DDS Function Generator

DFG-90xx series

DFG-9005 : 5MHz
DFG-9010 : 10MHz
DFG-9020 : 20MHz

■ Fetures

- Advanced Direct Digital Synthesis(DDS) technique, output in two independent channels
- Digital and indicator light display
- Crystal oscillation reference, high frequency accuracy and high resolution
- Keyboard operation, sequence adjusting with knob
- 100MHz frequency counter and power amplifier(optional)
- Dimensions and weight： 254×103×325(mm3);3kg

■ Technical Specification

Frequency Range		Channel A: - Sine : 40mHz~5MHz (DFG-9005) 40mHz~10MHz(DFG-9010) 40mHz~20MHz(DFG-9020) - Others: 40mHz~1MHz Channel B: - Sine : 10mHz~1MHz - Others: 10mHz~50KHz
Channel A	Waveform types:	16 types including sine, square, triangle, ramp and so on
	Waveform length	1024 points
	Sampling rate	100 MSa/s
	Amplitude resolution	8 bits
	Harmonic distortion	≥40dBc (<1MHz), ≥35dBc(1MHz~10MHz), ≥30dBc(20MHz~40MHz)
	Total distortion	≤1% (20Hz ~ 200kHz)
	Rise/Fall time	≤35ns over pulse: ≤ 10 %
	Duty cycle	1% ~ 99%
	Frequency Resolution	40mHz
	Frequency accuracy	$\pm(5\times10^{-5}$+ 40mHz)
	Frequency stability	$\pm5\times10^{-6}$/ 3hrs
	Amplitude range	2mVpp~20Vpp (High impedance, for frequency ≤10MHz)
		2mVpp~10Vpp (High impedance, for frequency >10MHz)
	Amplitude resolution	20mVpp (for amplitude > 2V) 2mVpp (for amplitude < 2V)
	Amplitude accuracy	±(1% + 2mV) (high impedance , virtual value, frequency is 1kHz)
	Amplitude stability	±0.5%/ 3hrs
	Amplitude flatness	±5% (for frequency≤1MHz) ±10% (1MHz< for frequency ≤10MHz) ±20% (10MHz< for frequency ≤20MHz)
	Output impedance	50Ω
	Offset range	±10V (high impedance)
	Offset Resolution	20mV
	Offset accuracy	±(1% + 20mV) With the functions of Sweeping and Frequency Modulation
Channel B	Waveform types:	1024 points
	Waveform length	100 MSa/s
	Sampling rate	8 bits
	Duty cycle	1%~99%
	Frequency Resolution	10mHz
	Frequency accuracy	$\pm(1\times10^{-5}$ + 10mHz)
	Amplitude range:	50mVpp~20Vpp (high impedance)
	Amplitude resolution	20mVpp
	Output impedance	50Ω
	Harmonic wave	0.1~250.0 times
	Frequency of harmonic wave	＜1MHz
	Phase difference of two CHs	0~360°
	Resolution	1°
Output characteristics of TTL	Waveform characteristics	Square, rise/fall time≤20nS
	Frequency characteristics	Same as the output of channel A
	Amplitude characteristics	Compatibility of TTL, CMOS, low level < 0.3V , high level > 4V
General characteristics	Power conditions	Power conditions : voltage：AC220 (1±10%) V ;
	frequency	Frequency：50 (1±5%) Hz ;
	power	Power : ＜30VA
	Environment conditions	Temperature：0~40℃ ; Humidity : ＜80%
	Operation characteristics	Keyboard operation, continuous adjusting by digit knobs.
	Display mode	Digit displays the working parameters. indicator light displays the function and option
	Package size	254 mm×103 mm×325 mm weight：3 kg
	Manufacturing technique	Surface conjoint technique, Large Scale Integrated circuit, high reliability, long life
Options	Frequency counter:	Frequency measurement range：1Hz~100MHz Amplitude of input signal：100mVpp~20Vpp
	Power amplifier:	Maximum output power：7W (8Ω) , 1W (50Ω) Maximum output voltage：22Vpp Frequency bandwidth：1Hz ~ 200kHz