

## AFG-200 & AFG-100 Specifications

The specifications apply when the AFG-200 & AFG-100 is powered on for at least 30 minutes under +20°C~+30°C.

MODEL NUMBER			AFG-125 / AFG-125P	AFG-225 / AFG-225P
OUTPUT CHANNELS			1	2
WAVEFORMS			Sine, Square, Ramp, Pulse, Noise, ARB	
ARBITRARY FUNCTIONS	Sample Rate		120 MSa/s	
	Repetition Rate		60MHz	
	Waveform Length		4k points	
	Amplitude Resolution		10 bits	
	Non-Volatile Memory		4k points	
FREQUENCY CHARACTERISTICS	Range	Sine/Square	1uHz~25MHz	
		Ramp	1uHz~1MHz	
	Resolution		1uHz	
	Accuracy	Stability	±20 ppm	
	Aging		±1 ppm, per 1 year	
	Tolerance		≤1 mHz	
OUTPUT CHARACTERISTICS	Amplitude	Range	GPA-501 power supply: 1mVpp to 2.5Vpp (into 50Ω), 2mVpp to 5Vpp (open-circuit)	
			USB power supply : 1mVpp to 2Vpp (into 50Ω), 2mVpp to 4Vpp (open-circuit)	
	Accuracy		±2% of setting ±1 mVpp (at 1 kHz)	
	Resolution		1mV or 3 digits	
	Flatness		±1% (0.1dB) ≤100kHz, ±3% (0.3 dB) ≤5MHz, ±5% (0.4 dB) ≤12MHz, ±10%(0.9dB) ≤25MHz(sine wave relative to 1kHz)	
	Units		Vpp, Vrms, dBm	
	Offset	Range	GPA-501 power supply: ±1.25 Vpk ac +dc (into 50Ω), ±2.5Vpk ac +dc (Open circuit)	
USB power supply: ±1 Vpk ac +dc (into 50Ω), ±2 Vpk ac +dc (Open circuit)				
Accuracy		2% of setting + 10mV+ 0.5% of amplitude		
WAVEFORM OUTPUT	Impedance		50Ω typical (fixed), > 10MΩ (output disabled)	
	Protection		Short-circuit protected. Overload relay automatically disables main output.	
SINE WAVE CHARACTERISTICS	Harmonic Distortion		≤-50 dBc DC ~ 1MHz, Ampl > 1Vpp ≤-35 dBc 1MHz ~ 5MHz, Ampl > 1Vpp ≤-30 dBc 5MHz ~ 25MHz, Ampl > 1Vpp	
SQUARE WAVE CHARACTERISTICS	Rise/Fall Time		≤10ns at maximum output. (into 50 Ω load)	
	Overshoot		<2%	
	Asymmetry		1% of period +5 ns	
	Variable duty Cycle		1.0% to 99.0% ≤100kHz 10% to 90% ≤ 1MHz 50% ≤ 25MHz	
RAMP CHARACTERISTICS	Linearity		< 0.1% of peak output	
	Variable Symmetry		0% to 100% (0.1% Resolution)	
PULSE CHARACTERISTICS	Period		40ns~2000s	
	Pulse Width		20ns~1999.9s	
	Overshoot		<2%	
	Accuracy		0.1%+20ns	
	Jitter		20ppm +10ns	
AM MODULATION	Carrier Waveforms		Sine, Square, Ramp, Pulse, Arb	

	Modulating Waveforms	Sine, Square, Triangle, Upramp, Dnramp
	Modulating Frequency	2mHz to 20kHz
	Depth	0% to 120.0%
	Source	Internal
FM MODULATION	Carrier Waveforms	Sine, Square, Ramp,
	Modulating Waveforms	Sine, Square, Triangle, Upramp, Dnramp
	Modulating Frequency	2mHz to 20kHz
	Peak Deviation	DC to Max Frequency
	Source	Internal
SWEEP	Waveforms	Sine, Square, Ramp,
	Type	Linear or Logarithmic
	Start/Stop Freq	1uHz to Max Frequency
	Sweep Time	1ms to 500s
	Source	Internal / Manual
FSK	Carrier Waveforms	Sine, Square, Ramp, Pulse
	Modulating Waveforms	50% duty cycle square
	Modulation Rate	2mHz to 100 kHz
	Frequency Range	1uHz to Max Frequency
	Source	Internal
PM	Carrier Waveforms	Sine, Square, Ramp
	Modulating Waveforms	Sine, Square, Triangle, Upramp, Dnramp
	Modulation Rate	2mHz to 20kHz
	Phase deviation	0° to 360°
	Source	Internal
SUM	Carrier Waveforms	Sine, Square, Ramp, Pulse, Noise
	Modulating Waveforms	Sine, Square, Triangle, Upramp, Dnramp
	Modulation Rate	2mHz to 20kHz
	SUM Depth	0% to 100.0%
	Source	Internal
SYNC OUTPUT	Type	Sync, Sweep Marker, Burst Marker or Arbitrary Waveform Marker
	Level	TTL Compatible into 50Ω
	Assignment	Channel 1 or Channel 2
	Polarity	Normal or Inverted
	Fan-out	≥4 TTL Load
	Impedance	50Ω Typical
DUAL CHANNEL FUNCTION	Phase	-180° ~180° (Square and Pulse cannot be change, Phase is 0°)
	Track	Synchronize phase
	Coupling	CH2=CH1 OR CH1=CH2 Frequency(Ratio or Difference) , Amplitude & DC Offset
BURST	Waveforms	Sine, Square, Ramp, Arb
	Frequency	1uHz~15 MHz(sine)
		1uHz~15 MHz(Square)
		1uHz~1 MHz (Ramp)
	Burst Count	1 to 65535 cycles or Infinite
	Start/Stop Phase	-360 to +360
	Internal Period	1ms to 500s
Gate Source	External Trigger	
Trigger Source	Single or Internal Rate	
TRIGGER DELAY	N-Cycle, Infinite	0s to 655350ns

SAVE/RECALL		10 Groups of Setting Memories
POWER OUTPUT	Only AFG-125P/AFG-225P	Output Voltage : (2.5V/3.3V/5V) $\pm$ 5%, Output Current : 0.6A
INTERFACE		USB (Device)
GENERAL SPECIFICATIONS	Power Source	DC 5V
	Power Consumption	10 W (Max)
	Operating Environment	Temperature to satisfy the specification : 18 ~ 28°C , Operating temperature : 0 ~ 40°C ,Relative Humidity: < 80%, 0 ~ 40°C,Installation category : CAT II
	Operating Altitude	2000 Meters
	Storage Temperature	-10~70°C, Humidity: $\leq$ 70%
	Dimensions (WxHxD)	215(W) x 35 (H) x 107(D) mm
	Weight	Approx. 1kg