

Models		AFG-2000 series			AFG-2100 Series	
		2005	2012	2025	2105	2112
Waveforms						
		Sine, Square, Ramp, Noise, Arbitrary Waveform				
Arbitrary Waveform						
	Sample Rate	20 MSa/s				
	Repetition Rate	10MHz				
	Waveform Length	4k points				
	Amplitude Resolution	10 bit				
	Non-Volatile Memory	4k points				
Frequency Characteristics						
Range	Sine, Square	0.1Hz 5MHz	0.1Hz 12MHz	0.1Hz 25MHz	0.1Hz 5MHz	0.1Hz 12MHz
	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	± 2% 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				

		$\pm 4\%$ (0.4 dB) $\leq 12\text{MHz}$ $\pm 20\%$ (2 dB) $\leq 20\text{MHz}$ $\pm 5\%$ (0.4 dB) $\leq 25\text{MHz}$ (sine wave relative to 1 kHz)	
	Units	Vpp, Vrms, dBm	
Offset	Range	$\pm 5\text{ Vpk ac +dc}$ (into 50Ω) $\pm 10\text{Vpk ac +dc}$ (Open circuit) $\pm 2.5\text{ Vpk ac +dc}$ (into 50Ω) for 20MHz-25MHz $\pm 5\text{Vpk ac +dc}$ (Open circuit) for 20MHz-25MHz	
	Accuracy	2% of setting + 5 mV+ 0.5% of amplitude	
Output	Impedance	50Ω typical (fixed) > $300\text{k}\Omega$ (output disabled)	
	Protection (main output)	Short-circuit protected by overload relay automatically disables output	
SYNC Output	Level	TTL-compatible into > $1\text{k}\Omega$	
	Impedance	50Ω nominal	
	Rise or Fall Time	$\leq 25\text{ns}$	
Sine wave Characteristics	Harmonic Distortion	$-55\text{ dBc DC} \sim 200\text{kHz}$, Ampl > 0.1Vpp $-50\text{ dBc } 200\text{kHz} \sim 1\text{MHz}$, Ampl > 0.1Vpp $-35\text{ dBc } 1\text{MHz} \sim 5\text{MHz}$, Ampl > 0.1Vpp $-30\text{ dBc } 5\text{MHz} \sim 25\text{MHz}$, Ampl > 0.1Vpp	
Square wave Characteristics	Rise/Fall Time	$\leq 25\text{ns}$ at maximum output (into 50Ω load)	
	Overshoot	< 5%	
	Asymmetry	1% of period+1 ns	
	Variable Duty Cycle	1.0% to 99.0% $\leq 100\text{kHz}$ 20.0% to 80.0% $\leq 5\text{ MHz}$ 40.0% to 60.0% $\leq 10\text{MHz}$	
Ramp Characteristics	Linearity	< 0.1% of peak output	
	Variable Symmetry	0% to 100%(0.1% Resolution)	
AM Modulation			
	Carrier Waveforms	—	Sine, Square, Triangle

	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
FM Modulation			
	Carrier Waveforms	—	Sine, Square, Triangle
	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
SWEEP			
	Waveforms	—	Sine, Square, Triangle
	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, Triangle
	Modulating Waveforms	—	50% duty cycle square
	Modulation Rate	—	2mHz to 100kHz(INT) DC to 100kHz(Ext)
	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 up
Resolution	—	100nHz for 1Hz, 0.1Hz for 100MHz.
Input Impedance	—	1kΩ/1pf
Sensitivity	—	35mVrms ~ 30Vms (5Hz to 15

System Characteristics

Store/Recall	10 Groups of Setting Memories
Interface	USB(Device)
Display	LCD

General Specifications

Power Source	AC100~240V , 50~60Hz
Power Consumption	25 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	CD (user manual + software) ×1 , Quick Start Guide x1, Power cord×1 GTL-101× 1 GTL-101× 2