

GIGA-TRONICS

80701A

The Giga-tronics 80701A is a modulated power sensor designed for measuring the average power of complex modulated signals. Operating over a frequency range of 50 MHz to 18 GHz, it supports a wide dynamic range from -67 dBm to +20 dBm and features internal EEPROM calibration factor storage for high-accuracy RF and microwave power measurements when paired with compatible Giga-tronics power meters.

SPECIFICATIONS

General

Interfaces	Proprietary multi-pin sensor cable interface
Display	None (measurement results displayed on compatible host power meter)

Physical

Power Supply	Powered via sensor cable from compatible host power meter
Operating Temperature	0 to +50 °C °C
Dimensions (W×H×D)	38 mm × 38 mm × 135 mm mm

Measurement Ranges & Power Specifications

Frequency Range Minimum	50 MHz
Frequency Range Maximum	18 GHz
Power Measurement Range Minimum	-67 dBm
Power Measurement Range Maximum	+20 dBm
Maximum Continuous Input Power	+23 dBm (200 mW)
Maximum Peak Input Power	+30 dBm (1 W) for < 10 μs

Sensor Technology & Architecture

Sensor Detection Type	Diode
Sensor Type	Modulated Power Sensor
Dynamic Range	87 dB

RF Port Characteristics

Input Impedance	50 Ω
RF Connector Type	Type N
Connector Sex	Male
Maximum SWR (50 MHz to 2 GHz)	1.12
Maximum SWR (2 GHz to 12.4 GHz)	1.22
Maximum SWR (12.4 GHz to 18 GHz)	1.29

Meter Compatibility & System Integration

Compatible Power Meter Models	Giga-tronics 8541C, 8542C, 8651A, 8652A
Calibration Factor Storage Type	Internal EEPROM
Calibration Reference Frequency	50 MHz
Calibration Reference Power Level	1 mW (0 dBm)

Environmental Parameters

Storage Temperature Range	-40 to +70 °C
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Power Measurement

CW Power Range	-67 dBm to +20 dBm
Modulated Power Range	-60 dBm to +20 dBm
Power Linearity (-67 to -20 dBm)	Negligible
Power Linearity (-20 to +20 dBm)	±3%

TECHNOLOGY

Modulated Diode Sensor

APPLICATIONS

RF and Microwave Average Power Measurement of Modulated 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.