

MEMORY ARRAY TESTER (8 CHANNEL) SETUP

Technical specifications

The Test Bed includes Memory Array Testing facility with 8 Channel Pulse Generator and Analyzer using digital storage oscilloscope.

Sl. No.	Parameters/Particulars	Technical Specifications
Arbitrary waveform/pulse Generator		
1	Pulse Generation	It should have pulse generation capabilities.
2	Number of Channels	Minimum 8 Channels (If units are separate then Synchronization method should be provided)
3	Rise Time/fall time	≤ 2 ns or better
4	Pulse Width	minumum 3 ns upto few 10s of seconds
5	Resolution	10 ps or better
6	Duty cycle adjustment	0.001% to 99.999%
7	Amplitude Output range	≤ 200 MHz: minimum 1 mVpp to 5 Vpp or above > 200 MHz to ≤ 250 MHz: 1 mVpp to 4 VP-P
8	Harmonic Distortion (1Vp-p)	≤ -37 dBc or better
9	THD (10Hz–20kHz,1Vp-p)	$\leq 0.4\%$ or better
10	Spurious (1Vp-p)	≤ -75 dBc + 6 dB octave or better
11	Jitter (RMS)	≤ 2.5 ps or better
12	Phase Noise @ 20MHz 10 KHz Offset, 1 Vp-p	< -125 dBc/Hz
13	DAC Resolution	14 Bits or better
14	DAC Sample Rate	1 Sa/s to 2 GSa/s
15	Resolution	12 Digits
16	Memory Depth	16 Mpts or better
17	Waveform Granularity	1 point
18	Screen Size	≥ 9 inches with touchscreen
Analyzer/Digital storage oscilloscope		
19	Number of Channels	8 Synchronized channels or above (If units are separate then Synchronization method should be available.)
20	Sample Rate; bandwidth	12.5 GSa/s on all 8 Channels; 2.5 GHz or above
21	Rise Time	≤ 160 ps or better
22	Record Length	≥ 60 MPoints on all analog channels or better
23	ADC/Vertical Resolution	12 Bits, 16 Bits with High Resolution Mode
24	Input Coupling & Impedance	DC (50 Ω), 1 M Ω
25	Noise level for Channels	52 uV or better

26	DC Gain Accuracy @10mV/div	$\leq \pm 2.0\%$ of full scale
27	Maximum Timebase setting	Up to 1000 sec/div
28	Waveform Capture Rate	500,000 wfm/sec in Real Time capture mode
29	Trigger types	Auto, Normal, Single Edge, Glitch, Width, Runt, Window zone trigger on all the channels
30	Trigger Rate in Segmented Mode	200 ns or better
31	Vertical sensitivity	1 M Ω : 500 μ V/div to 10 V/div in a 1-2-5 sequence 50 Ω : 1 mV/div to 1 V/div in a 1-2-5 sequence
32	Acquisition mode	Sample, Peak Detect, High Resolution, Faster Acquisition, Envelope, Averaging
33	Segmented Mode	Maximum trigger rate >5,000,000 waveforms per second
34	Overlay of frames	All the captured segments should be superimposed on each other for pulse variation analysis.
35	Measurements	Rise/Fall Time, Skew, Period/Frequency, Data Rate, Positive/Negative Width, Positive/Negative Overshoot, Phase Noise, Time Interval Error With simultaneous at least 32 measurements of pulse.
36	Measurement Analysis	Histogram, Time trend, Spectrum Plots
37	Search & Mark	It should be available and should be to find min & max for debug.
38	Spectrum Analysis	It should have also Digital Down Converter based frequency domain analysis.
39	Span setting	1KHz to 1GHz
40	Analysis	Both Time & Frequency domain should be available simultaneously.
41	Result Table	Search Result table & Measurement Result Table
42	Report Generation	It should be available.
43	Temperature	5 °C to 40 °C
44	Power	230V AC, 50-60 Hz
45	Accessories	Quote for following accessories: BNC to SMA Adapter – 8 nos SMA Phase Matched Cable Pair – 2 nos BNC to BNC Cable – 8 nos
46	Warranty	3 years

ELIGIBILITY CRITERIA:

- OEM should have authorized service centre in India, functioning minimum for 10 years to provide repair, maintenance, calibration and upgradation facility (OEM should provide necessary service of operation certificate).

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- The Bidder's firm should be registered in India. (Necessary document proof should be submitted).
- They should have at least 10 users in the south region of India in the last 5 years. Necessary document proof should be submitted along with contact details of at least 5 users.
- There should be a minimum of 5 users of the quoted model and its variants.