

AN702: SCM7B

Application Note: Frequency and Time Response

Figures 1 through 4 are the result of performing a 100-run Monte Carlo analysis on the SCM7B filter circuitry in both the frequency and time domains.* In this type of analysis, all component values are simultaneously (and randomly) varied between the specified \pm tolerances. 100 runs ensures an adequate statistical sample. Although the circuit bandwidth used is 3Hz, the results can be extended to higher bandwidths by appropriate scaling.

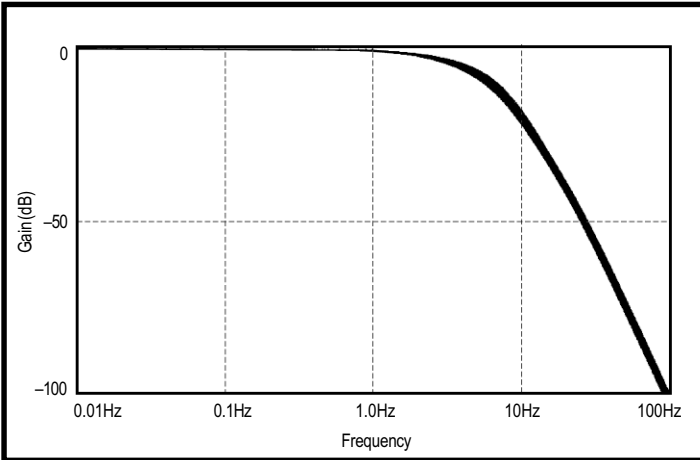


Figure 1: Gain Response

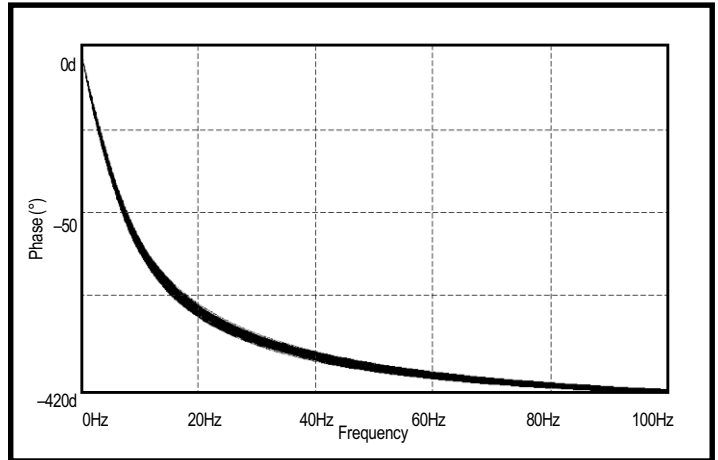


Figure 2: Phase Response

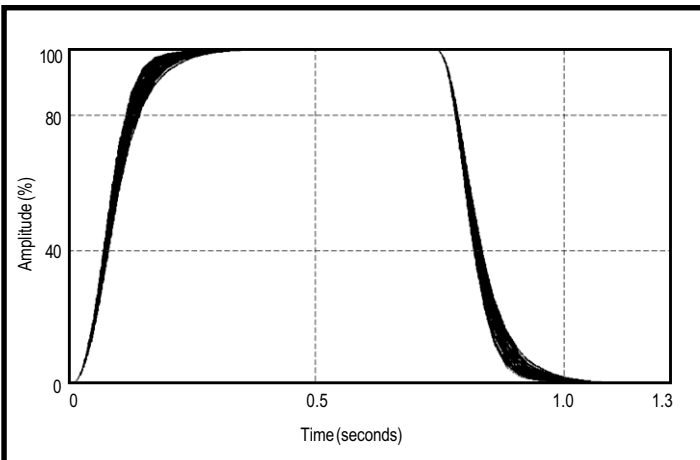


Figure 3: Time Response

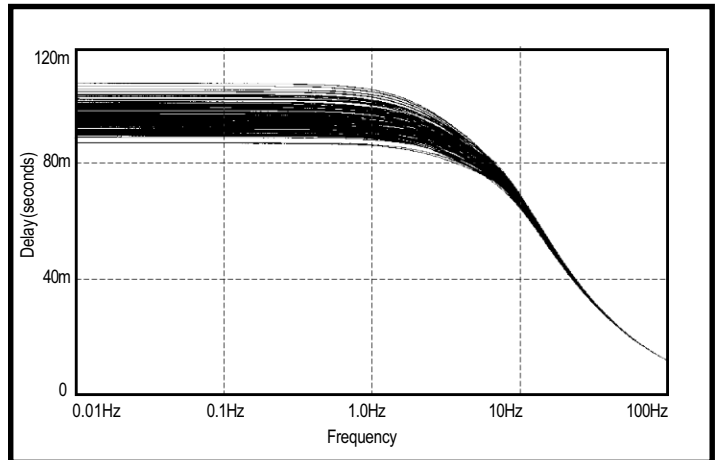


Figure 4: Delay Time (fundamental)

*Model represented: SCM7B34-02D