_m + C_5\right.}$$

9.517 X-INVALID-ORDER-517 $Z(s) = \left(L_1 s + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ L_5 s + R_5 + \frac{1}{C_5 s},\ \frac{C_L L_L R_L s^2+L_L s+R_L}{C_L L_L s^2+1}\right)$

$$H(s) = \frac{C_1C_5C_LL_1L_5L_LR_Lg_ms^6 + R_Lg_m + s^5\left(C_1C_5C_LL_1L_LR_5R_Lg_m - C_1C_5C_LL_1L_LR_L + C_1C_5L_1L_5L_Lg_m\right) + s^4\left(C_1C_5L_1L_5R_Lg_m + C_1C_5L_1L_LR_5g_m - C_1C_5L_1L_L + C_1C_LL_1L_LR_Lg_m + C_5C_LL_5L_LR_Lg_m\right) + s^3\left(C_1C_5L_1R_5R_Lg_m - C_1C_5L\right.}{C_1C_5C_LL_1L_5L_Lg_ms^6 + g_m + s^5\left(C_1C_5C_LL_1L_LR_5g_m + 2C_1C_5C_LL_1L_LR_Lg_m + C_1C_5C_LL_1L_L + C_1C_5C_LL_5L_L\right) + s^4\left(C_1C_5C_LL_LR_5 + C_1C_5C_LL_LR_L + C_1C_5L_1L_5g_m + 2C_1C_5L_1L_Lg_m + C_1C_LL_1L_Lg_m + C_5C_LL_5L_Lg_m\right) + s^3\left(C_1C_5L_1R_5g_m + 2C_1C_5L_1R_Lg_m + C\right.}$$

9.518 X-INVALID-ORDER-518 $Z(s) = \left(L_1 s + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ L_5 s + R_5 + \frac{1}{C_5 s},\ \frac{R_L\left(C_L L_L s^2+1\right)}{C_L L_L s^2+C_L R_L s+1}\right)$

$$H(s) = \frac{C_1C_5C_LL_1L_5L_LR_Lg_ms^6 + R_Lg_m + s^5\left(C_1C_5C_LL_1L_LR_5R_Lg_m - C_1C_5C_LL_1L_LR_L\right) + s^4\left(C_1C_5L_1L_5R_Lg_m\right.}{C_1C_5C_LL_1L_5L_Lg_ms^6 + g_m + s^5\left(C_1C_5C_LL_1L_5R_Lg_m + C_1C_5C_LL_1L_LR_5g_m + 2C_1C_5C_LL_1L_LR_Lg_m + C_1C_5C_LL_1L_L + C_1C_5C_LL_5L_L\right) + s^4\left(C_1C_5C_LL_1R_5R_Lg_m + C_1C_5C_LL_1R_L + C_1C_5C_LL_5R_L + C_1C_5C_LL_LR_5 + C_1C_5C_LL_LR_L + C_1C_5L_1L_5g_m + C_1C_LL_1L_L\right.}$$

9.519 X-INVALID-ORDER-519 $Z(s) = \left(L_1 s + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{L_5R_5s}{C_5L_5R_5s^2+L_5s+R_5},\ R_L\right)$

$$H(s) = \frac{-C_1C_5L_1L_5R_5R_Ls^4 - R_5R_L + s^3\left(C_1L_1L_5R_5R_Lg_m - C_1L_1L_5R_L\right) + s^2\left(-C_1L_1R_5R_L - C_5L_5R_5R_L\right) + s\left(L_5R_5R_Lg_m - L_5R_L\right)}{2R_5R_Lg_m + R_5 + s^4\left(2C_1C_5L_1L_5R_5R_Lg_m + C_1C_5L_1L_5R_5\right) + s^3\left(C_1C_5L_5R_5R_L + C_1L_1L_5R_5g_m + 2C_1L_1L_5R_Lg_m + C_1L_1L_5\right) + s^2\left(2C_1L_1R_5R_Lg_m + C_1L_1R_5 + C_1L_5R_5 + C_1L_5R_L + 2C_5L_5R_5R_Lg_m + C_5L_5R_5\right) + s\left(C_1R_5R_L + L_5R_5g_m + 2L_5R_Lg_m + L_5\right)}$$

9.520 X-INVALID-ORDER-520 $Z(s) = \left(L_1 s + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{L_5R_5s}{C_5L_5R_5s^2+L_5s+R_5},\ \frac{1}{C_L s}\right)$

$$H(s) = \frac{-C_1C_5L_1L_5R_5s^4 - R_5 + s^3\left(C_1L_1L_5R_5g_m - C_1L_1L_5\right) + s^2\left(-C_1L_1R_5 - C_5L_5R_5\right) + s\left(L_5R_5g_m - L_5\right)}{C_1C_5C_LL_1L_5R_5s^5 + 2R_5g_m + s^4\left(2C_1C_5L_1L_5R_5g_m + C_1C_LL_1L_5R_5g_m + C_1C_LL_1L_5\right) + s^3\left(C_1C_5L_5R_5 + C_1C_LL_1R_5 + C_1C_LL_5R_5 + 2C_1L_1L_5g_m + C_5C_LL_5R_5\right) + s^2\left(2C_1L_1R_5g_m + C_1L_5 + 2C_5L_5R_5g_m + C_LL_5R_5g_m + C_LL_5\right) + s\left(C_1R_5 + C_LR_5 + 2L_5g_m\right)}$$

9.521 X-INVALID-ORDER-521 $Z(s) = \left(L_1 s + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{L_5R_5s}{C_5L_5R_5s^2+L_5s+R_5},\ \frac{R_L}{C_LR_Ls+1}\right)$

$$H(s) = \frac{-C_1C_5L_1L_5R_5R_Ls^4 - R_5R_L + s^3\left(C_1L_1L_5R_5R_Lg_m - C_1L_1L_5R_L\right) + s^2\left(-C_1L_1R_5R_L - C_5L_5R_5R_L\right) + s\left(L_5R_5R_Lg_m\right.}{C_1C_5C_LL_1L_5R_5R_Ls^5 + 2R_5R_Lg_m + R_5 + s^4\left(2C_1C_5L_1L_5R_5R_Lg_m + C_1C_5L_1L_5R_5 + C_1C_LL_1L_5R_5R_Lg_m + C_1C_LL_1L_5R_L\right) + s^3\left(C_1C_5L_5R_5R_L + C_1C_LL_1R_5R_L + C_1C_LL_5R_5R_L + C_1L_1L_5R_5g_m + 2C_1L_1L_5R_Lg_m + C_1L_1L_5 + C_5C_LL_5R_5R_L\right) + s^2\left(2C_1L_1R_5R_L\right.}$$

9.522 X-INVALID-ORDER-522 $Z(s) = \left(L_1 s + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{L_5R_5s}{C_5L_5R_5s^2+L_5s+R_5},\ R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{-C_1C_5C_LL_1L_5R_5R_Ls^5 - R_5 + s^4\left(-C_1C_5L_1L_5R_5 + C_1C_LL_1L_5R_5R_Lg_m - C_1C_LL_1L_5R_L\right) + s^3\left(-C_1C_LL_1R_5R_L + C_1L_1L_5R_5g_m - C_1L_1L_5 - C_5C_LL_5R_5R_L\right) + s^2\left(-C_1L\right.}{2R_5g_m + s^5\left(2C_1C_5C_LL_1L_5R_5R_Lg_m + C_1C_5C_LL_1L_5R_5\right) + s^4\left(C_1C_5C_LL_5R_5R_L + 2C_1C_5L_1L_5R_5g_m + C_1C_LL_1L_5R_5g_m + 2C_1C_LL_1L_5R_Lg_m + C_1C_LL_1L_5\right) + s^3\left(C_1C_5L_5R_5 + 2C_1C_LL_1R_5R_Lg_m + C_1C_LL_1R_5 + C_1C_LL_5R_5 + C_1C_LL_5R_L + 2C_1L_1L_5g_m + 2C_5C_L\right.}$$

9.523 X-INVALID-ORDER-523 $Z(s) = \left(L_1 s + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{L_5R_5s}{C_5L_5R_5s^2+L_5s+R_5},\ L_L s + \frac{1}{C_L s}\right)$

$$H(s) = \frac{-C_1C_5C_LL_1L_5L_LR_5s^6 - R_5 + s^5\left(C_1C_LL_1L_5L_LR_5g_m - C_1C_LL_1L_5L_L\right) + s^4\left(-C_1C_5L_1L_5R_5 - C_1C_LL_1L_LR_5 - C_5C_LL_5L_LR_5\right) + s^3\left(C_1L_1L_5R_5g_m - C_1L_1L_5 + C_LL_5L_L\right.}{2C_1C_5C_LL_1L_5L_LR_5g_ms^6 + 2R_5g_m + s^5\left(C_1C_5C_LL_1L_5R_5 + C_1C_5C_LL_5L_LR_5 + 2C_1C_LL_1L_5L_Lg_m\right) + s^4\left(2C_1C_5L_1L_5R_5g_m + C_1C_LL_1L_5R_5g_m + C_1C_LL_1L_5 + 2C_1C_LL_1L_LR_5g_m + C_1C_LL_5L_L + 2C_5C_LL_5L_LR_5g_m\right) + s^3\left(C_1C_5L_5R_5 + C_1C_LL_1R_5 + C_1C_LL_5R_5 +\right.}$$

9.524 X-INVALID-ORDER-524 $Z(s) = \left(L_1 s + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{L_5R_5s}{C_5L_5R_5s^2+L_5s+R_5},\ \frac{L_Ls}{C_LL_Ls^2+1}\right)$

$$H(s) = \frac{-C_1C_5L_1L_5L_LR_5s^5 - L_LR_5s + s^4\left(C_1L_1L_5L_LR_5g_m - C_1L_1L_5L_L\right) + s^3\left(-C_1L_1L_LR_5 - C_5L_5L_LR_5\right) + s^2\left(L_5L_LR_5g_m\right.}{C_1C_5C_LL_1L_5L_LR_5s^6 + R_5 + s^5\left(2C_1C_5L_1L_5L_LR_5g_m + C_1C_LL_1L_5L_LR_5g_m + C_1C_LL_1L_5L_L\right) + s^4\left(C_1C_5L_1L_5R_5 + C_1C_5L_5L_LR_5 + C_1C_LL_1L_LR_5 + C_1C_LL_5L_LR_5 + 2C_1L_1L_5L_Lg_m + C_5C_LL_5L_LR_5\right) + s^3\left(C_1L_1L_5R_5g_m + C_1L_1L_5 + 2C_1L_1L_LR_5g_m + C_1L_5L_L\right.}$$

9.525 X-INVALID-ORDER-525 $Z(s) = \left(L_1 s + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{L_5R_5s}{C_5L_5R_5s^2+L_5s+R_5},\ L_L s + R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{-C_1C_5C_LL_1L_5L_LR_5s^6 - R_5 + s^5\left(-C_1C_5C_LL_1L_5R_5R_L + C_1C_LL_1L_5L_LR_5g_m - C_1C_LL_1L_5L_L\right) + s^4\left(-C_1C_5L_1L_5R_5 + C_1C_LL_1L_5R_5R_Lg_m - C_1C_LL_1L_5R\right.}{2C_1C_5C_LL_1L_5L_LR_5g_ms^6 + 2R_5g_m + s^5\left(2C_1C_5C_LL_1L_5R_5R_Lg_m + C_1C_5C_LL_1L_5R_5 + C_1C_5C_LL_5L_LR_5 + 2C_1C_LL_1L_5L_Lg_m\right) + s^4\left(C_1C_5C_LL_5R_5R_L + 2C_1C_5L_1L_5R_5g_m + C_1C_LL_1L_5R_5g_m + 2C_1C_LL_1L_5R_Lg_m + C_1C_LL_1L_5 + 2C_1C_LL_1L_LR_5g_m + C_1C_LL_5L_L\right.}$$

9.526 X-INVALID-ORDER-526 $Z(s) = \left(L_1 s + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{L_5R_5s}{C_5L_5R_5s^2+L_5s+R_5},\ \frac{L_LR_Ls}{C_LL_LR_Ls^2+L_Ls+R_L}\right)$

$$H(s) = \frac{-C_1C_5L_1L_5L_LR_5R_Ls^5 -}{C_1C_5C_LL_1L_5L_LR_5R_Ls^6 + R_5R_L + s^5\left(2C_1C_5L_1L_5L_LR_5R_Lg_m + C_1C_5L_1L_5L_LR_5 + C_1C_LL_1L_5L_LR_5R_Lg_m + C_1C_LL_1L_5L_LR_L\right) + s^4\left(C_1C_5L_1L_5R_5R_L + C_1C_5L_5L_LR_5R_L + C_1C_LL_1L_LR_5R_L + C_1C_LL_5L_LR_5R_L + C_1L_1L_5L_LR_5g_m + 2C_1L_1L_5L_LR_Lg_m + C_1L_1\right.}$$

9.527 X-INVALID-ORDER-527 $Z(s) = \left(L_1 s + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{L_5R_5s}{C_5L_5R_5s^2+L_5s+R_5},\ \frac{C_LL_LR_Ls^2+L_Ls+R_L}{C_LL_Ls^2+1}\right)$

$$H(s) = \frac{-C_1C_5C_LL_1L_5L_LR_5R_Ls^6 - R_5R_L + s^5\left(-C_1C_5L_1L_5L_LR_5 + C_1C_LL_1L_5L_LR_5R_Lg_m - C\right.}{2R_5R_Lg_m + R_5 + s^6\left(2C_1C_5C_LL_1L_5L_LR_5R_Lg_m + C_1C_5C_LL_1L_5L_LR_5\right) + s^5\left(C_1C_5C_LL_5L_LR_5R_L + 2C_1C_5L_1L_5L_LR_5g_m + C_1C_LL_1L_5L_LR_5g_m + 2C_1C_LL_1L_5L_LR_Lg_m + C_1C_LL_1L_5L_L\right) + s^4\left(2C_1C_5L_1L_5R_5R_Lg_m + C_1C_5L_1L_5R_5 + C_1C_5L_5L_LR_5 + 2C_1C_LL_1L_\right.}$$

9.528 X-INVALID-ORDER-528 $Z(s) = \left(L_1 s + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{L_5 R_5 s}{C_5 L_5 R_5 s^2 + L_5 s + R_5},\ \frac{R_L\left(C_L L_L s^2 + 1\right)}{C_L L_L s^2 + C_L R_L s + 1}\right)$

$$H(s) = \frac{-C_1 C_5 C_L L_1 L_5 L_L R_5 R_L s^6}{2R_5 R_L g_m + R_5 + s^6\left(2C_1 C_5 C_L L_1 L_5 L_L R_5 R_L g_m + C_1 C_5 C_L L_1 L_5 L_L R_5\right) + s^5\left(C_1 C_5 C_L L_1 L_5 R_5 R_L + C_1 C_5 C_L L_5 L_L R_5 R_L + C_1 C_L L_1 L_5 L_L R_5 g_m + 2C_1 C_L L_1 L_5 L_L R_L g_m + C_1 C_L L_1 L_5 L_L\right) + s^4\left(2C_1 C_5 L_1 L_5 R_5 R_L g_m + C_1 C_5 L_1 L_5 R_5 + C_1 C_L L_1 L_5 R_5 R_L g_m + C_1 C_L L\right.}$$

9.529 X-INVALID-ORDER-529 $Z(s) = \left(L_1 s + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{C_5 L_5 R_5 s^2 + L_5 s + R_5}{C_5 L_5 s^2 + 1},\ R_L\right)$

$$H(s) = \frac{C_1 L_1 L_5 R_L g_m s^3 + L_5 R_L g_m s + R_5 R_L g_m - R_L + s^4\left(C_1 C_5 L_1 L_5 R_5 R_L g_m - C_1 C_5 L_1 L_5 R_L\right) + s^2\left(C_1 L_1 R_5 R_L g_m - C_1 L_1 R_L + C_5 L_5 R_5 R_L g_m - C_5 L_5 R_L\right)}{R_5 g_m + 2R_L g_m + s^4\left(C_1 C_5 L_1 L_5 R_5 g_m + 2C_1 C_5 L_1 L_5 R_L g_m + C_1 C_5 L_1 L_5\right) + s^3\left(C_1 C_5 L_5 R_5 + C_1 C_5 L_5 R_L + C_1 L_1 L_5 g_m\right) + s^2\left(C_1 L_1 R_5 g_m + 2C_1 L_1 R_L g_m + C_1 L_1 + C_1 L_5 + C_5 L_5 R_5 g_m + 2C_5 L_5 R_L g_m + C_5 L_5\right) + s\left(C_1 R_5 + C_1 R_L + L_5 g_m\right) + 1}$$

9.530 X-INVALID-ORDER-530 $Z(s) = \left(L_1 s + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{C_5 L_5 R_5 s^2 + L_5 s + R_5}{C_5 L_5 s^2 + 1},\ \frac{1}{C_L s}\right)$

$$H(s) = \frac{C_1 L_1 L_5 g_m s^3 + L_5 g_m s + R_5 g_m + s^4\left(C_1 C_5 L_1 L_5 R_5 g_m - C_1 C_5 L_1 L_5\right) + s^2\left(C_1 L_1 R_5 g_m - C_1 L_1 + C_5 L_5 R_5 g_m - C_5 L_5\right) - 1}{2g_m + s^5\left(C_1 C_5 C_L L_1 L_5 R_5 g_m + C_1 C_5 C_L L_1 L_5\right) + s^4\left(C_1 C_5 C_L L_5 R_5 + 2C_1 C_5 L_1 L_5 g_m + C_1 C_L L_1 L_5 g_m\right) + s^3\left(C_1 C_5 L_5 + C_1 C_L L_1 R_5 g_m + C_1 C_L L_1 + C_1 C_L L_5 + C_5 C_L L_5 R_5 g_m + C_5 C_L L_5\right) + s^2\left(C_1 C_L R_5 + 2C_1 L_1 g_m + 2C_5 L_5 g_m + C_L L_5 g_m\right) + s\left(C_1 + C_L R_5 g_m + C\right.}$$

9.531 X-INVALID-ORDER-531 $Z(s) = \left(L_1 s + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{C_5 L_5 R_5 s^2 + L_5 s + R_5}{C_5 L_5 s^2 + 1},\ \frac{R_L}{C_L R_L s + 1}\right)$

$$H(s) = \frac{C_1 L_1 L_5 R_L g_m s^3 + L_5 R_L g_m s + R_5 R_L g_m - R_L + s^4\left(C_1 C_5 L_1 L_5 R_5 R_L g_m - C_1 C_5 L_1 L_5 R_L\right) + s^2\left(C_1 L_1 R_5\right.}{R_5 g_m + 2R_L g_m + s^5\left(C_1 C_5 C_L L_1 L_5 R_5 R_L g_m + C_1 C_5 C_L L_1 L_5 R_L\right) + s^4\left(C_1 C_5 C_L L_5 R_5 R_L + C_1 C_5 L_1 L_5 R_5 g_m + 2C_1 C_5 L_1 L_5 R_L g_m + C_1 C_5 L_1 L_5 + C_1 C_L L_1 L_5 R_L g_m\right) + s^3\left(C_1 C_5 L_5 R_5 + C_1 C_5 L_5 R_L + C_1 C_L L_1 R_5 R_L g_m + C_1 C_L L_1 R_L + C_1 C_L L_5 R_L + C_1 L_1 L_5 g_m + C\right.}$$

9.532 X-INVALID-ORDER-532 $Z(s) = \left(L_1 s + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{C_5 L_5 R_5 s^2 + L_5 s + R_5}{C_5 L_5 s^2 + 1},\ R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{R_5 g_m + s^5\left(C_1 C_5 C_L L_1 L_5 R_5 R_L g_m - C_1 C_5 C_L L_1 L_5 R_L\right) + s^4\left(C_1 C_5 L_1 L_5 R_5 g_m - C_1 C_5 L_1 L_5 + C_1 C_L L_1 L_5 R_L g_m\right) + s^3\left(C_1 C_L L_1 R_5 R_L g_m - C_1 C_L L_1 R_L + C_1 L_1 L_5 g_m + C_5 C_L L_5 R_5 R_L g_m - C_5 C_L L_5 R_L\right) + s^2\left(C_1 L_1 R_5 g_m - C_1 L_1 + C\right.}{2g_m + s^5\left(C_1 C_5 C_L L_1 L_5 R_5 g_m + 2C_1 C_5 C_L L_1 L_5 R_L g_m + C_1 C_5 C_L L_1 L_5\right) + s^4\left(C_1 C_5 C_L L_5 R_5 + C_1 C_5 C_L L_5 R_L + 2C_1 C_5 L_1 L_5 g_m + C_1 C_L L_1 L_5 g_m\right) + s^3\left(C_1 C_5 L_5 + C_1 C_L L_1 R_5 g_m + 2C_1 C_L L_1 R_L g_m + C_1 C_L L_1 + C_1 C_L L_5 + C_5 C_L L_5 R_5 g_m + 2C_5 C_L L_5 R_L g_m + C_5 C_L\right.}$$

9.533 X-INVALID-ORDER-533 $Z(s) = \left(L_1 s + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{C_5 L_5 R_5 s^2 + L_5 s + R_5}{C_5 L_5 s^2 + 1},\ L_L s + \frac{1}{C_L s}\right)$

$$H(s) = \frac{C_1 C_L L_1 L_5 L_L g_m s^5 + L_5 g_m s + R_5 g_m + s^6\left(C_1 C_5 C_L L_1 L_5 L_L R_5 g_m - C_1 C_5 C_L L_1 L_5 L_L\right) + s^4\left(C_1 C_5 L_1 L_5 R_5 g_m - C_1 C_5 L_1 L_5 + C_1 C_L L_1 L_L R_5 g_m - C_1 C_L L_1 L_L + C_5 C_L L_5 L_L R_5 g_m - C_5 C_L L_5 L_L\right) + s^3\left(C_1 L_1 L_5 g_m + C_L L_5 L_L g_m\right) + s}{2C_1 C_5 C_L L_1 L_5 L_L g_m s^6 + 2g_m + s^5\left(C_1 C_5 C_L L_1 L_5 R_5 g_m + C_1 C_5 C_L L_1 L_5 + C_1 C_5 C_L L_5 L_L\right) + s^4\left(C_1 C_5 C_L L_5 R_5 + 2C_1 C_5 L_1 L_5 g_m + C_1 C_L L_1 L_5 g_m + 2C_1 C_L L_1 L_L g_m + 2C_5 C_L L_5 L_L g_m\right) + s^3\left(C_1 C_5 L_5 + C_1 C_L L_1 R_5 g_m + C_1 C_L L_1 + C_1 C_L L_5 + C_1 C_L L_L + C_5 C_L L_5 R_5\right.}$$

9.534 X-INVALID-ORDER-534 $Z(s) = \left(L_1 s + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{C_5 L_5 R_5 s^2 + L_5 s + R_5}{C_5 L_5 s^2 + 1},\ \frac{L_L s}{C_L L_L s^2 + 1}\right)$

$$H(s) = \frac{C_1 L_1 L_5 L_L g_m s^4 + L_5 L_L g_m s^2 + s^5\left(C_1 C_5 L_1 L_5 L_L R_5 g_m - C_1 C_5 L_1 L_5 L_L\right) + s^3\left(C_1 L_1 L_L R_5 g_m - C_1 L_1 L_L\right.}{R_5 g_m + s^6\left(C_1 C_5 C_L L_1 L_5 L_L R_5 g_m + C_1 C_5 C_L L_1 L_5 L_L\right) + s^5\left(C_1 C_5 C_L L_5 L_L R_5 + 2C_1 C_5 L_1 L_5 L_L g_m + C_1 C_L L_1 L_5 L_L g_m\right) + s^4\left(C_1 C_5 L_1 L_5 R_5 g_m + C_1 C_5 L_1 L_5 + C_1 C_5 L_5 L_L + C_1 C_L L_1 L_L R_5 g_m + C_1 C_L L_1 L_L + C_1 C_L L_5 L_L + C_5 C_L L_5 L_L R_5 g_m + C_5 C_L L_5 L_L\right) + s^3\left(C_1\right.}$$

9.535 X-INVALID-ORDER-535 $Z(s) = \left(L_1 s + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{C_5 L_5 R_5 s^2 + L_5 s + R_5}{C_5 L_5 s^2 + 1},\ L_L s + R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{R_5 g_m + s^6\left(C_1 C_5 C_L L_1 L_5 L_L R_5 g_m - C_1 C_5 C_L L_1 L_5 L_L\right) + s^5\left(C_1 C_5 C_L L_1 L_5 R_5 R_L g_m - C_1 C_5 C_L L_1 L_5 R_L + C_1 C_L L_1 L_5 L_L g_m\right) + s^4\left(C_1 C_5 L_1 L_5 R_5 g_m - C_1 C_5 L_1 L_5 + C_1 C_L L_1 L_5 R_L g_m + C_1 C_L L_1 L_L R_5 g_m - C_1 C_L L_1 L_L + C_5 C_L L_5 L_L R_5 g_m - C_5 C_L L_5 L_L\right) + s^3\left(C_1 C_L\right.}{2C_1 C_5 C_L L_1 L_5 L_L g_m s^6 + 2g_m + s^5\left(C_1 C_5 C_L L_1 L_5 R_5 g_m + 2C_1 C_5 C_L L_1 L_5 R_L g_m + C_1 C_5 C_L L_1 L_5 + C_1 C_5 C_L L_5 L_L\right) + s^4\left(C_1 C_5 C_L L_5 R_5 + C_1 C_5 C_L L_5 R_L + 2C_1 C_5 L_1 L_5 g_m + C_1 C_L L_1 L_5 g_m + 2C_1 C_L L_1 L_L g_m + 2C_5 C_L L_5 L_L g_m\right) + s^3\left(C_1 C_5 L_5 + C_1 C_L L_1 R_5 g_m + 2\right.}$$

9.536 X-INVALID-ORDER-536 $Z(s) = \left(L_1 s + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{C_5 L_5 R_5 s^2 + L_5 s + R_5}{C_5 L_5 s^2 + 1},\ \frac{L_L R_L s}{C_L L_L R_L s^2 + L_L s + R_L}\right)$

$$H(s) = \frac{}{R_5 R_L g_m + R_L + s^6\left(C_1 C_5 C_L L_1 L_5 L_L R_5 R_L g_m + C_1 C_5 C_L L_1 L_5 L_L R_L\right) + s^5\left(C_1 C_5 C_L L_5 L_L R_5 R_L + C_1 C_5 L_1 L_5 L_L R_5 g_m + 2C_1 C_5 L_1 L_5 L_L R_L g_m + C_1 C_5 L_1 L_5 L_L + C_1 C_L L_1 L_5 L_L R_L g_m\right) + s^4\left(C_1 C_5 L_1 L_5 R_5 R_L g_m + C_1 C_5 L_1 L_5 R_L + C_1 C_5 L_5 L_L R_5 + C_1 C_5 L_5 L_L R_L + \right.}$$

9.537 X-INVALID-ORDER-537 $Z(s) = \left(L_1 s + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{C_5 L_5 R_5 s^2 + L_5 s + R_5}{C_5 L_5 s^2 + 1},\ \frac{C_L L_L R_L s^2 + L_L s + R_L}{C_L L_L s^2 + 1}\right)$

$$H(s) = \frac{R_5 R_L g_m - R_L + s^6\left(C_1 C_5 C_L L_1 L_5 L_L R_5 R_L g_m - C_1 C_5 C_L L_1 L_5 L_L R_L\right) + s^5\left(C_1 C_5 L_1 L_5 L_L R_5 g_m - C_1 C_5 L_1 L_5 L_L + C_1 C_L L_1 L_5 L_L R_L g_m\right) + s^4\left(C_1 C_5 L_1 L_5 R_5 R_L g_m - C_1 C_5 L_1 L_5 R_L\right.}{R_5 g_m + 2R_L g_m + s^6\left(C_1 C_5 C_L L_1 L_5 L_L R_5 g_m + 2C_1 C_5 C_L L_1 L_5 L_L R_L g_m + C_1 C_5 C_L L_1 L_5 L_L\right) + s^5\left(C_1 C_5 C_L L_5 L_L R_5 + C_1 C_5 C_L L_5 L_L R_L + 2C_1 C_5 L_1 L_5 L_L g_m + C_1 C_L L_1 L_5 L_L g_m\right) + s^4\left(C_1 C_5 L_1 L_5 R_5 g_m + 2C_1 C_5 L_1 L_5 R_L g_m + C_1 C_5 L_1 L_5 + C_1 C_5 L_5 L_L + C_1 C_L L_1 L_L\right.}$$

9.538 X-INVALID-ORDER-538 $Z(s) = \left(L_1 s + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{C_5 L_5 R_5 s^2 + L_5 s + R_5}{C_5 L_5 s^2 + 1},\ \frac{R_L\left(C_L L_L s^2 + 1\right)}{C_L L_L s^2 + C_L R_L s + 1}\right)$

$$H(s) = \frac{C_1 C_L L_1 L_5 L_L R_L g_m s^5 + L_5 R_L g_m s + \cdots}{R_5 g_m + 2R_L g_m + s^6 \left(C_1 C_5 C_L L_1 L_5 L_L R_5 g_m + 2C_1 C_5 C_L L_1 L_5 L_L R_L g_m + C_1 C_5 C_L L_1 L_5 L_L\right) + s^5 \left(C_1 C_5 C_L L_1 L_5 R_5 R_L g_m + C_1 C_5 C_L L_1 L_5 R_L + C_1 C_5 C_L L_5 L_L R_5 + C_1 C_5 C_L L_5 L_L R_L + C_1 C_L L_1 L_5 L_L g_m\right) + s^4 \left(C_1 C_5 C_L L_5 R_5 R_L + C_1 C_5 L_1 L_5 R_5 g_m + 2C_1 C_5 L_1 L_5 R_L \cdots\right.}$$

9.539 X-INVALID-ORDER-539 $Z(s) = \left(L_1 s + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{R_5\left(C_5 L_5 s^2 + 1\right)}{C_5 L_5 s^2 + C_5 R_5 s + 1},\ R_L\right)$

$$H(s) = \frac{-C_1 C_5 L_1 R_5 R_L s^3 - C_5 R_5 R_L s + R_5 R_L g_m - R_L + s^4 \left(C_1 C_5 L_1 L_5 R_5 R_L g_m - C_1 C_5 L_1 L_5 R_L\right) + s^2 \left(C_1 L_1 R_5 R_L g_m - C_1 L_1 R_L + C_5 L_5 R_5 R_L g_m - C_5 L_5 R_L\right)}{R_5 g_m + 2R_L g_m + s^4 \left(C_1 C_5 L_1 L_5 R_5 g_m + 2C_1 C_5 L_1 L_5 R_L g_m + C_1 C_5 L_1 L_5\right) + s^3 \left(2C_1 C_5 L_1 R_5 R_L g_m + C_1 C_5 L_1 R_5 + C_1 C_5 L_5 R_5 + C_1 C_5 L_5 R_L\right) + s^2 \left(C_1 C_5 R_5 R_L + C_1 L_1 R_5 g_m + 2C_1 L_1 R_L g_m + C_1 L_1 + C_5 L_5 R_5 g_m + 2C_5 L_5 R_L g_m + C_5 L_5\right) + s\left(C_1 R_5 + C_1 R_L + 2C_5 R \cdots\right.}$$

9.540 X-INVALID-ORDER-540 $Z(s) = \left(L_1 s + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{R_5\left(C_5 L_5 s^2 + 1\right)}{C_5 L_5 s^2 + C_5 R_5 s + 1},\ \frac{1}{C_L s}\right)$

$$H(s) = \frac{-C_1 C_5 L_1 R_5 s^3 - C_5 R_5 s + R_5 g_m + s^4 \left(C_1 C_5 L_1 L_5 R_5 g_m - C_1 C_5 L_1 L_5\right) + s^2 \left(C_1 L_1 R_5 g_m - C_1 L_1 + C_5 L_5 R_5 g_m - C_5 L_5\right) - 1}{2g_m + s^5 \left(C_1 C_5 C_L L_1 L_5 R_5 g_m + C_1 C_5 C_L L_1 L_5\right) + s^4 \left(C_1 C_5 C_L L_1 R_5 + C_1 C_5 C_L L_5 R_5 + 2C_1 C_5 L_1 L_5 g_m\right) + s^3 \left(2C_1 C_5 L_1 R_5 g_m + C_1 C_5 L_5 + C_1 C_L L_1 R_5 g_m + C_1 C_L L_1 + C_5 C_L L_5 R_5 g_m + C_5 C_L L_5\right) + s^2 \left(C_1 C_5 R_5 + C_1 C_L R_5 + 2C_1 L_1 g_m + C_5 C_L R_5 + 2C_5 L_5 g_m\right) + s\left(C \cdots\right.}$$

9.541 X-INVALID-ORDER-541 $Z(s) = \left(L_1 s + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{R_5\left(C_5 L_5 s^2 + 1\right)}{C_5 L_5 s^2 + C_5 R_5 s + 1},\ \frac{R_L}{C_L R_L s + 1}\right)$

$$H(s) = \frac{-C_1 C_5 L_1 R_5 R_L s^3 - C_5 R_5 R_L s + R_5 R_L g_m - R_L + s^4 \left(C_1 C_5 L_1 L_5 R_5 R_L g_m - C_1 C_5 L_1 L_5 R_L \cdots\right.}{R_5 g_m + 2R_L g_m + s^5 \left(C_1 C_5 C_L L_1 L_5 R_5 R_L g_m + C_1 C_5 C_L L_1 L_5 R_L\right) + s^4 \left(C_1 C_5 C_L L_1 R_5 R_L + C_1 C_5 C_L L_5 R_5 R_L + C_1 C_5 L_1 L_5 R_5 g_m + 2C_1 C_5 L_1 L_5 R_L g_m + C_1 C_5 L_1 L_5\right) + s^3 \left(2C_1 C_5 L_1 R_5 R_L g_m + C_1 C_5 L_1 R_5 + C_1 C_5 L_5 R_5 + C_1 C_5 L_5 R_L + C_1 C_L L_1 R_5 R_L g_m + C_1 C_L L_1 R \cdots\right.}$$

9.542 X-INVALID-ORDER-542 $Z(s) = \left(L_1 s + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{R_5\left(C_5 L_5 s^2 + 1\right)}{C_5 L_5 s^2 + C_5 R_5 s + 1},\ R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{R_5 g_m + s^5 \left(C_1 C_5 C_L L_1 L_5 R_5 R_L g_m - C_1 C_5 C_L L_1 L_5 R_L\right) + s^4 \left(-C_1 C_5 C_L L_1 R_5 R_L + C_1 C_5 L_1 L_5 R_5 g_m - C_1 C_5 L_1 L_5\right) + s^3 \left(-C_1 C_5 L_1 R_5 + C_1 C_L L_1 R_5 R_L g_m - C_1 C_L L_1 R_L + C_5 C_L L_5 R_5 R_L g_m \cdots\right.}{2g_m + s^5 \left(C_1 C_5 C_L L_1 L_5 R_5 g_m + 2C_1 C_5 C_L L_1 L_5 R_L g_m + C_1 C_5 C_L L_1 L_5\right) + s^4 \left(2C_1 C_5 C_L L_1 R_5 R_L g_m + C_1 C_5 C_L L_1 R_5 + C_1 C_5 C_L L_5 R_5 + C_1 C_5 C_L L_5 R_L + 2C_1 C_5 L_1 L_5 g_m\right) + s^3 \left(C_1 C_5 C_L R_5 R_L + 2C_1 C_5 L_1 R_5 g_m + C_1 C_5 L_5 + C_1 C_L L_1 R_5 g_m + 2C_1 C_L L_1 R_L g_m + C_1 C_L \cdots\right.}$$

9.543 X-INVALID-ORDER-543 $Z(s) = \left(L_1 s + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{R_5\left(C_5 L_5 s^2 + 1\right)}{C_5 L_5 s^2 + C_5 R_5 s + 1},\ L_L s + \frac{1}{C_L s}\right)$

$$H(s) = \frac{-C_1 C_5 C_L L_1 L_L R_5 s^5 - C_5 R_5 s + R_5 g_m + s^6 \left(C_1 C_5 C_L L_1 L_5 L_L R_5 g_m - C_1 C_5 C_L L_1 L_5 L_L\right) + s^4 \left(C_1 C_5 L_1 L_5 R_5 g_m - C_1 C_5 L_1 L_5 + C_1 C_L L_1 L_L R_5 g_m - C_1 C_L L_1 L_L + C_5 C_L L_5 L_L R_5 g_m - C_5 C \cdots\right.}{2C_1 C_5 C_L L_1 L_5 L_L g_m s^6 + 2g_m + s^5 \left(C_1 C_5 C_L L_1 L_5 R_5 g_m + C_1 C_5 C_L L_1 L_5 + 2C_1 C_5 C_L L_1 L_L R_5 g_m + C_1 C_5 C_L L_5 L_L\right) + s^4 \left(C_1 C_5 C_L L_1 R_5 + C_1 C_5 C_L L_5 R_5 + C_1 C_5 C_L L_L R_5 + 2C_1 C_5 L_1 L_5 g_m + 2C_1 C_L L_1 L_L g_m + 2C_5 C_L L_5 L_L g_m\right) + s^3 \left(2C_1 C_5 L_1 R_5 g_m + C_1 C_5 L_5 + C_1 C \cdots\right.}$$

9.544 X-INVALID-ORDER-544 $Z(s) = \left(L_1 s + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{R_5\left(C_5 L_5 s^2 + 1\right)}{C_5 L_5 s^2 + C_5 R_5 s + 1},\ \frac{L_L s}{C_L L_L s^2 + 1}\right)$

$$H(s) = \frac{-C_1 C_5 L_1 L_L R_5 s^4 - C_5 L_L R_5 s^2 + s^5 \left(C_1 C_5 L_1 L_5 L_L R_5 g_m - C_1 C_5 L_1 L_5 L_L\right) + s^3 \left(C_1 L_1 L_L R_5 \cdots\right.}{R_5 g_m + s^6 \left(C_1 C_5 C_L L_1 L_5 L_L R_5 g_m + C_1 C_5 C_L L_1 L_5 L_L\right) + s^5 \left(C_1 C_5 C_L L_1 L_L R_5 + C_1 C_5 C_L L_5 L_L R_5 + 2C_1 C_5 L_1 L_5 L_L g_m\right) + s^4 \left(C_1 C_5 L_1 L_5 R_5 g_m + C_1 C_5 L_1 L_5 + 2C_1 C_5 L_1 L_L R_5 g_m + C_1 C_5 L_5 L_L + C_1 C_L L_1 L_L R_5 g_m + C_1 C_L L_1 L_L + C_5 C_L L_5 L_L R_5 g_m + C_5 C_L L_5 L_L\right) + \cdots}$$

9.545 X-INVALID-ORDER-545 $Z(s) = \left(L_1 s + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{R_5\left(C_5 L_5 s^2 + 1\right)}{C_5 L_5 s^2 + C_5 R_5 s + 1},\ L_L s + R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{R_5 g_m + s^6 \left(C_1 C_5 C_L L_1 L_5 L_L R_5 g_m - C_1 C_5 C_L L_1 L_5 L_L\right) + s^5 \left(C_1 C_5 C_L L_1 L_5 R_5 R_L g_m - C_1 C_5 C_L L_1 L_5 R_L - C_1 C_5 C_L L_1 L_L R_5\right) + s^4 \left(-C_1 C_5 C_L L_1 R_5 R_L + C_1 C_5 L_1 L_5 R_5 g_m - C_1 C_5 L_1 L_5 + C_1 C_L L_1 \cdots\right.}{2C_1 C_5 C_L L_1 L_5 L_L g_m s^6 + 2g_m + s^5 \left(C_1 C_5 C_L L_1 L_5 R_5 g_m + 2C_1 C_5 C_L L_1 L_5 R_L g_m + C_1 C_5 C_L L_1 L_5 + 2C_1 C_5 C_L L_1 L_L R_5 g_m + C_1 C_5 C_L L_5 L_L\right) + s^4 \left(2C_1 C_5 C_L L_1 R_5 R_L g_m + C_1 C_5 C_L L_1 R_5 + C_1 C_5 C_L L_5 R_5 + C_1 C_5 C_L L_5 R_L + C_1 C_5 C_L L_L R_5 + 2C_1 C_5 L_1 L_5 g_m + 2C_1 C_L L \cdots\right.}$$

9.546 X-INVALID-ORDER-546 $Z(s) = \left(L_1 s + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{R_5\left(C_5 L_5 s^2 + 1\right)}{C_5 L_5 s^2 + C_5 R_5 s + 1},\ \frac{L_L R_L s}{C_L L_L R_L s^2 + L_L s + R_L}\right)$

$$H(s) = \frac{R_5 R_L g_m + R_L + s^6 \left(C_1 C_5 C_L L_1 L_5 L_L R_5 R_L g_m + C_1 C_5 C_L L_1 L_5 L_L R_L\right) + s^5 \left(C_1 C_5 C_L L_1 L_L R_5 R_L + C_1 C_5 C_L L_5 L_L R_5 R_L + C_1 C_5 L_1 L_5 L_L R_5 g_m + 2C_1 C_5 L_1 L_5 L_L R_L g_m + C_1 C_5 L_1 L_5 L_L\right) + s^4 \left(C_1 C_5 L_1 L_5 R_5 R_L g_m + C_1 C_5 L_1 L_5 R_L + 2C_1 C_5 L_1 L_L R_5 R_L g_m + C_1 C_5 L_1 \cdots\right.}$$

9.547 X-INVALID-ORDER-547 $Z(s) = \left(L_1 s + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{R_5\left(C_5 L_5 s^2+1\right)}{C_5 L_5 s^2+C_5 R_5 s+1},\ \frac{C_L L_L R_L s^2+L_L s+R_L}{C_L L_L s^2+1}\right)$

$$H(s) = \frac{R_5 R_L g_m - R_L + s^6 \left(C_1 C_5 C_L L_1 L_5 L_L R_5 R_L g_m - C_1 C_5 C_L L_1 L_5 L_L R_L\right) + s^5 \left(-C_1 C_5 C_L L_1 L_L R_5 R_L + C_1 C_5 L\right.}{R_5 g_m + 2R_L g_m + s^6 \left(C_1 C_5 C_L L_1 L_5 L_L R_5 g_m + 2C_1 C_5 C_L L_1 L_5 L_L R_L g_m + C_1 C_5 C_L L_1 L_5 L_L\right) + s^5 \left(2C_1 C_5 C_L L_1 L_L R_5 R_L g_m + C_1 C_5 C_L L_1 L_L R_5 + C_1 C_5 C_L L_5 L_L R_5 + C_1 C_5 C_L L_5 L_L R_L + 2C_1 C_5 L_1 L_5 L_L g_m\right) + s^4 \left(C_1 C_5 C_L L_L R_5 R_L + C_1 C_5 L_1 L_5 R_5 g_m + 2C_1 C_5 L_1 L_5 L\right.}$$

9.548 X-INVALID-ORDER-548 $Z(s) = \left(L_1 s + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{R_5\left(C_5 L_5 s^2+1\right)}{C_5 L_5 s^2+C_5 R_5 s+1},\ \frac{R_L\left(C_L L_L s^2+1\right)}{C_L L_L s^2+C_L R_L s+1}\right)$

$$H(s) = \frac{}{R_5 g_m + 2R_L g_m + s^6 \left(C_1 C_5 C_L L_1 L_5 L_L R_5 g_m + 2C_1 C_5 C_L L_1 L_5 L_L R_L g_m + C_1 C_5 C_L L_1 L_5 L_L\right) + s^5 \left(C_1 C_5 C_L L_1 L_5 R_5 R_L g_m + C_1 C_5 C_L L_1 L_5 R_L + 2C_1 C_5 C_L L_1 L_L R_5 R_L g_m + C_1 C_5 C_L L_1 L_L R_5 + C_1 C_5 C_L L_5 L_L R_5 + C_1 C_5 C_L L_5 L_L R_L\right) + s^4 \left(C_1 C_5 C_L L_1 R_5 R_L + C_1 C_5 C_L\right.}$$

9.549 X-INVALID-ORDER-549 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2+1},\ \infty,\ \infty,\ \infty,\ R_5,\ \frac{1}{C_L s}\right)$

$$H(s) = \frac{s\left(L_1 R_5 g_m - L_1\right)}{C_1 C_L L_1 R_5 s^3 + s^2 \left(C_1 L_1 + C_L L_1 R_5 g_m + C_L L_1\right) + s\left(C_L R_5 + 2L_1 g_m\right) + 1}$$

9.550 X-INVALID-ORDER-550 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2+1},\ \infty,\ \infty,\ \infty,\ R_5,\ \frac{R_L}{C_L R_L s+1}\right)$

$$H(s) = \frac{s\left(L_1 R_5 R_L g_m - L_1 R_L\right)}{C_1 C_L L_1 R_5 R_L s^3 + R_5 + R_L + s^2 \left(C_1 L_1 R_5 + C_1 L_1 R_L + C_L L_1 R_5 R_L g_m + C_L L_1 R_L\right) + s\left(C_L R_5 R_L + L_1 R_5 g_m + 2L_1 R_L g_m + L_1\right)}$$

9.551 X-INVALID-ORDER-551 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2+1},\ \infty,\ \infty,\ \infty,\ R_5,\ R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{s^2 \left(C_L L_1 R_5 R_L g_m - C_L L_1 R_L\right) + s\left(L_1 R_5 g_m - L_1\right)}{s^3 \left(C_1 C_L L_1 R_5 + C_1 C_L L_1 R_L\right) + s^2 \left(C_1 L_1 + C_L L_1 R_5 g_m + 2C_L L_1 R_L g_m + C_L L_1\right) + s\left(C_L R_5 + C_L R_L + 2L_1 g_m\right) + 1}$$

9.552 X-INVALID-ORDER-552 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2+1},\ \infty,\ \infty,\ \infty,\ R_5,\ L_L s + \frac{1}{C_L s}\right)$

$$H(s) = \frac{s^3 \left(C_L L_1 L_L R_5 g_m - C_L L_1 L_L\right) + s\left(L_1 R_5 g_m - L_1\right)}{C_1 C_L L_1 L_L s^4 + s^3 \left(C_1 C_L L_1 R_5 + 2C_L L_1 L_L g_m\right) + s^2 \left(C_1 L_1 + C_L L_1 R_5 g_m + C_L L_1 + C_L L_L\right) + s\left(C_L R_5 + 2L_1 g_m\right) + 1}$$

9.553 X-INVALID-ORDER-553 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2+1},\ \infty,\ \infty,\ \infty,\ R_5,\ \frac{L_L s}{C_L L_L s^2+1}\right)$

$$H(s) = \frac{s^2 \left(L_1 L_L R_5 g_m - L_1 L_L\right)}{C_1 C_L L_1 L_L R_5 s^4 + R_5 + s^3 \left(C_1 L_1 L_L + C_L L_1 L_L R_5 g_m + C_L L_1 L_L\right) + s^2 \left(C_1 L_1 R_5 + C_L L_L R_5 + 2L_1 L_L g_m\right) + s\left(L_1 R_5 g_m + L_1 + L_L\right)}$$

9.554 X-INVALID-ORDER-554 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2+1},\ \infty,\ \infty,\ \infty,\ R_5,\ L_L s + R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{s^3 \left(C_L L_1 L_L R_5 g_m - C_L L_1 L_L\right) + s^2 \left(C_L L_1 R_5 R_L g_m - C_L L_1 R_L\right) + s\left(L_1 R_5 g_m - L_1\right)}{C_1 C_L L_1 L_L s^4 + s^3 \left(C_1 C_L L_1 R_5 + C_1 C_L L_1 R_L + 2C_L L_1 L_L g_m\right) + s^2 \left(C_1 L_1 + C_L L_1 R_5 g_m + 2C_L L_1 R_L g_m + C_L L_1 + C_L L_L\right) + s\left(C_L R_5 + C_L R_L + 2L_1 g_m\right) + 1}$$

9.555 X-INVALID-ORDER-555 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2+1},\ \infty,\ \infty,\ \infty,\ R_5,\ \frac{L_L R_L s}{C_L L_L R_L s^2+L_L s+R_L}\right)$

$$H(s) = \frac{s^2 \left(L_1 L_L R_5 R_L g_m - L_1 L_L R_L\right)}{C_1 C_L L_1 L_L R_5 R_L s^4 + R_5 R_L + s^3 \left(C_1 L_1 L_L R_5 + C_1 L_1 L_L R_L + C_L L_1 L_L R_5 R_L g_m + C_L L_1 L_L R_L\right) + s^2 \left(C_1 L_1 R_5 R_L + C_L L_L R_5 R_L + L_1 L_L R_5 g_m + 2L_1 L_L R_L g_m + L_1 L_L\right) + s\left(L_1 R_5 R_L g_m + L_1 R_L + L_L R_5 + L_L R_L\right)}$$

9.556 X-INVALID-ORDER-556 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2+1},\ \infty,\ \infty,\ \infty,\ R_5,\ \frac{C_L L_L R_L s^2+L_L s+R_L}{C_L L_L s^2+1}\right)$

$$H(s) = \frac{s^3 (C_L L_1 L_L R_5 R_L g_m - C_L L_1 L_L R_L) + s^2 (L_1 L_L R_5 g_m - L_1 L_L) + s (L_1 R_5 R_L g_m - L_1 R_L)}{R_5 + R_L + s^4 (C_1 C_L L_1 L_L R_5 + C_1 C_L L_1 L_L R_L) + s^3 (C_1 L_1 L_L + C_L L_1 L_L R_5 g_m + 2C_L L_1 L_L R_L g_m + C_L L_1 L_L) + s^2 (C_1 L_1 R_5 + C_1 L_1 R_L + C_L L_L R_5 + C_L L_L R_L + 2L_1 L_L g_m) + s (L_1 R_5 g_m + 2L_1 R_L g_m + L_1 + L_L)}$$

9.557 X-INVALID-ORDER-557 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2+1},\ \infty,\ \infty,\ \infty,\ R_5,\ \frac{R_L\left(C_L L_L s^2+1\right)}{C_L L_L s^2+C_L R_L s+1}\right)$

$$H(s) = \frac{s^3 (C_L L_1 L_L R_5 R_L g_m - C_L L_1 L_L R_L) + s (L_1 R_5 R_L g_m - L_1 R_L)}{R_5 + R_L + s^4 (C_1 C_L L_1 L_L R_5 + C_1 C_L L_1 L_L R_L) + s^3 (C_1 C_L L_1 R_5 R_L + C_L L_1 L_L R_5 g_m + 2C_L L_1 L_L R_L g_m + C_L L_1 L_L) + s^2 (C_1 L_1 R_5 + C_1 L_1 R_L + C_L L_1 R_5 R_L g_m + C_L L_1 R_L + C_L L_L R_5 + C_L L_L R_L) + s (C_L R_5 R_L + L_1 R_5 g_m + 2L_1 R_L g_m + L_1)}$$

9.558 X-INVALID-ORDER-558 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2+1},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_5 s},\ R_L\right)$

$$H(s) = \frac{-C_5 L_1 R_L s^2 + L_1 R_L g_m s}{C_1 C_5 L_1 R_L s^3 + s^2 (C_1 L_1 + 2C_5 L_1 R_L g_m + C_5 L_1) + s (C_5 R_L + L_1 g_m) + 1}$$

9.559 X-INVALID-ORDER-559 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2+1},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_5 s},\ \frac{R_L}{C_L R_L s+1}\right)$

$$H(s) = \frac{-C_5 L_1 R_L s^2 + L_1 R_L g_m s}{s^3 (C_1 C_5 L_1 R_L + C_1 C_L L_1 R_L + C_5 C_L L_1 R_L) + s^2 (C_1 L_1 + 2C_5 L_1 R_L g_m + C_5 L_1 + C_L L_1 R_L g_m) + s (C_5 R_L + C_L R_L + L_1 g_m) + 1}$$

9.560 X-INVALID-ORDER-560 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2+1},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_5 s},\ R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{-C_5 C_L L_1 R_L s^2 + L_1 g_m + s (-C_5 L_1 + C_L L_1 R_L g_m)}{C_1 C_5 C_L L_1 R_L s^3 + C_5 + C_L + s^2 (C_1 C_5 L_1 + C_1 C_L L_1 + 2C_5 C_L L_1 R_L g_m + C_5 C_L L_1) + s (C_5 C_L R_L + 2C_5 L_1 g_m + C_L L_1 g_m)}$$

9.561 X-INVALID-ORDER-561 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2+1},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_5 s},\ L_L s + \frac{1}{C_L s}\right)$

$$H(s) = \frac{-C_5 C_L L_1 L_L s^3 - C_5 L_1 s + C_L L_1 L_L g_m s^2 + L_1 g_m}{C_1 C_5 C_L L_1 L_L s^4 + 2C_5 C_L L_1 L_L g_m s^3 + C_5 + C_L + s^2 (C_1 C_5 L_1 + C_1 C_L L_1 + C_5 C_L L_1 + C_5 C_L L_L) + s (2C_5 L_1 g_m + C_L L_1 g_m)}$$

9.562 X-INVALID-ORDER-562 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2+1},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_5 s},\ \frac{L_L s}{C_L L_L s^2+1}\right)$

$$H(s) = \frac{-C_5 L_1 L_L s^3 + L_1 L_L g_m s^2}{L_1 g_m s + s^4 (C_1 C_5 L_1 L_L + C_1 C_L L_1 L_L + C_5 C_L L_1 L_L) + s^3 (2C_5 L_1 L_L g_m + C_L L_1 L_L g_m) + s^2 (C_1 L_1 + C_5 L_1 + C_5 L_L + C_L L_L) + 1}$$

9.563 X-INVALID-ORDER-563 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2+1},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_5 s},\ L_L s + R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{-C_5 C_L L_1 L_L s^3 + L_1 g_m + s^2 (-C_5 C_L L_1 R_L + C_L L_1 L_L g_m) + s (-C_5 L_1 + C_L L_1 R_L g_m)}{C_1 C_5 C_L L_1 L_L s^4 + C_5 + C_L + s^3 (C_1 C_5 C_L L_1 R_L + 2C_5 C_L L_1 L_L g_m) + s^2 (C_1 C_5 L_1 + C_1 C_L L_1 + 2C_5 C_L L_1 R_L g_m + C_5 C_L L_1 + C_5 C_L L_L) + s (C_5 C_L R_L + 2C_5 L_1 g_m + C_L L_1 g_m)}$$

9.564 X-INVALID-ORDER-564 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2+1},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_5 s},\ \frac{L_L R_L s}{C_L L_L R_L s^2+L_L s+R_L}\right)$

$$H(s) = \frac{-C_5 L_1 L_L R_L s^3 + L_1 L_L R_L g_m s^2}{R_L + s^4 (C_1 C_5 L_1 L_L R_L + C_1 C_L L_1 L_L R_L + C_5 C_L L_1 L_L R_L) + s^3 (C_1 L_1 L_L + 2C_5 L_1 L_L R_L g_m + C_5 L_1 L_L + C_L L_1 L_L R_L g_m) + s^2 (C_1 L_1 R_L + C_5 L_1 R_L + C_5 L_L R_L + C_L L_L R_L + L_1 L_L g_m) + s (L_1 R_L g_m + L_L)}$$

9.565 X-INVALID-ORDER-565 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2+1},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_5 s},\ \frac{C_L L_L R_L s^2+L_L s+R_L}{C_L L_L s^2+1}\right)$

$$H(s) = \frac{-C_5 C_L L_1 L_L R_L s^4 + L_1 R_L g_m s + s^3 (-C_5 L_1 L_L + C_L L_1 L_L R_L g_m) + s^2 (-C_5 L_1 R_L + L_1 L_L g_m)}{C_1 C_5 C_L L_1 L_L R_L s^5 + s^4 (C_1 C_5 L_1 L_L + C_1 C_L L_1 L_L + 2C_5 C_L L_1 L_L R_L g_m + C_5 C_L L_1 L_L) + s^3 (C_1 C_5 L_1 R_L + C_5 C_L L_L R_L + 2C_5 L_1 L_L g_m + C_L L_1 L_L g_m) + s^2 (C_1 L_1 + 2C_5 L_1 R_L g_m + C_5 L_1 + C_5 L_L + C_L L_L) + s (C_5 R_L + L_1 g_m) + 1}$$

9.566 X-INVALID-ORDER-566 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2+1},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_5 s},\ \frac{R_L\left(C_L L_L s^2+1\right)}{C_L L_L s^2+C_L R_L s+1}\right)$

$$H(s) = \frac{-C_5 C_L L_1 L_L R_L s^4 - C_5 L_1 R_L s^2 + C_L L_1 L_L R_L g_m s^3 + L_1 R_L g_m s}{C_1 C_5 C_L L_1 L_L R_L s^5 + s^4 (C_1 C_L L_1 L_L + 2C_5 C_L L_1 L_L R_L g_m + C_5 C_L L_1 L_L) + s^3 (C_1 C_5 L_1 R_L + C_1 C_L L_1 R_L + C_5 C_L L_1 R_L + C_5 C_L L_L R_L + C_L L_1 L_L g_m) + s^2 (C_1 L_1 + 2C_5 L_1 R_L g_m + C_5 L_1 + C_L L_1 R_L g_m + C_L L_L) + s (C_5 R_L + C_L R_L + L_1 g_m) + 1}$$

9.567 X-INVALID-ORDER-567 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2+1},\ \infty,\ \infty,\ \infty,\ \frac{R_5}{C_5 R_5 s+1},\ R_L\right)$

$$H(s) = \frac{-C_5 L_1 R_5 R_L s^2 + s (L_1 R_5 R_L g_m - L_1 R_L)}{C_1 C_5 L_1 R_5 R_L s^3 + R_5 + R_L + s^2 (C_1 L_1 R_5 + C_1 L_1 R_L + 2C_5 L_1 R_5 R_L g_m + C_5 L_1 R_5) + s (C_5 R_5 R_L + L_1 R_5 g_m + 2L_1 R_L g_m + L_1)}$$

9.568 X-INVALID-ORDER-568 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2+1},\ \infty,\ \infty,\ \infty,\ \frac{R_5}{C_5 R_5 s+1},\ \frac{1}{C_L s}\right)$

$$H(s) = \frac{-C_5 L_1 R_5 s^2 + s (L_1 R_5 g_m - L_1)}{s^3 (C_1 C_5 L_1 R_5 + C_1 C_L L_1 R_5 + C_5 C_L L_1 R_5) + s^2 (C_1 L_1 + 2C_5 L_1 R_5 g_m + C_L L_1 R_5 g_m + C_L L_1) + s (C_5 R_5 + C_L R_5 + 2L_1 g_m) + 1}$$

9.569 X-INVALID-ORDER-569 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2+1},\ \infty,\ \infty,\ \infty,\ \frac{R_5}{C_5 R_5 s+1},\ \frac{R_L}{C_L R_L s+1}\right)$

$$H(s) = \frac{-C_5 L_1 R_5 R_L s^2 + s (L_1 R_5 R_L g_m - L_1 R_L)}{R_5 + R_L + s^3 (C_1 C_5 L_1 R_5 R_L + C_1 C_L L_1 R_5 R_L + C_5 C_L L_1 R_5 R_L) + s^2 (C_1 L_1 R_5 + C_1 L_1 R_L + 2C_5 L_1 R_5 R_L g_m + C_5 L_1 R_5 + C_L L_1 R_5 R_L g_m + C_L L_1 R_L) + s (C_5 R_5 R_L + C_L R_5 R_L + L_1 R_5 g_m + 2L_1 R_L g_m + L_1)}$$

9.570 X-INVALID-ORDER-570 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2+1},\ \infty,\ \infty,\ \infty,\ \frac{R_5}{C_5 R_5 s+1},\ R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{-C_5 C_L L_1 R_5 R_L s^3 + s^2 (-C_5 L_1 R_5 + C_L L_1 R_5 R_L g_m - C_L L_1 R_L) + s (L_1 R_5 g_m - L_1)}{C_1 C_5 C_L L_1 R_5 R_L s^4 + s^3 (C_1 C_5 L_1 R_5 + C_1 C_L L_1 R_5 + C_1 C_L L_1 R_L + 2C_5 C_L L_1 R_5 R_L g_m + C_5 C_L L_1 R_5) + s^2 (C_1 L_1 + C_5 C_L R_5 R_L + 2C_5 L_1 R_5 g_m + C_L L_1 R_5 g_m + 2C_L L_1 R_L g_m + C_L L_1) + s (C_5 R_5 + C_L R_5 + C_L R_L + 2L_1 g_m) + 1}$$

9.571 X-INVALID-ORDER-571 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2+1},\ \infty,\ \infty,\ \infty,\ \frac{R_5}{C_5 R_5 s+1},\ L_L s + \frac{1}{C_L s}\right)$

$$H(s) = \frac{-C_5 C_L L_1 L_L R_5 s^4 - C_5 L_1 R_5 s^2 + s^3 (C_L L_1 L_L R_5 g_m - C_L L_1 L_L) + s (L_1 R_5 g_m - L_1)}{C_1 C_5 C_L L_1 L_L R_5 s^5 + s^4 (C_1 C_L L_1 L_L + 2C_5 C_L L_1 L_L R_5 g_m) + s^3 (C_1 C_5 L_1 R_5 + C_1 C_L L_1 R_5 + C_5 C_L L_1 R_5 + C_5 C_L L_L R_5 + 2C_L L_1 L_L g_m) + s^2 (C_1 L_1 + 2C_5 L_1 R_5 g_m + C_L L_1 R_5 g_m + C_L L_1 + C_L L_L) + s (C_5 R_5 + C_L R_5 + 2L_1 g_m) + 1}$$

9.572 X-INVALID-ORDER-572 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2+1},\ \infty,\ \infty,\ \infty,\ \frac{R_5}{C_5 R_5 s+1},\ \frac{L_L s}{C_L L_L s^2+1}\right)$

$$H(s) = \frac{-C_5 L_1 L_L R_5 s^3 + s^2 (L_1 L_L R_5 g_m - L_1 L_L)}{R_5 + s^4 (C_1 C_5 L_1 L_L R_5 + C_1 C_L L_1 L_L R_5 + C_5 C_L L_1 L_L R_5) + s^3 (C_1 L_1 L_L + 2C_5 L_1 L_L R_5 g_m + C_L L_1 L_L R_5 g_m + C_L L_1 L_L) + s^2 (C_1 L_1 R_5 + C_5 L_1 R_5 + C_5 L_L R_5 + C_L L_L R_5 + 2L_1 L_L g_m) + s (L_1 R_5 g_m + L_1 + L_L)}$$

9.573 X-INVALID-ORDER-573 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2+1},\ \infty,\ \infty,\ \infty,\ \frac{R_5}{C_5 R_5 s+1},\ L_L s + R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{-C_5 C_L L_1 L_L R_5 s^4 + s^3 (-C_5 C_L L_1 R_5 R_L + C_L L_1 L_L R_5 g_m - C_L L_1 L_L) + s^2 (-C_5 L_1 R_5 + C_L L_1 R_5 R_L g_m - C_L L_1 R_L) + s (L_1 R_5 g_m - L_1)}{C_1 C_5 C_L L_1 L_L R_5 s^5 + s^4 (C_1 C_5 C_L L_1 R_5 R_L + C_1 C_L L_1 L_L + 2C_5 C_L L_1 L_L R_5 g_m) + s^3 (C_1 C_5 L_1 R_5 + C_1 C_L L_1 R_5 + C_1 C_L L_1 R_L + 2C_5 C_L L_1 R_5 R_L g_m + C_5 C_L L_1 R_5 + C_5 C_L L_L R_5 + 2C_L L_1 L_L g_m) + s^2 (C_1 L_1 + C_5 C_L R_5 R_L + 2C_5 L_1 R_5 g_m + C_L L_1 R_5 g_m + 2C_L L_1 R_L g_m}$$

9.574 X-INVALID-ORDER-574 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2+1},\ \infty,\ \infty,\ \infty,\ \frac{R_5}{C_5 R_5 s+1},\ \frac{L_L R_L s}{C_L L_L R_L s^2+L_L s+R_L}\right)$

$$H(s) = \frac{-C_5 L_1 L_L R_5 R_L s^3 + s^2 (L_1 L_L R_5 R_L g_m - L_1 L_L R_L)}{R_5 R_L + s^4 (C_1 C_5 L_1 L_L R_5 R_L + C_1 C_L L_1 L_L R_5 R_L + C_5 C_L L_1 L_L R_5 R_L) + s^3 (C_1 L_1 L_L R_5 + C_1 L_1 L_L R_L + 2C_5 L_1 L_L R_5 R_L g_m + C_5 L_1 L_L R_5 + C_L L_1 L_L R_5 R_L g_m + C_L L_1 L_L R_L) + s^2 (C_1 L_1 R_5 R_L + C_5 L_1 R_5 R_L + C_5 L_L R_5 R_L + C_L L_L R_5 R_L + L_1 L_L R_5 g_m + 2L_1 L_L R_L}$$

9.575 X-INVALID-ORDER-575 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2+1},\ \infty,\ \infty,\ \infty,\ \frac{R_5}{C_5 R_5 s+1},\ \frac{C_L L_L R_L s^2+L_L s+R_L}{C_L L_L s^2+1}\right)$

$$H(s) = \frac{-C_5 C_L L_1 L_L R_5 R_L s^4 + s^3 (-C_5 L_1 L_L R_5 + C_L L_1 L_L R_5 R_L g_m - C_L L_1 L_L R_L) + s^2 (-C_5 L_1 R_5 R_L + L_1 L_L R_5 g_m - L_1 L_L) + s (L_1 R_5 R_L g}{C_1 C_5 C_L L_1 L_L R_5 R_L s^5 + R_5 + R_L + s^4 (C_1 C_5 L_1 L_L R_5 + C_1 C_L L_1 L_L R_5 + C_1 C_L L_1 L_L R_L + 2C_5 C_L L_1 L_L R_5 R_L g_m + C_5 C_L L_1 L_L R_5) + s^3 (C_1 C_5 L_1 R_5 R_L + C_1 L_1 L_L + C_5 C_L L_L R_5 R_L + 2C_5 L_1 L_L R_5 g_m + C_L L_1 L_L R_5 g_m + 2C_L L_1 L_L R_L g_m + C_L L_1 L_L) + s^2 (C_1 L_1 R_5 -}$$

9.576 X-INVALID-ORDER-576 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2+1},\ \infty,\ \infty,\ \infty,\ \frac{R_5}{C_5 R_5 s+1},\ \frac{R_L\left(C_L L_L s^2+1\right)}{C_L L_L s^2+C_L R_L s+1}\right)$

$$H(s) = \frac{-C_5 C_L L_1 L_L R_5 R_L s^4 - C_5 L_1 R_5 R_L s^2 + s^3 (C_L L_1 L_L R_5 R_L g_m - C_L L_1 L_L R_L) + s (L_1 R_5 R_L g_m - L_1 R_L)}{C_1 C_5 C_L L_1 L_L R_5 R_L s^5 + R_5 + R_L + s^4 (C_1 C_L L_1 L_L R_5 + C_1 C_L L_1 L_L R_L + 2C_5 C_L L_1 L_L R_5 R_L g_m + C_5 C_L L_1 L_L R_5) + s^3 (C_1 C_5 L_1 R_5 R_L + C_1 C_L L_1 R_5 R_L + C_5 C_L L_1 R_5 R_L + C_5 C_L L_L R_5 R_L + C_L L_1 L_L R_5 g_m + 2C_L L_1 L_L R_L g_m + C_L L_1 L_L) + s^2 (C_1 L_1 R_5 + C_1 L_1 R_L -}$$

9.577 X-INVALID-ORDER-577 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2+1},\ \infty,\ \infty,\ \infty,\ R_5 + \frac{1}{C_5 s},\ R_L\right)$

$$H(s) = \frac{L_1 R_L g_m s + s^2 (C_5 L_1 R_5 R_L g_m - C_5 L_1 R_L)}{s^3 (C_1 C_5 L_1 R_5 + C_1 C_5 L_1 R_L) + s^2 (C_1 L_1 + C_5 L_1 R_5 g_m + 2C_5 L_1 R_L g_m + C_5 L_1) + s (C_5 R_5 + C_5 R_L + L_1 g_m) + 1}$$

9.578 X-INVALID-ORDER-578 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2+1},\ \infty,\ \infty,\ \infty,\ R_5 + \frac{1}{C_5 s},\ \frac{1}{C_L s}\right)$

$$H(s) = \frac{L_1 g_m + s (C_5 L_1 R_5 g_m - C_5 L_1)}{C_1 C_5 C_L L_1 R_5 s^3 + C_5 + C_L + s^2 (C_1 C_5 L_1 + C_1 C_L L_1 + C_5 C_L L_1 R_5 g_m + C_5 C_L L_1) + s (C_5 C_L R_5 + 2C_5 L_1 g_m + C_L L_1 g_m)}$$

9.579 X-INVALID-ORDER-579 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2+1},\ \infty,\ \infty,\ \infty,\ R_5 + \frac{1}{C_5 s},\ \frac{R_L}{C_L R_L s+1}\right)$

$$H(s) = \frac{L_1 R_L g_m s + s^2 (C_5 L_1 R_5 R_L g_m - C_5 L_1 R_L)}{C_1 C_5 C_L L_1 R_5 R_L s^4 + s^3 (C_1 C_5 L_1 R_5 + C_1 C_5 L_1 R_L + C_1 C_L L_1 R_L + C_5 C_L L_1 R_5 R_L g_m + C_5 C_L L_1 R_L) + s^2 (C_1 L_1 + C_5 C_L R_5 R_L + C_5 L_1 R_5 g_m + 2C_5 L_1 R_L g_m + C_5 L_1 + C_L L_1 R_L g_m) + s (C_5 R_5 + C_5 R_L + C_L R_L + L_1 g_m) + 1}$$

9.580 X-INVALID-ORDER-580 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2+1},\ \infty,\ \infty,\ \infty,\ R_5 + \frac{1}{C_5 s},\ R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{L_1 g_m + s^2 (C_5 C_L L_1 R_5 R_L g_m - C_5 C_L L_1 R_L) + s (C_5 L_1 R_5 g_m - C_5 L_1 + C_L L_1 R_L g_m)}{C_5 + C_L + s^3 (C_1 C_5 C_L L_1 R_5 + C_1 C_5 C_L L_1 R_L) + s^2 (C_1 C_5 L_1 + C_1 C_L L_1 + C_5 C_L L_1 R_5 g_m + 2C_5 C_L L_1 R_L g_m + C_5 C_L L_1) + s (C_5 C_L R_5 + C_5 C_L R_L + 2C_5 L_1 g_m + C_L L_1 g_m)}$$

9.581 X-INVALID-ORDER-581 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2+1},\ \infty,\ \infty,\ \infty,\ R_5 + \frac{1}{C_5 s},\ L_L s + \frac{1}{C_L s}\right)$

$$H(s) = \frac{C_L L_1 L_L g_m s^2 + L_1 g_m + s^3 (C_5 C_L L_1 L_L R_5 g_m - C_5 C_L L_1 L_L) + s (C_5 L_1 R_5 g_m - C_5 L_1)}{C_1 C_5 C_L L_1 L_L s^4 + C_5 + C_L + s^3 (C_1 C_5 C_L L_1 R_5 + 2C_5 C_L L_1 L_L g_m) + s^2 (C_1 C_5 L_1 + C_1 C_L L_1 + C_5 C_L L_1 R_5 g_m + C_5 C_L L_1 + C_5 C_L L_L) + s (C_5 C_L R_5 + 2C_5 L_1 g_m + C_L L_1 g_m)}$$

9.582 X-INVALID-ORDER-582 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2+1},\ \infty,\ \infty,\ \infty,\ R_5 + \frac{1}{C_5 s},\ \frac{L_L s}{C_L L_L s^2+1}\right)$

$$H(s) = \frac{L_1 L_L g_m s^2 + s^3 (C_5 L_1 L_L R_5 g_m - C_5 L_1 L_L)}{C_1 C_5 C_L L_1 L_L R_5 s^5 + s^4 (C_1 C_5 L_1 L_L + C_1 C_L L_1 L_L + C_5 C_L L_1 L_L R_5 g_m + C_5 C_L L_1 L_L) + s^3 (C_1 C_5 L_1 R_5 + C_5 C_L L_L R_5 + 2C_5 L_1 L_L g_m + C_L L_1 L_L g_m) + s^2 (C_1 L_1 + C_5 L_1 R_5 g_m + C_5 L_1 + C_5 L_L + C_L L_L) + s (C_5 R_5 + L_1 g_m) + 1}$$

9.583 X-INVALID-ORDER-583 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2+1},\ \infty,\ \infty,\ \infty,\ R_5 + \frac{1}{C_5 s},\ L_L s + R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{L_1 g_m + s^3 (C_5 C_L L_1 L_L R_5 g_m - C_5 C_L L_1 L_L) + s^2 (C_5 C_L L_1 R_5 R_L g_m - C_5 C_L L_1 R_L + C_L L_1 L_L g_m) + s (C_5 L_1 R_5 g_m - C_5 L_1 + C_L L_1 R_L g_m)}{C_1 C_5 C_L L_1 L_L s^4 + C_5 + C_L + s^3 (C_1 C_5 C_L L_1 R_5 + C_1 C_5 C_L L_1 R_L + 2 C_5 C_L L_1 L_L g_m) + s^2 (C_1 C_5 L_1 + C_1 C_L L_1 + C_5 C_L L_1 R_5 g_m + 2 C_5 C_L L_1 R_L g_m + C_5 C_L L_1 + C_5 C_L L_L) + s (C_5 C_L R_5 + C_5 C_L R_L + 2 C_5 L_1 g_m + C_L L_1 g_m)}$$

9.584 X-INVALID-ORDER-584 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2+1},\ \infty,\ \infty,\ \infty,\ R_5 + \frac{1}{C_5 s},\ \frac{L_L R_L s}{C_L L_L R_L s^2 + L_L s + R_L}\right)$

$$H(s) = \frac{L_1 L_L R_L g_m s^2 + s^3 (C_5 L_1 L_L R_5 R_L g_m - C_5 L_1 L_L R_L)}{C_1 C_5 C_L L_1 L_L R_5 R_L s^5 + R_L + s^4 (C_1 C_5 L_1 L_L R_5 + C_1 C_5 L_1 L_L R_L + C_1 C_L L_1 L_L R_L + C_5 C_L L_1 L_L R_5 R_L g_m + C_5 C_L L_1 L_L R_L) + s^3 (C_1 C_5 L_1 R_5 R_L + C_1 L_1 L_L + C_5 C_L L_L R_5 R_L + C_5 L_1 L_L R_5 g_m + 2 C_5 L_1 L_L R_L g_m + C_5 L_1 L_L + C_L L_1 L_L R_L g_m) + s^2 (C_1 L_1 R_L + C_5 L_1 \cdots}$$

9.585 X-INVALID-ORDER-585 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2+1},\ \infty,\ \infty,\ \infty,\ R_5 + \frac{1}{C_5 s},\ \frac{C_L L_L R_L s^2 + L_L s + R_L}{C_L L_L s^2 + 1}\right)$

$$H(s) = \frac{L_1 R_L g_m s + s^4 (C_5 C_L L_1 L_L R_5 R_L g_m - C_5 C_L L_1 L_L R_L) + s^3 (C_5 L_1 L_L R_5 g_m - C_5 L_1 L_L + C_L L_1 L_L R_L g_m) + s^2 (C_5 L_1 R_5 R_L g_m - C_5 L_1 R_L + L_1 L_L g_m)}{s^5 (C_1 C_5 C_L L_1 L_L R_5 + C_1 C_5 C_L L_1 L_L R_L) + s^4 (C_1 C_5 L_1 L_L + C_1 C_L L_1 L_L + C_5 C_L L_1 L_L R_5 g_m + 2 C_5 C_L L_1 L_L R_L g_m + C_5 C_L L_1 L_L) + s^3 (C_1 C_5 L_1 R_5 + C_1 C_5 L_1 R_L + C_5 C_L L_L R_5 + C_5 C_L L_L R_L + 2 C_5 L_1 L_L g_m + C_L L_1 L_L g_m) + s^2 (C_1 L_1 + C_5 L_1 R_5 g_m + 2 C_5 L_1 R_L g_m \cdots}$$

9.586 X-INVALID-ORDER-586 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2+1},\ \infty,\ \infty,\ \infty,\ R_5 + \frac{1}{C_5 s},\ \frac{R_L\left(C_L L_L s^2 + 1\right)}{C_L L_L s^2 + C_L R_L s + 1}\right)$

$$H(s) = \frac{C_L L_1 L_L R_L g_m s^3 + L_1 R_L g_m s + s^4 (C_5 C_L L_1 L_L R_5 R_L g_m - C_5 C_L L_1 L_L R_L) + s^2 (C_5 L_1 R_5 R_L g_m - C_5 L_1 R_L)}{s^5 (C_1 C_5 C_L L_1 L_L R_5 + C_1 C_5 C_L L_1 L_L R_L) + s^4 (C_1 C_5 C_L L_1 R_5 R_L + C_1 C_L L_1 L_L + C_5 C_L L_1 L_L R_5 g_m + 2 C_5 C_L L_1 L_L R_L g_m + C_5 C_L L_1 L_L) + s^3 (C_1 C_5 L_1 R_5 + C_1 C_5 L_1 R_L + C_1 C_L L_1 R_L + C_5 C_L L_1 R_5 R_L g_m + C_5 C_L L_1 R_L + C_5 C_L L_L R_5 + C_5 C_L L_L R_L + C_L L_1 L_L g_m) + \cdots}$$

9.587 X-INVALID-ORDER-587 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2+1},\ \infty,\ \infty,\ \infty,\ L_5 s + \frac{1}{C_5 s},\ R_L\right)$

$$H(s) = \frac{C_5 L_1 L_5 R_L g_m s^3 - C_5 L_1 R_L s^2 + L_1 R_L g_m s}{C_1 C_5 L_1 L_5 s^4 + s^3 (C_1 C_5 L_1 R_L + C_5 L_1 L_5 g_m) + s^2 (C_1 L_1 + 2 C_5 L_1 R_L g_m + C_5 L_1 + C_5 L_5) + s (C_5 R_L + L_1 g_m) + 1}$$

9.588 X-INVALID-ORDER-588 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2+1},\ \infty,\ \infty,\ \infty,\ L_5 s + \frac{1}{C_5 s},\ \frac{1}{C_L s}\right)$

$$H(s) = \frac{C_5 L_1 L_5 g_m s^2 - C_5 L_1 s + L_1 g_m}{C_1 C_5 C_L L_1 L_5 s^4 + C_5 C_L L_1 L_5 g_m s^3 + C_5 + C_L + s^2 (C_1 C_5 L_1 + C_1 C_L L_1 + C_5 C_L L_1 + C_5 C_L L_5) + s (2 C_5 L_1 g_m + C_L L_1 g_m)}$$

9.589 X-INVALID-ORDER-589 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2+1},\ \infty,\ \infty,\ \infty,\ L_5 s + \frac{1}{C_5 s},\ \frac{R_L}{C_L R_L s + 1}\right)$

$$H(s) = \frac{C_5 L_1 L_5 R_L g_m s^3 - C_5 L_1 R_L s^2 + L_1 R_L g_m s}{C_1 C_5 C_L L_1 L_5 R_L s^5 + s^4 (C_1 C_5 L_1 L_5 + C_5 C_L L_1 L_5 R_L g_m) + s^3 (C_1 C_5 L_1 R_L + C_1 C_L L_1 R_L + C_5 C_L L_1 R_L + C_5 C_L L_5 R_L + C_5 L_1 L_5 g_m) + s^2 (C_1 L_1 + 2 C_5 L_1 R_L g_m + C_5 L_1 + C_5 L_5 + C_L L_1 R_L g_m) + s (C_5 R_L + C_L R_L + L_1 g_m) + 1}$$

9.590 X-INVALID-ORDER-590 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2+1},\ \infty,\ \infty,\ \infty,\ L_5 s + \frac{1}{C_5 s},\ R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{C_5 C_L L_1 L_5 R_L g_m s^3 + L_1 g_m + s^2 (-C_5 C_L L_1 R_L + C_5 L_1 L_5 g_m) + s (-C_5 L_1 + C_L L_1 R_L g_m)}{C_1 C_5 C_L L_1 L_5 s^4 + C_5 + C_L + s^3 (C_1 C_5 C_L L_1 R_L + C_5 C_L L_1 L_5 g_m) + s^2 (C_1 C_5 L_1 + C_1 C_L L_1 + 2 C_5 C_L L_1 R_L g_m + C_5 C_L L_1 + C_5 C_L L_5) + s (C_5 C_L R_L + 2 C_5 L_1 g_m + C_L L_1 g_m)}$$

9.591 X-INVALID-ORDER-591 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2+1},\ \infty,\ \infty,\ \infty,\ L_5 s + \frac{1}{C_5 s},\ L_L s + \frac{1}{C_L s}\right)$

$$H(s) = \frac{C_5 C_L L_1 L_5 L_L g_m s^4 - C_5 C_L L_1 L_L s^3 - C_5 L_1 s + L_1 g_m + s^2 (C_5 L_1 L_5 g_m + C_L L_1 L_L g_m)}{C_5 + C_L + s^4 (C_1 C_5 C_L L_1 L_5 + C_1 C_5 C_L L_1 L_L) + s^3 (C_5 C_L L_1 L_5 g_m + 2 C_5 C_L L_1 L_L g_m) + s^2 (C_1 C_5 L_1 + C_1 C_L L_1 + C_5 C_L L_1 + C_5 C_L L_5 + C_5 C_L L_L) + s (2 C_5 L_1 g_m + C_L L_1 g_m)}$$

9.592 X-INVALID-ORDER-592 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2+1},\ \infty,\ \infty,\ \infty,\ L_5 s + \frac{1}{C_5 s},\ \frac{L_L s}{C_L L_L s^2+1}\right)$

$$H(s) = \frac{C_5 L_1 L_5 L_L g_m s^4 - C_5 L_1 L_L s^3 + L_1 L_L g_m s^2}{C_1 C_5 C_L L_1 L_5 L_L s^6 + C_5 C_L L_1 L_5 L_L g_m s^5 + L_1 g_m s + s^4 (C_1 C_5 L_1 L_5 + C_1 C_5 L_1 L_L + C_1 C_L L_1 L_L + C_5 C_L L_1 L_L + C_5 C_L L_5 L_L) + s^3 (C_5 L_1 L_5 g_m + 2C_5 L_1 L_L g_m + C_L L_1 L_L g_m) + s^2 (C_1 L_1 + C_5 L_1 + C_5 L_5 + C_5 L_L + C_L L_L) + 1}$$

9.593 X-INVALID-ORDER-593 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2+1},\ \infty,\ \infty,\ \infty,\ L_5 s + \frac{1}{C_5 s},\ L_L s + R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{C_5 C_L L_1 L_5 L_L g_m s^4 + L_1 g_m + s^3 (C_5 C_L L_1 L_5 R_L g_m - C_5 C_L L_1 L_L) + s^2 (-C_5 C_L L_1 R_L + C_5 L_1 L_5 g_m + C_L L_1 L_L g_m) + s (-C_5 L_1 + C_L L_1 R_L g_m)}{C_5 + C_L + s^4 (C_1 C_5 C_L L_1 L_5 + C_1 C_5 C_L L_1 L_L) + s^3 (C_1 C_5 C_L L_1 R_L + C_5 C_L L_1 L_5 g_m + 2C_5 C_L L_1 L_L g_m) + s^2 (C_1 C_5 L_1 + C_1 C_L L_1 + 2C_5 C_L L_1 R_L g_m + C_5 C_L L_1 + C_5 C_L L_5 + C_5 C_L L_L) + s (C_5 C_L R_L + 2C_5 L_1 g_m + C_L L_1 g_m)}$$

9.594 X-INVALID-ORDER-594 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2+1},\ \infty,\ \infty,\ \infty,\ L_5 s + \frac{1}{C_5 s},\ \frac{L_L R_L s}{C_L L_L R_L s^2 + L_L s + R_L}\right)$

$$H(s) = \frac{C_5 L_1 L_5 L_L R_L g_m s^4 - C_5 L_1 L_L R_L s^3 + L_1 L_L R_L g_m s^2}{C_1 C_5 C_L L_1 L_5 L_L R_L s^6 + R_L + s^5 (C_1 C_5 L_1 L_5 L_L + C_5 C_L L_1 L_5 L_L R_L g_m) + s^4 (C_1 C_5 L_1 L_5 R_L + C_1 C_5 L_1 L_L R_L + C_1 C_L L_1 L_L R_L + C_5 C_L L_1 L_L R_L + C_5 C_L L_5 L_L R_L + C_5 L_1 L_5 L_L g_m) + s^3 (C_1 L_1 L_L + C_5 L_1 L_5 R_L g_m + 2C_5 L_1 L_L R_L g_m + C_5 L_1 L_L + C_5 L_5 L_L + C_L L_1 L_{\cdots}}$$

9.595 X-INVALID-ORDER-595 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2+1},\ \infty,\ \infty,\ \infty,\ L_5 s + \frac{1}{C_5 s},\ \frac{C_L L_L R_L s^2 + L_L s + R_L}{C_L L_L s^2+1}\right)$

$$H(s) = \frac{C_5 C_L L_1 L_5 L_L R_L g_m s^5 + L_1 R_L g_m s + s^4 (-C_5 C_L L_1 L_L R_L + C_5 L_1 L_5 L_L g_m) + s^3 (C_5 L_1 L_5 R_L g_m - C_5 L_1 L_L + C_L L_1 L_L R_L g_m) + s^2 (-C_5 L_1 R_L + L_1 L_L g_m)}{C_1 C_5 C_L L_1 L_5 L_L s^6 + s^5 (C_1 C_5 C_L L_1 L_L R_L + C_5 C_L L_1 L_5 L_L g_m) + s^4 (C_1 C_5 L_1 L_5 + C_1 C_5 L_1 L_L + C_1 C_L L_1 L_L + 2C_5 C_L L_1 L_L R_L g_m + C_5 C_L L_1 L_L + C_5 C_L L_5 L_L) + s^3 (C_1 C_5 L_1 R_L + C_5 C_L L_L R_L + C_5 L_1 L_5 g_m + 2C_5 L_1 L_L g_m + C_L L_1 L_L g_m) + s^2 (C_1 L_1 + 2C_5 L_1 R_L g_{\cdots}}$$

9.596 X-INVALID-ORDER-596 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2+1},\ \infty,\ \infty,\ \infty,\ L_5 s + \frac{1}{C_5 s},\ \frac{R_L\left(C_L L_L s^2+1\right)}{C_L L_L s^2 + C_L R_L s + 1}\right)$

$$H(s) = \frac{C_5 C_L L_1 L_5 L_L R_L g_m s^5 - C_5 C_L L_1 L_L R_L s^4 - C_5 L_1 R_L s^2 + L_1 R_L g_m s + s^3 (C_5 L_1 L_5 R_L g_m + C_L L_1 L_L R_L g_m)}{C_1 C_5 C_L L_1 L_5 L_L s^6 + s^5 (C_1 C_5 C_L L_1 L_5 R_L + C_1 C_5 C_L L_1 L_L R_L + C_5 C_L L_1 L_5 L_L g_m) + s^4 (C_1 C_5 L_1 L_5 + C_1 C_L L_1 L_L + C_5 C_L L_1 L_5 R_L g_m + 2C_5 C_L L_1 L_L R_L g_m + C_5 C_L L_1 L_L + C_5 C_L L_5 L_L) + s^3 (C_1 C_5 L_1 R_L + C_1 C_L L_1 R_L + C_5 C_L L_1 R_L + C_5 C_L L_5 R_L + C_5 C_L L_L R_L + \cdots}$$

9.597 X-INVALID-ORDER-597 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2+1},\ \infty,\ \infty,\ \infty,\ \frac{L_5 s}{C_5 L_5 s^2+1},\ R_L\right)$

$$H(s) = \frac{-C_5 L_1 L_5 R_L s^3 + L_1 L_5 R_L g_m s^2 - L_1 R_L s}{C_1 C_5 L_1 L_5 R_L s^4 + R_L + s^3 (C_1 L_1 L_5 + 2C_5 L_1 L_5 R_L g_m + C_5 L_1 L_5) + s^2 (C_1 L_1 R_L + C_5 L_5 R_L + L_1 L_5 g_m) + s (2L_1 R_L g_m + L_1 + L_5)}$$

9.598 X-INVALID-ORDER-598 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2+1},\ \infty,\ \infty,\ \infty,\ \frac{L_5 s}{C_5 L_5 s^2+1},\ \frac{1}{C_L s}\right)$

$$H(s) = \frac{-C_5 L_1 L_5 s^3 + L_1 L_5 g_m s^2 - L_1 s}{2L_1 g_m s + s^4 (C_1 C_5 L_1 L_5 + C_1 C_L L_1 L_5 + C_5 C_L L_1 L_5) + s^3 (2C_5 L_1 L_5 g_m + C_L L_1 L_5 g_m) + s^2 (C_1 L_1 + C_5 L_5 + C_L L_1 + C_L L_5) + 1}$$

9.599 X-INVALID-ORDER-599 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2+1},\ \infty,\ \infty,\ \infty,\ \frac{L_5 s}{C_5 L_5 s^2+1},\ \frac{R_L}{C_L R_L s+1}\right)$

$$H(s) = \frac{-C_5 L_1 L_5 R_L s^3 + L_1 L_5 R_L g_m s^2 - L_1 R_L s}{R_L + s^4 (C_1 C_5 L_1 L_5 R_L + C_1 C_L L_1 L_5 R_L + C_5 C_L L_1 L_5 R_L) + s^3 (C_1 L_1 L_5 + 2C_5 L_1 L_5 R_L g_m + C_5 L_1 L_5 + C_L L_1 L_5 R_L g_m) + s^2 (C_1 L_1 R_L + C_5 L_5 R_L + C_L L_1 R_L + C_L L_5 R_L + L_1 L_5 g_m) + s (2L_1 R_L g_m + L_1 + L_5)}$$

9.600 X-INVALID-ORDER-600 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2+1},\ \infty,\ \infty,\ \infty,\ \frac{L_5 s}{C_5 L_5 s^2+1},\ R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{-C_5 C_L L_1 L_5 R_L s^4 - L_1 s + s^3 (-C_5 L_1 L_5 + C_L L_1 L_5 R_L g_m) + s^2 (-C_L L_1 R_L + L_1 L_5 g_m)}{C_1 C_5 C_L L_1 L_5 R_L s^5 + s^4 (C_1 C_5 L_1 L_5 + C_1 C_L L_1 L_5 + 2C_5 C_L L_1 L_5 R_L g_m + C_5 C_L L_1 L_5) + s^3 (C_1 C_L L_1 R_L + C_5 C_L L_5 R_L + 2C_5 L_1 L_5 g_m + C_L L_1 L_5 g_m) + s^2 (C_1 L_1 + C_5 L_5 + 2C_L L_1 R_L g_m + C_L L_1 + C_L L_5) + s (C_L R_L + 2L_1 g_m) + 1}$$

9.601 X-INVALID-ORDER-601 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2+1},\ \infty,\ \infty,\ \infty,\ \frac{L_5 s}{C_5 L_5 s^2+1},\ L_L s + \frac{1}{C_L s}\right)$

$$H(s) = \frac{-C_5 C_L L_1 L_5 L_L s^5 + C_L L_1 L_5 L_L g_m s^4 + L_1 L_5 g_m s^2 - L_1 s + s^3 \left(-C_5 L_1 L_5 - C_L L_1 L_L\right)}{C_1 C_5 C_L L_1 L_5 L_L s^6 + 2C_5 C_L L_1 L_5 L_L g_m s^5 + 2L_1 g_m s + s^4 \left(C_1 C_5 L_1 L_5 + C_1 C_L L_1 L_5 + C_1 C_L L_1 L_L + C_5 C_L L_1 L_5 + C_5 C_L L_5 L_L\right) + s^3 \left(2C_5 L_1 L_5 g_m + C_L L_1 L_5 g_m + 2C_L L_1 L_L g_m\right) + s^2 \left(C_1 L_1 + C_5 L_5 + C_L L_1 + C_L L_5 + C_L L_L\right) + 1}$$

9.602 X-INVALID-ORDER-602 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2+1},\ \infty,\ \infty,\ \infty,\ \frac{L_5 s}{C_5 L_5 s^2+1},\ \frac{L_L s}{C_L L_L s^2+1}\right)$

$$H(s) = \frac{-C_5 L_1 L_5 L_L s^3 + L_1 L_5 L_L g_m s^2 - L_1 L_L s}{L_1 + L_5 + L_L + s^4 \left(C_1 C_5 L_1 L_5 L_L + C_1 C_L L_1 L_5 L_L + C_5 C_L L_1 L_5 L_L\right) + s^3 \left(2C_5 L_1 L_5 L_L g_m + C_L L_1 L_5 L_L g_m\right) + s^2 \left(C_1 L_1 L_5 + C_1 L_1 L_L + C_5 L_1 L_5 + C_5 L_5 L_L + C_L L_1 L_L + C_L L_5 L_L\right) + s \left(L_1 L_5 g_m + 2L_1 L_L g_m\right)}$$

9.603 X-INVALID-ORDER-603 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2+1},\ \infty,\ \infty,\ \infty,\ \frac{L_5 s}{C_5 L_5 s^2+1},\ L_L s + R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{-C_5 C_L L_1 L_5 L_L s^5 - L_1 s + s^4 \left(-C_5 C_L L_1 L_5 R_L + C_L L_1 L_5 L_L g_m\right) + s^3 \left(-C_5 L_1 L_5 + C_L L_1 L_5 R_L g_m - C_L L_1 L_L\right) + s^2 \left(-C_L L_1 R_L + L_1 L_5 g_m\right)}{C_1 C_5 C_L L_1 L_5 L_L s^6 + s^5 \left(C_1 C_5 C_L L_1 L_5 R_L + 2C_5 C_L L_1 L_5 L_L g_m\right) + s^4 \left(C_1 C_5 L_1 L_5 + C_1 C_L L_1 L_5 + C_1 C_L L_1 L_L + 2C_5 C_L L_1 L_5 R_L g_m + C_5 C_L L_1 L_5 + C_5 C_L L_5 L_L\right) + s^3 \left(C_1 C_L L_1 R_L + C_5 C_L L_5 R_L + 2C_5 L_1 L_5 g_m + C_L L_1 L_5 g_m + 2C_L L_1 L_L g_m\right) + s^2 \left(C_1 L_1 + C_5 L_5 + 2C\right.}$$

9.604 X-INVALID-ORDER-604 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2+1},\ \infty,\ \infty,\ \infty,\ \frac{L_5 s}{C_5 L_5 s^2+1},\ \frac{L_L R_L s}{C_L L_L R_L s^2+L_L s+R_L}\right)$

$$H(s) = \frac{-C_5 L_1 L_5 L_L R_L s^3 + L_1 L_5 L_L R_L g_m s^2 - L_1 L_L R_L s}{L_1 R_L + L_5 R_L + L_L R_L + s^4 \left(C_1 C_5 L_1 L_5 L_L R_L + C_1 C_L L_1 L_5 L_L R_L + C_5 C_L L_1 L_5 L_L R_L\right) + s^3 \left(C_1 L_1 L_5 L_L + 2C_5 L_1 L_5 L_L R_L g_m + C_5 L_1 L_5 L_L + C_L L_1 L_5 L_L R_L g_m\right) + s^2 \left(C_1 L_1 L_5 R_L + C_1 L_1 L_L R_L + C_5 L_1 L_5 R_L + C_5 L_5 L_L R_L + C_L L_1 L_L R_L + C_L L_5 L_L R_L + L_1 L_5 L_L\right.}$$

9.605 X-INVALID-ORDER-605 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2+1},\ \infty,\ \infty,\ \infty,\ \frac{L_5 s}{C_5 L_5 s^2+1},\ \frac{C_L L_L R_L s^2+L_L s+R_L}{C_L L_L s^2+1}\right)$

$$H(s) = \frac{-C_5 C_L L_1 L_5 L_L R_L s^5 - L_1 R_L s + s^4 \left(-C_5 L_1 L_5 L_L + C_L L_1 L_5 L_L R_L g_m\right) + s^3 \left(-C_5 L_1 L_5 R_L - C_L L_1 L_L R_L + L_1 L_5 L_L g_m\right) + s^2 \left(L_1 L_5 R_L\right.}{C_1 C_5 C_L L_1 L_5 L_L R_L s^6 + R_L + s^5 \left(C_1 C_5 L_1 L_5 L_L + C_1 C_L L_1 L_5 L_L + 2C_5 C_L L_1 L_5 L_L R_L g_m + C_5 C_L L_1 L_5 L_L\right) + s^4 \left(C_1 C_5 L_1 L_5 R_L + C_1 C_L L_1 L_L R_L + C_5 C_L L_5 L_L R_L + 2C_5 L_1 L_5 L_L g_m + C_L L_1 L_5 L_L g_m\right) + s^3 \left(C_1 L_1 L_5 + C_1 L_1 L_L + 2C_5 L_1 L_5 R_L g_m + C_5 L_1 L_5 + C_5 L_5 L\right.}$$

9.606 X-INVALID-ORDER-606 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2+1},\ \infty,\ \infty,\ \infty,\ \frac{L_5 s}{C_5 L_5 s^2+1},\ \frac{R_L\left(C_L L_L s^2+1\right)}{C_L L_L s^2+C_L R_L s+1}\right)$

$$H(s) = \frac{-C_5 C_L L_1 L_5 L_L R_L s^5 + C_L L_1 L_5 L_L R_L g_m s^4 + L_1 L_5 R_L g_m s^2 - L_1 R_L s + s^3 \left(-C_5 L_1 L_5 R_L - C_L L_1 L_L R_L\right)}{C_1 C_5 C_L L_1 L_5 L_L R_L s^6 + R_L + s^5 \left(C_1 C_L L_1 L_5 L_L + 2C_5 C_L L_1 L_5 L_L R_L g_m + C_5 C_L L_1 L_5 L_L\right) + s^4 \left(C_1 C_5 L_1 L_5 R_L + C_1 C_L L_1 L_5 R_L + C_1 C_L L_1 L_L R_L + C_5 C_L L_1 L_5 R_L + C_5 C_L L_5 L_L R_L + C_L L_1 L_5 L_L g_m\right) + s^3 \left(C_1 L_1 L_5 + 2C_5 L_1 L_5 R_L g_m + C_5 L_1 L_5 + C_L L_1 L_5 R_L g_m + 2\right.}$$

9.607 X-INVALID-ORDER-607 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2+1},\ \infty,\ \infty,\ \infty,\ L_5 s + R_5 + \frac{1}{C_5 s},\ R_L\right)$

$$H(s) = \frac{C_5 L_1 L_5 R_L g_m s^3 + L_1 R_L g_m s + s^2 \left(C_5 L_1 R_5 R_L g_m - C_5 L_1 R_L\right)}{C_1 C_5 L_1 L_5 s^4 + s^3 \left(C_1 C_5 L_1 R_5 + C_1 C_5 L_1 R_L + C_5 L_1 L_5 g_m\right) + s^2 \left(C_1 L_1 + C_5 L_1 R_5 g_m + 2C_5 L_1 R_L g_m + C_5 L_1 + C_5 L_5\right) + s \left(C_5 R_5 + C_5 R_L + L_1 g_m\right) + 1}$$

9.608 X-INVALID-ORDER-608 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2+1},\ \infty,\ \infty,\ \infty,\ L_5 s + R_5 + \frac{1}{C_5 s},\ \frac{1}{C_L s}\right)$

$$H(s) = \frac{C_5 L_1 L_5 g_m s^2 + L_1 g_m + s \left(C_5 L_1 R_5 g_m - C_5 L_1\right)}{C_1 C_5 C_L L_1 L_5 s^4 + C_5 + C_L + s^3 \left(C_1 C_5 C_L L_1 R_5 + C_5 C_L L_1 L_5 g_m\right) + s^2 \left(C_1 C_5 L_1 + C_1 C_L L_1 + C_5 C_L L_1 R_5 g_m + C_5 C_L L_1 + C_5 C_L L_5\right) + s \left(C_5 C_L R_5 + 2C_5 L_1 g_m + C_L L_1 g_m\right)}$$

9.609 X-INVALID-ORDER-609 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2+1},\ \infty,\ \infty,\ \infty,\ L_5 s + R_5 + \frac{1}{C_5 s},\ \frac{R_L}{C_L R_L s+1}\right)$

$$H(s) = \frac{C_5 L_1 L_5 R_L g_m s^3 + L_1 R_L g_m s + s^2 \left(C_5 L_1 R_5 R_L g_m - C_5 L_1 R_L\right)}{C_1 C_5 C_L L_1 L_5 R_L s^5 + s^4 \left(C_1 C_5 C_L L_1 R_5 R_L + C_1 C_5 L_1 L_5 + C_5 C_L L_1 L_5 R_L g_m\right) + s^3 \left(C_1 C_5 L_1 R_5 + C_1 C_5 L_1 R_L + C_1 C_L L_1 R_L + C_5 C_L L_1 R_5 R_L g_m + C_5 C_L L_1 R_L + C_5 C_L L_5 R_L + C_5 L_1 L_5 g_m\right) + s^2 \left(C_1 L_1 + C_5 C_L R_5 R_L + C_5 L_1 R_5 g_m + 2C_5 L_1 R_L g_m + C_5 L_1 + C_5 L_5 + C\right.}$$

9.610 X-INVALID-ORDER-610 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2+1},\ \infty,\ \infty,\ \infty,\ L_5 s + R_5 + \frac{1}{C_5 s},\ R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{C_5 C_L L_1 L_5 R_L g_m s^3 + L_1 g_m + s^2 \left(C_5 C_L L_1 R_5 R_L g_m - C_5 C_L L_1 R_L + C_5 L_1 L_5 g_m\right) + s \left(C_5 L_1 R_5 g_m - C_5 L_1 + C_L L_1 R_L g_m\right)}{C_1 C_5 C_L L_1 L_5 s^4 + C_5 + C_L + s^3 \left(C_1 C_5 C_L L_1 R_5 + C_1 C_5 C_L L_1 R_L + C_5 C_L L_1 L_5 g_m\right) + s^2 \left(C_1 C_5 L_1 + C_1 C_L L_1 + C_5 C_L L_1 R_5 g_m + 2 C_5 C_L L_1 R_L g_m + C_5 C_L L_1 + C_5 C_L L_5\right) + s \left(C_5 C_L R_5 + C_5 C_L R_L + 2 C_5 L_1 g_m + C_L L_1 g_m\right)}$$

9.611 X-INVALID-ORDER-611 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2+1},\ \infty,\ \infty,\ \infty,\ L_5 s + R_5 + \frac{1}{C_5 s},\ L_L s + \frac{1}{C_L s}\right)$

$$H(s) = \frac{C_5 C_L L_1 L_5 L_L g_m s^4 + L_1 g_m + s^3 \left(C_5 C_L L_1 L_L R_5 g_m - C_5 C_L L_1 L_L\right) + s^2 \left(C_5 L_1 L_5 g_m + C_L L_1 L_L g_m\right) + s \left(C_5 L_1 R_5 g_m - C_5 L_1\right)}{C_5 + C_L + s^4 \left(C_1 C_5 C_L L_1 L_5 + C_1 C_5 C_L L_1 L_L\right) + s^3 \left(C_1 C_5 C_L L_1 R_5 + C_5 C_L L_1 L_5 g_m + 2 C_5 C_L L_1 L_L g_m\right) + s^2 \left(C_1 C_5 L_1 + C_1 C_L L_1 + C_5 C_L L_1 R_5 g_m + C_5 C_L L_1 + C_5 C_L L_5 + C_5 C_L L_L\right) + s \left(C_5 C_L R_5 + 2 C_5 L_1 g_m + C_L L_1 g_m\right)}$$

9.612 X-INVALID-ORDER-612 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2+1},\ \infty,\ \infty,\ \infty,\ L_5 s + R_5 + \frac{1}{C_5 s},\ \frac{L_L s}{C_L L_L s^2+1}\right)$

$$H(s) = \frac{C_5 L_1 L_5 L_L g_m s^4 + L_1 L_L g_m s^2 + s^3 \left(C_5 L_1 L_L R_5 g_m - C_5 L_1 L_L\right)}{C_1 C_5 C_L L_1 L_5 L_L s^6 + s^5 \left(C_1 C_5 C_L L_1 L_L R_5 + C_5 C_L L_1 L_5 L_L g_m\right) + s^4 \left(C_1 C_5 L_1 L_5 + C_1 C_5 L_1 L_L + C_1 C_L L_1 L_L + C_5 C_L L_1 L_L R_5 g_m + C_5 C_L L_1 L_L + C_5 C_L L_5 L_L\right) + s^3 \left(C_1 C_5 L_1 R_5 + C_5 C_L L_L R_5 + C_5 L_1 L_5 g_m + 2 C_5 L_1 L_L g_m + C_L L_1 L_L g_m\right) + s^2 \left(C_1 L_1 + C_5 L_1 R_5 g_m + \right.}$$

9.613 X-INVALID-ORDER-613 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2+1},\ \infty,\ \infty,\ \infty,\ L_5 s + R_5 + \frac{1}{C_5 s},\ L_L s + R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{C_5 C_L L_1 L_5 L_L g_m s^4 + L_1 g_m + s^3 \left(C_5 C_L L_1 L_5 R_L g_m + C_5 C_L L_1 L_L R_5 g_m - C_5 C_L L_1 L_L\right) + s^2 \left(C_5 C_L L_1 R_5 R_L g_m - C_5 C_L L_1 R_L + C_5 L_1 L_5 g_m + C_L L_1 L_L g_m\right) + s \left(C_5 L_1 R_5 g_m - C_5 L_1 + C_L L_1 R_L g_m\right)}{C_5 + C_L + s^4 \left(C_1 C_5 C_L L_1 L_5 + C_1 C_5 C_L L_1 L_L\right) + s^3 \left(C_1 C_5 C_L L_1 R_5 + C_1 C_5 C_L L_1 R_L + C_5 C_L L_1 L_5 g_m + 2 C_5 C_L L_1 L_L g_m\right) + s^2 \left(C_1 C_5 L_1 + C_1 C_L L_1 + C_5 C_L L_1 R_5 g_m + 2 C_5 C_L L_1 R_L g_m + C_5 C_L L_1 + C_5 C_L L_5 + C_5 C_L L_L\right) + s \left(C_5 C_L R_5 + C_5 C_L R_L + 2 C_5 L_1 g_m + C_L L_1\right.}$$

9.614 X-INVALID-ORDER-614 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2+1},\ \infty,\ \infty,\ \infty,\ L_5 s + R_5 + \frac{1}{C_5 s},\ \frac{L_L R_L s}{C_L L_L R_L s^2+L_L s+R_L}\right)$

$$H(s) = \frac{C_5 L_1 L_5 L_L R_L g_m s^4 + L_1 L_L R_L g_m s^2 + s^3}{C_1 C_5 C_L L_1 L_5 L_L R_L s^6 + R_L + s^5 \left(C_1 C_5 C_L L_1 L_L R_5 R_L + C_1 C_5 L_1 L_5 L_L + C_5 C_L L_1 L_5 L_L R_L g_m\right) + s^4 \left(C_1 C_5 L_1 L_5 R_L + C_1 C_5 L_1 L_L R_5 + C_1 C_5 L_1 L_L R_L + C_1 C_L L_1 L_L R_L + C_5 C_L L_1 L_L R_5 R_L g_m + C_5 C_L L_1 L_L R_L + C_5 C_L L_5 L_L R_L + C_5 L_1 L_5 L_L g_m\right) + s^3 \left(C_1 C_5 L_1 R_5 R_L\right.}$$

9.615 X-INVALID-ORDER-615 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2+1},\ \infty,\ \infty,\ \infty,\ L_5 s + R_5 + \frac{1}{C_5 s},\ \frac{C_L L_L R_L s^2+L_L s+R_L}{C_L L_L s^2+1}\right)$

$$H(s) = \frac{C_5 C_L L_1 L_5 L_L R_L g_m s^5 + L_1 R_L g_m s + s^4 \left(C_5 C_L L_1 L_L R_5 R_L g_m - C_5 C_L L_1 L_L R_L + C_5 L_1 L_5 L_L g_m\right) + s^3 \left(C_5 L_1 L_5 R_L g_m + C_5 L_1 L_L R_5 g_m - C_5 L_1 L_L + C_L L_1 L_L R_L\right.}{C_1 C_5 C_L L_1 L_5 L_L s^6 + s^5 \left(C_1 C_5 C_L L_1 L_L R_5 + C_1 C_5 C_L L_1 L_L R_L + C_5 C_L L_1 L_5 L_L g_m\right) + s^4 \left(C_1 C_5 L_1 L_5 + C_1 C_5 L_1 L_L + C_1 C_L L_1 L_L + C_5 C_L L_1 L_L R_5 g_m + 2 C_5 C_L L_1 L_L R_L g_m + C_5 C_L L_1 L_L + C_5 C_L L_5 L_L\right) + s^3 \left(C_1 C_5 L_1 R_5 + C_1 C_5 L_1 R_L + C_5 C_L L_L R_5 + C_5 C_L L_L R_L +\right.}$$

9.616 X-INVALID-ORDER-616 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2+1},\ \infty,\ \infty,\ \infty,\ L_5 s + R_5 + \frac{1}{C_5 s},\ \frac{R_L\left(C_L L_L s^2+1\right)}{C_L L_L s^2+C_L R_L s+1}\right)$

$$H(s) = \frac{C_5 C_L L_1 L_5 L_L R_L g_m s^5 + L_1 R_L g_m s + s^4 \left(C_5 C_L L_1 L_L R_5 R_L g_m - C_5 C_L\right.}{C_1 C_5 C_L L_1 L_5 L_L s^6 + s^5 \left(C_1 C_5 C_L L_1 L_5 R_L + C_1 C_5 C_L L_1 L_L R_5 + C_1 C_5 C_L L_1 L_L R_L + C_5 C_L L_1 L_5 L_L g_m\right) + s^4 \left(C_1 C_5 C_L L_1 R_5 R_L + C_1 C_5 L_1 L_5 + C_1 C_L L_1 L_L + C_5 C_L L_1 L_5 R_L g_m + C_5 C_L L_1 L_L R_5 g_m + 2 C_5 C_L L_1 L_L R_L g_m + C_5 C_L L_1 L_L + C_5 C_L L_5 L_L\right) + s^3 \left(C_1 C_5 L_1 R_5\right.}$$

9.617 X-INVALID-ORDER-617 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2+1},\ \infty,\ \infty,\ \infty,\ \frac{L_5 R_5 s}{C_5 L_5 R_5 s^2+L_5 s+R_5},\ R_L\right)$

$$H(s) = \frac{-C_5 L_1 L_5 R_5 R_L s^3 - L_1 R_5 R_L s + s^2 \left(L_1 L_5 R_5 R_L g_m - L_1 L_5 R_L\right)}{C_1 C_5 L_1 L_5 R_5 R_L s^4 + R_5 R_L + s^3 \left(C_1 L_1 L_5 R_5 + C_1 L_1 L_5 R_L + 2 C_5 L_1 L_5 R_5 R_L g_m + C_5 L_1 L_5 R_5\right) + s^2 \left(C_1 L_1 R_5 R_L + C_5 L_5 R_5 R_L + L_1 L_5 R_5 g_m + 2 L_1 L_5 R_L g_m + L_1 L_5\right) + s \left(2 L_1 R_5 R_L g_m + L_1 R_5 + L_5 R_5 + L_5 R_L\right)}$$

9.618 X-INVALID-ORDER-618 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2+1},\ \infty,\ \infty,\ \infty,\ \frac{L_5 R_5 s}{C_5 L_5 R_5 s^2+L_5 s+R_5},\ \frac{1}{C_L s}\right)$

$$H(s) = \frac{-C_5 L_1 L_5 R_5 s^3 - L_1 R_5 s + s^2 \left(L_1 L_5 R_5 g_m - L_1 L_5\right)}{R_5 + s^4 \left(C_1 C_5 L_1 L_5 R_5 + C_1 C_L L_1 L_5 R_5 + C_5 C_L L_1 L_5 R_5\right) + s^3 \left(C_1 L_1 L_5 + 2 C_5 L_1 L_5 R_5 g_m + C_L L_1 L_5 R_5 g_m + C_L L_1 L_5\right) + s^2 \left(C_1 L_1 R_5 + C_5 L_5 R_5 + C_L L_1 R_5 + C_L L_5 R_5 + 2 L_1 L_5 g_m\right) + s \left(2 L_1 R_5 g_m + L_5\right)}$$

9.619 X-INVALID-ORDER-619 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2+1},\ \infty,\ \infty,\ \infty,\ \frac{L_5 R_5 s}{C_5 L_5 R_5 s^2+L_5 s+R_5},\ \frac{R_L}{C_L R_L s+1}\right)$

$$H(s) = \frac{-C_5 L_1 L_5 R_5 R_L s^3 - L_1 R_5 R_L s + s^2 \left(L_1 L_5 R_5 R_L g_m - L_1 L_5 R_L\right)}{R_5 R_L + s^4 \left(C_1 C_5 L_1 L_5 R_5 R_L + C_1 C_L L_1 L_5 R_5 R_L + C_5 C_L L_1 L_5 R_5 R_L\right) + s^3 \left(C_1 L_1 L_5 R_5 + C_1 L_1 L_5 R_L + 2C_5 L_1 L_5 R_5 R_L g_m + C_5 L_1 L_5 R_5 + C_L L_1 L_5 R_5 R_L g_m + C_L L_1 L_5 R_L\right) + s^2 \left(C_1 L_1 R_5 R_L + C_5 L_5 R_5 R_L + C_L L_1 R_5 R_L + C_L L_5 R_5 R_L + L_1 L_5 R_5 g_m + 2L_1 L_5 R_L g_m +\right.}$$

9.620 X-INVALID-ORDER-620 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2+1},\ \infty,\ \infty,\ \infty,\ \frac{L_5 R_5 s}{C_5 L_5 R_5 s^2+L_5 s+R_5},\ R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{-C_5 C_L L_1 L_5 R_5 R_L s^4 - L_1 R_5 s + s^3 \left(-C_5 L_1 L_5 R_5 + C_L L_1 L_5 R_5 R_L g_m - C_L L_1 L_5 R_L\right) + s^2 \left(-C_L L_1 R_5 R_L + L_1 L_5 R_5 g_m - L_1 L_5\right)}{C_1 C_5 C_L L_1 L_5 R_5 R_L s^5 + R_5 + s^4 \left(C_1 C_5 L_1 L_5 R_5 + C_1 C_L L_1 L_5 R_5 + C_1 C_L L_1 L_5 R_L + 2C_5 C_L L_1 L_5 R_5 R_L g_m + C_5 C_L L_1 L_5 R_5\right) + s^3 \left(C_1 C_L L_1 R_5 R_L + C_1 L_1 L_5 + C_5 C_L L_5 R_5 R_L + 2C_5 L_1 L_5 R_5 g_m + C_L L_1 L_5 R_5 g_m + 2C_L L_1 L_5 R_L g_m + C_L L_1 L_5\right) + s^2 \left(C_1 L_1 R_5 + C_5 L_5 R_5\right.}$$

9.621 X-INVALID-ORDER-621 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2+1},\ \infty,\ \infty,\ \infty,\ \frac{L_5 R_5 s}{C_5 L_5 R_5 s^2+L_5 s+R_5},\ L_L s + \frac{1}{C_L s}\right)$

$$H(s) = \frac{-C_5 C_L L_1 L_5 L_L R_5 s^5 - L_1 R_5 s + s^4 \left(C_L L_1 L_5 L_L R_5 g_m - C_L L_1 L_5 L_L\right) + s^3 \left(-C_5 L_1 L_5 R_5 - C_L L_1 L_L R_5\right) + s^2 \left(L_1 L_5 R_5 g_m - L_1 L_5\right)}{C_1 C_5 C_L L_1 L_5 L_L R_5 s^6 + R_5 + s^5 \left(C_1 C_L L_1 L_5 L_L + 2C_5 C_L L_1 L_5 L_L R_5 g_m\right) + s^4 \left(C_1 C_5 L_1 L_5 R_5 + C_1 C_L L_1 L_5 R_5 + C_1 C_L L_1 L_L R_5 + C_5 C_L L_1 L_5 R_5 + C_5 C_L L_5 L_L R_5 + 2C_L L_1 L_5 L_L g_m\right) + s^3 \left(C_1 L_1 L_5 + 2C_5 L_1 L_5 R_5 g_m + C_L L_1 L_5 R_5 g_m + C_L L_1 L_5 + 2C_L L_1 L_L R_5 g_m + C\right.}$$

9.622 X-INVALID-ORDER-622 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2+1},\ \infty,\ \infty,\ \infty,\ \frac{L_5 R_5 s}{C_5 L_5 R_5 s^2+L_5 s+R_5},\ \frac{L_L s}{C_L L_L s^2+1}\right)$

$$H(s) = \frac{-C_5 L_1 L_5 L_L R_5 s^3 - L_1 L_L R_5 s + s^2 \left(L_1 L_5 L_L R_5 g_m - L_1 L_5 L_L\right)}{L_1 R_5 + L_5 R_5 + L_L R_5 + s^4 \left(C_1 C_5 L_1 L_5 L_L R_5 + C_1 C_L L_1 L_5 L_L R_5 + C_5 C_L L_1 L_5 L_L R_5\right) + s^3 \left(C_1 L_1 L_5 L_L + 2C_5 L_1 L_5 L_L R_5 g_m + C_L L_1 L_5 L_L R_5 g_m + C_L L_1 L_5 L_L\right) + s^2 \left(C_1 L_1 L_5 R_5 + C_1 L_1 L_L R_5 + C_5 L_1 L_5 R_5 + C_5 L_5 L_L R_5 + C_L L_1 L_L R_5 + C_L L_5 L_L R_5 + 2L_1 L_5 L_L g_m\right)}$$

9.623 X-INVALID-ORDER-623 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2+1},\ \infty,\ \infty,\ \infty,\ \frac{L_5 R_5 s}{C_5 L_5 R_5 s^2+L_5 s+R_5},\ L_L s + R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{-C_5 C_L L_1 L_5 L_L R_5 s^5 - L_1 R_5 s + s^4 \left(-C_5 C_L L_1 L_5 R_5 R_L + C_L L_1 L_5 L_L R_5 g_m - C_L L_1 L_5 L_L\right) + s^3 \left(-C_5\right.}{C_1 C_5 C_L L_1 L_5 L_L R_5 s^6 + R_5 + s^5 \left(C_1 C_5 C_L L_1 L_5 R_5 R_L + C_1 C_L L_1 L_5 L_L + 2C_5 C_L L_1 L_5 L_L R_5 g_m\right) + s^4 \left(C_1 C_5 L_1 L_5 R_5 + C_1 C_L L_1 L_5 R_5 + C_1 C_L L_1 L_5 R_L + C_1 C_L L_1 L_L R_5 + 2C_5 C_L L_1 L_5 R_5 R_L g_m + C_5 C_L L_1 L_5 R_5 + C_5 C_L L_5 L_L R_5 + 2C_L L_1 L_5 L_L g_m\right) + s^3 \left(C_1 C_L L_1 R_5 R\right.}$$

9.624 X-INVALID-ORDER-624 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2+1},\ \infty,\ \infty,\ \infty,\ \frac{L_5 R_5 s}{C_5 L_5 R_5 s^2+L_5 s+R_5},\ \frac{L_L R_L s}{C_L L_L R_L s^2+L_L s+R_L}\right)$

$$H(s) = \frac{-C_5 L_1 L_5 L_L R_5 R_L s^3 - L_1 L_L R_5 R_L s + s^2 \left(L_1 L_5 L_L R_5 R_L g_m - L_1 L_5\right.}{L_1 R_5 R_L + L_5 R_5 R_L + L_L R_5 R_L + s^4 \left(C_1 C_5 L_1 L_5 L_L R_5 R_L + C_1 C_L L_1 L_5 L_L R_5 R_L + C_5 C_L L_1 L_5 L_L R_5 R_L\right) + s^3 \left(C_1 L_1 L_5 L_L R_5 + C_1 L_1 L_5 L_L R_L + 2C_5 L_1 L_5 L_L R_5 R_L g_m + C_5 L_1 L_5 L_L R_5 + C_L L_1 L_5 L_L R_5 R_L g_m + C_L L_1 L_5 L_L R_L\right) + s^2 \left(C_1 L_1 L_5 R_5 R_L + C_1 L_1 L_L R_5 R_L -\right.}$$

9.625 X-INVALID-ORDER-625 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2+1},\ \infty,\ \infty,\ \infty,\ \frac{L_5 R_5 s}{C_5 L_5 R_5 s^2+L_5 s+R_5},\ \frac{C_L L_L R_L s^2+L_L s+R_L}{C_L L_L s^2+1}\right)$

$$H(s) = \frac{-C_5 C_L L_1 L_5 L_L R_5 R_L s^5 - L_1 R_5 R_L s + s^4 \left(-C_5 L_1 L\right.}{C_1 C_5 C_L L_1 L_5 L_L R_5 R_L s^6 + R_5 R_L + s^5 \left(C_1 C_5 L_1 L_5 L_L R_5 + C_1 C_L L_1 L_5 L_L R_5 + C_1 C_L L_1 L_5 L_L R_L + 2C_5 C_L L_1 L_5 L_L R_5 R_L g_m + C_5 C_L L_1 L_5 L_L R_5\right) + s^4 \left(C_1 C_5 L_1 L_5 R_5 R_L + C_1 C_L L_1 L_L R_5 R_L + C_1 L_1 L_5 L_L + C_5 C_L L_5 L_L R_5 R_L + 2C_5 L_1 L_5 L_L R_5 g_m + C_L L_1 L_5 L_L R_5 g_m\right.}$$

9.626 X-INVALID-ORDER-626 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2+1},\ \infty,\ \infty,\ \infty,\ \frac{L_5 R_5 s}{C_5 L_5 R_5 s^2+L_5 s+R_5},\ \frac{R_L\left(C_L L_L s^2+1\right)}{C_L L_L s^2+C_L R_L s+1}\right)$

$$H(s) = \frac{-C_5 C_L L_1 L_5 L_L R_5 R_L s^5 - L_1 R_5 R_L}{C_1 C_5 C_L L_1 L_5 L_L R_5 R_L s^6 + R_5 R_L + s^5 \left(C_1 C_L L_1 L_5 L_L R_5 + C_1 C_L L_1 L_5 L_L R_L + 2C_5 C_L L_1 L_5 L_L R_5 R_L g_m + C_5 C_L L_1 L_5 L_L R_5\right) + s^4 \left(C_1 C_5 L_1 L_5 R_5 R_L + C_1 C_L L_1 L_5 R_5 R_L + C_1 C_L L_1 L_L R_5 R_L + C_5 C_L L_1 L_5 R_5 R_L + C_5 C_L L_5 L_L R_5 R_L + C_L L_1 L_5 L_L R_5 g_m + 2C_L L_1 L_5 L\right.}$$

9.627 X-INVALID-ORDER-627 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2+1},\ \infty,\ \infty,\ \infty,\ \frac{C_5 L_5 R_5 s^2+L_5 s+R_5}{C_5 L_5 s^2+1},\ R_L\right)$

$$H(s) = \frac{L_1 L_5 R_L g_m s^2 + s^3 \left(C_5 L_1 L_5 R_5 R_L g_m - C_5 L_1 L_5 R_L\right) + s \left(L_1 R_5 R_L g_m - L_1 R_L\right)}{R_5 + R_L + s^4 \left(C_1 C_5 L_1 L_5 R_5 + C_1 C_5 L_1 L_5 R_L\right) + s^3 \left(C_1 L_1 L_5 + C_5 L_1 L_5 R_5 g_m + 2C_5 L_1 L_5 R_L g_m + C_5 L_1 L_5\right) + s^2 \left(C_1 L_1 R_5 + C_1 L_1 R_L + C_5 L_5 R_5 + C_5 L_5 R_L + L_1 L_5 g_m\right) + s \left(L_1 R_5 g_m + 2L_1 R_L g_m + L_1 + L_5\right)}$$

9.628 X-INVALID-ORDER-628 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2+1},\ \infty,\ \infty,\ \infty,\ \frac{C_5 L_5 R_5 s^2+L_5 s+R_5}{C_5 L_5 s^2+1},\ \frac{1}{C_L s}\right)$

$$H(s) = \frac{L_1 L_5 g_m s^2 + s^3 \left(C_5 L_1 L_5 R_5 g_m - C_5 L_1 L_5\right) + s \left(L_1 R_5 g_m - L_1\right)}{C_1 C_5 C_L L_1 L_5 R_5 s^5 + s^4 \left(C_1 C_5 L_1 L_5 + C_1 C_L L_1 L_5 + C_5 C_L L_1 L_5 R_5 g_m + C_5 C_L L_1 L_5\right) + s^3 \left(C_1 C_L L_1 R_5 + C_5 C_L L_5 R_5 + 2 C_5 L_1 L_5 g_m + C_L L_1 L_5 g_m\right) + s^2 \left(C_1 L_1 + C_5 L_5 + C_L L_1 R_5 g_m + C_L L_1 + C_L L_5\right) + s \left(C_L R_5 + 2 L_1 g_m\right) + 1}$$

9.629 X-INVALID-ORDER-629 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2+1},\ \infty,\ \infty,\ \infty,\ \frac{C_5 L_5 R_5 s^2+L_5 s+R_5}{C_5 L_5 s^2+1},\ \frac{R_L}{C_L R_L s+1}\right)$

$$H(s) = \frac{L_1 L_5 R_L g_m s^2 + s^3 \left(C_5 L_1 L_5 R_5 R_L g_m - C_5 L_1 L_5 R_L\right) + s \left(L_1 R_5 R_L g_m - L_1 R_L\right)}{C_1 C_5 C_L L_1 L_5 R_5 R_L s^5 + R_5 + R_L + s^4 \left(C_1 C_5 L_1 L_5 R_5 + C_1 C_5 L_1 L_5 R_L + C_1 C_L L_1 L_5 R_L + C_5 C_L L_1 L_5 R_5 R_L g_m + C_5 C_L L_1 L_5 R_L\right) + s^3 \left(C_1 C_L L_1 R_5 R_L + C_1 L_1 L_5 + C_5 C_L L_5 R_5 R_L + C_5 L_1 L_5 R_5 g_m + 2 C_5 L_1 L_5 R_L g_m + C_5 L_1 L_5 + C_L L_1 L_5 R_L g_m\right) + s^2 \left(C_1 L_1 R_5 + C_1 L\right.}$$

9.630 X-INVALID-ORDER-630 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2+1},\ \infty,\ \infty,\ \infty,\ \frac{C_5 L_5 R_5 s^2+L_5 s+R_5}{C_5 L_5 s^2+1},\ R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{s^4 \left(C_5 C_L L_1 L_5 R_5 R_L g_m - C_5 C_L L_1 L_5 R_L\right) + s^3 \left(C_5 L_1 L_5 R_5 g_m - C_5 L_1 L_5 + C_L L_1 L_5 R_L g_m\right) + s^2 \left(C_L L_1 R_5 R_L g_m - C_L L_1 R_L + L_1 L_5 g_m\right) + s \left(L_1 R_5 g_m - L_1\right)}{s^5 \left(C_1 C_5 C_L L_1 L_5 R_5 + C_1 C_5 C_L L_1 L_5 R_L\right) + s^4 \left(C_1 C_5 L_1 L_5 + C_1 C_L L_1 L_5 + C_5 C_L L_1 L_5 R_5 g_m + 2 C_5 C_L L_1 L_5 R_L g_m + C_5 C_L L_1 L_5\right) + s^3 \left(C_1 C_L L_1 R_5 + C_1 C_L L_1 R_L + C_5 C_L L_5 R_5 + C_5 C_L L_5 R_L + 2 C_5 L_1 L_5 g_m + C_L L_1 L_5 g_m\right) + s^2 \left(C_1 L_1 + C_5 L_5 + C_L L_1 R_5 g_m + 2 C_L L_1\right.}$$

9.631 X-INVALID-ORDER-631 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2+1},\ \infty,\ \infty,\ \infty,\ \frac{C_5 L_5 R_5 s^2+L_5 s+R_5}{C_5 L_5 s^2+1},\ L_L s + \frac{1}{C_L s}\right)$

$$H(s) = \frac{C_L L_1 L_5 L_L g_m s^4 + L_1 L_5 g_m s^2 + s^5 \left(C_5 C_L L_1 L_5 L_L R_5 g_m - C_5 C_L L_1 L_5 L_L\right) + s^3 \left(C_5 L_1 L_5 R_5 g_m - C_5 L_1 L_5 + C_L L_1 L_L R_5 g_m - C_L L_1 L_L\right) + s \left(L_1 R_5 g_m - L_1\right)}{C_1 C_5 C_L L_1 L_5 L_L s^6 + s^5 \left(C_1 C_5 C_L L_1 L_5 R_5 + 2 C_5 C_L L_1 L_5 L_L g_m\right) + s^4 \left(C_1 C_5 L_1 L_5 + C_1 C_L L_1 L_5 + C_1 C_L L_1 L_L + C_5 C_L L_1 L_5 R_5 g_m + C_5 C_L L_1 L_5 + C_5 C_L L_5 L_L\right) + s^3 \left(C_1 C_L L_1 R_5 + C_5 C_L L_5 R_5 + 2 C_5 L_1 L_5 g_m + C_L L_1 L_5 g_m + 2 C_L L_1 L_L g_m\right) + s^2 \left(C_1 L_1 + C_5 L_5 + C_L L\right.}$$

9.632 X-INVALID-ORDER-632 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2+1},\ \infty,\ \infty,\ \infty,\ \frac{C_5 L_5 R_5 s^2+L_5 s+R_5}{C_5 L_5 s^2+1},\ \frac{L_L s}{C_L L_L s^2+1}\right)$

$$H(s) = \frac{L_1 L_5 L_L g_m s^3 + s^4 \left(C_5 L_1 L_5 L_L R_5 g_m - C_5 L_1 L_5 L_L\right) + s^2 \left(L_1 L_L R_5 g_m - L_1 L_L\right)}{C_1 C_5 C_L L_1 L_5 L_L R_5 s^6 + R_5 + s^5 \left(C_1 C_5 L_1 L_5 L_L + C_1 C_L L_1 L_5 L_L + C_5 C_L L_1 L_5 L_L R_5 g_m + C_5 C_L L_1 L_5 L_L\right) + s^4 \left(C_1 C_5 L_1 L_5 R_5 + C_1 C_L L_1 L_L R_5 + C_5 C_L L_5 L_L R_5 + 2 C_5 L_1 L_5 L_L g_m + C_L L_1 L_5 L_L g_m\right) + s^3 \left(C_1 L_1 L_5 + C_1 L_1 L_L + C_5 L_1 L_5 R_5 g_m + C_5 L_1 L_5 + C_5 L_5 L_L + C\right.}$$

9.633 X-INVALID-ORDER-633 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2+1},\ \infty,\ \infty,\ \infty,\ \frac{C_5 L_5 R_5 s^2+L_5 s+R_5}{C_5 L_5 s^2+1},\ L_L s + R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{s^5 \left(C_5 C_L L_1 L_5 L_L R_5 g_m - C_5 C_L L_1 L_5 L_L\right) + s^4 \left(C_5 C_L L_1 L_5 R_5 R_L g_m - C_5 C_L L_1 L_5 R_L + C_L L_1 L_5 L_L g_m\right) + s^3 \left(C_5 L_1 L_5 R_5 g_m - C_5 L_1 L_5 + C_L L_1 L_5 R_L g_m + C_L L_1 L_L R_5 g_m - C_L L_1\right.}{C_1 C_5 C_L L_1 L_5 L_L s^6 + s^5 \left(C_1 C_5 C_L L_1 L_5 R_5 + C_1 C_5 C_L L_1 L_5 R_L + 2 C_5 C_L L_1 L_5 L_L g_m\right) + s^4 \left(C_1 C_5 L_1 L_5 + C_1 C_L L_1 L_5 + C_1 C_L L_1 L_L + C_5 C_L L_1 L_5 R_5 g_m + 2 C_5 C_L L_1 L_5 R_L g_m + C_5 C_L L_1 L_5 + C_5 C_L L_5 L_L\right) + s^3 \left(C_1 C_L L_1 R_5 + C_1 C_L L_1 R_L + C_5 C_L L_5 R_5 + C_5 C_L L_5 R_L + 2\right.}$$

9.634 X-INVALID-ORDER-634 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2+1},\ \infty,\ \infty,\ \infty,\ \frac{C_5 L_5 R_5 s^2+L_5 s+R_5}{C_5 L_5 s^2+1},\ \frac{L_L R_L s}{C_L L_L R_L s^2+L_L s+R_L}\right)$

$$H(s) = \frac{}{C_1 C_5 C_L L_1 L_5 L_L R_5 R_L s^6 + R_5 R_L + s^5 \left(C_1 C_5 L_1 L_5 L_L R_5 + C_1 C_5 L_1 L_5 L_L R_L + C_1 C_L L_1 L_5 L_L R_L + C_5 C_L L_1 L_5 L_L R_5 R_L g_m + C_5 C_L L_1 L_5 L_L R_L\right) + s^4 \left(C_1 C_5 L_1 L_5 R_5 R_L + C_1 C_L L_1 L_L R_5 R_L + C_1 L_1 L_5 L_L + C_5 C_L L_5 L_L R_5 R_L + C_5 L_1 L_5 L_L R_5 g_m + 2 C_5 L_1 L_5 L_L R_L g_m\right.}$$

9.635 X-INVALID-ORDER-635 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2+1},\ \infty,\ \infty,\ \infty,\ \frac{C_5 L_5 R_5 s^2+L_5 s+R_5}{C_5 L_5 s^2+1},\ \frac{C_L L_L R_L s^2+L_L s+R_L}{C_L L_L s^2+1}\right)$

$$H(s) = \frac{s^5 \left(C_5 C_L L_1 L_5 L_L R_5 R_L g_m - C_5 C_L L_1 L_5 L_L R_L\right) + s^4 \left(C_5 L_1 L_5 L_L R_5 g_m - C_5 L_1 L_5 L_L + C_L L_1 L_5 L_L R\right.}{R_5 + R_L + s^6 \left(C_1 C_5 C_L L_1 L_5 L_L R_5 + C_1 C_5 C_L L_1 L_5 L_L R_L\right) + s^5 \left(C_1 C_5 L_1 L_5 L_L + C_1 C_L L_1 L_5 L_L + C_5 C_L L_1 L_5 L_L R_5 g_m + 2 C_5 C_L L_1 L_5 L_L R_L g_m + C_5 C_L L_1 L_5 L_L\right) + s^4 \left(C_1 C_5 L_1 L_5 R_5 + C_1 C_5 L_1 L_5 R_L + C_1 C_L L_1 L_L R_5 + C_1 C_L L_1 L_L R_L + C_5 C_L L_5 L_L R_5 + C_5 C_L L_5 L_L\right.}$$

9.636 X-INVALID-ORDER-636 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2+1},\ \infty,\ \infty,\ \infty,\ \frac{C_5 L_5 R_5 s^2+L_5 s+R_5}{C_5 L_5 s^2+1},\ \frac{R_L\left(C_L L_L s^2+1\right)}{C_L L_L s^2+C_L R_L s+1}\right)$

$$H(s) = \frac{C_L L_1 L_5}{R_5 + R_L + s^6 \left(C_1 C_5 C_L L_1 L_5 L_L R_5 + C_1 C_5 C_L L_1 L_5 L_L R_L\right) + s^5 \left(C_1 C_5 C_L L_1 L_5 R_5 R_L + C_1 C_L L_1 L_5 L_L + C_5 C_L L_1 L_5 L_L R_5 g_m + 2 C_5 C_L L_1 L_5 L_L R_L g_m + C_5 C_L L_1 L_5 L_L\right) + s^4 \left(C_1 C_5 L_1 L_5 R_5 + C_1 C_5 L_1 L_5 R_L + C_1 C_L L_1 L_5 R_L + C_1 C_L L_1 L_L R_5 + C_1 C_L L_1 L_L R_L + C_5 C_L\right.}$$

9.637 X-INVALID-ORDER-637 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2+1},\ \infty,\ \infty,\ \infty,\ \frac{R_5\left(C_5 L_5 s^2+1\right)}{C_5 L_5 s^2+C_5 R_5 s+1},\ R_L\right)$

$$H(s) = \frac{-C_5 L_1 R_5 R_L s^2 + s^3 \left(C_5 L_1 L_5 R_5 R_L g_m - C_5 L_1 L_5 R_L\right) + s \left(L_1 R_5 R_L g_m - L_1 R_L\right)}{R_5 + R_L + s^4 \left(C_1 C_5 L_1 L_5 R_5 + C_1 C_5 L_1 L_5 R_L\right) + s^3 \left(C_1 C_5 L_1 R_5 R_L + C_5 L_1 L_5 R_5 g_m + 2 C_5 L_1 L_5 R_L g_m + C_5 L_1 L_5\right) + s^2 \left(C_1 L_1 R_5 + C_1 L_1 R_L + 2 C_5 L_1 R_5 R_L g_m + C_5 L_1 R_5 + C_5 L_5 R_5 + C_5 L_5 R_L\right) + s \left(C_5 R_5 R_L + L_1 R_5 g_m + 2 L_1 R_L g_m + L_1\right)}$$

9.638 X-INVALID-ORDER-638 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2+1},\ \infty,\ \infty,\ \infty,\ \frac{R_5\left(C_5 L_5 s^2+1\right)}{C_5 L_5 s^2+C_5 R_5 s+1},\ \frac{1}{C_L s}\right)$

$$H(s) = \frac{-C_5 L_1 R_5 s^2 + s^3 \left(C_5 L_1 L_5 R_5 g_m - C_5 L_1 L_5\right) + s \left(L_1 R_5 g_m - L_1\right)}{C_1 C_5 C_L L_1 L_5 R_5 s^5 + s^4 \left(C_1 C_5 L_1 L_5 + C_5 C_L L_1 L_5 R_5 g_m + C_5 C_L L_1 L_5\right) + s^3 \left(C_1 C_5 L_1 R_5 + C_1 C_L L_1 R_5 + C_5 C_L L_1 R_5 + C_5 C_L L_5 R_5 + 2 C_5 L_1 L_5 g_m\right) + s^2 \left(C_1 L_1 + 2 C_5 L_1 R_5 g_m + C_5 L_5 + C_L L_1 R_5 g_m + C_L L_1\right) + s \left(C_5 R_5 + C_L R_5 + 2 L_1 g_m\right) + 1}$$

9.639 X-INVALID-ORDER-639 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2+1},\ \infty,\ \infty,\ \infty,\ \frac{R_5\left(C_5 L_5 s^2+1\right)}{C_5 L_5 s^2+C_5 R_5 s+1},\ \frac{R_L}{C_L R_L s+1}\right)$

$$H(s) = \frac{-C_5 L_1 R_5 R_L s^2 + s^3 \left(C_5 L_1 L_5 R_5 R_L g_m - C_5 L_1 L_5 R_L\right) + s \left(L_1 R_5 R_L g_m - L_1 R_L\right)}{C_1 C_5 C_L L_1 L_5 R_5 R_L s^5 + R_5 + R_L + s^4 \left(C_1 C_5 L_1 L_5 R_5 + C_1 C_5 L_1 L_5 R_L + C_5 C_L L_1 L_5 R_5 R_L g_m + C_5 C_L L_1 L_5 R_L\right) + s^3 \left(C_1 C_5 L_1 R_5 R_L + C_1 C_L L_1 R_5 R_L + C_5 C_L L_1 R_5 R_L + C_5 C_L L_5 R_5 R_L + C_5 L_1 L_5 R_5 g_m + 2 C_5 L_1 L_5 R_L g_m + C_5 L_1 L_5\right) + s^2 \left(C_1 L_1 R_5 + C_1 L_1 R_L + 2 C_5 \right.}$$

9.640 X-INVALID-ORDER-640 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2+1},\ \infty,\ \infty,\ \infty,\ \frac{R_5\left(C_5 L_5 s^2+1\right)}{C_5 L_5 s^2+C_5 R_5 s+1},\ R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{s^4 \left(C_5 C_L L_1 L_5 R_5 R_L g_m - C_5 C_L L_1 L_5 R_L\right) + s^3 \left(-C_5 C_L L_1 R_5 R_L + C_5 L_1 L_5 R_5 g_m - C_5 L_1 L_5\right) + s^2 \left(-C_5 L_1 R_5 + C_L L_1 R_5 R_L g_m - C_L L_1 R_L\right) + s \left(L_1\right.}{s^5 \left(C_1 C_5 C_L L_1 L_5 R_5 + C_1 C_5 C_L L_1 L_5 R_L\right) + s^4 \left(C_1 C_5 C_L L_1 R_5 R_L + C_1 C_5 L_1 L_5 + C_5 C_L L_1 L_5 R_5 g_m + 2 C_5 C_L L_1 L_5 R_L g_m + C_5 C_L L_1 L_5\right) + s^3 \left(C_1 C_5 L_1 R_5 + C_1 C_L L_1 R_5 + C_1 C_L L_1 R_L + 2 C_5 C_L L_1 R_5 R_L g_m + C_5 C_L L_1 R_5 + C_5 C_L L_5 R_5 + C_5 C_L L_5 R_L + 2 C_5 L_1 L_5 g_m\right) + s}$$

9.641 X-INVALID-ORDER-641 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2+1},\ \infty,\ \infty,\ \infty,\ \frac{R_5\left(C_5 L_5 s^2+1\right)}{C_5 L_5 s^2+C_5 R_5 s+1},\ L_L s + \frac{1}{C_L s}\right)$

$$H(s) = \frac{-C_5 C_L L_1 L_L R_5 s^4 - C_5 L_1 R_5 s^2 + s^5 \left(C_5 C_L L_1 L_5 L_L R_5 g_m - C_5 C_L L_1 L_5 L_L\right) + s^3 \left(C_5 L_1 L_5 R_5 g_m - C_5 L_1 L_5 + C_L L_1 L_L R_5 g_m - C_L L_1 L_L\right) + s \left(L_1\right.}{C_1 C_5 C_L L_1 L_5 L_L s^6 + s^5 \left(C_1 C_5 C_L L_1 L_5 R_5 + C_1 C_5 C_L L_1 L_L R_5 + 2 C_5 C_L L_1 L_5 L_L g_m\right) + s^4 \left(C_1 C_5 L_1 L_5 + C_1 C_L L_1 L_L + C_5 C_L L_1 L_5 R_5 g_m + C_5 C_L L_1 L_5 + 2 C_5 C_L L_1 L_L R_5 g_m + C_5 C_L L_5 L_L\right) + s^3 \left(C_1 C_5 L_1 R_5 + C_1 C_L L_1 R_5 + C_5 C_L L_1 R_5 + C_5 C_L L_5 R_5 + C_5 C_L L_L R_5 + 2\right.}$$

9.642 X-INVALID-ORDER-642 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2+1},\ \infty,\ \infty,\ \infty,\ \frac{R_5\left(C_5 L_5 s^2+1\right)}{C_5 L_5 s^2+C_5 R_5 s+1},\ \frac{L_L s}{C_L L_L s^2+1}\right)$

$$H(s) = \frac{-C_5 L_1 L_L R_5 s^3 + s^4 \left(C_5 L_1 L_5 L_L R_5 g_m - C_5 L_1 L_5 L_L\right) + s^2 \left(L_1 L_L R_5 g_m - L_1 L_L\right)}{C_1 C_5 C_L L_1 L_5 L_L R_5 s^6 + R_5 + s^5 \left(C_1 C_5 L_1 L_5 L_L + C_5 C_L L_1 L_5 L_L R_5 g_m + C_5 C_L L_1 L_5 L_L\right) + s^4 \left(C_1 C_5 L_1 L_5 R_5 + C_1 C_5 L_1 L_L R_5 + C_1 C_L L_1 L_L R_5 + C_5 C_L L_1 L_L R_5 + C_5 C_L L_5 L_L R_5 + 2 C_5 L_1 L_5 L_L g_m\right) + s^3 \left(C_1 L_1 L_L + C_5 L_1 L_5 R_5 g_m + C_5 L_1 L_5 + 2 C_5 L_1 L_L R_5 g_m + C_5 L_5\right.}$$

9.643 X-INVALID-ORDER-643 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2+1},\ \infty,\ \infty,\ \infty,\ \frac{R_5\left(C_5 L_5 s^2+1\right)}{C_5 L_5 s^2+C_5 R_5 s+1},\ L_L s + R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{s^5 \left(C_5 C_L L_1 L_5 L_L R_5 g_m - C_5 C_L L_1 L_5 L_L\right) + s^4 \left(C_5 C_L L_1 L_5 R_5 R_L g_m - C_5 C_L L_1 L_5 R_L - C_5 C_L L_1 L_L R_5\right) + s^3 \left(-C_5 C\right.}{C_1 C_5 C_L L_1 L_5 L_L s^6 + s^5 \left(C_1 C_5 C_L L_1 L_5 R_5 + C_1 C_5 C_L L_1 L_5 R_L + C_1 C_5 C_L L_1 L_L R_5 + 2 C_5 C_L L_1 L_5 L_L g_m\right) + s^4 \left(C_1 C_5 C_L L_1 R_5 R_L + C_1 C_5 L_1 L_5 + C_1 C_L L_1 L_L + C_5 C_L L_1 L_5 R_5 g_m + 2 C_5 C_L L_1 L_5 R_L g_m + C_5 C_L L_1 L_5 + 2 C_5 C_L L_1 L_L R_5 g_m + C_5 C_L L_5 L_L\right) + s^3 \left(C_1 C_5 L_1 R_5\right.}$$

9.644 X-INVALID-ORDER-644 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2+1},\ \infty,\ \infty,\ \infty,\ \frac{R_5\left(C_5 L_5 s^2+1\right)}{C_5 L_5 s^2+C_5 R_5 s+1},\ \frac{L_L R_L s}{C_L L_L R_L s^2+L_L s+R_L}\right)$

$$H(s) = \frac{-C_5 L_1}{C_1 C_5 C_L L_1 L_5 L_L R_5 R_L s^6 + R_5 R_L + s^5 \left(C_1 C_5 L_1 L_5 L_L R_5 + C_1 C_5 L_1 L_5 L_L R_L + C_5 C_L L_1 L_5 L_L R_5 R_L g_m + C_5 C_L L_1 L_5 L_L R_L\right) + s^4 \left(C_1 C_5 L_1 L_5 R_5 R_L + C_1 C_5 L_1 L_L R_5 R_L + C_1 C_L L_1 L_L R_5 R_L + C_5 C_L L_1 L_L R_5 R_L + C_5 C_L L_5 L_L R_5 R_L + C_5 L_1 L_5 L_L R_5 g_m + 2 C_5 L_1 L_5 L_L\right.}$$

9.645 X-INVALID-ORDER-645 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2+1},\ \infty,\ \infty,\ \infty,\ \frac{R_5\left(C_5 L_5 s^2+1\right)}{C_5 L_5 s^2+C_5 R_5 s+1},\ \frac{C_L L_L R_L s^2+L_L s+R_L}{C_L L_L s^2+1}\right)$

$$H(s) = \frac{s^5 \left(C_5 C_L L_1 L_5 L_L R_5 R_L g_m - C_5 C_L L_1 L_5 L_L R\right.}{R_5 + R_L + s^6 \left(C_1 C_5 C_L L_1 L_5 L_L R_5 + C_1 C_5 C_L L_1 L_5 L_L R_L\right) + s^5 \left(C_1 C_5 C_L L_1 L_L R_5 R_L + C_1 C_5 L_1 L_5 L_L + C_5 C_L L_1 L_5 L_L R_5 g_m + 2 C_5 C_L L_1 L_5 L_L R_L g_m + C_5 C_L L_1 L_5 L_L\right) + s^4 \left(C_1 C_5 L_1 L_5 R_5 + C_1 C_5 L_1 L_5 R_L + C_1 C_5 L_1 L_L R_5 + C_1 C_L L_1 L_L R_5 + C_1 C_L L_1 L_L R_L + 2 C_5 C\right.}$$

9.646 X-INVALID-ORDER-646 $Z(s) = \left(\frac{L_1 s}{C_1 L_1 s^2+1},\ \infty,\ \infty,\ \infty,\ \frac{R_5\left(C_5 L_5 s^2+1\right)}{C_5 L_5 s^2+C_5 R_5 s+1},\ \frac{R_L\left(C_L L_L s^2+1\right)}{C_L L_L s^2+C_L R_L s+1}\right)$

$$H(s) = \frac{}{R_5 + R_L + s^6\left(C_1 C_5 C_L L_1 L_5 L_L R_5 + C_1 C_5 C_L L_1 L_5 L_L R_L\right) + s^5\left(C_1 C_5 C_L L_1 L_5 R_5 R_L + C_1 C_5 C_L L_1 L_L R_5 R_L + C_5 C_L L_1 L_5 L_L R_5 g_m + 2C_5 C_L L_1 L_5 L_L R_L g_m + C_5 C_L L_1 L_5 L_L\right) + s^4\left(C_1 C_5 L_1 L_5 R_5 + C_1 C_5 L_1 L_5 R_L + C_1 C_L L_1 L_L R_5 + C_1 C_L L_1 L_L R_L + C_5 C_L L_1 L_5 R_5 R_L\right.}$$

9.647 X-INVALID-ORDER-647 $Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ R_5,\ \frac{1}{C_L s}\right)$

$$H(s) = \frac{R_5 g_m + s^2\left(C_1 L_1 R_5 g_m - C_1 L_1\right) + s\left(C_1 R_1 R_5 g_m - C_1 R_1\right) - 1}{2g_m + s^3\left(C_1 C_L L_1 R_5 g_m + C_1 C_L L_1\right) + s^2\left(C_1 C_L R_1 R_5 g_m + C_1 C_L R_1 + C_1 C_L R_5 + 2C_1 L_1 g_m\right) + s\left(2C_1 R_1 g_m + C_1 + C_L R_5 g_m + C_L\right)}$$

9.648 X-INVALID-ORDER-648 $Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ R_5,\ \frac{R_L}{C_L R_L s+1}\right)$

$$H(s) = \frac{R_5 R_L g_m - R_L + s^2\left(C_1 L_1 R_5 R_L g_m - C_1 L_1 R_L\right) + s\left(C_1 R_1 R_5 R_L g_m - C_1 R_1 R_L\right)}{R_5 g_m + 2R_L g_m + s^3\left(C_1 C_L L_1 R_5 R_L g_m + C_1 C_L L_1 R_L\right) + s^2\left(C_1 C_L R_1 R_5 R_L g_m + C_1 C_L R_1 R_L + C_1 C_L R_5 R_L + C_1 L_1 R_5 g_m + 2C_1 L_1 R_L g_m + C_1 L_1\right) + s\left(C_1 R_1 R_5 g_m + 2C_1 R_1 R_L g_m + C_1 R_1 + C_1 R_5 + C_1 R_L + C_L R_5 R_L g_m + C_L R_L\right) + 1}$$

9.649 X-INVALID-ORDER-649 $Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ R_5,\ R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{R_5 g_m + s^3\left(C_1 C_L L_1 R_5 R_L g_m - C_1 C_L L_1 R_L\right) + s^2\left(C_1 C_L R_1 R_5 R_L g_m - C_1 C_L R_1 R_L + C_1 L_1 R_5 g_m - C_1 L_1\right) + s\left(C_1 R_1 R_5 g_m - C_1 R_1 + C_L R_5 R_L g_m - C_L R_L\right) - 1}{2g_m + s^3\left(C_1 C_L L_1 R_5 g_m + 2C_1 C_L L_1 R_L g_m + C_1 C_L L_1\right) + s^2\left(C_1 C_L R_1 R_5 g_m + 2C_1 C_L R_1 R_L g_m + C_1 C_L R_1 + C_1 C_L R_5 + C_1 C_L R_L + 2C_1 L_1 g_m\right) + s\left(2C_1 R_1 g_m + C_1 + C_L R_5 g_m + 2C_L R_L g_m + C_L\right)}$$

9.650 X-INVALID-ORDER-650 $Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ R_5,\ L_L s + \frac{1}{C_L s}\right)$

$$H(s) = \frac{R_5 g_m + s^4\left(C_1 C_L L_1 L_L R_5 g_m - C_1 C_L L_1 L_L\right) + s^3\left(C_1 C_L L_L R_1 R_5 g_m - C_1 C_L L_L R_1\right) + s^2\left(C_1 L_1 R_5 g_m - C_1 L_1 + C_L L_L R_5 g_m - C_L L_L\right) + s\left(C_1 R_1 R_5 g_m - C_1 R_1\right) - 1}{2C_1 C_L L_1 L_L g_m s^4 + 2g_m + s^3\left(C_1 C_L L_1 R_5 g_m + C_1 C_L L_1 + 2C_1 C_L L_L R_1 g_m + C_1 C_L L_L\right) + s^2\left(C_1 C_L R_1 R_5 g_m + C_1 C_L R_1 + C_1 C_L R_5 + 2C_1 L_1 g_m + 2C_L L_L g_m\right) + s\left(2C_1 R_1 g_m + C_1 + C_L R_5 g_m + C_L\right)}$$

9.651 X-INVALID-ORDER-651 $Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ R_5,\ \frac{L_L s}{C_L L_L s^2+1}\right)$

$$H(s) = \frac{s^3\left(C_1 L_1 L_L R_5 g_m - C_1 L_1 L_L\right) + s^2\left(C_1 L_L R_1 R_5 g_m - C_1 L_L R_1\right) + s\left(L_L R_5 g_m - L_L\right)}{R_5 g_m + s^4\left(C_1 C_L L_1 L_L R_5 g_m + C_1 C_L L_1 L_L\right) + s^3\left(C_1 C_L L_L R_1 R_5 g_m + C_1 C_L L_L R_1 + C_1 C_L L_L R_5 + 2C_1 L_1 L_L g_m\right) + s^2\left(C_1 L_1 R_5 g_m + C_1 L_1 + 2C_1 L_L R_1 g_m + C_1 L_L + C_L L_L R_5 g_m + C_L L_L\right) + s\left(C_1 R_1 R_5 g_m + C_1 R_1 + C_1 R_5 + 2L_L g_m\right) + 1}$$

9.652 X-INVALID-ORDER-652 $Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ R_5,\ L_L s + R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{R_5 g_m + s^4\left(C_1 C_L L_1 L_L R_5 g_m - C_1 C_L L_1 L_L\right) + s^3\left(C_1 C_L L_1 R_5 R_L g_m - C_1 C_L L_1 R_L + C_1 C_L L_L R_1 R_5 g_m - C_1 C_L L_L R_1\right) + s^2\left(C_1 C_L R_1 R_5 R_L g_m - C_1 C_L R_1 R_L + C_1 L_1 R_5 g_m - C_1 L_1 + C_L L_L R_5 g_m - C_L L_L\right) + s\left(C_1 R_1 R_5 g_m - C_1 R_1 + C_L R_5 R_L g_m - C_L R_L\right) - 1}{2C_1 C_L L_1 L_L g_m s^4 + 2g_m + s^3\left(C_1 C_L L_1 R_5 g_m + 2C_1 C_L L_1 R_L g_m + C_1 C_L L_1 + 2C_1 C_L L_L R_1 g_m + C_1 C_L L_L\right) + s^2\left(C_1 C_L R_1 R_5 g_m + 2C_1 C_L R_1 R_L g_m + C_1 C_L R_1 + C_1 C_L R_5 + C_1 C_L R_L + 2C_1 L_1 g_m + 2C_L L_L g_m\right) + s\left(2C_1 R_1 g_m + C_1 + C_L R_5 g_m + 2C_L R_L g_m + C_L\right)}$$

9.653 X-INVALID-ORDER-653 $Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ R_5,\ \frac{L_L R_L s}{C_L L_L R_L s^2+L_L s+R_L}\right)$

$$H(s) = \frac{s^3\left(C_1 L_1 L_L R_5 R_L g_m - C_1 L_1 L_L R_L\right) + s^2\left(C_1 L_L R_1 R_5 R_L g_m - C_1 L_L R_1 R_L\right) + s\left(L_L R_5 R_L g_m - L_L R_L\right)}{R_5 R_L g_m + R_L + s^4\left(C_1 C_L L_1 L_L R_5 R_L g_m + C_1 C_L L_1 L_L R_L\right) + s^3\left(C_1 C_L L_L R_1 R_5 R_L g_m + C_1 C_L L_L R_1 R_L + C_1 C_L L_L R_5 R_L + C_1 L_1 L_L R_5 g_m + 2C_1 L_1 L_L R_L g_m + C_1 L_1 L_L\right) + s^2\left(C_1 L_1 R_5 R_L g_m + C_1 L_1 R_L + C_1 L_L R_1 R_5 g_m + 2C_1 L_L R_1 R_L g_m + C_1 L_L R_1 + C_1 L_L R_5 +\right.}$$

9.654 X-INVALID-ORDER-654 $Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ R_5,\ \frac{C_L L_L R_L s^2+L_L s+R_L}{C_L L_L s^2+1}\right)$

$$H(s) = \frac{R_5 R_L g_m - R_L + s^4\left(C_1 C_L L_1 L_L R_5 R_L g_m - C_1 C_L L_1 L_L R_L\right) + s^3\left(C_1 C_L L_L R_1 R_5 R_L g_m - C_1 C_L L_L R_1 R_L + C_1 L_1 L_L R_5 g_m - C_1 L_1 L_L\right) + s^2\left(C_1 L_1 R_5 R_L g_m - C_1 L_1 R_L + C_1 L_L R_1 R_5 g_m - C_1 L_L R_1 + C_L L_L R_5 R_L g_m - C_L L_L\right.}{R_5 g_m + 2R_L g_m + s^4\left(C_1 C_L L_1 L_L R_5 g_m + 2C_1 C_L L_1 L_L R_L g_m + C_1 C_L L_1 L_L\right) + s^3\left(C_1 C_L L_L R_1 R_5 g_m + 2C_1 C_L L_L R_1 R_L g_m + C_1 C_L L_L R_1 + C_1 C_L L_L R_5 + C_1 C_L L_L R_L + 2C_1 L_1 L_L g_m\right) + s^2\left(C_1 L_1 R_5 g_m + 2C_1 L_1 R_L g_m + C_1 L_1 + 2C_1 L_L R_1 g_m + C_1 L_L + C_L L_L R_5 g_m +\right.}$$

9.655 X-INVALID-ORDER-655 $Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ R_5,\ \frac{R_L\left(C_L L_L s^2+1\right)}{C_L L_L s^2+C_L R_L s+1}\right)$

$$H(s) = \frac{R_5 R_L g_m - R_L + s^4\left(C_1 C_L L_1 L_L R_5 R_L g_m - C_1 C_L L_1 L_L R_L\right) + s^3\left(C_1 C_L L_L R_1 R_5 R_L g_m - C_1 C_L L_L R_1 R_L\right) + s^2\left(C_1 L_1 R_5 R_L g_m - C_1 L_1 R_L + C_L L_L R_5 R_L g}{R_5 g_m + 2R_L g_m + s^4\left(C_1 C_L L_1 L_L R_5 g_m + 2C_1 C_L L_1 L_L R_L g_m + C_1 C_L L_1 L_L\right) + s^3\left(C_1 C_L L_1 R_5 R_L g_m + C_1 C_L L_1 R_L + C_1 C_L L_L R_1 R_5 g_m + 2C_1 C_L L_L R_1 R_L g_m + C_1 C_L L_L R_1 + C_1 C_L L_L R_5 + C_1 C_L L_L R_L\right) + s^2\left(C_1 C_L R_1 R_5 R_L g_m + C_1 C_L R_1 R_L + C_1 C_L R_5 R_L + C_1 L_1\right.}$$

9.656 X-INVALID-ORDER-656 $Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_5 s},\ R_L\right)$

$$H(s) = \frac{-C_1 C_5 L_1 R_L s^3 + R_L g_m + s^2\left(-C_1 C_5 R_1 R_L + C_1 L_1 R_L g_m\right) + s\left(C_1 R_1 R_L g_m - C_5 R_L\right)}{g_m + s^3\left(2C_1 C_5 L_1 R_L g_m + C_1 C_5 L_1\right) + s^2\left(2C_1 C_5 R_1 R_L g_m + C_1 C_5 R_1 + C_1 C_5 R_L + C_1 L_1 g_m\right) + s\left(C_1 R_1 g_m + C_1 + 2C_5 R_L g_m + C_5\right)}$$

9.657 X-INVALID-ORDER-657 $Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_5 s},\ \frac{1}{C_L s}\right)$

$$H(s) = \frac{-C_1 C_5 L_1 s^3 + g_m + s^2\left(-C_1 C_5 R_1 + C_1 L_1 g_m\right) + s\left(C_1 R_1 g_m - C_5\right)}{C_1 C_5 C_L L_1 s^4 + s^3\left(C_1 C_5 C_L R_1 + 2C_1 C_5 L_1 g_m + C_1 C_L L_1 g_m\right) + s^2\left(2C_1 C_5 R_1 g_m + C_1 C_5 + C_1 C_L R_1 g_m + C_1 C_L + C_5 C_L\right) + s\left(2C_5 g_m + C_L g_m\right)}$$

9.658 X-INVALID-ORDER-658 $Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_5 s},\ \frac{R_L}{C_L R_L s+1}\right)$

$$H(s) = \frac{-C_1 C_5 L_1 R_L s^3 + R_L g_m + s^2\left(-C_1 C_5 R_1 R_L + C_1 L_1 R_L g_m\right) + s\left(C_1 R_1 R_L g_m - C_5 R_L\right)}{C_1 C_5 C_L L_1 R_L s^4 + g_m + s^3\left(C_1 C_5 C_L R_1 R_L + 2C_1 C_5 L_1 R_L g_m + C_1 C_5 L_1 + C_1 C_L L_1 R_L g_m\right) + s^2\left(2C_1 C_5 R_1 R_L g_m + C_1 C_5 R_1 + C_1 C_5 R_L + C_1 C_L R_1 R_L g_m + C_1 C_L R_L + C_1 L_1 g_m + C_5 C_L R_L\right) + s\left(C_1 R_1 g_m + C_1 + 2C_5 R_L g_m + C_5 + C_L R_L g_m\right)}$$

9.659 X-INVALID-ORDER-659 $Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_5 s},\ R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{-C_1 C_5 C_L L_1 R_L s^4 + g_m + s^3\left(-C_1 C_5 C_L R_1 R_L - C_1 C_5 L_1 + C_1 C_L L_1 R_L g_m\right) + s^2\left(-C_1 C_5 R_1 + C_1 C_L R_1 R_L g_m + C_1 L_1 g_m - C_5 C_L R_L\right) + s\left(C_1 R_1 g_m - C_5 + C_L R_L g_m\right)}{s^4\left(2C_1 C_5 C_L L_1 R_L g_m + C_1 C_5 C_L L_1\right) + s^3\left(2C_1 C_5 C_L R_1 R_L g_m + C_1 C_5 C_L R_1 + C_1 C_5 C_L R_L + 2C_1 C_5 L_1 g_m + C_1 C_L L_1 g_m\right) + s^2\left(2C_1 C_5 R_1 g_m + C_1 C_5 + C_1 C_L R_1 g_m + C_1 C_L + 2C_5 C_L R_L g_m + C_5 C_L\right) + s\left(2C_5 g_m + C_L g_m\right)}$$

9.660 X-INVALID-ORDER-660 $Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_5 s},\ L_L s + \frac{1}{C_L s}\right)$

$$H(s) = \frac{-C_1 C_5 C_L L_1 L_L s^5 + g_m + s^4\left(-C_1 C_5 C_L L_L R_1 + C_1 C_L L_1 L_L g_m\right) + s^3\left(-C_1 C_5 L_1 + C_1 C_L L_L R_1 g_m - C_5 C_L L_L\right) + s^2\left(-C_1 C_5 R_1 + C_1 L_1 g_m + C_L L_L g_m\right) + s\left(C_1 R_1 g_m - C_5\right)}{2C_1 C_5 C_L L_1 L_L g_m s^5 + s^4\left(C_1 C_5 C_L L_1 + 2C_1 C_5 C_L L_L R_1 g_m + C_1 C_5 C_L L_L\right) + s^3\left(C_1 C_5 C_L R_1 + 2C_1 C_5 L_1 g_m + C_1 C_L L_1 g_m + 2C_5 C_L L_L g_m\right) + s^2\left(2C_1 C_5 R_1 g_m + C_1 C_5 + C_1 C_L R_1 g_m + C_1 C_L + C_5 C_L\right) + s\left(2C_5 g_m + C_L g_m\right)}$$

9.661 X-INVALID-ORDER-661 $Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_5 s},\ \frac{L_L s}{C_L L_L s^2+1}\right)$

$$H(s) = \frac{-C_1 C_5 L_1 L_L s^4 + L_L g_m s + s^3\left(-C_1 C_5 L_L R_1 + C_1 L_1 L_L g_m\right) + s^2\left(C_1 L_L R_1 g_m - C_5 L_L\right)}{C_1 C_5 C_L L_1 L_L s^5 + g_m + s^4\left(C_1 C_5 C_L L_L R_1 + 2C_1 C_5 L_1 L_L g_m + C_1 C_L L_1 L_L g_m\right) + s^3\left(C_1 C_5 L_1 + 2C_1 C_5 L_L R_1 g_m + C_1 C_5 L_L + C_1 C_L L_L R_1 g_m + C_1 C_L L_L + C_5 C_L L_L\right) + s^2\left(C_1 C_5 R_1 + C_1 L_1 g_m + 2C_5 L_L g_m + C_L L_L g_m\right) + s\left(C_1 R_1 g_m + C_1 + C_5\right)}$$

9.662 X-INVALID-ORDER-662 $Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_5 s},\ L_L s + R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{-C_1 C_5 C_L L_1 L_L s^5 + g_m + s^4\left(-C_1 C_5 C_L L_1 R_L - C_1 C_5 C_L L_L R_1 + C_1 C_L L_1 L_L g_m\right) + s^3\left(-C_1 C_5 C_L R_1 R_L - C_1 C_5 L_1 + C_1 C_L L_1 R_L g_m + C_1 C_L L_L R_1 g_m - C_5 C_L L_L\right) + s^2\left(-C_1 C_5 R_1 + C_1 C_L R_1 R_L g_m + C_1 L_1 g_m - C_5 C_L R_L + C_L L_L g_m\right) + s\left(C_1 R_1 g_m - \right.}{2C_1 C_5 C_L L_1 L_L g_m s^5 + s^4\left(2C_1 C_5 C_L L_1 R_L g_m + C_1 C_5 C_L L_1 + 2C_1 C_5 C_L L_L R_1 g_m + C_1 C_5 C_L L_L\right) + s^3\left(2C_1 C_5 C_L R_1 R_L g_m + C_1 C_5 C_L R_1 + C_1 C_5 C_L R_L + 2C_1 C_5 L_1 g_m + C_1 C_L L_1 g_m + 2C_5 C_L L_L g_m\right) + s^2\left(2C_1 C_5 R_1 g_m + C_1 C_5 + C_1 C_L R_1 g_m + C_1 C_L + 2C_5 C_L R_L g_m + \right.}$$

9.663 X-INVALID-ORDER-663 $Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_5 s},\ \frac{L_L R_L s}{C_L L_L R_L s^2+L_L s+R_L}\right)$

$$H(s) = \frac{-C_1 C_5 L_1 L_L R_L s^4 + L_L R_L g_m s + s^3\left(-C_1 C_5 L_L R_1 R_L + C_1 L_1 L_L R_L g_m\right) + s^2\left(C_1 L_L R_1 R_L g_m - C_5 L_L R_L\right)}{C_1 C_5 C_L L_1 L_L R_L s^5 + R_L g_m + s^4\left(C_1 C_5 C_L L_L R_1 R_L + 2C_1 C_5 L_1 L_L R_L g_m + C_1 C_5 L_1 L_L + C_1 C_L L_1 L_L R_L g_m\right) + s^3\left(C_1 C_5 L_1 R_L + 2C_1 C_5 L_L R_1 R_L g_m + C_1 C_5 L_L R_1 + C_1 C_5 L_L R_L + C_1 C_L L_L R_1 R_L g_m + C_1 C_L L_L R_L + C_1 L_1 L_L g_m + C_5 C_L L_L R_L\right) + s^2\left(C_1 C_5 R_1 R_L + \right.}$$

9.664 X-INVALID-ORDER-664 $Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_5 s},\ \frac{C_L L_L R_L s^2+L_L s+R_L}{C_L L_L s^2+1}\right)$

$$H(s) = \frac{-C_1 C_5 C_L L_1 L_L R_L s^5 + R_L g_m + s^4\left(-C_1 C_5 C_L L_L R_1 R_L - C_1 C_5 L_1 L_L + C_1 C_L L_1 L_L R_L g_m\right) + s^3\left(-C_1 C_5 L_1 R_L - C_1 C_5 L_L R_1 + C_1 C_L L_L R_1 R_L g_m + C_1 L_1 L_L g_m - C_5 C_L L_L R_L\right) + s^2\left(-C_1 C_5 R_1 R_L + C_1 L_1 R_L g_m\right.}{g_m + s^5\left(2C_1 C_5 C_L L_1 L_L R_L g_m + C_1 C_5 C_L L_1 L_L\right) + s^4\left(2C_1 C_5 C_L L_L R_1 R_L g_m + C_1 C_5 C_L L_L R_1 + C_1 C_5 C_L L_L R_L + 2C_1 C_5 L_1 L_L g_m + C_1 C_L L_1 L_L g_m\right) + s^3\left(2C_1 C_5 L_1 R_L g_m + C_1 C_5 L_1 + 2C_1 C_5 L_L R_1 g_m + C_1 C_5 L_L + C_1 C_L L_L R_1 g_m + C_1 C_L L_L + 2C_5 C_L L_L R_L g_m + C_5\right.}$$

9.665 X-INVALID-ORDER-665 $Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_5 s},\ \frac{R_L\left(C_L L_L s^2+1\right)}{C_L L_L s^2+C_L R_L s+1}\right)$

$$H(s) = \frac{-C_1C_5C_LL_1L_LR_Ls^5 + R_Lg_m + s^4\left(-C_1C_5C_LL_LR_1R_L + C_1C_LL_1L_LR_Lg_m\right) + s^3\left(-C_1C_5L_1R_L + C_1C_LL_LR_1R_Lg_m - C_5C_LL_LR_L\right) + s^2\left(-C_1C_5R_1\right.}{g_m + s^5\left(2C_1C_5C_LL_1L_LR_Lg_m + C_1C_5C_LL_1L_L\right) + s^4\left(C_1C_5C_LL_1R_L + 2C_1C_5C_LL_LR_1R_Lg_m + C_1C_5C_LL_LR_1 + C_1C_5C_LL_LR_L + C_1C_LL_1L_Lg_m\right) + s^3\left(C_1C_5C_LR_1R_L + 2C_1C_5L_1R_Lg_m + C_1C_5L_1 + C_1C_LL_1R_Lg_m + C_1C_LL_LR_1g_m + C_1C_LL_L + 2C_5C_LL_LR_Lg_m\right.}$$

9.666 X-INVALID-ORDER-666 $Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{R_5}{C_5R_5s+1},\ R_L\right)$

$$H(s) = \frac{-C_1C_5L_1R_5R_Ls^3 + R_5R_Lg_m - R_L + s^2\left(-C_1C_5R_1R_5R_L + C_1L_1R_5R_Lg_m - C_1L_1R_L\right) + s\left(C_1R_1R_5R_Lg_m - C_1R_1R_L - C_5R_5R_L\right)}{R_5g_m + 2R_Lg_m + s^3\left(2C_1C_5L_1R_5R_Lg_m + C_1C_5L_1R_5\right) + s^2\left(2C_1C_5R_1R_5R_Lg_m + C_1C_5R_1R_5 + C_1C_5R_5R_L + C_1L_1R_5g_m + 2C_1L_1R_Lg_m + C_1L_1\right) + s\left(C_1R_1R_5g_m + 2C_1R_1R_Lg_m + C_1R_1 + C_1R_5 + C_1R_L + 2C_5R_5R_Lg_m + C_5R_5\right) + 1}$$

9.667 X-INVALID-ORDER-667 $Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{R_5}{C_5R_5s+1},\ \frac{1}{C_L s}\right)$

$$H(s) = \frac{-C_1C_5L_1R_5s^3 + R_5g_m + s^2\left(-C_1C_5R_1R_5 + C_1L_1R_5g_m - C_1L_1\right) + s\left(C_1R_1R_5g_m - C_1R_1 - C_5R_5\right) - 1}{C_1C_5C_LL_1R_5s^4 + 2g_m + s^3\left(C_1C_5C_LR_1R_5 + 2C_1C_5L_1R_5g_m + C_1C_LL_1R_5g_m + C_1C_LL_1\right) + s^2\left(2C_1C_5R_1R_5g_m + C_1C_5R_5 + C_1C_LR_1R_5g_m + C_1C_LR_1 + C_1C_LR_5 + 2C_1L_1g_m + C_5C_LR_5\right) + s\left(2C_1R_1g_m + C_1 + 2C_5R_5g_m + C_LR_5g_m + C_L\right)}$$

9.668 X-INVALID-ORDER-668 $Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{R_5}{C_5R_5s+1},\ \frac{R_L}{C_LR_Ls+1}\right)$

$$H(s) = \frac{-C_1C_5L_1R_5R_Ls^3 + R_5R_Lg_m - R_L + s^2\left(-C_1C_5R_1R_5R_L + C_1L_1R_5R_Lg_m - C_1L_1R_L\right) + s\left(C_1R_1R_5R_Lg_m - C_1R_1R_L - C_5R_5R\right.}{C_1C_5C_LL_1R_5R_Ls^4 + R_5g_m + 2R_Lg_m + s^3\left(C_1C_5C_LR_1R_5R_L + 2C_1C_5L_1R_5R_Lg_m + C_1C_5L_1R_5 + C_1C_LL_1R_5R_Lg_m + C_1C_LL_1R_L\right) + s^2\left(2C_1C_5R_1R_5R_Lg_m + C_1C_5R_1R_5 + C_1C_5R_5R_L + C_1C_LR_1R_5R_Lg_m + C_1C_LR_1R_L + C_1C_LR_5R_L + C_1L_1R_5g_m + 2C_1L_1R_Lg_m\right.}$$

9.669 X-INVALID-ORDER-669 $Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{R_5}{C_5R_5s+1},\ R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{-C_1C_5C_LL_1R_5R_Ls^4 + R_5g_m + s^3\left(-C_1C_5C_LR_1R_5R_L - C_1C_5L_1R_5 + C_1C_LL_1R_5R_Lg_m - C_1C_LL_1R_L\right) + s^2\left(-C_1C_5R_1R_5 + C_1C_LR_1R_5R_Lg_m - C_1C_LR_1R_L + C_1L_1R_5g_m - C_1L_1 - C_5C_LR_5R_L\right) +}{2g_m + s^4\left(2C_1C_5C_LL_1R_5R_Lg_m + C_1C_5C_LL_1R_5\right) + s^3\left(2C_1C_5C_LR_1R_5R_Lg_m + C_1C_5C_LR_1R_5 + C_1C_5C_LR_5R_L + 2C_1C_5L_1R_5g_m + C_1C_LL_1R_5g_m + 2C_1C_LL_1R_Lg_m + C_1C_LL_1\right) + s^2\left(2C_1C_5R_1R_5g_m + C_1C_5R_5 + C_1C_LR_1R_5g_m + 2C_1C_LR_1R_Lg_m + C_1C_LR_1 + C_1\right.}$$

9.670 X-INVALID-ORDER-670 $Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{R_5}{C_5R_5s+1},\ L_L s + \frac{1}{C_L s}\right)$

$$H(s) = \frac{-C_1C_5C_LL_1L_LR_5s^5 + R_5g_m + s^4\left(-C_1C_5C_LL_LR_1R_5 + C_1C_LL_1L_LR_5g_m - C_1C_LL_1L_L\right) + s^3\left(-C_1C_5L_1R_5 + C_1C_LL_LR_1R_5g_m - C_1C_LL_LR_1 - C_5C_LL_LR_5\right) + s^2\left(-C_1C_5R_1R_5 + C_1L_1R_5g_m - C_1L\right.}{2C_1C_5C_LL_1L_LR_5g_ms^5 + 2g_m + s^4\left(C_1C_5C_LL_1R_5 + 2C_1C_5C_LL_LR_1R_5g_m + C_1C_5C_LL_LR_5 + 2C_1C_LL_1L_Lg_m\right) + s^3\left(C_1C_5C_LR_1R_5 + 2C_1C_5L_1R_5g_m + C_1C_LL_1R_5g_m + C_1C_LL_1 + 2C_1C_LL_LR_1g_m + C_1C_LL_L + 2C_5C_LL_LR_5g_m\right) + s^2\left(2C_1C_5R_1R_5g_m + C_1C_5R_5 +\right.}$$

9.671 X-INVALID-ORDER-671 $Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{R_5}{C_5R_5s+1},\ \frac{L_Ls}{C_LL_Ls^2+1}\right)$

$$H(s) = \frac{-C_1C_5L_1L_LR_5s^4 + s^3\left(-C_1C_5L_LR_1R_5 + C_1L_1L_LR_5g_m - C_1L_1L_L\right) + s^2\left(C_1L_LR_1R_5g_m - C_1L_LR_1 - C_5L_LR_5\right) + s\left(L_LR_5g_m -\right.}{C_1C_5C_LL_1L_LR_5s^5 + R_5g_m + s^4\left(C_1C_5C_LL_LR_1R_5 + 2C_1C_5L_1L_LR_5g_m + C_1C_LL_1L_LR_5g_m + C_1C_LL_1L_L\right) + s^3\left(C_1C_5L_1R_5 + 2C_1C_5L_LR_1R_5g_m + C_1C_5L_LR_5 + C_1C_LL_LR_1R_5g_m + C_1C_LL_LR_1 + C_1C_LL_LR_5 + 2C_1L_1L_Lg_m + C_5C_LL_LR_5\right) + s^2\left(C_1C_5R_1R_5 + C_1\right.}$$

9.672 X-INVALID-ORDER-672 $Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{R_5}{C_5R_5s+1},\ L_L s + R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{-C_1C_5C_LL_1L_LR_5s^5 + R_5g_m + s^4\left(-C_1C_5C_LL_1R_5R_L - C_1C_5C_LL_LR_1R_5 + C_1C_LL_1L_LR_5g_m - C_1C_LL_1L_L\right) + s^3\left(-C_1C_5C_LR_1R_5R_L - C_1C_5L_1R_5 + C_1C_LL_1R_5R_Lg_m - C_1C_LL_1R_L + C_1C_LL_LR_1R_5\right.}{2C_1C_5C_LL_1L_LR_5g_ms^5 + 2g_m + s^4\left(2C_1C_5C_LL_1R_5R_Lg_m + C_1C_5C_LL_1R_5 + 2C_1C_5C_LL_LR_1R_5g_m + C_1C_5C_LL_LR_5 + 2C_1C_LL_1L_Lg_m\right) + s^3\left(2C_1C_5C_LR_1R_5R_Lg_m + C_1C_5C_LR_1R_5 + C_1C_5C_LR_5R_L + 2C_1C_5L_1R_5g_m + C_1C_LL_1R_5g_m + 2C_1C_LL_1R_Lg_m + C_1C_LL_1\right.}$$

9.673 X-INVALID-ORDER-673 $Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{R_5}{C_5R_5s+1},\ \frac{L_LR_Ls}{C_LL_LR_Ls^2+L_Ls+R_L}\right)$

$$H(s) = \frac{-C_1C_5L_1L_LR_5R_Ls^4 + s^3\left(-C_1C_5\right.}{C_1C_5C_LL_1L_LR_5R_Ls^5 + R_5R_Lg_m + R_L + s^4\left(C_1C_5C_LL_LR_1R_5R_L + 2C_1C_5L_1L_LR_5R_Lg_m + C_1C_5L_1L_LR_5 + C_1C_LL_1L_LR_5R_Lg_m + C_1C_LL_1L_LR_L\right) + s^3\left(C_1C_5L_1R_5R_L + 2C_1C_5L_LR_1R_5R_Lg_m + C_1C_5L_LR_1R_5 + C_1C_5L_LR_5R_L + C_1C_LL_LR_1R_5R_Lg_m + C_1C_LL_L\right.}$$

9.674 X-INVALID-ORDER-674 $Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{R_5}{C_5R_5s+1},\ \frac{C_LL_LR_Ls^2+L_Ls+R_L}{C_LL_Ls^2+1}\right)$

$$H(s) = \frac{-C_1C_5C_LL_1L_LR_5R_Ls^5 + R_5R_Lg_m - R_L + s^4\left(-C_1C_5C_LL_LR_1R_5R_L - C_1C_5L_1L_LR_5 + C_1C_LL_1L_LR_5R_Lg_m - C_1C_LL_1L_LR_L\right) + s^3\left(\right.}{R_5g_m + 2R_Lg_m + s^5\left(2C_1C_5C_LL_1L_LR_5R_Lg_m + C_1C_5C_LL_1L_LR_5\right) + s^4\left(2C_1C_5C_LL_LR_1R_5R_Lg_m + C_1C_5C_LL_LR_1R_5 + C_1C_5C_LL_LR_5R_L + 2C_1C_5L_1L_LR_5g_m + C_1C_LL_1L_LR_5g_m + 2C_1C_LL_1L_LR_Lg_m + C_1C_LL_1L_L\right) + s^3\left(2C_1C_5L_1R_5R_Lg_m + C_1C_5L_1R_5 + 2C_1C\right.}$$

9.675 X-INVALID-ORDER-675 $Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{R_5}{C_5 R_5 s+1},\ \frac{R_L\left(C_L L_L s^2+1\right)}{C_L L_L s^2+C_L R_L s+1}\right)$

$$H(s) = \frac{-C_1C_5C_LL_1L_LR_5R_Ls^5 + R_5R_Lg_m - R_L + s^4\left(-C_1C\right.}{R_5g_m + 2R_Lg_m + s^5\left(2C_1C_5C_LL_1L_LR_5R_Lg_m + C_1C_5C_LL_1L_LR_5\right) + s^4\left(C_1C_5C_LL_1R_5R_L + 2C_1C_5C_LL_LR_1R_5R_Lg_m + C_1C_5C_LL_LR_1R_5 + C_1C_5C_LL_LR_5R_L + C_1C_LL_1L_LR_5g_m + 2C_1C_LL_1L_LR_Lg_m + C_1C_LL_1L_L\right) + s^3\left(C_1C_5C_LR_1R_5R_L + 2C_1C_5L_1R_5R_Lg_m + \right.}$$

9.676 X-INVALID-ORDER-676 $Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ R_5 + \frac{1}{C_5 s},\ R_L\right)$

$$H(s) = \frac{R_Lg_m + s^3\left(C_1C_5L_1R_5R_Lg_m - C_1C_5L_1R_L\right) + s^2\left(C_1C_5R_1R_5R_Lg_m - C_1C_5R_1R_L + C_1L_1R_Lg_m\right) + s\left(C_1R_1R_Lg_m + C_5R_5R_Lg_m - C_5R_L\right)}{g_m + s^3\left(C_1C_5L_1R_5g_m + 2C_1C_5L_1R_Lg_m + C_1C_5L_1\right) + s^2\left(C_1C_5R_1R_5g_m + 2C_1C_5R_1R_Lg_m + C_1C_5R_1 + C_1C_5R_5 + C_1C_5R_L + C_1L_1g_m\right) + s\left(C_1R_1g_m + C_1 + C_5R_5g_m + 2C_5R_Lg_m + C_5\right)}$$

9.677 X-INVALID-ORDER-677 $Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ R_5 + \frac{1}{C_5 s},\ \frac{1}{C_L s}\right)$

$$H(s) = \frac{g_m + s^3\left(C_1C_5L_1R_5g_m - C_1C_5L_1\right) + s^2\left(C_1C_5R_1R_5g_m - C_1C_5R_1 + C_1L_1g_m\right) + s\left(C_1R_1g_m + C_5R_5g_m - C_5\right)}{s^4\left(C_1C_5C_LL_1R_5g_m + C_1C_5C_LL_1\right) + s^3\left(C_1C_5C_LR_1R_5g_m + C_1C_5C_LR_1 + C_1C_5C_LR_5 + 2C_1C_5L_1g_m + C_1C_LL_1g_m\right) + s^2\left(2C_1C_5R_1g_m + C_1C_5 + C_1C_LR_1g_m + C_1C_L + C_5C_LR_5g_m + C_5C_L\right) + s\left(2C_5g_m + C_Lg_m\right)}$$

9.678 X-INVALID-ORDER-678 $Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ R_5 + \frac{1}{C_5 s},\ \frac{R_L}{C_L R_L s+1}\right)$

$$H(s) = \frac{R_Lg_m + s^3\left(C_1C_5L_1R_5R_Lg_m - C_1C_5L_1R_L\right) + s^2\left(C_1C_5R_1R_5R_Lg_m - C_1C_5R_1R_L + C_1L_1R_Lg_m\right) + s\left(C_1R_1R_Lg_m + C_5R_5R_Lg_m - C_5R_L\right)}{g_m + s^4\left(C_1C_5C_LL_1R_5R_Lg_m + C_1C_5C_LL_1R_L\right) + s^3\left(C_1C_5C_LR_1R_5R_Lg_m + C_1C_5C_LR_1R_L + C_1C_5C_LR_5R_L + C_1C_5L_1R_5g_m + 2C_1C_5L_1R_Lg_m + C_1C_5L_1 + C_1C_LL_1R_Lg_m\right) + s^2\left(C_1C_5R_1R_5g_m + 2C_1C_5R_1R_Lg_m + C_1C_5R_1 + C_1C_5R_5 + C_1C_5R_L + C_1C_LR_1R_Lg_m\right.}$$

9.679 X-INVALID-ORDER-679 $Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ R_5 + \frac{1}{C_5 s},\ R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{g_m + s^4\left(C_1C_5C_LL_1R_5R_Lg_m - C_1C_5C_LL_1R_L\right) + s^3\left(C_1C_5C_LR_1R_5R_Lg_m - C_1C_5C_LR_1R_L + C_1C_5L_1R_5g_m - C_1C_5L_1 + C_1C_LL_1R_Lg_m\right) + s^2\left(C_1C_5R_1R_5g_m - C_1C_5R_1 + C_1C_LR_1R_Lg_m + C_1L_1g_m + C_5C_LR_5R_Lg_m - C_5C_LR_L\right) + s\left(C_1R_1g_m + C_5R_5g_m - \right.}{s^4\left(C_1C_5C_LL_1R_5g_m + 2C_1C_5C_LL_1R_Lg_m + C_1C_5C_LL_1\right) + s^3\left(C_1C_5C_LR_1R_5g_m + 2C_1C_5C_LR_1R_Lg_m + C_1C_5C_LR_1 + C_1C_5C_LR_5 + C_1C_5C_LR_L + 2C_1C_5L_1g_m + C_1C_LL_1g_m\right) + s^2\left(2C_1C_5R_1g_m + C_1C_5 + C_1C_LR_1g_m + C_1C_L + C_5C_LR_5g_m + 2C_5C_LR_Lg_m + C_5C_L\right.}$$

9.680 X-INVALID-ORDER-680 $Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ R_5 + \frac{1}{C_5 s},\ L_L s + \frac{1}{C_L s}\right)$

$$H(s) = \frac{g_m + s^5\left(C_1C_5C_LL_1L_LR_5g_m - C_1C_5C_LL_1L_L\right) + s^4\left(C_1C_5C_LL_LR_1R_5g_m - C_1C_5C_LL_LR_1 + C_1C_LL_1L_Lg_m\right) + s^3\left(C_1C_5L_1R_5g_m - C_1C_5L_1 + C_1C_LL_LR_1g_m + C_5C_LL_LR_5g_m - C_5C_LL_L\right) + s^2\left(C_1C_5R_1R_5g_m - C_1C_5R_1 + C_1L_1g_m + C_LL_Lg_m\right) + s\left(C_1R_1g_m\right.}{2C_1C_5C_LL_1L_Lg_ms^5 + s^4\left(C_1C_5C_LL_1R_5g_m + C_1C_5C_LL_1 + 2C_1C_5C_LL_LR_1g_m + C_1C_5C_LL_L\right) + s^3\left(C_1C_5C_LR_1R_5g_m + C_1C_5C_LR_1 + C_1C_5C_LR_5 + 2C_1C_5L_1g_m + C_1C_LL_1g_m + 2C_5C_LL_Lg_m\right) + s^2\left(2C_1C_5R_1g_m + C_1C_5 + C_1C_LR_1g_m + C_1C_L + C_5C_LR_5g_m + C_5C\right.}$$

9.681 X-INVALID-ORDER-681 $Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ R_5 + \frac{1}{C_5 s},\ \frac{L_L s}{C_L L_L s^2+1}\right)$

$$H(s) = \frac{L_Lg_ms + s^4\left(C_1C_5L_1L_LR_5g_m - C_1C_5L_1L_L\right) + s^3\left(C_1C_5L_LR_1R_5g_m - C_1C_5L_LR_1 + C_1L_1L_Lg_m\right) + s^2\left(C_1L_LR_1g_m + C_5L_LR_5g_m - C_5L_L\right)}{g_m + s^5\left(C_1C_5C_LL_1L_LR_5g_m + C_1C_5C_LL_1L_L\right) + s^4\left(C_1C_5C_LL_LR_1R_5g_m + C_1C_5C_LL_LR_1 + C_1C_5C_LL_LR_5 + 2C_1C_5L_1L_Lg_m + C_1C_LL_1L_Lg_m\right) + s^3\left(C_1C_5L_1R_5g_m + C_1C_5L_1 + 2C_1C_5L_LR_1g_m + C_1C_5L_L + C_1C_LL_LR_1g_m + C_1C_LL_L + C_5C_LL_LR_5g_m + C_5C_LL_L\right.}$$

9.682 X-INVALID-ORDER-682 $Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ R_5 + \frac{1}{C_5 s},\ L_L s + R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{g_m + s^5\left(C_1C_5C_LL_1L_LR_5g_m - C_1C_5C_LL_1L_L\right) + s^4\left(C_1C_5C_LL_1R_5R_Lg_m - C_1C_5C_LL_1R_L + C_1C_5C_LL_LR_1R_5g_m - C_1C_5C_LL_LR_1 + C_1C_LL_1L_Lg_m\right) + s^3\left(C_1C_5C_LR_1R_5R_Lg_m - C_1C_5C_LR_1R_L + C_1C_5L_1R_5g_m - C_1C_5L_1 + C_1C_LL_1R_Lg_m + C_1C_LL_LR_1g_m + C_5C\right.}{2C_1C_5C_LL_1L_Lg_ms^5 + s^4\left(C_1C_5C_LL_1R_5g_m + 2C_1C_5C_LL_1R_Lg_m + C_1C_5C_LL_1 + 2C_1C_5C_LL_LR_1g_m + C_1C_5C_LL_L\right) + s^3\left(C_1C_5C_LR_1R_5g_m + 2C_1C_5C_LR_1R_Lg_m + C_1C_5C_LR_1 + C_1C_5C_LR_5 + C_1C_5C_LR_L + 2C_1C_5L_1g_m + C_1C_L\right.}$$

9.683 X-INVALID-ORDER-683 $Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ R_5 + \frac{1}{C_5 s},\ \frac{L_L R_L s}{C_L L_L R_L s^2+L_L s+R_L}\right)$

$$H(s) = \frac{L_LR_Lg_ms + s^4\left(C_1C_5L_1L_LR_5R_Lg_m - C\right.}{R_Lg_m + s^5\left(C_1C_5C_LL_1L_LR_5R_Lg_m + C_1C_5C_LL_1L_LR_L\right) + s^4\left(C_1C_5C_LL_LR_1R_5R_Lg_m + C_1C_5C_LL_LR_1R_L + C_1C_5C_LL_LR_5R_L + C_1C_5L_1L_LR_5g_m + 2C_1C_5L_1L_LR_Lg_m + C_1C_5L_1L_L + C_1C_LL_1L_LR_Lg_m\right) + s^3\left(C_1C_5L_1R_5R_Lg_m + C_1C_5L_1R_L + C_1C_5L_LR_1R_5g_m + \right.}$$

9.684 X-INVALID-ORDER-684 $Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ R_5 + \frac{1}{C_5 s},\ \frac{C_L L_L R_L s^2+L_L s+R_L}{C_L L_L s^2+1}\right)$

$$H(s) = \frac{R_Lg_m + s^5\left(C_1C_5C_LL_1L_LR_5R_Lg_m - C_1C_5C_LL_1L_LR_L\right) + s^4\left(C_1C_5C_LL_LR_1R_5R_Lg_m - C_1C_5C_LL_LR_1R_L + C_1C_5L_1L_LR_5g_m - C_1C_5L_1L_L + C_1C_LL_1L_LR_Lg_m\right) + s^3\left(C_1C_5L_1R_5R_Lg_m - C_1C_5L_1R_L + C_1C_5L_LR_1R_5g_m - C_1C_5L_L\right.}{g_m + s^5\left(C_1C_5C_LL_1L_LR_5g_m + 2C_1C_5C_LL_1L_LR_Lg_m + C_1C_5C_LL_1L_L\right) + s^4\left(C_1C_5C_LL_LR_1R_5g_m + 2C_1C_5C_LL_LR_1R_Lg_m + C_1C_5C_LL_LR_1 + C_1C_5C_LL_LR_5 + C_1C_5C_LL_LR_L + 2C_1C_5L_1L_Lg_m + C_1C_LL_1L_Lg_m\right) + s^3\left(C_1C_5L_1R_5g_m + 2C_1C_5L_1R_Lg_m + C_1C_5L_1 + 2\right.}$$

9.685 X-INVALID-ORDER-685 $Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ R_5 + \frac{1}{C_5 s},\ \frac{R_L\left(C_L L_L s^2+1\right)}{C_L L_L s^2+C_L R_L s+1}\right)$

$$H(s) = \frac{R_L g_m + s^5 \left(C_1 C_5 C_L L_1 L_L R_5 R_L g_m - C_1 C_5 C_L L_1 L_L R_L\right) + s^4 \left(C_1 C_5 C_L L_L R_1 R_5 R_L g_m - C_1 C_5 C_L L_L \cdots\right.}{g_m + s^5 \left(C_1 C_5 C_L L_1 L_L R_5 g_m + 2C_1 C_5 C_L L_1 L_L R_L g_m + C_1 C_5 C_L L_1 L_L\right) + s^4 \left(C_1 C_5 C_L L_1 R_5 R_L g_m + C_1 C_5 C_L L_1 R_L + C_1 C_5 C_L L_L R_1 R_5 g_m + 2C_1 C_5 C_L L_L R_1 R_L g_m + C_1 C_5 C_L L_L R_1 + C_1 C_5 C_L L_L R_5 + C_1 C_5 C_L L_L R_L + C_1 C_L L_1 L_L g_m\right) + s^3 \left(C_1 C_5 C_L R_1 R_5 R_L g_m + C \cdots\right.}$$

9.686 X-INVALID-ORDER-686 $Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ L_5 s + \frac{1}{C_5 s},\ R_L\right)$

$$H(s) = \frac{C_1 C_5 L_1 L_5 R_L g_m s^4 + R_L g_m + s^3 \left(-C_1 C_5 L_1 R_L + C_1 C_5 L_5 R_1 R_L g_m\right) + s^2 \left(-C_1 C_5 R_1 R_L + C_1 L_1 R_L g_m + C_5 L_5 R_L g_m\right) + s \left(C_1 R_1 R_L g_m - C_5 R_L\right)}{C_1 C_5 L_1 L_5 g_m s^4 + g_m + s^3 \left(2C_1 C_5 L_1 R_L g_m + C_1 C_5 L_1 + C_1 C_5 L_5 R_1 g_m + C_1 C_5 L_5\right) + s^2 \left(2C_1 C_5 R_1 R_L g_m + C_1 C_5 R_1 + C_1 C_5 R_L + C_1 L_1 g_m + C_5 L_5 g_m\right) + s \left(C_1 R_1 g_m + C_1 + 2C_5 R_L g_m + C_5\right)}$$

9.687 X-INVALID-ORDER-687 $Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ L_5 s + \frac{1}{C_5 s},\ \frac{1}{C_L s}\right)$

$$H(s) = \frac{C_1 C_5 L_1 L_5 g_m s^4 + g_m + s^3 \left(-C_1 C_5 L_1 + C_1 C_5 L_5 R_1 g_m\right) + s^2 \left(-C_1 C_5 R_1 + C_1 L_1 g_m + C_5 L_5 g_m\right) + s \left(C_1 R_1 g_m - C_5\right)}{C_1 C_5 C_L L_1 L_5 g_m s^5 + s^4 \left(C_1 C_5 C_L L_1 + C_1 C_5 C_L L_5 R_1 g_m + C_1 C_5 C_L L_5\right) + s^3 \left(C_1 C_5 C_L R_1 + 2C_1 C_5 L_1 g_m + C_1 C_L L_1 g_m + C_5 C_L L_5 g_m\right) + s^2 \left(2C_1 C_5 R_1 g_m + C_1 C_5 + C_1 C_L R_1 g_m + C_1 C_L + C_5 C_L\right) + s \left(2C_5 g_m + C_L g_m\right)}$$

9.688 X-INVALID-ORDER-688 $Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ L_5 s + \frac{1}{C_5 s},\ \frac{R_L}{C_L R_L s+1}\right)$

$$H(s) = \frac{C_1 C_5 L_1 L_5 R_L g_m s^4 + R_L g_m + s^3 \left(-C_1 C_5 L_1 R_L + C_1 C_5 L_5 R_1 R_L g_m\right) + s^2 \left(-C_1 C_5 R_1 R_L + C_1 L_1 R_L g_m + C_5 L_5 R_L g_m\right) + s \left(C_1 R_1 R_L g_m - C_5 R_L\right)}{C_1 C_5 C_L L_1 L_5 R_L g_m s^5 + g_m + s^4 \left(C_1 C_5 C_L L_1 R_L + C_1 C_5 C_L L_5 R_1 R_L g_m + C_1 C_5 C_L L_5 R_L + C_1 C_5 L_1 L_5 g_m\right) + s^3 \left(C_1 C_5 C_L R_1 R_L + 2C_1 C_5 L_1 R_L g_m + C_1 C_5 L_1 + C_1 C_5 L_5 R_1 g_m + C_1 C_5 L_5 + C_1 C_L L_1 R_L g_m + C_5 C_L L_5 R_L g_m\right) + s^2 \left(2C_1 C_5 R_1 R_L g_m + C_1 C_5 R_1 + C_1 C_5 R \cdots\right.}$$

9.689 X-INVALID-ORDER-689 $Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ L_5 s + \frac{1}{C_5 s},\ R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{C_1 C_5 C_L L_1 L_5 R_L g_m s^5 + g_m + s^4 \left(-C_1 C_5 C_L L_1 R_L + C_1 C_5 C_L L_5 R_1 R_L g_m + C_1 C_5 L_1 L_5 g_m\right) + s^3 \left(-C_1 C_5 C_L R_1 R_L - C_1 C_5 L_1 + C_1 C_5 L_5 R_1 g_m + C_1 C_L L_1 R_L g_m + C_5 C_L L_5 R_L g_m\right) + s^2 \left(-C_1 C_5 R_1 + C_1 C_L R_1 R_L g_m + C_1 L_1 g_m - C_5 C_L R_L + C_5 L_5 g_m\right) + s \left(C_1 R_1 g \cdots\right.}{C_1 C_5 C_L L_1 L_5 g_m s^5 + s^4 \left(2C_1 C_5 C_L L_1 R_L g_m + C_1 C_5 C_L L_1 + C_1 C_5 C_L L_5 R_1 g_m + C_1 C_5 C_L L_5\right) + s^3 \left(2C_1 C_5 C_L R_1 R_L g_m + C_1 C_5 C_L R_1 + C_1 C_5 C_L R_L + 2C_1 C_5 L_1 g_m + C_1 C_L L_1 g_m + C_5 C_L L_5 g_m\right) + s^2 \left(2C_1 C_5 R_1 g_m + C_1 C_5 + C_1 C_L R_1 g_m + C_1 C_L + 2C_5 C_L R_L g_m + C_5 C \cdots\right.}$$

9.690 X-INVALID-ORDER-690 $Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ L_5 s + \frac{1}{C_5 s},\ L_L s + \frac{1}{C_L s}\right)$

$$H(s) = \frac{C_1 C_5 C_L L_1 L_5 L_L g_m s^6 + g_m + s^5 \left(-C_1 C_5 C_L L_1 L_L + C_1 C_5 C_L L_5 L_L R_1 g_m\right) + s^4 \left(-C_1 C_5 C_L L_L R_1 + C_1 C_5 L_1 L_5 g_m + C_1 C_L L_1 L_L g_m + C_5 C_L L_5 L_L g_m\right) + s^3 \left(-C_1 C_5 L_1 + C_1 C_5 L_5 R_1 g_m + C_1 C_L L_L R_1 g_m - C_5 C_L L_L\right) + s^2 \left(-C_1 C_5 R_1 + C_1 L_1 g_m + C_5 L_5 g_m + C_L L_L g \cdots\right.}{s^5 \left(C_1 C_5 C_L L_1 L_5 g_m + 2C_1 C_5 C_L L_1 L_L g_m\right) + s^4 \left(C_1 C_5 C_L L_1 + C_1 C_5 C_L L_5 R_1 g_m + C_1 C_5 C_L L_5 + 2C_1 C_5 C_L L_L R_1 g_m + C_1 C_5 C_L L_L\right) + s^3 \left(C_1 C_5 C_L R_1 + 2C_1 C_5 L_1 g_m + C_1 C_L L_1 g_m + C_5 C_L L_5 g_m + 2C_5 C_L L_L g_m\right) + s^2 \left(2C_1 C_5 R_1 g_m + C_1 C_5 + C_1 C_L R_1 g_m + C_1 C_L + C_5 \cdots\right.}$$

9.691 X-INVALID-ORDER-691 $Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ L_5 s + \frac{1}{C_5 s},\ \frac{L_L s}{C_L L_L s^2+1}\right)$

$$H(s) = \frac{C_1 C_5 L_1 L_5 L_L g_m s^5 + L_L g_m s + s^4 \left(-C_1 C_5 L_1 L_L + C_1 C_5 L_5 L_L R_1 g_m\right) + s^3 \left(-C_1 C_5 L_L R_1 + C_1 L_1 L_L g_m + C_5 L_5 L_L g_m\right) + s^2 \left(C_1 L_L R_1 g_m - C_5 L_L\right)}{C_1 C_5 C_L L_1 L_5 L_L g_m s^6 + g_m + s^5 \left(C_1 C_5 C_L L_1 L_L + C_1 C_5 C_L L_5 L_L R_1 g_m + C_1 C_5 C_L L_5 L_L\right) + s^4 \left(C_1 C_5 C_L L_L R_1 + C_1 C_5 L_1 L_5 g_m + 2C_1 C_5 L_1 L_L g_m + C_1 C_L L_1 L_L g_m + C_5 C_L L_5 L_L g_m\right) + s^3 \left(C_1 C_5 L_1 + C_1 C_5 L_5 R_1 g_m + C_1 C_5 L_5 + 2C_1 C_5 L_L R_1 g_m + C_1 C_5 L_L + C_1 C_L L \cdots\right.}$$

9.692 X-INVALID-ORDER-692 $Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ L_5 s + \frac{1}{C_5 s},\ L_L s + R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{C_1 C_5 C_L L_1 L_5 L_L g_m s^6 + g_m + s^5 \left(C_1 C_5 C_L L_1 L_5 R_L g_m - C_1 C_5 C_L L_1 L_L + C_1 C_5 C_L L_5 L_L R_1 g_m\right) + s^4 \left(-C_1 C_5 C_L L_1 R_L + C_1 C_5 C_L L_5 R_1 R_L g_m - C_1 C_5 C_L L_L R_1 + C_1 C_5 L_1 L_5 g_m + C_1 C_L L_1 L_L g_m + C_5 C_L L_5 L_L g_m\right) + s^3 \left(-C_1 C_5 C_L R_1 R_L - C_1 C_5 L_1 + C_1 C_5 L_5 R_1 g_m + C \cdots\right.}{s^5 \left(C_1 C_5 C_L L_1 L_5 g_m + 2C_1 C_5 C_L L_1 L_L g_m\right) + s^4 \left(2C_1 C_5 C_L L_1 R_L g_m + C_1 C_5 C_L L_1 + C_1 C_5 C_L L_5 R_1 g_m + C_1 C_5 C_L L_5 + 2C_1 C_5 C_L L_L R_1 g_m + C_1 C_5 C_L L_L\right) + s^3 \left(2C_1 C_5 C_L R_1 R_L g_m + C_1 C_5 C_L R_1 + C_1 C_5 C_L R_L + 2C_1 C_5 L_1 g_m + C_1 \cdots\right.}$$

9.693 X-INVALID-ORDER-693 $Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ L_5 s + \frac{1}{C_5 s},\ \frac{L_L R_L s}{C_L L_L R_L s^2+L_L s+R_L}\right)$

$$H(s) = \frac{C_1 C_5 L_1 L_5 L_L R_L g_m s^5 + L_L R_L g_m s + s^4 \left(-\cdots\right.}{C_1 C_5 C_L L_1 L_5 L_L R_L g_m s^6 + R_L g_m + s^5 \left(C_1 C_5 C_L L_1 L_L R_L + C_1 C_5 C_L L_5 L_L R_1 R_L g_m + C_1 C_5 C_L L_5 L_L R_L + C_1 C_5 L_1 L_5 L_L g_m\right) + s^4 \left(C_1 C_5 C_L L_L R_1 R_L + C_1 C_5 L_1 L_5 R_L g_m + 2C_1 C_5 L_1 L_L R_L g_m + C_1 C_5 L_1 L_L + C_1 C_5 L_5 L_L R_1 g_m + C_1 C_5 L_5 L_L + C_1 C_L L_1 L_L R_L g_m + C_5 \cdots\right.}$$

9.694 X-INVALID-ORDER-694 $Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ L_5 s + \frac{1}{C_5 s},\ \frac{C_L L_L R_L s^2+L_L s+R_L}{C_L L_L s^2+1}\right)$

$$H(s) = \frac{C_1 C_5 C_L L_1 L_5 L_L R_L g_m s^6 + R_L g_m + s^5 \left(-C_1 C_5 C_L L_1 L_L R_L + C_1 C_5 C_L L_5 L_L R_1 R_L g_m + C_1 C_5 L_1 L_5 L_L g_m\right) + s^4 \left(-C_1 C_5 C_L L_L R_1 R_L + C_1 C_5 L_1 L_5 R_L g_m - C_1 C_5 L_1 L_L + C_1 C_5 L_5 L_L R_1 g_m + C_1 C_L L_1 L_L R_L g_m + C_5 C_L L_5 L_L R_L g_m\right) + s^3 \left(\cdots\right.}{C_1 C_5 C_L L_1 L_5 L_L g_m s^6 + g_m + s^5 \left(2C_1 C_5 C_L L_1 L_L R_L g_m + C_1 C_5 C_L L_1 L_L + C_1 C_5 C_L L_5 L_L R_1 g_m + C_1 C_5 C_L L_5 L_L\right) + s^4 \left(2C_1 C_5 C_L L_L R_1 R_L g_m + C_1 C_5 C_L L_L R_1 + C_1 C_5 C_L L_L R_L + C_1 C_5 L_1 L_5 g_m + 2C_1 C_5 L_1 L_L g_m + C_1 C_L L_1 L_L g_m + C_5 C_L L_5 L_L g_m\right) + s^3 \left(2C_1 C_5 L_1 R \cdots\right.}$$

9.695 X-INVALID-ORDER-695 $Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ L_5 s + \frac{1}{C_5 s},\ \frac{R_L\left(C_L L_L s^2+1\right)}{C_L L_L s^2+C_L R_L s+1}\right)$

$$H(s) = \frac{C_1C_5C_LL_1L_5L_LR_Lg_ms^6 + R_Lg_m + s^5\left(-C_1C_5C_LL_1L_LR_L + C_1C_5C_LL_5L_LR_1R_Lg_m\right) + s^4\left(-C_1C_5C_LL_1\right.}{C_1C_5C_LL_1L_5L_Lg_ms^6 + g_m + s^5\left(C_1C_5C_LL_1L_5R_Lg_m + 2C_1C_5C_LL_1L_LR_Lg_m + C_1C_5C_LL_1L_L + C_1C_5C_LL_5L_LR_1g_m + C_1C_5C_LL_5L_L\right) + s^4\left(C_1C_5C_LL_1R_L + C_1C_5C_LL_5R_1R_Lg_m + C_1C_5C_LL_5R_L + 2C_1C_5C_LL_LR_1R_Lg_m + C_1C_5C_LL_LR_1 + C_1C_5C_LL_LR_L + C_1C\right.}$$

9.696 X-INVALID-ORDER-696 $Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{L_5 s}{C_5 L_5 s^2+1},\ R_L\right)$

$$H(s) = \frac{-C_1C_5L_1L_5R_Ls^4 - R_L + s^3\left(-C_1C_5L_5R_1R_L + C_1L_1L_5R_Lg_m\right) + s^2\left(-C_1L_1R_L + C_1L_5R_1R_Lg_m - C_5L_5R_L\right) + s\left(-C_1R_1R_L + L_5R_Lg_m\right)}{2R_Lg_m + s^4\left(2C_1C_5L_1L_5R_Lg_m + C_1C_5L_1L_5\right) + s^3\left(2C_1C_5L_5R_1R_Lg_m + C_1C_5L_5R_1 + C_1C_5L_5R_L + C_1L_1L_5g_m\right) + s^2\left(2C_1L_1R_Lg_m + C_1L_1 + C_1L_5R_1g_m + C_1L_5 + 2C_5L_5R_Lg_m + C_5L_5\right) + s\left(2C_1R_1R_Lg_m + C_1R_1 + C_1R_L + L_5g_m\right) + 1}$$

9.697 X-INVALID-ORDER-697 $Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{L_5 s}{C_5 L_5 s^2+1},\ \frac{1}{C_L s}\right)$

$$H(s) = \frac{-C_1C_5L_1L_5s^4 + s^3\left(-C_1C_5L_5R_1 + C_1L_1L_5g_m\right) + s^2\left(-C_1L_1 + C_1L_5R_1g_m - C_5L_5\right) + s\left(-C_1R_1 + L_5g_m\right) - 1}{C_1C_5C_LL_1L_5s^5 + 2g_m + s^4\left(C_1C_5C_LL_5R_1 + 2C_1C_5L_1L_5g_m + C_1C_LL_1L_5g_m\right) + s^3\left(2C_1C_5L_5R_1g_m + C_1C_5L_5 + C_1C_LL_1 + C_1C_LL_5R_1g_m + C_1C_LL_5 + C_5C_LL_5\right) + s^2\left(C_1C_LR_1 + 2C_1L_1g_m + 2C_5L_5g_m + C_LL_5g_m\right) + s\left(2C_1R_1g_m + C_1 + C_L\right)}$$

9.698 X-INVALID-ORDER-698 $Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{L_5 s}{C_5 L_5 s^2+1},\ \frac{R_L}{C_L R_L s+1}\right)$

$$H(s) = \frac{-C_1C_5L_1L_5R_Ls^4 - R_L + s^3\left(-C_1C_5L_5R_1R_L + C_1L_1L_5R_Lg_m\right) + s^2\left(-C_1L_1R_L + C_1L_5R_1R_Lg_m - C_5L_5R_L\right) + s\left(-C_1R_1R_L + L_5\right.}{C_1C_5C_LL_1L_5R_Ls^5 + 2R_Lg_m + s^4\left(C_1C_5C_LL_5R_1R_L + 2C_1C_5L_1L_5R_Lg_m + C_1C_5L_1L_5 + C_1C_LL_1L_5R_Lg_m\right) + s^3\left(2C_1C_5L_5R_1R_Lg_m + C_1C_5L_5R_1 + C_1C_5L_5R_L + C_1C_LL_1R_L + C_1C_LL_5R_1R_Lg_m + C_1C_LL_5R_L + C_1L_1L_5g_m + C_5C_LL_5R_L\right) + s^2\left(C_1C_LR_1R_L + 2C\right.}$$

9.699 X-INVALID-ORDER-699 $Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{L_5 s}{C_5 L_5 s^2+1},\ R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{-C_1C_5C_LL_1L_5R_Ls^5 + s^4\left(-C_1C_5C_LL_5R_1R_L - C_1C_5L_1L_5 + C_1C_LL_1L_5R_Lg_m\right) + s^3\left(-C_1C_5L_5R_1 - C_1C_LL_1R_L + C_1C_LL_5R_1R_Lg_m + C_1L_1L_5g_m - C_5C_LL_5R_L\right) + s^2\left(-C_1C_LR_1R_L - C_1L_1 + C_1L_5\right.}{2g_m + s^5\left(2C_1C_5C_LL_1L_5R_Lg_m + C_1C_5C_LL_1L_5\right) + s^4\left(2C_1C_5C_LL_5R_1R_Lg_m + C_1C_5C_LL_5R_1 + C_1C_5C_LL_5R_L + 2C_1C_5L_1L_5g_m + C_1C_LL_1L_5g_m\right) + s^3\left(2C_1C_5L_5R_1g_m + C_1C_5L_5 + 2C_1C_LL_1R_Lg_m + C_1C_LL_1 + C_1C_LL_5R_1g_m + C_1C_LL_5 + 2C_5C_LL_5R_Lg_m + C_5C\right.}$$

9.700 X-INVALID-ORDER-700 $Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{L_5 s}{C_5 L_5 s^2+1},\ L_L s + \frac{1}{C_L s}\right)$

$$H(s) = \frac{-C_1C_5C_LL_1L_5L_Ls^6 + s^5\left(-C_1C_5C_LL_5L_LR_1 + C_1C_LL_1L_5L_Lg_m\right) + s^4\left(-C_1C_5L_1L_5 - C_1C_LL_1L_L + C_1C_LL_5L_LR_1g_m - C_5C_LL_5L_L\right) + s^3\left(-C_1C_5L_5R_1 - C_1C_LL_LR_1 + C_1L_1L_5g_m + C_LL_5L_Lg_m\right) + s^2\right.}{2C_1C_5C_LL_1L_5L_Lg_ms^6 + 2g_m + s^5\left(C_1C_5C_LL_1L_5 + 2C_1C_5C_LL_5L_LR_1g_m + C_1C_5C_LL_5L_L\right) + s^4\left(C_1C_5C_LL_5R_1 + 2C_1C_5L_1L_5g_m + C_1C_LL_1L_5g_m + 2C_1C_LL_1L_Lg_m + 2C_5C_LL_5L_Lg_m\right) + s^3\left(2C_1C_5L_5R_1g_m + C_1C_5L_5 + C_1C_LL_1 + C_1C_LL_5R_1g_m + C_1C_LL_5 + 2C_1\right.}$$

9.701 X-INVALID-ORDER-701 $Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{L_5 s}{C_5 L_5 s^2+1},\ \frac{L_L s}{C_L L_L s^2+1}\right)$

$$H(s) = \frac{-C_1C_5L_1L_5L_Ls^5 - L_Ls + s^4\left(-C_1C_5L_5L_LR_1 + C_1L_1L_5L_Lg_m\right) + s^3\left(-C_1L_1L_L + C_1L_5L_LR_1g_m - C_5L_5L_L\right) + s^2\left(-C_1L_LR_1 + L_5\right.}{C_1C_5C_LL_1L_5L_Ls^6 + s^5\left(C_1C_5C_LL_5L_LR_1 + 2C_1C_5L_1L_5L_Lg_m + C_1C_LL_1L_5L_Lg_m\right) + s^4\left(C_1C_5L_1L_5 + 2C_1C_5L_5L_LR_1g_m + C_1C_5L_5L_L + C_1C_LL_1L_L + C_1C_LL_5L_LR_1g_m + C_1C_LL_5L_L + C_5C_LL_5L_L\right) + s^3\left(C_1C_5L_5R_1 + C_1C_LL_LR_1 + C_1L_1L_5g_m + 2C_1L_1L_Lg_m + \right.}$$

9.702 X-INVALID-ORDER-702 $Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{L_5 s}{C_5 L_5 s^2+1},\ L_L s + R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{-C_1C_5C_LL_1L_5L_Ls^6 + s^5\left(-C_1C_5C_LL_1L_5R_L - C_1C_5C_LL_5L_LR_1 + C_1C_LL_1L_5L_Lg_m\right) + s^4\left(-C_1C_5C_LL_5R_1R_L - C_1C_5L_1L_5 + C_1C_LL_1L_5R_Lg_m - C_1C_LL_1L_L + C_1C_LL_5L_LR_1g_m - C_5C_LL_5L_L\right) + s^3\left(-\right.}{2C_1C_5C_LL_1L_5L_Lg_ms^6 + 2g_m + s^5\left(2C_1C_5C_LL_1L_5R_Lg_m + C_1C_5C_LL_1L_5 + 2C_1C_5C_LL_5L_LR_1g_m + C_1C_5C_LL_5L_L\right) + s^4\left(2C_1C_5C_LL_5R_1R_Lg_m + C_1C_5C_LL_5R_1 + C_1C_5C_LL_5R_L + 2C_1C_5L_1L_5g_m + C_1C_LL_1L_5g_m + 2C_1C_LL_1L_Lg_m + 2C_5C_LL_5L_Lg_m\right) + s^3\left(2C_1C_5\right.}$$

9.703 X-INVALID-ORDER-703 $Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{L_5 s}{C_5 L_5 s^2+1},\ \frac{L_L R_L s}{C_L L_L R_L s^2+L_L s+R_L}\right)$

$$H(s) = \frac{-C_1C_5L_1L_5L_LR_Ls^5 - L_LR_Ls + s^4\left(\right.}{C_1C_5C_LL_1L_5L_LR_Ls^6 + R_L + s^5\left(C_1C_5C_LL_5L_LR_1R_L + 2C_1C_5L_1L_5L_LR_Lg_m + C_1C_5L_1L_5L_L + C_1C_LL_1L_5L_LR_Lg_m\right) + s^4\left(C_1C_5L_1L_5R_L + 2C_1C_5L_5L_LR_1R_Lg_m + C_1C_5L_5L_LR_1 + C_1C_5L_5L_LR_L + C_1C_LL_1L_LR_L + C_1C_LL_5L_LR_1R_Lg_m + C_1C_LL_5L_LR_L + C_1L\right.}$$

9.704 X-INVALID-ORDER-704 $Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{L_5 s}{C_5 L_5 s^2+1},\ \frac{C_L L_L R_L s^2+L_L s+R_L}{C_L L_L s^2+1}\right)$

$$H(s) = \frac{-C_1C_5C_LL_1L_5L_LR_Ls^6 - R_L + s^5\left(-C_1C_5C_LL_5L_LR_1R_L - C_1C_5L_1L_5L_L + C_1C_LL_1L_5L_LR_Lg_m\right) + s^4\left(-C_1C_5L_1L_5R_L - C_1C_5L_5L_LR_1\right.}{2R_Lg_m + s^6\left(2C_1C_5C_LL_1L_5L_LR_Lg_m + C_1C_5C_LL_1L_5L_L\right) + s^5\left(2C_1C_5C_LL_5L_LR_1R_Lg_m + C_1C_5C_LL_5L_LR_1 + C_1C_5C_LL_5L_LR_L + 2C_1C_5L_1L_5L_Lg_m + C_1C_LL_1L_5L_Lg_m\right) + s^4\left(2C_1C_5L_1L_5R_Lg_m + C_1C_5L_1L_5 + 2C_1C_5L_5L_LR_1g_m + C_1C_5L_5L_L + 2C_1C_LL_1L_LR_Lg\right.}$$

9.705 X-INVALID-ORDER-705 $Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{L_5 s}{C_5 L_5 s^2+1},\ \frac{R_L\left(C_L L_L s^2+1\right)}{C_L L_L s^2+C_L R_L s+1}\right)$

$$H(s) = \frac{-C_1C_5C_LL_1L_5L_LR_Ls^6 - R_L + s^5\left(-C_1C_5C_LL_5L_LR_1R\right.}{2R_Lg_m + s^6\left(2C_1C_5C_LL_1L_5L_LR_Lg_m + C_1C_5C_LL_1L_5L_L\right) + s^5\left(C_1C_5C_LL_1L_5R_L + 2C_1C_5C_LL_5L_LR_1R_Lg_m + C_1C_5C_LL_5L_LR_1 + C_1C_5C_LL_5L_LR_L + C_1C_LL_1L_5L_Lg_m\right) + s^4\left(C_1C_5C_LL_5R_1R_L + 2C_1C_5L_1L_5R_Lg_m + C_1C_5L_1L_5 + C_1C_LL_1L_5R_Lg_m + 2C_1C_LL_1L\right.}$$

9.706 X-INVALID-ORDER-706 $Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ L_5 s + R_5 + \frac{1}{C_5 s},\ R_L\right)$

$$H(s) = \frac{C_1C_5L_1L_5R_Lg_ms^4 + R_Lg_m + s^3\left(C_1C_5L_1R_5R_Lg_m - C_1C_5L_1R_L + C_1C_5L_5R_1R_Lg_m\right) + s^2\left(C_1C_5R_1R_5R_Lg_m - C_1C_5R_1R_L + C_1L_1R_Lg_m + C_5L_5R_Lg_m\right) + s\left(C_1R_1R_Lg_m + C_5R_5R_Lg_m - C_5R_L\right)}{C_1C_5L_1L_5g_ms^4 + g_m + s^3\left(C_1C_5L_1R_5g_m + 2C_1C_5L_1R_Lg_m + C_1C_5L_1 + C_1C_5L_5R_1g_m + C_1C_5L_5\right) + s^2\left(C_1C_5R_1R_5g_m + 2C_1C_5R_1R_Lg_m + C_1C_5R_1 + C_1C_5R_5 + C_1C_5R_L + C_1L_1g_m + C_5L_5g_m\right) + s\left(C_1R_1g_m + C_1 + C_5R_5g_m + 2C_5R_Lg_m + C_5\right)}$$

9.707 X-INVALID-ORDER-707 $Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ L_5 s + R_5 + \frac{1}{C_5 s},\ \frac{1}{C_L s}\right)$

$$H(s) = \frac{C_1C_5L_1L_5g_ms^4 + g_m + s^3\left(C_1C_5L_1R_5g_m - C_1C_5L_1 + C_1C_5L_5R_1g_m\right) + s^2\left(C_1C_5R_1R_5g_m - C_1C_5R_1 + C_1L_1g_m + C_5L_5g_m\right) + s\left(C_1R_1g_m + C_5R_5g_m - C_5\right)}{C_1C_5C_LL_1L_5g_ms^5 + s^4\left(C_1C_5C_LL_1R_5g_m + C_1C_5C_LL_1 + C_1C_5C_LL_5R_1g_m + C_1C_5C_LL_5\right) + s^3\left(C_1C_5C_LR_1R_5g_m + C_1C_5C_LR_1 + C_1C_5C_LR_5 + 2C_1C_5L_1g_m + C_1C_LL_1g_m + C_5C_LL_5g_m\right) + s^2\left(2C_1C_5R_1g_m + C_1C_5 + C_1C_LR_1g_m + C_1C_L + C_5C_LR_5g_m + C_5C_L\right) +}$$

9.708 X-INVALID-ORDER-708 $Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ L_5 s + R_5 + \frac{1}{C_5 s},\ \frac{R_L}{C_L R_L s+1}\right)$

$$H(s) = \frac{C_1C_5L_1L_5R_Lg_ms^4 + R_Lg_m + s^3\left(C_1C_5L_1R_5R_Lg_m - C_1C_5L_1R_L + C_1C_5L_5R_1R_Lg_m\right) + s^2\left(C_1C_5R_1R\right.}{C_1C_5C_LL_1L_5R_Lg_ms^5 + g_m + s^4\left(C_1C_5C_LL_1R_5R_Lg_m + C_1C_5C_LL_1R_L + C_1C_5C_LL_5R_1R_Lg_m + C_1C_5C_LL_5R_L + C_1C_5L_1L_5g_m\right) + s^3\left(C_1C_5C_LR_1R_5R_Lg_m + C_1C_5C_LR_1R_L + C_1C_5C_LR_5R_L + C_1C_5L_1R_5g_m + 2C_1C_5L_1R_Lg_m + C_1C_5L_1 + C_1C_5L_5R_1g_m + C_1C_5L\right.}$$

9.709 X-INVALID-ORDER-709 $Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ L_5 s + R_5 + \frac{1}{C_5 s},\ R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{C_1C_5C_LL_1L_5R_Lg_ms^5 + g_m + s^4\left(C_1C_5C_LL_1R_5R_Lg_m - C_1C_5C_LL_1R_L + C_1C_5C_LL_5R_1R_Lg_m + C_1C_5L_1L_5g_m\right) + s^3\left(C_1C_5C_LR_1R_5R_Lg_m - C_1C_5C_LR_1R_L + C_1C_5L_1R_5g_m - C_1C_5L_1 + C_1C_5L_5R_1g_m + C_1C_LL_1R_Lg_m + C_5C_LL_5R_Lg_m\right) + s^2\left(C_1C_5R_1R_5g_m - C_1C\right.}{C_1C_5C_LL_1L_5g_ms^5 + s^4\left(C_1C_5C_LL_1R_5g_m + 2C_1C_5C_LL_1R_Lg_m + C_1C_5C_LL_1 + C_1C_5C_LL_5R_1g_m + C_1C_5C_LL_5\right) + s^3\left(C_1C_5C_LR_1R_5g_m + 2C_1C_5C_LR_1R_Lg_m + C_1C_5C_LR_1 + C_1C_5C_LR_5 + C_1C_5C_LR_L + 2C_1C_5L_1g_m + C_1C_LL_1g_m + C_5C_LL_5g_m\right) + s^2\left(\right.}$$

9.710 X-INVALID-ORDER-710 $Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ L_5 s + R_5 + \frac{1}{C_5 s},\ L_L s + \frac{1}{C_L s}\right)$

$$H(s) = \frac{C_1C_5C_LL_1L_5L_Lg_ms^6 + g_m + s^5\left(C_1C_5C_LL_1L_LR_5g_m - C_1C_5C_LL_1L_L + C_1C_5C_LL_5L_LR_1g_m\right) + s^4\left(C_1C_5C_LL_LR_1R_5g_m - C_1C_5C_LL_LR_1 + C_1C_5L_1L_5g_m + C_1C_LL_1L_Lg_m + C_5C_LL_5L_Lg_m\right) + s^3\left(C_1C_5L_1R_5g_m - C_1C_5L_1 + C_1C_5L_5R_1g_m + C_1C_LL_LR_1g_m + C_5C_L\right.}{s^5\left(C_1C_5C_LL_1L_5g_m + 2C_1C_5C_LL_1L_Lg_m\right) + s^4\left(C_1C_5C_LL_1R_5g_m + C_1C_5C_LL_1 + C_1C_5C_LL_5R_1g_m + C_1C_5C_LL_5 + 2C_1C_5C_LL_LR_1g_m + C_1C_5C_LL_L\right) + s^3\left(C_1C_5C_LR_1R_5g_m + C_1C_5C_LR_1 + C_1C_5C_LR_5 + 2C_1C_5L_1g_m + C_1C_LL_1g_m + C_5C_LL_5g_m + 2C\right.}$$

9.711 X-INVALID-ORDER-711 $Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ L_5 s + R_5 + \frac{1}{C_5 s},\ \frac{L_L s}{C_L L_L s^2+1}\right)$

$$H(s) = \frac{C_1C_5L_1L_5L_Lg_ms^5 + L_Lg_ms + s^4\left(C_1C_5L_1L_LR_5g_m - C_1C_5L_1L_L + C_1C_5L_5L_LR_1g_m\right) + s^3\left(C_1C_5L_LR\right.}{C_1C_5C_LL_1L_5L_Lg_ms^6 + g_m + s^5\left(C_1C_5C_LL_1L_LR_5g_m + C_1C_5C_LL_1L_L + C_1C_5C_LL_5L_LR_1g_m + C_1C_5C_LL_5L_L\right) + s^4\left(C_1C_5C_LL_LR_1R_5g_m + C_1C_5C_LL_LR_1 + C_1C_5C_LL_LR_5 + C_1C_5L_1L_5g_m + 2C_1C_5L_1L_Lg_m + C_1C_LL_1L_Lg_m + C_5C_LL_5L_Lg_m\right) + s^3\left(C_1C_5L_1R_5g_m\right.}$$

9.712 X-INVALID-ORDER-712 $Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ L_5 s + R_5 + \frac{1}{C_5 s},\ L_L s + R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{C_1C_5C_LL_1L_5L_Lg_ms^6 + g_m + s^5\left(C_1C_5C_LL_1L_5R_Lg_m + C_1C_5C_LL_1L_LR_5g_m - C_1C_5C_LL_1L_L + C_1C_5C_LL_5L_LR_1g_m\right) + s^4\left(C_1C_5C_LL_1R_5R_Lg_m - C_1C_5C_LL_1R_L + C_1C_5C_LL_5R_1R_Lg_m + C_1C_5C_LL_LR_1R_5g_m - C_1C_5C_LL_LR_1 + C_1C_5L_1L_5g_m + C_1C_LL_1L_Lg_m + C_5\right.}{s^5\left(C_1C_5C_LL_1L_5g_m + 2C_1C_5C_LL_1L_Lg_m\right) + s^4\left(C_1C_5C_LL_1R_5g_m + 2C_1C_5C_LL_1R_Lg_m + C_1C_5C_LL_1 + C_1C_5C_LL_5R_1g_m + C_1C_5C_LL_5 + 2C_1C_5C_LL_LR_1g_m + C_1C_5C_LL_L\right) + s^3\left(\right.}$$

9.713 X-INVALID-ORDER-713 $Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ L_5 s + R_5 + \frac{1}{C_5 s},\ \frac{L_L R_L s}{C_L L_L R_L s^2+L_L s+R_L}\right)$

$$H(s) = \frac{C_1C_5C_LL_1L_5L_LR_Lg_ms^6 + R_Lg_m + s^5\left(C_1C_5C_LL_1L_LR_5R_Lg_m + C_1C_5C_LL_1L_LR_L + C_1C_5C_LL_5L_LR_1R_Lg_m + C_1C_5C_LL_5L_LR_L + C_1C_5L_1L_5L_Lg_m\right) + s^4\left(C_1C_5C_LL_LR_1R_5R_Lg_m + C_1C_5C_LL_LR_1R_L + C_1C_5C_LL_LR_5R_L + C_1C_5L_1L_5R_Lg_m + C_1C_5L_1L_LR_5g_m + \right.}{}$$

9.714 X-INVALID-ORDER-714 $Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ L_5 s + R_5 + \frac{1}{C_5 s},\ \frac{C_L L_L R_L s^2+L_L s+R_L}{C_L L_L s^2+1}\right)$

$$H(s) = \frac{C_1C_5C_LL_1L_5L_LR_Lg_ms^6 + R_Lg_m + s^5\left(C_1C_5C_LL_1L_LR_5R_Lg_m - C_1C_5C_LL_1L_LR_L + C_1C_5C_LL_5L_LR_1R_Lg_m + C_1C_5L_1L_5L_Lg_m\right) + s^4\left(C_1C_5C_LL_LR_1R_5R_Lg_m - C_1C_5C_LL_LR_1R_L + C_1C_5L_1L_5R_Lg_m + C_1C_5L_1L_LR_5g_m - C_1C_5L_1L_L + C_1C_5L_5L_LR_1g_m\right.}{C_1C_5C_LL_1L_5L_Lg_ms^6 + g_m + s^5\left(C_1C_5C_LL_1L_LR_5g_m + 2C_1C_5C_LL_1L_LR_Lg_m + C_1C_5C_LL_1L_L + C_1C_5C_LL_5L_LR_1g_m + C_1C_5C_LL_5L_L\right) + s^4\left(C_1C_5C_LL_LR_1R_5g_m + 2C_1C_5C_LL_LR_1R_Lg_m + C_1C_5C_LL_LR_1 + C_1C_5C_LL_LR_5 + C_1C_5C_LL_LR_L + C_1C_5L_1L_5g_m + 2C_1C\right.}$$

9.715 X-INVALID-ORDER-715 $Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ L_5 s + R_5 + \frac{1}{C_5 s},\ \frac{R_L\left(C_L L_L s^2+1\right)}{C_L L_L s^2+C_L R_L s+1}\right)$

$$H(s) = \frac{C_1C_5C_LL_1L_5L_LR_Lg_ms^6 + R_Lg_m + s^5\left(C_1C_5C_LL_1L_LR_5L\right.}{C_1C_5C_LL_1L_5L_LR_Lg_ms^6 + g_m + s^5\left(C_1C_5C_LL_1L_5R_Lg_m + C_1C_5C_LL_1L_LR_5g_m + 2C_1C_5C_LL_1L_LR_Lg_m + C_1C_5C_LL_1L_L + C_1C_5C_LL_5L_LR_1g_m + C_1C_5C_LL_5L_L\right) + s^4\left(C_1C_5C_LL_1R_5R_Lg_m + C_1C_5C_LL_1R_L + C_1C_5C_LL_5R_1R_Lg_m + C_1C_5C_LL_5R_L + C_1C_5C_LL_LR_1R_5g\right.}$$

9.716 X-INVALID-ORDER-716 $Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{L_5R_5s}{C_5L_5R_5s^2+L_5s+R_5},\ R_L\right)$

$$H(s) = \frac{-C_1C_5L_1L_5R_5R_Ls^4 - R_5R_L + s^3\left(-C_1C_5L_5R_1R_5R_L + C_1L_1L_5R_5R_Lg_m - C_1L_1L_5R_L\right) + s^2\left(-C_1L_1R_5R_L + C_1L_5R_1R_5R_Lg_m - C_1L_5R_1R_L - C_5L_5R_5R_L\right) + s\left(-C_1R_1R_5R_L\right.}{2R_5R_Lg_m + R_5 + s^4\left(2C_1C_5L_1L_5R_5R_Lg_m + C_1C_5L_1L_5R_5\right) + s^3\left(2C_1C_5L_5R_1R_5R_Lg_m + C_1C_5L_5R_1R_5 + C_1C_5L_5R_5R_L + C_1L_1L_5R_5g_m + 2C_1L_1L_5R_Lg_m + C_1L_1L_5\right) + s^2\left(2C_1L_1R_5R_Lg_m + C_1L_1R_5 + C_1L_5R_1R_5g_m + 2C_1L_5R_1R_Lg_m + C_1L_5R_1 + C_1L_5R_5 + C_1\right.}$$

9.717 X-INVALID-ORDER-717 $Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{L_5R_5s}{C_5L_5R_5s^2+L_5s+R_5},\ \frac{1}{C_L s}\right)$

$$H(s) = \frac{-C_1C_5L_1L_5R_5s^4 - R_5 + s^3\left(-C_1C_5L_5R_1R_5 + C_1L_1L_5R_5g_m - C_1L_1L_5\right) + s^2\left(-C_1L_1R_5 + C_1L_5R_1R_5g_m - C_1L_5R_1 - C_5L_5R_5\right) + s\left(-C_1R_1R_5 + L_5R_5g_m\right.}{C_1C_5C_LL_1L_5R_5s^5 + 2R_5g_m + s^4\left(C_1C_5C_LL_5R_1R_5 + 2C_1C_5L_1L_5R_5g_m + C_1C_LL_1L_5R_5g_m + C_1C_LL_1L_5\right) + s^3\left(2C_1C_5L_5R_1R_5g_m + C_1C_5L_5R_5 + C_1C_LL_1R_5 + C_1C_LL_5R_1R_5g_m + C_1C_LL_5R_1 + C_1C_LL_5R_5 + 2C_1L_1L_5g_m + C_5C_LL_5R_5\right) + s^2\left(C_1C_LR_1R_5 + 2C_1L\right.}$$

9.718 X-INVALID-ORDER-718 $Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{L_5R_5s}{C_5L_5R_5s^2+L_5s+R_5},\ \frac{R_L}{C_LR_Ls+1}\right)$

$$H(s) = \frac{-C_1C_5L_1L_5R_5R_Ls^4 - R_5R_L + s^3\left(-C_1C_5L_5R_1R_5R_L + \right.}{C_1C_5C_LL_1L_5R_5R_Ls^5 + 2R_5R_Lg_m + R_5 + s^4\left(C_1C_5C_LL_5R_1R_5R_L + 2C_1C_5L_1L_5R_5R_Lg_m + C_1C_5L_1L_5R_5 + C_1C_LL_1L_5R_5R_Lg_m + C_1C_LL_1L_5R_L\right) + s^3\left(2C_1C_5L_5R_1R_5R_Lg_m + C_1C_5L_5R_1R_5 + C_1C_5L_5R_5R_L + C_1C_LL_1R_5R_L + C_1C_LL_5R_1R_5R_Lg_m + C_1C_LL_5R_1\right.}$$

9.719 X-INVALID-ORDER-719 $Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{L_5R_5s}{C_5L_5R_5s^2+L_5s+R_5},\ R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{-C_1C_5C_LL_1L_5R_5R_Ls^5 - R_5 + s^4\left(-C_1C_5C_LL_5R_1R_5R_L - C_1C_5L_1L_5R_5 + C_1C_LL_1L_5R_5R_Lg_m - C_1C_LL_1L_5R_L\right) + s^3\left(-C_1C_5L_5R_1R_5 - C_1C_LL\right.}{2R_5g_m + s^5\left(2C_1C_5C_LL_1L_5R_5R_Lg_m + C_1C_5C_LL_1L_5R_5\right) + s^4\left(2C_1C_5C_LL_5R_1R_5R_Lg_m + C_1C_5C_LL_5R_1R_5 + C_1C_5C_LL_5R_5R_L + 2C_1C_5L_1L_5R_5g_m + C_1C_LL_1L_5R_5g_m + 2C_1C_LL_1L_5R_Lg_m + C_1C_LL_1L_5\right) + s^3\left(2C_1C_5L_5R_1R_5g_m + C_1C_5L_5R_5 + 2C_1C_LL_1R_5R_Lg_m\right.}$$

9.720 X-INVALID-ORDER-720 $Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{L_5R_5s}{C_5L_5R_5s^2+L_5s+R_5},\ L_Ls + \frac{1}{C_L s}\right)$

$$H(s) = \frac{-C_1C_5C_LL_1L_5L_LR_5s^6 - R_5 + s^5\left(-C_1C_5C_LL_5L_LR_1R_5 + C_1C_LL_1L_5L_LR_5g_m - C_1C_LL_1L_5L_L\right) + s^4\left(-C_1C_5L_1L_5R_5 - C_1C_LL_1L_LR_5 + C_1C_LL_5\right.}{2C_1C_5C_LL_1L_5L_LR_5g_ms^6 + 2R_5g_m + s^5\left(C_1C_5C_LL_1L_5R_5 + 2C_1C_5C_LL_5L_LR_1R_5g_m + C_1C_5C_LL_5L_LR_5 + 2C_1C_LL_1L_5L_Lg_m\right) + s^4\left(C_1C_5C_LL_5R_1R_5 + 2C_1C_5L_1L_5R_5g_m + C_1C_LL_1L_5R_5g_m + C_1C_LL_1L_5 + 2C_1C_LL_1L_LR_5g_m + 2C_1C_LL_5L_LR_1g_m + C_1C_LL_5L_L +\right.}$$

9.721 X-INVALID-ORDER-721 $Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{L_5R_5s}{C_5L_5R_5s^2+L_5s+R_5},\ \frac{L_Ls}{C_LL_Ls^2+1}\right)$

$$H(s) = \frac{-C_1C_5L_1L_5L_LR_5s^5 - L_LR_5s + s^4\left(-C_1C_5L_5L_LR_1R_5 + \right.}{C_1C_5C_LL_1L_5L_LR_5s^6 + R_5 + s^5\left(C_1C_5C_LL_5L_LR_1R_5 + 2C_1C_5L_1L_5L_LR_5g_m + C_1C_LL_1L_5L_LR_5g_m + C_1C_LL_1L_5L_L\right) + s^4\left(C_1C_5L_1L_5R_5 + 2C_1C_5L_5L_LR_1R_5g_m + C_1C_5L_5L_LR_5 + C_1C_LL_1L_LR_5 + C_1C_LL_5L_LR_1R_5g_m + C_1C_LL_5L_LR_1 + C_1C_LL_5L_LR_5 + 2C_1L_1L\right.}$$

9.722 X-INVALID-ORDER-722 $Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{L_5R_5s}{C_5L_5R_5s^2+L_5s+R_5},\ L_Ls + R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{-C_1C_5C_LL_1L_5L_LR_5s^6 - R_5 + s^5\left(-C_1C_5C_LL_1L_5R_5R_L - C_1C_5C_LL_5L_LR_1R_5 + C_1C_LL_1L_5L_LR_5g_m - C_1C_LL_1L_5L_L\right) + s^4\left(-C_1C_5C_L\right.}{2C_1C_5C_LL_1L_5L_LR_5g_ms^6 + 2R_5g_m + s^5\left(2C_1C_5C_LL_1L_5R_5R_Lg_m + C_1C_5C_LL_1L_5R_5 + 2C_1C_5C_LL_5L_LR_1R_5g_m + C_1C_5C_LL_5L_LR_5 + 2C_1C_LL_1L_5L_Lg_m\right) + s^4\left(2C_1C_5C_LL_5R_1R_5R_Lg_m + C_1C_5C_LL_5R_1R_5 + C_1C_5C_LL_5R_5R_L + 2C_1C_5L_1L_5R_5g_m + C_1C_LL_1L_5R_5g\right.}$$

9.723 X-INVALID-ORDER-723 $Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{L_5R_5s}{C_5L_5R_5s^2+L_5s+R_5},\ \frac{L_LR_Ls}{C_LL_LR_Ls^2+L_Ls+R_L}\right)$

$$H(s) = \frac{-C_1C_5L_1L_5R_5R_Ls^4 - R_5R_L + s^3\left(-C_1C_5L_5R_1R_5R_L + \right.}{C_1C_5C_LL_1L_5L_LR_5R_Ls^6 + R_5R_L + s^5\left(C_1C_5C_LL_5L_LR_1R_5R_L + 2C_1C_5L_1L_5L_LR_5R_Lg_m + C_1C_5L_1L_5L_LR_5 + C_1C_LL_1L_5L_LR_5R_Lg_m + C_1C_LL_1L_5L_LR_L\right) + s^4\left(C_1C_5L_1L_5R_5R_L + 2C_1C_5L_5L_LR_1R_5R_Lg_m + C_1C_5L_5L_LR_1R_5 + C_1C_5L_5L_LR_5R_L + C_1C_LL_1L_LR_5\right.}$$

9.724 X-INVALID-ORDER-724 $Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{L_5R_5s}{C_5L_5R_5s^2+L_5s+R_5},\ \frac{C_LL_LR_Ls^2+L_Ls+R_L}{C_LL_Ls^2+1}\right)$

$$H(s) = \frac{-C_1C_5C_LL_1L_5L_LR_5R_Ls^6 - R_5R_L + s}{2R_5R_Lg_m + R_5 + s^6\left(2C_1C_5C_LL_1L_5L_LR_5R_Lg_m + C_1C_5C_LL_1L_5L_LR_5\right) + s^5\left(2C_1C_5C_LL_5L_LR_1R_5R_Lg_m + C_1C_5C_LL_5L_LR_1R_5 + C_1C_5C_LL_5L_LR_5R_L + 2C_1C_5L_1L_5L_LR_5g_m + C_1C_LL_1L_5L_LR_5g_m + 2C_1C_LL_1L_5L_LR_Lg_m + C_1C_LL_1L_5L_L\right) + s^4\left(2C_1C_5L_1L_5R_5R\right.}$$

9.725 X-INVALID-ORDER-725 $Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{L_5 R_5 s}{C_5 L_5 R_5 s^2 + L_5 s + R_5},\ \frac{R_L\left(C_L L_L s^2 + 1\right)}{C_L L_L s^2 + C_L R_L s + 1}\right)$

$$H(s) = \frac{2R_5 R_L g_m + R_5 + s^6\left(2C_1C_5C_LL_1L_5L_LR_5R_Lg_m + C_1C_5C_LL_1L_5L_LR_5\right) + s^5\left(C_1C_5C_LL_1L_5R_5R_L + 2C_1C_5C_LL_5L_LR_1R_5R_Lg_m + C_1C_5C_LL_5L_LR_1R_5 + C_1C_5C_LL_5L_LR_5R_L + C_1C_LL_1L_5L_LR_5g_m + 2C_1C_LL_1L_5L_LR_Lg_m + C_1C_LL_1L_5L_L\right) + s^4\left(C_1C_5C_LL_5R_1R_5\right.}{}$$

9.726 X-INVALID-ORDER-726 $Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{C_5 L_5 R_5 s^2 + L_5 s + R_5}{C_5 L_5 s^2 + 1},\ R_L\right)$

$$H(s) = \frac{R_5R_Lg_m - R_L + s^4\left(C_1C_5L_1L_5R_5R_Lg_m - C_1C_5L_1L_5R_L\right) + s^3\left(C_1C_5L_5R_1R_5R_Lg_m - C_1C_5L_5R_1R_L + C_1L_1L_5R_Lg_m\right) + s^2\left(C_1L_1R_5R_Lg_m - C_1L_1R_L + C_1L_5R_1R_Lg_m + C_5L_5R_5R_Lg_m - C_5L_5R_L\right) + s\left(C_1R_1R\right.}{R_5g_m + 2R_Lg_m + s^4\left(C_1C_5L_1L_5R_5g_m + 2C_1C_5L_1L_5R_Lg_m + C_1C_5L_1L_5\right) + s^3\left(C_1C_5L_5R_1R_5g_m + 2C_1C_5L_5R_1R_Lg_m + C_1C_5L_5R_1 + C_1C_5L_5R_5 + C_1C_5L_5R_L + C_1L_1L_5g_m\right) + s^2\left(C_1L_1R_5g_m + 2C_1L_1R_Lg_m + C_1L_1 + C_1L_5R_1g_m + C_1L_5 + C_5L_5R_5g_m + 2C_5L_5R\right.}$$

9.727 X-INVALID-ORDER-727 $Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{C_5 L_5 R_5 s^2 + L_5 s + R_5}{C_5 L_5 s^2 + 1},\ \frac{1}{C_L s}\right)$

$$H(s) = \frac{R_5g_m + s^4\left(C_1C_5L_1L_5R_5g_m - C_1C_5L_1L_5\right) + s^3\left(C_1C_5L_5R_1R_5g_m - C_1C_5L_5R_1 + C_1L_1L_5g_m\right) + s^2\left(C_1L_1R_5g_m - C_1L_1 + C_1L_5R_1g_m + C_5L_5R_5g_m - C_5L_5\right) + s\left(C_1R_1R_5\right.}{2g_m + s^5\left(C_1C_5C_LL_1L_5R_5g_m + C_1C_5C_LL_1L_5\right) + s^4\left(C_1C_5C_LL_5R_1R_5g_m + C_1C_5C_LL_5R_1 + C_1C_5C_LL_5R_5 + 2C_1C_5L_1L_5g_m + C_1C_LL_1L_5g_m\right) + s^3\left(2C_1C_5L_5R_1g_m + C_1C_5L_5 + C_1C_LL_1R_5g_m + C_1C_LL_1 + C_1C_LL_5R_1g_m + C_1C_LL_5 + C_5C_LL_5R_5g_m + C_5C_LL_5\right) +}$$

9.728 X-INVALID-ORDER-728 $Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{C_5 L_5 R_5 s^2 + L_5 s + R_5}{C_5 L_5 s^2 + 1},\ \frac{R_L}{C_L R_L s + 1}\right)$

$$H(s) = \frac{R_5R_Lg_m - R_L + s^4\left(C_1C_5L_1L_5R_5R_Lg_m - C_1\right.}{R_5g_m + 2R_Lg_m + s^5\left(C_1C_5C_LL_1L_5R_5R_Lg_m + C_1C_5C_LL_1L_5R_L\right) + s^4\left(C_1C_5C_LL_5R_1R_5R_Lg_m + C_1C_5C_LL_5R_1R_L + C_1C_5C_LL_5R_5R_L + C_1C_5L_1L_5R_5g_m + 2C_1C_5L_1L_5R_Lg_m + C_1C_5L_1L_5 + C_1C_LL_1L_5R_Lg_m\right) + s^3\left(C_1C_5L_5R_1R_5g_m + 2C_1C_5L_5R_1R_Lg_m + C_1C_5L\right.}$$

9.729 X-INVALID-ORDER-729 $Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{C_5 L_5 R_5 s^2 + L_5 s + R_5}{C_5 L_5 s^2 + 1},\ R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{R_5g_m + s^5\left(C_1C_5C_LL_1L_5R_5R_Lg_m - C_1C_5C_LL_1L_5R_L\right) + s^4\left(C_1C_5C_LL_5R_1R_5R_Lg_m - C_1C_5C_LL_5R_1R_L + C_1C_5L_1L_5R_5g_m - C_1C_5L_1L_5 + C_1C_LL_1L_5R_Lg_m\right) + s^3\left(C_1C_5L_5R_1R_5g_m - C_1C_5L_5R_1 + C_1C_LL_1R_5R_Lg_m - C_1C_LL_1R_L + C_1C\right.}{2g_m + s^5\left(C_1C_5C_LL_1L_5R_5g_m + 2C_1C_5C_LL_1L_5R_Lg_m + C_1C_5C_LL_1L_5\right) + s^4\left(C_1C_5C_LL_5R_1R_5g_m + 2C_1C_5C_LL_5R_1R_Lg_m + C_1C_5C_LL_5R_1 + C_1C_5C_LL_5R_5 + C_1C_5C_LL_5R_L + 2C_1C_5L_1L_5g_m + C_1C_LL_1L_5g_m\right) + s^3\left(2C_1C_5L_5R_1g_m + C_1C_5L_5 + C_1C_LL_1R_5g_m + 2C\right.}$$

9.730 X-INVALID-ORDER-730 $Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{C_5 L_5 R_5 s^2 + L_5 s + R_5}{C_5 L_5 s^2 + 1},\ L_L s + \frac{1}{C_L s}\right)$

$$H(s) = \frac{R_5g_m + s^6\left(C_1C_5C_LL_1L_5L_LR_5g_m - C_1C_5C_LL_1L_5L_L\right) + s^5\left(C_1C_5C_LL_5L_LR_1R_5g_m - C_1C_5C_LL_5L_LR_1 + C_1C_LL_1L_5L_Lg_m\right) + s^4\left(C_1C_5L_1L_5R_5g_m - C_1C_5L_1L_5 + C_1C_LL_1L_LR_5g_m - C_1C_LL_1L_L + C_1C_LL_5L_LR_1g_m + C_5C_LL_5L_LR_5g_m -\right.}{2C_1C_5C_LL_1L_5L_Lg_ms^6 + 2g_m + s^5\left(C_1C_5C_LL_1L_5R_5g_m + C_1C_5C_LL_1L_5 + 2C_1C_5C_LL_5L_LR_1g_m + C_1C_5C_LL_5L_L\right) + s^4\left(C_1C_5C_LL_5R_1R_5g_m + C_1C_5C_LL_5R_1 + C_1C_5C_LL_5R_5 + 2C_1C_5L_1L_5g_m + C_1C_LL_1L_5g_m + 2C_1C_LL_1L_Lg_m + 2C_5C_LL_5L_Lg_m\right) + s^3\left(2C_1C_5L_5R\right.}$$

9.731 X-INVALID-ORDER-731 $Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{C_5 L_5 R_5 s^2 + L_5 s + R_5}{C_5 L_5 s^2 + 1},\ \frac{L_L s}{C_L L_L s^2 + 1}\right)$

$$H(s) = \frac{s^5\left(C_1C_5L_1L_5L_LR_5g_m - C_1C_5L_1L_5L_L\right) + s^4\left(\right.}{R_5g_m + s^6\left(C_1C_5C_LL_1L_5L_LR_5g_m + C_1C_5C_LL_1L_5L_L\right) + s^5\left(C_1C_5C_LL_5L_LR_1R_5g_m + C_1C_5C_LL_5L_LR_1 + C_1C_5C_LL_5L_LR_5 + 2C_1C_5L_1L_5L_Lg_m + C_1C_LL_1L_5L_Lg_m\right) + s^4\left(C_1C_5L_1L_5R_5g_m + C_1C_5L_1L_5 + 2C_1C_5L_5L_LR_1g_m + C_1C_5L_5L_L + C_1C_LL_1L_LR_5g_m + C_1C\right.}$$

9.732 X-INVALID-ORDER-732 $Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{C_5 L_5 R_5 s^2 + L_5 s + R_5}{C_5 L_5 s^2 + 1},\ L_L s + R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{R_5g_m + s^6\left(C_1C_5C_LL_1L_5L_LR_5g_m - C_1C_5C_LL_1L_5L_L\right) + s^5\left(C_1C_5C_LL_1L_5R_5R_Lg_m - C_1C_5C_LL_1L_5R_L + C_1C_5C_LL_5L_LR_1R_5g_m - C_1C_5C_LL_5L_LR_1 + C_1C_LL_1L_5L_Lg_m\right) + s^4\left(C_1C_5C_LL_5R_1R_5R_Lg_m - C_1C_5C_LL_5R_1R_L + C_1C_5L_1L_5R_5g_m - C_1C_5L_1L_5 + C_1C_LL\right.}{2C_1C_5C_LL_1L_5L_Lg_ms^6 + 2g_m + s^5\left(C_1C_5C_LL_1L_5R_5g_m + 2C_1C_5C_LL_1L_5R_Lg_m + C_1C_5C_LL_1L_5 + 2C_1C_5C_LL_5L_LR_1g_m + C_1C_5C_LL_5L_L\right) + s^4\left(C_1C_5C_LL_5R_1R_5g_m + 2C_1C_5C_LL_5R_1R_Lg_m + C_1C_5C_LL_5R_1 + C_1C_5C_LL_5R_5 +\right.}$$

9.733 X-INVALID-ORDER-733 $Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{C_5 L_5 R_5 s^2 + L_5 s + R_5}{C_5 L_5 s^2 + 1},\ \frac{L_L R_L s}{C_L L_L R_L s^2 + L_L s + R_L}\right)$

$$H(s) = \frac{R_5R_Lg_m + R_L + s^6\left(C_1C_5C_LL_1L_5L_LR_5R_Lg_m + C_1C_5C_LL_1L_5L_LR_L\right) + s^5\left(C_1C_5C_LL_5L_LR_1R_5R_Lg_m + C_1C_5C_LL_5L_LR_1R_L + C_1C_5C_LL_5L_LR_5R_L + C_1C_5L_1L_5L_LR_5g_m + 2C_1C_5L_1L_5L_LR_Lg_m + C_1C_5L_1L_5L_L + C_1C_LL_1L_5L_LR_Lg_m\right) + s^4\left(C_1C_5L_1L_5R_5R_Lg_m -\right.}{}$$

9.734 X-INVALID-ORDER-734 $Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{C_5 L_5 R_5 s^2 + L_5 s + R_5}{C_5 L_5 s^2 + 1},\ \frac{C_L L_L R_L s^2 + L_L s + R_L}{C_L L_L s^2 + 1}\right)$

$$H(s) = \frac{R_5R_Lg_m - R_L + s^6\left(C_1C_5C_LL_1L_5L_LR_5R_Lg_m - C_1C_5C_LL_1L_5L_LR_L\right) + s^5\left(C_1C_5C_LL_5L_LR_1R_5R_Lg_m - C_1C_5C_LL_5L_LR_1R_L + C_1C_5L_1L_5L_LR_5g_m - C_1C_5L_1L_5L_L + C_1C_LL_1L\right.}{R_5g_m + 2R_Lg_m + s^6\left(C_1C_5C_LL_1L_5L_LR_5g_m + 2C_1C_5C_LL_1L_5L_LR_Lg_m + C_1C_5C_LL_1L_5L_L\right) + s^5\left(C_1C_5C_LL_5L_LR_1R_5g_m + 2C_1C_5C_LL_5L_LR_1R_Lg_m + C_1C_5C_LL_5L_LR_1 + C_1C_5C_LL_5L_LR_5 + C_1C_5C_LL_5L_LR_L + 2C_1C_5L_1L_5L_Lg_m + C_1C_LL_1L_5L_Lg_m\right) + s^4\left(C_1C_5L\right.}$$

9.735 X-INVALID-ORDER-735 $Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{C_5 L_5 R_5 s^2 + L_5 s + R_5}{C_5 L_5 s^2 + 1},\ \frac{R_L\left(C_L L_L s^2 + 1\right)}{C_L L_L s^2 + C_L R_L s + 1}\right)$

$$H(s) = \frac{R_5 g_m + 2R_L g_m + s^6\left(C_1C_5C_LL_1L_5L_LR_5g_m + 2C_1C_5C_LL_1L_5L_LR_Lg_m + C_1C_5C_LL_1L_5L_L\right) + s^5\left(C_1C_5C_LL_1L_5R_5R_Lg_m + C_1C_5C_LL_1L_5R_L + C_1C_5C_LL_5L_LR_1R_5g_m + 2C_1C_5C_LL_5L_LR_1R_Lg_m + C_1C_5C_LL_5L_LR_1 + C_1C_5C_LL_5L_LR_5 + C_1C_5C_LL_5L_LR_L + C_1C_L\right.}{}$$

9.736 X-INVALID-ORDER-736 $Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{R_5\left(C_5 L_5 s^2 + 1\right)}{C_5 L_5 s^2 + C_5 R_5 s + 1},\ R_L\right)$

$$H(s) = \frac{R_5R_Lg_m - R_L + s^4\left(C_1C_5L_1L_5R_5R_Lg_m - C_1C_5L_1L_5R_L\right) + s^3\left(-C_1C_5L_1R_5R_L + C_1C_5L_5R_1R_5R_Lg_m - C_1C_5L_5R_1R_L\right) + s^2\left(-C_1C_5R_1R_5R_L + C_1L_1R_5R_Lg_m - C_1L_1R_L + C_5L_5\right.}{R_5g_m + 2R_Lg_m + s^4\left(C_1C_5L_1L_5R_5g_m + 2C_1C_5L_1L_5R_Lg_m + C_1C_5L_1L_5\right) + s^3\left(2C_1C_5L_1R_5R_Lg_m + C_1C_5L_1R_5 + C_1C_5L_5R_1R_5g_m + 2C_1C_5L_5R_1R_Lg_m + C_1C_5L_5R_1 + C_1C_5L_5R_5 + C_1C_5L_5R_L\right) + s^2\left(2C_1C_5R_1R_5R_Lg_m + C_1C_5R_1R_5 + C_1C_5R_5R_L + C_1L_1R_5g_m\right.}$$

9.737 X-INVALID-ORDER-737 $Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{R_5\left(C_5 L_5 s^2 + 1\right)}{C_5 L_5 s^2 + C_5 R_5 s + 1},\ \frac{1}{C_L s}\right)$

$$H(s) = \frac{R_5g_m + s^4\left(C_1C_5L_1L_5R_5g_m - C_1C_5L_1L_5\right) + s^3\left(-C_1C_5L_1R_5 + C_1C_5L_5R_1R_5g_m - C_1C_5L_5R_1\right) + s^2\left(-C_1C_5R_1R_5 + C_1L_1R_5g_m - C_1L_1 + C_5L_5R_5\right.}{2g_m + s^5\left(C_1C_5C_LL_1L_5R_5g_m + C_1C_5C_LL_1L_5\right) + s^4\left(C_1C_5C_LL_1R_5 + C_1C_5C_LL_5R_1R_5g_m + C_1C_5C_LL_5R_1 + C_1C_5C_LL_5R_5 + 2C_1C_5L_1L_5g_m\right) + s^3\left(C_1C_5C_LR_1R_5 + 2C_1C_5L_1R_5g_m + 2C_1C_5L_5R_1g_m + C_1C_5L_5 + C_1C_LL_1R_5g_m + C_1C_LL_1 + C_5C_LL_5R_5g_m + C_5C\right.}$$

9.738 X-INVALID-ORDER-738 $Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{R_5\left(C_5 L_5 s^2 + 1\right)}{C_5 L_5 s^2 + C_5 R_5 s + 1},\ \frac{R_L}{C_L R_L s + 1}\right)$

$$H(s) = \frac{R_5R_Lg_m - R_L + s^4\left(C\right.}{R_5g_m + 2R_Lg_m + s^5\left(C_1C_5C_LL_1L_5R_5R_Lg_m + C_1C_5C_LL_1L_5R_L\right) + s^4\left(C_1C_5C_LL_1R_5R_L + C_1C_5C_LL_5R_1R_5R_Lg_m + C_1C_5C_LL_5R_1R_L + C_1C_5C_LL_5R_5R_L + C_1C_5L_1L_5R_5g_m + 2C_1C_5L_1L_5R_Lg_m + C_1C_5L_1L_5\right) + s^3\left(C_1C_5C_LR_1R_5R_L + 2C_1C_5L_1R_5R_Lg_m + C_1C_5\right.}$$

9.739 X-INVALID-ORDER-739 $Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{R_5\left(C_5 L_5 s^2 + 1\right)}{C_5 L_5 s^2 + C_5 R_5 s + 1},\ R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{R_5g_m + s^5\left(C_1C_5C_LL_1L_5R_5R_Lg_m - C_1C_5C_LL_1L_5R_L\right) + s^4\left(-C_1C_5C_LL_1R_5R_L + C_1C_5C_LL_5R_1R_5R_Lg_m - C_1C_5C_LL_5R_1R_L + C_1C_5L_1L_5R_5g_m - C_1C_5L_1L_5\right) + s^3\left(-C_1C\right.}{2g_m + s^5\left(C_1C_5C_LL_1L_5R_5g_m + 2C_1C_5C_LL_1L_5R_Lg_m + C_1C_5C_LL_1L_5\right) + s^4\left(2C_1C_5C_LL_1R_5R_Lg_m + C_1C_5C_LL_1R_5 + C_1C_5C_LL_5R_1R_5g_m + 2C_1C_5C_LL_5R_1R_Lg_m + C_1C_5C_LL_5R_1 + C_1C_5C_LL_5R_5 + C_1C_5C_LL_5R_L + 2C_1C_5L_1L_5g_m\right) + s^3\left(2C_1C_5C_LR_1R_5R_Lg_m + C\right.}$$

9.740 X-INVALID-ORDER-740 $Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{R_5\left(C_5 L_5 s^2 + 1\right)}{C_5 L_5 s^2 + C_5 R_5 s + 1},\ L_L s + \frac{1}{C_L s}\right)$

$$H(s) = \frac{R_5g_m + s^6\left(C_1C_5C_LL_1L_5L_LR_5g_m - C_1C_5C_LL_1L_5L_L\right) + s^5\left(-C_1C_5C_LL_1L_LR_5 + C_1C_5C_LL_5L_LR_1R_5g_m - C_1C_5C_LL_5L_LR_1\right) + s^4\left(-C_1C_5C_LL_LR_1R_5 + C_1C_5L_1L_5R_5g_m - C\right.}{2C_1C_5C_LL_1L_5L_Lg_ms^6 + 2g_m + s^5\left(C_1C_5C_LL_1L_5R_5g_m + C_1C_5C_LL_1L_5 + 2C_1C_5C_LL_1L_LR_5g_m + 2C_1C_5C_LL_5L_LR_1g_m + C_1C_5C_LL_5L_L\right) + s^4\left(C_1C_5C_LL_1R_5 + C_1C_5C_LL_5R_1R_5g_m + C_1C_5C_LL_5R_1 + C_1C_5C_LL_5R_5 + 2C_1C_5C_LL_LR_1R_5g_m + C_1C_5C_LL_LR_5 + 2C_1\right.}$$

9.741 X-INVALID-ORDER-741 $Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{R_5\left(C_5 L_5 s^2 + 1\right)}{C_5 L_5 s^2 + C_5 R_5 s + 1},\ \frac{L_L s}{C_L L_L s^2 + 1}\right)$

$$H(s) = \frac{s^5\left(C_1C_5L_1L_5L_LR_5g_m -\right.}{R_5g_m + s^6\left(C_1C_5C_LL_1L_5L_LR_5g_m + C_1C_5C_LL_1L_5L_L\right) + s^5\left(C_1C_5C_LL_1L_LR_5 + C_1C_5C_LL_5L_LR_1R_5g_m + C_1C_5C_LL_5L_LR_1 + C_1C_5C_LL_5L_LR_5 + 2C_1C_5L_1L_5L_Lg_m\right) + s^4\left(C_1C_5C_LL_LR_1R_5 + C_1C_5L_1L_5R_5g_m + C_1C_5L_1L_5 + 2C_1C_5L_1L_LR_5g_m + 2C_1C_5L_5L_LR_1g_m\right.}$$

9.742 X-INVALID-ORDER-742 $Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{R_5\left(C_5 L_5 s^2 + 1\right)}{C_5 L_5 s^2 + C_5 R_5 s + 1},\ L_L s + R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{R_5g_m + s^6\left(C_1C_5C_LL_1L_5L_LR_5g_m - C_1C_5C_LL_1L_5L_L\right) + s^5\left(C_1C_5C_LL_1L_5R_5R_Lg_m - C_1C_5C_LL_1L_5R_L - C_1C_5C_LL_1L_LR_5 + C_1C_5C_LL_5L_LR_1R_5g_m - C_1C_5C_LL_5L_LR_1\right) + s^4\left(-C_1C_5C_LL_1R_5R_L\right.}{2C_1C_5C_LL_1L_5L_Lg_ms^6 + 2g_m + s^5\left(C_1C_5C_LL_1L_5R_5g_m + 2C_1C_5C_LL_1L_5R_Lg_m + C_1C_5C_LL_1L_5 + 2C_1C_5C_LL_1L_LR_5g_m + 2C_1C_5C_LL_5L_LR_1g_m + C_1C_5C_LL_5L_L\right) + s^4\left(2C_1C_5C_LL_1R_5R_Lg_m + C_1C_5C_LL_1R_5 + C_1C_5C_LL_5R_1R_5g_m + 2C_1C_5C_LL_5R_1R_Lg_m + C_1C_5\right.}$$

9.743 X-INVALID-ORDER-743 $Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{R_5\left(C_5 L_5 s^2 + 1\right)}{C_5 L_5 s^2 + C_5 R_5 s + 1},\ \frac{L_L R_L s}{C_L L_L R_L s^2 + L_L s + R_L}\right)$

$$H(s) = \frac{R_5R_Lg_m + R_L + s^6\left(C_1C_5C_LL_1L_5L_LR_5R_Lg_m + C_1C_5C_LL_1L_5L_LR_L\right) + s^5\left(C_1C_5C_LL_1L_LR_5R_L + C_1C_5C_LL_5L_LR_1R_5R_Lg_m + C_1C_5C_LL_5L_LR_1R_L + C_1C_5C_LL_5L_LR_5R_L + C_1C_5L_1L_5L_LR_5g_m + 2C_1C_5L_1L_5L_LR_Lg_m + C_1C_5L_1L_5L_L\right) + s^4\left(C_1C_5C_LL_LR_1R_5R_L\right.}{}$$

9.744 X-INVALID-ORDER-744 $Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{R_5\left(C_5 L_5 s^2+1\right)}{C_5 L_5 s^2+C_5 R_5 s+1},\ \frac{C_L L_L R_L s^2+L_L s+R_L}{C_L L_L s^2+1}\right)$

$$H(s) = \frac{R_5 R_L g_m - R_L + s^6 \left(C_1 C_5 C_L L_1 L_5 L_L R_5 R_L g_m - C_1 C_5 C_L L_1 L_5 L_L R_L\right) +}{R_5 g_m + 2R_L g_m + s^6 \left(C_1 C_5 C_L L_1 L_5 L_L R_5 g_m + 2C_1 C_5 C_L L_1 L_5 L_L R_L g_m + C_1 C_5 C_L L_1 L_5 L_L\right) + s^5 \left(2C_1 C_5 C_L L_1 L_L R_5 R_L g_m + C_1 C_5 C_L L_1 L_L R_5 + C_1 C_5 C_L L_5 L_L R_1 R_5 g_m + 2C_1 C_5 C_L L_5 L_L R_1 R_L g_m + C_1 C_5 C_L L_5 L_L R_1 + C_1 C_5 C_L L_5 L_L R_5 + C_1 C_5 C_L L_5 L_L R_L + 2C_1 C\right.}$$

9.745 X-INVALID-ORDER-745 $Z(s) = \left(L_1 s + R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{R_5\left(C_5 L_5 s^2+1\right)}{C_5 L_5 s^2+C_5 R_5 s+1},\ \frac{R_L\left(C_L L_L s^2+1\right)}{C_L L_L s^2+C_L R_L s+1}\right)$

$$H(s) = \frac{}{R_5 g_m + 2R_L g_m + s^6 \left(C_1 C_5 C_L L_1 L_5 L_L R_5 g_m + 2C_1 C_5 C_L L_1 L_5 L_L R_L g_m + C_1 C_5 C_L L_1 L_5 L_L\right) + s^5 \left(C_1 C_5 C_L L_1 L_5 R_5 R_L g_m + C_1 C_5 C_L L_1 L_5 R_L + 2C_1 C_5 C_L L_1 L_L R_5 R_L g_m + C_1 C_5 C_L L_1 L_L R_5 + C_1 C_5 C_L L_5 L_L R_1 R_5 g_m + 2C_1 C_5 C_L L_5 L_L R_1 R_L g_m + C_1 C_5 C_L L_5 L_L R_1 +\right.}$$

9.746 X-INVALID-ORDER-746 $Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2+L_1 s+R_1},\ \infty,\ \infty,\ \infty,\ R_5,\ \frac{1}{C_L s}\right)$

$$H(s) = \frac{s\left(L_1 R_1 R_5 g_m - L_1 R_1\right)}{C_1 C_L L_1 R_1 R_5 s^3 + R_1 + s^2 \left(C_1 L_1 R_1 + C_L L_1 R_1 R_5 g_m + C_L L_1 R_1 + C_L L_1 R_5\right) + s\left(C_L R_1 R_5 + 2L_1 R_1 g_m + L_1\right)}$$

9.747 X-INVALID-ORDER-747 $Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2+L_1 s+R_1},\ \infty,\ \infty,\ \infty,\ R_5,\ \frac{R_L}{C_L R_L s+1}\right)$

$$H(s) = \frac{s\left(L_1 R_1 R_5 R_L g_m - L_1 R_1 R_L\right)}{C_1 C_L L_1 R_1 R_5 R_L s^3 + R_1 R_5 + R_1 R_L + s^2 \left(C_1 L_1 R_1 R_5 + C_1 L_1 R_1 R_L + C_L L_1 R_1 R_5 R_L g_m + C_L L_1 R_1 R_L + C_L L_1 R_5 R_L\right) + s\left(C_L R_1 R_5 R_L + L_1 R_1 R_5 g_m + 2L_1 R_1 R_L g_m + L_1 R_1 + L_1 R_5 + L_1 R_L\right)}$$

9.748 X-INVALID-ORDER-748 $Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2+L_1 s+R_1},\ \infty,\ \infty,\ \infty,\ R_5,\ R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{s^2 \left(C_L L_1 R_1 R_5 R_L g_m - C_L L_1 R_1 R_L\right) + s\left(L_1 R_1 R_5 g_m - L_1 R_1\right)}{R_1 + s^3 \left(C_1 C_L L_1 R_1 R_5 + C_1 C_L L_1 R_1 R_L\right) + s^2 \left(C_1 L_1 R_1 + C_L L_1 R_1 R_5 g_m + 2C_L L_1 R_1 R_L g_m + C_L L_1 R_1 + C_L L_1 R_5 + C_L L_1 R_L\right) + s\left(C_L R_1 R_5 + C_L R_1 R_L + 2L_1 R_1 g_m + L_1\right)}$$

9.749 X-INVALID-ORDER-749 $Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2+L_1 s+R_1},\ \infty,\ \infty,\ \infty,\ R_5,\ L_L s + \frac{1}{C_L s}\right)$

$$H(s) = \frac{s^3 \left(C_L L_1 L_L R_1 R_5 g_m - C_L L_1 L_L R_1\right) + s\left(L_1 R_1 R_5 g_m - L_1 R_1\right)}{C_1 C_L L_1 L_L R_1 s^4 + R_1 + s^3 \left(C_1 C_L L_1 R_1 R_5 + 2C_L L_1 L_L R_1 g_m + C_L L_1 L_L\right) + s^2 \left(C_1 L_1 R_1 + C_L L_1 R_1 R_5 g_m + C_L L_1 R_1 + C_L L_1 R_5 + C_L L_L R_1\right) + s\left(C_L R_1 R_5 + 2L_1 R_1 g_m + L_1\right)}$$

9.750 X-INVALID-ORDER-750 $Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2+L_1 s+R_1},\ \infty,\ \infty,\ \infty,\ R_5,\ \frac{L_L s}{C_L L_L s^2+1}\right)$

$$H(s) = \frac{s^2 \left(L_1 L_L R_1 R_5 g_m - L_1 L_L R_1\right)}{C_1 C_L L_1 L_L R_1 R_5 s^4 + R_1 R_5 + s^3 \left(C_1 L_1 L_L R_1 + C_L L_1 L_L R_1 R_5 g_m + C_L L_1 L_L R_1 + C_L L_1 L_L R_5\right) + s^2 \left(C_1 L_1 R_1 R_5 + C_L L_L R_1 R_5 + 2L_1 L_L R_1 g_m + L_1 L_L\right) + s\left(L_1 R_1 R_5 g_m + L_1 R_1 + L_1 R_5 + L_L R_1\right)}$$

9.751 X-INVALID-ORDER-751 $Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2+L_1 s+R_1},\ \infty,\ \infty,\ \infty,\ R_5,\ L_L s + R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{s^3 \left(C_L L_1 L_L R_1 R_5 g_m - C_L L_1 L_L R_1\right) + s^2 \left(C_L L_1 R_1 R_5 R_L g_m - C_L L_1 R_1 R_L\right) + s\left(L_1 R_1 R_5 g_m - L_1 R_1\right)}{C_1 C_L L_1 L_L R_1 s^4 + R_1 + s^3 \left(C_1 C_L L_1 R_1 R_5 + C_1 C_L L_1 R_1 R_L + 2C_L L_1 L_L R_1 g_m + C_L L_1 L_L\right) + s^2 \left(C_1 L_1 R_1 + C_L L_1 R_1 R_5 g_m + 2C_L L_1 R_1 R_L g_m + C_L L_1 R_1 + C_L L_1 R_5 + C_L L_1 R_L + C_L L_L R_1\right) + s\left(C_L R_1 R_5 + C_L R_1 R_L + 2L_1 R_1 g_m + L_1\right)}$$

9.752 X-INVALID-ORDER-752 $Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2+L_1 s+R_1},\ \infty,\ \infty,\ \infty,\ R_5,\ \frac{L_L R_L s}{C_L L_L R_L s^2+L_L s+R_L}\right)$

$$H(s) = \frac{s^2 \left(L_1 L_L R_1 R_5 R_L g_m - L_1 L_L R_1 R_L\right)}{C_1 C_L L_1 L_L R_1 R_5 R_L s^4 + R_1 R_5 R_L + s^3 \left(C_1 L_1 L_L R_1 R_5 + C_1 L_1 L_L R_1 R_L + C_L L_1 L_L R_1 R_5 R_L g_m + C_L L_1 L_L R_1 R_L + C_L L_1 L_L R_5 R_L\right) + s^2 \left(C_1 L_1 R_1 R_5 R_L + C_L L_L R_1 R_5 R_L + L_1 L_L R_1 R_5 g_m + 2L_1 L_L R_1 R_L g_m + L_1 L_L R_1 + L_1 L_L R_5 + L_1 L_L R_L\right) + s\left(L_1 R_1 R_5 R_L g_m +\right.}$$

9.753 X-INVALID-ORDER-753 $Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1},\ \infty,\ \infty,\ \infty,\ R_5,\ \frac{C_L L_L R_L s^2 + L_L s + R_L}{C_L L_L s^2 + 1}\right)$

$$H(s) = \frac{s^3 \left(C_L L_1 L_L R_1 R_5 R_L g_m - C_L L_1 L_L R_1 R_L\right) + s^2 \left(L_1 L_L R_1 R_5 g_m - L_1 L_L R_1\right) + s \left(L_1 R_1 R_5 R_L g_m - L_1 R_1 R_L\right)}{R_1 R_5 + R_1 R_L + s^4 \left(C_1 C_L L_1 L_L R_1 R_5 + C_1 C_L L_1 L_L R_1 R_L\right) + s^3 \left(C_1 L_1 L_L R_1 + C_L L_1 L_L R_1 R_5 g_m + 2 C_L L_1 L_L R_1 R_L g_m + C_L L_1 L_L R_1 + C_L L_1 L_L R_5 + C_L L_1 L_L R_L\right) + s^2 \left(C_1 L_1 R_1 R_5 + C_1 L_1 R_1 R_L + C_L L_L R_1 R_5 + C_L L_L R_1 R_L + 2 L_1 L_L R_1 g_m + L_1 L_L\right) + s \left(L_1 R_1 R_5 \right.}$$

9.754 X-INVALID-ORDER-754 $Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1},\ \infty,\ \infty,\ \infty,\ R_5,\ \frac{R_L\left(C_L L_L s^2 + 1\right)}{C_L L_L s^2 + C_L R_L s + 1}\right)$

$$H(s) = \frac{s^3 \left(C_L L_1 L_L R_1 R_5 R_L g_m - C_L L_1 L_L R_1 R_L\right) + s \left(L_1 R_1 R_5 R_L g_m - L_1 R_1 R_L\right)}{R_1 R_5 + R_1 R_L + s^4 \left(C_1 C_L L_1 L_L R_1 R_5 + C_1 C_L L_1 L_L R_1 R_L\right) + s^3 \left(C_1 C_L L_1 R_1 R_5 R_L + C_L L_1 L_L R_1 R_5 g_m + 2 C_L L_1 L_L R_1 R_L g_m + C_L L_1 L_L R_1 + C_L L_1 L_L R_5 + C_L L_1 L_L R_L\right) + s^2 \left(C_1 L_1 R_1 R_5 + C_1 L_1 R_1 R_L + C_L L_1 R_1 R_5 R_L g_m + C_L L_1 R_1 R_L + C_L L_1 R_5 R_L + C_L L_1 R_1 \right.}$$

9.755 X-INVALID-ORDER-755 $Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_5 s},\ R_L\right)$

$$H(s) = \frac{-C_5 L_1 R_1 R_L s^2 + L_1 R_1 R_L g_m s}{C_1 C_5 L_1 R_1 R_L s^3 + R_1 + s^2 \left(C_1 L_1 R_1 + 2 C_5 L_1 R_1 R_L g_m + C_5 L_1 R_1 + C_5 L_1 R_L\right) + s \left(C_5 R_1 R_L + L_1 R_1 g_m + L_1\right)}$$

9.756 X-INVALID-ORDER-756 $Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_5 s},\ \frac{R_L}{C_L R_L s + 1}\right)$

$$H(s) = \frac{-C_5 L_1 R_1 R_L s^2 + L_1 R_1 R_L g_m s}{R_1 + s^3 \left(C_1 C_5 L_1 R_1 R_L + C_1 C_L L_1 R_1 R_L + C_5 C_L L_1 R_1 R_L\right) + s^2 \left(C_1 L_1 R_1 + 2 C_5 L_1 R_1 R_L g_m + C_5 L_1 R_1 + C_5 L_1 R_L + C_L L_1 R_1 R_L g_m + C_L L_1 R_L\right) + s \left(C_5 R_1 R_L + C_L R_1 R_L + L_1 R_1 g_m + L_1\right)}$$

9.757 X-INVALID-ORDER-757 $Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_5 s},\ R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{-C_5 C_L L_1 R_1 R_L s^2 + L_1 R_1 g_m + s \left(-C_5 L_1 R_1 + C_L L_1 R_1 R_L g_m\right)}{C_1 C_5 C_L L_1 R_1 R_L s^3 + C_5 R_1 + C_L R_1 + s^2 \left(C_1 C_5 L_1 R_1 + C_1 C_L L_1 R_1 + 2 C_5 C_L L_1 R_1 R_L g_m + C_5 C_L L_1 R_1 + C_5 C_L L_1 R_L\right) + s \left(C_5 C_L R_1 R_L + 2 C_5 L_1 R_1 g_m + C_5 L_1 + C_L L_1 R_1 g_m + C_L L_1\right)}$$

9.758 X-INVALID-ORDER-758 $Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_5 s},\ L_L s + \frac{1}{C_L s}\right)$

$$H(s) = \frac{-C_5 C_L L_1 L_L R_1 s^3 - C_5 L_1 R_1 s + C_L L_1 L_L R_1 g_m s^2 + L_1 R_1 g_m}{C_1 C_5 C_L L_1 L_L R_1 s^4 + C_5 R_1 + C_L R_1 + s^3 \left(2 C_5 C_L L_1 L_L R_1 g_m + C_5 C_L L_1 L_L\right) + s^2 \left(C_1 C_5 L_1 R_1 + C_1 C_L L_1 R_1 + C_5 C_L L_1 R_1 + C_5 C_L L_L R_1\right) + s \left(2 C_5 L_1 R_1 g_m + C_5 L_1 + C_L L_1 R_1 g_m + C_L L_1\right)}$$

9.759 X-INVALID-ORDER-759 $Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_5 s},\ \frac{L_L s}{C_L L_L s^2 + 1}\right)$

$$H(s) = \frac{-C_5 L_1 L_L R_1 s^3 + L_1 L_L R_1 g_m s^2}{R_1 + s^4 \left(C_1 C_5 L_1 L_L R_1 + C_1 C_L L_1 L_L R_1 + C_5 C_L L_1 L_L R_1\right) + s^3 \left(2 C_5 L_1 L_L R_1 g_m + C_5 L_1 L_L + C_L L_1 L_L R_1 g_m + C_L L_1 L_L\right) + s^2 \left(C_1 L_1 R_1 + C_5 L_1 R_1 + C_5 L_L R_1 + C_L L_L R_1\right) + s \left(L_1 R_1 g_m + L_1\right)}$$

9.760 X-INVALID-ORDER-760 $Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_5 s},\ L_L s + R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{-C_5 C_L L_1 L_L R_1 s^3 + L_1 R_1 g_m + s^2 \left(-C_5 C_L L_1 R_1 R_L + C_L L_1 L_L R_1 g_m\right) + s \left(-C_5 L_1 R_1 + C_L L_1 R_1 R_L g_m\right)}{C_1 C_5 C_L L_1 L_L R_1 s^4 + C_5 R_1 + C_L R_1 + s^3 \left(C_1 C_5 C_L L_1 R_1 R_L + 2 C_5 C_L L_1 L_L R_1 g_m + C_5 C_L L_1 L_L\right) + s^2 \left(C_1 C_5 L_1 R_1 + C_1 C_L L_1 R_1 + 2 C_5 C_L L_1 R_1 R_L g_m + C_5 C_L L_1 R_1 + C_5 C_L L_1 R_L + C_5 C_L L_L R_1\right) + s \left(C_5 C_L R_1 R_L + 2 C_5 L_1 R_1 g_m + C_5 L_1 + C_L L_1 R_1 g_m + C_L L_1\right)}$$

9.761 X-INVALID-ORDER-761 $Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_5 s},\ \frac{L_L R_L s}{C_L L_L R_L s^2 + L_L s + R_L}\right)$

$$H(s) = \frac{-C_5 L_1 L_L R_1 R_L s^3 + L_1 L_L R_1 R_L g_m s^2}{R_1 R_L + s^4 \left(C_1 C_5 L_1 L_L R_1 R_L + C_1 C_L L_1 L_L R_1 R_L + C_5 C_L L_1 L_L R_1 R_L\right) + s^3 \left(C_1 L_1 L_L R_1 + 2 C_5 L_1 L_L R_1 R_L g_m + C_5 L_1 L_L R_1 + C_5 L_1 L_L R_L + C_L L_1 L_L R_1 R_L g_m + C_L L_1 L_L R_L\right) + s^2 \left(C_1 L_1 R_1 R_L + C_5 L_1 R_1 R_L + C_5 L_L R_1 R_L + C_L L_L R_1 R_L + L_1 L_L R_1 g_m + L_1 L_L\right) + s \right.}$$

9.762 X-INVALID-ORDER-762 $Z(s) = \left(\frac{L_1R_1s}{C_1L_1R_1s^2+L_1s+R_1},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_5s},\ \frac{C_LL_LR_Ls^2+L_Ls+R_L}{C_LL_Ls^2+1}\right)$

$$H(s) = \frac{-C_5C_LL_1L_LR_1R_Ls^4 + L_1R_1R_Lg_ms + s^3\left(-C_5L_1L_LR_1 + C_LL_1L_LR_1R_Lg_m\right) + s^2\left(-C_5L_1R_1R_L + L_1L_LR_1g_m\right)}{C_1C_5C_LL_1L_LR_1R_Ls^5 + R_1 + s^4\left(C_1C_5L_1L_LR_1 + C_1C_LL_1L_LR_1 + 2C_5C_LL_1L_LR_1R_Lg_m + C_5C_LL_1L_LR_1 + C_5C_LL_1L_LR_L\right) + s^3\left(C_1C_5L_1R_1R_L + C_5C_LL_LR_1R_L + 2C_5L_1L_LR_1g_m + C_5L_1L_L + C_LL_1L_LR_1g_m + C_LL_1L_L\right) + s^2\left(C_1L_1R_1 + 2C_5L_1R_1R_Lg_m + C_5L_1\right.}$$

9.763 X-INVALID-ORDER-763 $Z(s) = \left(\frac{L_1R_1s}{C_1L_1R_1s^2+L_1s+R_1},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_5s},\ \frac{R_L\left(C_LL_Ls^2+1\right)}{C_LL_Ls^2+C_LR_Ls+1}\right)$

$$H(s) = \frac{-C_5C_LL_1L_LR_1R_Ls^4 - C_5L_1R_1R_Ls^2 + C_LL_1L_LR_1R_Lg_ms^3 + L_1R_1R_Lg_ms}{C_1C_5C_LL_1L_LR_1R_Ls^5 + R_1 + s^4\left(C_1C_LL_1L_LR_1 + 2C_5C_LL_1L_LR_1R_Lg_m + C_5C_LL_1L_LR_1 + C_5C_LL_1L_LR_L\right) + s^3\left(C_1C_5L_1R_1R_L + C_1C_LL_1R_1R_L + C_5C_LL_1R_1R_L + C_5C_LL_LR_1R_L + C_LL_1L_LR_1g_m + C_LL_1L_L\right) + s^2\left(C_1L_1R_1 + 2C_5L_1R_1R_Lg_m + C_5L_1R_1 + C_5L_1\right.}$$

9.764 X-INVALID-ORDER-764 $Z(s) = \left(\frac{L_1R_1s}{C_1L_1R_1s^2+L_1s+R_1},\ \infty,\ \infty,\ \infty,\ \frac{R_5}{C_5R_5s+1},\ R_L\right)$

$$H(s) = \frac{-C_5L_1R_1R_5R_Ls^2 + s\left(L_1R_1R_5R_Lg_m - L_1R_1R_L\right)}{C_1C_5L_1R_1R_5R_Ls^3 + R_1R_5 + R_1R_L + s^2\left(C_1L_1R_1R_5 + C_1L_1R_1R_L + 2C_5L_1R_1R_5R_Lg_m + C_5L_1R_1R_5 + C_5L_1R_5R_L\right) + s\left(C_5R_1R_5R_L + L_1R_1R_5g_m + 2L_1R_1R_Lg_m + L_1R_1 + L_1R_5 + L_1R_L\right)}$$

9.765 X-INVALID-ORDER-765 $Z(s) = \left(\frac{L_1R_1s}{C_1L_1R_1s^2+L_1s+R_1},\ \infty,\ \infty,\ \infty,\ \frac{R_5}{C_5R_5s+1},\ \frac{1}{C_Ls}\right)$

$$H(s) = \frac{-C_5L_1R_1R_5s^2 + s\left(L_1R_1R_5g_m - L_1R_1\right)}{R_1 + s^3\left(C_1C_5L_1R_1R_5 + C_1C_LL_1R_1R_5 + C_5C_LL_1R_1R_5\right) + s^2\left(C_1L_1R_1 + 2C_5L_1R_1R_5g_m + C_5L_1R_5 + C_LL_1R_1R_5g_m + C_LL_1R_1 + C_LL_1R_5\right) + s\left(C_5R_1R_5 + C_LR_1R_5 + 2L_1R_1g_m + L_1\right)}$$

9.766 X-INVALID-ORDER-766 $Z(s) = \left(\frac{L_1R_1s}{C_1L_1R_1s^2+L_1s+R_1},\ \infty,\ \infty,\ \infty,\ \frac{R_5}{C_5R_5s+1},\ \frac{R_L}{C_LR_Ls+1}\right)$

$$H(s) = \frac{-C_5L_1R_1R_5R_Ls^2 + s\left(L_1R_1R_5R_Lg_m - L_1R_1R_L\right)}{R_1R_5 + R_1R_L + s^3\left(C_1C_5L_1R_1R_5R_L + C_1C_LL_1R_1R_5R_L + C_5C_LL_1R_1R_5R_L\right) + s^2\left(C_1L_1R_1R_5 + C_1L_1R_1R_L + 2C_5L_1R_1R_5R_Lg_m + C_5L_1R_1R_5 + C_5L_1R_5R_L + C_LL_1R_1R_5R_Lg_m + C_LL_1R_1R_L + C_LL_1R_5R_L\right) + s\left(C_5R_1R_5R_L + C_LR_1R_5R_L + L_1R_1R_5g_m + 2L_1\right.}$$

9.767 X-INVALID-ORDER-767 $Z(s) = \left(\frac{L_1R_1s}{C_1L_1R_1s^2+L_1s+R_1},\ \infty,\ \infty,\ \infty,\ \frac{R_5}{C_5R_5s+1},\ R_L + \frac{1}{C_Ls}\right)$

$$H(s) = \frac{-C_5C_LL_1R_1R_5R_Ls^3 + s^2\left(-C_5L_1R_1R_5 + C_LL_1R_1R_5R_Lg_m - C_LL_1R_1R_L\right) + s\left(L_1R_1R_5g_m - L_1R_1\right)}{C_1C_5C_LL_1R_1R_5R_Ls^4 + R_1 + s^3\left(C_1C_5L_1R_1R_5 + C_1C_LL_1R_1R_5 + C_1C_LL_1R_1R_L + 2C_5C_LL_1R_1R_5R_Lg_m + C_5C_LL_1R_1R_5 + C_5C_LL_1R_5R_L\right) + s^2\left(C_1L_1R_1 + C_5C_LR_1R_5R_L + 2C_5L_1R_1R_5g_m + C_5L_1R_5 + C_LL_1R_1R_5g_m + 2C_LL_1R_1R_Lg_m + C_LL_1R_1 + C_LL_1R_5 +\right.}$$

9.768 X-INVALID-ORDER-768 $Z(s) = \left(\frac{L_1R_1s}{C_1L_1R_1s^2+L_1s+R_1},\ \infty,\ \infty,\ \infty,\ \frac{R_5}{C_5R_5s+1},\ L_Ls + \frac{1}{C_Ls}\right)$

$$H(s) = \frac{-C_5C_LL_1L_LR_1R_5s^4 - C_5L_1R_1R_5s^2 + s^3\left(C_LL_1L_LR_1R_5g_m - C_LL_1L_LR_1\right) + s\left(L_1R_1R_5g_m - L_1R_1\right)}{C_1C_5C_LL_1L_LR_1R_5s^5 + R_1 + s^4\left(C_1C_LL_1L_LR_1 + 2C_5C_LL_1L_LR_1R_5g_m + C_5C_LL_1L_LR_5\right) + s^3\left(C_1C_5L_1R_1R_5 + C_1C_LL_1R_1R_5 + C_5C_LL_1R_1R_5 + C_5C_LL_LR_1R_5 + 2C_LL_1L_LR_1g_m + C_LL_1L_L\right) + s^2\left(C_1L_1R_1 + 2C_5L_1R_1R_5g_m + C_5L_1R_5 + C_LL_1R_1R_5g_m + C_LL_1\right.}$$

9.769 X-INVALID-ORDER-769 $Z(s) = \left(\frac{L_1R_1s}{C_1L_1R_1s^2+L_1s+R_1},\ \infty,\ \infty,\ \infty,\ \frac{R_5}{C_5R_5s+1},\ \frac{L_Ls}{C_LL_Ls^2+1}\right)$

$$H(s) = \frac{-C_5L_1L_LR_1R_5s^3 + s^2\left(L_1L_LR_1R_5g_m - L_1L_LR_1\right)}{R_1R_5 + s^4\left(C_1C_5L_1L_LR_1R_5 + C_1C_LL_1L_LR_1R_5 + C_5C_LL_1L_LR_1R_5\right) + s^3\left(C_1L_1L_LR_1 + 2C_5L_1L_LR_1R_5g_m + C_5L_1L_LR_5 + C_LL_1L_LR_1R_5g_m + C_LL_1L_LR_1 + C_LL_1L_LR_5\right) + s^2\left(C_1L_1R_1R_5 + C_5L_1R_1R_5 + C_5L_LR_1R_5 + C_LL_LR_1R_5 + 2L_1L_LR_1g_m + L_1L_L\right) + s\left(\right.}$$

9.770 X-INVALID-ORDER-770 $Z(s) = \left(\frac{L_1R_1s}{C_1L_1R_1s^2+L_1s+R_1},\ \infty,\ \infty,\ \infty,\ \frac{R_5}{C_5R_5s+1},\ L_Ls + R_L + \frac{1}{C_Ls}\right)$

$$H(s) = \frac{-C_5C_LL_1L_LR_1R_5s^4 + s^3\left(-C_5C_LL_1R_1R_5R_L + C_LL_1L_LR_1R_5g_m - C_LL_1L_LR_1\right) + s^2\left(-C_5L_1R_1R_5 + C_L\right.}{C_1C_5C_LL_1L_LR_1R_5s^5 + R_1 + s^4\left(C_1C_5C_LL_1R_1R_5R_L + C_1C_LL_1L_LR_1 + 2C_5C_LL_1L_LR_1R_5g_m + C_5C_LL_1L_LR_5\right) + s^3\left(C_1C_5L_1R_1R_5 + C_1C_LL_1R_1R_5 + C_1C_LL_1R_1R_L + 2C_5C_LL_1R_1R_5R_Lg_m + C_5C_LL_1R_1R_5 + C_5C_LL_1R_5R_L + C_5C_LL_LR_1R_5 + 2C_LL_1L_LR_1g_m\right.}$$

9.771 X-INVALID-ORDER-771 $Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1},\ \infty,\ \infty,\ \infty,\ \frac{R_5}{C_5 R_5 s + 1},\ \frac{L_L R_L s}{C_L L_L R_L s^2 + L_L s + R_L}\right)$

$$H(s) = \frac{-C_5 L_1 L_L R_1 R_5 R_L s^3 + s^2 \left(L_1 L_L R_1 R_5 R_L g_m - L_1 L_L R_1 R_L\right)}{R_1 R_5 R_L + s^4 \left(C_1 C_5 L_1 L_L R_1 R_5 R_L + C_1 C_L L_1 L_L R_1 R_5 R_L + C_5 C_L L_1 L_L R_1 R_5 R_L\right) + s^3 \left(C_1 L_1 L_L R_1 R_5 + C_1 L_1 L_L R_1 R_L + 2C_5 L_1 L_L R_1 R_5 R_L g_m + C_5 L_1 L_L R_1 R_5 + C_5 L_1 L_L R_5 R_L + C_L L_1 L_L R_1 R_5 R_L g_m + C_L L_1 L_L R_1 R_L + C_L L_1 L_L R_5 R_L\right) + s^2 \left(C_1 L_1 R_1 R_5 R_L + C_5\right.}$$

9.772 X-INVALID-ORDER-772 $Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1},\ \infty,\ \infty,\ \infty,\ \frac{R_5}{C_5 R_5 s + 1},\ \frac{C_L L_L R_L s^2 + L_L s + R_L}{C_L L_L s^2 + 1}\right)$

$$H(s) = \frac{-C_5 C_L L_1 L_L R_1 R_5 R_L s^4 + s^3 \left(-C_5 L_1 L_L R_1 R_5 + C_L L_1 L\right.}{C_1 C_5 C_L L_1 L_L R_1 R_5 R_L s^5 + R_1 R_5 + R_1 R_L + s^4 \left(C_1 C_5 L_1 L_L R_1 R_5 + C_1 C_L L_1 L_L R_1 R_5 + C_1 C_L L_1 L_L R_1 R_L + 2C_5 C_L L_1 L_L R_1 R_5 R_L g_m + C_5 C_L L_1 L_L R_1 R_5 + C_5 C_L L_1 L_L R_5 R_L\right) + s^3 \left(C_1 C_5 L_1 R_1 R_5 R_L + C_1 L_1 L_L R_1 + C_5 C_L L_L R_1 R_5 R_L + 2C_5 L_1 L_L R_1 R_5 g_m + C_5 L_1 L\right.}$$

9.773 X-INVALID-ORDER-773 $Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1},\ \infty,\ \infty,\ \infty,\ \frac{R_5}{C_5 R_5 s + 1},\ \frac{R_L\left(C_L L_L s^2 + 1\right)}{C_L L_L s^2 + C_L R_L s + 1}\right)$

$$H(s) = \frac{-C_5 C_L L_1 L_L R_1 R_5 R_L s^4 - C_5 L_1 R_1 R}{C_1 C_5 C_L L_1 L_L R_1 R_5 R_L s^5 + R_1 R_5 + R_1 R_L + s^4 \left(C_1 C_L L_1 L_L R_1 R_5 + C_1 C_L L_1 L_L R_1 R_L + 2C_5 C_L L_1 L_L R_1 R_5 R_L g_m + C_5 C_L L_1 L_L R_1 R_5 + C_5 C_L L_1 L_L R_5 R_L\right) + s^3 \left(C_1 C_5 L_1 R_1 R_5 R_L + C_1 C_L L_1 R_1 R_5 R_L + C_5 C_L L_1 R_1 R_5 R_L + C_5 C_L L_L R_1 R_5 R_L + C_L L_1 L_L R_1 R_5 g_m + 2\right.}$$

9.774 X-INVALID-ORDER-774 $Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1},\ \infty,\ \infty,\ \infty,\ R_5 + \frac{1}{C_5 s},\ R_L\right)$

$$H(s) = \frac{L_1 R_1 R_L g_m s + s^2 \left(C_5 L_1 R_1 R_5 R_L g_m - C_5 L_1 R_1 R_L\right)}{R_1 + s^3 \left(C_1 C_5 L_1 R_1 R_5 + C_1 C_5 L_1 R_1 R_L\right) + s^2 \left(C_1 L_1 R_1 + C_5 L_1 R_1 R_5 g_m + 2C_5 L_1 R_1 R_L g_m + C_5 L_1 R_1 + C_5 L_1 R_5 + C_5 L_1 R_L\right) + s \left(C_5 R_1 R_5 + C_5 R_1 R_L + L_1 R_1 g_m + L_1\right)}$$

9.775 X-INVALID-ORDER-775 $Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1},\ \infty,\ \infty,\ \infty,\ R_5 + \frac{1}{C_5 s},\ \frac{1}{C_L s}\right)$

$$H(s) = \frac{L_1 R_1 g_m + s \left(C_5 L_1 R_1 R_5 g_m - C_5 L_1 R_1\right)}{C_1 C_5 C_L L_1 R_1 R_5 s^3 + C_5 R_1 + C_L R_1 + s^2 \left(C_1 C_5 L_1 R_1 + C_1 C_L L_1 R_1 + C_5 C_L L_1 R_1 R_5 g_m + C_5 C_L L_1 R_1 + C_5 C_L L_1 R_5\right) + s \left(C_5 C_L R_1 R_5 + 2C_5 L_1 R_1 g_m + C_5 L_1 + C_L L_1 R_1 g_m + C_L L_1\right)}$$

9.776 X-INVALID-ORDER-776 $Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1},\ \infty,\ \infty,\ \infty,\ R_5 + \frac{1}{C_5 s},\ \frac{R_L}{C_L R_L s + 1}\right)$

$$H(s) = \frac{L_1 R_1 R_L g_m s + s^2 \left(C_5 L_1 R_1 R_5 R_L g_m - C_5 L_1 R_1 R_L\right)}{C_1 C_5 C_L L_1 R_1 R_5 R_L s^4 + R_1 + s^3 \left(C_1 C_5 L_1 R_1 R_5 + C_1 C_5 L_1 R_1 R_L + C_1 C_L L_1 R_1 R_L + C_5 C_L L_1 R_1 R_5 R_L g_m + C_5 C_L L_1 R_1 R_L + C_5 C_L L_1 R_5 R_L\right) + s^2 \left(C_1 L_1 R_1 + C_5 C_L R_1 R_5 R_L + C_5 L_1 R_1 R_5 g_m + 2C_5 L_1 R_1 R_L g_m + C_5 L_1 R_1 + C_5 L_1 R_5 + C_5 L_1 R_L + C_L L_1 R_1 R_L g_m + C\right.}$$

9.777 X-INVALID-ORDER-777 $Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1},\ \infty,\ \infty,\ \infty,\ R_5 + \frac{1}{C_5 s},\ R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{L_1 R_1 g_m + s^2 \left(C_5 C_L L_1 R_1 R_5 R_L g_m - C_5 C_L L_1 R_1 R_L\right) + s \left(C_5 L_1 R_1 R_5 g_m - C_5 L_1 R_1 + C_L L_1 R_1 R_L g_m\right)}{C_5 R_1 + C_L R_1 + s^3 \left(C_1 C_5 C_L L_1 R_1 R_5 + C_1 C_5 C_L L_1 R_1 R_L\right) + s^2 \left(C_1 C_5 L_1 R_1 + C_1 C_L L_1 R_1 + C_5 C_L L_1 R_1 R_5 g_m + 2C_5 C_L L_1 R_1 R_L g_m + C_5 C_L L_1 R_1 + C_5 C_L L_1 R_5 + C_5 C_L L_1 R_L\right) + s \left(C_5 C_L R_1 R_5 + C_5 C_L R_1 R_L + 2C_5 L_1 R_1 g_m + C_5 L_1 + C_L L_1 R_1 g_m + C_L L_1\right)}$$

9.778 X-INVALID-ORDER-778 $Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1},\ \infty,\ \infty,\ \infty,\ R_5 + \frac{1}{C_5 s},\ L_L s + \frac{1}{C_L s}\right)$

$$H(s) = \frac{C_L L_1 L_L R_1 g_m s^2 + L_1 R_1 g_m + s^3 \left(C_5 C_L L_1 L_L R_1 R_5 g_m - C_5 C_L L_1 L_L R_1\right) + s \left(C_5 L_1 R_1 R_5 g_m - C_5 L_1 R_1\right)}{C_1 C_5 C_L L_1 L_L R_1 s^4 + C_5 R_1 + C_L R_1 + s^3 \left(C_1 C_5 C_L L_1 R_1 R_5 + 2C_5 C_L L_1 L_L R_1 g_m + C_5 C_L L_1 L_L\right) + s^2 \left(C_1 C_5 L_1 R_1 + C_1 C_L L_1 R_1 + C_5 C_L L_1 R_1 R_5 g_m + C_5 C_L L_1 R_1 + C_5 C_L L_1 R_5 + C_5 C_L L_L R_1\right) + s \left(C_5 C_L R_1 R_5 + 2C_5 L_1 R_1 g_m + C_5 L_1 + C_L L_1 R_1 g_m + C_L L_1\right)}$$

9.779 X-INVALID-ORDER-779 $Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1},\ \infty,\ \infty,\ \infty,\ R_5 + \frac{1}{C_5 s},\ \frac{L_L s}{C_L L_L s^2 + 1}\right)$

$$H(s) = \frac{L_1 L_L R_1 g_m s^2 + s^3 \left(C_5 L_1 L_L R_1 R_5 g_m - C_5 L_1 L_L R_1\right)}{C_1 C_5 C_L L_1 L_L R_1 R_5 s^5 + R_1 + s^4 \left(C_1 C_5 L_1 L_L R_1 + C_1 C_L L_1 L_L R_1 + C_5 C_L L_1 L_L R_1 R_5 g_m + C_5 C_L L_1 L_L R_1 + C_5 C_L L_1 L_L R_5\right) + s^3 \left(C_1 C_5 L_1 R_1 R_5 + C_5 C_L L_L R_1 R_5 + 2C_5 L_1 L_L R_1 g_m + C_5 L_1 L_L + C_L L_1 L_L R_1 g_m + C_L L_1 L_L\right) + s^2 \left(C_1 L_1 R_1 + C_5 L_1 R_1 R_5 g_m + C_5 L_1 R_1\right.}$$

9.780 X-INVALID-ORDER-780 $Z(s) = \left(\frac{L_1R_1s}{C_1L_1R_1s^2+L_1s+R_1},\ \infty,\ \infty,\ \infty,\ R_5+\frac{1}{C_5s},\ L_Ls+R_L+\frac{1}{C_Ls}\right)$

$$H(s) = \frac{L_1R_1g_m + s^3\left(C_5C_LL_1L_LR_1R_5g_m - C_5C_LL_1L_LR_1\right) + s^2\left(C_5C_LL_1R_1R_5R_Lg_m - C_5C_LL_1R_1R_L + C_LL_1L_LR_1g_m\right) + s\left(C_5L_1R_1R_5g_m - C_5L_1R_1 + C_LL_1R_1R_Lg_m\right)}{C_1C_5C_LL_1L_LR_1s^4 + C_5R_1 + C_LR_1 + s^3\left(C_1C_5C_LL_1R_1R_5 + C_1C_5C_LL_1R_1R_L + 2C_5C_LL_1L_LR_1g_m + C_5C_LL_1L_L\right) + s^2\left(C_1C_5L_1R_1 + C_1C_LL_1R_1 + C_5C_LL_1R_1R_5g_m + 2C_5C_LL_1R_1R_Lg_m + C_5C_LL_1R_1 + C_5C_LL_1R_5 + C_5C_LL_1R_L + C_5C_LL_LR_1\right) + s\left(C_5C_LR_1R_5\right.}$$

9.781 X-INVALID-ORDER-781 $Z(s) = \left(\frac{L_1R_1s}{C_1L_1R_1s^2+L_1s+R_1},\ \infty,\ \infty,\ \infty,\ R_5+\frac{1}{C_5s},\ \frac{L_LR_Ls}{C_LL_LR_Ls^2+L_Ls+R_L}\right)$

$$H(s) = \frac{L_1L_LR_1R_Lg_ms^2 + s^3\left(C_5L_1L_L\right.}{C_1C_5C_LL_1L_LR_1R_5R_Ls^5 + R_1R_L + s^4\left(C_1C_5L_1L_LR_1R_5 + C_1C_5L_1L_LR_1R_L + C_1C_LL_1L_LR_1R_L + C_5C_LL_1L_LR_1R_5R_Lg_m + C_5C_LL_1L_LR_1R_L + C_5C_LL_1L_LR_5R_L\right) + s^3\left(C_1C_5L_1R_1R_5R_L + C_1L_1L_LR_1 + C_5C_LL_LR_1R_5R_L + C_5L_1L_LR_1R_5g_m + 2C_5L_1L_LR_1R_Lg_m\right.}$$

9.782 X-INVALID-ORDER-782 $Z(s) = \left(\frac{L_1R_1s}{C_1L_1R_1s^2+L_1s+R_1},\ \infty,\ \infty,\ \infty,\ R_5+\frac{1}{C_5s},\ \frac{C_LL_LR_Ls^2+L_Ls+R_L}{C_LL_Ls^2+1}\right)$

$$H(s) = \frac{L_1R_1R_Lg_ms + s^4\left(C_5C_LL_1L_LR_1R_5R_Lg_m - C_5C_LL_1L_LR_1R_L\right) + s^3\left(C_5L_1L_LR_1R_5g_m - C_5L_1L_LR_1 + C_LL_1L_LR_1\right.}{R_1 + s^5\left(C_1C_5C_LL_1L_LR_1R_5 + C_1C_5C_LL_1L_LR_1R_L\right) + s^4\left(C_1C_5L_1L_LR_1 + C_1C_LL_1L_LR_1 + C_5C_LL_1L_LR_1R_5g_m + 2C_5C_LL_1L_LR_1R_Lg_m + C_5C_LL_1L_LR_1 + C_5C_LL_1L_LR_5 + C_5C_LL_1L_LR_L\right) + s^3\left(C_1C_5L_1R_1R_5 + C_1C_5L_1R_1R_L + C_5C_LL_LR_1R_5 + C_5C_LL_LR_1R_L\right.}$$

9.783 X-INVALID-ORDER-783 $Z(s) = \left(\frac{L_1R_1s}{C_1L_1R_1s^2+L_1s+R_1},\ \infty,\ \infty,\ \infty,\ R_5+\frac{1}{C_5s},\ \frac{R_L\left(C_LL_Ls^2+1\right)}{C_LL_Ls^2+C_LR_Ls+1}\right)$

$$H(s) = \frac{C_LL_1L_LR_1R_Lg_ms^3 + L_1R_1R_Lg_ms + s^4}{R_1 + s^5\left(C_1C_5C_LL_1L_LR_1R_5 + C_1C_5C_LL_1L_LR_1R_L\right) + s^4\left(C_1C_5C_LL_1R_1R_5R_L + C_1C_LL_1L_LR_1 + C_5C_LL_1L_LR_1R_5g_m + 2C_5C_LL_1L_LR_1R_Lg_m + C_5C_LL_1L_LR_1 + C_5C_LL_1L_LR_5 + C_5C_LL_1L_LR_L\right) + s^3\left(C_1C_5L_1R_1R_5 + C_1C_5L_1R_1R_L + C_1C_LL_1R_1R_L + C_5C_LL_1\right.}$$

9.784 X-INVALID-ORDER-784 $Z(s) = \left(\frac{L_1R_1s}{C_1L_1R_1s^2+L_1s+R_1},\ \infty,\ \infty,\ \infty,\ L_5s+\frac{1}{C_5s},\ R_L\right)$

$$H(s) = \frac{C_5L_1L_5R_1R_Lg_ms^3 - C_5L_1R_1R_Ls^2 + L_1R_1R_Lg_ms}{C_1C_5L_1L_5R_1s^4 + R_1 + s^3\left(C_1C_5L_1R_1R_L + C_5L_1L_5R_1g_m + C_5L_1L_5\right) + s^2\left(C_1L_1R_1 + 2C_5L_1R_1R_Lg_m + C_5L_1R_1 + C_5L_1R_L + C_5L_5R_1\right) + s\left(C_5R_1R_L + L_1R_1g_m + L_1\right)}$$

9.785 X-INVALID-ORDER-785 $Z(s) = \left(\frac{L_1R_1s}{C_1L_1R_1s^2+L_1s+R_1},\ \infty,\ \infty,\ \infty,\ L_5s+\frac{1}{C_5s},\ \frac{1}{C_Ls}\right)$

$$H(s) = \frac{C_5L_1L_5R_1g_ms^2 - C_5L_1R_1s + L_1R_1g_m}{C_1C_5C_LL_1L_5R_1s^4 + C_5R_1 + C_LR_1 + s^3\left(C_5C_LL_1L_5R_1g_m + C_5C_LL_1L_5\right) + s^2\left(C_1C_5L_1R_1 + C_1C_LL_1R_1 + C_5C_LL_1R_1 + C_5C_LL_5R_1\right) + s\left(2C_5L_1R_1g_m + C_5L_1 + C_LL_1R_1g_m + C_LL_1\right)}$$

9.786 X-INVALID-ORDER-786 $Z(s) = \left(\frac{L_1R_1s}{C_1L_1R_1s^2+L_1s+R_1},\ \infty,\ \infty,\ \infty,\ L_5s+\frac{1}{C_5s},\ \frac{R_L}{C_LR_Ls+1}\right)$

$$H(s) = \frac{C_5L_1L_5R_1R_Lg_ms^3 - C_5L_1R_1R_Ls^2 + L_1R_1R_Lg_ms}{C_1C_5C_LL_1L_5R_1R_Ls^5 + R_1 + s^4\left(C_1C_5L_1L_5R_1 + C_5C_LL_1L_5R_1R_Lg_m + C_5C_LL_1L_5R_L\right) + s^3\left(C_1C_5L_1R_1R_L + C_1C_LL_1R_1R_L + C_5C_LL_1R_1R_L + C_5C_LL_5R_1R_L + C_5L_1L_5R_1g_m + C_5L_1L_5\right) + s^2\left(C_1L_1R_1 + 2C_5L_1R_1R_Lg_m + C_5L_1R_1 + C_5L_1R_L + C_5L_5R_1 + C_LL\right.}$$

9.787 X-INVALID-ORDER-787 $Z(s) = \left(\frac{L_1R_1s}{C_1L_1R_1s^2+L_1s+R_1},\ \infty,\ \infty,\ \infty,\ L_5s+\frac{1}{C_5s},\ R_L+\frac{1}{C_Ls}\right)$

$$H(s) = \frac{C_5C_LL_1L_5R_1R_Lg_ms^3 + L_1R_1g_m + s^2\left(-C_5C_LL_1R_1R_L + C_5L_1L_5R_1g_m\right) + s\left(-C_5L_1R_1 + C_LL_1R_1R_Lg_m\right)}{C_1C_5C_LL_1L_5R_1s^4 + C_5R_1 + C_LR_1 + s^3\left(C_1C_5C_LL_1R_1R_L + C_5C_LL_1L_5R_1g_m + C_5C_LL_1L_5\right) + s^2\left(C_1C_5L_1R_1 + C_1C_LL_1R_1 + 2C_5C_LL_1R_1R_Lg_m + C_5C_LL_1R_1 + C_5C_LL_1R_L + C_5C_LL_5R_1\right) + s\left(C_5C_LR_1R_L + 2C_5L_1R_1g_m + C_5L_1 + C_LL_1R_1g_m + C_LL_1\right)}$$

9.788 X-INVALID-ORDER-788 $Z(s) = \left(\frac{L_1R_1s}{C_1L_1R_1s^2+L_1s+R_1},\ \infty,\ \infty,\ \infty,\ L_5s+\frac{1}{C_5s},\ L_Ls+\frac{1}{C_Ls}\right)$

$$H(s) = \frac{C_5C_LL_1L_5L_LR_1g_ms^4 - C_5C_LL_1L_LR_1s^3 - C_5L_1R_1s + L_1R_1g_m + s^2\left(C_5L_1L_5R_1g_m + C_LL_1L_LR_1g_m\right)}{C_5R_1 + C_LR_1 + s^4\left(C_1C_5C_LL_1L_5R_1 + C_1C_5C_LL_1L_LR_1\right) + s^3\left(C_5C_LL_1L_5R_1g_m + C_5C_LL_1L_5 + 2C_5C_LL_1L_LR_1g_m + C_5C_LL_1L_L\right) + s^2\left(C_1C_5L_1R_1 + C_1C_LL_1R_1 + C_5C_LL_1R_1 + C_5C_LL_5R_1 + C_5C_LL_LR_1\right) + s\left(2C_5L_1R_1g_m + C_5L_1 + C_LL_1R_1g_m + C_LL_1\right)}$$

9.789 X-INVALID-ORDER-789 $Z(s) = \left(\frac{L_1R_1s}{C_1L_1R_1s^2+L_1s+R_1},\ \infty,\ \infty,\ \infty,\ L_5s+\frac{1}{C_5s},\ \frac{L_Ls}{C_LL_Ls^2+1}\right)$

$$H(s) = \frac{C_5L_1L_5L_LR_1g_ms^4 - C_5L_1L_LR_1s^3 + L_1L_LR_1g_ms^2}{C_1C_5C_LL_1L_5L_LR_1s^6 + R_1 + s^5\left(C_5C_LL_1L_5L_LR_1g_m + C_5C_LL_1L_5L_L\right) + s^4\left(C_1C_5L_1L_5R_1 + C_1C_5L_1L_LR_1 + C_1C_LL_1L_LR_1 + C_5C_LL_1L_LR_1 + C_5C_LL_5L_LR_1\right) + s^3\left(C_5L_1L_5R_1g_m + C_5L_1L_5 + 2C_5L_1L_LR_1g_m + C_5L_1L_L + C_LL_1L_LR_1g_m + C_LL_1L_L\right) + s^2\left(C_1L_1\right.}$$

9.790 X-INVALID-ORDER-790 $Z(s) = \left(\frac{L_1R_1s}{C_1L_1R_1s^2+L_1s+R_1},\ \infty,\ \infty,\ \infty,\ L_5s+\frac{1}{C_5s},\ L_Ls+R_L+\frac{1}{C_Ls}\right)$

$$H(s) = \frac{C_5C_LL_1L_5L_LR_1g_ms^4 + L_1R_1g_m + s^3\left(C_5C_LL_1L_5R_1R_Lg_m - C_5C_LL_1L_LR_1\right) + s^2\left(-C_5C_LL_1R_1R_L + C_5L_1L_5R_1g_m + C_LL_1L_LR_1g_m\right) + s\left(-C_5L_1R_1 + C_LL_1R_1R_Lg_m\right)}{C_5R_1 + C_LR_1 + s^4\left(C_1C_5C_LL_1L_5R_1 + C_1C_5C_LL_1L_LR_1\right) + s^3\left(C_1C_5C_LL_1R_1R_L + C_5C_LL_1L_5R_1g_m + C_5C_LL_1L_5 + 2C_5C_LL_1L_LR_1g_m + C_5C_LL_1L_L\right) + s^2\left(C_1C_5L_1R_1 + C_1C_LL_1R_1 + 2C_5C_LL_1R_1R_Lg_m + C_5C_LL_1R_1 + C_5C_LL_1R_L + C_5C_LL_5R_1 + C_5C_LL_LR_1\right)}$$

9.791 X-INVALID-ORDER-791 $Z(s) = \left(\frac{L_1R_1s}{C_1L_1R_1s^2+L_1s+R_1},\ \infty,\ \infty,\ \infty,\ L_5s+\frac{1}{C_5s},\ \frac{L_LR_Ls}{C_LL_LR_Ls^2+L_Ls+R_L}\right)$

$$H(s) = \frac{C_5L_1L_5L_LR_1R_Lg_ms^4 - C_5L}{C_1C_5C_LL_1L_5L_LR_1R_Ls^6 + R_1R_L + s^5\left(C_1C_5L_1L_5L_LR_1 + C_5C_LL_1L_5L_LR_1R_Lg_m + C_5C_LL_1L_5L_LR_L\right) + s^4\left(C_1C_5L_1L_5R_1R_L + C_1C_5L_1L_LR_1R_L + C_1C_LL_1L_LR_1R_L + C_5C_LL_1L_LR_1R_L + C_5C_LL_5L_LR_1R_L + C_5L_1L_5L_LR_1g_m + C_5L_1L_5L_L\right) + s^3\left(C_1L_1L_LR_1 + C\right.}$$

9.792 X-INVALID-ORDER-792 $Z(s) = \left(\frac{L_1R_1s}{C_1L_1R_1s^2+L_1s+R_1},\ \infty,\ \infty,\ \infty,\ L_5s+\frac{1}{C_5s},\ \frac{C_LL_LR_Ls^2+L_Ls+R_L}{C_LL_Ls^2+1}\right)$

$$H(s) = \frac{C_5C_LL_1L_5L_LR_1R_Lg_ms^5 + L_1R_1R_Lg_ms + s^4\left(-C_5C_LL_1L_LR_1R_L + C_5L_1L_5L_LR_1g_m\right) + s^3\left(C_5L_1L_5R_1R_Lg_m - C_5L\right.}{C_1C_5C_LL_1L_5L_LR_1s^6 + R_1 + s^5\left(C_1C_5C_LL_1L_LR_1R_L + C_5C_LL_1L_5L_LR_1g_m + C_5C_LL_1L_5L_L\right) + s^4\left(C_1C_5L_1L_5R_1 + C_1C_5L_1L_LR_1 + C_1C_LL_1L_LR_1 + 2C_5C_LL_1L_LR_1R_Lg_m + C_5C_LL_1L_LR_1 + C_5C_LL_1L_LR_L + C_5C_LL_5L_LR_1\right) + s^3\left(C_1C_5L_1R_1R_L + C_5C_LL_LR_1R_L\right.}$$

9.793 X-INVALID-ORDER-793 $Z(s) = \left(\frac{L_1R_1s}{C_1L_1R_1s^2+L_1s+R_1},\ \infty,\ \infty,\ \infty,\ L_5s+\frac{1}{C_5s},\ \frac{R_L\left(C_LL_Ls^2+1\right)}{C_LL_Ls^2+C_LR_Ls+1}\right)$

$$H(s) = \frac{C_5C_LL_1L_5L_LR_1R_Lg_ms^5 - C_5C_LL_1L_L}{C_1C_5C_LL_1L_5L_LR_1s^6 + R_1 + s^5\left(C_1C_5C_LL_1L_5R_1R_L + C_1C_5C_LL_1L_LR_1R_L + C_5C_LL_1L_5L_LR_1g_m + C_5C_LL_1L_5L_L\right) + s^4\left(C_1C_5L_1L_5R_1 + C_1C_LL_1L_LR_1 + C_5C_LL_1L_5R_1R_Lg_m + C_5C_LL_1L_5R_L + 2C_5C_LL_1L_LR_1R_Lg_m + C_5C_LL_1L_LR_1 + C_5C_LL_1L_LR_L + C_5C_LL\right.}$$

9.794 X-INVALID-ORDER-794 $Z(s) = \left(\frac{L_1R_1s}{C_1L_1R_1s^2+L_1s+R_1},\ \infty,\ \infty,\ \infty,\ \frac{L_5s}{C_5L_5s^2+1},\ R_L\right)$

$$H(s) = \frac{-C_5L_1L_5R_1R_Ls^3 + L_1L_5R_1R_Lg_ms^2 - L_1R_1R_Ls}{C_1C_5L_1L_5R_1R_Ls^4 + R_1R_L + s^3\left(C_1L_1L_5R_1 + 2C_5L_1L_5R_1R_Lg_m + C_5L_1L_5R_1 + C_5L_1L_5R_L\right) + s^2\left(C_1L_1R_1R_L + C_5L_5R_1R_L + L_1L_5R_1g_m + L_1L_5\right) + s\left(2L_1R_1R_Lg_m + L_1R_1 + L_1R_L + L_5R_1\right)}$$

9.795 X-INVALID-ORDER-795 $Z(s) = \left(\frac{L_1R_1s}{C_1L_1R_1s^2+L_1s+R_1},\ \infty,\ \infty,\ \infty,\ \frac{L_5s}{C_5L_5s^2+1},\ \frac{1}{C_Ls}\right)$

$$H(s) = \frac{-C_5L_1L_5R_1s^3 + L_1L_5R_1g_ms^2 - L_1R_1s}{R_1 + s^4\left(C_1C_5L_1L_5R_1 + C_1C_LL_1L_5R_1 + C_5C_LL_1L_5R_1\right) + s^3\left(2C_5L_1L_5R_1g_m + C_5L_1L_5 + C_LL_1L_5R_1g_m + C_LL_1L_5\right) + s^2\left(C_1L_1R_1 + C_5L_5R_1 + C_LL_1R_1 + C_LL_5R_1\right) + s\left(2L_1R_1g_m + L_1\right)}$$

9.796 X-INVALID-ORDER-796 $Z(s) = \left(\frac{L_1R_1s}{C_1L_1R_1s^2+L_1s+R_1},\ \infty,\ \infty,\ \infty,\ \frac{L_5s}{C_5L_5s^2+1},\ \frac{R_L}{C_LR_Ls+1}\right)$

$$H(s) = \frac{-C_5L_1L_5R_1R_Ls^3 + L_1L_5R_1R_Lg_ms^2 - L_1R_1R_Ls}{R_1R_L + s^4\left(C_1C_5L_1L_5R_1R_L + C_1C_LL_1L_5R_1R_L + C_5C_LL_1L_5R_1R_L\right) + s^3\left(C_1L_1L_5R_1 + 2C_5L_1L_5R_1R_Lg_m + C_5L_1L_5R_1 + C_5L_1L_5R_L + C_LL_1L_5R_1R_Lg_m + C_LL_1L_5R_L\right) + s^2\left(C_1L_1R_1R_L + C_5L_5R_1R_L + C_LL_1R_1R_L + C_LL_5R_1R_L + L_1L_5R_1g_m + L_1L_5\right) + s\left(2L\right.}$$

9.797 X-INVALID-ORDER-797 $Z(s) = \left(\frac{L_1R_1s}{C_1L_1R_1s^2+L_1s+R_1},\ \infty,\ \infty,\ \infty,\ \frac{L_5s}{C_5L_5s^2+1},\ R_L+\frac{1}{C_Ls}\right)$

$$H(s) = \frac{-C_5C_LL_1L_5R_1R_Ls^4 - L_1R_1s + s^3\left(-C_5L_1L_5R_1 + C_LL_1L_5R_1R_Lg_m\right) + s^2\left(-C_LL_1R_1R_L + L_1L_5R_1g_m\right)}{C_1C_5C_LL_1L_5R_1R_Ls^5 + R_1 + s^4\left(C_1C_5L_1L_5R_1 + C_1C_LL_1L_5R_1 + 2C_5C_LL_1L_5R_1R_Lg_m + C_5C_LL_1L_5R_1 + C_5C_LL_1L_5R_L\right) + s^3\left(C_1C_LL_1R_1R_L + C_5C_LL_5R_1R_L + 2C_5L_1L_5R_1g_m + C_5L_1L_5 + C_LL_1L_5R_1g_m + C_LL_1L_5\right) + s^2\left(C_1L_1R_1 + C_5L_5R_1 + 2C_LL_1R_1R_Lg_m\right.}$$

9.798 X-INVALID-ORDER-798 $Z(s) = \left(\frac{L_1R_1s}{C_1L_1R_1s^2+L_1s+R_1},\ \infty,\ \infty,\ \infty,\ \frac{L_5s}{C_5L_5s^2+1},\ L_Ls+\frac{1}{C_Ls}\right)$

$$H(s) = \frac{-C_5C_LL_1L_5L_LR_1s^5 + C_LL_1L_5L_LR_1g_ms^4 + L_1L_5R_1g_ms^2 - L_1R_1s + s^3\left(-C_5L_1L_5R_1 - C_LL_1L_LR_1\right)}{C_1C_5C_LL_1L_5L_LR_1s^6 + R_1 + s^5\left(2C_5C_LL_1L_5L_LR_1g_m + C_5C_LL_1L_5L_L\right) + s^4\left(C_1C_5L_1L_5R_1 + C_1C_LL_1L_5R_1 + C_1C_LL_1L_LR_1 + C_5C_LL_1L_5R_1 + C_5C_LL_5L_LR_1\right) + s^3\left(2C_5L_1L_5R_1g_m + C_5L_1L_5 + C_LL_1L_5R_1g_m + C_LL_1L_5 + 2C_LL_1L_LR_1g_m + C_LL_1L_L\right) + s^2\left(C_1L\right.}$$

9.799 X-INVALID-ORDER-799 $Z(s) = \left(\frac{L_1R_1s}{C_1L_1R_1s^2+L_1s+R_1},\ \infty,\ \infty,\ \infty,\ \frac{L_5s}{C_5L_5s^2+1},\ \frac{L_Ls}{C_LL_Ls^2+1}\right)$

$$H(s) = \frac{-C_5L_1L_5L_LR_1s^3 + L_1L_5L_LR_1g_ms^2 - L_1L_LR_1s}{L_1R_1 + L_5R_1 + L_LR_1 + s^4\left(C_1C_5L_1L_5L_LR_1 + C_1C_LL_1L_5L_LR_1 + C_5C_LL_1L_5L_LR_1\right) + s^3\left(2C_5L_1L_5L_LR_1g_m + C_5L_1L_5L_L + C_LL_1L_5L_LR_1g_m + C_LL_1L_5L_L\right) + s^2\left(C_1L_1L_5R_1 + C_1L_1L_LR_1 + C_5L_1L_5R_1 + C_5L_5L_LR_1 + C_LL_1L_LR_1 + C_LL_5L_LR_1\right) + s\left(L_1L_5R_1g_m\right.}$$

9.800 X-INVALID-ORDER-800 $Z(s) = \left(\frac{L_1R_1s}{C_1L_1R_1s^2+L_1s+R_1},\ \infty,\ \infty,\ \infty,\ \frac{L_5s}{C_5L_5s^2+1},\ L_Ls+R_L+\frac{1}{C_Ls}\right)$

$$H(s) = \frac{-C_5C_LL_1L_5L_LR_1s^5 - L_1R_1s + s^4\left(-C_5C_LL_1L_5R_1R_L + C_LL_1L_5L_LR_1g_m\right) + s^3\left(-C_5L_1L_5R_1 + C_LL_1L_5R\right.}{C_1C_5C_LL_1L_5L_LR_1s^6 + R_1 + s^5\left(C_1C_5C_LL_1L_5R_1R_L + 2C_5C_LL_1L_5L_LR_1g_m + C_5C_LL_1L_5L_L\right) + s^4\left(C_1C_5L_1L_5R_1 + C_1C_LL_1L_5R_1 + C_1C_LL_1L_LR_1 + 2C_5C_LL_1L_5R_1R_Lg_m + C_5C_LL_1L_5R_1 + C_5C_LL_1L_5R_L + C_5C_LL_5L_LR_1\right) + s^3\left(C_1C_LL_1R_1R_L + C_5C_LL_5R_1R_L\right.}$$

9.801 X-INVALID-ORDER-801 $Z(s) = \left(\frac{L_1R_1s}{C_1L_1R_1s^2+L_1s+R_1},\ \infty,\ \infty,\ \infty,\ \frac{L_5s}{C_5L_5s^2+1},\ \frac{L_LR_Ls}{C_LL_LR_Ls^2+L_Ls+R_L}\right)$

$$H(s) = \frac{-C_5L_1L_5L_LR_1R_Ls^3 + L_1L_5L_LR_1R_Lg_ms^2 - L_1L_LR_1R_Ls}{L_1R_1R_L + L_5R_1R_L + L_LR_1R_L + s^4\left(C_1C_5L_1L_5L_LR_1R_L + C_1C_LL_1L_5L_LR_1R_L + C_5C_LL_1L_5L_LR_1R_L\right) + s^3\left(C_1L_1L_5L_LR_1 + 2C_5L_1L_5L_LR_1R_Lg_m + C_5L_1L_5L_LR_1 + C_5L_1L_5L_LR_L + C_LL_1L_5L_LR_1R_Lg_m + C_LL_1L_5L_LR_L\right) + s^2\left(C_1L_1L_5R_1R_L + C_1L_1L_LR_1R_L\right.}$$

9.802 X-INVALID-ORDER-802 $Z(s) = \left(\frac{L_1R_1s}{C_1L_1R_1s^2+L_1s+R_1},\ \infty,\ \infty,\ \infty,\ \frac{L_5s}{C_5L_5s^2+1},\ \frac{C_LL_LR_Ls^2+L_Ls+R_L}{C_LL_Ls^2+1}\right)$

$$H(s) = \frac{-C_5C_LL_1L_5L_LR_1R_Ls^5 - L_1R_1R_Ls + s^4\left(-C_5L_1L_5L_LR\right.}{C_1C_5C_LL_1L_5L_LR_1R_Ls^6 + R_1R_L + s^5\left(C_1C_5L_1L_5L_LR_1 + C_1C_LL_1L_5L_LR_1 + 2C_5C_LL_1L_5L_LR_1R_Lg_m + C_5C_LL_1L_5L_LR_1 + C_5C_LL_1L_5L_LR_L\right) + s^4\left(C_1C_5L_1L_5R_1R_L + C_1C_LL_1L_LR_1R_L + C_5C_LL_5L_LR_1R_L + 2C_5L_1L_5L_LR_1g_m + C_5L_1L_5L_L + C_LL_1L_5L_LR_1g_m\right.}$$

9.803 X-INVALID-ORDER-803 $Z(s) = \left(\frac{L_1R_1s}{C_1L_1R_1s^2+L_1s+R_1},\ \infty,\ \infty,\ \infty,\ \frac{L_5s}{C_5L_5s^2+1},\ \frac{R_L\left(C_LL_Ls^2+1\right)}{C_LL_Ls^2+C_LR_Ls+1}\right)$

$$H(s) = \frac{-C_5C_LL_1L_5L_LR_1R_Ls^5 + C_LL_1L_5\right.}{C_1C_5C_LL_1L_5L_LR_1R_Ls^6 + R_1R_L + s^5\left(C_1C_LL_1L_5L_LR_1 + 2C_5C_LL_1L_5L_LR_1R_Lg_m + C_5C_LL_1L_5L_LR_1 + C_5C_LL_1L_5L_LR_L\right) + s^4\left(C_1C_5L_1L_5R_1R_L + C_1C_LL_1L_5R_1R_L + C_1C_LL_1L_LR_1R_L + C_5C_LL_1L_5R_1R_L + C_5C_LL_5L_LR_1R_L + C_LL_1L_5L_LR_1g_m + C_LL_1L_5L_L\right.}$$

9.804 X-INVALID-ORDER-804 $Z(s) = \left(\frac{L_1R_1s}{C_1L_1R_1s^2+L_1s+R_1},\ \infty,\ \infty,\ \infty,\ L_5s+R_5+\frac{1}{C_5s},\ R_L\right)$

$$H(s) = \frac{C_5L_1L_5R_1R_Lg_ms^3 + L_1R_1R_Lg_ms + s^2\left(C_5L_1R_1R_5R_Lg_m - C_5L_1R_1R_L\right)}{C_1C_5L_1L_5R_1s^4 + R_1 + s^3\left(C_1C_5L_1R_1R_5 + C_1C_5L_1R_1R_L + C_5L_1L_5R_1g_m + C_5L_1L_5\right) + s^2\left(C_1L_1R_1 + C_5L_1R_1R_5g_m + 2C_5L_1R_1R_Lg_m + C_5L_1R_1 + C_5L_1R_5 + C_5L_1R_L + C_5L_5R_1\right) + s\left(C_5R_1R_5 + C_5R_1R_L + L_1R_1g_m + L_1\right)}$$

9.805 X-INVALID-ORDER-805 $Z(s) = \left(\frac{L_1R_1s}{C_1L_1R_1s^2+L_1s+R_1},\ \infty,\ \infty,\ \infty,\ L_5s+R_5+\frac{1}{C_5s},\ \frac{1}{C_Ls}\right)$

$$H(s) = \frac{C_5L_1L_5R_1g_ms^2 + L_1R_1g_m + s\left(C_5L_1R_1R_5g_m - C_5L_1R_1\right)}{C_1C_5C_LL_1L_5R_1s^4 + C_5R_1 + C_LR_1 + s^3\left(C_1C_5C_LL_1R_1R_5 + C_5C_LL_1L_5R_1g_m + C_5C_LL_1L_5\right) + s^2\left(C_1C_5L_1R_1 + C_1C_LL_1R_1 + C_5C_LL_1R_1R_5g_m + C_5C_LL_1R_1 + C_5C_LL_1R_5 + C_5C_LL_5R_1\right) + s\left(C_5C_LR_1R_5 + 2C_5L_1R_1g_m + C_5L_1 + C_LL_1R_1g_m + C_LL_1\right)}$$

9.806 X-INVALID-ORDER-806 $Z(s) = \left(\frac{L_1R_1s}{C_1L_1R_1s^2+L_1s+R_1},\ \infty,\ \infty,\ \infty,\ L_5s+R_5+\frac{1}{C_5s},\ \frac{R_L}{C_LR_Ls+1}\right)$

$$H(s) = \frac{C_5L_1L_5R_1R_Lg_ms^3 + L_1R_1R_Lg_ms + s^2\left(C_5L_1R_1R_5R_Lg_m - C_5L_1\right.}{C_1C_5C_LL_1L_5R_1R_Ls^5 + R_1 + s^4\left(C_1C_5C_LL_1R_1R_5R_L + C_1C_5L_1L_5R_1 + C_5C_LL_1L_5R_1R_Lg_m + C_5C_LL_1L_5R_L\right) + s^3\left(C_1C_5L_1R_1R_5 + C_1C_5L_1R_1R_L + C_1C_LL_1R_1R_L + C_5C_LL_1R_1R_5R_Lg_m + C_5C_LL_1R_1R_L + C_5C_LL_1R_5R_L + C_5C_LL_5R_1R_L + C_5L_1L_5R_1g_m + C_5\right.}$$

9.807 X-INVALID-ORDER-807 $Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1},\ \infty,\ \infty,\ \infty,\ L_5 s + R_5 + \frac{1}{C_5 s},\ R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{C_5 C_L L_1 L_5 R_1 R_L g_m s^3 + L_1 R_1 g_m + s^2 \left(C_5 C_L L_1 R_1 R_5 R_L g_m - C_5 C_L L_1 R_1 R_L + C_5 L_1 L_5 R_1 g_m\right) + s \left(C_5 L_1 R_1 R_5 g_m - C_5 L_1 R_1 + C_L L_1 R_1 R_L g_m\right)}{C_1 C_5 C_L L_1 L_5 R_1 s^4 + C_5 R_1 + C_L R_1 + s^3 \left(C_1 C_5 C_L L_1 R_1 R_5 + C_1 C_5 C_L L_1 R_1 R_L + C_5 C_L L_1 L_5 R_1 g_m + C_5 C_L L_1 L_5\right) + s^2 \left(C_1 C_5 L_1 R_1 + C_1 C_L L_1 R_1 + C_5 C_L L_1 R_1 R_5 g_m + 2 C_5 C_L L_1 R_1 R_L g_m + C_5 C_L L_1 R_1 + C_5 C_L L_1 R_5 + C_5 C_L L_1 R_L + C_5 C_L L_5 R_1\right) + s \left(C_5 C_L R_1 R_5 + \right.}$$

9.808 X-INVALID-ORDER-808 $Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1},\ \infty,\ \infty,\ \infty,\ L_5 s + R_5 + \frac{1}{C_5 s},\ L_L s + \frac{1}{C_L s}\right)$

$$H(s) = \frac{C_5 C_L L_1 L_5 L_L R_1 g_m s^4 + L_1 R_1 g_m + s^3 \left(C_5 C_L L_1 L_L R_1 R_5 g_m - C_5 C_L L_1 L_L R_1\right) + s^2 \left(C_5 L_1 L_5 R_1 g_m + C_L L_1 L_L R_1 g_m\right) + s \left(C_5 L_1 R_1 R_5 g_m - C_5 L_1 R_1\right)}{C_5 R_1 + C_L R_1 + s^4 \left(C_1 C_5 C_L L_1 L_5 R_1 + C_1 C_5 C_L L_1 L_L R_1\right) + s^3 \left(C_1 C_5 C_L L_1 R_1 R_5 + C_5 C_L L_1 L_5 R_1 g_m + C_5 C_L L_1 L_5 + 2 C_5 C_L L_1 L_L R_1 g_m + C_5 C_L L_1 L_L\right) + s^2 \left(C_1 C_5 L_1 R_1 + C_1 C_L L_1 R_1 + C_5 C_L L_1 R_1 R_5 g_m + C_5 C_L L_1 R_1 + C_5 C_L L_1 R_5 + C_5 C_L L_5 R_1 + C_5 C_L L_L R_1\right) +}$$

9.809 X-INVALID-ORDER-809 $Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1},\ \infty,\ \infty,\ \infty,\ L_5 s + R_5 + \frac{1}{C_5 s},\ \frac{L_L s}{C_L L_L s^2 + 1}\right)$

$$H(s) = \frac{C_5 L_1 L_5 L_L R_1 g_m s^4 + L_1 L_L R_1 g_m s^2 + s^3 \left(C_5 L_1 L_L R_1 R_5 g_m - C_5 L_1\right.}{C_1 C_5 C_L L_1 L_5 L_L R_1 s^6 + R_1 + s^5 \left(C_1 C_5 C_L L_1 L_L R_1 R_5 + C_5 C_L L_1 L_5 L_L R_1 g_m + C_5 C_L L_1 L_5 L_L\right) + s^4 \left(C_1 C_5 L_1 L_5 R_1 + C_1 C_5 L_1 L_L R_1 + C_1 C_L L_1 L_L R_1 + C_5 C_L L_1 L_L R_1 R_5 g_m + C_5 C_L L_1 L_L R_1 + C_5 C_L L_1 L_L R_5 + C_5 C_L L_5 L_L R_1\right) + s^3 \left(C_1 C_5 L_1 R_1 R_5 + C_5 C_L L_L R_1 R_5 + \right.}$$

9.810 X-INVALID-ORDER-810 $Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1},\ \infty,\ \infty,\ \infty,\ L_5 s + R_5 + \frac{1}{C_5 s},\ L_L s + R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{C_5 C_L L_1 L_5 L_L R_1 g_m s^4 + L_1 R_1 g_m + s^3 \left(C_5 C_L L_1 L_5 R_1 R_L g_m + C_5 C_L L_1 L_L R_1 R_5 g_m - C_5 C_L L_1 L_L R_1\right) + s^2 \left(C_5 C_L L_1 R_1 R_5 R_L g_m - C_5 C_L L_1 R_1 R_L + C_5 L_1 L_5 R_1 g_m + C_L L_1 L_L R_1 g_m\right)}{C_5 R_1 + C_L R_1 + s^4 \left(C_1 C_5 C_L L_1 L_5 R_1 + C_1 C_5 C_L L_1 L_L R_1\right) + s^3 \left(C_1 C_5 C_L L_1 R_1 R_5 + C_1 C_5 C_L L_1 R_1 R_L + C_5 C_L L_1 L_5 R_1 g_m + C_5 C_L L_1 L_5 + 2 C_5 C_L L_1 L_L R_1 g_m + C_5 C_L L_1 L_L\right) + s^2 \left(C_1 C_5 L_1 R_1 + C_1 C_L L_1 R_1 + C_5 C_L L_1 R_1 R_5 g_m + 2 C_5 C_L L_1 R_1 R_L g_m + C_5 C_L L_1 R_1 + C_5\right.}$$

9.811 X-INVALID-ORDER-811 $Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1},\ \infty,\ \infty,\ \infty,\ L_5 s + R_5 + \frac{1}{C_5 s},\ \frac{L_L R_L s}{C_L L_L R_L s^2 + L_L s + R_L}\right)$

$$H(s) = \frac{}{C_1 C_5 C_L L_1 L_5 L_L R_1 R_L s^6 + R_1 R_L + s^5 \left(C_1 C_5 C_L L_1 L_L R_1 R_5 R_L + C_1 C_5 L_1 L_5 L_L R_1 + C_5 C_L L_1 L_5 L_L R_1 R_L g_m + C_5 C_L L_1 L_5 L_L R_L\right) + s^4 \left(C_1 C_5 L_1 L_5 R_1 R_L + C_1 C_5 L_1 L_L R_1 R_5 + C_1 C_5 L_1 L_L R_1 R_L + C_1 C_L L_1 L_L R_1 R_L + C_5 C_L L_1 L_L R_1 R_5 R_L g_m + C_5 C_L L_1 L_L R_1 R_L + C\right.}$$

9.812 X-INVALID-ORDER-812 $Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1},\ \infty,\ \infty,\ \infty,\ L_5 s + R_5 + \frac{1}{C_5 s},\ \frac{C_L L_L R_L s^2 + L_L s + R_L}{C_L L_L s^2 + 1}\right)$

$$H(s) = \frac{C_5 C_L L_1 L_5 L_L R_1 R_L g_m s^5 + L_1 R_1 R_L g_m s + s^4 \left(C_5 C_L L_1 L_L R_1 R_5 R_L g_m - C_5 C_L L\right.}{C_1 C_5 C_L L_1 L_5 L_L R_1 s^6 + R_1 + s^5 \left(C_1 C_5 C_L L_1 L_L R_1 R_5 + C_1 C_5 C_L L_1 L_L R_1 R_L + C_5 C_L L_1 L_5 L_L R_1 g_m + C_5 C_L L_1 L_5 L_L\right) + s^4 \left(C_1 C_5 L_1 L_5 R_1 + C_1 C_5 L_1 L_L R_1 + C_1 C_L L_1 L_L R_1 + C_5 C_L L_1 L_L R_1 R_5 g_m + 2 C_5 C_L L_1 L_L R_1 R_L g_m + C_5 C_L L_1 L_L R_1 + C_5 C_L L_1 L_L R_5 + C_5 C_L L\right.}$$

9.813 X-INVALID-ORDER-813 $Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1},\ \infty,\ \infty,\ \infty,\ L_5 s + R_5 + \frac{1}{C_5 s},\ \frac{R_L \left(C_L L_L s^2 + 1\right)}{C_L L_L s^2 + C_L R_L s + 1}\right)$

$$H(s) = \frac{}{C_1 C_5 C_L L_1 L_5 L_L R_1 s^6 + R_1 + s^5 \left(C_1 C_5 C_L L_1 L_5 R_1 R_L + C_1 C_5 C_L L_1 L_L R_1 R_5 + C_1 C_5 C_L L_1 L_L R_1 R_L + C_5 C_L L_1 L_5 L_L R_1 g_m + C_5 C_L L_1 L_5 L_L\right) + s^4 \left(C_1 C_5 C_L L_1 R_1 R_5 R_L + C_1 C_5 L_1 L_5 R_1 + C_1 C_L L_1 L_L R_1 + C_5 C_L L_1 L_5 R_1 R_L g_m + C_5 C_L L_1 L_5 R_L + C_5 C_L L_1 L_L R_1 R_5 g_m\right.}$$

9.814 X-INVALID-ORDER-814 $Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1},\ \infty,\ \infty,\ \infty,\ \frac{L_5 R_5 s}{C_5 L_5 R_5 s^2 + L_5 s + R_5},\ R_L\right)$

$$H(s) = \frac{-C_5 L_1 L_5 R_1 R_5 R_L s^3 - L_1 R_1 R_5 R_L s + s^2 \left(L_1 L_5 R_1 R_5 R_L g_m - L_1 L_5 R_1 R_L\right)}{C_1 C_5 L_1 L_5 R_1 R_5 R_L s^4 + R_1 R_5 R_L + s^3 \left(C_1 L_1 L_5 R_1 R_5 + C_1 L_1 L_5 R_1 R_L + 2 C_5 L_1 L_5 R_1 R_5 R_L g_m + C_5 L_1 L_5 R_1 R_5 + C_5 L_1 L_5 R_5 R_L\right) + s^2 \left(C_1 L_1 R_1 R_5 R_L + C_5 L_5 R_1 R_5 R_L + L_1 L_5 R_1 R_5 g_m + 2 L_1 L_5 R_1 R_L g_m + L_1 L_5 R_1 + L_1 L_5 R_5 + L_1 L_5 R_L\right) + s \left(2 L_1 R_1 R_5 R_L g_m + L_1 R\right.}$$

9.815 X-INVALID-ORDER-815 $Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2 + L_1 s + R_1},\ \infty,\ \infty,\ \infty,\ \frac{L_5 R_5 s}{C_5 L_5 R_5 s^2 + L_5 s + R_5},\ \frac{1}{C_L s}\right)$

$$H(s) = \frac{-C_5 L_1 L_5 R_1 R_5 s^3 - L_1 R_1 R_5 s + s^2 \left(L_1 L_5 R_1 R_5 g_m - L_1 L_5 R_1\right)}{R_1 R_5 + s^4 \left(C_1 C_5 L_1 L_5 R_1 R_5 + C_1 C_L L_1 L_5 R_1 R_5 + C_5 C_L L_1 L_5 R_1 R_5\right) + s^3 \left(C_1 L_1 L_5 R_1 + 2 C_5 L_1 L_5 R_1 R_5 g_m + C_5 L_1 L_5 R_5 + C_L L_1 L_5 R_1 R_5 g_m + C_L L_1 L_5 R_1 + C_L L_1 L_5 R_5\right) + s^2 \left(C_1 L_1 R_1 R_5 + C_5 L_5 R_1 R_5 + C_L L_1 R_1 R_5 + C_L L_5 R_1 R_5 + 2 L_1 L_5 R_1 g_m + L_1 L_5\right) + s \left(2 L_1 R\right.}$$

9.816 X-INVALID-ORDER-816 $Z(s) = \left(\frac{L_1R_1s}{C_1L_1R_1s^2+L_1s+R_1},\ \infty,\ \infty,\ \infty,\ \frac{L_5R_5s}{C_5L_5R_5s^2+L_5s+R_5},\ \frac{R_L}{C_LR_Ls+1}\right)$

$$H(s) = \frac{-C_5L_1L_5R_1R_5R_Ls^3 - L_1R_1R_5R_Ls + s^2\left(L_1L_5R_1R_5R_Lg_m - L_1L_5R_1R_L\right)}{R_1R_5R_L + s^4\left(C_1C_5L_1L_5R_1R_5R_L + C_1C_LL_1L_5R_1R_5R_L + C_5C_LL_1L_5R_1R_5R_L\right) + s^3\left(C_1L_1L_5R_1R_5 + C_1L_1L_5R_1R_L + 2C_5L_1L_5R_1R_5R_Lg_m + C_5L_1L_5R_1R_5 + C_5L_1L_5R_5R_L + C_LL_1L_5R_1R_5R_Lg_m + C_LL_1L_5R_1R_L + C_LL_1L_5R_5R_L\right) + s^2\left(C_1L_1R_1R_5R_L + C_5L_5\right.}$$

9.817 X-INVALID-ORDER-817 $Z(s) = \left(\frac{L_1R_1s}{C_1L_1R_1s^2+L_1s+R_1},\ \infty,\ \infty,\ \infty,\ \frac{L_5R_5s}{C_5L_5R_5s^2+L_5s+R_5},\ R_L + \frac{1}{C_Ls}\right)$

$$H(s) = \frac{-C_5C_LL_1L_5R_1R_5R_Ls^4 - L_1R_1R_5s + s^3\left(-C_5L_1L_5R_1R_5 + C_LL_1L_5R_1R_5R\right.}{C_1C_5C_LL_1L_5R_1R_5R_Ls^5 + R_1R_5 + s^4\left(C_1C_5L_1L_5R_1R_5 + C_1C_LL_1L_5R_1R_5 + C_1C_LL_1L_5R_1R_L + 2C_5C_LL_1L_5R_1R_5R_Lg_m + C_5C_LL_1L_5R_1R_5 + C_5C_LL_1L_5R_5R_L\right) + s^3\left(C_1C_LL_1R_1R_5R_L + C_1L_1L_5R_1 + C_5C_LL_5R_1R_5R_L + 2C_5L_1L_5R_1R_5g_m + C_5L_1L_5R_5 + C_LL_1\right.}$$

9.818 X-INVALID-ORDER-818 $Z(s) = \left(\frac{L_1R_1s}{C_1L_1R_1s^2+L_1s+R_1},\ \infty,\ \infty,\ \infty,\ \frac{L_5R_5s}{C_5L_5R_5s^2+L_5s+R_5},\ L_Ls + \frac{1}{C_Ls}\right)$

$$H(s) = \frac{-C_5C_LL_1L_5L_LR_1R_5s^5 - L_1R_1R_5s + s^4\left(C_LL_1L_5L_LR_1R_5g_m - C_LL_1L_5L_L\right.}{C_1C_5C_LL_1L_5L_LR_1R_5s^6 + R_1R_5 + s^5\left(C_1C_LL_1L_5L_LR_1 + 2C_5C_LL_1L_5L_LR_1R_5g_m + C_5C_LL_1L_5L_LR_5\right) + s^4\left(C_1C_5L_1L_5R_1R_5 + C_1C_LL_1L_5R_1R_5 + C_1C_LL_1L_LR_1R_5 + C_5C_LL_1L_5R_1R_5 + C_5C_LL_5L_LR_1R_5 + 2C_LL_1L_5L_LR_1g_m + C_LL_1L_5L_L\right) + s^3\left(C_1L_1L_5R_1 + 2\right.}$$

9.819 X-INVALID-ORDER-819 $Z(s) = \left(\frac{L_1R_1s}{C_1L_1R_1s^2+L_1s+R_1},\ \infty,\ \infty,\ \infty,\ \frac{L_5R_5s}{C_5L_5R_5s^2+L_5s+R_5},\ \frac{L_Ls}{C_LL_Ls^2+1}\right)$

$$H(s) = \frac{-C_5L_1L_5L_LR_1R_5s^3 - L_1L_LR_1R_5s + s^2\left(L_1L_5L_LR_1R_5g_m - L_1L_5L_LR_1\right)}{L_1R_1R_5 + L_5R_1R_5 + L_LR_1R_5 + s^4\left(C_1C_5L_1L_5L_LR_1R_5 + C_1C_LL_1L_5L_LR_1R_5 + C_5C_LL_1L_5L_LR_1R_5\right) + s^3\left(C_1L_1L_5L_LR_1 + 2C_5L_1L_5L_LR_1R_5g_m + C_5L_1L_5L_LR_5 + C_LL_1L_5L_LR_1R_5g_m + C_LL_1L_5L_LR_1 + C_LL_1L_5L_LR_5\right) + s^2\left(C_1L_1L_5R_1R_5 + C_1L_1L_LR_1R_5 + C_5\right.}$$

9.820 X-INVALID-ORDER-820 $Z(s) = \left(\frac{L_1R_1s}{C_1L_1R_1s^2+L_1s+R_1},\ \infty,\ \infty,\ \infty,\ \frac{L_5R_5s}{C_5L_5R_5s^2+L_5s+R_5},\ L_Ls + R_L + \frac{1}{C_Ls}\right)$

$$H(s) = \frac{-}{C_1C_5C_LL_1L_5L_LR_1R_5s^6 + R_1R_5 + s^5\left(C_1C_5C_LL_1L_5R_1R_5R_L + C_1C_LL_1L_5L_LR_1 + 2C_5C_LL_1L_5L_LR_1R_5g_m + C_5C_LL_1L_5L_LR_5\right) + s^4\left(C_1C_5L_1L_5R_1R_5 + C_1C_LL_1L_5R_1R_5 + C_1C_LL_1L_5R_1R_L + C_1C_LL_1L_LR_1R_5 + 2C_5C_LL_1L_5R_1R_5R_Lg_m + C_5C_LL_1L_5R_1R_5 + C_5\right.}$$

9.821 X-INVALID-ORDER-821 $Z(s) = \left(\frac{L_1R_1s}{C_1L_1R_1s^2+L_1s+R_1},\ \infty,\ \infty,\ \infty,\ \frac{L_5R_5s}{C_5L_5R_5s^2+L_5s+R_5},\ \frac{L_LR_Ls}{C_LL_LR_Ls^2+L_Ls+R_L}\right)$

$$H(s) = \frac{}{L_1R_1R_5R_L + L_5R_1R_5R_L + L_LR_1R_5R_L + s^4\left(C_1C_5L_1L_5L_LR_1R_5R_L + C_1C_LL_1L_5L_LR_1R_5R_L + C_5C_LL_1L_5L_LR_1R_5R_L\right) + s^3\left(C_1L_1L_5L_LR_1R_5 + C_1L_1L_5L_LR_1R_L + 2C_5L_1L_5L_LR_1R_5R_Lg_m + C_5L_1L_5L_LR_1R_5 + C_5L_1L_5L_LR_5R_L + C_LL_1L_5L_LR_1R_5R_Lg_m + C_L\right.}$$

9.822 X-INVALID-ORDER-822 $Z(s) = \left(\frac{L_1R_1s}{C_1L_1R_1s^2+L_1s+R_1},\ \infty,\ \infty,\ \infty,\ \frac{L_5R_5s}{C_5L_5R_5s^2+L_5s+R_5},\ \frac{C_LL_LR_Ls^2+L_Ls+R_L}{C_LL_Ls^2+1}\right)$

$$H(s) = \frac{}{C_1C_5C_LL_1L_5L_LR_1R_5R_Ls^6 + R_1R_5R_L + s^5\left(C_1C_5L_1L_5L_LR_1R_5 + C_1C_LL_1L_5L_LR_1R_5 + C_1C_LL_1L_5L_LR_1R_L + 2C_5C_LL_1L_5L_LR_1R_5R_Lg_m + C_5C_LL_1L_5L_LR_1R_5 + C_5C_LL_1L_5L_LR_5R_L\right) + s^4\left(C_1C_5L_1L_5R_1R_5R_L + C_1C_LL_1L_LR_1R_5R_L + C_1L_1L_5L_LR_1 + C_5C_LL\right.}$$

9.823 X-INVALID-ORDER-823 $Z(s) = \left(\frac{L_1R_1s}{C_1L_1R_1s^2+L_1s+R_1},\ \infty,\ \infty,\ \infty,\ \frac{L_5R_5s}{C_5L_5R_5s^2+L_5s+R_5},\ \frac{R_L\left(C_LL_Ls^2+1\right)}{C_LL_Ls^2+C_LR_Ls+1}\right)$

$$H(s) = \frac{}{C_1C_5C_LL_1L_5L_LR_1R_5R_Ls^6 + R_1R_5R_L + s^5\left(C_1C_LL_1L_5L_LR_1R_5 + C_1C_LL_1L_5L_LR_1R_L + 2C_5C_LL_1L_5L_LR_1R_5R_Lg_m + C_5C_LL_1L_5L_LR_1R_5 + C_5C_LL_1L_5L_LR_5R_L\right) + s^4\left(C_1C_5L_1L_5R_1R_5R_L + C_1C_LL_1L_5R_1R_5R_L + C_1C_LL_1L_LR_1R_5R_L + C_5C_LL_1L_5R_1R_5R_L + C\right.}$$

9.824 X-INVALID-ORDER-824 $Z(s) = \left(\frac{L_1R_1s}{C_1L_1R_1s^2+L_1s+R_1},\ \infty,\ \infty,\ \infty,\ \frac{C_5L_5R_5s^2+L_5s+R_5}{C_5L_5s^2+1},\ R_L\right)$

$$H(s) = \frac{L_1L_5R_1R_Lg_ms^2 + s^3\left(C_5L_1L_5R_1R_5R_Lg_m - C_5L_1L_5R_1R_L\right) + s\left(L_1R_1R_5R_Lg_m - L_1R_1R_L\right)}{R_1R_5 + R_1R_L + s^4\left(C_1C_5L_1L_5R_1R_5 + C_1C_5L_1L_5R_1R_L\right) + s^3\left(C_1L_1L_5R_1 + C_5L_1L_5R_1R_5g_m + 2C_5L_1L_5R_1R_Lg_m + C_5L_1L_5R_1 + C_5L_1L_5R_5 + C_5L_1L_5R_L\right) + s^2\left(C_1L_1R_1R_5 + C_1L_1R_1R_L + C_5L_5R_1R_5 + C_5L_5R_1R_L + L_1L_5R_1g_m + L_1L_5\right) + s\left(L_1R_1R_5g_m + 2L\right.}$$

9.825 X-INVALID-ORDER-825 $Z(s) = \left(\frac{L_1R_1s}{C_1L_1R_1s^2+L_1s+R_1},\ \infty,\ \infty,\ \infty,\ \frac{C_5L_5R_5s^2+L_5s+R_5}{C_5L_5s^2+1},\ \frac{1}{C_Ls}\right)$

$$H(s) = \frac{L_1L_5R_1g_ms^2 + s^3\left(C_5L_1L_5R_1R_5g_m - C_5L_1L_5R_1\right) + s\left(L_1R_1R_5g_m - L_1R_1\right)}{C_1C_5C_LL_1L_5R_1R_5s^5 + R_1 + s^4\left(C_1C_5L_1L_5R_1 + C_1C_LL_1L_5R_1 + C_5C_LL_1L_5R_1R_5g_m + C_5C_LL_1L_5R_1 + C_5C_LL_1L_5R_5\right) + s^3\left(C_1C_LL_1R_1R_5 + C_5C_LL_5R_1R_5 + 2C_5L_1L_5R_1g_m + C_5L_1L_5 + C_LL_1L_5R_1g_m + C_LL_1L_5\right) + s^2\left(C_1L_1R_1 + C_5L_5R_1 + C_LL_1R_1R_5g_m + C\right.}$$

9.826 X-INVALID-ORDER-826 $Z(s) = \left(\frac{L_1R_1s}{C_1L_1R_1s^2+L_1s+R_1},\ \infty,\ \infty,\ \infty,\ \frac{C_5L_5R_5s^2+L_5s+R_5}{C_5L_5s^2+1},\ \frac{R_L}{C_LR_Ls+1}\right)$

$$H(s) = \frac{L_1L_5R_1R_Lg_ms^2 + s^3\left(\right.}{C_1C_5C_LL_1L_5R_1R_5R_Ls^5 + R_1R_5 + R_1R_L + s^4\left(C_1C_5L_1L_5R_1R_5 + C_1C_5L_1L_5R_1R_L + C_1C_LL_1L_5R_1R_L + C_5C_LL_1L_5R_1R_5R_Lg_m + C_5C_LL_1L_5R_1R_L + C_5C_LL_1L_5R_5R_L\right) + s^3\left(C_1C_LL_1R_1R_5R_L + C_1L_1L_5R_1 + C_5C_LL_5R_1R_5R_L + C_5L_1L_5R_1R_5g_m + 2C_5L_1L_5R_1\right.}$$

9.827 X-INVALID-ORDER-827 $Z(s) = \left(\frac{L_1R_1s}{C_1L_1R_1s^2+L_1s+R_1},\ \infty,\ \infty,\ \infty,\ \frac{C_5L_5R_5s^2+L_5s+R_5}{C_5L_5s^2+1},\ R_L + \frac{1}{C_Ls}\right)$

$$H(s) = \frac{s^4\left(C_5C_LL_1L_5R_1R_5R_Lg_m - C_5C_LL_1L_5R_1R_L\right) + s^3\left(C_5L_1L_5R_1R_5g_m - C_5L_1L_5R_1 + C_LL_1L_5R_1R_Lg_m\right) + s^2\left(C_LL_1R_1\right.}{R_1 + s^5\left(C_1C_5C_LL_1L_5R_1R_5 + C_1C_5C_LL_1L_5R_1R_L\right) + s^4\left(C_1C_5L_1L_5R_1 + C_1C_LL_1L_5R_1 + C_5C_LL_1L_5R_1R_5g_m + 2C_5C_LL_1L_5R_1R_Lg_m + C_5C_LL_1L_5R_1 + C_5C_LL_1L_5R_5 + C_5C_LL_1L_5R_L\right) + s^3\left(C_1C_LL_1R_1R_5 + C_1C_LL_1R_1R_L + C_5C_LL_5R_1R_5 + C_5C_LL_5R_1R_L + 2\right.}$$

9.828 X-INVALID-ORDER-828 $Z(s) = \left(\frac{L_1R_1s}{C_1L_1R_1s^2+L_1s+R_1},\ \infty,\ \infty,\ \infty,\ \frac{C_5L_5R_5s^2+L_5s+R_5}{C_5L_5s^2+1},\ L_Ls + \frac{1}{C_Ls}\right)$

$$H(s) = \frac{C_LL_1L_5L_LR_1g_ms^4 + L_1L_5R_1g_ms^2 + s^5\left(C_5C_LL_1L_5L_LR_1R_5g_m - C_5C_LL_1L_5L_LR_1\right) + s^3\left(C_5L_1L_5R_1R_5g_m - C_5L_1L_5\right.}{C_1C_5C_LL_1L_5L_LR_1s^6 + R_1 + s^5\left(C_1C_5C_LL_1L_5R_1R_5 + 2C_5C_LL_1L_5L_LR_1g_m + C_5C_LL_1L_5L_L\right) + s^4\left(C_1C_5L_1L_5R_1 + C_1C_LL_1L_5R_1 + C_1C_LL_1L_LR_1 + C_5C_LL_1L_5R_1R_5g_m + C_5C_LL_1L_5R_1 + C_5C_LL_1L_5R_5 + C_5C_LL_5L_LR_1\right) + s^3\left(C_1C_LL_1R_1R_5 + C_5C_LL_5R_1R_5 + \right.}$$

9.829 X-INVALID-ORDER-829 $Z(s) = \left(\frac{L_1R_1s}{C_1L_1R_1s^2+L_1s+R_1},\ \infty,\ \infty,\ \infty,\ \frac{C_5L_5R_5s^2+L_5s+R_5}{C_5L_5s^2+1},\ \frac{L_Ls}{C_LL_Ls^2+1}\right)$

$$H(s) = \frac{L_1L_5L_LR_1g_ms^3 + s^4\left(\right.}{C_1C_5C_LL_1L_5L_LR_1R_5s^6 + R_1R_5 + s^5\left(C_1C_5L_1L_5L_LR_1 + C_1C_LL_1L_5L_LR_1 + C_5C_LL_1L_5L_LR_1R_5g_m + C_5C_LL_1L_5L_LR_1 + C_5C_LL_1L_5L_LR_5\right) + s^4\left(C_1C_5L_1L_5R_1R_5 + C_1C_LL_1L_LR_1R_5 + C_5C_LL_5L_LR_1R_5 + 2C_5L_1L_5L_LR_1g_m + C_5L_1L_5L_L + C_LL_1L_5L_LR_1g_m + C\right.}$$

9.830 X-INVALID-ORDER-830 $Z(s) = \left(\frac{L_1R_1s}{C_1L_1R_1s^2+L_1s+R_1},\ \infty,\ \infty,\ \infty,\ \frac{C_5L_5R_5s^2+L_5s+R_5}{C_5L_5s^2+1},\ L_Ls + R_L + \frac{1}{C_Ls}\right)$

$$H(s) = \frac{s^5\left(C_5C_LL_1L_5L_LR_1R_5g_m - C_5C_LL_1L_5L_LR_1\right) + s^4\left(C_5C_LL_1L_5R_1R_5R_Lg_m - C_5C_LL_1L_5R_1R_L + C_L\right.}{C_1C_5C_LL_1L_5L_LR_1s^6 + R_1 + s^5\left(C_1C_5C_LL_1L_5R_1R_5 + C_1C_5C_LL_1L_5R_1R_L + 2C_5C_LL_1L_5L_LR_1g_m + C_5C_LL_1L_5L_L\right) + s^4\left(C_1C_5L_1L_5R_1 + C_1C_LL_1L_5R_1 + C_1C_LL_1L_LR_1 + C_5C_LL_1L_5R_1R_5g_m + 2C_5C_LL_1L_5R_1R_Lg_m + C_5C_LL_1L_5R_1 + C_5C_LL_1L_5R_5 + C_5C_LL_1\right.}$$

9.831 X-INVALID-ORDER-831 $Z(s) = \left(\frac{L_1R_1s}{C_1L_1R_1s^2+L_1s+R_1},\ \infty,\ \infty,\ \infty,\ \frac{C_5L_5R_5s^2+L_5s+R_5}{C_5L_5s^2+1},\ \frac{L_LR_Ls}{C_LL_LR_Ls^2+L_Ls+R_L}\right)$

$$H(s) = \frac{}{C_1C_5C_LL_1L_5L_LR_1R_5R_Ls^6 + R_1R_5R_L + s^5\left(C_1C_5L_1L_5L_LR_1R_5 + C_1C_5L_1L_5L_LR_1R_L + C_1C_LL_1L_5L_LR_1R_L + C_5C_LL_1L_5L_LR_1R_5R_Lg_m + C_5C_LL_1L_5L_LR_1R_L + C_5C_LL_1L_5L_LR_5R_L\right) + s^4\left(C_1C_5L_1L_5R_1R_5R_L + C_1C_LL_1L_LR_1R_5R_L + C_1L_1L_5L_LR_1 + C_5C_LL_5\right.}$$

9.832 X-INVALID-ORDER-832 $Z(s) = \left(\frac{L_1R_1s}{C_1L_1R_1s^2+L_1s+R_1},\ \infty,\ \infty,\ \infty,\ \frac{C_5L_5R_5s^2+L_5s+R_5}{C_5L_5s^2+1},\ \frac{C_LL_LR_Ls^2+L_Ls+R_L}{C_LL_Ls^2+1}\right)$

$$H(s) = \frac{}{R_1R_5 + R_1R_L + s^6\left(C_1C_5C_LL_1L_5L_LR_1R_5 + C_1C_5C_LL_1L_5L_LR_1R_L\right) + s^5\left(C_1C_5L_1L_5L_LR_1 + C_1C_LL_1L_5L_LR_1 + C_5C_LL_1L_5L_LR_1R_5g_m + 2C_5C_LL_1L_5L_LR_1R_Lg_m + C_5C_LL_1L_5L_LR_1 + C_5C_LL_1L_5L_LR_5 + C_5C_LL_1L_5L_LR_L\right) + s^4\left(C_1C_5L_1L_5R_1R_5 + C_1C_5L_1L_5\right.}$$

9.833 X-INVALID-ORDER-833 $Z(s) = \left(\frac{L_1R_1s}{C_1L_1R_1s^2+L_1s+R_1},\ \infty,\ \infty,\ \infty,\ \frac{C_5L_5R_5s^2+L_5s+R_5}{C_5L_5s^2+1},\ \frac{R_L\left(C_LL_Ls^2+1\right)}{C_LL_Ls^2+C_LR_Ls+1}\right)$

$$H(s) = \frac{}{R_1R_5 + R_1R_L + s^6\left(C_1C_5C_LL_1L_5L_LR_1R_5 + C_1C_5C_LL_1L_5L_LR_1R_L\right) + s^5\left(C_1C_5C_LL_1L_5R_1R_5R_L + C_1C_LL_1L_5L_LR_1 + C_5C_LL_1L_5L_LR_1R_5g_m + 2C_5C_LL_1L_5L_LR_1R_Lg_m + C_5C_LL_1L_5L_LR_1 + C_5C_LL_1L_5L_LR_5 + C_5C_LL_1L_5L_LR_L\right) + s^4\left(C_1C_5L_1L_5R_1R_5 + C_1C_5\right.}$$

9.834 X-INVALID-ORDER-834 $Z(s) = \left(\frac{L_1R_1s}{C_1L_1R_1s^2+L_1s+R_1},\ \infty,\ \infty,\ \infty,\ \frac{R_5\left(C_5L_5s^2+1\right)}{C_5L_5s^2+C_5R_5s+1},\ R_L\right)$

$$H(s) = \frac{-C_5L_1R_1R_5R_Ls^2 + s^3\left(C_5L_1L_5R_1R_5R_Lg_m - C_5L_1L_5R_1R_L\right) + s\left(L_1R_1R_5R_Lg_m - L_1R_1R_L\right)}{R_1R_5 + R_1R_L + s^4\left(C_1C_5L_1L_5R_1R_5 + C_1C_5L_1L_5R_1R_L\right) + s^3\left(C_1C_5L_1R_1R_5R_L + C_5L_1L_5R_1R_5g_m + 2C_5L_1L_5R_1R_Lg_m + C_5L_1L_5R_1 + C_5L_1L_5R_5 + C_5L_1L_5R_L\right) + s^2\left(C_1L_1R_1R_5 + C_1L_1R_1R_L + 2C_5L_1R_1R_5R_Lg_m + C_5L_1R_1R_5 + C_5L_1R_5R_L + C_5L_5R_1R_5 + C}$$

9.835 X-INVALID-ORDER-835 $Z(s) = \left(\frac{L_1R_1s}{C_1L_1R_1s^2+L_1s+R_1},\ \infty,\ \infty,\ \infty,\ \frac{R_5\left(C_5L_5s^2+1\right)}{C_5L_5s^2+C_5R_5s+1},\ \frac{1}{C_Ls}\right)$

$$H(s) = \frac{-C_5L_1R_1R_5s^2 + s^3\left(C_5L_1L_5R_1R_5g_m - C_5L_1L_5R_1\right) + s\left(L_1R_1R_5g_m - L_1R_1\right)}{C_1C_5C_LL_1L_5R_1R_5s^5 + R_1 + s^4\left(C_1C_5L_1L_5R_1 + C_5C_LL_1L_5R_1R_5g_m + C_5C_LL_1L_5R_1 + C_5C_LL_1L_5R_5\right) + s^3\left(C_1C_5L_1R_1R_5 + C_1C_LL_1R_1R_5 + C_5C_LL_1R_1R_5 + C_5C_LL_5R_1R_5 + 2C_5L_1L_5R_1g_m + C_5L_1L_5\right) + s^2\left(C_1L_1R_1 + 2C_5L_1R_1R_5g_m + C_5L_1R_5 + C_5L_5R_1 + C}$$

9.836 X-INVALID-ORDER-836 $Z(s) = \left(\frac{L_1R_1s}{C_1L_1R_1s^2+L_1s+R_1},\ \infty,\ \infty,\ \infty,\ \frac{R_5\left(C_5L_5s^2+1\right)}{C_5L_5s^2+C_5R_5s+1},\ \frac{R_L}{C_LR_Ls+1}\right)$

$$H(s) = \frac{-C_5L_1R_1R_5R_Ls^2 + s^3\left(C_5\right.}{C_1C_5C_LL_1L_5R_1R_5R_Ls^5 + R_1R_5 + R_1R_L + s^4\left(C_1C_5L_1L_5R_1R_5 + C_1C_5L_1L_5R_1R_L + C_5C_LL_1L_5R_1R_5R_Lg_m + C_5C_LL_1L_5R_1R_L + C_5C_LL_1L_5R_5R_L\right) + s^3\left(C_1C_5L_1R_1R_5R_L + C_1C_LL_1R_1R_5R_L + C_5C_LL_1R_1R_5R_L + C_5C_LL_5R_1R_5R_L + C_5L_1L_5R_1R_5g_m + 2C_5L_1\right.}$$

9.837 X-INVALID-ORDER-837 $Z(s) = \left(\frac{L_1R_1s}{C_1L_1R_1s^2+L_1s+R_1},\ \infty,\ \infty,\ \infty,\ \frac{R_5\left(C_5L_5s^2+1\right)}{C_5L_5s^2+C_5R_5s+1},\ R_L + \frac{1}{C_Ls}\right)$

$$H(s) = \frac{s^4\left(C_5C_LL_1L_5R_1R_5R_Lg_m - C_5C_LL_1L_5R_1R_L\right) + s^3\left(-C_5C_LL_1R_1R_5R_L\right.}{R_1 + s^5\left(C_1C_5C_LL_1L_5R_1R_5 + C_1C_5C_LL_1L_5R_1R_L\right) + s^4\left(C_1C_5C_LL_1R_1R_5R_L + C_1C_5L_1L_5R_1 + C_5C_LL_1L_5R_1R_5g_m + 2C_5C_LL_1L_5R_1R_Lg_m + C_5C_LL_1L_5R_1 + C_5C_LL_1L_5R_5 + C_5C_LL_1L_5R_L\right) + s^3\left(C_1C_5L_1R_1R_5 + C_1C_LL_1R_1R_5 + C_1C_LL_1R_1R_L + 2C_5C_LL_1R_1\right.}$$

9.838 X-INVALID-ORDER-838 $Z(s) = \left(\frac{L_1R_1s}{C_1L_1R_1s^2+L_1s+R_1},\ \infty,\ \infty,\ \infty,\ \frac{R_5\left(C_5L_5s^2+1\right)}{C_5L_5s^2+C_5R_5s+1},\ L_Ls + \frac{1}{C_Ls}\right)$

$$H(s) = \frac{-C_5C_LL_1L_LR_1R_5s^4 - C_5L_1R_1R_5s^2 + s^5\left(C_5C_LL_1L_5L_LR_1R_5g_m - C\right.}{C_1C_5C_LL_1L_5L_LR_1s^6 + R_1 + s^5\left(C_1C_5C_LL_1L_5R_1R_5 + C_1C_5C_LL_1L_LR_1R_5 + 2C_5C_LL_1L_5L_LR_1g_m + C_5C_LL_1L_5L_L\right) + s^4\left(C_1C_5L_1L_5R_1 + C_1C_LL_1L_LR_1 + C_5C_LL_1L_5R_1R_5g_m + C_5C_LL_1L_5R_1 + C_5C_LL_1L_5R_5 + 2C_5C_LL_1L_LR_1R_5g_m + C_5C_LL_1L_LR_5 + C_5C_LL_5}$$

9.839 X-INVALID-ORDER-839 $Z(s) = \left(\frac{L_1R_1s}{C_1L_1R_1s^2+L_1s+R_1},\ \infty,\ \infty,\ \infty,\ \frac{R_5\left(C_5L_5s^2+1\right)}{C_5L_5s^2+C_5R_5s+1},\ \frac{L_Ls}{C_LL_Ls^2+1}\right)$

$$H(s) = \frac{-C_5L_1L_LR_1R_5s^3 + s^4\left(C_5L\right.}{C_1C_5C_LL_1L_5L_LR_1R_5s^6 + R_1R_5 + s^5\left(C_1C_5L_1L_5L_LR_1 + C_5C_LL_1L_5L_LR_1R_5g_m + C_5C_LL_1L_5L_LR_1 + C_5C_LL_1L_5L_LR_5\right) + s^4\left(C_1C_5L_1L_5R_1R_5 + C_1C_5L_1L_LR_1R_5 + C_1C_LL_1L_LR_1R_5 + C_5C_LL_1L_LR_1R_5 + C_5C_LL_5L_LR_1R_5 + 2C_5L_1L_5L_LR_1g_m + C_5L_1L_5L_L\right) + s}$$

9.840 X-INVALID-ORDER-840 $Z(s) = \left(\frac{L_1R_1s}{C_1L_1R_1s^2+L_1s+R_1},\ \infty,\ \infty,\ \infty,\ \frac{R_5\left(C_5L_5s^2+1\right)}{C_5L_5s^2+C_5R_5s+1},\ L_Ls + R_L + \frac{1}{C_Ls}\right)$

$$H(s) = \frac{s^5\left(C_5C_LL_1L\right.}{C_1C_5C_LL_1L_5L_LR_1s^6 + R_1 + s^5\left(C_1C_5C_LL_1L_5R_1R_5 + C_1C_5C_LL_1L_5R_1R_L + C_1C_5C_LL_1L_LR_1R_5 + 2C_5C_LL_1L_5L_LR_1g_m + C_5C_LL_1L_5L_L\right) + s^4\left(C_1C_5C_LL_1R_1R_5R_L + C_1C_5L_1L_5R_1 + C_1C_LL_1L_LR_1 + C_5C_LL_1L_5R_1R_5g_m + 2C_5C_LL_1L_5R_1R_Lg_m + C_5C_LL_1L_5R_1\right.}$$

9.841 X-INVALID-ORDER-841 $Z(s) = \left(\frac{L_1R_1s}{C_1L_1R_1s^2+L_1s+R_1},\ \infty,\ \infty,\ \infty,\ \frac{R_5\left(C_5L_5s^2+1\right)}{C_5L_5s^2+C_5R_5s+1},\ \frac{L_LR_Ls}{C_LL_LR_Ls^2+L_Ls+R_L}\right)$

$$H(s) = \frac{}{C_1C_5C_LL_1L_5L_LR_1R_5R_Ls^6 + R_1R_5R_L + s^5\left(C_1C_5L_1L_5L_LR_1R_5 + C_1C_5L_1L_5L_LR_1R_L + C_5C_LL_1L_5L_LR_1R_5R_Lg_m + C_5C_LL_1L_5L_LR_1R_L + C_5C_LL_1L_5L_LR_5R_L\right) + s^4\left(C_1C_5L_1L_5R_1R_5R_L + C_1C_5L_1L_LR_1R_5R_L + C_1C_LL_1L_LR_1R_5R_L + C_5C_LL_1L_LR_1R_5R_L + C\right.}$$

9.842 X-INVALID-ORDER-842 $Z(s) = \left(\frac{L_1R_1s}{C_1L_1R_1s^2+L_1s+R_1},\ \infty,\ \infty,\ \infty,\ \frac{R_5\left(C_5L_5s^2+1\right)}{C_5L_5s^2+C_5R_5s+1},\ \frac{C_LL_LR_Ls^2+L_Ls+R_L}{C_LL_Ls^2+1}\right)$

$$H(s) = \frac{}{R_1R_5 + R_1R_L + s^6\left(C_1C_5C_LL_1L_5L_LR_1R_5 + C_1C_5C_LL_1L_5L_LR_1R_L\right) + s^5\left(C_1C_5C_LL_1L_LR_1R_5R_L + C_1C_5L_1L_5L_LR_1 + C_5C_LL_1L_5L_LR_1R_5g_m + 2C_5C_LL_1L_5L_LR_1R_Lg_m + C_5C_LL_1L_5L_LR_1 + C_5C_LL_1L_5L_LR_5 + C_5C_LL_1L_5L_LR_L\right) + s^4\left(C_1C_5L_1L_5R_1R_5 + C_1C_5\right.}$$

9.843 X-INVALID-ORDER-843 $Z(s) = \left(\frac{L_1 R_1 s}{C_1 L_1 R_1 s^2+L_1 s+R_1},\ \infty,\ \infty,\ \infty,\ \frac{R_5\left(C_5 L_5 s^2+1\right)}{C_5 L_5 s^2+C_5 R_5 s+1},\ \frac{R_L\left(C_L L_L s^2+1\right)}{C_L L_L s^2+C_L R_L s+1}\right)$

$$H(s) = \frac{\text{[illegible]}}{R_1 R_5 + R_1 R_L + s^6 \left(C_1 C_5 C_L L_1 L_5 L_L R_1 R_5 + C_1 C_5 C_L L_1 L_5 L_L R_1 R_L\right) + s^5 \left(C_1 C_5 C_L L_1 L_5 R_1 R_5 R_L + C_1 C_5 C_L L_1 L_L R_1 R_5 R_L + C_5 C_L L_1 L_5 L_L R_1 R_5 g_m + 2 C_5 C_L L_1 L_5 L_L R_1 R_L g_m + C_5 C_L L_1 L_5 L_L R_1 + C_5 C_L L_1 L_5 L_L R_5 + C_5 C_L L_1 L_5 L_L R_L\right) + s^4 \left(C_1 C_5 L_1 L_5 R_1 R_5 + \text{[illegible]}\right.}$$

9.844 X-INVALID-ORDER-844 $Z(s) = \left(\frac{C_1 L_1 R_1 s^2+L_1 s+R_1}{C_1 L_1 s^2+1},\ \infty,\ \infty,\ \infty,\ R_5,\ \frac{1}{C_L s}\right)$

$$H(s) = \frac{R_1 R_5 g_m - R_1 + s^2 \left(C_1 L_1 R_1 R_5 g_m - C_1 L_1 R_1\right) + s \left(L_1 R_5 g_m - L_1\right)}{2 R_1 g_m + s^3 \left(C_1 C_L L_1 R_1 R_5 g_m + C_1 C_L L_1 R_1 + C_1 C_L L_1 R_5\right) + s^2 \left(2 C_1 L_1 R_1 g_m + C_1 L_1 + C_L L_1 R_5 g_m + C_L L_1\right) + s \left(C_L R_1 R_5 g_m + C_L R_1 + C_L R_5 + 2 L_1 g_m\right) + 1}$$

9.845 X-INVALID-ORDER-845 $Z(s) = \left(\frac{C_1 L_1 R_1 s^2+L_1 s+R_1}{C_1 L_1 s^2+1},\ \infty,\ \infty,\ \infty,\ R_5,\ \frac{R_L}{C_L R_L s+1}\right)$

$$H(s) = \frac{R_1 R_5 R_L g_m - R_1 R_L + s^2 \left(C_1 L_1 R_1 R_5 R_L g_m - C_1 L_1 R_1 R_L\right) + s \left(L_1 R_5 R_L g_m - L_1 R_L\right)}{R_1 R_5 g_m + 2 R_1 R_L g_m + R_1 + R_5 + R_L + s^3 \left(C_1 C_L L_1 R_1 R_5 R_L g_m + C_1 C_L L_1 R_1 R_L + C_1 C_L L_1 R_5 R_L\right) + s^2 \left(C_1 L_1 R_1 R_5 g_m + 2 C_1 L_1 R_1 R_L g_m + C_1 L_1 R_1 + C_1 L_1 R_5 + C_1 L_1 R_L + C_L L_1 R_5 R_L g_m + C_L L_1 R_L\right) + s \left(C_L R_1 R_5 R_L g_m + C_L R_1 R_L + C_L R_5 R_L + L_1 R_5 g_m + 2\text{[illegible]}\right.}$$

9.846 X-INVALID-ORDER-846 $Z(s) = \left(\frac{C_1 L_1 R_1 s^2+L_1 s+R_1}{C_1 L_1 s^2+1},\ \infty,\ \infty,\ \infty,\ R_5,\ R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{R_1 R_5 g_m - R_1 + s^3 \left(C_1 C_L L_1 R_1 R_5 R_L g_m - C_1 C_L L_1 R_1 R_L\right) + s^2 \left(C_1 L_1 R_1 R_5 g_m - C_1 L_1 R_1 + C_L L_1 R_5 R_L g_m - C_L L_1 R_L\right) + s \left(C_L R_1 R_5 R_L g_m - C_L R_1 R_L + L_1 R_5 g_m - L_1\right)}{2 R_1 g_m + s^3 \left(C_1 C_L L_1 R_1 R_5 g_m + 2 C_1 C_L L_1 R_1 R_L g_m + C_1 C_L L_1 R_1 + C_1 C_L L_1 R_5 + C_1 C_L L_1 R_L\right) + s^2 \left(2 C_1 L_1 R_1 g_m + C_1 L_1 + C_L L_1 R_5 g_m + 2 C_L L_1 R_L g_m + C_L L_1\right) + s \left(C_L R_1 R_5 g_m + 2 C_L R_1 R_L g_m + C_L R_1 + C_L R_5 + C_L R_L + 2 L_1 g_m\right) + 1}$$

9.847 X-INVALID-ORDER-847 $Z(s) = \left(\frac{C_1 L_1 R_1 s^2+L_1 s+R_1}{C_1 L_1 s^2+1},\ \infty,\ \infty,\ \infty,\ R_5,\ L_L s + \frac{1}{C_L s}\right)$

$$H(s) = \frac{R_1 R_5 g_m - R_1 + s^4 \left(C_1 C_L L_1 L_L R_1 R_5 g_m - C_1 C_L L_1 L_L R_1\right) + s^3 \left(C_L L_1 L_L R_5 g_m - C_L L_1 L_L\right) + s^2 \left(C_1 L_1 R_1 R_5 g_m - C_1 L_1 R_1 + C_L L_L R_1 R_5 g_m - C_L L_L R_1\right) + s \left(L_1 R_5 g_m - L_1\right)}{2 R_1 g_m + s^4 \left(2 C_1 C_L L_1 L_L R_1 g_m + C_1 C_L L_1 L_L\right) + s^3 \left(C_1 C_L L_1 R_1 R_5 g_m + C_1 C_L L_1 R_1 + C_1 C_L L_1 R_5 + 2 C_L L_1 L_L g_m\right) + s^2 \left(2 C_1 L_1 R_1 g_m + C_1 L_1 + C_L L_1 R_5 g_m + C_L L_1 + 2 C_L L_L R_1 g_m + C_L L_L\right) + s \left(C_L R_1 R_5 g_m + C_L R_1 + C_L R_5 + 2 L_1 g_m\right) + 1}$$

9.848 X-INVALID-ORDER-848 $Z(s) = \left(\frac{C_1 L_1 R_1 s^2+L_1 s+R_1}{C_1 L_1 s^2+1},\ \infty,\ \infty,\ \infty,\ R_5,\ \frac{L_L s}{C_L L_L s^2+1}\right)$

$$H(s) = \frac{s^3 \left(C_1 L_1 L_L R_1 R_5 g_m - C_1 L_1 L_L R_1\right) + s^2 \left(L_1 L_L R_5 g_m - L_1 L_L\right) + s \left(L_L R_1 R_5 g_m - L_L R_1\right)}{R_1 R_5 g_m + R_1 + R_5 + s^4 \left(C_1 C_L L_1 L_L R_1 R_5 g_m + C_1 C_L L_1 L_L R_1 + C_1 C_L L_1 L_L R_5\right) + s^3 \left(2 C_1 L_1 L_L R_1 g_m + C_1 L_1 L_L + C_L L_1 L_L R_5 g_m + C_L L_1 L_L\right) + s^2 \left(C_1 L_1 R_1 R_5 g_m + C_1 L_1 R_1 + C_1 L_1 R_5 + C_L L_L R_1 R_5 g_m + C_L L_L R_1 + C_L L_L R_5 + 2 L_1 L_L g_m\right) + s \left(L_1 R_5 g_m + L_1 + \text{[illegible]}\right.}$$

9.849 X-INVALID-ORDER-849 $Z(s) = \left(\frac{C_1 L_1 R_1 s^2+L_1 s+R_1}{C_1 L_1 s^2+1},\ \infty,\ \infty,\ \infty,\ R_5,\ L_L s + R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{R_1 R_5 g_m - R_1 + s^4 \left(C_1 C_L L_1 L_L R_1 R_5 g_m - C_1 C_L L_1 L_L R_1\right) + s^3 \left(C_1 C_L L_1 R_1 R_5 R_L g_m - C_1 C_L L_1 R_1 R_L + C_L L_1 L_L R_5 g_m - C_L L_1 L_L\right) + s^2 \left(C_1 L_1 R_1 R_5 g_m - C_1 L_1 R_1 + C_L L_1 R_5 R_L g_m - C_L L_1 R_L + C_L L_L R_1 R_5 g_m - C_L L_L R_1\right) + s \left(C_L R_1 R_5 R_L g\text{[illegible]}\right.}{2 R_1 g_m + s^4 \left(2 C_1 C_L L_1 L_L R_1 g_m + C_1 C_L L_1 L_L\right) + s^3 \left(C_1 C_L L_1 R_1 R_5 g_m + 2 C_1 C_L L_1 R_1 R_L g_m + C_1 C_L L_1 R_1 + C_1 C_L L_1 R_5 + C_1 C_L L_1 R_L + 2 C_L L_1 L_L g_m\right) + s^2 \left(2 C_1 L_1 R_1 g_m + C_1 L_1 + C_L L_1 R_5 g_m + 2 C_L L_1 R_L g_m + C_L L_1 + 2 C_L L_L R_1 g_m + C_L L_L\right) + s \left(C_L R_1 R_5 g_m + 2\text{[illegible]}\right.}$$

9.850 X-INVALID-ORDER-850 $Z(s) = \left(\frac{C_1 L_1 R_1 s^2+L_1 s+R_1}{C_1 L_1 s^2+1},\ \infty,\ \infty,\ \infty,\ R_5,\ \frac{L_L R_L s}{C_L L_L R_L s^2+L_L s+R_L}\right)$

$$H(s) = \frac{s^3 \left(C_1 L_1 L_L R_1 R_5 R_L g_m - C_1 L_1 L_L R_1 R_L\right) + s^2 \left(L_1 L_L R_5 R_L g_m - L_1 L_L R_L\right) + s \left(L_L R_1 R_5 R_L\text{[illegible]}\right.}{R_1 R_5 R_L g_m + R_1 R_L + R_5 R_L + s^4 \left(C_1 C_L L_1 L_L R_1 R_5 R_L g_m + C_1 C_L L_1 L_L R_1 R_L + C_1 C_L L_1 L_L R_5 R_L\right) + s^3 \left(C_1 L_1 L_L R_1 R_5 g_m + 2 C_1 L_1 L_L R_1 R_L g_m + C_1 L_1 L_L R_1 + C_1 L_1 L_L R_5 + C_1 L_1 L_L R_L + C_L L_1 L_L R_5 R_L g_m + C_L L_1 L_L R_L\right) + s^2 \left(C_1 L_1 R_1 R_5 R_L g_m + C_1 L_1 R_1 R_L + \text{[illegible]}\right.}$$

9.851 X-INVALID-ORDER-851 $Z(s) = \left(\frac{C_1 L_1 R_1 s^2+L_1 s+R_1}{C_1 L_1 s^2+1},\ \infty,\ \infty,\ \infty,\ R_5,\ \frac{C_L L_L R_L s^2+L_L s+R_L}{C_L L_L s^2+1}\right)$

$$H(s) = \frac{R_1 R_5 R_L g_m - R_1 R_L + s^4 \left(C_1 C_L L_1 L_L R_1 R_5 R_L g_m - C_1 C_L L_1 L_L R_1 R_L\right) + s^3 \left(C_1 L_1 L_L R_1 R_5 g_m - C_1 L_1 L_L R_1 + C_L L_1 L_L R_5 R_L g_m - C_L L_1 L_L R_L\right) + s^2 \left(C_1 L_1 R_1 R_5 R_L g_m - C_1 L_1 R_1 R_L + C_L L_1 R\text{[illegible]}\right.}{R_1 R_5 g_m + 2 R_1 R_L g_m + R_1 + R_5 + R_L + s^4 \left(C_1 C_L L_1 L_L R_1 R_5 g_m + 2 C_1 C_L L_1 L_L R_1 R_L g_m + C_1 C_L L_1 L_L R_1 + C_1 C_L L_1 L_L R_5 + C_1 C_L L_1 L_L R_L\right) + s^3 \left(2 C_1 L_1 L_L R_1 g_m + C_1 L_1 L_L + C_L L_1 L_L R_5 g_m + 2 C_L L_1 L_L R_L g_m + C_L L_1 L_L\right) + s^2 \left(C_1 L_1 R_1 R_5 g_m + 2 C_1 L_1 R_1 R_L g_m\right.}$$

9.852 X-INVALID-ORDER-852 $Z(s) = \left(\frac{C_1L_1R_1s^2+L_1s+R_1}{C_1L_1s^2+1},\ \infty,\ \infty,\ \infty,\ R_5,\ \frac{R_L\left(C_LL_Ls^2+1\right)}{C_LL_Ls^2+C_LR_Ls+1}\right)$

$$H(s) = \frac{R_1R_5R_Lg_m - R_1R_L + s^4\left(C_1C_LL_1L_LR_1R_5R_Lg_m - C_1C_LL_1L_LR_1R_L\right) + s^3\left(C_LL_1L_LR_5R_Lg_m - C_LL_1L_LR_L\right) + s^2\left(C\right.}{R_1R_5g_m + 2R_1R_Lg_m + R_1 + R_5 + R_L + s^4\left(C_1C_LL_1L_LR_1R_5g_m + 2C_1C_LL_1L_LR_1R_Lg_m + C_1C_LL_1L_LR_1 + C_1C_LL_1L_LR_5 + C_1C_LL_1L_LR_L\right) + s^3\left(C_1C_LL_1R_1R_5R_Lg_m + C_1C_LL_1R_1R_L + C_1C_LL_1R_5R_L + C_LL_1L_LR_5g_m + 2C_LL_1L_LR_Lg_m + C_LL_1L_L\right) + s^2\left(C_1L\right.}$$

9.853 X-INVALID-ORDER-853 $Z(s) = \left(\frac{C_1L_1R_1s^2+L_1s+R_1}{C_1L_1s^2+1},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_5s},\ R_L\right)$

$$H(s) = \frac{-C_1C_5L_1R_1R_Ls^3 + R_1R_Lg_m + s^2\left(C_1L_1R_1R_Lg_m - C_5L_1R_L\right) + s\left(-C_5R_1R_L + L_1R_Lg_m\right)}{R_1g_m + s^3\left(2C_1C_5L_1R_1R_Lg_m + C_1C_5L_1R_1 + C_1C_5L_1R_L\right) + s^2\left(C_1L_1R_1g_m + C_1L_1 + 2C_5L_1R_Lg_m + C_5L_1\right) + s\left(2C_5R_1R_Lg_m + C_5R_1 + C_5R_L + L_1g_m\right) + 1}$$

9.854 X-INVALID-ORDER-854 $Z(s) = \left(\frac{C_1L_1R_1s^2+L_1s+R_1}{C_1L_1s^2+1},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_5s},\ \frac{1}{C_Ls}\right)$

$$H(s) = \frac{-C_1C_5L_1R_1s^3 + R_1g_m + s^2\left(C_1L_1R_1g_m - C_5L_1\right) + s\left(-C_5R_1 + L_1g_m\right)}{C_1C_5C_LL_1R_1s^4 + s^3\left(2C_1C_5L_1R_1g_m + C_1C_5L_1 + C_1C_LL_1R_1g_m + C_1C_LL_1 + C_5C_LL_1\right) + s^2\left(C_5C_LR_1 + 2C_5L_1g_m + C_LL_1g_m\right) + s\left(2C_5R_1g_m + C_5 + C_LR_1g_m + C_L\right)}$$

9.855 X-INVALID-ORDER-855 $Z(s) = \left(\frac{C_1L_1R_1s^2+L_1s+R_1}{C_1L_1s^2+1},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_5s},\ \frac{R_L}{C_LR_Ls+1}\right)$

$$H(s) = \frac{-C_1C_5L_1R_1R_Ls^3 + R_1R_Lg_m + s^2\left(C_1L_1R_1R_Lg_m - C_5L_1R_L\right) + s\left(-C_5R_1R_L + L_1R_Lg_m\right)}{C_1C_5C_LL_1R_1R_Ls^4 + R_1g_m + s^3\left(2C_1C_5L_1R_1R_Lg_m + C_1C_5L_1R_1 + C_1C_5L_1R_L + C_1C_LL_1R_1R_Lg_m + C_1C_LL_1R_L + C_5C_LL_1R_L\right) + s^2\left(C_1L_1R_1g_m + C_1L_1 + C_5C_LR_1R_L + 2C_5L_1R_Lg_m + C_5L_1 + C_LL_1R_Lg_m\right) + s\left(2C_5R_1R_Lg_m + C_5R_1 + C_5R_L + C_LR_1R_Lg_m +\right.}$$

9.856 X-INVALID-ORDER-856 $Z(s) = \left(\frac{C_1L_1R_1s^2+L_1s+R_1}{C_1L_1s^2+1},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_5s},\ R_L + \frac{1}{C_Ls}\right)$

$$H(s) = \frac{-C_1C_5C_LL_1R_1R_Ls^4 + R_1g_m + s^3\left(-C_1C_5L_1R_1 + C_1C_LL_1R_1R_Lg_m - C_5C_LL_1R_L\right) + s^2\left(C_1L_1R_1g_m - C_5C_LR_1R_L - C_5L_1 + C_LL_1R_Lg_m\right) + s\left(-C_5R_1 + C_LR_1R_Lg_m + L_1g_m\right)}{s^4\left(2C_1C_5C_LL_1R_1R_Lg_m + C_1C_5C_LL_1R_1 + C_1C_5C_LL_1R_L\right) + s^3\left(2C_1C_5L_1R_1g_m + C_1C_5L_1 + C_1C_LL_1R_1g_m + C_1C_LL_1 + 2C_5C_LL_1R_Lg_m + C_5C_LL_1\right) + s^2\left(2C_5C_LR_1R_Lg_m + C_5C_LR_1 + C_5C_LR_L + 2C_5L_1g_m + C_LL_1g_m\right) + s\left(2C_5R_1g_m + C_5 + C_LR_1g_m + C_L\right)}$$

9.857 X-INVALID-ORDER-857 $Z(s) = \left(\frac{C_1L_1R_1s^2+L_1s+R_1}{C_1L_1s^2+1},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_5s},\ L_Ls + \frac{1}{C_Ls}\right)$

$$H(s) = \frac{-C_1C_5C_LL_1L_LR_1s^5 + R_1g_m + s^4\left(C_1C_LL_1L_LR_1g_m - C_5C_LL_1L_L\right) + s^3\left(-C_1C_5L_1R_1 - C_5C_LL_LR_1 + C_LL_1L_Lg_m\right) + s^2\left(C_1L_1R_1g_m - C_5L_1 + C_LL_LR_1g_m\right) + s\left(-C_5R_1 + L_1g_m\right)}{s^5\left(2C_1C_5C_LL_1L_LR_1g_m + C_1C_5C_LL_1L_L\right) + s^4\left(C_1C_5C_LL_1R_1 + 2C_5C_LL_1L_Lg_m\right) + s^3\left(2C_1C_5L_1R_1g_m + C_1C_5L_1 + C_1C_LL_1R_1g_m + C_1C_LL_1 + C_5C_LL_1 + 2C_5C_LL_LR_1g_m + C_5C_LL_L\right) + s^2\left(C_5C_LR_1 + 2C_5L_1g_m + C_LL_1g_m\right) + s\left(2C_5R_1g_m + C_5 + C_LR_1g_m + C_L\right.}$$

9.858 X-INVALID-ORDER-858 $Z(s) = \left(\frac{C_1L_1R_1s^2+L_1s+R_1}{C_1L_1s^2+1},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_5s},\ \frac{L_Ls}{C_LL_Ls^2+1}\right)$

$$H(s) = \frac{-C_1C_5L_1L_LR_1s^4 + L_LR_1g_ms + s^3\left(C_1L_1L_LR_1g_m - C_5L_1L_L\right) + s^2\left(-C_5L_LR_1 + L_1L_Lg_m\right)}{C_1C_5C_LL_1L_LR_1s^5 + R_1g_m + s^4\left(2C_1C_5L_1L_LR_1g_m + C_1C_5L_1L_L + C_1C_LL_1L_LR_1g_m + C_1C_LL_1L_L + C_5C_LL_1L_L\right) + s^3\left(C_1C_5L_1R_1 + C_5C_LL_LR_1 + 2C_5L_1L_Lg_m + C_LL_1L_Lg_m\right) + s^2\left(C_1L_1R_1g_m + C_1L_1 + C_5L_1 + 2C_5L_LR_1g_m + C_5L_L + C_LL_LR_1g_m + C_LL_L\right) +}$$

9.859 X-INVALID-ORDER-859 $Z(s) = \left(\frac{C_1L_1R_1s^2+L_1s+R_1}{C_1L_1s^2+1},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_5s},\ L_Ls + R_L + \frac{1}{C_Ls}\right)$

$$H(s) = \frac{-C_1C_5C_LL_1L_LR_1s^5 + R_1g_m + s^4\left(-C_1C_5C_LL_1R_1R_L + C_1C_LL_1L_LR_1g_m - C_5C_LL_1L_L\right) + s^3\left(-C_1C_5L_1R_1 + C_1C_LL_1R_1R_Lg_m - C_5C_LL_1R_L - C_5C_LL_LR_1 + C_LL_1L_Lg_m\right) + s^2\left(C_1L_1R_1g_m - C_5C_LR_1R_L - C_5L_1 + C_LL_1R_L\right.}{s^5\left(2C_1C_5C_LL_1L_LR_1g_m + C_1C_5C_LL_1L_L\right) + s^4\left(2C_1C_5C_LL_1R_1R_Lg_m + C_1C_5C_LL_1R_1 + C_1C_5C_LL_1R_L + 2C_5C_LL_1L_Lg_m\right) + s^3\left(2C_1C_5L_1R_1g_m + C_1C_5L_1 + C_1C_LL_1R_1g_m + C_1C_LL_1 + 2C_5C_LL_1R_Lg_m + C_5C_LL_1 + 2C_5C_LL_LR_1g_m + C_5C_LL_L\right) + s^2\left(2C_5C_LR_1R\right.}$$

9.860 X-INVALID-ORDER-860 $Z(s) = \left(\frac{C_1L_1R_1s^2+L_1s+R_1}{C_1L_1s^2+1},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_5s},\ \frac{L_LR_Ls}{C_LL_LR_Ls^2+L_Ls+R_L}\right)$

$$H(s) = \frac{-C_1C_5L_1L_LR_1R_Ls^4 + L_LR_1R_Lg_ms + s^3\left(C_1L_1L_LR_1R_Lg_m - C_5L_1L_LR_L\right) + s^2\left(-C_5L_LR_1R_L\right.}{C_1C_5C_LL_1L_LR_1R_Ls^5 + R_1R_Lg_m + R_L + s^4\left(2C_1C_5L_1L_LR_1R_Lg_m + C_1C_5L_1L_LR_1 + C_1C_5L_1L_LR_L + C_1C_LL_1L_LR_1R_Lg_m + C_1C_LL_1L_LR_L + C_5C_LL_1L_LR_L\right) + s^3\left(C_1C_5L_1R_1R_L + C_1L_1L_LR_1g_m + C_1L_1L_L + C_5C_LL_LR_1R_L + 2C_5L_1L_LR_Lg_m + C_5L_1L_L + C_L\right.}$$

9.861 X-INVALID-ORDER-861 $Z(s) = \left(\frac{C_1L_1R_1s^2+L_1s+R_1}{C_1L_1s^2+1},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_5s},\ \frac{C_LL_LR_Ls^2+L_Ls+R_L}{C_LL_Ls^2+1}\right)$

$$H(s) = \frac{-C_1C_5C_LL_1L_LR_1R_Ls^5 + R_1R_Lg_m + s^4\left(-C_1C_5L_1L_LR_1 + C_1C_LL_1L_LR_1R_Lg_m - C_5C_LL_1L_LR_L\right) + s^3\left(-C_1C_5L_1R_1R_L + C_1L_1L_LR_1g_m - C_5C_LL_LR_1R_L - C_5L_1L_L + C_LL_1L\right.}{R_1g_m + s^5\left(2C_1C_5C_LL_1L_LR_1R_Lg_m + C_1C_5C_LL_1L_LR_1 + C_1C_5C_LL_1L_LR_L\right) + s^4\left(2C_1C_5L_1L_LR_1g_m + C_1C_5L_1L_L + C_1C_LL_1L_LR_1g_m + C_1C_LL_1L_L + 2C_5C_LL_1L_LR_Lg_m + C_5C_LL_1L_L\right) + s^3\left(2C_1C_5L_1R_1R_Lg_m + C_1C_5L_1R_1 + C_1C_5L_1R_L + 2C_5C_LL_LR_1R_Lg_m +\right.}$$

9.862 X-INVALID-ORDER-862 $Z(s) = \left(\frac{C_1L_1R_1s^2+L_1s+R_1}{C_1L_1s^2+1},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_5s},\ \frac{R_L\left(C_LL_Ls^2+1\right)}{C_LL_Ls^2+C_LR_Ls+1}\right)$

$$H(s) = \frac{-C_1C_5C_LL_1L_LR_1R_Ls^5 + R_1R_Lg_m + s^4\left(C_1C_LL_1L_LR_1R_Lg_m - C_5C_LL_1L_LR_L\right) + s^3\left(-C_1C_5L_1R_1R_L - C_5C_LL_1\right.}{R_1g_m + s^5\left(2C_1C_5C_LL_1L_LR_1R_Lg_m + C_1C_5C_LL_1L_LR_1 + C_1C_5C_LL_1L_LR_L\right) + s^4\left(C_1C_5C_LL_1R_1R_L + C_1C_LL_1L_LR_1g_m + C_1C_LL_1L_L + 2C_5C_LL_1L_LR_Lg_m + C_5C_LL_1L_L\right) + s^3\left(2C_1C_5L_1R_1R_Lg_m + C_1C_5L_1R_1 + C_1C_5L_1R_L + C_1C_LL_1R_1R_Lg_m + C_1C_LL_1R_L + C\right.}$$

9.863 X-INVALID-ORDER-863 $Z(s) = \left(\frac{C_1L_1R_1s^2+L_1s+R_1}{C_1L_1s^2+1},\ \infty,\ \infty,\ \infty,\ \frac{R_5}{C_5R_5s+1},\ R_L\right)$

$$H(s) = \frac{-C_1C_5L_1R_1R_5R_Ls^3 + R_1R_5R_Lg_m - R_1R_L + s^2\left(C_1L_1R_1R_5R_Lg_m - C_1L_1R_1R_L - C_5L_1R_5R_L\right) + s\left(-C_5R_1R_5R_L + L_1R_5R_Lg_m - L_1R_L\right)}{R_1R_5g_m + 2R_1R_Lg_m + R_1 + R_5 + R_L + s^3\left(2C_1C_5L_1R_1R_5R_Lg_m + C_1C_5L_1R_1R_5 + C_1C_5L_1R_5R_L\right) + s^2\left(C_1L_1R_1R_5g_m + 2C_1L_1R_1R_Lg_m + C_1L_1R_1 + C_1L_1R_5 + C_1L_1R_L + 2C_5L_1R_5R_Lg_m + C_5L_1R_5\right) + s\left(2C_5R_1R_5R_Lg_m + C_5R_1R_5 + C_5R_5R_L + L_1R_5g_m + 2L\right.}$$

9.864 X-INVALID-ORDER-864 $Z(s) = \left(\frac{C_1L_1R_1s^2+L_1s+R_1}{C_1L_1s^2+1},\ \infty,\ \infty,\ \infty,\ \frac{R_5}{C_5R_5s+1},\ \frac{1}{C_Ls}\right)$

$$H(s) = \frac{-C_1C_5L_1R_1R_5s^3 + R_1R_5g_m - R_1 + s^2\left(C_1L_1R_1R_5g_m - C_1L_1R_1 - C_5L_1R_5\right) + s\left(-C_5R_1R_5 + L_1R_5g_m - L_1\right)}{C_1C_5C_LL_1R_1R_5s^4 + 2R_1g_m + s^3\left(2C_1C_5L_1R_1R_5g_m + C_1C_5L_1R_5 + C_1C_LL_1R_1R_5g_m + C_1C_LL_1R_1 + C_1C_LL_1R_5 + C_5C_LL_1R_5\right) + s^2\left(2C_1L_1R_1g_m + C_1L_1 + C_5C_LR_1R_5 + 2C_5L_1R_5g_m + C_LL_1R_5g_m + C_LL_1\right) + s\left(2C_5R_1R_5g_m + C_5R_5 + C_LR_1R_5g_m + C_LR_1 + C\right.}$$

9.865 X-INVALID-ORDER-865 $Z(s) = \left(\frac{C_1L_1R_1s^2+L_1s+R_1}{C_1L_1s^2+1},\ \infty,\ \infty,\ \infty,\ \frac{R_5}{C_5R_5s+1},\ \frac{R_L}{C_LR_Ls+1}\right)$

$$H(s) = \frac{-C_1C_5L_1R_1R_5R_Ls^3 + R_1R_5R_Lg_m - R_1R_L + s^2\left(C_1L_1R_1R_5R_Lg_m - C_1L_1R_1R_L - C_5L_1R_5R_L\right) +}{C_1C_5C_LL_1R_1R_5R_Ls^4 + R_1R_5g_m + 2R_1R_Lg_m + R_1 + R_5 + R_L + s^3\left(2C_1C_5L_1R_1R_5R_Lg_m + C_1C_5L_1R_1R_5 + C_1C_5L_1R_5R_L + C_1C_LL_1R_1R_5R_Lg_m + C_1C_LL_1R_1R_L + C_1C_LL_1R_5R_L + C_5C_LL_1R_5R_L\right) + s^2\left(C_1L_1R_1R_5g_m + 2C_1L_1R_1R_Lg_m + C_1L_1R_1 + C_1L_1R_5 +\right.}$$

9.866 X-INVALID-ORDER-866 $Z(s) = \left(\frac{C_1L_1R_1s^2+L_1s+R_1}{C_1L_1s^2+1},\ \infty,\ \infty,\ \infty,\ \frac{R_5}{C_5R_5s+1},\ R_L + \frac{1}{C_Ls}\right)$

$$H(s) = \frac{-C_1C_5C_LL_1R_1R_5R_Ls^4 + R_1R_5g_m - R_1 + s^3\left(-C_1C_5L_1R_1R_5 + C_1C_LL_1R_1R_5R_Lg_m - C_1C_LL_1R_1R_L - C_5C_LL_1R_5R_L\right) + s^2\left(C_1L_1R_1R_5g_m - C_1L_1R_1 - C_5C_LR_1R_5\right.}{2R_1g_m + s^4\left(2C_1C_5C_LL_1R_1R_5R_Lg_m + C_1C_5C_LL_1R_1R_5 + C_1C_5C_LL_1R_5R_L\right) + s^3\left(2C_1C_5L_1R_1R_5g_m + C_1C_5L_1R_5 + C_1C_LL_1R_1R_5g_m + 2C_1C_LL_1R_1R_Lg_m + C_1C_LL_1R_1 + C_1C_LL_1R_5 + C_1C_LL_1R_L + 2C_5C_LL_1R_5R_Lg_m + C_5C_LL_1R_5\right) + s^2\left(2C_1L_1R_1g_m + C_1L_1\right.}$$

9.867 X-INVALID-ORDER-867 $Z(s) = \left(\frac{C_1L_1R_1s^2+L_1s+R_1}{C_1L_1s^2+1},\ \infty,\ \infty,\ \infty,\ \frac{R_5}{C_5R_5s+1},\ L_Ls + \frac{1}{C_Ls}\right)$

$$H(s) = \frac{-C_1C_5C_LL_1L_LR_1R_5s^5 + R_1R_5g_m - R_1 + s^4\left(C_1C_LL_1L_LR_1R_5g_m - C_1C_LL_1L_LR_1 - C_5C_LL_1L_LR_5\right) + s^3\left(-C_1C_5L_1R_1R_5 - C_5C_LL_LR_1R_5 + C_LL_1L_LR_5g_m - C_LL_1\right.}{2R_1g_m + s^5\left(2C_1C_5C_LL_1L_LR_1R_5g_m + C_1C_5C_LL_1L_LR_5\right) + s^4\left(C_1C_5C_LL_1R_1R_5 + 2C_1C_LL_1L_LR_1g_m + C_1C_LL_1L_L + 2C_5C_LL_1L_LR_5g_m\right) + s^3\left(2C_1C_5L_1R_1R_5g_m + C_1C_5L_1R_5 + C_1C_LL_1R_1R_5g_m + C_1C_LL_1R_1 + C_1C_LL_1R_5 + C_5C_LL_1R_5 + 2C_5C_LL_LR_1R_5g_m +\right.}$$

9.868 X-INVALID-ORDER-868 $Z(s) = \left(\frac{C_1L_1R_1s^2+L_1s+R_1}{C_1L_1s^2+1},\ \infty,\ \infty,\ \infty,\ \frac{R_5}{C_5R_5s+1},\ \frac{L_Ls}{C_LL_Ls^2+1}\right)$

$$H(s) = \frac{-C_1C_5L_1L_LR_1R_5s^4 + s^3\left(C_1L_1L_LR_1R_5g_m - C_1L_1L_LR_1 - C_5L_1L_LR_5\right) + s^2\left(-C_5L_LR_1R_5 + L_1L_L\right.}{C_1C_5C_LL_1L_LR_1R_5s^5 + R_1R_5g_m + R_1 + R_5 + s^4\left(2C_1C_5L_1L_LR_1R_5g_m + C_1C_5L_1L_LR_5 + C_1C_LL_1L_LR_1R_5g_m + C_1C_LL_1L_LR_1 + C_1C_LL_1L_LR_5 + C_5C_LL_1L_LR_5\right) + s^3\left(C_1C_5L_1R_1R_5 + 2C_1L_1L_LR_1g_m + C_1L_1L_L + C_5C_LL_LR_1R_5 + 2C_5L_1L_LR_5g_m + C_LL_1L_LR_5\right.}$$

9.869 X-INVALID-ORDER-869 $Z(s) = \left(\frac{C_1L_1R_1s^2+L_1s+R_1}{C_1L_1s^2+1},\ \infty,\ \infty,\ \infty,\ \frac{R_5}{C_5R_5s+1},\ L_Ls + R_L + \frac{1}{C_Ls}\right)$

$$H(s) = \frac{-C_1C_5C_LL_1L_LR_1R_5s^5 + R_1R_5g_m - R_1 + s^4\left(-C_1C_5C_LL_1R_1R_5R_L + C_1C_LL_1L_LR_1R_5g_m - C_1C_LL_1L_LR_1 - C_5C_LL_1L_LR_5\right) + s^3\left(-C_1C_5L_1R_1R_5 + C_1C\right.}{2R_1g_m + s^5\left(2C_1C_5C_LL_1L_LR_1R_5g_m + C_1C_5C_LL_1L_LR_5\right) + s^4\left(2C_1C_5C_LL_1R_1R_5R_Lg_m + C_1C_5C_LL_1R_1R_5 + C_1C_5C_LL_1R_5R_L + 2C_1C_LL_1L_LR_1g_m + C_1C_LL_1L_L + 2C_5C_LL_1L_LR_5g_m\right) + s^3\left(2C_1C_5L_1R_1R_5g_m + C_1C_5L_1R_5 + C_1C_LL_1R_1R_5g_m + 2C_1C_LL_1R_1R_Lg\right.}$$

9.870 X-INVALID-ORDER-870 $Z(s) = \left(\frac{C_1L_1R_1s^2+L_1s+R_1}{C_1L_1s^2+1},\ \infty,\ \infty,\ \infty,\ \frac{R_5}{C_5R_5s+1},\ \frac{L_LR_Ls}{C_LL_LR_Ls^2+L_Ls+R_L}\right)$

$$H(s) = \frac{}{C_1C_5C_LL_1L_LR_1R_5R_Ls^5 + R_1R_5R_Lg_m + R_1R_L + R_5R_L + s^4\left(2C_1C_5L_1L_LR_1R_5R_Lg_m + C_1C_5L_1L_LR_1R_5 + C_1C_5L_1L_LR_5R_L + C_1C_LL_1L_LR_1R_5R_Lg_m + C_1C_LL_1L_LR_1R_L + C_1C_LL_1L_LR_5R_L + C_5C_LL_1L_LR_5R_L\right) + s^3\left(C_1C_5L_1R_1R_5R_L + C_1L_1L_LR_1R_5g_m + 2C\right.}$$

9.871 X-INVALID-ORDER-871 $Z(s) = \left(\frac{C_1L_1R_1s^2+L_1s+R_1}{C_1L_1s^2+1},\ \infty,\ \infty,\ \infty,\ \frac{R_5}{C_5R_5s+1},\ \frac{C_LL_LR_Ls^2+L_Ls+R_L}{C_LL_Ls^2+1}\right)$

$$H(s) = \frac{-C_1C_5C_LL_1L_LR_1R_5R_Ls^5 + R_1R_5R_Lg_m - R_1R_L + s^4\left(-C_1C_5L_1L_LR_1R_5 + C\right.}{R_1R_5g_m + 2R_1R_Lg_m + R_1 + R_5 + R_L + s^5\left(2C_1C_5C_LL_1L_LR_1R_5R_Lg_m + C_1C_5C_LL_1L_LR_1R_5 + C_1C_5C_LL_1L_LR_5R_L\right) + s^4\left(2C_1C_5L_1L_LR_1R_5g_m + C_1C_5L_1L_LR_5 + C_1C_LL_1L_LR_1R_5g_m + 2C_1C_LL_1L_LR_1R_Lg_m + C_1C_LL_1L_LR_1 + C_1C_LL_1L_LR_5 + C_1C_LL_1L_LR_L\right.}$$

9.872 X-INVALID-ORDER-872 $Z(s) = \left(\frac{C_1L_1R_1s^2+L_1s+R_1}{C_1L_1s^2+1},\ \infty,\ \infty,\ \infty,\ \frac{R_5}{C_5R_5s+1},\ \frac{R_L\left(C_LL_Ls^2+1\right)}{C_LL_Ls^2+C_LR_Ls+1}\right)$

$$H(s) = \frac{R_1R_5g_m + 2R_1R_Lg_m + R_1 + R_5 + R_L + s^5\left(2C_1C_5C_LL_1L_LR_1R_5R_Lg_m + C_1C_5C_LL_1L_LR_1R_5 + C_1C_5C_LL_1L_LR_5R_L\right) + s^4\left(C_1C_5C_LL_1R_1R_5R_L + C_1C_LL_1L_LR_1R_5g_m + 2C_1C_LL_1L_LR_1R_Lg_m + C_1C_LL_1L_LR_1 + C_1C_LL_1L_LR_5 + C_1C_LL_1L_LR_L + 2C_5C_LL_1L_LR_5\right.}{}$$

9.873 X-INVALID-ORDER-873 $Z(s) = \left(\frac{C_1L_1R_1s^2+L_1s+R_1}{C_1L_1s^2+1},\ \infty,\ \infty,\ \infty,\ R_5+\frac{1}{C_5s},\ R_L\right)$

$$H(s) = \frac{R_1R_Lg_m + s^3\left(C_1C_5L_1R_1R_5R_Lg_m - C_1C_5L_1R_1R_L\right) + s^2\left(C_1L_1R_1R_Lg_m + C_5L_1R_5R_Lg_m - C_5L_1R_L\right) + s\left(C_5R_1R_5R_Lg_m - C_5R_1R_L + L_1R_Lg_m\right)}{R_1g_m + s^3\left(C_1C_5L_1R_1R_5g_m + 2C_1C_5L_1R_1R_Lg_m + C_1C_5L_1R_1 + C_1C_5L_1R_5 + C_1C_5L_1R_L\right) + s^2\left(C_1L_1R_1g_m + C_1L_1 + C_5L_1R_5g_m + 2C_5L_1R_Lg_m + C_5L_1\right) + s\left(C_5R_1R_5g_m + 2C_5R_1R_Lg_m + C_5R_1 + C_5R_5 + C_5R_L + L_1g_m\right) + 1}$$

9.874 X-INVALID-ORDER-874 $Z(s) = \left(\frac{C_1L_1R_1s^2+L_1s+R_1}{C_1L_1s^2+1},\ \infty,\ \infty,\ \infty,\ R_5+\frac{1}{C_5s},\ \frac{1}{C_Ls}\right)$

$$H(s) = \frac{R_1g_m + s^3\left(C_1C_5L_1R_1R_5g_m - C_1C_5L_1R_1\right) + s^2\left(C_1L_1R_1g_m + C_5L_1R_5g_m - C_5L_1\right) + s\left(C_5R_1R_5g_m - C_5R_1 + L_1g_m\right)}{s^4\left(C_1C_5C_LL_1R_1R_5g_m + C_1C_5C_LL_1R_1 + C_1C_5C_LL_1R_5\right) + s^3\left(2C_1C_5L_1R_1g_m + C_1C_5L_1 + C_1C_LL_1R_1g_m + C_1C_LL_1 + C_5C_LL_1R_5g_m + C_5C_LL_1\right) + s^2\left(C_5C_LR_1R_5g_m + C_5C_LR_1 + C_5C_LR_5 + 2C_5L_1g_m + C_LL_1g_m\right) + s\left(2C_5R_1g_m + C_5 + C_LR_1g_m + C_L\right)}$$

9.875 X-INVALID-ORDER-875 $Z(s) = \left(\frac{C_1L_1R_1s^2+L_1s+R_1}{C_1L_1s^2+1},\ \infty,\ \infty,\ \infty,\ R_5+\frac{1}{C_5s},\ \frac{R_L}{C_LR_Ls+1}\right)$

$$H(s) = \frac{R_1R_Lg_m + s^3\left(C_1C_5L_1R_1R_5R_Lg_m - C_1C_5L_1R_1R_L\right) + s^2\left(C_1L_1R_1R_Lg_m + C_5L_1R_5R_Lg_m - C_5L_1R_L\right) + s\left(\right.}{R_1g_m + s^4\left(C_1C_5C_LL_1R_1R_5R_Lg_m + C_1C_5C_LL_1R_1R_L + C_1C_5C_LL_1R_5R_L\right) + s^3\left(C_1C_5L_1R_1R_5g_m + 2C_1C_5L_1R_1R_Lg_m + C_1C_5L_1R_1 + C_1C_5L_1R_5 + C_1C_5L_1R_L + C_1C_LL_1R_1R_Lg_m + C_1C_LL_1R_L + C_5C_LL_1R_5R_Lg_m + C_5C_LL_1R_L\right) + s^2\left(C_1L_1R_1g_m + C_1L_1 + C_5\right.}$$

9.876 X-INVALID-ORDER-876 $Z(s) = \left(\frac{C_1L_1R_1s^2+L_1s+R_1}{C_1L_1s^2+1},\ \infty,\ \infty,\ \infty,\ R_5+\frac{1}{C_5s},\ R_L+\frac{1}{C_Ls}\right)$

$$H(s) = \frac{R_1g_m + s^4\left(C_1C_5C_LL_1R_1R_5R_Lg_m - C_1C_5C_LL_1R_1R_L\right) + s^3\left(C_1C_5L_1R_1R_5g_m - C_1C_5L_1R_1 + C_1C_LL_1R_1R_Lg_m + C_5C_LL_1R_5R_Lg_m - C_5C_LL_1R_L\right) + s^2\left(C_1L_1R_1g_m + C_5C_LR_1R_5R_Lg_m - C_5C_LR_1R_L + C_5L_1R_5g_m - C_5L_1 + C_LL_1R_L\right.}{s^4\left(C_1C_5C_LL_1R_1R_5g_m + 2C_1C_5C_LL_1R_1R_Lg_m + C_1C_5C_LL_1R_1 + C_1C_5C_LL_1R_5 + C_1C_5C_LL_1R_L\right) + s^3\left(2C_1C_5L_1R_1g_m + C_1C_5L_1 + C_1C_LL_1R_1g_m + C_1C_LL_1 + C_5C_LL_1R_5g_m + 2C_5C_LL_1R_Lg_m + C_5C_LL_1\right) + s^2\left(C_5C_LR_1R_5g_m + 2C_5C_LR_1R_Lg_m + C_5C_LR_1 + C\right.}$$

9.877 X-INVALID-ORDER-877 $Z(s) = \left(\frac{C_1L_1R_1s^2+L_1s+R_1}{C_1L_1s^2+1},\ \infty,\ \infty,\ \infty,\ R_5+\frac{1}{C_5s},\ L_Ls+\frac{1}{C_Ls}\right)$

$$H(s) = \frac{R_1g_m + s^5\left(C_1C_5C_LL_1L_LR_1R_5g_m - C_1C_5C_LL_1L_LR_1\right) + s^4\left(C_1C_LL_1L_LR_1g_m + C_5C_LL_1L_LR_5g_m - C_5C_LL_1L_L\right) + s^3\left(C_1C_5L_1R_1R_5g_m - C_1C_5L_1R_1 + C_5C_LL_LR_1R_5g_m - C_5C_LL_LR_1 + C_LL_1L_Lg_m\right) + s^2\left(C_1L_1R_1g_m + C_5L_1R_5g_m -\right.}{s^5\left(2C_1C_5C_LL_1L_LR_1g_m + C_1C_5C_LL_1L_L\right) + s^4\left(C_1C_5C_LL_1R_1R_5g_m + C_1C_5C_LL_1R_1 + C_1C_5C_LL_1R_5 + 2C_5C_LL_1L_Lg_m\right) + s^3\left(2C_1C_5L_1R_1g_m + C_1C_5L_1 + C_1C_LL_1R_1g_m + C_1C_LL_1 + C_5C_LL_1R_5g_m + C_5C_LL_1 + 2C_5C_LL_LR_1g_m + C_5C_LL_L\right) + s^2\left(C_5C_LR_1R_5g_m\right.}$$

9.878 X-INVALID-ORDER-878 $Z(s) = \left(\frac{C_1L_1R_1s^2+L_1s+R_1}{C_1L_1s^2+1},\ \infty,\ \infty,\ \infty,\ R_5+\frac{1}{C_5s},\ \frac{L_Ls}{C_LL_Ls^2+1}\right)$

$$H(s) = \frac{L_LR_1g_ms + s^4\left(C_1C_5L_1L_LR_1R_5g_m - C_1C_5L_1L_LR_1\right) + s^3\left(C_1L_1L_LR_1g_m + C_5L_1L_LR_5g_m - C_5L_1L_L\right) + s^2}{R_1g_m + s^5\left(C_1C_5C_LL_1L_LR_1R_5g_m + C_1C_5C_LL_1L_LR_1 + C_1C_5C_LL_1L_LR_5\right) + s^4\left(2C_1C_5L_1L_LR_1g_m + C_1C_5L_1L_L + C_1C_LL_1L_LR_1g_m + C_1C_LL_1L_L + C_5C_LL_1L_LR_5g_m + C_5C_LL_1L_L\right) + s^3\left(C_1C_5L_1R_1R_5g_m + C_1C_5L_1R_1 + C_1C_5L_1R_5 + C_5C_LL_LR_1R_5g_m + C_5C_L\right.}$$

9.879 X-INVALID-ORDER-879 $Z(s) = \left(\frac{C_1L_1R_1s^2+L_1s+R_1}{C_1L_1s^2+1},\ \infty,\ \infty,\ \infty,\ R_5+\frac{1}{C_5s},\ L_Ls+R_L+\frac{1}{C_Ls}\right)$

$$H(s) = \frac{R_1g_m + s^5\left(C_1C_5C_LL_1L_LR_1R_5g_m - C_1C_5C_LL_1L_LR_1\right) + s^4\left(C_1C_5C_LL_1R_1R_5R_Lg_m - C_1C_5C_LL_1R_1R_L + C_1C_LL_1L_LR_1g_m + C_5C_LL_1L_LR_5g_m - C_5C_LL_1L_L\right) + s^3\left(C_1C_5L_1R_1R_5g_m - C_1C_5L_1R_1 + C_1C_LL_1R_1R_Lg_m + C_5C_LL_1R_5R_Lg_m - C_5C_LL_1R_L + C_5C_LL\right.}{s^5\left(2C_1C_5C_LL_1L_LR_1g_m + C_1C_5C_LL_1L_L\right) + s^4\left(C_1C_5C_LL_1R_1R_5g_m + 2C_1C_5C_LL_1R_1R_Lg_m + C_1C_5C_LL_1R_1 + C_1C_5C_LL_1R_5 + C_1C_5C_LL_1R_L + 2C_5C_LL_1L_Lg_m\right) + s^3\left(2C_1C_5L_1R_1g_m + C_1C_5L_1 + C_1C_LL_1R_1g_m + C_1C_LL_1 + C_5C_LL_1R_5g_m + 2C_5C_LL_1R\right.}$$

9.880 X-INVALID-ORDER-880 $Z(s) = \left(\frac{C_1L_1R_1s^2+L_1s+R_1}{C_1L_1s^2+1},\ \infty,\ \infty,\ \infty,\ R_5+\frac{1}{C_5s},\ \frac{L_LR_Ls}{C_LL_LR_Ls^2+L_Ls+R_L}\right)$

$$H(s) = \frac{R_1R_Lg_m + R_L + s^5\left(C_1C_5C_LL_1L_LR_1R_5R_Lg_m + C_1C_5C_LL_1L_LR_1R_L + C_1C_5C_LL_1L_LR_5R_L\right) + s^4\left(C_1C_5L_1L_LR_1R_5g_m + 2C_1C_5L_1L_LR_1R_Lg_m + C_1C_5L_1L_LR_1 + C_1C_5L_1L_LR_5 + C_1C_5L_1L_LR_L + C_1C_LL_1L_LR_1R_Lg_m + C_1C_LL_1L_LR_L + C_5C_LL_1L_LR_5R_Lg_m + C\right.}{}$$

9.881 X-INVALID-ORDER-881 $Z(s) = \left(\frac{C_1L_1R_1s^2+L_1s+R_1}{C_1L_1s^2+1},\ \infty,\ \infty,\ \infty,\ R_5+\frac{1}{C_5s},\ \frac{C_LL_LR_Ls^2+L_Ls+R_L}{C_LL_Ls^2+1}\right)$

$$H(s) = \frac{R_1R_Lg_m + s^5\left(C_1C_5C_LL_1L_LR_1R_5R_Lg_m - C_1C_5C_LL_1L_LR_1R_L\right) + s^4\left(C_1C_5L_1L_LR_1R_5g_m - C_1C_5L_1L_LR_1 + C_1C_LL_1L_LR_1R_Lg_m + C_5C_LL_1L_LR_5R_Lg_m - C_5C_LL_1L_LR_L\right) + s^3\left(C_1C_5L\right.}{R_1g_m + s^5\left(C_1C_5C_LL_1L_LR_1R_5g_m + 2C_1C_5C_LL_1L_LR_1R_Lg_m + C_1C_5C_LL_1L_LR_1 + C_1C_5C_LL_1L_LR_5 + C_1C_5C_LL_1L_LR_L\right) + s^4\left(2C_1C_5L_1L_LR_1g_m + C_1C_5L_1L_L + C_1C_LL_1L_LR_1g_m + C_1C_LL_1L_L + C_5C_LL_1L_LR_5g_m + 2C_5C_LL_1L_LR_Lg_m + C_5C_LL_1L_L\right) + s^3\left(C_1C\right.}$$

9.882 X-INVALID-ORDER-882 $Z(s) = \left(\frac{C_1L_1R_1s^2+L_1s+R_1}{C_1L_1s^2+1},\ \infty,\ \infty,\ \infty,\ R_5+\frac{1}{C_5s},\ \frac{R_L\left(C_LL_Ls^2+1\right)}{C_LL_Ls^2+C_LR_Ls+1}\right)$

$$H(s) = \frac{R_1R_Lg_m + s^5\left(C_1C_5C_LL_1L_LR_1R_5R_Lg_m - \right.}{R_1g_m + s^5\left(C_1C_5C_LL_1L_LR_1R_5g_m + 2C_1C_5C_LL_1L_LR_1R_Lg_m + C_1C_5C_LL_1L_LR_1 + C_1C_5C_LL_1L_LR_5 + C_1C_5C_LL_1L_LR_L\right) + s^4\left(C_1C_5C_LL_1R_1R_5R_Lg_m + C_1C_5C_LL_1R_1R_L + C_1C_5C_LL_1R_5R_L + C_1C_LL_1L_LR_1g_m + C_1C_LL_1L_L + C_5C_LL_1L_LR_5g_m + 2C_5C_LL_1L_L\right.}$$

9.883 X-INVALID-ORDER-883 $Z(s) = \left(\frac{C_1L_1R_1s^2+L_1s+R_1}{C_1L_1s^2+1},\ \infty,\ \infty,\ \infty,\ L_5s+\frac{1}{C_5s},\ R_L\right)$

$$H(s) = \frac{C_1C_5L_1L_5R_1R_Lg_ms^4 + R_1R_Lg_m + s^3\left(-C_1C_5L_1R_1R_L + C_5L_1L_5R_Lg_m\right) + s^2\left(C_1L_1R_1R_Lg_m - C_5L_1R_L + C_5L_5R_1R_Lg_m\right) + s\left(-C_5R_1R_L + L_1R_Lg_m\right)}{R_1g_m + s^4\left(C_1C_5L_1L_5R_1g_m + C_1C_5L_1L_5\right) + s^3\left(2C_1C_5L_1R_1R_Lg_m + C_1C_5L_1R_1 + C_1C_5L_1R_L + C_5L_1L_5g_m\right) + s^2\left(C_1L_1R_1g_m + C_1L_1 + 2C_5L_1R_Lg_m + C_5L_1 + C_5L_5R_1g_m + C_5L_5\right) + s\left(2C_5R_1R_Lg_m + C_5R_1 + C_5R_L + L_1g_m\right) + 1}$$

9.884 X-INVALID-ORDER-884 $Z(s) = \left(\frac{C_1L_1R_1s^2+L_1s+R_1}{C_1L_1s^2+1},\ \infty,\ \infty,\ \infty,\ L_5s+\frac{1}{C_5s},\ \frac{1}{C_Ls}\right)$

$$H(s) = \frac{C_1C_5L_1L_5R_1g_ms^4 + R_1g_m + s^3\left(-C_1C_5L_1R_1 + C_5L_1L_5g_m\right) + s^2\left(C_1L_1R_1g_m - C_5L_1 + C_5L_5R_1g_m\right) + s\left(-C_5R_1 + L_1g_m\right)}{s^5\left(C_1C_5C_LL_1L_5R_1g_m + C_1C_5C_LL_1L_5\right) + s^4\left(C_1C_5C_LL_1R_1 + C_5C_LL_1L_5g_m\right) + s^3\left(2C_1C_5L_1R_1g_m + C_1C_5L_1 + C_1C_LL_1R_1g_m + C_1C_LL_1 + C_5C_LL_1 + C_5C_LL_5R_1g_m + C_5C_LL_5\right) + s^2\left(C_5C_LR_1 + 2C_5L_1g_m + C_LL_1g_m\right) + s\left(2C_5R_1g_m + C_5 + C_LR_1g_m + C_L\right)}$$

9.885 X-INVALID-ORDER-885 $Z(s) = \left(\frac{C_1L_1R_1s^2+L_1s+R_1}{C_1L_1s^2+1},\ \infty,\ \infty,\ \infty,\ L_5s+\frac{1}{C_5s},\ \frac{R_L}{C_LR_Ls+1}\right)$

$$H(s) = \frac{C_1C_5L_1L_5R_1R_Lg_ms^4 + R_1R_Lg_m + s^3\left(-C_1C_5L_1R_1R_L + C_5L_1L_5R_Lg_m\right) + s^2\left(C_1L_1R_1R_Lg_m - C_5L_1R_L + C\right.}{R_1g_m + s^5\left(C_1C_5C_LL_1L_5R_1R_Lg_m + C_1C_5C_LL_1L_5R_L\right) + s^4\left(C_1C_5C_LL_1R_1R_L + C_1C_5L_1L_5R_1g_m + C_1C_5L_1L_5 + C_5C_LL_1L_5R_Lg_m\right) + s^3\left(2C_1C_5L_1R_1R_Lg_m + C_1C_5L_1R_1 + C_1C_5L_1R_L + C_1C_LL_1R_1R_Lg_m + C_1C_LL_1R_L + C_5C_LL_1R_L + C_5C_LL_5R_1R_Lg_m + C_5C_L\right.}$$

9.886 X-INVALID-ORDER-886 $Z(s) = \left(\frac{C_1L_1R_1s^2+L_1s+R_1}{C_1L_1s^2+1},\ \infty,\ \infty,\ \infty,\ L_5s+\frac{1}{C_5s},\ R_L+\frac{1}{C_Ls}\right)$

$$H(s) = \frac{C_1C_5C_LL_1L_5R_1R_Lg_ms^5 + R_1g_m + s^4\left(-C_1C_5C_LL_1R_1R_L + C_1C_5L_1L_5R_1g_m + C_5C_LL_1L_5R_Lg_m\right) + s^3\left(-C_1C_5L_1R_1 + C_1C_LL_1R_1R_Lg_m - C_5C_LL_1R_L + C_5C_LL_5R_1R_Lg_m + C_5L_1L_5g_m\right) + s^2\left(C_1L_1R_1g_m - C_5C_LR_1R_L - C_5L_1 + C_5L\right.}{s^5\left(C_1C_5C_LL_1L_5R_1g_m + C_1C_5C_LL_1L_5\right) + s^4\left(2C_1C_5C_LL_1R_1R_Lg_m + C_1C_5C_LL_1R_1 + C_1C_5C_LL_1R_L + C_5C_LL_1L_5g_m\right) + s^3\left(2C_1C_5L_1R_1g_m + C_1C_5L_1 + C_1C_LL_1R_1g_m + C_1C_LL_1 + 2C_5C_LL_1R_Lg_m + C_5C_LL_1 + C_5C_LL_5R_1g_m + C_5C_LL_5\right) + s^2\left(2C_5C_LR_1R_Lg_m\right.}$$

9.887 X-INVALID-ORDER-887 $Z(s) = \left(\frac{C_1L_1R_1s^2+L_1s+R_1}{C_1L_1s^2+1},\ \infty,\ \infty,\ \infty,\ L_5s+\frac{1}{C_5s},\ L_Ls+\frac{1}{C_Ls}\right)$

$$H(s) = \frac{C_1C_5C_LL_1L_5L_LR_1g_ms^6 + R_1g_m + s^5\left(-C_1C_5C_LL_1L_LR_1 + C_5C_LL_1L_5L_Lg_m\right) + s^4\left(C_1C_5L_1L_5R_1g_m + C_1C_LL_1L_LR_1g_m - C_5C_LL_1L_L + C_5C_LL_5L_LR_1g_m\right) + s^3\left(-C_1C_5L_1R_1 - C_5C_LL_LR_1 + C_5L_1L_5g_m + C_LL_1L_Lg_m\right) + s^2\left(C_1L_1R_1g_m\right.}{s^5\left(C_1C_5C_LL_1L_5R_1g_m + C_1C_5C_LL_1L_5 + 2C_1C_5C_LL_1L_LR_1g_m + C_1C_5C_LL_1L_L\right) + s^4\left(C_1C_5C_LL_1R_1 + C_5C_LL_1L_5g_m + 2C_5C_LL_1L_Lg_m\right) + s^3\left(2C_1C_5L_1R_1g_m + C_1C_5L_1 + C_1C_LL_1R_1g_m + C_1C_LL_1 + C_5C_LL_1 + C_5C_LL_5R_1g_m + C_5C_LL_5 + 2C_5C_LL_LR_1g_m + C_5C\right.}$$

9.888 X-INVALID-ORDER-888 $Z(s) = \left(\frac{C_1L_1R_1s^2+L_1s+R_1}{C_1L_1s^2+1},\ \infty,\ \infty,\ \infty,\ L_5s+\frac{1}{C_5s},\ \frac{L_Ls}{C_LL_Ls^2+1}\right)$

$$H(s) = \frac{C_1C_5L_1L_5L_LR_1g_ms^5 + L_LR_1g_ms + s^4\left(-C_1C_5L_1L_LR_1 + C_5L_1L_5L_Lg_m\right) + s^3\left(C_1L_1L_LR_1g_m - C_5L_1L_L + C\right.}{R_1g_m + s^6\left(C_1C_5C_LL_1L_5L_LR_1g_m + C_1C_5C_LL_1L_5L_L\right) + s^5\left(C_1C_5C_LL_1L_LR_1 + C_5C_LL_1L_5L_Lg_m\right) + s^4\left(C_1C_5L_1L_5R_1g_m + C_1C_5L_1L_5 + 2C_1C_5L_1L_LR_1g_m + C_1C_5L_1L_L + C_1C_LL_1L_LR_1g_m + C_1C_LL_1L_L + C_5C_LL_1L_L + C_5C_LL_5L_LR_1g_m + C_5C_LL_5L_L\right) + s^3\left(C_1\right.}$$

9.889 X-INVALID-ORDER-889 $Z(s) = \left(\frac{C_1L_1R_1s^2+L_1s+R_1}{C_1L_1s^2+1},\ \infty,\ \infty,\ \infty,\ L_5s+\frac{1}{C_5s},\ L_Ls+R_L+\frac{1}{C_Ls}\right)$

$$H(s) = \frac{C_1C_5C_LL_1L_5L_LR_1g_ms^6 + R_1g_m + s^5\left(C_1C_5C_LL_1L_5R_1R_Lg_m - C_1C_5C_LL_1L_LR_1 + C_5C_LL_1L_5L_Lg_m\right) + s^4\left(-C_1C_5C_LL_1R_1R_L + C_1C_5L_1L_5R_1g_m + C_1C_LL_1L_LR_1g_m + C_5C_LL_1L_5R_Lg_m - C_5C_LL_1L_L + C_5C_LL_5L_LR_1g_m\right) + s^3\left(-C_1C_5L_1R_1 + C_1C_LL_1R_1R_Lg_m\right.}{s^5\left(C_1C_5C_LL_1L_5R_1g_m + C_1C_5C_LL_1L_5 + 2C_1C_5C_LL_1L_LR_1g_m + C_1C_5C_LL_1L_L\right) + s^4\left(2C_1C_5C_LL_1R_1R_Lg_m + C_1C_5C_LL_1R_1 + C_1C_5C_LL_1R_L + C_5C_LL_1L_5g_m + 2C_5C_LL_1L_Lg_m\right) + s^3\left(2C_1C_5L_1R_1g_m + C_1C_5L_1 + C_1C_LL_1R_1g_m + C_1C_LL_1 + 2C_5C_LL\right.}$$

9.890 X-INVALID-ORDER-890 $Z(s) = \left(\frac{C_1L_1R_1s^2+L_1s+R_1}{C_1L_1s^2+1},\ \infty,\ \infty,\ \infty,\ L_5s+\frac{1}{C_5s},\ \frac{L_LR_Ls}{C_LL_LR_Ls^2+L_Ls+R_L}\right)$

$$H(s) = \frac{}{R_1R_Lg_m + R_L + s^6\left(C_1C_5C_LL_1L_5L_LR_1R_Lg_m + C_1C_5C_LL_1L_5L_LR_L\right) + s^5\left(C_1C_5C_LL_1L_LR_1R_L + C_1C_5L_1L_5L_LR_1g_m + C_1C_5L_1L_5L_L + C_5C_LL_1L_5L_LR_Lg_m\right) + s^4\left(C_1C_5L_1L_5R_1R_Lg_m + C_1C_5L_1L_5R_L + 2C_1C_5L_1L_LR_1R_Lg_m + C_1C_5L_1L_LR_1 + C_1C_5L_1L_LR_L + \right.}$$

9.891 X-INVALID-ORDER-891 $Z(s) = \left(\frac{C_1L_1R_1s^2+L_1s+R_1}{C_1L_1s^2+1},\ \infty,\ \infty,\ \infty,\ L_5s+\frac{1}{C_5s},\ \frac{C_LL_LR_Ls^2+L_Ls+R_L}{C_LL_Ls^2+1}\right)$

$$H(s) = \frac{C_1C_5C_LL_1L_5L_LR_1R_Lg_ms^6 + R_1R_Lg_m + s^5\left(-C_1C_5C_LL_1L_LR_1R_L + C_1C_5L_1L_5L_LR_1g_m + C_5C_LL_1L_5L_LR_Lg_m\right) + s^4\left(C_1C_5L_1L_5R_1R_Lg_m - C_1C_5L_1L_LR_1 + C_1C_LL_1L_LR_1R_Lg_m - C_5C\right.}{R_1g_m + s^6\left(C_1C_5C_LL_1L_5L_LR_1g_m + C_1C_5C_LL_1L_5L_L\right) + s^5\left(2C_1C_5C_LL_1L_LR_1R_Lg_m + C_1C_5C_LL_1L_LR_1 + C_1C_5C_LL_1L_LR_L + C_5C_LL_1L_5L_Lg_m\right) + s^4\left(C_1C_5L_1L_5R_1g_m + C_1C_5L_1L_5 + 2C_1C_5L_1L_LR_1g_m + C_1C_5L_1L_L + C_1C_LL_1L_LR_1g_m + C_1C_LL_1L_L + 2C_5C_L\right.}$$

9.892 X-INVALID-ORDER-892 $Z(s) = \left(\frac{C_1L_1R_1s^2+L_1s+R_1}{C_1L_1s^2+1},\ \infty,\ \infty,\ \infty,\ L_5s+\frac{1}{C_5s},\ \frac{R_L\left(C_LL_Ls^2+1\right)}{C_LL_Ls^2+C_LR_Ls+1}\right)$

$$H(s) = \frac{C_1C_5C_LL_1L_5L_LR_1R_Lg_ms^6 + R_1R_Lg_m + s^5\,(}{R_1g_m + s^6\,(C_1C_5C_LL_1L_5L_LR_1g_m + C_1C_5C_LL_1L_5L_L) + s^5\,(C_1C_5C_LL_1L_5R_1R_Lg_m + C_1C_5C_LL_1L_5R_L + 2C_1C_5C_LL_1L_LR_1R_Lg_m + C_1C_5C_LL_1L_LR_1 + C_1C_5C_LL_1L_LR_L + C_5C_LL_1L_5L_Lg_m) + s^4\,(C_1C_5C_LL_1R_1R_L + C_1C_5L_1L_5R_1g_m + C_1C_5L_1L_5 + C_1C_LL_1L_L}$$

9.893 X-INVALID-ORDER-893 $Z(s) = \left(\frac{C_1L_1R_1s^2+L_1s+R_1}{C_1L_1s^2+1},\ \infty,\ \infty,\ \infty,\ \frac{L_5s}{C_5L_5s^2+1},\ R_L\right)$

$$H(s) = \frac{-C_1C_5L_1L_5R_1R_Ls^4 - R_1R_L + s^3\,(C_1L_1L_5R_1R_Lg_m - C_5L_1L_5R_L) + s^2\,(-C_1L_1R_1R_L - C_5L_5R_1R_L + L_1L_5R_Lg_m) + s\,(-L_1R_L + L_5R_1R_Lg_m)}{2R_1R_Lg_m + R_1 + R_L + s^4\,(2C_1C_5L_1L_5R_1R_Lg_m + C_1C_5L_1L_5R_1 + C_1C_5L_1L_5R_L) + s^3\,(C_1L_1L_5R_1g_m + C_1L_1L_5 + 2C_5L_1L_5R_Lg_m + C_5L_1L_5) + s^2\,(2C_1L_1R_1R_Lg_m + C_1L_1R_1 + C_1L_1R_L + 2C_5L_5R_1R_Lg_m + C_5L_5R_1 + C_5L_5R_L + L_1L_5g_m) + s\,(2L_1R_Lg_m + L_1 +}$$

9.894 X-INVALID-ORDER-894 $Z(s) = \left(\frac{C_1L_1R_1s^2+L_1s+R_1}{C_1L_1s^2+1},\ \infty,\ \infty,\ \infty,\ \frac{L_5s}{C_5L_5s^2+1},\ \frac{1}{C_Ls}\right)$

$$H(s) = \frac{-C_1C_5L_1L_5R_1s^4 - R_1 + s^3\,(C_1L_1L_5R_1g_m - C_5L_1L_5) + s^2\,(-C_1L_1R_1 - C_5L_5R_1 + L_1L_5g_m) + s\,(-L_1 + L_5R_1g_m)}{C_1C_5C_LL_1L_5R_1s^5 + 2R_1g_m + s^4\,(2C_1C_5L_1L_5R_1g_m + C_1C_5L_1L_5 + C_1C_LL_1L_5R_1g_m + C_1C_LL_1L_5 + C_5C_LL_1L_5) + s^3\,(C_1C_LL_1R_1 + C_5C_LL_5R_1 + 2C_5L_1L_5g_m + C_LL_1L_5g_m) + s^2\,(2C_1L_1R_1g_m + C_1L_1 + 2C_5L_5R_1g_m + C_5L_5 + C_LL_1 + C_LL_5R_1g_m + C_LL_5) + s}$$

9.895 X-INVALID-ORDER-895 $Z(s) = \left(\frac{C_1L_1R_1s^2+L_1s+R_1}{C_1L_1s^2+1},\ \infty,\ \infty,\ \infty,\ \frac{L_5s}{C_5L_5s^2+1},\ \frac{R_L}{C_LR_Ls+1}\right)$

$$H(s) = \frac{-C_1C_5L_1L_5R_1R_Ls^4 - R_1R_L + s^3\,(C_1L_1L_5R_1R_Lg_m - C_5L_1L_5R_L) + s^2\,(-C_1L_1R_1R_L - C_5L_5R_1R_L}{C_1C_5C_LL_1L_5R_1R_Ls^5 + 2R_1R_Lg_m + R_1 + R_L + s^4\,(2C_1C_5L_1L_5R_1R_Lg_m + C_1C_5L_1L_5R_1 + C_1C_5L_1L_5R_L + C_1C_LL_1L_5R_1R_Lg_m + C_1C_LL_1L_5R_L + C_5C_LL_1L_5R_L) + s^3\,(C_1C_LL_1R_1R_L + C_1L_1L_5R_1g_m + C_1L_1L_5 + C_5C_LL_5R_1R_L + 2C_5L_1L_5R_Lg_m + C_5L_1L_5 + C}$$

9.896 X-INVALID-ORDER-896 $Z(s) = \left(\frac{C_1L_1R_1s^2+L_1s+R_1}{C_1L_1s^2+1},\ \infty,\ \infty,\ \infty,\ \frac{L_5s}{C_5L_5s^2+1},\ R_L+\frac{1}{C_Ls}\right)$

$$H(s) = \frac{-C_1C_5C_LL_1L_5R_1R_Ls^5 - R_1 + s^4\,(-C_1C_5L_1L_5R_1 + C_1C_LL_1L_5R_1R_Lg_m - C_5C_LL_1L_5R_L) + s^3\,(-C_1C_LL_1R_1R_L + C_1L_1L_5R_1g_m - C_5C_LL_5R_1R_L - C_5L_1L_5 + C_LL_1L}{2R_1g_m + s^5\,(2C_1C_5C_LL_1L_5R_1R_Lg_m + C_1C_5C_LL_1L_5R_1 + C_1C_5C_LL_1L_5R_L) + s^4\,(2C_1C_5L_1L_5R_1g_m + C_1C_5L_1L_5 + C_1C_LL_1L_5R_1g_m + C_1C_LL_1L_5 + 2C_5C_LL_1L_5R_Lg_m + C_5C_LL_1L_5) + s^3\,(2C_1C_LL_1R_1R_Lg_m + C_1C_LL_1R_1 + C_1C_LL_1R_L + 2C_5C_LL_5R_1R_Lg_m + C}$$

9.897 X-INVALID-ORDER-897 $Z(s) = \left(\frac{C_1L_1R_1s^2+L_1s+R_1}{C_1L_1s^2+1},\ \infty,\ \infty,\ \infty,\ \frac{L_5s}{C_5L_5s^2+1},\ L_Ls+\frac{1}{C_Ls}\right)$

$$H(s) = \frac{-C_1C_5C_LL_1L_5L_LR_1s^6 - R_1 + s^5\,(C_1C_LL_1L_5L_LR_1g_m - C_5C_LL_1L_5L_L) + s^4\,(-C_1C_5L_1L_5R_1 - C_1C_LL_1L_LR_1 - C_5C_LL_5L_LR_1 + C_LL_1L_5L_Lg_m) + s^3\,(C_1L_1L_5R_1g_m -}{2R_1g_m + s^6\,(2C_1C_5C_LL_1L_5L_LR_1g_m + C_1C_5C_LL_1L_5L_L) + s^5\,(C_1C_5C_LL_1L_5R_1 + 2C_5C_LL_1L_5L_Lg_m) + s^4\,(2C_1C_5L_1L_5R_1g_m + C_1C_5L_1L_5 + C_1C_LL_1L_5R_1g_m + C_1C_LL_1L_5 + 2C_1C_LL_1L_LR_1g_m + C_1C_LL_1L_L + C_5C_LL_1L_5 + 2C_5C_LL_5L_LR_1g_m + C_5C_LL_5L_L) + s}$$

9.898 X-INVALID-ORDER-898 $Z(s) = \left(\frac{C_1L_1R_1s^2+L_1s+R_1}{C_1L_1s^2+1},\ \infty,\ \infty,\ \infty,\ \frac{L_5s}{C_5L_5s^2+1},\ \frac{L_Ls}{C_LL_Ls^2+1}\right)$

$$H(s) = \frac{-C_1C_5L_1L_5L_LR_1s^5 - L_LR_1s + s^4\,(C_1L_1L_5L_LR_1g_m - C_5L_1L_5L_L) + s^3\,(-C_1L_1L_LR_1 - C_5L_5L_LR_1}{C_1C_5C_LL_1L_5L_LR_1s^6 + R_1 + s^5\,(2C_1C_5L_1L_5L_LR_1g_m + C_1C_5L_1L_5L_L + C_1C_LL_1L_5L_LR_1g_m + C_1C_LL_1L_5L_L + C_5C_LL_1L_5L_L) + s^4\,(C_1C_5L_1L_5R_1 + C_1C_LL_1L_LR_1 + C_5C_LL_5L_LR_1 + 2C_5L_1L_5L_Lg_m + C_LL_1L_5L_Lg_m) + s^3\,(C_1L_1L_5R_1g_m + C_1L_1L_5 + 2C_1L_1L_L}$$

9.899 X-INVALID-ORDER-899 $Z(s) = \left(\frac{C_1L_1R_1s^2+L_1s+R_1}{C_1L_1s^2+1},\ \infty,\ \infty,\ \infty,\ \frac{L_5s}{C_5L_5s^2+1},\ L_Ls+R_L+\frac{1}{C_Ls}\right)$

$$H(s) = \frac{-C_1C_5C_LL_1L_5L_LR_1s^6 - R_1 + s^5\,(-C_1C_5C_LL_1L_5R_1R_L + C_1C_LL_1L_5L_LR_1g_m - C_5C_LL_1L_5L_L) + s^4\,(-C_1C_5L_1L_5R_1 + C_1C_LL_1L_5R_1R_Lg_m - C_1C_LL_1L_LR}{2R_1g_m + s^6\,(2C_1C_5C_LL_1L_5L_LR_1g_m + C_1C_5C_LL_1L_5L_L) + s^5\,(2C_1C_5C_LL_1L_5R_1R_Lg_m + C_1C_5C_LL_1L_5R_1 + C_1C_5C_LL_1L_5R_L + 2C_5C_LL_1L_5L_Lg_m) + s^4\,(2C_1C_5L_1L_5R_1g_m + C_1C_5L_1L_5 + C_1C_LL_1L_5R_1g_m + C_1C_LL_1L_5 + 2C_1C_LL_1L_LR_1g_m + C_1C_LL_1L_L + 2C_5}$$

9.900 X-INVALID-ORDER-900 $Z(s) = \left(\frac{C_1L_1R_1s^2+L_1s+R_1}{C_1L_1s^2+1},\ \infty,\ \infty,\ \infty,\ \frac{L_5s}{C_5L_5s^2+1},\ \frac{L_LR_Ls}{C_LL_LR_Ls^2+L_Ls+R_L}\right)$

$$H(s) = \frac{}{C_1C_5C_LL_1L_5L_LR_1R_Ls^6 + R_1R_L + s^5\,(2C_1C_5L_1L_5L_LR_1R_Lg_m + C_1C_5L_1L_5L_LR_1 + C_1C_5L_1L_5L_LR_L + C_1C_LL_1L_5L_LR_1R_Lg_m + C_1C_LL_1L_5L_LR_L + C_5C_LL_1L_5L_LR_L) + s^4\,(C_1C_5L_1L_5R_1R_L + C_1C_LL_1L_LR_1R_L + C_1L_1L_5L_LR_1g_m + C_1L_1L_5L_L + C_5C_LL_5L_LR}$$

9.901 X-INVALID-ORDER-901 $Z(s) = \left(\frac{C_1L_1R_1s^2+L_1s+R_1}{C_1L_1s^2+1},\ \infty,\ \infty,\ \infty,\ \frac{L_5s}{C_5L_5s^2+1},\ \frac{C_LL_LR_Ls^2+L_Ls+R_L}{C_LL_Ls^2+1}\right)$

$$H(s) = \frac{-C_1C_5C_LL_1L_5L_LR_1R_Ls^6 - R_1R_L + s^5\,(-C_1C_5L_1L_5L_LR_1 + C_1C_LL_1L_5L_LR_1R}{2R_1R_Lg_m + R_1 + R_L + s^6\,(2C_1C_5C_LL_1L_5L_LR_1R_Lg_m + C_1C_5C_LL_1L_5L_LR_1 + C_1C_5C_LL_1L_5L_LR_L) + s^5\,(2C_1C_5L_1L_5L_LR_1g_m + C_1C_5L_1L_5L_L + C_1C_LL_1L_5L_LR_1g_m + C_1C_LL_1L_5L_L + 2C_5C_LL_1L_5L_LR_Lg_m + C_5C_LL_1L_5L_L) + s^4\,(2C_1C_5L_1L_5R_1R_Lg_m + C_1C_5L_1}$$

9.902 X-INVALID-ORDER-902 $Z(s) = \left(\frac{C_1L_1R_1s^2+L_1s+R_1}{C_1L_1s^2+1},\ \infty,\ \infty,\ \infty,\ \frac{L_5s}{C_5L_5s^2+1},\ \frac{R_L\left(C_LL_Ls^2+1\right)}{C_LL_Ls^2+C_LR_Ls+1}\right)$

$$H(s) = \frac{\text{[illegible]}}{2R_1R_Lg_m + R_1 + R_L + s^6\left(2C_1C_5C_LL_1L_5L_LR_1R_Lg_m + C_1C_5C_LL_1L_5L_LR_1 + C_1C_5C_LL_1L_5L_LR_L\right) + s^5\left(C_1C_5C_LL_1L_5R_1R_L + C_1C_LL_1L_5L_LR_1g_m + C_1C_LL_1L_5L_L + 2C_5C_LL_1L_5L_LR_Lg_m + C_5C_LL_1L_5L_L\right) + s^4\left(2C_1C_5L_1L_5R_1R_Lg_m + C_1C_5L_1L_5R_1 + C_1C_5L\text{[illegible]}\right.}$$

9.903 X-INVALID-ORDER-903 $Z(s) = \left(\frac{C_1L_1R_1s^2+L_1s+R_1}{C_1L_1s^2+1},\ \infty,\ \infty,\ \infty,\ L_5s + R_5 + \frac{1}{C_5s},\ R_L\right)$

$$H(s) = \frac{C_1C_5L_1L_5R_1R_Lg_ms^4 + R_1R_Lg_m + s^3\left(C_1C_5L_1R_1R_5R_Lg_m - C_1C_5L_1R_1R_L + C_5L_1L_5R_Lg_m\right) + s^2\left(C_1L_1R_1R_Lg_m + C_5L_1R_5R_Lg_m - C_5L_1R_L + C_5L_5R_1R_Lg_m\right) + s\left(C_5R_1R_5R_Lg_m - C_5R_1R_L + L_1R_Lg_m\right)}{R_1g_m + s^4\left(C_1C_5L_1L_5R_1g_m + C_1C_5L_1L_5\right) + s^3\left(C_1C_5L_1R_1R_5g_m + 2C_1C_5L_1R_1R_Lg_m + C_1C_5L_1R_1 + C_1C_5L_1R_5 + C_1C_5L_1R_L + C_5L_1L_5g_m\right) + s^2\left(C_1L_1R_1g_m + C_1L_1 + C_5L_1R_5g_m + 2C_5L_1R_Lg_m + C_5L_1 + C_5L_5R_1g_m + C_5L_5\right) + s\left(C_5R_1R_5g_m + 2C_5R_1R_Lg_m\right.}$$

9.904 X-INVALID-ORDER-904 $Z(s) = \left(\frac{C_1L_1R_1s^2+L_1s+R_1}{C_1L_1s^2+1},\ \infty,\ \infty,\ \infty,\ L_5s + R_5 + \frac{1}{C_5s},\ \frac{1}{C_Ls}\right)$

$$H(s) = \frac{C_1C_5L_1L_5R_1g_ms^4 + R_1g_m + s^3\left(C_1C_5L_1R_1R_5g_m - C_1C_5L_1R_1 + C_5L_1L_5g_m\right) + s^2\left(C_1L_1R_1g_m + C_5L_1R_5g_m - C_5L_1 + C_5L_5R_1g_m\right) + s\left(C_5R_1R_5g_m - C_5R_1 + L_1g_m\right)}{s^5\left(C_1C_5C_LL_1L_5R_1g_m + C_1C_5C_LL_1L_5\right) + s^4\left(C_1C_5C_LL_1R_1R_5g_m + C_1C_5C_LL_1R_1 + C_1C_5C_LL_1R_5 + C_5C_LL_1L_5g_m\right) + s^3\left(2C_1C_5L_1R_1g_m + C_1C_5L_1 + C_1C_LL_1R_1g_m + C_1C_LL_1 + C_5C_LL_1R_5g_m + C_5C_LL_5R_1g_m + C_5C_LL_5\right) + s^2\left(C_5C_LR_1R_5g_m + C_5\text{[illegible]}\right.}$$

9.905 X-INVALID-ORDER-905 $Z(s) = \left(\frac{C_1L_1R_1s^2+L_1s+R_1}{C_1L_1s^2+1},\ \infty,\ \infty,\ \infty,\ L_5s + R_5 + \frac{1}{C_5s},\ \frac{R_L}{C_LR_Ls+1}\right)$

$$H(s) = \frac{C_1C_5L_1L_5R_1R_Lg_ms^4 + R_1R_Lg_m + s^3\left(C_1C_5L_1R_1\text{[illegible]}\right.}{R_1g_m + s^5\left(C_1C_5C_LL_1L_5R_1R_Lg_m + C_1C_5C_LL_1L_5R_L\right) + s^4\left(C_1C_5C_LL_1R_1R_5R_Lg_m + C_1C_5C_LL_1R_1R_L + C_1C_5C_LL_1R_5R_L + C_1C_5L_1L_5R_1g_m + C_1C_5L_1L_5 + C_5C_LL_1L_5R_Lg_m\right) + s^3\left(C_1C_5L_1R_1R_5g_m + 2C_1C_5L_1R_1R_Lg_m + C_1C_5L_1R_1 + C_1C_5L_1R_5 + C_1C_5L_1R\text{[illegible]}\right.}$$

9.906 X-INVALID-ORDER-906 $Z(s) = \left(\frac{C_1L_1R_1s^2+L_1s+R_1}{C_1L_1s^2+1},\ \infty,\ \infty,\ \infty,\ L_5s + R_5 + \frac{1}{C_5s},\ R_L + \frac{1}{C_Ls}\right)$

$$H(s) = \frac{C_1C_5C_LL_1L_5R_1R_Lg_ms^5 + R_1g_m + s^4\left(C_1C_5C_LL_1R_1R_5R_Lg_m - C_1C_5C_LL_1R_1R_L + C_1C_5L_1L_5R_1g_m + C_5C_LL_1L_5R_Lg_m\right) + s^3\left(C_1C_5L_1R_1R_5g_m - C_1C_5L_1R_1 + C_1C_LL_1R_1R_Lg_m + C_5C_LL_1R_5R_Lg_m - C_5C_LL_1R_L + C_5C_LL_5R_1R_Lg_m + C_5L_1L_5g\text{[illegible]}\right.}{s^5\left(C_1C_5C_LL_1L_5R_1g_m + C_1C_5C_LL_1L_5\right) + s^4\left(C_1C_5C_LL_1R_1R_5g_m + 2C_1C_5C_LL_1R_1R_Lg_m + C_1C_5C_LL_1R_1 + C_1C_5C_LL_1R_5 + C_1C_5C_LL_1R_L + C_5C_LL_1L_5g_m\right) + s^3\left(2C_1C_5L_1R_1g_m + C_1C_5L_1 + C_1C_LL_1R_1g_m + C_1C_LL_1 + C_5C_LL_1R_5g_m + 2C_5C_LL_1R_Lg_m + C_5C\text{[illegible]}\right.}$$

9.907 X-INVALID-ORDER-907 $Z(s) = \left(\frac{C_1L_1R_1s^2+L_1s+R_1}{C_1L_1s^2+1},\ \infty,\ \infty,\ \infty,\ L_5s + R_5 + \frac{1}{C_5s},\ L_Ls + \frac{1}{C_Ls}\right)$

$$H(s) = \frac{C_1C_5C_LL_1L_5L_LR_1g_ms^6 + R_1g_m + s^5\left(C_1C_5C_LL_1L_LR_1R_5g_m - C_1C_5C_LL_1L_LR_1 + C_5C_LL_1L_5L_Lg_m\right) + s^4\left(C_1C_5L_1L_5R_1g_m + C_1C_LL_1L_LR_1g_m + C_5C_LL_1L_LR_5g_m - C_5C_LL_1L_L + C_5C_LL_5L_LR_1g_m\right) + s^3\left(C_1C_5L_1R_1R_5g_m - C_1C_5L_1R_1 + C_5C_LL\text{[illegible]}\right.}{s^5\left(C_1C_5C_LL_1L_5R_1g_m + C_1C_5C_LL_1L_5 + 2C_1C_5C_LL_1L_LR_1g_m + C_1C_5C_LL_1L_L\right) + s^4\left(C_1C_5C_LL_1R_1R_5g_m + C_1C_5C_LL_1R_1 + C_1C_5C_LL_1R_5 + C_5C_LL_1L_5g_m + 2C_5C_LL_1L_Lg_m\right) + s^3\left(2C_1C_5L_1R_1g_m + C_1C_5L_1 + C_1C_LL_1R_1g_m + C_1C_LL_1 + C_5C_LL_1R_5g_m + C_5C\text{[illegible]}\right.}$$

9.908 X-INVALID-ORDER-908 $Z(s) = \left(\frac{C_1L_1R_1s^2+L_1s+R_1}{C_1L_1s^2+1},\ \infty,\ \infty,\ \infty,\ L_5s + R_5 + \frac{1}{C_5s},\ \frac{L_Ls}{C_LL_Ls^2+1}\right)$

$$H(s) = \frac{C_1C_5L_1L_5L_LR_1g_ms^5 + L_LR_1g_ms + s^4\left(C_1C_5L_1L\text{[illegible]}\right.}{R_1g_m + s^6\left(C_1C_5C_LL_1L_5L_LR_1g_m + C_1C_5C_LL_1L_5L_L\right) + s^5\left(C_1C_5C_LL_1L_LR_1R_5g_m + C_1C_5C_LL_1L_LR_1 + C_1C_5C_LL_1L_LR_5 + C_5C_LL_1L_5L_Lg_m\right) + s^4\left(C_1C_5L_1L_5R_1g_m + C_1C_5L_1L_5 + 2C_1C_5L_1L_LR_1g_m + C_1C_5L_1L_L + C_1C_LL_1L_LR_1g_m + C_1C_LL_1L_L + C_5C_LL_1L\text{[illegible]}\right.}$$

9.909 X-INVALID-ORDER-909 $Z(s) = \left(\frac{C_1L_1R_1s^2+L_1s+R_1}{C_1L_1s^2+1},\ \infty,\ \infty,\ \infty,\ L_5s + R_5 + \frac{1}{C_5s},\ L_Ls + R_L + \frac{1}{C_Ls}\right)$

$$H(s) = \frac{C_1C_5C_LL_1L_5L_LR_1g_ms^6 + R_1g_m + s^5\left(C_1C_5C_LL_1L_5R_1R_Lg_m + C_1C_5C_LL_1L_LR_1R_5g_m - C_1C_5C_LL_1L_LR_1 + C_5C_LL_1L_5L_Lg_m\right) + s^4\left(C_1C_5C_LL_1R_1R_5R_Lg_m - C_1C_5C_LL_1R_1R_L + C_1C_5L_1L_5R_1g_m + C_1C_LL_1L_LR_1g_m + C_5C_LL_1L_5R_Lg_m + C_5C_LL_1L_LR_5g_m - C_5\text{[illegible]}\right.}{s^5\left(C_1C_5C_LL_1L_5R_1g_m + C_1C_5C_LL_1L_5 + 2C_1C_5C_LL_1L_LR_1g_m + C_1C_5C_LL_1L_L\right) + s^4\left(C_1C_5C_LL_1R_1R_5g_m + 2C_1C_5C_LL_1R_1R_Lg_m + C_1C_5C_LL_1R_1 + C_1C_5C_LL_1R_5 + C_1C_5C_LL_1R_L + C_5C_LL_1L_5g_m + 2C_5\text{[illegible]}\right.}$$

9.910 X-INVALID-ORDER-910 $Z(s) = \left(\frac{C_1L_1R_1s^2+L_1s+R_1}{C_1L_1s^2+1},\ \infty,\ \infty,\ \infty,\ L_5s + R_5 + \frac{1}{C_5s},\ \frac{L_LR_Ls}{C_LL_LR_Ls^2+L_Ls+R_L}\right)$

$$H(s) = \frac{\text{[illegible]}}{R_1R_Lg_m + R_L + s^6\left(C_1C_5C_LL_1L_5L_LR_1R_Lg_m + C_1C_5C_LL_1L_5L_LR_L\right) + s^5\left(C_1C_5C_LL_1L_LR_1R_5R_Lg_m + C_1C_5C_LL_1L_LR_1R_L + C_1C_5C_LL_1L_LR_5R_L + C_1C_5L_1L_5L_LR_1g_m + C_1C_5L_1L_5L_L + C_5C_LL_1L_5L_LR_Lg_m\right) + s^4\left(C_1C_5L_1L_5R_1R_Lg_m + C_1C_5L_1L_5R_L + C_1C_5\text{[illegible]}\right.}$$

9.911 X-INVALID-ORDER-911 $Z(s) = \left(\frac{C_1L_1R_1s^2+L_1s+R_1}{C_1L_1s^2+1},\ \infty,\ \infty,\ \infty,\ L_5s + R_5 + \frac{1}{C_5s},\ \frac{C_LL_LR_Ls^2+L_Ls+R_L}{C_LL_Ls^2+1}\right)$

$$H(s) = \frac{C_1C_5C_LL_1L_5L_LR_1R_Lg_ms^6 + R_1R_Lg_m + s^5\left(C_1C_5C_LL_1L_LR_1R_5R_Lg_m - C_1C_5C_LL_1L_LR_1R_L + C_1C_5L_1L_5L_LR_1g_m + C_5C_LL_1L_5L_LR_Lg_m\right) + s^4\left(C_1C_5L_1L_5R_1R_Lg_m + C_1C_5L_1L_LR_1R_5g_m - C_1\text{[illegible]}\right.}{R_1g_m + s^6\left(C_1C_5C_LL_1L_5L_LR_1g_m + C_1C_5C_LL_1L_5L_L\right) + s^5\left(C_1C_5C_LL_1L_LR_1R_5g_m + 2C_1C_5C_LL_1L_LR_1R_Lg_m + C_1C_5C_LL_1L_LR_1 + C_1C_5C_LL_1L_LR_5 + C_1C_5C_LL_1L_LR_L + C_5C_LL_1L_5L_Lg_m\right) + s^4\left(C_1C_5L_1L_5R_1g_m + C_1C_5L_1L_5 + 2C_1C_5L_1L_LR_1g_m + C_1C_5L_1L\text{[illegible]}\right.}$$

9.912 X-INVALID-ORDER-912 $Z(s) = \left(\frac{C_1L_1R_1s^2+L_1s+R_1}{C_1L_1s^2+1},\ \infty,\ \infty,\ \infty,\ L_5s+R_5+\frac{1}{C_5s},\ \frac{R_L\left(C_LL_Ls^2+1\right)}{C_LL_Ls^2+C_LR_Ls+1}\right)$

$$H(s) = \frac{}{R_1g_m + s^6\left(C_1C_5C_LL_1L_5L_LR_1g_m + C_1C_5C_LL_1L_5L_L\right) + s^5\left(C_1C_5C_LL_1L_5R_1R_Lg_m + C_1C_5C_LL_1L_5R_L + C_1C_5C_LL_1L_LR_1R_5g_m + 2C_1C_5C_LL_1L_LR_1R_Lg_m + C_1C_5C_LL_1L_LR_1 + C_1C_5C_LL_1L_LR_5 + C_1C_5C_LL_1L_LR_L + C_5C_LL_1L_5L_Lg_m\right) + s^4\left(C_1C_5C_LL_1R_1R_5R_L\right.}$$

9.913 X-INVALID-ORDER-913 $Z(s) = \left(\frac{C_1L_1R_1s^2+L_1s+R_1}{C_1L_1s^2+1},\ \infty,\ \infty,\ \infty,\ \frac{L_5R_5s}{C_5L_5R_5s^2+L_5s+R_5},\ R_L\right)$

$$H(s) = \frac{-C_1C_5L_1L_5R_1R_5R_Ls^4 - R_1R_5R_L + s^3\left(C_1L_1L_5R_1R_5R_Lg_m - C_1L_1L_5R_1R_L - C_5L_1L_5R_5R_L\right) + s^2\left(-C_1L_1R_1R_5R_L - C_5L_5R_1R_5R_L + L_1L_5R_5\right.}{2R_1R_5R_Lg_m + R_1R_5 + R_5R_L + s^4\left(2C_1C_5L_1L_5R_1R_5R_Lg_m + C_1C_5L_1L_5R_1R_5 + C_1C_5L_1L_5R_5R_L\right) + s^3\left(C_1L_1L_5R_1R_5g_m + 2C_1L_1L_5R_1R_Lg_m + C_1L_1L_5R_1 + C_1L_1L_5R_5 + C_1L_1L_5R_L + 2C_5L_1L_5R_5R_Lg_m + C_5L_1L_5R_5\right) + s^2\left(2C_1L_1R_1R_5R_Lg_m + C_1L_1R_1R_5 + \right.}$$

9.914 X-INVALID-ORDER-914 $Z(s) = \left(\frac{C_1L_1R_1s^2+L_1s+R_1}{C_1L_1s^2+1},\ \infty,\ \infty,\ \infty,\ \frac{L_5R_5s}{C_5L_5R_5s^2+L_5s+R_5},\ \frac{1}{C_Ls}\right)$

$$H(s) = \frac{-C_1C_5L_1L_5R_1R_5s^4 - R_1R_5 + s^3\left(C_1L_1L_5R_1R_5g_m - C_1L_1L_5R_1 - C_5L_1L_5R_5\right) + s^2\left(-C_1L_1R_1R_5 - C_5L_5R_1R_5 + L_1L_5R_5g_m - \right.}{C_1C_5C_LL_1L_5R_1R_5s^5 + 2R_1R_5g_m + R_5 + s^4\left(2C_1C_5L_1L_5R_1R_5g_m + C_1C_5L_1L_5R_5 + C_1C_LL_1L_5R_1R_5g_m + C_1C_LL_1L_5R_1 + C_1C_LL_1L_5R_5 + C_5C_LL_1L_5R_5\right) + s^3\left(C_1C_LL_1R_1R_5 + 2C_1L_1L_5R_1g_m + C_1L_1L_5 + C_5C_LL_5R_1R_5 + 2C_5L_1L_5R_5g_m + C_LL_1L_5R_5g_m + C_L\right.}$$

9.915 X-INVALID-ORDER-915 $Z(s) = \left(\frac{C_1L_1R_1s^2+L_1s+R_1}{C_1L_1s^2+1},\ \infty,\ \infty,\ \infty,\ \frac{L_5R_5s}{C_5L_5R_5s^2+L_5s+R_5},\ \frac{R_L}{C_LR_Ls+1}\right)$

$$H(s) = \frac{-C_1C_5L_1L_5}{C_1C_5C_LL_1L_5R_1R_5R_Ls^5 + 2R_1R_5R_Lg_m + R_1R_5 + R_5R_L + s^4\left(2C_1C_5L_1L_5R_1R_5R_Lg_m + C_1C_5L_1L_5R_1R_5 + C_1C_5L_1L_5R_5R_L + C_1C_LL_1L_5R_1R_5R_Lg_m + C_1C_LL_1L_5R_1R_L + C_1C_LL_1L_5R_5R_L + C_5C_LL_1L_5R_5R_L\right) + s^3\left(C_1C_LL_1R_1R_5R_L + C_1L_1L_5R_1R_5g_m + 2C_1\right.}$$

9.916 X-INVALID-ORDER-916 $Z(s) = \left(\frac{C_1L_1R_1s^2+L_1s+R_1}{C_1L_1s^2+1},\ \infty,\ \infty,\ \infty,\ \frac{L_5R_5s}{C_5L_5R_5s^2+L_5s+R_5},\ R_L+\frac{1}{C_Ls}\right)$

$$H(s) = \frac{-C_1C_5C_LL_1L_5R_1R_5R_Ls^5 - R_1R_5 + s^4\left(-C_1C_5L_1L_5R_1R_5 + C_1C_LL_1L_5R_1R_5R_Lg_m - C_1C_LL_1\right.}{2R_1R_5g_m + R_5 + s^5\left(2C_1C_5C_LL_1L_5R_1R_5R_Lg_m + C_1C_5C_LL_1L_5R_1R_5 + C_1C_5C_LL_1L_5R_5R_L\right) + s^4\left(2C_1C_5L_1L_5R_1R_5g_m + C_1C_5L_1L_5R_5 + C_1C_LL_1L_5R_1R_5g_m + 2C_1C_LL_1L_5R_1R_Lg_m + C_1C_LL_1L_5R_1 + C_1C_LL_1L_5R_5 + C_1C_LL_1L_5R_L + 2C_5C_LL_1L_5R_5R_Lg_m + C\right.}$$

9.917 X-INVALID-ORDER-917 $Z(s) = \left(\frac{C_1L_1R_1s^2+L_1s+R_1}{C_1L_1s^2+1},\ \infty,\ \infty,\ \infty,\ \frac{L_5R_5s}{C_5L_5R_5s^2+L_5s+R_5},\ L_Ls+\frac{1}{C_Ls}\right)$

$$H(s) = \frac{-C_1C_5C_LL_1L_5L_LR_1R_5s^6 - R_1R_5 + s^5\left(C_1C_LL_1L_5L_LR_1R_5g_m - C_1C_LL_1L_5L_LR_1 - C_5C_LL_1L\right.}{2R_1R_5g_m + R_5 + s^6\left(2C_1C_5C_LL_1L_5L_LR_1R_5g_m + C_1C_5C_LL_1L_5L_LR_5\right) + s^5\left(C_1C_5C_LL_1L_5R_1R_5 + 2C_1C_LL_1L_5L_LR_1g_m + C_1C_LL_1L_5L_L + 2C_5C_LL_1L_5L_LR_5g_m\right) + s^4\left(2C_1C_5L_1L_5R_1R_5g_m + C_1C_5L_1L_5R_5 + C_1C_LL_1L_5R_1R_5g_m + C_1C_LL_1L_5R_1 + C_1C_LL_1L_5R_5\right.}$$

9.918 X-INVALID-ORDER-918 $Z(s) = \left(\frac{C_1L_1R_1s^2+L_1s+R_1}{C_1L_1s^2+1},\ \infty,\ \infty,\ \infty,\ \frac{L_5R_5s}{C_5L_5R_5s^2+L_5s+R_5},\ \frac{L_Ls}{C_LL_Ls^2+1}\right)$

$$H(s) = \frac{-C_1C_5L_1L_5}{C_1C_5C_LL_1L_5L_LR_1R_5s^6 + R_1R_5 + s^5\left(2C_1C_5L_1L_5L_LR_1R_5g_m + C_1C_5L_1L_5L_LR_5 + C_1C_LL_1L_5L_LR_1R_5g_m + C_1C_LL_1L_5L_LR_1 + C_1C_LL_1L_5L_LR_5 + C_5C_LL_1L_5L_LR_5\right) + s^4\left(C_1C_5L_1L_5R_1R_5 + C_1C_LL_1L_LR_1R_5 + 2C_1L_1L_5L_LR_1g_m + C_1L_1L_5L_L + C_5C_LL_5L_LR_1\right.}$$

9.919 X-INVALID-ORDER-919 $Z(s) = \left(\frac{C_1L_1R_1s^2+L_1s+R_1}{C_1L_1s^2+1},\ \infty,\ \infty,\ \infty,\ \frac{L_5R_5s}{C_5L_5R_5s^2+L_5s+R_5},\ L_Ls+R_L+\frac{1}{C_Ls}\right)$

$$H(s) = \frac{-C_1C_5C_LL_1L_5L_LR_1R_5s^6 - R_1R_5 + s^5\left(-C_1C_5C_LL_1L_5R_1R_5R\right.}{2R_1R_5g_m + R_5 + s^6\left(2C_1C_5C_LL_1L_5L_LR_1R_5g_m + C_1C_5C_LL_1L_5L_LR_5\right) + s^5\left(2C_1C_5C_LL_1L_5R_1R_5R_Lg_m + C_1C_5C_LL_1L_5R_1R_5 + C_1C_5C_LL_1L_5R_5R_L + 2C_1C_LL_1L_5L_LR_1g_m + C_1C_LL_1L_5L_L + 2C_5C_LL_1L_5L_LR_5g_m\right) + s^4\left(2C_1C_5L_1L_5R_1R_5g_m + C_1C_5L_1L_5R_5 + C\right.}$$

9.920 X-INVALID-ORDER-920 $Z(s) = \left(\frac{C_1L_1R_1s^2+L_1s+R_1}{C_1L_1s^2+1},\ \infty,\ \infty,\ \infty,\ \frac{L_5R_5s}{C_5L_5R_5s^2+L_5s+R_5},\ \frac{L_LR_Ls}{C_LL_LR_Ls^2+L_Ls+R_L}\right)$

$$H(s) = \frac{}{C_1C_5C_LL_1L_5L_LR_1R_5R_Ls^6 + R_1R_5R_L + s^5\left(2C_1C_5L_1L_5L_LR_1R_5R_Lg_m + C_1C_5L_1L_5L_LR_1R_5 + C_1C_5L_1L_5L_LR_5R_L + C_1C_LL_1L_5L_LR_1R_5R_Lg_m + C_1C_LL_1L_5L_LR_1R_L + C_1C_LL_1L_5L_LR_5R_L + C_5C_LL_1L_5L_LR_5R_L\right) + s^4\left(C_1C_5L_1L_5R_1R_5R_L + C_1C_LL_1L_LR_1R_5R\right.}$$

9.921 X-INVALID-ORDER-921 $Z(s) = \left(\frac{C_1L_1R_1s^2+L_1s+R_1}{C_1L_1s^2+1},\ \infty,\ \infty,\ \infty,\ \frac{L_5R_5s}{C_5L_5R_5s^2+L_5s+R_5},\ \frac{C_LL_LR_Ls^2+L_Ls+R_L}{C_LL_Ls^2+1}\right)$

$$H(s) = \frac{}{2R_1R_5R_Lg_m + R_1R_5 + R_5R_L + s^6\left(2C_1C_5C_LL_1L_5L_LR_1R_5R_Lg_m + C_1C_5C_LL_1L_5L_LR_1R_5 + C_1C_5C_LL_1L_5L_LR_5R_L\right) + s^5\left(2C_1C_5L_1L_5L_LR_1R_5g_m + C_1C_5L_1L_5L_LR_5 + C_1C_LL_1L_5L_LR_1R_5g_m + 2C_1C_LL_1L_5L_LR_1R_Lg_m + C_1C_LL_1L_5L_LR_1 + C_1C_LL_1L_5L_LR_5 + C\right.}$$

9.922 X-INVALID-ORDER-922 $Z(s) = \left(\frac{C_1L_1R_1s^2+L_1s+R_1}{C_1L_1s^2+1},\ \infty,\ \infty,\ \infty,\ \frac{L_5R_5s}{C_5L_5R_5s^2+L_5s+R_5},\ \frac{R_L\left(C_LL_Ls^2+1\right)}{C_LL_Ls^2+C_LR_Ls+1}\right)$

$$H(s) = \frac{\quad}{2R_1R_5R_Lg_m + R_1R_5 + R_5R_L + s^6\left(2C_1C_5C_LL_1L_5L_LR_1R_5R_Lg_m + C_1C_5C_LL_1L_5L_LR_1R_5 + C_1C_5C_LL_1L_5L_LR_5R_L\right) + s^5\left(C_1C_5C_LL_1L_5R_1R_5R_L + C_1C_LL_1L_5L_LR_1R_5g_m + 2C_1C_LL_1L_5L_LR_1R_Lg_m + C_1C_LL_1L_5L_LR_1 + C_1C_LL_1L_5L_LR_5 + C_1C_LL_1L_5L_LR_L + 2\right.}$$

9.923 X-INVALID-ORDER-923 $Z(s) = \left(\frac{C_1L_1R_1s^2+L_1s+R_1}{C_1L_1s^2+1},\ \infty,\ \infty,\ \infty,\ \frac{C_5L_5R_5s^2+L_5s+R_5}{C_5L_5s^2+1},\ R_L\right)$

$$H(s) = \frac{R_1R_5R_Lg_m - R_1R_L + s^4\left(C_1C_5L_1L_5R_1R_5R_Lg_m - C_1C_5L_1L_5R_1R_L\right) + s^3\left(C_1L_1L_5R_1R_Lg_m + C_5L_1L_5R_5R_Lg_m - C_5L_1L_5R_L\right) + s^2\left(C_1L_1R_1R_5R_Lg_m - C_1L_1R_1R_L + C_5L_5R_1R_5R_L\right.}{R_1R_5g_m + 2R_1R_Lg_m + R_1 + R_5 + R_L + s^4\left(C_1C_5L_1L_5R_1R_5g_m + 2C_1C_5L_1L_5R_1R_Lg_m + C_1C_5L_1L_5R_1 + C_1C_5L_1L_5R_5 + C_1C_5L_1L_5R_L\right) + s^3\left(C_1L_1L_5R_1g_m + C_1L_1L_5 + C_5L_1L_5R_5g_m + 2C_5L_1L_5R_Lg_m + C_5L_1L_5\right) + s^2\left(C_1L_1R_1R_5g_m + 2C_1L_1R_1R_Lg_m + C_1L_1\right.}$$

9.924 X-INVALID-ORDER-924 $Z(s) = \left(\frac{C_1L_1R_1s^2+L_1s+R_1}{C_1L_1s^2+1},\ \infty,\ \infty,\ \infty,\ \frac{C_5L_5R_5s^2+L_5s+R_5}{C_5L_5s^2+1},\ \frac{1}{C_Ls}\right)$

$$H(s) = \frac{R_1R_5g_m - R_1 + s^4\left(C_1C_5L_1L_5R_1R_5g_m - C_1C_5L_1L_5R_1\right) + s^3\left(C_1L_1L_5R_1g_m + C_5L_1L_5R_5g_m - C_5L_1L_5\right) + s^2\left(C_1L_1R_1R_5g_m - C_1L_1R_1 +\right.}{2R_1g_m + s^5\left(C_1C_5C_LL_1L_5R_1R_5g_m + C_1C_5C_LL_1L_5R_1 + C_1C_5C_LL_1L_5R_5\right) + s^4\left(2C_1C_5L_1L_5R_1g_m + C_1C_5L_1L_5 + C_1C_LL_1L_5R_1g_m + C_1C_LL_1L_5 + C_5C_LL_1L_5R_5g_m + C_5C_LL_1L_5\right) + s^3\left(C_1C_LL_1R_1R_5g_m + C_1C_LL_1R_1 + C_1C_LL_1R_5 + C_5C_LL_5R_1R_5g_m + C_5C_LL\right.}$$

9.925 X-INVALID-ORDER-925 $Z(s) = \left(\frac{C_1L_1R_1s^2+L_1s+R_1}{C_1L_1s^2+1},\ \infty,\ \infty,\ \infty,\ \frac{C_5L_5R_5s^2+L_5s+R_5}{C_5L_5s^2+1},\ \frac{R_L}{C_LR_Ls+1}\right)$

$$H(s) = \frac{\quad}{R_1R_5g_m + 2R_1R_Lg_m + R_1 + R_5 + R_L + s^5\left(C_1C_5C_LL_1L_5R_1R_5R_Lg_m + C_1C_5C_LL_1L_5R_1R_L + C_1C_5C_LL_1L_5R_5R_L\right) + s^4\left(C_1C_5L_1L_5R_1R_5g_m + 2C_1C_5L_1L_5R_1R_Lg_m + C_1C_5L_1L_5R_1 + C_1C_5L_1L_5R_5 + C_1C_5L_1L_5R_L + C_1C_LL_1L_5R_1R_Lg_m + C_1C_LL_1L_5R_L + C_5C\right.}$$

9.926 X-INVALID-ORDER-926 $Z(s) = \left(\frac{C_1L_1R_1s^2+L_1s+R_1}{C_1L_1s^2+1},\ \infty,\ \infty,\ \infty,\ \frac{C_5L_5R_5s^2+L_5s+R_5}{C_5L_5s^2+1},\ R_L + \frac{1}{C_Ls}\right)$

$$H(s) = \frac{R_1R_5g_m - R_1 + s^5\left(C_1C_5C_LL_1L_5R_1R_5R_Lg_m - C_1C_5C_LL_1L_5R_1R_L\right) + s^4\left(C_1C_5L_1L_5R_1R_5g_m - C_1C_5L_1L_5R_1 + C_1C_LL_1L_5R_1R_Lg_m + C_5C_LL_1L_5R_5R_Lg_m - C_5C_LL_1L_5R_L\right) + s^3\left(C_1C_LL_1R_1R\right.}{2R_1g_m + s^5\left(C_1C_5C_LL_1L_5R_1R_5g_m + 2C_1C_5C_LL_1L_5R_1R_Lg_m + C_1C_5C_LL_1L_5R_1 + C_1C_5C_LL_1L_5R_5 + C_1C_5C_LL_1L_5R_L\right) + s^4\left(2C_1C_5L_1L_5R_1g_m + C_1C_5L_1L_5 + C_1C_LL_1L_5R_1g_m + C_1C_LL_1L_5 + C_5C_LL_1L_5R_5g_m + 2C_5C_LL_1L_5R_Lg_m + C_5C_LL_1L_5\right) + s^3\left(C_1C_LL\right.}$$

9.927 X-INVALID-ORDER-927 $Z(s) = \left(\frac{C_1L_1R_1s^2+L_1s+R_1}{C_1L_1s^2+1},\ \infty,\ \infty,\ \infty,\ \frac{C_5L_5R_5s^2+L_5s+R_5}{C_5L_5s^2+1},\ L_Ls + \frac{1}{C_Ls}\right)$

$$H(s) = \frac{R_1R_5g_m - R_1 + s^6\left(C_1C_5C_LL_1L_5L_LR_1R_5g_m - C_1C_5C_LL_1L_5L_LR_1\right) + s^5\left(C_1C_LL_1L_5L_LR_1g_m + C_5C_LL_1L_5L_LR_5g_m - C_5C_LL_1L_5L_L\right) + s^4\left(C_1C_5L_1L_5R_1R_5g_m - C_1C_5L_1L_5R_1 + C_1C_LL_1L_LR\right.}{2R_1g_m + s^6\left(2C_1C_5C_LL_1L_5L_LR_1g_m + C_1C_5C_LL_1L_5L_L\right) + s^5\left(C_1C_5C_LL_1L_5R_1R_5g_m + C_1C_5C_LL_1L_5R_1 + C_1C_5C_LL_1L_5R_5 + 2C_5C_LL_1L_5L_Lg_m\right) + s^4\left(2C_1C_5L_1L_5R_1g_m + C_1C_5L_1L_5 + C_1C_LL_1L_5R_1g_m + C_1C_LL_1L_5 + 2C_1C_LL_1L_LR_1g_m + C_1C_LL_1L_L + C_5C_L\right.}$$

9.928 X-INVALID-ORDER-928 $Z(s) = \left(\frac{C_1L_1R_1s^2+L_1s+R_1}{C_1L_1s^2+1},\ \infty,\ \infty,\ \infty,\ \frac{C_5L_5R_5s^2+L_5s+R_5}{C_5L_5s^2+1},\ \frac{L_Ls}{C_LL_Ls^2+1}\right)$

$$H(s) = \frac{\quad}{R_1R_5g_m + R_1 + R_5 + s^6\left(C_1C_5C_LL_1L_5L_LR_1R_5g_m + C_1C_5C_LL_1L_5L_LR_1 + C_1C_5C_LL_1L_5L_LR_5\right) + s^5\left(2C_1C_5L_1L_5L_LR_1g_m + C_1C_5L_1L_5L_L + C_1C_LL_1L_5L_LR_1g_m + C_1C_LL_1L_5L_L + C_5C_LL_1L_5L_LR_5g_m + C_5C_LL_1L_5L_L\right) + s^4\left(C_1C_5L_1L_5R_1R_5g_m + C_1C_5L_1L_5R_1\right.}$$

9.929 X-INVALID-ORDER-929 $Z(s) = \left(\frac{C_1L_1R_1s^2+L_1s+R_1}{C_1L_1s^2+1},\ \infty,\ \infty,\ \infty,\ \frac{C_5L_5R_5s^2+L_5s+R_5}{C_5L_5s^2+1},\ L_Ls + R_L + \frac{1}{C_Ls}\right)$

$$H(s) = \frac{R_1R_5g_m - R_1 + s^6\left(C_1C_5C_LL_1L_5L_LR_1R_5g_m - C_1C_5C_LL_1L_5L_LR_1\right) + s^5\left(C_1C_5C_LL_1L_5R_1R_5R_Lg_m - C_1C_5C_LL_1L_5R_1R_L + C_1C_LL_1L_5L_LR_1g_m + C_5C_LL_1L_5L_LR_5g_m - C_5C_LL_1L_5L_L\right) + s^4\left(C_1C_5L_1L_5R_1R_5g_m - C_1C_5L_1L_5R_1 + C_1C_LL_1L_5R_1R\right.}{2R_1g_m + s^6\left(2C_1C_5C_LL_1L_5L_LR_1g_m + C_1C_5C_LL_1L_5L_L\right) + s^5\left(C_1C_5C_LL_1L_5R_1R_5g_m + 2C_1C_5C_LL_1L_5R_1R_Lg_m + C_1C_5C_LL_1L_5R_1 + C_1C_5C_LL_1L_5R_5 + C_1C_5C_LL_1L_5R_L + 2C_5C_LL_1L_5L_Lg_m\right) + s^4\left(2C_1C_5L_1L_5R_1g_m + C_1C_5L_1L_5 + C_1C_LL_1L_5R_1g_m + C_1C_LL_1\right.}$$

9.930 X-INVALID-ORDER-930 $Z(s) = \left(\frac{C_1L_1R_1s^2+L_1s+R_1}{C_1L_1s^2+1},\ \infty,\ \infty,\ \infty,\ \frac{C_5L_5R_5s^2+L_5s+R_5}{C_5L_5s^2+1},\ \frac{L_LR_Ls}{C_LL_LR_Ls^2+L_Ls+R_L}\right)$

$$H(s) = \frac{\quad}{R_1R_5R_Lg_m + R_1R_L + R_5R_L + s^6\left(C_1C_5C_LL_1L_5L_LR_1R_5R_Lg_m + C_1C_5C_LL_1L_5L_LR_1R_L + C_1C_5C_LL_1L_5L_LR_5R_L\right) + s^5\left(C_1C_5L_1L_5L_LR_1R_5g_m + 2C_1C_5L_1L_5L_LR_1R_Lg_m + C_1C_5L_1L_5L_LR_1 + C_1C_5L_1L_5L_LR_5 + C_1C_5L_1L_5L_LR_L + C_1C_LL_1L_5L_LR_1R_Lg_m + C_1C\right.}$$

9.931 X-INVALID-ORDER-931 $Z(s) = \left(\frac{C_1L_1R_1s^2+L_1s+R_1}{C_1L_1s^2+1},\ \infty,\ \infty,\ \infty,\ \frac{C_5L_5R_5s^2+L_5s+R_5}{C_5L_5s^2+1},\ \frac{C_LL_LR_Ls^2+L_Ls+R_L}{C_LL_Ls^2+1}\right)$

$$H(s) = \frac{R_1R_5R_Lg_m - R_1R_L + s^6\left(C_1C_5C_LL_1L_5L_LR_1R_5R_Lg_m - C_1C_5C_LL_1L_5L_LR_1R_L\right) + s^5\left(C_1C_5L_1\right.}{R_1R_5g_m + 2R_1R_Lg_m + R_1 + R_5 + R_L + s^6\left(C_1C_5C_LL_1L_5L_LR_1R_5g_m + 2C_1C_5C_LL_1L_5L_LR_1R_Lg_m + C_1C_5C_LL_1L_5L_LR_1 + C_1C_5C_LL_1L_5L_LR_5 + C_1C_5C_LL_1L_5L_LR_L\right) + s^5\left(2C_1C_5L_1L_5L_LR_1g_m + C_1C_5L_1L_5L_L + C_1C_LL_1L_5L_LR_1g_m + C_1C_LL_1L_5L_L + C_5C_LL_1\right.}$$

9.932 X-INVALID-ORDER-932 $Z(s) = \left(\frac{C_1L_1R_1s^2+L_1s+R_1}{C_1L_1s^2+1},\ \infty,\ \infty,\ \infty,\ \frac{C_5L_5R_5s^2+L_5s+R_5}{C_5L_5s^2+1},\ \frac{R_L\left(C_LL_Ls^2+1\right)}{C_LL_Ls^2+C_LR_Ls+1}\right)$

$$H(s) = \frac{\text{[illegible]}}{R_1R_5g_m + 2R_1R_Lg_m + R_1 + R_5 + R_L + s^6\left(C_1C_5C_LL_1L_5L_LR_1R_5g_m + 2C_1C_5C_LL_1L_5L_LR_1R_Lg_m + C_1C_5C_LL_1L_5L_LR_1 + C_1C_5C_LL_1L_5L_LR_5 + C_1C_5C_LL_1L_5L_LR_L\right) + s^5\left(C_1C_5C_LL_1L_5R_1R_5R_Lg_m + C_1C_5C_LL_1L_5R_1R_L + C_1C_5C_LL_1L_5R_5R_L + C_1C_LL_1L_5L\right.}$$

9.933 X-INVALID-ORDER-933 $Z(s) = \left(\frac{C_1L_1R_1s^2+L_1s+R_1}{C_1L_1s^2+1},\ \infty,\ \infty,\ \infty,\ \frac{R_5\left(C_5L_5s^2+1\right)}{C_5L_5s^2+C_5R_5s+1},\ R_L\right)$

$$H(s) = \frac{R_1R_5R_Lg_m - R_1R_L + s^4\left(C_1C_5L_1L_5R_1R_5R_Lg_m - C_1C_5L_1L_5R_1R_L\right) + s^3\left(-C_1C_5L_1R_1R_5R_L + C_5L_1L_5R_5R_Lg_m - C_5L_1L_5R_L\right) + s^2\left(C_1L_1R_1R_5\right.}{R_1R_5g_m + 2R_1R_Lg_m + R_1 + R_5 + R_L + s^4\left(C_1C_5L_1L_5R_1R_5g_m + 2C_1C_5L_1L_5R_1R_Lg_m + C_1C_5L_1L_5R_1 + C_1C_5L_1L_5R_5 + C_1C_5L_1L_5R_L\right) + s^3\left(2C_1C_5L_1R_1R_5R_Lg_m + C_1C_5L_1R_1R_5 + C_1C_5L_1R_5R_L + C_5L_1L_5R_5g_m + 2C_5L_1L_5R_Lg_m + C_5L_1L_5\right) + s^2\left(C_1L_1R_1R_5\right.}$$

9.934 X-INVALID-ORDER-934 $Z(s) = \left(\frac{C_1L_1R_1s^2+L_1s+R_1}{C_1L_1s^2+1},\ \infty,\ \infty,\ \infty,\ \frac{R_5\left(C_5L_5s^2+1\right)}{C_5L_5s^2+C_5R_5s+1},\ \frac{1}{C_Ls}\right)$

$$H(s) = \frac{R_1R_5g_m - R_1 + s^4\left(C_1C_5L_1L_5R_1R_5g_m - C_1C_5L_1L_5R_1\right) + s^3\left(-C_1C_5L_1R_1R_5 + C_5L_1L_5R_5g_m - C_5L_1L_5\right) + s^2\left(C\right.}{2R_1g_m + s^5\left(C_1C_5C_LL_1L_5R_1R_5g_m + C_1C_5C_LL_1L_5R_1 + C_1C_5C_LL_1L_5R_5\right) + s^4\left(C_1C_5C_LL_1R_1R_5 + 2C_1C_5L_1L_5R_1g_m + C_1C_5L_1L_5 + C_5C_LL_1L_5R_5g_m + C_5C_LL_1L_5\right) + s^3\left(2C_1C_5L_1R_1R_5g_m + C_1C_5L_1R_5 + C_1C_LL_1R_1R_5g_m + C_1C_LL_1R_1 + C_1C_LL_1R_5 + C_5C_L\right.}$$

9.935 X-INVALID-ORDER-935 $Z(s) = \left(\frac{C_1L_1R_1s^2+L_1s+R_1}{C_1L_1s^2+1},\ \infty,\ \infty,\ \infty,\ \frac{R_5\left(C_5L_5s^2+1\right)}{C_5L_5s^2+C_5R_5s+1},\ \frac{R_L}{C_LR_Ls+1}\right)$

$$H(s) = \frac{\text{[illegible]}}{R_1R_5g_m + 2R_1R_Lg_m + R_1 + R_5 + R_L + s^5\left(C_1C_5C_LL_1L_5R_1R_5R_Lg_m + C_1C_5C_LL_1L_5R_1R_L + C_1C_5C_LL_1L_5R_5R_L\right) + s^4\left(C_1C_5C_LL_1R_1R_5R_L + C_1C_5L_1L_5R_1R_5g_m + 2C_1C_5L_1L_5R_1R_Lg_m + C_1C_5L_1L_5R_1 + C_1C_5L_1L_5R_5 + C_1C_5L_1L_5R_L + C_5C_LL_1L_5R_5R_Lg_m\right.}$$

9.936 X-INVALID-ORDER-936 $Z(s) = \left(\frac{C_1L_1R_1s^2+L_1s+R_1}{C_1L_1s^2+1},\ \infty,\ \infty,\ \infty,\ \frac{R_5\left(C_5L_5s^2+1\right)}{C_5L_5s^2+C_5R_5s+1},\ R_L + \frac{1}{C_Ls}\right)$

$$H(s) = \frac{R_1R_5g_m - R_1 + s^5\left(C_1C_5C_LL_1L_5R_1R_5R_Lg_m - C_1C_5C_LL_1L_5R_1R_L\right) + s^4\left(-C_1C_5C_LL_1R_1R_5R_L + C_1C_5L_1L_5R_1R_5g_m\right.}{2R_1g_m + s^5\left(C_1C_5C_LL_1L_5R_1R_5g_m + 2C_1C_5C_LL_1L_5R_1R_Lg_m + C_1C_5C_LL_1L_5R_1 + C_1C_5C_LL_1L_5R_5 + C_1C_5C_LL_1L_5R_L\right) + s^4\left(2C_1C_5C_LL_1R_1R_5R_Lg_m + C_1C_5C_LL_1R_1R_5 + C_1C_5C_LL_1R_5R_L + 2C_1C_5L_1L_5R_1g_m + C_1C_5L_1L_5 + C_5C_LL_1L_5R_5g_m + 2C_5C_LL_1L_5R\right.}$$

9.937 X-INVALID-ORDER-937 $Z(s) = \left(\frac{C_1L_1R_1s^2+L_1s+R_1}{C_1L_1s^2+1},\ \infty,\ \infty,\ \infty,\ \frac{R_5\left(C_5L_5s^2+1\right)}{C_5L_5s^2+C_5R_5s+1},\ L_Ls + \frac{1}{C_Ls}\right)$

$$H(s) = \frac{R_1R_5g_m - R_1 + s^6\left(C_1C_5C_LL_1L_5L_LR_1R_5g_m - C_1C_5C_LL_1L_5L_LR_1\right) + s^5\left(-C_1C_5C_LL_1L_LR_1R_5 + C_5C_LL_1L_5L_LR_5g_m\right.}{2R_1g_m + s^6\left(2C_1C_5C_LL_1L_5L_LR_1g_m + C_1C_5C_LL_1L_5L_L\right) + s^5\left(C_1C_5C_LL_1L_5R_1R_5g_m + C_1C_5C_LL_1L_5R_1 + C_1C_5C_LL_1L_5R_5 + 2C_1C_5C_LL_1L_LR_1R_5g_m + C_1C_5C_LL_1L_LR_5 + 2C_5C_LL_1L_5L_Lg_m\right) + s^4\left(C_1C_5C_LL_1R_1R_5 + 2C_1C_5L_1L_5R_1g_m + C_1C_5L_1L_5 + 2C_1C_LL_1\right.}$$

9.938 X-INVALID-ORDER-938 $Z(s) = \left(\frac{C_1L_1R_1s^2+L_1s+R_1}{C_1L_1s^2+1},\ \infty,\ \infty,\ \infty,\ \frac{R_5\left(C_5L_5s^2+1\right)}{C_5L_5s^2+C_5R_5s+1},\ \frac{L_Ls}{C_LL_Ls^2+1}\right)$

$$H(s) = \frac{\text{[illegible]}}{R_1R_5g_m + R_1 + R_5 + s^6\left(C_1C_5C_LL_1L_5L_LR_1R_5g_m + C_1C_5C_LL_1L_5L_LR_1 + C_1C_5C_LL_1L_5L_LR_5\right) + s^5\left(C_1C_5C_LL_1L_LR_1R_5 + 2C_1C_5L_1L_5L_LR_1g_m + C_1C_5L_1L_5L_L + C_5C_LL_1L_5L_LR_5g_m + C_5C_LL_1L_5L_L\right) + s^4\left(C_1C_5L_1L_5R_1R_5g_m + C_1C_5L_1L_5R_1 + C_1C_5L_1L_5R_5\right.}$$

9.939 X-INVALID-ORDER-939 $Z(s) = \left(\frac{C_1L_1R_1s^2+L_1s+R_1}{C_1L_1s^2+1},\ \infty,\ \infty,\ \infty,\ \frac{R_5\left(C_5L_5s^2+1\right)}{C_5L_5s^2+C_5R_5s+1},\ L_Ls + R_L + \frac{1}{C_Ls}\right)$

$$H(s) = \frac{R_1R_5g_m - R_1 + s^6\left(C_1C_5C_LL_1L_5L_LR_1R_5g_m - C_1C_5C_LL_1L_5L_LR_1\right) + s^5\left(C_1C_5C_LL_1L_5R_1R_5R_Lg_m - C_1C_5C_LL_1L_5R_1\right.}{2R_1g_m + s^6\left(2C_1C_5C_LL_1L_5L_LR_1g_m + C_1C_5C_LL_1L_5L_L\right) + s^5\left(C_1C_5C_LL_1L_5R_1R_5g_m + 2C_1C_5C_LL_1L_5R_1R_Lg_m + C_1C_5C_LL_1L_5R_1 + C_1C_5C_LL_1L_5R_5 + C_1C_5C_LL_1L_5R_L + 2C_1C_5C_LL_1L_LR_1R_5g_m + C_1C_5C_LL_1L_LR_5 + 2C_5C_LL_1L_5L_Lg_m\right) + s^4\left(2C_1C_5C_LL_1R_1\right.}$$

9.940 X-INVALID-ORDER-940 $Z(s) = \left(\frac{C_1L_1R_1s^2+L_1s+R_1}{C_1L_1s^2+1},\ \infty,\ \infty,\ \infty,\ \frac{R_5\left(C_5L_5s^2+1\right)}{C_5L_5s^2+C_5R_5s+1},\ \frac{L_LR_Ls}{C_LL_LR_Ls^2+L_Ls+R_L}\right)$

$$H(s) = \frac{\text{[illegible]}}{R_1R_5R_Lg_m + R_1R_L + R_5R_L + s^6\left(C_1C_5C_LL_1L_5L_LR_1R_5R_Lg_m + C_1C_5C_LL_1L_5L_LR_1R_L + C_1C_5C_LL_1L_5L_LR_5R_L\right) + s^5\left(C_1C_5C_LL_1L_LR_1R_5R_L + C_1C_5L_1L_5L_LR_1R_5g_m + 2C_1C_5L_1L_5L_LR_1R_Lg_m + C_1C_5L_1L_5L_LR_1 + C_1C_5L_1L_5L_LR_5 + C_1C_5L_1L_5L_LR_L + C_5C\right.}$$

9.941 X-INVALID-ORDER-941 $Z(s) = \left(\frac{C_1L_1R_1s^2+L_1s+R_1}{C_1L_1s^2+1},\ \infty,\ \infty,\ \infty,\ \frac{R_5\left(C_5L_5s^2+1\right)}{C_5L_5s^2+C_5R_5s+1},\ \frac{C_LL_LR_Ls^2+L_Ls+R_L}{C_LL_Ls^2+1}\right)$

$$H(s) = \frac{\text{[illegible]}}{R_1R_5g_m + 2R_1R_Lg_m + R_1 + R_5 + R_L + s^6\left(C_1C_5C_LL_1L_5L_LR_1R_5g_m + 2C_1C_5C_LL_1L_5L_LR_1R_Lg_m + C_1C_5C_LL_1L_5L_LR_1 + C_1C_5C_LL_1L_5L_LR_5 + C_1C_5C_LL_1L_5L_LR_L\right) + s^5\left(2C_1C_5C_LL_1L_LR_1R_5R_Lg_m + C_1C_5C_LL_1L_LR_1R_5 + C_1C_5C_LL_1L_LR_5R_L + 2C_1C_5L_1L_5\right.}$$

9.942 X-INVALID-ORDER-942 $Z(s) = \left(\frac{C_1L_1R_1s^2+L_1s+R_1}{C_1L_1s^2+1},\ \infty,\ \infty,\ \infty,\ \frac{R_5\left(C_5L_5s^2+1\right)}{C_5L_5s^2+C_5R_5s+1},\ \frac{R_L\left(C_LL_Ls^2+1\right)}{C_LL_Ls^2+C_LR_Ls+1}\right)$

$$H(s) = \frac{\text{[illegible]}}{R_1R_5g_m + 2R_1R_Lg_m + R_1 + R_5 + R_L + s^6\left(C_1C_5C_LL_1L_5L_LR_1R_5g_m + 2C_1C_5C_LL_1L_5L_LR_1R_Lg_m + C_1C_5C_LL_1L_5L_LR_1 + C_1C_5C_LL_1L_5L_LR_5 + C_1C_5C_LL_1L_5L_LR_L\right) + s^5\left(C_1C_5C_LL_1L_5R_1R_5R_Lg_m + C_1C_5C_LL_1L_5R_1R_L + C_1C_5C_LL_1L_5R_5R_L + 2C_1C_5C_LL_1L\right.}$$

9.943 X-INVALID-ORDER-943 $Z(s) = \left(\frac{R_1\left(C_1L_1s^2+1\right)}{C_1L_1s^2+C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ R_5,\ \frac{1}{C_Ls}\right)$

$$H(s) = \frac{R_1R_5g_m - R_1 + s^2\left(C_1L_1R_1R_5g_m - C_1L_1R_1\right)}{2R_1g_m + s^3\left(C_1C_LL_1R_1R_5g_m + C_1C_LL_1R_1 + C_1C_LL_1R_5\right) + s^2\left(C_1C_LR_1R_5 + 2C_1L_1R_1g_m + C_1L_1\right) + s\left(C_1R_1 + C_LR_1R_5g_m + C_LR_1 + C_LR_5\right) + 1}$$

9.944 X-INVALID-ORDER-944 $Z(s) = \left(\frac{R_1\left(C_1L_1s^2+1\right)}{C_1L_1s^2+C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ R_5,\ \frac{R_L}{C_LR_Ls+1}\right)$

$$H(s) = \frac{R_1R_5R_Lg_m - R_1R_L + s^2\left(C_1L_1R_1R_5R_Lg_m - C_1L_1R_1R_L\right)}{R_1R_5g_m + 2R_1R_Lg_m + R_1 + R_5 + R_L + s^3\left(C_1C_LL_1R_1R_5R_Lg_m + C_1C_LL_1R_1R_L + C_1C_LL_1R_5R_L\right) + s^2\left(C_1C_LR_1R_5R_L + C_1L_1R_1R_5g_m + 2C_1L_1R_1R_Lg_m + C_1L_1R_1 + C_1L_1R_5 + C_1L_1R_L\right) + s\left(C_1R_1R_5 + C_1R_1R_L + C_LR_1R_5R_Lg_m + C_LR_1R_L + C_LR_5R_L\right)}$$

9.945 X-INVALID-ORDER-945 $Z(s) = \left(\frac{R_1\left(C_1L_1s^2+1\right)}{C_1L_1s^2+C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ R_5,\ R_L + \frac{1}{C_Ls}\right)$

$$H(s) = \frac{R_1R_5g_m - R_1 + s^3\left(C_1C_LL_1R_1R_5R_Lg_m - C_1C_LL_1R_1R_L\right) + s^2\left(C_1L_1R_1R_5g_m - C_1L_1R_1\right) + s\left(C_LR_1R_5R_Lg_m - C_LR_1R_L\right)}{2R_1g_m + s^3\left(C_1C_LL_1R_1R_5g_m + 2C_1C_LL_1R_1R_Lg_m + C_1C_LL_1R_1 + C_1C_LL_1R_5 + C_1C_LL_1R_L\right) + s^2\left(C_1C_LR_1R_5 + C_1C_LR_1R_L + 2C_1L_1R_1g_m + C_1L_1\right) + s\left(C_1R_1 + C_LR_1R_5g_m + 2C_LR_1R_Lg_m + C_LR_1 + C_LR_5 + C_LR_L\right) + 1}$$

9.946 X-INVALID-ORDER-946 $Z(s) = \left(\frac{R_1\left(C_1L_1s^2+1\right)}{C_1L_1s^2+C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ R_5,\ L_Ls + \frac{1}{C_Ls}\right)$

$$H(s) = \frac{R_1R_5g_m - R_1 + s^4\left(C_1C_LL_1L_LR_1R_5g_m - C_1C_LL_1L_LR_1\right) + s^2\left(C_1L_1R_1R_5g_m - C_1L_1R_1 + C_LL_LR_1R_5g_m - C_LL_LR_1\right)}{2R_1g_m + s^4\left(2C_1C_LL_1L_LR_1g_m + C_1C_LL_1L_L\right) + s^3\left(C_1C_LL_1R_1R_5g_m + C_1C_LL_1R_1 + C_1C_LL_1R_5 + C_1C_LL_LR_1\right) + s^2\left(C_1C_LR_1R_5 + 2C_1L_1R_1g_m + C_1L_1 + 2C_LL_LR_1g_m + C_LL_L\right) + s\left(C_1R_1 + C_LR_1R_5g_m + C_LR_1 + C_LR_5\right) + 1}$$

9.947 X-INVALID-ORDER-947 $Z(s) = \left(\frac{R_1\left(C_1L_1s^2+1\right)}{C_1L_1s^2+C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ R_5,\ \frac{L_Ls}{C_LL_Ls^2+1}\right)$

$$H(s) = \frac{s^3\left(C_1L_1L_LR_1R_5g_m - C_1L_1L_LR_1\right) + s\left(L_LR_1R_5g_m - L_LR_1\right)}{R_1R_5g_m + R_1 + R_5 + s^4\left(C_1C_LL_1L_LR_1R_5g_m + C_1C_LL_1L_LR_1 + C_1C_LL_1L_LR_5\right) + s^3\left(C_1C_LL_LR_1R_5 + 2C_1L_1L_LR_1g_m + C_1L_1L_L\right) + s^2\left(C_1L_1R_1R_5g_m + C_1L_1R_1 + C_1L_1R_5 + C_1L_LR_1 + C_LL_LR_1R_5g_m + C_LL_LR_1 + C_LL_LR_5\right) + s\left(C_1R_1R_5 + 2L_LR_1g_m + L_L\right)}$$

9.948 X-INVALID-ORDER-948 $Z(s) = \left(\frac{R_1\left(C_1L_1s^2+1\right)}{C_1L_1s^2+C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ R_5,\ L_Ls + R_L + \frac{1}{C_Ls}\right)$

$$H(s) = \frac{R_1R_5g_m - R_1 + s^4\left(C_1C_LL_1L_LR_1R_5g_m - C_1C_LL_1L_LR_1\right) + s^3\left(C_1C_LL_1R_1R_5R_Lg_m - C_1C_LL_1R_1R_L\right) + s^2\left(C_1L_1R_1R_5g_m - C_1L_1R_1 + C_LL_LR_1R_5g_m - C_LL_LR_1\right) + s\left(C_LR_1R_5R_Lg_m - C_LR_1R_L\right)}{2R_1g_m + s^4\left(2C_1C_LL_1L_LR_1g_m + C_1C_LL_1L_L\right) + s^3\left(C_1C_LL_1R_1R_5g_m + 2C_1C_LL_1R_1R_Lg_m + C_1C_LL_1R_1 + C_1C_LL_1R_5 + C_1C_LL_1R_L + C_1C_LL_LR_1\right) + s^2\left(C_1C_LR_1R_5 + C_1C_LR_1R_L + 2C_1L_1R_1g_m + C_1L_1 + 2C_LL_LR_1g_m + C_LL_L\right) + s\left(C_1R_1 + C_LR_1R_5g_m + 2C\right.}$$

9.949 X-INVALID-ORDER-949 $Z(s) = \left(\frac{R_1\left(C_1L_1s^2+1\right)}{C_1L_1s^2+C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ R_5,\ \frac{L_LR_Ls}{C_LL_LR_Ls^2+L_Ls+R_L}\right)$

$$H(s) = \frac{s^3\left(C_1L_1L_LR_1R_5R_Lg_m - C_1L_1L_LR_1R_L\right) + s\left(L_LR_1R_5R_Lg_m - L_LR_1R_L\right)}{R_1R_5R_Lg_m + R_1R_L + R_5R_L + s^4\left(C_1C_LL_1L_LR_1R_5R_Lg_m + C_1C_LL_1L_LR_1R_L + C_1C_LL_1L_LR_5R_L\right) + s^3\left(C_1C_LL_LR_1R_5R_L + C_1L_1L_LR_1R_5g_m + 2C_1L_1L_LR_1R_Lg_m + C_1L_1L_LR_1 + C_1L_1L_LR_5 + C_1L_1L_LR_L\right) + s^2\left(C_1L_1R_1R_5R_Lg_m + C_1L_1R_1R_L + C_1L_1R_5R_L +\right.}$$

9.950 X-INVALID-ORDER-950 $Z(s) = \left(\frac{R_1\left(C_1L_1s^2+1\right)}{C_1L_1s^2+C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ R_5,\ \frac{C_LL_LR_Ls^2+L_Ls+R_L}{C_LL_Ls^2+1}\right)$

$$H(s) = \frac{R_1R_5R_Lg_m - R_1R_L + s^4\left(C_1C_LL_1L_LR_1R_5R_Lg_m - C_1C_LL_1L_LR_1R_L\right) + s^3\left(C_1L_1L_LR_1R_5g_m - C_1L_1L_LR_1\right) + s^2\left(C_1L_1R_1R_5R_Lg_m - C_1L_1R_1R_L + C_LL_LR_1R_5\right.}{R_1R_5g_m + 2R_1R_Lg_m + R_1 + R_5 + R_L + s^4\left(C_1C_LL_1L_LR_1R_5g_m + 2C_1C_LL_1L_LR_1R_Lg_m + C_1C_LL_1L_LR_1 + C_1C_LL_1L_LR_5 + C_1C_LL_1L_LR_L\right) + s^3\left(C_1C_LL_LR_1R_5 + C_1C_LL_LR_1R_L + 2C_1L_1L_LR_1g_m + C_1L_1L_L\right) + s^2\left(C_1L_1R_1R_5g_m + 2C_1L_1R_1R_Lg_m + C_1L_1R_1 +\right.}$$

9.951 X-INVALID-ORDER-951 $Z(s) = \left(\frac{R_1\left(C_1L_1s^2+1\right)}{C_1L_1s^2+C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ R_5,\ \frac{R_L\left(C_LL_Ls^2+1\right)}{C_LL_Ls^2+C_LR_Ls+1}\right)$

$$H(s) = \frac{R_1R_5R_Lg_m - R_1R_L + s^4\left(C_1C_LL_1L_LR_1R_5R_Lg_m - C_1C_LL_1L_LR_1R_L\right) + s^2\left(C_1L_1R_1R_5R_Lg_m - C_1L\right.}{R_1R_5g_m + 2R_1R_Lg_m + R_1 + R_5 + R_L + s^4\left(C_1C_LL_1L_LR_1R_5g_m + 2C_1C_LL_1L_LR_1R_Lg_m + C_1C_LL_1L_LR_1 + C_1C_LL_1L_LR_5 + C_1C_LL_1L_LR_L\right) + s^3\left(C_1C_LL_1R_1R_5R_Lg_m + C_1C_LL_1R_1R_L + C_1C_LL_1R_5R_L + C_1C_LL_LR_1R_5 + C_1C_LL_LR_1R_L\right) + s^2\left(C_1C_LR_1R_5R_L +\right.}$$

9.952 X-INVALID-ORDER-952 $Z(s) = \left(\frac{R_1\left(C_1L_1s^2+1\right)}{C_1L_1s^2+C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_5s},\ R_L\right)$

$$H(s) = \frac{-C_1C_5L_1R_1R_Ls^3 + C_1L_1R_1R_Lg_ms^2 - C_5R_1R_Ls + R_1R_Lg_m}{R_1g_m + s^3\left(2C_1C_5L_1R_1R_Lg_m + C_1C_5L_1R_1 + C_1C_5L_1R_L\right) + s^2\left(C_1C_5R_1R_L + C_1L_1R_1g_m + C_1L_1\right) + s\left(C_1R_1 + 2C_5R_1R_Lg_m + C_5R_1 + C_5R_L\right) + 1}$$

9.953 X-INVALID-ORDER-953 $Z(s) = \left(\frac{R_1\left(C_1L_1s^2+1\right)}{C_1L_1s^2+C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_5s},\ \frac{1}{C_Ls}\right)$

$$H(s) = \frac{-C_1C_5L_1R_1s^3 + C_1L_1R_1g_ms^2 - C_5R_1s + R_1g_m}{C_1C_5C_LL_1R_1s^4 + s^3\left(2C_1C_5L_1R_1g_m + C_1C_5L_1 + C_1C_LL_1R_1g_m + C_1C_LL_1\right) + s^2\left(C_1C_5R_1 + C_1C_LR_1 + C_5C_LR_1\right) + s\left(2C_5R_1g_m + C_5 + C_LR_1g_m + C_L\right)}$$

9.954 X-INVALID-ORDER-954 $Z(s) = \left(\frac{R_1\left(C_1L_1s^2+1\right)}{C_1L_1s^2+C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_5s},\ \frac{R_L}{C_LR_Ls+1}\right)$

$$H(s) = \frac{-C_1C_5L_1R_1R_Ls^3 + C_1L_1R_1R_Lg_ms^2 - C_5R_1R_Ls + R_1R_Lg_m}{C_1C_5C_LL_1R_1R_Ls^4 + R_1g_m + s^3\left(2C_1C_5L_1R_1R_Lg_m + C_1C_5L_1R_1 + C_1C_5L_1R_L + C_1C_LL_1R_1R_Lg_m + C_1C_LL_1R_L\right) + s^2\left(C_1C_5R_1R_L + C_1C_LR_1R_L + C_1L_1R_1g_m + C_1L_1 + C_5C_LR_1R_L\right) + s\left(C_1R_1 + 2C_5R_1R_Lg_m + C_5R_1 + C_5R_L + C_LR_1R_Lg_m + C_LR_L\right) + 1}$$

9.955 X-INVALID-ORDER-955 $Z(s) = \left(\frac{R_1\left(C_1L_1s^2+1\right)}{C_1L_1s^2+C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_5s},\ R_L + \frac{1}{C_Ls}\right)$

$$H(s) = \frac{-C_1C_5C_LL_1R_1R_Ls^4 + R_1g_m + s^3\left(-C_1C_5L_1R_1 + C_1C_LL_1R_1R_Lg_m\right) + s^2\left(C_1L_1R_1g_m - C_5C_LR_1R_L\right) + s\left(-C_5R_1 + C_LR_1R_Lg_m\right)}{s^4\left(2C_1C_5C_LL_1R_1R_Lg_m + C_1C_5C_LL_1R_1 + C_1C_5C_LL_1R_L\right) + s^3\left(C_1C_5C_LR_1R_L + 2C_1C_5L_1R_1g_m + C_1C_5L_1 + C_1C_LL_1R_1g_m + C_1C_LL_1\right) + s^2\left(C_1C_5R_1 + C_1C_LR_1 + 2C_5C_LR_1R_Lg_m + C_5C_LR_1 + C_5C_LR_L\right) + s\left(2C_5R_1g_m + C_5 + C_LR_1g_m + C_L\right)}$$

9.956 X-INVALID-ORDER-956 $Z(s) = \left(\frac{R_1\left(C_1L_1s^2+1\right)}{C_1L_1s^2+C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_5s},\ L_Ls + \frac{1}{C_Ls}\right)$

$$H(s) = \frac{-C_1C_5C_LL_1L_LR_1s^5 + C_1C_LL_1L_LR_1g_ms^4 - C_5R_1s + R_1g_m + s^3\left(-C_1C_5L_1R_1 - C_5C_LL_LR_1\right) + s^2\left(C_1L_1R_1g_m + C_LL_LR_1g_m\right)}{s^5\left(2C_1C_5C_LL_1L_LR_1g_m + C_1C_5C_LL_1L_L\right) + s^4\left(C_1C_5C_LL_1R_1 + C_1C_5C_LL_LR_1\right) + s^3\left(2C_1C_5L_1R_1g_m + C_1C_5L_1 + C_1C_LL_1R_1g_m + C_1C_LL_1 + 2C_5C_LL_LR_1g_m + C_5C_LL_L\right) + s^2\left(C_1C_5R_1 + C_1C_LR_1 + C_5C_LR_1\right) + s\left(2C_5R_1g_m + C_5 + C_LR_1g_m + C_L\right)}$$

9.957 X-INVALID-ORDER-957 $Z(s) = \left(\frac{R_1\left(C_1L_1s^2+1\right)}{C_1L_1s^2+C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_5s},\ \frac{L_Ls}{C_LL_Ls^2+1}\right)$

$$H(s) = \frac{-C_1C_5L_1L_LR_1s^4 + C_1L_1L_LR_1g_ms^3 - C_5L_LR_1s^2 + L_LR_1g_ms}{C_1C_5C_LL_1L_LR_1s^5 + R_1g_m + s^4\left(2C_1C_5L_1L_LR_1g_m + C_1C_5L_1L_L + C_1C_LL_1L_LR_1g_m + C_1C_LL_1L_L\right) + s^3\left(C_1C_5L_1R_1 + C_1C_5L_LR_1 + C_1C_LL_LR_1 + C_5C_LL_LR_1\right) + s^2\left(C_1L_1R_1g_m + C_1L_1 + 2C_5L_LR_1g_m + C_5L_L + C_LL_LR_1g_m + C_LL_L\right) + s\left(C_1R_1 + C_5R_1\right) + 1}$$

9.958 X-INVALID-ORDER-958 $Z(s) = \left(\frac{R_1\left(C_1L_1s^2+1\right)}{C_1L_1s^2+C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_5s},\ L_Ls + R_L + \frac{1}{C_Ls}\right)$

$$H(s) = \frac{-C_1C_5C_LL_1L_LR_1s^5 + R_1g_m + s^4\left(-C_1C_5C_LL_1R_1R_L + C_1C_LL_1L_LR_1g_m\right) + s^3\left(-C_1C_5L_1R_1 + C_1C_LL_1R_1R_Lg_m - C_5C_LL_LR_1\right) + s^2\left(C_1L_1R_1g_m - C_5C_LR_1R_L + C_LL_LR_1g_m\right) + s\left(-C_5R_1 + C_L\right.}{s^5\left(2C_1C_5C_LL_1L_LR_1g_m + C_1C_5C_LL_1L_L\right) + s^4\left(2C_1C_5C_LL_1R_1R_Lg_m + C_1C_5C_LL_1R_1 + C_1C_5C_LL_1R_L + C_1C_5C_LL_LR_1\right) + s^3\left(C_1C_5C_LR_1R_L + 2C_1C_5L_1R_1g_m + C_1C_5L_1 + C_1C_LL_1R_1g_m + C_1C_LL_1 + 2C_5C_LL_LR_1g_m + C_5C_LL_L\right) + s^2\left(C_1C_5R_1 + C_1C_LR_1 + 2C\right.}$$

9.959 X-INVALID-ORDER-959 $Z(s) = \left(\frac{R_1\left(C_1L_1s^2+1\right)}{C_1L_1s^2+C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_5s},\ \frac{L_LR_Ls}{C_LL_LR_Ls^2+L_Ls+R_L}\right)$

$$H(s) = \frac{-C_1C_5L_1L_LR_1R_Ls^4 + C_1L_1L_LR_1R_Lg_ms^3 - C_5L_LR_1R_Ls^2 + L_LR_1R_Lg_ms}{C_1C_5C_LL_1L_LR_1R_Ls^5 + R_1R_Lg_m + R_L + s^4\left(2C_1C_5L_1L_LR_1R_Lg_m + C_1C_5L_1L_LR_1 + C_1C_5L_1L_LR_L + C_1C_LL_1L_LR_1R_Lg_m + C_1C_LL_1L_LR_L\right) + s^3\left(C_1C_5L_1R_1R_L + C_1C_5L_LR_1R_L + C_1C_LL_LR_1R_L + C_1L_1L_LR_1g_m + C_1L_1L_L + C_5C_LL_LR_1R_L\right) + s^2\left(C_1L_1R_1R_L\right.}$$

9.960 X-INVALID-ORDER-960 $Z(s) = \left(\frac{R_1\left(C_1L_1s^2+1\right)}{C_1L_1s^2+C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_5s},\ \frac{C_LL_LR_Ls^2+L_Ls+R_L}{C_LL_Ls^2+1}\right)$

$$H(s) = \frac{-C_1C_5C_LL_1L_LR_1R_Ls^5 + R_1R_Lg_m + s^4\left(-C_1C_5L_1L_LR_1 + C_1C_LL_1L_LR_1R_Lg_m\right) + s^3\left(-C_1C_5L_1R_1R_L + C_1L_1L_LR_1g_m - C_5C_LL_LR_1R_L\right) + s^2\left(C_1L_1\right.}{R_1g_m + s^5\left(2C_1C_5C_LL_1L_LR_1R_Lg_m + C_1C_5C_LL_1L_LR_1 + C_1C_5C_LL_1L_LR_L\right) + s^4\left(C_1C_5C_LL_LR_1R_L + 2C_1C_5L_1L_LR_1g_m + C_1C_5L_1L_L + C_1C_LL_1L_LR_1g_m + C_1C_LL_1L_L\right) + s^3\left(2C_1C_5L_1R_1R_Lg_m + C_1C_5L_1R_1 + C_1C_5L_1R_L + C_1C_5L_LR_1 + C_1C_LL_LR_1 + 2C_5C_L\right.}$$

9.961 X-INVALID-ORDER-961 $Z(s) = \left(\frac{R_1\left(C_1L_1s^2+1\right)}{C_1L_1s^2+C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_5s},\ \frac{R_L\left(C_LL_Ls^2+1\right)}{C_LL_Ls^2+C_LR_Ls+1}\right)$

$$H(s) = \frac{-C_1C_5C_LL_1L_LR_1R_Ls^5 + C_1C_LL_1L_LR_1R_Lg_ms^4 - C_5R_1R_Ls + R_1R_Lg_m + s^3\left(-C_1C_5L_1R_1R_L - C_5\right.}{R_1g_m + s^5\left(2C_1C_5C_LL_1L_LR_1R_Lg_m + C_1C_5C_LL_1L_LR_1 + C_1C_5C_LL_1L_LR_L\right) + s^4\left(C_1C_5C_LL_1R_1R_L + C_1C_5C_LL_LR_1R_L + C_1C_LL_1L_LR_1g_m + C_1C_LL_1L_L\right) + s^3\left(2C_1C_5L_1R_1R_Lg_m + C_1C_5L_1R_1 + C_1C_5L_1R_L + C_1C_LL_1R_1R_Lg_m + C_1C_LL_1R_L + C_1C_LL_LR_1 + 2C\right.}$$

9.962 X-INVALID-ORDER-962 $Z(s) = \left(\frac{R_1\left(C_1L_1s^2+1\right)}{C_1L_1s^2+C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ \frac{R_5}{C_5R_5s+1},\ R_L\right)$

$$H(s) = \frac{-C_1C_5L_1R_1R_5R_Ls^3 - C_5R_1R_5R_Ls + R_1R_5R_Lg_m - R_1R_L + s^2\left(C_1L_1R_1R_5R_Lg_m - C_1L_1R_1R_L\right)}{R_1R_5g_m + 2R_1R_Lg_m + R_1 + R_5 + R_L + s^3\left(2C_1C_5L_1R_1R_5R_Lg_m + C_1C_5L_1R_1R_5 + C_1C_5L_1R_5R_L\right) + s^2\left(C_1C_5R_1R_5R_L + C_1L_1R_1R_5g_m + 2C_1L_1R_1R_Lg_m + C_1L_1R_1 + C_1L_1R_5 + C_1L_1R_L\right) + s\left(C_1R_1R_5 + C_1R_1R_L + 2C_5R_1R_5R_Lg_m + C_5R_1R_5 + C_5R_5R_L\right)}$$

9.963 X-INVALID-ORDER-963 $Z(s) = \left(\frac{R_1\left(C_1L_1s^2+1\right)}{C_1L_1s^2+C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ \frac{R_5}{C_5R_5s+1},\ \frac{1}{C_Ls}\right)$

$$H(s) = \frac{-C_1C_5L_1R_1R_5s^3 - C_5R_1R_5s + R_1R_5g_m - R_1 + s^2\left(C_1L_1R_1R_5g_m - C_1L_1R_1\right)}{C_1C_5C_LL_1R_1R_5s^4 + 2R_1g_m + s^3\left(2C_1C_5L_1R_1R_5g_m + C_1C_5L_1R_5 + C_1C_LL_1R_1R_5g_m + C_1C_LL_1R_1 + C_1C_LL_1R_5\right) + s^2\left(C_1C_5R_1R_5 + C_1C_LR_1R_5 + 2C_1L_1R_1g_m + C_1L_1 + C_5C_LR_1R_5\right) + s\left(C_1R_1 + 2C_5R_1R_5g_m + C_5R_5 + C_LR_1R_5g_m + C_LR_1 + C_LR_5\right) + 1}$$

9.964 X-INVALID-ORDER-964 $Z(s) = \left(\frac{R_1\left(C_1L_1s^2+1\right)}{C_1L_1s^2+C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ \frac{R_5}{C_5R_5s+1},\ \frac{R_L}{C_LR_Ls+1}\right)$

$$H(s) = \frac{-C_1C_5L_1R_1R_5R_Ls^3 - C_5R_1R_5R_Ls + R_1R_5R_Lg_m - R_1R_L + s^2\left(C_1L_1R_1R_5R_Lg_m - C_1L_1R_1R_L\right)}{C_1C_5C_LL_1R_1R_5R_Ls^4 + R_1R_5g_m + 2R_1R_Lg_m + R_1 + R_5 + R_L + s^3\left(2C_1C_5L_1R_1R_5R_Lg_m + C_1C_5L_1R_1R_5 + C_1C_5L_1R_5R_L + C_1C_LL_1R_1R_5R_Lg_m + C_1C_LL_1R_1R_L + C_1C_LL_1R_5R_L\right) + s^2\left(C_1C_5R_1R_5R_L + C_1C_LR_1R_5R_L + C_1L_1R_1R_5g_m + 2C_1L_1R_1R_Lg_m + C_1\right.}$$

9.965 X-INVALID-ORDER-965 $Z(s) = \left(\frac{R_1\left(C_1L_1s^2+1\right)}{C_1L_1s^2+C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ \frac{R_5}{C_5R_5s+1},\ R_L + \frac{1}{C_Ls}\right)$

$$H(s) = \frac{-C_1C_5C_LL_1R_1R_5R_Ls^4 + R_1R_5g_m - R_1 + s^3\left(-C_1C_5L_1R_1R_5 + C_1C_LL_1R_1R_5R_Lg_m - C_1C_LL_1R_1R_L\right) + s^2\left(C_1L_1R_1R_5g_m - C_1L_1R_1 - C_5C\right.}{2R_1g_m + s^4\left(2C_1C_5C_LL_1R_1R_5R_Lg_m + C_1C_5C_LL_1R_1R_5 + C_1C_5C_LL_1R_5R_L\right) + s^3\left(C_1C_5C_LR_1R_5R_L + 2C_1C_5L_1R_1R_5g_m + C_1C_5L_1R_5 + C_1C_LL_1R_1R_5g_m + 2C_1C_LL_1R_1R_Lg_m + C_1C_LL_1R_1 + C_1C_LL_1R_5 + C_1C_LL_1R_L\right) + s^2\left(C_1C_5R_1R_5 + C_1C_LR_1R_5 + C_1C_LR\right.}$$

9.966 X-INVALID-ORDER-966 $Z(s) = \left(\frac{R_1\left(C_1L_1s^2+1\right)}{C_1L_1s^2+C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ \frac{R_5}{C_5R_5s+1},\ L_Ls + \frac{1}{C_Ls}\right)$

$$H(s) = \frac{-C_1C_5C_LL_1L_LR_1R_5s^5 - C_5R_1R_5s + R_1R_5g_m - R_1 + s^4\left(C_1C_LL_1L_LR_1R_5g_m - C_1C_LL_1L_LR_1\right) + s^3\left(-C_1C_5L_1R_1R_5 - C_5C_LL_LR_1R_5\right) + s^2}{2R_1g_m + s^5\left(2C_1C_5C_LL_1L_LR_1R_5g_m + C_1C_5C_LL_1L_LR_5\right) + s^4\left(C_1C_5C_LL_1R_1R_5 + C_1C_5C_LL_LR_1R_5 + 2C_1C_LL_1L_LR_1g_m + C_1C_LL_1L_L\right) + s^3\left(2C_1C_5L_1R_1R_5g_m + C_1C_5L_1R_5 + C_1C_LL_1R_1R_5g_m + C_1C_LL_1R_1 + C_1C_LL_1R_5 + C_1C_LL_LR_1 + 2C_5C_LL_LR_1R_5g_m + C\right.}$$

9.967 X-INVALID-ORDER-967 $Z(s) = \left(\frac{R_1\left(C_1L_1s^2+1\right)}{C_1L_1s^2+C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ \frac{R_5}{C_5R_5s+1},\ \frac{L_Ls}{C_LL_Ls^2+1}\right)$

$$H(s) = \frac{-C_1C_5L_1L_LR_1R_5s^4 - C_5L_LR_1R_5s^2 + s^3\left(C_1L_1L_LR_1R_5g_m - C_1L_1L_LR_1\right) + s\left(L_LR_1R_5g_m - L_LR_1\right)}{C_1C_5C_LL_1L_LR_1R_5s^5 + R_1R_5g_m + R_1 + R_5 + s^4\left(2C_1C_5L_1L_LR_1R_5g_m + C_1C_5L_1L_LR_5 + C_1C_LL_1L_LR_1R_5g_m + C_1C_LL_1L_LR_1 + C_1C_LL_1L_LR_5\right) + s^3\left(C_1C_5L_1R_1R_5 + C_1C_5L_LR_1R_5 + C_1C_LL_LR_1R_5 + 2C_1L_1L_LR_1g_m + C_1L_1L_L + C_5C_LL_LR_1R_5\right) + s^2\left(C_1L_1R_1\right.}$$

9.968 X-INVALID-ORDER-968 $Z(s) = \left(\frac{R_1\left(C_1L_1s^2+1\right)}{C_1L_1s^2+C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ \frac{R_5}{C_5R_5s+1},\ L_Ls+R_L+\frac{1}{C_Ls}\right)$

$$H(s) = \frac{-C_1C_5C_LL_1L_LR_1R_5s^5 + R_1R_5g_m - R_1 + s^4\left(-C_1C_5C_LL_1R_1R_5R_L + C_1C_LL_1L_LR_1R_5g_m - C_1C_LL_1L_LR_1\right)}{2R_1g_m + s^5\left(2C_1C_5C_LL_1L_LR_1R_5g_m + C_1C_5C_LL_1L_LR_5\right) + s^4\left(2C_1C_5C_LL_1R_1R_5R_Lg_m + C_1C_5C_LL_1R_1R_5 + C_1C_5C_LL_1R_5R_L + C_1C_5C_LL_LR_1R_5 + 2C_1C_LL_1L_LR_1g_m + C_1C_LL_1L_L\right) + s^3\left(C_1C_5C_LR_1R_5R_L + 2C_1C_5L_1R_1R_5g_m + C_1C_5L_1R_5 + C_1C_LL_1R_1R_5g_m\right.}$$

9.969 X-INVALID-ORDER-969 $Z(s) = \left(\frac{R_1\left(C_1L_1s^2+1\right)}{C_1L_1s^2+C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ \frac{R_5}{C_5R_5s+1},\ \frac{L_LR_Ls}{C_LL_LR_Ls^2+L_Ls+R_L}\right)$

$$H(s) = \frac{-C_1C}{C_1C_5C_LL_1L_LR_1R_5R_Ls^5 + R_1R_5R_Lg_m + R_1R_L + R_5R_L + s^4\left(2C_1C_5L_1L_LR_1R_5R_Lg_m + C_1C_5L_1L_LR_1R_5 + C_1C_5L_1L_LR_5R_L + C_1C_LL_1L_LR_1R_5R_Lg_m + C_1C_LL_1L_LR_1R_L + C_1C_LL_1L_LR_5R_L\right) + s^3\left(C_1C_5L_1R_1R_5R_L + C_1C_5L_LR_1R_5R_L + C_1C_LL_LR_1R_5R_L + C\right.}$$

9.970 X-INVALID-ORDER-970 $Z(s) = \left(\frac{R_1\left(C_1L_1s^2+1\right)}{C_1L_1s^2+C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ \frac{R_5}{C_5R_5s+1},\ \frac{C_LL_LR_Ls^2+L_Ls+R_L}{C_LL_Ls^2+1}\right)$

$$H(s) = \frac{-C_1C_5C_LL_1L_LR_1R_5R_Ls^5 + R_1R_5R_Lg_m}{R_1R_5g_m + 2R_1R_Lg_m + R_1 + R_5 + R_L + s^5\left(2C_1C_5C_LL_1L_LR_1R_5R_Lg_m + C_1C_5C_LL_1L_LR_1R_5 + C_1C_5C_LL_1L_LR_5R_L\right) + s^4\left(C_1C_5C_LL_LR_1R_5R_L + 2C_1C_5L_1L_LR_1R_5g_m + C_1C_5L_1L_LR_5 + C_1C_LL_1L_LR_1R_5g_m + 2C_1C_LL_1L_LR_1R_Lg_m + C_1C_LL_1L_LR_1 + C_1C_LL_1\right.}$$

9.971 X-INVALID-ORDER-971 $Z(s) = \left(\frac{R_1\left(C_1L_1s^2+1\right)}{C_1L_1s^2+C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ \frac{R_5}{C_5R_5s+1},\ \frac{R_L\left(C_LL_Ls^2+1\right)}{C_LL_Ls^2+C_LR_Ls+1}\right)$

$$H(s) = \frac{}{R_1R_5g_m + 2R_1R_Lg_m + R_1 + R_5 + R_L + s^5\left(2C_1C_5C_LL_1L_LR_1R_5R_Lg_m + C_1C_5C_LL_1L_LR_1R_5 + C_1C_5C_LL_1L_LR_5R_L\right) + s^4\left(C_1C_5C_LL_1R_1R_5R_L + C_1C_5C_LL_LR_1R_5R_L + C_1C_LL_1L_LR_1R_5g_m + 2C_1C_LL_1L_LR_1R_Lg_m + C_1C_LL_1L_LR_1 + C_1C_LL_1L_LR_5 + C_1C_LL_1L\right.}$$

9.972 X-INVALID-ORDER-972 $Z(s) = \left(\frac{R_1\left(C_1L_1s^2+1\right)}{C_1L_1s^2+C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ R_5+\frac{1}{C_5s},\ R_L\right)$

$$H(s) = \frac{C_1L_1R_1R_Lg_ms^2 + R_1R_Lg_m + s^3\left(C_1C_5L_1R_1R_5R_Lg_m - C_1C_5L_1R_1R_L\right) + s\left(C_5R_1R_5R_Lg_m - C_5R_1R_L\right)}{R_1g_m + s^3\left(C_1C_5L_1R_1R_5g_m + 2C_1C_5L_1R_1R_Lg_m + C_1C_5L_1R_1 + C_1C_5L_1R_5 + C_1C_5L_1R_L\right) + s^2\left(C_1C_5R_1R_5 + C_1C_5R_1R_L + C_1L_1R_1g_m + C_1L_1\right) + s\left(C_1R_1 + C_5R_1R_5g_m + 2C_5R_1R_Lg_m + C_5R_1 + C_5R_5 + C_5R_L\right) + 1}$$

9.973 X-INVALID-ORDER-973 $Z(s) = \left(\frac{R_1\left(C_1L_1s^2+1\right)}{C_1L_1s^2+C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ R_5+\frac{1}{C_5s},\ \frac{1}{C_Ls}\right)$

$$H(s) = \frac{C_1L_1R_1g_ms^2 + R_1g_m + s^3\left(C_1C_5L_1R_1R_5g_m - C_1C_5L_1R_1\right) + s\left(C_5R_1R_5g_m - C_5R_1\right)}{s^4\left(C_1C_5C_LL_1R_1R_5g_m + C_1C_5C_LL_1R_1 + C_1C_5C_LL_1R_5\right) + s^3\left(C_1C_5C_LR_1R_5 + 2C_1C_5L_1R_1g_m + C_1C_5L_1 + C_1C_LL_1R_1g_m + C_1C_LL_1\right) + s^2\left(C_1C_5R_1 + C_1C_LR_1 + C_5C_LR_1R_5g_m + C_5C_LR_1 + C_5C_LR_5\right) + s\left(2C_5R_1g_m + C_5 + C_LR_1g_m + C_L\right)}$$

9.974 X-INVALID-ORDER-974 $Z(s) = \left(\frac{R_1\left(C_1L_1s^2+1\right)}{C_1L_1s^2+C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ R_5+\frac{1}{C_5s},\ \frac{R_L}{C_LR_Ls+1}\right)$

$$H(s) = \frac{C_1L_1R_1R_Lg_ms^2 + R_1R_Lg_m + s^3\left(C_1C_5L_1R_1R_5R_Lg_m - C_1C_5L_1R_1R_L\right) + s\left(C_5R_1R_5R_Lg_m - C_5R\right.}{R_1g_m + s^4\left(C_1C_5C_LL_1R_1R_5R_Lg_m + C_1C_5C_LL_1R_1R_L + C_1C_5C_LL_1R_5R_L\right) + s^3\left(C_1C_5C_LR_1R_5R_L + C_1C_5L_1R_1R_5g_m + 2C_1C_5L_1R_1R_Lg_m + C_1C_5L_1R_1 + C_1C_5L_1R_5 + C_1C_5L_1R_L + C_1C_LL_1R_1R_Lg_m + C_1C_LL_1R_L\right) + s^2\left(C_1C_5R_1R_5 + C_1C_5R_1R_L + C_1C_LR_1R\right.}$$

9.975 X-INVALID-ORDER-975 $Z(s) = \left(\frac{R_1\left(C_1L_1s^2+1\right)}{C_1L_1s^2+C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ R_5+\frac{1}{C_5s},\ R_L+\frac{1}{C_Ls}\right)$

$$H(s) = \frac{R_1g_m + s^4\left(C_1C_5C_LL_1R_1R_5R_Lg_m - C_1C_5C_LL_1R_1R_L\right) + s^3\left(C_1C_5L_1R_1R_5g_m - C_1C_5L_1R_1 + C_1C_LL_1R_1R_Lg_m\right) + s^2\left(C_1L_1R_1g_m + C_5C_LR_1R_5R_Lg_m - C_5C_LR_1R_L\right) + s\left(C_5R_1R_5g_m - C_5R_1 + C_LR_1\right.}{s^4\left(C_1C_5C_LL_1R_1R_5g_m + 2C_1C_5C_LL_1R_1R_Lg_m + C_1C_5C_LL_1R_1 + C_1C_5C_LL_1R_5 + C_1C_5C_LL_1R_L\right) + s^3\left(C_1C_5C_LR_1R_5 + C_1C_5C_LR_1R_L + 2C_1C_5L_1R_1g_m + C_1C_5L_1 + C_1C_LL_1R_1g_m + C_1C_LL_1\right) + s^2\left(C_1C_5R_1 + C_1C_LR_1 + C_5C_LR_1R_5g_m + 2C_5C_LR_1R_Lg_m + C_5\right.}$$

9.976 X-INVALID-ORDER-976 $Z(s) = \left(\frac{R_1\left(C_1L_1s^2+1\right)}{C_1L_1s^2+C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ R_5+\frac{1}{C_5s},\ L_Ls+\frac{1}{C_Ls}\right)$

$$H(s) = \frac{C_1C_LL_1L_LR_1g_ms^4 + R_1g_m + s^5\left(C_1C_5C_LL_1L_LR_1R_5g_m - C_1C_5C_LL_1L_LR_1\right) + s^3\left(C_1C_5L_1R_1R_5g_m - C_1C_5L_1R_1 + C_5C_LL_LR_1R_5g_m - C_5C_LL_LR_1\right) + s^2\left(C_1L_1R_1g_m + C_LL_LR_1g_m\right) + s\left(C_5R_1R_5g_m\right.}{s^5\left(2C_1C_5C_LL_1L_LR_1g_m + C_1C_5C_LL_1L_L\right) + s^4\left(C_1C_5C_LL_1R_1R_5g_m + C_1C_5C_LL_1R_1 + C_1C_5C_LL_1R_5 + C_1C_5C_LL_LR_1\right) + s^3\left(C_1C_5C_LR_1R_5 + 2C_1C_5L_1R_1g_m + C_1C_5L_1 + C_1C_LL_1R_1g_m + C_1C_LL_1 + 2C_5C_LL_LR_1g_m + C_5C_LL_L\right) + s^2\left(C_1C_5R_1 + C_1C_LR_1 + C_5C\right.}$$

9.977 X-INVALID-ORDER-977 $Z(s) = \left(\frac{R_1\left(C_1L_1s^2+1\right)}{C_1L_1s^2+C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ R_5+\frac{1}{C_5s},\ \frac{L_Ls}{C_LL_Ls^2+1}\right)$

$$H(s) = \frac{C_1L_1L_LR_1g_ms^3 + L_LR_1g_ms + s^4\left(C_1C_5L_1L_LR_1R_5g_m - C_1C_5L_1L_LR_1\right) + s^2\left(C_5L_LR_1R_5g_m - C_5\cdots\right.}{R_1g_m + s^5\left(C_1C_5C_LL_1L_LR_1R_5g_m + C_1C_5C_LL_1L_LR_1 + C_1C_5C_LL_1L_LR_5\right) + s^4\left(C_1C_5C_LL_LR_1R_5 + 2C_1C_5L_1L_LR_1g_m + C_1C_5L_1L_L + C_1C_LL_1L_LR_1g_m + C_1C_LL_1L_L\right) + s^3\left(C_1C_5L_1R_1R_5g_m + C_1C_5L_1R_1 + C_1C_5L_1R_5 + C_1C_5L_LR_1 + C_1C_LL_LR_1 + C_5C_LL_LR_1\cdots\right.}$$

9.978 X-INVALID-ORDER-978 $Z(s) = \left(\frac{R_1\left(C_1L_1s^2+1\right)}{C_1L_1s^2+C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ R_5+\frac{1}{C_5s},\ L_Ls+R_L+\frac{1}{C_Ls}\right)$

$$H(s) = \frac{R_1g_m + s^5\left(C_1C_5C_LL_1L_LR_1R_5g_m - C_1C_5C_LL_1L_LR_1\right) + s^4\left(C_1C_5C_LL_1R_1R_5R_Lg_m - C_1C_5C_LL_1R_1R_L + C_1C_LL_1L_LR_1g_m\right) + s^3\left(C_1C_5L_1R_1R_5g_m - C_1C_5L_1R_1 + C_1C_LL_1R_1R_Lg_m + C_5C_LL_LR_1R_5g_m - C_5C_LL_L\cdots\right.}{s^5\left(2C_1C_5C_LL_1L_LR_1g_m + C_1C_5C_LL_1L_L\right) + s^4\left(C_1C_5C_LL_1R_1R_5g_m + 2C_1C_5C_LL_1R_1R_Lg_m + C_1C_5C_LL_1R_1 + C_1C_5C_LL_1R_5 + C_1C_5C_LL_1R_L + C_1C_5C_LL_LR_1\right) + s^3\left(C_1C_5C_LR_1R_5 + C_1C_5C_LR_1R_L + 2C_1C_5L_1R_1g_m + C_1C_5L_1 + C_1C_LL_1R_1g_m + C_1C_LL_1 + 2C_5\cdots\right.}$$

9.979 X-INVALID-ORDER-979 $Z(s) = \left(\frac{R_1\left(C_1L_1s^2+1\right)}{C_1L_1s^2+C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ R_5+\frac{1}{C_5s},\ \frac{L_LR_Ls}{C_LL_LR_Ls^2+L_Ls+R_L}\right)$

$$H(s) = \frac{\cdots}{R_1R_Lg_m + R_L + s^5\left(C_1C_5C_LL_1L_LR_1R_5R_Lg_m + C_1C_5C_LL_1L_LR_1R_L + C_1C_5C_LL_1L_LR_5R_L\right) + s^4\left(C_1C_5C_LL_LR_1R_5R_L + C_1C_5L_1L_LR_1R_5g_m + 2C_1C_5L_1L_LR_1R_Lg_m + C_1C_5L_1L_LR_1 + C_1C_5L_1L_LR_5 + C_1C_5L_1L_LR_L + C_1C_LL_1L_LR_1R_Lg_m + C_1C_LL_1L_LR_L\right) + s\cdots}$$

9.980 X-INVALID-ORDER-980 $Z(s) = \left(\frac{R_1\left(C_1L_1s^2+1\right)}{C_1L_1s^2+C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ R_5+\frac{1}{C_5s},\ \frac{C_LL_LR_Ls^2+L_Ls+R_L}{C_LL_Ls^2+1}\right)$

$$H(s) = \frac{R_1R_Lg_m + s^5\left(C_1C_5C_LL_1L_LR_1R_5R_Lg_m - C_1C_5C_LL_1L_LR_1R_L\right) + s^4\left(C_1C_5L_1L_LR_1R_5g_m - C_1C_5L_1L_LR_1 + C_1C_LL_1L_LR_1R_Lg_m\cdots\right.}{R_1g_m + s^5\left(C_1C_5C_LL_1L_LR_1R_5g_m + 2C_1C_5C_LL_1L_LR_1R_Lg_m + C_1C_5C_LL_1L_LR_1 + C_1C_5C_LL_1L_LR_5 + C_1C_5C_LL_1L_LR_L\right) + s^4\left(C_1C_5C_LL_LR_1R_5 + C_1C_5C_LL_LR_1R_L + 2C_1C_5L_1L_LR_1g_m + C_1C_5L_1L_L + C_1C_LL_1L_LR_1g_m + C_1C_LL_1L_L\right) + s^3\left(C_1C_5L_1R_1R_5g_m + 2\cdots\right.}$$

9.981 X-INVALID-ORDER-981 $Z(s) = \left(\frac{R_1\left(C_1L_1s^2+1\right)}{C_1L_1s^2+C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ R_5+\frac{1}{C_5s},\ \frac{R_L\left(C_LL_Ls^2+1\right)}{C_LL_Ls^2+C_LR_Ls+1}\right)$

$$H(s) = \frac{C_1C_LL_1L_L\cdots}{R_1g_m + s^5\left(C_1C_5C_LL_1L_LR_1R_5g_m + 2C_1C_5C_LL_1L_LR_1R_Lg_m + C_1C_5C_LL_1L_LR_1 + C_1C_5C_LL_1L_LR_5 + C_1C_5C_LL_1L_LR_L\right) + s^4\left(C_1C_5C_LL_1R_1R_5R_Lg_m + C_1C_5C_LL_1R_1R_L + C_1C_5C_LL_1R_5R_L + C_1C_5C_LL_LR_1R_5 + C_1C_5C_LL_LR_1R_L + C_1C_LL_1L_LR_1g_m + C_1C_LL\cdots\right.}$$

9.982 X-INVALID-ORDER-982 $Z(s) = \left(\frac{R_1\left(C_1L_1s^2+1\right)}{C_1L_1s^2+C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ L_5s+\frac{1}{C_5s},\ R_L\right)$

$$H(s) = \frac{C_1C_5L_1L_5R_1R_Lg_ms^4 - C_1C_5L_1R_1R_Ls^3 - C_5R_1R_Ls + R_1R_Lg_m + s^2\left(C_1L_1R_1R_Lg_m + C_5L_5R_1R_Lg_m\right)}{R_1g_m + s^4\left(C_1C_5L_1L_5R_1g_m + C_1C_5L_1L_5\right) + s^3\left(2C_1C_5L_1R_1R_Lg_m + C_1C_5L_1R_1 + C_1C_5L_1R_L + C_1C_5L_5R_1\right) + s^2\left(C_1C_5R_1R_L + C_1L_1R_1g_m + C_1L_1 + C_5L_5R_1g_m + C_5L_5\right) + s\left(C_1R_1 + 2C_5R_1R_Lg_m + C_5R_1 + C_5R_L\right) + 1}$$

9.983 X-INVALID-ORDER-983 $Z(s) = \left(\frac{R_1\left(C_1L_1s^2+1\right)}{C_1L_1s^2+C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ L_5s+\frac{1}{C_5s},\ \frac{1}{C_Ls}\right)$

$$H(s) = \frac{C_1C_5L_1L_5R_1g_ms^4 - C_1C_5L_1R_1s^3 - C_5R_1s + R_1g_m + s^2\left(C_1L_1R_1g_m + C_5L_5R_1g_m\right)}{s^5\left(C_1C_5C_LL_1L_5R_1g_m + C_1C_5C_LL_1L_5\right) + s^4\left(C_1C_5C_LL_1R_1 + C_1C_5C_LL_5R_1\right) + s^3\left(2C_1C_5L_1R_1g_m + C_1C_5L_1 + C_1C_LL_1R_1g_m + C_1C_LL_1 + C_5C_LL_5R_1g_m + C_5C_LL_5\right) + s^2\left(C_1C_5R_1 + C_1C_LR_1 + C_5C_LR_1\right) + s\left(2C_5R_1g_m + C_5 + C_LR_1g_m + C_L\right)}$$

9.984 X-INVALID-ORDER-984 $Z(s) = \left(\frac{R_1\left(C_1L_1s^2+1\right)}{C_1L_1s^2+C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ L_5s+\frac{1}{C_5s},\ \frac{R_L}{C_LR_Ls+1}\right)$

$$H(s) = \frac{C_1C_5L_1L_5R_1R_Lg_ms^4 - C_1C_5L_1R_1R_Ls^3 - C_5R_1R_Ls + R_1R_Lg_m + s^2\left(C_1L_1R_1R_Lg_m + C_5L_5R_1\cdots\right.}{R_1g_m + s^5\left(C_1C_5C_LL_1L_5R_1R_Lg_m + C_1C_5C_LL_1L_5R_L\right) + s^4\left(C_1C_5C_LL_1R_1R_L + C_1C_5C_LL_5R_1R_L + C_1C_5L_1L_5R_1g_m + C_1C_5L_1L_5\right) + s^3\left(2C_1C_5L_1R_1R_Lg_m + C_1C_5L_1R_1 + C_1C_5L_1R_L + C_1C_5L_5R_1 + C_1C_LL_1R_1R_Lg_m + C_1C_LL_1R_L + C_5C_LL_5R_1R_Lg_m + C_5C_L\cdots\right.}$$

9.985 X-INVALID-ORDER-985 $Z(s) = \left(\frac{R_1\left(C_1L_1s^2+1\right)}{C_1L_1s^2+C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ L_5s+\frac{1}{C_5s},\ R_L+\frac{1}{C_Ls}\right)$

$$H(s) = \frac{C_1C_5C_LL_1L_5R_1R_Lg_ms^5 + R_1g_m + s^4\left(-C_1C_5C_LL_1R_1R_L + C_1C_5L_1L_5R_1g_m\right) + s^3\left(-C_1C_5L_1R_1 + C_1C_LL_1R_1R_Lg_m + C_5C_LL_5R_1R_Lg_m\right) + s^2\left(C_1L_1R_1g_m - C_5C_LR_1R_L + C_5L_5R_1g_m\right) + s\left(-C_5R_1 + C\cdots\right.}{s^5\left(C_1C_5C_LL_1L_5R_1g_m + C_1C_5C_LL_1L_5\right) + s^4\left(2C_1C_5C_LL_1R_1R_Lg_m + C_1C_5C_LL_1R_1 + C_1C_5C_LL_1R_L + C_1C_5C_LL_5R_1\right) + s^3\left(C_1C_5C_LR_1R_L + 2C_1C_5L_1R_1g_m + C_1C_5L_1 + C_1C_LL_1R_1g_m + C_1C_LL_1 + C_5C_LL_5R_1g_m + C_5C_LL_5\right) + s^2\left(C_1C_5R_1 + C_1C_LR_1 + 2C_5C_L\cdots\right.}$$

9.986 X-INVALID-ORDER-986 $Z(s) = \left(\frac{R_1\left(C_1L_1s^2+1\right)}{C_1L_1s^2+C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ L_5s+\frac{1}{C_5s},\ L_Ls+\frac{1}{C_Ls}\right)$

$$H(s) = \frac{C_1C_5C_LL_1L_5L_LR_1g_ms^6 - C_1C_5C_LL_1L_LR_1s^5 - C_5R_1s + R_1g_m + s^4\left(C_1C_5L_1L_5R_1g_m + C_1C_LL_1L_LR_1g_m + C_5C_LL_5L_LR_1g_m\right) + s^3\left(-C_1C_5L_1R_1 - C_5C_LL_LR_1\right) + s^2\left(C_1L_1R_1g_m + C_5L_5R_1g_m + C_L\right.}{s^5\left(C_1C_5C_LL_1L_5R_1g_m + C_1C_5C_LL_1L_5 + 2C_1C_5C_LL_1L_LR_1g_m + C_1C_5C_LL_1L_L\right) + s^4\left(C_1C_5C_LL_1R_1 + C_1C_5C_LL_5R_1 + C_1C_5C_LL_LR_1\right) + s^3\left(2C_1C_5L_1R_1g_m + C_1C_5L_1 + C_1C_LL_1R_1g_m + C_1C_LL_1 + C_5C_LL_5R_1g_m + C_5C_LL_5 + 2C_5C_LL_LR_1g_m + C_5C_LL_L\right) + s^2\left(\right.}$$

9.987 X-INVALID-ORDER-987 $Z(s) = \left(\frac{R_1\left(C_1L_1s^2+1\right)}{C_1L_1s^2+C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ L_5s+\frac{1}{C_5s},\ \frac{L_Ls}{C_LL_Ls^2+1}\right)$

$$H(s) = \frac{C_1C_5L_1L_5L_LR_1g_ms^5 - C_1C_5L_1L_LR_1s^4 - C_5L_LR_1s^2 + L_LR_1g_ms + s^3\left(C_1L_1L_LR_1g_m + C_5L_5L_\right.}{R_1g_m + s^6\left(C_1C_5C_LL_1L_5L_LR_1g_m + C_1C_5C_LL_1L_5L_L\right) + s^5\left(C_1C_5C_LL_1L_LR_1 + C_1C_5C_LL_5L_LR_1\right) + s^4\left(C_1C_5L_1L_5R_1g_m + C_1C_5L_1L_5 + 2C_1C_5L_1L_LR_1g_m + C_1C_5L_1L_L + C_1C_LL_1L_LR_1g_m + C_1C_LL_1L_L + C_5C_LL_5L_LR_1g_m + C_5C_LL_5L_L\right) + s^3\left(C_1C_5L_1R_1 + C_1\right.}$$

9.988 X-INVALID-ORDER-988 $Z(s) = \left(\frac{R_1\left(C_1L_1s^2+1\right)}{C_1L_1s^2+C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ L_5s+\frac{1}{C_5s},\ L_Ls+R_L+\frac{1}{C_Ls}\right)$

$$H(s) = \frac{C_1C_5C_LL_1L_5L_LR_1g_ms^6 + R_1g_m + s^5\left(C_1C_5C_LL_1L_5R_1R_Lg_m - C_1C_5C_LL_1L_LR_1\right) + s^4\left(-C_1C_5C_LL_1R_1R_L + C_1C_5L_1L_5R_1g_m + C_1C_LL_1L_LR_1g_m + C_5C_LL_5L_LR_1g_m\right) + s^3\left(-C_1C_5L_1R_1 + C_1C_LL_1R_1R_Lg_m + C_5C_LL\right.}{s^5\left(C_1C_5C_LL_1L_5R_1g_m + C_1C_5C_LL_1L_5 + 2C_1C_5C_LL_1L_LR_1g_m + C_1C_5C_LL_1L_L\right) + s^4\left(2C_1C_5C_LL_1R_1R_Lg_m + C_1C_5C_LL_1R_1 + C_1C_5C_LL_1R_L + C_1C_5C_LL_5R_1 + C_1C_5C_LL_LR_1\right) + s^3\left(C_1C_5C_LR_1R_L + 2C_1C_5L_1R_1g_m + C_1C_5L_1 + C_1C_LL_1R_1g_m + C_1C_LL_1 + C_5C\right.}$$

9.989 X-INVALID-ORDER-989 $Z(s) = \left(\frac{R_1\left(C_1L_1s^2+1\right)}{C_1L_1s^2+C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ L_5s+\frac{1}{C_5s},\ \frac{L_LR_Ls}{C_LL_LR_Ls^2+L_Ls+R_L}\right)$

$$H(s) = \frac{}{R_1R_Lg_m + R_L + s^6\left(C_1C_5C_LL_1L_5L_LR_1R_Lg_m + C_1C_5C_LL_1L_5L_LR_L\right) + s^5\left(C_1C_5C_LL_1L_LR_1R_L + C_1C_5C_LL_5L_LR_1R_L + C_1C_5L_1L_5L_LR_1g_m + C_1C_5L_1L_5L_L\right) + s^4\left(C_1C_5L_1L_5R_1R_Lg_m + C_1C_5L_1L_5R_L + 2C_1C_5L_1L_LR_1R_Lg_m + C_1C_5L_1L_L + C_1C_LL_1L_LR_1g_m + C\right.}$$

9.990 X-INVALID-ORDER-990 $Z(s) = \left(\frac{R_1\left(C_1L_1s^2+1\right)}{C_1L_1s^2+C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ L_5s+\frac{1}{C_5s},\ \frac{C_LL_LR_Ls^2+L_Ls+R_L}{C_LL_Ls^2+1}\right)$

$$H(s) = \frac{C_1C_5C_LL_1L_5L_LR_1R_Lg_ms^6 + R_1R_Lg_m + s^5\left(-C_1C_5C_LL_1L_LR_1R_L + C_1C_5L_1L_5L_LR_1g_m\right) + s^4\left(C_1C_5L_1L_5R_1R_Lg_m - C_1C_5L_1L_L\right.}{R_1g_m + s^6\left(C_1C_5C_LL_1L_5L_LR_1g_m + C_1C_5C_LL_1L_5L_L\right) + s^5\left(2C_1C_5C_LL_1L_LR_1R_Lg_m + C_1C_5C_LL_1L_LR_1 + C_1C_5C_LL_1L_LR_L + C_1C_5C_LL_5L_LR_1\right) + s^4\left(C_1C_5C_LL_LR_1R_L + C_1C_5L_1L_5R_1g_m + C_1C_5L_1L_5 + 2C_1C_5L_1L_LR_1g_m + C_1C_5L_1L_L + C_1C_LL_1L_LR_1g_m + C\right.}$$

9.991 X-INVALID-ORDER-991 $Z(s) = \left(\frac{R_1\left(C_1L_1s^2+1\right)}{C_1L_1s^2+C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ L_5s+\frac{1}{C_5s},\ \frac{R_L\left(C_LL_Ls^2+1\right)}{C_LL_Ls^2+C_LR_Ls+1}\right)$

$$H(s) = \frac{C_1C_5C_LL_1L}{R_1g_m + s^6\left(C_1C_5C_LL_1L_5L_LR_1g_m + C_1C_5C_LL_1L_5L_L\right) + s^5\left(C_1C_5C_LL_1L_5R_1R_Lg_m + C_1C_5C_LL_1L_5R_L + 2C_1C_5C_LL_1L_LR_1R_Lg_m + C_1C_5C_LL_1L_LR_1 + C_1C_5C_LL_1L_LR_L + C_1C_5C_LL_5L_LR_1\right) + s^4\left(C_1C_5C_LL_1R_1R_L + C_1C_5C_LL_5R_1R_L + C_1C_5C_LL_LR_1R_L + C_1C\right.}$$

9.992 X-INVALID-ORDER-992 $Z(s) = \left(\frac{R_1\left(C_1L_1s^2+1\right)}{C_1L_1s^2+C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ \frac{L_5s}{C_5L_5s^2+1},\ R_L\right)$

$$H(s) = \frac{-C_1C_5L_1L_5R_1R_Ls^4 + C_1L_1L_5R_1R_Lg_ms^3 + L_5R_1R_Lg_ms - R_1R_L + s^2\left(-C_1L_1R_1R_L - C_5L_5R_1R_L\right)}{2R_1R_Lg_m + R_1 + R_L + s^4\left(2C_1C_5L_1L_5R_1R_Lg_m + C_1C_5L_1L_5R_1 + C_1C_5L_1L_5R_L\right) + s^3\left(C_1C_5L_5R_1R_L + C_1L_1L_5R_1g_m + C_1L_1L_5\right) + s^2\left(2C_1L_1R_1R_Lg_m + C_1L_1R_1 + C_1L_1R_L + C_1L_5R_1 + 2C_5L_5R_1R_Lg_m + C_5L_5R_1 + C_5L_5R_L\right) + s\left(C_1R_1R_L + L_5R_1g_m + L_5\right)}$$

9.993 X-INVALID-ORDER-993 $Z(s) = \left(\frac{R_1\left(C_1L_1s^2+1\right)}{C_1L_1s^2+C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ \frac{L_5s}{C_5L_5s^2+1},\ \frac{1}{C_Ls}\right)$

$$H(s) = \frac{-C_1C_5L_1L_5R_1s^4 + C_1L_1L_5R_1g_ms^3 + L_5R_1g_ms - R_1 + s^2\left(-C_1L_1R_1 - C_5L_5R_1\right)}{C_1C_5C_LL_1L_5R_1s^5 + 2R_1g_m + s^4\left(2C_1C_5L_1L_5R_1g_m + C_1C_5L_1L_5 + C_1C_LL_1L_5R_1g_m + C_1C_LL_1L_5\right) + s^3\left(C_1C_5L_5R_1 + C_1C_LL_1R_1 + C_1C_LL_5R_1 + C_5C_LL_5R_1\right) + s^2\left(2C_1L_1R_1g_m + C_1L_1 + 2C_5L_5R_1g_m + C_5L_5 + C_LL_5R_1g_m + C_LL_5\right) + s\left(C_1R_1 + C_LR_1\right) + 1}$$

9.994 X-INVALID-ORDER-994 $Z(s) = \left(\frac{R_1\left(C_1L_1s^2+1\right)}{C_1L_1s^2+C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ \frac{L_5s}{C_5L_5s^2+1},\ \frac{R_L}{C_LR_Ls+1}\right)$

$$H(s) = \frac{-C_1C_5L_1L_5R_1R_Ls^4 + C_1L_1L_5R_1R_Lg_ms^3 + L_5R_1R_Lg_ms - R_1R_L + s^2\left(-C_1L_1R_1R_L - C_5L_5R_1R_L\right)}{C_1C_5C_LL_1L_5R_1R_Ls^5 + 2R_1R_Lg_m + R_1 + R_L + s^4\left(2C_1C_5L_1L_5R_1R_Lg_m + C_1C_5L_1L_5R_1 + C_1C_5L_1L_5R_L + C_1C_LL_1L_5R_1R_Lg_m + C_1C_LL_1L_5R_L\right) + s^3\left(C_1C_5L_5R_1R_L + C_1C_LL_1R_1R_L + C_1C_LL_5R_1R_L + C_1L_1L_5R_1g_m + C_1L_1L_5 + C_5C_LL_5R_1R_L\right) + s^2\left(2C_1L_1R\right.}$$

9.995 X-INVALID-ORDER-995 $Z(s) = \left(\frac{R_1\left(C_1L_1s^2+1\right)}{C_1L_1s^2+C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ \frac{L_5s}{C_5L_5s^2+1},\ R_L+\frac{1}{C_Ls}\right)$

$$H(s) = \frac{-C_1C_5C_LL_1L_5R_1R_Ls^5 - R_1 + s^4\left(-C_1C_5L_1L_5R_1 + C_1C_LL_1L_5R_1R_Lg_m\right) + s^3\left(-C_1C_LL_1R_1R_L + C_1L_1L_5R_1g_m - C_5C_LL_5R_1R_L\right) + s^2\left(-C_1L_1\right.}{2R_1g_m + s^5\left(2C_1C_5C_LL_1L_5R_1R_Lg_m + C_1C_5C_LL_1L_5R_1 + C_1C_5C_LL_1L_5R_L\right) + s^4\left(C_1C_5C_LL_5R_1R_L + 2C_1C_5L_1L_5R_1g_m + C_1C_5L_1L_5 + C_1C_LL_1L_5R_1g_m + C_1C_LL_1L_5\right) + s^3\left(C_1C_5L_5R_1 + 2C_1C_LL_1R_1R_Lg_m + C_1C_LL_1R_1 + C_1C_LL_1R_L + C_1C_LL_5R_1 + 2C_5C_LL_5\right.}$$

9.996 X-INVALID-ORDER-996 $Z(s) = \left(\frac{R_1\left(C_1L_1s^2+1\right)}{C_1L_1s^2+C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ \frac{L_5s}{C_5L_5s^2+1},\ L_Ls+\frac{1}{C_Ls}\right)$

$$H(s) = \frac{-C_1C_5C_LL_1L_5L_LR_1s^6 + C_1C_LL_1L_5L_LR_1g_ms^5 + L_5R_1g_ms - R_1 + s^4\left(-C_1C_5L_1L_5R_1 - C_1C_LL_1L_LR_1 - C_5C_LL_5L_LR_1\right) + s^3\left(C_1L_1L_5R_1g_m\right.}{2R_1g_m + s^6\left(2C_1C_5C_LL_1L_5L_LR_1g_m + C_1C_5C_LL_1L_5L_L\right) + s^5\left(C_1C_5C_LL_1L_5R_1 + C_1C_5C_LL_5L_LR_1\right) + s^4\left(2C_1C_5L_1L_5R_1g_m + C_1C_5L_1L_5 + C_1C_LL_1L_5R_1g_m + C_1C_LL_1L_5 + 2C_1C_LL_1L_LR_1g_m + C_1C_LL_1L_L + 2C_5C_LL_5L_LR_1g_m + C_5C_LL_5L_L\right) + s^3\left(C_1C_5L_5R_1 +\right.}$$

9.997 X-INVALID-ORDER-997 $Z(s) = \left(\frac{R_1\left(C_1L_1s^2+1\right)}{C_1L_1s^2+C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ \frac{L_5s}{C_5L_5s^2+1},\ \frac{L_Ls}{C_LL_Ls^2+1}\right)$

$$H(s) = \frac{-C_1C_5L_1L_5L_LR_1s^5 + C_1L_1L_5L_LR_1g_ms^4 + L_5L_LR_1g_ms^2 - L_LR_1s + s^3\left(-C_1L_1L_LR_1 - C_5L_5L_LR_1\right)}{C_1C_5C_LL_1L_5L_LR_1s^6 + R_1 + s^5\left(2C_1C_5L_1L_5L_LR_1g_m + C_1C_5L_1L_5L_L + C_1C_LL_1L_5L_LR_1g_m + C_1C_LL_1L_5L_L\right) + s^4\left(C_1C_5L_1L_5R_1 + C_1C_5L_5L_LR_1 + C_1C_LL_1L_LR_1 + C_1C_LL_5L_LR_1 + C_5C_LL_5L_LR_1\right) + s^3\left(C_1L_1L_5R_1g_m + C_1L_1L_5 + 2C_1L_1L_LR_1g_m + C_1L_1L_L +\right.}$$

9.998 X-INVALID-ORDER-998 $Z(s) = \left(\frac{R_1\left(C_1L_1s^2+1\right)}{C_1L_1s^2+C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ \frac{L_5s}{C_5L_5s^2+1},\ L_Ls+R_L+\frac{1}{C_Ls}\right)$

$$H(s) = \frac{-C_1C_5C_LL_1L_5L_LR_1s^6 - R_1 + s^5\left(-C_1C_5C_LL_1L_5R_1R_L + C_1C_LL_1L_5L_LR_1g_m\right) + s^4\left(-C_1C_5L_1L_5R_1 + C_1C_LL\right.}{2R_1g_m + s^6\left(2C_1C_5C_LL_1L_5L_LR_1g_m + C_1C_5C_LL_1L_5L_L\right) + s^5\left(2C_1C_5C_LL_1L_5R_1R_Lg_m + C_1C_5C_LL_1L_5R_1 + C_1C_5C_LL_1L_5R_L + C_1C_5C_LL_5L_LR_1\right) + s^4\left(C_1C_5C_LL_5R_1R_L + 2C_1C_5L_1L_5R_1g_m + C_1C_5L_1L_5 + C_1C_LL_1L_5R_1g_m + C_1C_LL_1L_5 + 2C_1C_LL_1L_LR_1g_m +\right.}$$

9.999 X-INVALID-ORDER-999 $Z(s) = \left(\frac{R_1\left(C_1L_1s^2+1\right)}{C_1L_1s^2+C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ \frac{L_5s}{C_5L_5s^2+1},\ \frac{L_LR_Ls}{C_LL_LR_Ls^2+L_Ls+R_L}\right)$

$$H(s) = \frac{-C_1C$$
$$C_1C_5C_LL_1L_5L_LR_1R_Ls^6 + R_1R_L + s^5\left(2C_1C_5L_1L_5L_LR_1R_Lg_m + C_1C_5L_1L_5L_LR_1 + C_1C_5L_1L_5L_LR_L + C_1C_LL_1L_5L_LR_1R_Lg_m + C_1C_LL_1L_5L_LR_L\right) + s^4\left(C_1C_5L_1L_5R_1R_L + C_1C_5L_5L_LR_1R_L + C_1C_LL_1L_LR_1R_L + C_1C_LL_5L_LR_1R_L + C_1L_1L_5L_LR_1g_m + C_1L_1L\right.$$

9.1000 X-INVALID-ORDER-1000 $Z(s) = \left(\frac{R_1\left(C_1L_1s^2+1\right)}{C_1L_1s^2+C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ \frac{L_5s}{C_5L_5s^2+1},\ \frac{C_LL_LR_Ls^2+L_Ls+R_L}{C_LL_Ls^2+1}\right)$

$$H(s) = \frac{-C_1C_5C_LL_1L_5L_LR_1R_Ls^6 - R_1R_L + s^5\left(-\right.}{2R_1R_Lg_m + R_1 + R_L + s^6\left(2C_1C_5C_LL_1L_5L_LR_1R_Lg_m + C_1C_5C_LL_1L_5L_LR_1 + C_1C_5C_LL_1L_5L_LR_L\right) + s^5\left(C_1C_5C_LL_5L_LR_1R_L + 2C_1C_5L_1L_5L_LR_1g_m + C_1C_5L_1L_5L_L + C_1C_LL_1L_5L_LR_1g_m + C_1C_LL_1L_5L_L\right) + s^4\left(2C_1C_5L_1L_5R_1R_Lg_m + C_1C_5L_1L_5R_1 + C_1C_5L_1\right.}$$

9.1001 X-INVALID-ORDER-1001 $Z(s) = \left(\frac{R_1\left(C_1L_1s^2+1\right)}{C_1L_1s^2+C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ \frac{L_5s}{C_5L_5s^2+1},\ \frac{R_L\left(C_LL_Ls^2+1\right)}{C_LL_Ls^2+C_LR_Ls+1}\right)$

$$H(s) = \frac{}{2R_1R_Lg_m + R_1 + R_L + s^6\left(2C_1C_5C_LL_1L_5L_LR_1R_Lg_m + C_1C_5C_LL_1L_5L_LR_1 + C_1C_5C_LL_1L_5L_LR_L\right) + s^5\left(C_1C_5C_LL_1L_5R_1R_L + C_1C_5C_LL_5L_LR_1R_L + C_1C_LL_1L_5L_LR_1g_m + C_1C_LL_1L_5L_L\right) + s^4\left(2C_1C_5L_1L_5R_1R_Lg_m + C_1C_5L_1L_5R_1 + C_1C_5L_1L_5R_L + C_1C_LL_1\right.}$$

9.1002 X-INVALID-ORDER-1002 $Z(s) = \left(\frac{R_1\left(C_1L_1s^2+1\right)}{C_1L_1s^2+C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ L_5s+R_5+\frac{1}{C_5s},\ R_L\right)$

$$H(s) = \frac{C_1C_5L_1L_5R_1R_Lg_ms^4 + R_1R_Lg_m + s^3\left(C_1C_5L_1R_1R_5R_Lg_m - C_1C_5L_1R_1R_L\right) + s^2\left(C_1L_1R_1R_Lg_m + C_5L_5R_1R_Lg_m\right) + s\left(C_5R_1R_5R_Lg_m - C_5R_1R_L\right)}{R_1g_m + s^4\left(C_1C_5L_1L_5R_1g_m + C_1C_5L_1L_5\right) + s^3\left(C_1C_5L_1R_1R_5g_m + 2C_1C_5L_1R_1R_Lg_m + C_1C_5L_1R_1 + C_1C_5L_1R_5 + C_1C_5L_1R_L + C_1C_5L_5R_1\right) + s^2\left(C_1C_5R_1R_5 + C_1C_5R_1R_L + C_1L_1R_1g_m + C_1L_1 + C_5L_5R_1g_m + C_5L_5\right) + s\left(C_1R_1 + C_5R_1R_5g_m + 2C_5R_1R_Lg_m +\right.}$$

9.1003 X-INVALID-ORDER-1003 $Z(s) = \left(\frac{R_1\left(C_1L_1s^2+1\right)}{C_1L_1s^2+C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ L_5s+R_5+\frac{1}{C_5s},\ \frac{1}{C_Ls}\right)$

$$H(s) = \frac{C_1C_5L_1L_5R_1g_ms^4 + R_1g_m + s^3\left(C_1C_5L_1R_1R_5g_m - C_1C_5L_1R_1\right) + s^2\left(C_1L_1R_1g_m + C_5L_5R_1g_m\right) + s\left(C_5R_1R_5g_m - C_5R_1\right)}{s^5\left(C_1C_5C_LL_1L_5R_1g_m + C_1C_5C_LL_1L_5\right) + s^4\left(C_1C_5C_LL_1R_1R_5g_m + C_1C_5C_LL_1R_1 + C_1C_5C_LL_1R_5 + C_1C_5C_LL_5R_1\right) + s^3\left(C_1C_5C_LR_1R_5 + 2C_1C_5L_1R_1g_m + C_1C_5L_1 + C_1C_LL_1R_1g_m + C_1C_LL_1 + C_5C_LL_5R_1g_m + C_5C_LL_5\right) + s^2\left(C_1C_5R_1 + C_1C_LR_1 + C_5C_LR_1\right.}$$

9.1004 X-INVALID-ORDER-1004 $Z(s) = \left(\frac{R_1\left(C_1L_1s^2+1\right)}{C_1L_1s^2+C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ L_5s+R_5+\frac{1}{C_5s},\ \frac{R_L}{C_LR_Ls+1}\right)$

$$H(s) = \frac{C_1C_5L_1L_5R_1R_Lg_ms^4 + R_1R_Lg_m \cdots}{R_1g_m + s^5\left(C_1C_5C_LL_1L_5R_1R_Lg_m + C_1C_5C_LL_1L_5R_L\right) + s^4\left(C_1C_5C_LL_1R_1R_5R_Lg_m + C_1C_5C_LL_1R_1R_L + C_1C_5C_LL_1R_5R_L + C_1C_5C_LL_5R_1R_L + C_1C_5L_1L_5R_1g_m + C_1C_5L_1L_5\right) + s^3\left(C_1C_5C_LR_1R_5R_L + C_1C_5L_1R_1R_5g_m + 2C_1C_5L_1R_1R_Lg_m + C_1C_5L_1R_1 + C_1C \cdots\right.}$$

9.1005 X-INVALID-ORDER-1005 $Z(s) = \left(\frac{R_1\left(C_1L_1s^2+1\right)}{C_1L_1s^2+C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ L_5s+R_5+\frac{1}{C_5s},\ R_L+\frac{1}{C_Ls}\right)$

$$H(s) = \frac{C_1C_5C_LL_1L_5R_1R_Lg_ms^5 + R_1g_m + s^4\left(C_1C_5C_LL_1R_1R_5R_Lg_m - C_1C_5C_LL_1R_1R_L + C_1C_5L_1L_5R_1g_m\right) + s^3\left(C_1C_5L_1R_1R_5g_m - C_1C_5L_1R_1 + C_1C_LL_1R_1R_Lg_m + C_5C_LL_5R_1R_Lg_m\right) + s^2\left(C_1L_1R_1g \cdots\right.}{s^5\left(C_1C_5C_LL_1L_5R_1g_m + C_1C_5C_LL_1L_5\right) + s^4\left(C_1C_5C_LL_1R_1R_5g_m + 2C_1C_5C_LL_1R_1R_Lg_m + C_1C_5C_LL_1R_1 + C_1C_5C_LL_1R_5 + C_1C_5C_LL_1R_L + C_1C_5C_LL_5R_1\right) + s^3\left(C_1C_5C_LR_1R_5 + C_1C_5C_LR_1R_L + 2C_1C_5L_1R_1g_m + C_1C_5L_1 + C_1C_LL_1R_1g_m + C_1C_LL_1 + C_5C_L \cdots\right.}$$

9.1006 X-INVALID-ORDER-1006 $Z(s) = \left(\frac{R_1\left(C_1L_1s^2+1\right)}{C_1L_1s^2+C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ L_5s+R_5+\frac{1}{C_5s},\ L_Ls+\frac{1}{C_Ls}\right)$

$$H(s) = \frac{C_1C_5C_LL_1L_5L_LR_1g_ms^6 + R_1g_m + s^5\left(C_1C_5C_LL_1L_LR_1R_5g_m - C_1C_5C_LL_1L_LR_1\right) + s^4\left(C_1C_5L_1L_5R_1g_m + C_1C_LL_1L_LR_1g_m + C_5C_LL_5L_LR_1g_m\right) + s^3\left(C_1C_5L_1R_1R_5g_m - C_1C_5L_1R_1 + C_5C_LL_LR_1R \cdots\right.}{s^5\left(C_1C_5C_LL_1L_5R_1g_m + C_1C_5C_LL_1L_5 + 2C_1C_5C_LL_1L_LR_1g_m + C_1C_5C_LL_1L_L\right) + s^4\left(C_1C_5C_LL_1R_1R_5g_m + C_1C_5C_LL_1R_1 + C_1C_5C_LL_1R_5 + C_1C_5C_LL_5R_1 + C_1C_5C_LL_LR_1\right) + s^3\left(C_1C_5C_LR_1R_5 + 2C_1C_5L_1R_1g_m + C_1C_5L_1 + C_1C_LL_1R_1g_m + C_1C_LL_1 + C_5C_L \cdots\right.}$$

9.1007 X-INVALID-ORDER-1007 $Z(s) = \left(\frac{R_1\left(C_1L_1s^2+1\right)}{C_1L_1s^2+C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ L_5s+R_5+\frac{1}{C_5s},\ \frac{L_Ls}{C_LL_Ls^2+1}\right)$

$$H(s) = \frac{C_1C_5L_1L_5L_LR_1g_ms^5 + L_LR_1g_ms \cdots}{R_1g_m + s^6\left(C_1C_5C_LL_1L_5L_LR_1g_m + C_1C_5C_LL_1L_5L_L\right) + s^5\left(C_1C_5C_LL_1L_LR_1R_5g_m + C_1C_5C_LL_1L_LR_1 + C_1C_5C_LL_1L_LR_5 + C_1C_5C_LL_5L_LR_1\right) + s^4\left(C_1C_5C_LL_LR_1R_5 + C_1C_5L_1L_5R_1g_m + C_1C_5L_1L_5 + 2C_1C_5L_1L_LR_1g_m + C_1C_5L_1L_L + C_1C_LL_1L_LR_1g_m + C_1C \cdots\right.}$$

9.1008 X-INVALID-ORDER-1008 $Z(s) = \left(\frac{R_1\left(C_1L_1s^2+1\right)}{C_1L_1s^2+C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ L_5s+R_5+\frac{1}{C_5s},\ L_Ls+R_L+\frac{1}{C_Ls}\right)$

$$H(s) = \frac{C_1C_5C_LL_1L_5L_LR_1g_ms^6 + R_1g_m + s^5\left(C_1C_5C_LL_1L_5R_1R_Lg_m + C_1C_5C_LL_1L_LR_1R_5g_m - C_1C_5C_LL_1L_LR_1\right) + s^4\left(C_1C_5C_LL_1R_1R_5R_Lg_m - C_1C_5C_LL_1R_1R_L + C_1C_5L_1L_5R_1g_m + C_1C_LL_1L_LR_1g_m + C_5C_LL_5L_LR_1g_m\right) + s^3\left(C_1C_5L_1R_1 \cdots\right.}{s^5\left(C_1C_5C_LL_1L_5R_1g_m + C_1C_5C_LL_1L_5 + 2C_1C_5C_LL_1L_LR_1g_m + C_1C_5C_LL_1L_L\right) + s^4\left(C_1C_5C_LL_1R_1R_5g_m + 2C_1C_5C_LL_1R_1R_Lg_m + C_1C_5C_LL_1R_1 + C_1C_5C_LL_1R_5 + C_1C_5C_LL_1R_L + C_1C_5C_LL_5R_1 + C_1C_5C_LL_LR_1\right) + s^3\left(C_1C_5C_LR_1R_5 + C_1C_5C_LR_1R_L + 2C_1C \cdots\right.}$$

9.1009 X-INVALID-ORDER-1009 $Z(s) = \left(\frac{R_1\left(C_1L_1s^2+1\right)}{C_1L_1s^2+C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ L_5s+R_5+\frac{1}{C_5s},\ \frac{L_LR_Ls}{C_LL_LR_Ls^2+L_Ls+R_L}\right)$

$$H(s) = \frac{\cdots}{R_1R_Lg_m + R_L + s^6\left(C_1C_5C_LL_1L_5L_LR_1R_Lg_m + C_1C_5C_LL_1L_5L_LR_L\right) + s^5\left(C_1C_5C_LL_1L_LR_1R_5R_Lg_m + C_1C_5C_LL_1L_LR_1R_L + C_1C_5C_LL_1L_LR_5R_L + C_1C_5C_LL_5L_LR_1R_L + C_1C_5L_1L_5L_LR_1g_m + C_1C_5L_1L_5L_L\right) + s^4\left(C_1C_5C_LL_LR_1R_5R_L + C_1C_5L_1L_5R_1R_Lg_m + \cdots\right.}$$

9.1010 X-INVALID-ORDER-1010 $Z(s) = \left(\frac{R_1\left(C_1L_1s^2+1\right)}{C_1L_1s^2+C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ L_5s+R_5+\frac{1}{C_5s},\ \frac{C_LL_LR_Ls^2+L_Ls+R_L}{C_LL_Ls^2+1}\right)$

$$H(s) = \frac{C_1C_5C_LL_1L_5L_LR_1R_Lg_ms^6 + R_1R_Lg_m + s^5\left(C_1C_5C_LL_1L_LR_1R_5R_Lg_m - C_1C_5C_LL_1L_LR_1R_L + C_1C_5L_1L_5L \cdots\right.}{R_1g_m + s^6\left(C_1C_5C_LL_1L_5L_LR_1g_m + C_1C_5C_LL_1L_5L_L\right) + s^5\left(C_1C_5C_LL_1L_LR_1R_5g_m + 2C_1C_5C_LL_1L_LR_1R_Lg_m + C_1C_5C_LL_1L_LR_1 + C_1C_5C_LL_1L_LR_5 + C_1C_5C_LL_1L_LR_L + C_1C_5C_LL_5L_LR_1\right) + s^4\left(C_1C_5C_LL_LR_1R_5 + C_1C_5C_LL_LR_1R_L + C_1C_5L_1L_5R_1g_m + C_1C_5 \cdots\right.}$$

9.1011 X-INVALID-ORDER-1011 $Z(s) = \left(\frac{R_1\left(C_1L_1s^2+1\right)}{C_1L_1s^2+C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ L_5s+R_5+\frac{1}{C_5s},\ \frac{R_L\left(C_LL_Ls^2+1\right)}{C_LL_Ls^2+C_LR_Ls+1}\right)$

$$H(s) = \frac{\cdots}{R_1g_m + s^6\left(C_1C_5C_LL_1L_5L_LR_1g_m + C_1C_5C_LL_1L_5L_L\right) + s^5\left(C_1C_5C_LL_1L_5R_1R_Lg_m + C_1C_5C_LL_1L_5R_L + C_1C_5C_LL_1L_LR_1R_5g_m + 2C_1C_5C_LL_1L_LR_1R_Lg_m + C_1C_5C_LL_1L_LR_1 + C_1C_5C_LL_1L_LR_5 + C_1C_5C_LL_1L_LR_L + C_1C_5C_LL_5L_LR_1\right) + s^4\left(C_1C_5C_LL_1R_1R_5R \cdots\right.}$$

9.1012 X-INVALID-ORDER-1012 $Z(s) = \left(\frac{R_1\left(C_1L_1s^2+1\right)}{C_1L_1s^2+C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ \frac{L_5R_5s}{C_5L_5R_5s^2+L_5s+R_5},\ R_L\right)$

$$H(s) = \frac{-C_1C_5L_1L_5R_1R_5R_Ls^4 - R_1R_5R_L + s^3\left(C_1L_1L_5R_1R_5R_Lg_m - C_1L_1L_5R_1R_L\right) + s^2\left(-C_1L_1R_1R_5R_L - C_5L_5R_1R_5R_L\right) + s\left(L_5R_1R_5 \cdots\right.}{2R_1R_5R_Lg_m + R_1R_5 + R_5R_L + s^4\left(2C_1C_5L_1L_5R_1R_5R_Lg_m + C_1C_5L_1L_5R_1R_5 + C_1C_5L_1L_5R_5R_L\right) + s^3\left(C_1C_5L_5R_1R_5R_L + C_1L_1L_5R_1R_5g_m + 2C_1L_1L_5R_1R_Lg_m + C_1L_1L_5R_1 + C_1L_1L_5R_5 + C_1L_1L_5R_L\right) + s^2\left(2C_1L_1R_1R_5R_Lg_m + C_1L_1R_1R_5 + C_1L_1R_5R_L + C \cdots\right.}$$

9.1013 X-INVALID-ORDER-1013 $Z(s) = \left(\frac{R_1\left(C_1L_1s^2+1\right)}{C_1L_1s^2+C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ \frac{L_5R_5s}{C_5L_5R_5s^2+L_5s+R_5},\ \frac{1}{C_Ls}\right)$

$$H(s) = \frac{-C_1C_5L_1L_5R_1R_5s^4 - R_1R_5 + s^3\left(C_1L_1L_5R_1R_5g_m - C_1L_1L_5R_1\right) + s^2\left(-C_1L_1R_1R_5 - C_5L_5R_1R_5\right) + s\left(L_5R_1R_5g_m - L_5R_1\right)}{C_1C_5C_LL_1L_5R_1R_5s^5 + 2R_1R_5g_m + R_5 + s^4\left(2C_1C_5L_1L_5R_1R_5g_m + C_1C_5L_1L_5R_5 + C_1C_LL_1L_5R_1R_5g_m + C_1C_LL_1L_5R_1 + C_1C_LL_1L_5R_5\right) + s^3\left(C_1C_5L_5R_1R_5 + C_1C_LL_1R_1R_5 + C_1C_LL_5R_1R_5 + 2C_1L_1L_5R_1g_m + C_1L_1L_5 + C_5C_LL_5R_1R_5\right) + s^2\left(2C_1L_1R_1R_5g_m \cdots\right.}$$

9.1014 X-INVALID-ORDER-1014 $Z(s) = \left(\frac{R_1\left(C_1L_1s^2+1\right)}{C_1L_1s^2+C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ \frac{L_5R_5s}{C_5L_5R_5s^2+L_5s+R_5},\ \frac{R_L}{C_LR_Ls+1}\right)$

$$H(s) = \frac{-C_1C_5L_1L_5R_1R_5R_Ls^4 \cdots}{C_1C_5C_LL_1L_5R_1R_5R_Ls^5 + 2R_1R_5R_Lg_m + R_1R_5 + R_5R_L + s^4\left(2C_1C_5L_1L_5R_1R_5R_Lg_m + C_1C_5L_1L_5R_1R_5 + C_1C_5L_1L_5R_5R_L + C_1C_LL_1L_5R_1R_5R_Lg_m + C_1C_LL_1L_5R_1R_L + C_1C_LL_1L_5R_5R_L\right) + s^3\left(C_1C_5L_5R_1R_5R_L + C_1C_LL_1R_1R_5R_L + C_1C_LL_5R_1R_5R_L + C_1\cdots\right.}$$

9.1015 X-INVALID-ORDER-1015 $Z(s) = \left(\frac{R_1\left(C_1L_1s^2+1\right)}{C_1L_1s^2+C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ \frac{L_5R_5s}{C_5L_5R_5s^2+L_5s+R_5},\ R_L + \frac{1}{C_Ls}\right)$

$$H(s) = \frac{-C_1C_5C_LL_1L_5R_1R_5R_Ls^5 - R_1R_5 + s^4\left(-C_1C_5L_1L_5R_1R_5 + C\cdots\right.}{2R_1R_5g_m + R_5 + s^5\left(2C_1C_5C_LL_1L_5R_1R_5R_Lg_m + C_1C_5C_LL_1L_5R_1R_5 + C_1C_5C_LL_1L_5R_5R_L\right) + s^4\left(C_1C_5C_LL_5R_1R_5R_L + 2C_1C_5L_1L_5R_1R_5g_m + C_1C_5L_1L_5R_5 + C_1C_LL_1L_5R_1R_5g_m + 2C_1C_LL_1L_5R_1R_Lg_m + C_1C_LL_1L_5R_1 + C_1C_LL_1L_5R_5 + C_1C_LL_1L_5R_L\right) + s^3\cdots}$$

9.1016 X-INVALID-ORDER-1016 $Z(s) = \left(\frac{R_1\left(C_1L_1s^2+1\right)}{C_1L_1s^2+C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ \frac{L_5R_5s}{C_5L_5R_5s^2+L_5s+R_5},\ L_Ls + \frac{1}{C_Ls}\right)$

$$H(s) = \frac{-C_1C_5C_LL_1L_5L_LR_1R_5s^6 - R_1R_5 + s^5\left(C_1C_LL_1L_5L_LR_1R_5g\cdots\right.}{2R_1R_5g_m + R_5 + s^6\left(2C_1C_5C_LL_1L_5L_LR_1R_5g_m + C_1C_5C_LL_1L_5L_LR_5\right) + s^5\left(C_1C_5C_LL_1L_5R_1R_5 + C_1C_5C_LL_5L_LR_1R_5 + 2C_1C_LL_1L_5L_LR_1g_m + C_1C_LL_1L_5L_L\right) + s^4\left(2C_1C_5L_1L_5R_1R_5g_m + C_1C_5L_1L_5R_5 + C_1C_LL_1L_5R_1R_5g_m + C_1C_LL_1L_5R_1 + C_1C_LL_1L_5R_5 + \cdots\right.}$$

9.1017 X-INVALID-ORDER-1017 $Z(s) = \left(\frac{R_1\left(C_1L_1s^2+1\right)}{C_1L_1s^2+C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ \frac{L_5R_5s}{C_5L_5R_5s^2+L_5s+R_5},\ \frac{L_Ls}{C_LL_Ls^2+1}\right)$

$$H(s) = \frac{-C_1C_5L_1L_5L_LR_1R_5s^5 \cdots}{C_1C_5C_LL_1L_5L_LR_1R_5s^6 + R_1R_5 + s^5\left(2C_1C_5L_1L_5L_LR_1R_5g_m + C_1C_5L_1L_5L_LR_5 + C_1C_LL_1L_5L_LR_1R_5g_m + C_1C_LL_1L_5L_LR_1 + C_1C_LL_1L_5L_LR_5\right) + s^4\left(C_1C_5L_1L_5R_1R_5 + C_1C_5L_5L_LR_1R_5 + C_1C_LL_1L_LR_1R_5 + C_1C_LL_5L_LR_1R_5 + 2C_1L_1L_5L_LR_1g_m + C_1L_1L_5\cdots\right.}$$

9.1018 X-INVALID-ORDER-1018 $Z(s) = \left(\frac{R_1\left(C_1L_1s^2+1\right)}{C_1L_1s^2+C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ \frac{L_5R_5s}{C_5L_5R_5s^2+L_5s+R_5},\ L_Ls + R_L + \frac{1}{C_Ls}\right)$

$$H(s) = \frac{\cdots}{2R_1R_5g_m + R_5 + s^6\left(2C_1C_5C_LL_1L_5L_LR_1R_5g_m + C_1C_5C_LL_1L_5L_LR_5\right) + s^5\left(2C_1C_5C_LL_1L_5R_1R_5R_Lg_m + C_1C_5C_LL_1L_5R_1R_5 + C_1C_5C_LL_1L_5R_5R_L + C_1C_5C_LL_5L_LR_1R_5 + 2C_1C_LL_1L_5L_LR_1g_m + C_1C_LL_1L_5L_L\right) + s^4\left(C_1C_5C_LL_5R_1R_5R_L + 2C_1C_5L_1L_5R_1R_5g_m\cdots\right.}$$

9.1019 X-INVALID-ORDER-1019 $Z(s) = \left(\frac{R_1\left(C_1L_1s^2+1\right)}{C_1L_1s^2+C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ \frac{L_5R_5s}{C_5L_5R_5s^2+L_5s+R_5},\ \frac{L_LR_Ls}{C_LL_LR_Ls^2+L_Ls+R_L}\right)$

$$H(s) = \frac{\cdots}{C_1C_5C_LL_1L_5L_LR_1R_5R_Ls^6 + R_1R_5R_L + s^5\left(2C_1C_5L_1L_5L_LR_1R_5R_Lg_m + C_1C_5L_1L_5L_LR_1R_5 + C_1C_5L_1L_5L_LR_5R_L + C_1C_LL_1L_5L_LR_1R_5R_Lg_m + C_1C_LL_1L_5L_LR_1R_L + C_1C_LL_1L_5L_LR_5R_L\right) + s^4\left(C_1C_5L_1L_5R_1R_5R_L + C_1C_5L_5L_LR_1R_5R_L + C_1C_LL_1L_LR_1R_5R\cdots\right.}$$

9.1020 X-INVALID-ORDER-1020 $Z(s) = \left(\frac{R_1\left(C_1L_1s^2+1\right)}{C_1L_1s^2+C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ \frac{L_5R_5s}{C_5L_5R_5s^2+L_5s+R_5},\ \frac{C_LL_LR_Ls^2+L_Ls+R_L}{C_LL_Ls^2+1}\right)$

$$H(s) = \frac{\cdots}{2R_1R_5R_Lg_m + R_1R_5 + R_5R_L + s^6\left(2C_1C_5C_LL_1L_5L_LR_1R_5R_Lg_m + C_1C_5C_LL_1L_5L_LR_1R_5 + C_1C_5C_LL_1L_5L_LR_5R_L\right) + s^5\left(C_1C_5C_LL_5L_LR_1R_5R_L + 2C_1C_5L_1L_5L_LR_1R_5g_m + C_1C_5L_1L_5L_LR_5 + C_1C_LL_1L_5L_LR_1R_5g_m + 2C_1C_LL_1L_5L_LR_1R_Lg_m + C_1C_LL_1L_5L_L\cdots\right.}$$

9.1021 X-INVALID-ORDER-1021 $Z(s) = \left(\frac{R_1\left(C_1L_1s^2+1\right)}{C_1L_1s^2+C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ \frac{L_5R_5s}{C_5L_5R_5s^2+L_5s+R_5},\ \frac{R_L\left(C_LL_Ls^2+1\right)}{C_LL_Ls^2+C_LR_Ls+1}\right)$

$$H(s) = \frac{\cdots}{2R_1R_5R_Lg_m + R_1R_5 + R_5R_L + s^6\left(2C_1C_5C_LL_1L_5L_LR_1R_5R_Lg_m + C_1C_5C_LL_1L_5L_LR_1R_5 + C_1C_5C_LL_1L_5L_LR_5R_L\right) + s^5\left(C_1C_5C_LL_1L_5R_1R_5R_L + C_1C_5C_LL_5L_LR_1R_5R_L + C_1C_LL_1L_5L_LR_1R_5g_m + 2C_1C_LL_1L_5L_LR_1R_Lg_m + C_1C_LL_1L_5L_LR_1 + C_1C_LL_1L_5L_L\cdots\right.}$$

9.1022 X-INVALID-ORDER-1022 $Z(s) = \left(\frac{R_1\left(C_1L_1s^2+1\right)}{C_1L_1s^2+C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ \frac{C_5L_5R_5s^2+L_5s+R_5}{C_5L_5s^2+1},\ R_L\right)$

$$H(s) = \frac{C_1L_1L_5R_1R_Lg_ms^3 + L_5R_1R_Lg_ms + R_1R_5R_Lg_m - R_1R_L + s^4\left(C_1C_5L_1L_5R_1R_5R_Lg_m - C_1C_5L_1L_5R_1R_L\right) + s^2\left(C_1L_1R_1R_5R_Lg_m - C_1L_1R_1R_L + C_5L_5\right.}{R_1R_5g_m + 2R_1R_Lg_m + R_1 + R_5 + R_L + s^4\left(C_1C_5L_1L_5R_1R_5g_m + 2C_1C_5L_1L_5R_1R_Lg_m + C_1C_5L_1L_5R_1 + C_1C_5L_1L_5R_5 + C_1C_5L_1L_5R_L\right) + s^3\left(C_1C_5L_5R_1R_5 + C_1C_5L_5R_1R_L + C_1L_1L_5R_1g_m + C_1L_1L_5\right) + s^2\left(C_1L_1R_1R_5g_m + 2C_1L_1R_1R_Lg_m + C_1L_1R_1 + C_1L_1\right.}$$

9.1023 X-INVALID-ORDER-1023 $Z(s) = \left(\frac{R_1\left(C_1L_1s^2+1\right)}{C_1L_1s^2+C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ \frac{C_5L_5R_5s^2+L_5s+R_5}{C_5L_5s^2+1},\ \frac{1}{C_Ls}\right)$

$$H(s) = \frac{C_1L_1L_5R_1g_ms^3 + L_5R_1g_ms + R_1R_5g_m - R_1 + s^4\left(C_1C_5L_1L_5R_1R_5g_m - C_1C_5L_1L_5R_1\right) + s^2\left(C_1L_1R_1R_5g_m - C_1L_1R_1 +\right.}{2R_1g_m + s^5\left(C_1C_5C_LL_1L_5R_1R_5g_m + C_1C_5C_LL_1L_5R_1 + C_1C_5C_LL_1L_5R_5\right) + s^4\left(C_1C_5C_LL_5R_1R_5 + 2C_1C_5L_1L_5R_1g_m + C_1C_5L_1L_5 + C_1C_LL_1L_5R_1g_m + C_1C_LL_1L_5\right) + s^3\left(C_1C_5L_5R_1 + C_1C_LL_1R_1R_5g_m + C_1C_LL_1R_1 + C_1C_LL_1R_5 + C_1C_LL_5R_1 + C_5C_LL_5R_1R_5\right.}$$

9.1024 X-INVALID-ORDER-1024 $Z(s) = \left(\frac{R_1\left(C_1L_1s^2+1\right)}{C_1L_1s^2+C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ \frac{C_5L_5R_5s^2+L_5s+R_5}{C_5L_5s^2+1},\ \frac{R_L}{C_LR_Ls+1}\right)$

$$H(s) = \frac{}{R_1R_5g_m + 2R_1R_Lg_m + R_1 + R_5 + R_L + s^5\left(C_1C_5C_LL_1L_5R_1R_5R_Lg_m + C_1C_5C_LL_1L_5R_1R_L + C_1C_5C_LL_1L_5R_5R_L\right) + s^4\left(C_1C_5C_LL_5R_1R_5R_L + C_1C_5L_1L_5R_1R_5g_m + 2C_1C_5L_1L_5R_1R_Lg_m + C_1C_5L_1L_5R_1 + C_1C_5L_1L_5R_5 + C_1C_5L_1L_5R_L + C_1C_LL_1L_5R_1R_Lg_m -\right.}$$

9.1025 X-INVALID-ORDER-1025 $Z(s) = \left(\frac{R_1\left(C_1L_1s^2+1\right)}{C_1L_1s^2+C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ \frac{C_5L_5R_5s^2+L_5s+R_5}{C_5L_5s^2+1},\ R_L + \frac{1}{C_Ls}\right)$

$$H(s) = \frac{R_1R_5g_m - R_1 + s^5\left(C_1C_5C_LL_1L_5R_1R_5R_Lg_m - C_1C_5C_LL_1L_5R_1R_L\right) + s^4\left(C_1C_5L_1L_5R_1R_5g_m - C_1C_5L_1L_5R_1 + C_1C_LL_1L_5R_1R_Lg_m\right) +}{2R_1g_m + s^5\left(C_1C_5C_LL_1L_5R_1R_5g_m + 2C_1C_5C_LL_1L_5R_1R_Lg_m + C_1C_5C_LL_1L_5R_1 + C_1C_5C_LL_1L_5R_5 + C_1C_5C_LL_1L_5R_L\right) + s^4\left(C_1C_5C_LL_5R_1R_5 + C_1C_5C_LL_5R_1R_L + 2C_1C_5L_1L_5R_1g_m + C_1C_5L_1L_5 + C_1C_LL_1L_5R_1g_m + C_1C_LL_1L_5\right) + s^3\left(C_1C_5L_5R_1 + C_1C_LL_1\right.}$$

9.1026 X-INVALID-ORDER-1026 $Z(s) = \left(\frac{R_1\left(C_1L_1s^2+1\right)}{C_1L_1s^2+C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ \frac{C_5L_5R_5s^2+L_5s+R_5}{C_5L_5s^2+1},\ L_Ls + \frac{1}{C_Ls}\right)$

$$H(s) = \frac{C_1C_LL_1L_5L_LR_1g_ms^5 + L_5R_1g_ms + R_1R_5g_m - R_1 + s^6\left(C_1C_5C_LL_1L_5L_LR_1R_5g_m - C_1C_5C_LL_1L_5L_LR_1\right) + s^4\left(C_1C_5L_1L_5R_1R_5g_m - \right.}{2R_1g_m + s^6\left(2C_1C_5C_LL_1L_5L_LR_1g_m + C_1C_5C_LL_1L_5L_L\right) + s^5\left(C_1C_5C_LL_1L_5R_1R_5g_m + C_1C_5C_LL_1L_5R_1 + C_1C_5C_LL_1L_5R_5 + C_1C_5C_LL_5L_LR_1\right) + s^4\left(C_1C_5C_LL_5R_1R_5 + 2C_1C_5L_1L_5R_1g_m + C_1C_5L_1L_5 + C_1C_LL_1L_5R_1g_m + C_1C_LL_1L_5 + 2C_1C_LL_1L_LR_1g_m + C\right.}$$

9.1027 X-INVALID-ORDER-1027 $Z(s) = \left(\frac{R_1\left(C_1L_1s^2+1\right)}{C_1L_1s^2+C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ \frac{C_5L_5R_5s^2+L_5s+R_5}{C_5L_5s^2+1},\ \frac{L_Ls}{C_LL_Ls^2+1}\right)$

$$H(s) = \frac{}{R_1R_5g_m + R_1 + R_5 + s^6\left(C_1C_5C_LL_1L_5L_LR_1R_5g_m + C_1C_5C_LL_1L_5L_LR_1 + C_1C_5C_LL_1L_5L_LR_5\right) + s^5\left(C_1C_5C_LL_5L_LR_1R_5 + 2C_1C_5L_1L_5L_LR_1g_m + C_1C_5L_1L_5L_L + C_1C_LL_1L_5L_LR_1g_m + C_1C_LL_1L_5L_L\right) + s^4\left(C_1C_5L_1L_5R_1R_5g_m + C_1C_5L_1L_5R_1 + C_1C_5L_1L_5R_5\right.}$$

9.1028 X-INVALID-ORDER-1028 $Z(s) = \left(\frac{R_1\left(C_1L_1s^2+1\right)}{C_1L_1s^2+C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ \frac{C_5L_5R_5s^2+L_5s+R_5}{C_5L_5s^2+1},\ L_Ls + R_L + \frac{1}{C_Ls}\right)$

$$H(s) = \frac{R_1R_5g_m - R_1 + s^6\left(C_1C_5C_LL_1L_5L_LR_1R_5g_m - C_1C_5C_LL_1L_5L_LR_1\right) + s^5\left(C_1C_5C_LL_1L_5R_1R_5R_Lg_m - C_1C_5C_LL_1L_5R_1R_L + C_1C_LL_1L_5L_LR_1g_m\right) +}{2R_1g_m + s^6\left(2C_1C_5C_LL_1L_5L_LR_1g_m + C_1C_5C_LL_1L_5L_L\right) + s^5\left(C_1C_5C_LL_1L_5R_1R_5g_m + 2C_1C_5C_LL_1L_5R_1R_Lg_m + C_1C_5C_LL_1L_5R_1 + C_1C_5C_LL_1L_5R_5 + C_1C_5C_LL_1L_5R_L + C_1C_5C_LL_5L_LR_1\right) + s^4\left(C_1C_5C_LL_5R_1R_5 + C_1C_5C_LL_5R_1R_L + 2C_1C_5L_1L_5R_1g_m + C_1C\right.}$$

9.1029 X-INVALID-ORDER-1029 $Z(s) = \left(\frac{R_1\left(C_1L_1s^2+1\right)}{C_1L_1s^2+C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ \frac{C_5L_5R_5s^2+L_5s+R_5}{C_5L_5s^2+1},\ \frac{L_LR_Ls}{C_LL_LR_Ls^2+L_Ls+R_L}\right)$

$$H(s) = \frac{}{R_1R_5R_Lg_m + R_1R_L + R_5R_L + s^6\left(C_1C_5C_LL_1L_5L_LR_1R_5R_Lg_m + C_1C_5C_LL_1L_5L_LR_1R_L + C_1C_5C_LL_1L_5L_LR_5R_L\right) + s^5\left(C_1C_5C_LL_5L_LR_1R_5R_L + C_1C_5L_1L_5L_LR_1R_5g_m + 2C_1C_5L_1L_5L_LR_1R_Lg_m + C_1C_5L_1L_5L_LR_1 + C_1C_5L_1L_5L_LR_5 + C_1C_5L_1L_5L_LR_L + C_1C\right.}$$

9.1030 X-INVALID-ORDER-1030 $Z(s) = \left(\frac{R_1\left(C_1L_1s^2+1\right)}{C_1L_1s^2+C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ \frac{C_5L_5R_5s^2+L_5s+R_5}{C_5L_5s^2+1},\ \frac{C_LL_LR_Ls^2+L_Ls+R_L}{C_LL_Ls^2+1}\right)$

$$H(s) = \frac{R}{R_1R_5g_m + 2R_1R_Lg_m + R_1 + R_5 + R_L + s^6\left(C_1C_5C_LL_1L_5L_LR_1R_5g_m + 2C_1C_5C_LL_1L_5L_LR_1R_Lg_m + C_1C_5C_LL_1L_5L_LR_1 + C_1C_5C_LL_1L_5L_LR_5 + C_1C_5C_LL_1L_5L_LR_L\right) + s^5\left(C_1C_5C_LL_5L_LR_1R_5 + C_1C_5C_LL_5L_LR_1R_L + 2C_1C_5L_1L_5L_LR_1g_m + C_1C_5L_1L_5L_L + C\right.}$$

9.1031 X-INVALID-ORDER-1031 $Z(s) = \left(\frac{R_1\left(C_1L_1s^2+1\right)}{C_1L_1s^2+C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ \frac{C_5L_5R_5s^2+L_5s+R_5}{C_5L_5s^2+1},\ \frac{R_L\left(C_LL_Ls^2+1\right)}{C_LL_Ls^2+C_LR_Ls+1}\right)$

$$H(s) = \frac{\text{[illegible]}}{R_1R_5g_m + 2R_1R_Lg_m + R_1 + R_5 + R_L + s^6\left(C_1C_5C_LL_1L_5L_LR_1R_5g_m + 2C_1C_5C_LL_1L_5L_LR_1R_Lg_m + C_1C_5C_LL_1L_5L_LR_1 + C_1C_5C_LL_1L_5L_LR_5 + C_1C_5C_LL_1L_5L_LR_L\right) + s^5\left(C_1C_5C_LL_1L_5R_1R_5R_Lg_m + C_1C_5C_LL_1L_5R_1R_L + C_1C_5C_LL_1L_5R_5R_L + C_1C_5C_LL_5L_L\right.}$$

9.1032 X-INVALID-ORDER-1032 $Z(s) = \left(\frac{R_1\left(C_1L_1s^2+1\right)}{C_1L_1s^2+C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ \frac{R_5\left(C_5L_5s^2+1\right)}{C_5L_5s^2+C_5R_5s+1},\ R_L\right)$

$$H(s) = \frac{-C_1C_5L_1R_1R_5R_Ls^3 - C_5R_1R_5R_Ls + R_1R_5R_Lg_m - R_1R_L + s^4\left(C_1C_5L_1L_5R_1R_5R_Lg_m - C_1C_5L_1L_5R_1R_L\right) + s^2\left(C_1L_1R_1\right.}{R_1R_5g_m + 2R_1R_Lg_m + R_1 + R_5 + R_L + s^4\left(C_1C_5L_1L_5R_1R_5g_m + 2C_1C_5L_1L_5R_1R_Lg_m + C_1C_5L_1L_5R_1 + C_1C_5L_1L_5R_5 + C_1C_5L_1L_5R_L\right) + s^3\left(2C_1C_5L_1R_1R_5R_Lg_m + C_1C_5L_1R_1R_5 + C_1C_5L_1R_5R_L + C_1C_5L_5R_1R_5 + C_1C_5L_5R_1R_L\right) + s^2\left(C_1C_5R_1R_5R_L + C_1L_1\right.}$$

9.1033 X-INVALID-ORDER-1033 $Z(s) = \left(\frac{R_1\left(C_1L_1s^2+1\right)}{C_1L_1s^2+C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ \frac{R_5\left(C_5L_5s^2+1\right)}{C_5L_5s^2+C_5R_5s+1},\ \frac{1}{C_Ls}\right)$

$$H(s) = \frac{-C_1C_5L_1R_1R_5s^3 - C_5R_1R_5s + R_1R_5g_m - R_1 + s^4\left(C_1C_5L_1L_5R_1R_5g_m - C_1C_5L_1L_5R_1\right) + s^2\left(C_1L_1R_1\right.}{2R_1g_m + s^5\left(C_1C_5C_LL_1L_5R_1R_5g_m + C_1C_5C_LL_1L_5R_1 + C_1C_5C_LL_1L_5R_5\right) + s^4\left(C_1C_5C_LL_1R_1R_5 + C_1C_5C_LL_5R_1R_5 + 2C_1C_5L_1L_5R_1g_m + C_1C_5L_1L_5\right) + s^3\left(2C_1C_5L_1R_1R_5g_m + C_1C_5L_1R_5 + C_1C_5L_5R_1 + C_1C_LL_1R_1R_5g_m + C_1C_LL_1R_1 + C_1C_LL_1R_5 + C_5C_LL\right.}$$

9.1034 X-INVALID-ORDER-1034 $Z(s) = \left(\frac{R_1\left(C_1L_1s^2+1\right)}{C_1L_1s^2+C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ \frac{R_5\left(C_5L_5s^2+1\right)}{C_5L_5s^2+C_5R_5s+1},\ \frac{R_L}{C_LR_Ls+1}\right)$

$$H(s) = \frac{\text{[illegible]}}{R_1R_5g_m + 2R_1R_Lg_m + R_1 + R_5 + R_L + s^5\left(C_1C_5C_LL_1L_5R_1R_5R_Lg_m + C_1C_5C_LL_1L_5R_1R_L + C_1C_5C_LL_1L_5R_5R_L\right) + s^4\left(C_1C_5C_LL_1R_1R_5R_L + C_1C_5C_LL_5R_1R_5R_L + C_1C_5L_1L_5R_1R_5g_m + 2C_1C_5L_1L_5R_1R_Lg_m + C_1C_5L_1L_5R_1 + C_1C_5L_1L_5R_5 + C_1C_5L_1L_5R_L\right)}$$

9.1035 X-INVALID-ORDER-1035 $Z(s) = \left(\frac{R_1\left(C_1L_1s^2+1\right)}{C_1L_1s^2+C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ \frac{R_5\left(C_5L_5s^2+1\right)}{C_5L_5s^2+C_5R_5s+1},\ R_L + \frac{1}{C_Ls}\right)$

$$H(s) = \frac{R_1R_5g_m - R_1 + s^5\left(C_1C_5C_LL_1L_5R_1R_5R_Lg_m - C_1C_5C_LL_1L_5R_1R_L\right)}{2R_1g_m + s^5\left(C_1C_5C_LL_1L_5R_1R_5g_m + 2C_1C_5C_LL_1L_5R_1R_Lg_m + C_1C_5C_LL_1L_5R_1 + C_1C_5C_LL_1L_5R_5 + C_1C_5C_LL_1L_5R_L\right) + s^4\left(2C_1C_5C_LL_1R_1R_5R_Lg_m + C_1C_5C_LL_1R_1R_5 + C_1C_5C_LL_1R_5R_L + C_1C_5C_LL_5R_1R_5 + C_1C_5C_LL_5R_1R_L + 2C_1C_5L_1L_5R_1g_m + C_1C_5L_1\right.}$$

9.1036 X-INVALID-ORDER-1036 $Z(s) = \left(\frac{R_1\left(C_1L_1s^2+1\right)}{C_1L_1s^2+C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ \frac{R_5\left(C_5L_5s^2+1\right)}{C_5L_5s^2+C_5R_5s+1},\ L_Ls + \frac{1}{C_Ls}\right)$

$$H(s) = \frac{-C_1C_5C_LL_1L_LR_1R_5s^5 - C_5R_1R_5s + R_1R_5g_m - R_1 + s^6\left(C_1C_5C_L\right.}{2R_1g_m + s^6\left(2C_1C_5C_LL_1L_5L_LR_1g_m + C_1C_5C_LL_1L_5L_L\right) + s^5\left(C_1C_5C_LL_1L_5R_1R_5g_m + C_1C_5C_LL_1L_5R_1 + C_1C_5C_LL_1L_5R_5 + 2C_1C_5C_LL_1L_LR_1R_5g_m + C_1C_5C_LL_1L_LR_5 + C_1C_5C_LL_5L_LR_1\right) + s^4\left(C_1C_5C_LL_1R_1R_5 + C_1C_5C_LL_5R_1R_5 + C_1C_5C_LL_LR_1R_5 + 2C_1C\right.}$$

9.1037 X-INVALID-ORDER-1037 $Z(s) = \left(\frac{R_1\left(C_1L_1s^2+1\right)}{C_1L_1s^2+C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ \frac{R_5\left(C_5L_5s^2+1\right)}{C_5L_5s^2+C_5R_5s+1},\ \frac{L_Ls}{C_LL_Ls^2+1}\right)$

$$H(s) = \frac{\text{[illegible]}}{R_1R_5g_m + R_1 + R_5 + s^6\left(C_1C_5C_LL_1L_5L_LR_1R_5g_m + C_1C_5C_LL_1L_5L_LR_1 + C_1C_5C_LL_1L_5L_LR_5\right) + s^5\left(C_1C_5C_LL_1L_LR_1R_5 + C_1C_5C_LL_5L_LR_1R_5 + 2C_1C_5L_1L_5L_LR_1g_m + C_1C_5L_1L_5L_L\right) + s^4\left(C_1C_5L_1L_5R_1R_5g_m + C_1C_5L_1L_5R_1 + C_1C_5L_1L_5R_5 + 2C_1C_5L_1L_LR\right.}$$

9.1038 X-INVALID-ORDER-1038 $Z(s) = \left(\frac{R_1\left(C_1L_1s^2+1\right)}{C_1L_1s^2+C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ \frac{R_5\left(C_5L_5s^2+1\right)}{C_5L_5s^2+C_5R_5s+1},\ L_Ls + R_L + \frac{1}{C_Ls}\right)$

$$H(s) = \frac{R_1R_5g_m - R_1 + s^6\left(C_1C_5C_LL_1\right.}{2R_1g_m + s^6\left(2C_1C_5C_LL_1L_5L_LR_1g_m + C_1C_5C_LL_1L_5L_L\right) + s^5\left(C_1C_5C_LL_1L_5R_1R_5g_m + 2C_1C_5C_LL_1L_5R_1R_Lg_m + C_1C_5C_LL_1L_5R_1 + C_1C_5C_LL_1L_5R_5 + C_1C_5C_LL_1L_5R_L + 2C_1C_5C_LL_1L_LR_1R_5g_m + C_1C_5C_LL_1L_LR_5 + C_1C_5C_LL_5L_LR_1\right) + s^4\left(2C_1C_5C_LL_1R_1R_5\right.}$$

9.1039 X-INVALID-ORDER-1039 $Z(s) = \left(\frac{R_1\left(C_1L_1s^2+1\right)}{C_1L_1s^2+C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ \frac{R_5\left(C_5L_5s^2+1\right)}{C_5L_5s^2+C_5R_5s+1},\ \frac{L_LR_Ls}{C_LL_LR_Ls^2+L_Ls+R_L}\right)$

$$H(s) = \frac{\text{[illegible]}}{R_1R_5R_Lg_m + R_1R_L + R_5R_L + s^6\left(C_1C_5C_LL_1L_5L_LR_1R_5R_Lg_m + C_1C_5C_LL_1L_5L_LR_1R_L + C_1C_5C_LL_1L_5L_LR_5R_L\right) + s^5\left(C_1C_5C_LL_1L_LR_1R_5R_L + C_1C_5C_LL_5L_LR_1R_5R_L + C_1C_5L_1L_5L_LR_1R_5g_m + 2C_1C_5L_1L_5L_LR_1R_Lg_m + C_1C_5L_1L_5L_LR_1 + C_1C_5L_1L_5L_LR_5\right.}$$

9.1040 X-INVALID-ORDER-1040 $Z(s) = \left(\frac{R_1\left(C_1L_1s^2+1\right)}{C_1L_1s^2+C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ \frac{R_5\left(C_5L_5s^2+1\right)}{C_5L_5s^2+C_5R_5s+1},\ \frac{C_LL_LR_Ls^2+L_Ls+R_L}{C_LL_Ls^2+1}\right)$

$$H(s) = \frac{R_1R_5g_m + 2R_1R_Lg_m + R_1 + R_5 + R_L + s^6\left(C_1C_5C_LL_1L_5L_LR_1R_5g_m + 2C_1C_5C_LL_1L_5L_LR_1R_Lg_m + C_1C_5C_LL_1L_5L_LR_1 + C_1C_5C_LL_1L_5L_LR_5 + C_1C_5C_LL_1L_5L_LR_L\right) + s^5\left(2C_1C_5C_LL_1L_LR_1R_5R_Lg_m + C_1C_5C_LL_1L_LR_1R_5 + C_1C_5C_LL_1L_LR_5R_L + C_1C_5C_LL_1L\right.}{}$$

9.1041 X-INVALID-ORDER-1041 $Z(s) = \left(\frac{R_1\left(C_1L_1s^2+1\right)}{C_1L_1s^2+C_1R_1s+1},\ \infty,\ \infty,\ \infty,\ \frac{R_5\left(C_5L_5s^2+1\right)}{C_5L_5s^2+C_5R_5s+1},\ \frac{R_L\left(C_LL_Ls^2+1\right)}{C_LL_Ls^2+C_LR_Ls+1}\right)$

$$H(s) = \frac{R_1R_5g_m + 2R_1R_Lg_m + R_1 + R_5 + R_L + s^6\left(C_1C_5C_LL_1L_5L_LR_1R_5g_m + 2C_1C_5C_LL_1L_5L_LR_1R_Lg_m + C_1C_5C_LL_1L_5L_LR_1 + C_1C_5C_LL_1L_5L_LR_5 + C_1C_5C_LL_1L_5L_LR_L\right) + s^5\left(C_1C_5C_LL_1L_5R_1R_5R_Lg_m + C_1C_5C_LL_1L_5R_1R_L + C_1C_5C_LL_1L_5R_5R_L + 2C_1C_5C_LL_1L\right.}{}$$

10 X-INVALID-WZ

10.1 X-INVALID-WZ-1 $Z(s) = \left(R_1,\ \infty,\ \infty,\ \infty,\ \frac{R_5}{C_5R_5s+1},\ R_L + \frac{1}{C_Ls}\right)$

$$H(s) = \frac{-C_5C_LR_1R_5R_Ls^2 + R_1R_5g_m - R_1 + s\left(-C_5R_1R_5 + C_LR_1R_5R_Lg_m - C_LR_1R_L\right)}{2R_1g_m + s^2\left(2C_5C_LR_1R_5R_Lg_m + C_5C_LR_1R_5 + C_5C_LR_5R_L\right) + s\left(2C_5R_1R_5g_m + C_5R_5 + C_LR_1R_5g_m + 2C_LR_1R_Lg_m + C_LR_1 + C_LR_5 + C_LR_L\right) + 1}$$

Parameters:

Q: $\frac{2\sqrt{C_5}\sqrt{C_L}R_1\sqrt{R_5}R_Lg_m\sqrt{\frac{2R_1g_m}{2R_1R_Lg_m+R_1+R_L}+\frac{1}{2R_1R_Lg_m+R_1+R_L}}+\sqrt{C_5}\sqrt{C_L}R_1\sqrt{R_5}\sqrt{\frac{2R_1g_m}{2R_1R_Lg_m+R_1+R_L}+\frac{1}{2R_1R_Lg_m+R_1+R_L}}+\sqrt{C_5}\sqrt{C_L}\sqrt{R_5}R_L\sqrt{\frac{2R_1g_m}{2R_1R_Lg_m+R_1+R_L}+\frac{1}{2R_1R_Lg_m+R_1+R_L}}}{2C_5R_1R_5g_m+C_5R_5+C_LR_1R_5g_m+2C_LR_1R_Lg_m+C_LR_1+C_LR_5+C_LR_L}$

wo: $\sqrt{\frac{2R_1g_m+1}{2C_5C_LR_1R_5R_Lg_m+C_5C_LR_1R_5+C_5C_LR_5R_L}}$

bandwidth: $\frac{\sqrt{\frac{2R_1g_m+1}{2C_5C_LR_1R_5R_Lg_m+C_5C_LR_1R_5+C_5C_LR_5R_L}}\left(2C_5R_1R_5g_m+C_5R_5+C_LR_1R_5g_m+2C_LR_1R_Lg_m+C_LR_1+C_LR_5+C_LR_L\right)}{2\sqrt{C_5}\sqrt{C_L}R_1\sqrt{R_5}R_Lg_m\sqrt{\frac{2R_1g_m}{2R_1R_Lg_m+R_1+R_L}+\frac{1}{2R_1R_Lg_m+R_1+R_L}}+\sqrt{C_5}\sqrt{C_L}R_1\sqrt{R_5}\sqrt{\frac{2R_1g_m}{2R_1R_Lg_m+R_1+R_L}+\frac{1}{2R_1R_Lg_m+R_1+R_L}}+\sqrt{C_5}\sqrt{C_L}\sqrt{R_5}R_L\sqrt{\frac{2R_1g_m}{2R_1R_Lg_m+R_1+R_L}+\frac{1}{2R_1R_Lg_m+R_1+R_L}}}$

K-LP: $\frac{R_1R_5g_m-R_1}{2R_1g_m+1}$

K-HP: $-\frac{R_1R_L}{2R_1R_Lg_m+R_1+R_L}$

K-BP: $\frac{-C_5R_1R_5+C_LR_1R_5R_Lg_m-C_LR_1R_L}{2C_5R_1R_5g_m+C_5R_5+C_LR_1R_5g_m+2C_LR_1R_Lg_m+C_LR_1+C_LR_5+C_LR_L}$

Qz: None

Wz: $\frac{\sqrt{-R_5g_m+1}}{\sqrt{C_5}\sqrt{C_L}\sqrt{R_5}\sqrt{R_L}}$

10.2 X-INVALID-WZ-2 $Z(s) = \left(L_1s,\ \infty,\ \infty,\ \infty,\ \frac{1}{C_5s},\ R_L + \frac{1}{C_Ls}\right)$

$$H(s) = \frac{-C_5C_LL_1R_Ls^2 + L_1g_m + s\left(-C_5L_1 + C_LL_1R_Lg_m\right)}{C_5 + C_L + s^2\left(2C_5C_LL_1R_Lg_m + C_5C_LL_1\right) + s\left(C_5C_LR_L + 2C_5L_1g_m + C_LL_1g_m\right)}$$

Parameters:

Q: $\frac{2\sqrt{C_5}\sqrt{C_L}\sqrt{L_1}R_Lg_m\sqrt{C_5+C_L}\sqrt{\frac{1}{2R_Lg_m+1}}+\sqrt{C_5}\sqrt{C_L}\sqrt{L_1}\sqrt{C_5+C_L}\sqrt{\frac{1}{2R_Lg_m+1}}}{C_5C_LR_L+2C_5L_1g_m+C_LL_1g_m}$

wo: $\sqrt{C_5+C_L}\sqrt{\frac{1}{2C_5C_LL_1R_Lg_m+C_5C_LL_1}}$

bandwidth: $\frac{\sqrt{C_5+C_L}\left(C_5C_LR_L+2C_5L_1g_m+C_LL_1g_m\right)\sqrt{\frac{1}{2C_5C_LL_1R_Lg_m+C_5C_LL_1}}}{2\sqrt{C_5}\sqrt{C_L}\sqrt{L_1}R_Lg_m\sqrt{C_5+C_L}\sqrt{\frac{1}{2R_Lg_m+1}}+\sqrt{C_5}\sqrt{C_L}\sqrt{L_1}\sqrt{C_5+C_L}\sqrt{\frac{1}{2R_Lg_m+1}}}$

K-LP: $\frac{L_1g_m}{C_5+C_L}$

K-HP: $-\frac{R_L}{2R_Lg_m+1}$

K-BP: $\frac{-C_5L_1+C_LL_1R_Lg_m}{C_5C_LR_L+2C_5L_1g_m+C_LL_1g_m}$

Qz: None

Wz: $\frac{\sqrt{-g_m}}{\sqrt{C_5}\sqrt{C_L}\sqrt{R_L}}$

10.3 X-INVALID-WZ-3 $Z(s) = \left(L_1 s,\ \infty,\ \infty,\ \infty,\ R_5 + \frac{1}{C_5 s},\ R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{L_1 g_m + s^2 \left(C_5 C_L L_1 R_5 R_L g_m - C_5 C_L L_1 R_L\right) + s \left(C_5 L_1 R_5 g_m - C_5 L_1 + C_L L_1 R_L g_m\right)}{C_5 + C_L + s^2 \left(C_5 C_L L_1 R_5 g_m + 2 C_5 C_L L_1 R_L g_m + C_5 C_L L_1\right) + s \left(C_5 C_L R_5 + C_5 C_L R_L + 2 C_5 L_1 g_m + C_L L_1 g_m\right)}$$

Parameters:

Q: $\frac{\sqrt{C_5}\sqrt{C_L}\sqrt{L_1}R_5 g_m\sqrt{C_5+C_L}\sqrt{\frac{1}{R_5 g_m+2R_L g_m+1}}+2\sqrt{C_5}\sqrt{C_L}\sqrt{L_1}R_L g_m\sqrt{C_5+C_L}\sqrt{\frac{1}{R_5 g_m+2R_L g_m+1}}+\sqrt{C_5}\sqrt{C_L}\sqrt{L_1}\sqrt{C_5+C_L}\sqrt{\frac{1}{R_5 g_m+2R_L g_m+1}}}{C_5C_LR_5+C_5C_LR_L+2C_5L_1g_m+C_LL_1g_m}$

wo: $\sqrt{C_5+C_L}\sqrt{\frac{1}{C_5C_LL_1R_5g_m+2C_5C_LL_1R_Lg_m+C_5C_LL_1}}$

bandwidth: $\frac{\sqrt{C_5+C_L}(C_5C_LR_5+C_5C_LR_L+2C_5L_1g_m+C_LL_1g_m)\sqrt{\frac{1}{C_5C_LL_1R_5g_m+2C_5C_LL_1R_Lg_m+C_5C_LL_1}}}{\sqrt{C_5}\sqrt{C_L}\sqrt{L_1}R_5g_m\sqrt{C_5+C_L}\sqrt{\frac{1}{R_5g_m+2R_Lg_m+1}}+2\sqrt{C_5}\sqrt{C_L}\sqrt{L_1}R_Lg_m\sqrt{C_5+C_L}\sqrt{\frac{1}{R_5g_m+2R_Lg_m+1}}+\sqrt{C_5}\sqrt{C_L}\sqrt{L_1}\sqrt{C_5+C_L}\sqrt{\frac{1}{R_5g_m+2R_Lg_m+1}}}$

K-LP: $\frac{L_1g_m}{C_5+C_L}$

K-HP: $\frac{R_5R_Lg_m-R_L}{R_5g_m+2R_Lg_m+1}$

K-BP: $\frac{C_5L_1R_5g_m-C_5L_1+C_LL_1R_Lg_m}{C_5C_LR_5+C_5C_LR_L+2C_5L_1g_m+C_LL_1g_m}$

Qz: None

Wz: $\sqrt{\frac{g_m}{C_5C_LR_5R_Lg_m-C_5C_LR_L}}$

10.4 X-INVALID-WZ-4 $Z(s) = \left(R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ R_5,\ R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{R_5 g_m + s^2 \left(C_1 C_L R_1 R_5 R_L g_m - C_1 C_L R_1 R_L\right) + s \left(C_1 R_1 R_5 g_m - C_1 R_1 + C_L R_5 R_L g_m - C_L R_L\right) - 1}{2 g_m + s^2 \left(C_1 C_L R_1 R_5 g_m + 2 C_1 C_L R_1 R_L g_m + C_1 C_L R_1 + C_1 C_L R_5 + C_1 C_L R_L\right) + s \left(2 C_1 R_1 g_m + C_1 + C_L R_5 g_m + 2 C_L R_L g_m + C_L\right)}$$

Parameters:

Q: $\frac{\sqrt{2}\sqrt{C_1}\sqrt{C_L}R_1R_5g_m\sqrt{\frac{g_m}{R_1R_5g_m+2R_1R_Lg_m+R_1+R_5+R_L}}+2\sqrt{2}\sqrt{C_1}\sqrt{C_L}R_1R_Lg_m\sqrt{\frac{g_m}{R_1R_5g_m+2R_1R_Lg_m+R_1+R_5+R_L}}+\sqrt{2}\sqrt{C_1}\sqrt{C_L}R_1\sqrt{\frac{g_m}{R_1R_5g_m+2R_1R_Lg_m+R_1+R_5+R_L}}+\sqrt{2}\sqrt{C_1}\sqrt{C_L}R_5\sqrt{\frac{g_m}{R_1R_5g_m+2R_1R_Lg_m+R_1+R_5+R_L}}+\sqrt{2}\sqrt{C_1}\sqrt{C_L}R_L\sqrt{\frac{g_m}{R_1R_5g_m+2R_1R_Lg_m+R_1+R_5+R_L}}}{2C_1R_1g_m+C_1+C_LR_5g_m+2C_LR_Lg_m+C_L}$

wo: $\sqrt{2}\sqrt{\frac{g_m}{C_1C_LR_1R_5g_m+2C_1C_LR_1R_Lg_m+C_1C_LR_1+C_1C_LR_5+C_1C_LR_L}}$

bandwidth: $\frac{\sqrt{2}\sqrt{\frac{g_m}{C_1C_LR_1R_5g_m+2C_1C_LR_1R_Lg_m+C_1C_LR_1+C_1C_LR_5+C_1C_LR_L}}(2C_1R_1g_m+C_1+C_LR_5g_m+2C_LR_Lg_m+C_L)}{\sqrt{2}\sqrt{C_1}\sqrt{C_L}R_1R_5g_m\sqrt{\frac{g_m}{R_1R_5g_m+2R_1R_Lg_m+R_1+R_5+R_L}}+2\sqrt{2}\sqrt{C_1}\sqrt{C_L}R_1R_Lg_m\sqrt{\frac{g_m}{R_1R_5g_m+2R_1R_Lg_m+R_1+R_5+R_L}}+\sqrt{2}\sqrt{C_1}\sqrt{C_L}R_1\sqrt{\frac{g_m}{R_1R_5g_m+2R_1R_Lg_m+R_1+R_5+R_L}}+\sqrt{2}\sqrt{C_1}\sqrt{C_L}R_5\sqrt{\frac{g_m}{R_1R_5g_m+2R_1R_Lg_m+R_1+R_5+R_L}}+\sqrt{2}\sqrt{C_1}\sqrt{C_L}R_L\sqrt{\frac{g_m}{R_1R_5g_m+2R_1R_Lg_m+R_1+R_5+R_L}}}$

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

K-HP: $\frac{R_1R_5R_Lg_m-R_1R_L}{R_1R_5g_m+2R_1R_Lg_m+R_1+R_5+R_L}$

K-BP: $\frac{C_1R_1R_5g_m-C_1R_1+C_LR_5R_Lg_m-C_LR_L}{2C_1R_1g_m+C_1+C_LR_5g_m+2C_LR_Lg_m+C_L}$

Qz: None

Wz: $\frac{1}{\sqrt{C_1}\sqrt{C_L}\sqrt{R_1}\sqrt{R_L}}$

10.5 X-INVALID-WZ-5 $Z(s) = \left(R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{1}{C_5 s},\ R_L\right)$

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

Parameters:

Q: $\frac{2\sqrt{C_1}\sqrt{C_5}R_1R_Lg_m\sqrt{\frac{g_m}{2R_1R_Lg_m+R_1+R_L}}+\sqrt{C_1}\sqrt{C_5}R_1\sqrt{\frac{g_m}{2R_1R_Lg_m+R_1+R_L}}+\sqrt{C_1}\sqrt{C_5}R_L\sqrt{\frac{g_m}{2R_1R_Lg_m+R_1+R_L}}}{C_1R_1g_m+C_1+2C_5R_Lg_m+C_5}$

wo: $\sqrt{\frac{g_m}{2C_1C_5R_1R_Lg_m+C_1C_5R_1+C_1C_5R_L}}$

bandwidth: $\frac{\sqrt{\frac{g_m}{2C_1C_5R_1R_Lg_m+C_1C_5R_1+C_1C_5R_L}}(C_1R_1g_m+C_1+2C_5R_Lg_m+C_5)}{2\sqrt{C_1}\sqrt{C_5}R_1R_Lg_m\sqrt{\frac{g_m}{2R_1R_Lg_m+R_1+R_L}}+\sqrt{C_1}\sqrt{C_5}R_1\sqrt{\frac{g_m}{2R_1R_Lg_m+R_1+R_L}}+\sqrt{C_1}\sqrt{C_5}R_L\sqrt{\frac{g_m}{2R_1R_Lg_m+R_1+R_L}}}$

K-LP: R_L

K-HP: $-\frac{R_1R_L}{2R_1R_Lg_m+R_1+R_L}$

K-BP: $\frac{C_1R_1R_Lg_m-C_5R_L}{C_1R_1g_m+C_1+2C_5R_Lg_m+C_5}$

Qz: None

Wz: $\frac{\sqrt{-g_m}}{\sqrt{C_1}\sqrt{C_5}\sqrt{R_1}}$

10.6 X-INVALID-WZ-6 $Z(s) = \left(R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ \frac{R_5}{C_5 R_5 s+1},\ R_L\right)$

$$H(s) = \frac{-C_1C_5R_1R_5R_Ls^2 + R_5R_Lg_m - R_L + s\left(C_1R_1R_5R_Lg_m - C_1R_1R_L - C_5R_5R_L\right)}{R_5g_m + 2R_Lg_m + s^2\left(2C_1C_5R_1R_5R_Lg_m + C_1C_5R_1R_5 + C_1C_5R_5R_L\right) + s\left(C_1R_1R_5g_m + 2C_1R_1R_Lg_m + C_1R_1 + C_1R_5 + C_1R_L + 2C_5R_5R_Lg_m + C_5R_5\right) + 1}$$

Parameters:

Q: $\frac{2\sqrt{C_1}\sqrt{C_5}R_1\sqrt{R_5}R_Lg_m\sqrt{\frac{R_5g_m}{2R_1R_Lg_m+R_1+R_L}+\frac{2R_Lg_m}{2R_1R_Lg_m+R_1+R_L}+\frac{1}{2R_1R_Lg_m+R_1+R_L}}+\sqrt{C_1}\sqrt{C_5}R_1\sqrt{R_5}\sqrt{\frac{R_5g_m}{2R_1R_Lg_m+R_1+R_L}+\frac{2R_Lg_m}{2R_1R_Lg_m+R_1+R_L}+\frac{1}{2R_1R_Lg_m+R_1+R_L}}+\sqrt{C_1}\sqrt{C_5}\sqrt{R_5}R_L\sqrt{\frac{R_5g_m}{2R_1R_Lg_m+R_1+R_L}+\frac{2R_Lg_m}{2R_1R_Lg_m+R_1+R_L}+\frac{1}{2R_1R_Lg_m+R_1+R_L}}}{C_1R_1R_5g_m+2C_1R_1R_Lg_m+C_1R_1+C_1R_5+C_1R_L+2C_5R_5R_Lg_m+C_5R_5}$

wo: $\sqrt{\frac{R_5g_m+2R_Lg_m+1}{2C_1C_5R_1R_5R_Lg_m+C_1C_5R_1R_5+C_1C_5R_5R_L}}$

bandwidth: $\frac{\sqrt{\frac{R_5g_m+2R_Lg_m+1}{2C_1C_5R_1R_5R_Lg_m+C_1C_5R_1R_5+C_1C_5R_5R_L}}\left(C_1R_1R_5g_m+2C_1R_1R_Lg_m+C_1R_1+C_1R_5+C_1R_L+2C_5R_5R_Lg_m+C_5R_5\right)}{2\sqrt{C_1}\sqrt{C_5}R_1\sqrt{R_5}R_Lg_m\sqrt{\frac{R_5g_m}{2R_1R_Lg_m+R_1+R_L}+\frac{2R_Lg_m}{2R_1R_Lg_m+R_1+R_L}+\frac{1}{2R_1R_Lg_m+R_1+R_L}}+\sqrt{C_1}\sqrt{C_5}R_1\sqrt{R_5}\sqrt{\frac{R_5g_m}{2R_1R_Lg_m+R_1+R_L}+\frac{2R_Lg_m}{2R_1R_Lg_m+R_1+R_L}+\frac{1}{2R_1R_Lg_m+R_1+R_L}}+\sqrt{C_1}\sqrt{C_5}\sqrt{R_5}R_L\sqrt{\frac{R_5g_m}{2R_1R_Lg_m+R_1+R_L}+\frac{2R_Lg_m}{2R_1R_Lg_m+R_1+R_L}+\frac{1}{2R_1R_Lg_m+R_1+R_L}}}$

K-LP: $\frac{R_5R_Lg_m-R_L}{R_5g_m+2R_Lg_m+1}$

K-HP: $-\frac{R_1R_L}{2R_1R_Lg_m+R_1+R_L}$

K-BP: $\frac{C_1R_1R_5R_Lg_m-C_1R_1R_L-C_5R_5R_L}{C_1R_1R_5g_m+2C_1R_1R_Lg_m+C_1R_1+C_1R_5+C_1R_L+2C_5R_5R_Lg_m+C_5R_5}$

Qz: None

Wz: $\frac{\sqrt{-R_5g_m+1}}{\sqrt{C_1}\sqrt{C_5}\sqrt{R_1}\sqrt{R_5}}$

10.7 X-INVALID-WZ-7 $Z(s) = \left(R_1 + \frac{1}{C_1 s},\ \infty,\ \infty,\ \infty,\ R_5 + \frac{1}{C_5 s},\ R_L\right)$

$$H(s) = \frac{R_Lg_m + s^2\left(C_1C_5R_1R_5R_Lg_m - C_1C_5R_1R_L\right) + s\left(C_1R_1R_Lg_m + C_5R_5R_Lg_m - C_5R_L\right)}{g_m + s^2\left(C_1C_5R_1R_5g_m + 2C_1C_5R_1R_Lg_m + C_1C_5R_1 + C_1C_5R_5 + C_1C_5R_L\right) + s\left(C_1R_1g_m + C_1 + C_5R_5g_m + 2C_5R_Lg_m + C_5\right)}$$

Parameters:

Q: $\frac{\sqrt{C_1}\sqrt{C_5}R_1R_5g_m\sqrt{\frac{g_m}{R_1R_5g_m+2R_1R_Lg_m+R_1+R_5+R_L}}+2\sqrt{C_1}\sqrt{C_5}R_1R_Lg_m\sqrt{\frac{g_m}{R_1R_5g_m+2R_1R_Lg_m+R_1+R_5+R_L}}+\sqrt{C_1}\sqrt{C_5}R_1\sqrt{\frac{g_m}{R_1R_5g_m+2R_1R_Lg_m+R_1+R_5+R_L}}+\sqrt{C_1}\sqrt{C_5}R_5\sqrt{\frac{g_m}{R_1R_5g_m+2R_1R_Lg_m+R_1+R_5+R_L}}+\sqrt{C_1}\sqrt{C_5}R_L\sqrt{\frac{g_m}{R_1R_5g_m+2R_1R_Lg_m+R_1+R_5+R_L}}}{C_1R_1g_m+C_1+C_5R_5g_m+2C_5R_Lg_m+C_5}$

wo: $\sqrt{\frac{g_m}{C_1C_5R_1R_5g_m+2C_1C_5R_1R_Lg_m+C_1C_5R_1+C_1C_5R_5+C_1C_5R_L}}$

bandwidth: $\frac{\sqrt{\frac{g_m}{C_1C_5R_1R_5g_m+2C_1C_5R_1R_Lg_m+C_1C_5R_1+C_1C_5R_5+C_1C_5R_L}}\left(C_1R_1g_m+C_1+C_5R_5g_m+2C_5R_Lg_m+C_5\right)}{\sqrt{C_1}\sqrt{C_5}R_1R_5g_m\sqrt{\frac{g_m}{R_1R_5g_m+2R_1R_Lg_m+R_1+R_5+R_L}}+2\sqrt{C_1}\sqrt{C_5}R_1R_Lg_m\sqrt{\frac{g_m}{R_1R_5g_m+2R_1R_Lg_m+R_1+R_5+R_L}}+\sqrt{C_1}\sqrt{C_5}R_1\sqrt{\frac{g_m}{R_1R_5g_m+2R_1R_Lg_m+R_1+R_5+R_L}}+\sqrt{C_1}\sqrt{C_5}R_5\sqrt{\frac{g_m}{R_1R_5g_m+2R_1R_Lg_m+R_1+R_5+R_L}}+\sqrt{C_1}\sqrt{C_5}R_L\sqrt{\frac{g_m}{R_1R_5g_m+2R_1R_Lg_m+R_1+R_5+R_L}}}$

K-LP: R_L

K-HP: $\frac{R_1R_5R_Lg_m-R_1R_L}{R_1R_5g_m+2R_1R_Lg_m+R_1+R_5+R_L}$

K-BP: $\frac{C_1R_1R_Lg_m+C_5R_5R_Lg_m-C_5R_L}{C_1R_1g_m+C_1+C_5R_5g_m+2C_5R_Lg_m+C_5}$

Qz: None

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

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