

Filter Summary Report: TIA,simple,Z3

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1 Examined $H(z)$ for TIA simple **Z3:** Z_3

$$H(z) = Z_3$$

2 HP

3 BP

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

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

Parameters:

Q: $C_3 R_3 \sqrt{\frac{1}{C_3 L_3}}$
wo: $\sqrt{\frac{1}{C_3 L_3}}$
bandwidth: $\frac{1}{C_3 R_3}$
K-LP: 0
K-HP: 0
K-BP: R_3
Qz: 0
Wz: None

4 LP

5 BS

5.1 BS-1 $Z(s) = \left(\infty, \infty, \frac{R_3 (C_3 L_3 s^2 + 1)}{C_3 L_3 s^2 + C_3 R_3 s + 1}, \infty, \infty, \infty \right)$

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

Parameters:

Q: $\frac{L_3 \sqrt{\frac{1}{C_3 L_3}}}{R_3}$
wo: $\sqrt{\frac{1}{C_3 L_3}}$
bandwidth: $\frac{R_3}{L_3}$
K-LP: R_3
K-HP: R_3
K-BP: 0
Qz: None
Wz: $\sqrt{\frac{1}{C_3 L_3}}$

6 GE

7 AP

8 INVALID-NUMER

9 INVALID-WZ

10 INVALID-ORDER

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

$$H(s) = R_3$$

10.2 INVALID-ORDER-2 $Z(s) = \left(\infty, \infty, \frac{1}{C_3s}, \infty, \infty, \infty\right)$

$$H(s) = \frac{1}{C_3s}$$

10.3 INVALID-ORDER-3 $Z(s) = \left(\infty, \infty, \frac{R_3}{C_3R_3s+1}, \infty, \infty, \infty\right)$

$$H(s) = \frac{R_3}{C_3R_3s+1}$$

10.4 INVALID-ORDER-4 $Z(s) = \left(\infty, \infty, R_3 + \frac{1}{C_3s}, \infty, \infty, \infty\right)$

$$H(s) = \frac{C_3R_3s+1}{C_3s}$$

10.5 INVALID-ORDER-5 $Z(s) = \left(\infty, \infty, L_3s + \frac{1}{C_3s}, \infty, \infty, \infty\right)$

$$H(s) = \frac{C_3L_3s^2+1}{C_3s}$$

10.6 INVALID-ORDER-6 $Z(s) = \left(\infty, \infty, \frac{L_3s}{C_3L_3s^2+1}, \infty, \infty, \infty\right)$

$$H(s) = \frac{L_3s}{C_3L_3s^2+1}$$

10.7 INVALID-ORDER-7 $Z(s) = \left(\infty, \infty, L_3s + R_3 + \frac{1}{C_3s}, \infty, \infty, \infty\right)$

$$H(s) = \frac{C_3L_3s^2+C_3R_3s+1}{C_3s}$$

10.8 INVALID-ORDER-8 $Z(s) = \left(\infty, \infty, \frac{L_3s}{C_3L_3s^2+1} + R_3, \infty, \infty, \infty\right)$

$$H(s) = \frac{C_3L_3R_3s^2+L_3s+R_3}{C_3L_3s^2+1}$$

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