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Laboratory Name :	ELECTRONICS REGIONAL TEST LABORATORY (NORTH), S BLOCK OKHLA PH-II, NEW DELHI, DELHI, INDIA		
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S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
Permanent Facility					
1	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	1 Phase 2 wire AC Active Energy @ 45 Hz to 65 Hz (63.5 V to 550 V, 5 mA to 100 A, 0.5 (Lead/Lag) to UPF)	Using Power Energy Standard by Direct Method	1.59 Wh to 55 kWh	0.011 % to 0.032 %
2	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	1 Phase 2 wire AC Active Power @ 45 Hz to 65 Hz (63.5 V to 550 V, 5 mA to 100 A, 0.5 (Lead/Lag) to UPF)	Using Power Energy Standard by Direct Method	1.59 W to 55 kW	0.011 % to 0.032 %
3	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	1 Phase 2 wire AC Apparent Power @ 45 Hz to 65 Hz (63.5 V to 550 V, 5 mA to 100 A, 0.5 (Lead/Lag) to UPF)	Using Power Energy Standard by Direct Method	3.18 VA to 55 kVA	0.011 % to 0.032 %
4	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	1 Phase 2 wire AC Reactive Energy @ 45 Hz to 65 Hz (63.5 V to 550 V, 5 mA to 100 A, 0.5 (Lead/Lag) to UPF)	Using Power Energy Standard by Direct Method	3.18 VArh to 55 kVArh	0.011 % to 0.032 %

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5	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	1 Phase 2 wire AC Reactive Power @ 45 Hz to 65 Hz (63.5 V to 550 V, 5 mA to 100 A, 0.5 (Lead/Lag) to UPF)	Using Power Energy Standard by Direct Method	1.59 VAr to 55 kVAr	0.011 % to 0.032 %
6	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	1 phase AC Apparent Power (2 wire) @ 45 Hz to 65 Hz (63.2 V to 550 V, 5 mA to 100 A, 0.1(Lead/Lag) to UPF)	Using Power Energy Std by Direct Method	3.18 VA to 55 kVA	0.011 % to 0.032 %
7	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	3 phase 4 wire AC Active Energy @ 45 Hz to 65 Hz (63.5 V to 550 V, 5 mA to 100 A, 0.5 (Lead/Lag) to UPF)	Using Power Energy Standard by Direct Method	4.77 Wh to 165 kWh	0.011 % to 0.032 %
8	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	3 phase 4 wire AC Active Power @ 45 Hz to 65 Hz (63.5 V to 550 V, 5 mA to 100 A, 0.5 (Lead/Lag) to UPF)	Using Power Energy Standard by Direct Method	4.77 W to 165 kW	0.011 % to 0.032 %
9	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	3 phase 4 wire AC Apparent Power @ 45 Hz to 65 Hz (63.5 V to 550 V, 5 mA to 100 A, 0.5 (Lead/Lag) to UPF)	Using Power Energy Standard by Direct Method	9.54 VA to 165 kVA	0.011 % to 0.032 %

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10	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	3 phase 4 wire AC Reactive Energy @ 45 Hz to 65 Hz (63.5 V to 550 V, 5 mA to 100 A, 0.5 (Lead/Lag) to UPF)	Using Power Energy Standard by Direct Method	4.77 VArh to 165 kVArh	0.011 % to 0.032 %
11	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	3 phase 4 wire AC Reactive Power @ 45 Hz to 65 Hz (63.5 V to 550 V, 5 mA to 100 A, 0.5 (Lead/Lag) to UPF)	Using Power Energy Standard by Direct Method	4.77 VAr to 165 kVAr	0.011 % to 0.032 %
12	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	AC Current @ 10 Hz to 10 kHz	Using Current Shunt, AC-DC Transfer Std, AC Measurement Std & DMM by Comparison Method	1 A to 20 A	0.01 % to 0.02 %
13	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	AC Current @ 10 Hz to 10 kHz	Using Current Shunt, AC-DC Transfer Std, AC Measurement Std & DMM by Comparison Method	10 µA to 1 A	0.05 % to 0.015 %
14	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	AC Current @ 45 Hz to 1 kHz	Using DMM & Shunt by V / I Method	20 A to 100 A	0.02 % to 0.1 %

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15	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	AC Current @ 45 Hz to 400 Hz	Using AC Current Probe with DMM by Direct Method	10 A to 1000 A	0.1 % to 1 %
16	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	AC High Voltage @ 50 Hz	Using HV Probe with DMM by Direct Method	1 kV to 28 kV	0.71 % to 1 %
17	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	AC Voltage @ 10 Hz to 1 MHz	Using DMM, AC-DC Transfer Std, AC Measurement Std by Direct Method	22 mV to 700 mV	0.01 % to 0.002 %
18	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	AC Voltage @ 10 Hz to 1 MHz	Using DMM, AC-DC Transfer Std, AC Measurement Std by Direct Method	2 mV to 22 mV	0.13 % to 0.01 %
19	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	AC Voltage @ 10 Hz to 1 MHz	Using DMM, AC-DC Transfer Std, AC Measurement Std by Direct Method	700 mV to 22 V	0.014 % to 0.005 %

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20	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	AC Voltage @ 10 Hz to 100 kHz	Using DMM, AC-DC Transfer Std, AC Measurement Std by Direct Method	22 V to 1000 V	0.002 % to 0.01 %
21	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	Capacitance @ 1 kHz	Using LCR Bridge / Meter, 4T Std Capacitor by Comparison Method	1 µF to 1 mF	0.02 % to 0.5 %
22	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	Capacitance @ 1 kHz	Using Capacitance Bridge, Std Capacitor by Comparison Method	1 pF to 1000 pF	0.02 % to 0.002 %
23	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	Capacitance @ 1 kHz	Using Capacitance Bridge, LCR Bridge, Std Capacitor, DMM by Comparison Method	1000 pF to 100 µF	0.002 % to 0.3 %
24	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	Inductance @ 1 kHz	Using LCR Digibridge, Std Inductor by Comparison Method	100 µH to 10 H	0.02 % to 0.052 %

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25	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	Inductance @ 1 kHz	Using Std Resistor and Std Capacitor (for 100 H Simulation) & LCR Digi bridge / Meter by Comparison Method	100 H	0.05 %
26	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	Power Factor (Lag/ Lead) @ 45Hz to 65Hz (10 V to 600 V, 1 mA to 200 A)	Using Digital Power Energy Meter, Power Energy Standard by Direct Method	0 to UPF	0.0004 PF
27	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	Resistance @ 1 kHz	Using AC / DC Std Resistor, Precision LCR Meter, LCR Digi Bridge by Comparison Method	1 ohm to 100 kohm	0.01 % to 0.02 %
28	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	3 phase 4 wire AC Active Power @ 45 Hz to 65 Hz (63.5 V to 550 V, 5 mA to 100 A, 0.5 (Lead/Lag) to UPF)	Using Power / Energy Calibrator with Current Amplifier, Power Energy Standard by Comparison Method	4.77 W to 165 kW	0.011 % to 0.032 %
29	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	1 Phase 2 wire AC Active Energy @ 45 Hz to 65 Hz (63.5 V to 550 V, 5 mA to 100 A, 0.5 (Lead/Lag) to UPF)	Using Power / Energy Calibrator with Current Amplifier, Power Energy Standard by Comparison Method	1.59 Wh to 55 kWh	0.011 % to 0.032 %

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30	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	1 Phase 2 wire AC Active Power @ 45 Hz to 65 Hz (63.5 V to 550 V, 5 mA to 100 A, 0.5 (Lead/Lag) to UPF)	Using Power / Energy Calibrator with Current Amplifier, Power Energy Standard by Comparison Method	1.59 W to 55 kW	0.011 % to 0.032 %
31	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	1 Phase 2 wire AC Apparent Power @ 45 Hz to 65 Hz (63.5 V to 550 V, 5 mA to 100 A, 0.5 (Lead/Lag) to UPF)	Using Power / Energy Calibrator with Current Amplifier, Power Energy Standard by Comparison Method	3.18 VA to 55 kVA	0.011 % to 0.032 %
32	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	1 Phase 2 wire AC Reactive Energy @ 45 Hz to 65 Hz (63.5 V to 550 V, 5 mA to 100 A, 0.5 (Lead/Lag) to UPF)	Using Power / Energy Calibrator with Current Amplifier, Power Energy Standard by Comparison Method	3.18 VArh to 55 kVArh	0.011 % to 0.032 %
33	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	1 Phase 2 wire AC Reactive Power @ 45 Hz to 65 Hz (63.5 V to 550 V, 5 mA to 100 A, 0.5 (Lead/Lag) to UPF)	Using Power / Energy Calibrator with Current Amplifier, Power Energy Standard by Comparison Method	1.59 VAr to 55 kVAr	0.011 % to 0.032 %
34	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	3 phase 4 wire AC Active Energy @ 45 Hz to 65 Hz (63.5 V to 550 V, 5 mA to 100 A, 0.5 (Lead/Lag) to UPF)	Using Power / Energy Calibrator with Current Amplifier, Power Energy Standard by Comparison Method	4.77 Wh to 165 kWh	0.011 % to 0.032 %

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35	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	3 phase 4 wire AC Apparent Power @ 45 Hz to 65 Hz (63.5 V to 550 V, 5 mA to 100 A, 0.5 (Lead/Lag) to UPF)	Using Power / Energy Calibrator with Current Amplifier, Power Energy Standard by Comparison Method	9.54 VA to 165 kVA	0.011 % to 0.032 %
36	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	3 phase 4 wire AC Reactive Energy @ 45 Hz to 65 Hz (63.5 V to 550 V, 5 mA to 100 A, 0.5 (Lead/Lag) to UPF)	Using Power / Energy Calibrator with Current Amplifier, Power Energy Standard by Comparison Method	4.77 VArh to 165 kVArh	0.011 % to 0.032 %
37	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	3 phase 4 wire AC Reactive Power @ 45 Hz to 65 Hz (63.5 V to 550 V, 5 mA to 100 A, 0.5 (Lead/Lag) to UPF)	Using Power / Energy Calibrator with Current Amplifier, Power Energy Standard by Comparison Method	4.77 VAr to 165 kVAr	0.011 % to 0.032 %
38	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	AC Current @ 10 Hz to 10 kHz	Using Multi Function Calibrator, Current Shunt, AC-DC Transfer Std, AC Measurement Std, DMM by Comparison Method	10 µA to 22 mA	0.1 % to 0.015 %
39	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	AC Current @ 10 Hz to 6 kHz	Using Trasconductance Amplifier & Multi Function Calibrator by Direct Method	20 A to 100 A	0.015 % to 0.2 %

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40	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	AC Current @ 40 Hz to 10 kHz	Using Multi Function Calibrator, Current Shunt, AC-DC Transfer Std, AC Measurement Std, DMM by Comparison Method	22 mA to 2.2 A	0.011 % to 0.013 %
41	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	AC Current @ 40 Hz to 10 kHz	Using Multi Function Calibrator, Current Shunt, AC-DC Transfer Std, AC Measurement Std, DMM by Comparison Method	2.2 A to 20 A	0.013 % to 0.015 %
42	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	AC Current @ 40 Hz to 65 Hz	Using Power / Energy Calibrator with Current Amplifier, Shunt, DMM by Comparison Method	100 A	0.2 %
43	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	AC Current @ 50 Hz	Using Multi Function Calibrator with Current Coil by Direct Method	10 A to 1000 A	0.1 % to 0.6 %
44	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	AC High Voltage @ 50 Hz	Using High Voltage Tester and High Voltage Probe with DMM by Comparison / Substitution Method	1 kV to 15 kV	1 %

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45	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	AC Resistance @ upto 1 kHz	Using Standard Reference AC/DC Resistor by Direct method	1 ohm to 10 kohm	0.003 % to 0.001 %
46	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	AC Resistance @ upto 1 kHz	Using Standard Reference AC/DC Resistor by Direct method	10 kohm to 100 kohm	0.001 % to 0.012 %
47	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	AC Voltage @ 10 Hz to 20 kHz	Using Multi Function Calibrator, AC-DC Transfer Std, AC Measurement Std by Comparison Method	2 mV to 220 mV	0.05 % to 0.004 %
48	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	AC Voltage @ 10 Hz to 20 kHz	Using Multi Function Calibrator, AC-DC Transfer Std, AC Measurement Std by Comparison Method	220 mV to 1000 V	0.004 % to 0.008 %
49	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	AC Voltage @ 20 kHz to 1 MHz	Using Multi Function Calibrator, AC-DC Transfer Std, AC Measurement Std by Comparison Method	2 mV to 220 mV	0.13 % to 0.008 %
50	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	AC Voltage @ 20 kHz to 1 MHz	Using Multi Function Calibrator, AC-DC Transfer Std, AC Measurement Std by Comparison Method	22 V to 220 V	0.004 % % to 0.05 %

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51	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	AC Voltage @ 20 kHz to 1 MHz	Using Multi Function Calibrator, AC-DC Transfer Std, AC Measurement Std by Comparison Method:	220 mV to 22 V	0.008 % to 0.05 %
52	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	AC Voltage @ 20 kHz to 100 kHz	Using Multi Function Calibrator, AC-DC Transfer Std, AC Measurement Std by Comparison Method	220 V to 600 V	0.005 % to 0.01 %
53	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	Capacitance @ 1 kHz	Using Standard Capacitor by Direct Method	0.001 µF	0.01 %
54	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	Capacitance @ 1 kHz	Using Standard Capacitor by Direct Method	0.001 µF	0.01 %
55	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	Capacitance @ 1 kHz	Using Standard Capacitor by Direct Method	0.01 µF	0.02 %
56	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	Capacitance @ 1 kHz	Using Standard Capacitor by Direct Method	0.1 µF	0.01 %

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57	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	Capacitance @ 1 kHz	Using Standard Capacitor by Direct Method	1 µF	0.02 %
58	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	Capacitance @ 1 kHz	Using Multi-Product Calibrator by Direct Method	1 µF to 100 µF	0.01 % to 0.3 %
59	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	Capacitance @ 1 kHz	Using 4 Terminal Std Capacitor by Direct Method	1 mF	0.25 %
60	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	Capacitance @ 1 kHz	Using Standard Capacitor by Direct Method	1 pF	0.006 %
61	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	Capacitance @ 1 kHz	Using 4 Terminal Std Capacitor by Direct Method	10 µF	0.25 %
62	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	Capacitance @ 1 kHz	Using 4 Terminal Std Capacitor by Direct Method	10 mF	0.25 %

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63	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	Capacitance @ 1 kHz	Using Standard Capacitor by Direct Method	10 pF	0.003 %
64	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	Capacitance @ 1 kHz	Using 4 Terminal Std Capacitor by Direct Method	100 µF	0.25 %
65	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	Capacitance @ 1 kHz	Using Standard Capacitor by Direct Method	100 pF	0.003 %
66	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	Capacitance @ 1 kHz	Using Standard Capacitor by Direct Method	1000 pF	0.073 %
67	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	Capacitance @ 10 kHz	Using Standard Capacitor by Direct Method	0.1 µF	0.25 %
68	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	Capacitance @ 10 kHz	Using Standard Capacitor by Direct Method	1 µF	0.1 %

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69	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	Capacitance @ 10 kHz to 1 MHz	Using Standard Capacitor by Direct Method	0.001 µF	0.1 %
70	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	Capacitance @ 10 kHz to 1 MHz	Using Standard Capacitor by Direct Method	1 pF	0.6 %
71	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	Capacitance @ 10 kHz to 1 MHz	Using Standard Capacitor by Direct Method	10 pF	0.2 %
72	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	Capacitance @ 10 kHz to 1 MHz	Using Standard Capacitor by Direct Method	100 pF	0.6 %
73	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	Capacitance @ 10 kHz to 1 MHz	Using Standard Capacitor by Direct Method	1000 pF	1 %
74	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	Capacitance @ 10 kHz to 100 kHz	Using Standard Capacitor by Direct Method	0.01 µF	0.1 %

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75	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	Capacitance @ 100 kHz	Using Standard Capacitor by Direct Method	0.1 µF	0.25 %
76	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	Capacitance @ 100 kHz	Using Standard Capacitor by Direct Method	1 µF	3.5 %
77	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	Inductance @ 1 kHz	Using Std Inductor by Direct Method	1 H	0.01 %
78	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	Inductance @ 1 kHz	Using Std Inductor by Direct Method	1 mH	0.012 %
79	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	Inductance @ 1 kHz	Using Std Inductor by Direct Method	10 H	0.03 %
80	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	Inductance @ 1 kHz	Using Std Inductor by Direct Method	10 mH	0.5 %

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81	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	Inductance @ 1 kHz	Using Std Inductor by Direct Method	100 µH	0.05 %
82	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	Inductance @ 1 kHz	Using Std Inductor by Direct Method	100 mH	0.01 %
83	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	Inductance @ 10 kHz to 100 kHz	Using Std Inductor by Direct Method	25 mH	0.41 %
84	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	Inductance @ 10 kHz to 100 kHz	Using Std Inductor by Direct Method	10 mH	0.5 %
85	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	Oscilloscope Calibration : Bandwidth	Using Oscilloscope Calibrator by Direct Method	50 kHz to 1.1 GHz	4.04 %

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86	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	Oscilloscope Calibration: Deflection Factor (Amplitude) - 1 Mohm @ 10 Hz to 50 kHz	Using Oscilloscope Calibrator by Direct Method	1 mV to 190 V	0.1 % to 0.2 %
87	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	Oscilloscope Calibration: Deflection Factor (Amplitude) - 50 ohm @ 10 Hz to 50 kHz	Using Oscilloscope Calibrator by Direct Method	1 mV to 5.56 V	0.1 % to 0.2 %
88	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	Oscilloscope Calibration: Time Base	Using Oscilloscope Calibrator by Direct Method	1 ns to 55 s	0.001 %
89	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	Power Factor (Lag /Lead) @ 45 Hz to 65 Hz (10 V to 600 V, 1 mA to 200 A)	Using Power / Energy Calibrator with Current Amplifier, Digital Power Energy Meter, Power Energy Standard by Comparison Method	0 to UPF	0.0004

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90	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source,Measure)	INDUCTANCE (1kHz)	Using Std Resistances and Std Capacitance for 100H Simulation, by Comparison Method	100 H	0.04%
91	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	DC Current	Using 8½ DMM, Standard Resistor by V / I Method	1 A to 20 A	0.0012 % to 0.005 %
92	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	DC Current	Using 8½ DMM, Standard Resistor by V / I Method	100 µA to 1 A	0.002 % to 0.0012 %
93	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	DC Current	Using 8½ DMM, Standard Resistor by V / I Method	100 nA to 100 µA	0.03 % to 0.002 %
94	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	DC Current	Using 8½ DMM, Std Shunt by V / I Method	20 A to 100 A	0.005 % to 0.035 %

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95	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	DC High Voltage	Using HV Probe with DMM by Direct Method	1 kV to 40 kV	0.05 % to 0.4 %
96	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	DC Power (1 V to 1000 V, 100 mA to 20 A)	Using Reference Multmeters & MFC by Comparison Method	100 mW to 20 kW	0.005 % to 0.01 %
97	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	DC Resistance (4 wire)	Using DC Comparator Resistance Bridge & Std Resistor by Comparison Method	10 kohm to 1 Gohm	0.00016 % to 0.004 %
98	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	DC Resistance (4 wire)	Using DC Comparator Resistance Bridge with High Current Range Extender, Std Resistor by Comparison Method	100 µohm to 100 mohm	0.1 % to 0.0004 %
99	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	DC Resistance (4 wire)	Using DC Comparator Resistance Bridge with High Current Range Extender, Std Resistor by Comparison Method	100 mohm to 10 kohm	0.0004 % to 0.00016 %

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100	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	DC Resistance @ 10V to 1000V	Using Digital Teraohmmeter by Direct Method	1 Gohm to 20 Gohm	0.004 % to 0.1 %
101	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	DC Resistance @ 10V to 1000V	Using Digital Teraohmmeter by Direct Method	20 Gohm to 100 Tohm	0.1 % to 1 %
102	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	DC Voltage	Using 8½ DMM, DC Ref Standard, Ref Divider by Comparison Method	0.1 mV to 100 mV	0.026 % to 0.0005 %
103	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	DC Voltage	Using 8½ DMM, DC Ref Standard, Ref Divider by Comparison Method	10 V to 1050 V	0.0001 % to 0.0005 %
104	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	DC Voltage	Using 8½ DMM, DC Ref Standard, Ref Divider by Comparison Method	100 mV to 10 V	0.0005 % to 0.0001 %
105	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Current	Using MFC, Std Resistor by V / I Method	10 µA to 100 mA	0.003 % to 0.002 %

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106	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Current	Using MFC with Current Coil by Direct Method	100 A to 1000 A	0.25 %
107	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Current	Using MFC, Std Resistor / Shunt by V / I Method	100 mA to 20 A	0.003 % to 0.008 %
108	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Current	Using MFC, Std Resistor by V / I Method	100 nA to 10 µA	0.2 % to 0.003 %
109	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Current	Using MFC and Std resistor by Direct Method	100 pA to 100 nA	0.2 % to 0.03 %
110	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Current	Using MFC with Transconductance Amplifier by Direct Method	20 A to 100 A	0.008 % to 0.014 %
111	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC High Voltage	Using HV Source, HV Probe with DMM by Comparison / Substitution Method	1 kV to 40 kV	0.5 % to 1 %

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112	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Power (1 V to 1000 V, 100 mA to 20 A)	Using Multi Function Calibrator by Direct Method	100 mW to 20 kW	0.005 % to 0.01 %
113	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Resistance (2 wire)	Using Standard Resistor by Direct Method	1 Gohm	0.01 %
114	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Resistance (2 wire)	Using Standard Resistor by Direct Method	1 Tohm	0.04 %
115	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Resistance (2 wire)	Using Standard Resistor by Direct Method	10 Gohm	0.018 %
116	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Resistance (2 wire)	Using Standard Resistor by Direct Method	10 Mohm	0.001 %
117	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Resistance (2 wire)	Using Standard Resistor by Direct Method	10 Tohm	0.12 %

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118	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Resistance (2 wire)	Using Standard Resistor by Direct Method	100 Gohm	0.02 %
119	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Resistance (2 wire)	Using Standard Resistor by Direct Method	100 Mohm	0.005 %
120	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Resistance (2 wire)	Using Standard Resistor by Direct Method	100 Tohm	0.61 %
121	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Resistance (4 wire)	Using Standard Reference Resistor by Direct Method	10 kohm	0.00018 %
122	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Resistance (4 wire)	Using Standard Resistor by Direct Method	0.1 mohm	0.02 %
123	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Resistance (4 wire)	Using Standard Reference Resistor by Direct Method	1 kohm	0.0002 %

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124	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Resistance (4 wire)	Using Standard Resistor by Direct Method	1 Mohm	0.00055 %
125	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Resistance (4 wire)	Using Standard Reference Resistor by Direct Method	1 mohm	0.01 %
126	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Resistance (4 wire)	Using Standard Reference resistor by Direct Method	1 ohm	0.00015 %
127	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Resistance (4 wire)	Using Standard Resistor by Direct Method	10 mohm	0.002 %
128	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Resistance (4 wire)	Using Standard Reference Resistor by Direct Method	10 ohm	0.0002 %
129	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Resistance (4 wire)	Using Standard Resistor by Direct Method	100 kohm	0.00025 %

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130	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Resistance (4 wire)	Using Standard Resistor by Direct Method	100 mohm	0.0005 %
131	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Resistance (4 wire)	Using Standard Resistor by Direct Method	100 ohm	0.00018 %
132	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Voltage	Using MFC, DC Ref Standard, Ref Divider, DMM by Comparison Method	1 µV to 1 mV	0.061 % to 0.015 %
133	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Voltage	Using MFC, DC Ref Standard, Ref Divider, DMM by Comparison Method	1 mV to 100 mV	0.015 % to 0.00035 %
134	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Voltage	Using Reference Voltage Standard by Direct Method	1 V to 10 V	0.0002 % to 0.0001 %
135	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Voltage	Using MFC, DC Ref Standard, Ref Divider, DMM by Comparison Method	10 V to 1100 V	0.0001 % to 0.0007 %

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136	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Voltage	Using MFC, DC Ref Standard, Ref Divider by Comparison Method	100 mV to 10 V	0.00035 % to 0.0001 %
137	ELECTRO-TECHNICAL-RF/MICROWAVE (1 GHZ AND ABOVE) (Measure)	Attenuation @ 10 MHz to 18 GHz	Using Power Meter and Step Attenuator by Comparison Method	1 dB to 60 dB	0.15 dB to 0.32 dB
138	ELECTRO-TECHNICAL-RF/MICROWAVE (1 GHZ AND ABOVE) (Measure)	Attenuation @ 100 kHz to 10 MHz	Using Power Meter, Step Attenuator by Comparison Method	1 dB to 40 dB	0.15 dB to 0.3 dB
139	ELECTRO-TECHNICAL-RF/MICROWAVE (1 GHZ AND ABOVE) (Measure)	Modulation: Amplitude Modulation Depth (CW : 10 MHz to 2.5 GHz; MF : 30 Hz to 10 kHz)	Using Modulation Analyzer by Direct Method	Depth : 10 % to 95 %	2.1 %
140	ELECTRO-TECHNICAL-RF/MICROWAVE (1 GHZ AND ABOVE) (Measure)	Modulation: Amplitude Modulation Depth (CW : 10 MHz to 2.5 GHz; MF : 30 Hz to 10 kHz)	Using Signal Generator, Modulation Analyzer by Comparison Method	Depth : 10 % to 95 %	2.1 %

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141	ELECTRO-TECHNICAL-RF/MICROWAVE (1 GHZ AND ABOVE) (Measure)	Modulation: Frequency Modulation Deviation (CW : 10 MHz to 2.5 GHz; MF : 30 Hz to 10 kHz)	Using Signal Generator, Modulation Analyzer by Comparison Method	Deviation :1 kHz to 500 kHz	2 %
142	ELECTRO-TECHNICAL-RF/MICROWAVE (1 GHZ AND ABOVE) (Measure)	Modulation: Frequency Modulation Deviation (CW : 10 MHz to 2.5 GHz; MF : 30 Hz to 10 kHz)	Using Modulation Analyzer by Direct Method	Deviation: 1 kHz to 500 kHz	2 %
143	ELECTRO-TECHNICAL-RF/MICROWAVE (1 GHZ AND ABOVE) (Measure)	Reflection Coefficient @ 10 MHz to 18 GHz	Using Vector Network Analyzer with Cal Kit, Verification Kit & Attenuator with Short by Comparison Method	0 to 0.5 Tau	0.01 Tau to 0.02 Tau
144	ELECTRO-TECHNICAL-RF/MICROWAVE (1 GHZ AND ABOVE) (Measure)	RF Power @ 1 MHz to 1 GHz	Using RF Power Meter, Attenuator by Direct Method	20 mW to 10 W	5 % to 6 %
145	ELECTRO-TECHNICAL-RF/MICROWAVE (1 GHZ AND ABOVE) (Measure)	RF Power @ 10 MHz to 18 GHz	Using RF Power Meter with attenuator, RF signal generator / synthesizer by Comparison Method	100 nW to 20 mW	3.2 % to 4 %

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146	ELECTRO-TECHNICAL-RF/MICROWAVE (1 GHZ AND ABOVE) (Measure)	RF Power @ 10 MHz to 18 GHz	Using RF Power Meter, Attenuator by Direct Method	100 nW to 20 mW	3.2 % to 4 %
147	ELECTRO-TECHNICAL-RF/MICROWAVE (1 GHZ AND ABOVE) (Measure)	RF Power @ 100 kHz to 10 MHz	Using RF Power Meter, Attenuator by Direct Method	10 µW to 20 mW	3 % to 4 %
148	ELECTRO-TECHNICAL-RF/MICROWAVE (1 GHZ AND ABOVE) (Measure)	RF Power @ 100 kHz to 10 MHz	Using RF Power Meter with RF Signal generator by Comparison Method	10 µW to 20 mW	3 % to 4 %
149	ELECTRO-TECHNICAL-RF/MICROWAVE (1 GHZ AND ABOVE) (Source)	Attenuation @ 10 MHz to 18 GHz	Using RF Step Attenuator by Direct Method	5 dB to 60 dB	0.21 dB to 0.3 dB
150	ELECTRO-TECHNICAL-RF/MICROWAVE (1 GHZ AND ABOVE) (Source)	Attenuation @ 100 kHz to 2.7 GHz	Using Step Attenuator by Direct Method	1 dB to 60 dB	0.2 dB to 0.34 dB

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151	ELECTRO-TECHNICAL-TIME & FREQUENCY (Measure)	Frequency	Using Universal Frequency Counter / Timer (Ext Locked with rubidium standard / Oscillator) by Comparison Method	0.01 Hz to 40 GHz	0.000003 % to 0.000000005 %
152	ELECTRO-TECHNICAL-TIME & FREQUENCY (Measure)	Time Interval	Using Universal Frequency Counter, Timer by Direct Method	1 s to 3600 s	0.00001 %
153	ELECTRO-TECHNICAL-TIME & FREQUENCY (Source)	Frequency	Using RF Signal Generator, Microwave Synthesizer (Ext Locked with Ref Rb Frequency Std/ Oscillator) by Comparison Method)	0.01 Hz to 20 GHz	0.000003 % to 0.000000005 %
154	ELECTRO-TECHNICAL-TIME & FREQUENCY (Source)	Frequency	Using Ref Rb Frequency Std / Oscillator, Freq Converter by Direct Method	1 MHz	0.000000005 %
155	ELECTRO-TECHNICAL-TIME & FREQUENCY (Source)	Frequency	Using Ref Rb Frequency Std / Oscillator, Freq Converter by Direct Method	10 MHz	0.000000005 %

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156	ELECTRO-TECHNICAL-TIME & FREQUENCY (Source)	Frequency	Using Ref Rb Frequency Std / Oscillator, Frequency Converter by Direct Method	100 kHz	0.000000005 %
157	ELECTRO-TECHNICAL-TIME & FREQUENCY (Source)	Frequency	Using Ref Rb Frequency Std/ Oscillator, Freq Converter by Direct Method	5 MHz	0.000000005 %
158	MECHANICAL-ACOUSTICS	Acoustics Sound Level Meter @ 1 kHz	Using Sound Level Calibrator by Direct Method	94 dB	0.32 dB
159	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Dial Gauge - Plunger type (L.C.: 0.001 mm)	Using Slip Gauge Set by Comparison Method	0 to 25 mm	0.003 mm
160	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Vernier Calliper (L.C.: 0.01 mm)	Using Slip Gauge Set by Comparison Method	0 to 300 mm	0.016 mm

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161	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Micro meter (External) (L.C.: 0.001 mm)	Using Slip Gauge Set by Comparison Method	0 to 25 mm	0.003 mm
162	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Micrometer (External) (L.C.: 0.01 mm)	Using Slip Gauge Set by Comparison Method	0 mm to 25 mm	0.015 mm
163	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Vernier Caliper (L.C.: 0.01 mm)	Using Slip Gauge Set by Comparison Method	0 mm to 200 mm	0.016 mm
164	MECHANICAL-PRESSURE INDICATING DEVICES	Dead Weight Testers (Hydraulic)	Using Pressure balance DWT by Cross float method, DKD-R 6-1	3 bar(g) to 50 bar(g)	0.008 % of rdg
165	MECHANICAL-PRESSURE INDICATING DEVICES	Dead Weight Testers (Hydraulic)	Using Pressure balance DWT by Cross float method as Per DKD-R 6-1	50 bar(g) to 700 bar(g)	0.009 % of rdg

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166	MECHANICAL-PRESSURE INDICATING DEVICES	Digital Pressure Calibrator (Pneumatic)	Using DWT Dual Range, Pressure balance by Comparison Method as Per DKD-R 6-1:	0 to 13.5 bar(g)	0.06 % of rdg
167	MECHANICAL-PRESSURE INDICATING DEVICES	Pressure calibrator & Pressure Gauges (Pneumatic)	Using Portable Pressure Calibrator by Comparison Method as Per DKD-R 6-1	0.035 bar (abs) to 7 bar (abs)	0.058 % of rdg
168	MECHANICAL-PRESSURE INDICATING DEVICES	Pressure calibrator & Pressure Gauges (Pneumatic)	Using Pressure indicator, Pneumatic pump by Comparison Method as Per DKD-R 6-1	0.1 bar to 2.6 bar	0.07 % rdg
169	MECHANICAL-PRESSURE INDICATING DEVICES	Pressure calibrator & Pressure Gauges (Pneumatic)	Using DWT, Pressure balance by Comparison Method as Per DKD-R 6-1	13.5 bar(g) to 200 bar(g)	0.032 % of rdg
170	MECHANICAL-PRESSURE INDICATING DEVICES	Pressure Calibrators & Pressure Gauges (Pneumatic)	Using Pressure Calibrator by Comparison method as Per DKD-R 6-1	(-) 0.95 bar(g) to 0 bar(g)	0.086 % of rdg
171	MECHANICAL-PRESSURE INDICATING DEVICES	Pressure calibrators &Pressure Gauges (Hydraulic)	Using DW tester (Hydraulic) by Comparison Method as Per DKD-R 6-1	0 to 700 bar(g)	0.02 % of rdg

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172	MECHANICAL-PRESSURE INDICATING DEVICES	Pressure Calibrators &Vacuum Gauges (Pneumatic)	Using Pressure indicator, Pneumatic pump, Precision barometer by Comparison method as Per DKD-R 6-2	(-) 0.9 bar(g) to (-) 0.1 bar(g)	0.13 % of rdg
173	MECHANICAL-WEIGHING SCALE AND BALANCE	Weighing Scale & Balance - Class III (Readability : 0.1 g)	Using Standard weight E2 Class weights by Comparison Method as Per OIML R 76-1	200 g to 12 kg	0.07 g
174	MECHANICAL-WEIGHING SCALE AND BALANCE	Weighing Scale & Balance - Class III (Readability : 2 g)	Using Standard weight E2 Class weights by Comparison Method as Per OIML R 76-1	12 kg to 22 kg	2.2 g
175	MECHANICAL-WEIGHING SCALE AND BALANCE	Weighing Scale and balance - Class I (Readability : 0.01 mg)	Using Standard weight E2 Class weights by Comparison Method as Per OIML R 76-1	1 mg to 200 g	0.08 mg
176	MECHANICAL-WEIGHTS	Weights F1 Accuracy Class and Coarser	Using Standard Weights E2 Class & Electronics Balances (Readability : 0.01 mg) by substitution method (ABBA weighing cycle) as per OMIL R 111-1	50 g	0.061 mg

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177	MECHANICAL-WEIGHTS	Weights F1 Accuracy Class and Coarser	Using Standard Weights E2 Class & Electronics Balances (Readability : 0.01 mg) by substitution method (ABBA weighing cycle) as per OMIL R 111-1	10 g	0.042 mg
178	MECHANICAL-WEIGHTS	Weights F1 Accuracy Class and Coarser	Using Standard Weights E2 Class & Electronics Balances (Readability : 0.01 mg) by substitution method (ABBA weighing cycle) as per OMIL R 111-1	100 g	0.1 mg
179	MECHANICAL-WEIGHTS	Weights F1 Accuracy Class and Coarser	Using Standard Weights E2 Class & Electronics Balances (Readability : 0.01 mg) by substitution method (ABBA weighing cycle) as per OMIL R 111-1	20 g	0.051 mg

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180	MECHANICAL-WEIGHTS	Weights F1 Accuracy Class and Coarser	Using Standard Weights E2 Class & Electronics Balances (Readability : 0.01 mg) by substitution method (ABBA weighing cycle) as per OMIL R 111-1	200 mg	0.015 mg
181	MECHANICAL-WEIGHTS	Weights F1 Accuracy Class and Coarser	Using Standard Weights E2 Class & Electronics Balances (Readability : 0.01 mg) by substitution method (ABBA weighing cycle) as per OMIL R 111-1	50 mg	0.013 mg
182	MECHANICAL-WEIGHTS	Weights F1 Accuracy Class and Coarser	Using Standard Weights E2 Class & Electronics Balances (Readability : 0.01 mg) by substitution method (ABBA weighing cycle) as per OMIL R 111-1	500 mg	0.018 mg

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183	MECHANICAL-WEIGHTS	Weights F1 Accuracy Class and Coarser	Using Standard Weights E2 Class & Electronics Balances (Readability : 0.01 mg) by substitution method (ABBA weighing cycle) as per OMIL R 111-1	1 g	0.022 mg
184	MECHANICAL-WEIGHTS	Weights F1 Accuracy Class and Coarser	Using Standard Weights E2 Class & Electronics Balances (Readability : 0.01 mg) by substitution method (ABBA weighing cycle) as per OMIL R 111-1	100 mg	0.013 mg
185	MECHANICAL-WEIGHTS	Weights F1 Accuracy Class and Coarser	Using Standard Weights E2 Class & Electronics Balances (Readability : 0.01 mg) by substitution method (ABBA weighing cycle) as per OMIL R 111-1	2 g	0.03 mg

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186	MECHANICAL-WEIGHTS	Weights F1 Accuracy Class and Coarser	Using Standard Weights E2 Class & Electronics Balances (Readability : 0.01 mg) by substitution method (ABBA weighing cycle) as per OMIL R 111-1	200 g	0.2 mg
187	MECHANICAL-WEIGHTS	Weights F1 Accuracy Class and Coarser	Using Standard Weights E2 Class & Electronics Balances (Readability : 0.01 mg) by substitution method (ABBA weighing cycle) as per OMIL R 111-1	5 g	0.033 mg
188	MECHANICAL-WEIGHTS	Weights F2 Accuracy Class and Coarser	Using Standard Weights E2 Class & Electronics Balances (Readability : 0.01 mg) by substitution method (ABBA weighing cycle) as per OMIL R 111-1	10 mg	0.013 mg

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189	MECHANICAL-WEIGHTS	Weights F2 Accuracy Class and Coarser	Using Standard Weights E2 Class & Electronics Balances (Readability : 0.01 mg) by substitution method (ABBA weighing cycle) as per OMIL R 111-1:	20 mg	0.013 mg
190	MECHANICAL-WEIGHTS	Weights F2 Accuracy Class and Coarser	Using Standard Weights E2 Class & Electronics Balances (Readability : 0.01 mg) by substitution method (ABBA weighing cycle) as per OMIL R 111-1	1 mg	0.013 mg
191	MECHANICAL-WEIGHTS	Weights F2 Accuracy Class and Coarser	Using Standard Weights E2 Class & Electronics Balances (Readability : 0.01 mg) by substitution method (ABBA weighing cycle) as per OMIL R 111-1	2 mg	0.013 mg

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192	MECHANICAL-WEIGHTS	Weights F2 Accuracy Class and Coarser	Using Standard Weights E2 Class & Electronics Balances (Readability : 0.01 mg) by substitution method (ABBA weighing cycle) as per OMIL R 111-1	5 mg	0.013 mg
193	MECHANICAL-WEIGHTS	Weights M2 Accuracy Class and Coarser	Using Standard Weights E2 Class & Electronics Balances (Readability : 0.1 g) by substitution method (ABBA weighing cycle) as per OMIL R 111-1	5 kg	0.12 g
194	MECHANICAL-WEIGHTS	Weights M2 Accuracy Class and Coarser	Using Standard Weights E2 Class & Electronics Balances (Readability : 0.1 g) by substitution method (ABBA weighing cycle) as per OMIL R 111-1	10 kg	0.2 g

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195	MECHANICAL-WEIGHTS	Weights M3 Accuracy Class and Coarser	Using Standard Weights E2 Class & Electronics Balances (Readability : 0.1 g) by substitution method (ABBA weighing cycle) as per OMIL R 111-1	2 kg	0.12 g
196	MECHANICAL-WEIGHTS	Weights M3 Accuracy Class and Coarser	Using Standard Weights E2 Class & Electronics Balances (Readability : 0.1 g) by substitution method (ABBA weighing cycle) as per OMIL R 111-1	500 g	0.12 g
197	MECHANICAL-WEIGHTS	Weights M3 Accuracy Class and Coarser	Using Standard Weights E2 Class & Electronics Balances (Readability : 0.1 g) by substitution method (ABBA weighing cycle) as per OMIL R 111-1	1 kg	0.12 g

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198	THERMAL-SPECIFIC HEAT & HUMIDITY	Humidity / Temperature Indicator with sensor of Chamber	Using Relative Humidity - Temperature indicator with Humidity - Temperature chamber by Comparison Method	20 %rh to 95 %rh @ 10 °C to 55 °C	1 %rh
199	THERMAL-SPECIFIC HEAT & HUMIDITY	Humidity/ Temperature Indicator with sensor	Using Relative Humidity - Temperature indicator with Humidity - Temperature chamber by Comparison Method	20 %rh to 95 %rh @ 20 °C to 55 °C	1 %rh
200	THERMAL-TEMPERATURE	RTD, Thermocouple, PRT with or without indicator	Using SPRT, Digital Thermometer and Dry block bath by comparison Method	200 °C to 660 °C	0.15 °C
201	THERMAL-TEMPERATURE	RTD, Thermocouple, PRT with or without indicator, Data Logger with Sensor	Using SPRT, Digital Thermometer and Liquid bath by comparison Method	(-) 50 °C to 200 °C	0.06 °C
202	THERMAL-TEMPERATURE	RTD, Thermocouple, PRT with or without indicator, Data Logger with Sensor	Using SPRT, Digital Thermometer, High Precision Temp. Bath by Comparison Method	(-) 80 °C to (-) 50 °C	0.05 °C

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203	THERMAL-TEMPERATURE	Temperature chamber, Oven, freezer, (Multiposition Calibration)	Using Temp. Calibrator with RTD sensors (Minimum 9 Sensors) by Comparison Method	(-) 80 °C to 200 °C	0.6 °C
204	THERMAL-TEMPERATURE	Temperature indicator with sensor of dry block (Single Position calibration)	Using SPRT Hart, Digital Thermometer by Comparison Method	50 °C to 660 °C	0.15 °C
205	THERMAL-TEMPERATURE	Temperature indicator with sensor of Dry block / furnace (Single Position Calibration)	Using 'S' type Thermocouple, Dig. Thermometer, zero reference bath by Comparison Method	200 °C to 1000 °C	1.2 °C
206	THERMAL-TEMPERATURE	Temperature Indicator with sensor of liquid bath (Single Position Calibration)	Using SPRT, Digital Thermometer By Comparison Method	(-) 80 °C to 200 °C	0.06 °C
207	THERMAL-TEMPERATURE	Temperature Indicator with sensor of liquid bath (Single Position Calibration)	Using SPRT, Digital Thermometer by Comparison Method	(-) 50 °C to 200 °C	0.06 °C
208	THERMAL-TEMPERATURE	Thermocouple with or without indicator	Using S Type Thermocouple, Digital Thermometer, Furnace and zero reference bath by Comparison Method	660 °C to 1000 °C	1.21 °C

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Site Facility					
1	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	1 Phase 2 wire AC Active Energy @ 45 Hz to 65 Hz (63.5 V to 550 V, 5 mA to 100 A, 0.5 (Lead/Lag) to UPF)	Using Power Energy Standard by Direct Method	1.59 Wh to 55 kWh	0.011 % to 0.032 %
2	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	1 Phase 2 wire AC Active Power @ 45 Hz to 65 Hz (63.5 V to 550 V, 5 mA to 100 A, 0.5 (Lead/Lag) to UPF)	Using Power Energy Standard by Direct Method	1.59 W to 55 kW	0.011 % to 0.032 %
3	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	1 Phase 2 wire AC Apparent Power @ 45 Hz to 65 Hz (63.5 V to 550 V, 5 mA to 100 A, 0.5 (Lead/Lag) to UPF)	Using Power Energy Standard by Direct Method	3.18 VA to 55 kVA	0.011 % to 0.032 %
4	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	1 Phase 2 wire AC Reactive Energy @ 45 Hz to 65 Hz (63.5 V to 550 V, 5 mA to 100 A, 0.5 (Lead/Lag) to UPF)	Using Power Energy Standard by Direct Method	3.18 VArh to 55 kVArh	0.011 % to 0.032 %

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5	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	1 Phase 2 wire AC Reactive Power @ 45 Hz to 65 Hz (63.5 V to 550 V, 5 mA to 100 A, 0.5 (Lead/Lag) to UPF)	Using Power Energy Standard by Direct Method	1.59 VAr to 55 kVAr	0.011 % to 0.032 %
6	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	1 phase AC Apparent Power (2 wire) @ 45 Hz to 65 Hz (63.2 V to 550 V, 5 mA to 100 A, 0.1(Lead/Lag) to UPF)	Using Power Energy Std by Direct Method	3.18 VA to 55 kVA	0.011 % to 0.032 %
7	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	3 phase 4 wire AC Active Energy @ 45 Hz to 65 Hz (63.5 V to 550 V, 5 mA to 100 A, 0.5 (Lead/Lag) to UPF)	Using Power Energy Standard by Direct Method	4.77 Wh to 165 kWh	0.011 % to 0.032 %
8	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	3 phase 4 wire AC Active Power @ 45 Hz to 65 Hz (63.5 V to 550 V, 5 mA to 100 A, 0.5 (Lead/Lag) to UPF)	Using Power Energy Standard by Direct Method	4.77 W to 165 kW	0.011 % to 0.032 %
9	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	3 phase 4 wire AC Apparent Power @ 45 Hz to 65 Hz (63.5 V to 550 V, 5 mA to 100 A, 0.5 (Lead/Lag) to UPF)	Using Power Energy Standard by Direct Method	9.54 VA to 165 kVA	0.011 % to 0.032 %

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10	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	3 phase 4 wire AC Reactive Energy @ 45 Hz to 65 Hz (63.5 V to 550 V, 5 mA to 100 A, 0.5 (Lead/Lag) to UPF)	Using Power Energy Standard by Direct Method	4.77 VArh to 165 kVArh	0.011 % to 0.032 %
11	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	3 phase 4 wire AC Reactive Power @ 45 Hz to 65 Hz (63.5 V to 550 V, 5 mA to 100 A, 0.5 (Lead/Lag) to UPF)	Using Power Energy Standard by Direct Method	4.77 VAr to 165 kVAr	0.011 % to 0.032 %
12	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	AC Current @ 10 Hz to 10 kHz	Using Current Shunt, AC-DC Transfer Std, AC Measurement Std & DMM by Comparison Method	1 A to 20 A	0.01 % to 0.02 %
13	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	AC Current @ 10 Hz to 10 kHz	Using Current Shunt, AC-DC Transfer Std, AC Measurement Std & DMM by Comparison Method	10 µA to 1 A	0.05 % to 0.015 %
14	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	AC Current @ 45 Hz to 1 kHz	Using DMM & Shunt by V / I Method	20 A to 100 A	0.02 % to 0.1 %

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15	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	AC Current @ 45 Hz to 400 Hz	Using AC Current Probe with DMM by Direct Method	10 A to 1000 A	0.1 % to 1 %
16	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	AC High Voltage @ 50 Hz	Using HV Probe with DMM by Direct Method	1 kV to 28 kV	0.71 % to 1 %
17	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	AC Voltage @ 10 Hz to 1 MHz	Using DMM, AC-DC Transfer Std, AC Measurement Std by Direct Method	22 mV to 700 mV	0.01 % to 0.002 %
18	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	AC Voltage @ 10 Hz to 1 MHz	Using DMM, AC-DC Transfer Std, AC Measurement Std by Direct Method	2 mV to 22 mV	0.13 % to 0.01 %
19	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	AC Voltage @ 10 Hz to 1 MHz	Using DMM, AC-DC Transfer Std, AC Measurement Std by Direct Method	700 mV to 22 V	0.014 % to 0.005 %

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20	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	AC Voltage @ 10 Hz to 100 kHz	Using DMM, AC-DC Transfer Std, AC Measurement Std by Direct Method	22 V to 1000 V	0.002 % to 0.01 %
21	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	Capacitance @ 1 kHz	Using LCR Bridge / Meter, 4T Std Capacitor by Comparison Method	1 µF to 1 mF	0.02 % to 0.5 %
22	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	Capacitance @ 1 kHz	Using Capacitance Bridge, Std Capacitor by Comparison Method	1 pF to 1000 pF	0.02 % to 0.002 %
23	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	Capacitance @ 1 kHz	Using Capacitance Bridge, LCR Bridge, Std Capacitor, DMM by Comparison Method	1000 pF to 100 µF	0.002 % to 0.3 %
24	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	Inductance @ 1 kHz	Using LCR Digibridge, Std Inductor by Comparison Method	100 µH to 10 H	0.02 % to 0.052 %

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25	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	Inductance @ 1 kHz	Using Std Resistor and Std Capacitor (for 100 H Simulation) & LCR Digi bridge / Meter by Comparison Method	100 H	0.05 %
26	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	Power Factor (Lag/ Lead) @ 45Hz to 65Hz (10 V to 600 V, 1 mA to 200 A)	Using Digital Power Energy Meter, Power Energy Standard by Direct Method	0 to UPF	0.0004 PF
27	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	Resistance @ 1 kHz	Using AC / DC Std Resistor, Precision LCR Meter, LCR Digi Bridge by Comparison Method	1 ohm to 100 kohm	0.01 % to 0.02 %
28	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	3 phase 4 wire AC Active Power @ 45 Hz to 65 Hz (63.5 V to 550 V, 5 mA to 100 A, 0.5 (Lead/Lag) to UPF)	Using Power / Energy Calibrator with Current Amplifier, Power Energy Standard by Comparison Method	4.77 W to 165 kW	0.011 % to 0.032 %
29	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	1 Phase 2 wire AC Active Energy @ 45 Hz to 65 Hz (63.5 V to 550 V, 5 mA to 100 A, 0.5 (Lead/Lag) to UPF)	Using Power / Energy Calibrator with Current Amplifier, Power Energy Standard by Comparison Method	1.59 Wh to 55 kWh	0.011 % to 0.032 %

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30	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	1 Phase 2 wire AC Active Power @ 45 Hz to 65 Hz (63.5 V to 550 V, 5 mA to 100 A, 0.5 (Lead/Lag) to UPF)	Using Power / Energy Calibrator with Current Amplifier, Power Energy Standard by Comparison Method	1.59 W to 55 kW	0.011 % to 0.032 %
31	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	1 Phase 2 wire AC Apparent Power @ 45 Hz to 65 Hz (63.5 V to 550 V, 5 mA to 100 A, 0.5 (Lead/Lag) to UPF)	Using Power / Energy Calibrator with Current Amplifier, Power Energy Standard by Comparison Method	3.18 VA to 55 kVA	0.011 % to 0.032 %
32	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	1 Phase 2 wire AC Reactive Energy @ 45 Hz to 65 Hz (63.5 V to 550 V, 5 mA to 100 A, 0.5 (Lead/Lag) to UPF)	Using Power / Energy Calibrator with Current Amplifier, Power Energy Standard by Comparison Method	3.18 VArh to 55 kVArh	0.011 % to 0.032 %
33	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	1 Phase 2 wire AC Reactive Power @ 45 Hz to 65 Hz (63.5 V to 550 V, 5 mA to 100 A, 0.5 (Lead/Lag) to UPF)	Using Power / Energy Calibrator with Current Amplifier, Power Energy Standard by Comparison Method	1.59 VAr to 55 kVAr	0.011 % to 0.032 %
34	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	3 phase 4 wire AC Active Energy @ 45 Hz to 65 Hz (63.5 V to 550 V, 5 mA to 100 A, 0.5 (Lead/Lag) to UPF)	Using Power / Energy Calibrator with Current Amplifier, Power Energy Standard by Comparison Method	4.77 Wh to 165 kWh	0.011 % to 0.032 %

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35	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	3 phase 4 wire AC Apparent Power @ 45 Hz to 65 Hz (63.5 V to 550 V, 5 mA to 100 A, 0.5 (Lead/Lag) to UPF)	Using Power / Energy Calibrator with Current Amplifier, Power Energy Standard by Comparison Method	9.54 VA to 165 kVA	0.011 % to 0.032 %
36	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	3 phase 4 wire AC Reactive Energy @ 45 Hz to 65 Hz (63.5 V to 550 V, 5 mA to 100 A, 0.5 (Lead/Lag) to UPF)	Using Power / Energy Calibrator with Current Amplifier, Power Energy Standard by Comparison Method	4.77 VArh to 165 kVArh	0.011 % to 0.032 %
37	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	3 phase 4 wire AC Reactive Power @ 45 Hz to 65 Hz (63.5 V to 550 V, 5 mA to 100 A, 0.5 (Lead/Lag) to UPF)	Using Power / Energy Calibrator with Current Amplifier, Power Energy Standard by Comparison Method	4.77 VAr to 165 kVAr	0.011 % to 0.032 %
38	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	AC Current @ 10 Hz to 10 kHz	Using Multi Function Calibrator, Current Shunt, AC-DC Transfer Std, AC Measurement Std, DMM by Comparison Method	10 µA to 22 mA	0.1 % to 0.015 %
39	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	AC Current @ 10 Hz to 6 kHz	Using Trasconductance Amplifier & Multi Function Calibrator by Direct Method	20 A to 100 A	0.015 % to 0.2 %

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40	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	AC Current @ 40 Hz to 10 kHz	Using Multi Function Calibrator, Current Shunt, AC-DC Transfer Std, AC Measurement Std, DMM by Comparison Method	22 mA to 2.2 A	0.011 % to 0.013 %
41	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	AC Current @ 40 Hz to 10 kHz	Using Multi Function Calibrator, Current Shunt, AC-DC Transfer Std, AC Measurement Std, DMM by Comparison Method	2.2 A to 20 A	0.013 % to 0.015 %
42	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	AC Current @ 40 Hz to 65 Hz	Using Power / Energy Calibrator with Current Amplifier, Shunt, DMM by Comparison Method	100 A	0.2 %
43	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	AC Current @ 50 Hz	Using Multi Function Calibrator with Current Coil by Direct Method	10 A to 1000 A	0.1 % to 0.6 %
44	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	AC Resistance @ upto 1 kHz	Using Standard Reference AC/DC Resistor by Direct method	1 ohm to 10 kohm	0.003 % to 0.001 %

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45	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	AC Resistance @ upto 1 kHz	Using Standard Reference AC/DC Resistor by Direct method	10 kohm to 100 kohm	0.001 % to 0.012 %
46	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	AC Voltage @ 10 Hz to 20 kHz	Using Multi Function Calibrator, AC-DC Transfer Std, AC Measurement Std by Comparison Method	2 mV to 220 mV	0.05 % to 0.004 %
47	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	AC Voltage @ 10 Hz to 20 kHz	Using Multi Function Calibrator, AC-DC Transfer Std, AC Measurement Std by Comparison Method	220 mV to 1000 V	0.004 % to 0.008 %
48	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	AC Voltage @ 20 kHz to 1 MHz	Using Multi Function Calibrator, AC-DC Transfer Std, AC Measurement Std by Comparison Method	2 mV to 220 mV	0.13 % to 0.008 %
49	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	AC Voltage @ 20 kHz to 1 MHz	Using Multi Function Calibrator, AC-DC Transfer Std, AC Measurement Std by Comparison Method	22 V to 220 V	0.004 % % to 0.05 %
50	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	AC Voltage @ 20 kHz to 1 MHz	Using Multi Function Calibrator, AC-DC Transfer Std, AC Measurement Std by Comparison Method:	220 mV to 22 V	0.008 % to 0.05 %

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51	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	AC Voltage @ 20 kHz to 100 kHz	Using Multi Function Calibrator, AC-DC Transfer Std, AC Measurement Std by Comparison Method	220 V to 600 V	0.005 % to 0.01 %
52	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	Capacitance @ 1 kHz	Using Standard Capacitor by Direct Method	0.001 µF	0.01 %
53	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	Capacitance @ 1 kHz	Using Standard Capacitor by Direct Method	0.001 µF	0.01 %
54	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	Capacitance @ 1 kHz	Using Standard Capacitor by Direct Method	0.01 µF	0.02 %
55	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	Capacitance @ 1 kHz	Using Standard Capacitor by Direct Method	0.1 µF	0.01 %
56	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	Capacitance @ 1 kHz	Using Standard Capacitor by Direct Method	1 µF	0.02 %

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57	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	Capacitance @ 1 kHz	Using Multi-Product Calibrator by Direct Method	1 µF to 100 µF	0.01 % to 0.3 %
58	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	Capacitance @ 1 kHz	Using 4 Terminal Std Capacitor by Direct Method	1 mF	0.25 %
59	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	Capacitance @ 1 kHz	Using Standard Capacitor by Direct Method	1 pF	0.006 %
60	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	Capacitance @ 1 kHz	Using 4 Terminal Std Capacitor by Direct Method	10 µF	0.25 %
61	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	Capacitance @ 1 kHz	Using 4 Terminal Std Capacitor by Direct Method	10 mF	0.25 %
62	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	Capacitance @ 1 kHz	Using Standard Capacitor by Direct Method	10 pF	0.003 %

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63	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	Capacitance @ 1 kHz	Using 4 Terminal Std Capacitor by Direct Method	100 µF	0.25 %
64	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	Capacitance @ 1 kHz	Using Standard Capacitor by Direct Method	100 pF	0.003 %
65	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	Capacitance @ 1 kHz	Using Standard Capacitor by Direct Method	1000 pF	0.073 %
66	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	Capacitance @ 10 kHz	Using Standard Capacitor by Direct Method	0.1 µF	0.25 %
67	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	Capacitance @ 10 kHz	Using Standard Capacitor by Direct Method	1 µF	0.1 %
68	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	Capacitance @ 10 kHz to 1 MHz	Using Standard Capacitor by Direct Method	0.001 µF	0.1 %

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69	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	Capacitance @ 10 kHz to 1 MHz	Using Standard Capacitor by Direct Method	1 pF	0.6 %
70	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	Capacitance @ 10 kHz to 1 MHz	Using Standard Capacitor by Direct Method	10 pF	0.2 %
71	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	Capacitance @ 10 kHz to 1 MHz	Using Standard Capacitor by Direct Method	100 pF	0.6 %
72	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	Capacitance @ 10 kHz to 1 MHz	Using Standard Capacitor by Direct Method	1000 pF	1 %
73	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	Capacitance @ 10 kHz to 100 kHz	Using Standard Capacitor by Direct Method	0.01 µF	0.1 %
74	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	Capacitance @ 100 kHz	Using Standard Capacitor by Direct Method	0.1 µF	0.25 %

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75	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	Capacitance @ 100 kHz	Using Standard Capacitor by Direct Method	1 µF	3.5 %
76	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	Inductance @ 1 kHz	Using Std Inductor by Direct Method	1 H	0.01 %
77	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	Inductance @ 1 kHz	Using Std Inductor by Direct Method	1 mH	0.012 %
78	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	Inductance @ 1 kHz	Using Std Inductor by Direct Method	10 H	0.03 %
79	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	Inductance @ 1 kHz	Using Std Inductor by Direct Method	10 mH	0.5 %
80	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	Inductance @ 1 kHz	Using Std Inductor by Direct Method	100 µH	0.05 %

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81	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	Inductance @ 1 kHz	Using Std Inductor by Direct Method	100 mH	0.01 %
82	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	Inductance @ 10 kHz to 100 kHz	Using Std Inductor by Direct Method	25 mH	0.41 %
83	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	Inductance @ 10 kHz to 100 kHz	Using Std Inductor by Direct Method	10 mH	0.5 %
84	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	Oscilloscope Calibration : Bandwidth	Using Oscilloscope Calibrator by Direct Method	50 kHz to 1.1 GHz	4.04 %
85	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	Oscilloscope Calibration: Deflection Factor (Amplitude) - 1 Mohm @ 10 Hz to 50 kHz	Using Oscilloscope Calibrator by Direct Method	1 mV to 190 V	0.1 % to 0.2 %

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86	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	Oscilloscope Calibration: Deflection Factor (Amplitude) - 50 ohm @ 10 Hz to 50 kHz	Using Oscilloscope Calibrator by Direct Method	1 mV to 5.56 V	0.1 % to 0.2 %
87	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	Oscilloscope Calibration: Time Base	Using Oscilloscope Calibrator by Direct Method	1 ns to 55 s	0.001 %
88	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	Power Factor (Lag /Lead) @ 45 Hz to 65 Hz (10 V to 600 V, 1 mA to 200 A)	Using Power / Energy Calibrator with Current Amplifier, Digital Power Energy Meter, Power Energy Standard by Comparison Method	0 to UPF	0.0004
89	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source,Measure)	INDUCTANCE (1kHz)	Using Std Resistances and Std Capacitance for 100H Simulation, by Comparison Method	100 H	0.04%
90	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	DC Current	Using 8½ DMM, Standard Resistor by V / I Method	1 A to 20 A	0.0012 % to 0.005 %

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91	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	DC Current	Using 8½ DMM, Standard Resistor by V / I Method	100 µA to 1 A	0.002 % to 0.0012 %
92	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	DC Current	Using 8½ DMM, Standard Resistor by V / I Method	100 nA to 100 µA	0.03 % to 0.002 %
93	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	DC Current	Using 8½ DMM, Std Shunt by V / I Method	20 A to 100 A	0.005 % to 0.035 %
94	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	DC High Voltage	Using HV Probe with DMM by Direct Method	1 kV to 40 kV	0.05 % to 0.4 %
95	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	DC Power (1 V to 1000 V, 100 mA to 20 A)	Using Reference Multmeters & MFC by Comparison Method	100 mW to 20 kW	0.005 % to 0.01 %
96	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	DC Resistance (4 wire)	Using DC Comparator Resistance Bridge & Std Resistor by Comparison Method	10 kohm to 1 Gohm	0.00016 % to 0.004 %

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97	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	DC Resistance (4 wire)	Using DC Comparator Resistance Bridge with High Current Range Extender, Std Resistor by Comparison Method	100 µohm to 100 mohm	0.1 % to 0.0004 %
98	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	DC Resistance (4 wire)	Using DC Comparator Resistance Bridge with High Current Range Extender, Std Resistor by Comparison Method	100 mohm to 10 kohm	0.0004 % to 0.00016 %
99	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	DC Resistance @ 10V to 1000V	Using Digital Teraohmmeter by Direct Method	1 Gohm to 20 Gohm	0.004 % to 0.1 %
100	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	DC Resistance @ 10V to 1000V	Using Digital Teraohmmeter by Direct Method	20 Gohm to 100 Tohm	0.1 % to 1 %
101	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	DC Voltage	Using 8½ DMM, DC Ref Standard, Ref Divider by Comparison Method	0.1 mV to 100 mV	0.026 % to 0.0005 %

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102	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	DC Voltage	Using 8½ DMM, DC Ref Standard, Ref Divider by Comparison Method	10 V to 1050 V	0.0001 % to 0.0005 %
103	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	DC Voltage	Using 8½ DMM, DC Ref Standard, Ref Divider by Comparison Method	100 mV to 10 V	0.0005 % to 0.0001 %
104	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Current	Using MFC, Std Resistor by V / I Method	10 µA to 100 mA	0.003 % to 0.002 %
105	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Current	Using MFC with Current Coil by Direct Method	100 A to 1000 A	0.25 %
106	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Current	Using MFC, Std Resistor / Shunt by V / I Method	100 mA to 20 A	0.003 % to 0.008 %
107	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Current	Using MFC, Std Resistor by V / I Method	100 nA to 10 µA	0.2 % to 0.003 %

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108	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Current	Using MFC and Std resistor by Direct Method	100 pA to 100 nA	0.2 % to 0.03 %
109	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Current	Using MFC with Transconductance Amplifier by Direct Method	20 A to 100 A	0.008 % to 0.014 %
110	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Power (1 V to 1000 V, 100 mA to 20 A)	Using Multi Function Calibrator by Direct Method	100 mW to 20 kW	0.005 % to 0.01 %
111	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Resistance (2 wire)	Using Standard Resistor by Direct Method	1 Gohm	0.01 %
112	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Resistance (2 wire)	Using Standard Resistor by Direct Method	1 Tohm	0.04 %
113	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Resistance (2 wire)	Using Standard Resistor by Direct Method	10 Gohm	0.018 %

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114	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Resistance (2 wire)	Using Standard Resistor by Direct Method	10 Mohm	0.001 %
115	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Resistance (2 wire)	Using Standard Resistor by Direct Method	10 Tohm	0.12 %
116	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Resistance (2 wire)	Using Standard Resistor by Direct Method	100 Gohm	0.02 %
117	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Resistance (2 wire)	Using Standard Resistor by Direct Method	100 Mohm	0.005 %
118	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Resistance (2 wire)	Using Standard Resistor by Direct Method	100 Tohm	0.61 %
119	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Resistance (4 wire)	Using Standard Reference Resistor by Direct Method	10 kohm	0.00018 %

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120	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Resistance (4 wire)	Using Standard Resistor by Direct Method	0.1 mohm	0.02 %
121	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Resistance (4 wire)	Using Standard Reference Resistor by Direct Method	1 kohm	0.0002 %
122	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Resistance (4 wire)	Using Standard Resistor by Direct Method	1 Mohm	0.00055 %
123	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Resistance (4 wire)	Using Standard Reference Resistor by Direct Method	1 mohm	0.01 %
124	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Resistance (4 wire)	Using Standard Reference resistor by Direct Method	1 ohm	0.00015 %
125	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Resistance (4 wire)	Using Standard Resistor by Direct Method	10 mohm	0.002 %

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126	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Resistance (4 wire)	Using Standard Reference Resistor by Direct Method	10 ohm	0.0002 %
127	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Resistance (4 wire)	Using Standard Resistor by Direct Method	100 kohm	0.00025 %
128	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Resistance (4 wire)	Using Standard Resistor by Direct Method	100 mohm	0.0005 %
129	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Resistance (4 wire)	Using Standard Resistor by Direct Method	100 ohm	0.00018 %
130	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Voltage	Using MFC, DC Ref Standard, Ref Divider, DMM by Comparison Method	1 µV to 1 mV	0.061 % to 0.015 %
131	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Voltage	Using MFC, DC Ref Standard, Ref Divider, DMM by Comparison Method	1 mV to 100 mV	0.015 % to 0.00035 %

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132	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Voltage	Using Reference Voltage Standard by Direct Method	1 V to 10 V	0.0002 % to 0.0001 %
133	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Voltage	Using MFC, DC Ref Standard, Ref Divider, DMM by Comparison Method	10 V to 1100 V	0.0001 % to 0.0007 %
134	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Voltage	Using MFC, DC Ref Standard, Ref Divider by Comparison Method	100 mV to 10 V	0.00035 % to 0.0001 %
135	ELECTRO-TECHNICAL-RF/MICROWAVE (1 GHZ AND ABOVE) (Measure)	Attenuation @ 10 MHz to 18 GHz	Using Power Meter and Step Attenuator by Comparison Method	1 dB to 60 dB	0.15 dB to 0.32 dB
136	ELECTRO-TECHNICAL-RF/MICROWAVE (1 GHZ AND ABOVE) (Measure)	Attenuation @ 100 kHz to 10 MHz	Using Power Meter, Step Attenuator by Comparison Method	1 dB to 40 dB	0.15 dB to 0.3 dB

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137	ELECTRO-TECHNICAL-RF/MICROWAVE (1 GHZ AND ABOVE) (Measure)	Modulation: Amplitude Modulation Depth (CW : 10 MHz to 2.5 GHz; MF : 30 Hz to 10 kHz)	Using Modulation Analyzer by Direct Method	Depth : 10 % to 95 %	2.1 %
138	ELECTRO-TECHNICAL-RF/MICROWAVE (1 GHZ AND ABOVE) (Measure)	Modulation: Amplitude Modulation Depth (CW : 10 MHz to 2.5 GHz; MF : 30 Hz to 10 kHz)	Using Signal Generator, Modulation Analyzer by Comparison Method	Depth : 10 % to 95 %	2.1 %
139	ELECTRO-TECHNICAL-RF/MICROWAVE (1 GHZ AND ABOVE) (Measure)	Modulation: Frequency Modulation Deviation (CW : 10 MHz to 2.5 GHz; MF : 30 Hz to 10 kHz)	Using Signal Generator, Modulation Analyzer by Comparison Method	Deviation :1 kHz to 500 kHz	2 %
140	ELECTRO-TECHNICAL-RF/MICROWAVE (1 GHZ AND ABOVE) (Measure)	Modulation: Frequency Modulation Deviation (CW : 10 MHz to 2.5 GHz; MF : 30 Hz to 10 kHz)	Using Modulation Analyzer by Direct Method	Deviation: 1 kHz to 500 kHz	2 %
141	ELECTRO-TECHNICAL-RF/MICROWAVE (1 GHZ AND ABOVE) (Measure)	Reflection Coefficient @ 10 MHz to 18 GHz	Using Vector Network Analyzer with Cal Kit, Verification Kit & Attenuator with Short by Comparison Method	0 to 0.5 Tau	0.01 Tau to 0.02 Tau

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142	ELECTRO-TECHNICAL-RF/MICROWAVE (1 GHZ AND ABOVE) (Measure)	RF Power @ 1 MHz to 1 GHz	Using RF Power Meter, Attenuator by Direct Method	20 mW to 10 W	5 % to 6 %
143	ELECTRO-TECHNICAL-RF/MICROWAVE (1 GHZ AND ABOVE) (Measure)	RF Power @ 10 MHz to 18 GHz	Using RF Power Meter with attenuator, RF signal generator / synthesizer by Comparison Method	100 nW to 20 mW	3.2 % to 4 %
144	ELECTRO-TECHNICAL-RF/MICROWAVE (1 GHZ AND ABOVE) (Measure)	RF Power @ 10 MHz to 18 GHz	Using RF Power Meter, Attenuator by Direct Method	100 nW to 20 mW	3.2 % to 4 %
145	ELECTRO-TECHNICAL-RF/MICROWAVE (1 GHZ AND ABOVE) (Measure)	RF Power @ 100 kHz to 10 MHz	Using RF Power Meter, Attenuator by Direct Method	10 µW to 20 mW	3 % to 4 %
146	ELECTRO-TECHNICAL-RF/MICROWAVE (1 GHZ AND ABOVE) (Measure)	RF Power @ 100 kHz to 10 MHz	Using RF Power Meter with RF Signal generator by Comparison Method	10 µW to 20 mW	3 % to 4 %

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147	ELECTRO-TECHNICAL-RF/MICROWAVE (1 GHZ AND ABOVE) (Source)	Attenuation @ 10 MHz to 18 GHz	Using RF Step Attenuator by Direct Method	5 dB to 60 dB	0.21 dB to 0.3 dB
148	ELECTRO-TECHNICAL-RF/MICROWAVE (1 GHZ AND ABOVE) (Source)	Attenuation @ 100 kHz to 2.7 GHz	Using Step Attenuator by Direct Method	1 dB to 60 dB	0.2 dB to 0.34 dB
149	ELECTRO-TECHNICAL-TIME & FREQUENCY (Measure)	Frequency	Using Universal Frequency Counter / Timer (Ext Locked with rubidium standard / Oscillator) by Comparison Method	0.01 Hz to 40 GHz	0.000003 % to 0.000000005 %
150	ELECTRO-TECHNICAL-TIME & FREQUENCY (Measure)	Time Interval	Using Universal Frequency Counter, Timer by Direct Method	1 s to 3600 s	0.00001 %

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151	ELECTRO-TECHNICAL-TIME & FREQUENCY (Source)	Frequency	Using RF Signal Generator, Microwave Synthesizer (Ext Locked with Ref Rb Frequency Std/ Oscillator) by Comparison Method)	0.01 Hz to 20 GHz	0.000003 % to 0.000000005 %
152	ELECTRO-TECHNICAL-TIME & FREQUENCY (Source)	Frequency	Using Ref Rb Frequency Std / Oscillator, Freq Converter by Direct Method	1 MHz	0.000000005 %
153	ELECTRO-TECHNICAL-TIME & FREQUENCY (Source)	Frequency	Using Ref Rb Frequency Std / Oscillator, Freq Converter by Direct Method	10 MHz	0.000000005 %
154	ELECTRO-TECHNICAL-TIME & FREQUENCY (Source)	Frequency	Using Ref Rb Frequency Std / Oscillator, Frequency Converter by Direct Method	100 kHz	0.000000005 %
155	ELECTRO-TECHNICAL-TIME & FREQUENCY (Source)	Frequency	Using Ref Rb Frequency Std/ Oscillator, Freq Converter by Direct Method	5 MHz	0.000000005 %

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156	MECHANICAL-ACOUSTICS	Acoustics Sound Level Meter @ 1 kHz	Using Sound Level Calibrator by Direct Method	94 dB	0.32 dB
157	MECHANICAL-WEIGHING SCALE AND BALANCE	Weighing Scale & Balance - Class III (Readability : 0.1 g)	Using Standard weight E2 Class weights by Comparison Method as Per OIML R 76-1	200 g to 12 kg	0.07 g
158	MECHANICAL-WEIGHING SCALE AND BALANCE	Weighing Scale & Balance - Class III (Readability : 2 g)	Using Standard weight E2 Class weights by Comparison Method as Per OIML R 76-1	12 kg to 22 kg	2.2 g
159	MECHANICAL-WEIGHING SCALE AND BALANCE	Weighing Scale and balance - Class I (Readability : 0.01 mg)	Using Standard weight E2 Class weights by Comparison Method as Per OIML R 76-1	1 mg to 200 g	0.08 mg
160	THERMAL-SPECIFIC HEAT & HUMIDITY	Temperature Indicator with sensor of Humidity / Temperature Chamber	Using Relative Humidity - Temperature Indicator by Comparison Method	20 % rh to 95 % rh @ 10 °C to 55 °C	1.3 %rh
161	THERMAL-TEMPERATURE	RTD, Thermocouple, PRT with or without indicator, Data Logger with Sensor	Using SPRT, Digital Thermometer, Liquid bath by Comparison Method	(-) 50 °C to 200 °C	0.06 °C

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162	THERMAL-TEMPERATURE	Temperature chamber, Oven, freezer, (Multiposition Calibration)	Using Temp. Calibrator with RTD sensors (Minimum 9 Sensors) by Comparison Method	(-) 80 °C to 200 °C	0.6 °C
163	THERMAL-TEMPERATURE	Temperature indicator with sensor of Dry block/ furnace (Single Position calibration)	Using S Thermocouple, Digital Thermometer, High Temperature Furnace and Zero Ref Bath by Comparison Method	660 °C to 1000 °C	1.4 °C
164	THERMAL-TEMPERATURE	Temperature Indicator with sensor of dry block bath (Single Position Calibration)	Using SSPRT, Digital Thermometer by Comparison Method	25 °C to 660 °C	0.2 °C
165	THERMAL-TEMPERATURE	Temperature Indicator with sensor of liquid bath (Single position Calibration)	Using SPRT, Digital Thermometer By Comparison Method	(-) 50 °C to 200 °C	0.06 °C
166	THERMAL-TEMPERATURE	Thermocouple with or without indicator	Using S type Thermocouple, Digital Thermometer, Furnace and zero reference bath by Comparison Method	660 °C to 1000 °C	1.4 °C

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*** CMCs represent expanded uncertainties expressed at approximately the 95% level of confidence, using a coverage factor of k = 2.**