

ANRITSU

MA24106A

The Anritsu MA24106A is a highly accurate, standalone USB power sensor designed to measure the true RMS average power of CW and modulated signals over a wide dynamic range of 63 dB. Operating from 50 MHz to 6 GHz, this sensor functions as a complete miniature power meter by incorporating internal microcontroller processing, analog-to-digital converters, and signal conditioning. It connects directly to a PC or compatible Anritsu handheld instruments, eliminating the need for a traditional external power meter benchtop unit.

SPECIFICATIONS

General

Interfaces	USB 2.0 (integrated cable with Type A connector)
Display	None (utilizes PC or connected handheld host display)

Physical

Power Supply	5 VDC via USB interface, 100 mA typical
Operating Temperature	0 to +50 °C °C
Dimensions (W×H×D)	108 mm × 30 mm × 20 mm (excluding cable) mm
Weight	0.14 kg kg

Measurement Ranges & Power Specifications

Frequency Range	50 MHz to 6 GHz
Power Measurement Range	-40 dBm to +23 dBm
Dynamic Range	63 dB
Maximum Continuous Input Power	+30 dBm
Maximum Peak Input Power	+33 dBm (< 10 μs)
Maximum DC Input Voltage	15 VDC

Sensor Technology & Architecture

Sensor Detection Type	True RMS Average Diode
Measurement Modes Supported	Continuous Average

RF Port Characteristics

Input Impedance	50 Ω
RF Connector Type	Type-N
Connector Sex	Male
Maximum SWR (50 MHz to 2 GHz)	1.15
Maximum SWR (2 GHz to 6 GHz)	1.25

Triggering & Sampling

Measurement Speed	> 150 readings/sec
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Connectivity & Host Interfaces

Current Draw	100 mA (typical)
Software Compatibility	Anritsu Power Meter application for Microsoft Windows

Meter Compatibility & System Integration

Compatible Instrument Models	Anritsu MS272xB, MT8222A, MS202xA, MS203xA, MS271xB
Internal Calibration Support	Not required (integrated temperature and frequency calibration corrections on-board)
Recommended Calibration Cycle	1 year

Environmental Parameters

Storage Temperature Range	-40 °C to +70 °C
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Inputs & Outputs

USB Connector Type	None (integrated cable)
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Power

USB Power Source	5 V (USB bus powered)
Power Consumption	100 mA typical

Performance

Linearity	1.8% (0.079 dB) at 15 °C to 35 °C; 2.5% (0.11 dB) at 0 °C to 50 °C
Zero Set	5 nW
Zero Drift	5 nW (1 hour, constant temperature)
Noise	5 nW (at 100 averages)
Frequency Resolution	1 kHz

Calibration Uncertainty

Calibration Factor Uncertainty (50 MHz to 2 GHz)	1.3% (15 °C to 35 °C); 1.6% (0 °C to 50 °C)
Calibration Factor Uncertainty (2 GHz to 6 GHz)	1.9% (15 °C to 35 °C); 2.1% (0 °C to 50 °C)

Environmental & Reliability

Operating Humidity	95% RH at 30 °C, 75% RH at 40 °C, 45% RH at 50 °C (non-condensing)
Shock & Vibration Compliance	MIL-T-28800D, Class 5

Communications

USB Interface Speed	USB 2.0 Full Speed (12 Mbps)
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Compliance

Electromagnetic Compatibility	Conforms to 2004/108/EC, EN61326-1
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TECHNOLOGY

True RMS Diode Power Sensor

APPLICATIONS

Average power measurement of CW, modulated RF waveforms (3G, 4G, OFDM), and multi-tone signals

Generated by SpecAtlasHub (specatlashub.com). Specifications are compiled from available sources and are subject to change — verify critical values against the manufacturer before purchase.