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MEATEST
KL Calibration Laboratory

Calibration Certificate No. 25264/V

Manufacturer:	Meatest
Model Type Number:	9010+
Serial Number:	751091
Customer:	
Date of Calibration:	16.3.2023
Place of Calibration:	Calibration laboratory Meatest, Zelezna 3, CZ-619 00 Brno
Number of Pages:	8
Page:	1

The instrument has been calibrated in accordance with the manufacturer´s User´s manual using standards that are traceable to National or International Standards or have been derived by approved ratio techniques.

The measurement uncertainties stated in this document have been determined according EA-4/02. They were estimated as expanded uncertainty obtained multiplying the standard uncertainty by the coverage factor k=2 with confidence level of 95%.

The measurement results relate only to the calibrated items ado not carry any implication regarding long term stability of the instrument.

Seal	Date of Issue	Head of Calibration Laboratory	Person in Charge
	17.3.2023	Ing. Karel Volný	Michal Kalina

This calibration certificate may not be reproduced other than in full except with the permision of the issuing laboratory. Calibration certificates without signature and seal are not valid.

Range of Calibration: AC DC voltage, current, power,
DC resistance,
Capacitance, frequency.

Calibration Conditions: Temperature (22.5 ± 1) °C

Humidity (29 ± 15) %

Calibration Procedure: Automatic calibration according to the test procedure 9010+TRB

Applied Standards: F8588A sn480576173, NRP-18T sn102503, BU1240-0.01 sn617184, BU1281-0.001 sn61582, BU1240-0,1 sn617888, M632 sn626381, IET 1865+ snE9-21332918, K53210A snMY61360248, CH66202 sn662020007910, CH11021 s110213001480.

The following pages contain the calibration results with column indicating the instrument performance relative to the stated specification.

The column headed "%spe" is the measured error as percentage of the stated specification with no allowance being made for the calibration uncertainty.

Measurement Results:

Function	Range	Standard	UUT	Deviation	%spe	Allowed	Uncertaint	
SOURCE								
DC Voltage - pasive								
VDC-2WP	20 mV	-19.00017 mV	-19.00000 mV	0.17 uV	8	2.07 uV	0.43 uV	ok
VDC-2WP	20 mV	-10.00048 mV	-10.00000 mV	0.47 uV	26	1.80 uV	0.30 uV	ok
VDC-2WP	20 mV	-1.00054 mV	-1.00000 mV	0.54 uV	36	1.53 uV	0.24 uV	ok
VDC-2WP	20 mV	0.99949 mV	1.00000 mV	0.51 uV	33	1.53 uV	0.24 uV	ok
VDC-2WP	20 mV	9.99974 mV	10.00000 mV	0.26 uV	14	1.80 uV	0.30 uV	ok
VDC-2WP	20 mV	18.99988 mV	19.00000 mV	0.12 uV	6	2.07 uV	0.38 uV	ok
VDC-2WP	200 mV	-189.9990 mV	-190.0000 mV	-1.0 uV	-22	4.3 uV	1.4 uV	ok
VDC-2WP	200 mV	-99.99990 mV	-100.00000 mV	-0.10 uV	-3	3.00 uV	0.83 uV	ok
VDC-2WP	200 mV	-21.00033 mV	-21.00000 mV	0.33 uV	18	1.82 uV	0.37 uV	ok
VDC-2WP	200 mV	21.00005 mV	21.00000 mV	-0.05 uV	-3	1.82 uV	0.36 uV	ok
VDC-2WP	200 mV	100.00002 mV	100.00000 mV	-0.02 uV	-1	3.00 uV	0.83 uV	ok
VDC-2WP	200 mV	189.9997 mV	190.0000 mV	0.3 uV	8	4.3 uV	1.4 uV	ok
DC Voltage - active								
VDC	20 mV	-18.9984 mV	-19.0000 mV	-1.6 uV	-14	11.9 uV	2.6 uV	ok
VDC	20 mV	-10.00131 mV	-10.00000 mV	1.31 uV	12	11.00 uV	0.73 uV	ok
VDC	20 mV	-1.00308 mV	-1.00000 mV	3.08 uV	30	10.10 uV	0.45 uV	ok
VDC	20 mV	0.99986 mV	1.00000 mV	0.15 uV	1	10.10 uV	0.26 uV	ok
VDC	20 mV	10.0004 mV	10.0000 mV	-0.4 uV	-4	11.0 uV	1.5 uV	ok
VDC	20 mV	19.0008 mV	19.0000 mV	-0.8 uV	-7	11.9 uV	1.6 uV	ok
VDC	200 mV	-189.9995 mV	-190.0000 mV	-0.5 uV	-4	12.9 uV	2.4 uV	ok
VDC	200 mV	-100.0011 mV	-100.0000 mV	1.1 uV	10	11.5 uV	1.1 uV	ok
VDC	200 mV	100.0003 mV	100.0000 mV	-0.3 uV	-3	11.5 uV	1.6 uV	ok
VDC	200 mV	190.0013 mV	190.0000 mV	-1.3 uV	-10	12.9 uV	2.0 uV	ok
VDC	2 V	-1.8999979 V	-1.9000000 V	-0.0021 mV	-8	0.0278 mV	0.0068 mV	ok
VDC	2 V	-1.0000004 V	-1.0000000 V	0.0003 mV	2	0.0170 mV	0.0037 mV	ok
VDC	2 V	1.0000011 V	1.0000000 V	-0.0011 mV	-6	0.0170 mV	0.0037 mV	ok
VDC	2 V	1.9000015 V	1.9000000 V	-0.0015 mV	-5	0.0278 mV	0.0068 mV	ok
VDC	20 V	-18.999967 V	-19.000000 V	-0.033 mV	-15	0.225 mV	0.062 mV	ok
VDC	20 V	-2.1000185 V	-2.1000000 V	0.0185 mV	33	0.0560 mV	0.0074 mV	ok
VDC	20 V	2.1000123 V	2.1000000 V	-0.0123 mV	-22	0.0560 mV	0.0074 mV	ok
VDC	20 V	4.000008 V	4.000000 V	-0.008 mV	-10	0.075 mV	0.014 mV	ok
VDC	20 V	6.000002 V	6.000000 V	-0.002 mV	-2	0.095 mV	0.020 mV	ok
VDC	20 V	8.000001 V	8.000000 V	-0.001 mV	-1	0.115 mV	0.026 mV	ok
VDC	20 V	9.999995 V	10.000000 V	0.005 mV	3	0.135 mV	0.033 mV	ok
VDC	20 V	11.999997 V	12.000000 V	0.003 mV	2	0.155 mV	0.039 mV	ok
VDC	20 V	13.999990 V	14.000000 V	0.010 mV	6	0.175 mV	0.046 mV	ok
VDC	20 V	15.999990 V	16.000000 V	0.010 mV	5	0.195 mV	0.052 mV	ok
VDC	20 V	17.999982 V	18.000000 V	0.018 mV	8	0.215 mV	0.059 mV	ok
VDC	20 V	18.999982 V	19.000000 V	0.018 mV	8	0.225 mV	0.062 mV	ok
VDC	20 V	19.99991 V	20.00000 V	0.10 mV	40	0.24 mV	0.13 mV	ok
VDC	100 V	-100.00021 V	-100.00000 V	0.20 mV	12	1.65 mV	0.51 mV	ok
VDC	100 V	22.00008 V	22.00000 V	-0.08 mV	-17	0.48 mV	0.14 mV	ok
VDC	100 V	90.00008 V	90.00000 V	-0.08 mV	-5	1.50 mV	0.46 mV	ok
VDC	100 V	99.99997 V	100.00000 V	0.03 mV	2	1.65 mV	0.51 mV	ok
VDC	280 V	-279.9998 V	-280.0000 V	-0.2 mV	-4	4.6 mV	2.0 mV	ok
VDC	280 V	-200.0005 V	-200.0000 V	0.5 mV	14	3.4 mV	1.6 mV	ok
VDC	280 V	110.00033 V	110.00000 V	-0.33 mV	-16	2.05 mV	0.56 mV	ok
VDC	280 V	199.9999 V	200.0000 V	0.1 mV	3	3.4 mV	1.6 mV	ok
VDC	280 V	279.9995 V	280.0000 V	0.5 mV	11	4.6 mV	2.0 mV	ok
VDC	1.05 kV	-0.9999989 kV	-1.0000000 kV	-0.0011 V	-5	0.0235 V	0.0056 V	ok
VDC	1.05 kV	-0.6000010 kV	-0.6000000 kV	0.0010 V	6	0.0155 V	0.0036 V	ok
VDC	1.05 kV	0.2999955 kV	0.3000000 kV	0.0045 V	47	0.0095 V	0.0022 V	ok
VDC	1.05 kV	0.5999995 kV	0.6000000 kV	0.0006 V	4	0.0155 V	0.0036 V	ok
VDC	1.05 kV	0.8999965 kV	0.9000000 kV	0.0035 V	16	0.0215 V	0.0051 V	ok
VDC	1.05 kV	0.9999992 kV	1.0000000 kV	0.0008 V	3	0.0235 V	0.0056 V	ok
AC Voltage								
VAC	20 mV	9.9928 mV; 120Hz	10.0000 mV	7.2 uV	14	50.0 uV	2.1 uV	ok
VAC	20 mV	9.9936 mV; 1kHz	10.0000 mV	6.4 uV	13	50.0 uV	1.5 uV	ok
VAC	20 mV	18.9969 mV; 120Hz	19.0000 mV	3.1 uV	5	68.0 uV	2.2 uV	ok
VAC	20 mV	18.9961 mV; 1kHz	19.0000 mV	3.9 uV	6	68.0 uV	2.1 uV	ok
VAC	200 mV	19.9949 mV; 1kHz	20.0000 mV	5.1 uV	11	47.0 uV	2.2 uV	ok
VAC	200 mV	99.9989 mV; 1kHz	100.0000 mV	1.1 uV	1	75.0 uV	8.4 uV	ok
VAC	200 mV	189.995 mV; 1kHz	190.000 mV	5 uV	5	107 uV	20 uV	ok

Measurement Results:

Function	Range	Standard	UUT	Deviation	%spe	Allowed	Uncertaint	
VAC	2 V	0.199971 V; 1kHz	0.200000 V	0.029 mV	24	0.123 mV	0.021 mV	ok
VAC	2 V	0.999976 V; 1kHz	1.000000 V	0.024 mV	9	0.255 mV	0.080 mV	ok
VAC	2 V	1.89994 V; 120Hz	1.90000 V	0.06 mV	16	0.40 mV	0.20 mV	ok
VAC	2 V	1.89996 V; 1kHz	1.90000 V	0.04 mV	11	0.40 mV	0.20 mV	ok
VAC	2 V	1.90003 V; 10kHz	1.90000 V	-0.03 mV	-7	0.40 mV	0.30 mV	ok
VAC	2 V	1.90010 V; 30kHz	1.90000 V	-0.10 mV	-17	0.58 mV	0.58 mV	ok
VAC	2 V	1.9004 V; 100kHz	1.9000 V	-0.4 mV	-27	1.3 mV	1.7 mV	ok
VAC	2 V	1.9036 V; 300kHz	1.9000 V	-3.6 mV	-35	10.3 mV	7.9 mV	ok
VAC	20 V	2.09973 V; 1kHz	2.10000 V	0.28 mV	27	1.04 mV	0.21 mV	ok
VAC	20 V	3.99980 V; 1kHz	4.00000 V	0.20 mV	15	1.34 mV	0.35 mV	ok
VAC	20 V	5.99985 V; 1kHz	6.00000 V	0.15 mV	9	1.66 mV	0.50 mV	ok
VAC	20 V	7.99988 V; 1kHz	8.00000 V	0.12 mV	6	1.98 mV	0.65 mV	ok
VAC	20 V	9.99992 V; 1kHz	10.00000 V	0.08 mV	3	2.30 mV	0.80 mV	ok
VAC	20 V	12.0000 V; 1kHz	12.0000 V	0.0 mV	1	2.6 mV	1.5 mV	ok
VAC	20 V	13.9999 V; 1kHz	14.0000 V	0.1 mV	4	2.9 mV	1.7 mV	ok
VAC	20 V	15.9999 V; 1kHz	16.0000 V	0.1 mV	3	3.3 mV	1.9 mV	ok
VAC	20 V	17.9992 V; 60Hz	18.0000 V	0.8 mV	22	3.6 mV	2.0 mV	ok
VAC	20 V	17.9998 V; 120Hz	18.0000 V	0.2 mV	7	3.6 mV	2.0 mV	ok
VAC	20 V	17.9999 V; 1kHz	18.0000 V	0.1 mV	2	3.6 mV	2.0 mV	ok
VAC	20 V	17.9994 V; 10kHz	18.0000 V	0.6 mV	17	3.6 mV	2.4 mV	ok
VAC	20 V	18.002 V; 100kHz	18.000 V	-2 mV	-17	13 mV	16 mV	ok
VAC	20 V	18.9999 V; 1kHz	19.0000 V	0.1 mV	3	3.7 mV	2.1 mV	ok
VAC	20 V	19.9999 V; 1kHz	20.0000 V	0.1 mV	3	3.9 mV	2.2 mV	ok
VAC	100 V	21.9987 V; 1kHz	22.0000 V	1.3 mV	14	9.0 mV	2.4 mV	ok
VAC	100 V	89.9980 V; 1kHz	90.0000 V	2.0 mV	10	21.2 mV	7.9 mV	ok
VAC	100 V	90.002 V; 30kHz	90.000 V	-2 mV	-4	50 mV	23 mV	ok
VAC	280 V	109.9964 V; 1kHz	110.0000 V	3.6 mV	12	29.8 mV	9.5 mV	ok
VAC	280 V	199.996 V; 1kHz	200.000 V	4 mV	9	46 mV	46 mV	ok
VAC	280 V	279.998 V; 1kHz	280.000 V	2 mV	3	60 mV	55 mV	ok
VAC	1 kV	0.299967 kV; 1kHz	0.300000 kV	0.033 V	27	0.120 V	0.057 V	ok
VAC	1 kV	0.74993 kV; 1kHz	0.75000 kV	0.07 V	27	0.26 V	0.10 V	ok
VAC	1 kV	0.89992 kV; 1kHz	0.90000 kV	0.08 V	25	0.30 V	0.12 V	ok
VAC	1 kV	0.74998 kV; 120Hz	0.75000 kV	0.02 V	8	0.26 V	0.10 V	ok
DC Current								
IDC	200 uA	-190.0001 uA	-190.0000 uA	0.1 nA	0	58.0 nA	2.3 nA	ok
IDC	200 uA	-100.0002 uA	-100.0000 uA	0.2 nA	0	40.0 nA	1.4 nA	ok
IDC	200 uA	100.0000 uA	100.0000 uA	0.0 nA	0	40.0 nA	1.4 nA	ok
IDC	200 uA	190.0000 uA	190.0000 uA	-0.0 nA	0	58.0 nA	2.3 nA	ok
IDC	2 mA	-1.900007 mA	-1.900000 mA	0.007 uA	2	0.335 uA	0.021 uA	ok
IDC	2 mA	-1.000003 mA	-1.000000 mA	0.003 uA	2	0.200 uA	0.013 uA	ok
IDC	2 mA	1.000000 mA	1.000000 mA	-0.000 uA	0	0.200 uA	0.013 uA	ok
IDC	2 mA	1.900002 mA	1.900000 mA	-0.002 uA	-1	0.335 uA	0.021 uA	ok
IDC	20 mA	-19.00076 mA	-19.00000 mA	0.76 uA	30	2.50 uA	0.24 uA	ok
IDC	20 mA	-10.00041 mA	-10.00000 mA	0.41 uA	26	1.60 uA	0.15 uA	ok
IDC	20 mA	10.00037 mA	10.00000 mA	-0.37 uA	-23	1.60 uA	0.15 uA	ok
IDC	20 mA	19.00074 mA	19.00000 mA	-0.74 uA	-29	2.50 uA	0.24 uA	ok
IDC	200 mA	-190.0061 mA	-190.0000 mA	6.1 uA	25	24.0 uA	8.4 uA	ok
IDC	200 mA	-100.0029 mA	-100.0000 mA	2.9 uA	19	15.0 uA	5.0 uA	ok
IDC	200 mA	21.0004 mA	21.0000 mA	-0.4 uA	-6	7.1 uA	2.0 uA	ok
IDC	200 mA	50.0016 mA	50.0000 mA	-1.6 uA	-16	10.0 uA	3.1 uA	ok
IDC	200 mA	100.0030 mA	100.0000 mA	-3.0 uA	-20	15.0 uA	5.0 uA	ok
IDC	200 mA	150.0045 mA	150.0000 mA	-4.5 uA	-22	20.0 uA	6.9 uA	ok
IDC	200 mA	190.0060 mA	190.0000 mA	-6.0 uA	-25	24.0 uA	8.4 uA	ok
IDC	2 A	-1.90009 A	-1.90000 A	0.09 mA	24	0.35 mA	0.34 mA	ok
IDC	2 A	-1.00001 A	-1.00000 A	0.01 mA	7	0.21 mA	0.23 mA	ok
IDC	2 A	1.00002 A	1.00000 A	-0.02 mA	-8	0.21 mA	0.23 mA	ok
IDC	2 A	1.90008 A	1.90000 A	-0.08 mA	-24	0.35 mA	0.34 mA	ok
IDC	20.5 A	9.99929 A	10.00000 A	0.71 mA	24	3.00 mA	0.35 mA	ok
IDC	20.5 A	-9.99936 A	-10.00000 A	-0.64 mA	-21	3.00 mA	0.35 mA	ok
IDC	20.5 A	-18.99912 A	-19.00000 A	-0.88 mA	-17	5.25 mA	0.66 mA	ok
IDC	20.5 A	18.99898 A	19.00000 A	1.02 mA	19	5.25 mA	0.66 mA	ok
IDC	30 A	20.99907 A	21.00000 A	0.93 mA	9	10.20 mA	0.73 mA	ok
IDC	30 A	-20.99934 A	-21.00000 A	-0.66 mA	-6	10.20 mA	0.73 mA	ok
IDC	30 A	28.9981 A	29.0000 A	1.9 mA	14	13.8 mA	1.0 mA	ok
IDC	30 A	-28.9996 A	-29.0000 A	-0.4 mA	-3	13.8 mA	1.0 mA	ok
AC Current								

Measurement Results:

Function	Range	Standard	UUT	Deviation	%spe	Allowed	Uncertaint	
IAC	200 uA	100.008 uA; 1kHz	100.000 uA	-8 nA	-4	205 nA	36 nA	ok
IAC	2 mA	1.00047 mA; 1kHz	1.00000 mA	-0.47 uA	-45	1.05 uA	0.36 uA	ok
IAC	2 mA	1.90087 mA; 1kHz	1.90000 mA	-0.87 uA	-48	1.82 uA	0.63 uA	ok
IAC	20 mA	9.9997 mA; 120Hz	10.0000 mA	0.3 uA	5	6.0 uA	3.6 uA	ok
IAC	20 mA	10.0022 mA; 1kHz	10.0000 mA	-2.2 uA	-37	6.0 uA	3.6 uA	ok
IAC	20 mA	9.9989 mA; 10kHz	10.0000 mA	1.1 uA	4	26.0 uA	6.5 uA	ok
IAC	20 mA	19.0023 mA; 1kHz	19.0000 mA	-2.3 uA	-24	9.6 uA	6.3 uA	ok
IAC	200 mA	100.013 mA; 1kHz	100.000 mA	-13 uA	-22	60 uA	36 uA	ok
IAC	200 mA	190.016 mA; 1kHz	190.000 mA	-16 uA	-17	96 uA	63 uA	ok
IAC	2 A	1.00009 A; 120Hz	1.00000 A	-0.09 mA	-15	0.58 mA	0.42 mA	ok
IAC	2 A	1.00007 A; 1kHz	1.00000 A	-0.07 mA	-12	0.58 mA	0.42 mA	ok
IAC	2 A	1.90011 A; 1kHz	1.90000 A	-0.11 mA	-11	1.01 mA	0.69 mA	ok
IAC	20.5 A	10.00085 A; 120Hz	10.00000 A	-0.85 mA	-7	11.50 mA	0.88 mA	ok
IAC	20.5 A	10.00102 A; 1kHz	10.00000 A	-1.02 mA	-9	11.50 mA	0.87 mA	ok
IAC	20.5 A	19.0016 A; 120Hz	19.0000 A	-1.6 mA	-9	18.3 mA	1.8 mA	ok
IAC	20.5 A	19.0017 A; 1kHz	19.0000 A	-1.7 mA	-9	18.3 mA	1.8 mA	ok
IAC	30 A	21.0014 A; 120Hz	21.0000 A	-1.4 mA	-5	30.2 mA	2.0 mA	ok
IAC	30 A	20.9961 A; 400Hz	21.0000 A	3.9 mA	13	30.2 mA	2.0 mA	ok
IAC	30 A	29.0024 A; 120Hz	29.0000 A	-2.4 mA	-6	39.8 mA	2.7 mA	ok
IAC	30 A	28.9940 A; 400Hz	29.0000 A	6.0 mA	15	39.8 mA	2.6 mA	ok
AC Power								
P-AC	5.74 kW	0.002000 kW *	0.002000 kW	0.000 W	0	0.046 W	0.055 W	ok
* 20V,100mA,60Hz,0°								
P-AC	5.74 kW	0.020001 kW *	0.020000 kW	-0.000 W	0	0.450 W	0.055 W	ok
* 20V,1A,60Hz,0°								
P-AC	5.74 kW	0.199990 kW *	0.200000 kW	0.010 W	0	4.600 W	0.055 W	ok
* 200V,1A,60Hz,0°								
P-AC	5.74 kW	2.000000 kW *	2.000000 kW	0.000 W	0	46.000 W	0.055 W	ok
* 200V,10A,60Hz,0°								
P-FACTOR	1 -	0.500 - *	0.500 -	3.00e-4 -	13	2.27e-3 -	11 m-	ok
* 20V,200mA,60Hz								
P-FACTOR	1 -	1.000 - *	1.000 -	0.00e+0 -	0	3.43e-6 -	11 m-	ok
* 20V,200mA,60Hz								
P-FACTOR	1 -	0.500 -; 20V,2A,60Hz	0.500 -	0.00e+0 -	0	2.27e-3 -	11 m-	ok
P-FACTOR	1 -	1.000 -; 20V,2A,60Hz	1.000 -	0.00e+0 -	0	3.43e-6 -	11 m-	ok
P-FACTOR	1 -	0.500 -; 20V,10A,60Hz	0.500 -	-3.00e-4 -	-13	2.27e-3 -	11 m-	ok
P-FACTOR	1 -	1.000 -; 20V,10A,60Hz	1.000 -	0.00e+0 -	0	3.43e-6 -	11 m-	ok
VFC, Equivalent Factor = 1 V/A								
VDC-VFC	50 mV	0.00111 mV	0.00000 mV	-1.11 uV	-6	20.00 uV	0.24 uV	ok
VDC-VFC	50 mV	5.00075 mV	5.00000 mV	-0.75 uV	-3	22.50 uV	0.26 uV	ok
VDC-VFC	50 mV	-4.99865 mV	-5.00000 mV	-1.35 uV	-6	22.50 uV	0.26 uV	ok
VDC-VFC	50 mV	44.99807 mV	45.00000 mV	1.93 uV	5	42.50 uV	0.50 uV	ok
VDC-VFC	50 mV	-44.99612 mV	-45.00000 mV	-3.88 uV	-9	42.50 uV	0.50 uV	ok
VDC-VFC	500 mV	54.99915 mV	55.00000 mV	0.85 uV	0	227.50 uV	0.56 uV	ok
VDC-VFC	500 mV	-54.99803 mV	-55.00000 mV	-1.97 uV	-1	227.50 uV	0.57 uV	ok
VDC-VFC	500 mV	449.9908 mV	450.0000 mV	9.2 uV	2	425.0 uV	1.8 uV	ok
VDC-VFC	500 mV	-449.9911 mV	-450.0000 mV	-9.0 uV	-2	425.0 uV	1.8 uV	ok
VDC-VFC	5 V	0.5499907 V	0.5500000 V	0.0093 mV	1	1.2750 mV	0.0030 mV	ok
VDC-VFC	5 V	-0.5499973 V	-0.5500000 V	-0.0027 mV	0	1.2750 mV	0.0027 mV	ok
VDC-VFC	5 V	4.499956 V	4.500000 V	0.044 mV	1	3.250 mV	0.015 mV	ok
VDC-VFC	5 V	-4.499974 V	-4.500000 V	-0.026 mV	-1	3.250 mV	0.015 mV	ok
Scope - sine mode								
FREQ	200 Hz	100.00000 Hz	100.00000 Hz	-0.00 mHz	-16	0.01 mHz	0.26 mHz	ok
FREQ	2 kHz	1.00000002 kHz	1.00000000 kHz	-0.00002 Hz	-16	0.00010 Hz	0.00035 Hz	ok
FREQ	20 kHz	10.00000017 kHz	10.00000000 kH	-0.00017 Hz	-17	0.00100 Hz	0.00035 Hz	ok
FREQ	200 kHz	100.00000163 kHz	100.00000000 k	-0.00163 Hz	-16	0.01000 Hz	0.00035 Hz	ok
FREQ	2 MHz	1.00000001657 MHz	1.00000000000	-0.00001657	-17	0.00010000	0.00000082	ok
FREQ	20 MHz	10.0000001650 MHz	10.0000000000	-0.0001650 k	-16	0.0010000 k	0.0000082	ok
FREQ	200 MHz	100.000001660 MHz	100.000000000	-0.001660 kH	-17	0.010000 kH	0.000085 k	ok
FREQ	400 MHz	350.00000583 MHz	350.00000000 M	-0.00583 kHz	-17	0.03500 kHz	0.00021 kH	ok
FREQ	1.1 GHz	0.60000000968 GHz	0.60000000000	-0.00000968	-16	0.00006000	0.00000068	ok
FREQ	1.1 GHz	0.80000001281 GHz	0.80000000000	-0.00001281	-16	0.00008000	0.00000074	ok
FREQ	1.1 GHz	1.00000001617 GHz	1.00000000000	-0.00001617	-16	0.00010000	0.00000082	ok
FREQ	1.1 GHz	1.10000001802 GHz	1.10000000000	-0.00001802	-16	0.00011000	0.00000086	ok

Measurement Results:

Function	Range	Standard	UUT	Deviation	%spe	Allowed	Uncertaint	
V_SCOS	1.5 Vpk	0.10010 Vpk; 101kHz	0.10000 Vpk	-0.10 mVpk	-4	2.25 mVpk	0.29 mVpk	ok
V_SCOS	1.5 Vpk	0.8012 Vpk; 101kHz	0.8000 Vpk	-1.2 mVpk	-7	16.3 mVpk	2.3 mVpk	ok
V_SCOS	1.5 Vpk	0.10004 Vpk; 1MHz	0.10000 Vpk	-0.04 mVpk	-1	2.75 mVpk	0.29 mVpk	ok
V_SCOS	1.5 Vpk	0.7996 Vpk; 1MHz	0.8000 Vpk	0.4 mVpk	2	20.3 mVpk	2.3 mVpk	ok
V_SCOS	1.5 Vpk	0.01015 Vpk; 10MHz	0.01000 Vpk	-0.15 mVpk	-30	0.50 mVpk	0.38 mVpk	ok
V_SCOS	1.5 Vpk	0.09996 Vpk; 10MHz	0.10000 Vpk	0.04 mVpk	1	2.75 mVpk	0.29 mVpk	ok
V_SCOS	1.5 Vpk	0.7998 Vpk; 10MHz	0.8000 Vpk	0.2 mVpk	1	20.3 mVpk	2.3 mVpk	ok
V_SCOS	1.5 Vpk	0.09983 Vpk; 100MHz	0.10000 Vpk	0.17 mVpk	5	3.55 mVpk	0.29 mVpk	ok
V_SCOS	1.5 Vpk	0.8003 Vpk; 100MHz	0.8000 Vpk	-0.3 mVpk	-1	26.7 mVpk	2.3 mVpk	ok
V_SCOS	1.5 Vpk	0.09945 Vpk; 300MHz	0.10000 Vpk	0.55 mVpk	14	3.95 mVpk	0.35 mVpk	ok
V_SCOS	1.5 Vpk	0.8008 Vpk; 300MHz	0.8000 Vpk	-0.8 mVpk	-3	29.9 mVpk	2.8 mVpk	ok
V_SCOS	1.5 Vpk	0.09902 Vpk; 400MHz	0.10000 Vpk	0.98 mVpk	25	3.95 mVpk	0.34 mVpk	ok
V_SCOS	1.5 Vpk	0.8005 Vpk; 400MHz	0.8000 Vpk	-0.5 mVpk	-2	29.9 mVpk	2.8 mVpk	ok
V_SCOS	1.5 Vpk	0.09985 Vpk; 600MHz	0.10000 Vpk	0.15 mVpk	2	6.80 mVpk	0.35 mVpk	ok
V_SCOS	1.5 Vpk	0.8004 Vpk; 600MHz	0.8000 Vpk	-0.4 mVpk	-1	52.3 mVpk	2.8 mVpk	ok
V_SCOS	1.5 Vpk	0.09980 Vpk; 800MHz	0.10000 Vpk	0.20 mVpk	3	6.80 mVpk	0.35 mVpk	ok
V_SCOS	1.5 Vpk	0.8005 Vpk; 800MHz	0.8000 Vpk	-0.5 mVpk	-1	52.3 mVpk	2.8 mVpk	ok
V_SCOS	1.5 Vpk	0.09977 Vpk; 1GHz	0.10000 Vpk	0.23 mVpk	3	6.80 mVpk	0.35 mVpk	ok
V_SCOS	1.5 Vpk	0.8024 Vpk; 1GHz	0.8000 Vpk	-2.4 mVpk	-5	52.3 mVpk	2.8 mVpk	ok
V_SCOS	1.5 Vpk	0.09976 Vpk; 1.1GHz	0.10000 Vpk	0.24 mVpk	3	6.80 mVpk	0.35 mVpk	ok
V_SCOS	1.5 Vpk	0.8038 Vpk; 1.1GHz	0.8000 Vpk	-3.8 mVpk	-7	52.3 mVpk	2.8 mVpk	ok
V+_SCOV	20 mVpk	0.01229 mVpk	0.00000 mVpk	-12.29 uVpk	-40	30.40 uVpk	0.44 uVpk	ok
V+_SCOV	20 mVpk	19.0030 mVpk	19.0000 mVpk	-3.0 uVpk	-8	36.1 uVpk	2.3 uVpk	ok
V+_SCOV	200 mVpk	190.0093 mVpk	190.0000 mVpk	-9.3 uVpk	-10	91.0 uVpk	1.6 uVpk	ok
V+_SCOV	2 Vpk	1.9000878 Vpk	1.9000000 Vpk	-0.0878 mVpk	-14	0.6400 mVpk	0.0066 mVp	ok
V+_SCOV	20 Vpk	19.000408 Vpk	19.000000 Vpk	-0.407 mVpk	-7	6.130 mVpk	0.062 mVpk	ok
V+_SCOV	200 Vpk	190.00080 Vpk	190.00000 Vpk	-0.80 mVpk	-1	62.63 mVpk	0.93 mVpk	ok
V-_SCOV	20 mVpk	19.0017 mVpk	19.0000 mVpk	-1.7 uVpk	-5	36.1 uVpk	1.5 uVpk	ok
V-_SCOV	200 mVpk	190.0114 mVpk	190.0000 mVpk	-11.4 uVpk	-13	91.0 uVpk	1.6 uVpk	ok
V-_SCOV	2 Vpk	1.9000889 Vpk	1.9000000 Vpk	-0.0889 mVpk	-14	0.6400 mVpk	0.0066 mVp	ok
V-_SCOV	20 Vpk	19.000409 Vpk	19.000000 Vpk	-0.409 mVpk	-7	6.130 mVpk	0.062 mVpk	ok
V-_SCOV	200 Vpk	190.00070 Vpk	190.00000 Vpk	-0.70 mVpk	-1	62.63 mVpk	0.93 mVpk	ok
Resistance LVR 4W Variable								
RDC	10 Ohm	-0.000643 Ohm	0.000000 Ohm	0.643 mOhm	32	2.000 mOhm	0.035 mOhm	ok
RDC	10 Ohm	10.00059 Ohm	10.00000 Ohm	-0.59 mOhm	-12	5.00 mOhm	0.13 mOhm	ok
RDC	33 Ohm	29.99881 Ohm	30.00000 Ohm	1.19 mOhm	12	9.50 mOhm	0.31 mOhm	ok
RDC	100 Ohm	99.99909 Ohm	100.00000 Ohm	0.91 mOhm	5	18.00 mOhm	0.89 mOhm	ok
RDC	330 Ohm	299.9954 Ohm	300.0000 Ohm	4.6 mOhm	14	33.0 mOhm	3.1 mOhm	ok
RDC	1 kOhm	0.9999922 kOhm	1.0000000 kOhm	0.0078 Ohm	8	0.1030 Ohm	0.0088 Ohm	ok
RDC	3.3 kOhm	2.999905 kOhm	3.000000 kOhm	0.095 Ohm	32	0.300 Ohm	0.031 Ohm	ok
RDC	10 kOhm	9.999831 kOhm	10.000000 kOhm	0.169 Ohm	18	0.930 Ohm	0.090 Ohm	ok
RDC	33 kOhm	29.99982 kOhm	30.00000 kOhm	0.18 Ohm	6	3.00 Ohm	0.31 Ohm	ok
Resistance LVR 2W Variable								
RDC	100 kOhm	99.99988 kOhm	100.00000 kOhm	0.12 Ohm	1	9.33 Ohm	0.93 Ohm	ok
RDC	330 kOhm	299.9995 kOhm	300.0000 kOhm	0.5 Ohm	1	33.0 Ohm	6.3 Ohm	ok
RDC	1 MOhm	1.000001 MOhm	1.000000 MOhm	-0.001 kOhm	-1	0.153 kOhm	0.013 kOhm	ok
RDC	3.3 MOhm	3.00005 MOhm	3.00000 MOhm	-0.05 kOhm	-11	0.48 kOhm	0.39 kOhm	ok
RDC	10 MOhm	9.99980 MOhm	10.00000 MOhm	0.20 kOhm	10	2.03 kOhm	0.48 kOhm	ok
RDC	33 MOhm	30.003 MOhm	30.000 MOhm	-3 kOhm	-6	60 kOhm	36 kOhm	ok
RDC	100 MOhm	100.001 MOhm	100.000 MOhm	-1 kOhm	-1	200 kOhm	39 kOhm	ok
RDC	1 GOhm	1.0000 GOhm	1.0000 GOhm	-0.0 MOhm	0	10.0 MOhm	4.1 MOhm	ok
Resistance LVR 4W Fixed								
LVR_FIX_	100 mOhm	-0.3803 mOhm	-0.3791 mOhm	1.2 uOhm	0	500.0 uOhm	4.7 uOhm	ok
LVR_FIX_	1 Ohm	1.002727 Ohm	1.002729 Ohm	0.002 mOhm	0	0.500 mOhm	0.017 mOhm	ok
LVR_FIX_	10 Ohm	10.10380 Ohm	10.10392 Ohm	0.12 mOhm	12	1.00 mOhm	0.11 mOhm	ok
LVR_FIX_	100 Ohm	101.00505 Ohm	101.00480 Ohm	-0.25 mOhm	-8	3.00 mOhm	0.90 mOhm	ok
LVR_FIX_	1 kOhm	0.9999231 kOhm	0.9999211 kOhm	-0.0020 Ohm	-13	0.0150 Ohm	0.0088 Ohm	ok
LVR_FIX_	10 kOhm	9.998188 kOhm	9.998206 kOhm	0.018 Ohm	12	0.150 Ohm	0.090 Ohm	ok
LVR_FIX_	100 kOhm	100.00419 kOhm	100.00430 kOhm	0.11 Ohm	7	1.50 Ohm	0.91 Ohm	ok

Measurement Results:

Function	Range	Standard	UUT	Deviation	%spe	Allowed	Uncertaint	
Resistance LVR 2W Fixed								
LVR_FIX_	1 MOhm	1.000242 MOhm	1.000248 MOhm	0.006 kOhm	19	0.030 kOhm	0.013 kOhm	ok
LVR_FIX_	10 MOhm	9.98308 MOhm	9.98326 MOhm	0.18 kOhm	14	1.30 kOhm	0.48 kOhm	ok
LVR_FIX_	100 MOhm	99.801 MOhm	99.803 MOhm	2 kOhm	2	100 kOhm	39 kOhm	ok
LVR_FIX_	1 GOhm	1.0007 GOhm	1.0003 GOhm	-0.4 MOhm	-16	2.5 MOhm	4.1 MOhm	ok
Capacitance Variable								
C-2W	1 nF	1.0026 nF	1.0000 nF	-2.6 pF	-13	20.0 pF	3.1 pF	ok
C-2W	3.3 nF	2.9915 nF	3.0000 nF	8.5 pF	28	30.0 pF	5.7 pF	ok
C-2W	10 nF	9.997 nF	10.000 nF	3 pF	7	50 pF	12 pF	ok
C-2W	33 nF	30.011 nF	30.000 nF	-11 pF	-8	150 pF	33 pF	ok
C-2W	100 nF	100.082 nF	100.000 nF	-82 pF	-16	500 pF	77 pF	ok
C-2W	330 nF	300.15 nF	300.00 nF	-148 pF	-10	1500 pF	333 pF	ok
C-2W	1 uF	1.00075 uF	1.00000 uF	-0.75 nF	-15	5.00 nF	0.76 nF	ok
C-2W	3.3 uF	3.0002 uF	3.0000 uF	-0.2 nF	-1	15.0 nF	3.4 nF	ok
C-2W	10 uF	10.003 uF	10.000 uF	-3 nF	-5	50 nF	26 nF	ok
C-2W	33 uF	30.014 uF	30.000 uF	-14 nF	-9	150 nF	42 nF	ok
C-2W	100 uF	99.96 uF	100.00 uF	37 nF	7	500 nF	105 nF	ok
C-2W	1 mF	1.0000 mF	1.0000 mF	0.0 uF	0	5.0 uF	1.1 uF	ok
C-2W	11 mF	3.0006 mF	3.0000 mF	-0.6 uF	-4	15.0 uF	4.7 uF	ok
C-2W	11 mF	10.998 mF	11.000 mF	2 uF	4	55 uF	13 uF	ok
C-2W	120 mF	30.003 mF	30.000 mF	-3 uF	-1	300 uF	47 uF	ok
C-2W	120 mF	99.99 mF	100.00 mF	13 uF	1	1000 uF	120 uF	ok
Capacitance Fixed								
C_FIX_2W	1 nF	1.1153 nF	1.1176 nF	2.3 pF	16	14.0 pF	3.5 pF	ok
C_FIX_2W	10 nF	10.560 nF	10.569 nF	9 pF	23	37 pF	13 pF	ok
C_FIX_2W	100 nF	103.109 nF	103.057 nF	-51 pF	-20	258 pF	78 pF	ok
C_FIX_2W	1 uF	1.03285 uF	1.03282 uF	-0.03 nF	-1	2.58 nF	0.78 nF	ok
C_FIX_2W	10 uF	9.9422 uF	9.9417 uF	-0.5 nF	-2	34.8 nF	7.6 nF	ok
C_FIX_2W	100 uF	103.69 uF	103.64 uF	-51 nF	-11	466 nF	109 nF	ok
Resistance HVR								
HVR	200 kOhm	100.00404 kOhm	100.00000 kOhm	-4.04 Ohm	-2	200.00 Ohm	0.93 Ohm	ok
HVR	200 kOhm	189.9630 kOhm	190.0000 kOhm	37.0 Ohm	10	380.0 Ohm	1.7 Ohm	ok
HVR	1 MOhm	0.899977 MOhm	0.900000 MOhm	0.023 kOhm	1	1.800 kOhm	0.012 kOhm	ok
HVR	2 MOhm	1.900053 MOhm	1.900000 MOhm	-0.053 kOhm	-1	5.700 kOhm	0.022 kOhm	ok
HVR	10 MOhm	9.00042 MOhm	9.00000 MOhm	-0.42 kOhm	-2	27.00 kOhm	0.47 kOhm	ok
HVR	20 MOhm	19.00050 MOhm	19.00000 MOhm	-0.50 kOhm	-1	95.00 kOhm	0.59 kOhm	ok
HVR	200 MOhm	90.019 MOhm	90.000 MOhm	-19 kOhm	-4	450 kOhm	39 kOhm	ok
HVR	200 MOhm	190.05 MOhm	190.00 MOhm	-50 kOhm	-5	950 kOhm	114 kOhm	ok
HVR	1 GOhm	0.89861 GOhm	0.90000 GOhm	1.39 MOhm	31	4.50 MOhm	0.27 MOhm	ok
HVR	2 GOhm	1.899 GOhm	1.900 GOhm	1 MOhm	5	19 MOhm	12 MOhm	ok
HVR	10 GOhm	8.996 GOhm	9.000 GOhm	4 MOhm	4	90 MOhm	57 MOhm	ok
HVR	100 GOhm	100.0 GOhm	99.6 GOhm	-376 MOhm	-13	2988 MOhm	1154 MOhm	ok
Meter								
DC Voltage								
VDC	12 mV	-10.00186 mV	-10.00148 mV	0.39 uV	11	3.50 uV	0.76 uV	ok
VDC	12 mV	9.99895 mV	10.00029 mV	1.34 uV	38	3.50 uV	0.58 uV	ok
VDC	120 mV	-100.0009 mV	-99.9995 mV	1.5 uV	15	10.0 uV	1.3 uV	ok
VDC	120 mV	99.9990 mV	99.9995 mV	0.57 uV	6	10.00 uV	0.97 uV	ok
VDC	1.2 V	-1.000001 V	-0.999985 V	0.0158 mV	16	0.1000 mV	0.0037 mV	ok
VDC	1.2 V	1.000000 V	0.999990 V	-0.0098 mV	-10	0.1000 mV	0.0037 mV	ok
VDC	12 V	-9.99999 V	-9.99985 V	0.139 mV	14	1.000 mV	0.033 mV	ok
VDC	12 V	9.99999 V	9.99990 V	-0.092 mV	-9	1.000 mV	0.033 mV	ok
DC Current								
IDC	100 uA	99.999 uA	100.003 uA	3.9 nA	10	40.0 nA	1.7 nA	ok
IDC	1 mA	-1.00000 mA	-0.99998 mA	0.022 uA	7	0.300 uA	0.015 uA	ok
IDC	1 mA	1.00000 mA	0.99998 mA	-0.024 uA	-8	0.300 uA	0.015 uA	ok
IDC	2.4 mA	-2.00001 mA	-2.00000 mA	0.013 uA	1	1.100 uA	0.068 uA	ok
IDC	2.4 mA	1.00000 mA	0.99995 mA	-0.050 uA	-5	0.950 uA	0.016 uA	ok
IDC	2.4 mA	2.00001 mA	1.99993 mA	-0.076 uA	-7	1.100 uA	0.076 uA	ok

Measurement Results:

Function	Range	Standard	UUT	Deviation	%spe	Allowed	Uncertaint	
IDC	24 mA	-20.0010 mA	-20.0007 mA	0.3 uA	8	3.8 uA	1.9 uA	ok
IDC	24 mA	-10.0004 mA	-10.0008 mA	-0.41 uA	-18	2.30 uA	0.16 uA	ok
IDC	24 mA	10.0003 mA	9.9990 mA	-1.35 uA	-59	2.30 uA	0.16 uA	ok
IDC	24 mA	20.0003 mA	19.9990 mA	-1.3 uA	-34	3.8 uA	1.9 uA	ok
DC 4W Resistance								
RDC	2 kOhm	0.02000 kOhm	0.02000 kOhm	-0.0014 Ohm	-10	0.0140 Ohm	0.0064 Ohm	ok
RDC	2 kOhm	1.00000 kOhm	0.99998 kOhm	-0.021 Ohm	-10	0.210 Ohm	0.035 Ohm	ok
RDC	2 kOhm	1.90000 kOhm	1.89998 kOhm	-0.023 Ohm	-6	0.390 Ohm	0.066 Ohm	ok
RDC	20 kOhm	3.0000 kOhm	3.0000 kOhm	-0.02 Ohm	-3	0.65 Ohm	0.12 Ohm	ok
RDC	20 kOhm	10.0000 kOhm	10.0000 kOhm	0.04 Ohm	2	2.05 Ohm	0.35 Ohm	ok
RDC	20 kOhm	19.0000 kOhm	18.9999 kOhm	-0.06 Ohm	-2	3.85 Ohm	0.66 Ohm	ok

Symbol description:
ok ... passed

Statement of Compliance: Passed