

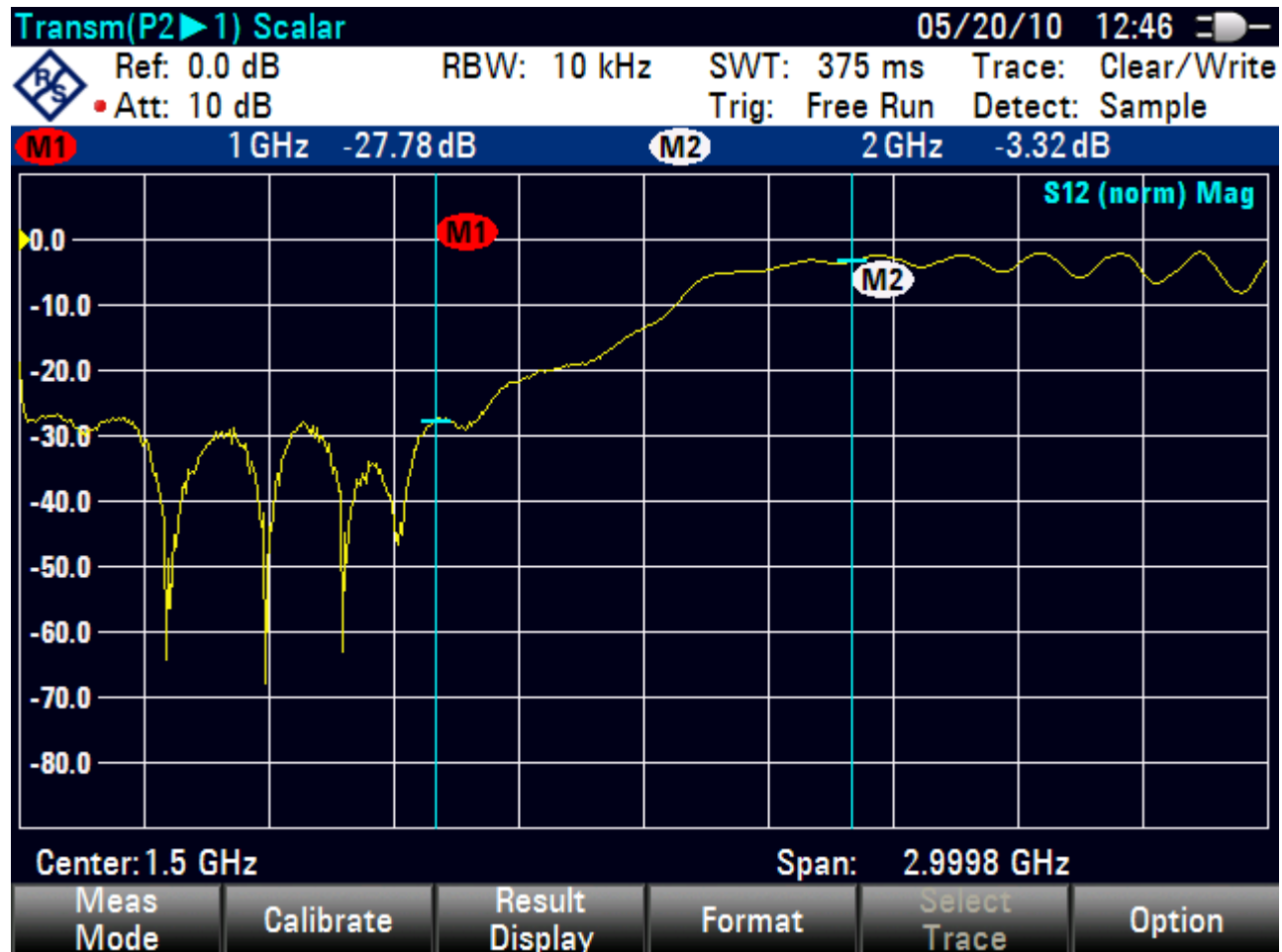
May 17, 2010

Introduction

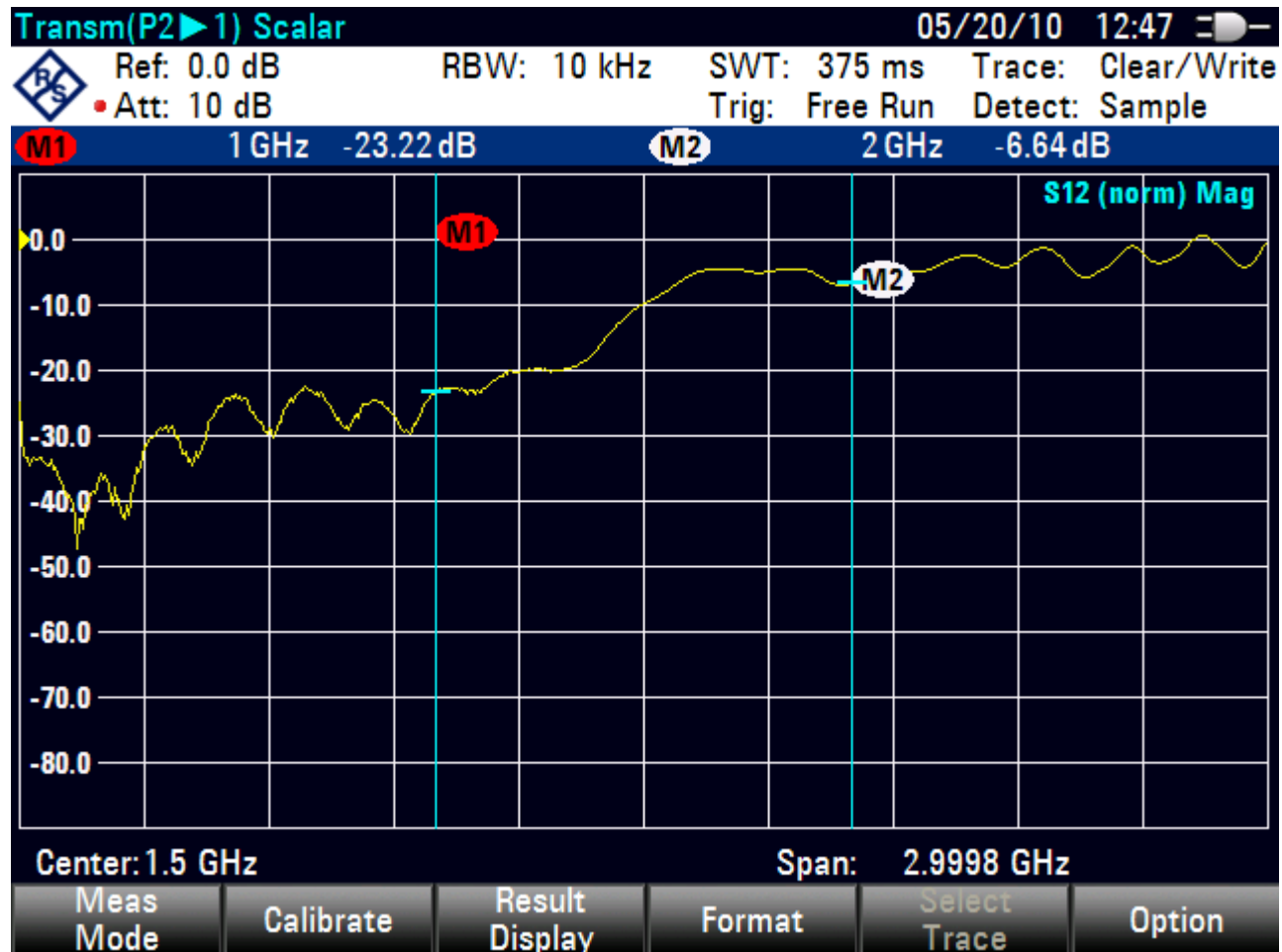
The following waveforms measure return loss on a standard (randomly chosen) 'house quality' 1 GHz 2-way splitter. An initial RL measurement is taken on a high quality 50 ohm terminator for reference purposes. All measurements were taken with a Rohde & Schwarz FSH818 Spectrum analyzer & tracking generator, with RF bridge, test lead and adaptor losses 'normalized' to the 0 dB reference line, therefore the *return loss values* shown on the diagrams are the precise (accuracy better than .1 dB) values. The horizontal (frequency) axis is from 0 to 3 GHz.



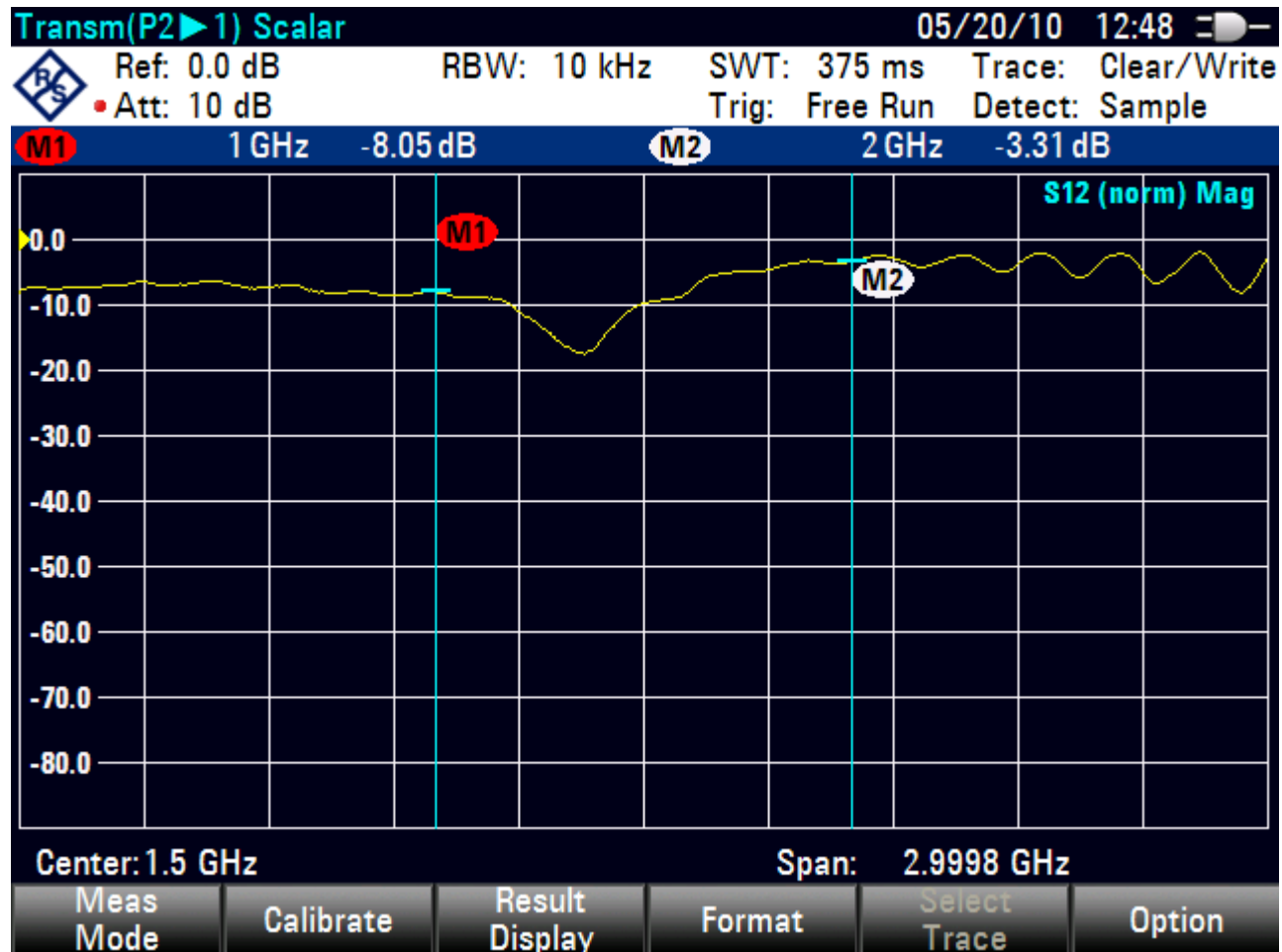
Return loss measured on a quality 50 ohm terminator (used for calibration purposes).
Markers show return loss value at 1 & 2 GHz respectively.



Return loss measured on the 75 ohm input to a standard 1 GHz 2W splitter.
Measured RL values range from 28 to 30 dB, from 0 to 1 GHz. The output ports are properly terminated.



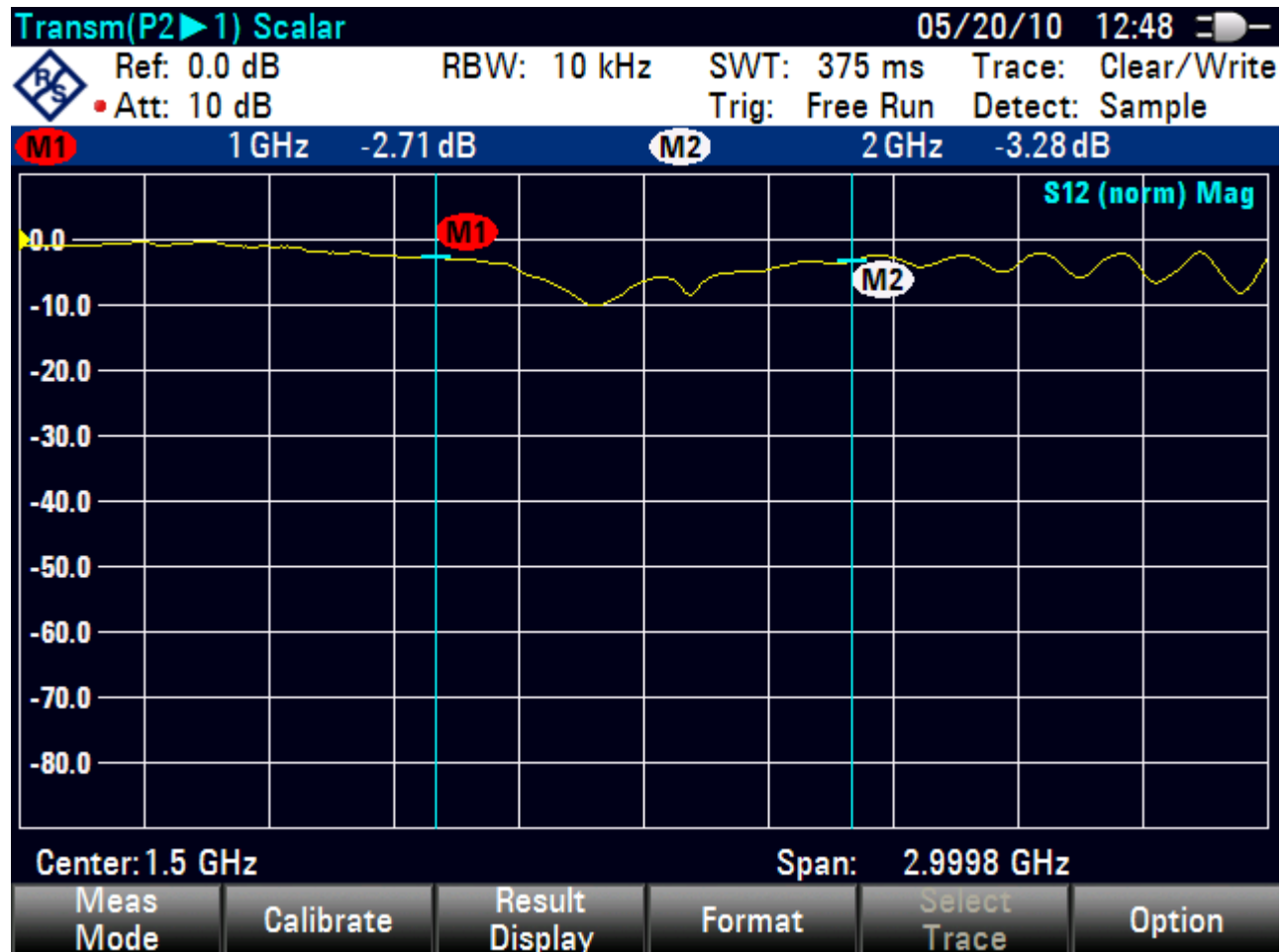
Return loss measured on the 75 ohm output to a standard 1 GHz 2W splitter.
Measured RL values range from 23 to 30 dB, from 0 to 1 GHz. The remaining ports are properly terminated.



Return loss measured on the 75 ohm input to a standard 1 GHz 2W splitter.

Typical RL values range from 6 to 8 dB, from 0 to 1 GHz.

One output port has a good 75 ohm match, **while the 2nd has a force poor match.**



Return loss measured on the 75 ohm input to a standard 1 GHz 2W splitter.

Typical RL values range from 0 to 2.5 dB, from 0 to 1 GHz.

In this final example, **both output ports have a poor 75 ohm match.**