

## S-Band Isolator Western Microwave model ICS-3113

Matthias, DD1US, October 14<sup>th</sup> 2021

Hello,

Last week I got an S-band isolator ICS-3113 from Western Microwave. I did not find any data in the Internet and thus I was curious to see how it performs in the ham radio bands.

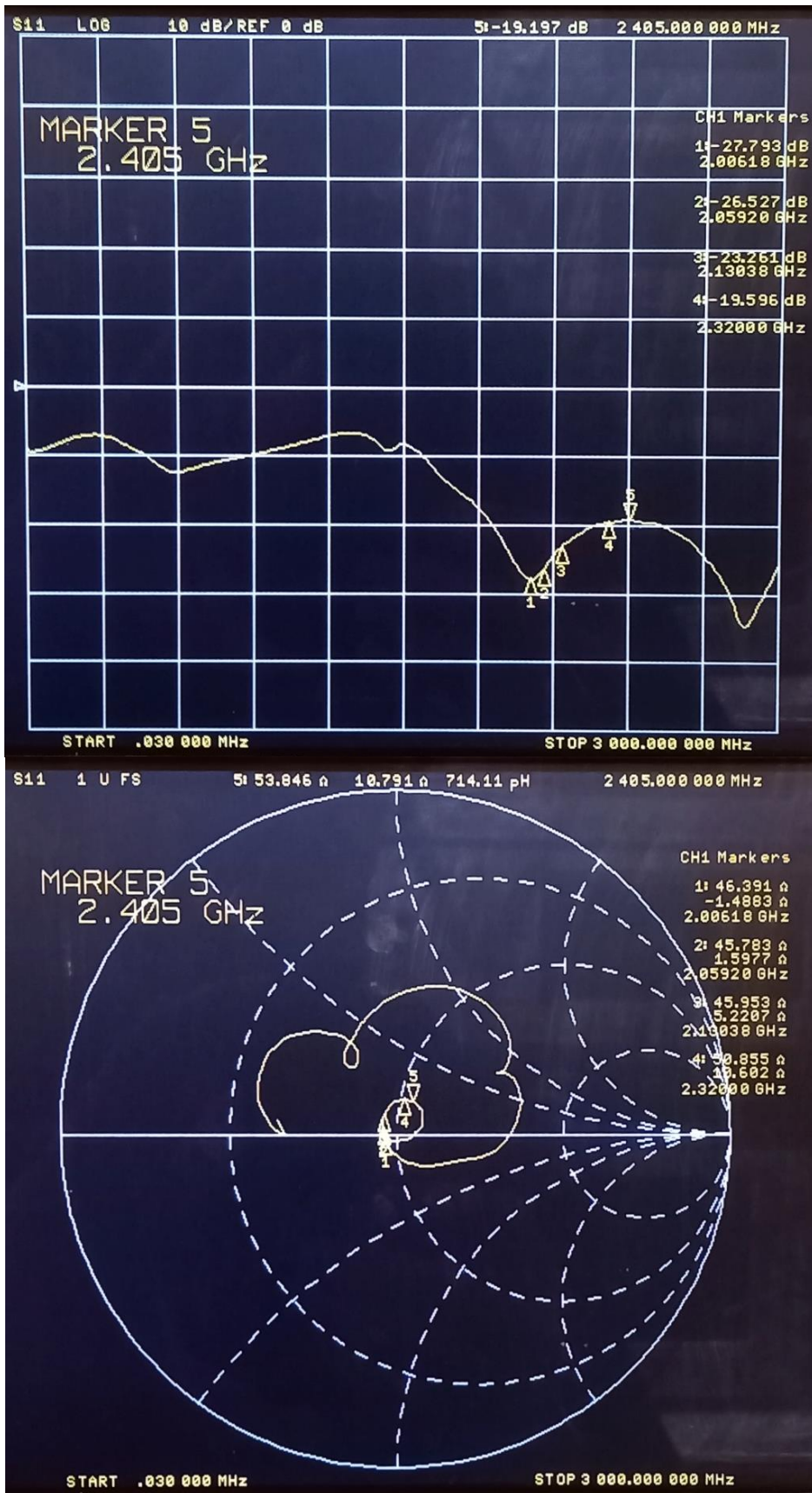
Here is a picture of the device:



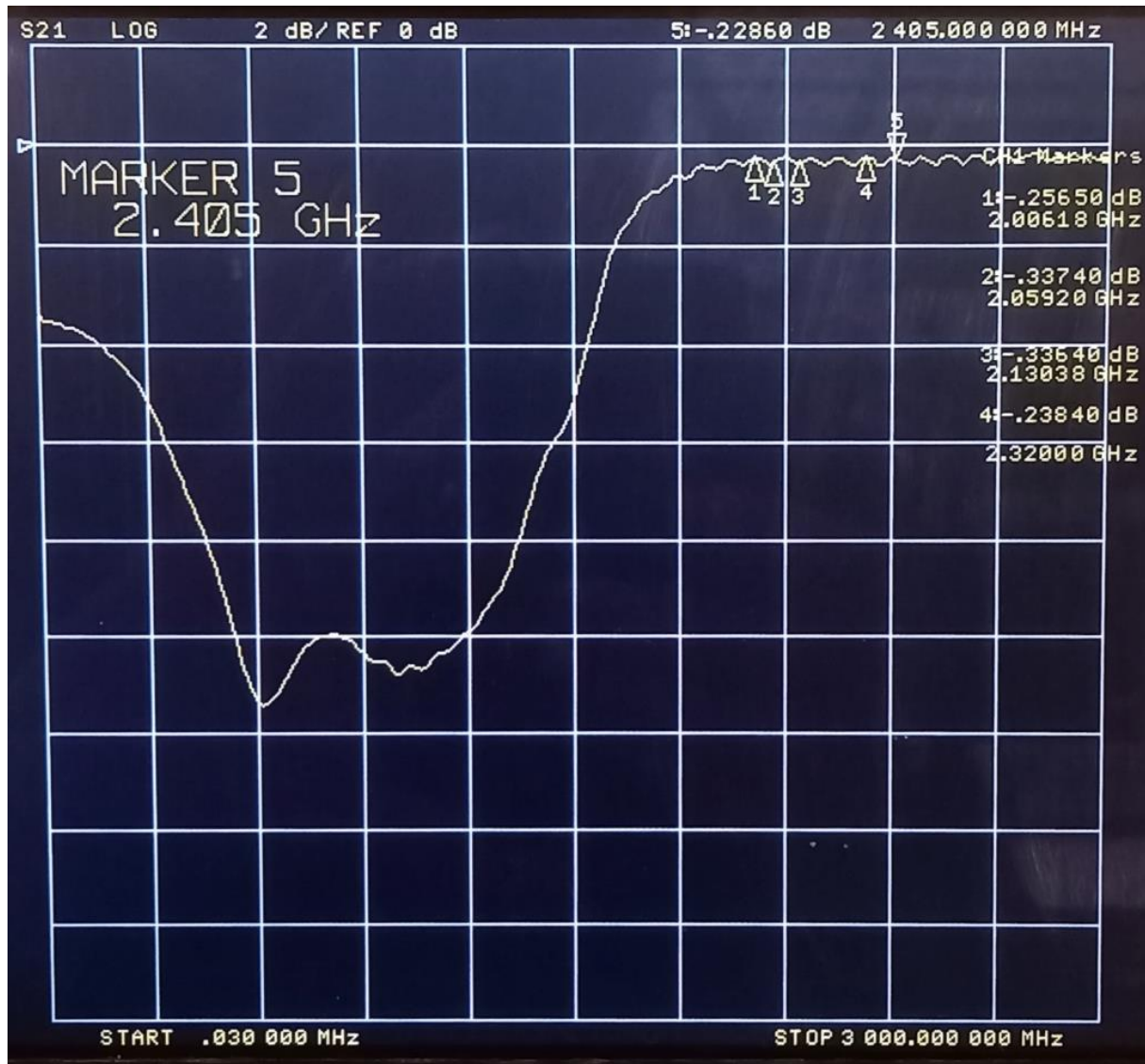
The isolator is in a round plastic case and has female N connectors at the input and output port. There is no indication with respect to the frequency range of the device. The model number is ICS-3113.

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

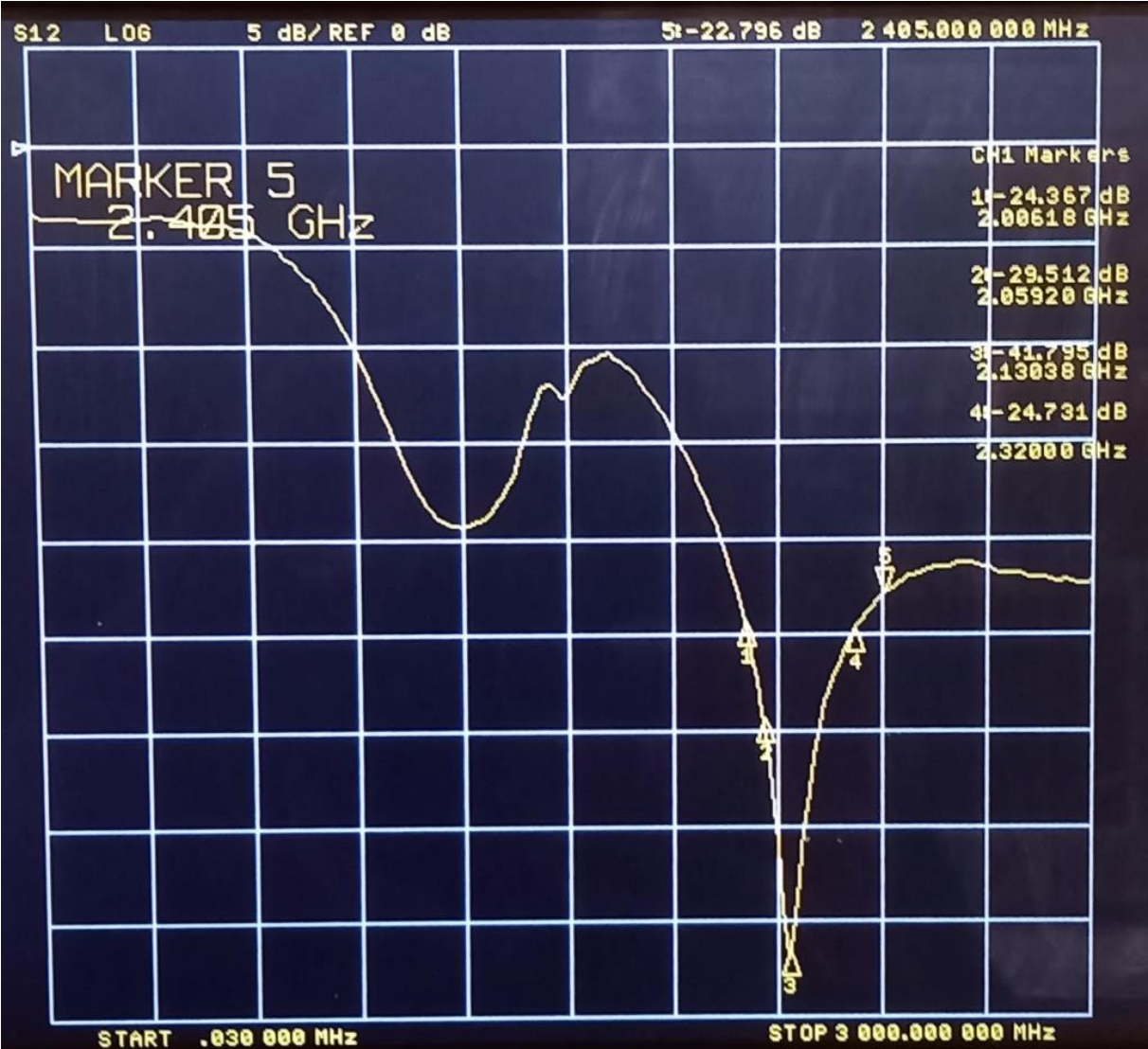
S11 input matching (return loss at 2006MHz is 28dB, at 2320MHz it is 20dB and at 2405MHz it is 19dB)



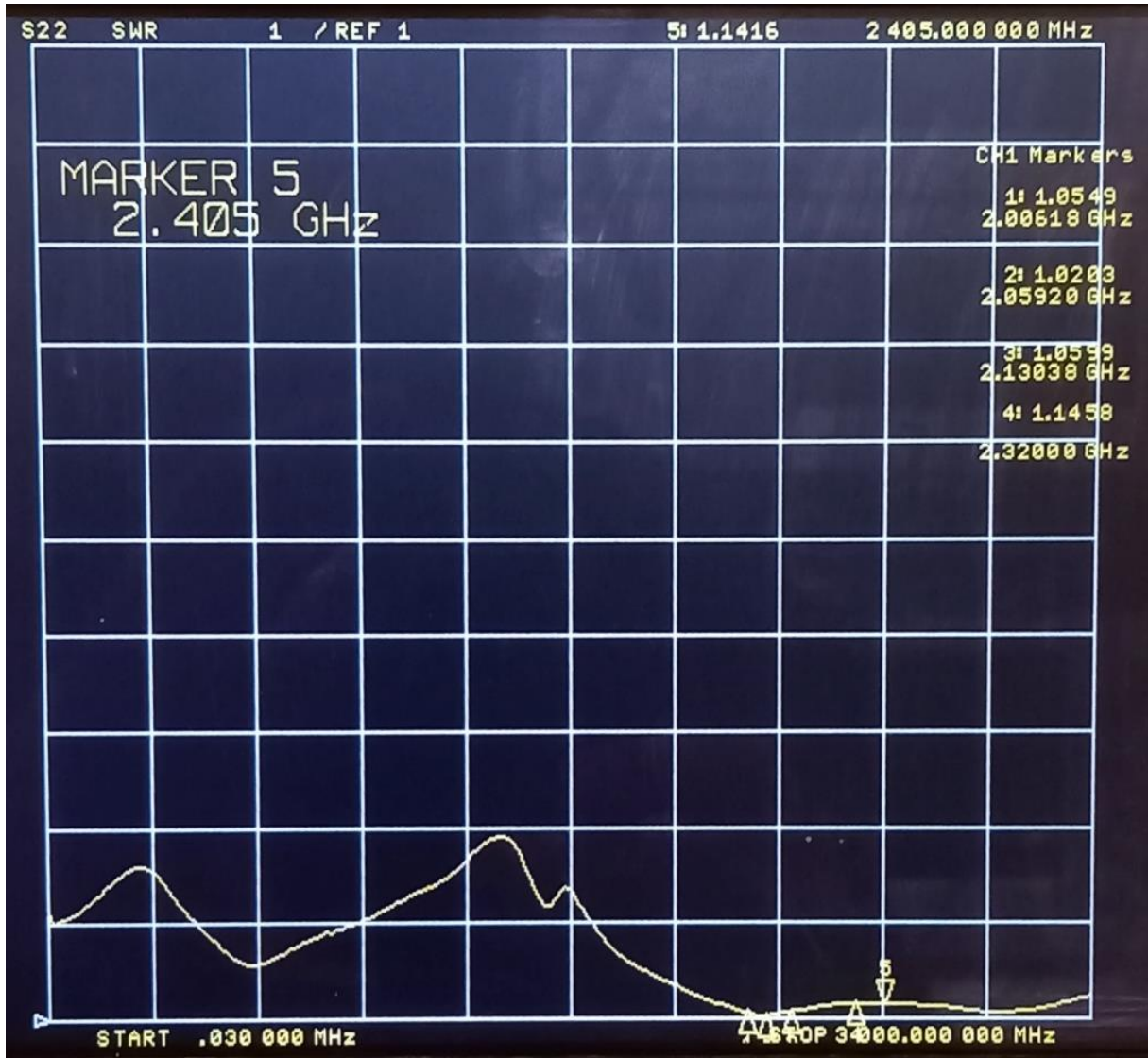
S21 forward transmission (insertion loss at 2006MHz is 0.26dB, at 2320MHz it is 0.24dB and at 2405MHz it is 0.23dB)



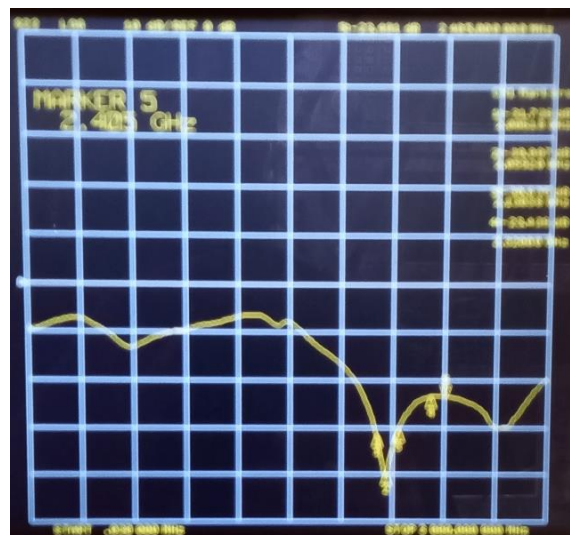
S12 reverse transmission (isolation at 2006MHz is -24dB, at 2130MHz it is -42dB, at 2320MHz it is -25dB and at 2405MHz it is -23dB)

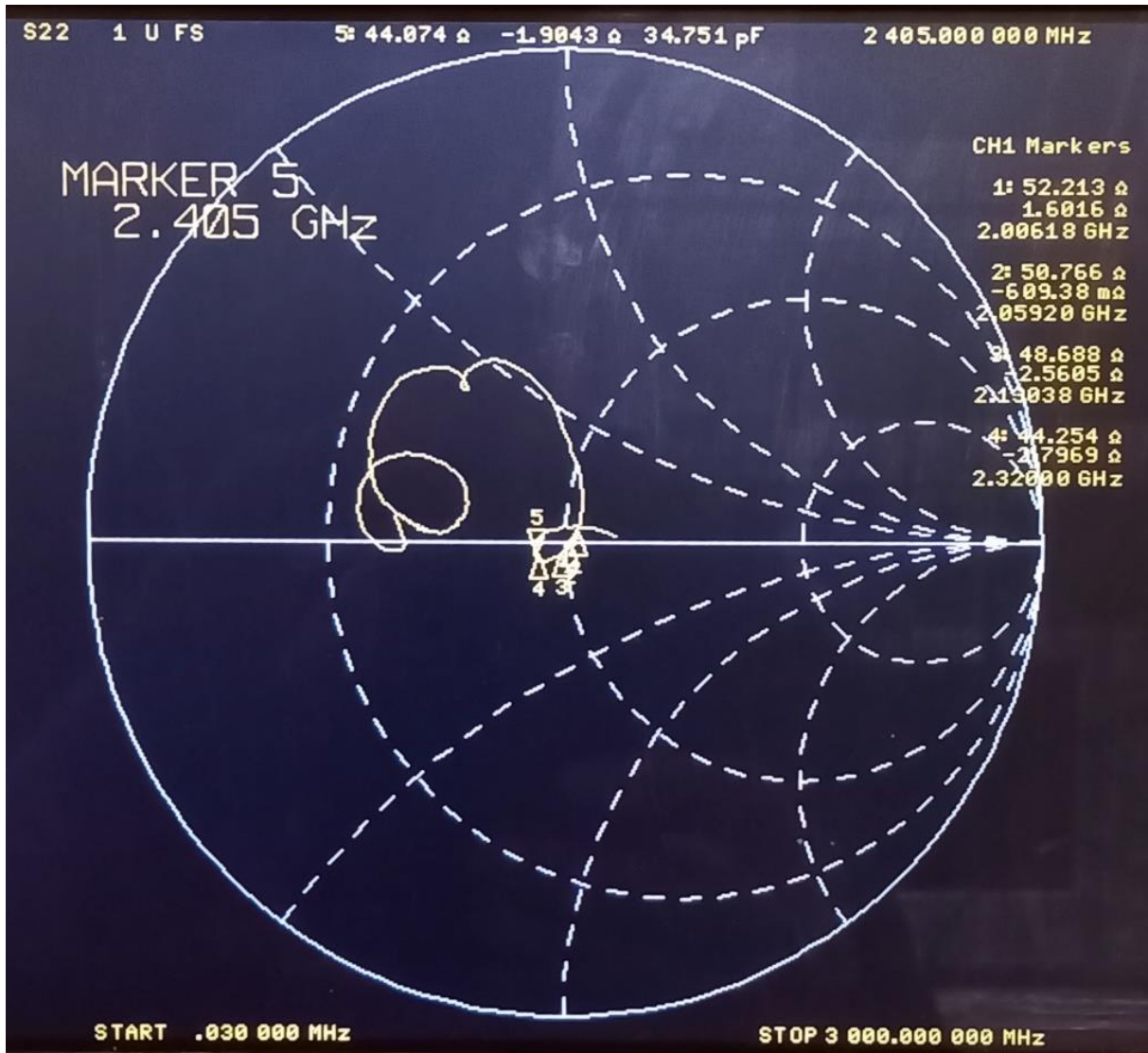


S22 output matching (SWR at 2006MHz is 1.05, at 2060MHz it is 1.02, at 2320MHz it is 1.15 and at 2405MHz it is 1.14)



S22 output matching: the corresponding return loss at 2006MHz is 32dB, at 2060MHz it is 40dB, at 2320MHz it is 23dB and at 2405MHz it is 24dB)





The measurements show that this isolator is well suited for the 13cm ham radio band.

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

Matthias DD1US

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