



**4011A**



**4010A**

# Function Generators

## Model 4011A 5 MHz Function Generator with Digital Display

- 0.5 Hz to 5 MHz
- Sine, Square, Triangle, Pulse, & Ramp output
- Coarse and Fine tuning
- 4 digit LED display
- Variable duty cycle
- Variable DC offset

## Model 4010A 2 MHz Function Generator

- 0.2 Hz to 2 MHz
- Sine, Square, Triangle, Pulse, & Ramp output
- Variable duty cycle
- Variable DC offset

## Specifications

**models**  
**4010A**

	4011A	4010A
Frequency Characteristics		
Waveforms	Sine, Square, Triangle, $\pm$ Pulse, $\pm$ Ramp	
Range	0.5 Hz to 5 MHz	0.2 Hz to 2 MHz
	in 7 ranges	in 7 ranges
Resolution	4 digits	NA
Dial Accuracy	NA	$\pm 5\%$ typical
Tuning Range	Coarse, 10:1	10:1
	Fine $\pm 5\%$ of coarse setting	Does not apply
Variable Duty Cycle	15:85:15 Cont variable	15:85:15 cont variable
Operating Modes	Normal, VCG	Normal, VCG
Output Characteristics		
Impedance	50 $\Omega$ $\pm 10\%$	
Level	20 V p-p Open circuit, 10V p-p into 50 $\Omega$	
Amplitude	Variable, 20 dB range typical	
Attenuation	-20 dB $\pm$ 1dB	
DC Offset	Preset $\pm 0.1$ V typ Variable: $\pm 10$ V open-circuit $\pm 5$ into 50 $\Omega$	
SINE Wave	Distortion: $\leq 3\%$ @ 1 kHz Flatness: $\leq 5\%$ (.35 dB)	Distortion: $\leq 4\%$ @ 1 kHz Flatness: $\leq 5\%$ (.35 dB)
Square Wave	Symmetry: 0.5 Hz to 100 KHz $\leq 2\%$ Risetime: $\leq 20$ nS 4010A square wave Risetime $\leq 120$ nS	
Triangle Wave	Linearity: $\geq 98\%$ to 100 KHz, $\geq 95\%$ to 2 MHz	
TTL Output		
Level	0.8V to 2.4V	
Rise time	$\leq 20$ nS (4011A), $\leq 50$ nS (4010A)	
Duty Cycle	50% typical	
CMOS Output		
Max. Frequency	2 MHz	2 MHz
Level	4V to 14V $\pm 0.5$ p-p cont. variable	
Rise Time	$\leq 120$ nS	
Input		
Input Voltage	0-10V $\pm 1$ V causes a 100:1 frequency change	
Impedance	10K $\Omega$ $\pm 5\%$	
Frequency Counter		
Accuracy	Time Base Accy $\pm 1$ count	NA
Time Base Accuracy	$\pm 10$ PPM (23°C $\pm 5^\circ$ C)	NA
Display	4 digit LED	NA
Power Source	120/230 VAC $\pm 10\%$ , 50/60 Hz, internal jumper selectable	
Dimensions (H x W x D)	4.5 x 11.75 x 10.375" (114 x 298 x 264 mm)	
Weight	4 lbs (1.8 kg)	

## Accessories

**Two Year Warranty**

SUPPLIED: Output cable with BNC to alligator clips, Instruction Manual  
Carrying Case (not included): LC-40



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