

Function/Arbitrary Waveform Generator

2 Channel, 16 Bits, 250 MSa/s, 64 Million Points, 80M Frequency Counter

MFG3000 Series



Feature

- 16 bits resolution, 250MSa/s Sample rate, 2 Channels;
- 64 Mpts Max. arbitrary waveform Memory Depth.
- 100/80/60/30/20/10/5MHz maximum sine output frequency.
- 16 channels digital output, together with the analog channel can rebuild the more mixed signals in daily practice
- Support AM, FM, PM, ASK, FSK, PSK and PWM modulations
- TCXO timebase standard, OCXO optional for ultra-high stability
- 7 inch, 16K true color TFT display, WVGA(800X480)
- Plenty of interfaces: USB Host, USB Device, LAN

Specification		Model	MFG3102	MFG3082	MFG3062	MFG3032	MFG3022	MFG3012	MFG3005
Main Feature	Channel		2	2	2	2	2	2	2
	Waveform Length		64M	64M	64M	64M	64M	64M	64M
	Bandwidth		100MHz	80MHz	60MHz	30MHz	20MHz	10MHz	5MHz
	Frequency		1uHz~100MHz	1uHz~80MHz	1uHz~60MHz	1uHz~30MHz	1uHz~20MHz	1uHz~10MHz	1uHz~5MHz
	Sample Rate		250MSa/s						
	Voltage resolution		16Bit						
Frequency Characteristics	Digital Output Mode		16Channels						
	Waveform		Sine, Square, Ramp, Pulse, Noise, Sinc, Exponential Fall, ECG, Gauss, Haver Sine, Lorentz, Dual-Tone, DC						
	Sine		1uHz~ Max.						
	Square		1uHz – 30MHz	1uHz – 30MHz	1uHz – 30MHz	1uHz~Max.			
	Pulse		1uHz – 15MHz	1uHz – 15MHz	1uHz – 15MHz	1uHz~Max.			
	Ramp		1uHz – 4MHz	1uHz – 3MHz	1uHz – 3MHz	1uHz~3MHz			
	White Noise		100MHz	80MHz	60MHz	30MHz	20MHz	10MHz	5MHz
	Harmonic/ Arbitrary Resolution		1uHz – 30MHz	1uHz~25MHz	1uHz~25MHz	1uHz~20MHz	1uHz~20MHz	1uHz~10MHz	1uHz~5MHz
	Accuracy		±2ppm, 18 C~28 C						
	Square	Rise /Fall time(Typical)		<10ns	<11ns	<12ns	<14ns	<16ns	<18ns
Overshoot			Typical Value (100KHz, 1Vpp) <3%						
Duty Cycle			≤10MHz: 20.0%~80.0%; 10MHz~40MHz: 40.0%~60.0%; >40MHz: 50.0% (fixed)						
Ramp	Non-symmetry		1% of period+5ns						
	Linearity		≤1% (Typical, 1kHz, 1VPP, Symmetry 100%)						
Pulse	Symmetry		0% - 100%						
	Period		33.33ns~1millons	40ns~1millons	40ns~1millons	50ns~1millons	50ns~1millons	100ns~1millons	200ns~1millons
	Pulse		≥12ns	≥14ns	≥14ns	≥16ns	≥16ns	≥18ns	≥18ns
	Leading/Trailing Edge Time		≥8ns	≥9ns	≥10ns	≥10ns	≥11ns	≥11ns	≥12ns
Amplitude Characteristic	Overshoot		Typical (1Vpp) <3%						
	Amplitude Range		≤20MHz:1mVpp - 20Vpp; ≤60MHz:1mVpp -15Vpp; ≤80MHz:1mVpp -10Vpp; ≤90MHz:1mVpp - 5Vpp; ≤100MHz:1mVpp - 2Vpp						
	Accuracy		Typical (1kHz Sine, 0V deviation, >10mVpp, Auto), ±1% of setting ±2mVpp						
	Resolution		1mv or 4 digits						
	Isolation		<-80dB						
Modulation Characteristic	Impedance		50Ω(Typical)						
	Modulation Type		AM, FM, PM, 2ASK, 2FSK, 2PSK, PWM						
	Carrier Waveforms		Sine, Square, Ramp, Arb. (except DC)						
	AM Source		Internal/External						
	FM Modulating Waveforms		Sine, Square, Ramp, Noise, Arb						
	PM Frequency		1Hz - 500KHz						
	Depth		0% -- 120%						
	2ASK Carrier Waveforms		Sine, Square, Ramp, Arb. (except DC)						
	2FSK Source		Internal/External						
	2PSK Modulating Waveforms		Square of 50% duty cycle(PWM:Sine, Square, Ramp, Noise, Arb.)						
Burst Characteristic	PWM Frequency		1Hz - 500KHz						
	Burst Count		2000000000						
	Gated Source		External trigger						
	Trigger Source		Internal, External or Manual						
Sweep Characteristic	Direction		Up						
	Type		linear						
	Sweep/Hold/Return time		280000s						
General Specifications	Trigger Source		Internal, External, Manual						
	Mark		Falling Edge of Sync signal(programmable)						
	Display		7" 64K Color TFT Display, 800*480 resolution.						
	Weight		3.5Kg						