



Waveform Generator | HDG3000B

2 Channels, 100MHz Bandwidth, 16 Bits Vertical Resolution, 80MHz Frequency Counter



Product Features

- Frequency range: 1μHz ~ 100MHz/80MHz/60MHz/40MHz/25MHz/15MHz;
- Up to 300MSa/s sampling rate;
- Arbitrary waveform generator with 16 bits resolution, 2M waveform length;
- Two channels with the same performance;
- More than 160 arbitrary waveforms, including exponential rise, exponential fall, ECG, Gauss, Lorentz, haversine, dual-tone, DC etc;
- 4.3-inch color TFT LCD display;
- Support AM, DSB – AM, FM, PM, ASK, FSK, PSK, BPSK, QPSK, 3 FSK, 4 FSK, OSK and PWM modulations;
- 1 μHz frequency resolution and 1mVpp to 10Vpp output amplitude;
- Built in 80MHz, 7-digit frequency counter;
- Frequency sweep and burst capability;
- Built-in high-order harmonic generator (at most 16-order harmonic).

Model		HDG3102B	HDG3082B	HDG3062B	HDG3042B	HDG3022B	HDG3012B
Channels		2					
Waveform Length		2M points					
Max. Frequency		100MHz	80MHz	60MHz	40MHz	25MHz	15MHz
Sampling Rate		300MSa/s					
Vertical Resolution		16 bits					
Standard Waveforms		Sine, Square, Triangle, Pulse, Noise, Harmonic					
Arbitrary Waveforms		160 arbitrary waveforms, including Exponential rise, Exponential fall, ECG, Gauss, Haversin, Lorentz, Double-tone, DC, etc.					
Frequency Range	Sine	1μHz~100MHz	1μHz~80MHz	1μHz~60MHz	1μHz~40MHz	1μHz~25MHz	1μHz~15MHz
	Square	1μHz~15MHz	1μHz~15MHz	1μHz~15MHz	1μHz~15MHz	1μHz~15MHz	1μHz~15MHz
	Pulse	1μHz~15MHz	1μHz~15MHz	1μHz~15MHz	1μHz~15MHz	1μHz~15MHz	1μHz~15MHz
	Triangle	1μHz~2MHz	1μHz~2MHz	1μHz~2MHz	1μHz~2MHz	1μHz~2MHz	1μHz~2MHz
	Harmonic	1μHz~50MHz	1μHz~40MHz	1μHz~30MHz	1μHz~20MHz	1μHz~10MHz	1μHz~5MHz
	Noise Bandwidth (-3dB)	100MHz					
	Arbitrary	1μHz~20MHz	1μHz~20MHz	1μHz~20MHz	1μHz~15MHz	1μHz~15MHz	1μHz~15MHz
Frequency Resolution		1μHz					
Internal Frequency Reference Accuracy		±1ppm, 18~28°C					
Amplitude Range in 50Ω		≤10MHz: 1mVpp ~ 10Vpp					
		≤55MHz: 1mVpp ~ 5.5Vpp					
		≤80MHz: 1mVpp ~ 3.5Vpp					
		≤100MHz: 1mVpp ~ 2Vpp					
Amplitude Accuracy		Typical (1kHz Sine, 0V offset, > 10mVPP)					
Amplitude Flatness (relative to 1kHz Sine, 1Vpp, 50Ω)		± 1% of setting ± 5mVpp					
		≤5MHz: ±0.1dB					
		≤15MHz: ±0.2dB					
		≤25MHz: ±0.3dB					
		≤40MHz: ±0.5dB					
Amplitude Units		40MHz: ±1.0dB					
Amplitude Resolution		Vpp, mVpp, Vrms, dBm in 50Ω					
Amplitude Resolution		1mVpp					
External Reference Input Frequency Range		10MHz ± 50Hz					
Internal Reference Output	Level	3.3Vpp					
	Output Impedance	50Ω, DC coupling					
Frequency Counter	Measurement Function	Frequency, Period, Positive/Negative Pulse Width, Duty Cycle					
	Frequency Resolution	7 digits					
	Frequency Range	1μHz~80MHz					
	Gate Time	10ms~16s					
	Input Signal Range	0~3.3V					
	Connectors	USB Host, USB Device					
Display		4.3-inch color TFT LCD					
Power Voltage		100~120VAC _{RMS} (±10%),45Hz to 440Hz, CATII					
		120~240VAC _{RMS} (±10%),45Hz to 66Hz, CATII					
Power Consumption		<30W					
Fuse		T, 0.25A, 250V, 5x20mm					
Temperature		Operating: 10°C ~ 40°C					
		Storage: -20°C ~ 60°C					
Cooling Method		Fan cooling					
Operating Humidity		≤+104°F(≤+40°C): Relative humidity ≤90%					
		106°F~122°F (+41°C ~50°C): Relative humidity ≤60%					
Altitude		Operating: below 3,000 meters					
		Non-operating: below 15,000 meters					
Dimensions		318mm x 110mm x 150mm (W x H x D)					
Weight		2.5kg					