

Modified Technical Specifications for Semiconductor Parametric Analyzer:

Semiconductor Device Analyzer to support of 8 slot modules and including proper ground unit with High Power Source Measure Unit, High Resolution Source Measure Unit, Medium Power Source Measure Units (as applicable) & Capacitance Measure Unit for I-V and C-V measurements. It should support Industry standard device modeling software and parameter extraction software with desired specifications mentioned below.

1	Medium Power source Measure Unit's Range & Resolution	10pA / 0.5μV to 100mA/100V or better (Quote per module)
2	High Power Source Measure Unit's Range & Resolution	10pA / 2μV or better to 1A/200V or better
3	Ground Unit (Output Voltage)	0V ±100μV or better
4 (a)	Manual Sweep Control Mode	Instantaneous control of sweep parameter manually to stress the device beyond the specified limits & safeguarding the device,
(b)	Sweep Measurements	SMU's should support range management feature that can prevent damage to sensitive devices when making sweep measurements.
5	IV Sweep Mode	Single & double Staircase sweep, Pulsed sweep, staircase sweep with pulsed bias, IV sampling, CV, C-t Sweep, C-f Sweep. (List sweep Linear & log interval, and stop condition, bias hold and negative hold time).
6	IV Sampling Capability	1ms and 100μS in Fast sampling, linear and log sampling
7	QSCV Measurement	Quasi Static CV measurement with leak compensation.
8	CV measurement function	Cp-G, Cp-D, Cp-Q, Cp-Rp, Cs-Rs, Cs-D, Cs-Q, R-X, G-B, Z-θ, Y-θ <u>Lp-G, Lp-D, Lp-Q, Lp-Rp, Ls-Rs, Ls-D, Ls-Q</u> (Optional)
9	CV Measurement Test Signal Frequency	1kHz to 5MHz with preferred 1mHz resolution or better and accuracy of +/-0.2%
10	CV Measurement Range	10mV to 250mV with 1mVrms resolution.
11	IV CV measurement switching	CV measurement range up to bias of ±100V or better Switching unit to switch between SMUs & CMU, to do IV & CV measurement without physically changing the connection.
12	Analysis Function	Normal mode, grad mode, tangent mode, and regression mode Lines. Automatic locating markers using the auto analysis setup. Parameters can be automatically determined using automatic analysis, user function, and read out functions.
13	Pulsed IV Measurement Capability	2 Pulse output Channels, Force & Voltage Waveform Monitor output. Curr & Volt range in Fast IV Mode ±10V & 10mA Pulse Period & Accuracy Minimum 100ns with in ±1% Sampling Rate 5ns to 1S variable.
14	Interfaces	GPIO, interlock, USB, LAN, trigger in/out, digital I/O
15	Offline software	Offline Desktop Software for data analysis & setup creation.
16	Application Libraries	Application libraries for testing CMOS, FET BJTs, Diode, solar cell etc.
17	Test Fixture	Test fixture to be furnished with the dual-in-line package socket module, universal socket modules, and connection wires for device connection (preferred) .
18	Operating System	Windows 7 or latest.
19	Control from Remote PC	FLEX, VXI plug & play & Built in Graphical Programming environment.
20	Future Upgradable	Upgradable for pulsed IV Measurement & for High Power devices. High current device measurement above 100A High Voltage device measurement above 3000V (preferred)
21	User Interface Options	<i>Touch panel display</i> , knob, soft keys, USB keyboard & mouse
22	Device Modeling software, Instruments & Prober support	Hardware should support device modeling software like IC-CAP, Network Analyzer, LCR Meters, Pulse Generators & must be able to control standard Prober system (preferred)
23	Warranty	<i>1 years Standard+2 years additional</i>
24	Product should be CE Certification	