

KEYSIGHT TECHNOLOGIES (AGILENT HP)

5342A

The HP / Agilent 5342A is a high-performance automatic microwave frequency counter capable of measuring continuous wave signals up to 18 GHz. It features a sensitive -25 dBm input, an 11-digit LED display, and dual inputs for both low-frequency and microwave measurement tasks. The instrument leverages harmonic heterodyne converter technology to provide fast, accurate readings.

SPECIFICATIONS

General

Interfaces	HP-IB (Option 011)
Display	11-digit LED

Input 1 (Microwave) Characteristics

Frequency Range	500 MHz to 18 GHz
Sensitivity	-25 dBm (500 MHz to 12.4 GHz); -20 dBm (> 12.4 GHz)
Maximum Input Level	+7 dBm
Impedance	50 Ω
Coupling	AC to instrument, DC to 50 Ω termination
Connector Type	Type-N (female)
Maximum FM Tolerance	50 MHz peak-to-peak

Timebase & Reference Oscillator

Internal Reference Frequency	10 MHz
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Measurement Characteristics

Frequency Resolution	1 Hz to 1 MHz (selectable)
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Available Options & Accessories

Amplitude Measurement Option	Option 002
Extended Frequency Option	Option 005 (up to 24 GHz)
High Stability Timebase Option	Option 001 (Oven Controlled Crystal Oscillator)
Digital-to-Analog Output Option	Option 004

Performance

Acquisition Time (Automatic Mode)	< 530 ms
Acquisition Time (Manual Mode)	< 80 ms

Inputs & Outputs

External Timebase Input Frequency	10 MHz
Timebase Output Frequency	10 MHz
Low Frequency Input Range (Input 2)	10 Hz to 520 MHz
Low Frequency Input Sensitivity (Input 2)	50 mV rms
Low Frequency Input Impedance (Input 2)	50 Ω or 1 MΩ (selectable)
Microwave Input Damage Level (Input 1)	+25 dBm (peak), 5 Vdc

Internal Timebase

High Stability Timebase Aging Rate (Option 001)	< 5 × 10 ⁻¹⁰ / day (after 24-hour warm-up)
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TECHNOLOGY

Harmonic Heterodyne Converter

APPLICATIONS

Microwave Frequency Measurement

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