Function Generator

DDS Function/Arbitrary Waveform Generator TFG3800 Series

Features

- Adopt Direct Digital Synthesis (DDS) technology
- 3.5-inch QVGA color LCD display
- Two equivalent output channels
- Frequency range 1μHz~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

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Specifications

Model		**TFG-3880**	**TFG-38120**	**TFG-38160**
Sampling rate		400Msa/s		
Output waveforms		Sine, Square, Pulse, Ramp, Noise, DC, Arbitrary		
Frequency				
Range	Sine	1μHz~80MHz	1μHz~120MHz	1μHz~160MHz
	Square	1μHz~40MHz		
	Pulse	1μHz~40MHz		
	Ramp	1μHz~4MHz		
	Noise	400MHz white noise		
	Arbitrary	1μHz~40MHz		
Resolution		1μHz		
Accuracy		±5x10^{-6}		
Stability		±1x10^{-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		