

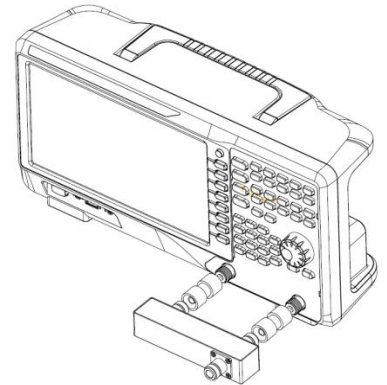
# RB3X25 Reflection Bridge Instructions

## Product Introduction

RB3X25 Reflection Bridge is a hardware accessory designed to enable spectrum analyzer measurements of S11-related parameters such as return loss, reflection coefficient and VSWR. It provides N type female port, with 2 N (Male)-N(Male) adapters to facilitate connections.

The reflection bridge has 3 ports:

- IN (TG): Signal input terminal. This terminal connects to the generator/source.
- COUPLE (RF): Coupling output terminal. This terminal connects to the receiver/analyzer input.
- DUT: This port is connected to the Device-Under Test (DUT).



It can be used with any analyzer that has a working generator output and RF input, but the distance between the RB3X25 ports is designed to match the connectors on the SSA3000X/Plus series spectrum analyzers which improves accuracy by eliminating the need for extra cables.

## Measurement Procedure with SIGLENT SSA analyzers

### 1. Connection:

The connection of the bridge and spectrum analyzer is shown in the figure above.

Use the N(M)-to-N(M) adapters to connect the output terminal of the tracking generator and RF input terminals of the spectrum analyzer to the IN and COUPLE terminals of the reflection bridge respectively.

The cables between the DUT and bridge should be as short as possible, in order to reduce mismatches and loss.

### 2. Measurement procedure (for analyzers with active REFL licenses):

- 1) Select Reflection Meas. The Tracking Generator (TG) indicator light will be illuminated
- 2) Perform port calibration according to the message instructions
- 3) Connect the DUT to the Reflection Bridge
- 4) Move the Marker and the Reflection Table will display the frequency, return loss, reflection coefficient and VSWR

## Specifications

Frequency range	1 MHz- 2500 MHz		
Connector type	N (Female)		
Impedance	50 $\Omega$		
Insertion loss	IN to DUT : 3 dB (typ.)		
Directivity	1 MHz – 1.5 GHz	1.5 GHz – 2.0 GHz	2.0 GHz – 2.5 GHz
	25 dB (typ.)	20 dB (typ.)	15 dB (typ.)
Size& Weight	136 mm ×75 mm × 30 mm, 0.5 kg		