

KEYSIGHT TECHNOLOGIES (AGILENT HP)

53147A

The Keysight (Agilent) 53147A is a comprehensive microwave measurement tool that integrates a 20 GHz CW frequency counter, a power meter, and a digital voltmeter into a single compact and rugged package. Designed for field and benchtop applications, it supports a wide variety of Agilent 8480 series power sensors and features optional battery operation for maximum portability.

SPECIFICATIONS

General

Interfaces	GPIO (IEEE-488), RS-232
Display	Backlit Liquid Crystal Display (LCD)

Microwave Frequency Measurement (Channel 1)

Frequency Range	50 MHz to 20 GHz
Input Impedance	50 Ω nominal
Coupling	AC
Connector Type	Precision N (female)

Power Meter Characteristics

Power Range	-70 dBm to +44 dBm (sensor dependent)
Compatible Sensors	Agilent 8480 series power sensors
Power Accuracy (Instrument)	± 0.02 dB ($\pm 0.5\%$ linear)

Standard Reference Timebase (TCXO)

Reference Frequency	10 MHz
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Reference Input & Output

External Reference Input Frequency	1, 2, 5, 10 MHz
External Reference Input Level	100 mVrms to 5 Vrms
External Reference Input Impedance	1 k Ω nominal
Internal Reference Output Frequency	10 MHz
Internal Reference Output Level	1 Vp-p nominal into 50 Ω
Internal Reference Output Impedance	50 Ω nominal

Power Meter

Power Meter Resolution	0.01 dB (log mode), 0.1% (linear mode)
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Timebase (Standard)

Standard Timebase Aging Rate	< 1 x 10 ⁻⁷ per month
Standard Timebase Temperature Stability	< 1 x 10 ⁻⁶ (0 °C to 50 °C)
Standard Timebase Line Voltage Stability	< 1 x 10 ⁻⁷ (for ±10% line voltage change)

Channel 2 (Microwave Input) Performance

Channel 2 Maximum FM Deviation	20 MHz peak-to-peak
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TECHNOLOGY

Microwave Frequency Counter & Power Meter

APPLICATIONS

RF and Microwave Test and Measurement

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