

CALIBRATION DATA SHEET

Hewlett Packard / 34401A

Certificate Number
467176 - 8044 - 467186

Parameters Tested/Test Specification	Nom. Applied	- Limit	+ Limit	As Found	As Left	Uncertainty
Self Test	----	Pass	Fail	Pass		----
Zero Offset Test (Rear Inputs)						
10mA DC Range	Open	-0.00200	0.00200	0.00005		----
100mA DC Range	Open	-0.0050	0.0050	0.0001		----
1A DC Range	Open	-0.000100	0.000100	0.000004		----
3A DC Range	Open	-0.000600	0.000600	0.000006		----
100mV DC Range	Short	-0.0035	0.0035	-0.0012		----
1V DC Range	Short	-0.000007	0.000007	-0.000000		----
10V DC Range	Short	-0.00005	0.00005	0.00000		----
100V DC Range	Short	-0.0006	0.0006	0.0001		----
1000V DC Range	Short	-0.010	0.010	0.000		----
100 Ohm Range, 2-Wire	Short	-0.0040	0.0040	0.0000		----
1kOhm Range, 2-Wire	Short	-0.000010	0.000010	0.000001		----
10kOhm Range, 2-Wire	Short	-0.00010	0.00010	-0.00000		----
100kOhm Range, 2-Wire	Short	-0.0010	0.0010	0.0000		----
1MOhm Range, 2-Wire	Short	-0.000010	0.000010	0.000002		----
10MOhm Range, 2-Wire	Short	-0.00010	0.00010	0.00001		----
100MOhm Range, 2-Wire	Short	-0.0100	0.0100	-0.0004		----
100Ohm Range, 4-Wire	Short	-0.0040	0.0040	-0.0014		----
1kOhm Range, 4-Wire	Short	-0.000010	0.000010	-0.000000		----
10kOhm Range, 4-Wire	Short	-0.00010	0.00010	-0.00000		----
100kOhm Range, 4-Wire	Short	-0.0010	0.0010	-0.0000		----
1MOhm Range, 4-Wire	Short	-0.000010	0.000010	0.000001		----
10MOhm Range, 4-Wire	Short	-0.00010	0.00010	0.00001		----
100MOhm Range, 4-Wire	Short	-0.0100	0.0100	-0.0002		----
Zero Offset Test (Front Inputs)						
10mA DC Range	Open	-0.00200	0.00200	0.00001		----
100mA DC Range	Open	-0.0050	0.0050	0.0001		----
1A DC Range	Open	-0.000100	0.000100	0.000001		----
3A DC Range	Open	-0.000600	0.000600	0.000006		----
100mV DC Range	Short	-0.0035	0.0035	0.0001		----
1V DC Range	Short	-0.000007	0.000007	0.000001		----
10V DC Range	Short	-0.00005	0.00005	0.00001		----
100V DC Range	Short	-0.0006	0.0006	0.00001		----
1000V DC Range	Short	-0.010	0.010	0.001		----
100Ohm Range, 2-Wire	Short	-0.0040	0.0040	-0.0016		----
1kOhm Range, 2-Wire	Short	-0.000010	0.000010	0.000000		----
10kOhm Range, 2-Wire	Short	-0.00010	0.00010	0.00001		----
100kOhm Range, 2-Wire	Short	-0.0010	0.0010	0.0001		----
1MOhm Range, 2-Wire	Short	-0.000010	0.000010	0.000001		----
10MOhm Range, 2-Wire	Short	-0.00010	0.00010	0.00001		----
100MOhm Range, 2-Wire	Short	-0.0100	0.0100	-0.0000		----
100Ohm Range, 4-Wire	Short	-0.0040	0.0040	0.0006		----
1kOhm Range, 4-Wire	Short	-0.000010	0.000010	0.000001		----
10kOhm Range, 4-Wire	Short	-0.00010	0.00010	0.00002		----
100kOhm Range, 4-Wire	Short	-0.0010	0.0010	0.0001		----
1MOhm Range, 4-Wire	Short	-0.000010	0.000010	0.000002		----
10MOhm Range, 4-Wire	Short	-0.00010	0.00010	0.00002		----

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100MOhm Range, 4-Wire	Short	-0.0100	0.0100	0.0000		----
DC Voltage						
100mV Range	100.0000mV	99.9915	100.0085	100.0022		2.4uV
1V Range	1.000000V	0.999953	1.000047	1.000017		.010mV
10V Range	10.00000V	9.99960	10.00040	10.00017		.13mV
10V Range	-10.00000V	-10.00040	-9.99960	-10.00020		.13mV
100V Range	100.0000V	99.9949	100.0051	100.0026		1.8mV
1000V Range	1000.000V	999.945	1000.055	1000.025		17mV
AC Voltage						
100 mV Range @1kHz	10.0000mV	9.9540	10.0460	10.0048		6.6uV
100 mV Range @1kHz	100.0000mV	99.9000	100.1000	100.0266		20uV
@50kHz	100.0000mV	99.8300	100.1700	99.9974		37uV
1V Range @20Hz	1.000000V	0.999100	1.000900	0.999818		.29mV
@1kHz	1.000000V	0.999100	1.000900	1.000056		.19mV
@50kHz	1.000000V	0.998300	1.001700	0.999395		.66mV
@100kHz	1.000000V	0.993200	1.006800	0.998390		2.2mV
@300kHz	1.000000V	0.955000	1.045000	1.000711		2.6mV
10V Range @ 1kHz	10.00000V@1kHz	9.99100	10.00900	9.99874		1.9mV
@50kHz	10.00000V	9.98300	10.01700	9.99242		3.8mV
@10Hz	10.00000V	9.99100	10.00900	9.99688		13mV
100V Range@1kHz	100.0000V	99.9100	100.0900	99.9330		20mV
@50kHz	100.0000V	99.8300	100.1700	99.9115		40mV
750V Range@ 1kHz	750.000V	749.325	750.675	749.921		.19V
@50 kHz	320.000V	319.241	320.759	319.687		.09V
Frequency Response						
@20Hz	1.000000V	0.999100	1.000900	0.999770		.30mV
@1kHz	1.000000V	0.999100	1.000900	1.000011		.30mV
@20kHz	1.000000V	0.999100	1.000900	0.999952		.21mV
@50kHz	1.000000V	0.998300	1.001700	0.999543		.29mV
@100kHz	1.000000V	0.993200	1.006800	0.998757		.66mV
@300kHz	1.000000V	0.955000	1.045000	1.001021		2.6mV
Linearity @ 1kHz	10.00000V	9.99100	10.00900	9.99865		1.9mv
	1.00000V	0.99650	1.00350	1.00005		.30mV
	0.10000V	0.08700	0.11300	0.10096		20uV
DC Current						
10mA Range	10.000000mA	9.99300	10.00700	9.99704		1.2uA
100mA Range	100.0000mA	99.9450	100.0550	99.9649		14uA
1A Range	1.000000A	0.998900	1.001100	1.000135		.20mA
3A Range	2.000000A	1.995800	2.004200	2.000397		.70mA
AC Current						
1A Range@1kHz	1.000000A	0.998600	1.001400	1.000464		.70mA
3A Range@1kHz	2.000000A	1.995200	2.004800	1.999944		1.9mA
4-Wire Ohms						
100Ohm Range	100.0000	99.9860	100.0140	100.0032		3.6mΩ
1kOhm Range	1.000000	0.999890	1.000110	0.999928		43mΩ
10kOhm Range	10.00000	9.99890	10.00110	9.99915		.44Ω
100kOhm Range	100.0000	99.9890	100.0110	99.9971		4Ω

