

1 Filter Summary

Filter Order	Z Combo	Transfer Function	Valid	Filter Type	Parameters
None	$\left(R_1, \infty, \infty, \infty, \infty, \infty, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L}}\right)$	$\frac{L_L R_L R_L g_m s^2}{(R_1 g_m + 1)(C_L L_L R_L s^2 + L_L s + R_L)}$	Yes	BP	Q: $C_L R_L \sqrt{\frac{1}{C_L L_L}}$; wo: $\sqrt{\frac{1}{C_L L_L}}$; bandwidth: $\frac{1}{C_L R_L}$; K-LP: 0; K-HP: 0; K-BP: $\frac{R_L R_L g_m}{R_1 g_m + 1}$; Qz: 0; Wz: None;
None	$\left(L_1 s, \infty, \infty, \infty, \infty, \infty, \frac{R_L}{C_L R_L s + 1}\right)$	$\frac{L_1 R_L g_m s}{(C_L R_L s + 1)(L_1 g_m + 1)}$	Yes	BP	Q: $\frac{C_L L_1 R_L g_m \sqrt{\frac{1}{C_L L_L R_L g_m}}}{C_L R_L s + 1}$; wo: $\sqrt{\frac{1}{C_L L_1 R_L g_m}}$; bandwidth: $\frac{C_L R_L + L_1 g_m}{C_L L_1 R_L g_m}$; K-LP: 0; K-HP: 0; K-BP: $\frac{L_1 R_L g_m}{C_L R_L + L_1 g_m}$; Qz: 0; Wz: None;
None	$\left(\frac{L_L s}{C_L L_1 s^2 + 1}, \infty, \infty, \infty, \infty, \infty, R_L\right)$	$\frac{L_1 R_L g_m s}{C_L L_1 s^2 + L_1 g_m s + 1}$	Yes	BP	Q: $\frac{C_L \sqrt{\frac{1}{C_L L_L}}}{g_m}$; wo: $\sqrt{\frac{1}{C_L L_L}}$; bandwidth: $\frac{g_m}{C_L}$; K-LP: 0; K-HP: 0; K-BP: R_L ; Qz: 0; Wz: None;
None	$\left(\frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1}}, \infty, \infty, \infty, \infty, \infty, R_L\right)$	$\frac{L_1 R_L R_L g_m s}{C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1}$	Yes	BP	Q: $\frac{C_1 R_L \sqrt{\frac{1}{C_1 L_1}}}{R_1 g_m + 1}$; wo: $\sqrt{\frac{1}{C_1 L_1}}$; bandwidth: $\frac{R_1 g_m + 1}{C_1 R_L}$; K-LP: 0; K-HP: 0; K-BP: 0; Qz: 0; Wz: None;
None	$\left(\frac{1}{C_1 s}, \infty, \infty, \infty, \infty, \infty, \frac{R_L}{C_L R_L s + 1}\right)$	$\frac{R_L g_m}{(C_1 s + g_m)(C_L R_L s + 1)}$	Yes	LP	Q: $\frac{C_1 C_L R_L \sqrt{\frac{1}{C_1 C_L R_L g_m}}}{C_1 C_L R_L s + 1}$; wo: $\sqrt{\frac{g_m}{C_1 C_L R_L}}$; bandwidth: $\frac{C_1 + C_L R_L g_m}{C_1 C_L R_L}$; K-LP: R_L ; K-HP: 0; K-BP: 0; Qz: None; Wz: None;
None	$\left(\frac{R_L}{C_1 R_L s + 1}, \infty, \infty, \infty, \infty, \infty, \frac{1}{C_L R_L s + 1}\right)$	$\frac{R_L}{(C_1 R_L s + 1)(C_L R_L s + R_1 g_m + 1)}$	Yes	LP	Q: $\frac{C_1 C_L R_L R_L \sqrt{\frac{1}{C_1 C_L R_L g_m}}}{C_1 R_L + C_L R_L R_L g_m + C_L R_L}$; wo: $\sqrt{\frac{R_1 g_m + 1}{C_1 C_L R_L R_L}}$; bandwidth: $\frac{C_1 R_L + C_L R_L R_L g_m + C_L R_L}{C_1 C_L R_L R_L g_m + C_L R_L}$; K-LP: $\frac{R_L R_L g_m}{R_1 g_m + 1}$; K-HP: 0; K-BP: 0; Qz: None; Wz: None;
None	$\left(\frac{L_L s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, \infty, \infty, \frac{1}{C_L s}\right)$	$\frac{L_L g_m}{C_L (C_1 L_1 s^2 + L_1 g_m s + 1)}$	Yes	LP	Q: $\frac{C_1 \sqrt{\frac{1}{C_1 L_1}}}{g_m}$; wo: $\sqrt{\frac{1}{C_1 L_1}}$; bandwidth: $\frac{g_m}{C_L}$; K-LP: $\frac{L_L g_m}{C_L}$; K-HP: 0; K-BP: 0; Qz: None; Wz: None;
None	$\left(\frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1}}, \infty, \infty, \infty, \infty, \infty, \frac{1}{C_L s}\right)$	$\frac{L_L R_L g_m}{C_L (C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1)}$	Yes	LP	Q: $\frac{C_1 R_L \sqrt{\frac{1}{C_1 L_1}}}{R_1 g_m + 1}$; wo: $\sqrt{\frac{1}{C_1 L_1}}$; bandwidth: $\frac{R_1 g_m + 1}{C_1 R_L}$; K-LP: $\frac{L_L g_m}{C_L}$; K-HP: 0; K-BP: 0; Qz: None; Wz: None;
None	$\left(R_1, \infty, \infty, \infty, \infty, \infty, \frac{R_L (L_L s^2 + \frac{1}{C_L^2})}{L_L s + R_L + \frac{1}{C_L^2}}\right)$	$\frac{R_L R_L g_m (C_L L_L s^2 + 1)}{(R_1 g_m + 1)(C_L L_L s^2 + C_L R_L s + 1)}$	Yes	BS	Q: $\frac{L_L \sqrt{\frac{1}{C_L L_L}}}{R_1 g_m + 1}$; wo: $\sqrt{\frac{1}{C_L L_L}}$; bandwidth: $\frac{R_L}{L_L}$; K-LP: $\frac{R_L R_L g_m}{R_1 g_m + 1}$; K-HP: $\frac{R_L R_L g_m}{R_1 g_m + 1}$; K-BP: 0; Qz: None; Wz: $\sqrt{\frac{1}{C_L L_L}}$;
None	$\left(L_1 s + \frac{1}{C_L s}, \infty, \infty, \infty, \infty, \infty, R_L\right)$	$\frac{R_L g_m (C_L L_1 s^2 + 1)}{C_L L_1 g_m s + C_1 s + g_m}$	Yes	BS	Q: $\frac{L_1 g_m \sqrt{\frac{1}{C_1 L_1}}}{g_m}$; wo: $\sqrt{\frac{1}{C_1 L_1}}$; bandwidth: $\frac{1}{L_1 g_m}$; K-LP: R_L ; K-HP: R_L ; K-BP: 0; Qz: None; Wz: $\sqrt{\frac{1}{C_1 L_1}}$;
None	$\left(\frac{R_L (L_L s^2 + \frac{1}{C_L^2})}{L_L s + R_L + \frac{1}{C_L^2}}, \infty, \infty, \infty, \infty, \infty, R_L\right)$	$\frac{R_L R_L g_m (C_L L_L s^2 + 1)}{C_L L_1 R_1 g_m s^2 + C_L L_1 s^2 + C_1 R_1 s + R_1 g_m + 1}$	Yes	BS	Q: $\frac{L_L \sqrt{\frac{1}{C_L L_L}}}{R_1 g_m + 1}$; wo: $\sqrt{\frac{1}{C_L L_L}}$; bandwidth: $\frac{R_L}{L_L (R_1 g_m + 1)}$; K-LP: $\frac{R_L R_L g_m}{R_1 g_m + 1}$; K-HP: $\frac{R_L R_L g_m}{R_1 g_m + 1}$; K-BP: 0; Qz: None; Wz: $\sqrt{\frac{1}{C_L L_L}}$;
None	$\left(L_L s + R_L + \frac{1}{C_L s}, \infty, \infty, \infty, \infty, \infty, R_L\right)$	$\frac{R_L g_m (C_1 L_1 s^2 + C_L R_L s + 1)}{C_L L_1 g_m s^2 + C_L L_1 s^2 + C_1 R_1 s + R_1 g_m + 1}$	Yes	GE	Q: $\frac{L_L g_m \sqrt{\frac{1}{C_1 L_1}}}{R_1 g_m + 1}$; wo: $\sqrt{\frac{1}{C_1 L_1}}$; bandwidth: $\frac{g_m}{L_1 g_m}$; K-LP: R_L ; K-HP: R_L ; K-BP: $\frac{R_L R_L g_m}{R_1 g_m + 1}$; Qz: $\frac{L_L \sqrt{\frac{1}{C_1 L_1}}}{R_1 g_m + 1}$; Wz: $\sqrt{\frac{1}{C_1 L_1}}$;
None	$\left(\frac{L_L s}{C_1 L_1 s^2 + 1} + R_L, \infty, \infty, \infty, \infty, \infty, R_L\right)$	$\frac{L_L g_m (C_1 L_1 s^2 + 1)}{C_1 L_1 R_1 g_m s^2 + C_1 L_1 s^2 + L_1 g_m s + R_1 g_m + 1}$	Yes	GE	Q: $\frac{C_1 \sqrt{\frac{1}{C_1 L_1}}}{g_m}$; wo: $\sqrt{\frac{1}{C_1 L_1}}$; bandwidth: $\frac{g_m}{C_1 (R_1 g_m + 1)}$; K-LP: $\frac{R_L R_L g_m}{R_1 g_m + 1}$; K-HP: $\frac{R_L R_L g_m}{R_1 g_m + 1}$; K-BP: R_L ; Qz: $\frac{C_1 R_L \sqrt{\frac{1}{C_1 L_1}}}{C_1 R_1 g_m + C_1 + C_L R_L g_m}$; Wz: $\sqrt{\frac{1}{C_1 L_1}}$;
None	$\left(R_L + \frac{1}{C_L s}, \infty, \infty, \infty, \infty, \infty, \frac{R_L}{C_L R_L s + 1}\right)$	$\frac{R_L g_m (C_1 R_L s + 1)}{(C_L R_L s + 1)(C_1 R_L s + C_1 s + g_m)}$	Yes	INVALID – NUMER	Q: $\frac{C_1 C_L R_L \sqrt{\frac{1}{C_1 C_L R_L g_m}}}{C_1 R_1 g_m + C_1 + C_L R_L g_m}$; wo: $\sqrt{\frac{g_m}{C_1 C_L R_L (R_1 g_m + 1)}}$; bandwidth: $\frac{C_1 R_L + C_L R_L R_L g_m + C_L R_L}{C_1 C_L R_L (R_1 g_m + 1)}$; K-LP: R_L ; K-HP: 0; K-BP: $\frac{C_1 R_L R_L g_m}{C_1 R_1 g_m + C_1 + C_L R_L g_m}$; Qz: 0; Wz: None;
None	$\left(\frac{L_L s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, \infty, \infty, R_L + \frac{1}{C_L s}\right)$	$\frac{L_L g_m (C_1 L_1 s^2 + 1)}{C_L (C_1 L_1 s^2 + L_1 g_m s + 1)}$	Yes	INVALID – NUMER	Q: $\frac{C_1 \sqrt{\frac{1}{C_1 L_1}}}{g_m}$; wo: $\sqrt{\frac{1}{C_1 L_1}}$; bandwidth: $\frac{g_m}{C_L}$; K-LP: $\frac{L_L g_m}{C_L}$; K-HP: 0; K-BP: R_L ; Qz: 0; Wz: None;
None	$\left(\frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1}}, \infty, \infty, \infty, \infty, \infty, R_L + \frac{1}{C_L s}\right)$	$\frac{L_L R_L g_m (C_L L_L s^2 + 1)}{C_L (C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1)}$	Yes	INVALID – NUMER	Q: $\frac{C_1 R_L \sqrt{\frac{1}{C_1 L_1}}}{R_1 g_m + 1}$; wo: $\sqrt{\frac{1}{C_1 L_1}}$; bandwidth: $\frac{R_1 g_m + 1}{C_1 R_L}$; K-LP: $\frac{L_L g_m}{C_L}$; K-HP: 0; K-BP: $\frac{R_L R_L g_m}{R_1 g_m + 1}$; Qz: 0; Wz: None;
None	$\left(\frac{L_L s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, \infty, \infty, L_L s + \frac{1}{C_L s}\right)$	$\frac{L_L g_m (C_L L_L s^2 + 1)}{C_L (C_1 L_1 s^2 + L_1 g_m s + 1)}$	No	INVALID – WZ	Q: $\frac{C_1 \sqrt{\frac{1}{C_1 L_1}}}{g_m}$; wo: $\sqrt{\frac{1}{C_1 L_1}}$; bandwidth: $\frac{g_m}{C_L}$; K-LP: $\frac{L_L g_m}{C_L}$; K-HP: $\frac{L_L g_m}{C_L}$; K-BP: 0; Qz: None; Wz: $\sqrt{\frac{1}{C_L L_L}}$;
None	$\left(\frac{L_L s}{C_1 L_1 s^2 + 1}, \infty, \infty, \infty, \infty, \infty, L_L s + R_L + \frac{1}{C_L s}\right)$	$\frac{L_L g_m (C_L L_L s^2 + 1)}{C_L (C_1 L_1 s^2 + L_1 g_m s + 1)}$	No	INVALID – WZ	Q: $\frac{C_1 \sqrt{\frac{1}{C_1 L_1}}}{g_m}$; wo: $\sqrt{\frac{1}{C_1 L_1}}$; bandwidth: $\frac{g_m}{C_L}$; K-LP: $\frac{L_L g_m}{C_L}$; K-HP: $\frac{L_L g_m}{C_L}$; K-BP: R_L ; Qz: $\frac{L_L \sqrt{\frac{1}{C_1 L_1}}}{C_L}$; Wz: $\sqrt{\frac{1}{C_L L_L}}$;
None	$\left(\frac{1}{C_1 s + \frac{1}{R_1} + \frac{1}{L_1}}, \infty, \infty, \infty, \infty, \infty, L_L s + \frac{1}{C_L s}\right)$	$\frac{L_L R_L g_m (C_L L_L s^2 + 1)}{C_L (C_1 L_1 R_1 s^2 + L_1 R_1 g_m s + L_1 s + R_1)}$	No	INVALID – WZ	Q: $\frac{C_1 R_L \sqrt{\frac{1}{C_1 L_1}}}{R_1 g_m + 1}$; wo: $\sqrt{\frac{1}{C_1 L_1}}$; bandwidth: $\frac{R_1 g_m + 1}{C_1 R_L}$; K-LP: $\frac{L_L g_m}{C_L}$; K-HP: $\frac{L_L g_m}{C_L}$; K-BP: 0; Qz: None; Wz: $\sqrt{\frac{1}{C_L L_L}}$;
None	$\left(R_1, \infty, \infty, \infty, \infty, \infty, R_L\right)$	$\frac{R_L R_L g_m}{R_1 g_m + 1}$	No	INVALID – ORDER	NONE
None	$\left(R_1, \infty, \infty, \infty, \infty, \infty, \frac{1}{C_L s}\right)$	$\frac{R_L g_m}{C_L s (R_1 g_m + 1)}$	No	INVALID – ORDER	NONE
None	$\left(R_1, \infty, \infty, \infty, \infty, \infty, \frac{R_L}{C_L R_L s + 1}\right)$	$\frac{R_L R_L g_m}{(R_1 g_m + 1)(C_L R_L s + 1)}$	No	INVALID – ORDER	NONE
None	$\left(R_1, \infty, \infty, \infty, \infty, \infty, R_L + \frac{1}{C_L s}\right)$	$\frac{R_L g_m (C_L R_L s + 1)}{C_L s (R_1 g_m + 1)}$	No	INVALID – ORDER	NONE
None	$\left(R_1, \infty, \infty, \infty, \infty, \infty, L_L s + \frac{1}{C_L s}\right)$	$\frac{R_L g_m (C_L L_L s^2 + 1)}{C_L s (R_1 g_m + 1)}$	No	INVALID – ORDER	NONE
None	$\left(R_1, \infty, \infty, \infty, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1}\right)$	$\frac{L_L R_L g_m s}{C_L L_L s^2 + L_1 g_m s + 1}$	No	INVALID – ORDER	NONE
None	$\left(R_1, \infty, \infty, \infty, \infty, \infty, L_L s + R_L + \frac{1}{C_L s}\right)$	$\frac{R_L g_m (C_1 L_1 s^2 + C_L R_L s + 1)}{C_L L_1 g_m s^2 + C_L L_1 s^2 + C_1 R_1 s + R_1 g_m + 1}$	No	INVALID – ORDER	NONE
None	$\left(L_1 s, \infty, \infty, \infty, \infty, \infty, R_L\right)$	$\frac{L_L R_L g_m s}{C_L L_L s^2 + 1}$	No	INVALID – ORDER	NONE
None	$\left(L_1 s, \infty, \infty, \infty, \infty, \infty, \frac{1}{C_L s}\right)$	$\frac{L_L g_m}{C_L (L_1 g_m + 1)}$	No	INVALID – ORDER	NONE
None	$\left(L_1 s, \infty, \infty, \infty, \infty, \infty, R_L + \frac{1}{C_L s}\right)$	$\frac{L_L g_m (C_L R_L s + 1)}{C_L (L_1 g_m + 1)}$	No	INVALID – ORDER	NONE
None	$\left(L_1 s, \infty, \infty, \infty, \infty, \infty, \frac{1}{C_L^2 s}\right)$	$\frac{L_L g_m (C_L L_L s^2 + 1)}{C_L L_1 g_m s + C_1 s + g_m}$	No	INVALID – ORDER	NONE
None	$\left(L_1 s, \infty, \infty, \infty, \infty, \infty, L_L s + \frac{1}{C_L s}\right)$	$\frac{L_L R_L g_m s^2}{(C_L L_L s^2 + 1)(L_1 g_m s + 1)}$	No	INVALID – ORDER	NONE
None	$\left(L_1 s, \infty, \infty, \infty, \infty, \infty, L_L s + R_L + \frac{1}{C_L s}\right)$	$\frac{L_L g_m (C_L L_L s^2 + C_L R_L s + 1)}{L_1 g_m (C_L L_L s^2 + C_L R_L s + 1)}$	No	INVALID – ORDER	NONE
None	$\left(L_1 s, \infty, \infty, \infty, \infty, \infty, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L}}\right)$	$\frac{L_L L_L R_L g_m s^2}{(L_1 g_m + 1)(C_L L_L R_L s^2 + L_L s + R_L)}$	No	INVALID – ORDER	NONE
None	$\left(L_1 s, \infty, \infty, \infty, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$	$\frac{L_L g_m s (C_L L_L R_L s^2 + L_L s + R_L)}{(C_L L_L s^2 + 1)(L_1 g_m + 1)}$	No	INVALID – ORDER	NONE
None	$\left(L_1 s, \infty, \infty, \infty, \infty, \infty, \frac{R_L (L_L s^2 + \frac{1}{C_L^2})}{L_L s + R_L + \frac{1}{C_L^2}}\right)$	$\frac{L_L R_L g_m s (C_L L_L s^2 + 1)}{(L_1 g_m + 1)(C_L L_L s^2 + C_L R_L s + 1)}$	No	INVALID – ORDER	NONE
None	$\left(\frac{1}{C_L s}, \infty, \infty, \infty, \infty, \infty, R_L\right)$	$\frac{R_L g_m}{C_L s + g_m}$	No	INVALID – ORDER	NONE
None	$\left(\frac{1}{C_L s}, \infty, \infty, \infty, \infty, \infty, \frac{1}{C_L^2 s}\right)$	$\frac{g_m}{C_L s (C_L s + g_m)}$	No	INVALID – ORDER	NONE
None	$\left(\frac{1}{C_L s}, \infty, \infty, \infty, \infty, \infty, R_L + \frac{1}{C_L s}\right)$	$\frac{g_m (C_L R_L s + 1)}{C_L s (C_L s + g_m)}$	No	INVALID – ORDER	NONE
None	$\left(\frac{1}{C_L^2 s}, \infty, \infty, \infty, \infty, \infty, L_L s + \frac{1}{C_L s}\right)$	$\frac{g_m (C_L L_L s^2 + 1)}{C_L s (C_L s + g_m)}$	No	INVALID – ORDER	NONE
None	$\left(\frac{1}{C_L s}, \infty, \infty, \infty, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1}\right)$	$\frac{L_L g_m s}{(C_1 s + g_m)(C_L L_L s^2 + 1)}$	No	INVALID – ORDER	NONE
None	$\left(\frac{1}{C_L^2 s}, \infty, \infty, \infty, \infty, \infty, L_L s + R_L + \frac{1}{C_L s}\right)$	$\frac{L_L g_m s (C_L L_L s^2 + C_L R_L s + 1)}{g_m (C_L L_L s^2 + C_L R_L s + 1)}$	No	INVALID – ORDER	NONE
None	$\left(\frac{1}{C_L s}, \infty, \infty, \infty, \infty, \infty, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L}}\right)$	$\frac{L_L L_L R_L g_m s^2}{(L_1 g_m + 1)(C_L L_L R_L s^2 + L_L s + R_L)}$	No	INVALID – ORDER	NONE
None	$\left(L_1 s, \infty, \infty, \infty, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$	$\frac{L_L g_m s (C_L L_L R_L s^2 + L_L s + R_L)}{(C_L L_L s^2 + 1)(L_1 g_m + 1)}$	No	INVALID – ORDER	NONE
None	$\left(L_1 s, \infty, \infty, \infty, \infty, \infty, \frac{R_L (L_L s^2 + \frac{1}{C_L^2})}{L_L s + R_L + \frac{1}{C_L^2}}\right)$	$\frac{L_L R_L g_m s (C_L L_L s^2 + 1)}{(L_1 g_m + 1)(C_L L_L s^2 + C_L R_L s + 1)}$	No	INVALID – ORDER	NONE
None	$\left(\frac{1}{C_L s}, \infty, \infty, \infty, \infty, \infty, R_L\right)$	$\frac{R_L R_L g_m}{C_L R_L s + R_1 g_m + 1}$	No	INVALID – ORDER	NONE
None	$\left(\frac{1}{C_L s}, \infty, \infty, \infty, \infty, \infty, \frac{1}{C_L s}\right)$	$\frac{R_L g_m}{C_L s (C_L s + R_1 g_m + 1)}$	No	INVALID – ORDER	NONE
None	$\left(\frac{1}{C_L s}, \infty, \infty, \infty, \infty, \infty, R_L + \frac{1}{C_L s}\right)$	$\frac{R_L g_m (C_L R_L s + 1)}{C_L s (C_L s + R_1 g_m + 1)}$	No	INVALID – ORDER	NONE
None	$\left(\frac{1}{C_L^2 s}, \infty, \infty, \infty, \infty, \infty, L_L s + \frac{1}{C_L s}\right)$	$\frac{R_L g_m (C_L L_L s^2 + 1)}{C_L s (C_L s + R_1 g_m + 1)}$	No	INVALID – ORDER	NONE
None	$\left(\frac{1}{C_L s}, \infty, \infty, \infty, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1}\right)$	$\frac{L_L R_L g_m s}{(C_L L_L s^2 + 1)(C_1 R_L s + 1)}$	No	INVALID – ORDER	NONE
None	$\left(\frac{1}{C_L^2 s}, \infty, \infty, \infty, \infty, \infty, L_L s + R_L + \frac{1}{C_L s}\right)$	$\frac{R_L g_m (C_L L_L s^2 + C_L R_L s + 1)}{C_L s (C_L s + R_1 g_m + 1)}$	No	INVALID – ORDER	NONE
None	$\left(R_1 + \frac{1}{C_L s}, \infty, \infty, \infty, \infty, \infty, R_L\right)$	$\frac{R_L g_m (C_1 R_L s + 1)}{C_L R_1 g_m + C_1 s + g_m}$	No	INVALID – ORDER	NONE
None	$\left(R_1 + \frac{1}{C_L^2 s}, \infty, \infty, \infty, \infty, \infty, R_L + \frac{1}{C_L s}\right)$	$\frac{g_m (C_L R_L s + 1)}{C_L s (C_L s + R_1 g_m + 1)}$	No	INVALID – ORDER	NONE
None	$\left(R_1 + \frac{1}{C_L^2 s}, \infty, \infty, \infty, \infty, \infty, L_L s + \frac{1}{C_L s}\right)$	$\frac{R_L g_m (C_L L_L s^2 + 1)}{C_L s (C_L s + R_1 g_m + 1)}$	No	INVALID – ORDER	NONE
None	$\left(R_1 + \frac{1}{C_L^2 s}, \infty, \infty, \infty, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1}\right)$	$\frac{L_L R_L g_m s}{(C_L L_L s^2 + 1)(C_1 R_L s + 1)}$	No	INVALID – ORDER	NONE
None	$\left(R_1 + \frac{1}{C_L s}, \infty, \infty, \infty, \infty, \infty, L_L s + R_L + \frac{1}{C_L s}\right)$	$\frac{g_m (C_L R_L s + 1)(C_L L_L s^2 + 1)}{g_m (C_L R_L s + 1)(C_L L_L s^2 + C_L R_L s + 1)}$	No	INVALID – ORDER	NONE
None	$\left(R_1 + \frac{1}{C_L^2 s}, \infty, \infty, \infty, \infty, \infty, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L}}\right)$	$\frac{L_L R_L g_m s (C_L L_L s^2 + C_L R_L s + 1)}{(C_1 R_L s + C_1 s + g_m)(C_L L_L s^2 + L_L s + R_L)}$	No	INVALID – ORDER	NONE
None	$\left(R_1 + \frac{1}{C_L^2 s}, \infty, \infty, \infty, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$	$\frac{R_L g_m (C_L L_L R_L s^2 + L_L s + R_L)}{(C_L L_L s^2 + 1)(C_L R_L s + R_1 g_m + 1)}$	No	INVALID – ORDER	NONE
None	$\left(\frac{R_L (L_L s^2 + \frac{1}{C_L^2})}{L_L s + R_L + \frac{1}{C_L^2}}, \infty, \infty, \infty, \infty, \infty, \frac{1}{C_L s}\right)$	$\frac{R_L R_L g_m (C_L L_L s^2 + 1)}{(C_1 R_L s + R_1 g_m + 1)(C_L L_L s^2 + C_L R_L s + 1)}$	No	INVALID – ORDER	NONE
None	$\left(R_1 + \frac{1}{C_L s}, \infty, \infty, \infty, \infty, \infty, \frac{1}{C_L s}\right)$	$\frac{R_L g_m (C_1 R_L s + 1)}{C_L s (C_L s + R_1 g_m + 1)}$	No	INVALID – ORDER	NONE
None	$\left(R_1 + \frac{1}{C_L^2 s}, \infty, \infty, \infty, \infty, \infty, R_L + \frac{1}{C_L s}\right)$	$\frac{g_m (C_L R_L s + 1)(C_L L_L s^2 + 1)}{g_m (C_L R_L s + 1)(C_L L_L s^2 + C_L R_L s + 1)}$	No	INVALID – ORDER	NONE
None	$\left(R_1 + \frac{1}{C_L^2 s}, \infty, \infty, \infty, \infty, \infty, L_L s + \frac{1}{C_L s}\right)$	$\frac{R_L g_m (C_L L_L s^2 + 1)}{C_L s (C_L s + R_1 g_m + 1)}$	No	INVALID – ORDER	NONE
None	$\left(R_1 + \frac{1}{C_L^2 s}, \infty, \infty, \infty, \infty, \infty, \frac{L_L s}{C_L L_L s^2 + 1}\right)$	$\frac{L_L R_L g_m s}{(C_L L_L s^2 + 1)(C_1 R_L s + 1)}$	No	INVALID – ORDER	NONE
None	$\left(L_L s + \frac{1}{C_L s}, \infty, \infty, \infty, \infty, \infty, \frac{1}{C_L s}\right)$	$\frac{L_L g_m (C_1 L_L s^2 + 1)}{C_L s (C_L s + R_1 g_m + 1)}$	No	INVALID – ORDER	NONE
None	$\left(L_L s + \frac{1}{C_L s}, \infty, \infty, \infty, \infty, \infty, R_L + \frac{1}{C_L s}\right)$	$\frac{g_m (C_L L_L s^2 + 1)(C_L R_L s + 1)}{g_m (C_L L_L s^2 + 1)(C_L R_L s + 1)}$	No	INVALID – ORDER	NONE
None	$\left(L_L s + \frac{1}{C_L^2 s}, \infty, \infty, \infty, \infty, \infty, \frac{R_L (L_L s^2 + \frac{1}{C_L^2})}{L_L s + R_L + \frac{1}{C_L^2}}\right)$	$\frac{R_L g_m (C_L L_L s^2 + 1)}{C_L s (C_L s + R_1 g_m + 1)}$	No	INVALID – ORDER	NONE
None	$\left(\frac{L_L s}{C_L L_L s^2 + 1}, \infty, \infty, \infty, \infty, \infty, \frac{1}{C_L s}\right)$	$\frac{L_L R_L g_m s}{(C_L L_L s^2 + 1)(C_1 R_L s + 1)}$	No	INVALID – ORDER	NONE
None	$\left(L_L s + \frac{1}{C_L s}, \infty, \infty, \infty, \infty, \infty, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L}}\right)$	$\frac{L_L R_L g_m s (C_L L_L s^2 + C_L R_L s + 1)}{(C_1 R_L s + C_1 s + g_m)(C_L L_L s^2 + L_L s + R_L)}$	No	INVALID – ORDER	NONE
None	$\left(L_L s + \frac{1}{C_L s}, \infty, \infty, \infty, \infty, \infty, L_L s + \frac{1}{C_L s} + R_L\right)$	$\frac{g_m (C_L L_L s^2 + 1)(C_L L_L R_L s^2 + L_L s + R_L)}{(C_L L_L s^2 + 1)(C_L R_L s + R_1 g_m + 1)}$	No	INVALID – ORDER	NONE
None	$\left(L_L s + \frac{1}{C_L^2 s}, \infty, \infty, \infty, \infty, \infty, \frac{R_L (L_L s^2 + \frac{1}{C_L^2})}{L_L s + R_L + \frac{1}{C_L^2}}\right)$	$\frac{R_L g_m (C_L L_L s^2 + 1)}{C_L s (C_L s + R_1 g_m + 1)}$	No	INVALID – ORDER	NONE
None	$\left(\frac{L_L s}{C_L L_L s^2 + 1}, \infty, \infty, \infty, \infty, \infty, \frac{1}{C_L s}\right)$	$\frac{L_L R_L g_m s}{(C_L L_L s^2 + 1)(C_1 R_L s + 1)}$	No	INVALID – ORDER	NONE

