



Function Generator



Product Description

3.5-inch 480×320TFT LCD with clear graphic interface

Chinese / English menu available

Press key for help and information

File management supporting USB flash disk and local storage

Key features

For two-channel output, the highest output frequency is: ET3310 Model is 10MHz, ET3325 Model is 25MHz, ET3340 Model is 40MHz, ET3360 Model is 60MHz, ET3370 Model is 70MHz

The two channels are independent from each other and have the function of phase synchronization

Sampling rate of 160MSa/S, vertical resolution of 12 bit and storage depth of 16k

Five basic waveforms and 32 arbitrary waveforms in-built

Waveform storage: Supports 10 user-defined set of waveform editing

Pulse wave output set in edge time

Internal/external AM, FM and FSK modulation function

Output of linear/logarithmic frequency sweep and burst waveform

Frequency meter of high precision of 160MHz

With RS232 interface, USB Device, USB Host interface supporting USB flash disk storage

Multi-functional arbitrary waveform editing software equipped

Product Technical Indicators

Frequency Characteristics					
	ET3310	ET3325	ET3340	ET3360	ET3370
Waveform types	Sine, square, triangle, pulse, noise and arbitrary waves (including DC)				
Sine	1uHz ~ 10MHz	1uHz ~ 25MHz	1uHz ~ 40MHz	1uHz ~ 60MHz	1uHz ~ 70MHz
Square	1uHz ~ 5MHz	1uHz ~ 5MHz	1uHz ~ 10MHz	1uHz ~ 10MHz	1uHz ~ 10MHz
Triangle	1uHz ~ 500kHz	1uHz ~ 500kHz	1uHz ~ 1MHz	1uHz ~ 2MHz	1uHz ~ 2MHz
Noise (-3dB)	7MHz Bandwidth				
Pulse	100uHz ~ 5MHz	100uHz ~ 10MHz			

Arbitrary wave	1uHz ~ 5MHz	1uHz ~ 10MHz
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Frequency Resolution	1uHz	
Frequency Accuracy	±5ppm	
Sine Wave Characteristics		
Harmonic distortion >1Vpp	0~1MHz: <-45dBc 1MHz~10MHz: <-40dBc 10MHz~20MHz: <-30dBc 20MHz~40MHz: <-25dBc	0~1MHz: <-45dBc 1MHz~40MHz: <-40dBc
Total harmonic distortion	<0.2% (20Hz-20kHz, 1Vpp)	
Square Wave Signal Characteristics		
Rise/fall Time	<20ns	
Overshoot	<5%	
Duty cycle	≤100kHz: 1%~99%; ≤5MHz: 20%~80%; ≤10MHz: 40%~60% (0.1% resolution)	
Dissymmetry (50% duty cycle)	1% Period + 5ns	
Jitter	6ns +0.1% Period	
Ramp Wave Characteristics		
Linearity degree	≤0.1% Peak output	
Symmetry	0.0~100.0%(resolution 0.1%)	
Pulse Wave Characteristics		
Pulse width	Min 20ns;1ns resolution	
Edge transition time	Min 20ns	

Overshoot	<5%			
Jitter	6ns +0.1% Period			
Arbitrary Wave Characteristics				
Channel	CH1		CH2	
Sampling speed	160MSa/S		160MSa/S	
Waveform amplitude resolution	12bits		10bits	
Waveform length	16k		4k	
Minimum rise/fall time	<20ns		<20ns	
Jitter	6ns+30ppm		6ns+30ppm	
Storage quantity	10 waveforms		10 waveforms	
Output Characteristics				
Amplitude (50Ω)				
Range	1mVpp~10Vpp ≤20MHz 1mVpp~5Vpp >20MHz		1mVpp~3Vpp ≤20MHz	
Accuracy	±1% set value ±1mVpp(1kHz Sine,0 offset,>10mVpp)			
Resolution	1mV or 3 bit			
Flatness (relative to 1K Sine, 1 Vpp)	±0.1dB,≤100kHz		±0.1dB,≤100kHz	
	±0.3dB,≤5MHz		±0.2dB,≤5MHz	
	±0.4dB,≤25MHz		±2dB,≤40MHz	
Offset (50Ω)				
Range	±5Vpk ,	ac + dc		±1.5Vpk , ac + dc
Accuracy	±(1% set value +5mV+0.5% amplitude)			
Output impedance	50Ω			
Protection	Short circuit protection, automatically disables the waveform output when overloading			
SYNC Output				
Level	TTL compatibility			
Impedance	50Ω			

Rise/fall time	<25ns;
Maximum frequency	25MHz
AM Modulation (CH1)	
Carrier wave	Sine, square, ramp, pulse and arbitrary waveforms (excluding DC)
Source	Internal/external
Modulation wave	Sine, square, triangle and ramp
Modulation frequency	2mHz~20kHz
Modulation depth	0%~120%
FM Modulation (CH1)	
Carrier wave	Sine, square, ramp, pulse and arbitrary waveforms (excluding DC)
Source	Internal/external
Modulation wave	Sine, square, triangle and ramp
Modulation frequency	2mHz~20kHz
Frequency offset	0~Maximum carrier frequency
FSK Modulation (CH1)	
Carrier wave	Sine, square, ramp, pulse or arbitrary waveforms (excluding DC)
Source	Internal/external
Modulation wave	Square wave of 50% duty ratio
Keying frequency	2mHz~1MHz
Frequency Sweep (CH1)	
Carrier wave	Sine, square, ramp, pulse and arbitrary waveforms (excluding DC)
Types	Linearity/Logarithm
Start/Stop Frequency	1uHz~Maximum carrier frequency
Sweep frequency time	1ms~500s

Trigger source	Manual operating, internal, external	
Burst characteristics (CH1)		
Carrier wave	Sine, square, ramp, pulse, noise and arbitrary waveforms (excluding DC)	
Pulse count	1~65535 or infinite, gated	
Start/stop phase	0~360°	
Internal period	1us~500s	
Gating source	External	
Trigger source	Internal, external, manual operating	
Frequency Meter		
Frequency range	1Hz~160MHz	
Frequency resolution	6 bit/s	
Voltage range and sensitivity	100mVpp~5Vpp	
Input adjustment	input impedance	1MΩ
	coupled modes	AC
Trigger Input		
Level	TTL compatibility	
Slope	Rise/Fall	
Pulse width	>100ns	
Reaction time	<500ns(burst)	
	<10us(sweep frequency)	
Modulation Input		
Impedance	1MΩ	
Signal range	±5V ac + dc	

General Technical Specifications:

- 1 Supply voltage:200~240V, 45~65Hz
- 1 Power consumption:< 40W
- 1 Types:3.5-inch TFT LCD screen,Resolution480×320,16M color
- 1 Environment:Operation 10 °C ~ +40 °C,Non-operation -10°C~+60°C
- 1 Humidity range:Within the range of 0 ~ 40 °C,≤90% relative humidity
- 1 Interface:RS232,USB Host,USB Device

Standard accessories:

- 1 1 piece of 30A51 three-wire power line;
- 1 1 piece of 33A52 BNC coaxial cable;
- 1 1 CD-ROM

Optional accessories:

- 1 BNC alligator clip line (33P01);
- 1 Cabinet installation suit (32P02);
- 1 RS232 serial line (32P04);
- 1 USB data line (32P05).