AFG-4000 Series

Arbitrary Function Generator







Model	AFG-4125E	AFG-4125AE*	AFG-4225E	AFG-4235	AFG-4260	AFG-4280	AFG-4210H	AFG-4225H	
No. of Channel	Single		Dual						
Frequency Range (Sine)	25 MHz		25 MHz	35 MHz	60 MHz	80 MHz	100 MHz	250 MHz	
Sample Rate (Sa/s)		125 M		500 M				1.25 G	
Amplitude Resolution	14 bits			16 bits					
Memory Length	16	k/CH	10 M/CH						
Touch Panel	N/A			Yes					
Communication Interface	USB(Host, Device)			USB(Host, Device), LAN					

^{*}AFG-4125AE built-in power amplifier function

AFG-4000 series arbitrary function signal generators, which provide 25 MHz to 250 MHz bandwidth, single-channel and dual-channel designs, and feature 1 μ Hz high-resolution in the whole frequency bandwidth. The series has built-in standard signals including sine wave, square wave, triangle wave, pulse wave, noise wave, harmonic wave, etc.

The highest bandwidth 250 MHz model provides 1.25 GSa/s sample rate; the mid-range models ranging from 35 MHz to 100 MHz provide 500 MSa/s sample rate; and the 25 MHz entry-level models have a sample rate of 125MSa/s. For vertical resolution, the 35 MHz to 250 MHz models feature 16-bit resolution, and 25 MHz entry-level models provide 14-bit resolution.

In addition, the AFG-4000 series provides the modulation signal outputs of AM, DSB-AM, FM, PM, PWM, ASK, PSK, BPSK, QPSK, FSK, 3FSK, 4FSK, OSK, SUM, signal sweep outputs, and the Burst and Counter functions. AFG-4125AE has the built-in amplifier function.

The AFG-4000 series has the built-in 50 ohm/high impedance switching function, and is equipped with an 8-inch high-resolution TFT LCD, and the models above 35 MHz are equipped with the touch screen function. For communications interfaces, models above 35 MHz are built-in USB and LAN communications interfaces.

FEATURES

- * Provide Single-channel or Dual-channel Output Single Channel : AFG-4125E/4125AE(25MHz) Dual Channel : AFG-4225E/4235/4260/4280/ 4210H/4225H(25/35/60/80/100/250MHz)
- * Built-in Sine, Square, Triangle, Ramp, Pulse, Noise, Harmonic Wave, Arbitrary Wave
- * Min. Resolution : $1\mu Hz$
- * Sampling Rate : AFG-4225H : 1.25GSa/s; AFG-4235/4260/4280/4210H : 500MSa/s; AFG-4125E/4125AE/4225E : 125MSa/s
- * Amplitude Resolution : AFG-4125E/4125AE/4225E : 14bits; AFG-4235/4260/4280/4210H/4225H : 16bits
- * Memory Length : AFG-4225E/4235/4260/4280/4210H/ 4225H : 10M/per channel; AFG-4125E/4125AE : 16k/per Channel
- * Modulation : AM, DSB-AM, FM, PM, PWM, ASK, PSK, BPSK, QPSK, FSK, 3FSK, 4FSK, OSK, SUM
- * Built-in Sweep, Burst, Counter Function
- * AFG-4125AE Built-in Power Amplifier Function
- * Communication Interface : AFG-4235/4260/4280/4210H/ 4225H Provide USB, LAN Interface; AFG-4125E/4125AE/ 4225E Provide USB Interface
- * 8" TFT LCD Display, 800 x 480 Resolution
- * Multi-Touch Display : AFG-4235/4260/4280/4210H/4225H

APPLICATIONS

- * Educational Institutions
- * Automotive Electronics
- * Electronic Products and Parts







Website

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Models									
	I	AFG-4125E AFG-4125AE	AFG-4225E	AFG-4235	AFG-4260	AFG-4280	AFG-4210H	AFG-4225H	
Channels									
		1					2		
Waveforms				C: C-	Trinnels Done	- Dulas Naiss Haw	Aukit-		
Arbitrary Functions				sirie, sq	uare, mangie, kam	p, Pulse, Noise, Harr	nonic wave, Arbiti	ary wave	
ARB Function						Built-in			
Sample Rate (*1)		125 MSa/s			500 N	ISa/s		1.25 GSa/s	
Repetition Rate (Arbitrary Wave)	e)	15 MHz						MHz	
Waveform Length Amplitude Resolution		2 to 16 K points 14 bits		2 to 10 M points 16 bits					
Minimum Rise and Fall Time		< 10 ns			< 8	ns	10	< 5ns	
Jitter						8 ns			
Non-Volatile Memory						32 MB			
User-defined Output Section		From point 2 to 16,384 From point 2 to 16,384					n point 2 to 10,240 n point 2 to 10,240		
User-defined Output Marker Sec Output Mode	ection	110111 politit 2 to 10,384			1 to 1.00	0,000 cycles or infinit		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
Frequency Characteristics						-,,			
Sine		25 MHz		35 MHz	60 MHz	80 MHz	100 MHz	250 MHz	
Square		5 MHz		15 MHz		30 MHz		50 MHz	
Pulse Triangle, Ramp		5 MHz 1 MHz		15 MHz	3 N	IH-7		25 MHz 5 MHz	
Noise (-3 dB)		25 MHz BW		35 MHz BW	60 MHz BW	80 MHz BW	100 MHz BW	120 MHz BW	
Harmonic Wave		12.5 MHz		17.5 MHz	30 MHz	40 MHz	50 MHz	125 MHz	
Resolution						z or 10 significant fig	ures		
Accuracy Stability		±2 ppm at 25 °C ± 5 °C						±1 ppm at 0 to 40 °C	
Aging Tolerance		±1 ppm, per 1 year ±1 ppm							
Output Characteristics(*2)									
Output Amplitude Into 50 Ω)	1 mVpp to 10 Vpp, for	r < 25 MHz : 1 mVn	on to 5 Vnn. for < 60	MHz: 1 mVnn to 2	5 Vpp. for < 100 MH	7	1 mVpp to 10 Vpp, for ≤ 40 MHz ; 1 mVpp to 5 Vpp, for ≤ 80 MHz	
		1 111 V pp to 10 V pp; 101	1 5 23 WIT12 , 1 IIIVP	pp to 5 γpp, tot ≤ 00 1	viriz , i mvpp to z	ypp, ισι <u>></u> 100 ινι 1		1 mVpp to 2.5 Vpp, for ≤ 120 MHz ; 1 mVpp to 1 Vpp, for ≤ 250 MHz	
Open-circ	cuit	2 mVpp to 20 Vpp, fo	or ≤ 25 MHz ; 2 mV _I	pp to 10 Vpp, for ≤ 60	MHz ; 2mVpp to 5	Vpp, for ≤ 100 MHz	:	2 mVpp to 20 Vpp, for \leq 40 MHz ; 2 mVpp to 10 Vpp, for \leq 80 MHz 2 mVpp to 5 Vpp, for \leq 120 MHz ; 2 mVpp to 2 Vpp, for \leq 250 MHz	
Bandwidth Fatness	+			100.441 "	1			2 mVpp to 5 Vpp, for ≤ 120 MHz; 2 mVpp to 2 Vpp, for ≤ 250 MHz ≤10 MHz:±0.2 dB;≤60 MHz:±0.3 dB;≤100 MHz:±0.5 dB;≤160 MHz:±1 dB;	
		≤10 MHz: ±0.2 dB ; ≤60			relative to 100 kHz s	sine wave, 1 Vpp,50 !	.2)	≤250 MHz: ±1.5 dB; (relative to 1 kHz Sine wave, 1 Vpp, 50 Ω)	
Accuracy		\pm (2% of setting + 1 mVpp)(1 kHz sine, 0 V offset, >10 mVpp)							
Resolution Output Impedance		0.1 mVpp or 4 digits (The amplitude ≥ 1 Vpp is 1 mVpp)							
Output Protection		50 Q (Typical) Short circuit protection, the output will be automatically turned off when overloaded							
DC Offset Range		Sinot croup protection, the output will be autoritated on when overloaded £ (10 Vpk – Amplitude Vpp / 2), (High resistance)							
Accuracy	,	\pm (3 % of setting + 5 mV + amplitude Vpp * 0.5 %) \pm (1 % of setting + 5 mV + amplitude Vpp * 0.5 %)							
Resolution	on	0.1 mVpp or 4 digits (The amplitude > 1	1 Vpp is 1 mVpp)						
Sine Wave Characteristics Harmonic Distortion(*3)			DC to 1 MHz: <	65 dBc ; 1 MHz to 10	MHz: <-60 dBc :			DC to 1 MHz; <-65 dBc : 1 MHz to 10 MHz; <-60 dBc	
Transmic Distortion('5)		10 MHz to		c; 60 MHz to 100 MI		(0 dBm)		10 MHz to 120 MHz:<-50 dBc;120 MHz to 250 MHz:<-45 dBc Typical (0 dBm)	
Total Harmonic Distortion		< 0.05%, 10 Hz to 20 kHz, 1 Vpp						71 7	
Non-harmonic Distortion		≤10 MHz: <-70 dBc; >10 MHz: <-70 dBc		erval; Typical (0 dBm)					
Phase Noise Square Wave Characteristics		10 MHz: ≤-110 dBc/Hz Typical (0 dBm,	, 10 kHz offset)						
Rise/Fall Time		< 30 ns		I	< 8	ns		< 5 ns	
Overshoot		Typical (100 kHz, 1 Vpp) < 5 %, (1 Vpp, 50 Ω)				ical (100 kHz, 1 Vp	p) < 3 %, (1 Vpp, 50 Ω)	
Duty Cycle		50.00 % (fixed)		•					
Ramp Wave Characteristics									
Linearity				0//					
		< 0.1 % of peak output (typical 1 kHz, 1 0.0 % to 100.0 %	Vpp, symmetry 50	%)					
Symmetry Pulse Wave Characteristics		0.0 % to 100.0 %	Vpp, symmetry 50	%)					
Symmetry Pulse Wave Characteristics Period		0.0 % to 100.0 % 200 ns to 1000 ks		66.667 ns to 1000 ks		40 ns to 1000 ks		20 ns to 1000 ks	
Symmetry Pulse Wave Characteristics Period Pulse Width		0.0 % to 100.0 % 200 ns to 1000 ks ≥ 48 ns				40 ns to 1000 ks ≥ 12 ns		20 ns to 1000 ks ≥7 ns	
Symmetry Pulse Wave Characteristics Period Pulse Width Duty Cycle		0.0 % to 100.0 % 200 ns to 1000 ks ≥ 48 ns 0.1 % to 99.9 % (limited by the frequence	cy setting)	66.667 ns to 1000 ks ≥ 18 ns	8 ns (limited by the	≥ 12 ns		≥7 ns	
Symmetry Pulse Wave Characteristics Period Pulse Width		0.0 % to 100.0 % 200 ns to 1000 ks ≥ 48 ns 0.1 % to 99.9 % (limited by the frequence) ≥ 32 ns (limited by the pulse wice)	cy setting) dth setting)	66.667 ns to 1000 ks ≥ 18 ns	8 ns (limited by the				
Symmetry Pulse Wave Characteristics Period Pulse Width Duty Cycle Rise and Fall Time Overshoot Jitter		0.0 % to 100.0 % 200 ns to 1000 ks ≥ 48 ns 0.1 % to 99.9 % (limited by the frequence	cy setting) dth setting)	66.667 ns to 1000 ks ≥ 18 ns	8 ns (limited by the	≥ 12 ns pulse width setting)	Typical (100 k⊢	≥7 ns	
Symmetry Pulse Wave Characteristics Period Pulse Width Duty Cycle Rise and Fall Time Overshoot Jitter Noise Wave Characteristics		0.0 % to 100.0 % 200 ns to 1000 ks ≥ 48 ns 0.1 % to 99.9 % (limited by the frequence ≥ 32 ns (limited by the pulse wic Typical (100 kHz, 1 Vpp) <	cy setting) dth setting)	66.667 ns to 1000 ks ≥ 18 ns		≥ 12 ns pulse width setting) ≤5 MHz: 2 ppm	Typical (100 k⊢	≥7 ns ≥7 ns (limited by the pulse width setting) x, 1 Vpp) < 3 %	
Symmetry Pulse Wave Characteristics Period Pulse Width Duty Cycle Rise and Fall Time Overshoot Jitter Noise Wave Characteristics Types		0.0 % to 100.0 % 200 ns to 1000 ks ≥ 48 ns 0.1 % to 99.9 % (limited by the frequence) ≥ 32 ns (limited by the pulse wire Typical (100 kHz, 1 Vpp) < 2 ns	cy setting) dth setting)	66.667 ns to 1000 ks ≥ 18 ns	C	≥ 12 ns pulse width setting) ≤5 MHz: 2 ppm aussian white noise	Typical (100 kH + 300 ps , >5 MHz	≥7 ns ≥7 ns (limited by the pulse width setting) z, 1 Vpp) < 3 % :: 300 ps (rms), typical (1 Vpp, 50 Ω)	
Symmetry Pulse Wave Characteristics Period Pulse Width Duty Cycle Rise and Fall Time Overshoot Jitter Noise Wave Characteristics		0.0 % to 100.0 % 200 ns to 1000 ks ≥ 48 ns 0.1 % to 99.9 % (limited by the frequence ≥ 32 ns (limited by the pulse wic Typical (100 kHz, 1 Vpp) <	cy setting) dth setting)	66.667 ns to 1000 ks ≥ 18 ns		≥ 12 ns pulse width setting) ≤5 MHz: 2 ppm	Typical (100 k⊢	≥7 ns ≥7 ns (limited by the pulse width setting) x, 1 Vpp) < 3 %	
Symmetry Pulse Wave Characteristics Period Pulse Width Duty Cycle Rise and Fall Time Overshoot Jitter Noise Wave Characteristics Types Bandwidth (-3 dB)		0.0 % to 100.0 % 200 ns to 1000 ks ≥ 48 ns 0.1 % to 99.9 % (limited by the frequence) ≥ 32 ns (limited by the pulse wire Typical (100 kHz, 1 Vpp) < 2 ns	cy setting) dth setting) < 5 %	66.667 ns to 1000 ks ≥ 18 ns ≥	60 MHz BW	≥ 12 ns pulse width setting) ≤5 MHz: 2 ppm iaussian white noise 80 MHz BW	Typical (100 kH + 300 ps , >5 MHz 100 MHz BW	≥7 ns ≥7 ns (limited by the pulse width setting) z, 1 Vpp) < 3 % 300 ps (rms), typical (1 Vpp, 50 Ω) 120 MHz BW	
Symmetry Pulse Wave Characteristics Period Pulse Width Duty Cycle Rise and Fall Time Overshoot Jitter Noise Wave Characteristics Types Bandwidth (-3 dB) Harmonic Wave Characteristic: Harmonic Number Frequency Range	cs	0.0 % to 100.0 % 200 ns to 1000 ks ≥ 48 ns 0.1 % to 99.9 % (limited by the frequence ≥ 32 ns (limited by the pulse wic Typical (100 kHz, 1 Vpp) < 2 ns 25 MHz BW 1 µHz to 12.5 MHz	cy setting) dth setting) < 5 %	66.667 ns to 1000 ks ≥ 18 ns	60 MHz BW	≥ 12 ns pulse width setting) ≤5 MHz: 2 ppm iaussian white noise 80 MHz BW	Typical (100 kH + 300 ps , >5 MHz 100 MHz BW	≥7 ns ≥7 ns (limited by the pulse width setting) z, 1 Vpp) < 3 % 300 ps (rms), typical (1 Vpp, 50 Ω) 120 MHz BW	
Symmetry Pulse Wave Characteristics Period Pulse Width Duty Cycle Rise and Fall Time Overshoot Jitter Noise Wave Characteristics Types Bandwidth (-3 dB) Harmonic Wave Characteristic: Harmonic Number Frequency Range Harmonic Type	cs	0.0 % to 100.0 % 200 ns to 1000 ks ≥ 48 ns 0.1 % to 99.9 % (limited by the frequence ≥ 32 ns (limited by the pulse with Typical (100 kHz, 1 Vpp) < 2 ns 25 MHz BW 1 µHz to 12.5 MHz Odd, even, sequential, custom	cy setting) dth setting) < 5 %	66.667 ns to 1000 ks ≥ 18 ns ≥	60 MHz BW	≥ 12 ns pulse width setting) ≤5 MHz: 2 ppm iaussian white noise 80 MHz BW	Typical (100 kH + 300 ps , >5 MHz 100 MHz BW	≥7 ns ≥7 ns (limited by the pulse width setting) z, 1 Vpp) < 3 % 300 ps (rms), typical (1 Vpp, 50 Ω) 120 MHz BW	
Symmetry Pulse Wave Characteristics Period Pulse Width Duty Cycle Rise and Fall Time Overshoot Jitter Noise Wave Characteristics Types Bandwidth (-3 dB) Harmonic Wave Characteristics Harmonic Number Frequency Range	cs	0.0 % to 100.0 % 200 ns to 1000 ks ≥ 48 ns 0.1 % to 99.9 % (limited by the frequence ≥ 32 ns (limited by the pulse wic Typical (100 kHz, 1 Vpp) < 2 ns 25 MHz BW 1 µHz to 12.5 MHz	cy setting) dth setting) < 5 %	66.667 ns to 1000 ks ≥ 18 ns ≥	60 MHz BW	≥ 12 ns pulse width setting) ≤5 MHz: 2 ppm iaussian white noise 80 MHz BW	Typical (100 kH + 300 ps , >5 MHz 100 MHz BW	≥7 ns ≥7 ns (limited by the pulse width setting) z, 1 Vpp) < 3 % 300 ps (rms), typical (1 Vpp, 50 Ω) 120 MHz BW	
Symmetry Pulse Wave Characteristics Period Pulse Width Duty Cycle Rise and Fall Time Overshoot Jitter Noise Wave Characteristics Types Bandwidth (-3 dB) Harmonic Wave Characteristics Harmonic Number Frequency Range Harmonic Type Harmonic Amplitude Harmonic Amplitude Harmonic Phase Advanced Waveform Character	cs	0.0 % to 100.0 % 200 ns to 1000 ks ≥ 48 ns 0.1 % to 99.9 % (limited by the frequence ≥ 32 ns (limited by the pulse wice Typical (100 kHz, 1 Vpp) < < 2 ns 25 MHz BW 1 µHz to 12.5 MHz Odd, even, sequential, custom Each harmonic amplitude can be set Each harmonic phase can be set	cy setting) dth setting) c 5 %	56.667 ns to 1000 k ≥ 18 ns 2 35 MHz BW	60 MHz BW	≥ 12 ns pulse width setting) ≤5 MHz: 2 ppm iaussian white noise 80 MHz BW	Typical (100 kH + 300 ps , >5 MHz 100 MHz BW	≥7 ns ≥7 ns (limited by the pulse width setting) z, 1 Vpp) < 3 % 300 ps (rms), typical (1 Vpp, 50 Ω) 120 MHz BW	
Symmetry Pulse Wave Characteristics Period Pulse Width Duty Cycle Rise and Fall Time Overshoot Jitter Noise Wave Characteristics Types Bandwidth (-3 dB) Harmonic Wave Characteristics Harmonic Wave Characteristics Harmonic Type Harmonic Type Harmonic Amplitude Harmonic Amplitude Harmonic Phase Advanced Waveform Character Modulation Function	cs	0.0 % to 100.0 % 200 ns to 1000 ks ≥ 48 ns ≥ 48 ns 0.1 % to 99.9 % (limited by the frequenc ≥ 32 ns (limited by the pulse with Typical (100 kHz, 1 Vpp) < < 2 ns 25 MHz BW 1 µHz to 12.5 MHz Odd, even, sequential, custom Each harmonic amplitude can be set Each harmonic phase can be set	cy setting) dth setting) c 5 %	56.667 ns to 1000 k ≥ 18 ns 2 35 MHz BW	60 MHz BW	≥ 12 ns pulse width setting) ≤5 MHz: 2 ppm iaussian white noise 80 MHz BW	Typical (100 kH + 300 ps , >5 MHz 100 MHz BW	≥7 ns ≥7 ns (limited by the pulse width setting) z, 1 Vpp) < 3 % 300 ps (rms), typical (1 Vpp, 50 Ω) 120 MHz BW	
Symmetry Pulse Wave Characteristics Period Pulse Width Duty Cycle Rise and Fall Time Overshoot Jitter Noise Wave Characteristics Types Bandwidth (-3 dB) Harmonic Wave Characteristics Harmonic Number Frequency Range Harmonic Amplitude Harmonic Amplitude Harmonic Amplitude Harmonic Phase Advanced Waveform Character Modulation Function Sweep Function	cs	0.0 % to 100.0 % 200 ns to 1000 ks ≥ 48 ns 0.1 % to 99.9 % (limited by the frequence ≥ 32 ns (limited by the pulse with	cy setting) dth setting) < 5 %	56.667 ns to 1000 k ≥ 18 ns 2 35 MHz BW	60 MHz BW	≥ 12 ns pulse width setting) ≤5 MHz: 2 ppm iaussian white noise 80 MHz BW	Typical (100 kH + 300 ps , >5 MHz 100 MHz BW	≥7 ns ≥7 ns (limited by the pulse width setting) z, 1 Vpp) < 3 % 300 ps (rms), typical (1 Vpp, 50 Ω) 120 MHz BW	
Symmetry Pulse Wave Characteristics Period Pulse Width Duty Cycle Rise and Fall Time Overshoot Jitter Noise Wave Characteristics Types Bandwidth (-3 dB) Harmonic Wave Characteristics Harmonic Wave Characteristics Harmonic Type Harmonic Type Harmonic Amplitude Harmonic Phase Advanced Waveform Character Modulation Function	cs	0.0 % to 100.0 % 200 ns to 1000 ks ≥ 48 ns ≥ 48 ns 0.1 % to 99.9 % (limited by the frequenc ≥ 32 ns (limited by the pulse with Typical (100 kHz, 1 Vpp) < < 2 ns 25 MHz BW 1 µHz to 12.5 MHz Odd, even, sequential, custom Each harmonic amplitude can be set Each harmonic phase can be set	cy setting) 1th setting) 5 96 (, BPSK, QPSK, FSK	56.667 ns to 1000 k ≥ 18 ns 2 35 MHz BW	60 MHz BW	≥ 12 ns pulse width setting) ≤5 MHz: 2 ppm iaussian white noise 80 MHz BW	Typical (100 kH + 300 ps , >5 MHz 100 MHz BW	≥7 ns ≥7 ns (limited by the pulse width setting) z, 1 Vpp) < 3 % 300 ps (rms), typical (1 Vpp, 50 Ω) 120 MHz BW	
Symmetry Pulse Wave Characteristics Period Pulse Width Duty Cycle Rise and Fall Time Overshoot Jitter Noise Wave Characteristics Types Bandwidth (-3 dB) Harmonic Wave Characteristics Harmonic Number Frequency Range Harmonic Number Frequency Range Harmonic Amplitude Harmonic Type Harmonic Amplitude Harmonic Function Sweep Function Burst Function Burst Function Counter Function	cs	0.0 % to 100.0 % 200 ns to 1000 ks ≥ 48 ns ≥ 48 ns 0.1 % to 99.9 % (limited by the frequenc ≥ 32 ns (limited by the pulse wix Typical (100 kHz, 1 Vpp) < < 2 ns 25 MHz BW 1 µHz to 12.5 MHz Odd, even, sequential, custom Each harmonic amplitude can be set Each harmonic amplitude can be set Each harmonic phase can be set Each harmonic pub can be set Each harmonic pub can be set Each harmonic count (1 to 1000,000 cycle Support type: Linear, logarithmic, Step	cy setting) 1th setting) 5 96 (, BPSK, QPSK, FSK	56.667 ns to 1000 k ≥ 18 ns 2 35 MHz BW	60 MHz BW	≥ 12 ns pulse width setting) ≤5 MHz: 2 ppm iaussian white noise 80 MHz BW	Typical (100 kH + 300 ps , >5 MHz 100 MHz BW	≥7 ns ≥7 ns (limited by the pulse width setting) z, 1 Vpp) < 3 % 300 ps (rms), typical (1 Vpp, 50 Ω) 120 MHz BW	
Symmetry Pulse Wave Characteristics Period Pulse Width Duty Cycle Rise and Fall Time Overshoot Jitter Noise Wave Characteristics Types Bandwidth (-3 dB) Harmonic Wave Characteristics Harmonic Wave Characteristics Harmonic Harmonic Harmonic Harmonic Harmonic Wave Harmonic Harmonic Harmonic Sweep Harmonic Type Harmonic Amplitude Harmonic Phase Advanced Waveform Character Modulation Function Sweep Function Burst Function Counter Function Counter Function Input/Output Characteristics	cs	0.0 % to 100.0 % 200 ns to 1000 ks ≥ 48 ns ≥ 48 ns 0.1 % to 99.9 % (limited by the frequenc ≥ 32 ns (limited by the pulse wix Typical (100 kHz, 1 Vpp) < < 2 ns 25 MHz BW 1 µHz to 12.5 MHz Odd, even, sequential, custom Each harmonic phase can be set Each harmonic phase can be set Each harmonic phase can be set Support type: Linear, logarithmic, Step Support type: cunt (1 to 1000.000 cycle Support frequency range: 100 mHz to 20	cy setting) 1th setting) 5 % K, BPSK, QPSK, FSK es), Infinite, gated 00 MHz	56.667 ns to 1000 k ≥ 18 ns 2 35 MHz BW	60 MHz BW	≥ 12 ns pulse width setting) ≤5 MHz: 2 ppm iaussian white noise 80 MHz BW	Typical (100 kH + 300 ps , >5 MHz 100 MHz BW	≥7 ns ≥7 ns (limited by the pulse width setting) z, 1 Vpp) < 3 % 300 ps (rms), typical (1 Vpp, 50 Ω) 120 MHz BW	
Symmetry Pulse Wave Characteristics Period Pulse Width Duty Cycle Rise and Fall Time Overshoot Jitter Noise Wave Characteristics Types Bandwidth (-3 dB) Harmonic Wave Characteristics Harmonic Number Frequency Range Harmonic Amplitude Harmonic Amplitude Harmonic Type Harmonic Amplitude Harmonic Fines Advanced Waveform Character Modulation Function Sweep Function Burst Function Counter Function Power Amplifier Function Input/Output Characteristics Channel Coupling	cs	0.0 % to 100.0 % 200 ns to 1000 ks ≥ 48 ns 0.1 % to 99.9 % (limited by the frequence ≥ 32 ns (limited by the pulse wic Typical (100 kHz, 1 Vpp) < 2 ns 25 MHz BW 1 µHz to 12.5 MHz Odd, even, sequential, custom Each harmonic amplitude can be set Each harmonic phase can be set Support type: Count (1 to 1000,000 cycle Support type: Count (1 to 1000,000 cycle - Support Grequency range: 100 mHz to 2t - Support Channel copy, amplitude syn, frequency	cy setting) dth setting) 5 % (S. BPSK, QPSK, FSK es), Infinite, gated 00 MHz	\$6.667 ns to 1000 kt ≥ 18 ns ≥ 18 ns ≥ 35 MHz BW 1μ Hz to 17.5 MHz 1, 3FSK, 4FSK, OSK, S	60 MHz BW	≥ 12 ns pulse width setting) ≤5 MHz: 2 ppm iaussian white noise 80 MHz BW	Typical (100 kH + 300 ps , >5 MHz 100 MHz BW	≥7 ns 27 ns (limited by the pulse width setting) 1z, 1 Vpp) < 3 % 23 00 ps (rms), typical (1 Vpp, 50 Ω) 120 MHz BW	
Symmetry Pulse Wave Characteristics Period Pulse Width Duty Cycle Rise and Fall Time Overshoot Jitter Noise Wave Characteristics Types Bandwidth (-3 dB) Harmonic Wave Characteristics Harmonic Wave Characteristics Harmonic Type Harmonic Type Harmonic Amplitude Harmonic Phase Advanced Waveform Character Modulation Function Sweep Function Burst Function Counter Function Counter Function Input/Output Characteristics Channel Coupling Input	cs	0.0 % to 100.0 % 200 ns to 1000 ks ≥ 48 ns ≥ 48 ns 0.1 % to 99.9 % (limited by the frequenc ≥ 32 ns (limited by the pulse wix Typical (100 kHz, 1 Vpp) < < 2 ns 25 MHz BW 1 µHz to 12.5 MHz Odd, even, sequential, custom Each harmonic phase can be set Each harmonic phase can be set Each harmonic phase can be set Support type: Linear, logarithmic, Step Support type: cunt (1 to 1000.000 cycle Support frequency range: 100 mHz to 20	cy setting) dth setting) 5 % (S. BPSK, QPSK, FSK es), Infinite, gated 00 MHz	\$6.667 ns to 1000 kt ≥ 18 ns ≥ 18 ns ≥ 35 MHz BW 1μ Hz to 17.5 MHz 1, 3FSK, 4FSK, OSK, S	60 MHz BW	≥ 12 ns pulse width setting) ≤5 MHz: 2 ppm iaussian white noise 80 MHz BW	Typical (100 kH + 300 ps , >5 MHz 100 MHz BW	≥7 ns 27 ns (limited by the pulse width setting) 1z, 1 Vpp) < 3 % 23 00 ps (rms), typical (1 Vpp, 50 Ω) 120 MHz BW	
Symmetry Pulse Wave Characteristics Period Pulse Width Duty Cycle Rise and Fall Time Overshoot Jitter Noise Wave Characteristics Types Bandwidth (-3 dB) Harmonic Wave Characteristics Harmonic Number Frequency Range Harmonic Number Harmonic Amplitude Harmonic Amplitude Harmonic Phase Advanced Waveform Character Modulation Function Burst Function Counter Function Counter Function Input/Output Characteristics Channel Coupling Input Countput General Specifications	cs	0.0 % to 100.0 % 200 ns to 1000 ks ≥ 48 ns ≥ 48 ns 0.1 % to 99.9 % (limited by the frequenc ≥ 32 ns (limited by the pulse wice Typical (100 kHz, 1 Vpp) < < 2 ns 25 MHz BW 1 µHz to 12.5 MHz Odd, even, sequential, custom Each harmonic amplitude can be set Each harmonic amplitude can be set Each harmonic count (1 to 1000,000 cycle Support type: count (1 to 1000,000 cycle Support frequency range: 100 mHz to 2¹ Support Channel copy, amplitude syn, frequency External modulation input, External trigg Internal clock output, Sync output	cy setting) dth setting) 5 % (S. BPSK, QPSK, FSK es), Infinite, gated 00 MHz	\$6.667 ns to 1000 kt ≥ 18 ns ≥ 18 ns ≥ 35 MHz BW 1μ Hz to 17.5 MHz 1, 3FSK, 4FSK, OSK, S	60 MHz BW	≥ 12 ns pulse width setting) ≤5 MHz: 2 ppm iaussian white noise 80 MHz BW	Typical (100 kH + 300 ps , >5 MHz 100 MHz BW	≥7 ns 27 ns (limited by the pulse width setting) 1z, 1 Vpp) < 3 % 23 00 ps (rms), typical (1 Vpp, 50 Ω) 120 MHz BW	
Symmetry Pulse Wave Characteristics Period Pulse Width Duty Cycle Rise and Fall Time Overshoot Jitter Noise Wave Characteristics Types Bandwidth (-3 dB) Harmonic Wave Characteristics Harmonic Wave Characteristics Harmonic Type Harmonic Type Harmonic Type Harmonic Type Harmonic Type Harmonic Type Harmonic Amplitude Harmonic Fination Sweep Function Burst Function Gounter Function Dower Amplifier Function Input/Output Characteristics Channel Coupling Input Output General Specifications Display Type	cs	0.0 % to 100.0 % 200 ns to 1000 ks ≥ 48 ns 0.1 % to 99.9 % (limited by the frequence ≥ 32 ns (limited by the pulse with the	cy setting) dth setting) 5 % (S. BPSK, QPSK, FSK es), Infinite, gated 00 MHz	\$6.667 ns to 1000 kt ≥ 18 ns ≥ 18 ns ≥ 35 MHz BW 1μ Hz to 17.5 MHz 37.5 MHz 38.3 MHz BW 1μ Hz to 17.5 MHz	60 MHz BW	≥ 12 ns pulse width setting) ≤5 MHz: 2 ppm iaussian white noise 80 MHz BW	Typical (100 kH + 300 ps , >5 MHz 100 MHz BW	≥7 ns 27 ns (limited by the pulse width setting) 1z, 1 Vpp) < 3 % 23 00 ps (rms), typical (1 Vpp, 50 Ω) 120 MHz BW	
Symmetry Pulse Wave Characteristics Period Pulse Width Duty Cycle Rise and Fall Time Overshoot Jitter Noise Wave Characteristics Types Bandwidth (-3 dB) Harmonic Wave Characteristics Harmonic Number Frequency Range Harmonic Number Harmonic Amplitude Harmonic Amplitude Harmonic Type Harmonic Amplitude Harmonic Finetion Sweep Function Burst Function Gounter Function Dever Amplifier Function Fower Amplifier Function Counter Function Counter Function Dower Amplifier Function Input/Output Characteristics Channel Coupling Input County General Specifications Display Type Resolution Resolution Power Resolution Type Resolution Popper	ristics	0.0 % to 100.0 % 200 ns to 1000 ks ≥ 48 ns 0.1 % to 99.9 % (limited by the frequency ≥ 32 ns (limited by the pulse wic Typical (100 kHz, 1 Ypp) <	cy setting) dth setting) 5 % (S. BPSK, QPSK, FSK es), Infinite, gated 00 MHz	\$6.667 ns to 1000 kt ≥ 18 ns ≥ 18 ns ≥ 35 MHz BW 1μ Hz to 17.5 MHz 37.5 MHz 38.3 MHz BW 1μ Hz to 17.5 MHz	60 MHz BW	≥ 12 ns pulse width setting) ≤5 MHz: 2 ppm iaussian white noise 80 MHz BW	Typical (100 kH + 300 ps , >5 MHz 100 MHz BW	≥7 ns 27 ns (limited by the pulse width setting) 1z, 1 Vpp) < 3 % 23 00 ps (rms), typical (1 Vpp, 50 Ω) 120 MHz BW	
Symmetry Pulse Wave Characteristics Period Pulse Width Duty Cycle Rise and Fall Time Overshoot Jitter Noise Wave Characteristics Types Bandwidth (-3 dB) Harmonic Wave Characteristics Harmonic Wave Characteristics Harmonic Type Harmonic Type Harmonic Amplitude Harmonic Amplitude Harmonic Amplitude Harmonic Fination Sweep Function Sweep Function Burst Function Counter Function Counter Function Input/Output Characteristics Channel Coupling Input Output General Specifications Display Type Resolution Special Type Resolution Type Resolution Color	ristics	0.0 % to 100.0 % 200 ns to 1000 ks ≥ 48 ns 0.1 % to 99.9 % (limited by the frequency ≥ 32 ns (limited by the pulse with Typical (100 kHz, 1 Vpp) < 22 ns 25 MHz BW 1 µHz to 12.5 MHz Odd, even, sequential, custom Each harmonic amplitude can be set Each harmonic phase can be set Each harmonic phase can be set Support type: Count (1 to 1000,000 cycle Support type: Count (1 to 1000,000 cycle Support frequency range: 100 mHz to 2′ Support type: Count (1 to 1000,000 cycle External modulation input, External trigg linternal clock output, Sync output 8-inch color LCD display 800 Horizontal × 480 Vertical pixels 65,536 colors, 16 bits, TFT	cy setting) dth setting) < 5 % K, BPSK, QPSK, FSK es), Infinite, gated 00 MHz v syn, align phase ger input, External of	\$6.667 ns to 1000 kt ≥ 18 ns ≥ 18 ns ≥ 35 MHz BW 1μ Hz to 17.5 MHz 37.5 MHz 38.3 MHz BW 1μ Hz to 17.5 MHz	60 MHz BW	≥ 12 ns pulse width setting) ≤5 MHz: 2 ppm iaussian white noise 80 MHz BW	Турісаl (100 k+ + 300 ps , >5 MHz 100 MHz BW 1 µHz to 50 MHz	≥7 ns 27 ns (limited by the pulse width setting) 1z, 1 Vpp) < 3 % 23 00 ps (rms), typical (1 Vpp, 50 Ω) 120 MHz BW	
Symmetry Pulse Wave Characteristics Period Pulse Width Duty Cycle Rise and Fall Time Overshoot Jitter Noise Wave Characteristics Types Bandwidth (-3 dB) Harmonic Wave Characteristics Harmonic Wave Characteristics Harmonic Type Harmonic Harmonic Harmonic Amplitude Harmonic Type Harmonic Amplitude Harmonic Fination Sweep Function Burst Function Counter Function Counter Function Input/Output Characteristics Channel Coupling Input Output General Specifications Display Type Resolution Color	on creen Capacitive	0.0 % to 100.0 % 200 ns to 1000 ks ≥ 48 ns ≥ 48 ns 0.1 % to 99.9 % (limited by the frequenc ≥ 32 ns (limited by the pulse wix Typical (100 kHz, 1 Vpp) <	cy setting) dth setting) < 5 % K, BPSK, QPSK, FSK es), Infinite, gated 00 MHz v syn, align phase ger input, External of	\$6.667 ns to 1000 kt ≥ 18 ns ≥ 18 ns ≥ 35 MHz BW 1μ Hz to 17.5 MHz 37.5 MHz 38.3 MHz BW 1μ Hz to 17.5 MHz	60 MHz BW	≥ 12 ns pulse width setting) ≤5 MHz: 2 ppm iaussian white noise 80 MHz BW	Typical (100 k+ + 300 ps, >5 MHz 100 MHz BW 1 μHz to 50 MHz	≥7 ns (limited by the pulse width setting) z, 1 Vpp) < 3 % 2: 300 ps (rms), typical (1 Vpp, 50 Ω) 120 MHz BW 1 µHz to 125 MHz	
Symmetry Pulse Wave Characteristics Period Pulse Width Duty Cycle Rise and Fall Time Overshoot Jitter Noise Wave Characteristics Types Bandwidth (-3 dB) Harmonic Wave Characteristics Harmonic Wave Characteristics Harmonic Type Resolution Color Touch Scr Communication Interface Power Source	on Creen Capacitive	0.0 % to 100.0 % 200 ns to 1000 ks ≥ 48 ns 0.1 % to 99.9 % (limited by the frequence ≥ 32 ns (limited by the pulse with	cy setting) dth setting) < 5 % K, BPSK, QPSK, FSK es), Infinite, gated 00 MHz v syn, align phase ger input, External of	\$6.667 ns to 1000 kt ≥ 18 ns ≥ 18 ns ≥ 35 MHz BW 1μ Hz to 17.5 MHz 37.5 MHz 38.3 MHz BW 1μ Hz to 17.5 MHz	60 MHz BW	≥ 12 ns pulse width setting) ≤5 MHz: 2 ppm iaussian white noise 80 MHz BW	Typical (100 k+ + 300 ps, >5 MHz 100 MHz BW 1 μHz to 50 MHz	≥7 ns (limited by the pulse width setting) 1z, 1 Vpp) < 3 % 1300 ps (rms), typical (1 Vpp, 50 Ω) 120 MHz BW 1 µHz to 125 MHz	
Symmetry Pulse Wave Characteristics Period Pulse Width Duty Cycle Rise and Fall Time Overshoot Jitter Noise Wave Characteristics Types Bandwidth (-3 dB) Harmonic Wave Characteristics Harmonic Number Frequency Range Harmonic Number Frequency Range Harmonic Number Harmonic Frequency Range Harmonic Fype Harmonic Amplitude Harmonic Fype Harmonic Fype Harmonic Fype Counter Function Burst Function Burst Function Counter Function Power Amplifier Function Input/Output Characteristics Channel Coupling Input Coupting Input General Specifications Display Type Resolutior Color Touch Scr Communication Interface Power Source	on sumption	0.0 % to 100.0 % 200 ns to 1000 ks ≥ 48 ns ≥ 48 ns 0.1 % to 99.9 % (limited by the frequenc ≥ 32 ns (limited by the pulse wice Typical (100 kHz, 1 Vpp) <	cy setting) dth setting) < 5 % K, BPSK, QPSK, FSK es), Infinite, gated 00 MHz v syn, align phase ger input, External of	\$6.667 ns to 1000 kt ≥ 18 ns ≥ 18 ns ≥ 35 MHz BW 1μ Hz to 17.5 MHz 37.5 MHz 38.3 MHz BW 1μ Hz to 17.5 MHz	60 MHz BW	≥ 12 ns pulse width setting) ≤5 MHz: 2 ppm iaussian white noise 80 MHz BW	Typical (100 k+ + 300 ps, >5 MHz 100 MHz BW 1 μHz to 50 MHz	≥7 ns (limited by the pulse width setting) 1z, 1 Vpp) < 3 % 1300 ps (rms), typical (1 Vpp, 50 Ω) 120 MHz BW 1 µHz to 125 MHz	
Symmetry Pulse Wave Characteristics Period Pulse Width Duty Cycle Rise and Fall Time Overshoot Jitter Noise Wave Characteristics Types Bandwidth (-3 dB) Harmonic Wave Characteristics Harmonic Wave Characteristics Harmonic Type	on creen Capacitive	0.0 % to 100.0 % 200 ns to 1000 ks ≥ 48 ns 0.1 % to 99.9 % (limited by the frequency ≥ 32 ns (limited by the pulse wix Typical (100 kHz.1 Vpp) < < 2 ns 25 MHz BW 1 μHz to 12.5 MHz Odd, even, sequential, custom Each harmonic phase can be set Each harmonic phase can be set Support type: Linear, logarithmic, Step Support type: Linear, logarithmic, Step Support type: count (1 to 1000,000 cycle Support frequency range: 100 mHz to 2t Channel copy, amplitude syn, frequency External modulation input, External triggi Internal clock output, Sync output 8-inch color LCD display 800 Horizontal × 480 Vertical pixels 65,336 colors, 16 bits, TFT USB Host, USB Device 100 to 240 V (±10%), 50/60 Hz Less than 50 VA 250V, FZAL	cy setting) dth setting) < 5 % K, BPSK, QPSK, FSK es), Infinite, gated 00 MHz v syn, align phase ger input, External of	\$6.667 ns to 1000 kt ≥ 18 ns ≥ 18 ns ≥ 35 MHz BW 1μ Hz to 17.5 MHz 37.5 MHz 38.3 MHz BW 1μ Hz to 17.5 MHz	60 MHz BW	≥ 12 ns pulse width setting) ≤5 MHz: 2 ppm iaussian white noise 80 MHz BW	Typical (100 k+ + 300 ps, >5 MHz 100 MHz BW 1 μHz to 50 MHz	≥7 ns (limited by the pulse width setting) 1z, 1 Vpp) < 3 % 1300 ps (rms), typical (1 Vpp, 50 Ω) 120 MHz BW 1 µHz to 125 MHz	
Symmetry Pulse Wave Characteristics Period Pulse Width Duty Cycle Rise and Fall Time Overshoot Jitter Noise Wave Characteristics Types Bandwidth (-3 dB) Harmonic Wave Characteristics Harmonic Number Frequency Range Harmonic Number Frequency Range Harmonic Amplitude Harmonic Amplitude Harmonic Amplitude Harmonic Phase Advanced Waveform Character Modulation Function Sweep Function Burst Function Counter Function Down Amplifier Function Input/Output Characteristics Channel Coupling Input General Specifications Display Type Resolutior Color Touch Scr Communication Interface Power Operating Temperation Operating Operating Temperation Fuse Operating Temperation Touch Scr Power Core Fuse Operating Temperation Te	on creen Capacitive onsumption ture to Satisfy	0.0 % to 100.0 % 200 ns to 1000 ks ≥ 48 ns ≥ 48 ns 0.1 % to 99.9 % (limited by the frequenc ≥ 32 ns (limited by the pulse wice Typical (100 kHz, 1 Vpp) <	cy setting) dth setting) < 5 % K, BPSK, QPSK, FSK es), Infinite, gated 00 MHz v syn, align phase ger input, External of	\$6.667 ns to 1000 kt ≥ 18 ns ≥ 18 ns ≥ 35 MHz BW 1μ Hz to 17.5 MHz 37.5 MHz 38.3 MHz BW 1μ Hz to 17.5 MHz	60 MHz BW	≥ 12 ns pulse width setting) ≤5 MHz: 2 ppm iaussian white noise 80 MHz BW	Typical (100 k+ + 300 ps, >5 MHz 100 MHz BW 1 μHz to 50 MHz	≥7 ns (limited by the pulse width setting) 1z, 1 Vpp) < 3 % 1300 ps (rms), typical (1 Vpp, 50 Ω) 120 MHz BW 1 µHz to 125 MHz	
Symmetry Pulse Wave Characteristics Period Pulse Width Duty Cycle Rise and Fall Time Overshoot Jitter Noise Wave Characteristics Types Bandwidth (-3 dB) Harmonic Wave Characteristics Harmonic Wave Characteristics Harmonic Number Frequency Range Harmonic Type Harmonic	on creen Capacitive consumption ture to Satisfy g Temperature Humidity	0.0 % to 100.0 % 200 ns to 1000 ks ≥ 48 ns 0.1 % to 99.9 % (limited by the frequency ≥ 32 ns (limited by the pulse with Typical (100 kHz, 1 Vpp) < < 2 ns 25 MHz BW 1 µHz to 12.5 MHz Odd, even, sequential, custom Each harmonic phase can be set Each harmonic phase can be set Each harmonic phase can be set Support type: count (1 to 1000,000 cycle Support frequency range: 100 mHz to 2' Support modulation input, External triging internal clock output, Sync output 8-inch color LCD display 800 Horizontal × 480 Vertical pixels 65,536 colors, 16 bits, TFT USB Host, USB Device 100 to 240 V (±10%), 50/60 Hz Less than 50 VA 250 V, F2AL 18 °C to 28 °C 0 °C to 40 °C	cy setting) 1th setting) 5 % (, BPSK, QPSK, FSK es), Infinite, gated 00 MHz v syn, align phase ger input, External of	\$6.667 ns to 1000 kc ≥ 18 ns ≥ 18 ns ≥ 18 ns	C 60 MHz BW 1 μHz to 30 MHz 1 μHz to 30 MHz	≥ 12 ns pulse width setting) ≤5 MHz: 2 ppm iaussian white noise 80 MHz BW	Typical (100 k+ + 300 ps, >5 MHz 100 MHz BW 1 μHz to 50 MHz	≥7 ns (limited by the pulse width setting) 1z, 1 Vpp) < 3 % 1300 ps (rms), typical (1 Vpp, 50 Ω) 120 MHz BW 1 µHz to 125 MHz	
Symmetry Pulse Wave Characteristics Period Pulse Width Duty Cycle Rise and Fall Time Overshoot Jitter Noise Wave Characteristics Types Bandwidth (-3 dB) Harmonic Wave Characteristics Harmonic Wave Characteristics Harmonic Type Harmonic Type Harmonic Amplitude Harmonic Amplitude Harmonic Amplitude Harmonic Phase Advanced Waveform Character Modulation Function Sweep Function Burst Function Counter Function Counter Function Input/Output Characteristics Channel Coupling Input Output Ceneral Specifications Display Type Resolution Color Touch Scr Communication Interface Power	on category	0.0 % to 100.0 % 200 ns to 1000 ks ≥ 48 ns ≥ 48 ns 0.1 % to 99.9 % (limited by the frequenc ≥ 32 ns (limited by the pulse wice Typical (100 kHz, 1 Vpp) < < 2 ns 25 MHz BW 1 µHz to 12.5 MHz Odd, even, sequential, custom Each harmonic amplitude can be set Each harmonic phase can be set AM, DSB-AM, FM, PM, PWM, ASK, PSK Support type: Linear, logarithmic, Step Support type: count (1 to 1000,000 cycle Support type: count (1 to 1000,000 cycle Support type: count (1 to 1000,000 cycle Support develor type: 100 mHz to 2t Support Support type: Linear, logarithmic, Step Support type: count (1 to 1000,000 cycle Support type: count (1 to 1000,000 cycle Support type: count (1 to 1000,000 cycle Support type: Linear, logarithmic, Step Support type: Linear, l	cy setting) 1th setting) 5 % C, BPSK, QPSK, FSK es), Infinite, gated 00 MHz v syn, align phase ger input, External of	\$6.667 ns to 1000 kc ≥ 18 ns ≥ 18 ns ≥ 18 ns	C 60 MHz BW 1 μHz to 30 MHz 1 μHz to 30 MHz	≥ 12 ns pulse width setting) ≤5 MHz: 2 ppm iaussian white noise 80 MHz BW	Typical (100 k+ + 300 ps, >5 MHz 100 MHz BW 1 μHz to 50 MHz	≥7 ns (limited by the pulse width setting) 1z, 1 Vpp) < 3 % 1300 ps (rms), typical (1 Vpp, 50 Ω) 120 MHz BW 1 µHz to 125 MHz	
Symmetry Pulse Wave Characteristics Period Pulse Width Duty Cycle Rise and Fall Time Overshoot Jitter Noise Wave Characteristics Types Bandwidth (-3 dB) Harmonic Wave Characteristics Harmonic Wave Characteristics Harmonic Type	on category	0.0 % to 100.0 % 200 ns to 1000 ks ≥ 48 ns 0.1 % to 99.9 % (limited by the frequency ≥ 32 ns (limited by the pulse wix Typical (100 kHz.1 Vpp) < < 2 ns 25 MHz BW 1 μHz to 12.5 MHz Odd, even, sequential, custom Each harmonic phase can be set Each harmonic phase can be set Each harmonic phase can be set Support type: linear, logarithmic, Step Support type: lorear, logarithmic, Step Support type: count (1 to 1000,000 cycle Support type: lorear, logarithmic, Step Support type: count (1 to 1000,000 cycle Support step linear, logarithmic, Step Support type: lorear, logarithmic, Step Support type: lor	cy setting) 1th setting) 5 % C, BPSK, QPSK, FSK es), Infinite, gated 00 MHz v syn, align phase ger input, External of	\$6.667 ns to 1000 kc ≥ 18 ns ≥ 18 ns ≥ 18 ns	C 60 MHz BW 1 μHz to 30 MHz 1 μHz to 30 MHz	≥ 12 ns pulse width setting) ≤5 MHz: 2 ppm iaussian white noise 80 MHz BW	Typical (100 k+ + 300 ps, >5 MHz 100 MHz BW 1 μHz to 50 MHz	≥7 ns (limited by the pulse width setting) 1z, 1 Vpp) < 3 % 1300 ps (rms), typical (1 Vpp, 50 Ω) 120 MHz BW 1 µHz to 125 MHz	
Symmetry Pulse Wave Characteristics Period Pulse Width Duty Cycle Rise and Fall Time Overshoot Jitter Noise Wave Characteristics Types Bandwidth (-3 dB) Harmonic Wave Characteristics Harmonic Number Frequency Range Harmonic Number Frequency Range Harmonic Amplitude Harmonic Type Harmonic Amplitude Harmonic Function Sweep Function Burst Function Counter Function Input/Output Characteristics Channel Coupling Input Output General Specifications Display Type Resolution Display Type Resolution Color Touch Scr Communication Interface Power Operating Environment Operating Environment Operating Environment Operating Storage Temperature	on creen Capacitive on sumption ture to Satisfy g Temperature Humidity on Category g Altitude	0.0 % to 100.0 % 200 ns to 1000 ks ≥ 48 ns 0.1 % to 99.9 % (limited by the frequency ≥ 32 ns (limited by the pulse with Typical (100 kHz, 1 Vpp) < 22 ns 25 MHz BW 1 µHz to 12.5 MHz Odd, even, sequential, custom Each harmonic phase can be set Each harmonic phase can be set Each harmonic phase can be set Support type: Count (1 to 1000,000 cycle Support type: Linear, logarithmic, Step Support type: Count (1 to 1000,000 mHz to 2t Support myer: Count (1 to 1000,000 cycle External modulation input, External trigg linternal clock output, Sync output 8-inch color LCD display 800 Horizontal × 480 Vertical pixels 65,536 colors, 16 bits, TFT USB Host, USB Device 100 to 240 V (±10%), 50/60 Hz Less than 50 VA 250V, F2AL 18 "C to 28 "C 0 "C to 40 "C Less than 35 "C : ≤ 90 % relative humidi CAT II Operating 3,000 meters ; Non-operatior 20 "C to 60 "C, Humidity : ≤70 %	cy setting) 1th setting) 5 % C, BPSK, QPSK, FSK es), Infinite, gated 00 MHz v syn, align phase ger input, External of	\$6.667 ns to 1000 kc ≥ 18 ns ≥ 18 ns ≥ 18 ns	C 60 MHz BW 1 μHz to 30 MHz 1 μHz to 30 MHz	≥ 12 ns pulse width setting) ≤5 MHz: 2 ppm iaussian white noise 80 MHz BW	Typical (100 k+ + 300 ps, >5 MHz 100 MHz BW 1 μHz to 50 MHz	≥7 ns (limited by the pulse width setting) 1z, 1 Vpp) < 3 % 1300 ps (rms), typical (1 Vpp, 50 Ω) 120 MHz BW 1 µHz to 125 MHz	
Symmetry Pulse Wave Characteristics Period Pulse Width Duty Cycle Rise and Fall Time Overshoot Jitter Noise Wave Characteristics Types Bandwidth (3 dB) Harmonic Wave Characteristics Harmonic Number Frequency Range Harmonic Type Harmonic Typ	on creen Capacitive on sumption ture to Satisfy g Temperature Humidity on Category g Altitude	0.0 % to 100.0 % 200 ns to 1000 ks ≥ 48 ns 0.1 % to 99.9 % (limited by the frequency ≥ 32 ns (limited by the pulse with Typical (100 kHz, 1 Vpp) < 22 ns 25 MHz BW 1 µHz to 12.5 MHz Odd, even, sequential, custom Each harmonic amplitude can be set Each harmonic phase can be set Each harmonic phase can be set Support type: count (1 to 1000,000 cycle Support type: count (1 to 1000,000 mHz to 20 Support type: count (1 to 1000,000 cycle Support type: count (1 to 1000,000 cycle Support in type: count (1 to 1000,000 cycle Support type: Linear, logarithmic Support Support type: count (1 to 1000,000 cycle Sup	cy setting) 1th setting) 5 % C, BPSK, QPSK, FSK es), Infinite, gated 00 MHz v syn, align phase ger input, External of	\$6.667 ns to 1000 kc ≥ 18 ns ≥ 18 ns ≥ 18 ns	C 60 MHz BW 1 μHz to 30 MHz 1 μHz to 30 MHz	≥ 12 ns pulse width setting) ≤5 MHz: 2 ppm iaussian white noise 80 MHz BW	Typical (100 k+ + 300 ps, >5 MHz 100 MHz BW 1 μHz to 50 MHz	≥7 ns (limited by the pulse width setting) 1z, 1 Vpp) < 3 % 1300 ps (rms), typical (1 Vpp, 50 Ω) 120 MHz BW 1 µHz to 125 MHz	
Symmetry Pulse Wave Characteristics Period Pulse Width Duty Cycle Rise and Fall Time Overshoot Jitter Noise Wave Characteristics Types Bandwidth (-3 dB) Harmonic Wave Characteristics Harmonic Wave Characteristics Harmonic Wave Characteristics Harmonic Frequency Range Harmonic Type Harmonic Amplitude Harmonic Fines Harmonic Amplitude Harmonic Fines Harmonic Amplitude Harmonic Fines Harmonic Amplitude Harmonic Fines Harmonic Amplitude Harmonic June Harmonic Amplitude Harmonic Fines Characteristics Channel Coupling Input/ Output Characteristics Channel Coupling Input/ Output Characteristics Channel Coupling Input Output Ceneral Specifications Display Type Resolution Color Touch Scr Communication Interface Power Operating Environment Operating Environment Operating Relative H Installatio Operating Operating Operating Relative H Installatio Operating Operat	on reen Capacitive on sumption ture to Satisfy g Temperature Humidity on Category g Altitude	0.0 % to 100.0 % 200 ns to 1000 ks ≥ 48 ns ≥ 48 ns 0.1 % to 99.9 % (limited by the frequenc ≥ 32 ns (limited by the pulse wis Typical (100 kHz.1 Vpp) < < 2 ns 25 MHz BW 1 μHz to 12.5 MHz Odd, even, sequential, custom Each harmonic phase can be set Each harmonic phase can be set AM, DSB-AM, FM, PM, PWM, ASK, PSK Support type: Linear, logarithmic, Step Support type: Linear, logarithmic, Step Support type: count (1 to 1000,000 cycle Support type: Linear, logarithmic, Step Support type: Linear, logarithmic, Step Support type: Count (1 to 1000,000 cycle Support type: Linear, logarithmic, Step Support type: Linear, logarithmic, Step Support type: Lount (1 to 1000,000 cycle Support special type: count (1 to 1000,000 cycle Support special type: count (1 to 1000,000 cycle Support special type: count (1 to 1000,000 cycle Support type: Linear, logarithmic, Step Support t	cy setting) 1th setting) 5 % (, BPSK, QPSK, FSK es), Infinite, gated 00 MHz 7 syn, align phase ger input, External of	\$6.667 ns to 1000 kc ≥ 18 ns ≥ 18 ns ≥ 18 ns	C 60 MHz BW 1 μHz to 30 MHz 1 μHz to 30 MHz	≥ 12 ns pulse width setting) ≤5 MHz: 2 ppm iaussian white noise 80 MHz BW	Typical (100 k+ + 300 ps, >5 MHz 100 MHz BW 1 μHz to 50 MHz	≥7 ns (limited by the pulse width setting) 1z, 1 Vpp) < 3 % 1300 ps (rms), typical (1 Vpp, 50 Ω) 120 MHz BW 1 µHz to 125 MHz	

Note: *1. The User's available range of the sample rate is from 1 μ Sa/s to 75 MSa/s. (AFG-4125E/4125AE/4225E is from 1 μ Sa/s to 30 MSa/s) *2. Not specifically labeled, the load defaults to 50 Ω. *3. DC offset set to zero.

Specifications subject to change without notice. AFG-4000D1_E_DS_202502

ORDERING INFORMATION

AFG-4125E
AFG-4125AE
AFG-4225E
AFG-4225E
AFG-4235
AFG-4260
AFG-4280
AFG-4280
AFG-4210H
AFG-4225H
AFG-4225H
AFG-4225H
AFG-4225H
AFG-4225H
AFG-4225H
AFG-4225H
AFG-4225H
AFG-4260
AFG-4270H

ACCESSORIES

USB Cable x 1, Power Cord x 1

 $\label{eq:AFG-4125E-4125AE:} \mbox{Test Lead, BNC to Alligator Clips Cable x 1} \mbox{AFG-4225E-4235: Test Lead, BNC to Alligator Clips Cable x 2} \mbox{AFG-4260/4280/4210H/4225H: Test Lead, BNC Cable x 2} \mbox{}$

OPTIONAL ACCESSORIES

GTL-101 Test Lead, BNC (P/M) to Alligator, approx. 1100 mm
GTL-110 BNC Cable, BNC (P/M) to BNC (P/M), approx. 1000 mm



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