







DSO4004C Series

4CH oscilloscope, with 1CH Arbitrary/function waveform generator, independent keys of oscilloscope and waveform generator which is easy to operate at the same time.. 80-250MHz bandwidth, minimum measurement range 500 μ V /div , 1GS/s sample rate , advanced digital trigger system, high trigger sensitivity, low trigger jitter , high resolution 7 inch 64K color TFT (800*480)

Model	DSO4254C	DSO4204C	DSO4104C	DSO4084C
Bandwidth	250MHz	200MHz	100MHz	80MHz
Horizontal				
Sample Rate Range	1GS/s			
Waveform Interpolation	(sin x)/x			
Record Length	Maximum 64K samples per single-channel;			
	Maximum 32K samples per dual-channel (4K, 32K optional)			
SEC/DIV Range	2ns/div~100s/div			
	1, 2, 5 sequence			
Sample Rate and Delay Time Accuracy	\pm 50ppm			
Delta Time Measurement Accuracy (Full Bandwidth)	Single-shot, Normal mode \pm (1 sample interval +100ppm \times reading + 0.6ns)			
	>16 averages \pm (1 sample interval + 100ppm \times reading + 0.4ns)			
	Sample interval = s/div \div 200			
Vertical				
AD Converter	8-bit resolution, each channel sampled simultaneously			

VOLTS/DIV Range	500 μ V/div to 10V/div at input BNC			
Position Range	500 μ V/div~20mV/div, \pm 400mV			
	50mV/div~200mV/div, \pm 2V			
	500mV/div~2V/div, \pm 40V			
	5V/div~10V/div, \pm 50V			
Selectable Analog Bandwidth Limit, typical	20MHz			
Low Frequency Response (-3db)	\leq 10Hz at BNC			
Rise Time at BNC, typical	DSO4254C	DSO4204C	DSO4104C	DSO4084C
	<1.4ns	\leq 1.8ns	<3.5ns	\leq 4.4ns
DC Gain Accuracy	\pm 3% for Normal or Average acquisition mode, 10V/div to 10mV/div			
	\pm 4% for Normal or Average acquisition mode, 5mV/div to 500 μ V/div			
	Note: Bandwidth reduced to 6MHz when using a 1X probe.			
Acquisition				
Acquisition Modes	Normal, Peak Detect, Average and HR			
Acquisition Rate, typical	Up to 2000 waveforms per second per channel (Normal acquisition mode, no measurement)			
Single Sequence	Acquisition Mode	Acquisition Stop Time		
	Normal, Peak Detect	Upon single acquisition on all channels simultaneously		
	Average	After N acquisitions on all channels simultaneously, N can be set to 4, 8, 16, 32, 64 or 128		
Trigger				
Mode	Auto, Normal			
Level	CH1~CH4	\pm 4 divisions from center of screen		
	EXT	0~3.3V		
Holdoff Range	20ns ~ 10s			
Trigger Level Accuracy	CH1~CH4	0.2div \times volts/div within \pm 4 divisions from center of screen		
	EXT	\pm (6% of setting + 40mV)		
Edge Trigger				

Slope	Rising, Falling, Rising&Falling
Source	CH1~CH4/EXT
Pulse Width	
Polarity	Positive, Negative
Condition(When)	<, >, ≠, =
Source	CH1~CH4
Width Range	8ns ~ 10s
Resolution	8ns
Video Trigger	
Signal Standard	NTSC, PAL
Source	CH1~CH4
Sync	ScanLine, LinrNum, OddField, EvenField and AllField
Slope Trigger	
Slope	Rising, Falling
Condition(When)	<, >, ≠, =
Source	CH1 ~ CH4
Time Range	8ns ~ 10s
Resolution	8ns
Overtime Trigger	
Source	CH1~CH4
Polarity	Positive, Negative
Time Range	8ns ~ 10s
Resolution	8ns
Window Trigger	
Source	CH1~CH4
Pattern Trigger	
Pattern	0: Lower level; 1: High level;

Level	CH1~CH4
Interval Trigger	
Slope	Rising, Falling
Condition(When)	<, >, ≠, =
Source	CH1~CH4
Time Range	8ns ~ 10s
Resolution	8ns
Under Amp	
Polarity	Positive, Negative
Condition(When)	<, >, ≠, =
Source	CH1~CH4
Time Range	8ns ~ 10s
Resolution	8ns
UART Trigger	
Condition(When)	Start, Stop, Data, Parity Error, COM Error
Source(RX/TX)	CH1~CH4
Data format	Hex
Condition(When)	<, >, ≠, =
Data Length	1 byte
Data Length	5 bit, 6 bit, 7 bit, 8 bit
Parity Check	None, Odd, Even
Idle Level	High, Low
Baud Rate(Selectable)	110/300/600/1200/2400/4800/9600/14400/19200/38400/57600/115200/230400/380400/460400 bit/s
Baud Rate (Custom)	300bit/s~334000bit/s
LIN Trigger	
Condition(When)	Interval Field, Sync Field, Id field, Sync Id Error, Identifier, Id and Data
Source	CH1~CH4
Data format	Hex

Baud Rate (Selectable)	110/300/600/1200/2400/4800/9600/14400/19200/38400/57600/115200/230400/380400/460400 bit/s
Baud Rate (Custom)	300bit/s~334000bit/s
CAN Trigger	
Condition(When)	Start Bit, Remote Frame, Data Frame Id, Frame Id, Data Frame Id A, Error Frame, All Error, Ack Error, Overload Fram
Source	CH1~CH4
Data format	Hex
Baud Rate (Selectable)	10000, 20000, 33300, 500000, 62500, 83300, 100000, 125000, 250000, 500000, 800000, 1000000
Baud Rate (Custom)	5kbit/s~1Mbit/s
SPI Trigger	
Source (CS/CLK/Data)	CH1~CH4
Data format	Hex
Data Length	4, 8, 16, 24, 32
IIC Trigger	
Source (SDA/SCL)	CH1~CH4
Data format	Hex
Data Index	0~7
When(Condition)	Start, Stop, No Ack, Address, Data, Restart
Inputs	
Input Coupling	DC,AC or GND
Input Impedance, DC coupled	20pF±3 pF, 1MΩ±2%
Probe Attenuation	1X,10X
Supported Probe Attenuation Factors	1X, 10X, 100X, 1000X
Overvoltage Category	300V CAT II
Maximum Input Voltage	300V _{RMS} (10X)
Measurements	
Cursors	Voltage difference between cursors: ΔV

	Time difference between cursors: ΔT Reciprocal of ΔT in Hertz ($1/\Delta T$)	
Automatic Measurements	Frequency, Period, Average, Pk-Pk, RMS, PeriodRms, Min, Max, RiseTime, FallTime, + Width, - Width, + Duty, - Duty, Vbase, Vtop, Vmid, Vamp, Overshoot, Preshoot, PeriodAvg, FOVShoot, RPREShoot, BWidth, FRR, FFF, FRF, FFR, LRR, LRF, LFR and LFF	
General Specifications		
Display		
Display Type	7 inch 64K color TFT (diagonal liquid crystal)	
Display Resolution	800 horizontal by 480 vertical pixels	
Display Contrast	Adjustable	
Probe Compensator Output		
Output Voltage, typical	About 2Vpp into $\geq 1M\Omega$ load	
Frequency, typical	1kHz	
Power Supply		
Supply Voltage	100-120VACRMS($\pm 10\%$), 45Hz to 440Hz, CAT II 120-240VACRMS($\pm 10\%$), 45Hz to 66Hz, CAT II	
Power Consumption	<30W	
Fuse	T, 3.15A, 250V, 5x20mm	
Environmental		
Operating Temperature	0~50 °C (32~122 °F)	
Storage Temperature	-40~+71 °C (-40~159.8 °F)	
Humidity	$\leq +104^{\circ}\text{F}(\leq +40^{\circ}\text{C})$: $\leq 90\%$ relative humidity	
	106°F~122°F (+41°C ~50°C): $\leq 60\%$ relative humidity	
Cooling Method	Convection	
Altitude	Operating and Nonoperating	3,000m (10,000 feet)
	Random Vibration	0.31g _{RMS} from 50Hz to 500Hz, 10 minutes on each axis
		Nonoperating

		10 minutes on each axis
Mechanical Shock	Operating	50g, 11ms, half sine
Mechanical		
Dimension	318 x 110 x 150mm(L x W x H)	
Weight	2900g	

Arbitrary Waveform Generator Mode	
Waveform Frequency	Sine: 0.1Hz~25MHz Square: 0.1Hz~10MHz Ramp: 0.1Hz~1MHz EXP: 0.1Hz~5MHz
Amplitude	5mV~3.5Vp-p(50Ω) 10mV~7Vp-p(High impedance)
DAC	2K~200MHz adjustable
Frequency Resolution	0.001
Channel	1CH waveform output
Waveform Depth	4KSa
Vertical Resolution	12 bit
Frequency Stability	<30ppm
Output Impedance	50 Ω