

Data Sheet

5 MHz Sweep Function Generator Model 4012A



Model 4012A is a popular 5 MHz generator for general bench and lab use with an ideal mixture of features and sweep function at a compelling price.

Features & Benefits

- 0.5 Hz to 5 MHz
- Sine, Square, Triangle, Pulse, and Ramp output
- Coarse and fine tuning knobs
- 4-digit LED display
- Linear and log sweep
- Variable duty cycle
- Variable DC offset
- Variable 20 Vpp output into open circuit (10 Vpp into 50 Ω)

Specifications	4012A
Frequency Characteristics	
Waveforms	Sine, Square, Triangle, $\pm$ Pulse, $\pm$ Ramp
Range	0.5 Hz to 5 MHz in 7 ranges
Resolution	4 digits
Tuning Range	10:1
Fine	$\pm 5\%$ of coarse setting
Variable Duty Cycle	15:85:15 cont variable
Operating Modes	Normal, Sweep, VCG
Output Characteristics	
Impedance	50 $\Omega \pm 10\%$
Level	20 V p-p Open circuit, 10 V p-p into 50 Ω
Amplitude	Variable, 20 dB range typical
Attenuation	-20 dB ± 1 dB
DC Offset	Preset: ± 0.1 V typical Variable: ± 10 V open-circuit ± 5 into 50 Ω
Sine Wave	
Distortion	$< 3\%$ typical at 1 kHz
Flatness (Into 50 Ω)	$\pm 5\% \pm (.45 \text{ dB})$ 0.5 Hz to 5 MHz
Square Wave	
Symmetry	0.1 Hz to 100 kHz $< 2\%$
Rise time (Into 50 Ω)	≤ 120 nS
Triangle Wave	
Linearity	$\geq 98\%$ to 100 kHz
TTL Output	
Level	0.8 V to 2.4 V
Rise time	≤ 20 nS
Duty Cycle	50% typical
CMOS Output	
Max. Frequency	2 MHz
Level	4 V to 14 V ± 0.5 V p-p continuously variable
Rise Time	≤ 120 nS (Open circuit)
VCG (Voltage controlled generator)	
Input Voltage	0-10 V ± 1 V causes a 100:1 frequency change
Impedance	10 k $\Omega \pm 5\%$
Sweep Operation	
Mode	LIN/LOG
Width	100:1 continuously variable
Rate	0.5 s to 30 s continuously variable
Frequency Counter	
Accuracy	Time base accuracy ± 1 count
Time Base Accuracy	± 10 ppm (23 $^{\circ}\text{C} \pm 5^{\circ}\text{C}$)
Display	4 digit LED
General	
AC Input	120/230 VAC $\pm 10\%$, 50/60 Hz, internal jumper selectable
Dimensions (W x H x D)	10.5" x 4.5" x 12.25" (266.7 x 114.3 x 311.15 mm)
Weight	4 lbs (1.8 kg)
Two-Year Warranty	
Included Accessories	Instruction manual, output cable (BNC to alligator clips)