

High Performance Multimeters

50,000 Count, ASYC II | 50,000 Count Bench DMMs

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Specifications

Unless otherwise stated, accuracy specifications apply from 18 ° C to 28 ° C. Specifications stated as n%R +nD, mean ±(n% of reading +n least significant digit). Accuracy specifications stated as n%FS means ±(n% of Full Scale).

DC VOLTAGE (Auto/Manual Ranging)

Ranges	Accuracy			Resolution	Input Impedance
	5490	5470	5460		
500 mV	0.025% R+ 2D	0.05% R + 2D	0.1% R + 2D	10 μ V	10 M Ω or 1G Ω *
5 V	0.025% R+ 2D	0.05% R + 2D	0.1% R + 2D	100 μ V	11M Ω
50 V	0.025% R + 2D	0.05% R + 2D	0.1% R + 2D	1 mV	10 M Ω
500 V	0.025% R + 2D	0.05% R + 2D	0.2% R + 2D	10 mV	10 M Ω
1000 V	0.025% R + 2D	0.05% R + 2D	0.3% R + 2D	100 mV	10 M Ω

*10M Ω only on 5460

AC VOLTAGE (Auto/Manual Ranging, True RMS, AC or AC + DC)
Models 5490/5470

Accuracy at greater than 10% or range. 50,000 counts at Full Scale:

Range	DC to 1 KHz	1 kHz to 4 kHz	4kHz 10 kHz	10 kHz to 30 kHz	30 kHz to 50 kHz	Resolution	Input Impedance
500 mv	0.3%R+ 30D	1 % R + 30D	5% R +30D	Not Specified		10 μ V	10 M Ω /100 pF or 1 G Ω
5V	0.3%R + 30D	1%R+30D	2%R+30D	2% R + 30D	3% R + 30D	100 μ V	11 M Ω /100 pF
50 V	0.3%R + 30D	1%R+30D	2%R+30D	2% R + 30D	3% R + 30D	1 mv	10 M Ω /100 pF
500 V	0.3%R + 30D	1%R+30D	2%R+30D	2% R + 30D	3% R + 30D	10 mv	10 M Ω /100 pF
750 V	0.3%R + 30D	Not specified				1 00 mV	10 M Ω /100 pF

50 kHz to 100 kHz (5V, 50V, 500V ranges) \pm 6% FS typical
Crest Factor: 6

Model 5460

Accuracy at greater than 10% of range, 5000 counts at Full Scale:

Ranges	DC to 1kHz	1 kHz to 5kHz	5 kHz to 10kHz	10 kHz to 20kHz	20 kHz to 30 kHz	Resolution	Input Impedance
500 mV	1%R+2D	4%R+3D	Not Specified			100 μ V	10M Ω /100pF
5V	1%R+3D	1%R+3D	2%R+3D	2%R+3D	3%R+3D	1 mv	11 M Ω /100pF
50V	1%R+3D	1 %R+3D	2%R+3D	2%R+3D	3%R+3D	10 mv	10 M Ω /100 pF
500V	1%R+3D	1%R+3D	2%R+3D	2%R+3D	3%R+3D	100 mv	10 M Ω /100pF
750V	1%R+3D	Not Specified				1V	10 M Ω /100pF

Crest Factor: 3

AC/DC VOLTAGE PROTECTION

Overvoltage Protection: \pm 1 100 V DC + AC Peak

Transient Protection: 6kV for 10 μ s

DC CURRENT (Auto/Manual Ranging)

Range	Accuracy		Resolution	Max Burden Voltage
	5490,5470	5460		
500 μ A	0.2%R + 5D	Not Available	10nA	700mV
5mA	0.2%R + 2D	0.2%R+2D	100nA	700mV

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50mA	0.05%R + 2D	0.2%R + 2D	1 μ A	700mV
500 mA	0.2%R + 2D	0.2%R+2D	10 μ A	1.5 V
10 A	0.5%R +2D	0.5%R+2D	1mA	500mV

AC CURRENT (Auto/Manual Ranging, True RMS, AC or DC + DC)
(Models 5490/5470)

Ranges	DC to 1 kHz	1 kHz to 10 kHz	10 kHz to 20 kHz	20 kHz to 30 kHz	Resolution	Max Burden Voltage
500 μ A	0.75%R+50D	0.75%R+50D	1.0%R+50D	3.0%R+50D	10nA	700mV
5mA	0.6%R+50D	0.6%R+50D	1.0%+50D	2.0%+50D	100nA	700mV
50mA	0.6%+50D	0.6%R+50D	1.0%+50D	2.0%+50D	1 μ A	700mV
500mA	0.7%+50D	0.7%+50D	Not Specified		10 μ A	1.5V
10A	1% of FS	Not Specified			1mA	500mV

Crest Factor:6

AC CURRENT
Model 5460

Ranges	DC to 5kHz	Resolution	Max Burden Voltage
5ma	1.0%R + 3D	1 μ A	700mV
50mA	1.0%R+3D	10 μ A	700mV
500mA	1.0%R+3D	100 μ A	1.5V
10A	1% of FS	10mA	500mV

Crest Factor: 3

RESISTANCE (Auto/Manual Ranging)

Ranges	Accuracy 5490,5470	Accuracy 5460	Resolution	Test Current
500 Ω	0.07%R+5D	0.1%R+5D	10m Ω	1mA
5k Ω	0.07%R+2D	0.1%R+2D	100m Ω	100 μ A
50k Ω	0.07%R+2D	0.1%R+2D	1 Ω	10 μ A
500k Ω	0.07%R+2D	0.1%R+2D	10 Ω	1 μ A
5M Ω *	0.3%R + 2D	0.3%R + 2D	100 Ω	100nA
50M Ω *	1%R+2D	1.0%R+2D	1k Ω	10nA

CAPACITANCE(Auto/Manual Ranging)

Ranges	Accuracy		Resolution	Measurement Current	Max Measurement Time
	5490,5470	5460			
50nF	1.0%R+2D	1.0%+2D	10pF	100nA	0.5 sec
500 nF	1.0%R+2D	1.0%R+2D	100pF	1 μ A	0.5 sec
5 μ F	1.0%R+2D	1.0%R+2D	1nF	10 μ A	0.5 sec
50 μ F	1.0%R+2D	1.0%R+2D	10nF	100 μ A	0.5sec
500 μ F	1.0%R+2D	1.0%R+2D	100nF	1mA	1.5 sec
5000 μ F	1.0%R+2D	2.0%R+2D	1 μ F	1mA	3 sec/mF
50 mF	1.0%R+2D	2.0%R+2D	10 μ F	1mA	3 sec/mF

CAPACITANCE/RESISTANCE PROTECTION

Overload Protection: 600 V DC + AC peak

FREQUENCY (Autoranging)

Range: 0.6 Hz to 500 kHz Accuracy: \pm (0.03% rdg + 1 digit)

Range	500mV (5490, 5470)	5V to 500V 500 μ A to 500mA	750V	10A (5490,5470)
0.6Hz to 5kHz	2% of FS	2% of FS	100 V	2A
5kHz to 50kHz	5% of FS	5% of FS	250V	
50kHz to 500kHz	Not Specified	10% of FS		Not Specified