

Specifications

The specifications apply when the function generator is powered on for at least 30 minutes under +20°C~+30°C.

Models		AFG-2000 series			AFG-2100 Series		
		2005	2012	2025	2105	2112	2125
Waveforms		Sine, Square, Ramp(Triangle)					
Arbitrary Waveform							
	Sample Rate	20 MSa/s					
	Repetition Rate	10MHz					
	Waveform Length	4k points					
	Amplitude Resolution	10 bit					
	Non-Volatile Memory	4k points					
	User-defined Output Section	4k points					
	User-defined Mark Output	4k points					
Frequency Characteristics							
Range	Sine, Square	0.1Hz 5MHz	0.1Hz 12MHz	0.1Hz 25MHz	0.1Hz 5MHz	0.1Hz 12MHz	0.1Hz 25MHz
	Ramp	0.1Hz ~ 1MHz					
Resolution	Sine, Square, Ramp	0.1Hz					
Accuracy	Stability	±20 ppm					
	Aging	±1 ppm, per 1 year					
	Tolerance	≤ 1 mHz					
Output Characteristics							
Amplitude	Range	1 mVpp to 10 Vpp(into 50Ω), 0.1Hz~20MHz 2 mVpp to 20 Vpp(open-circuit) , 0.1Hz~20MHz 1 mVpp to 5 Vpp(into 50Ω), 20MHz~25MHz 2 mVpp to 10 Vpp(open-circuit), 20MHz~25MHz					
	Accuracy	± 1% of setting ±1 mVpp (at 1 kHz,>10 mVpp)					
	Resolution	1 mV or 3 digits					
	Flatness	± 1% (0.1dB) ≤100kHz ± 3% (0.3 dB) ≤5MHz ± 5% (0.4 dB) ≤20MHz ± 5% (0.4 dB) ≤25MHz (sine wave relative to 1 kHz)					
	Units	Vpp, Vrms, dBm,					
Offset	Range	±5 Vpk ac +dc (into 50Ω) ±10Vpk ac +dc (Open circuit)					
	Accuracy	1% of setting + 5 mV+ 0.5% of amplitude					
Output	Impedance	50Ω typical (fixed)> 10MΩ (output disabled)					
	Protection (main output)	Short-circuit protected by overload relay automatically disables output					
SYNC Output	Level	TTL-compatible into>1kΩ					
	Impedance	50Ω nominal					
	Rise or Fall Time	≤25ns					
Sine wave Characteristics	Harmonic Distortion	-55 dBc DC~1 MHz, Ampl>1 Vpp -45 dBc 1MHz~5 MHz, Ampl>1 Vpp -30 dBc 5MHz~25 MHz, Ampl>1 Vpp					
	Rise/Fall Time	≤25ns at maximum output (into 50Ωload)					
	Overshoot	< 5%					
Square wave Characteristics	Asymmetry	1% of period+1 ns					
	Variable Duty Cycle	1.0% to 99.0% ≤ 100kHz					
		20.0% to 80.0% ≤ 5 MHz					
		40.0% to 60.0% ≤ 10MHz 50% ≤ 25MHz					
Ramp Characteristics	Linearity	< 0.1% of peak output					
	Variable Symmetry	0% to 100%(0.1% Resolution)					



Made to Measure

AM Modulation			
	Carrier Waveforms	—	Sine, Square, Ramp, ARB
	Modulating Waveforms	—	Sine, Square, Triangle
	Modulating Frequency	—	2 mHz to 20 kHz (Int) DC to 20KHz (Ext)
	Depth	—	0% to 120.0%
	Source	—	Internal / External
	Carrier BW	—	100Hz to Max Frequency (-3dB)
	External Modulating Sensitivity	—	≤ 10Vp-p for setting depth
FM Modulation			
	Carrier Waveforms	—	Sine, Square, Ramp, ARB
	Modulating Waveforms	—	Sine, Square, Triangle
	Modulating Frequency	—	2 mHz to 20 kHz (Int) DC to 20KHz (Ext)
	Deviation	—	DC to Max Frequency
	Source	—	Internal / External
	External Modulating Sensitivity	—	≤ 10Vp-p for setting deviation
SWEEP			
	Waveforms	—	Sine, Square, Ramp, ARB
	Type	—	Linear or Logarithmic
	Start F / Stop F	—	0.1Hz to Max Frequency
	Sweep Time	—	1 ms to 500 s
	Source	—	Internal / External
FSK			
	Carrier Waveforms	—	Sine, Square, Ramp, ARB
	Modulating Waveforms	—	50% duty cycle square
	Internal Rate	—	2 mHz to 100 kHz
	Frequency Range	—	0.1Hz to Max Frequency
	Source	—	Internal / External
Frequency Counter			
	Range	—	5Hz to 150MHz
	Accuracy	—	Time Base accuracy ± 1count
	Time base	—	± 20ppm (23°C ± 5°C) after 30 minutes warm up
	Resolution	—	100nHz for 1Hz, 0.1Hz for 100MHz.
	Input Impedance	—	1MΩ/150pf
	Sensitivity	—	≤ 35mVrms(5Hz to 100MHz) ≤ 45mVrms(100MHz to 150MHz)
System Characteristics			
	Store/Recall	10 Groups of Setting Memories	
	Interface	USB(Device)	
	Display	3.5", 3 color LCD	
General Specifications			
	Power Source	AC100~240V, 50~60Hz	
	Power Consumption	15 VA	
	Operating Environment	Temperature to satisfy the specification : 18 ~ 28 °C Operating temperature : 0 ~ 40 °C Relative Humidity: ≤ 80%, 0 ~ 40°C ≤ 70%, 35 ~ 40°C Installation category : CAT II	
	Operating Altitude	2000 meters	
	Storage Temperature	-10 ~ 70 °C, Humidity: ≤ 70%	
	Dimensions (WxHxD)	266(W)×107(H)×293(D) mm	
	Weight	Approx. 2.5 kg	
	Accessories	User Manual CD × 1, Quick Start Guide × 1, Power cord × 1	
		GTL-110 × 1	GTL-110 × 2