

13cm isolator unknown source

Matthias, DD1US, January 28th 2020

Hello,

From my days operating 13cm ATV I have an isolator left. I do not know the source as there is no label on it. I suspect it might be from ALCATEL or BOSCH Telecom but I do not really know.

Here are pictures of the device:

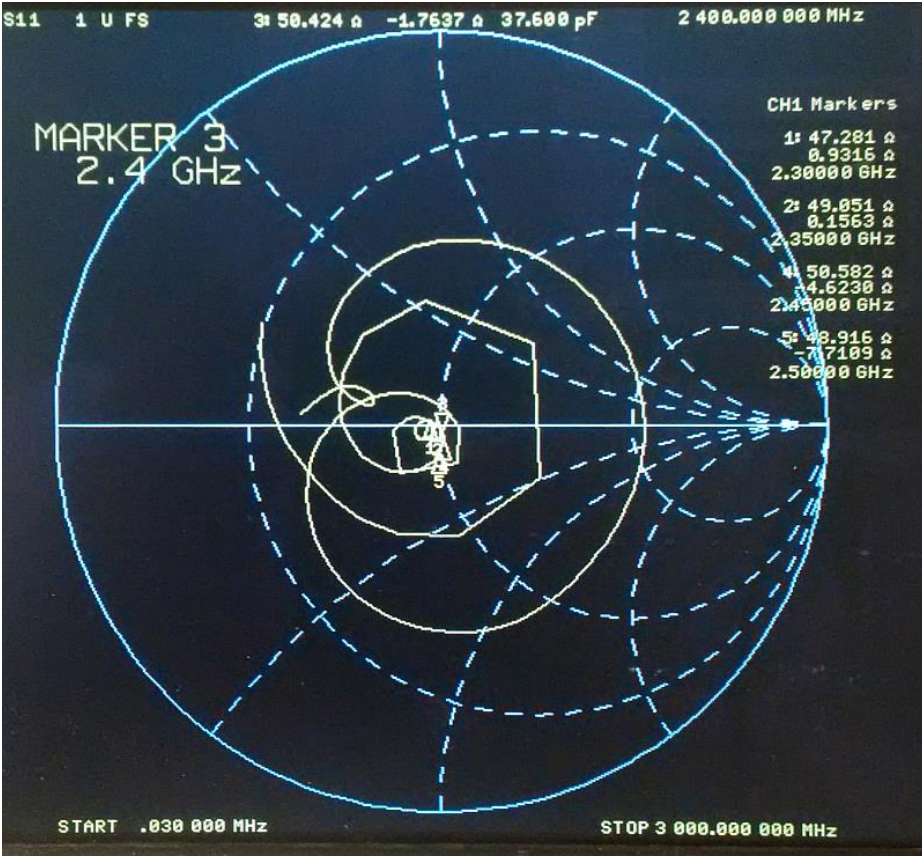
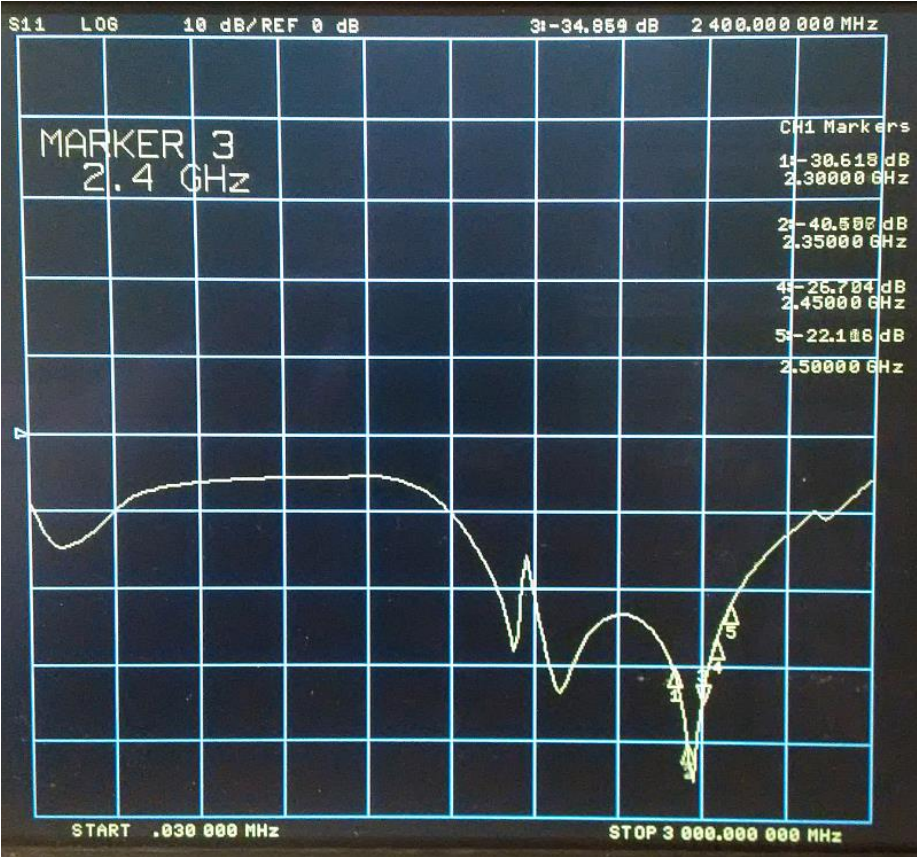


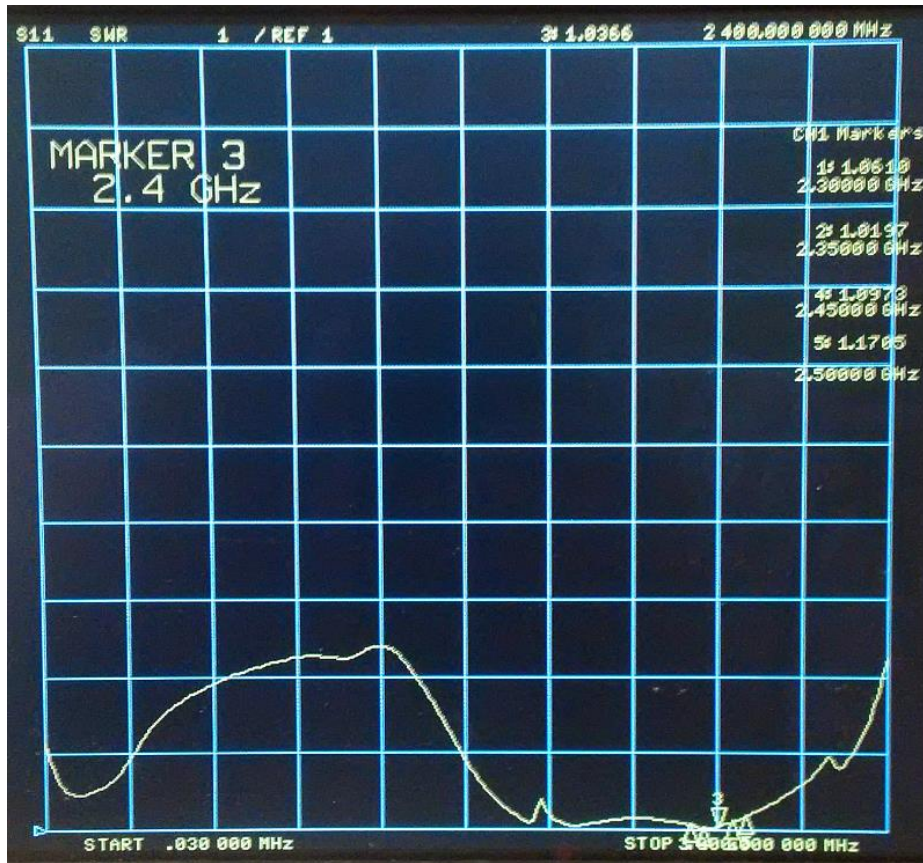


The circulator is in a solid metal case and has 2 unknown connectors. I think it is a SIEMENS type but I am not sure. They are adapted to SMA.

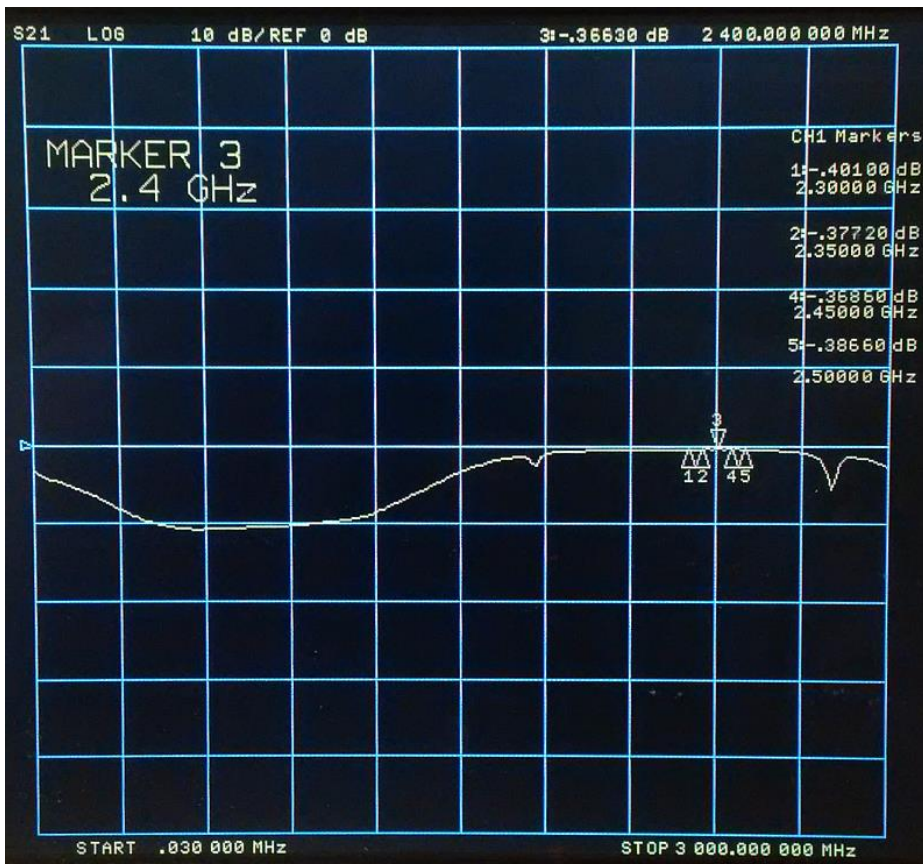
Below you will find some measurement results of this S-band isolator. All measurements were done in the frequency range 30kHz to 3GHz.

S11 input matching (return loss is 30.6dB@2300MHz, 40.5dB@2350MHz, 34.96dB@2400MHz, 26.7dB@2450MHz, 22.1dB@2500MHz)



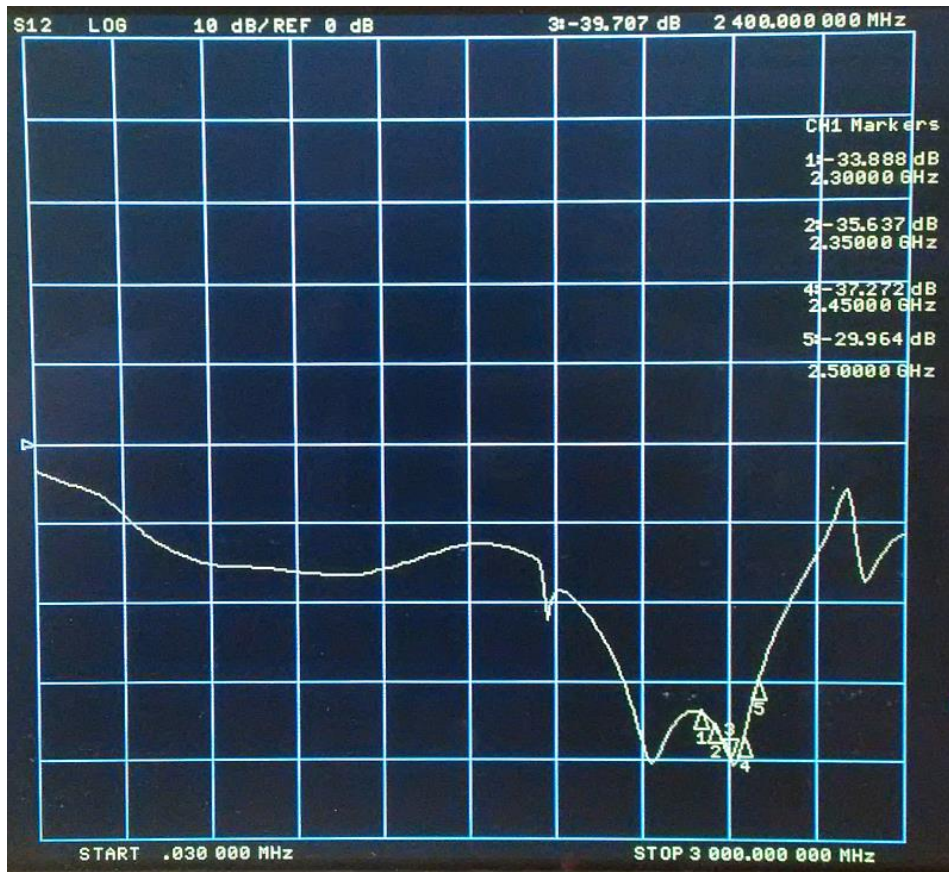


S21 forward transmission (insertion loss 0.40dB@2300MHz, 0.38dB@2350MHz, 0.37dB@2400MHz, 0.37dB@2450MHz, 0.39dB@2500MHz)

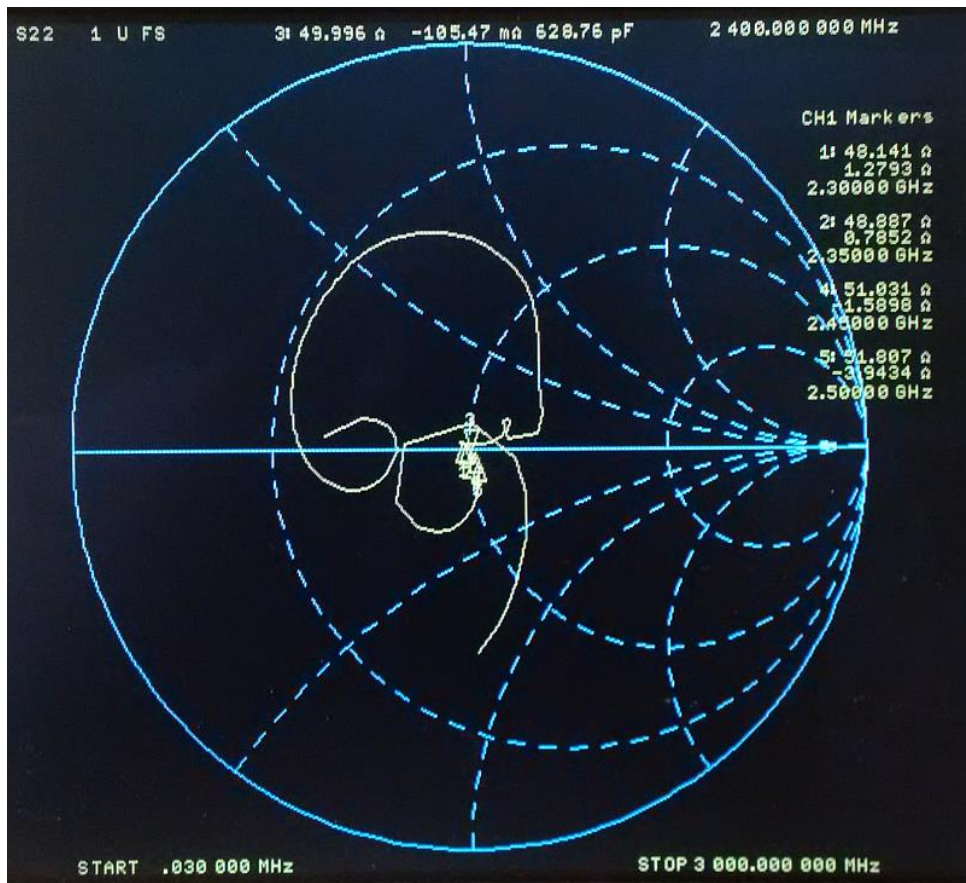


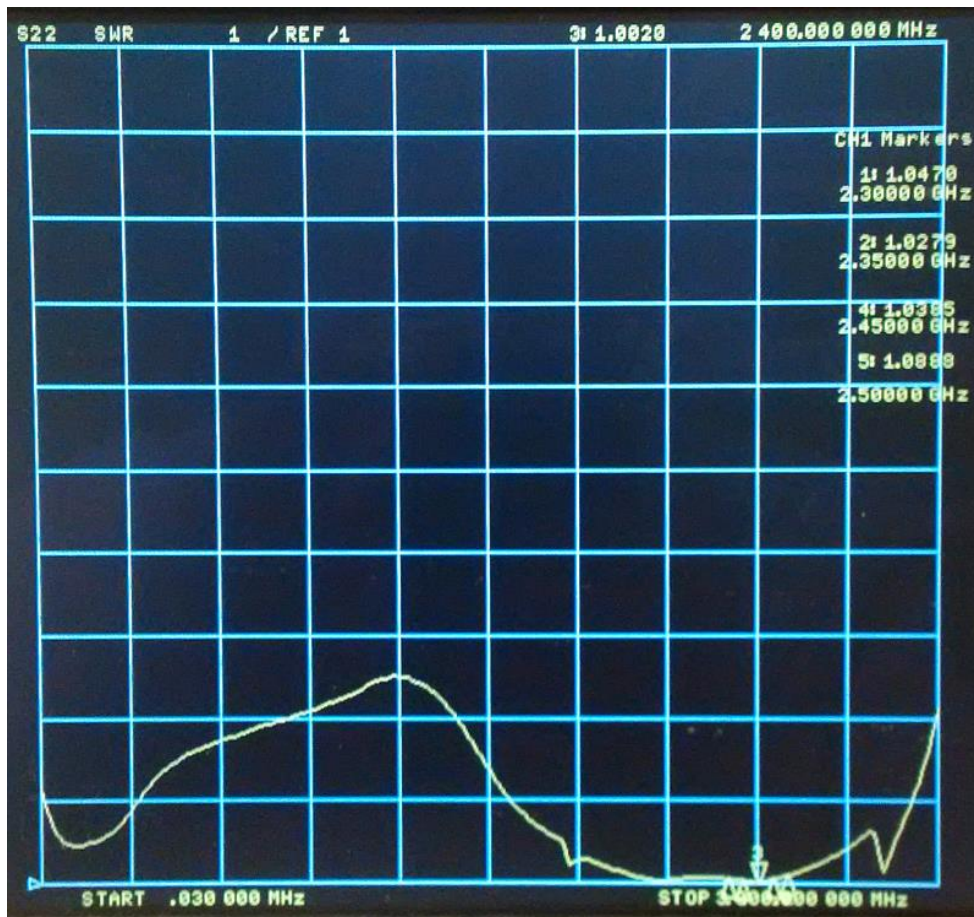


S12 reverse transmission (isolation at 33.9@2300MHz, 35.60@2350MHz, 39.7dB@2400MHz, 37.3dB@2450MHz, 30.0dB@2500MHz)



S22 output matching (return loss at 32.8@2300MHz, 37.3dB@2350MHz, 59.4@2400MHz, 34.6dB@2450MHz, 27.5dB@2500MHz)





The measurements show that this isolator is very well suited to cover the frequency range 2.3 – 2.5GHz. It is well centered in the 13cm band. At 2400MHz it features an insertion loss of 0.37dB and an excellent isolation of 39.7dB. Input and output return loss are 35dB and 60dB respectively.

I wonder what the source / supplier of this isolator is and what the maximum power handling of this isolator might be. I had used it in the past up to a power level of 500mW.

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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