

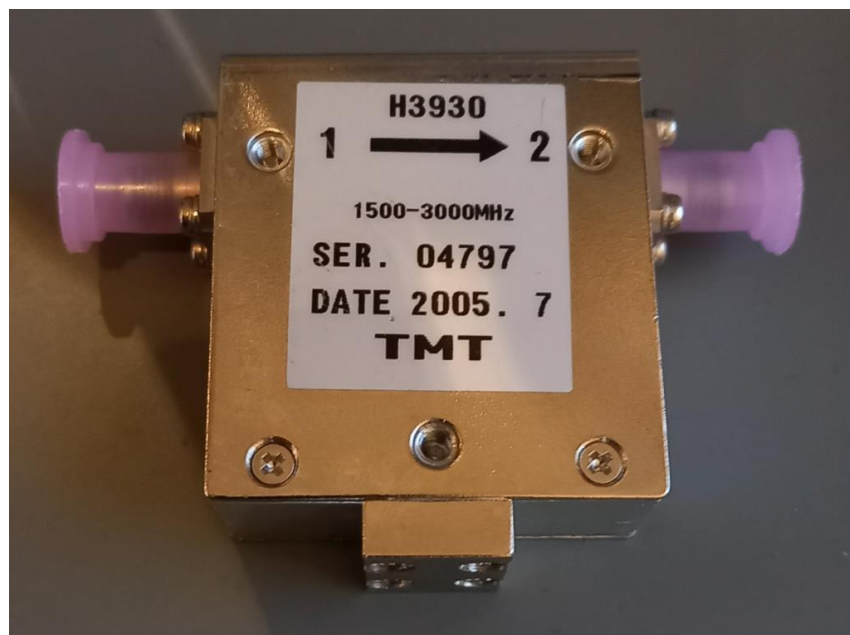
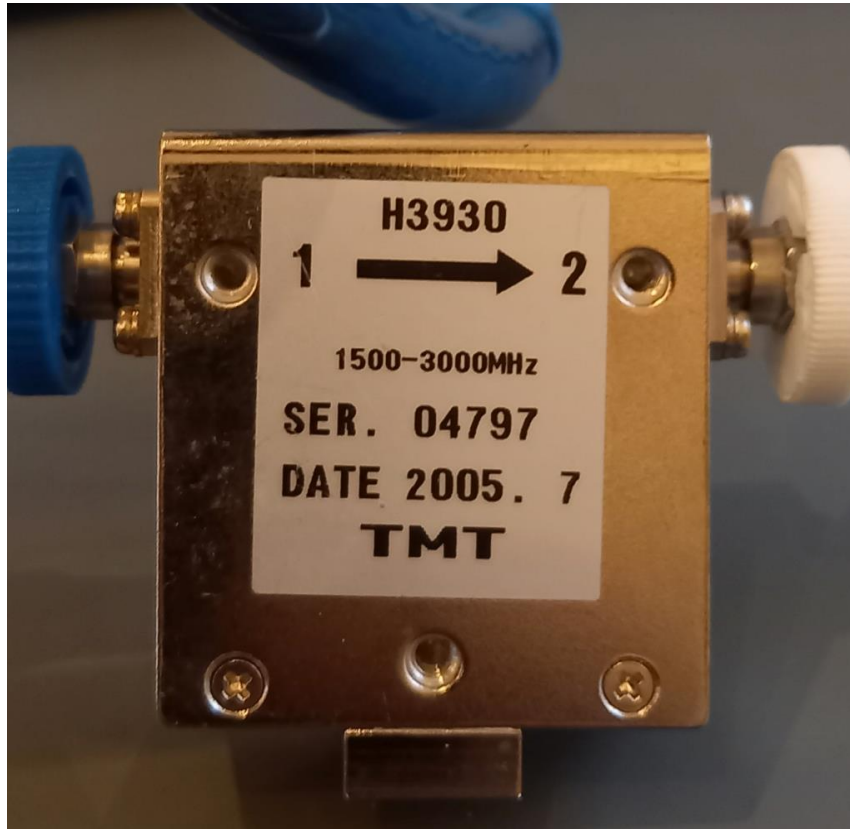
## 2-4 GHz Isolator TMT H3930 1500-3000MHz

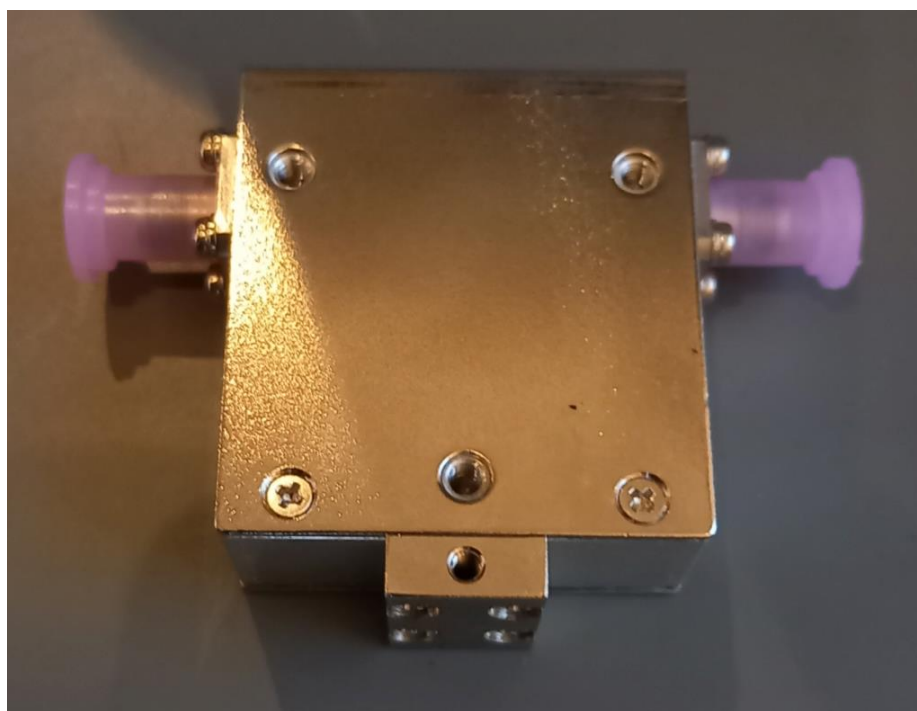
Matthias, DD1US, December 21<sup>st</sup> 2021

Hello,

Some days ago, I acquired some isolators which I wanted to use for 2.4 GHz. They are from a company TMT. The part numbers are H3930 and H3930AP. I did not find any specification for these isolators on the internet.

Here are some pictures of such a device:



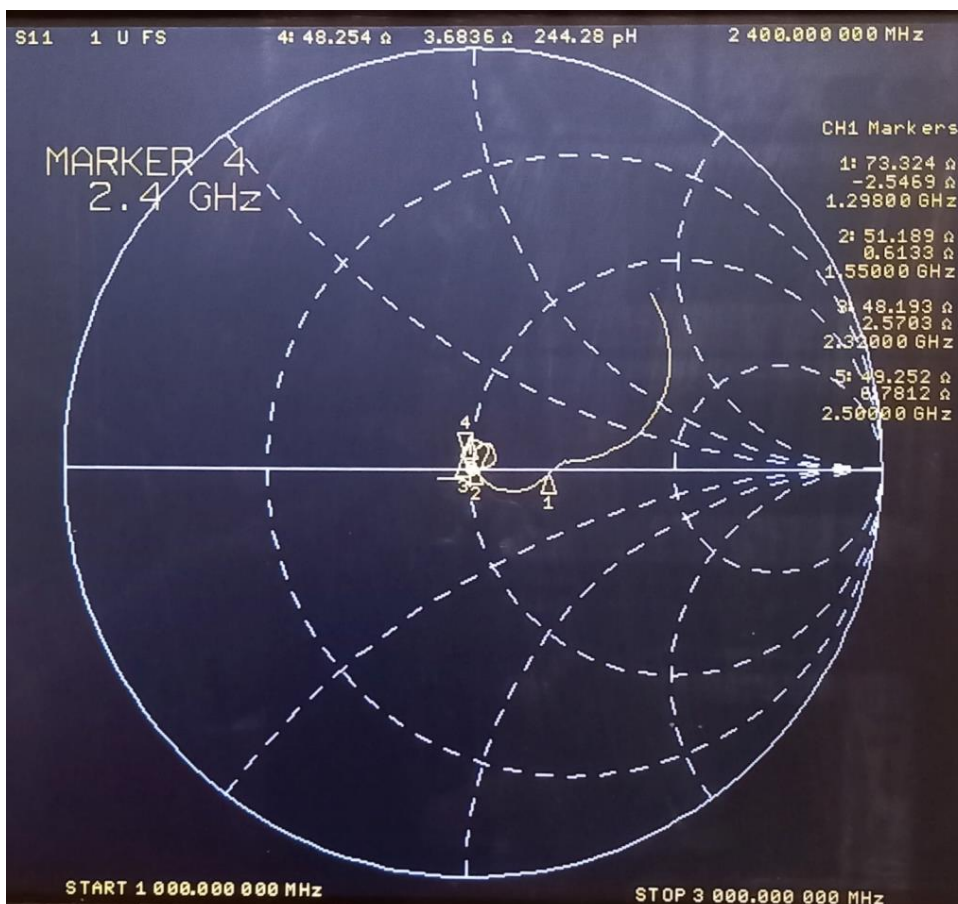
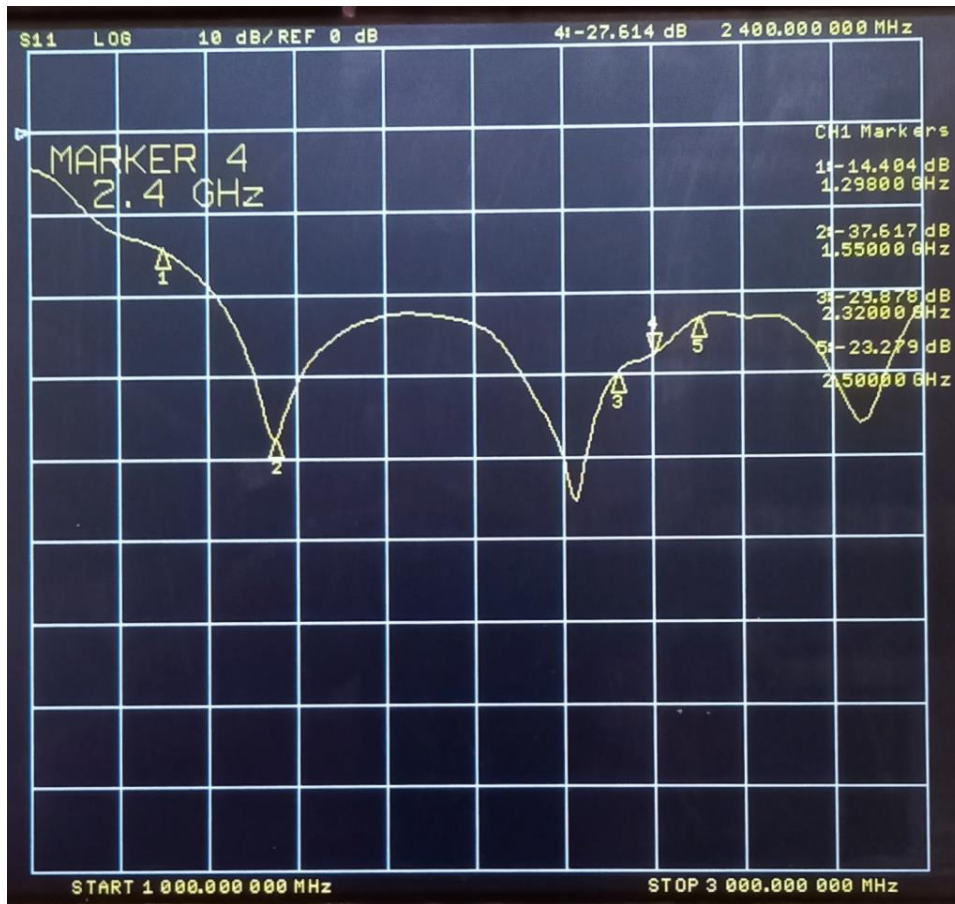


The isolator is housed in a solid metal case and female SMA connectors are used at the input and output ports.

The following data is printed on the device: H3930 1500-3000MHz, Ser. 04797, DATE 2005.7, TMT

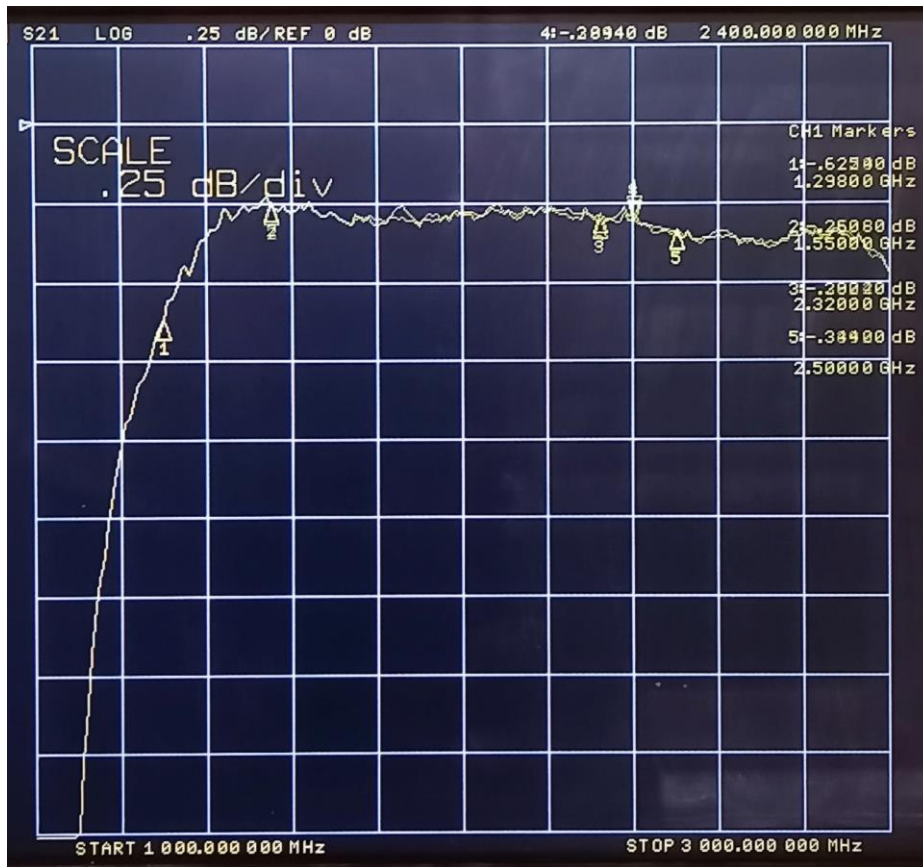
Below you will find some measurement results of this S-band isolator. All measurements were done in the frequency range 1GHz to 3GHz.

S11 input matching (return loss at 2400MHz is 27.6dB)

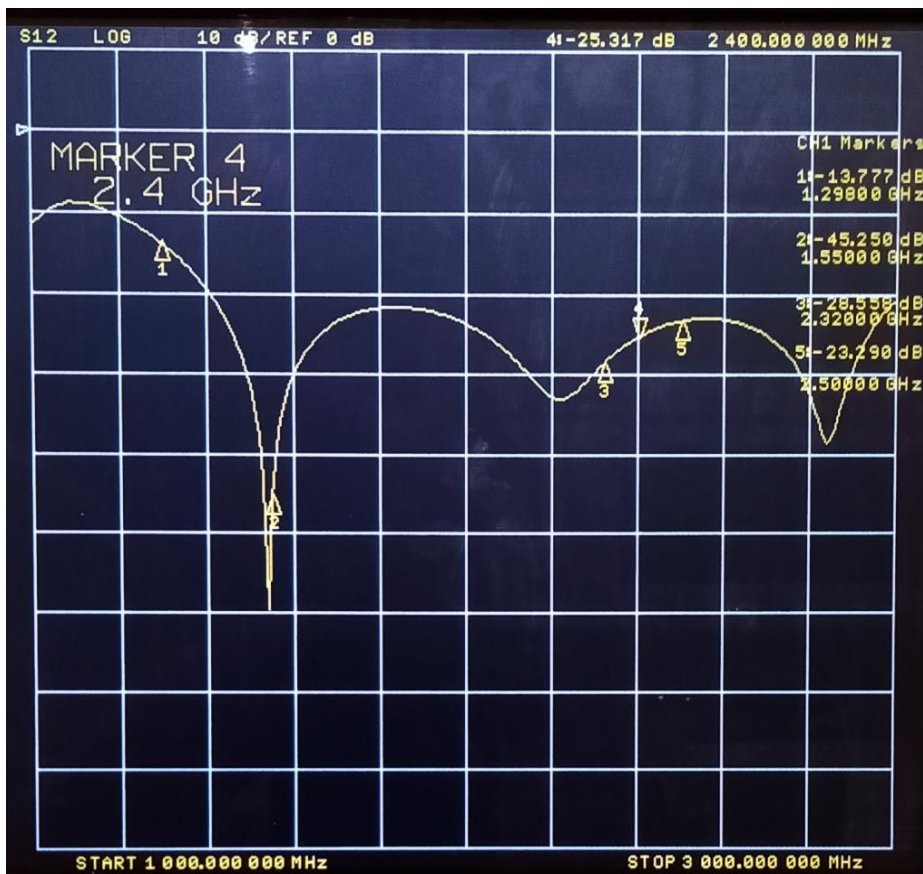




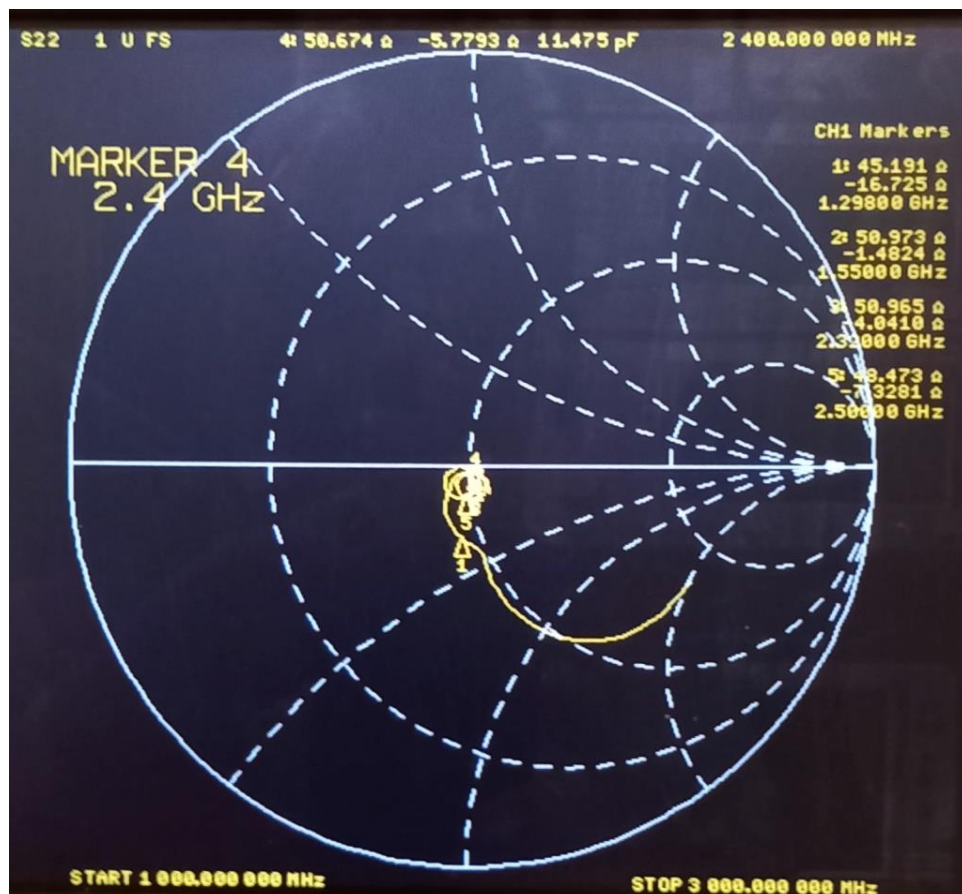
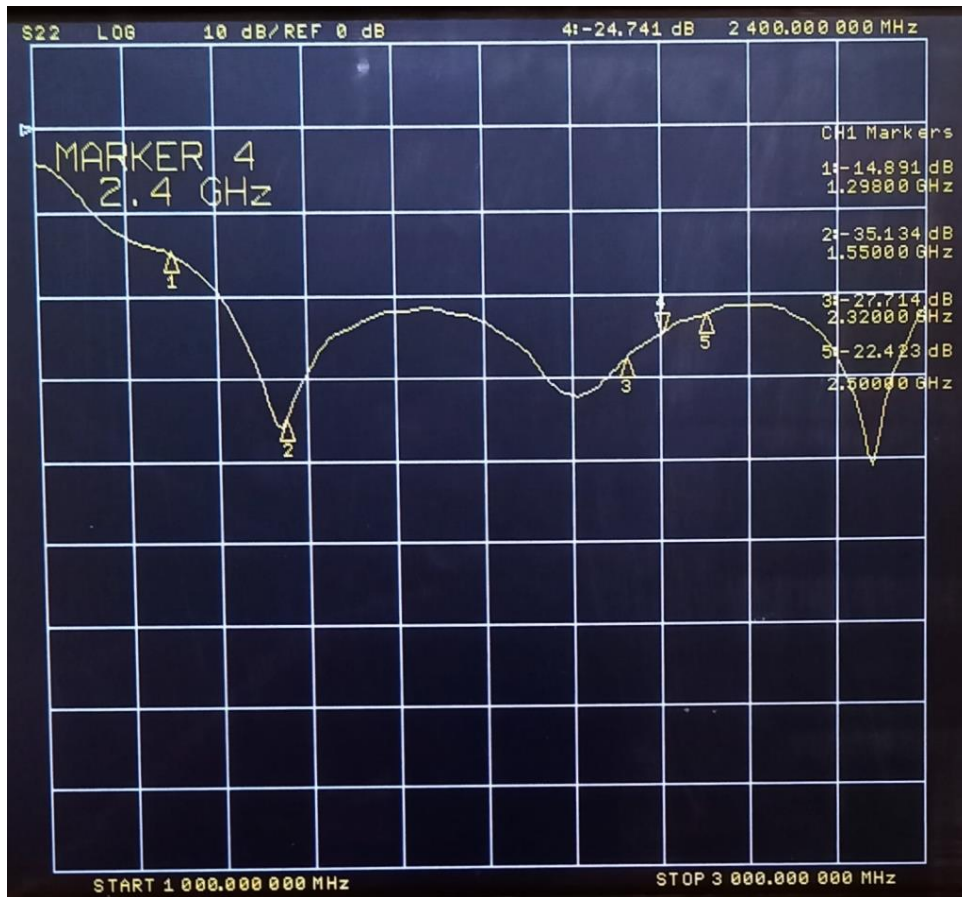
S21 forward transmission (insertion loss at 2400MHz is 0.29dB)



S12 reverse transmission (isolation at 2400MHz is 25.3dB)



S22 output matching (return loss at 2400MHz is 24.7dB)



The measurements results of this isolator at 2.4 GHz show that it is very well suited to be used at 2.4 GHz.

I tested the isolator for maximum RF power handling capabilities. After applying for 10 minutes 6W RF power to its input (while leaving the output port open) the device got quite warm. After this worst case test its temperature was about 50 degree Celsius. I measured its RF parameters when it was still hot and after it cooled down and they did not change significantly compared to the measurements done before. Thus, this isolator seems to be perfectly well suited to protect the AMSAT-DL QO-100 Upconverter or AMSAT-DL 46dB Gain PA which both deliver a saturated output power of 6W. If possible, the isolator should be bolted to a heatsink or metal enclosure for cooling.

I have a few of these isolators left and will sell them in the QO-100 user community. I am checking each of them before passing them on to someone else. If you are interested then please let me know.

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

Best regards

Matthias DD1US

Email: [DD1US@AMSAT.ORG](mailto:DD1US@AMSAT.ORG)

Homepage: <http://www.dd1us.de>