



Duplexer Box MN2555A

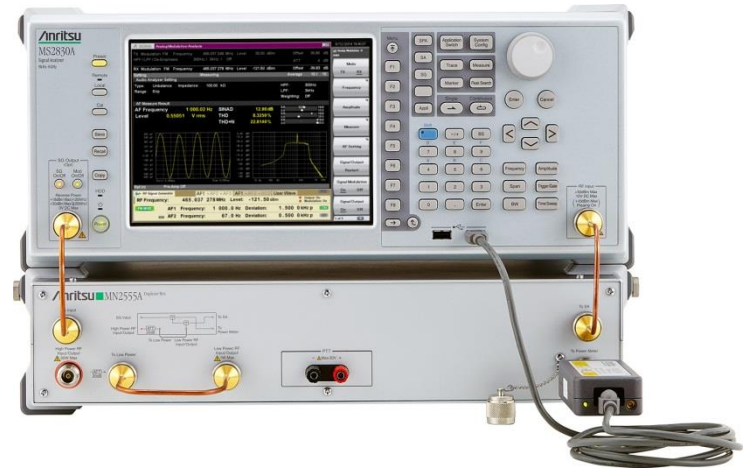
Signal Analyzer
MS2830A

Ver.1.0

Duplexer Box MN2555A



Duplexer Box MN2555A



Connecting MN2555A, Signal Analyzer MS2830A, and USB Power Sensor

*The shape of the accessory may be changed.

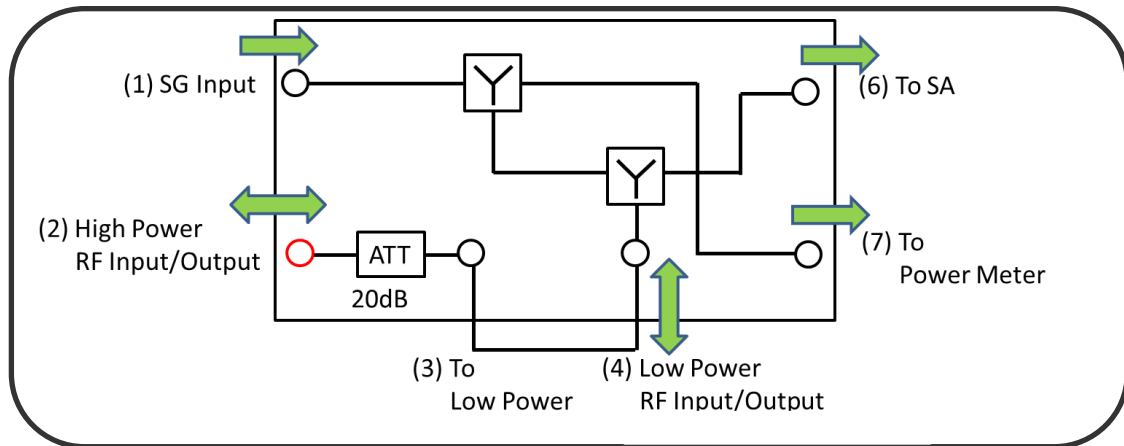
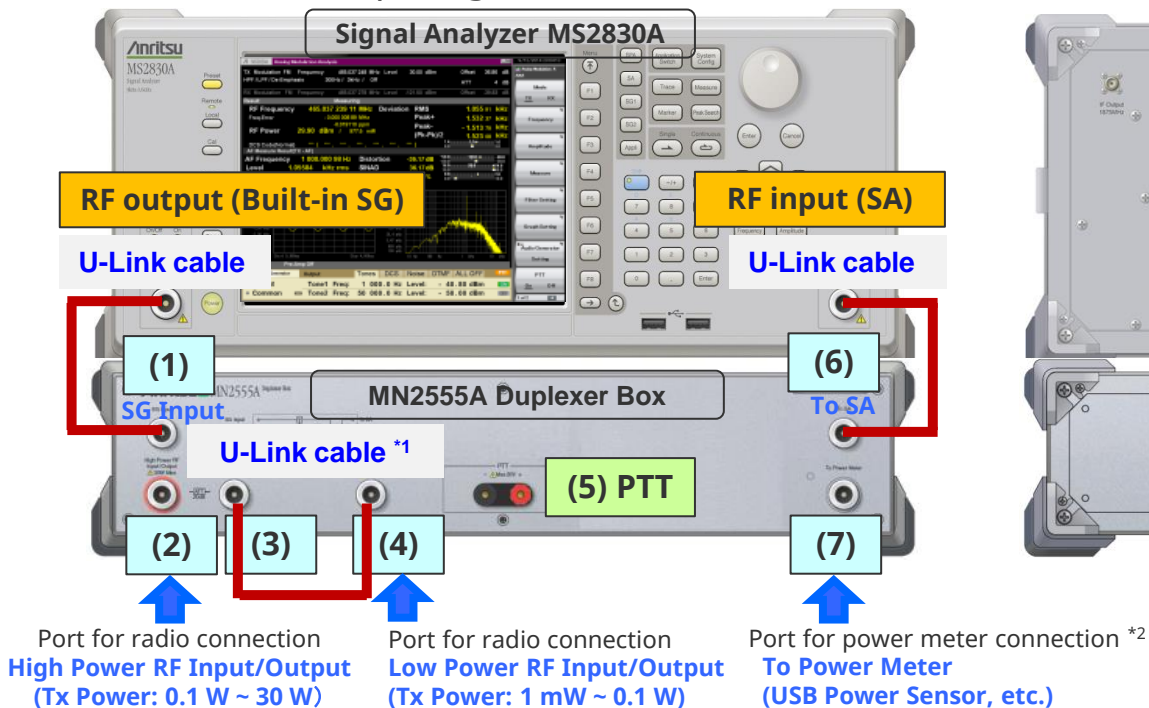
Connecting the Duplexer Box MN2555A to the Signal Analyzer MS2830A (MS2830A-040, 041, 043) supports integration of independent RF I/O ports with the MS2830A.

The MN2555A has a high-power built-in attenuator, supporting radio output transmissions up to 30 W, as well as connection of a power meter.

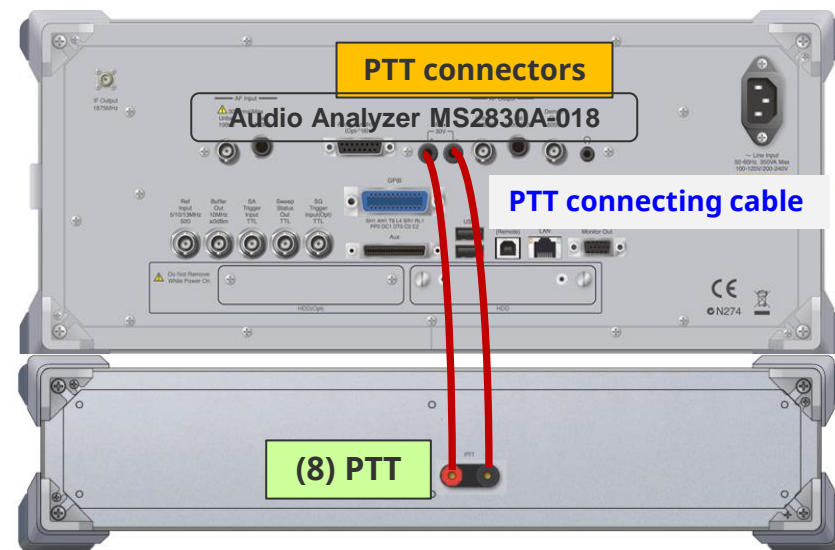
RF signal correction data is also provided as a standard accessory with the MN2555A.

Duplexer Box MN2555A

◆ Connection Setup Diagram <Front Panel>



<Back Panel>



- *1: Provides ports (High Power RF Input/Output) for connecting radio
- *2: When a power sensor is not connected, connect a 50-Ω terminator (standard accessory) to the To Power Meter connector.

Duplexer Box MN2555A

◆ Standard Configuration

Item	Model/Type	Product Name	Qty	Remarks
Main Unit	MN2555A	Duplexer Box	1	
Standard Accessories	W3754AE	MN2555A Duplexer Box Operation Manual	1	PDF file
	Z1892A	MN2555A USB Memory	1	Saves correction data and operation manual
	J1647A	U-link cable	3	N-P - N-P 50Ω
	J1648A	PTT connecting cable	1	Connect to PTT control connector of Audio AnalyzerMS2830A-018.
	J1650A	50-Ω Terminator (with chain)	1	N-P 50Ω

◆ Correction data

The correction data is provided as a text file.

The provided data and paths are as follows:

- Insertion loss between High Power RF Input/Output and SG Input connectors
- Insertion loss between High Power RF Input/Output and To SA connectors
- Insertion loss between High Power RF Input/Output and To Power Meter connectors
- Insertion loss between Low Power RF Input/Output and SG Input connectors
- Insertion loss between Low Power RF Input/Output and To SA connectors
- Insertion loss between Low Power RF Input/Output and To Power Meter connectors

[We recommended backing-up correction data saved on the USB memory stick.](#)

Duplexer Box MN2555A

Coaxial Connectors		
Item	Specifications	Connection Setup Diagram Connector No.
High Power RF Input/Output (Input/Output connectors)	N-J, 50Ω (Nominal) Input level range: 0.1 W to 30 W Rated input level: 30 W max.	(2)
	Specify VSWR of an unused connector when it is terminated. 100 kHz ≤ f < 10 MHz ≤ 1.2 (Nominal) 10 MHz ≤ f ≤ 1300 MHz ≤ 1.2 (Typ.) 1300 MHz < f ≤ 6000 MHz ≤ 1.6 (Nominal)	
Low Power RF Input/Output (Input/Output connectors)	N-J, 50 Ω (Nominal) Input level range: 1 mW to 0.1 W Rated input level: 1 W max.	(4)
	Specify VSWR of an unused connector when it is terminated. 100 kHz ≤ f < 10 MHz ≤ 1.2 (Nominal) 10 MHz ≤ f ≤ 1300 MHz ≤ 1.2 (Typ.) 1300 MHz < f ≤ 6000 MHz ≤ 1.6 (Nominal)	
To Low Power (Output connectors)	Connect with Low Power RF connector by U-link cable. N-J, 50Ω (Nominal) Rated reverse level: 1 W max.	(3)
SG Input (Input connectors)	Connect with MS2830A SG Output (Option) connector by U-link cable. N-J, 50Ω (Nominal) Rated input level: 1 W max.	(1)
To SA (Output connectors)	Connect with MS2830A RF Input connector by U-link cable. N-J, 50Ω (Nominal) Rated reverse level: 1 W max.	(6)
To Power Meter (Output connectors)	Connect with power sensor.. Install N-P type Termination Resistor when unused. N-J, 50Ω (Nominal) Rated reverse level: 1 W max.	(7)

Duplexer Box MN2555A Specifications

Measurement for transmitting (1/2)		
Item	Specifications	Connection Setup Diagram Connector No.
Frequency Range	For To SA connector: 100 kHz to 6000 MHz	(2)→(6) (4)→(6)
	For To Power Meter connector: 100 kHz to 1300 MHz	(2)→(7) (4)→(7)
Insertion Loss *Specify insertion loss of an unused connector when it is terminated.	Between High Power RF Input/Output connector to To SA connector: 100 kHz ≤ f < 10 MHz ≤ 36 dB (Nominal) 10 MHz ≤ f ≤ 1300 MHz ≤ 36 dB (Typ.) 1300 MHz < f ≤ 6000 MHz ≤ 39 dB (Nominal)	(2)→(6)
	Between Low Power RF Input/Output connector to To SA connector: 100 kHz ≤ f < 10 MHz ≤ 15 dB (Nominal) 10 MHz ≤ f ≤ 1300 MHz ≤ 15 dB (Typ.) 1300 MHz < f ≤ 6000 MHz ≤ 18 dB (Nominal)	(4)→(6)
	Between High Power RF Input/Output connector to To Power Meter connector: 100 kHz ≤ f < 10 MHz ≤ 42 dB (Nominal) 10 MHz ≤ f ≤ 1300 MHz ≤ 42 dB (Typ.)	(2)→(7)
	Between Low Power RF Input/Output connector to To Power Meter connector: 100 kHz ≤ f < 10 MHz ≤ 22 dB (Nominal) 10 MHz ≤ f ≤ 1300 MHz ≤ 22 dB (Typ.)	(4)→(7)
Frequency Characteristics (Insertion Loss)	At 100 kHz ≤ f ≤ 1300 MHz, ±3 dB (Typ.) (On the basis of 400 MHz) At 1300 MHz < f ≤ 6000 MHz, ±5 dB (Typ.) (On the basis of 2000 MHz)	(2)→(7) (4)→(7) (2)→(6) (4)→(6)

Duplexer Box MN2555A Specifications

Measurement for transmitting (2/2)		
Item	Specifications	Connection Setup Diagram Connector No.
<p>Level Accuracy for To SA connector</p> <p>(Total accuracy when MS2830A (SA) and MN2555A connected)</p>	<p>Specify level accuracy in the following conditions.</p> <ul style="list-style-type: none"> • U-link cable connects MS2830A SG Output (Option) connector with SG Input connector and MS2830A SA Input connector with To SA connector respectively. • To Power Meter connector is terminated (including conditions where MA24106A, MA24108A, MA24118A, and MA24126A are connected). • Preamplifier is turned off. (MS2830A) • Input attenuator ≥ 10 dB (MS2830A) • Output level ≤ -10 dBm (MS2830A SG Output (Option) connector) • Frequency characteristics have been corrected using the correction data attached to the MN2555A. <p>300 kHz $\leq f \leq$ 1300 MHz ± 1.0 dB (Nominal) 1300 MHz $< f \leq$ 3600 MHz ± 1.2 dB (Nominal) 3600 MHz $< f \leq$ 6000 MHz ± 3.2 dB (Nominal)</p>	<p>(2)→(6)→SA</p> <p>(4)→(6)→SA</p>
<p>Level Accuracy for To Power Meter Connector</p> <p>(Total accuracy when power sensors described on right and MN2555A connected)</p>	<p>Specify level accuracy in the following conditions..</p> <ul style="list-style-type: none"> • U-link cable connects MS2830A SG Output (Option) connector with SG Input connector and MS2830A SA Input connector with To SA connector respectively.. • Preamplifier is turned off. (MS2830A) • Input attenuator ≥ 10 dB (MS2830A) • Output level ≤ -10 dBm (MS2830A SG Output (Option) connector) • Frequency characteristics have been corrected using the correction data attached to the MN2555A. <p>When using MA24108A, MA24118A, or MA24126A: 100 kHz $\leq f \leq$ 1300 MHz ± 0.4 dB (Nominal) When using MA24106A: 100 kHz $\leq f \leq$ 1300 MHz ± 0.45 dB (Nominal)</p>	<p>(2)→(7)→ Power Meter</p> <p>(4)→(7)→ Power Meter</p>

Duplexer Box MN2555A Specifications

Measurement for receiving		
Item	Specifications	Connection Setup Diagram Connector No.
Frequency Range	100 kHz to 1300 MHz	(1)→(2) (1)→(4)
Insertion Loss *Specify insertion loss of an unused connector when it is terminated.	Between High Power RF Input/Output connector to SG Input connector: 100 kHz ≤ f < 10 MHz ≤ 49 dB (Nominal) 10 MHz ≤ f ≤ 1300 MHz ≤ 49 dB (Typ.)	(1)→(2)
	Between Low Power RF Input/Output connector to SG Input connector: 100 kHz ≤ f < 10 MHz ≤ 29 dB (Nominal) 10 MHz ≤ f ≤ 1300 MHz ≤ 29 dB (Typ.)	(1)→(4)
Frequency Characteristics (Insertion loss)	At 100 kHz ≤ f ≤ 1300 MHz ±3 dB (Typ.) (On the basis of 400 MHz)	(1)→(2)
		(1)→(4)
Output Level Accuracy (Total accuracy when MS2830A (built-in SG) and MN2555A connected)	<p>Specify output level accuracy of High Power RF connector and Low Power RF connector in the following conditions.</p> <ul style="list-style-type: none"> • U-link cable connects MS2830A SG Output (Option) connector with SG Input connector and MS2830A SA Input connector with To SA connector respectively. • To Power Meter connector is terminated (including conditions where MA24106A, MA24108A, MA24118A, and MA24126A are connected). • Preamplifier is turned off. (MS2830A) • Input attenuator ≥ 10 dB (MS2830A) • -110 dBm ≤ Output level ≤ -10 dBm (MS2830A SG Output (Option) connector) • Frequency characteristics have been corrected using the correction data attached to the MN2555A. <p>100 kHz ≤ f < 250 kHz ±5.0 dB (Nominal) 250 kHz ≤ f < 100 MHz ±2.0 dB (Nominal) 100 MHz ≤ f < 375 MHz ±1.2 dB (Nominal) 375 MHz ≤ f ≤ 1300 MHz ±0.8 dB (Nominal)</p>	Built-in SG→(1)→(2) Built-in SG→(1)→(4)

Duplexer Box MN2555A Specifications

Other	
Item	Specifications
Other Connectors	PTT connectors (front panel): Banana jack (Φ4.0 mm) PTT connectors (rear panel): Banana jack (Φ4.0 mm)
Dimensions, Mass	426 (W) x 88 (H) x 390 (D) mm (Except for protrusions) ≤6.5 kg
Operating Temperature	5° to 45°C
Storage Temperature	-10° to 60°C

