

# Network Analyzers

## Evaluation of Duplexers, Couplers and Other Devices

### R3962/3963/3964/3965/3966



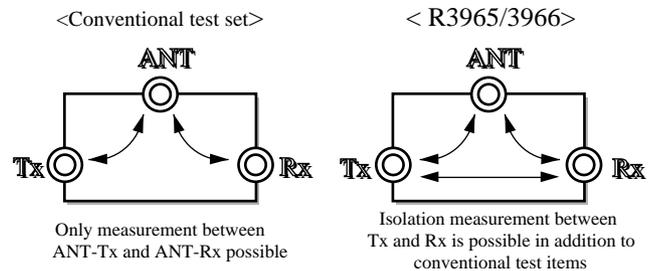
#### R3962A/B S-Parameter Test Sets R3963A/B, R3964A/B Duplexer Test Sets/Adapters R3965A/B, R3966A/B 3 Port Test Sets/Adapters

Since duplexers and couplers used in PDC/PHS and other telephone and communication equipment have three I/O ports, reconnection of the ports is often required when performing characteristic evaluations with conventional network analyzers. Used together with ADVANTEST's 3.8 GHz/8 GHz Network Analyzer Series (R3764, R3765, R3766 or R3767), the R396X Series Test Sets make it possible to switch measurement terminals on the network analyzer automatically without reconnecting the ports.

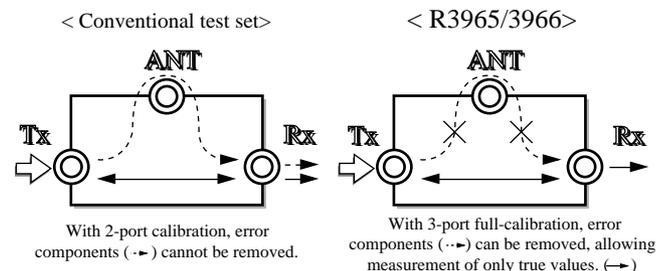
The R3965/3966 Series is completely compatible with 3 port devices, allowing measurement of duplexer isolation terminals. With the 3 port full calibration function and the CAL memory for 3 ports, the R3965/3966 series delivers high-accuracy measurements without the need for connection of external PCs or other memory devices.

The R396X Series comes in five different models to accommodate diverse measurement device configurations (such as test configurations specialized for duplexers and for 3 port devices). Each model comes in types A and B, for a total of 10 types. Type A models are desktop units which include the network analyzer in a single unit for stand-alone use. Type B models are compact and lightweight, ideal for system use. They are used separated from the network analyzer, near the DUT.

#### ■ Complete 3 Port Device Compatibility, Enabling Measurement of Isolation Terminals



#### ■ High-Accuracy Measurement With 3 Port Full Calibration

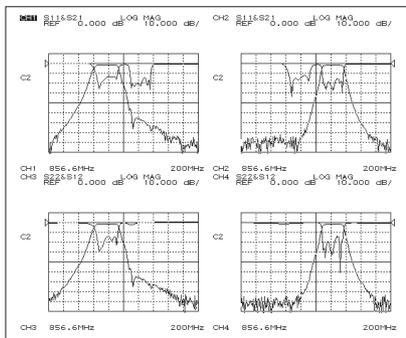


#### Test Set/Adapter Selection Guide

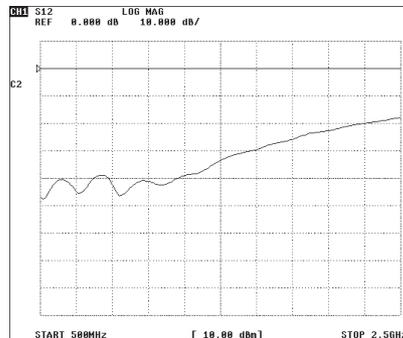
	Stand-Alone Use			System Use				
	Type	NA* Type			Type	NA* Type		
		A	B	C		A	B	C
S-Parameter Test Set	R3962A	●			R3962B	●		
Duplexer Test Set	R3963A	●			R3963B	●		
Duplexer Test Adapter	R3964A			●	R3964B			●
3-Port Test Set	R3965A	●			R3965B	●		
3-Port Test Adapter	R3966A			●	R3966B			●

\* : The connectable network analyzer (NA) is the R3764H/3765H/3766H/3767H series.

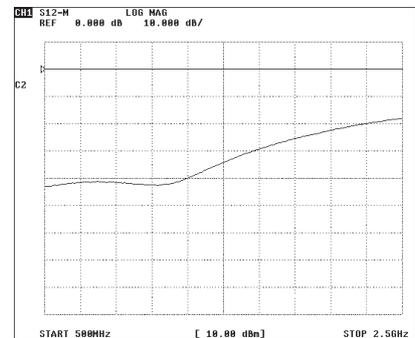
#### Measurement Display Example



< Measurement of all Tx/Rx parameters >



< Coupler isolation measurement (during 2 port calibration) >



< Coupler isolation measurement (during 3 port calibration) >

#### Main Features of Representative Models

##### <Common Specifications>

**Frequency range:** 40 MHz to 8 GHz

**External dimensions:**

Type A 424 (W) × 88 (H) × 400 (D) mm

Type B 250 (W) × 80 (H) × 165 (D) mm

**Weight:** 5 kg (max.)

##### <R3962A/3962B Specifications>

**Directionality (25 ± 5°C):** 30 dB (40 MHz to 2.6 GHz)  
26 dB (2.6 GHz to 3.8 GHz)  
22 dB (3.8 GHz to 8 GHz)

**Test port load match:** 25 ± 5°C

30 dB (40 MHz to 2.6 GHz)  
26 dB (2.6 GHz to 3.8 GHz)  
22 dB (3.8 GHz to 8 GHz)

##### <R3963A/3963B Specifications>

**Directionality (25 ± 5°C):**

**ANT PORT** 30 dB typ. \*40 dB typ. (40 MHz to 2.6 GHz)  
29 dB typ. \*32 dB typ. (2.6 GHz to 3.8 GHz)  
25 dB typ. \*26 dB typ. (3.8 GHz to 8 GHz)  
**TEST PORT 1, 2** 15 dB typ. \*40 dB typ. (40 MHz to 2.6 GHz)  
20 dB typ. \*32 dB typ. (2.6 GHz to 3.8 GHz)  
8 dB typ. \*26 dB typ. (3.8 GHz to 8 GHz)

**Test port load match (25 ± 5°C):**

**ANT PORT** 25 dB typ. \*40 dB typ. (40 MHz to 2.6 GHz)  
20 dB typ. \*32 dB typ. (2.6 GHz to 3.8 GHz)  
14 dB typ. \*26 dB typ. (3.8 GHz to 8 GHz)  
**TEST PORT 1, 2** 18 dB typ. \*40 dB typ. (40 MHz to 2.6 GHz)  
20 dB typ. \*32 dB typ. (2.6 GHz to 3.8 GHz)  
14 dB typ. \*26 dB typ. (3.8 GHz to 8 GHz)

\* During 2 port full calibration