Digital Storage Oscilloscope

Technical Data

MT2125

The MT2125 is a 25MHz portable oscilloscope and offers a dual channel digital storage oscilloscope with a sample rate of 100MS/s. The compact design and STN LCD colour display with 640*480 pixels makes it an excellent choice for replacement for traditional analogue oscilloscopes. The MT2125 has the same functions, features and accessories as that of the MT2160. The quality and competitive price of MT2125 makes it the ideal choice for assembly line and educational use in Schools, Colleges as well as Universities.

Features Include:

- 25MHz Bandwidth
- 100MS/s Sample rate
- 19cm STN LCD colour display with 640 x 480 Pixels
- Manual Cursor measurement
- 5 Automatic waveform measurements
- High speed screen update, saving 4 waveforms and setup parameters
- Trigger Modes Auto, Free Run, Single Shot, Edge Video
- Stores up to 6K Bytes per channel
- 400V (DC+AC Peak) maximum input power
- Communication to PC via USB Interface, software included
- Include 2 pieces by 1x10 probes

General Specifications

Display
Display Type	:	7.8" colour liquid crystal display
Display Resolution	:	640 (horizontal) X 480 (vertical) pixels
Display Color	:	256 colours

Output of the Probe Compensator
Output Voltage (Typical)	:	5V, with peak-to-peak value equal to or greater than 1MΩ of load
Frequency (Typical)	:	Square wave of 1KHz

Power
Mains Voltage	:	100 ~ 240 VAC RMS, 50Hz, CAT II
Power Consumption	:	< 15W
Fuse	:	1A, T class 250V
Battery		Optional

Environment
Operating Temperature	:	0°C ~ 40°C
Storage Temperature	:	-20°C ~ +60°C
Relative Humidity	:	≤ 90%
Operating Height	:	3000m
Non-Operating Height	:	15 000m
Cooling Method		Natural convection

Mechanical Specifications
Dimensions	:	350 X 157 X 103mm
Weight		1.6kg

Oscilloscope Functions

AQUISITION	
Sample Rate	100MS/s

INPUT	
Input Coupling	DC, AC, Ground
Input Impedance	1MΩ±2% connected in parallel with 20pF±5pF
Probe Attenuation Coefficient	1X, 10X, 100X, 1000X
Max Input Voltage	300V (PK-PK) (DC + AC PK-PK)

HORIZONTAL	
Sampling Rate	10S/s ~ 100MS/s
Interpolation	(sinx) /x
Record Length	5K points on each channel
Scanning Speed (S/div)	5ns/div ~ 100s/div, step by 1 ~ 2.5 ~ 5
Sampling Rate / Relay Time Accuracy	100ppm
Interval ($\triangle$ T) Accuracy (DC ~ 100MHz)	Single: ±(1 sampling interval time + 100ppmXreading+0.6ns) > Average 16: ±(1 interval time + 100ppmXreading+0.4ns)

VERTICAL	
Analogue Digital Converter (A/D)	8 bits resolution (2 channels simultaneously)
Sensitivity (V/div)	5mV/div ~ 5V/div (at input)
Displacement Range	±10div (5mV/div ~ 5V/div)
Simulative Bandwidth	60M
Single Bandwidth	Full bandwidth
Low Frequency	≥5Hz (at input, AC coupling, -3dB)
Rise Time (at input, typical)	≤ 14ns
DC Accuracy	±3%
DC Accuracy (average)	The voltage difference ($\triangle$ V) between any two points on the waveform after averaging the captured waveforms more than 16: ±(5%reading+0.05 divisions)

TRIGGER		
Type	Edge	Rising, Falling
	Video	Line synchronisation, Field synchronisation, odd field. even field, any line
Edge Trigger	Sensitivity	Adjustable: 0.2div~1.0div
Coupling		DC, AC LF Rjc, Hf Rjc
Trigger Lever Range	Internal	±6 divisions from the screen center
	EXT	±600mV
	EXT / 5	±3V
Trigger Level Accuracy (typical)	Internal	±0.3 div
	EXT	± (40mV + 6% of set value)
	EXT / 5	± (200mV + 6% of set value)
Horizontal Trigger Displacement		655 divisions for pre triggering and 4 divisions for post triggering
Trigger Holdoff Range		100ns~10ns
50% Level Setting (typical)		Input signal frequency ≥50Hz
Trigger Sensitivity (video trigger, typical)	Internal	2 divisions of peak-to-peak value
	EXT	±400mV
	EXT / 5	2V
Signal System		NTSC, PAL and SECAM (any frequency)
Alternate Trigger	CHI1	Edge, video
	CHI2	Edge, video

MEASUREMENT		
Cursor		$\triangle V$ and $\triangle T$ between cursors
Automatic		Peak-to-peak value, average value, RMS, frequency period, Vmax, Vmin, Vtop, Vbase, Vamp, Overshoot, Preshoot, RiseTime, FallTime, +width, -width,+duty, -duty, delayA -› B ⬏ and delayA -› B ⬎
Waveform Math		+, -, Invert, FFT
Waveform Storage		4 Waveforms
Lissajou's Figure	Bandwidth	Full bandwidth
	Phase Difference	±3 degrees
Communication Port		USB1.1 or RS-232