

DSO4004B Series 4CH oscilloscope 80-250MHz bandwidth



- 4CH oscilloscope+EXT+DVM+auto range function
- 80-250MHz bandwidth, minimum range 500 μ V /div, 1GS/s sample rate.
- Over 32 types of auto measurement function
- Advanced digital trigger system, high trigger sensitivity.
- Over 14 types of trigger function: edge, overtime, pulse, pattern, interval, etc.
- Integrated USB Host/Device, convenient to communicate with PC. Support U-stick storage/system update.
- Support a variety of SCPI remote control command
- Support optional RS232 port, LAN port
- Stable and reliable quality, sturdy and durable.

Model	DSO4254B	DSO4204B	DSO4104B	DSO4084B
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	± 50 ppm			
Delta Time Measurement Accuracy	Single-shot, Normal mode $\pm (1 \text{ sample interval} + 100\text{ppm} \times \text{reading} + 0.6\text{ns})$ >16 averages			
(Full Bandwidth)	$\pm (1 \text{ sample interval} + 100\text{ppm} \times \text{reading} + 0.4\text{ns})$ 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	DSO4254B	DSO4204B	DSO4104B	DSO4084B
	<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, DataFrame 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/ΔT)	
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 ≥1MΩ load	
Frequency, typical	1kHz	
Power Supply		
Supply Voltage	100-120VACRMS(±10%),45Hz to 440Hz, CAT II 120-240VACRMS(±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	≤+104°F(≤+40°C): ≤90% relative humidity	
	106°F~122°F (+41°C ~50°C): ≤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	2.46g _{RMS} from 5Hz to 500Hz 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	