

**Lab. No.:0133****Basic Info**

Organization	Tektronix Taiwan, Ltd.
Organization Address	3F, No. 89, Sec. 2, Ti Ding Avenue, Taipei City 114, Taiwan (R.O.C.)
Organization Representative	
Web site	www.tektronix.com

Laboratory	Calibration Laboratory
Lab. Address	3F, No. 89, Sec. 2, Ti Ding Avenue, Taipei City 114, Taiwan (R.O.C.)

Accreditation Criteria : ISO/IEC 17025:2005

Originally Accredited : January 01, 1994

Effective Period : January 21, 2014 to January 20, 2017

Accredited Scope : Calibration Field, see described in the Appendix

Laboratory Head : HSU, Ming-Luh

Accredited Scope:

Electricity

Calibration items	Calibration Method /Working Standard	Ranges	Smallest uncertainty
KF1001 DC volt source	TTL-0011-07,TTL-0012-08 /Fluke 5700A HP 3458A	0.1 V	0.0054 %
		1 V	0.0021 %
		10 V	0.0020 %
		100 V	0.0030 %
		1000 V	0.0049 %
KF1002 DC ampere meter	TTL-0011-07,TTL-0012-08 /Fluke 5700A HP 3458A	0.1 mA	0.022 %
		1 mA	0.012 %
		10 mA	0.012 %
		100 mA	0.017 %
		1000 mA	0.029 %
KF1011 AC volt meter AC volt source	TTL-0011-07,TTL-0012-08 /Fluke 5700A HP 3458A	1 V	0.055 %
		10 V	0.055 %
		100 V	0.073 %
		700 V (1 kHz)	0.17 %

KF1012 AC ampere meter AC current source	TTL-0011-07,TTL-0012-08 /Fluke 5700A HP 3458A	1 mA	0.093 %
		10 mA	0.097 %
		100 mA	0.098 %
		1000 mA (1 kHz)	0.24 %
KF3001 ohmmeter resistor	TTL-0011-07,TTL-0012-08 /Fluke 5700A HP 3458A	10 $\Omega$	0.0070 %
		100 $\Omega$	0.0071 %
		1 k $\Omega$	0.0032 %
		10 k $\Omega$	0.0032 %
		100 k $\Omega$	0.0044 %
		1 M $\Omega$	0.0060 %
		10 M $\Omega$	0.014 %
100 M $\Omega$	0.092 %		

Calibration items	Calibration Method /Working Standard	Ranges	Smallest uncertainty
KF4001 digital oscilloscope (Tektronix Digital Oscilloscope Bandwidth from DC to 3.2 GHz)	TTL-0016-06 /Fluke 9500B Fluke 9530	DC Volts- Generate 1 MΩ load, 50 Ω load, 0 V	15 μV
		(0 to 100) mV	0.05 % + 26 μV
		100 mV to 1.0 V	0.022 % + 65 μV
		(1.0 to 5.6) V	0.026 % + 50 μV
		1MΩ load	
		(5.6 to 222.4)V	0.03 %
		Sinewave Flatness–Generate, 50 Ω load, 50 kHz to 10 MHz	
		Reference, V(p-p)	
		1 Hz to 100 MHz, 4.4 mV to 5.6 V	0.22 dB
		(100 to 550) MHz, 4.4 mV to 5.6 V	0.27 dB
		550 MHz to 1.1 GHz, 4.4 mV to 3.4 V	0.37 dB
		(1.1 to 2.5) GHz, 4.4 mV to 3.4 V	0.47 dB
(2.5 to 3.2) GHz, 4.4 mV to 2.2 V	0.48 dB		
AC Volts-Generate, 50 Ω, sinewave, V(p-p)			
1 Hz to 550 MHz, 4.4 mV to 5.6 V	0.033 V/V		
550 MHz to 2.5 GHz, 4.4 mV to 3.4 V	0.063 V/V		
(2.5 to 3.2) GHz, 4.4 mV to 2.2 V	0.11 V/V		
Resistance Measure			
(40 to 90) Ω	0.25 % - 0.059 Ω		
1 MΩ	0.12 %		
Frequency and Period			
12 kHz to 3.2 GHz	2.7 E-07 Hz/Hz		

## Time And Frequency

Calibration items	Calibration Method /Working Standard	Ranges	Smallest uncertainty
KJ0200 frequency standard frequency counter  (Null below)	TTL-0013-07,TTL-0014-06 /FE 5650A HP 53132A	10 MHz	3.3 E-08

Remarks : Smallest uncertainty represents an expanded uncertainty using a coverage factor approximately 95 % level of confidence.

Approval Signatory	Scope
HSU, Ming-Luh	KF1001,KF1002,KF1011,KF1012,KF3001,KF4001,KJ0200