



Keysight Approved Calibration Provider # 71456

Certificate Of Calibration

Certificate No: U1282AMY57490072

Manufacturer: Keysight Technologies Description: Handheld Digital Multimeter

Model No: U1282A Serial No: MY57490072

Options Installed With Specifications: N/A

Date of Calibration: 15-DEC-2017

Temperature: $(23 \pm 5)^{\circ}$ C **Humidity:** (50 - 80) % RH

Procedure: AE-P-W14501

This certifies that the equipment has been calibrated using applicable Keysight Technologies procedures in compliance with a quality management system registered to ISO 9001:2015.

As Received Conditions: Factory tested - No incoming data available.

As Shipped Conditions: At the completion of the calibration, measured values were IN-SPECIFICATION at the points tested.

Remarks or special requirements: This calibration includes an attached measurement report. For inquiries regarding this calibration please contact Keysight Technologies at the above address.

Notes:

1) This calibration report shall not be reproduced, except in full.

Traceability Information: Measurements are traceable to the International System of Units (SI) via national metrology institutes (www.keysight.com/find/NMI) that are signatories to the CIPM Mutual Recognition Arrangement.

Calibration Equipr	nent Used:	Date Used: Date equipment used in this Calibration.			
Model Number	Model Description	Trace Number	Date Used	Cal Due Date	
33522B	FUNCTION/ARBITRARY WAVEFORM	PA0108	15-DEC-2017	14-AUG-2018	
	GENERATOR				
FLU_5522A	MULTI-PRODUCT CALIBRATOR	PA0112	15-DEC-2017	12-AUG-2018	
U3606B	MULTIMETER AND DC POWER SUPPLY	PA0111	15-DEC-2017	30-MAR-2018	

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TH

Ng Kok Seong Quality Manager Keysight Calibration Provider # 71456

Keysight Provider #71456							
	DD	MM	YY	BY:			
CAL	15	12	17	FI			
DIE							

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5963-6007

UK6 Measurement Report

Report No: U1282AMY57490072 **Session:** As Completed **Model No:** U1282A **Serial No:** MY57490072

Date of Calibration: 15-DEC-2017

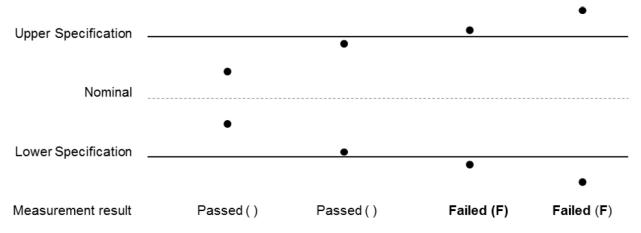
Compliance with Specification: Measured values were observed in specification at the points tested are determined to have Passed (). Measured values observed out of specification at the points tested are determined to have Failed (F).

An overall statement of compliance for all tests performed as received, and as completed (if any adjustments / repairs were performed) is included at the beginning of this report. Statements of compliance apply only to warranted specifications. When functional verification tests are performed, results are reported in the "Functional Test" section, and do not affect these statements of compliance.

Measurement results are reported as:

Passed () - The measured values of the equipment were observed in specification at the points tested.

Failed (F) - One or more measured values of the equipment were observed out of specification at the points tested.



() This result is indicated on the measurement report as a blank space in the column labeled "Status" or "Sts".

Uncertainty of Measurement: Keysight considers the uncertainties of measurements during the development of performance tests. In this report, conformance statements of "Passed" or "Failed" are determined by simple comparison of observed measurements to the warranted specifications.

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Report No: U1282AMY57490072 **Date of Calibration:** 15-DEC-2017

Model No: U1282A

Session: As Completed **Serial No:** MY57490072

Measurement Results Summary

Test Name	Status
DCmV Measurement	Passed
DCV Measurement	Passed
ACmV Measurement	Passed
ACV Measurement	Passed
ACV-LPF Measurement	Passed
DCuA Measurement	Passed
DCmA Measurement	Passed
DCA Measurement	Passed
ACuA Measurement	Passed
ACmA Measurement	Passed
ACA Measurement	Passed
Capacitance Measurement	Passed
Resistance Measurement	Passed
Conductance Measurement	Passed
DIODE Measurement	Passed
Duty Cycle Measurement	Passed
Frequency Sensitivity Voltage Measurement	Passed
Frequency Counter Measurement	Passed
Temperature Measurement	Passed

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Report No: U1282AMY57490072 **Date of Calibration:** 15-DEC-2017

Model No: U1282A Serial No: MY57490072

UK6 Measurement Report

DCmV Measurement

Range	Test Value	Lower Limit	Measured Value	Upper Limit	Status
mV	mV	mV	mV	mV	
60	60	59.96	59.999	60.04	
600	600	599.8	600	600.2	

DCV Measurement

Range	Test Value	Lower Limit	Measured Value	Upper Limit	Status
V	V	V	V	V	
6	6	5.998	6.0003	6.002	
60	60	59.98	59.998	60.02	
600	600	599.8	599.96	600.2	
1000	1000	999.3	1000.1	1000.8	

ACmV Measurement

Range	Test Value	Frequency	Lower Limit	Measured Value	Upper Limit	Status
mV	mV	Hz	mV	mV	mV	
60	60	20	59.34	60.037	60.66	
60	60	45	59.795	60.008	60.205	
60	60	1000	59.795	59.998	60.205	
60	60	10000	59.555	60.017	60.445	
60	60	20000	59.04	60.094	60.96	
60	60	100000	56.84	60.177	63.16	
600	600	20	593.4	600.26	606.6	
600	600	45	597.95	600.01	602.05	
600	600	1000	597.95	599.96	602.05	
600	600	10000	595.55	600.37	604.45	
600	600	20000	590.4	601.81	609.6	
600	600	100000	568.40	604.15	631.60	

ACV Measurement

Range	Test Value	Frequency	Lower Limit	Measured Value	Upper Limit	Status
V	V	Hz	V	V	V	
6	6	20	5.934	5.996	6.066	
6	6	45	5.9795	5.9937	6.0205	
6	6	1000	5.9795	5.9917	6.0205	
6	6	10000	5.9555	5.9926	6.0445	
6	6	20000	5.904	5.9961	6.096	
6	6	100000	5.6840	5.9762	6.3160	
60	30	20	29.64	30.014	30.36	
60	60	45	59.795	59.943	60.205	
60	60	1000	59.795	59.922	60.205	
60	60	10000	59.555	59.93	60.445	
60	60	20000	59.04	59.883	60.96	
60	60	100000	56.840	59.317	63.160	
600	30	20	29.1	30.05	30.9	

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Model No: U1282A

Session: As Completed Serial No: MY57490072

Range	Test Value	Frequency	Lower Limit	Measured Value	Upper Limit	Status
V	V	Hz	V	V	V	
600	600	45	597.95	599.3	602.05	
600	600	1000	597.95	599.09	602.05	
600	600	10000	595.55	598.6	604.45	
600	300	20000	294.9	299.61	305.1	
600	320	30000	307.3	320.2	332.7	
1000	1000	45	994.5	997.1	1005.5	
1000	1000	1000	994.5	997.1	1005.5	
1000	1000	10000	990.5	995.9	1009.5	
1000	300	20000	289.5	299.2	310.5	

ACV-LPF Measurement

Range	Test Value	Frequency	Lower Limit	Measured Value	Upper Limit	Status
V	V	Hz	V	V	${f V}$	
6	3	20	2.934	3.0005	3.066	

DCuA Measurement

Range	Test Value	Lower Limit	Measured Value	Upper Limit	Status
uA	uA	uA	uA	uA	
600	600	599.18	600	600.82	

DCmA Measurement

Range	Test Value	Lower Limit	Measured Value	Upper Limit	Status
mA	mA	mA	mA	mA	
6	6	5.9965	6.0003	6.0035	
60	60	59.92	59.993	60.08	
600	440	439.29	439.94	440.71	

DCA Measurement

Range	Test Value	Lower Limit	Measured Value	Upper Limit	Status
A	A	A	A	A	
6	6	5.99	6.0012	6.01	
10	10	9.98	10.001	10.02	

ACuA Measurement

Range	Test Value	Frequency	Lower Limit	Measured Value	Upper Limit	Status
uA	uA	Hz	uA	uA	uA	
600	600	20	593.6	599.32	606.4	
600	600	45	596.15	599.13	603.85	
600	600	1000	596.15	598.91	603.85	

ACmA Measurement

Range	Test Value	Frequency	Lower Limit	Measured Value	Upper Limit	Status
mA	mA	Hz	mA	mA	mA	
6	6	20	5.936	5.9931	6.064	
6	6	45	5.9615	5.9913	6.0385	
6	6	1000	5.9615	5.9887	6.0385	
60	60	20	59.36	59.932	60.64	

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Range	Test Value	Frequency	Lower Limit	Measured Value	Upper Limit	Status
mA	mA	Hz	mA	mA	mA	
60	60	45	59.615	59.919	60.385	
60	60	1000	59.615	59.898	60.385	
600	440	20	435.20	439.68	444.80	
600	440	45	437.11	439.58	442.89	
600	440	1000	437.11	439.49	442.89	

ACA Measurement

Range	Test Value	Frequency	Lower Limit	Measured Value	Upper Limit	Status
A	A	Hz	A	A	A	
6	0.3	20	0.293	0.2997	0.307	
6	6	45	5.9615	5.9938	6.0385	
6	6	1000	5.9615	5.994	6.0385	
6	2.9	5000	2.8535	2.9062	2.9465	
10	1	20	0.95	0.996	1.05	
10	10	45	9.915	9.998	10.085	
10	10	1000	9.915	10.001	10.085	
10	2.9	5000	2.827	2.905	2.974	

Capacitance Measurement

Range	Test Value	Unit	Lower Limit	Measured Value	Upper Limit	Status
10	10	nF	9.895	10.007	10.105	
100	100	nF	98.95	100	101.05	
1	1	uF	0.9895	0.9998	1.0105	
10	10	uF	9.895	9.996	10.105	
100	100	uF	98.95	99.95	101.05	
1	1	mF	0.9895	0.9995	1.0105	
10	10	mF	9.895	10	10.105	•
100	100	mF	97.4	99.47	102.6	

Resistance Measurement

Range	Test Value	Unit	Lower Limit	Measured Value	Upper Limit	Status
60	60	ohm	59.89	59.997	60.11	
600	600	ohm	599.6	599.98	600.4	
6	6	kohm	5.9968	5.9999	6.0032	
60	60	kohm	59.968	60	60.032	
600	600	kohm	599.68	599.98	600.32	
6	6	Mohm	5.9908	5.9991	6.0092	
60	60	Mohm	59.097	59.955	60.903	
600	600	Mohm	551.97	595.35	648.03	

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Conductance Measurement

Range	Test Value	Lower Limit	Measured Value	Upper Limit	Status
nS	MOhm	MOhm	MOhm	MOhm	
600	50	49.3	50.01	50.7	

DIODE Measurement

Range	Test Value	Lower Limit	Measured Value	Upper Limit	Status
V	V	V	V	V	
3	1	0.994	1.0001	1.006	

Duty Cycle Measurement

Range	Test Value	Test Voltage	Lower Limit	Measured Value	Upper Limit	Status
%	%	Vpp	%	%	%	
99	50	6	49.685	50	50.315	

Frequency Sensitivity Voltage Measurement

Range	Test Value	Test Voltage	Lower Limit	Measured Value	Upper Limit	Status
Hz	Hz	mV	Hz	Hz	Hz	
99.999	90	250	89.979	90.001	90.021	

Frequency Counter Measurement

Frequency Range	Test Value	Test Voltage	Frequency Counter Range	Lower Limit	Measured value	Upper Limit	Status
MHz	MHz	mV		MHz	MHz	MHz	
9.9999	1	180	1	0.9995	1	1.0005	
99.999	20	297	100	19.9946	20.001	20.0054	

Temperature Measurement

Range	Test Value	Lower Limit	Measured Value	Upper Limit	Status
CEL	CEL	CEL	CEL	CEL	
1372	0	-1	0	1	

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