

Filter Summary Report: TIA,simple,Z5

Generated by MacAnalog-Symbolix

December 7, 2024

Contents

1 Examined $H(z)$ for TIA simple **Z5:** $\frac{Z_5g_m-1}{2g_m}$

$$H(z) = \frac{Z_5g_m-1}{2g_m}$$

2 HP

3 BP

4 LP

5 BS

6 GE

7 AP

8 INVALID-NUMER

9 INVALID-WZ

10 INVALID-ORDER

10.1 INVALID-ORDER-1 $Z(s) = (\infty, \infty, \infty, \infty, R_5, \infty)$

$$H(s) = \frac{Z_5g_m-1}{2g_m}$$

10.2 INVALID-ORDER-2 $Z(s) = \left(\infty, \infty, \infty, \infty, \frac{1}{C_5s}, \infty\right)$

$$H(s) = \frac{Z_5g_m-1}{2g_m}$$

10.3 INVALID-ORDER-3 $Z(s) = \left(\infty, \infty, \infty, \infty, \frac{R_5}{C_5R_5s+1}, \infty\right)$

$$H(s) = \frac{Z_5g_m-1}{2g_m}$$

10.4 INVALID-ORDER-4 $Z(s) = \left(\infty, \infty, \infty, \infty, R_5 + \frac{1}{C_5s}, \infty\right)$

$$H(s) = \frac{Z_5g_m-1}{2g_m}$$

$$10.5 \quad \text{INVALID-ORDER-5} \quad Z(s) = \left(\infty, \infty, \infty, \infty, L_5 s + \frac{1}{C_5 s}, \infty \right)$$

$$H(s) = \frac{Z_5 g_m - 1}{2g_m}$$

$$10.6 \quad \text{INVALID-ORDER-6} \quad Z(s) = \left(\infty, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \infty \right)$$

$$H(s) = \frac{Z_5 g_m - 1}{2g_m}$$

$$10.7 \quad \text{INVALID-ORDER-7} \quad Z(s) = \left(\infty, \infty, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, \infty \right)$$

$$H(s) = \frac{Z_5 g_m - 1}{2g_m}$$

$$10.8 \quad \text{INVALID-ORDER-8} \quad Z(s) = \left(\infty, \infty, \infty, \infty, \frac{L_5 R_5 s}{C_5 L_5 R_5 s^2 + L_5 s + R_5}, \infty \right)$$

$$H(s) = \frac{Z_5 g_m - 1}{2g_m}$$

$$10.9 \quad \text{INVALID-ORDER-9} \quad Z(s) = \left(\infty, \infty, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \infty \right)$$

$$H(s) = \frac{Z_5 g_m - 1}{2g_m}$$

$$10.10 \quad \text{INVALID-ORDER-10} \quad Z(s) = \left(\infty, \infty, \infty, \infty, \frac{R_5 (C_5 L_5 s^2 + 1)}{C_5 L_5 s^2 + C_5 R_5 s + 1}, \infty \right)$$

$$H(s) = \frac{Z_5 g_m - 1}{2g_m}$$