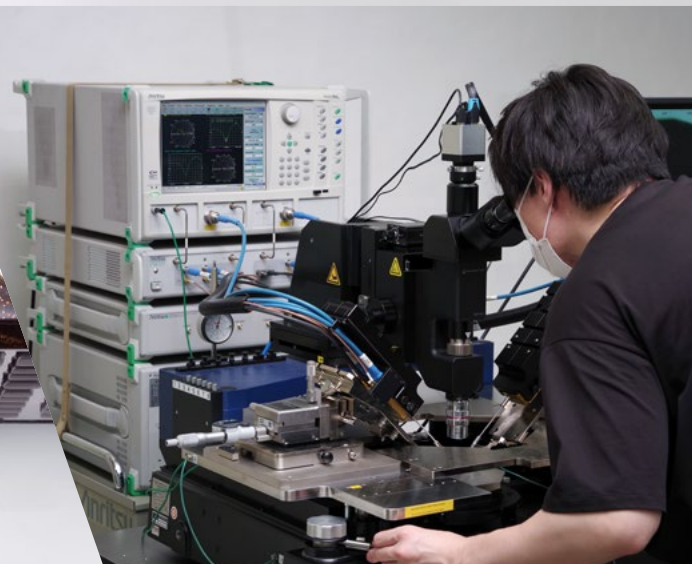


General Purpose Instruments

Anritsu Electronic Measuring Instruments 2026 Digest



*Not for sale





Honor the Past, Engineer the Future.



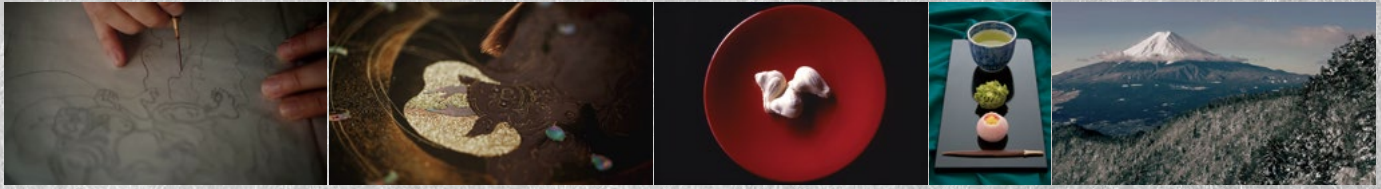
Sticking with what you know might feel safe.
But the future is shaped by new choices.
Experience can sometimes limit what you believe is possible.
Yet staying ahead means stepping into the unknown.

For over a century, Anritsu has lived by this truth.
That's why we meet every new challenge with support you can rely on.
We believe thinking things through with you is part of our performance.
Because we're here to give innovation the power to break through.
So, if you're ready to change what comes next,
choose a partner who rises to that challenge with you.

Where innovation begins.

Anritsu

A leader in test and measurement solutions, founded in Japan in 1895.



Urushi

Urushi lacquer is one of Japan's most enduring artistic traditions, defined by meticulous craftsmanship, precision, and continuous refinement.

For Anritsu, Urushi is more than decoration—it symbolizes our commitment to advancing technology, pushing engineering boundaries, and enabling innovation for our customers.



Raijin and Fujin

Raijin (thunder) and Fujin (wind) are deities from Japanese mythology who govern the forces of nature. Though they embody immense power, they have also been regarded as symbols that bring harmony out of chaos.

In this collaboration, we express how Anritsu's "testing" technologies support the realization of a safe, secure, and comfortable society.

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Vector Signal Generator

MG3710E 100 kHz to 2.7 GHz/4 GHz/6 GHz

Supports the Evaluation of Wireless Communications Evolving into the 5G

- RF modulation bandwidth 160 MHz*/120 MHz
- Pre-installed key waveform patterns
- Waveform addition function
Adds and outputs two signals, such as wanted signal + interference signal or wanted signal + AWGN
- One unit supports two RF outputs max., Ideal for multi-system evaluations
- Supports BER test function

*: When using MX370111A/MX370111A-002

The MG3710E supports various digital modulation signals, such as 5G, LTE/LTE-Advanced, GSM/GPRS/EDGE, W-CDMA/HSPA/HSPA Evolution, TD-SCDMA, Digital Broadcast (ISDB-T, DVB-T/H, CMMB), GPS, Bluetooth®, and WLAN for major communication systems. It is ideal for tests of base stations, mobile terminals and devices.



Signal Analyzer

MS2850A 9 kHz to 32 GHz/44.5 GHz

MS2830A 9 kHz to 3.6 GHz/6 GHz/13.5 GHz

Supports All Key Communications Systems

- Analysis bandwidth: 1 GHz max. (MS2850A)
125 MHz max. (MS2830A)
- Versatile built-in measurement functions: Adjacent channel leakage power, Occupied bandwidth, Spectrum emission mask, Spurious emission, Frequency counter, etc
- Measurement software options supporting modulation analysis: 5G (MS2850A), LTE/LTE-Advanced, W-CDMA/HSPA/HSPA Evolution, GSM/EDGE/EDGE Evolution, WLAN, Vector Modulation, Analog Modulation, etc.

The MS2850A/MS2830A have all the versatile built-in measurement functions needed for evaluating Tx characteristics. Parameter setting is easy using pre-installed templates for each measurement standard. Installing measurement options displaying numerical and graphical results supports modulation analysis of key communications systems.



MS2850A



MS2850A



MS2830A

Signal Analyzer

MS2850A series (MS2850A-047/046) 9 kHz to 32 GHz/44.5 GHz

Wideband signal analysis using excellent dynamic range and flatness

- Excellent Flatness Performance
In-band frequency characteristics: ± 1.2 dB (nom.), In-band phase linearity: 5° p-p (nom.)
(Center Frequency: 28 GHz, at Center Frequency ± 500 MHz)
- Wide Dynamic Range
Better than 140 dB@28 GHz (The difference between the ADC clipping level and DANL)
- Analysis Bandwidth: 255 MHz (Standard), 510 MHz (Option), 1 GHz (Option)
- Measurement applications (Options): Modulation Analysis (5G, LTE, LTE-Advanced, W-CDMA, GSM, Vector Modulation, etc.), Phase Noise, Noise Figure, Noise Floor Reduction, etc.

The MS2850A-047/046 is a spectrum analyzer/signal analyzer with a maximum analysis bandwidth of 1 GHz and excellent flatness performance. With this performance, the MS2850A supports high-accuracy amplitude and phase measurements for each signal in wideband next-generation communications systems, such as 5G mobile and satellite. In addition to signal analysis, 1 GHz analysis bandwidth can be utilized as a digitizer application that monitors multiple frequencies in satellite communication. The large amounts of digitized data captured can be transferred to an external PC 100 times faster than conventional method by External Interface for High Speed Data Transfer PCIe/USB3.0 MS2850A-053/054 option.



Signal Analyzer

MS2840A series (MS2840A-040/041) 9 kHz to 3.6 GHz/6 GHz

Top Class Phase Noise Performance at Middle-Price Range

- Phase Noise: -140 dBc/Hz@150 MHz, 10 kHz offset (MS2840A-066, meas.)
 -138 dBc/Hz@1 GHz, 10 kHz offset (MS2840A-066, meas.)
 -123 dBc/Hz@1 GHz, 10 kHz offset (Standard)
- Analysis Bandwidth: 31.25 MHz (Standard), 125 MHz max. (Option)
- Measurement applications (Options): Modulation Analysis (Vector Modulation, Analog Modulation), Phase Noise, Noise Figure, Noise Floor Reduction, Built-in Vector/Analog Signal Generator, BER, etc.

Installing the MS2840A-066 option in the MS2840A-040/041 supports excellent phase noise performance exceeding that of high-end models. It offers high cost-performance in fields including development and manufacturing of narrowband wireless equipment and oscillators with built-in wireless, as well as wireless fundamental research. Additionally, it is ideal for substitute replacement of first-generation and earlier legacy high-end models. It has a built-in signal analyzer function with a wide 31.25 MHz analysis bandwidth using FFT technology for versatile analyses in both the time and frequency domains, etc. Moreover, installing the internal vector signal generator and analog signal generator options provides all-in-one support for TRx measurements of wireless equipment.



MS2840A-041

Signal Analyzer

MS2840A series (MS2840A-044/046) 9 kHz to 26.5 GHz/44.5 GHz

Excellent Phase Noise Performance Using New Synthesizer Design

- Phase Noise: -123 dBc/Hz@1 GHz, 10 kHz offset
- Analysis Bandwidth: 31.25 MHz (Standard), 125 MHz max. (Option)
- Measurement applications (Options): Modulation Analysis (Vector Modulation, Analog Modulation), Phase Noise, Noise Figure, Noise Floor Reduction, Pulse Radar, etc.

The MS2840A-044/046 is a spectrum analyzer offering top-class phase noise performance in a middle-price-range model. This excellent phase noise performance supports measurement of wideband transmitters, such as VHF and UHF LMR/PMR, where the measurement instrument performance is key to measurement of close-in spurious, as well as measurement of microwave wireless backhaul, satellite, pulse radar, etc.



MS2840A-046



Signal Analyzer

MS2830A series (MS2830A-040/041/043/044/045) 9 kHz to 3.6/6/13.5/26.5/43 GHz

Supports TRx evaluations of various wireless equipment plus spurious measurements of narrowband wireless equipment

- Total level accuracy: ± 0.3 dB (typ.) (300 kHz to 4 GHz)
- SSB phase noise: -109 dBc/Hz@500 MHz, 1 kHz offset*
 - -118 dBc/Hz@500 MHz, 10 kHz offset*
 - -133 dBc/Hz@500 MHz, 100 kHz offset*
- *: Requires Low Phase Noise Performance MS2830A-066
- Measurement applications (Options):
 - Modulation Analysis (LTE/LTE-Advanced, Analog Modulation, Vector Modulation, etc.), Noise Figure, Built-in Audio Analyzer, Built-in Vector/Analog Signal Generator, BER, Internal Signal Generator Control Function, etc.



MS2830A-041

The MS2830A is the multifunctional Signal Analyzer and offers excellent cost-performance with a full line of test applications. The MS2830A-040/041/043 has an upper frequency limit of 3.6/6/13.5 GHz and they are ideal for evaluating various digital wireless equipment, including cellular and WLAN, as well as for developing, manufacturing, and maintaining analog and digital PMR/LMR. Moreover, built-in functions such as the analog/vector signal generator supporting Rx evaluation and the noise figure (NF) test function, cover a wide application range.

The MS2830A-044/045 has an upper frequency limit of 26.5 GHz/43 GHz and they are ideal for Tx evaluation when manufacturing and maintaining μ wave and mmWave wireless equipment using various built-in test applications required for testing digital wireless equipment.



Field Master™

MS2070A 9 kHz to 3 GHz

Handheld RF Spectrum Analyzer

- Spectrum analyzer: 9 kHz to 3 GHz
- Interference analyzer with interference mapping and eCompass handle
- Spectrogram display for detection and recording of interfering signals
- Smart measurements including channel power and occupied bandwidth
- USB power sensor support for precise transmitter power measurements
- AM/FM demodulation with audio output for signal identification
- Channel scanner with trace strip chart and bar chart



The MS2070A from Anritsu offers an unrivalled combination of performance and features for standard spectrum analysis to 3 GHz. It builds on Anritsu's experience of developing handheld instruments that delivers in both field and laboratory environments. The large 10-inch high resolution multi-touch screen presents results and instrument configuration in a clear and easy to use style. At under 4 kg weight, with the integrated battery typically providing three hours of operation all in a convenient soft carry case, it is ideal for measurements in the field. Key applications include HF, VHF, UHF transmitter measurements, interference hunting, EMI/EMC pre-compliance testing and PIM hunting.



Field Master™

MS2080A 9 kHz to 4 GHz/6 GHz

Handheld RF Spectrum Analyzer

- Spectrum analyzer: 9 kHz to 4 GHz/6 GHz
- Fast sweep speeds of 45 GHz per second
- Real Time Spectrum Analyzer (RTSA) with 40 MHz bandwidth
- Cable and antenna analyzer with addition of S331P Site Master
- LTE FDD/TDD analyzer with modulation quality
- 5G NR FR1 analyzer including support for DSS
- Interference analyzer with interference mapping and eCompass handle
- USB power sensor support for precise transmitter power measurements
- AM/FM demodulation with audio output for signal identification
- Channel scanner with trace strip chart and bar chart



The MS2080A is a spectrum analyzer that integrates RF field technician's most commonly used instruments into a single package. That means less to carry and a single user interface to learn, making time in the field more productive. Integrating a high performance spectrum analyzer with RTSA, interference analyzer tools, LTE/5G NR transmitter analysis and cable and antenna line sweep measurements the MS2080A addresses the full complement of the RF field technicians requirements. Designed to withstand the knocks and blows inevitable when working at remote transmitter sites. Weighing less than 4 kg, the MS2080A is small, compact, and easy to carry. An optional shoulder harness attaches to the supplied soft case to ease long-term use outdoors, especially with over six hours of continuous operation when adding the extended power pack. An environmental rating of IP52 in the soft case protects the instrument from dust and water, ensuring it is always ready to make the measurements you need in the location you need them.



Field Master Pro™

MS2090A 9 kHz to 9/14/20/26.5/32/43.5/54 GHz

Compact and Ruggedized for Field Use

- DANL: -164 dBm (with preamp)
- TOI: +20 dBm (typical)
- Analysis bandwidth: Up to 150 MHz
- Amp range: DANL to +30 dBm
- Phase noise at 1 GHz: -110 dBc/Hz @ 100 kHz offset (typical)
- Demodulation: 5G NR, LTE FDD, RF, and modulation quality plus SSB signal analysis
- Resolution bandwidth (RBW): 1 Hz to 10 MHz
- RTSA bandwidth: 22, 55, 110, 150 MHz (option dependent)
- Amplitude accuracy: <14 GHz ± 1.3 dB (± 0.5 dB, typical)
- Zero span with 60 ns minimum span
- IQ capture and streaming
- Channel scanner with trace strip chart and bar chart



The MS2090A real-time spectrum analyzer delivers performance never previously available in a compact, handheld instrument. With continuous frequency coverage from 9 kHz to 54 GHz, the Field Master Pro MS2090A is specifically designed to meet the test challenges of a full range of other wireless technologies in use today, including: 5G, LTE, wireless backhaul, aerospace/defense, satellite systems, and radar.



Spectrum Master™ Ultraportable Spectrum Analyzer



MS2760A/MS2762A 9 kHz to 170 GHz

The Future of Performance and Affordability

- First portable spectrum analyzer to provide continuous frequency coverage to 170 GHz
- Broadband mmWave capabilities for radio astronomy, automotive radar, wireless backhaul, 802.11ad, satcom, and more
- Ultraportable form factor enables measurements right at the device under test
- Measure: channel power, adjacent channel power, occupied bandwidth
- Patented NLT technology provides >100 dB dynamic range
- -141/-136/-129/-122 dBm DANL to 90/110/145/170 GHz (Spectrum Master MS2762A)
- Up to 6 traces, 3 trace detectors, and 12 markers
- Standard three-year warranty



Our MS276xA family of ultraportable spectrum analyzers is the first solution of its kind to provide continuous coverage to 170 GHz.

This family now offers:

- The MS2760A models: providing full broadband coverage from 9 kHz to 170 GHz with excellent dynamic range and DANL performance.
- The MS2762A models: providing increased dynamic range and DANL performance than the MS2760A models for the most demanding sensitivity requirements, these units frequency coverage range is from 6 GHz to 170 GHz.

The MS2760A and MS2762A solutions deliver the best-in-class price/performance ratio unmatched by traditional benchtop instruments. The MS276xA series are pocket-sized, yet big on performance with leading dynamic range, sweep speed, and amplitude accuracy.

The ultraportable size of these instruments enables a direct connection to almost any DUT, eliminating the need for lossy, expensive cables. This enables you to more efficiently advance your technology development and reduce your time to market.



Spectrum Master™

MS2720T 9 kHz to 9 GHz/13 GHz/20 GHz

High-performance Handheld Spectrum Analyzer

- Frequency coverage: 9 kHz to 9 GHz, 13 GHz, and 20 GHz
- Broadband preamplifiers over the whole frequency range for increased sensitivity approx. 17 dB
- Three sweep modes: Improved sweep speed, up to 100 times faster
- Resolution and video bandwidths from 1 Hz to 10 MHz
- New triggering choices, including hysteresis, hold-off, and delay
- More zero-span capabilities including 10 MHz RBW & VBW
- Enhanced spectrum analyzer touch-screen GUI, including large marker display choice
- Choice of display options for readability: normal, black on white, night vision, color on white, or high contrast
- On-screen interference mapping as part of the interference analysis option



The MS2720T represents one of the company's highest performance handheld spectrum analyzer. Exciting new features and options bring more value and speed to the user. The MS2720T features over 30 analyzers in one to meet virtually every measurement need.



Remote Spectrum Monitor

only MS27101A/MS27102A/MS27103A



MS27100A/MS27101A/MS27102A/MS27103A/MS27200A/MS27201A 9 kHz up to 54 GHz

For Remote RF Signal Monitoring

- Frequency coverage: 9 kHz up to 54 GHz
- Sweep speed up to 24 GHz/s
- Integrated web server to view, control and conduct measurements via web browser for MS2710xA family and a Windows-based PC GUI application for the MS27201A
- Hardware watchdog timer to insure long-term stability for remotely deployed monitors
- Low spurious levels for accurate signal discovery
- Up to 150 MHz analysis bandwidth



MS27100A



MS27101A



MS27102A



MS27103A



MS27200A



MS27201A

Our remote spectrum monitoring products are designed to both mitigate interference problems and to identify illegal or unlicensed signal activity. The MS27101A is housed in a 1/2 rack enclosure with 1U height, designed exclusively for indoor applications. MS27102A is an IP67 rated device which operates outdoors, with the ability to be mounted on poles or walls (using the included mounting bracket). The MS27103A is a multi-port spectrum monitor (12 RF In ports or optionally 24 RF In ports) which is ideal for cellular, DAS and other applications requiring the use of multiple antennas. The MS27201A is built for the most demanding spectrum monitoring tasks by extending the frequency range to 54 GHz and up to 150 MHz analysis bandwidth. The MS27201A packs a real-time spectrum analyzer, 5G and LTE analysis, IQ capture and streaming, and pulse analyzer, all in a 2U enclosure. The MS27100A and MS27200A models are designed to be integrated into systems. Additionally, Anritsu remote spectrum monitors work with powerful PC software to capture, analyze, and monitor the RF spectrum for signal integrity and to locate interfering transmissions.



VectorStar™ Microwave VNA

MS4640B 10 MHz to 20 GHz/40 GHz/70 GHz

Premium Family of RF to Microwave and Millimeter-wave Vector Network Analyzers

- SPA available from 70 kHz (optional) to 20/40/70/110/125/145 and 220 GHz. Also available for banded configuration to 1.1 THz
- Dual SPA mode available: suitable for Mixers/Amplifier/Harmonics/Spurious testing
- Highest performance pulse measurements — PulseView™ offers 2.5 ns pulse resolution with 100 dB dynamic range
- 4-port single-ended or balanced measurements using DifferentialView™ analysis
- Internal trace-based eye diagram option provides the ability to display Time Domain, S-Parameters, and Eye Diagram analysis with active sweep updates
- Superior dynamic range: up to 142 dB



The VectorStar™ family is Anritsu's premium VNA line, providing the highest overall performance on a modern platform. The MS4640B offers the broadest coverage in a single instrument, 70 kHz (optional) to 70 GHz. The additional two decades at the low-end are even more impressive than the guaranteed 70 GHz coverage on the high-end.



VectorStar™ Broadband VNA

ME7838AX/A4X/EX/E4X/D/D4/G/G4 70 kHz to 110 GHz/145 GHz/220 GHz with mmWave bands up to 1.1 THz

High-performance, Broadband Network Analysis Solutions

- The ME7838AX or EX versions can easily be upgraded to 145 or 220 GHz
- All versions may be configured to include banded mmWave modules up to 1.1 THz
- Industry-best calibration and measurement stability: 0.1 dB vs. 0.6 dB over 24 hours
- All versions support the 3744x-Rx receiver for noise figure measurements to 125 GHz
- Compact, lightweight mmWave modules (0.6 lb. vs. 7+ lbs. and 1/50 the volume) offer low cost installation on smaller probe stations
- SPA available from 70 kHz to 20/40/70/110/125/145 and 220 GHz. Also available for banded configuration to 1.1 THz
- Dual SPA mode available: suitable for Mixers/Amplifier/Harmonics/Spurious testing
- SPA available on all ports. User can define which port to use as SPA port

The ME7838 series system provides high-performance in a compact millimeter-wave (mmWave) module with industry-best calibration stability. While other broadband systems continue to provide raw performance with negative directivity in critical frequency bands, the ME7838 series is the only broadband system with positive raw directivity. The result is better calibration stability and better measurement stability with significantly longer time between calibrations for accurate measurements and improved productivity. The ME7838G VNA addresses the market need to conduct on-wafer measurements that span into the sub-Terahertz region for more accurate device characterization. The system offers unprecedented broadband coverage from 70 kHz to 220 GHz in a single sweep and is optimized for on-wafer measurements utilizing the TITAN T220 probe from MPI. An innovative design allows the 220 GHz probe to connect directly to the mmWave module for accurate, stable on-wafer measurements and avoiding the limits of threaded connectors. For more information on the TITAN T220 probe including specifications and data sheet please visit the MPI website.



ME7838A



VectorStar™ Opto-Electronic Network Analyzer

ME7848A series 70 kHz to 40 GHz/70 GHz/110 GHz, 850/1310/1550 nm

Opto-electronic network analyzer (ONA) series provides specified, traceable measurements of O/E, E/O, and O/O

- Fast and accurate opto-electronic measurements — ME7848A 200 series ONA enables error-corrected transfer function, group delay, and return loss measurements of E/O and O/E components and subsystems
- O/E Calibration Module MN4765B — Now up to 145 GHz — The O/E calibration module is a thermally stabilized photodiode reference standard detector that can eliminate drift over temperature. Accurate bias voltage to the photodiode is maintained internally
- Electrical to Optical Converter MN4775A — The E/O converter includes a lithium niobate (LiNbO3) modulator stabilized by a fully automatic bias controller and a tunable or fixed wavelength laser source. Excellent converter stability ensures characteristics remain consistent during measurement of opto-electronic DUT detectors and receivers
- National Institute of Standards and Technology (NIST) derived characterization — Magnitude and phase characterization of the O/E calibration module is obtained using a primary standard characterized by NIST and held in the Anritsu Calibration Lab
- Internal VNA de-embedding for simplified calibration — The built-in application menus provide instructions that guide the user through the set-up and calibrations required for making E/O, O/O, and O/E measurements
- Excellent stability and repeatability — Use of full 12-term calibration with de-embedding results in stable and repeatable measurements of opto-electronic devices using the VectorStar VNA
- Modularity and upgradability — The VectorStar ONA ME7848A ONA can be easily modified to a different wavelength by adding the appropriate MN4775A E/O converter and MN4765B O/E calibration detector. The VectorStar Opto-Electronic Network Analyzer ME7838A 100 series can be upgraded to a 200 series by including the appropriate E/O converter MN4775A



The ME7848A ONA provides a modular approach to optical measurements of O/E, E/O, and O/O devices operating at 850, 1310, and 1550 nm wavelengths. There are two configurations available: the ME7848A-100 series includes the MN4765B and the ME7848A-200 series adds the MN4775A.

The ME7848A-200 series provides the ability to quickly switch between O/E, E/O, and O/O measurements with specified traceable measurements established by the MN4765B.

The ME7848A can be easily modified to different wavelengths by adding the appropriate MN4775A and MN4765B. The ME7838A-100 series can be upgraded to a 200 series by including the appropriate MN4775A.



ShockLine™ 1-Port VNA

MS46121B 150 kHz to 6 GHz

Ideal for Testing Multiple 1-port Devices in Parallel for Improved Test Productivity and Throughput

- 1-port VNA with frequency options from 150 kHz to 6 GHz
- External PC control enables control of multiple MS46121B in parallel for excellent multisite throughput
- Very compact package allows for direct connection to the DUT
- Scalar transmission measurements in a (1-to-1) or (1-to-n) configuration
- No on-board data storage eliminates the need for data purging in secure applications
- Standard bandpass time domain with time gating grants easier and faster fault identification
- A common GUI interface within the ShockLine family reduces switching costs between models

The MS46121B is a PC-controlled 1-port ShockLine Vector Network Analyzers with a frequency range of 150 kHz to 6 GHz. The MS46121B provides performance and accuracy for your 1-port measurements in a low cost and space saving solution that is small enough to directly connect to the device under test. The MS46121B is aimed at RF and microwave applications in manufacturing, engineering and education. The MS46121B comes with 100 ms/point sweep speeds and a measurement accuracy of ± 0.5 dB (-6 dB offset, typ.), making them suitable for your passive device test applications.



ShockLine™ Modular 1-Port Vector Network Analyzer



MS46131A series 1 MHz to 8 GHz/20 GHz/43.5 GHz

Lightweight, Compact, 1-Port VNA

- 1-port VNA with frequency options from 1 MHz to 8/20/43.5 GHz
- Guaranteed performance to 43.5 GHz with Extended-K™ ports
- PC control takes advantage of external computer processing power and functionality
- Small and lightweight package enables direct connection to the DUT
- No on-board data storage eliminates the need for data purging in secure applications
- All ShockLine™ VNAs share common software supporting GUI and program compatibility
- Time domain with time gating option enables easier and faster fault identification
- Simultaneous Sweep: Allows multiple (up to 4) MS46131A 1-port VNAs to run parallel measurements, each controlled by its own ShockLine software instance



The MS46131A series consists of three modular, PC-controlled 1-port VNAs with frequency ranges from 1 MHz to 8/20/43.5 GHz. Anritsu's patented nonlinear transmission line (NLTL) technology, VNA-on-chip technology, simplifies the internal VNA architecture, reducing the size and cost of the instrument while enhancing accuracy and measurement repeatability. The MS46131A series is small and portable enough to bring the VNA port to the device under test (DUT), improving measurement stability, and simplifying test configuration by eliminating test port cables. The MS46131A series is ideally suited for 1-port RF and microwave applications in engineering, manufacturing, and education. All three VNA models have fast sweep speed and excellent corrected directivity making them suitable for a variety of 1-port device test applications including measuring passive 5G millimeter-wave (mmWave) components.



Distributed Modular 2-Port Vector Network Analyzer



ME7868A/ME7869A series 1 MHz to 8 GHz/20 GHz/43.5 GHz

2-port USB VNA systems deliver phase synchronized measurements over 100 meters

- 2-port VNA with frequency options from 1 MHz to 8 GHz/20 GHz/43.5 GHz
- Extend remote ports 100+ meters apart with Phaselync™ synchronization
- Small and lightweight ports enable direct connection to DUT, eliminating long cable runs
- Guaranteed performance to 43.5 GHz with Extended-K™ ports
- PC control takes advantage of external computer processing power and functionality
- No on-board data storage makes use in secure applications more convenient
- Common ShockLine™ control software delivers powerful debug and test capabilities



The ME7868A/ME7869A system is the first distributed, fully reversing 2-port VNA solution that provides guaranteed performance from 1 MHz to 43.5 GHz by utilizing Anritsu's Extended-K components. Powered by the revolutionary Phaselync technology, it enables engineers to synchronize two portable ShockLine 1-port Vector Network Analyzer MS46131A VNAs and connect them directly to a device under test (DUT) to conduct vector transmission measurements over distances of 100 meters or more. Whether in a manufacturing, engineering, or education environment, this solution simplifies long-distance S-parameter measurements and VNA test system integration by removing the need to utilize conventional benchtop VNAs with long cable runs, which eliminates insertion loss, improves measurement stability, and lowers setup costs. The ME7868A/ME7869A offers a configurable VNA setup to maximize hardware utilization. Easily set VNA port count (single 1-port, dual 1-ports, single 2-ports, or up to four ports for reflection measurements) from session-by-session to ensure maximum flexibility. With low-pass time domain with time gating option, users have access to a TDR-like display with more resolution than bandpass time domain for characterizing discontinuities. Because there is no on-board data storage, this eliminates the need to purge data for secure applications.



ShockLine™ Compact VNA

MS46122B series 1 MHz to 8 GHz/20 GHz/43.5 GHz

Low-cost Series of 1U High, 2-port Compact Vector Network Analyzers

- World's first series of compact VNAs to 43.5 GHz for cost-effective measurements
- PC control takes advantage of external computer processing power and functionality
- Compact 1U high package for efficient use of bench and rack space
- No on-board data storage eliminates the need for data purging in secure applications
- Time domain with time gating option grants easier and faster fault identification

The MS46122B is a series of three PC-controlled Compact ShockLine Vector Network Analyzers with a frequency range from 1 MHz to 8 GHz/20 GHz/43.5 GHz. The series benefits from patented ShockLine VNA-on-chip technology, which simplifies the internal VNA architecture at high frequencies, reduces instrument cost, and enhances accuracy and measurement repeatability.



ShockLine™ Economy VNA

MS46322B series 1 MHz to 8 GHz/20 GHz/43.5 GHz

Low-cost Series of 2U High, 2-port Economy Vector Network Analyzers

- Ideal for testing RF and microwave devices
- Fast sweep speed and wide dynamic range minimize test times and maximize throughput
- Excellent corrected directivity allows for less measurement uncertainty
- Time domain with time gating option grants easier and faster fault identification
- The LAN interface for remote control is more robust than USB and faster than GPIB
- A common GUI and SCPI interface within the ShockLine family
- USB ports allow for easy connection to user-provided monitor, keyboard, and mouse
- The small 2U packages allows for the efficient use of rack space

The MS46322B is a series of Economy ShockLine Vector Network Analyzers with frequency range from 1 MHz to 8, 20 and 43.5 GHz. It is based on patented ShockLine VNA-on-chip technology, which simplifies the internal VNA architecture at high frequencies, reduces instrument cost, and enhances accuracy and measurement repeatability.



ShockLine™ 2-Port and 4-Port Performance VNA

MS46522B/MS46524B series 50 kHz to 8.5 GHz/20 GHz/43.5 GHz (55 GHz to 92 GHz)

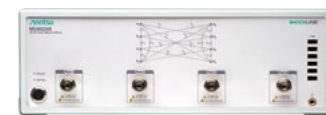
High-performance, 3U High, 2-port and 4-Port VNA Available in a 50 kHz to 43.5 GHz Frequency Range

- High output power allows measurement of high attenuation devices (MS46522B)
- Industry leading dynamic range enables measurement of very low reflection artifacts
- Excellent corrected directivity minimizes measurement uncertainty
- SmartCal™ automatic calibration unit reduces calibration and setup time
- Time domain with time gating option grants easier and faster fault identification
- Modern LAN interface for remote control is faster than GPIB
- A common GUI and SCPI interface within the ShockLine family
- E-band VNA
 - Extended frequency range covering E-band and major parts of V-band
 - Full-assembled test system eliminates setup errors and increases reliability
 - Tethered modules connect directly to the DUT increasing measurement stability
- Simple signal integrity testing of passive multi-port and differential devices
- The compact 3U high chassis allows for the efficient use of rack space

The MS46522B/MS46524B is a series of 2 and 4-port Performance ShockLine Vector Network Analyzers. Delivering an unprecedented level of value and performance, including best-in-class dynamic range, the Performance series lowers cost-of-test and speeds time to market in numerous testing applications up to 92 GHz. These applications include designing and manufacturing mobile network equipment, mobile devices, automotive cables, high-speed data interconnects and system integration components.



MS46522B



MS46524B



Rubidium™ RF/Microwave Signal Generator

MG362x1A 9 kHz to 20 GHz/43.5 GHz/70 GHz

Delivering the highest purity and frequency stability levels in an RF/Microwave Signal Generator

- Non-linear Measurements: Single tone distortion (P1dB compression point), two tone intermodulation (IP2, IP3), in/out of band interference (C/I, blocking)
- Devices and Systems Characterization: Pulse modulated signal source to test radar systems, including pulse train triggering and user defined waveform modulation
- Clock and Pure CW Source: LO substitution in testing of transceiver chains and Gbit data converters (ADCs and DACs), and for calibration and metrology lab frequency reference
- Swept Linear Measurements: Additional source/s synchronized with vector analyzer and both digital step and analog sweep modes



Signal purity determines quality of measurements in several applications such as radar, transceiver, ADC/DAC, and components testing. The MG362x1A pushes the envelope in phase noise performance with its low and ultra-low phase noise options. Coupled with best-in-class harmonic and spurious performance, Rubidium signal generator offers industry leading overall signal purity performance, that enable customers to make more accurate measurements. The MG362x1A offers atomic clock frequency stability with an internal rubidium frequency reference option. The atomic clock frequency stability makes Rubidium an ideal signal generator for Metrology and high speed clock applications.



EcoSyn™ Lite Microwave Frequency Synthesizer Module

MG36021A 10 MHz to 20 GHz

The Ideal Signal Source

Anritsu's EcoSyn Lite MG36021A is a RF/Microwave frequency synthesizer module capable of generating CW output from 10 MHz to 20 GHz. With outstanding phase noise, ultra-fast switching speed, high output power, and a small form factor, EcoSyn Lite MG36021A is an ideal signal source.

- For testing RF/mmWave components and subsystems in production
- As a portable signal source for quick functional testing
- As a LO source with low phase noise for up/down converters
- As a low jitter clock source for Gbit ADC/DACs and in high speed optical systems
- As a CW signal source in RF/Microwave subsystems that require fast switching speed



EcoSyn Lite's phase noise performance of -124 dBc/Hz (typical) at 10 GHz and 10 kHz offset is one of the best in its class. Along with non-harmonic spurious of -60 dBc, EcoSyn Lite can be used as a clock source with low jitter for Gbit ADC/DAC testing and in high speed optical systems.



Vector Signal Generator

MG3710E 100 kHz to 2.7 GHz/4 GHz/6 GHz

Multi-band, Multi-system, Multi-channel Cut Costs for New Wireless Tests

- Generate and output modulation signals of various communication systems such as 5G NR (sub-6 GHz), LTE-Advanced FDD/TDD (Optional)
- RF modulation bandwidth 160 MHz*/120 MHz *: When using MX370111A/MX370111A-002
- ACLR: -71 dBc (W-CDMA, TestModel1, 64DPCH, 2 GHz)
- SSB phase noise: <-131 dBc/Hz (typ.) (1 GHz, 20 kHz offset, CW)
- Pre-installed key waveform patterns
- Waveform addition function:
Adds and outputs two signals, such as wanted signal + interference signal or wanted signal + AWGN
- One unit supports two RF outputs max. Ideal for multi-system evaluations.
- Supports BER test function



The MG3710E is a Vector Signal Generator with 6 GHz upper frequency limit and 160 MHz/120 MHz wide RF modulation baseband generator. The excellent signal generator ACLR and SSB phase noise reduces the effect on wideband and narrow-band measurements to improve test margins and yields. It outputs various wireless systems signals such as 5G, LTE, WLAN and narrowband communications (PMR/LMR).



Analog Signal Generator

MG3740A 100 kHz to 2.7 GHz/4 GHz/6 GHz

Versatile Modulation Functions, Excellent Expandability

- Built-in AM/FM/øM/Pulse modulation function (standard)
- Additional analog modulation input (option):
AM + FM, AM + øM, Internal 1 + Internal 2, Internal + External
*: FM + øM does not support.
- Dual RF Outputs (option):
One unit supports two RF outputs (1st RF/2nd RF) max.
- Narrowband digital modulation function (option):
RF modulation bandwidth: 2 MHz
- BER test function (option), Input bit rate: 100 bps to 40 Mbps
- USB power sensors (sold separately)



The MG3740A has excellent RF specifications, including SSB phase noise, output level, etc., and versatile modulation functions (AM/FM/øM/Pulse). Moreover, the MG3740A supports additional analog modulation by external signal input, dual RF outputs, narrowband digital modulation function for Professional Mobile Radio (PMR), BER test function and USB power sensors.

Microwave CW USB Power Sensors

MA24300A series (MA24330A/340A/350A) 10 MHz to 50 GHz

Fast, Accurate Average Power Measurements

- Frequency range from 10 MHz to 50 GHz over 90 dB of dynamic range
- Power measurement range: +20 to -70 dBm
- CW average power measurements
- Fast measurement speed: >2,100 readings/s continuous, >5,600 readings/s buffered
- NIST traceable calibrations
- Silicone protective covering for additional field durability



The MA24300A power sensor family is designed to provide fast, accurate average power measurements from 10 MHz to 50 GHz over 90 dB of dynamic range. The sensor employs high-performance digital processing that enables measurements speeds of >2,100 continuous power readings/s and >5,600 buffered readings/s. A unique, low noise design eliminates the need to zero the sensor before taking measurements for most applications. The sensors have internal and external triggering capability that facilitates time based measurements and the use of list mode to speed up automated processes. The sensor can be controlled with a PC via remote programming commands or with PowerXpert™, a free software application. These sensors are also compatible with most Anritsu RF and microwave handheld instruments.



USB Peak Power Sensors

MA24400A series (MA24406A/08A/18A/19A/40A/41A) 50 MHz to 40 GHz

Meeting the Wireless Communications Challenges of Signal Measurement and Characterization

- 6, 8, 18, and 40 GHz models
- Up to 195 MHz VBW and 3 ns rise time
- 100,000 measurements per second
- Real-time processing of power readings
- 100 MS/s continuous and 10 GS/s effective sampling rates
- 100 ps time resolution for rising/falling edge measurements
- Full pulse profiling
- Crest factor, CCDF, and statistical measurements



With industry-leading rise time and video bandwidth (VBW) of up to 195 MHz (sensor dependent), Anritsu's USB peak power sensors are able to measure the peak power of wideband modulated signals, like 802.11ac, as well as pulses as narrow as 10 ns. The MA24400A family also takes measurement speed and resolution to a new level. Other peak power sensors halt measurements while processing captured data. With real-time processing of power readings, these sensors never miss a signal. Sampling rates of 100 megasamples per second continuous and 10 gigasamples per second effective provides best-in-class time resolution of 100 ps and the ability to measure 3 ns rise time. This means that even the smallest change in the signal will be caught and plotted for a full picture of signal behavior.



Power Meter

ML2437A/ML2438A

For Measuring Wide Dynamic Range Power

- Speed accuracy and flexibility in a low cost package
- Portable, rugged, and splash resistant
- Optional NiMH battery, providing six hours continuous operation
- Measure and transfer a high speed burst of 200 data points using profile operating mode with sampling rates of 35k per second
- With 99.9% emulation of older meters, the ML2430A series improves ATE system productivity Typical test system speed improvement is 2 to 10 times faster system speed
- Single input (ML2437A), Dual input (ML2438A)

The ML2437A/ML2438A combines the advantages of thermal meter accuracy, diode meter speed, and peak power meter display graphics. The result is a single instrument that samples at more than 35k per second and achieves 90 dB dynamic range with a single sensor.

This meter includes graphics display capability as a standard feature. The ruggedized housing and optional high-capacity NiMH battery bring laboratory quality accuracy to field service applications.



MA24507A/MA24510A

Frequency Selectable millimeter-wave (mmWave) Power Analyzer that measures the RF power of a signal and is powered by USB

- Low power capability to measure signals as low as -90 dBm
- Excellent for over-the-air (OTA) testing, especially with mmWave signals that have high propagation loss
- User settings to control measurement speeds and noise floor
- Channel Monitor mode in PowerXpert for monitoring up to six frequency channels at once
- Power Hunter mode in PowerXpert for searching up to six signals within a frequency range
- Mounting holes for direct mounting to connect probes for OTA or on-wafer testing

Power Master is an ultraportable, USB-powered mmWave power analyzer that enables simple, numeric, frequency-based measurement of RF power from 9 kHz to 110 GHz and as low as -90 dBm. Traditional power meters are broadband and have limited power ranges, so engineers and technicians are using spectrum analyzers that include many unneeded features, cost hundreds of thousands of dollars, and take up half the test bench just to make simple, frequency-based RF amplitude measurements. The Power Master series enables those measurements in a USB-powered device slightly bigger than a smartphone and at a fraction of the price of a spectrum analyzer.



Inline Peak Power Sensor

MA24103A/MA24105A 25 MHz to 1 GHz/350 MHz to 4 GHz

A Standalone, Compact, and Highly Accurate Bi-directional Inline Peak Power Sensor

- Broad frequency range: 25 MHz to 1 GHz/350 MHz to 4 GHz
- Covers all major cellular and communication bands, such as WLL, GSM/EDGE, CDMA/EV-DO, W-CDMA/HSDPA, WiMAX and TD-SCDMA
- Forward and reverse measurements
- Widest dynamic range inline power sensor in its class
- True-RMS measurements to 150 W
- Standalone, Low cost, Plug and Play device
- Ideal for High Crest Factor Signal Measurements



The MA24103A/MA24105A is designed to take accurate average power measurements over 2 mW to 150 W, from 25 MHz to 1 GHz or 350 MHz to 4 GHz. The sensor employs a "dual path" architecture that enables True-RMS measurements over the entire frequency and dynamic range allowing users to measure CW, multi-tone and digitally modulated signals such as GSM/EDGE, CDMA/EV-DO, W-CDMA/HSDPA, WiMAX, and TD-SCDMA. The forward direction path also includes a 4 MHz bandwidth channel that has peak and comparator/integrator circuits that add measurement functions such as PEP power, crest factor, CCDF, and burst average power. Another detection circuit on the reverse direction adds reverse power measurement capabilities including reverse power, reflection coefficient, return-loss, and SWR. The presence of a micro-controller along with signal conditioning circuitry, ADC, and power supply in the sensor makes it a complete miniature power meter.



USB Power Sensor

MA24106A True-RMS, 50 MHz to 6 GHz

Handy, Highly Accurate and Reliable USB Sensor for RF Power Measurement

- True RMS measurements over 63 dB dynamic range enables accurate CW and modulated power measurements
- Ready for use in a wide variety of applications, including installation and maintenance of base stations, testing of 3G/4G devices, cell phones and general purpose RF devices
- High damage power levels and ESD protection circuitry showcases ruggedness and reliability
- Low power consumption (100 mA, typ.) extends laptop battery life
- Worldwide calibration and service centers ensure reduced downtime and local support



The MA24106A is a USB power sensor that eliminates the need of a traditional power meter. It is a highly accurate, standalone instrument that communicates with a PC via USB. The power measurement capability of the MA24106A is intended to mimic that of a traditional thermal (thermo-electric) power sensor with a wider dynamic range.



Microwave USB Power Sensor

MA24108A/MA24118A/MA24126A 10 MHz to 8 GHz/18 GHz/26 GHz

Low-Cost, Compact, and Highly Accurate Power Sensors for RF and Microwave Applications

- Broad frequency range: 10 MHz to 8 GHz (MA24108A)/18 GHz (MA24118A)/26 GHz (MA24126A)
- True-RMS measurements
- NIST traceable calibration
- Built-in internal and external trigger (only used with PC)
- High power handling (+33 dBm)
- 1 mW calibration need eliminated
- Silicone protective covering for additional field durability



The MA24108A/MA24118A/MA24126A are designed to provide accurate average power measurements from 10 MHz to 8 GHz/18 GHz/26 GHz over 60 dB of dynamic range. These sensors employ a "dual path" architecture that provides (similar to thermal sensor) True-RMS measurements over the entire frequency and dynamic range, enabling users to make highly accurate average power measurements for CW, multi-tone, and digitally modulated signal up to 26 GHz. The sensors have internal and external triggering capability that facilitates individual slot power measurements of TDMA waveforms as well as burst power measurements of periodic and non-periodic waveforms.



Microwave Universal USB Power Sensor

MA24208A/MA24218A 10 MHz to 8 GHz/18 GHz

Low-cost, Compact, and Highly Accurate Power Sensors for RF and Microwave Applications

- Frequency range: 10 MHz to 8 GHz (MA24208A)/18 GHz (MA24218A)
- Power measurement range: +20 to -60 dBm
- True RMS measurements (modulation independent)
- Fast measurement speed: >1,600 (speed may vary depending on the speed of the CPU controlling the sensor) readings/s continuous, >11,000 readings/s buffered (speed may vary depending on the speed of the CPU controlling the sensor)
- Able to accept high power levels before being damaged: +30 dBm (CW), +34 dBm (peak <10 μ s)
- No zero required for signals >-45 dBm
- Compatible with Anritsu handheld instruments



The MA24208A and MA24218A are designed to provide fast, accurate average power measurements from 10 MHz to 8 GHz/18 GHz over 80 dB of dynamic range. These sensors employ a patented "triple path" architecture that provides True-RMS measurements (similar to thermal sensors) over the entire frequency and dynamic range, enabling users to make highly accurate average power measurements for CW, multi-tone, and digitally modulated signal up to 18 GHz. These sensors employ high-performance digital processing that enables best-in-class measurements speeds, including >1,600 continuous power readings/s continuous and >11,000 buffered readings/s.



Related documents

■ Electronic Measuring Instruments: Components



<https://www.anritsu.com/en-au/test-measurement/support/downloads/brochures-datasheets-and-catalogs/dwl21024>

■ Electronic Measuring Instruments: Peripheral Equipment-Coaxial Cords, Adapters/Power Cord Plugs/F-Series Cabinets



<https://www.anritsu.com/en-au/test-measurement/support/downloads/brochures-datasheets-and-catalogs/dwl21025>

■ Non-Compliant CE Mark and RoHS Products



<https://www.anritsu.com/en-au/test-measurement/support/downloads/brochures-datasheets-and-catalogs/dwl21026>

■ Precision RF & Microwave Components



<https://www.anritsu.com/en-au/test-measurement/support/downloads/brochures-datasheets-and-catalogs/dwl19010>



Specifications are subject to change without notice.

• **United States**

Anritsu Americas Sales Company

490 Jarvis Drive, Morgan Hill, CA 95037-2809, U.S.A.
Phone: (408)-778-2000

• **Canada**

Anritsu Electronics Ltd.

Americas Sales and Support

490 Jarvis Drive, Morgan Hill, CA 95037-2809, U.S.A.
Phone: +1-800-Anritsu (1-800-267-4878)

• **Brazil**

Anritsu Eletrônica Ltda.

Praça Amadeu Amaral, 27 - 1 Andar
01327-010 - Bela Vista - Sao Paulo - SP, Brazil
Phone: +55-11-3283-2511

• **Mexico**

Anritsu Company, S.A. de C.V.

Blvd Miguel de Cervantes Saavedra #169 Piso 1, Col. Granada
Mexico, Ciudad de Mexico, 11520, MEXICO
Phone: +52-55-4169-7104

• **United Kingdom**

Anritsu EMEA Limited

900 Capability Green, Luton, Bedfordshire, LU1 3LU, U.K.
Phone: +44-1582-433200

• **France**

Anritsu SA

12 avenue du Québec, Immeuble Goyave,
91140 VILLEBON SUR YVETTE, France
Phone: +33-1-60-92-15-50

• **Germany**

Anritsu GmbH

Nemetschek Haus, Konrad-Zuse-Platz 1,
81829 München, Germany
Phone: +49-89-442308-0

• **Italy**

Anritsu S.R.L.

Spaces Eur Arte, Viale dell'Arte 25, 00144 Roma, Italy
Phone: +39-6-509-9711

• **Sweden**

Anritsu AB

Kistagången 20 B, 2 tr, 164 40 Kista, Sweden
Phone: +46-8-534-707-00

• **Finland**

Anritsu AB

Technopolis Aviapolis, Teknobulevardi 3-5 (D208.5),
FI-01530 Vantaa, Finland
Phone: +358-20-741-8100

• **Denmark**

Anritsu A/S

c/o Regus Winghouse, Ørestads Boulevard 73, 4th floor,
2300 Copenhagen S, Denmark
Phone: +45-7211-2200

• **Austria**

Anritsu EMEA GmbH

Am Belvedere 10, A-1100 Vienna, Austria
Phone: +43-(0)1-717-28-710

• **United Arab Emirates**

Anritsu A/S

Office No. 164, Building 17, Dubai Internet City
P. O. Box - 501901, Dubai, United Arab Emirates
Phone: +971 (0) 4-2424919

• **India**

ANRITSU INDIA PRIVATE LIMITED

6th Floor, Indiqube ETA, No.38/4, Adjacent to EMC2,
Doddanekundi, Outer Ring Road, Bengaluru - 560048, India
Phone: +91-80-6728-1300
Fax: +91-80-6728-1301

• **Singapore**

ANRITSU PTE LTD

1 Jalan Kilang Timor, #07-04/06 Pacific Tech Centre
Singapore 159303
Phone: +65-6282-2400

• **Vietnam**

ANRITSU COMPANY LIMITED

16th Floor, Peakview Tower, 36 Hoang Cau Street, O Cho Dua Ward,
Hanoi, Vietnam
Phone: +84-24-3201-2730
Fax: +84-24-3201-2740

• **P.R. China (Shanghai)**

Anritsu (China) Co., Ltd.

Room 2301-2303, Tower A, New Caohejing International Business
Center No. 391 Gui Ping Road, Shanghai, 200233, P.R. China
Phone: +86-21-6237-0898

• **P.R. China (Hong Kong)**

ANRITSU COMPANY LIMITED

Unit 1302, 13th Floor, New East Ocean Center,
No.9 Science Museum Road, TsimShaTsui East,
Kowloon, Hong Kong
Phone: +852-2301-4980

• **Japan**

ANRITSU CORPORATION

8-5, Tamura-cho, Atsugi-shi, Kanagawa, 243-0016 Japan
Phone: +81-46-296-1244
Fax: +81-46-296-1239

• **Korea**

Anritsu Corporation Limited

8F, A TOWER, 20, Gwacheondaero 7-gil, Gwacheon-si,
Gyeonggi-do, 13840, Republic of Korea
Phone: +82-2-6259-7300

• **Australia**

Anritsu Pty Ltd

Unit 20, 21-35 Ricketts Road, Mount Waverley, Victoria 3149, Australia
Phone: +61-3-9558-8177

• **Taiwan**

ANRITSU COMPANY, INC.

7F., No. 316, Sec. 1, Neihu Rd., Neihu Dist., Taipei City 114663,
Taiwan
Phone: +886-2-8751-1816