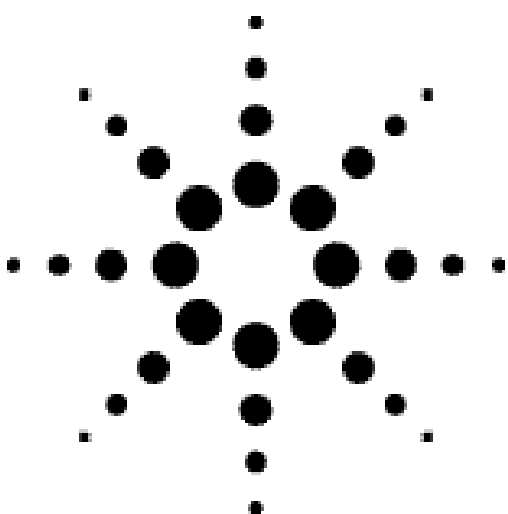


Agilent Technologies 5361B Pulse/CW Microwave Counter

Data Sheet



Product Specifications

Input Characteristics

Input 1 Input 2 Input 2
(50 \bar{U}) (1 M \bar{U}) (50 \bar{U})

Frequency range 500 MHz to 20, 10 Hz to 10 MHz to
26.5, 40 GHz 80 MHz 525 MHz

Sensitivity 25 mV rms 25 mV rms

0.5 to 12.4 GHz -28 dBm

12.4 to 20 GHz -23 dBm

0.5 to 26.5 GHz -20 dBm

(Opt 026, 040)

26.5 to 40 GHz $0.37 \times f$ (in GHz)

(Opt 040) -29.8 dBm

Frequency (Input 1)

Automatic and Manual Acquisition: 500 MHz to 20 GHz; 500 MHz to
26.5 GHz (Option 026); 500 MHz to 40 GHz (Option 040)

Least Significant Digit: 1 MHz to 1 Hz for frequency, 0.001 Hz for PRF

Pulse Frequency Measurements

Pulse width (minimum): manual mode, 60 ns; auto mode, 100 ns

Pulse rep freq: minimum 1 Hz; maximum 2 MHz

Measurement time, resolution, accuracy: See datasheet

CW Frequency Measurements

FM tolerance: 55 MHz peak-to-peak

Tracking speed (fast acquisition): 800 MHz/s

Acquisition time: Manual mode, <40 ms; automatic mode, fast acq., <100 ms

Gate times (1 Hz resolution): 200 to 1000 ms

Measurement time: >8.5 ms (in Dump Mode)

Accuracy: See datasheet

Pulse Parameters (Input 1)

Pulse Width PRI Offtime PRF

Min./Max. 60 ns/10 ms 500 ns/1 s 400 ns/1s 1Hz/2 MHz to 0.001 Hz

LSD (PW <1 ms) 1 ns;(PW

>
) 100 nx
Accuracy: $\pm(20 \text{ nx} + \text{timebase uncertainty} \times \pm(20 \text{ nx}) \times (\text{PRF})^2$
(100 ave.) measurement $\pm\text{LSD} \pm\text{LSD} \pm\text{timebase uncertainty}$

Profile (Input 1)

Frequency Range (min/max for Y axis): 500 MHz/40 GHz
FM Chirp Tolerance (max span for Y axis): 50 MHz peak-to-peak
Time Range (min/max span for X axis): 100 ns/10 ms; 1 ns resolution
Internal Gate Width: Minimum 11 ns to 23 ns; typical minimum: 14 ns
External Gate Width: Minimum: Manual acquisition 20 ns; auto acquisition 60 ns
Number of Data Points: Up to 100

Profile Frequency Measurements

Printers supported: HP 2225A, HP 227B, HP 3630A Opt 002
Profile phase measurements: See Application Note 377-4 for details. Computer required.

Frequency (Input 2)

Range: 10 Hz to 525 MHz
Accuracy: 0.001 Hz to 1 Hz
Resolution/LSD: 0.001 to 1 Hz