



財團法人全國認證基金會
Taiwan Accreditation Foundation

Certificate of Accreditation

(Certificate No : L2035-230912)

This is to certify that

Jim-E Technology Corporation Calibration Laboratory

4F-11, No. 36, Tai Yuan Street, Jubei City, Hsinchu, Taiwan (R.O.C.)

is accredited in respect of laboratory

Accreditation Criteria : ISO/IEC 17025:2017 ; CNS 17025:2018

Accreditation Number : 2035

Originally Accredited : October 07, 2008

Effective Period : October 07, 2023 to October 06, 2026

Accredited Scope : Calibration Field, see described in the Appendix



Scan to verify

Ching-Chang Lien

Ching-Chang Lien
President, Taiwan Accreditation Foundation
September 12, 2023

Accreditation Number : 2035

Laboratory Head : RONG, Johnney

Electricity

calibration items	working standard brand /model	calibration method document name /no.	measurand level or range				measurement conditions /independent variable explanation	smallest uncertainty	
			minimum value	units	maximum value	units		value	units
KF1001 DC Voltage Source (on-site calibration included) DC Voltage Meter (on-site calibration included)	Multi-Function Calibrator /FLUKE 5700A Multimeter /Agilent 3458A	1. DC Voltage Source: (1) LAB: Document No.: QI-0011 Document No.: QI-0031 (2) On-Site: Document No.: QI-0111 Document No.: QI-0131 2. DC Voltage Meter: (1) LAB: Document No.: QI-0012 Document No.: QI-0032 (2) On-Site: Document No.: QI-0132 Document No.: QI-0112	0.1	V	0.1	V	1. DC Voltage Source (1) LAB - single point	30	μV/V
			1	V	1	V	1. DC Voltage Source (1) LAB - single point	20	μV/V
			10	V	10	V	1. DC Voltage Source (1) LAB - single point	20	μV/V
			100	V	100	V	1. DC Voltage Source (1) LAB - single point	25	μV/V
			1	kV	1	kV	1. DC Voltage Source (1) LAB - single point	35	μV/V
			0.1	V	1	V	1. DC Voltage Source (1) LAB - range	80	μV/V
			>1	V	10	V	1. DC Voltage Source (1) LAB - range	0.14	mV/V
			>10	V	100	V	1. DC Voltage Source (1) LAB - range	0.14	mV/V
			>100	V	1	kV	1. DC Voltage Source (1) LAB - range	0.23	mV/V
			0.1	V	0.1	V	1. DC Voltage Source (2) on-site - single point	55	μV/V
1	V	1	V	1. DC Voltage Source (2) on-site - single point	40	μV/V			



calibration items	working standard	calibration method	measurand level or range				measurement conditions /independent variable	smallest uncertainty	
	brand /model	document name /no.	minimum value	units	maximum value	units	explanation	value	units
KF1001 DC Voltage Source (on-site calibration included) DC Voltage Meter (on-site calibration included)	Multi-Function Calibrator /FLUKE 5700A Multimeter /Agilent 3458A	1. DC Voltage Source: (1) LAB: Document No.: QI-0011 Document No.: QI-0031	10	V	10	V	1. DC Voltage Source (2) on-site - single point	40	μV/V
			100	V	100	V	1. DC Voltage Source (2) on-site - single point	45	μV/V
		2. DC Voltage Meter: (1) LAB: Document No.: QI-0111 Document No.: QI-0131	1	kV	1	kV	1. DC Voltage Source (2) on-site - single point	55	μV/V
			0.1	V	1	V	1. DC Voltage Source (2) on-site - range	0.15	mV/V
		(2) On-Site: Document No.: QI-0032 Document No.: QI-0132 Document No.: QI-0112	>1	V	10	V	1. DC Voltage Source (2) on-site - range	0.21	mV/V
			>10	V	100	V	1. DC Voltage Source (2) on-site - range	0.21	mV/V
		>100	V	1	kV	1. DC Voltage Source (2) on-site - range	0.31	mV/V	
		0.1	V	0.1	V	2. DC Voltage Meter (1) LAB - single point	45	μV/V	
		1	V	1	V	2. DC Voltage Meter (1) LAB - single point	30	μV/V	
		10	V	10	V	2. DC Voltage Meter (1) LAB - single point	30	μV/V	
		100	V	100	V	2. DC Voltage Meter (1) LAB - single point	35	μV/V	
		1	kV	1	kV	2. DC Voltage Meter (1) LAB - single point	45	μV/V	



calibration items	working standard	calibration method	measurand level or range				measurement conditions /independent variable	smallest uncertainty	
	brand /model	document name /no.	minimum value	units	maximum value	units	explanation	value	units
KF1001 DC Voltage Source (on-site calibration included) DC Voltage Meter (on-site calibration included)	Multi-Function Calibrator /FLUKE 5700A Multimeter /Agilent 3458A	1. DC Voltage Source: (1) LAB: Document No.: QI-0011 Document No.: QI-0031 (2) On-Site: Document No.: QI-0111 Document No.: QI-0131 2. DC Voltage Meter: (1) LAB: Document No.: QI-0012 Document No.: QI-0032 (2) On-Site: Document No.: QI-0132 Document No.: QI-0112	0.1	V	1	V	2. DC Voltage Meter (1) LAB - range	0.11	mV/V
			>1	V	10	V	2. DC Voltage Meter (1) LAB - range	0.17	mV/V
			>10	V	100	V	2. DC Voltage Meter (1) LAB - range	0.17	mV/V
			>100	V	1	kV	2. DC Voltage Meter (1) LAB - range	0.27	mV/V
			0.1	V	0.1	V	2. DC Voltage Meter (2) on-site - single point	45	μV/V
			1	V	1	V	2. DC Voltage Meter (2) on-site - single point	30	μV/V
			10	V	10	V	2. DC Voltage Meter (2) on-site - single point	30	μV/V
			100	V	100	V	2. DC Voltage Meter (2) on-site - single point	35	μV/V
			1	kV	1	kV	2. DC Voltage Meter (2) on-site - single point	45	μV/V
			0.1	V	1	V	2. DC Voltage Meter (2) on-site - range	0.11	mV/V
			>1	V	10	V	2. DC Voltage Meter (2) on-site - range	0.17	mV/V
			>10	V	100	V	2. DC Voltage Meter (2) on-site - range	0.17	mV/V
			>100	V	1	kV	2. DC Voltage Meter (2) on-site - range	0.27	mV/V
Approval Signatory: FANG, Frank; LEE, Chun-Hsiang; RONG, Johnney									



calibration items	working standard	calibration method	measurand level or range				measurement conditions /independent variable	smallest uncertainty	
	brand /model	document name /no.	minimum value	units	maximum value	units	explanation	value	units
KF1002 DC Current Source (on-site calibration included) DC Current Meter (on-site calibration included)	System1: Single Calibration (100 μ A~1 A) and Range Calibration Multi-Function Calibrator /FLUKE 5700A Multimeter /Agilent 3458A System2: Single Calibration (10 μ A~100 pA) Source Meter /Keithley 2636A Standard Resistor Set /HP 16353A Multimeter /Agilent 3458A	1. DC Current Source: (1) LAB: Document No.: QI-0013	100	μ A	100	μ A	1. DC Current Source (1) LAB - single point	70	μ A/A
		Document No.: QI-0033	1	mA	1	mA	1. DC Current Source (1) LAB - single point	70	μ A/A
		Document No.: QI-0051 (2) On-Site: Document No.: QI-0113	10	mA	10	mA	1. DC Current Source (1) LAB - single point	70	μ A/A
		Document No.: QI-0133	100	mA	100	mA	1. DC Current Source (1) LAB - single point	0.10	mA/A
		Document No.: QI-0151	1	A	1	A	1. DC Current Source (1) LAB - single point	0.25	mA/A
		2. DC Current Meter: (1) LAB: Document No.: QI-0014	10	μ A	100	μ A	1. DC Current Source (1) LAB - range	0.36	mA/A
		Document No.: QI-0034	>0.1	mA	1	mA	1. DC Current Source (1) LAB - range	0.35	mA/A
		Document No.: QI-0052 (2) On-Site: Document No.: QI-0114	>1	mA	10	mA	1. DC Current Source (1) LAB - range	0.14	mA/A
		Document No.: QI-0134	>10	mA	100	mA	1. DC Current Source (1) LAB - range	0.16	mA/A
		Document No.: QI-0152	>0.1	A	1	A	1. DC Current Source (1) LAB - range	0.27	mA/A
			100	μ A	100	μ A	1. DC Current Source (2) on-site - single point	0.20	mA/A
			1	mA	1	mA	1. DC Current Source (2) on-site - single point	0.15	mA/A
			10	mA	10	mA	1. DC Current Source (2) on-site - single point	0.15	mA/A
	100	mA	100	mA	1. DC Current Source (2) on-site - single point	0.23	mA/A		



calibration items	working standard	calibration method	measurand level or range				measurement conditions /independent variable	smallest uncertainty	
	brand /model	document name /no.	minimum value	units	maximum value	units	explanation	value	units
KF1002 DC Current Source (on-site calibration included) DC Current Meter (on-site calibration included)	System1: Single Calibration (100 μ A~1 A) and Range Calibration Multi-Function Calibrator /FLUKE 5700A Multimeter /Agilent 3458A System2: Single Calibration (10 μ A~100 pA) Source Meter /Keithley 2636A Standard Resistor Set /HP 16353A Multimeter /Agilent 3458A	1. DC Current Source: (1) LAB: Document No.: QI-0013	1	A	1	A	1. DC Current Source (2) on-site - single point	0.42	mA/A
		Document No.: QI-0033	10	μ A	100	μ A	1. DC Current Source (2) on-site - range	0.53	mA/A
		Document No.: QI-0051 (2) On-Site: Document No.: QI-0113	>0.1	mA	1	mA	1. DC Current Source (2) on-site - range	0.45	mA/A
		Document No.: QI-0133 Document No.: QI-0151	>1	mA	10	mA	1. DC Current Source (2) on-site - range	0.24	mA/A
		2. DC Current Meter: (1) LAB: Document No.: QI-0014	>10	mA	100	mA	1. DC Current Source (2) on-site - range	0.28	mA/A
		Document No.: QI-0034	>0.1	A	1	A	1. DC Current Source (2) on-site - range	0.47	mA/A
		Document No.: QI-0052 (2) On-Site: Document No.: QI-0114	100	μ A	100	μ A	2. DC Current Meter (1) LAB - single point	0.17	mA/A
		Document No.: QI-0134 Document No.: QI-0152	1	mA	1	mA	2. DC Current Meter (1) LAB - single point	0.11	mA/A
			10	mA	10	mA	2. DC Current Meter (1) LAB - single point	0.11	mA/A
			100	mA	100	mA	2. DC Current Meter (1) LAB - single point	0.16	mA/A
			1	A	1	A	2. DC Current Meter (1) LAB - single point	0.35	mA/A
			10	μ A	100	μ A	2. DC Current Meter (1) LAB - range	0.44	mA/A
			>0.1	mA	1	mA	2. DC Current Meter (1) LAB - range	0.40	mA/A
	>1	mA	10	mA	2. DC Current Meter (1) LAB - range	0.18	mA/A		



calibration items	working standard	calibration method	measurand level or range				measurement conditions /independent variable	smallest uncertainty	
	brand /model	document name /no.	minimum value	units	maximum value	units	explanation	value	units
KF1002 DC Current Source (on-site calibration included) DC Current Meter (on-site calibration included)	System1: Single Calibration (100 μ A~1 A) and Range Calibration Multi-Function Calibrator /FLUKE 5700A Multimeter /Agilent 3458A System2: Single Calibration (10 μ A~100 pA) Source Meter /Keithley 2636A Standard Resistor Set /HP 16353A Multimeter /Agilent 3458A	1. DC Current Source: (1) LAB: Document No.: QI-0013	>10	mA	100	mA	2. DC Current Meter (1) LAB - range	0.23	mA/A
		Document No.: QI-0033	>0.1	A	1	A	2. DC Current Meter (1) LAB - range	0.40	mA/A
		Document No.: QI-0051	100	μ A	100	μ A	2. DC Current Meter (2) on-site - single point	0.17	mA/A
		(2) On-Site: Document No.: QI-0113	1	mA	1	mA	2. DC Current Meter (2) on-site - single point	0.11	mA/A
		Document No.: QI-0133	10	mA	10	mA	2. DC Current Meter (2) on-site - single point	0.11	mA/A
		Document No.: QI-0151	100	mA	100	mA	2. DC Current Meter (2) on-site - single point	0.16	mA/A
		2. DC Current Meter: (1) LAB: Document No.: QI-0014	1	A	1	A	2. DC Current Meter (2) on-site - single point	0.35	mA/A
		Document No.: QI-0034	10	μ A	100	μ A	2. DC Current Meter (2) on-site - range	0.44	mA/A
		Document No.: QI-0052	>0.1	mA	1	mA	2. DC Current Meter (2) on-site - range	0.40	mA/A
		(2) On-Site: Document No.: QI-0114	>1	mA	10	mA	2. DC Current Meter (2) on-site - range	0.18	mA/A
		Document No.: QI-0134	>10	mA	100	mA	2. DC Current Meter (2) on-site - range	0.23	mA/A
		Document No.: QI-0152	>0.1	A	1	A	2. DC Current Meter (2) on-site - range	0.40	mA/A
			10	μ A	10	μ A	1. DC Current Source (1) LAB - single point	1.4	mA/A
			1	μ A	1	μ A	1. DC Current Source (1) LAB - single point	1.5	mA/A
	100	nA	100	nA	1. DC Current Source (1) LAB - single point	1.8	mA/A		



calibration items	working standard	calibration method	measurand level or range				measurement conditions /independent variable	smallest uncertainty	
	brand /model	document name /no.	minimum value	units	maximum value	units	explanation	value	units
KF1002 DC Current Source (on-site calibration included) DC Current Meter (on-site calibration included)	System1: Single Calibration (100 μ A~1 A) and Range Calibration Multi-Function Calibrator /FLUKE 5700A Multimeter /Agilent 3458A System2: Single Calibration (10 μ A~100 pA) Source Meter /Keithley 2636A Standard Resistor Set /HP 16353A Multimeter /Agilent 3458A	1. DC Current Source: (1) LAB: Document No.: QI-0013	10	nA	10	nA	1. DC Current Source (1) LAB - single point	2.6	mA/A
		Document No.: QI-0033	1	nA	1	nA	1. DC Current Source (1) LAB - single point	4.3	mA/A
		Document No.: QI-0051 (2) On-Site: Document No.: QI-0113	100	pA	100	pA	1. DC Current Source (1) LAB - single point	26	mA/A
		Document No.: QI-0133 Document No.: QI-0151	10	μ A	10	μ A	1. DC Current Source (2) on-site - single point	1.4	mA/A
		2. DC Current Meter: (1) LAB: Document No.: QI-0014	1	μ A	1	μ A	1. DC Current Source (2) on-site - single point	1.5	mA/A
		Document No.: QI-0034 Document No.: QI-0052	100	nA	100	nA	1. DC Current Source (2) on-site - single point	1.8	mA/A
		(2) On-Site: Document No.: QI-0114 Document No.: QI-0134	10	nA	10	nA	1. DC Current Source (2) on-site - single point	2.6	mA/A
		Document No.: QI-0152	1	nA	1	nA	1. DC Current Source (2) on-site - single point	4.3	mA/A
			100	pA	100	pA	1. DC Current Source (2) on-site - single point	26	mA/A
			10	μ A	10	μ A	2. DC Current Meter (1) LAB - single point	2.0	mA/A
	1	μ A	1	μ A	2. DC Current Meter (1) LAB - single point	2.3	mA/A		
	100	nA	100	nA	2. DC Current Meter (1) LAB - single point	2.5	mA/A		



calibration items	working standard	calibration method	measurand level or range				measurement conditions /independent variable	smallest uncertainty	
	brand /model	document name /no.	minimum value	units	maximum value	units	explanation	value	units
KF1002 DC Current Source (on-site calibration included) DC Current Meter (on-site calibration included)	System1: Single Calibration (100 μ A~1 A) and Range Calibration Multi-Function Calibrator /FLUKE 5700A Multimeter /Agilent 3458A System2: Single Calibration (10 μ A~100 pA) Source Meter /Keithley 2636A Standard Resistor Set /HP 16353A Multimeter /Agilent 3458A	1. DC Current Source: (1) LAB: Document No.: QI-0013	10	nA	10	nA	2. DC Current Meter (1) LAB - single point	3.8	mA/A
		Document No.: QI-0033	1	nA	1	nA	2. DC Current Meter (1) LAB - single point	6.3	mA/A
		Document No.: QI-0051 (2) On-Site: Document No.: QI-0113	100	pA	100	pA	2. DC Current Meter (1) LAB - single point	37	mA/A
		Document No.: QI-0133 Document No.: QI-0151	10	μ A	10	μ A	2. DC Current Meter (2) on-site - single point	2.0	mA/A
		2. DC Current Meter: (1) LAB: Document No.: QI-0014	1	μ A	1	μ A	2. DC Current Meter (2) on-site - single point	2.3	mA/A
		Document No.: QI-0034 Document No.: QI-0052 (2) On-Site: Document No.: QI-0114	100	nA	100	nA	2. DC Current Meter (2) on-site - single point	2.5	mA/A
		Document No.: QI-0134 Document No.: QI-0152	10	nA	10	nA	2. DC Current Meter (2) on-site - single point	3.8	mA/A
			1	nA	1	nA	2. DC Current Meter (2) on-site - single point	6.3	mA/A
	100	pA	100	pA	2. DC Current Meter (2) on-site - single point	37	mA/A		

Approval Signatory: FANG, Frank; LEE, Chun-Hsiang; RONG, Johnney



calibration items	working standard	calibration method	measurand level or range				measurement conditions /independent variable	smallest uncertainty	
	brand /model	document name /no.	minimum value	units	maximum value	units	explanation	value	units
KF1011 AC Voltage Source (on-site calibration included) AC Voltage Meter (on-site calibration included)	Multi-Function Calibrator /FLUKE 5700A Multimeter /Agilent 3458A	1. AC Voltage Source: (1) LAB: Document No.: QI-0015	0.1	V	0.1	V	1. AC Voltage Source (1 kHz) (1) LAB - single point	0.20	mV/V
			1	V	1	V	1. AC Voltage Source (1 kHz) (1) LAB - single point	0.13	mV/V
		2. AC Voltage Meter: (1) LAB: Document No.: QI-0115	10	V	10	V	1. AC Voltage Source (1 kHz) (1) LAB - single point	0.15	mV/V
			100	V	100	V	1. AC Voltage Source (1 kHz) (1) LAB - single point	0.30	mV/V
		Document No.: QI-0016	700	V	700	V	1. AC Voltage Source (1 kHz) (1) LAB - single point	0.55	mV/V
			0.1	V	0.1	V	1. AC Voltage Source (1 kHz) (2) on-site - single point	0.38	mV/V
		Document No.: QI-0116	1	V	1	V	1. AC Voltage Source (1 kHz) (2) on-site - single point	0.28	mV/V
			10	V	10	V	1. AC Voltage Source (1 kHz) (2) on-site - single point	0.29	mV/V
			100	V	100	V	1. AC Voltage Source (1 kHz) (2) on-site - single point	0.48	mV/V
			700	V	700	V	1. AC Voltage Source (1 kHz) (2) on-site - single point	0.83	mV/V
			0.1	V	0.1	V	2. AC Voltage Meter (1 kHz) (1) LAB - single point	0.30	mV/V
			1	V	1	V	2. AC Voltage Meter (1 kHz) (1) LAB - single point	0.18	mV/V
			10	V	10	V	2. AC Voltage Meter (1 kHz) (1) LAB - single point	0.20	mV/V
			100	V	100	V	2. AC Voltage Meter (1 kHz) (1) LAB - single point	0.35	mV/V



calibration items	working standard	calibration method	measurand level or range				measurement conditions /independent variable	smallest uncertainty	
	brand /model	document name /no.	minimum value	units	maximum value	units	explanation	value	units
KF1011 AC Voltage Source (on-site calibration included) AC Voltage Meter (on-site calibration included)	Multi-Function Calibrator /FLUKE 5700A Multimeter /Agilent 3458A	1. AC Voltage Source: (1) LAB: Document No.: QI-0015	700	V	700	V	2. AC Voltage Meter (1 kHz) (1) LAB - single point	0.60	mV/V
		(2) On-Site: Document No.: QI-0115	0.1	V	0.1	V	2. AC Voltage Meter (1 kHz) (2) on-site - single point	0.30	mV/V
		2. AC Voltage Meter: (1) LAB: Document No.: QI-0016	1	V	1	V	2. AC Voltage Meter (1 kHz) (2) on-site - single point	0.18	mV/V
		(2) On-Site: Document No.: QI-0116	10	V	10	V	2. AC Voltage Meter (1 kHz) (2) on-site - single point	0.20	mV/V
			100	V	100	V	2. AC Voltage Meter (1 kHz) (2) on-site - single point	0.35	mV/V
			700	V	700	V	2. AC Voltage Meter (1 kHz) (2) on-site - single point	0.60	mV/V
Approval Signatory: FANG, Frank; LEE, Chun-Hsiang; RONG, Johnney									
KF1012 AC Current Source (on-site calibration included) AC Current Meter (on-site calibration included)	Multi-Function Calibrator /FLUKE 5700A Multimeter /Agilent 3458A	1. AC Current Source: (1) LAB: Document No.: QI-0017	1	mA	1	mA	1. AC Current Source (1 kHz) (1) LAB - single point	0.60	mA/A
		(2) On-Site: Document No.: QI-0117	10	mA	10	mA	1. AC Current Source (1 kHz) (1) LAB - single point	0.60	mA/A
		2. AC Current Meter: (1) LAB: Document No.: QI-0018	100	mA	100	mA	1. AC Current Source (1 kHz) (1) LAB - single point	0.60	mA/A
		(2) On-Site: Document No.: QI-0118	1	A	1	A	1. AC Current Source (1 kHz) (1) LAB - single point	1.5	mA/A
			1	mA	1	mA	1. AC Current Source (1 kHz) (2) on-site - single point	0.90	mA/A
			10	mA	10	mA	1. AC Current Source (1 kHz) (2) on-site - single point	0.90	mA/A
			100	mA	100	mA	1. AC Current Source (1 kHz) (2) on-site - single point	0.90	mA/A
			1	A	1	A	1. AC Current Source (1 kHz) (2) on-site - single point	2.4	mA/A



calibration items	working standard	calibration method	measurand level or range				measurement conditions /independent variable	smallest uncertainty	
	brand /model	document name /no.	minimum value	units	maximum value	units	explanation	value	units
KF1012 AC Current Source (on-site calibration included) AC Current Meter (on-site calibration included)	Multi-Function Calibrator /FLUKE 5700A Multimeter /Agilent 3458A	1. AC Current Source: (1) LAB: Document No.: QI-0017	1	mA	1	mA	2. AC Current Meter (1 kHz) (1) LAB - single point	0.65	mA/A
		(2) On-Site: Document No.: QI-0117	10	mA	10	mA	2. AC Current Meter (1 kHz) (1) LAB - single point	0.65	mA/A
		2. AC Current Meter: (1) LAB: Document No.: QI-0018	100	mA	100	mA	2. AC Current Meter (1 kHz) (1) LAB - single point	0.65	mA/A
		(2) On-Site: Document No.: QI-0118	1	A	1	A	2. AC Current Meter (1 kHz) (1) LAB - single point	1.8	mA/A
			1	mA	1	mA	2. AC Current Meter (1 kHz) (2) on-site - single point	0.65	mA/A
			10	mA	10	mA	2. AC Current Meter (1 kHz) (2) on-site - single point	0.65	mA/A
			100	mA	100	mA	2. AC Current Meter (1 kHz) (2) on-site - single point	0.65	mA/A
			1	A	1	A	2. AC Current Meter (1 kHz) (2) on-site - single point	1.8	mA/A
Approval Signatory: FANG, Frank; LEE, Chun-Hsiang; RONG, Johnney									
KF3001 Resistor (on-site calibration included)	System 1 - Single point calibration: Multi-Function Calibrator /FLUKE 5700A Multimeter /Agilent 3458A System 2 - Range calibration: Multimeter /Agilent 3458A Standard Resistor /FLUKE 5500A	(1) LAB: Document No.: QI-0071	1	Ω	1	Ω	1.Resistor (1) LAB - single point	0.13	m Ω / Ω
		Document No.: QI-0073	10	Ω	10	Ω	1.Resistor (1) LAB - single point	40	$\mu\Omega$ / Ω
		(2) On-Site: Document No.: QI-0171	100	Ω	100	Ω	1.Resistor (1) LAB - single point	35	$\mu\Omega$ / Ω
		Document No.: QI-0173	1	k Ω	1	k Ω	1.Resistor (1) LAB - single point	25	$\mu\Omega$ / Ω
			10	k Ω	10	k Ω	1.Resistor (1) LAB - single point	25	$\mu\Omega$ / Ω
			100	k Ω	100	k Ω	1.Resistor (1) LAB - single point	30	$\mu\Omega$ / Ω



calibration items	working standard brand /model	calibration method document name /no.	measurand level or range				measurement conditions /independent variable explanation	smallest uncertainty	
			minimum value	units	maximum value	units		value	units
KF3001 Resister (on-site calibration included)	System 1 - Single point calibration: Multi-Function Calibrator /FLUKE 5700A System 2 - Range calibration: Multimeter /Agilent 3458A Standard Resistor /FLUKE 5500A	(1) LAB: Document No.: QI-0071	1	MΩ	1	MΩ	1.Resister (1) LAB - single point	35	μΩ/Ω
			10	MΩ	10	MΩ	1.Resister (1) LAB - single point	90	μΩ/Ω
		(2) On-Site: Document No.: QI-0171	1	Ω	1	Ω	1.Resister (2) on-site - single point	0.26	mΩ/Ω
			10	Ω	10	Ω	1.Resister (2) on-site - single point	75	μΩ/Ω
		Document No.: QI-0173	100	Ω	100	Ω	1.Resister (2) on-site - single point	65	μΩ/Ω
			1	kΩ	1	kΩ	1.Resister (2) on-site - single point	50	μΩ/Ω
		10	kΩ	10	kΩ	1.Resister (2) on-site - single point	50	μΩ/Ω	
		100	kΩ	100	kΩ	1.Resister (2) on-site - single point	50	μΩ/Ω	
		1	MΩ	1	MΩ	1.Resister (2) on-site - single point	65	μΩ/Ω	
		10	MΩ	10	MΩ	1.Resister (2) on-site - single point	0.16	mΩ/Ω	
0.1	Ω	10	Ω	2.Resister (1) LAB - range	0.70	mΩ/Ω			
0.1	Ω	10	Ω	2.Resister (2) on-site - range	5.2	mΩ/Ω			
Approval Signatory: FANG, Frank; LEE, Chun-Hsiang; RONG, Johnney									
KF3001 Ohm Meter (on-site calibration included)	System 1 - Single point calibration: Multi-Function Calibrator /FLUKE 5700A System 2 - Range calibration: Multimeter /Agilent 3458A Standard Resistor /FLUKE 5500A	(1) LAB: Document No.: QI-0072	1	Ω	1	Ω	1.Ohm Meter (1) LAB - single point	0.21	mΩ/Ω
			10	Ω	10	Ω	1.Ohm Meter (1) LAB - single point	60	μΩ/Ω
		(2) On-Site: Document No.: QI-0172	100	Ω	100	Ω	1.Ohm Meter (1) LAB - single point	50	μΩ/Ω
			1	kΩ	1	kΩ	1.Ohm Meter (1) LAB - single point	40	μΩ/Ω
		Document No.: QI-0174	10	kΩ	10	kΩ	1.Ohm Meter (1) LAB - single point	40	μΩ/Ω
			100	kΩ	100	kΩ	1.Ohm Meter (1) LAB - single point	40	μΩ/Ω
		1	MΩ	1	MΩ	1.Ohm Meter (1) LAB - single point	50	μΩ/Ω	
		10	MΩ	10	MΩ	1.Ohm Meter (1) LAB - single point	0.12	mΩ/Ω	
0.1	Ω	10	Ω	2.Ohm Meter (1) LAB - range	3.6	mΩ/Ω			



calibration items	working standard	calibration method	measurand level or range				measurement conditions /independent variable	smallest uncertainty	
	brand /model	document name /no.	minimum value	units	maximum value	units	explanation	value	units
KF3001 Ohm Meter (on-site calibration included)	System 1 - Single point calibration: Multi-Function Calibrator /FLUKE 5700A Multimeter /Agilent 3458A System 2 - Range calibration: Multimeter /Agilent 3458A Standard Resistor /FLUKE 5500A	(1) LAB: Document No.: QI-0072	1	Ω	1	Ω	1.Ohm Meter (2) on-site - single point	0.21	m Ω / Ω
		Document No.: QI-0074	10	Ω	10	Ω	1.Ohm Meter (2) on-site - single point	60	$\mu\Omega$ / Ω
		(2) On-Site: Document No.: QI-0172	100	Ω	100	Ω	1.Ohm Meter (2) on-site - single point	50	$\mu\Omega$ / Ω
		Document No.: QI-0174	1	k Ω	1	k Ω	1.Ohm Meter (2) on-site - single point	40	$\mu\Omega$ / Ω
			10	k Ω	10	k Ω	1.Ohm Meter (2) on-site - single point	40	$\mu\Omega$ / Ω
			100	k Ω	100	k Ω	1.Ohm Meter (2) on-site - single point	40	$\mu\Omega$ / Ω
			1	M Ω	1	M Ω	1.Ohm Meter (2) on-site - single point	50	$\mu\Omega$ / Ω
			10	M Ω	10	M Ω	1.Ohm Meter (2) on-site - single point	0.12	m Ω / Ω
	0.1	Ω	10	Ω	2.Ohm Meter (2) on-site - range	3.6	m Ω / Ω		
Approval Signatory: FANG, Frank; LEE, Chun-Hsiang; RONG, Johnney									
KF3003 Capacitor (on-site calibration included) Capacitance meter (on-site calibration included)	LCR METER /HP 4284A STANDARD CAPACITOR /HP16380A STANDARD CAPACITOR /HP16380C	1. Capacitor: (1) LAB: Document No: QI-0175	10	pF	10	pF	1. Capacitor (1 kHz) (1) LAB - single point	0.75	mF/F
		(2) On-Site: Document No: QI-0176	100	pF	100	pF	1. Capacitor (1 kHz) (1) LAB - single point	0.90	mF/F
		2. Capacitance meter: (1) LAB: Document No: QI-0075	1000	pF	1000	pF	1. Capacitor (1 kHz) (1) LAB - single point	0.60	mF/F
		(2) On-Site: Document No: QI-0076	0.01	μ F	0.01	μ F	1. Capacitor (1 kHz) (1) LAB - single point	0.50	mF/F
			0.1	μ F	0.1	μ F	1. Capacitor (1 kHz) (1) LAB - single point	0.50	mF/F
			1	μ F	1	μ F	1. Capacitor (1 kHz) (1) LAB - single point	0.50	mF/F
			10	pF	10	pF	1. Capacitor (on-site) (1 kHz) (2) on-site - single point	1.6	mF/F



calibration items	working standard	calibration method	measurand level or range				measurement conditions /independent variable	smallest uncertainty	
	brand /model	document name /no.	minimum value	units	maximum value	units	explanation	value	units
KF3003 Capacitor (on-site calibration included) Capacitance meter (on-site calibration included)	LCR METER /HP 4284A STANDARD CAPACITOR /HP16380A STANDARD CAPACITOR /HP16380C	1. Capacitor: (1) LAB: Document No: QI-0175 (2) On-Site: Document No: QI-0176 2. Capacitance meter: (1) LAB: Document No: QI-0075 (2) On-Site: Document No: QI-0076	100	pF	100	pF	1. Capacitor (on-site) (1 kHz) (2) on-site - single point	1.7	mF/F
			1000	pF	1000	pF	1. Capacitor (on-site) (1 kHz) (2) on-site - single point	1.5	mF/F
			0.01	μF	0.01	μF	1. Capacitor (on-site) (1 kHz) (2) on-site - single point	1.5	mF/F
			0.1	μF	0.1	μF	1. Capacitor (on-site) (1 kHz) (2) on-site - single point	1.5	mF/F
			1	μF	1	μF	1. Capacitor (on-site) (1 kHz) (2) on-site - single point	1.4	mF/F
			10	pF	10	pF	2. Capacitance meter (1 kHz) (1) LAB - single point	1.6	mF/F
			100	pF	100	pF	2. Capacitance meter (1 kHz) (1) LAB - single point	1.7	mF/F
			1000	pF	1000	pF	2. Capacitance meter (1 kHz) (1) LAB - single point	1.5	mF/F
			0.01	μF	0.01	μF	2. Capacitance meter (1 kHz) (1) LAB - single point	1.5	mF/F
			0.1	μF	0.1	μF	2. Capacitance meter (1 kHz) (1) LAB - single point	1.5	mF/F
			1	μF	1	μF	2. Capacitance meter (1 kHz) (1) LAB - single point	1.4	mF/F
			10	pF	10	pF	2. Capacitance meter (1 kHz) (2) (2) on-site - single point	1.6	mF/F
			100	pF	100	pF	2. Capacitance meter (1 kHz) (2) (2) on-site - single point	1.7	mF/F
			1000	pF	1000	pF	2. Capacitance meter (1 kHz) (2) (2) on-site - single point	1.5	mF/F



calibration items	working standard	calibration method	measurand level or range				measurement conditions /independent variable	smallest uncertainty	
	brand /model	document name /no.	minimum value	units	maximum value	units	explanation	value	units
KF3003 Capacitor (on-site calibration included) Capacitance meter (on-site calibration included)	LCR METER /HP 4284A STANDARD CAPACITOR /HP16380A STANDARD CAPACITOR /HP16380C	1. Capacitor: (1) LAB: Document No: QI-0175	0.01	μF	0.01	μF	2. Capacitance meter (1 kHz) (2) (2) on-site - single point	1.5	mF/F
		(2) On-Site: Document No: QI-0176	0.1	μF	0.1	μF	2. Capacitance meter (1 kHz) (2) (2) on-site - single point	1.5	mF/F
		2. Capacitance meter: (1) LAB: Document No: QI-0075 (2) On-Site: Document No: QI-0076	1	μF	1	μF	2. Capacitance meter (1 kHz) (2) (2) on-site - single point	1.4	mF/F
Approval Signatory: FANG, Frank; LEE, Chun-Hsiang; RONG, Johnney									

Time And Frequency

calibration items	working standard	calibration method	measurand level or range				measurement conditions /independent variable	smallest uncertainty	
	brand /model	document name /no.	minimum value	units	maximum value	units	explanation	value	units
KJ0200 Frequency standard and frequency signal source (on-site calibration included)	Rubidium Standard /FEI FE-5680A Counter /HP 53181A	Document No.: QI-0311 Document No.: QI-0312 Document No.: QI-0211 Document No.: QI-0212	10	MHz	10	MHz		5.0 x 10 ⁻⁹	
Approval Signatory: FANG, Frank; LEE, Chun-Hsiang; RONG, Johnney									

Note : Smallest uncertainty represents an expanded uncertainty using a coverage factor approximately 95 % level of confidence.
(Null Below)

