INDIAN INSTITUTE OF TECHNOLOGY BOMBAY
MATERIALS MANAGEMENT DIVISION
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Ref. PR No. 1000051408 Rfx. No. 6100002523

Item Description – **Oscilloscope and High Voltage Probes (Qty: 1)**

Sr. No	Parameters	Detailed Technical Specification	Technical Compliance (Yes / No)	Additional Information (if any)
1.	**Oscilloscope (Qty: 1 No.)**	1. Bandwidth: 500 MHz on all 8 analog channels (upgradeable up to 6 GHz via software license)		
		2. Analog Channels: 8		
		3. Analog Sample rate: 16 GSa/s on all analog channels simultaneously		
		4. Maximum Analog channels record length: Standard 100 Mpts per channel		
		5. ADC bits: 10-bit standard, up to 16bits effective with high-resolution mode and hardware filtering		
		6. Noise: 43 µV @ 20 MHz, 1, 2 mV/div 73 µV @ 1 GHz, 1, 2 mV/div		
		7. ENOB: 9.0 @ 20 MHz and 8.0 @ 1 GHz		
		8. Intrinsic Jitter: 118 femtoseconds @ 100 ns/div		
		9. Rise Time (10 to 90%): 430 ps		
		10. Waveform update rate: > 200,000 waveforms/sec		
		11. Input sensitivity range: 50 Ω - 1 mV/div to 1 V/div 1 MΩ - 1 mV/div to 5 V/div		
		12. DC vertical gain accuracy: ± 2% full scale (±1% typical)		
		13. Input Impedance: 50 Ω - ± 3.5% (typically ± 1% at 25 °C) 1 MΩ - ± 1% (14 pF typical)		

		14. Input coupling: DC, AC (both)		
		15. Maximum input voltage: 50 Ω - ± 5 VMAX 1 1 MΩ - 30 VRMS or ± 40 VMAX (DC + VPEAK)		
		16. Time base range: Roll mode 50 ms/div to 1000 s /div Other modes 5 ps/div to 200 s/div Zoom window 1 ps/div to current main time scale setting		
		17. Time base accuracy: ± (8 ppb initial + 75 ppb/year aging)		
		18. Minimum detectable pulse width: 2 ns		
		19. Acquisition mode: Normal, Peak Detect, Averaging, High Resolution, Roll Mode, Sample, Envelope		
		20. Trigger Types: Edge, Pulse width, video, pattern/state, External, Zone Qualified triggering, runt, setup/hold, pattern, burst		
		21. Trigger jitter: 4 channel models: 523 fsRMS 8 channel models: 531 fsRMS		
		22. Averaging (wfm/s): > 12,000 waveforms/sec		
		23. Measurements (meas/s): > 300,000		
		24. Eye plotting (UI/s): > 750,000 Unit Intervals per second		
		25. Display: 15.6” capacitive multi-touch, Full HD (1920x1080)		
		26. Connectivity: USB 2.0, USB 3.0 x2, Ethernet, HDMI		
		27. Operating system: Windows 10		
		28. CPU: Intel Core i5-6500, 3.2 GHz		
		29. System memory: 8 GB		
		30. Hard drives: 500 GB removeable SSD, upgradeable to 1 TB SSD, additional of either are available		
		31. Peripherals: Optical USB mouse and full-size keyboard provided		
		32. Power: 100 to 120 V @ 50/60/400 Hz 100 to 240 V @ 50/60 Hz		
		33. Probe Included: Passive Probe, 10:1, 500 MHz N2873A per channel		
		34. Warranty: 3 Years		
		35. Delivery: 8-10 Weeks		

2.	**Voltage Probe (Qty: 8 Nos)**	**1.** Differential Measurable Voltage: ±140 V (DC + Peak AC) at 50× ±1400 V (DC + Peak AC) at 500×		
		2. Bandwidth (–3 dB): 100 MHz or higher		
		3. Attenuation: 50:1 / 500:1		
		4. AC CMRR: –80 dB at 50/60 Hz –50 dB at 1 kHz –50 dB at 1 MHz		
		5. Propagation Delay: 14 ns at 50:1		
		6. Input R/C (each input to ground): 4 MΩ // 7 pF 8 MΩ // 3.5 pF		
		7. Scope's Input Impedance: 1 MΩ		
		8. Input-Referred Noise: < 50 mV (at 50×) < 300 mV (at 500×)		
		9. Interface: Auto probe		
		10. Accessories Included: AC adapter for probe supply (if needed) Extender leads, hook clips, pincer clips, and alligator clips		
		11. Warranty: 1 year		
		12. Delivery: 8-10 Weeks		
3.	**Current Probe (Qty: 2 Nos)**	**1.** Frequency Range: DC to 100 MHz		
		2. Peak Current: 50 A		
		3. RMS Current: 30 A AC/DC		
		4. Minimum Current: 5 mA		
		5. Rise Time: 3.5 ns or less		
		6. Output Voltage Rate: 0.1 V/A (10:1)		
		7. Noise: 2.5 mArms or less		
		8. Amplitude Accuracy: ±1.05% of reading (±10 mA)		
		9. Power Supply: Included to support both probes		
		10. Warranty: 1 year		
		11. Delivery: 8-10 Weeks		