

EIP MICROWAVE

545A

The EIP Microwave 545A is a high-performance microwave frequency counter designed for precise frequency and power measurements up to 18 GHz. Known for its rugged reliability and excellent signal tracking, it is a staple of legacy microwave test benches.

SPECIFICATIONS

General

Interfaces	GPIB (IEEE-488) interface available via Option 01
Display	12-digit LED display with annunciators

Physical

Power Supply	100 / 120 / 220 / 240 VAC $\pm 10\%$, 47 - 440 Hz, 80 VA maximum
Operating Temperature	0 to 50 °C °C
Dimensions (W×H×D)	425 mm × 88 mm × 356 mm mm
Weight	9.1 kg kg

Frequency Specifications

Frequency Range - Band 1	10 Hz - 100 MHz
Frequency Range - Band 2	10 MHz - 1 GHz
Frequency Range - Band 3	1 GHz - 18 GHz
Acquisition Time	250 ms
Tracking Speed	800 MHz/s
FM Tolerance	20 MHz p-p up to 10 MHz modulation rate
Amplitude Discrimination	10 dB automatic separation

Power Measurement

Power Measurement Resolution	0.1 dB (Option 02)
Power Measurement Accuracy	0.5 dB typical (Option 02)

Input Characteristics - Low/Medium Frequency

Band 1 Input Impedance	1 M Ω 20 pF
Band 1 Sensitivity	25 mV rms
Band 2 Input Impedance	50 Ω
Band 2 Sensitivity	25 mV rms

Input Characteristics - Microwave

Band 3 Input Impedance	50 Ω nominal
Band 3 Sensitivity	-30 dBm (1 GHz to 12.4 GHz), -25 dBm (12.4 GHz to 18 GHz)
Band 3 Damage Level	10 W (+40 dBm) continuous
Band 3 Connector	Precision Type N (female)

Internal Timebase

Standard Reference Oscillator Frequency	10 MHz
Standard Reference Aging Rate	$< 1 \times 10^{-7}$ per month
Standard Reference Temperature Stability	$< 1 \times 10^{-6}$ (0 °C to 50 °C)
External Reference Input	10 MHz

Environmental

Storage Temperature Range	-55 °C to +75 °C
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Options & Accessories

Option 01	GPIB (IEEE-488) Interface
Option 02	Power Measurement
Option 09	Rear Panel Inputs

Performance

Frequency Resolution	1 Hz to 1 MHz in decade steps
Frequency Measurement Accuracy	± 1 count $\pm$ timebase error

Inputs & Outputs

Band 1 Maximum Safe Input	150 Vrms (DC to 1 kHz), derating to 2 Vrms at 100 MHz
Band 3 Maximum Operating Input	+10 dBm
Reference Oscillator Output	10 MHz, ≥ 1 V p-p into 50 Ω

Options

Option 03 (High Stability Timebase)	Oven-controlled crystal oscillator (OCXO), aging rate $< 1 \times 10^{-9}$ /day, temperature stability $< 1 \times 10^{-7}$ (0 °C to 50 °C)
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Power

Power Consumption	100 VA maximum
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Inputs

Band 1 Input Connector	BNC female
Band 2 Input Connector	BNC female
Band 1 Input Coupling	AC
Band 2 Input Coupling	AC

Power Requirements

Mains Voltage	100 / 120 / 220 / 240 VAC (+10%, -13%, selectable)
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Timebase

Option 03 Warm-up Time	20 minutes to within 1×10^{-8} of final frequency
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Control & Programming

GPIB Compliance (Option 02)	IEEE-488-1978
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TECHNOLOGY

Heterodyne / YIG-preselected microwave frequency counter

APPLICATIONS

Microwave frequency measurement, RF power measurement, spectral signal monitoring

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