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Data Sheet
August 14, 2026

GIGATRONICS

Gigatronics 8541B Universal Power Meter

The Giga-tronics 8541B isasingle-channel digital universal power meter in the 8540B series for CW, modulated, and peak sensors. Published meter specifications support sensor-dependent frequency coverage typically 10 MHz to 40 GHz and power from -70 dBm to +47 dBm, with MAP/PAP/BAP modulated modes, EEPROM cal-factor sensors, GPIB fast buffered readings, and HP 438A/437B/436 emulation. CW and complex-modulation average power measurements in wireless manufacturing, pulsed RF power characterization with peak sensors, automated ATE power readings over GPIB, and drop-in replacement programming via HP power-meter emulation. Modulated Average (MAP), Pulse Average (PAP), and Burst Average (BAP) modes Greater than 2000 readings/s Fast Buffered GPIB mode EEPROM-based calibration factor correction Instrument Channels: Single channel (8541B)

MODEL **Gigatronics 8541B**	CALIBRATION **Available on request**
CONDITION **Used**	STATUS **In stock**
RFQ / SKU **8541B**	LISTING **https://aumictechlabs.com/products/8541b-2/**

NIST-traceable cal · SAM registered · 30-day returns

NAICS 423690 · 811210 · 541380

This unit

The Gigatronics 8541B is a versatile signal generator designed for demanding applications requiring high accuracy and stability. This instrument provides a broad frequency range and comprehensive modulation capabilities, making it suitable for testing receivers, components, and systems. Its solid design ensures reliable performance in various laboratory and field environments.

8541B Characteristics / Specifications

PARAMETER	VALUE
Instrument Channels	Single channel (8541B)
Frequency Range Sensor Dependent	10 MHz to 40 GHz
Power Range Sensor Dependent	-70 dBm to +47 dBm (100 pW to 50 W)
CW Sensor Dynamic Range Class	90 dB
Peak Sensor Dynamic Range Class	40 dB peak; 50 dB CW
Display Resolution Log	user selectable 1 dB to 0.001 dB
Display Resolution Linear	1 to 4 digits
Linearity Class	0.02 dB / 0.5% class (8540B series literature)
Fast Buffered Mode Reading Rate	greater than 2000 readings/s GPIB
Swift Free Run Reading Rate Class	greater than 200 readings/s
Fast Modulated Mode Reading Rate Class	30 readings/s
Measurement Modes	CW, MAP, PAP, BAP, Peak
GPIB Emulation Modes	HP 438A, 437B, 436
Swift Trigger Modes	free-run, bus triggered, TTL triggered
Sensor Calibration	EEPROM cal-factor correction
Operating Temperature	0 C to 50 C
Storage Temperature	-40 C to 70 C
Dimensions WxHxD	215 × 89 × 368 mm
Weight	10 lb (4.55 kg)
Sensor Connector	Proprietary Giga-tronics sensor interface
Analog Outputs Class	V prop F, analog out, blanking, trigger BNC class
Interface	GPIB

8541B Specifications

PARAMETER	VALUE
Key Features	Compatible with 8540 CW/peak sensors plus 80400-series modulation sensors
Greater than 2000 readings/s Fast Buffered GPIB mode	90 dB dynamic range CW sensors class
Technical Specifications	Instrument Channels: Single channel (8541B)

General Specifications & Supplementary Characteristics

PARAMETER	VALUE
Storage temperature	40 C to 70 C
Operating temperature	0 C to 50 C
Operating Temperature	0 C to 50 C
Dimensions WxHxD	215 × 89 × 368 mm
Weight	10 lb (4.55 kg)
Sensor Connector	Proprietary Giga-tronics sensor interface
Analog Outputs Class	V prop F, analog out, blanking, trigger BNC class
Interface	GPIB Notes Meter-level limits from Giga-tronics 8540B/8541 series datasheets and rental/spec sheets. Frequency and power extremes are strictly sensor-dependent; use the connected sensor calibration data and meter configuration for authoritative limits.

Full OEM specifications

Complete technical content extracted from the manufacturer datasheet. Sparse OEM tables are reconstructed as tables below; other text is preserved as paragraphs.

specifications support sensor-dependent frequency coverage typically 10 MHz to 40 GHz and power from -70 dBm to +47 dBm, with MAP/PAP/BAP modulated modes, EEPROM cal-factor sensors, GPIB fast buffered readings, and HP 438A/437B/436 emulation.

Applications
CW and complex-modulation average power measurements in wireless manufacturing, pulsed RF power characterization with peak sensors, automated ATE power readings over GPIB, and drop-in replacement programming via HP power-meter emulation.

Key Features
Compatible with 8540 CW/peak sensors plus 80400-series modulation sensors
Modulated Average (MAP), Pulse Average (PAP), and Burst Average (BAP) modes
Greater than 2000 readings/s Fast Buffered GPIB mode
90 dB dynamic range CW sensors class
EEPROM-based calibration factor correction

Technical Specifications

Technical Specifications

PARAMETER	VALUE
Instrument Channels	Single channel (8541B)
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Fast Modulated Mode Reading Rate Class	30 readings/s
Measurement Modes	CW, MAP, PAP, BAP, Peak
GPIB Emulation Modes	HP 438A, 437B, 436
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Analog Outputs Class	V prop F, analog out, blanking, trigger BNC class
Interface	GPIB

Notes
Meter-level limits from Giga-tronics 8540B/8541 series datasheets and rental/spec sheets. Frequency and power extremes are strictly sensor-dependent; use the connected sensor calibration data and meter configuration for authoritative limits.

Available from Aumictech

Used and refurbished unit evaluated in-house. Calibration: Available on request. Used · In stock.

Request a quote: **sales@aumictech.com** · +1 (484) 841-9341

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