Test Equipment Solutions Datasheet

Test Equipment Solutions Ltd specialise in the second user sale, rental and distribution of quality test & measurement (T&M) equipment. We stock all major equipment types such as Spectrum Analyzers, Signal Generators, Oscilloscopes, Power Meters, Network Analyzers etc from all the major suppliers such as Keysight, Tektronix, Anritsu and Rohde & Schwarz.

We are focused at the professional end of the marketplace, primarily working with customers for whom high performance, quality and service are key, whilst realising the cost savings that second user equipment offers. We fully test & refurbish equipment in our in-house, traceable Lab. Items are supplied with manuals, accessories and typically a full no-quibble 1 year warranty. Our staff have extensive backgrounds in T&M which enables us to deliver industry-leading service and support. We endeavour to be customer focused in every way right down to the detail, such as offering free delivery on sales, presenting flexible technical + commercial solutions and supplying a loan unit during warranty repair, if available.

As well as the headline benefit of cost saving, second user offers shorter lead times, higher reliability and multivendor solutions. Rental, of course, is ideal for shorter term needs and offers fast delivery, flexibility, try-before-you-buy, zero capital expenditure, lower risk and off balance sheet accounting. Both second user and rental improve the key business measure of Return On Capital Employed.

We are based in at Oakley, Bedfordshire in the UK from where we supply test equipment worldwide. Our facility incorporates Sales, Support, Admin, Logistics and our own in-house Lab.

All products supplied by Test Equipment Solutions include:

- No-quibble parts & labour warranty (we provide transport for UK mainland addresses).
- Free loan equipment during warranty repair, if available.
- Full electrical, mechanical and safety refurbishment in our 40GHz in-house Lab.
- Certificate of Conformance (calibration available on request).
- Manuals and accessories required for normal operation.
- Free insured delivery to your UK mainland address (sales).
- Support from our team of seasoned Test & Measurement engineers.
- ISO9001 quality assurance.

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Product Brochure

Anritsu

Site Master™

Compact Handheld Cable & Antenna Analyzer with Spectrum Analyzer

S331E	S332E	S361E	S362E	
2 MHz to 4 GHz	2 MHz to 4 GHz	2 MHz to 6 GHz	2 MHz to 6 GHz	Cable & Antenna Analyzer
	100 kHz to 4 GHz		100 kHz to 6 GHz	Spectrum Analyzer

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FROM THE LEADER IN CABLE AND ANTENNA ANALYSIS ANRITSU INTRODUCES ITS 8TH GENERATION SITE MASTER

The wireless communications market continues to evolve at a rapid pace. Operators and service providers have to maintain old networks while upgrading to the new 3G and 4G networks so as to keep up with changing consumer demands. They face the additional challenge of needing to ensure their networks are competitive from a reliability, quality, and cost perspective. As a result of all this, they expect more of the contractors and technicians who maintain their networks. To stay competitive, these contractors and technicians must maintain more base stations than before and complete a wide variety of tasks in the shortest time possible.

Anritsu is pleased to introduce its eighth-generation compact handheld Site Master cable and antenna analyzer series with integrated spectrum analyzer. The new Site Master analyzers offer the same ease of use, ruggedness, and familiar menus as its predecessor S331D and S332D. In addition, Anritsu has enhanced the Site Master to address all the customer requirements and suggestions received over the years.

Indeed, for more than 14 years, Anritsu's Site Master has been the de facto standard for contractors, installers, and wireless service providers who need a portable and rugged cable and antenna analyzer. The Site Master reduces per site maintenance expense, maximizes system up-time, and breaks away from the traditional fix-after-failure maintenance mode by finding small problems before major failures occur. Radio frequency (RF) engineers and field technicians in the U.S. Navy, U.S. Air Force, and other global defense programs responsible for installing and maintaining communication systems use Site Master's frequency domain reflectrometry (FDR)-based approach to improve the quality of their communication systems.

Although the new Site Master resides in a modern platform that takes advantage of the latest technologies and is loaded with features that will enhance productivity, it provides more value for better productivity without giving up the familiar look and feel.

INTEGRATED

The Site Master is a 4 or 6 GHz cable and antenna analyzer that can be configured to include either a 4 or 6 GHz spectrum analyzer, 2-port transmission measurement with built-in 32V bias tee, an interference analyzer with spectrogram displays, a channel scanner, power meter, high accuracy power meter, and GPS receiver for time and location stamping. Because of its multi-functional capabilities, it eliminates the need for you to carry and learn multiple instruments.

TRUSTED

Anritsu builds upon its expertise in portable compact cable and antenna analyzers and spectrum analyzers. The Site Master is approved by all major operators and service providers worldwide.

DESIGNED FOR FIELD USE

The Site Master was designed specifically for field environments. It weighs less than 6 lbs and its field replaceable Li-Ion battery typically lasts for more than 4 hours. A new bright 8.4-inch color display provides visibility even in broad daylight. With an operating temperature range from -10° to 55 °C, the Site Master will work in the most extreme weather conditions. The analyzer is almost impervious to the bumps and bangs typically encountered by portable field equipment, and its ruggedized case and splash proof design allow you to depend on high performance anywhere, anytime.

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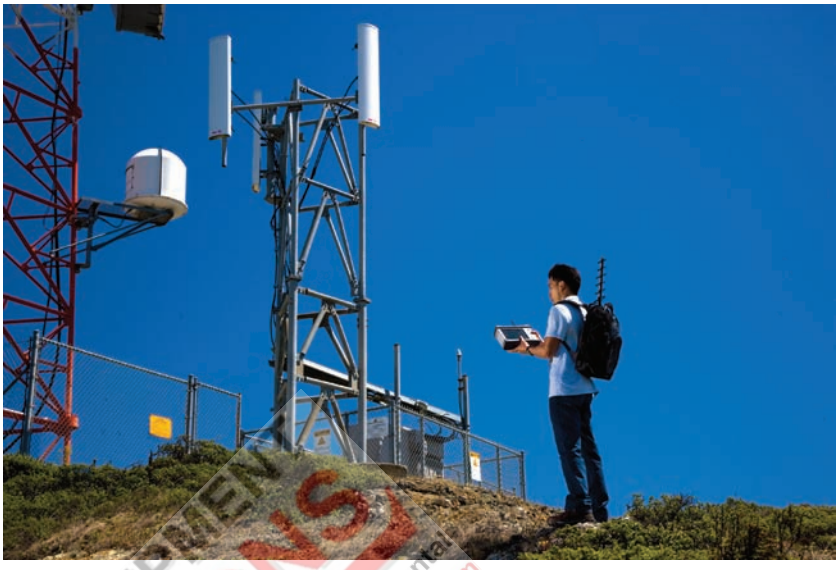
SITE MASTER IS THE PREFERRED CABLE AND ANTENNA ANALYZER OF WIRELESS SERVICE PROVIDERS, CONTRACTORS AND INSTALLERS

INTEGRATED MEASUREMENT CAPABILITIES



CONFIGURATION OVERVIEW

FUNCTION	DESCRIPTION
Cable and Antenna Analyzer, 2 MHz to 4/6 GHz	Characterizes cable and antenna systems with return loss, cable loss, VSWR, distance-to-fault measurements. Also includes 1-port phase and Smith chart displays. Offers faster than 1 ms/data point sweep speed and a dual display.
Spectrum Analyzer, 100 kHz to 4/6 GHz	Locates and identifies various signals over a wide frequency range. Detect signals as low as -152 dBm with phase noise better than -100 dBc/Hz.
2-port Transmission Measurement (Option 21)	Provides high and low power settings for both TMA gain and antenna-antenna isolation measurements. Offers better than 80 dB dynamic range.
Bias Tee (Option 10)	Provides built-in 32 V bias tee that can be turned on as needed, and which eliminates the need to carry an external supply.
High Accuracy Power Meter (Option 19)	Connects high accuracy 6-, 8-, and 18 GHz USB power sensors with better than 0.16 dB accuracy.
Power Meter (Option 29)	Makes channelized transmitter power measurements.
Interference Analyzer (Option 25)	Includes the popular spectrogram display for monitoring intermittent signals over time.
Channel Scanner (Option 27)	Measures the power of multiple transmitted signals.
CW Signal Generator (Option 28)	Includes CW source to test low noise amplifiers, repeaters. (This requires an external CW generator kit.)
GPS Receiver (Option 31)	Provides location and UTC time information. Also improves the accuracy of the reference oscillator.
Gated Sweep (Option 90)	Views pulsed or burst signals such as WiMAX, GSM, and TD-SCDMA only when they are on.

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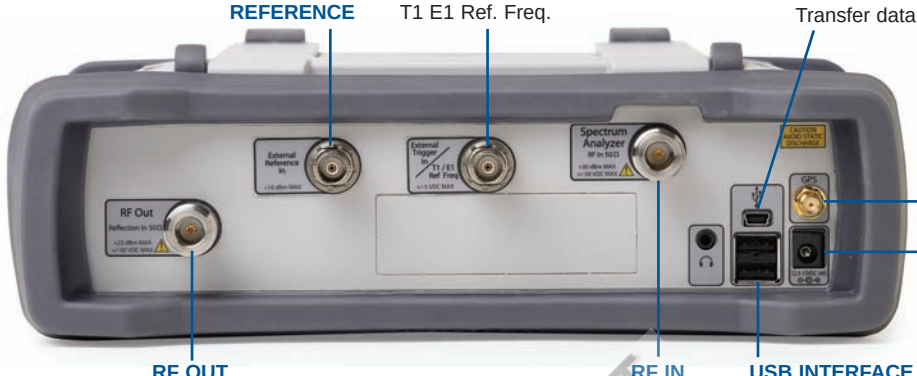
DESIGNED FOR THE FIELD



ALL CONNECTORS ARE CONVENIENTLY LOCATED ON THE TOP PANEL, LEAVING THE ORDER CLEAR FOR HANDHELD USE.

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CONVENIENT SOFT CASE AND TILT BAIL

TILT BAILS ARE INTEGRATED INTO THE CASE AND SOFT CASE FOR BETTER SCREEN VIEWING

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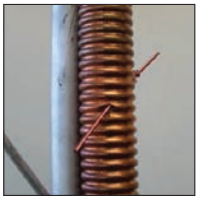
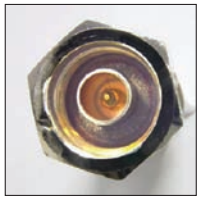
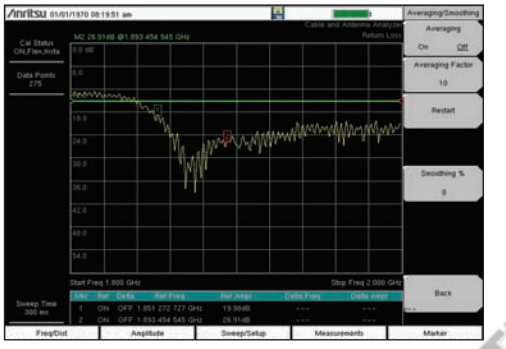
MASTER CABLE & ANTENNA ANALYSIS, ANYWHERE, ANYTIME

The majority of the problems you find at a typical cell site are caused by problematic cables, pinched cables, corroded connectors, antennas, lightning strikes, rain getting into cables, and bullet holes. Degraded cable systems and badly positioned antennas affect overall system coverage and eventually result in dropped calls. Site Master's FDR-based return loss and DTF measurements can pinpoint an antenna problem from ground level in a few seconds, enabling Site Master to identify small problems before they become big problems.







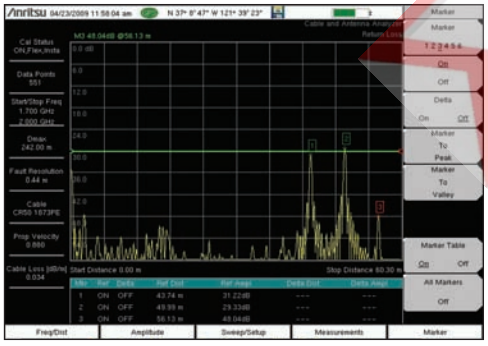
Return Loss/VSWR

RETURN LOSS / VSWR

Use the Site Master to make return loss and VSWR and verify that the cable and antenna system conforms to performance specifications.

CABLE LOSS

Cable Loss metrics measure the level of insertion loss within the cable feedline system. This measurement can be verified prior to deployment, when you have access to both ends. Site Master automatically calculates the average cable loss.

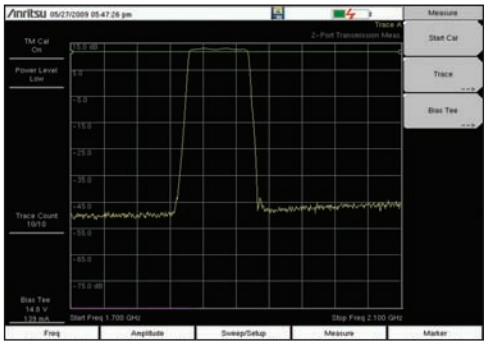


Distance-to-Fault

DISTANCE-TO-FAULT

While the return loss metric is the best measurement to verify the health of a system, distance-to-fault (DTF) is used to troubleshoot systems and locate the problem.

The Site Master's DTF measurement uses the fast Fourier transform to convert frequency data to the time domain and displays signal anomalies with respect to distance. Using the standard trace math feature, you can monitor small relative changes over time.



2-Port Transmission Measurements

2-PORT TRANSMISSION MEASUREMENTS (OPTION 21)

Cellular/PCS and 3G base stations today use diplexers, duplexers, and tower-mounted amplifiers to extend the coverage area. Site Master's 2-port transmission measurement enables you to make gain, isolation, and insertion loss measurements as well as verify sector-to-sector isolation.

BIAS TEE (OPTION 10)

The built-in bias tee can be turned on as needed to place +12 to +32V on the center conductor of the RF in port, eliminating the need for you to carry external supplies in the field.

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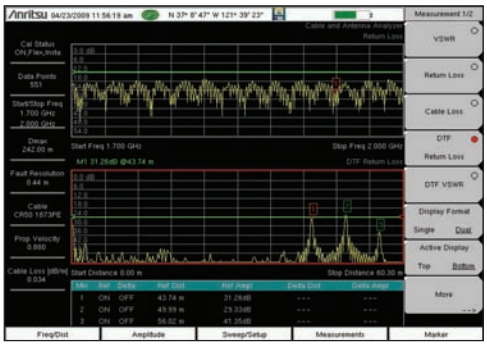
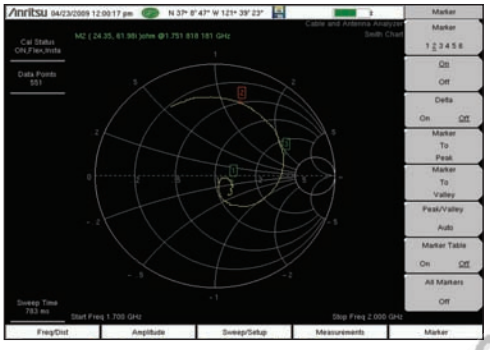
ENHANCE PRODUCTIVITY WITH DUAL DISPLAYS AND INSTANT CALIBRATION



Dual Display



Smith Chart

InstaCal

DUAL DISPLAY

The dual display enables users to view two cable and antenna measurements on the same display. Because you can control the top and bottom displays independently, you can set markers and limit lines on each display. This results in significant time savings as there's no need to make two measurements.

SMITH CHART AND 1-PORT PHASE DISPLAY

The cable and antenna analyzer also includes Smith chart and 1-port phase measurement displays for when you need to tune antennas and phase match cables.

INSTACAL™ CALIBRATION

Although you need to get the job done as quickly as possible, you still need to make reliable and accurate measurements. Anritsu's InstaCal module enables you to make accurate calibrations at the end of the phase stable cable without connecting a short/open/load. You only need to connect the InstaCal module once and everything is done automatically. This calibration method can cut the calibration time by as much as 50 percent and still deliver accurate calibrations. Directivity specification for the InstaCal module is 38 dB for the entire frequency range, allowing you to make fast and accurate measurements in no time—and with no in-between connections.

STANDARD OSL CALIBRATION

Open-Short-Load (OSL) calibration comes standard with the Site Master. All errors from source match, directivity, and frequency response are mathematically removed, allowing you to make accurate vector-corrected measurements. Directivity is usually the main contributor to measurement uncertainty, and corrected directivity of 42 dB or better is common using Anritsu's precision components.

FLEXCAL™

The Site Master's FlexCal™ broadband calibration feature is an OSL-based calibration method that allows you to perform a broadband calibration and change the frequency range after calibration without having to recalibrate the instrument.

RF IMMUNITY

Site Master's special dithering RF immunity solution enables you to make accurate cable and antenna measurements even in the presence of strong RF activity from co-located cell sites.

CABLE AND ANTENNA ANALYZER HIGHLIGHTS

- Return loss, VSWR, cable loss, DTF
- 2-port transmission measurements with 32V bias tee
- 1-port phase, Smith chart
- Optical DTF measurements
- Dual display mode capabilities
- Built-in, editable signal standard and cable standard lists
- Calibration: OSL Cal, FlexCal, InstaCal
- 137, 275, 551, 1102, 2204 data points
- < 1 msec per datapoint sweep speed
- Trace overlay and trace math to monitor changes with reference traces
- Marker table with automatic peak/valley markers
- GPS tagging
- Limit lines and alarming for providing reference standards
- GPS tagging of data to verify location of tests
- Master Software Tools for post-analysis and report generation

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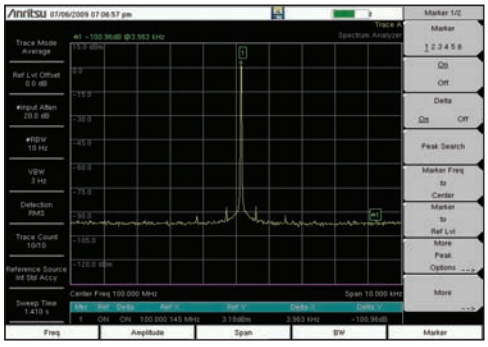
HIGH PERFORMANCE, COMPACT SPECTRUM ANALYSIS

Site Master S332E and the S362E Site Master with integrated spectrum analysis capability provide users with a high-performance, easy-to-use, feature-rich spectrum analyzer for field environments and applications requiring mobility.

Site Master's integrated high performance spectrum analyzer makes it ideal for a broad range of activities, including spectrum monitoring, AM/FM broadcast proofing, interference analysis, field strength measurements, transmitter spectrum analysis, electro magnetic field strength, signal strength mapping, and overall field analysis of cellular 2G/3G/4G, land mobile radio, Wi-Fi, and broadcast signals.



Dynamic Range Performance

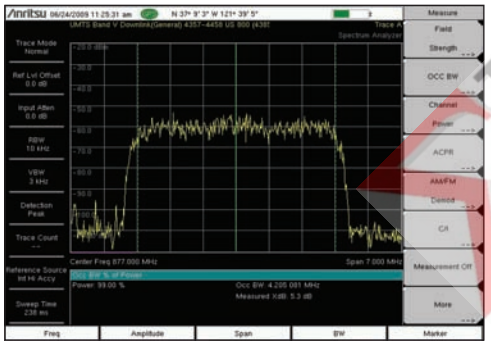
HIGH PERFORMANCE

Site Master's dynamic range is better than 95 dB in 10 Hz RBW, allowing you to measure very small signals in the presence of much larger signals. The picture to the left demonstrates the dynamic range in Site Master.

Additionally, Site Master's phase noise is better than -100 dBc/Hz at 10 kHz offset. The integrated 4 or 6 GHz spectrum analyzer delivers -152 dBm DANL in 10 Hz RBW.

FAST SWEEP SPEED

It automatically sets the fastest sweep possible and still delivers accurate measurements. This allows you to rely on Site Master to optimize accuracy and consistency.



Smart Measurements

SMART MEASUREMENTS

Site Master comes with commonly needed and easily accessed measurements built in. These include field strength, occupied bandwidth, channel power, adjacent channel power ratio (ACPR), AM/FM/SSB demodulation, and carrier-to-interference (C/I) ratio measurements.

OCCUPIED BANDWIDTH

Determine the amount of spectrum used by a modulated signal. You can choose between two different methods of determining bandwidth: the percent-of-power method or the "x" dB down method.

ADJACENT CHANNEL POWER RATIO

Adjacent Channel Power Ratio is a common transmitter measurement. This is the ratio of the amount of leakage power in the adjacent channel to the total transmitted power in the main channel. This measurement can be used to replace the traditional two-tone intermodulation distortion (IMD) test for system non-linear behavior. The Site Master allows you to perform this measurement quickly and accurately.

FIELD STRENGTH MEASUREMENTS

The Site Master can determine the effects of electromagnetic fields caused by transmitter systems, and automatically take specific antenna factors of the connected antenna into account.

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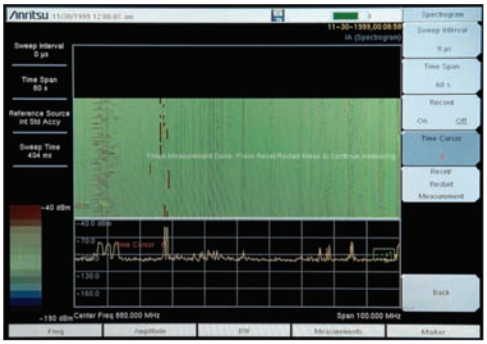
MASTER THE LOCATION OF INTERFERENCE

As the wireless industry continues to expand, more diverse uses for the radio spectrum emerge and the number of signals that may potentially cause interference is constantly increasing.

Compounding the problem are the many sources that can generate interference including intentional radiators, un-intentional radiators, and self interference. Interference causes Carrier-to-Interference degradation robbing the network of capacity. The goal of these measurements is to resolve interference issues as quickly as possible.



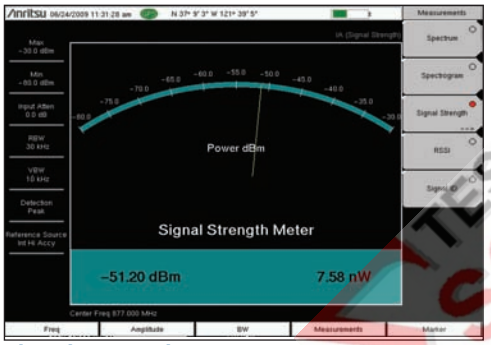
Spectrogram Display

INTERFERENCE ANALYSIS (OPTION 25)

The interference analyzer option provides you with a spectrogram display, RSSI, signal strength meter, and signal ID. Site Master's integrated spectrum analyzer can detect signals as low as -152 dBm.

SPECTROGRAM DISPLAY

This option provides you with a three-dimensional display of frequency, power, and time of the spectrum activity to identify intermittent interference and track signal levels over time. The Site Master allows you to save a history up to 72 hours.



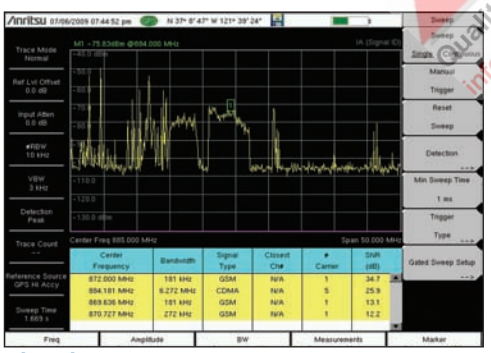
Signal Strength Meter

RECEIVED SINGLE STRENGTH INDICATOR (RSSI)

You can use the Site Master's RSSI measurement to observe the signal strength of a single frequency over time, and collect data for up to 72 hours.

SIGNAL STRENGTH METER

The Site Master's signal strength meter can locate an interfering signal by using a directional antenna and measuring the signal strength. It displays power in Watts, dBm, in the graphical analog meter display, and by an audible beep proportional to its strength.



Signal ID

SIGNAL ID

Site Master's signal ID feature in the interference analyzer can help you quickly identify the type of the interfering signal. You can configure this measurement to identify all signals in the selected band or to simply monitor one single interfering frequency. The Site Master then displays results that include center frequency, signal bandwidth, and signal type (FM, GSM/GPRS/EDGE, W-CDMA/HSDPA, CDMA/EV-DO, Wi-Fi).

AM/FM/SSB DEMODULATION

A bulit-in demodulator for AM, narrowband FM, wideband FM and single sideband allows you to easily identify the interfering signal.

SPECTRUM ANALYZER HIGHLIGHTS

- Measurements: Occupied bandwidth, channel power, ACPR, C/I, AM/FM demod, field strength
- Interference analyzer: spectrogram, signal strength, RSSI, signal ID
- Dynamic range: > 95 dB
- DANL: -162 dBm typical (normalized to 1 Hz)
- Phase noise: -100 dBc/Hz @ 10 kHz offset
- Frequency accuracy: < +/- 50 ppb with GPS on
- Advanced marker functions: noise marker, frequency counter, fixed, tracking
- Advanced limit line functions: one-button envelope creation
- Detection methods: peak, RMS, negative, sample, quasi-peak
- Save-on-event: automatically saves a sweep when crossing a limit line
- Gated sweep: view pulsed or burst signals only when they are on, or off

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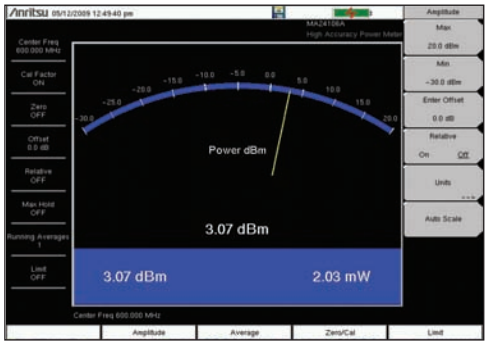
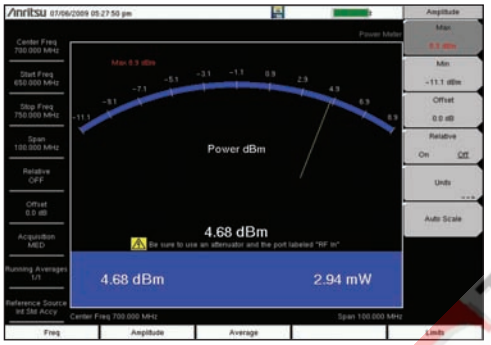
POWER MEASUREMENTS FOR A WIDE RANGE OF APPLICATIONS

The Anritsu Site Master provides many different power measurements to support a wide range of applications. The high-accuracy broadband sensor family provides the best accuracy (±0.16 dB) over a wide frequency range. The power meter is ideal for users looking to making channelized measurements in a few keystrokes with minimal training. Site Master's channel power measurement also makes channelized measurements but requires more knowledge and is recommended for more advanced users. And when you are measuring multiple channels, the channel scanner is your perfect choice.

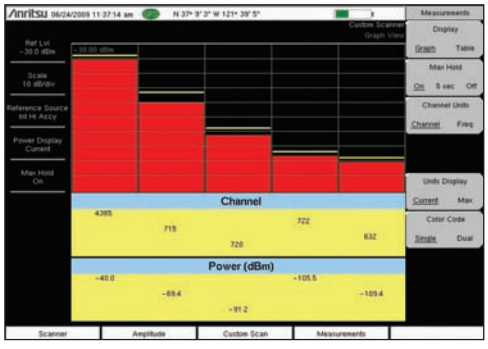


Power Meter



High Accuracy Power Meter

High Accuracy Power Sensors



Channel Scanner

CHANNEL POWER

Use Site Master's channel power measurement to determine the power and power density of a transmission channel. Using the built-in signal standard list, you can meaure the channel power of a wide range of signals.

POWER METER (OPTION 29)

Site Master's internal power meter provides power measurements without any additional tools and is ideal for making channelized power measurements.You can display the results in both dBm and Watts. This option is easy to use and requires limited setup entries.

HIGH ACCURACY POWER METER (OPTION 19)

Anritsu's high accuracy power meter option enables you to make high accuracy RMS measurements. This capability is perfect for measuring both CW and digitally modulated signals such as CDMA/EV-DO, GSM/EDGE, WCDMA/HSDPA, and P25. You can select from a wide range of USB sensors delivering better than ±0.16 dB accuracy. An additional benefit of using the USB connection is that a separate DC supply (or battery) is not needed since the necessary power is supplied by the USB port.

- PSN50 High Accuracy RF Power Sensor, 50 MHz to 6 GHz, -30 to +20 dBm, True-RMS
- MA24104A Inline High Power Sensor, 600 MHz to 4 GHz, +3 to +51.76 dBm (150W), True-RMS
- MA24106A High Accuracy RF Power Sensor, 50 MHz to 6 GHz, -40 to +23 dBm, True-RMS
- MA24108A Microwave USB Power Sensor, 10 MHz to 8 GHz, -40 to +20 dBm, True-RMS
- MA24118A, Microwave USB Power Sensor, 10 MHz to 18 GHz, -40 to +20 dBm, True-RMS

PC POWER METER

These power sensors can be used with a PC running Microsoft Windows® via USB. They come with PowerXpert™ application, a data analysis, and control software. The application has abundant features, such as data logging, power versus time graph, big numerical display, and many more, that enable quick and accurate measurements.

CHANNEL SCANNER (OPTION 27)

The channel scanner option measures the power of multiple transmitted signals, making it very useful for simultaneously measuring channel power of up to 20 channels in GSM, TDMA, CDMA, W-CDMA, HSDPA, and public safety networks. You can select the frequencies or the scanned data to be displayed by frequencies or the channel number. And in the custom setup menu each channel can be custom built with different frequency bandwidth, or with channels from different signal standards. With Script Master, scans can be automated for up to 1200 channels.

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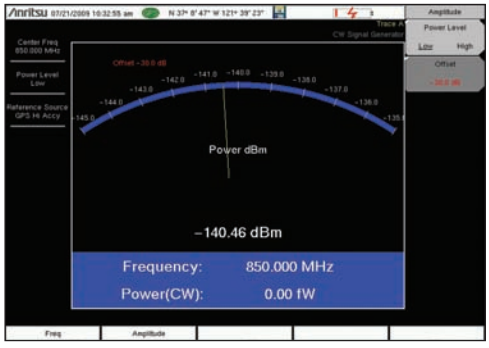
GPS Receiver

GPS RECEIVER (OPTION 31)

Site Master's GPS option can be used to confirm the exact measurement location (longitude, latitude, altitude) and Universal Time (UT) information. Each trace can be stamped with location information to ensure you are taking measurements at the right location.

In addition, the GPS option enhances the frequency accuracy of the internal reference oscillator. Within three minutes of acquiring the GPS satellite, the built-in GPS receiver provides a frequency accuracy to better than 50 ppb.



CW Signal Generator

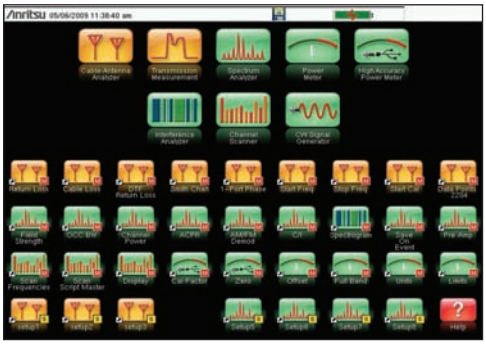
CW SIGNAL GENERATOR (OPTION 28)

This option provides a CW signal generator from 2 MHz to 4 or 6 GHz. The signal at the output port can be set high (about 0 dBm) or low (-30 dBm). With the use of the CW Signal Generator Kit's attenuator connected to the RF port, the level can be varied in 1 dB steps giving you the ability to generate signals as low as -110 dBm for receiver sensitivity measurements. The included splitter divides the signal allowing for a simultanious power measurement.

Touchscreen keyboard

BUILT-IN KEYBOARD

The built-in touchscreen keyboard gives you access to a fully functional keyboard, saving valuable time in the field when entering trace names. You can create shortcuts to customer-configurable user "quick names" to program frequently used words.



Menus with shortcut icons

MENUS WITH SHORTCUT ICONS

Find your favorite measurements quickly by pressing the menu key. Create shortcuts for popular measurements, setups, and functions by simply holding down any key for more than three seconds. The display here shows the menu with standard measurements and with the lower part filled with shortcut icons.

LOCAL LANGUAGE SUPPORT

Site Master features eight languages including English, Japanese, Chinese, Italian, French, German, Spanish and Korean. Two custom user-defined languages can be uploaded into the instrument using Master Software Tools.

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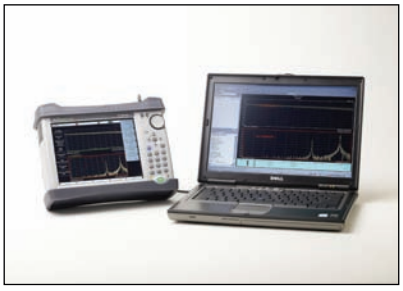
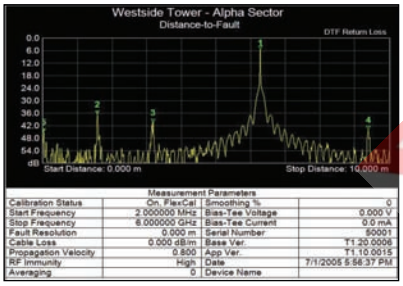
MASTER SOFTWARE TOOLS - THE POWER BEHIND THE SITE MASTER

Master Software Tools (MST) is a powerful PC software post-processing tool designed to enhance the productivity of technicians in report generation, data analysis, and testing automation.

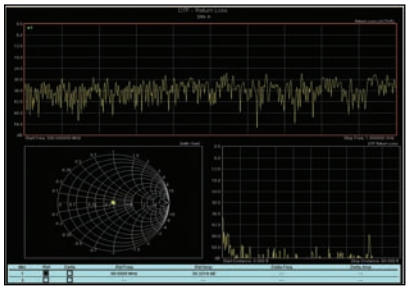


Connect to PC using USB

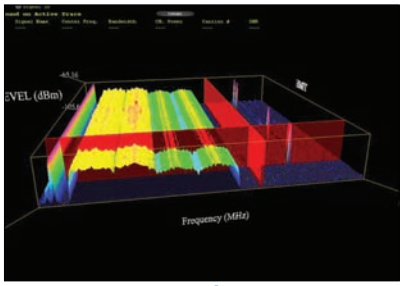
Report Generation



Import HHST *.DAT Files



Multiple Trace View



3D Spectrogram View

FAST DOWNLOADS
Download all measurements to MST with a single menu selection.

REPORT GENERATION
Create reports with company logo, GPS tagging information, calibration status, and serial number of the instrument for complete reporting.
Add custom company logos.

IMPORT HHST *.DAT FILES
Compatibility is retained with Handheld Software Tools (HHST) with a *.dat file converter which converts HHST files to MST file format and vice-versa.

COMPARE TRACES
Use MST to build a record of all traces. Easy to use trace overlay features allow for easy comparison with historical traces.

TRACE RENAMING
Rename hundreds of traces in minutes using the trace rename tool in MST.

TRACE EDITOR
For VNA traces, select markers to peak and valley and displays individual values for Return Loss, Cable Loss, VSWR, Magnitude, Phase and milliRho. For SPA measurements set limit line envelopes, edit limit lines segments and turn on and off segments. Also, edit frequency and amplitude parameters.

PRODUCT UPDATES
The product update tool will ensure you always use the latest instrument firmware.

GROUP EDIT
Add limit lines and markers to all the traces in one folder with just one click.

SIGNAL STANDARDS AND CABLE LISTS
While the Site Master signal standard and cable lists are updated frequently, Master Software Tools can be used to add custom signals and cables.

MULTIPLE TRACE VIEW AND TRACE CONVERTER
Create multiple trace displays (RL, VSWR, Cable Loss, DTF, Phase) from a single 1-port measurement.

FULL TRACE RETRIEVAL
Download and archive hundreds of traces instantly to your PC without opening them.

FOLDER SPECTROGRAM
Folder Spectrogram – creates a composite file of up to 15,000 multiple traces for quick review.

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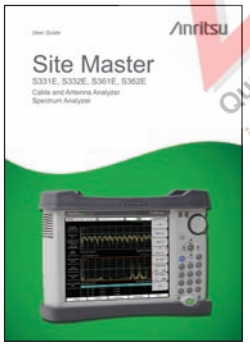
ORDERING INFORMATION

S331E	S332E	S361E	S362E	DESCRIPTION
2 MHz to 4 GHz	2 MHz to 4 GHz	2 MHz to 6 GHz	2 MHz to 6 GHz	Cable and Antenna Analyzer
	100 kHz to 4 GHz		100 kHz to 6 GHz	Spectrum Analyzer
S331E-0021	S332E-0021	S361E-0021	S362E-0021	2-Port Transmission Mearsurement
S331E-0010	S332E-0010	S361E-0010	S362E-0010	Bias-Tee (Requires Option 0021 for S3331E/S361E)
S331E-0031	S332E-0031	S361E-0031	S362E-0031	GPS Receiver (Requires Antenna P/N 2000-1528-R)
SS331E-0019	S332E-0019	S361E-0019	S362E-0019	High-Accuracy Power Meter
	S332E-0029		S362E-0029	Power Meter
	S332E-0025		S362E-0025	Interference Analyzer
	S332E-0027		S362E-0027	Channel Scanner
	S332E-0090		S362E-0090	Gated Sweep
	S332E-0028		S362E-0028	CW Signal Generator (Requires CW Signal Generator Kit, P/N 69793)
S331E-0098	S332E-0098	S361E-0098	S362E-0098	Standard Calibration to Z540
S331E-0099	S332E-0099	S361E-0099	S362E-0099	Premium Calibration to Z540 plus test data

POWER SENSORS (For complete ordering information see the respective datasheets for each sensor)

MODEL NUMBER	DESCRIPTION
PSN50	High Accuracy RF Power Sensor, 50 MHz to 6 GHz, +20 dBm
MA24104A	Inline High Power Sensor, 600 MHz to 4 GHz, +51.76 dBm
MA24106A	High Accuracy RF Power Sensor, 50 MHz to 8 GHz, +23 dBm
MA24108A	Microwave USB Power Sensor, 10 MHz to 8 GHz, +20 dBm
MA24118A	Microwave USB Power Sensor, 10 MHz to 18 GHz, +20 dBm

MANUALS (Soft copy included on MST CD and at www.us.anritsu.com)



NUMBER	DESCRIPTION
10580-00252	Site Master User Guide (Hard copy included)
	–Bias-Tee, GPS Receiver
10580-00230	Cable and Antenna Analyzer Measurement Guide
	–Bias-Tee
10580-00242	2-Port Transmission Measurement
10580-00231	Spectrum Analyzer Measurement Guide
	–Interference Analyzer, Channel Scanner, Gated Sweep, CW Signal Generator
10580-00240	Power Meter Measurement Guide
	–High Accuracy Power Meter
10580-00215	ODTF-1 Optical Distance-to-Fault Module
10580-00256	Programming Manual
10580-00253	Maintenance Manual

STANDARD ACCESSORIES (Included with instrument)

NUMBER	DESCRIPTION
10580-00252	Site Master User Guide (Includes Bias-Tee, GPS Receiver)
3-68736	Soft Carrying Case
2300-498	MST CD: Master Software Tools, User/Measurement Guides, Programming Manual, Troubleshooting Guides, Application Notes
633-44	Rechargeable Li-Ion Battery
40-168-R	AC-DC Adapter
806-141-R	Automotive Cigarette Lighter 12 VDC Adapter
3-2000-1498	USB A/5-pin mini-B Cable, 10 feet/305 cm
11410-00484	Site Master™ S331E, S332E, S361E, S362E Technical Data Sheet, One Year Warranty (Including battery, firmware, and software), Certificate of Calibration and Conformance

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OPTIONAL ACCESSORIES

CALIBRATION COMPONENTS, 50 Ω

PART NUMBER	DESCRIPTION
ICN50B	InstaCal™ Calibration Module, 2 MHz to 6.0 GHz, N(m), 50 Ω
OSLN50-1	Precision Open/Short/Load, N(m), 42dB, 6.0 GHz, 50 Ω
OSLNF50-1	Precision Open/Short/Load, N(f), 42dB, 6.0 GHz, 50 Ω
2000-1618-R	Precision Open/Short/Load, 7/16 DIN(m), DC to 6.0 GHz 50 Ω
2000-1619-R	Precision Open/Short/Load, 7/16 DIN(f), DC to 6.0 GHz 50 Ω
22N50	Open/Short, N(m), DC to 18 GHz, 50 Ω
22NF50	Open/Short, N(f), DC to 18 GHz, 50 Ω
SM/PL-1	Precision Load, N(m), 42 dB, 6.0 GHz
SM/PLNF-1	Precision Load, N(f), 42 dB, 6.0 GHz

CALIBRATION COMPONENTS, 75 Ω

22N75	Open/Short, N(m), DC to 3 GHz, 75 Ω
22NF75	Open/Short, N(f), DC to 3 GHz, 75 Ω
26N75A	Precision Termination, N(m), DC to 3 GHz, 75 Ω
26NF75A	Precision Termination, N(f), DC to 3 GHz, 75 Ω
12N50-75B	Matching Pad, DC to 3 GHz, 50 Ω to 75 Ω

PHASE-STABLE TEST PORT CABLES, ARMORED W/ REINFORCED GRIP (recommended for cable & antenna line sweep applications)

15RNFN50-1.5-R	1.5 m, DC to 6 GHz, N(m) - N(f), 50 Ω
15RDFN50-1.5-R	1.5 m, DC to 6 GHz, N(m) - 7/16 DIN(f), 50 Ω
15RDN50-1.5-R	1.5 m, DC to 6 GHz, N(m) - 7/16 DIN(m), 50 Ω
15RNFN50-3.0-R	3.0 m, DC to 6 GHz, N(m) - N(f), 50 Ω
15RDFN50-3.0-R	3.0 m, DC to 6 GHz, N(m) - 7/16 DIN(f), 50 Ω
15RDN50-3.0-R	3.0 m, DC to 6 GHz, N(m) - 7/16 DIN(m), 50 Ω

PHASE-STABLE TEST PORT CABLES, ARMORED (recommended for use with tightly spaced connectors and other general purpose applications)

15NNF50-1.5C	1.5 m, DC to 6 GHz, N(m) - N(f), 50 Ω
15NN50-1.5C	1.5 m, DC to 6 GHz, N(m) - N(m), 50 Ω
15NDF50-1.5C	1.5 m, DC to 6 GHz, N(m) - 7/16 DIN(f), 50 Ω
15ND50-1.5C	1.5 m, DC to 6 GHz, N(m) - 7/16 DIN(m), 50 Ω
15NNF50-3.0C	3.0 m, DC to 6 GHz, N(m) - N(f), 50 Ω
15NN50-3.0C	3.0 m, DC to 6 GHz, N(m) - N(m), 50 Ω

ADAPTERS

1091-26-R	SMA(m) - N(m), DC to 18 GHz, 50 Ω
1091-27-R	SMA(f) - N(m), DC to 18 GHz, 50 Ω
1091-80-R	SMA(m) - N(f), DC to 18 GHz, 50 Ω
1091-81-R	SMA(f) - N(f), DC to 18 GHz, 50 Ω
1091-172	BNC(f) - N(m), DC to 1.3 GHz, 50 Ω
510-90	7/16 DIN(f) - N(m), DC to 7.5 GHz, 50 Ω
510-91	7/16 DIN(f) - N(f), DC to 7.5 GHz, 50 Ω
510-92	7/16 DIN(m) - N(m), DC to 7.5 GHz, 50 Ω
510-93	7/16 DIN(m) - N(f), DC to 7.5 GHz, 50 Ω
510-96	7/16 DIN(m) - 7/16 DIN (m), DC to 7.5 GHz, 50 Ω
510-97	7/16 DIN(f) - 7/16 DIN (f), DC to 7.5 GHz, 50 Ω
1091-379-R	7/16 DIN(f) - 7/16 DIN(f), DC to 6 GHz, 50 Ω, w/ Reinforced Grip
510-102-R	N(m) - N(m), DC to 11 GHz, 50 Ω, 90 degrees right angle

PRECISION ADAPTERS

34NN50A	Precision Adapter, N(m) - N(m), DC to 18 GHz, 50 Ω
34NFNF50	Precision Adapter, N(f) - N(f), DC to 18 GHz, 50 Ω

MISCELLANEOUS ACCESSORIES

2000-1528-R	GPS Antenna, SMA(m)
69793	CW Signal Generator Kit
ODTF-1	Optical Distance-to-Fault Module, 1550 nm, Single Mode
2000-1520-R	USB Flash Drive
2000-1374	External Charger for Li-Ion Batteries

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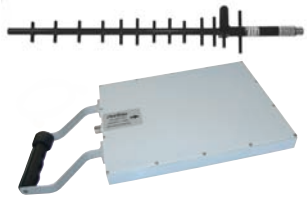
OPTIONAL ACCESSORIES

BACKPACK AND TRANSIT CASE

67135	Anritsu Backpack (For Handheld Instrument and PC)
760-243-R	Large Transit Case with Wheels and Handle

DIRECTIONAL ANTENNAS



Part Number	Description
2000-1411-R	822-900 MHz, N(f), 10 dBd, Yagi
2000-1412-R	885-975 MHz, N(f), 10 dBd, Yagi
2000-1413-R	1710-1880 MHz, N(f), 10 dBd. Yagi
2000-1414-R	1850-1990 MHz, N(f), 9.3 dBd, Yagi
2000-1415-R	2400-2500 MHz, N(f), 10 dBd, Yagi
2000-1416-R	1920-2170 MHz, N(f), 10 dBd, Yagi
2000-1519	500 MHz to 3 GHz, log periodic

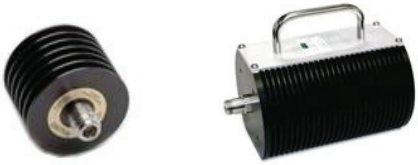
PORTABLE ANTENNAS

2000-1200	806-866 MHz, SMA(m), 50 Ω
2000-1473	870-960 MHz, SMA(m), 50 Ω
2000-1035	896-941 MHz, SMA (m), 50 Ω (1/4 wave)
2000-1030	1710 to 1880 MHz, SMA(m), 50 Ω (1/2 wave)
2000-1474	1710 to 1880 MHz with knuckle elbow (1/2 wave)
2000-1031-R	1850 to 1990 MHz, SMA(m), 50 Ω (1/2 wave)
2000-1475	1920 to 1980 MHz and 2110 to 2170 MHz, SMA(m), 50 Ω
2000-1032-R	2400 to 2500 MHz, SMA(m), 50 Ω (1/2 wave)
2000-1361	2400 to 2500, 5000 to 6000 MHz, SMA(m), 50 Ω
61532	Antenna Kit (Consists of: 2000-1030, 2000-1031, 2000-1032-R, 2000-1200, 2000-1035, 2000-1361, and carrying pouch)

BANDPASS FILTERS

1030-114-R	806-869 MHz, N(m) - SMA(f), 50 Ω
1030-109-R	824 - 849 MHz, N(m) - SMA (f), 50 Ω
1030-110-R	880 - 915 MHz, N(m) - SMA (f), 50 Ω
1030-105-R	890-915 MHz Band, 0.41 dB loss, N(m) - SMA(f), 50 Ω
1030-111-R	1850 - 1910 MHz, N(m) - SMA (f), 50 Ω
1030-106-R	1710-1790 MHz Band, 0.34 dB loss, N(m) - SMA(f), 50 Ω
1030-107-R	1910-1990 MHz Band, 0.41 dB loss, N(m) - SMA(f), 50 Ω
1030-112-R	2400 - 2484 MHz, N(m) - SMA (f), 50 Ω
1030-155-R	2500-2700 MHz, N(m) – N(f), 50 Ω

ATTENUATORS



3-1010-122	20 dB, 5 W, DC to 12.4 GHz, N(m)-N(f)
42N50-20	20 dB, 5 W, DC to 18 GHz, N(m) - N(f)
42N50A-30	30 dB, 5 W, DC to 18 GHz, N(m) - N(f)
3-1010-123	30 dB, 50 W, DC to 8.5 GHz, N(m)-N(f)
1010-127-R	30 dB, 150 W, DC to 3 GHz, N(m) - N(f)
3-1010-124	40 dB, 100 W, DC to 8.5 GHz, N(m)-N(f), Uni-directional
1010-121	40 dB, 100 W, DC to 18 GHz, N(m)-N(f), Uni-directional
1010-128-R	40 dB, 150 W, DC to 3 GHz, N(m) - N(f)

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