



**PRECISION
MEASUREMENTS
INC.**

CERTIFICATE OF CALIBRATION

Report No. 1895981

CUSTOMER

Old ABC, Company
333 Moffett Park Drive
Sunnyvale, CA
94089

Cal Date: 11/30/2011
Due Date: 11/30/2012
Cal Int: 12 Mo.

INSTRUMENT/ID

Manufacturer: Fluke

Serial No: 916704298

Acct No: 4532

Model No: 179

Asset/ID No: 4571

PMC No: 2014

Description: Multimeter, Digital

Department: R&D

Code No: 04

Location: Bldg. 2

CALIBRATION CONDITIONS

Received: In Tolerance

Cal Spec: Manufacturer

Temp: 23 °C

Returned: In Tolerance

Cal Procedure: 179.pdf

Humidity: 48 %

Cal'd At: PMI Lab

CALIBRATION EQUIPMENT USED

Asset No.	Manufacturer	Model No.	Calib. Date	Due Date
2752	Fluke	5520A	09/09/11	09/09/12

REMARKS/COMMENTS

See Attached External Data Report

PRECISION MEASUREMENTS, INC. Quality System complies with ISO 9001:2008 and certifies that all calibration has been performed using standards traceable to the NATIONAL INSTITUTE of STANDARDS and TECHNOLOGY (NIST), or an acceptable value of a natural physical constant or ratio Calibration technique per MIL-STD-45662A, or current versions of ANSI-Z-540 , or ISO/IEC 17025 as applicable. Uncertainty of Standards has a 4:1 ratio or greater than the instrument under test or otherwise accounted for by analysis or quantitatively documented on this Certificate. This certificate applies only to the instrument identified above and shall not be reproduced, except in full, without specific written approval by PRECISION MEASUREMENTS, INC.

TECHNICIAN: Miller By Miller

QC: Shimeg

PM-COC-102A

•333 Moffett Park Drive • Sunnyvale, CA 94089 • (408) 733-8600•

Function	Nominal	As Found	As Left	Min. Tol.	Max. Tol.	Measurement Uncertainty	
AC Voltage							
Range							
300 mV							
5 V	45 Hz	300.0 mV	299.9 mV	299.9 mV	296.7 mV	303.3 mV	0.095 mV
	500 Hz	5.000 V	4.994 V	4.994 V	4.947 V	5.053 V	0.0017 V
	1 kHz	5.000 V	4.954 V	4.954 V	4.897 V	5.103 V	0.0017 V
50 V							
	45 Hz	50.00 V	49.95 V	49.95 V	49.47 V	50.53 V	0.011 V
	1 kHz	50.00 V	50.05 V	50.05 V	48.97 V	51.03 V	0.011 V
500 V							
	45 Hz	300.0 V	299.8 V	299.8 V	296.7 V	303.3 V	0.08 V
	500 Hz	500.0 V	500.3 V	500.3 V	494.7 V	505.3 V	0.12 V
	1 kHz	500.0 V	500.3 V	500.3 V	489.7 V	510.3 V	0.12 V
1000 V							
	45 Hz	1000 V	997 V	997 V	987 V	1013 V	0.16 V
Frequency - AC							
1V Input							
	45.00 Hz	45.00 Hz	45.00 Hz	44.94 Hz	45.06 Hz	1*10 ⁻⁶ Hz	
5 V Input							
	50.00 kHz	50.00 kHz	50.00 kHz	49.94 kHz	50.06 kHz	1*10 ⁻⁶ kHz	
DC Voltage							
	5.000 V	5.000 V	5.000 V	4.993 V	5.007 V	0.00080 V	
	300.0 V	300.0 V	300.0 V	299.5 V	300.5 V	0.022 V	
	1000 V	1000 V	1000 V	997 V	1003 V	0.66 V	
	-1000 V	-1000 V	-1000 V	-1003 V	-997 V	0.66 V	
DC Voltage - Frequency							
3V Input							
	45.00 Hz	45.00 Hz	45.00 Hz	44.94 Hz	45.06 Hz	1*10 ⁻⁶ Hz	
30 V Input							
	50.00 kHz	50.00 kHz	50.00 kHz	49.94 kHz	50.06 kHz	1*10 ⁻⁶ kHz	
DC Millivolt							
	30.0 mV	30.0 mV	30.0 mV	29.8 mV	30.2 mV	0.063 mV	
	-300.0 mV	-299.9 mV	-299.9 mV	-300.5 mV	-299.5 mV	0.081 mV	
	600.0 mV	599.8 mV	599.8 mV	599.3 mV	600.7 mV	0.082 mV	
Resistance							
	19.0 Ω	19.1 Ω	19.1 Ω	18.6 Ω	19.4 Ω	0.063 Ω	
	19.00 MΩ	19.00 MΩ	19.00 MΩ	18.68 MΩ	19.32 MΩ	0.023 MΩ	
Capacitance							
	900 nF	900 nF	900 nF	887 nF	913 nF	NA	
Continuity							
	25.00 Ω	Beep ON	Beep ON	Beep ON		0.064 Ω	
	250.00 Ω	Beep OFF	Beep OFF	Beep OFF		0.083 Ω	
Diode Check							
	2.00 V	2.000 V	2.000 V	1.978 V	2.022 V	0.062 V	

Function	Nominal	As Found	As Left	Min. Tol.	Max. Tol.	Measurement Uncertainty
AC Current						
Frequency						
45 Hz	3.00 mA	3.01 mA	3.01 mA	2.20 mA	3.80 mA	0.018 mA
1 kHz	50.00 mA	49.96 mA	49.96 mA	49.22 mA	50.78 mA	0.086 mA
1 kHz	400.0 mA	399.4 mA	399.4 mA	393.7 mA	406.3 mA	0.88 mA
45 Hz	4.000 A	4.001 A	4.001 A	3.937 A	4.063 A	0.015 A
1 kHz	9.00 A	9.00 A	9.00 A	8.83 A	9.17 A	0.030 A
DC Current						
	3.00 mA	3.01 mA	3.01 mA	2.94 mA	3.06 mA	0.0074 mA
	50.00 mA	49.99 mA	49.99 mA	49.47 mA	50.53 mA	0.024 mA
	-400.0 mA	-400.0 mA	-400.0 mA	-404.3 mA	-395.7 mA	0.34 mA
	4.000 A	4.000 A	4.000 A	3.957 A	4.043 A	0.0071 A
	-9.00 A	-8.99 A	-8.99 A	-9.12 A	-8.88 A	-0.012 A