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Application of VSWR bridge

◇Simplified measurement method of impedance

*～*Application**～*

The impedance of inputs and outputs of RF circuits are demanded to be 50 ohm. It is possible to verify the impedance using an impedance analyzer or other method. But these methods need so much cost. MVS300 provides an easy and a low cost way to verify it.

■ Principle of the measurement

Using VSWR bridge, we can measure a return loss that is a reflected power from a DUT. In a circuit system whose the impedance is 50 ohm and the matching is enough taken, the reflection is hardly generated and the return loss becomes larger.

On the other hand, in the case of that the DUT port is a short circuit, the power is reflected almost all and the return loss becomes near 0dB.

If the return loss is under −14dB, the transmit rate is assumed over 95%, and the impedance is generally assumed to be 50 ohm and a matching is given.

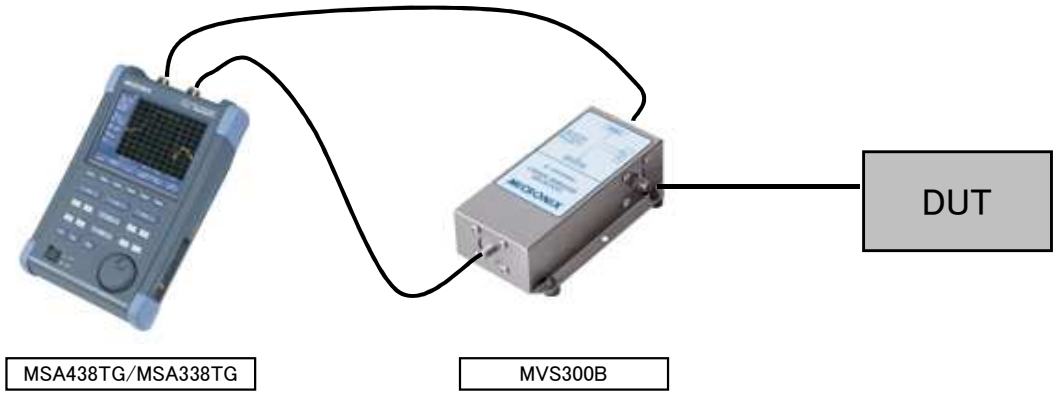
■ Procedure of the Measurement

① Connect the MSA338TG/MSA438TG and MVS300B, and take a normalize in the frequency range to be measured. Keep the DUT terminal open.

② Connect the DUT and measure the return loss.

※Please refer the manual of MVS300B for more detail.

Connection of the measurement system



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MICRONIX Corporation
2-21-2 Owada-machi, Hachioji-shi, Tokyo, Japan URL：https://micronix-jp.com/
TEL: +81-42-649-3889 FAX: +81-42-649-2113