East Tester®

Datasheet

ET33 series

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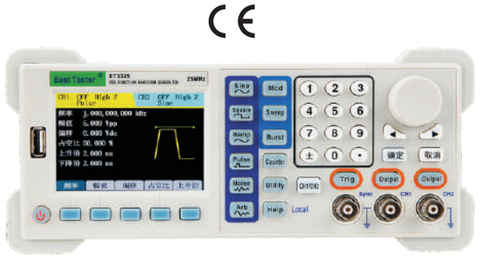
ET33 series dual-channel function/arbitrary wave generator is designed by direct digital synthesis (DDS) technology, which can produce accurate, stable and low distortion output signal.

Main features

- The 3.5 inch 480x320TFT LCD screen has a clear graphical interface.
- Support menu in Chinese and English
- Dual channel output, maximum output frequency 70MHz
- The two channels are independent of each other and have phase synchronization function.
- 160MSa/S sampling rate, 12 bit vertical resolution, 16K storage depth
- Built in 5 basic waveforms and 60 arbitrary waveforms.
- Waveform storage: supporting 10 sets of user defined editing waveforms
- The pulse wave output at the edge time can be set.
- Internal / external AM, FM, FSK, PM, ASK, PSK modulation function
- Output of linear / logarithmic sweep and pulse train waveform
- High precision frequency meter with 200MHz
- It has RS232 interface, USB Device, USB Host interface, GPIB (optional), supports U disk storage.
- Equipped with multi-function arbitrary waveform editing software



General technical specifications

- Supply voltage: 220V.AC + 10%, or 110V.AC + 10% (optional), 45~65Hz
- Power consumption: <40W
- Display: 3.5 inch TFT LCD screen, resolution 480 x 320, color 16M color.
- Temperature range: operating state 10 C ~+40 C, non operating -10 C ~+60
- Chumidity range: 0~40 C, less than 90% relative humidity.
- Interface: RS232, USB Host, USB Device, GPIB (matching)
- Size: 265 x 105 x 305mm (wide * high * Deep)

Matching accessories

- One three-core power cord
- Two power fuses
- 1 user manual

Optional accessories

- CD
- USB cable
- RS232/485 cable
- The output line

Product technical index

Frequency Characteristics					
Model	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		
Frequency Resolution	1uHz				
Frequency Accuracy	±5ppm				
Sine Wave Characteristics	CH1			CH2	
Harmonic distortion(>1Vpp)	0~1MHz: <-45dBc;1MHz~10MHz: <-40dBc;10MHz~20MHz: <-30dBc 20MHz~40MHz: <-25dBc;40MHz~70MHz: <-20dBc			0~1MHz: <-45dBc 1MHz~40MHz: <-40dBc;40MHz~70MHz: <-35dBc	
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				

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Arbitrary Wave Characteristics	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;±0.3dB,≤5MHz;±0.4dB,≤25MHz;±1dB,≤70MHz	±0.1dB,≤100kHz;±0.2dB,≤5MHz;±2dB, ≤40MHz;±5dB,≤70MHz
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	