National Accreditation Board for Testing and Calibration Laboratories

SCOPE OF ACCREDITATION

Laboratory Name : ELECTRONICS REGIONAL TEST LABORATORY (NORTH), S BLOCK OKHLA PH-II, NEW DELHI, DELHI, INDIA

Accreditation Standard ISO/IEC 17025:2017

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* The validity is extended for one year up to 10.02.2022

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)	AC CURRENT	Fluke 8508 A,Tektronix 4050 With Shunt; Direct / Comparison Method	20 A to 300 A (**10 Hz to 1 kHz)**	0.05% to 0.1%
2	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	AC CURRENT	Using Fluke 8508 A, Fluke 3458A, FlukeA40, Wavetek 4950, Fluke 5720A; Direct Method	1 µA to 1A (10Hz to 10kHz)	100 ppm to 500 ppm
3	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	AC CURRENT	Using Fluke 8508 A, Fluke 3458A, FlukeA40, Wavetek 4950, Fluke 5720A; Direct Method	1 µA to 1A (10Hz to 10kHz)	100 ppm to 500 ppm
4	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	AC CURRENT	Tektronix 4050 With Shunt; Std. Resistance Tinsley, Std CT, Fluke 36 (Clamp); Direct / Comparison Method	1 A to 1000 A (45 Hz to 400 Hz)	0.1% to 1%

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5	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	AC CURRENT	Fluke 8508 A,Tektronix 4050 With Shunt; Direct / Comparison Method	1A to 20A (10Hz to 10kHz)	100 ppm to 500 ppm
6	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	AC CURRENT	Fluke 8508 A,Tektronix 4050 With Shunt; Direct / Comparison Method	1A to 20A (10Hz to 10kHz)	100 ppm to 500 ppm
7	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	AC CURRENT	Fluke 8508 A,Tektronix 4050 With Shunt; Direct / Comparison Method	20A to 300 A (10 Hz to 1 kHz)	0.05% to 0.1%
8	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	AC HIGH VOLTAGE	Fluke 80K40 with DMM Direct Method	1 kV to 28kV (50Hz)	0.5% to 1%

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9	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	AC VOLTAGE	Using Fluke 792A, Fluke 8508 A, Wavetek 4950,HP 3458A; Direct / Comparison Method	1mV to 22 mV (10 Hz to 1 MHz)	100 ppm to 1000 ppm
10	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	AC VOLTAGE	Using Fluke 792A, Fluke 8508 A, Wavetek 4950,HP 3458A; Direct / Comparison Method	22 mV to 700 mV (10 Hz to 1 MHz)	20 ppm to 100 ppm
11	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	AC VOLTAGE	Using Fluke 792A, Fluke 8508 A, Wavetek 4950,HP 3458A; Direct / Comparison Method	22 V to 1050V (10 Hz to 100 kHz)	20 ppm to 100 ppm
12	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	AC VOLTAGE	Using Fluke 792A, Fluke 8508 A, Wavetek 4950,HP 3458A; Direct / Comparison Method	700 mV to 22V (10Hz to 1MHz)	10 ppm to 50 ppm

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13	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	CAPACITANCE	Using IET 1616, GR 1620A Quadtech 1689, ESI 2110, GR 1688, HP 4275A; Direct / Comparison Method	1 pF to1000 pF (1kHz)	10 ppm to 80 ppm
14	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	CAPACITANCE	Using IET 1616, GR 1620A Quadtech 1689, HP 42748,GR 1688, HP 4275A; Direct / Comparison Method	1 pF to 1000pF (10kHz to 1MHz)	0.05% to 0.1%
15	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	CAPACITANCE	Using Quadtech/ IET 1689 with IET 1417 Comparison/ Substitution Method	1µF to 1F (100Hz, 120Hz & 1kHz)	0.25% to 0.5%
16	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	CAPACITANCE	Using IET 1616, GR 1620A Quadtech 1689, ESI 2110, GR 1688, HP 4275A; Direct / Comparison Method	1000 pF to 100 µF (1kHz)	10 ppm to 0.2%

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17	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	INDUCTANCE	Using GR 1482 Series; Direct Method	100 µH to 10 H (1 kHz)	0.05% to 0.01%
18	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	INDUCTANCE	Using Quadtech 1689, GR 1482 Series,GR 1409 & 1440 Series; Direct / Comparison Method	100 µH to 10H (1kHz)	0.05% to 0.02%
19	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	INDUCTANCE	Using Quadtech 1689,Tinsley 6471, GR 1482 Series,GR 1409 & 1440 Series; Direct / Comparison Method	100 µH to 25mH (1kHz to 100kHz)	0.1% to 0.3%
20	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	INDUCTANCE	Using Quadtech 1689, GR 1482 Series,GR 1409 & 1440 Series; Direct / Comparison Method	100 H (1kHz)	0.05%

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21	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	RESISTANCE AC	Using Quadtech 1689; Direct / Comparison Method	1 ohm to 100 k ohm (upto 1kHz)	0.01 % to 0.02 %
22	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	AC CURRENT	Using Fluke 5720A, Wavetek 4808 & Fluke 5725A; Direct Method	22mA to 2.2A (40Hz to 10kHz)	140 ppm to 1000 ppm
23	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	AC CURRENT	Using Fluke 5720A, Wavetek 4808 & Fluke 5725A; Direct Method	22mA to 2.2A (40Hz to 10kHz)	140 ppm to 1000 ppm
24	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	AC CURRENT	Using Fluke 5720A, Wavetek 4808 & Fluke 5725A; Direct Method	10 µA to 22 mA (**10 Hz to 10 kHz)**	140 ppm to 1000 ppm
25	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	AC CURRENT	Using Fluke 5720A, Wavetek 4808 & Fluke 5725A Direct Method	22 mA to 2.2 A (**40 Hz to 10 kHz)**	200 ppm to 300 ppm

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26	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	AC CURRENT	Using Fluke 5720A, Wavetek 4808 & Fluke 5725A by Direct Method	10 µA to 22 mA (10 Hz to 10 kHz)	140 ppm to 1000 ppm
27	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	AC CURRENT	Using Rotek 8100 (200A) Direct Method	11A to 200A (40Hz to 1kHz)	0.01% to 0.03%
28	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	AC CURRENT	Using Fluke 5720A, Wavetek 4808 & Fluke 5725A; Direct Method	2.2 A to 11A (40Hz to 10kHz)	300 ppm to 1000 ppm
29	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	AC CURRENT	Using Fluke 5720A, Wavetek 4808 & Fluke 5725A; Direct Method	2.2 A to 11A (40Hz to 10kHz)	300 ppm to 1000 ppm
30	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	AC CURRENT	Fluke 5520A /5522A & Current Coil; Direct / Comparison Method	20 A to 1000 A (**40 Hz to 70 Hz**)	0.1% to 0.5%

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31	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	AC CURRENT	Fluke 5520A /5522A & Current Coil Direct / Comparison Method	20 A to 1000 A (40 Hz to 70 Hz)	0.1% to 0.5%
32	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	AC CURRENT	Fluke 5520A & Current Coil; Direct / Comparison Method	20 A to 1000A (40Hz to 70Hz)	0.1% to 0.5%
33	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	AC CURRENT	Using Fluke 5720A, Wavetek 4808 & Fluke 5725A Direct Method	22 mA to 2.2 A (40 Hz to 10 kHz)	200 ppm to 300 ppm
34	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	AC HIGH VOLTAGE	Hippotronics HD140, Fluke 80K-40; Direct/ Comparison Method	1 kV to 15kV (50Hz)	1%
35	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	AC VOLTAGE	Using Fluke 5720A & Wavetek 4808 by Direct Method	1 mV to 220 mV (10 Hz to 20 kHz)	120 ppm to 240 ppm

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36	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	AC VOLTAGE	Using Fluke 5720A ; Direct Method	1mV to 3.5 V (10 Hz to 30 MHz)	0.03% to 3.5%
37	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	AC VOLTAGE	Using Fluke 5720A & Wavetek 4808 by Direct Method	1 mV to 220 mV (20 kHz to 1 MHz)	200 ppm to 2300 ppm
38	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	AC VOLTAGE	Using Fluke 5720A & Wavetek 4808 ; Direct Method	220 mV to 22 V (10 Hz to 20 kHz)	40 ppm to 400 ppm
39	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	AC VOLTAGE	Using Fluke 5720A & Wavetek 4808 ; Direct Method	220 mV to 22V (20kHz to 1MHz)	80 ppm to 2700 ppm
40	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	AC VOLTAGE	Using Fluke 5720A & Wavetek 4808 ; Direct Method	220 V to 600 V (20 kHz to 100 kHz)	40 ppm to 100 ppm

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41	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	AC VOLTAGE	Using Fluke 5720A & Wavetek 4808 by Direct Method	22V to 1100V (10Hz to 20kHz)	40 ppm to 260 ppm
42	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	AC VOLTAGE	Using Fluke 5720A & Wavetek 4808 by Direct Method	22V to 220V (20 kHz to 1 MHz)	80 ppm to 8000 ppm
43	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	CAPACITANCE	Using GR 1403 Series, GR 1404 Series, GR 1409 Series, GR 1423 Series , HP 16382 Series; Fluke 5520A; Direct / Comparison/ Substitution Method	1 µF to 100 µF (1kHz)	0.01% to 0.3%
44	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	CAPACITANCE	Using HP 16380 Series; Direct / Comparison/ Substitution Method	1 pF to 1000 pF (10 kHz to 1 MHz)	0.1% to 0.5%
45	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	CAPACITANCE	Using GR 1403 Series, HP 16382 Series	1 pF (1kHz)	50 ppm to 50 ppm

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46	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	CAPACITANCE	Using IET 1417 Direct Method	1µF to 1F (100Hz, 120Hz & 1kHz)	0.25% to 0.5%
47	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	CAPACITANCE	GR 1404 Series, Series Direct / Comparison/ Substitution Method	10 pF to 1000 pF (1kHz)	10 ppm to 10 ppm
48	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	CAPACITANCE	Using GR 1409 Series; Direct / Comparison/ Substitution Method	1000 pF to 1 µF (10 kHz to 100 kHz)	0.03% to 0.11%
49	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	CAPACITANCE	Using GR 1403 Series, GR 1404 Series, Series, GR 1409 Series, GR 1423 Series , HP 16382 Series; Fluke 5520A; Direct / Comparison/ Substitution Method	1000 pF to 1 µF (1kHz)	10 ppm to 100 ppm
50	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	INDUCTANCE	HP 103 series; Direct Method	10 mH to 25 mH (10 kHz to 100 kHz)	0.1% to 0.3%

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51	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	INDUCTANCE	100H by Simulation Method using 1409 & 1440 series	100 H (1kHz)	0.04% to 0.04%
52	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	RESISTANCE AC	Using Tinsley 5685 ; Direct method	1 ohm to 10kohm (upto 1kHz)	10 ppm to 20 ppm
53	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	RESISTANCE AC	Using GR 1440; Direct/Comparison Method	10 k ohm to 100 k ohm (upto 1kHz)	10 ppm to 100 ppm
54	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source,Measure)	AC CURRENT	Using Rotek 8100 (200A); Direct Method	11A to 200A (40Hz to 1kHz)	0.01% to 0.03%
55	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	DC CURRENT	Fluke 8508A, Wavetek 4950, Fluke 3458A, Std Resistance Tinsley & L&N, L&N 4000; Direct / Comparison Method	1 A to 20 A	10 ppm to 30 ppm

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56	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	DC CURRENT	Fluke 8508A, Wavetek 4950, Fluke 3458A, Std Resistance Tinsley & L&N, L&N 4000; Direct / Comparison Method	100 µA to 1 A	10 ppm to 20 ppm
57	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	DC CURRENT	Shunt Guildline 9230 with DMM, Fluke 36(Clamp); Direct / Comparison Method	100 A to 1000 A	0.02% to 0.5%
58	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	DC CURRENT	Keithley 410, Fluke 8508A, Wavetek 4950, Fluke 3458A, Std Resistance Tinsley & L&N, L&N 4000; Direct / Comparison Method	100 nA to 100 µA	20 ppm to 0.03%
59	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	DC CURRENT	Fluke 8508A, Wavetek 4950, Fluke 3458A, Std Resistance Tinsley & L&N 4000; Direct / Comparison Method	20 A to 100 A	30 ppm to 200 ppm

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60	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	DC CURRENT	Using Dig. Tera Om Meter Guildline 6520 & Pico Amp. Source Keithley 261; Direct / Comparison Method	5 pA to 100 nA	2% to 0.03%
61	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	DC HIGH VOLTAGE	Using Fluke 80K40 with DMM Direct Method	10 kV to 40 kV	0.05% to 1%
62	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	DC HIGH VOLTAGE	Fluke 80E, Fluke 80K40 with DMM Direct Method	1kV to 10 kV	0.05%
63	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	DC VOLTAGE	Using Fluke 8508 A, Wavetek 4950, 7004N,Agilent 34420, HP 3458A; Direct / Comparison Method	0.1 mV to 100 m V	5 ppm to 100 ppm
64	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	DC VOLTAGE	Using Fluke 8508 A, Wavetek 4950, 7004N,Agilent 34420, HP 3458A; Direct / Comparison Method	100 mV to 1050 V	5 ppm

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65	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	RESISTANCE DC	Using Guildline 6520; Direct / Comparison Method	1 G ohm to 20 G ohm	40ppm to 0.1 %
66	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	RESISTANCE DC	Using Guildline 6520; Direct / Comparison Method; Direct / Ratio Comparison Method	1 G ohm to 20 G ohm	40 ppm to 0.1%
67	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	RESISTANCE DC	Guildline 6520; Direct / Comparison Method	1 T ohm to 100 T ohm	0.2% to 1%
68	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	RESISTANCE DC	Using Guildline 6675A, Guildline 6623; Direct / Ratio Comparison Method	10 µ ohm to 100 m ohm	0.1% to 50 ppm
69	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	RESISTANCE DC	Using Guildline 6675A, Guildline 6623; Direct / Ratio Comparison Method	10 k ohm to 1 G ohm	1.2 ppm to 40 ppm

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70	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	RESISTANCE DC	Using Guildline 6675A, Guildline 6623; Direct / Ratio Comparison Method	100 m ohm to 10 k ohm	1.2 ppm to 50 ppm
71	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	RESISTANCE DC	Guildline 6520; Direct / Comparison Method	20 G Ohm to 1 T Ohm	0.1 % to 0.2 %
72	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC CURRENT	Using Fluke 5720A & Wavetek 4808; Direct Method	10 µA to 100 mA	30 ppm to 45 ppm
73	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC CURRENT	Using Fluke 5720A & Wavetek 4808; Direct Method	100 mA to 2 A	30 ppm to 80 ppm
74	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC CURRENT	Using Fluke 5720A & Wavetek 4808; Direct Method	100 nA to 10 µA	30 ppm to 2000 ppm

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75	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC CURRENT	XHR, Xentrex	11 A to 50 A	0.25% to 0.25%
76	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC CURRENT	Fluke 5725A; Rotek 780; Direct Method	2 A to 11 A	80 ppm to 360 ppm
77	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC CURRENT	Fluke 5520A/5522A & Current Coil ; Direct / Comparison Method	50 A to 1000 A	0.25% to 1%
78	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC HIGH VOLTAGE	Hippotronics HD140,Fluke 410B,Fluke 80K 40,Direct/Compariso n Method	1 kV to 40 kV	0.1 % to 1.0 %
79	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC VOLTAGE	Using Wavetek 4808 & Fluke 5720A; Direct Method	1 mV to 100 mV	3.5 ppm to 100 ppm

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80	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC VOLTAGE	Using Wavetek 7004N; Direct Method	1 V	2 ppm
81	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC VOLTAGE	Using Wavetek 7004N; Direct Method	10 V	1 ppm
82	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC VOLTAGE	Using Wavetek 4808 & Fluke 5720A; Direct Method	100 nV to 1 mV	0.01% to 0.5%
83	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC VOLTAGE	Wavetek 7004N, Wavetek 4808 and Fluke 5720A,Direct Method	10 V to 1100 V	3.5 ppm to 7.0 ppm
84	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC VOLTAGE	Wavetek 7004N,Wavetek 4808 and Fluke 5720A,Direct Method	100 mV to 10 V	3.5ppm

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85	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	RESISTANCE DC	Using Guildline 9230/1000,Direct / Comparison Method	0.1 m ohm to 0.1 m ohm	50 ppm to 50 ppm
86	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	RESISTANCE DC	Using Guildline 9230, Tinsley 5686, L&N 4000,Guildline 9334, Tinsley 5685A/B,Guildline 9330, Guildline 9334,Guildline 9336 & 9337 Series; Direct / Comparison Method	1 m ohm to 100 m ohm	2.2 ppm to 4 ppm
87	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	RESISTANCE DC	Using Guildline 9230, Tinsley 5686, L&N 4000,Guildline 9334, Tinsley 5685A/B,Guildline 9330, Guildline 9334,Guildline 9336 & 9337 Series; Direct / Comparison Method	1 ohm to 10 k ohm	0.5 ppm to 1.9 ppm

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88	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	RESISTANCE DC	Using Guildline 65206, 9337 Series; Direct / Comparison Method	1 T ohm to 100 T ohm	0.05% to 0.1%
89	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	RESISTANCE DC	Using Guildline 65206, 9336 Series; Direct / Comparison Method	1 G ohm to 100 G ohm	0.01% to 0.02%
90	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	RESISTANCE DC	Using L&N 4000,Guildline 9334, Tinsley 5685A/B,Guildline 9330, Guildline 9334,Guildline 9336 & 9337 Series; Direct / Comparison Method	100 k ohm to 100 M ohm	1.5 ppm to 10 ppm
91	ELECTRO-TECHNICAL-OTHERS (Measure)	AC HIGH VOLTAGE	Fluke 80K40 with DMM Direct Method	1 kV to 28kV (50Hz)	0.5% to 1%
92	ELECTRO-TECHNICAL-OTHERS (Measure)	AC VOLTAGE	Using Fluke 792A, Fluke 8508 A, Wavetek 4950,HP 3458A; Direct / Comparison Method	1 mV to 22 mV(**10 Hz to 1 MHz)**	100 ppm to 1000 ppm

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93	ELECTRO-TECHNICAL-OTHERS (Measure)	AC VOLTAGE	Using Fluke 792A, Fluke 8508 A, Wavetek 4950,HP 3458A; Direct / Comparison Method	22 mV to 700 mV (10 Hz to 1 MHz)	20 ppm to 100 ppm
94	ELECTRO-TECHNICAL-OTHERS (Measure)	AC VOLTAGE	Using Fluke 792A, Fluke 8508 A, Wavetek 4950,HP 3458A; Direct / Comparison Method	22 V to 1050V (10 Hz to 100 kHz)	20 ppm to 100 ppm
95	ELECTRO-TECHNICAL-OTHERS (Measure)	AC VOLTAGE	Using Fluke 792A, Fluke 8508 A, Wavetek 4950,HP 3458A; Direct / Comparison Method	700 mV to 22V (10Hz to 1MHz)	10 ppm to 50 ppm
96	ELECTRO-TECHNICAL-OTHERS (Measure)	ATTENUATION	Using HP 438A, R&S DPSP, HP/ Aeroflex 30dB Attenuator; Direct / Comparison/ Substitution Method	1 dB to 40 dB (100 kHz to 10 MHz)	0.2 dB to 0.3 dB
97	ELECTRO-TECHNICAL-OTHERS (Measure)	CAPACITANCE	Using IET 1616, GR 1620A Quadtech 1689, ESI 2110, GR 1688, HP 4275A; Direct / Comparison Method	1 pF to 1000 pF (1kHz)	10 ppm to 80 ppm

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98	ELECTRO-TECHNICAL-OTHERS (Measure)	CAPACITANCE	Using IET 1616, GR 1620A Quadtech 1689, ESI 2110, GR 1688, HP 4275A; Direct / Comparison Method	1000 pF to 100 µF (1kHz)	10 ppm to 0.2%
99	ELECTRO-TECHNICAL-OTHERS (Measure)	CAPACITANCE	Using IET 1616, GR 1620A Quadtech 1689, HP 42748,GR 1688, HP 4275A; Direct / Comparison Method	1 pF to 1000pF (10kHz to 1MHz)	0.05% to 0.1%
100	ELECTRO-TECHNICAL-OTHERS (Measure)	CAPACITANCE	Using Quadtech/ IET 1689 with IET 1417 Comparison/ Substitution Method	1µF to 1F (100Hz, 120Hz & 1kHz)	0.25% to 0.5%
101	ELECTRO-TECHNICAL-OTHERS (Measure)	DC HIGH VOLTAGE	Using Fluke 80K40 with DMM Direct Method	10 kV to 40 kV	0.05% to 1%
102	ELECTRO-TECHNICAL-OTHERS (Measure)	DC HIGH VOLTAGE	Fluke 80E, Fluke 80K40 with DMM Direct Method	1kV to 10 kV	0.05% to 0.05%
103	ELECTRO-TECHNICAL-OTHERS (Measure)	DC POWER	Using HP 3458, Fluke 8508A; Direct / Comparison Method	10mW to 20kW (1V to 1000V/ 1mA to 20A)	0.005% to 0.01%

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104	ELECTRO-TECHNICAL-OTHERS (Measure)	DC VOLTAGE	Using Fluke 8508 A, Wavetek 4950, 7004N,Agilent 34420, HP 3458A; Direct / Comparison Method	0.1 mV to 100 m V	5 ppm to 100 ppm
105	ELECTRO-TECHNICAL-OTHERS (Measure)	DC VOLTAGE	Using Fluke 8508 A, Wavetek 4950, 7004N,Agilent 34420, HP 3458A; Direct / Comparison Method	100 mV to 1050 V	5 ppm to 5 ppm
106	ELECTRO-TECHNICAL-OTHERS (Measure)	INDUCTANCE	Using Quadtech 1689, GR 1482 Series,GR 1409 & 1440 Series; Direct / Comparison Method	100 µH to 10H (1kHz)	0.05% to 0.02%
107	ELECTRO-TECHNICAL-OTHERS (Measure)	INDUCTANCE	Using Quadtech 1689,Tinsley 6471, GR 1482 Series,GR 1409 & 1440 Series; Direct / Comparison Method	100 µH to 25mH (1kHz to 100kHz)	0.1% to 0.3%
108	ELECTRO-TECHNICAL-OTHERS (Measure)	INDUCTANCE	Using Quadtech 1689, GR 1482 Series,GR 1409 & 1440 Series; Direct / Comparison Method	100 H (1kHz)	0.05%

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109	ELECTRO-TECHNICAL-OTHERS (Measure)	LF ENERGY Single phase & Three Phase	Using Rotek MSB-100, Hsiang Cheng 3100E, Rotek 8100; Direct / Comparison Method	10V to 600 V 1mA to 200 A, (45 Hz to 65Hz) (PF Unity to 0.1 (Lead/Lag)	100 ppm to 200 ppm
110	ELECTRO-TECHNICAL-OTHERS (Measure)	LF ENERGY Single phase & Three Phase	Using Rotek MSB-100, Hsiang Cheng 3100E, Rotek 8100; Direct / Comparison Method	10V to 600 V / 1mA to (45 Hz to 65Hz) (PF Unity to 0.1 (Lead/Lag),	100 ppm to 200 ppm
111	ELECTRO-TECHNICAL-OTHERS (Measure)	LF POWER Single phase & Three Phase	Using Rotek MSB-100, Hsiang Cheng 3100E, Rotek 8100; Direct / Comparison Method	10V to 600 V 1mA to 200 A,(45 Hz to 65Hz) (PF Unity to 0.1 (Lead/Lag)	100 ppm to 200 ppm
112	ELECTRO-TECHNICAL-OTHERS (Measure)	LF POWER Single phase & Three Phase	Using Rotek MSB-100, Hsiang Cheng 3100E, Rotek 8100; Direct / Comparison Method	10V to 600 V /1mA to 2 (45 Hz to 65Hz) (PF Unity to 0.1 (Lead/Lag),	100 ppm to 200 ppm
113	ELECTRO-TECHNICAL-OTHERS (Measure)	MODULATION: AMPLITUDE MODULATION DEPTH	Using Keysight N5181B , R&S SMT06, Gigatronics 2440M , Radiocommunication Monitor, R&S CMS50, Boonton 8201 Direct / Comparison Method	Depth : 5% to 95% (MF : Upto 1 kHz) **CW: 10 MHz to 1 GHz** to	3% to 4%

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114	ELECTRO-TECHNICAL-OTHERS (Measure)	MODULATION: AMPLITUDE MODULATION DEPTH	Using Keysight N5181B , R&S SMT06, Gigatronics 2440M , Radiocommunication Monitor, R&S CMS50, Boonton 8201 Direct / Comparison Method	Depth: 5% to 95% (MF : Upto 1 kHz) CW: 10 MHz to 1 GHz	3% to 4%
115	ELECTRO-TECHNICAL-OTHERS (Measure)	MODULATION: FREQUENCY MODULATION DEVIATION	Using Keysight N5181B , R&S SMT06, Gigatronics 2440M , Radiocommunication Monitor, R&S CMS50, Boonton 8201 Direct / Comparison Method	Deviation:1kHz to (MF : Upto 1 kHz) **CW: 10 MHz to 1 GHz** to	6% to 6%
116	ELECTRO-TECHNICAL-OTHERS (Measure)	MODULATION: FREQUENCY MODULATION DEVIATION	Using Keysight N5181B , R&S SMT06, Gigatronics 2440M , Radiocommunication Monitor, R&S CMS50, Boonton 8201 Direct / Comparison Method	Deviation:1kHz to 500kHz (MF : Upto 1 kHz) CW: 10 MHz to 1 GHz	6%

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117	ELECTRO-TECHNICAL-OTHERS (Measure)	POWER FACTOR	Using YEW 2524,HC 3100E, Rotek MSB-100, Rotek 8100; Direct / Comparison Method	0 to 1 (Lag & (**45 Hz to 65Hz)**	0.0004 PF
118	ELECTRO-TECHNICAL-OTHERS (Measure)	POWER FACTOR	Using YEW 2524,HC 3100E, Rotek MSB-100, Rotek 8100; Direct / Comparison Method	0 to 1 (Lag & Lead) (45 Hz to 65Hz)	0.0004 PF
119	ELECTRO-TECHNICAL-OTHERS (Measure)	RESISTANCE AC	Using Quadtech 1689; Direct / Comparison Method	1 ohm to 100 k ohm (upto 1kHz)	0.01 % to 0.02 %
120	ELECTRO-TECHNICAL-OTHERS (Measure)	RESISTANCE DC	Using Guildline 6520; Direct / Comparison Method	1 G ohm to 20 G ohm	40ppm to 0.1 %
121	ELECTRO-TECHNICAL-OTHERS (Measure)	RESISTANCE DC	Using Guildline 6520; Direct / Comparison Method; Direct / Ratio Comparison Method	1 G ohm to 20 G ohm	40 ppm to 0.1%
122	ELECTRO-TECHNICAL-OTHERS (Measure)	RESISTANCE DC	Guildline 6520; Direct / Comparison Method	1 T ohm to 100 T ohm	0.2% to 1%

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123	ELECTRO-TECHNICAL-OTHERS (Measure)	RESISTANCE DC	Using Guildline 6675A, Guildline 6623; Direct / Ratio Comparison Method	10 µ ohm to 100 m ohm	0.1% to 50 ppm
124	ELECTRO-TECHNICAL-OTHERS (Measure)	RESISTANCE DC	Using Guildline 6675A, Guildline 6623; Direct / Ratio Comparison Method	10 k ohm to 1 G ohm	1.2 ppm to 40 ppm
125	ELECTRO-TECHNICAL-OTHERS (Measure)	RESISTANCE DC	Using Guildline 6675A, Guildline 6623; Direct / Ratio Comparison Method	10 k Ohm to 1 M Ohm	1.2 ppm to 3 ppm
126	ELECTRO-TECHNICAL-OTHERS (Measure)	RESISTANCE DC	Using Guildline 6675A, Guildline 6623; Direct / Ratio Comparison Method	100 m ohm to 10 k ohm	1.2 ppm to 50 ppm
127	ELECTRO-TECHNICAL-OTHERS (Measure)	RESISTANCE DC	Guildline 6520; Direct / Comparison Method	20 G Ohm to 1 T Ohm	0.1 % to 0.2 %
128	ELECTRO-TECHNICAL-OTHERS (Measure)	RF POWER	Using HP 438A , Direct / Comparison Method	10µW to 20mW (100 kHz to 10 MHz)	3% to 5%
129	ELECTRO-TECHNICAL-OTHERS (Measure)	RF POWER	HP 438A with HP/ Aeroflex 30dB Attenuator; Direct / Comparison Method	20 mW to 10 W (**1MHz to 1GHz)**	5% to 7%

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130	ELECTRO-TECHNICAL-OTHERS (Source)	AC HIGH VOLTAGE	Hippotronics HD140, Fluke 80K-40; Direct/ Comparison Method	1 kV to 15kV (50Hz)	1% to 1%
131	ELECTRO-TECHNICAL-OTHERS (Source)	AC VOLTAGE	Using Fluke 5720A & Wavetek 4808 ; Direct Method	1 mV to 220 mV (**10 Hz to 20 kHz)**	120 ppm to 240 ppm
132	ELECTRO-TECHNICAL-OTHERS (Source)	AC VOLTAGE	Using Fluke 5720A ; Direct Method	1mV to 3.5 V (**10 Hz to 30 MHz)**	0.03% to 3.5%
133	ELECTRO-TECHNICAL-OTHERS (Source)	AC VOLTAGE	Using Fluke 5720A & Wavetek 4808 ; Direct Method	22V to 1100V (10Hz to 20kHz)	40 ppm to 260 ppm
134	ELECTRO-TECHNICAL-OTHERS (Source)	AC VOLTAGE	Using Fluke 5720A & Wavetek 4808 ; Direct Method	22V to 220V (**20 kHz to 1 MHz)**	80 ppm to 8000 ppm
135	ELECTRO-TECHNICAL-OTHERS (Source)	AC VOLTAGE	Using Fluke 5720A & Wavetek 4808 ; Direct Method	1 mV to 220 mV (20 kHz to 1 MHz)	200 ppm to 2300 ppm
136	ELECTRO-TECHNICAL-OTHERS (Source)	AC VOLTAGE	Using Fluke 5720A & Wavetek 4808 ; Direct Method	220 mV to 22 V (10 Hz to 20 kHz)	40 ppm to 400 ppm

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137	ELECTRO-TECHNICAL-OTHERS (Source)	AC VOLTAGE	Using Fluke 5720A & Wavetek 4808 ; Direct Method	220 mV to 22V (20kHz to 1MHz)	80 ppm to 2700 ppm
138	ELECTRO-TECHNICAL-OTHERS (Source)	AC VOLTAGE	Using Fluke 5720A & Wavetek 4808 ; Direct Method	220 V to 600 V (**20 kHz to 100 kHz)**	40 ppm to 100 ppm
139	ELECTRO-TECHNICAL-OTHERS (Source)	CAPACITANCE	Using GR 1403 Series, HP 16382 Series	1 pF (1kHz)	50 ppm to 50 ppm
140	ELECTRO-TECHNICAL-OTHERS (Source)	CAPACITANCE	Using GR 1403 Series, GR 1404 Series, GR 1409 Series, GR 1423 Series , HP 16382 Series; Fluke 5520A; Direct / Comparison/ Substitution Method	1 µF to 100 µF (1kHz)	0.01% to 0.3%
141	ELECTRO-TECHNICAL-OTHERS (Source)	CAPACITANCE	Using HP 16380 Series; Direct / Comparison/ Substitution Method	1 pF to 1000 pF (10 kHz to 1 MHz)	0.1% to 0.5%
142	ELECTRO-TECHNICAL-OTHERS (Source)	CAPACITANCE	Using IET 1417 Direct Method	1µF to 1F **(100Hz, 120Hz & 1kHz)**	0.25% to 0.5%

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143	ELECTRO-TECHNICAL-OTHERS (Source)	CAPACITANCE	GR 1404 Series, Series Direct / Comparison/ Substitution Method	10 pF to 1000 pF (1kHz)	10 ppm to 10 ppm
144	ELECTRO-TECHNICAL-OTHERS (Source)	CAPACITANCE	Using GR 1409 Series; Direct / Comparison/ Substitution Method	1000 pF to 1 µF (10 kHz to 100 kHz)	0.03% to 0.11%
145	ELECTRO-TECHNICAL-OTHERS (Source)	CAPACITANCE	Using GR 1403 Series, GR 1404 Series, Series, GR 1409 Series, GR 1423 Series , HP 16382 Series; Fluke 5520A; Direct / Comparison/ Substitution Method	1000 pF to 1 µF (1kHz)	10 ppm to 100 ppm
146	ELECTRO-TECHNICAL-OTHERS (Source)	DC HIGH VOLTAGE	Hippotronics HD140,Fluke 410B,Fluke 80K 40,Direct/Comparison Method	1 kV to 40 kV	0.1 % to 1.0 %
147	ELECTRO-TECHNICAL-OTHERS (Source)	DC POWER	Using Fluke 5520A/5522A Fluke 5720A/5725A; Direct Method	100 mW to 20kW (1V to 1000V/ 1mA to 20A)	0.005 % to 0.01 %

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148	ELECTRO-TECHNICAL-OTHERS (Source)	DC VOLTAGE	Using Wavetek 4808 & Fluke 5720A; Direct Method	1 mV to 100 mV	3.5 ppm to 100 ppm
149	ELECTRO-TECHNICAL-OTHERS (Source)	DC VOLTAGE	Using Wavetek 7004N; Direct Method	1 V	2 ppm
150	ELECTRO-TECHNICAL-OTHERS (Source)	DC VOLTAGE	Using Wavetek 7004N; Direct Method	10 V	1 ppm
151	ELECTRO-TECHNICAL-OTHERS (Source)	DC VOLTAGE	Using Wavetek 4808 & Fluke 5720A; Direct Method	100 nV to 1 mV	0.01% to 0.5%
152	ELECTRO-TECHNICAL-OTHERS (Source)	DC VOLTAGE	Wavetek 7004N, Wavetek 4808 and Fluke 5720A,Direct Method	10 V to 1100 V	3.5 ppm to 7.0 ppm
153	ELECTRO-TECHNICAL-OTHERS (Source)	DC VOLTAGE	Wavetek 7004N,Wavetek 4808 and Fluke 5720A,Direct Method	100 mv to 10 V	3.5 ppm to 3.5 ppm

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154	ELECTRO-TECHNICAL-OTHERS (Source)	INDUCTANCE	HP 103 series; Direct Method	10 mH to 25 mH (**10 kHz to 100 kHz)**	0.1% to 0.3%
155	ELECTRO-TECHNICAL-OTHERS (Source)	INDUCTANCE	100H by Simulation Method using 1409 & 1440 series	100 H (1kHz)	0.04% to 0.04%
156	ELECTRO-TECHNICAL-OTHERS (Source)	LF ENERGY Single phase & Three Phase	Using Rotek 8100 with Rotek MSB-100, Hsiang Cheng 3100E; Direct / Comparison Method	10V to 600 V /1mA to 2 (45 Hz to 65Hz) (PF Unity to 0.1 (Lead/Lag),	100 ppm to 200 ppm
157	ELECTRO-TECHNICAL-OTHERS (Source)	LF ENERGY Single phase & Three Phase	Using Rotek 8100 with Rotek MSB-100, Hsiang Cheng 3100E; Direct / Comparison Method	10V to 600 V 1mA to 200 A ,(45 Hz to 65Hz) (PF Unity to 0.1 (Lead/Lag)	100 ppm to 200 ppm
158	ELECTRO-TECHNICAL-OTHERS (Source)	LF POWER Single phase & Three Phase	Using Rotek 8100 with Rotek MSB-100, Hsiang Cheng 3100E; Direct / Comparison Method	10V to 600 V 1mA to 200 A,(45 Hz to 65Hz) (PF Unity to 0.1 (Lead/Lag)	100 ppm to 200 ppm
159	ELECTRO-TECHNICAL-OTHERS (Source)	LF POWER Single phase & Three Phase	Using Rotek 8100 with Rotek MSB-100, Hsiang Cheng 3100E; Direct / Comparison Method	10V to 600 V / 1mA to (45 Hz to 65Hz) (PF Unity to 0.1 (Lead/Lag),	100 ppm to 200 ppm

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160	ELECTRO-TECHNICAL-OTHERS (Source)	MODULATION: AMPLITUDE MODULATION DEPTH	Using Keysight N5181B , R&S SMT06, Gigatronics 2440M, Boonton 8201; Direct / Comparison Method	Depth : 5% to 95% (MF : Upto 1 kHz) **CW: 10 MHz to 1 GHz** to	3% to 4%
161	ELECTRO-TECHNICAL-OTHERS (Source)	MODULATION: AMPLITUDE MODULATION DEPTH	Using Keysight N5181B , R&S SMT06, Gigatronics 2440M, Boonton 8201; Direct / Comparison Method	Depth: 5% to 95% (MF : Upto 1 kHz) CW: 10 MHz to 1 GHz	3% to 4%
162	ELECTRO-TECHNICAL-OTHERS (Source)	MODULATION: FREQUENCY MODULATION DEVIATION	Using Keysight N5181B , R&S SMT06, Gigatronics 2440M, Boonton 8201; Direct / Comparison Method	Deviation:1kHz to (MF : Upto 1 kHz) **CW: 10 MHz to 1 GHz**	3% to 6%
163	ELECTRO-TECHNICAL-OTHERS (Source)	MODULATION: FREQUENCY MODULATION DEVIATION	Using Keysight N5181B , R&S SMT06, Gigatronics 2440M, Boonton 8201; Direct / Comparison Method	Deviation:1kHz to 500kHz (MF : Upto 1 kHz) CW: 10 MHz to 1 GHz	3% to 6%
164	ELECTRO-TECHNICAL-OTHERS (Source)	OSCILLOSCOPE CALIBRATION: BANDWIDTH	Using Fluke 9500 B, Fluke 5520 A; Direct Method	DC to 1.1 GHz	0.05 % to 3 %

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165	ELECTRO-TECHNICAL-OTHERS (Source)	OSCILLOSCOPE CALIBRATION: BANDWIDTH	Using Fluke 9500 B, Fluke 5520 A; Direct Method	DC1.1 GHz	0.05 % to 3 %
166	ELECTRO-TECHNICAL-OTHERS (Source)	OSCILLOSCOPE CALIBRATION: DEFLECTION FACTOR (Amplitude)	Using Fluke 9500 B, Fluke 5520 A; Direct Method	1mV to 5.56 V (50ohm) (**10 Hz to 50 kHz)**	0.05 % to 0.2 %
167	ELECTRO-TECHNICAL-OTHERS (Source)	OSCILLOSCOPE CALIBRATION: DEFLECTION FACTOR (Amplitude)	Using Fluke 9500 B, Fluke 5520 A; Direct Method	1mV to 5.56 V (50ohm) (10 Hz to 50 kHz)	0.05 % to 0.2 %
168	ELECTRO-TECHNICAL-OTHERS (Source)	OSCILLOSCOPE CALIBRATION: DEFLECTION FACTOR (Amplitude)	Using Fluke 9500 B, Fluke 5520 A; Direct Method	1mV to 210 V (1Mohm (**10 Hz to 50 kHz)**	0.05 % to 0.2 %
169	ELECTRO-TECHNICAL-OTHERS (Source)	OSCILLOSCOPE CALIBRATION: DEFLECTION FACTOR (Amplitude)	Using Fluke 9500 B, Fluke 5520 A by Direct Method	1mV to 210 V (1Mohm) (10 Hz to 50 kHz)	0.05 % to 0.2 %
170	ELECTRO-TECHNICAL-OTHERS (Source)	OSCILLOSCOPE CALIBRATION: TIME BASE (Marker)	Using Fluke 9500 B, Fluke 5520 A; Direct Method	1ns to 55 s	10ppm
171	ELECTRO-TECHNICAL-OTHERS (Source)	OSCILLOSCOPE CALIBRATION: TIME BASE (Marker)	Using Fluke 9500 B, Fluke 5520 A; Direct Method	1ns to 55 s	10ppm

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172	ELECTRO-TECHNICAL-OTHERS (Source)	POWER FACTOR	Using Rotek 8100 with YEW 2524,HC 3100E, Rotek MSB-100; Direct / Comparison Method	0 to 1 (Lag & (45 Hz to 65Hz)	0.0004 PF to
173	ELECTRO-TECHNICAL-OTHERS (Source)	RESISTANCE AC	Using Tinsley 5685 ; Direct	1 ohm to 10kohm (upto 1kHz)	10 ppm to 20 ppm
174	ELECTRO-TECHNICAL-OTHERS (Source)	RESISTANCE AC	Using GR 1440; Direct/Comparison Method	10 k ohm to 100 k ohm (upto 1kHz)	10 ppm to 100 ppm
175	ELECTRO-TECHNICAL-OTHERS (Source)	RESISTANCE DC	Using Guildline 9230/1000,Direct / Comparison Method	0.1 m ohm to 0.1 m ohm	50 ppm to 50 ppm
176	ELECTRO-TECHNICAL-OTHERS (Source)	RESISTANCE DC	Using Guildline 9230, Tinsley 5686, L&N 4000,Guildline 9334, Tinsley 5685A/B,Guildline 9330, Guildline 9334,Guildline 9336 & 9337 Series; Direct / Comparison Method	1 m ohm to 100 m ohm	2.2 ppm to 4 ppm

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177	ELECTRO-TECHNICAL-OTHERS (Source)	RESISTANCE DC	Using Guildline 9230, Tinsley 5686, L&N 4000,Guildline 9334, Tinsley 5685A/B,Guildline 9330, Guildline 9334,Guildline 9336 & 9337 Series; Direct / Comparison Method	1 ohm to 10 k ohm	0.5 ppm to 1.9 ppm
178	ELECTRO-TECHNICAL-OTHERS (Source)	RESISTANCE DC	Using Guildline 65206, 9337 Series; Direct / Comparison Method	1 T ohm to 100 T ohm	0.05% to 0.1%
179	ELECTRO-TECHNICAL-OTHERS (Source)	RESISTANCE DC	Using Guildline 65206, 9336 Series; Direct / Comparison Method	1 G ohm to 100 G ohm	0.01% to 0.02%
180	ELECTRO-TECHNICAL-OTHERS (Source)	RESISTANCE DC	Using L&N 4000,Guildline 9334, Tinsley 5685A/B,Guildline 9330, Guildline 9334,Guildline 9336 & 9337 Series; Direct / Comparison Method	100 k ohm to 100 M ohm	1.5 ppm to 10 ppm

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181	ELECTRO-TECHNICAL-OTHERS (Source)	RF POWER	Keysight N5181B, R&S SMT-06,Gigatronics 2440M with Amplifier & HP 438A with HP/ Aeroflex 30Attenuator; Direct / Comparison Method	20 mW to 10 W(**1MHz to 1GHz)**	5% to 7%
182	ELECTRO-TECHNICAL-OTHERS (Source)	RF POWER	Using Keysight N5181B, R&S with HP 438A, Direct / Comparison Method	10 µW to 20mW (**100 kHz to 10 MHz)**	4.5% to 5%
183	ELECTRO-TECHNICAL-OTHERS (Source,Measure)	INDUCTANCE	Using GR 1482 Series; Direct Method	100 µH to 10 H (**1 kHz)**	0.05% to 0.01%
184	ELECTRO-TECHNICAL-RF/MICROWAVE (1 GHZ AND ABOVE) (Measure)	ATTENUATION	R&S ZVB20; Boonton 52000 Series; HP/ Aeroflex 30dB Attenuator; Direct / Comparison / Substitution Method	1 dB to 70 dB (10 MHz to 18 GHz)	0.2 dB to 0.3 dB

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185	ELECTRO-TECHNICAL-RF/MICROWAVE (1 GHZ AND ABOVE) (Measure)	REFLECTION COEFFICIENT	Using R&S ZVB-20 with Cal Kit, Verification Kit & & Attenuator with Short (3dB); Direct/ Comparison Method	0 to 0.5 (10MHz to 18GHz)	0.01 to 0.02
186	ELECTRO-TECHNICAL-RF/MICROWAVE (1 GHZ AND ABOVE) (Measure)	REFLECTION COEFFICIENT	Using R&S ZVB-20 with Cal Kit, Verification Kit & & Attenuator with Short (3dB); Direct/ Comparison Method	0 to 0.5 (10MHz to 18GHz)	0.01 to 0.02
187	ELECTRO-TECHNICAL-RF/MICROWAVE (1 GHZ AND ABOVE) (Measure)	RF POWER	HP 438A & Boonton 52000 Series, Keysight 1914A Direct Method	100nW to 20mW(**10 MHz to 18 GHz)**	4.5% to 5%
188	ELECTRO-TECHNICAL-RF/MICROWAVE (1 GHZ AND ABOVE) (Measure)	RF POWER	Using HP 438A , Direct / Comparison Method	10µW to 20mW (100 kHz to 10 MHz)	3% to 5%

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189	ELECTRO-TECHNICAL-RF/MICROWAVE (1 GHZ AND ABOVE) (Measure)	RF POWER	HP 438A & Boonton 52000 Series, Keysight 1914A Direct Method	100nW to 20mW (10 MHz to 18 GHz)	4.5% to 5%
190	ELECTRO-TECHNICAL-RF/MICROWAVE (1 GHZ AND ABOVE) (Measure)	RF POWER	HP 438A with HP/ Aeroflex 30dB Attenuator; Direct / Comparison Method	20 mW to10 W (1MHz to 1GHz)	5% to 7%
191	ELECTRO-TECHNICAL-RF/MICROWAVE (1 GHZ AND ABOVE) (Source)	ATTENUATION	R&S ZVB20, Aeroflex 30dB RF Attenuator; Direct / Comparison / Substitution Method	30 dB (10 MHz to 18 GHz)	0.2dB to 0.3 dB
192	ELECTRO-TECHNICAL-RF/MICROWAVE (1 GHZ AND ABOVE) (Source)	ATTENUATION	Using R&S DPSP; Direct / Comparison / Substitution Method	1 dB to 70 dB (50 kHz to 2.7 GHz)	0.2 dB to 0.3 dB

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193	ELECTRO-TECHNICAL-RF/MICROWAVE (1 GHZ AND ABOVE) (Source)	RF POWER	Using Keysight N5181B, R&S with HP 438A, Direct / Comparison Method	10 µW to 20mW (100 kHz to 10 MHz)	4.5% to 5%
194	ELECTRO-TECHNICAL-RF/MICROWAVE (1 GHZ AND ABOVE) (Source)	RF POWER	Keysight N5181B, R&S SMT-06,Gigatronics 2440M with Amplifier & HP 438A with HP/ Aeroflex 30Attenuator; Direct / Comparison Method	20 mW to 10 W (1MHz to 1GHz)	5% to 7%
195	ELECTRO-TECHNICAL-RF/MICROWAVE (1 GHZ AND ABOVE) (Source)	RF POWER	Keysight 5181B, Gigatronics 2440M, with HP 438A & Boonton 52000 Series, Keysight 1914A Direct / Comparison Method	100nW to 20mW (**10 MHz to 18 GHz)**	4.5% to 5%
196	ELECTRO-TECHNICAL-RF/MICROWAVE (1 GHZ AND ABOVE) (Source)	RF POWER	Keysight 5181B, Gigatronics 2440M, with HP 438A & Boonton 52000 Series, Keysight 1914A Direct / Comparison Method	100nW to 20mW (10 MHz to 18 GHz)	4.5% to 5%

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197	ELECTRO-TECHNICAL-TIME & FREQUENCY (Measure)	FREQUENCY	Using Keysight 53230A, Agilent 53132/ 53152A, HP 5345A, (Locked with Ref Freq Std. R&S XSRM, GR 1115-C); Direct / Comparison Method	0.01 Hz to 40GHz	0.03 ppm to 0.00005 ppm
198	ELECTRO-TECHNICAL-TIME & FREQUENCY (Source)	FREQUENCY	Using R&S XSRM, GR1115C Keysight N5181B, R&S SMT-06 R&S, Gigatronics 2440M (Locked with Ref Std Freq.); Direct / Comparison Method	0.01 Hz to 40GHz	0.03 ppm to 0.00005ppm
199	ELECTRO-TECHNICAL-TIME & FREQUENCY (Source)	FREQUENCY	Using R&S XSRM; Direct Method	100 kHz to 10MHz	0.00005 ppm
200	ELECTRO-TECHNICAL-TIME & FREQUENCY (Source,Measure)	TIME INTERVAL	Using Keysight 53230A, Agilent 53132A, HP 5315A, ; Direct / Comparison Method	1 s to 3600s	0.1 ppm

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201	MECHANICAL-ACCELERATION AND SPEED	Speed Tachometer (Non Contact Type) Stroboscope	Multifunction calibrator &Tachometer (Non contact type) by Comparison Method	60 rpm to 20000 rpm	0.2 rpm to 1.4 rpm
202	MECHANICAL-ACOUSTICS	ACOUSTICS: SOUND LEVEL	Using B&K 4230; Direct Method	94dB (1kHz)	0.2dB
203	MECHANICAL-ACOUSTICS	SOUND LEVEL Meter	Using B&K 4230; Direct Method	94dB (1kHz)	0.2dB
204	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	LENGTH Dial Gauge L.C. 0.001mm.	Slip Gauge Set 'O' Grade Make-Mitutoyo & Dial calibrator by Comparison Method	0 to 25 mm	0.003mm
205	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	LENGTH Dial Gauge L.C. 0.001mm.	Slip Gauge Set 'O' Grade Make-Mitutoyo & Dial calibrator by Comparison Method	0 mm to 25 mm	0.003mm
206	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	LENGTH Micro meter (External) L.C. 0.001mm.	Slip Gauge Set 'O' Grade Make-Mitutoyo by Comparison Method	0 to 25 mm	0.003mm

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207	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	LENGTH Micro meter (External) L.C. 0.001mm.	Slip Gauge Set 'O' Grade Make-Mitutoyo by Comparison Method	0 mm to 25 mm mm	0.003mm
208	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	LENGTH Vernier Caliper L.C. 0.01mm.	Slip Gauge Set 'O' Grade Make-Mitutoyo by Comparison Method	0 to 200 mm	0.016mm
209	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	LENGTH Vernier Caliper L.C. 0.01mm.	Slip Gauge Set 'O' Grade Make-Mitutoyo by comparison method	0 to 300 mm	0.016mm
210	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	LENGTH Vernier Caliper L.C. 0.01mm.	Slip Gauge Set 'O' Grade Make-Mitutoyo by Comparison Method	0 mm to 200 mm	0.016mm

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211	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	LENGTH Vernier Caliper L.C. 0.01mm.	Slip Gauge Set 'O' Grade Make-Mitutoyo by comparison method	0 mm to 300 mm	0.016mm
212	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Micrometer(Length) (External), L.C.0.01mm	Standard Slip gauge 'O' grade by Comparison Method	0 to 25 mm	0.015mm
213	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Micrometer(Length) (External), L.C.0.01mm	Standard Slip gauge 'O' grade by Comparison Method	0 mm to 25 mm	0.015mm
214	MECHANICAL-PRESSURE INDICATING DEVICES	Calibration of DUC (Pneumatic)	DWT (Ruska, USA) Model2470(Dual Range) Pressure balance by Comparison Method	0 to 13.5 bar(g)	0.06% of reading
215	MECHANICAL-PRESSURE INDICATING DEVICES	Calibration of DUC (Pneumatic)	DWT (Ruska, USA) Model2470(Dual Range) Pressure balance by Comparison Method	0 bar(g) to 13.5 bar(g)	0.06% of reading

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216	MECHANICAL-PRESSURE INDICATING DEVICES	Calibration of DWT'S by Cross float Method (Hydraulic)	DWT (Ruska, USA) Model2485 (Dual Range) using pressure balance (DWT) by Cross float method	50 bar(g) to 700 bar(g)	0.009% of reading
217	MECHANICAL-PRESSURE INDICATING DEVICES	Dead Weight Testers(Hydraulic) by cross float method	Ref. DWT, Ruska-2485 using pressure balance (DWT) by Cross float method	3 bar(g) to 50 bar(g)	0.008% of reading
218	MECHANICAL-PRESSURE INDICATING DEVICES	Dead Weight Testers(Hydraulic) by cross float method	Ref. DWT, Ruska-2485 using pressure balance (DWT) by Cross float method	3 bar(g) to 50 bar(g)	0.008% of reading
219	MECHANICAL-PRESSURE INDICATING DEVICES	Pressure calibrator & indicating devices	Ref. DWT, Ruska-2470, Pressure balance by Comparison Method	13.5 bar(g) to 200 bar(g)	0.013% of reading
220	MECHANICAL-PRESSURE INDICATING DEVICES	Pressure calibrator & indicating devices(pneumatic)	Pressure indicator, Druck,DPI-740 &Pressure Calibrator DPI 612 by using Comparison Method	0.1 bar(abs) to 2.6 **bar(abs)**	0.07% of reading

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221	MECHANICAL-PRESSURE INDICATING DEVICES	Pressure calibrator & indicating devices(pneumatic)	Pressure indicator, Druck,DPI-740 &Pressure Calibrator DPI 612 by using Comparison Method	0.1 bar(abs) to 2.6 bar(abs)	0.07% of reading
222	MECHANICAL-PRESSURE INDICATING DEVICES	Pressure calibrators & indicating devices(Hydraulic)	DWT(Hydraulic), Budenberg, 580DXA by Comparison Method	0 to 700 bar(g)	0.02% of reading
223	MECHANICAL-PRESSURE INDICATING DEVICES	Pressure calibrators & indicating devices(Hydraulic)	DWT(Hydraulic), Budenberg, 580DXA by Comparison Method	0 bar(g) to 700 bar(g)	0.02% of reading
224	MECHANICAL-PRESSURE INDICATING DEVICES	pressure calibrators & indicating devices(pneumatic)	Pressure indicator, Druck, DPI-740 & Pressure Calibrator (-1 to 2 bar g) DPI 611 by Comparison method	(-)0.9 bar (g) to (-) 0.1 bar(g)	0.13% of reading
225	MECHANICAL-WEIGHING SCALE AND BALANCE	WEIGHING BALANCE	Standard Weights E-2 Class, Mettler as per procedure based on OIML R-76 (2006)	1 mg to 200 g	0.1mg
226	MECHANICAL-WEIGHING SCALE AND BALANCE	Weighing Balances	Standard Weights E2 Class	0 (d=0.1 g) to 22 kg (d=0.1 g)	0.7 g

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227	MECHANICAL-WEIGHING SCALE AND BALANCE	Weighing Balances	Standard Weights E2 Class	0 (d=10 mg) to 12 kg (d=10 mg)	5 mg
228	MECHANICAL-WEIGHING SCALE AND BALANCE	Weighing Balances	Standard Weights E2 Class as per procedure base on OIML R-76 (2006)	1 mg to 200 g	0.1 mg
229	MECHANICAL-WEIGHING SCALE AND BALANCE	Weighing Balances	Standard Weights E2 Class as per procedure base on OIML R-76 (2006)	1 mg to 200 g	0.1 mg
230	MECHANICAL-WEIGHING SCALE AND BALANCE	Weighing Balances (d=10 mg)	Standard Weights E2 Class	0 to 12 kg	5 mg
231	MECHANICAL-WEIGHING SCALE AND BALANCE	Weighing balances	Standard weights E2 class as per procedure based on OIML R-76 (2006)	200 gm to 12 kg	0.2g
232	MECHANICAL-WEIGHING SCALE AND BALANCE	Weighing Balances (d=0.1 g)	Standard Weights E2 Class	0 to 22 kg	0.7 g

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233	MECHANICAL-WEIGHTS	MASS. Weights	Standard Weights E-2 Class & Electronics Balances substitution Method, ABBA Weighing cycle	1 g	0.022 mg
234	MECHANICAL-WEIGHTS	MASS. Weights	Standard Weights E-2 Class & Electronics Balances substitution Method, ABBA Weighing cycle	1 g to 1 g g	.0.022 mg
235	MECHANICAL-WEIGHTS	MASS. Weights	Standard Weights E-2 Class & Electronics Balances substitution Method, ABBA Weighing cycle	1 kg	0.12g
236	MECHANICAL-WEIGHTS	MASS. Weights	Standard Weights E-2 Class & Electronics Balances substitution Method, ABBA Weighing cycle	1 kg to 1 kg	0.12g

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237	MECHANICAL-WEIGHTS	MASS. Weights	Standard Weights E-2 Class & Electronics Balances, substitution method ABBA weighing cycle	1 mg	0.013mg
238	MECHANICAL-WEIGHTS	MASS. Weights	Standard Weights E-2 Class & Electronics Balances, substitution method ABBA weighing cycle	1 mg to 1 mg	0.013mg
239	MECHANICAL-WEIGHTS	MASS. Weights	Standard Weights E-2 Class & Electronics Balances substitution Method, ABBA Weighing cycle	10 g	0.042mg
240	MECHANICAL-WEIGHTS	MASS. Weights	Standard Weights E-2 Class & Electronics Balances substitution Method, ABBA Weighing cycle	10 g to 10 g	0.042mg

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241	MECHANICAL-WEIGHTS	MASS. Weights	Standard Weights E-2 Class & Electronics Balances substitution Method, ABBA Weighing cycle	10 kg	0.2 g
242	MECHANICAL-WEIGHTS	MASS. Weights	Standard Weights E-2 Class & Electronics Balances substitution Method, ABBA Weighing cycle	10 kg to 10 kg	0.2 g
243	MECHANICAL-WEIGHTS	MASS. Weights	Standard Weights E-2 Class & Electronics Balances substitution Method, ABBA Weighing cycle	10 mg	0.013 mg
244	MECHANICAL-WEIGHTS	MASS. Weights	Standard Weights E-2 Class & Electronics Balances substitution Method, ABBA Weighing cycle	10 mg to 10 mg	0.013 mg

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245	MECHANICAL-WEIGHTS	MASS. Weights	Standard Weights E-2 Class & Electronics Balances substitution Method, ABBA Weighing cycle	100 g	0.102mg
246	MECHANICAL-WEIGHTS	MASS. Weights	Standard Weights E-2 Class & Electronics Balances substitution Method, ABBA Weighing cycle	100 g to 100 g	0.102mg
247	MECHANICAL-WEIGHTS	MASS. Weights	Standard Weights E-2 Class & Electronics Balances substitution Method, ABBA Weighing cycle	100 mg	0.013 mg
248	MECHANICAL-WEIGHTS	MASS. Weights	Standard Weights E-2 Class & Electronics Balances substitution Method, ABBA Weighing cycle	100 mg to 100 mg	0.013 mg

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249	MECHANICAL-WEIGHTS	MASS. Weights	Standard Weights E-2 Class & Electronics Balances substitution Method, ABBA Weighing cycle	2 mg	0.013 mg
250	MECHANICAL-WEIGHTS	MASS. Weights	Standard Weights E-2 Class & Electronics Balances substitution Method, ABBA Weighing cycle	2 mg to 2 mg	0.013 mg
251	MECHANICAL-WEIGHTS	MASS. Weights	Standard Weights E-2 Class & Electronics Balances substitution Method, ABBA Weighing cycle	2 g	0.03mg
252	MECHANICAL-WEIGHTS	MASS. Weights	Standard Weights E-2 Class & Electronics Balances substitution Method, ABBA Weighing cycle	2 g to 2 g	0.03mg

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253	MECHANICAL-WEIGHTS	MASS. Weights	Standard Weights E-2 Class & Electronics Balances substitution Method, ABBA Weighing cycle	2 kg	0.12g
254	MECHANICAL-WEIGHTS	MASS. Weights	Standard Weights E-2 Class & Electronics Balances substitution Method, ABBA Weighing cycle	2 kg to 2 kg	0.12g
255	MECHANICAL-WEIGHTS	MASS. Weights	Standard Weights E-2 Class & Electronics Balances substitution Method, ABBA Weighing cycle	20 g	0.051mg
256	MECHANICAL-WEIGHTS	MASS. Weights	Standard Weights E-2 Class & Electronics Balances substitution Method, ABBA Weighing cycle	20 g to 20 g	0.051mg

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257	MECHANICAL-WEIGHTS	MASS. Weights	Standard Weights E-2 Class & Electronics Balances substitution Method, ABBA Weighing cycle	20 mg	0.013 mg
258	MECHANICAL-WEIGHTS	MASS. Weights	Standard Weights E-2 Class & Electronics Balances substitution Method, ABBA Weighing cycle	20 mg to 20 mg	0.013 mg
259	MECHANICAL-WEIGHTS	MASS. Weights	Standard Weights E-2 Class & Electronics Balances substitution Method, ABBA Weighing cycle	200 g	0.203mg
260	MECHANICAL-WEIGHTS	MASS. Weights	Standard Weights E-2 Class & Electronics Balances substitution Method, ABBA Weighing cycle	200 g to 200 g	0.203mg

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261	MECHANICAL-WEIGHTS	MASS. Weights	Standard Weights E-2 Class & Electronics Balances substitution Method, ABBA Weighing cycle	200 mg	0.015 mg
262	MECHANICAL-WEIGHTS	MASS. Weights	Standard Weights E-2 Class & Electronics Balances substitution Method, ABBA Weighing cycle	200 mg to 200 mg	0.015 mg
263	MECHANICAL-WEIGHTS	MASS. Weights	Standard Weights E-2 Class & Electronics Balances substitution Method, ABBA Weighing cycle	5 mg	0.013 mg
264	MECHANICAL-WEIGHTS	MASS. Weights	Standard Weights E-2 Class & Electronics Balances substitution Method, ABBA Weighing cycle	5 mg to 5 mg	0.013 mg

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265	MECHANICAL-WEIGHTS	MASS. Weights	Standard Weights E-2 Class & Electronics Balances substitution Method, ABBA Weighing cycle	5 kg	0.12g
266	MECHANICAL-WEIGHTS	MASS. Weights	Standard Weights E-2 Class & Electronics Balances substitution Method, ABBA Weighing cycle	5 kg to 5 kg	0.12g
267	MECHANICAL-WEIGHTS	MASS. Weights	Standard Weights E-2 Class & Electronics Balances substitution Method, ABBA Weighing cycle	50 g	0.061mg
268	MECHANICAL-WEIGHTS	MASS. Weights	Standard Weights E-2 Class & Electronics Balances substitution Method, ABBA Weighing cycle	50 g to 50 g	0.061mg

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269	MECHANICAL-WEIGHTS	MASS. Weights	Standard Weights E-2 Class & Electronics Balances substitution Method, ABBA Weighing cycle	50 mg	0.013mg
270	MECHANICAL-WEIGHTS	MASS. Weights	Standard Weights E-2 Class & Electronics Balances substitution Method, ABBA Weighing cycle	50 mg to 50 mg	0.013mg
271	MECHANICAL-WEIGHTS	MASS. Weights	Standard Weights E-2 Class & Electronics Balances substitution Method, ABBA Weighing cycle	500 g	0.12 g
272	MECHANICAL-WEIGHTS	MASS. Weights	Standard Weights E-2 Class & Electronics Balances substitution Method, ABBA Weighing cycle	500 g to 500	0.12

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273	MECHANICAL-WEIGHTS	MASS. Weights	Standard Weights E-2 Class & Electronics Balances substitution Method, ABBA Weighing cycle	500 mg	0.018 mg
274	MECHANICAL-WEIGHTS	MASS. Weights	Standard Weights E-2 Class & Electronics Balances substitution Method, ABBA Weighing cycle	500 mg to 500 mg	0.018 mg
275	MECHANICAL-WEIGHTS	Mass, weights	Standard Weights E-2 Class & Electronics Balances substitution Method, ABBA Weighing cycle	5 g	0.033mg
276	MECHANICAL-WEIGHTS	Mass, weights	Standard Weights E-2 Class & Electronics Balances substitution Method, ABBA Weighing cycle	5 g to 5 g	0.033mg
277	OPTICAL-OPTICAL	OPTICAL ATTENUATION (at 1310nm and 1550nm)	Optical Attenuator IQ3100; By Standard Method	0.1 dB to 50 dB	0.2dB

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278	OPTICAL-OPTICAL	OPTICAL LENGTH	Optical fiber spools; By Standard Method	2.2 km to 14.9 km	0.0021km
279	OPTICAL-OPTICAL	OPTICAL LENGTH	Optical fiber spools; By Standard Method	2.2 km to 14.9 km	0.0021km
280	OPTICAL-OPTICAL	OPTICAL POWER (at 1310nm and 1550nm)	Power Meter IQ1103/1502, EXFO; By Standard Method	-50 dBm to 10 dBm	0.3dB
281	THERMAL-SPECIFIC HEAT & HUMIDITY	Humidity/Temp. indicator of chamber	RH-Temp. indicator Hygropalm 1, Rotronic (10 degC to 55 degC), by Comparison Method	20 % to 95 %	1%
282	THERMAL-SPECIFIC HEAT & HUMIDITY	Humidity/Temp. indicator of chamber	RH/Temperature Indicator with Chamber (25°C to 55°C) , Hygropalm 1 Rotronic by Comparison Method	30 % to 95 %	1%
283	THERMAL-SPECIFIC HEAT & HUMIDITY	Humidity/Temp. indicator of chamber with sensor	RH-Temp. indicator Hygropalm 1, Rotronic , by Comparison Method	20 %RH to 95%RH @10°C to 55 °C	1%RH

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284	THERMAL-SPECIFIC HEAT & HUMIDITY	Humidity/Temp. indicator with sensor of chamber	RH/Temperature Indicator with Chamber , Hygropalm 1 Rotronic by Comparison Method	30 %RH to 95 %RH @25°C to 55°C	1%RH
285	THERMAL-TEMPERATURE	Liquid in glass thermometer	SPRT Heart + Liquid bath Julabo FP50 +Dig Thermometer by Comparison Method	-50 °C to +200 °C	0.08°C
286	THERMAL-TEMPERATURE	Liquid in glass thermometer	SPRT Heart + Liquid bath Julabo FP50 +Dig Thermometer by Comparison Method	-50 °C to 200 °C	0.08°C
287	THERMAL-TEMPERATURE	RTDs, T/Cs,Temp. Measuring Devices With probe	SPRT Heart + Dig. Thermometer + Dry block bath Heart 9173 by comparison Method	200 °C to 660 °C	0.15°C
288	THERMAL-TEMPERATURE	RTDs, T/Cs,Temp. Measuring Devices With probe	SPRT + Dig. Thermometer + Liquid bath Julabo FP50 by Comparison Method	-50 °C to 200 °C	0.05°C

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289	THERMAL-TEMPERATURE	RTDs, Thermocouple,Temp. Measuring Devices With probe	SPRT Heart + Dig. Thermometer + Dry block bath Heart 9173 by comparison Method	200 °C to 660 °C	0.15°C
290	THERMAL-TEMPERATURE	T/Cs , Temperature measuring Devices with probe	'S' Thermocouple + Dig. Thermometer + Furnace Heart 9112 + zero ref. by Comparison Method	660 °C to 1000 °C	1.2°C
291	THERMAL-TEMPERATURE	Temp indicator with sensor of dry block	SPRT Heart + +Dig Thermometer Fluk/ Hart Chub E4 by Comparison Method	50 °C to 660 °C	0.15°C
292	THERMAL-TEMPERATURE	Temp indicator with sensor of High Temp. Dry block/ furnace	'S' Thermocouple + Dig. Thermometer Fluke/ Hart Chub E4+ zero ref.bath by Comparison Method (Single Point Calibration)	150 °C to 1000 °C	1.2°C
293	THERMAL-TEMPERATURE	Temperature chamber/ Oven//freezer/incubator	Temp. Calibrator Hart/Fluke with RTDs sensors & Data Logger with RTDs sensors by Comparison Method (Multipoint Calibration)	-80 °C to 200 °C	0.6°C

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294	THERMAL-TEMPERATURE	Temperature chamber/ Oven//freezer/incubator	Temp. Calibrator Hart/Fluke with RTDs sensors & Data Logger with RTDs sensors by Comparison Method ((Multipoint Calibration)	-80 °C to 200 °C	0.6°C
295	THERMAL-TEMPERATURE	Temperature Indicator with sensor of liquid bath	SPRT Hart/Fluke+ +Dig Thermometer Fluke Cub E4 By Comparison Method (Single Point Calibration)	-50 °C to 300 °C	0.05°C

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Site Facility					
1	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	AC CURRENT	Fluke 8508 A,Tektronix 4050 With Shunt; Direct / Comparison Method	20 A to 300 A (**10 Hz to 1 kHz)**	0.05% to 0.1%
2	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	AC CURRENT	Using Fluke 8508 A, Fluke 3458A, FlukeA40, Wavetek 4950, Fluke 5720A; Direct Method	1 µA to 1A (10Hz to 10kHz)	100 ppm to 500 ppm
3	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	AC CURRENT	Using Fluke 8508 A, Fluke 3458A, FlukeA40, Wavetek 4950, Fluke 5720A; Direct Method	1 µA to 1A (10Hz to 10kHz)	100 ppm to 500 ppm
4	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	AC CURRENT	Tektronix 4050 With Shunt; Std. Resistance Tinsley, Std CT, Fluke 36 (Clamp); Direct / Comparison Method	1 A to 1000 A (45 Hz to 400 Hz)	0.1% to 1%

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5	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	AC CURRENT	Fluke 8508 A,Tektronix 4050 With Shunt; Direct / Comparison Method	1A to 20A (10Hz to 10kHz)	100 ppm to 500 ppm
6	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	AC CURRENT	Fluke 8508 A,Tektronix 4050 With Shunt; Direct / Comparison Method	1A to 20A (10Hz to 10kHz)	100 ppm to 500 ppm
7	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	AC CURRENT	Fluke 8508 A,Tektronix 4050 With Shunt; Direct / Comparison Method	20A to 300 A (10 Hz to 1 kHz)	0.05% to 0.1%
8	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	AC HIGH VOLTAGE	Fluke 80K40 with DMM Direct Method	1 kV to 28kV (50Hz)	0.5% to 1%

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9	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	AC VOLTAGE	Using Fluke 792A, Fluke 8508 A, Wavetek 4950,HP 3458A; Direct / Comparison Method	1mV to 22 mV (10 Hz to 1 MHz)	100 ppm to 1000 ppm
10	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	AC VOLTAGE	Using Fluke 792A, Fluke 8508 A, Wavetek 4950,HP 3458A; Direct / Comparison Method	22 mV to 700 mV (10 Hz to 1 MHz)	20 ppm to 100 ppm
11	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	AC VOLTAGE	Using Fluke 792A, Fluke 8508 A, Wavetek 4950,HP 3458A; Direct / Comparison Method	22 V to 1050V (10 Hz to 100 kHz)	20 ppm to 100 ppm
12	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	AC VOLTAGE	Using Fluke 792A, Fluke 8508 A, Wavetek 4950,HP 3458A; Direct / Comparison Method	700 mV to 22V (10Hz to 1MHz)	10 ppm to 50 ppm

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13	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	CAPACITANCE	Using IET 1616, GR 1620A Quadtech 1689, ESI 2110, GR 1688, HP 4275A; Direct / Comparison Method	1 pF to1000 pF (1kHz)	10 ppm to 80 ppm
14	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	CAPACITANCE	Using IET 1616, GR 1620A Quadtech 1689, HP 42748,GR 1688, HP 4275A; Direct / Comparison Method	1 pF to 1000pF (10kHz to 1MHz)	0.05% to 0.1%
15	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	CAPACITANCE	Using Quadtech/ IET 1689 with IET 1417 Comparison/ Substitution Method	1µF to 1F (100Hz, 120Hz & 1kHz)	0.25% to 0.5%
16	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	CAPACITANCE	Using IET 1616, GR 1620A Quadtech 1689, ESI 2110, GR 1688, HP 4275A; Direct / Comparison Method	1000 pF to 100 µF (1kHz)	10 ppm to 0.2%

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17	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	INDUCTANCE	Using GR 1482 Series; Direct Method	100 µH to 10 H (1 kHz)	0.05% to 0.01%
18	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	INDUCTANCE	Using Quadtech 1689, GR 1482 Series,GR 1409 & 1440 Series; Direct / Comparison Method	100 µH to 10H (1kHz)	0.05% to 0.02%
19	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	INDUCTANCE	Using Quadtech 1689,Tinsley 6471, GR 1482 Series,GR 1409 & 1440 Series; Direct / Comparison Method	100 µH to 25mH (1kHz to 100kHz)	0.1% to 0.3%
20	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	INDUCTANCE	Using Quadtech 1689, GR 1482 Series,GR 1409 & 1440 Series; Direct / Comparison Method	100 H (1kHz)	0.05%

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21	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	RESISTANCE AC	Using Quadtech 1689; Direct / Comparison Method	1 ohm to 100 k ohm (upto 1kHz)	0.01 % to 0.02 %
22	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	AC CURRENT	Using Fluke 5720A, Wavetek 4808 & Fluke 5725A; Direct Method	22mA to 2.2A (40Hz to 10kHz)	140 ppm to 1000 ppm
23	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	AC CURRENT	Using Fluke 5720A, Wavetek 4808 & Fluke 5725A; Direct Method	22mA to 2.2A (40Hz to 10kHz)	140 ppm to 1000 ppm
24	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	AC CURRENT	Using Fluke 5720A, Wavetek 4808 & Fluke 5725A; Direct Method	10 µA to 22 mA (**10 Hz to 10 kHz)**	140 ppm to 1000 ppm
25	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	AC CURRENT	Using Fluke 5720A, Wavetek 4808 & Fluke 5725A Direct Method	22 mA to 2.2 A (**40 Hz to 10 kHz)**	200 ppm to 300 ppm

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26	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	AC CURRENT	Using Fluke 5720A, Wavetek 4808 & Fluke 5725A by Direct Method	10 µA to 22 mA (10 Hz to 10 kHz)	140 ppm to 1000 ppm
27	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	AC CURRENT	Using Rotek 8100 (200A) Direct Method	11A to 200A (40Hz to 1kHz)	0.01% to 0.03%
28	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	AC CURRENT	Using Fluke 5720A, Wavetek 4808 & Fluke 5725A; Direct Method	2.2 A to 11A (40Hz to 10kHz)	300 ppm to 1000 ppm
29	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	AC CURRENT	Using Fluke 5720A, Wavetek 4808 & Fluke 5725A; Direct Method	2.2 A to 11A (40Hz to 10kHz)	300 ppm to 1000 ppm
30	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	AC CURRENT	Fluke 5520A /5522A & Current Coil; Direct / Comparison Method	20 A to 1000 A (**40 Hz to 70 Hz**)	0.1% to 0.5%

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31	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	AC CURRENT	Fluke 5520A /5522A & Current Coil Direct / Comparison Method	20 A to 1000 A (40 Hz to 70 Hz)	0.1% to 0.5%
32	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	AC CURRENT	Fluke 5520A & Current Coil; Direct / Comparison Method	20 A to 1000A (40Hz to 70Hz)	0.1% to 0.5%
33	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	AC CURRENT	Using Fluke 5720A, Wavetek 4808 & Fluke 5725A Direct Method	22 mA to 2.2 A (40 Hz to 10 kHz)	200 ppm to 300 ppm
34	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	AC VOLTAGE	Using Fluke 5720A & Wavetek 4808 by Direct Method	1 mV to 220 mV (10 Hz to 20 kHz)	120 ppm to 240 ppm
35	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	AC VOLTAGE	Using Fluke 5720A ; Direct Method	1mV to 3.5 V (10 Hz to 30 MHz)	0.03% to 3.5%

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36	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	AC VOLTAGE	Using Fluke 5720A & Wavetek 4808 by Direct Method	1 mV to 220 mV (20 kHz to 1 MHz)	200 ppm to 2300 ppm
37	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	AC VOLTAGE	Using Fluke 5720A & Wavetek 4808 ; Direct Method	220 mV to 22 V (10 Hz to 20 kHz)	40 ppm to 400 ppm
38	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	AC VOLTAGE	Using Fluke 5720A & Wavetek 4808 ; Direct Method	220 mV to 22V (20kHz to 1MHz)	80 ppm to 2700 ppm
39	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	AC VOLTAGE	Using Fluke 5720A & Wavetek 4808 ; Direct Method	220 V to 600 V (20 kHz to 100 kHz)	40 ppm to 100 ppm
40	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	AC VOLTAGE	Using Fluke 5720A & Wavetek 4808 by Direct Method	22V to 1100V (10Hz to 20kHz)	40 ppm to 260 ppm

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41	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	AC VOLTAGE	Using Fluke 5720A & Wavetek 4808 by Direct Method	22V to 220V (20 kHz to 1 MHz)	80 ppm to 8000 ppm
42	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	CAPACITANCE	Using GR 1403 Series, GR 1404 Series, GR 1409 Series, GR 1423 Series , HP 16382 Series; Fluke 5520A; Direct / Comparison/ Substitution Method	1 µF to 100 µF (1kHz)	0.01% to 0.3%
43	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	CAPACITANCE	Using HP 16380 Series; Direct / Comparison/ Substitution Method	1 pF to 1000 pF (10 kHz to 1 MHz)	0.1% to 0.5%
44	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	CAPACITANCE	Using GR 1403 Series, HP 16382 Series	1 pF (1kHz)	50 ppm to 50 ppm
45	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	CAPACITANCE	Using IET 1417 Direct Method	1µF to 1F (100Hz, 120Hz & 1kHz)	0.25% to 0.5%

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46	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	CAPACITANCE	GR 1404 Series, Series Direct / Comparison/ Substitution Method	10 pF to 1000 pF (1kHz)	10 ppm to 10 ppm
47	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	CAPACITANCE	Using GR 1409 Series; Direct / Comparison/ Substitution Method	1000 pF to 1 µF (10 kHz to 100 kHz)	0.03% to 0.11%
48	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	CAPACITANCE	Using GR 1403 Series, GR 1404 Series, Series, GR 1409 Series, GR 1423 Series , HP 16382 Series; Fluke 5520A; Direct / Comparison/ Substitution Method	1000 pF to 1 µF (1kHz)	10 ppm to 100 ppm
49	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	INDUCTANCE	HP 103 series; Direct Method	10 mH to 25 mH (10 kHz to 100 kHz)	0.1% to 0.3%
50	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	INDUCTANCE	100H by Simulation Method using 1409 & 1440 series	100 H (1kHz)	0.04% to 0.04%

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51	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	RESISTANCE AC	Using Tinsley 5685 ; Direct method	1 ohm to 10kohm (upto 1kHz)	10 ppm to 20 ppm
52	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	RESISTANCE AC	Using GR 1440; Direct/Comparison Method	10 k ohm to 100 k ohm (upto 1kHz)	10 ppm to 100 ppm
53	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source,Measure)	AC CURRENT	Using Rotek 8100 (200A); Direct Method	11A to 200A (40Hz to 1kHz)	0.01% to 0.03%
54	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	DC CURRENT	Fluke 8508A, Wavetek 4950, Fluke 3458A, Std Resistance Tinsley & L&N, L&N 4000; Direct / Comparison Method	1 A to 20 A	10 ppm to 30 ppm

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55	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	DC CURRENT	Fluke 8508A, Wavetek 4950, Fluke 3458A, Std Resistance Tinsley & L&N, L&N 4000; Direct / Comparison Method	100 µA to 1 A	10 ppm to 20 ppm
56	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	DC CURRENT	Shunt Guildline 9230 with DMM, Fluke 36(Clamp); Direct / Comparison Method	100 A to 1000 A	0.02% to 0.5%
57	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	DC CURRENT	Keithley 410, Fluke 8508A, Wavetek 4950, Fluke 3458A, Std Resistance Tinsley & L&N, L&N 4000; Direct / Comparison Method	100 nA to 100 µA	20 ppm to 0.03%
58	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	DC CURRENT	Fluke 8508A, Wavetek 4950, Fluke 3458A, Std Resistance Tinsley & L&N 4000; Direct / Comparison Method	20 A to 100 A	30 ppm to 200 ppm

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59	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	DC CURRENT	Using Dig. Tera Om Meter Guildline 6520 & Pico Amp. Source Keithley 261; Direct / Comparison Method	5 pA to 100 nA	2% to 0.03%
60	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	DC HIGH VOLTAGE	Using Fluke 80K40 with DMM Direct Method	10 kV to 40 kV	0.05% to 1%
61	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	DC HIGH VOLTAGE	Fluke 80E, Fluke 80K40 with DMM Direct Method	1kV to 10 kV	0.05%
62	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	DC VOLTAGE	Using Fluke 8508 A, Wavetek 4950, 7004N,Agilent 34420, HP 3458A; Direct / Comparison Method	0.1 mV to 100 m V	5 ppm to 100 ppm
63	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	DC VOLTAGE	Using Fluke 8508 A, Wavetek 4950, 7004N,Agilent 34420, HP 3458A; Direct / Comparison Method	100 mV to 1050 V	5 ppm

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64	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	RESISTANCE DC	Using Guildline 6520; Direct / Comparison Method	1 G ohm to 20 G ohm	40ppm to 0.1 %
65	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	RESISTANCE DC	Using Guildline 6520; Direct / Comparison Method; Direct / Ratio Comparison Method	1 G ohm to 20 G ohm	40 ppm to 0.1%
66	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	RESISTANCE DC	Guildline 6520; Direct / Comparison Method	1 T ohm to 100 T ohm	0.2% to 1%
67	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	RESISTANCE DC	Using Guildline 6675A, Guildline 6623; Direct / Ratio Comparison Method	10 µ ohm to 100 m ohm	0.1% to 50 ppm
68	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	RESISTANCE DC	Using Guildline 6675A, Guildline 6623; Direct / Ratio Comparison Method	10 k ohm to 1 G ohm	1.2 ppm to 40 ppm

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69	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	RESISTANCE DC	Using Guildline 6675A, Guildline 6623; Direct / Ratio Comparison Method	100 m ohm to 10 k ohm	1.2 ppm to 50 ppm
70	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	RESISTANCE DC	Guildline 6520; Direct / Comparison Method	20 G Ohm to 1 T Ohm	0.1 % to 0.2 %
71	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC CURRENT	Using Fluke 5720A & Wavetek 4808; Direct Method	10 µA to 100 mA	30 ppm to 45 ppm
72	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC CURRENT	Using Fluke 5720A & Wavetek 4808; Direct Method	100 mA to 2 A	30 ppm to 80 ppm
73	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC CURRENT	Using Fluke 5720A & Wavetek 4808; Direct Method	100 nA to 10 µA	30 ppm to 2000 ppm

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74	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC CURRENT	XHR, Xentrex	11 A to 50 A	0.25% to 0.25%
75	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC CURRENT	Fluke 5725A; Rotek 780; Direct Method	2 A to 11 A	80 ppm to 360 ppm
76	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC CURRENT	Fluke 5520A/5522A & Current Coil ; Direct / Comparison Method	50 A to 1000 A	0.25% to 1%
77	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC VOLTAGE	Using Wavetek 4808 & Fluke 5720A; Direct Method	1 mV to 100 mV	3.5 ppm to 100 ppm
78	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC VOLTAGE	Using Wavetek 7004N; Direct Method	1 V	2 ppm

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79	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC VOLTAGE	Using Wavetek 7004N; Direct Method	10 V	1 ppm
80	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC VOLTAGE	Using Wavetek 4808 & Fluke 5720A; Direct Method	100 nV to 1 mV	0.01% to 0.5%
81	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC VOLTAGE	Wavetek 7004N, Wavetek 4808 and Fluke 5720A,Direct Method	10 V to 1100 V	3.5 ppm to 7.0 ppm
82	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC VOLTAGE	Wavetek 7004N,Wavetek 4808 and Fluke 5720A,Direct Method	100 mV to 10 V	3.5ppm
83	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	RESISTANCE DC	Using Guildline 9230/1000,Direct / Comparison Method	0.1 m ohm to 0.1 m ohm	50 ppm to 50 ppm

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84	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	RESISTANCE DC	Using Guildline 9230, Tinsley 5686, L&N 4000,Guildline 9334, Tinsley 5685A/B,Guildline 9330, Guildline 9334,Guildline 9336 & 9337 Series; Direct / Comparison Method	1 m ohm to 100 m ohm	2.2 ppm to 4 ppm
85	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	RESISTANCE DC	Using Guildline 9230, Tinsley 5686, L&N 4000,Guildline 9334, Tinsley 5685A/B,Guildline 9330, Guildline 9334,Guildline 9336 & 9337 Series; Direct / Comparison Method	1 ohm to 10 k ohm	0.5 ppm to 1.9 ppm
86	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	RESISTANCE DC	Using Guildline 65206, 9337 Series; Direct / Comparison Method	1 T ohm to 100 T ohm	0.05% to 0.1%

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87	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	RESISTANCE DC	Using Guildline 65206, 9336 Series; Direct / Comparison Method	1 G ohm to 100 G ohm	0.01% to 0.02%
88	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	RESISTANCE DC	Using L&N 4000,Guildline 9334, Tinsley 5685A/B,Guildline 9330, Guildline 9334,Guildline 9336 & 9337 Series; Direct / Comparison Method	100 k ohm to 100 M ohm	1.5 ppm to 10 ppm
89	ELECTRO-TECHNICAL-OTHERS (Measure)	AC HIGH VOLTAGE	Fluke 80K40 with DMM Direct Method	1 kV to 28kV (50Hz)	0.5% to 1%
90	ELECTRO-TECHNICAL-OTHERS (Measure)	AC VOLTAGE	Using Fluke 792A, Fluke 8508 A, Wavetek 4950,HP 3458A; Direct / Comparison Method	1 mV to 22 mV(**10 Hz to 1 MHz)**	100 ppm to 1000 ppm
91	ELECTRO-TECHNICAL-OTHERS (Measure)	AC VOLTAGE	Using Fluke 792A, Fluke 8508 A, Wavetek 4950,HP 3458A; Direct / Comparison Method	22 mV to 700 mV (10 Hz to 1 MHz)	20 ppm to 100 ppm

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92	ELECTRO-TECHNICAL-OTHERS (Measure)	AC VOLTAGE	Using Fluke 792A, Fluke 8508 A, Wavetek 4950,HP 3458A; Direct / Comparison Method	22 V to 1050V (10 Hz to 100 kHz)	20 ppm to 100 ppm
93	ELECTRO-TECHNICAL-OTHERS (Measure)	AC VOLTAGE	Using Fluke 792A, Fluke 8508 A, Wavetek 4950,HP 3458A; Direct / Comparison Method	700 mV to 22V (10Hz to 1MHz)	10 ppm to 50 ppm
94	ELECTRO-TECHNICAL-OTHERS (Measure)	ATTENUATION	Using HP 438A, R&S DPSP, HP/ Aeroflex 30dB Attenuator; Direct / Comparison/ Substitution Method	1 dB to 40 dB (100 kHz to 10 MHz)	0.2 dB to 0.3 dB
95	ELECTRO-TECHNICAL-OTHERS (Measure)	CAPACITANCE	Using IET 1616, GR 1620A Quadtech 1689, ESI 2110, GR 1688, HP 4275A; Direct / Comparison Method	1 pF to 1000 pF (1kHz)	10 ppm to 80 ppm
96	ELECTRO-TECHNICAL-OTHERS (Measure)	CAPACITANCE	Using IET 1616, GR 1620A Quadtech 1689, ESI 2110, GR 1688, HP 4275A; Direct / Comparison Method	1000 pF to 100 µF (1kHz)	10 ppm to 0.2%

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97	ELECTRO-TECHNICAL-OTHERS (Measure)	CAPACITANCE	Using IET 1616, GR 1620A Quadtech 1689, HP 42748,GR 1688, HP 4275A; Direct / Comparison Method	1 pF to 1000pF (10kHz to 1MHz)	0.05% to 0.1%
98	ELECTRO-TECHNICAL-OTHERS (Measure)	CAPACITANCE	Using Quadtech/ IET 1689 with IET 1417 Comparison/ Substitution Method	1µF to 1F (100Hz, 120Hz & 1kHz)	0.25% to 0.5%
99	ELECTRO-TECHNICAL-OTHERS (Measure)	DC HIGH VOLTAGE	Using Fluke 80K40 with DMM Direct Method	10 kV to 40 kV	0.05% to 1%
100	ELECTRO-TECHNICAL-OTHERS (Measure)	DC HIGH VOLTAGE	Fluke 80E, Fluke 80K40 with DMM Direct Method	1kV to 10 kV	0.05% to 0.05%
101	ELECTRO-TECHNICAL-OTHERS (Measure)	DC POWER	Using HP 3458, Fluke 8508A; Direct / Comparison Method	10mW to 20kW (1V to 1000V/ 1mA to 20A)	0.005% to 0.01%
102	ELECTRO-TECHNICAL-OTHERS (Measure)	DC VOLTAGE	Using Fluke 8508 A, Wavetek 4950, 7004N,Agilent 34420, HP 3458A; Direct / Comparison Method	0.1 mV to 100 m V	5 ppm to 100 ppm

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103	ELECTRO-TECHNICAL-OTHERS (Measure)	DC VOLTAGE	Using Fluke 8508 A, Wavetek 4950, 7004N,Agilent 34420, HP 3458A; Direct / Comparison Method	100 mV to 1050 V	5 ppm to 5 ppm
104	ELECTRO-TECHNICAL-OTHERS (Measure)	INDUCTANCE	Using Quadtech 1689, GR 1482 Series,GR 1409 & 1440 Series; Direct / Comparison Method	100 µH to 10H (1kHz)	0.05% to 0.02%
105	ELECTRO-TECHNICAL-OTHERS (Measure)	INDUCTANCE	Using Quadtech 1689,Tinsley 6471, GR 1482 Series,GR 1409 & 1440 Series; Direct / Comparison Method	100 µH to 25mH (1kHz to 100kHz)	0.1% to 0.3%
106	ELECTRO-TECHNICAL-OTHERS (Measure)	INDUCTANCE	Using Quadtech 1689, GR 1482 Series,GR 1409 & 1440 Series; Direct / Comparison Method	100 H (1kHz)	0.05%
107	ELECTRO-TECHNICAL-OTHERS (Measure)	LF ENERGY Single phase & Three Phase	Using Rotek MSB-100, Hsiang Cheng 3100E, Rotek 8100; Direct / Comparison Method	10V to 600 V 1mA to 200 A, (45 Hz to 65Hz) (PF Unity to 0.1 (Lead/Lag)	100 ppm to 200 ppm

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108	ELECTRO-TECHNICAL-OTHERS (Measure)	LF ENERGY Single phase & Three Phase	Using Rotek MSB-100, Hsiang Cheng 3100E, Rotek 8100; Direct / Comparison Method	10V to 600 V / 1mA to (45 Hz to 65Hz) (PF Unity to 0.1 (Lead/Lag),	100 ppm to 200 ppm
109	ELECTRO-TECHNICAL-OTHERS (Measure)	LF POWER Single phase & Three Phase	Using Rotek MSB-100, Hsiang Cheng 3100E, Rotek 8100; Direct / Comparison Method	10V to 600 V 1mA to 200 A,(45 Hz to 65Hz) (PF Unity to 0.1 (Lead/Lag)	100 ppm to 200 ppm
110	ELECTRO-TECHNICAL-OTHERS (Measure)	LF POWER Single phase & Three Phase	Using Rotek MSB-100, Hsiang Cheng 3100E, Rotek 8100; Direct / Comparison Method	10V to 600 V /1mA to 2 (45 Hz to 65Hz) (PF Unity to 0.1 (Lead/Lag),	100 ppm to 200 ppm
111	ELECTRO-TECHNICAL-OTHERS (Measure)	MODULATION: AMPLITUDE MODULATION DEPTH	Using Keysight N5181B , R&S SMT06, Gigatronics 2440M , Radiocommunication Monitor, R&S CMS50, Boonton 8201 Direct / Comparison Method	Depth : 5% to 95% (MF : Upto 1 kHz) **CW: 10 MHz to 1 GHz** to	3% to 4%

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112	ELECTRO-TECHNICAL-OTHERS (Measure)	MODULATION: AMPLITUDE MODULATION DEPTH	Using Keysight N5181B , R&S SMT06, Gigatronics 2440M , Radiocommunication Monitor, R&S CMS50, Boonton 8201 Direct / Comparison Method	Depth: 5% to 95% (MF : Upto 1 kHz) CW: 10 MHz to 1 GHz	3% to 4%
113	ELECTRO-TECHNICAL-OTHERS (Measure)	MODULATION: FREQUENCY MODULATION DEVIATION	Using Keysight N5181B , R&S SMT06, Gigatronics 2440M , Radiocommunication Monitor, R&S CMS50, Boonton 8201 Direct / Comparison Method	Deviation:1kHz to (MF : Upto 1 kHz) **CW: 10 MHz to 1 GHz** to	6% to 6%
114	ELECTRO-TECHNICAL-OTHERS (Measure)	MODULATION: FREQUENCY MODULATION DEVIATION	Using Keysight N5181B , R&S SMT06, Gigatronics 2440M , Radiocommunication Monitor, R&S CMS50, Boonton 8201 Direct / Comparison Method	Deviation:1kHz to 500kHz (MF : Upto 1 kHz) CW: 10 MHz to 1 GHz	6%

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115	ELECTRO-TECHNICAL-OTHERS (Measure)	POWER FACTOR	Using YEW 2524,HC 3100E, Rotek MSB-100, Rotek 8100; Direct / Comparison Method	0 to 1 (Lag & (**45 Hz to 65Hz)**	0.0004 PF
116	ELECTRO-TECHNICAL-OTHERS (Measure)	POWER FACTOR	Using YEW 2524,HC 3100E, Rotek MSB-100, Rotek 8100; Direct / Comparison Method	0 to 1 (Lag & Lead) (45 Hz to 65Hz)	0.0004 PF
117	ELECTRO-TECHNICAL-OTHERS (Measure)	RESISTANCE AC	Using Quadtech 1689; Direct / Comparison Method	1 ohm to 100 k ohm (upto 1kHz)	0.01 % to 0.02 %
118	ELECTRO-TECHNICAL-OTHERS (Measure)	RESISTANCE DC	Using Guildline 6520; Direct / Comparison Method	1 G ohm to 20 G ohm	40ppm to 0.1 %
119	ELECTRO-TECHNICAL-OTHERS (Measure)	RESISTANCE DC	Using Guildline 6520; Direct / Comparison Method; Direct / Ratio Comparison Method	1 G ohm to 20 G ohm	40 ppm to 0.1%
120	ELECTRO-TECHNICAL-OTHERS (Measure)	RESISTANCE DC	Guildline 6520; Direct / Comparison Method	1 T ohm to 100 T ohm	0.2% to 1%

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121	ELECTRO-TECHNICAL-OTHERS (Measure)	RESISTANCE DC	Using Guildline 6675A, Guildline 6623; Direct / Ratio Comparison Method	10 µ ohm to 100 m ohm	0.1% to 50 ppm
122	ELECTRO-TECHNICAL-OTHERS (Measure)	RESISTANCE DC	Using Guildline 6675A, Guildline 6623; Direct / Ratio Comparison Method	10 k ohm to 1 G ohm	1.2 ppm to 40 ppm
123	ELECTRO-TECHNICAL-OTHERS (Measure)	RESISTANCE DC	Using Guildline 6675A, Guildline 6623; Direct / Ratio Comparison Method	10 k Ohm to 1 M Ohm	1.2 ppm to 3 ppm
124	ELECTRO-TECHNICAL-OTHERS (Measure)	RESISTANCE DC	Using Guildline 6675A, Guildline 6623; Direct / Ratio Comparison Method	100 m ohm to 10 k ohm	1.2 ppm to 50 ppm
125	ELECTRO-TECHNICAL-OTHERS (Measure)	RESISTANCE DC	Guildline 6520; Direct / Comparison Method	20 G Ohm to 1 T Ohm	0.1 % to 0.2 %
126	ELECTRO-TECHNICAL-OTHERS (Measure)	RF POWER	Using HP 438A , Direct / Comparison Method	10µW to 20mW (100 kHz to 10 MHz)	3% to 5%
127	ELECTRO-TECHNICAL-OTHERS (Measure)	RF POWER	HP 438A with HP/ Aeroflex 30dB Attenuator; Direct / Comparison Method	20 mW to 10 W (**1MHz to 1GHz)**	5% to 7%

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128	ELECTRO-TECHNICAL-OTHERS (Source)	AC VOLTAGE	Using Fluke 5720A & Wavetek 4808 ; Direct Method	1 mV to 220 mV (**10 Hz to 20 kHz)**	120 ppm to 240 ppm
129	ELECTRO-TECHNICAL-OTHERS (Source)	AC VOLTAGE	Using Fluke 5720A ; Direct Method	1mV to 3.5 V (**10 Hz to 30 MHz)**	0.03% to 3.5%
130	ELECTRO-TECHNICAL-OTHERS (Source)	AC VOLTAGE	Using Fluke 5720A & Wavetek 4808 ; Direct Method	22V to 1100V (10Hz to 20kHz)	40 ppm to 260 ppm
131	ELECTRO-TECHNICAL-OTHERS (Source)	AC VOLTAGE	Using Fluke 5720A & Wavetek 4808 ; Direct Method	22V to 220V (**20 kHz to 1 MHz)**	80 ppm to 8000 ppm
132	ELECTRO-TECHNICAL-OTHERS (Source)	AC VOLTAGE	Using Fluke 5720A & Wavetek 4808 ; Direct Method	1 mV to 220 mV (20 kHz to 1 MHz)	200 ppm to 2300 ppm
133	ELECTRO-TECHNICAL-OTHERS (Source)	AC VOLTAGE	Using Fluke 5720A & Wavetek 4808 ; Direct Method	220 mV to 22 V (10 Hz to 20 kHz)	40 ppm to 400 ppm
134	ELECTRO-TECHNICAL-OTHERS (Source)	AC VOLTAGE	Using Fluke 5720A & Wavetek 4808 ; Direct Method	220 mV to 22V (20kHz to 1MHz)	80 ppm to 2700 ppm

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135	ELECTRO-TECHNICAL-OTHERS (Source)	AC VOLTAGE	Using Fluke 5720A & Wavetek 4808 ; Direct Method	220 V to 600 V (**20 kHz to 100 kHz)**	40 ppm to 100 ppm
136	ELECTRO-TECHNICAL-OTHERS (Source)	CAPACITANCE	Using GR 1403 Series, HP 16382 Series	1 pF (1kHz)	50 ppm to 50 ppm
137	ELECTRO-TECHNICAL-OTHERS (Source)	CAPACITANCE	Using GR 1403 Series, GR 1404 Series, GR 1409 Series, GR 1423 Series , HP 16382 Series; Fluke 5520A; Direct / Comparison/ Substitution Method	1 µF to 100 µF (1kHz)	0.01% to 0.3%
138	ELECTRO-TECHNICAL-OTHERS (Source)	CAPACITANCE	Using HP 16380 Series; Direct / Comparison/ Substitution Method	1 pF to 1000 pF (10 kHz to 1 MHz)	0.1% to 0.5%
139	ELECTRO-TECHNICAL-OTHERS (Source)	CAPACITANCE	Using IET 1417 Direct Method	1µF to 1F **(100Hz, 120Hz & 1kHz)**	0.25% to 0.5%
140	ELECTRO-TECHNICAL-OTHERS (Source)	CAPACITANCE	GR 1404 Series, Series Direct / Comparison/ Substitution Method	10 pF to 1000 pF (1kHz)	10 ppm to 10 ppm

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141	ELECTRO-TECHNICAL-OTHERS (Source)	CAPACITANCE	Using GR 1409 Series; Direct / Comparison/ Substitution Method	1000 pF to 1 µF (10 kHz to 100 kHz)	0.03% to 0.11%
142	ELECTRO-TECHNICAL-OTHERS (Source)	CAPACITANCE	Using GR 1403 Series, GR 1404 Series, Series, GR 1409 Series, GR 1423 Series , HP 16382 Series; Fluke 5520A; Direct / Comparison/ Substitution Method	1000 pF to 1 µF (1kHz)	10 ppm to 100 ppm
143	ELECTRO-TECHNICAL-OTHERS (Source)	DC POWER	Using Fluke 5520A/5522A Fluke 5720A/5725A; Direct Method	100 mW to 20kW (1V to 1000V/ 1mA to 20A)	0.005 % to 0.01 %
144	ELECTRO-TECHNICAL-OTHERS (Source)	DC VOLTAGE	Using Wavetek 4808 & Fluke 5720A; Direct Method	1 mV to 100 mV	3.5 ppm to 100 ppm
145	ELECTRO-TECHNICAL-OTHERS (Source)	DC VOLTAGE	Using Wavetek 7004N; Direct Method	1 V	2 ppm

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146	ELECTRO-TECHNICAL-OTHERS (Source)	DC VOLTAGE	Using Wavetek 7004N; Direct Method	10 V	1 ppm
147	ELECTRO-TECHNICAL-OTHERS (Source)	DC VOLTAGE	Using Wavetek 4808 & Fluke 5720A; Direct Method	100 nV to 1 mV	0.01% to 0.5%
148	ELECTRO-TECHNICAL-OTHERS (Source)	DC VOLTAGE	Wavetek 7004N, Wavetek 4808 and Fluke 5720A,Direct Method	10 V to 1100 V	3.5 ppm to 7.0 ppm
149	ELECTRO-TECHNICAL-OTHERS (Source)	DC VOLTAGE	Wavetek 7004N,Wavetek 4808 and Fluke 5720A,Direct Method	100 mv to 10 V	3.5 ppm to 3.5 ppm
150	ELECTRO-TECHNICAL-OTHERS (Source)	INDUCTANCE	HP 103 series; Direct Method	10 mH to 25 mH (**10 kHz to 100 kHz)**	0.1% to 0.3%
151	ELECTRO-TECHNICAL-OTHERS (Source)	INDUCTANCE	100H by Simulation Method using 1409 & 1440 series	100 H (1kHz)	0.04% to 0.04%

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152	ELECTRO-TECHNICAL-OTHERS (Source)	LF ENERGY Single phase & Three Phase	Using Rotek 8100 with Rotek MSB-100, Hsiang Cheng 3100E; Direct / Comparison Method	10V to 600 V /1mA to 2 (45 Hz to 65Hz) (PF Unity to 0.1 (Lead/Lag),	100 ppm to 200 ppm
153	ELECTRO-TECHNICAL-OTHERS (Source)	LF ENERGY Single phase & Three Phase	Using Rotek 8100 with Rotek MSB-100, Hsiang Cheng 3100E; Direct / Comparison Method	10V to 600 V 1mA to 200 A ,(45 Hz to 65Hz) (PF Unity to 0.1 (Lead/Lag)	100 ppm to 200 ppm
154	ELECTRO-TECHNICAL-OTHERS (Source)	LF POWER Single phase & Three Phase	Using Rotek 8100 with Rotek MSB-100, Hsiang Cheng 3100E; Direct / Comparison Method	10V to 600 V 1mA to 200 A,(45 Hz to 65Hz) (PF Unity to 0.1 (Lead/Lag)	100 ppm to 200 ppm
155	ELECTRO-TECHNICAL-OTHERS (Source)	LF POWER Single phase & Three Phase	Using Rotek 8100 with Rotek MSB-100, Hsiang Cheng 3100E; Direct / Comparison Method	10V to 600 V / 1mA to (45 Hz to 65Hz) (PF Unity to 0.1 (Lead/Lag),	100 ppm to 200 ppm
156	ELECTRO-TECHNICAL-OTHERS (Source)	MODULATION: AMPLITUDE MODULATION DEPTH	Using Keysight N5181B , R&S SMT06, Gigatronics 2440M, Boonton 8201; Direct / Comparison Method	Depth : 5% to 95% (MF : Upto 1 kHz) **CW: 10 MHz to 1 GHz** to	3% to 4%

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157	ELECTRO-TECHNICAL-OTHERS (Source)	MODULATION: AMPLITUDE MODULATION DEPTH	Using Keysight N5181B , R&S SMT06, Gigatronics 2440M, Boonton 8201; Direct / Comparison Method	Depth: 5% to 95% (MF : Upto 1 kHz) CW: 10 MHz to 1 GHz	3% to 4%
158	ELECTRO-TECHNICAL-OTHERS (Source)	MODULATION: FREQUENCY MODULATION DEVIATION	Using Keysight N5181B , R&S SMT06, Gigatronics 2440M, Boonton 8201; Direct / Comparison Method	Deviation:1kHz to (MF : Upto 1 kHz) **CW: 10 MHz to 1 GHz**	3% to 6%
159	ELECTRO-TECHNICAL-OTHERS (Source)	MODULATION: FREQUENCY MODULATION DEVIATION	Using Keysight N5181B , R&S SMT06, Gigatronics 2440M, Boonton 8201; Direct / Comparison Method	Deviation:1kHz to 500kHz (MF : Upto 1 kHz) CW: 10 MHz to 1 GHz	3% to 6%
160	ELECTRO-TECHNICAL-OTHERS (Source)	OSCILLOSCOPE CALIBRATION: BANDWIDTH	Using Fluke 9500 B, Fluke 5520 A; Direct Method	DC to 1.1 GHz	0.05 % to 3 %
161	ELECTRO-TECHNICAL-OTHERS (Source)	OSCILLOSCOPE CALIBRATION: BANDWIDTH	Using Fluke 9500 B, Fluke 5520 A; Direct Method	DC1.1 GHz	0.05 % to 3 %

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162	ELECTRO-TECHNICAL-OTHERS (Source)	OSCILLOSCOPE CALIBRATION: DEFLECTION FACTOR (Amplitude)	Using Fluke 9500 B, Fluke 5520 A; Direct Method	1mV to 5.56 V (50ohm) (**10 Hz to 50 kHz)**	0.05 % to 0.2 %
163	ELECTRO-TECHNICAL-OTHERS (Source)	OSCILLOSCOPE CALIBRATION: DEFLECTION FACTOR (Amplitude)	Using Fluke 9500 B, Fluke 5520 A; Direct Method	1mV to 5.56 V (50ohm) (10 Hz to 50 kHz)	0.05 % to 0.2 %
164	ELECTRO-TECHNICAL-OTHERS (Source)	OSCILLOSCOPE CALIBRATION: DEFLECTION FACTOR (Amplitude)	Using Fluke 9500 B, Fluke 5520 A; Direct Method	1mV to 210 V (1Mohm (**10 Hz to 50 kHz)**	0.05 % to 0.2 %
165	ELECTRO-TECHNICAL-OTHERS (Source)	OSCILLOSCOPE CALIBRATION: DEFLECTION FACTOR (Amplitude)	Using Fluke 9500 B, Fluke 5520 A by Direct Method	1mV to 210 V (1Mohm) (10 Hz to 50 kHz)	0.05 % to 0.2 %
166	ELECTRO-TECHNICAL-OTHERS (Source)	OSCILLOSCOPE CALIBRATION: TIME BASE (Marker)	Using Fluke 9500 B, Fluke 5520 A; Direct Method	1ns to 55 s	10ppm
167	ELECTRO-TECHNICAL-OTHERS (Source)	OSCILLOSCOPE CALIBRATION: TIME BASE (Marker)	Using Fluke 9500 B, Fluke 5520 A; Direct Method	1ns to 55 s	10ppm

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168	ELECTRO-TECHNICAL-OTHERS (Source)	POWER FACTOR	Using Rotek 8100 with YEW 2524,HC 3100E, Rotek MSB-100; Direct / Comparison Method	0 to 1 (Lag & (45 Hz to 65Hz)	0.0004 PF to
169	ELECTRO-TECHNICAL-OTHERS (Source)	RESISTANCE AC	Using Tinsley 5685 ; Direct	1 ohm to 10kohm (upto 1kHz)	10 ppm to 20 ppm
170	ELECTRO-TECHNICAL-OTHERS (Source)	RESISTANCE AC	Using GR 1440; Direct/Comparison Method	10 k ohm to 100 k ohm (upto 1kHz)	10 ppm to 100 ppm
171	ELECTRO-TECHNICAL-OTHERS (Source)	RESISTANCE DC	Using Guildline 9230/1000,Direct / Comparison Method	0.1 m ohm to 0.1 m ohm	50 ppm to 50 ppm
172	ELECTRO-TECHNICAL-OTHERS (Source)	RESISTANCE DC	Using Guildline 9230, Tinsley 5686, L&N 4000,Guildline 9334, Tinsley 5685A/B,Guildline 9330, Guildline 9334,Guildline 9336 & 9337 Series; Direct / Comparison Method	1 m ohm to 100 m ohm	2.2 ppm to 4 ppm

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173	ELECTRO-TECHNICAL-OTHERS (Source)	RESISTANCE DC	Using Guildline 9230, Tinsley 5686, L&N 4000,Guildline 9334, Tinsley 5685A/B,Guildline 9330, Guildline 9334,Guildline 9336 & 9337 Series; Direct / Comparison Method	1 ohm to 10 k ohm	0.5 ppm to 1.9 ppm
174	ELECTRO-TECHNICAL-OTHERS (Source)	RESISTANCE DC	Using Guildline 65206, 9337 Series; Direct / Comparison Method	1 T ohm to 100 T ohm	0.05% to 0.1%
175	ELECTRO-TECHNICAL-OTHERS (Source)	RESISTANCE DC	Using Guildline 65206, 9336 Series; Direct / Comparison Method	1 G ohm to 100 G ohm	0.01% to 0.02%
176	ELECTRO-TECHNICAL-OTHERS (Source)	RESISTANCE DC	Using L&N 4000,Guildline 9334, Tinsley 5685A/B,Guildline 9330, Guildline 9334,Guildline 9336 & 9337 Series; Direct / Comparison Method	100 k ohm to 100 M ohm	1.5 ppm to 10 ppm

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177	ELECTRO-TECHNICAL-OTHERS (Source)	RF POWER	Keysight N5181B, R&S SMT-06,Gigatronics 2440M with Amplifier & HP 438A with HP/ Aeroflex 30Attenuator; Direct / Comparison Method	20 mW to 10 W(**1MHz to 1GHz)**	5% to 7%
178	ELECTRO-TECHNICAL-OTHERS (Source)	RF POWER	Using Keysight N5181B, R&S with HP 438A, Direct / Comparison Method	10 µW to 20mW (**100 kHz to 10 MHz)**	4.5% to 5%
179	ELECTRO-TECHNICAL-OTHERS (Source,Measure)	INDUCTANCE	Using GR 1482 Series; Direct Method	100 µH to 10 H (**1 kHz)**	0.05% to 0.01%
180	ELECTRO-TECHNICAL-RF/MICROWAVE (1 GHZ AND ABOVE) (Measure)	ATTENUATION	R&S ZVB20; Boonton 52000 Series; HP/ Aeroflex 30dB Attenuator; Direct / Comparison / Substitution Method	1 dB to 70 dB (10 MHz to 18 GHz)	0.2 dB to 0.3 dB

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181	ELECTRO-TECHNICAL-RF/MICROWAVE (1 GHZ AND ABOVE) (Measure)	REFLECTION COEFFICIENT	Using R&S ZVB-20 with Cal Kit, Verification Kit & & Attenuator with Short (3dB); Direct/ Comparison Method	0 to 0.5 (10MHz to 18GHz)	0.01 to 0.02
182	ELECTRO-TECHNICAL-RF/MICROWAVE (1 GHZ AND ABOVE) (Measure)	REFLECTION COEFFICIENT	Using R&S ZVB-20 with Cal Kit, Verification Kit & & Attenuator with Short (3dB); Direct/ Comparison Method	0 to 0.5 (10MHz to 18GHz)	0.01 to 0.02
183	ELECTRO-TECHNICAL-RF/MICROWAVE (1 GHZ AND ABOVE) (Measure)	RF POWER	HP 438A & Boonton 52000 Series, Keysight 1914A Direct Method	100nW to 20mW(**10 MHz to 18 GHz)**	4.5% to 5%
184	ELECTRO-TECHNICAL-RF/MICROWAVE (1 GHZ AND ABOVE) (Measure)	RF POWER	Using HP 438A , Direct / Comparison Method	10µW to 20mW (100 kHz to 10 MHz)	3% to 5%

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185	ELECTRO-TECHNICAL-RF/MICROWAVE (1 GHZ AND ABOVE) (Measure)	RF POWER	HP 438A & Boonton 52000 Series, Keysight 1914A Direct Method	100nW to 20mW (10 MHz to 18 GHz)	4.5% to 5%
186	ELECTRO-TECHNICAL-RF/MICROWAVE (1 GHZ AND ABOVE) (Measure)	RF POWER	HP 438A with HP/ Aeroflex 30dB Attenuator; Direct / Comparison Method	20 mW to10 W (1MHz to 1GHz)	5% to 7%
187	ELECTRO-TECHNICAL-RF/MICROWAVE (1 GHZ AND ABOVE) (Source)	ATTENUATION	R&S ZVB20, Aeroflex 30dB RF Attenuator; Direct / Comparison / Substitution Method	30 dB (10 MHz to 18 GHz)	0.2dB to 0.3 dB
188	ELECTRO-TECHNICAL-RF/MICROWAVE (1 GHZ AND ABOVE) (Source)	ATTENUATION	Using R&S DPSP; Direct / Comparison / Substitution Method	1 dB to 70 dB (50 kHz to 2.7 GHz)	0.2 dB to 0.3 dB

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189	ELECTRO-TECHNICAL-RF/MICROWAVE (1 GHZ AND ABOVE) (Source)	RF POWER	Using Keysight N5181B, R&S with HP 438A, Direct / Comparison Method	10 µW to 20mW (100 kHz to 10 MHz)	4.5% to 5%
190	ELECTRO-TECHNICAL-RF/MICROWAVE (1 GHZ AND ABOVE) (Source)	RF POWER	Keysight N5181B, R&S SMT-06,Gigatronics 2440M with Amplifier & HP 438A with HP/ Aeroflex 30Attenuator; Direct / Comparison Method	20 mW to 10 W (1MHz to 1GHz)	5% to 7%
191	ELECTRO-TECHNICAL-RF/MICROWAVE (1 GHZ AND ABOVE) (Source)	RF POWER	Keysight 5181B, Gigatronics 2440M, with HP 438A & Boonton 52000 Series, Keysight 1914A Direct / Comparison Method	100nW to 20mW (**10 MHz to 18 GHz)**	4.5% to 5%
192	ELECTRO-TECHNICAL-RF/MICROWAVE (1 GHZ AND ABOVE) (Source)	RF POWER	Keysight 5181B, Gigatronics 2440M, with HP 438A & Boonton 52000 Series, Keysight 1914A Direct / Comparison Method	100nW to 20mW (10 MHz to 18 GHz)	4.5% to 5%

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193	ELECTRO-TECHNICAL-TIME & FREQUENCY (Measure)	FREQUENCY	Using Keysight 53230A, Agilent 53132/ 53152A, HP 5345A, (Locked with Ref Freq Std. R&S XSRM, GR 1115-C); Direct / Comparison Method	0.01 Hz to 40GHz	0.03 ppm to 0.00005 ppm
194	ELECTRO-TECHNICAL-TIME & FREQUENCY (Source)	FREQUENCY	Using R&S XSRM, GR1115C Keysight N5181B, R&S SMT-06 R&S, Gigatronics 2440M (Locked with Ref Std Freq.); Direct / Comparison Method	0.01 Hz to 40GHz	0.03 ppm to 0.00005ppm
195	ELECTRO-TECHNICAL-TIME & FREQUENCY (Source)	FREQUENCY	Using R&S XSRM; Direct Method	100 kHz to 10MHz	0.00005 ppm
196	ELECTRO-TECHNICAL-TIME & FREQUENCY (Source,Measure)	TIME INTERVAL	Using Keysight 53230A, Agilent 53132A, HP 5315A, ; Direct / Comparison Method	1 s to 3600s	0.1 ppm
197	MECHANICAL-ACOUSTICS	ACOUSTICS: SOUND LEVEL	Using B&K 4230; Direct Method	94dB (1kHz)	0.2dB

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198	MECHANICAL-ACOUSTICS	SOUND LEVEL Meter	Using B&K 4230; Direct Method	94dB (1kHz)	0.2dB
199	MECHANICAL-WEIGHING SCALE AND BALANCE	Weighing balances	Standard weights E2 class Mattler by as per procedure based on OIML R-76 (2006)	1 mg to 200 g	0.1mg
200	MECHANICAL-WEIGHING SCALE AND BALANCE	Weighing Balances	Standard weight E2 class weight as per procedure based on OIML R-76 (2006)	12 kg to 22 kg	2.2g
201	MECHANICAL-WEIGHING SCALE AND BALANCE	Weighing Balances	Standard. weights E2 class as per procedure based on OIML R-76(2006)	200 gm to 12 kg	0.2g
202	THERMAL-SPECIFIC HEAT & HUMIDITY	Hygrometer, Temp-Humidity indicators	RH-Temp indicator hygropalm 1 Rotronic (10 °C to 55 °C) by comparison Method)	20 % to 95 %	1.3 %
203	THERMAL-SPECIFIC HEAT & HUMIDITY	Hygrometer, Temp-Humidity indicators with sensor	RH-Temp indicator hygropalm 1 Rotronic by comparison Method)	20 %RH to 95 %RH @10 °C to 55 °C	1.3%RH

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204	THERMAL-TEMPERATURE	Thermocouple, Temperature Measuring Devices with Probes	S Thermocouple, Digital Thermometer, High Temperature Furnace Hart/Fluke and Zero Ref Bath by Comparison Method	660 °C to 1000 °C	1.4°C
205	THERMAL-TEMPERATURE	RTD, Thermocouple, Temperature Measuring Devices with Probes	SSPRT HART, Digital Thermameter Fluk Chub E4 and liquid Bath Julabo by Comparison Method	(-) 50 °C to 200 °C	0.06°C
206	THERMAL-TEMPERATURE	Temperature chamber/Oven/freezer/incubator etc.	Temp. calibrator/indicator Hart Fluke/data logger with RTD Pt100 sensors by Comparison Method (Multipoint Calibration)	(-)80 °C to 200 °C	0.6°C
207	THERMAL-TEMPERATURE	Temperature Indicator with sensor of dry block bath	SSPRT+Dig. Thermometer Hart Fluke Chub E4 by Comparison Method (Single point Calibration)	25 °C to 660 °C	0.2°C

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208	THERMAL-TEMPERATURE	Temperature Indicator with sensor of dry block/furnaces etc.	High Temperature Furnance Hart/Fluke 9150,S type Thermocouple+Digital Thermometer+Zero ref.bath by Comparison Method (Single point Calibration)	660 °C to 1000 °C	1.4°C
209	THERMAL-TEMPERATURE	Temperature Indicator with sensor of liquid bath	SPRT Hart/Flukwith Digital Thermometer Hart/Chub E4, by comparison method.(Single point Calibration)	-50 °C to 200 °C	0.06°C

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