Function Generator

DDS Function/Arbitrary Waveform Generator TFG3800 Series

Features

- Adopt Direct Digital Synthesis (DDS) technology
- 3.5-inch QVGA color LCD display
- Frequency range 1μHz~30/60/80/120/160MHz
- Vertical resolution 16 bits
- Embedded 400MSa/s arbitrary generator
- Low edge jitter ≤50ps rms
- Built-in 52 arbitrary waveforms
- Arbitrary waveform length 16384 points
- Sine wave distortion less than 0.2%
- Multiple modulations: AM, DSB-AM, FM, PM, PWM, FSK, PSK, Sweep, Burst
- Built-in 8 digits 1000MHz frequency counter
- USB Host and USB device interfaces, optional LAN and GPIB interface

Function Generator

Specifications

Model		TFG-3830	TFG-3860	TFG-3880	TFG-38120	TFG-38160
Sampling rate		400Msa/s				
Output waveforms		Sine, Square, Pulse, Ramp, Noise, DC, Arbitrary				
Frequency						
Range	Sine	1μHz~30MHz	1μHz~60MHz	1μHz~80MHz	1μHz~120MHz	1μHz~160MHz
	Square	1μHz~30MHz	1μHz~60MHz	1μHz~60MHz		
	Pulse	1μHz~30MHz	1μHz~60MHz	1μHz~60MHz		
	Ramp	1μHz~4MHz				
	Noise	400MHz white noise				
	Arbitrary	1μHz~30MHz	1μHz~60MHz	1μHz~60MHz		
Resolution		1μHz				
Accuracy		$\pm 5 \times 10^{-6}$				
Stability		$\pm 1 \times 10^{-6}$				
Waveforms						
Sine		Distortion≤0.2% (1Vpp, DC<f≤20kHz)				
Square/Pulse		Duty cycle 0.1%~99.9% Resolution 0.1%				
Rise/Fall time		6ns~1μs Resolution 0.1ns				
Edge jitter		≤100ps rms				
Minimum pulse width		6ns				
Ramp symmetry		0.0%~100.0% Resolution 0.1ns				
Waveform length		16384 points				
Amplitude						
Range	50Ω	1mVpp~10Vpp f≤40MHz 1mVpp~5Vpp 40MHz<f≤100MHz		1mVpp~5Vpp 100MHz<f≤130MHz 1mVpp~3Vpp 130MHz<f≤160MHz		
	High Impedance	1mVpp~20Vpp f≤40MHz 1mVpp~10Vpp 40MHz<f≤100MHz		1mVpp~5Vpp 100MHz<f≤130MHz 1mVpp~3Vpp 130MHz<f≤160MHz		
Resolution		16 bits, 4 significant digit				
Accuracy		±1%, ±1mVpp, 1kHz				
Flatness		≤±0.2dB f≤10MHz ≤±0.4dB 10MHz<f≤60MHz		≤±0.8dB 60MHz<f≤100MHz ≤±1.0dB 100MHz<f≤160MHz		
Offset		Offset range: ±(10V DC~AC peak) (high impedance) Resolution: 16 bits, 4 significant digit Accuracy: ±1%, offset at ±0.25%, amplitude at ±2mV				
Modulation						
AM		Depth: 0.0%~120.0% Resolution: 0.1%				
FM		Deviation: Fc/2 Resolution: 1μHz				
PM		Deviation: 0.1°~360.0° Resolution: 0.1°				
PWM		Deviation: 0.0ns~width-12ns Resolution: 0.1ns				
FSK/PSK		Hopping rate: 1μHz~1MHz Resolution: 1μHz				
Sweep						
Sweep mode		Lin./Log.				
Sweep time		0.001s~3600s, resolution 1ms				
Hold time		0.001s~3600s, resolution 1ms				
Return time		0.001s~3600s, resolution 1ms				
Trigger source		Internal/External/Single				
Burst						
Burst mode		N cycles/gated				
Start phase		0°~360.0° resolution: 0.1°				
Cycles		1~100000000 resolution: 1				
Period		1μs~1000s resolution: 1μs				
Trigger source		Internal/External/Single				
Frequency counter						
Range		1Hz~1000MHz				
Resolution		8 digits				
General						
Accessories		BNC-BNC cable x1, Test lead x1, USB cable x1 , Software CD x1,Power cord x1, Manual x1				
Power supply		220VAC±10%,50Hz/60Hz±2Hz				
Dimension		260W×105H×390D mm				
Weight		2.5kg				