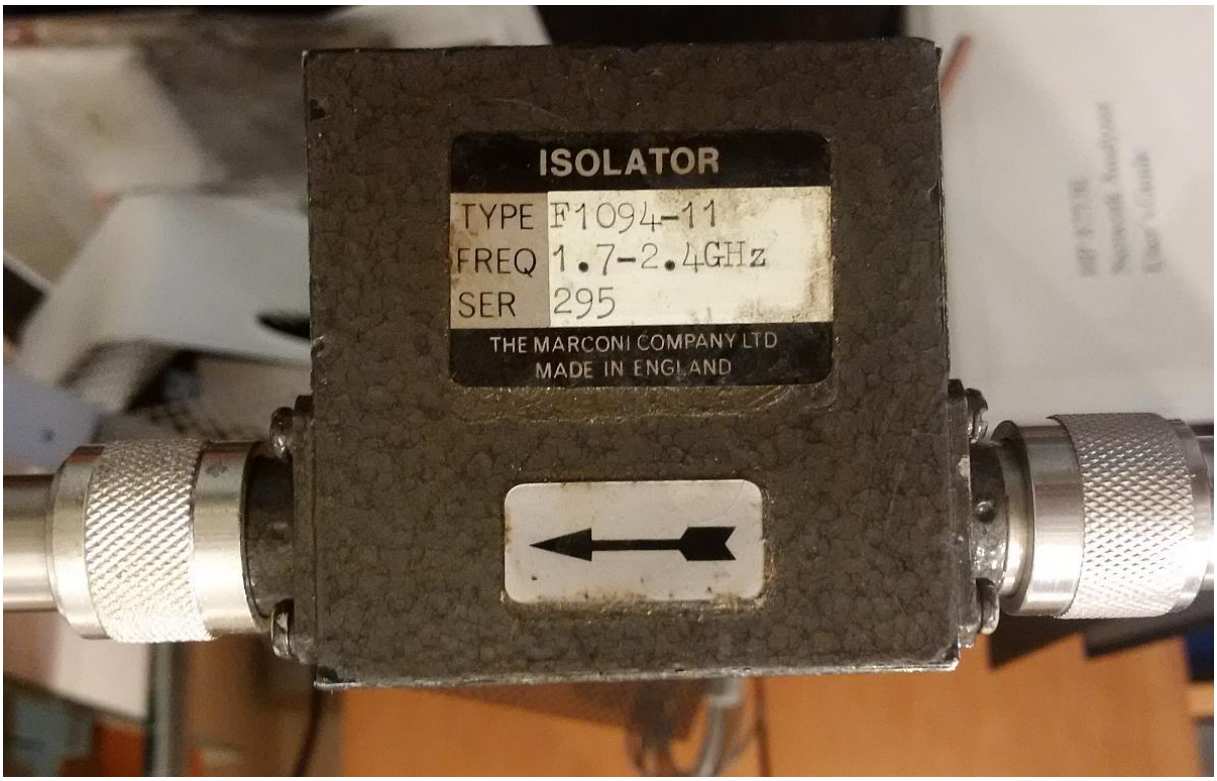
1700-2400MHz isolator Marconi F1094-11

Matthias, DD1US, January 25th 2020

Hello,

For quite some time I had a S-band isolator F1094-11 from Marconi lying in one of my drawers. Recently I decided to characterize it as I could not find any data in the Internet.

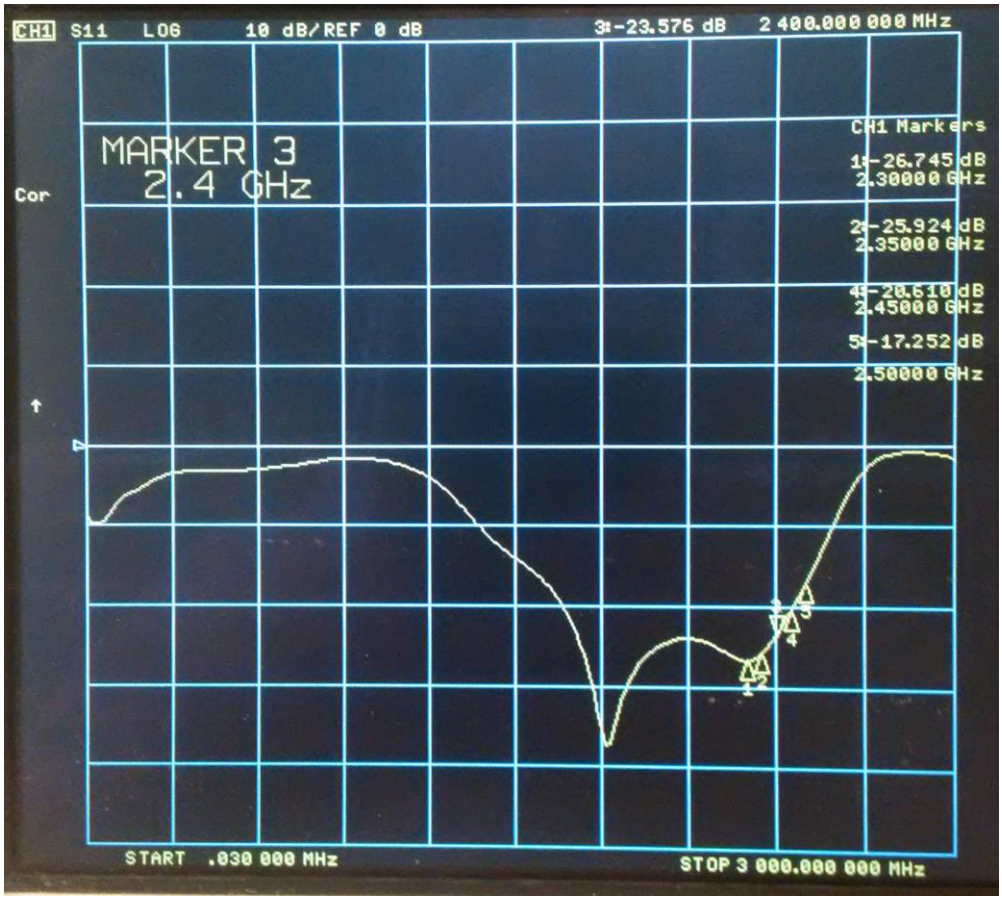
Here is a picture of the device:



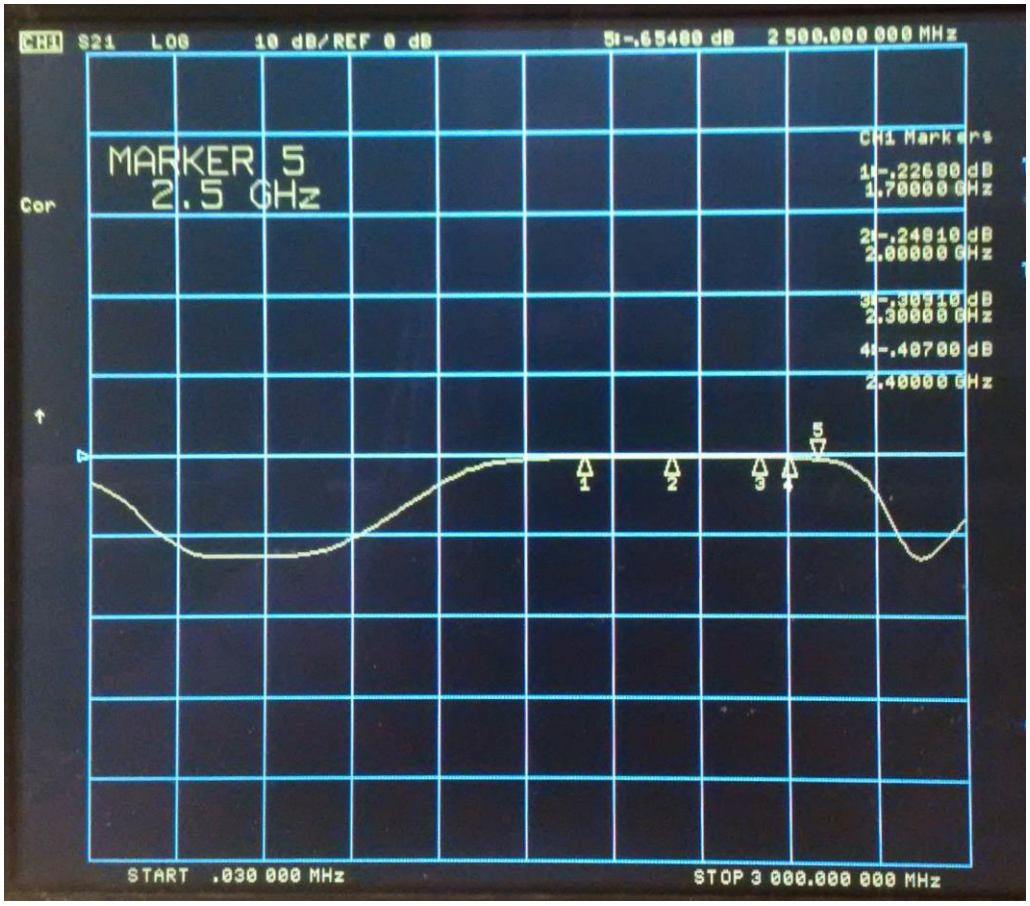
The isolator is in a solid metal case and has female N connectors at the input and output port. It has a frequency range 1.7-2.4GHz printed on the label.

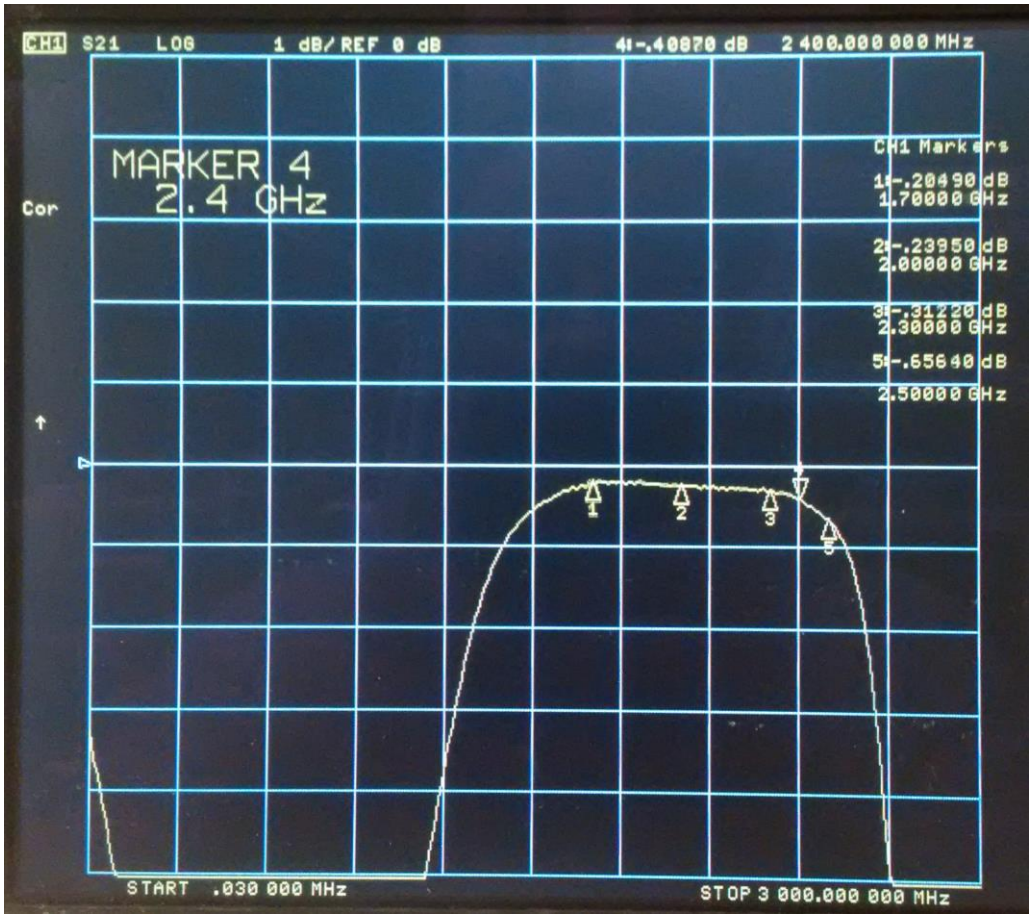
Below you will find some measurement results of this S-band isolator. All measurements were done in the frequency range 30kHz to 3GHz.

S11 input matching (return loss at 1700MHz is 22.3dB and at 2400MHz it is 23.5dB)

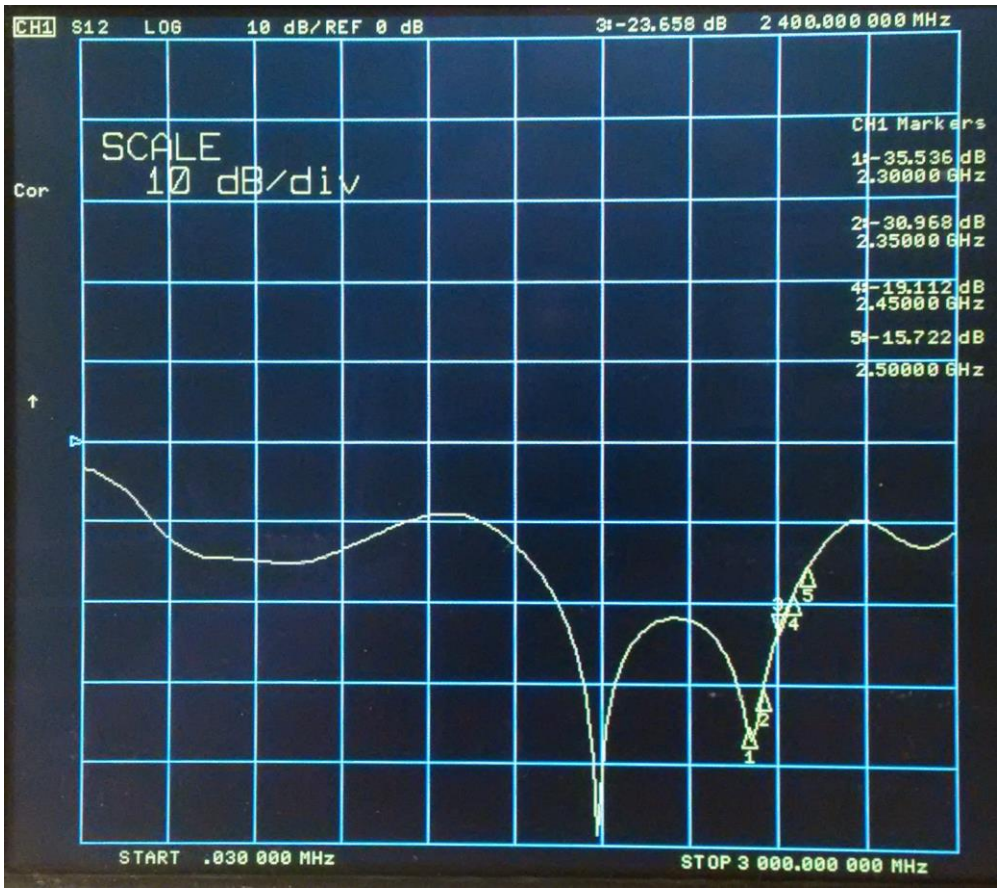


S21 forward transmission (insertion loss at 1700MHz is 0.23dB and at 2400MHz it is 0.41dB)

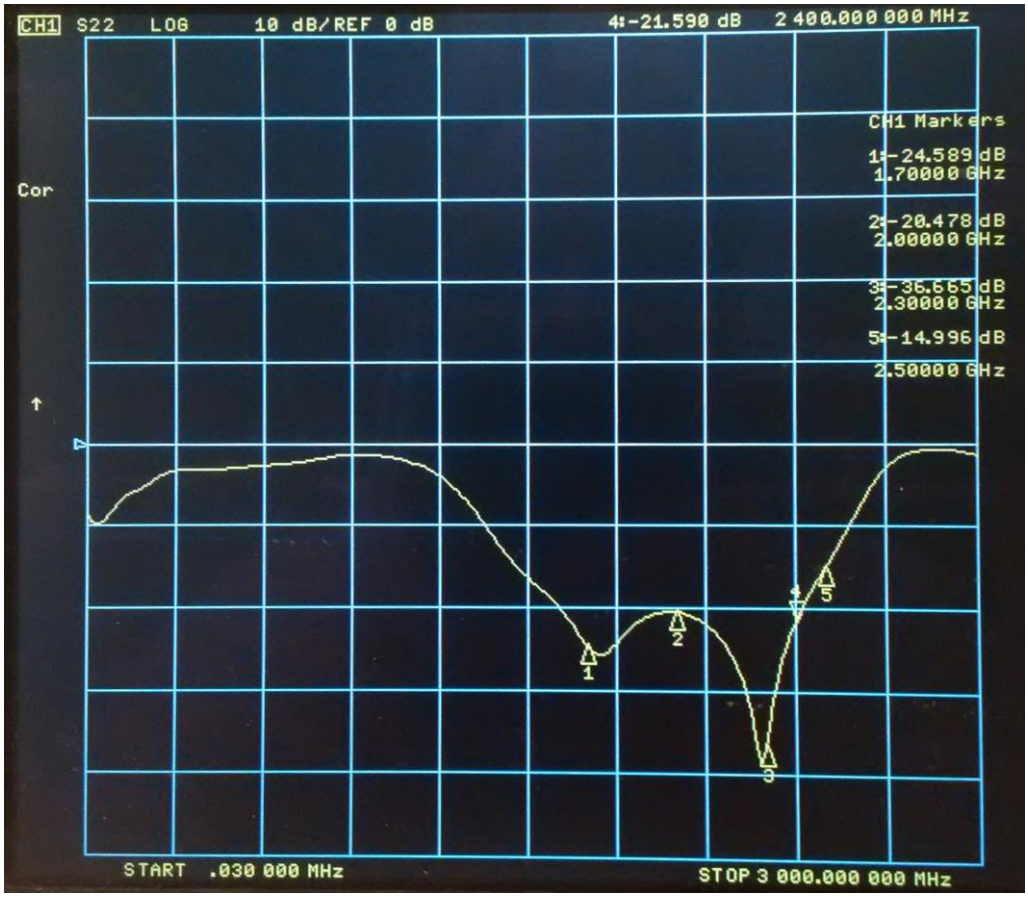


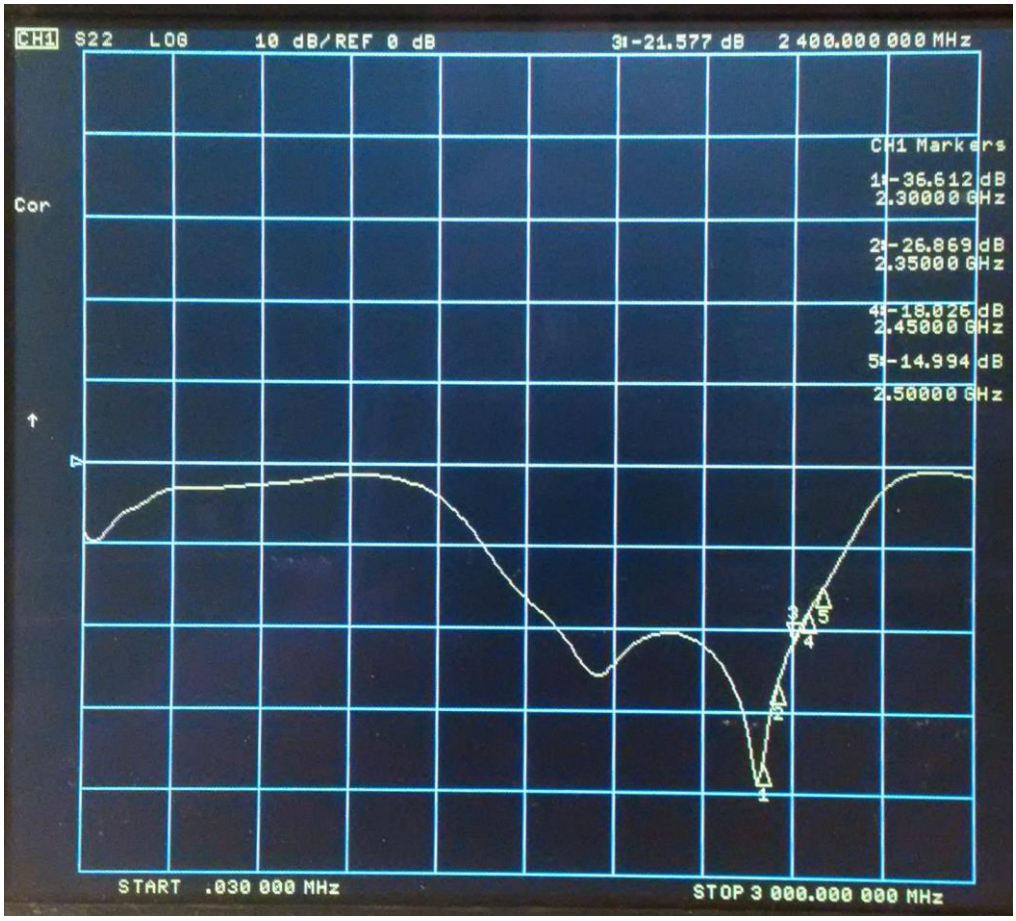


S12 reverse transmission (isolation at 1700MHz is >25dB and at 2400MHz it is -23.7dB)



S22 output matching (return loss at 1700MHz is 24.6dB and at 2400MHz it is 21.6dB)





The measurements show that this isolator is well suited to cover the frequency range 1.7 – 2.4GHz.

I wonder what the maximum power handling of this isolator might be.

If anyone has more data then please let me know.

I will be happy to answer questions and always appreciate feedback. Many thanks in advance.

Best regards

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