

DDS Arbitrary Waveform/Function Generator

TFG3600E Series



TFG-3605E



► Introduction

The TFG3600E series are arbitrary waveform/function generators with maximum frequency of 5MHz, 10MHz, 15MHz and 20MHz. The TFG3600E series are based on DDS (Direct Digital Synthesis) technology providing flexible performance and system features for basic scientific and industrial requirements.

The 8 bits resolution, 100MSa/s sampling rate, 1024 pts memory length, 32 built-in waveforms and 8 user-defined arbitrary waveforms create various waveforms for different needs. A free PC software for RS-232 interfaces control for creating and analyzing waveforms. The TFG3600E series have additional functions of multiple modulations (FM, FSK, ASK, PSK), 200MHz external counter, 40 sets memories and multiple protections. Stable output frequency, high accuracy and low distortion make TFG3600E series an ideal solution for an accurate and affordable signal source for industrial, scientific research and educational applications.

► Features

- ✓ Max. output frequency 5MHz/10MHz/15MHz/20MHz
- ✓ 2 output channels
- ✓ 3.5-inch TFT LCD display
- ✓ Direct Digital Synthesis technology (DDS)
- ✓ Sampling rate 100MSa/s, vertical resolution 8 bit, waveform length 1024 points
- ✓ Arbitrary waveform function
- ✓ 32 built-in waveforms and 8 user-defined arbitrary waveforms
- ✓ 40 sets panel setting save & recall
- ✓ Min. 1mV (50Ω) waveform output with good stability
- ✓ Modulations: FM, FSK, ASK, PSK
- ✓ Frequency sweep, amplitude sweep, burst and TTL output functions
- ✓ Over voltage protection, over current protection, short circuit protection, reverse voltage protection
- ✓ Standard parts: RS-232 interface, 200MHz frequency counter
- ✓ Optional parts: power amplifier

Model			TFG-3605E	TFG-3610E	TFG-3615E	TFG-3620E
Main output	Output frequency	Sine	1μHz~5MHz	1μHz~10MHz	1μHz~15MHz	1μHz~20MHz
		Square	1μHz~5MHz			
		Other	1μHz~1MHz			
	Output waveform		32 built-in waveforms, including Sine, Square, Triangle, Ramp, Pulse, etc. And 8 user-defined arbitrary waveforms			
	Output amplitude		2mVpp~20Vpp (high impedance)			
	Output modulation		Single frequency, Sweep frequency, Sweep amplitude, FM, FSK, ASK, PSK and Burst			
	Waveform length		1024 points			
	Vertical resolution		8 bits			
	Sampling rate		100MSa/s			
	Frequency resolution		1μHz			
	Frequency accuracy		±5×10 ⁻⁵			
	Amplitude resolution		20mVpp (amplitude>2Vpp); 2mVpp (amplitude<2Vpp)			
	Amplitude accuracy		± (1%+2mVrms) (high impedance, RMS, frequency 1kHz)			
	Amplitude flatness		±5% (frequency <10MHz); ±10% (frequency >10MHz)			
	Output impedance		50Ω			
	Offset range		±10V (high impedance, attenuation 0 dB)			
	Offset resolution		20mVdc			
	Offset accuracy		±(1%+20mVdc)			
	FM deviation		0%~20%			
	PSK modulation range		0~360°			
	Phase resolution		1°			
Sine	Harmonic distortion		≥40dBc (<1MHz); ≥35dBc (1~20MHz)			
	Total distortion		≤1% (20Hz~200kHz)			
Square	Rise/fall time		≤35ns			
	Duty cycle of square		1%~99%			
TTL output	Rise/fall time		≤20ns			
	Low level		<0.3V			
	High level		>4V			
Sweep	Sweep time		100ms~900s			
	Sweep direction		Up, Down, Up-Down			
	Sweep mode		Linear, Logarithmic			
CHB output	Output frequency	Sine	1μHz~1MHz			
		Other	1μHz~100kHz			
	Output waveform		32 built-in waveforms, including Sine, Square, Triangle, Ramp, Pulse, etc. And 8 user-defined arbitrary waveforms			
	Output amplitude		50mVpp~20Vpp (high impedance)			
	Waveform length		1024 points			
	Vertical resolution		8 bits			
	Sampling rate		12.5MSa/s			
	Frequency resolution		1μHz			
	Frequency accuracy		±1×10 ⁻⁵			
	Amplitude resolution		20mVpp			
	Output impedance		50Ω			
Frequency counter	Testing frequency range		1Hz~200MHz			
	Input signal amplitude		100mVpp~20Vpp			
Power amplifier (optional)	Max. output power		7W (8Ω), 1W (50Ω)			
	Max. output voltage		22Vpp			
	Frequency bandwidth		1Hz~200kHz			
General	Remote control		RS-232 interface			
	Display		TFT LCD			
	Power source		AC110V/220V±10% selectable, 50/60Hz, Max. 45VA			
	Standard accessories		Power cord ×1, Operation manual ×1, Software CD ×1, RS-232 cable ×1, BNC-BNC cable ×1, Test lead ×1			
	Dimension		415×295×195mm			
	Weight		3.5kg			