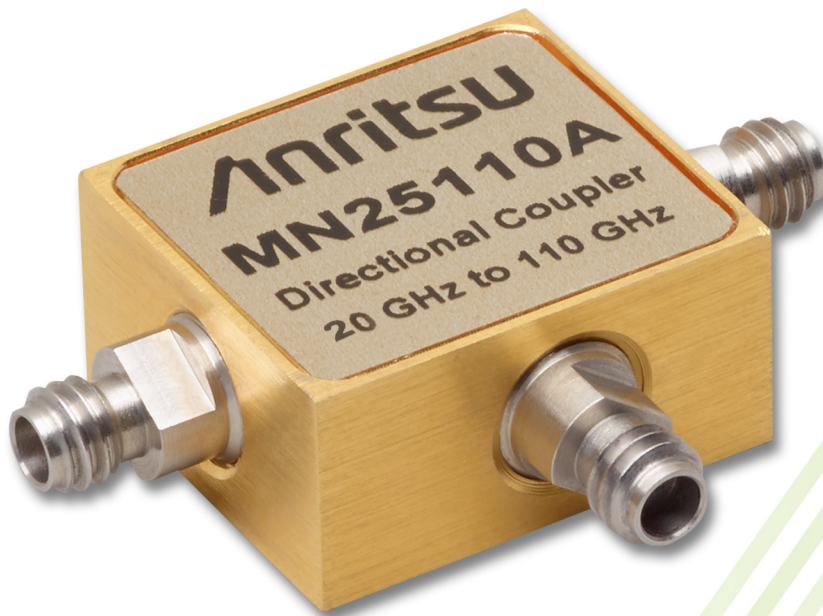


Anritsu Advancing beyond

Precision Directional Couplers

MN25110A
20 GHz to 110 GHz



Introduction

Introduction

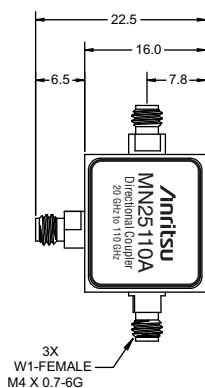
The MN25110A is a precision directional coupler designed to provide the best measurement possible when sampling signals for analysis. The MN25110A is metrology grade and equipped with Anritsu trademarked W1 connectors that achieve the smallest possible reflections and very low broadband insertion loss.

The MN25110A is scalable, providing access to broadband measurements from near DC to 110 GHz. The native W1 coaxial interface removes the need for adapters between uncommon interfaces by allowing users to direct connect to coaxial instrument test ports.

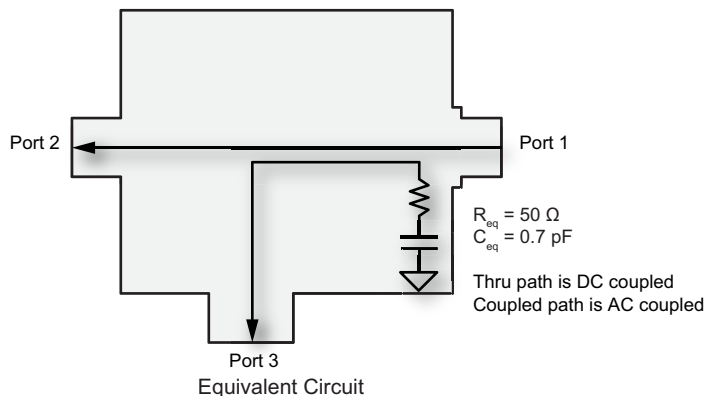
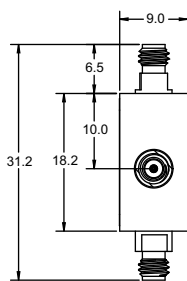
Features

- Operational from 110 MHz to 110 GHz
- Coaxial interface with Anritsu trademarked W1 connectors
- W1 Connectors™ are compatible with 1 mm connectors.
- Design is robust and well suited for high frequency system and instrumentation applications
- Anritsu offers metrology grade adapters and calibration devices for better repeatability and performance

Dimensions



MN25110A



All dimensions in mm

Typical specifications are not tested and are not warranted. They are generally representative of characteristic performance.
 Warranty: 1 year; Calibration period: 6 months

Available Models

Model	Frequency Range	Connectors	Impedance	Max Input Power
MN25110A	20 GHz ^a to 110 GHz	W1(f) to W1(f)	50 Ω	1.0 W

a. Operational to 110 MHz.

Specifications

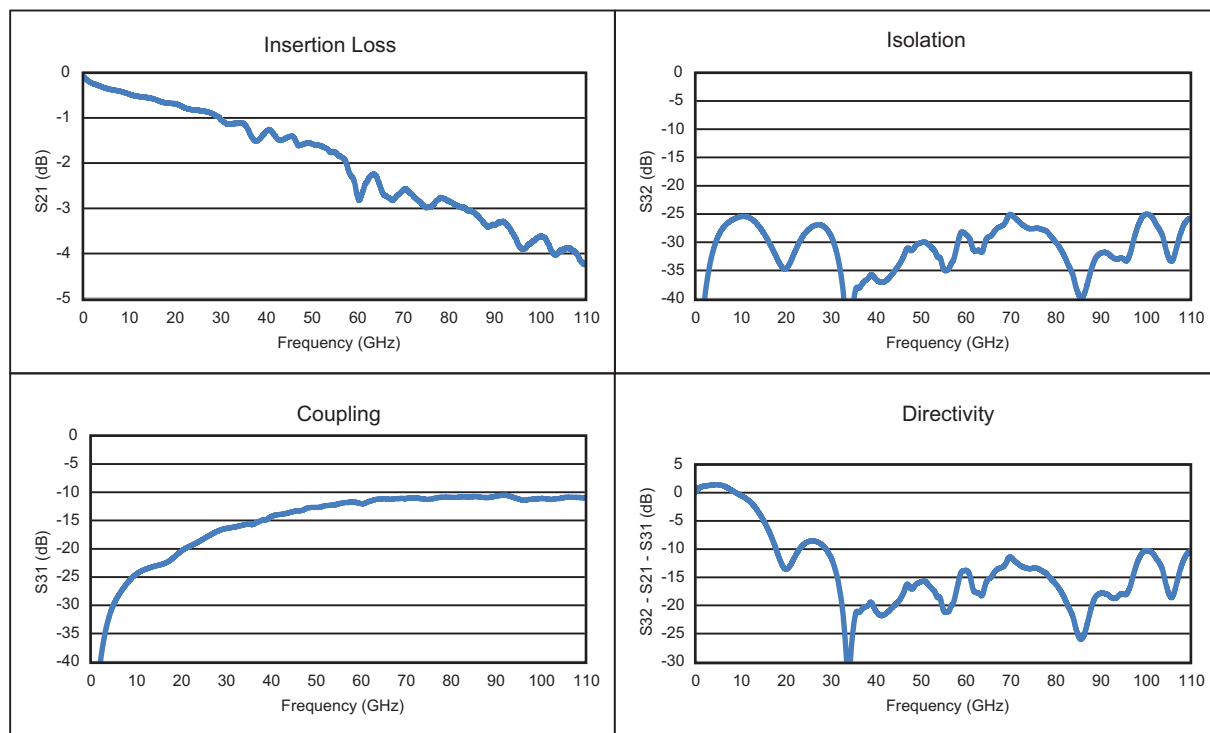
General

Insertion Loss Temperature Coefficient	0.001 dB/dB/°C max
Temperature Range	Operating: 0 °C to +70 °C; Non-operating: -55 °C to +125 °C
Weight	10 g

Insertion Loss, Isolation, Coupling

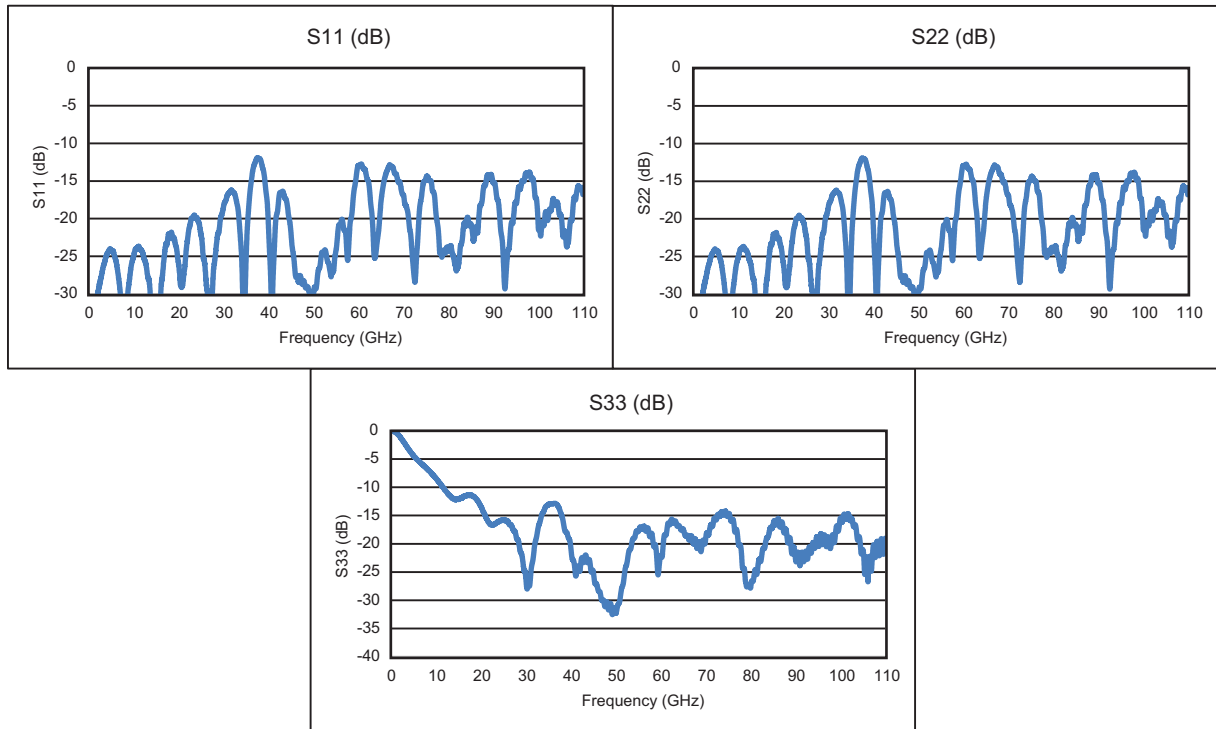
Frequency Range	Input Return Loss (min)	Insertion Loss	Isolation (min)	Coupling	Directivity ^a (min)
20 GHz to 25 GHz	15.0 dB	0 to 2.3 dB	24.0 dB	15.0 to 25.0 dB	7.0 dB
> 25 GHz to 30 GHz	10.0 dB	0 to 2.3 dB	24.0 dB	10.0 to 20.0 dB	7.0 dB
> 30 GHz to 35 GHz	10.0 dB	0 to 2.3 dB	24.0 dB	10.0 to 20.0 dB	7.0 dB
> 35 GHz to 50 GHz	10.0 dB	0 to 2.3 dB	24.0 dB	10.0 to 18.0 dB	10.0 dB
> 50 GHz to 65 GHz	10.0 dB	0.8 to 3.7 dB	23.0 dB	9.0 to 16.0 dB	10.0 dB
> 65 GHz to 80 GHz	10.0 dB	0.8 to 3.7 dB	23.0 dB	9.0 to 13.0 dB	10.0 dB
> 80 GHz to 95 GHz	10.0 dB	2.0 to 5.5 dB	23.0 dB	9.0 to 13.0 dB	10.0 dB
> 95 GHz to 110 GHz	10.0 dB	2.0 to 5.5 dB	23.0 dB	9.0 to 13.0 dB	7.0 dB

a. Directivity is a derived value (Isolation - Insertion Loss - Coupling) and is not a warranted specification.



All plots typical.

Match



All plots typical.

Environmental (per MIL-STD-202G)

Temperature Shock	-55 °C to +150 °C
Humidity	95% at 40 °C, 96 hours, Test 103B, Condition B
Shock	100 G peak sawtooth, method 213, Condition B
Vibration	Sinewave: 10 Hz to 2000 Hz, 0.06" DA, method 204, test condition D Random: 50 Hz to 2000 Hz, 11.6 Grms, Power Spectral Density 0.1 Grms 2 Hz, Method 214, Test Condition 1, Letter D
Voltage withstanding	500 VAC RMS, 60 seconds, method 301

Regulatory Compliance

European Union	RoHS Directive: 2011/65/EU + Amendment 2015/863
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Ordering Information

Precision Directional Couplers

Part Number	Description
MN25110A	Precision Directional Coupler, 20 GHz to 110 GHz, W1(f) input, W1(f) output, W1(f) coupled port, 50 Ω
MN25110A-099	Premium Calibration to ISO17025 and ANSI/NCSL Z540-1. Includes calibration certificate, test report, and uncertainty data.

Notes

Training at Anritsu

Anritsu has designed courses to help you stay up to date with technologies important to your job. For available training courses, visit: www.anritsu.com/training



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