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
Model No: 179
Description: Multimeter, Digital

Serial No: 916704298
Asset/ID No: 4571
Department: R&D
Location: Bldg. 2

Acct No: 4532
PMC No: 2014
Code No: 04

CALIBRATION CONDITIONS

Received: In Tolerance
Returned: In Tolerance
Cal'd At: PMI Lab

Cal Spec: Manufacturer
Cal Procedure: 179.pdf

Temp: 23 ºC
Humidity: 48 %

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

TECHNICIAN: Miller By Miller **QC:** Shimeg

PMC Number: 2014

Precision Measurements, Inc.

12/6/2011

Function	Nominal	As Found	As Left	Min. Tol.	Max. Tol.	Measurement Uncertainty
AC Voltage						
Range						
300 mV						
45 Hz	300.0 mV	299.9 mV	299.9 mV	296.7 mV	303.3 mV	0.095 mV
5 V						
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

Serial Number: 916704298

Precision Measurements, Inc.

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

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