

# DG5000 Series Function/Arbitrary Waveform Generators



## ► Features and Benefits

- Up to 350MHz BW, 1GSa/s, 14bits vertical resolution, 128Mpts waveform length per channel
- Direct Digital Synthesizer(DDS) Technology, High quality Output signals with lower distortion
- Versatile waveforms generation: Sine, Square, Ramp, Triangle, Pulse, White noise, DC, Index up, Index down, Sinc, Electrocardiogram
- Versatile modulation functions: AM, FM, PM, ASK,FSK,PSK,PWM, Sweep, Burst
- Built in IQ modulation: BPSK,QPSK,OQPSK, $\pi/4$ DQPSK,8PSK,D8PSK, 16PSK, 4QAM,8QAM,16QAM,32QAM,64QAM
- Frequency hopping option with user defined pattern, table and sequence
- USB Host, USB Device, LAN(LXI-Class C), GPIB
- 4.3 inch 16M true color TFT LCD
- Versatile signal inputs and outputs

## ► Specifications

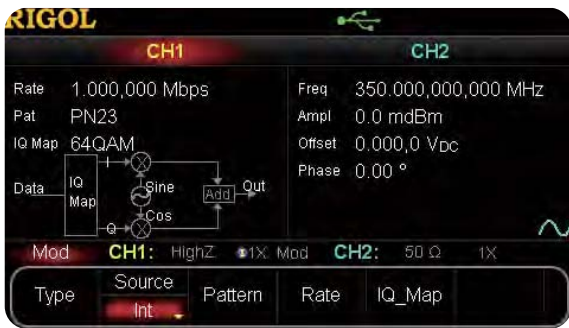
Model	DG5352	DG5351	DG5252	DG5251	DG5102	DG5101
Channel	2	1	2	1	2	1
Maximum Frequency	350 MHz		250 MHz		100 MHz	
Sample Rate	1 GSa/s					
<b>Waveforms</b>						
Standard Waveforms	Sine, Square, Ramp, Pulse, Noise					
Arbitrary Waveforms	Sinc, Exponential Rise, Exponential Fall, ECG, Gauss, HaverSine, Lorentz, Dual-Tone, DC					

Frequency Characteristics			
Sine	1 $\mu$ Hz to 350 MHz	1 $\mu$ Hz to 250 MHz	1 $\mu$ Hz to 100 MHz
Square	1 $\mu$ Hz to 120 MHz	1 $\mu$ Hz to 120 MHz	1 $\mu$ Hz to 100 MHz
Ramp	1 $\mu$ Hz to 5 MHz	1 $\mu$ Hz to 5 MHz	1 $\mu$ Hz to 3 MHz
Pulse	1 $\mu$ Hz to 50 MHz	1 $\mu$ Hz to 50 MHz	1 $\mu$ Hz to 50 MHz
Noise	250 MHz Bandwidth	250 MHz Bandwidth	100 MHz Bandwidth
Arb	1 $\mu$ Hz to 50 MHz	1 $\mu$ Hz to 50 MHz	1 $\mu$ Hz to 50 MHz
Resolution	1 $\mu$ Hz		
Accuracy	$\pm 1$ ppm, 18 $^{\circ}$ C to 28 $^{\circ}$ C		

<b>Arb</b>	
Waveform Length	2 to 128M points
Vertical Resolution	14 bits
Mode	Normal Mode, Play Mode
Sample Rate	Normal Mode (Waveform Length is from 2 to 16M points): 1G Sa/s (fixed) Play Mode (Waveform Length is from 16k to 128M points): $\leq 1$ G Sa/s (variable)
Minimum Rise/Fall Time	Typical Value (1Vpp) $\leq 3$ ns
Jitter (rms)	3 ns
Interpolation Method	Close, Linear, Spline
Edit Method	Edit Point, Edit Block
Non-Volatile Memory	1G Bytes

## ► Ordering Information

	Description	Order Number
Options	Frequency Hopping Module	DG5-FH
	Logic Signal Output Module	DG-POD-A
	Power Amplifier	PA1011
Optional Accessories	SMB(M) to SMB(M) Cable (1 meter)	CB-SMB(M)-SMB(M)-1
	SMB(M) to BNC(M) Cable (1 meter)	CB-SMB(M)-BNC(M)-1
	SMB(M) to BNC(F) Cable (1 meter)	CB-SMB(M)-BNC(F)-1
	40 dB Attenuator	ATT-40dB
	Rack Mount Kit	RMK-DG-5



IQ Modulation



Frequency Hopping



IQ Mapping Selection



IQ Mapping Edit



AM



PWM



FSK



Burst