Cypher Instruments Ltd Page 1 of 2

AN005 - C60 Application Note

High resolution plots – elliptic low pass filter

The **amplitude response** of a 10KHz passive elliptic low pass filter was resolved using 10,000 test points. The filter has some very sharp notches which can be missed if a low resolution test is performed. A script file was written to concatenate the ten sections of the response.

10KHz Elliptic 8987 points

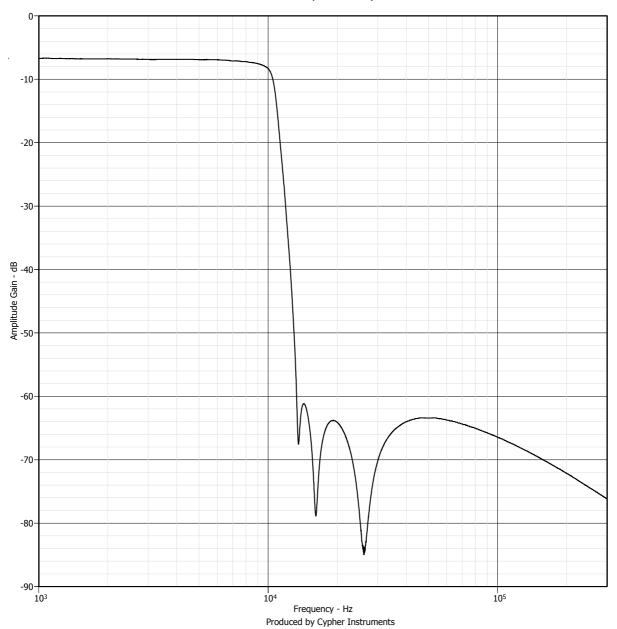


Figure 1. 8987 point amplitude graph

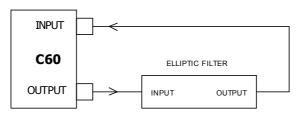


Figure 2. Connection diagram

Cypher Instruments Ltd Page 2 of 2

Another elliptic low pass filter is shown in Figure 3. The phase plot shows the sudden 180° phase reversal that occurs when the response passes through a deep notch.

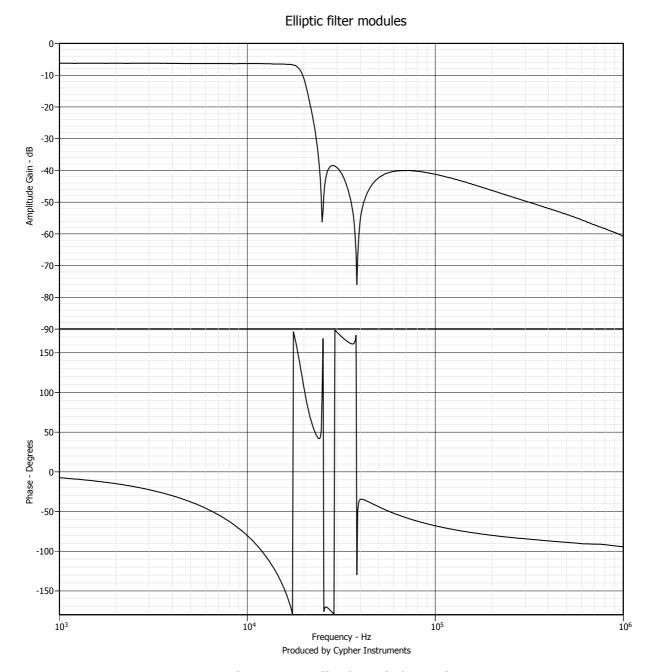


Figure 3. Amplitude and phase plot