

DDS Function Generator

DFG-8020 / DFG-8010 / DFG-8005



TIM

home



Model: DFG-8020

● General Features

- ◆ Frequency
 - 5MHz: DFG-8005
 - 10MHz: DFG-8010
 - 20MHz: DFG-8020
- ◆ Max. 100MSa/s Real-time Sampling Rate
- ◆ Advanced Direct Digital Synthesis (DDS) Technique
- ◆ Amplitude resolution: 8bits
- ◆ Waveform Length: 1,024 points
- ◆ Two Independent Channel (Channel A & B)
- ◆ 16 Types versatile waveforms including Sine, Square, Triangle, Ramp, Pulse and TTL
- ◆ Internal / External FM Modulation
- ◆ Crystal oscillation reference, High frequency accuracy and high resolution

● Convenient Features

- ◆ USB Interfacing Function
- ◆ Built in 100MHz Frequency Counter
- ◆ Keyboard operation and sequency adjusting with knob
- ◆ Digital and indicator light function

Supplied by :

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SPECIFICATIONS

Spec	Model	DFG-8005	DFG-8010	DFG-8020
Output Characteristics of Channel A & Channel B				
Waveform Characteristics				
Waveform Types		16 Types including sine, square, triangle, ramp and so on		
Waveform Length		1,024 points		
Sampling Rate		100MSa/s		
Amplitude resolution		8 bits		
Harmonic Distortion		≥40dBc(< 1MHz), ≥35dBc(1MHz~10MHz), ≥30dBc(10MHz~20MHz)		
Total Distortion		≤1% (10Hz~100KHz, ≥200mVrms)		
Pulse, Square		Rise/Fall times≤35ns, Over pulse:≤20%		
Duty Cycle		1~99%		
Frequency Characteristics				
Frequency range		Sine: 40mHz~5MHz (DFG-8005), 10MHz (DFG-8010), 20MHz (DFG-8020), Other: 40mHz~1MHz		
Resolution		20mHz		
Frequency accuracy & stability		±(5×10 ⁻⁵ +20mHz) / ±5×10 ⁻⁶ /3hrs		
Amplitude Characteristics				
Amplitude range		- 2mVpp~20Vpp (High impedance, for frequency≤10MHz) - 2mVpp~14Vpp (High impedance, 10MHz < for frequency≤15MHz) - 2mVpp~8Vpp (High impedance, for frequency > 15MHz)		
Resolution		20mVpp (amplitude > 2V), 2mVpp(amplitude < 2V)		
Accuracy & Stability		±(1%+2mV) / ±0.5% per 3 hrs		
Flatness		±1dB(1MHz < frequency < 15MHz), ±1.5dB(15MHz < frequency < 20MHz)		
Output impedance		50Ω		
Offset characteristics (for the 0dB attenuation)				
Offset range		±10V (high impedance, for output amplitude level ≥2Vp-p) ±1V (high impedance, 0.2Vpp < for output amplitude level < 2Vp-p) ±0.1V (high impedance, for output amplitude level < 0.2Vp-p)		
Resolution		20mV		
Offset accuracy		±(1%+20mV)		
Sweeping characteristics:linear frequency sweeping				
Sweeping range		the start and end point can be set arbitrarily		
Sweeping step		any value greater than the resolution		
Sweeping rate		10ms~60s / step		
Sweeping mode		positive, negative, to-and-fro		
Frequency modulation characteristics				
Carrier signal		Channel A		
Modulation signal		interior signal of channel B or exterior signal		
Frequency deviation modulation		0%~10%		
Output Characteristics of TTL				
Waveform characteristics		Square, Rise/Fall times≤20nS		
Frequency characteristics				
When channel A is selected		The frequency of SYNC is the same as that of Channel A (up to 1MHz)		
When channel B is selected		The frequency of SYNC is the same as that of Channel B (up to 1MHz)		
Amplitude characteristics		Compatibility of TTL, Low Level < 0.3V, High Level > 4V		
Frequency counter				
Display		8 digit LED display, Gate time, Hz		
Frequency range		1Hz~100MHz		
Resolution		0.1Hz(< 10MHz), 1Hz(10MHz≥)		
Accuracy		±(0.5%1count)[< 10MHz], ±Timebase error±1count[≥500KHz]		
Time base		10MHz, ±50ppm		
Input sensitivity		1Hz~10Hz: 200mVpp~2Vpp, 10Hz~100Hz: 200mVpp~4Vpp, 100Hz~10MHz: 200mVpp~10Vpp		
General characteristics				
Power condition				
Voltage		AC100~240V, ±5%		
Frequency		50~60Hz		
Power		< 30W		
Fuse		2A/250V, T type		
Environment condition				
Operating Temperature		0~40°C (Accuracy specified at 23±5°C)		
Operating Humidity		80%RH		
Operation characteristics				
Display mode		Digit displays the working parameters, Indicator light displays the function and option		
Packing size				
Dimension		254mm×103mm×325mm		
Weight		Approx. 3Kg		



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