

ACA TMatrix Inc. Best Measurement Capabilities	Test and Measurement Services
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Type II Electrical Measurement and Calibration Capabilities

Measured Quantity and Range	@	Best Measurement Capabilities Expressed as an uncertainty (+/-)	Notes
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Direct Voltage (Specific Voltages)

1, 10, 100, 1000V	± 2 ppm	Source/Measure
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Direct Voltage

1 uV to 22.0V	± 6 ppm	Source/Measure
22.0V to 275V	± 7 ppm	Source/Measure
275V to 1100V	± 8 ppm	Source/Measure
1100V to 10kV	$\pm .01\%$	Source/Measure
10kV to 20kV	$\pm 4\%$	Source/Measure
20kV to 30kV	$\pm 2\%$	Source/Measure
30kV to 40kV	$\pm 4\%$	Source/Measure

Direct Current

10 nA to 20A	$\pm 0.006\%$	Source/Measure
20A to 500A	$\pm 0.25\%$	Source/Measure

Resistance

.1 to 100k Ohm	± 10 ppm	Measure
100k to 10M Ohm	± 50 ppm	Measure
10M - 1T Ohm	$\pm 1\%$	Measure
1T - 10T Ohm	$\pm 2\%$	Measure

10T – 16T Ohm

± 10%

Measure

Measured Quantity and Range	@	Best Measurement Capabilities Expressed as an uncertainty (+/-)	Notes
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Alternating Current

10 uA to 10 mA	50 Hz to 1kHz	±.08%	Measure
10 mA to 5 A	5 Hz to 20 kHz	±.02%	Measure
10 mA to 5 A	20 kHz to 50 kHz	±.03%	Measure
10 mA to 5 A	50 kHz to 100 kHz	±.05%	Measure
5 A to 10 A	100 Hz to 100 kHz	±.06%	Measure
10 A to 20 A	5 Hz to 20 kHz	±.03%	Measure
10 A to 20 A	20k Hz to 50k Hz	±.05%	Measure
20 A to 600 A	60Hz	± .04%	Measure

Alternating Voltage

0.5 to 1000 V	500 kHz	± 0.005	Source/Measure
0.5 to 500 V	20 kHz	± 0.005	Source/Measure
0.5 to 200 V	50 kHz	± 0.01	Source/Measure
0.5 to 100 V	100 kHz	± 0.02	Source/Measure
0.5 to 50 V	500 kHz	± 0.05	Source/Measure
0.5 to 10 V	1MHz	± 0.05	Source/Measure

Capacitance

10 (-5) pF to 11.1uF	1kHz	± .01%	Source/Measure
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Inductance (Specific)

200 uH, 1mH, 10 mH, 100 mH, 1 H, 10 H		± .06%	Source/Measure
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Inductance (non-specific)

0.1 nH to 111 uH	± 1%	Measure
111 uH to 1111 H	± 0.1%	Measure

Measured Quantity and Range	@	Best Measurement Capabilities Expressed as an uncertainty (+/-)	Notes
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Temperature

Ice Point	0°C	± 0.025 0°C	Source/Measure
Thermometer	-50 °C to 200 °C	± 0.1 °C	Source/Measure

Modulation

Frequency Modulation	10 MHz to 3 GHz @ 1kHz rate	± 1%	Measure
Amplitude Modulation	10 MHz to 3 GHz @ 1kHz rate Between 5% and 95%	± 1%	Measure
Phase Modulation	at receiving frequency of 25kHz to 3 GHz @ 1kHz rate	± 3%	Measure

RF & Microwave Power

-20 to +20 dBm	100kHz to 10 MHz	±3%	Source/Measure
-30 to +20 dBm	.01 to 9 GHz	±2.7%	Source/Measure
-30 to +20 dBm	10 to 18 GHz	±3.8%	Source/Measure
-70 to -30 dBm	.01 to 11 GHz	±3.7%	Source/Measure
-70 to -30 dBm	12 to 18 GHz	±5%	Source/Measure

Sound Pressure Level

114 dBspl 125, 259, 500, 1000, 2000 Hz ±0.25 dB Source/Measure

Note: Pressures other than 114 dB

104, 94, 84, 74 dB 125, 259, 500, 1000, 2000 Hz 0.35 dB Source/Measure

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Frequency

1 MHz to <10 Hz	1 part in 10 (4)
10 Hz to <100 Hz	1 part in 10 (5)
100 Hz to <1kHz	1 part in 10 (6)
1kHz to <10kHz	1 part in 10 (7)
10kHz to <100kHz	1 part in 10 (8)
100kHz to <1 MHz	1 part in 10 (9)
1 MHz to <10 MHz	1 part in 10 (10)
10 MHz to <100 MHz	1 part in 10 (11)
100 MHz to <1 GHz	1 part in 10 (12)
1 GHz to <20 GHz	1 part in 10 (9)