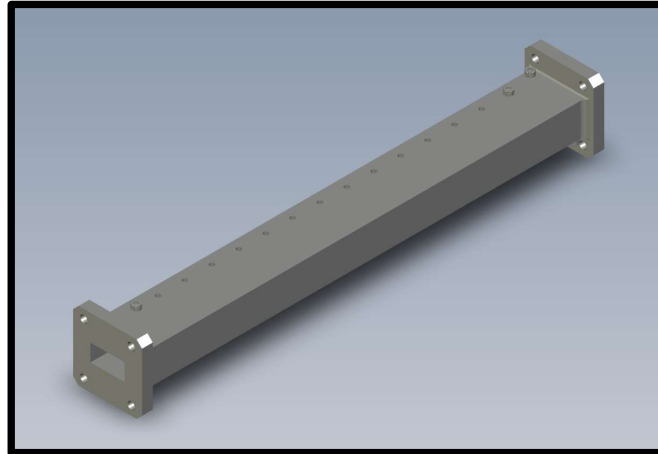


Case Study – Q1186 WG17 Highpass TX Filter



Overview

Phase 2 Microwave have recently developed a WG17 highpass transmit filter for a satellite broadcast provider, in order for them to investigate spurious interference signals on one of their antennas. The key specification requirements were:

Passband: 12.75 to 14.5 GHz

Passband Insertion Loss: < 0.5 dB

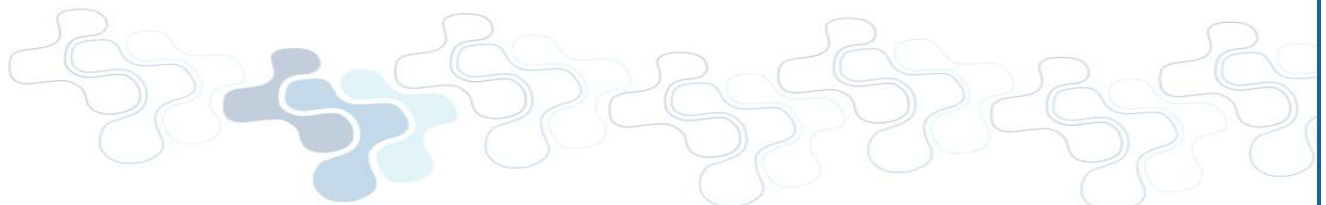
Rejection: > 85 dB over 10.8 to 12 GHz

Challenge

The main challenge was to develop and provide the filter within a very tight timeframe in order for the customer to investigate their problem as quickly as possible.

Solution

Applying EM design software enabled the complete filter to be accurately modeled and expediently manufactured. Excellent correlation between design and measured results are confirmed by the plots below, where over 100 dB rejection was achieved.



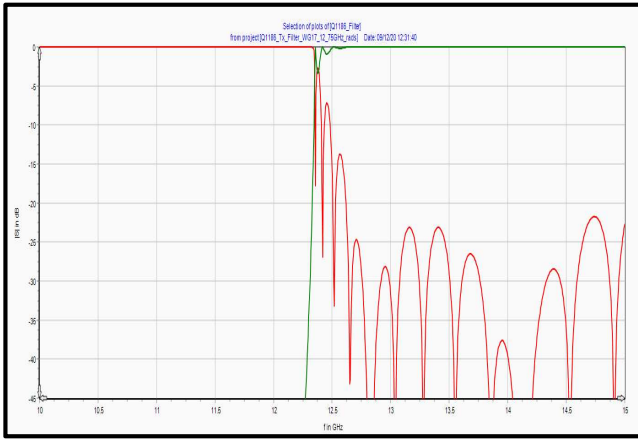


FIGURE 1 - EM DESIGN

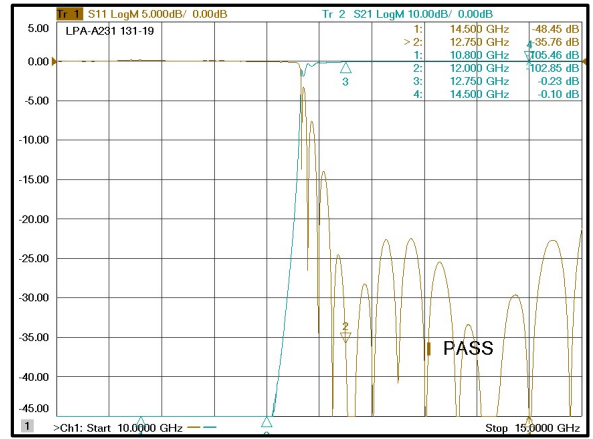


FIGURE 2 - TEST RESULTS

