

# Function Generators

## CFG253 \* CFG280



**CFG280.**

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### CHARACTERISTICS

#### Key Specifications

	<b>CFG253</b>	<b>CFG280</b>
Waveform Outputs	Square wave, sine wave, triangle wave, TTL pulse, sweep functions for all outputs	Square wave, sine wave, triangle wave, TTL pulse, sweep functions for all outputs
Ranges	1.0 Hz to 3.0 MHz in 7 ranges	0.1 Hz (calibrated) to 11 MHz in 8 ranges
Frequency Multiplier	Variable from 0.3 to 3.0 times the selected frequency range	Variable from 0.1 to 1 (uncalibrated) 1 to 11 (calibrated)
Dial Accuracy	±5% of full scale	±5% of full scale from 0.1 Hz to 10 MHz
Sine Wave Distortion	<1% (10 Hz to 100 kHz)	<1% (10 Hz to 100 kHz), -30 dB at all other frequencies
Triangle Wave Linearity	20 Hz to 200 kHz: ≥99%; 200 kHz to 3 MHz: ≥97%	0.1 Hz to 110 kHz: ≥99%; 110 kHz to 1 MHz: ≥97%; 1 MHz to 11 MHz: ≥95%
Square Wave Response	≤100 ns rise/fall time, maximum output into 50 Ohm load	≤25 ns rise/fall time, maximum output into 50 Ohm load
Main Output Amplitude	0 to 20 V <sub>p-p</sub>	0 to 20 V <sub>p-p</sub>
Attenuator	20 dB	20 dB
SYNC/TTL Output	TTL output level, rise <25 ns (20 TTL load) ≥3 V pk	<25 ns rise/fall time, maximum output into 50 Ohm load
Main Output Impedance	50 Ohm ±10%	50 Ohm ±10%
DC Offset (continuously variable)	±10 V minimum open circuit; ±5 V minimum into 50 Ohm load	±10 V minimum open circuit; ±5 V minimum into 50 Ohm load
Symmetry/Duty Cycle	5 to 1 minimum symmetry change	95/5 fixed (pulse and ramp)
Internal Variable Sweep Rate	0.5 Hz to 50 Hz	0.5 Hz to 50 Hz
External Voltage-controlled Variable Sweep Range (10 kilohm Input)	100:1 minimum for 0 to +10 VDC input with frequency control set at maximum	100:1 minimum for 0 to ±10 VDC input with frequency control set at 0.1 or 11

VCF (FM) Input		±10 V input shifts frequency $\geq 100:1$ up or down with dial set at 0.1 or 11 respectively
AM		0 to 100%, DBSC, external sine wave only
Warranty	One year	One year
Safety	UL1244, CSA231	UL1244, CSA231
EMC	Meets 89/336/EEC	Meets 89/336/EEC

**CFG280 Counter Specifications**

Frequency Range (AC coupled)		1 Hz to 100 MHz
Sensitivity		30 mV <sub>RMS</sub> from 1 Hz to 50 MHz; 50 mV <sub>RMS</sub> from 50 MHz to 100 MHz
Period Range/Resolution		1 ms to 60 s/1 ms
Crystal Frequency		10 MHz
Time Base Stability		±0.001% (±10 ppm) from 0° to 40°C
Frequency Accuracy		±(time base error + 1 count)
Period Accuracy		±(time base error + 1 count + trigger error)
EMC		UL1244

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Product manufactured in ISO 9002 registered facilities



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