Anritsu

Broadband Site Master™ S810D/S820D

Cable and Antenna Analyzer
25 MHz to 20 GHz

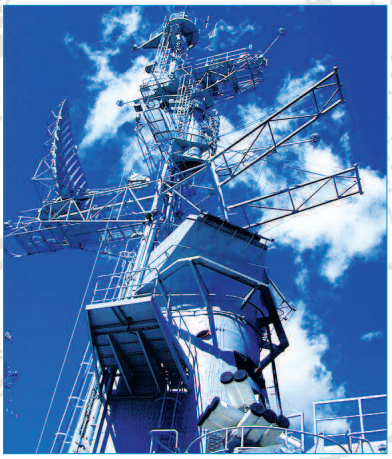
SiteMaster The World's Leading Handheld Cable and Antenna Analyzer

The Leading Handheld Broadband Microwave Transmission Line and Antenna Analyzer

Anritsu's handheld, battery-operated Broadband Site Master is the most accurate and convenient tool available for field installation, verification, troubleshooting and repair of microwave cables and communication systems. With calibrated vector error correction and a convenient user interface, difficult test specifications become easy to verify, quality is improved, and maintenance expenses are reduced.

The Broadband Site Master targets microwave site installers, point-to-point operators, point-to-multipoint operators, radio manufacturers, private/public networks that support microwave links, and defense programs responsible for the installation and maintenance of microwave cables. The Broadband Site Master models test both waveguide and coaxial cables more conveniently than laboratory-sized scalar analyzers or microwave test sets.

Enhanced Performance and Functionality



The Broadband Site Master offers the following improvements over the preceding model:

- Increased frequency range to cover 25 MHz to 20 GHz with a single connection
- Updated thin film transistor (TFT) color display that is easily viewable in direct sunlight
- Increased measurement speed so screen updates occur in real time
- Faster distance-to-fault (DTF) calculations allow real-time updates
- Added GPS functionality enables data to be stored with latitude, longitude, and altitude information

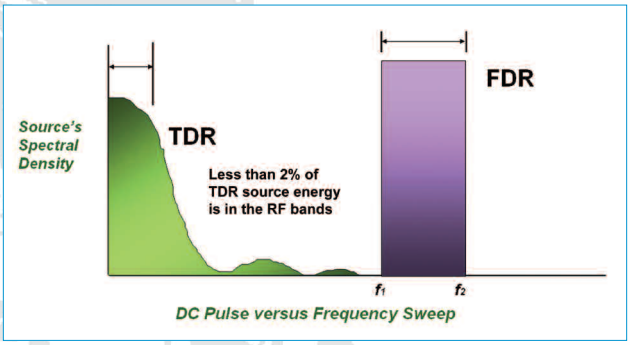
Cost Savings and Quality Improvement

Market competition requires operators to reduce per site maintenance expenses. Site Master's Frequency Domain Reflectometry (FDR) technique breaks away from the traditional fix-after-failure maintenance process by finding small, hard to identify problems before major failures occur.

Sixty to eighty percent of a typical cell site's problems are caused by problematic cables, connectors and antennas. Cables installed in aircraft and on-board ships are difficult to troubleshoot and can cause extensive down time. When cables are damaged, mis-positioned, or contaminated with moisture, Site Master identifies the problem quickly. Antenna degradation reduces the cell coverage pattern. Site Master can pinpoint the antenna problem from ground level in a few seconds so climbing the antenna tower becomes unnecessary.

FDR Technique

Frequency Domain Reflectometry (FDR) and Time Domain Reflectometry (TDR) have similar acronyms, and both techniques are used to test transmission lines, but that's where the similarities end. The TDR technique is not sensitive to RF problems. The TDR stimulus is a DC pulse, not RF. Thus, TDR is unable to detect system faults that often lead to system failures. The FDR technique saves costly, time-consuming trouble shooting efforts by testing cable feedline and antenna systems at their proper operating frequency. Deficient connectors, lightning arrestors, cables, jumpers, or antennas are replaced before call quality is compromised.



The TDR pulse energy is not as useful for higher frequency applications as the FDR approach implemented in Site Master.

Insightful and Convenient Measurements

Site Master performs various RF measurements aimed at simplifying transmission line and antenna system analysis: Return Loss, SWR, Cable Loss, and Distance-to-Fault (DTF). A single soft key selection on the main menu activates the desired measurement mode.

Return Loss, SWR

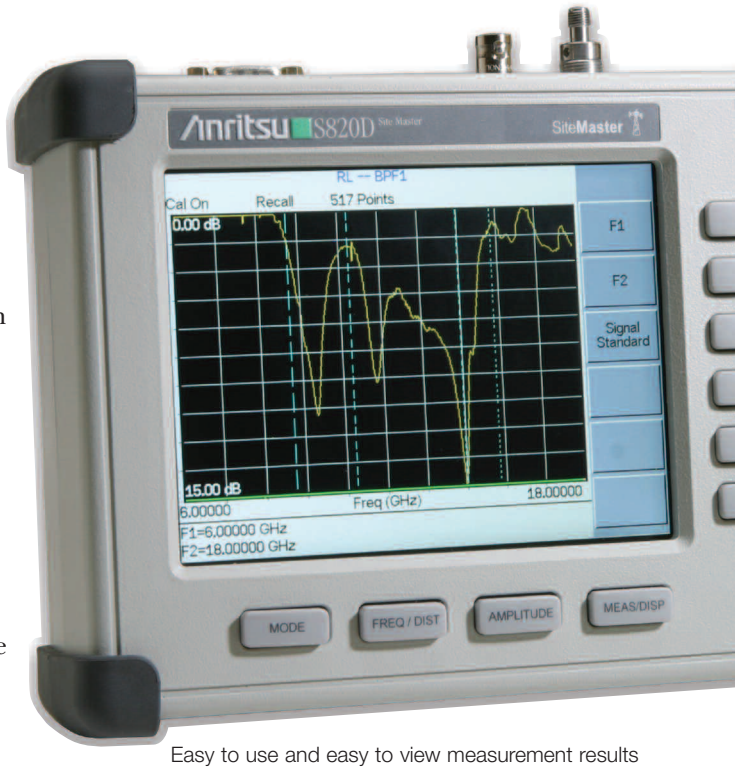
Return Loss and SWR measurements ensure conformance to system performance specifications. The measurement can easily be toggled between either one of the two modes and can be performed without climbing the tower.

Cable Loss

Cable Loss measurements determine the level of insertion loss within the cable feedline system. Insertion loss can be verified prior to deployment, when you have access to both ends of the cable, or on installed cables without access to the opposite end.

Distance-to-Fault

Although a Return Loss test can tell users the magnitude of signal reflections, it cannot tell the precise location of a fault within the cable system. A Distance-to-Fault measurement provides the clearest indication of trouble areas as it gives both the magnitude of signal reflection and the location of the signal anomaly.



Easy to use and easy to view measurement results

Vector Error Correction

Vector error correction within the S8x0 “D” Series improves the quality and convenience of measurements compared to traditional scalar techniques. Accuracy and repeatability are enhanced as errors such as test port match and source match are removed.

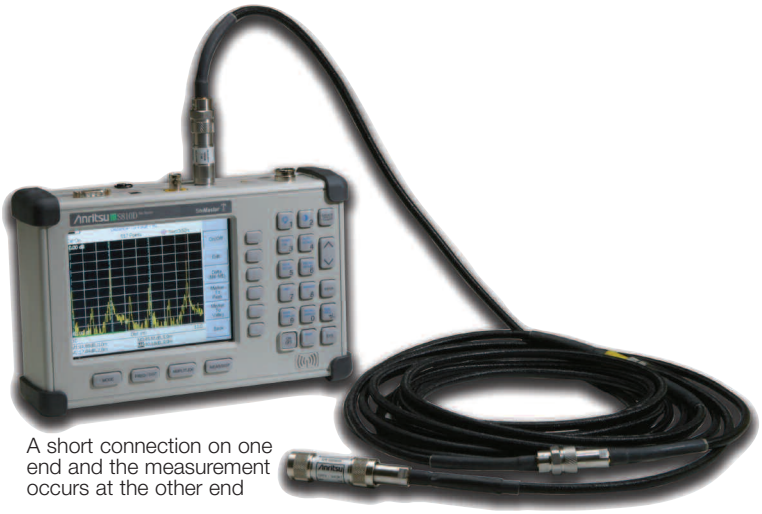
Waveguide Dispersion and Calibration

Vector error correction using FDR improves the quality of Distance-to-Fault data. Not only is the reflection magnitude more accurate, but the waveguide dispersion correction for fault location (different frequencies propagate at different speeds) is more accurate and repeatable. Unlike scalar-based systems, the Broadband Site Master S8x0 “D” Series does not suffer reflection magnitude errors and length inaccuracies in proportion to the relative lengths of the coaxial input cable and waveguide under test.

Coaxial Connections

Site Master supports frequently used coaxial connectors such as K, N, and TNC.


Adapt to a variety of coaxial connectors


A short connection on one end and the measurement occurs at the other end

Transmission Line and Antenna Analyzer - Anywhere, Anytime

Functionality and Benefits

Functionality	Benefits
Cable and Antenna Analyzer	Quickly finds small, hard to identify faults before major failures occur.
Power Monitor (S8x0D/5)	Performs accurate power measurements with more resolution in higher insertion loss situations.
GPS Receiver (S8x0D/31)	Built-in receiver for location information.

Rugged and Reliable Chassis Design

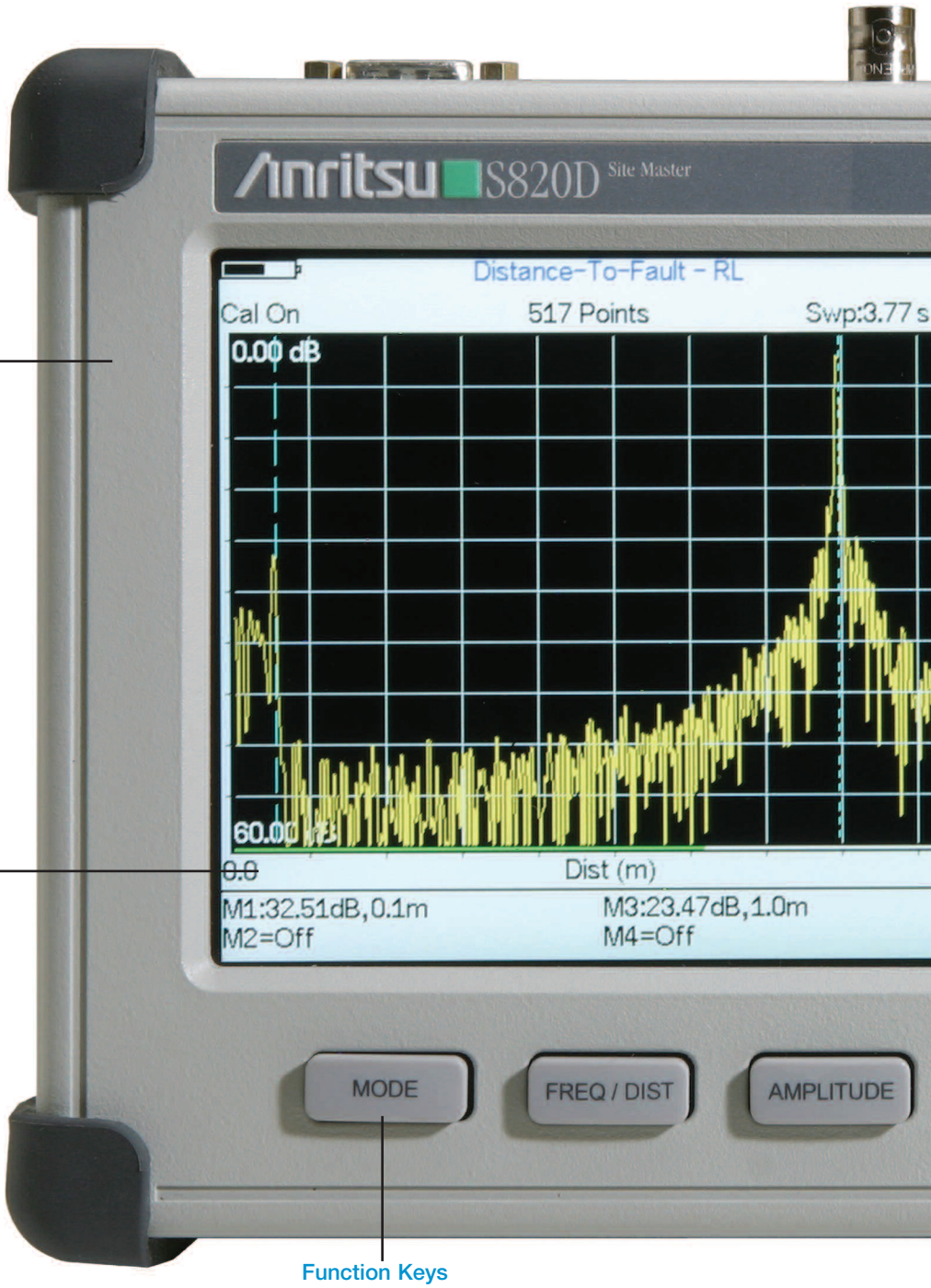
Ruggedized, lightweight, compact, high-impact housing is designed to withstand repeated drops and rough handling. Weather resistant seals and rubber membrane keypad protect unit from dirt and moisture.

TFT Color Display

Standard TFT (640x480) color display featuring variable brightness control. Viewable in direct sunlight.

Unit Dimensions

25.4 x 17.8 x 6.1 cm
(Actual Size Shown)



Function Keys

Four dedicated function keys simplify measurement tasks.

RS-232 Interface

Transfer stored data to and from a personal computer (PC) or download to printer via a serial cable for further analysis. Use PC to automatically control and collect data in the field.

External DC Power Port

RF Detector

Save and Recall Setup

25 setups for fast repeatable testing.

Markers

Six markers for more comprehensive measurements.

Limits

Create simple pass/fail measurements with a single limit line, upper and/or lower mask limits.

Save and Recall Display

Up to 200 memory locations. Alphanumeric data labeling and automatic time/date stamp simplifies data management.

Multilingual User Interface

Multilingual user interface features on-screen menus and messages in six different languages: Chinese, English, French, German, Japanese, and Spanish.

Soft Keys

Intuitive softkey menu and user interface.

Optional Features

Power Monitor (S8x0D/5)

When cable losses or physical distances are too much for a one-port measurement, use an external synthesizer as a source and Option 5 with the 5400 and 560 Series RF Detectors as receivers to perform thru-line insertion loss measurements. In addition, the detectors can be used to measure absolute power levels (dBm or mW) over the broadband frequency range of the detector.

Use Power Monitor to perform absolute power measurements with or without an external synthesizer

Built-in GPS provides time and location information using the optional GPS Antenna (2000-1410)

GPS Receiver (S8x0D/31)

Built-in GPS provides location information (latitude, longitude, altitude) and Universal Time (UT) information. Site Master can stamp each trace with location information to check if the measurements are taken at the right location. Site Master stores the GPS location information until the unit is turned off. This stored location information can be used to stamp traces taken indoors at the same cell site location. The GPS option is offered with a magnet mount antenna with a 15 foot (~ 5m) cable to mount on the car or other useful surface.

Handheld Software Tools™

Powerful data management and analysis software is provided with every Site Master unit offering easy to use utilities for managing, archiving, and further analyzing cable and antenna performance. Simply connect the serial cable between the Site Master and a Windows®-based PC to transfer data, analyze measurements, and compare with previous measurements.

Connect Site Master to a PC via a serial (null modem) cable to transfer data or further analyze results

Specifications

The specifications on the following pages describe the warranted performance of the instrument at 23°C ± 3°C when the unit is calibrated with the appropriate coaxial calibration kit for the built-in test port connector. A warm-up time of five minutes should be allowed prior to verifying system specifications. Performance parameters denoted as "typical" indicate non-warranted specifications.

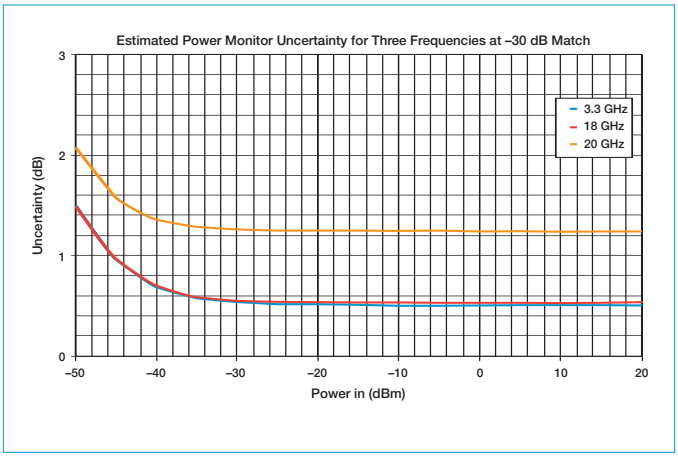
Description			Value
Frequency Range			25 MHz to 20000 MHz (S820D) 25 MHz to 10500 MHz (S810D)
Frequency Accuracy (CW mode)			≤3 ppm at +25ºC
Frequency Resolution			10 kHz
Output Power			<0 dBm
Immunity to Interfering Signals	on-channel		+13 dBm
	on-frequency		–10 dBm
Measurement speed	Return Loss, SWR, DTF		≤2 sec/sweep for 517 data points (CW ON) ≤4 sec/sweep for 517 data points (CW OFF)
Number of data points			130, 259, 517
Return Loss	Range		0.00 to 60.00 dB
	Resolution		0.01 dB
VSWR	Range		1.00 to 65.53
	Resolution		0.01
Coax/Waveguide Insertion Loss	Range		0.00 to 30.00 dB
	Resolution		0.01 dB
Measurement Accuracy			≥42 dB corrected directivity after calibration for <5 GHz ≥36 dB corrected directivity after calibration for <15 GHz ≥32 dB corrected directivity after calibration for >15 GHz (see uncertainty curves)
Distance-to-Fault	Vertical Range	Return Loss	0.00 to 60 dB
		VSWR	1.00 to 65.53
	Horizontal Range		0 to (# of data pts –1) x horizontal resolution, # of data pts = 130, 259, 517
	Horizontal Resolution	Coaxial Cable (Rectangular windowing)	$\frac{(1.5 \times 10^8)(V_p)}{\Delta F}$ Where V_p is the cable's relative propagation velocity Where ΔF is the stop frequency minus the start frequency (in Hz)
		Waveguide	$\frac{1.5 \times 10^8 (\sqrt{1-(F_c/F_1)^2})}{\Delta F}$ Where F_c is waveguide cutoff frequency (in Hz); F_1 is the start frequency (in Hz), ΔF is the stop frequency minus the start frequency (in Hz)
Test Port Connector			Precision K(f) or N(f) (Option 11NF)

Specifications (continued)

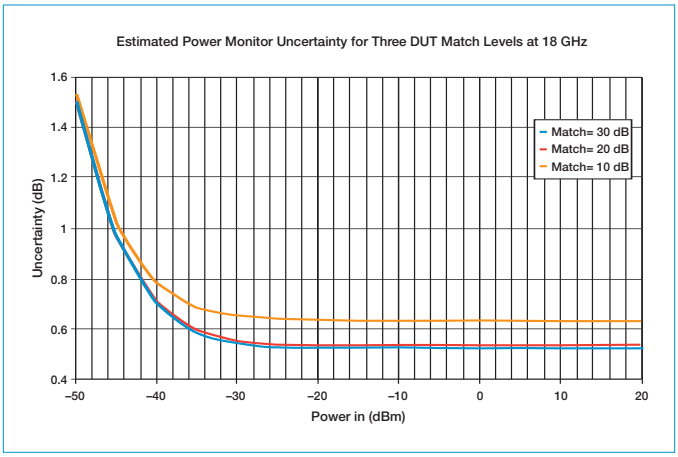
Description			Value
Language Support			Chinese, English, French, German, Japanese, and Spanish
Internal Trace Memory			Up to 200 traces
Setup Configurations			25
Custom Cable Configuration Memory			50 configurations
Display			TFT color display with adjustable backlight
Ports	RF Out	Standard Type k(f) test port, 50Ω	+23 dBm (Peak), ±50 VDC, Maximum input without damage
		Optional (S8x0D/11NF) Type N(f) test port, 50Ω	+23 dBm (Peak), ±50 VDC, Maximum input without damage
	GPS In	Reverse BNC(m), 50Ω	For use with specified GPS antenna only
	RF Detector	Type N(m), 50Ω	+20 dBm (Peak), Maximum input without damage
	Serial Interface	9 pin D-sub	RS-232 three wire serial
CE	Electromagnetic Compatibility		Meets European Community requirement EN61326-1:1998
	Safety		Meets European Community requirement EN61010-1:2001
Environmental (MIL-PRF- 28800F Class 2)	Temperature/Humidity	Operating	–10ºC to 55ºC, humidity 85% or less
		Non-operating	–51ºC to +71ºC (recommend storing battery separately between 0ºC to +40ºC for any prolonged non-operating storage period)
	Mechanical	Vibration	Sine (5 to 55 Hz); Random (10 to 500 Hz)
		Shock	30G, 11 msec, half sine
Power Supply			External: DC input: +12 to +15 Volt DC, 3A Internal: NiMH battery: 10.8 volts, 1800 mAh
Dimensions		Size (W x H x D)	25.4 cm x 17.8 cm x 6.1 cm (10.0 in x 7.0 in x 2.4 in)
		Weight	<2.28 kg (<5 lbs) including battery

Option Description		Value
RF Power Monitor (S8X0D/5)	Detector Range	–50 to +20 dBm, 10 nW to 100 mW
	Offset Range	0 to +60 dB
	Display Range	–80 to 80 dBm
	Resolution	0.1 dB, 0.1 xW
	Measurement Accuracy	±1 dB maximum for >–40 dBm and <18 GHz using 560-7N50B (see uncertainty curves)
GPS Location Indicator (S8X0D/31)		Latitude, Longitude, Altitude, and Universal Time on display Latitude, Longitude, Altitude, and Universal Time on trace storage

Using the 560-7N50B detector, the following curves show estimated power monitor uncertainties for various DUT match:



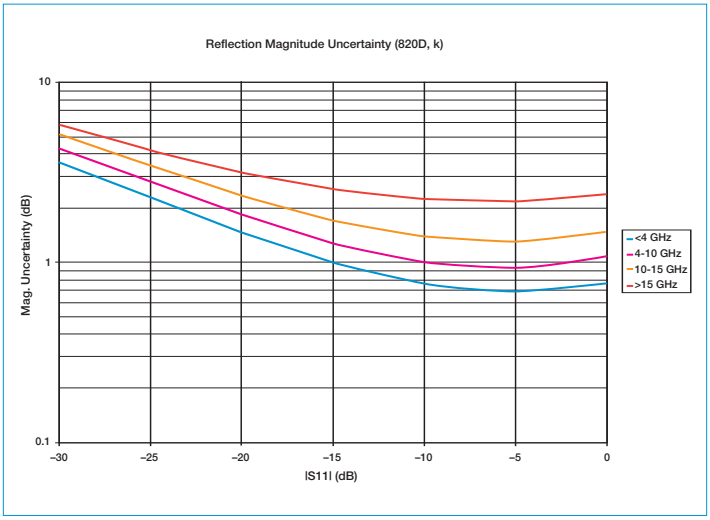
Estimated Power Monitor Uncertainty for Three Frequencies at –30 dB Match



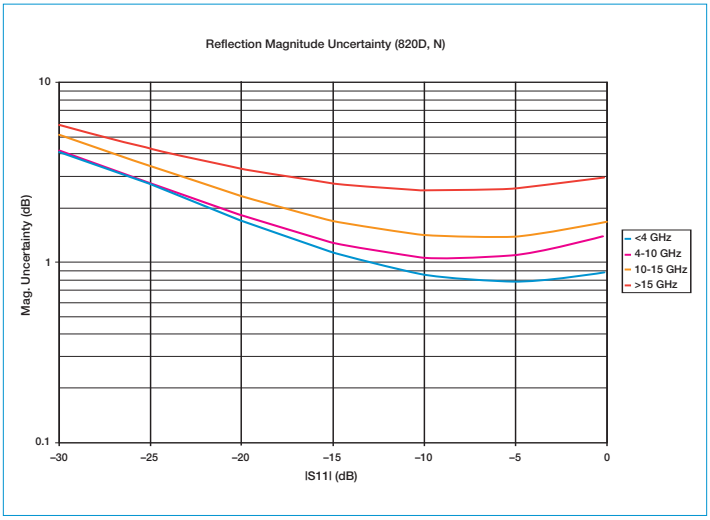
Estimated Power Monitor Uncertainty for Three DUT Match Levels at 18 GHz

Measurement Uncertainties

The following graphs provide measurement accuracy at 23°C ±3°C after vector error correction for the standard K and N connector types. The errors are worst case contributions of residual directivity, source match, frequency response, network analyzer dynamic accuracy, and connector repeatability. In preparing these graphs, Fixed CW is ON. Calibration components 22K50 and 28K50 are used for K test port results. Calibration components 22N50 and 28N50-2 are used for the N test port results:

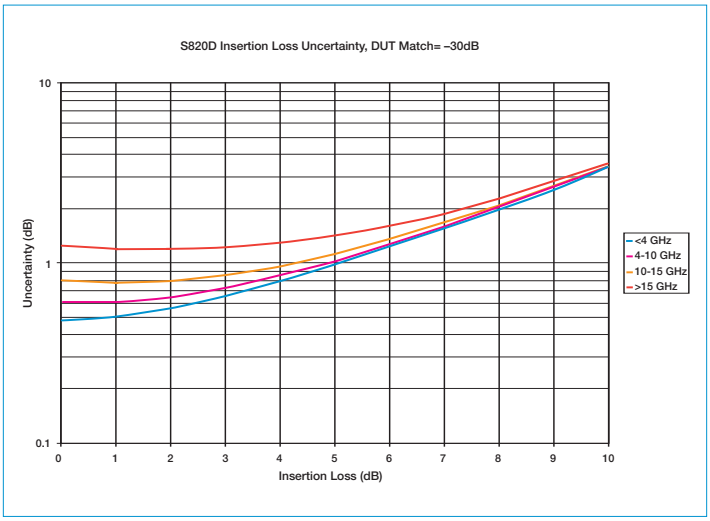


Reflection Magnitude Uncertainty (S820D, K Connector)

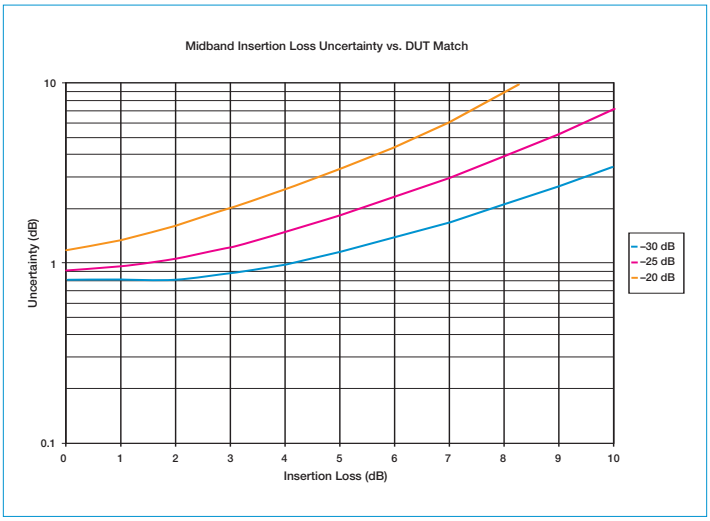


Reflection Magnitude Uncertainty (S820D, N Connector)

The reflection measurements of the 820D can be used to extract the insertion loss of cables or other devices when the far end of the device is terminated in a good reflector. The uncertainty in extracting the insertion loss is a function of basic measurement uncertainty and the base return loss of the device (often the cable's connector). The uncertainties are plotted versus the insertion loss to be measured as either the frequency or the base DUT's return loss vary:



S820D Insertion Loss Uncertainty, DUT Match = –30 dB



S820D Insertion Loss Uncertainty vs. DUT Match, Frequency = 10 GHz

Ordering Information

Basic Models

Model	Description
S810D	Cable and Antenna Analyzer (25 MHz to 10.5 GHz) with built-in DTF, K(f) Test Port Connector
S820D	Cable and Antenna Analyzer (25 MHz to 20 GHz) with built-in DTF, K(f) Test Port Connector

Options

Option	Description
S8X0D/5	Power Monitor (Detector not included)
S8X0D/11NF	Replaces standard K(f) Test Port Connector with N(f)
S8X0D/31	GPS Receiver (Antenna not included)

Standard Accessories

- User's Guide
- Soft Carrying Case
- AC-DC Adapter
- Precision Adapter, Ruggedized K(m) to N(f)
- Automotive 12 Volt DC Adapter
- Handheld Software Tools CD ROM containing Fault Location (DTF), Smith Chart and Software Data Management
- Serial Interface (Null Modem) Cable
- Rechargeable Battery, NiMH

Detectors

The 5400 and 560 Series Detectors use zero-biased Schottky diodes. Measurements use a single cycle per sweep AC detection, and auto-zeroing with DC detection during the frequency sweep. Optional extender cables of over 3000 feet can be used with the S8x0D Series. Contact a local sales representative for special cables.

Maximum Input Power: +20 dBm
Standard Cable Length: 122 cm (4 ft.)
Dimensions: 7.6 x 2.9 x 2.2 cm (3 x 1-1/8 x 7/8 in.)
Weight: 170g (6 oz.)

5400-71N50 Detector

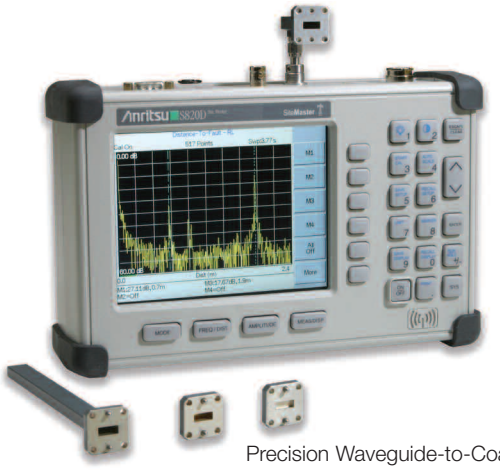
Model	Frequency Range	Impedance	Return Loss	Input Connector	Frequency Response
5400-71N50	0.001 to 3 GHz	50Ω	26 dB	N(m)	±0.2 dB, <1 GHz ±0.3 dB, <3 GHz
5400-71N75	0.001 to 3 GHz	75Ω	26 dB, <2 GHz 20 dB, <3 GHz	N(m)	±0.2 dB, <1 GHz ±0.5 dB, <3 GHz
560-7A50	0.01 to 18 GHz	50Ω	15 dB, <0.04 GHz 22 dB, <8 GHz 17 dB, <18 GHz	GPC-7	±0.5 dB, <18 GHz
560-7N50B	0.01 to 20 GHz	50Ω	15 dB, <0.04 GHz 22 dB, <8 GHz 17 dB, <18 GHz 14 dB, <20 GHz	N(m)	±0.5 dB, <18 GHz ±1.25 dB, <20 GHz
560-7S50B	0.01 to 20 GHz	50Ω	15 dB, <0.04 GHz 22 dB, <8 GHz 17 dB, <18 GHz 14 dB, <20 GHz	WSMA(m)	±0.5 dB, <18 GHz ±1.25 dB, <20 GHz
560-7S50-2	0.01 to 26.5 GHz	50Ω	15 dB, <0.04 GHz 22 dB, <8 GHz 17 dB, <18 GHz 14 dB, <26.5 GHz	WSMA(m)	±0.5 dB, <18 GHz ±1.25 dB, <26.5 GHz
560-7K50	0.01 to 40 GHz	50Ω	12 dB, <0.04 GHz 22 dB, <8 GHz 17 dB, <18 GHz 15 dB, <26.5 GHz 14 dB, <32 GHz 13 dB, <40 GHz	K(m)	±0.5 dB, <18 GHz ±1.25 dB, <26.5 GHz ±2.2 dB, <32 GHz ±2.5 dB, <40 GHz
560-7VA50	0.01 to 50 GHz	50Ω	12 dB, <0.04 GHz 19 dB, <20 GHz 15 dB, <40 GHz 10 dB, <50 GHz	V(m)	±0.8 dB, <20 GHz ±2.5 dB, <40 GHz ±3.0 dB, <50 GHz

Waveguide Calibration Components

xx (in the following table) specifies Waveguide Calibration components:

- 23 = 1/8 Offset Short
- 24 = 3/8 Offset Short
- 26 = Precision Load

Example: 23UA90, 24UA90, 26UA90, and 35UM90N



Precision Waveguide-to-Coaxial Adapters

Precision Waveguide Calibration Components①

Part Number	Frequency Range	Waveguide Type	Compatible Flanges
xxUM40	3.30 to 4.90 GHz	WR229, WG11A	PDR40
xxUM48	3.95 to 5.85 GHz	WR187,WG12	CAR48, PAR48, UAR48, PDR48
xxUM70	5.85 to 8.20 GHz	WR137, WG14	CAR70, PAR70, UAR 70, PDR70
xxUM84	7.05 to 10.00 GHz	WR112, WG15	CBR84, UBR84, PBR84, PDR84
xxUM100	8.20 to 12.40 GHz	WR90, WG16	CBR100, UBR100, PBR100, PDR100
xxUM120	10.00 to 15.00 GHz	WR75, WG17	CBR120, UBR120, PBR120, PDR120
xxUM140	12.40 to 18.00 GHz	WR62, WG18	CBR140, UBR140, PBR140, PDR140
xxUM220	17.00 to 26.50 GHz	WR42, WG20	CBR220, UBR220, PBR220, PDR220
xxUA187	3.95 to 5.85 GHz	WR187, WG12	CPR187F, CPR187G, UG-1352/U, UG-1353/U, UG-1728/U, UG-1729/U, UG-148/U, UG-149A/U
xxUA137	5.85 to 8.20 GHz	WR137, WG14	CPR137F, CPR137G, UG-1356/U, UG-1357/U, UG-1732/U, UG-1733/U, UG-343B/U, UG-344/U, UG-440B/U, UG-441/U
xxUA112	7.05 to 10.00 GHz	WR112, WG15	CPR112F, CPR112G, UG-1358/U, UG-1359/U, UG-1734/U, UG-1735/U, UG-52B/U, UG-51/U, UG-137B/U, UG-138/U
xxUA90	8.20 to 12.40 GHz	WR90, WG16	CPR90F, CPR90G, UG-1360/U, UG-1361/U, UG-1736/U, UG-1737/U, UG-40B/U, UG-39/U, UG-135/U, UG-136B/U
xxUA62	12.40 to 18.00 GHz	WR62, WG18	UG-541A/U, UG-419/U, UG-1665/U, UG1666/U
xxUA42	17.00 to 26.50 GHz	WR42, WG20	UG-596A/U, UG-595/U, UG-597/U, UG-598A/U

Precision Waveguide-to-Coaxial Adapters①

Part Number	Frequency Range	Waveguide Type	Compatible Flanges
35UM40N	3.30 to 4.90 GHz	WR229, WG11A	PDR40
35UM48N	3.95 to 5.85 GHz	WR187,WG12	CAR48, PAR48, UAR48, PDR48
35UM70N	5.85 to 8.20 GHz	WR137, WG14	CAR70, PAR70, UAR 70, PDR70
35UM84N	7.05 to 10.00 GHz	WR112, WG15	CBR84, UBR84, PBR84, PDR84
35UM100N	8.20 to 12.40 GHz	WR90, WG16	CBR100, UBR100, PBR100, PDR100
35UM120N	10.00 to 15.00 GHz	WR75, WG17	CBR120, UBR120, PBR120, PDR120
35UM140N	12.40 to 18.00 GHz	WR62, WG18	CBR140, UBR140, PBR140, PDR140
35UM220K	17.00 to 26.50 GHz	WR42, WG20	CBR220, UBR220, PBR220, PDR220
35UA187N	3.95 to 5.85 GHz	WR187, WG12	CPR187F, CPR187G, UG-1352/U, UG-1353/U, UG-1728/U, UG-1729/U, UG-148/U, UG-149A/U
35UA137N	5.85 to 8.20 GHz	WR137, WG14	CPR137F, CPR137G, UG-1356/U, UG-1357/U, UG-1732/U, UG-1733/U, UG-343B/U, UG-344/U, UG-440B/U, UG-441/U
35UA112N	7.05 to 10.00 GHz	WR112, WG15	CPR112F, CPR112G, UG-1358/U, UG-1359/U, UG-1734/U, UG-1735/U, UG-52B/U, UG-51/U, UG-137B/U, UG-138/U
35UA90N	8.20 to 12.40 GHz	WR90, WG16	CPR90F, CPR90G, UG-1360/U, UG-1361/U, UG-1736/U, UG-1737/U, UG-40B/U, UG-39/U, UG-135/U, UG-136B/U
35UA62N	12.40 to 18.00 GHz	WR62, WG18	UG-541A/U, UG-419/U, UG-1665/U, UG1666/U
35UA42K	17.00 to 26.50 GHz	WR42, WG20	UG-596A/U, UG-595/U, UG-597/U, UG-598A/U

① Contact an Anritsu sales representative for availability of waveguide calibration components and waveguide-to-coaxial adapters not listed in the table.

Coaxial Calibration Components

K Connectors

- 22K50 Precision K(m) Short/Open, 40 GHz
- 22KF50 Precision K(f) Short/Open, 40 GHz
- 28K50 Precision Termination, DC to 40 GHz, 50Ω, K(m)
- 28KF50 Precision Termination, DC to 40 GHz, 50Ω, K(f)
- 15KKF50-1.5A Armored Test Port Cable, 1.5 meter K(m) to K(f) 20 GHz
- 15RKKF50-1.5A Ruggedized Armored Test Port Cable, 1.5 meter K(m) to K(f) 20 GHz

N-Type Connectors

- 22N50 Precision N(m) Short/Open, 18 GHz
- 22NF50 Precision N(f) Short/Open, 18 GHz
- 28N50-2 Precision Termination, DC to 18 GHz, 50Ω, N(m)
- 28NF50-2 Precision Termination, DC to 18 GHz, 50Ω, N(f)
- 15NNF50-1.5B Armored Test Port Cable, 1.5 meter N(m) to N(f) 18 GHz
- 42N50-20 5W Attenuator, N(m) to N(f), 18 GHz

TNC Connectors

- 1015-54 TNC Termination (f), 18 GHz
- 1015-55 TNC Termination (m), 18 GHz
- 1091-55 TNC Open (f), 18 GHz
- 1091-53 TNC Open (m), 18 GHz
- 1091-56 TNC Short (f), 18 GHz
- 1091-54 TNC Short (m), 18 GHz

Adapters

- 34RKNF50 Precision Adapter, Ruggedized K(m) to N(f)
- 34NN50A Precision N(m) to N(m) Adapter, 18 GHz
- 34NFNF50 Precision N(f) to N(f) Adapter, 18 GHz
- K220B Precision Adapter, K(m) to K(m), 40 GHz
- K222B Precision Adapter, K(f) to K(f), 40 GHz

- 1091-26 Adapter, N(m)-SMA(m), DC to 18 GHz, 50Ω
- 1091-27 Adapter, N(m)-SMA(f), DC to 18 GHz, 50Ω
- 1091-80 Adapter, N(f)-SMA(m), DC to 18 GHz, 50Ω
- 1091-81 Adapter, N(f)-SMA(f), DC to 18 GHz, 50Ω

- 513-62 Adapter, TNC(f) to N(f), 18 GHz, 50Ω
- 1091-315 Adapter, TNC(m) to N(f), 18 GHz, 50Ω
- 1091-324 Adapter, TNC(f) to N(m), 18 GHz, 50Ω
- 1091-325 Adapter, TNC(m) to N(m), 18 GHz, 50Ω
- 1091-317 Adapter, TNC(m) to SMA(f), 18 GHz, 50Ω
- 1091-318 Adapter, TNC(m) to SMA(m), 18 GHz, 50Ω
- 1091-323 Adapter, TNC(f) to TNC(f), 18 GHz, 50Ω
- 1091-326 Adapter, TNC(m) to TNC(m), 18 GHz, 50Ω

Standard Accessories

- 10680-00001 Site Master S810D/S820D User's Guide
- 2300-347 Anritsu Handheld Software Tools
- 48258 Soft Carrying Case
- 633-27 Rechargeable NiMH Battery
- 34RKN50 Precision Adapter, Ruggedized K(m) to N(f)
- 40-168 AC/DC Adapter
- 806-62 Automotive Cigarette Lighter/12 Volt DC Adapter
- 800-441 Serial Interface (Null Modem) Cable

48258

Optional Accessories

- 551-1691 USB to RS232 Adapter Cable
- 760-235 Transit Case for Microwave Site Master
- 800-109 Detector Extender Cable, 7.6m
- 2000-1029 Battery Charger (External)
- 2000-1410 Magnet Mount GPS Antenna with 15 ft. cable

633-27

Manuals

- 10680-00001 Site Master S810D/S820D User's Guide
- 10680-00002 Site Master S810D/S820D Programming Manual
- 10680-00003 Site Master S810D/S820D Maintenance Manual

Related Literature, Application Notes

- 11410-00214 Reflectometer Measurements - Revisited
- 11410-00206 Time Domain
- 11410-00270 What is Your Measurement Accuracy?

Printers

- 2000-1214 HP DeskJet Printer, Model 450: Includes printer cable, 2000-1216 black print cartridge, and U.S. power cord.

  Also includes 2000-753 serial-to-parallel Centronics converter cable and 1091-310 Centronics-to DB25 adapter. Rechargeable battery is optional and is not included.
- 2000-753 Null Modem Serial-to-Parallel Centronics Converter Cable
- 1091-310 Adapter 36-pin Centronics female-to-DB25 female
- 2000-1216 Black Print Cartridge
- 2000-663 Power Cable (Europe) for DeskJet Printer
- 2000-664 Power Cable (Australia) for DeskJet Printer
- 2000-666 Power Cable (Japan) for DeskJet Printer
- 2000-667 Power Cable (S. Africa) for DeskJet Printer
- 2000-1217 Rechargeable Battery for DeskJet Printer, Model 450
- 2000-1218 Power Cable (U.K.) for DeskJet Printer

Military photos provided by the U.S. Department of Defense.

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