

ARBITRARY WAVEFORM /DDS FUNCTION GENERATOR



DFG-1010 & DFG-1020



AFG-1010 & AFG-1020

Features

- Direct Digital Synthesis technology (DDS)
- 3.5-inch TFT LCD display
- Sampling rate 100Ms/s, vertical resolution 8 bit & waveform length 1Kpts
- Arbitrary waveform functions, up to 8 sets of users' defined waveforms
- 40 sets panel setting save & recall
- Min. 1mV (50Ω) waveform output with good stability
- 0.1% pulse duty cycle resolution
- FM, FSK, ASK, and PSK modulations
- Over voltage & current protection, short circuit & reverse voltage protection
- Numeric keyboard and rotary dial for data input
- Built-in 100MHz Frequency Counter
- RS232 interface

Technical Specification

Model	DFG-1010	DFG-1020	AFG-1010	AFG-1020
Frequency (Output A)				
Frequency range (Sine Wave)	40mHz~10MHz	40mHz~20MHz	40mHz~10MHz	40mHz~20MHz
	Other Waveforms: 40mHz~1MHz			
Resolution & Accuracy	40mHz, ± (50ppm + 40mHz)			
Waveform (Output A)				
Waveform types	32 types w aveforms, including Sine, Square, Pulse		40 types w aveforms, including Sine, Square, Pulse and 8 sets of arbitrary waveforms	
Waveform length	1024 points			
Vertical resolution	8 bits			
Sampling rate	100MSa/s			
Sine harmonic distortion	≥40dBc (<1MHz), ≥35dBc (1MHz~20MHz)			
Sine total distortion	≤1% (20Hz~200kHz)			
Pulse, Square	Rise/fall edge time: ≤35ns, Overshoot: ≤10%			
Square wave duty cycle	1%~99%			

Amplitude (Output A)				
Amplitude range	2mVpp~20Vpp, 40mHz~10MHz (high impedance)			
Resolution	20mVpp (amplitude>2Vpp), 2mVpp (amplitude<2Vpp)			
Accuracy	± (1% + 2 mVrms) (high impedance, RMS, frequency 1kHz)			
Stability	±0.5% / 3 hours			
Flatness	±5% (frequency of 10MHz or below), ±10% (frequency above 10MHz)			
Output impedance	50Ω			
Offset (Output A)				
Offset range	±10V (high impedance, attenuation 0 dB)			
Resolution & Accuracy	20mVdc, ±(1% + 20mVdc)			
Sweep (Output A)				
Linear sweep or frequency sweep				
Sweep range	Free to set starting point and end point			
Sweep step	Higher than any figure of the resolution			
Sweep rate	10ms~60ms/step			
Sweep mode	Linear, Log Up or Log Down, Single			
Frequency Modulation (FM) (Output A)				
Carrier signal	Output A waveforms			
Modulating signal & deviation	Output B signal or External signal, 0%~20%			
Burst (Output A)				
Burst counts & Mode	1~65000 cycles / Internal, External, Single			
FSK, ASK, PSK (Output A)				
FSK	Free to set carrier waveform frequency and hopping frequency			
ASK	Free to set carrier waveform amplitude and hopping amplitude			
PSK	Hopping phase: 0~360°, Max. resolution: 1°			
Alternative rate	10ms~60s			
Frequency (Output B)				
Frequency range (Sine Wave)	40mHz~1MHz	40mHz~1MHz	40mHz~1MHz	40mHz~1MHz
	Other Waveforms: 10mHz~100KHz			
Resolution & Accuracy	10mHz, ± (1x10 ⁻⁵ +10 mHz)			
Waveform (Output B)				
Waveform types	32 types w aveforms, including Sine, Square, Pulse		40 types w aveforms, including Sine, Square, Pulse and 8 sets of arbitrary w aveforms	
Waveform length	1024 points			
Sampling range	12.5Msa/s			
Amplitude resolution	8 bits			
Square wave duty cycle	1%~99%			
Amplitude (Output B)				
Range	50mVpp~20Vpp (high impedance)			
Resolution & Impedance	20mVpp / 50Ω			
Burst (Output B)				
Burst count & mode	1~65000 cycles / Internal, External, Single			
TTL output				
Waveform characteristics	Square wave, rise/fall time ≤20ns			
Frequency characteristics	40mHz~1MHz			
Amplitude characteristics	TTL and CMOS compatible, low<0.3V, high>4V			
Frequency counter				
Frequency range	1Hz~100MHz			
Input signal amplitude	100mVpp~20Vpp			
General				
Power source &	110V/220V AC, (1±10%), 50Hz (1±5%) / <30V			
Environmental	Temperature: 0~40°C, humidity: <80%			
Dimension & Weight	365*260*110mm, 3KG			