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Arbitrary Waveform/Function Generators



Product No : TFG3800

Product Description

TFG3800 series Arbitrary waveform generator has max. frequency range of 80MHz, 120MHz and 160MHz. TFG3800 series adopts digital filter technology, giving output of high accuracy, high stability, low distortion and low jitter waveforms. Its outstanding performance and system features make this instrument a perfect solution for your testing requirement. The simplified and optimized design of the front panel and 3.5-inch TFT display interface make your testing much easier for operation and observation. Additionally, the extendable optional functions can also improve your system characteristics.

- ★ Adopt Direct Digital Synthesis (DDS) technology
- ★ 3.5-inch QVGA color LCD display
- ★ Two equivalent output channels
- ★ Frequency range 1 μ Hz~80/120/160MHz
- ★ Vertical resolution 16 bits
- ★ Embedded 400MSa/s arbitrary generator
- ★ Low edge jitter \leq 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

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: $\pm 1\%$, offset at $\pm 0.25\%$, amplitude at $\pm 2\text{mV}$
Modulation	
AM	Depth: 0.0%~120.0% Resolution: 0.1%
FM	Deviation: $F_c/2$ Resolution: 1 μHz
PM	Deviation: 0.1°~360.0° Resolution: 0.1°
PWM	Deviation: 0.0ns~width-12ns Resolution: 0.1ns
FSK/PSK	Hopping rate: 1 μHz ~1MHz Resolution: 1 μHz
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	1 μs ~1000s resolution: 1 μs
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 $\pm 10\%$, 50Hz/60Hz $\pm 2\text{Hz}$
Dimension	260W \times 105H \times 390D mm
Weight	2.5kg

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