Schedule of Accreditation

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United Kingdom Accreditation Service

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UKAS CALIBRATION **0183** **Accredited to ISO/IEC 17025:2017**	**Fluke Precision Measurement Ltd** **Issue No:** 064 **Issue date:** 24 April 2026	
	52 Hurricane Way **Norwich** **Norfolk** **NR6 6JB**	**Contact: Mr Robert Hemmin** **Tel: +44 (0)1603-256620** **E-Mail: service.uk@fluke.com** **Website: www.fluke.com**
Calibration performed by the Organisations at the locations specified below		

Locations covered by the organisation and their relevant activities

Laboratory locations:

Location details	Activity
Address 52 Hurricane Way Norwich Norfolk NR6 6JB	Electrical

Site activities performed away from the locations listed above:

Location details	Activity	Location code
The customers' site or premises must be suitable for the nature of the particular calibrations undertaken and will be the subject of contract review arrangements between the laboratory and the customer.	Electrical	Site capabilities are listed at the end of the schedule, click on link

Calibration and Measurement Capability (CMC)

Measured Quantity Instrument or Gauge	Range	Expanded Measurement Uncertainty (k = 2)	Remarks
ELECTRICAL			Sourcing and measurement capability for the calibration of resistance instruments
DC RESISTANCE			
	6 mΩ	7.8 μΩ/Ω	
	20 mΩ	3.6 μΩ/Ω	
	0.1 Ω	3.4 μΩ/Ω	
	1 Ω	0.69 μΩ/Ω	
	10 Ω	0.57 μΩ/Ω	
	100 Ω	0.32 μΩ/Ω	
	1 kΩ	0.68 μΩ/Ω	
	10 kΩ	0.39 μΩ/Ω	
	100 kΩ	1.5 μΩ/Ω	
	1 MΩ	3.4 μΩ/Ω	
	10 MΩ	4.1 μΩ/Ω	
	100 MΩ	10 μΩ/Ω	
	1 GΩ	15 μΩ/Ω125 μΩ/Ω	
	10 GΩ		
	100 GΩ	0.20 %	
	1 TΩ	0.50 %	
	2 TΩ	0.50 %	
	5 TΩ	0.50 %	
	9 TΩ	0.90 %	
	10 TΩ	0.90 %	
	100 GΩ	0.075 %	For calibrating 3 terminal guarded high resistance meters
	1 TΩ	0.10 %	
	10 TΩ	0.84 %	
	100 GΩ	0.42 %	
	1 TΩ	0.44 %	For measuring 5320A calibrators
	2 TΩ	0.74 %	
	5 TΩ	0.81 %	
	9 TΩ	1.4 %	
Other values	0 Ω to 20 mΩ	38 nΩ	Sourcing and measurement capability for the calibration of resistance instruments
	20 mΩ to 50 mΩ	3.8 μΩ/Ω	
	50 mΩ to 0.2 Ω	3.7 μΩ/Ω	
	0.2 Ω to 2.0 Ω	1.5 μΩ/Ω	
	2.0 Ω to 20 Ω	1.4 μΩ/Ω	
	20 Ω to 200 Ω	0.62 μΩ/Ω	
	200 Ω to 2.0 kΩ	0.86 μΩ/Ω	
	2.0 kΩ to 20 kΩ	0.66 μΩ/Ω	
	20 kΩ to 200 kΩ	1.6μΩ/Ω	
	200 kΩ to 2.0 MΩ	3.7 μΩ/Ω	
	2.0 MΩ to 20 MΩ	7.2 μΩ/Ω	
	20 MΩ to 200 MΩ	12 μΩ/Ω	
	200 MΩ to 2 GΩ	27 μΩ/Ω	
	2 GΩ to 20 GΩ	140 μΩ/Ω	

Measured Quantity Instrument or Gauge	Range	Expanded Measurement Uncertainty (k = 2)	Remarks
RESISTANCE (continued)			
Earth Bonding Resistance			
50Hz to 60 Hz	1 mΩ to 20 mΩ	2.4 %	4-wire
	20 mΩ to 100 mΩ	0.83 %	
	100 mΩ to 1 Ω	0.32 %	2-wire & 4-wire
	1 Ω to 100 Ω	0.44 %	
	100 Ω to 2 kΩ	0.091 %	
DC VOLTAGE			
Specific Values	100 mV	1.8 µV/V	By comparison with DC voltage reference standards using voltage dividers.
	200 mV	1.8 µV/V	
	1 V	0.56 µV/V	
	1.018 V	0.56 µV/V	
	2 V	0.56 µV/V	
	10 V	0.35 µV/V	
	20 V	0.35 µV/V	
	100 V	0.56 µV/V	
	200 V	0.58 µV/V	
	1000 V	0.61 µV/V	
Other Values	0 V to 10 mV	80 nV	Sourcing and measurement capability for the calibration of voltage instruments
	10 mV to 20 mV	6.5 µV/V	
	20 mV to 100 mV	5.7 µV/V	
	100 mV to 200 mV	4.9 µV/V	
	200 mV to 20 V	2.6 µV/V	
	20 V to 200 V	2.5 µV/V	
	200 V to 1050 V	4.8 µV/V	
DC Voltage Linearity			
2 V range	0 V to 0.5 V	0.26 uV	
	0.5 V to 1 V	0.31 uV	
	At 1 V	0.25 uV	
	1 V to 1.5 V	0.37 uV	
	1.5 V to 2 V	0.45 uV	
20 V range	0 V to 5 V	2.6 uV	
	5 V to 10 V	3.0 uV	
	At 10 V	0.75 uV	
	10 V to 15 V	3.7 uV	
	15 V to 20 V	4.4 uV	
200 V range	At 100 V	7.5 uV	
1 kV range	At 500 V	75 uV	
DC HIGH VOLTAGE	1 kV to 10 kV	220 µV/V	For the calibration of high voltage sources, meters and dividers.
	10 kV to 40 kV	500 µV/V	
DC CURRENT	0 A to 10 µA	240 pA	Sourcing and measurement capability for the calibration of current instruments
	10 µA to 200 µA	2.4 µA/A	
	200 µA to 20 mA	1.6 µA/A	
	20 mA to 200 mA	1.9 µA/A	
	200 mA to 1 A	6.6 µA/A	
	1 A to 20 A	6.8 µA/A	
	20 A to 100 A	15 µA/A	

Measured Quantity Instrument or Gauge	Range	Expanded Measurement Uncertainty (k = 2)	Remarks
AC HIGH VOLTAGE	*50 Hz and 60 Hz:*		
	1 kV to 10 kV	0.17 %	For the calibration of high voltage meters and sources.
	10 kV to 30 kV	0.23 %	
	1 kV to 10 kV	0.19 %	For the calibration of high voltage dividers
	10 kV to 30 kV	0.25 %	
CURRENT			

Absolute current measurement ((μA/A)

Frequency kHz	2 μA	10 μA	100 μA	1 mA	10 mA	20 mA	50 mA	100 mA	200 mA	500 mA	1 A	2 A	5 A	10 A	20 A	50 A	100 A
DC	92	29	18	15	18	18	19	19	19	19	21	19	22	21	20	26	27
0.01	670	260	55	42	25	25	31	31	32	30	30	30	40	40	40	40	50
0.02	670	260	52	42	24	24	27	27	28	27	28	27	31	34	38	44	52
0.04	670	220	50	41	24	24	24	24	25	25	26	25	30	33	37	44	52
1	670	200	50	41	22	22	23	23	24	23	25	24	29	33	36	43	51
10	670	200	50	41	23	23	24	23	24	23	25	24	29	33	36	43	51
30	670	200	54	41	24	24	24	24	25	24	25	25	30	41	42	61	88
70	670	200	55	43	29	28	25	25	26	24	26	29	38	68	79	110	140
100	670	210	58	47	34	31	27	25	26	25	28	33	41	83	100	140	170

Remark: Calibrations may be performed at intermediate frequencies with the larger of the adacent uncertainties.

Measured Quantity Instrument or Gauge	Range	Expanded Measurement Uncertainty (k = 2)	Remarks
TEMPERATURE SIMULATION			
Fluke 9100, 5500 and 525B series calibrators and Datapaq series calibrators	Internal reference junction	0.066 °C	Product specific; calibration of calibrator internal reference junction
Temperature simulators, calibration by electrical simulation Base metal thermocouples			Excluding reference junction compensation
Type E	-250 ºC to -100 ºC -100 ºC to +1000 ºC	0.100 ºC 0.070 ºC	
Type J	-210 ºC to -100 ºC -100 ºC to +1200 ºC	0.076 ºC 0.071 ºC	
Type K	-200 ºC to -100 ºC -100 ºC to +1372 ºC	0.083 ºC 0.076 ºC	
Type N	-200 ºC to -100 ºC -100 ºC to +1372 ºC	0.100 ºC 0.085 ºC	
Type T	-250 ºC to -150 ºC -150 ºC to +400 ºC	0.130 ºC 0.083 ºC	
Noble metal thermocouples			
Type B	500 ºC to 1550 ºC 1550 ºC to 1820 ºC	0.15 ºC 0,19 ºC	
Type R	-50 ºC to +100 ºC 100 ºC to 1000 ºC 1000 ºC to 1760 ºC	0.19 ºC 0.16 ºC 0.27 ºC	
Type S	0 ºC to 1400 ºC 1400 ºC to 1750 ºC	0.20 ºC 0.24 ºC	
Temperature simulators, calibration by electrical simulation Base metal thermocouples			Including reference junction compensation
Type E	-250 ºC to -100 ºC -100 ºC to +1000 ºC	0.170 ºC 0.098 ºC	
Type J	-210 ºC to -100 ºC -100 ºC to +1200 ºC	0.115 ºC 0.100 ºC	
Type K	-200 ºC to -100 ºC -100 ºC to +1372 ºC	0.130 ºC 0.109 ºC	
Type N	-200 ºC to -100 ºC -100 ºC to +1372 ºC	0.170 ºC 0.125 ºC	
Type T	-250 ºC to -150 ºC -150 ºC to +400 ºC	0.230 ºC 0.130 ºC	

Measured Quantity Instrument or Gauge	Range	Expanded Measurement Uncertainty (k = 2)	Remarks
Temperature simulators, calibration by electrical simulation Noble metal thermocouples			Including reference junction compensation
Type B	500 ºC to 600 ºC 600 ºC to 1820 ºC	0.29 ºC 0.24 ºC	
Type R	-50 ºC to +100 ºC 100 ºC to 1000 ºC 1000 ºC to 1760 ºC	0.37 ºC 0.22 ºC 0.31 ºC	
Type S	0 ºC to 1400 ºC 1400 ºC to 1750 ºC	0.27 ºC 0.28 ºC	
CAPACITANCE			
	At effective frequencies from *0.08 Hz to 6 Hz* 0.2 nF to 2 nF 2 nF to 4 nF 4 nF to 20 nF 20 nF to 200 nF 0.2 µF to 2 µF 2 µF to 20 µF 20 µF to 200 mF	 210 µF/F 480 µF/F 260 µF/F 130 µF/F 68 µF/F 91 µF/F 85 µF/F	Measurement of ground-isolated capacitors and capacitance calibrators
	At 100 Hz: 0.3 µF 1.0 µF 2 µF 3 µF 10 µF	 0.26 % 0.075 % 0.073 % 0.13 % 0.13 %	
	At 1 kHz: 350 pF 480 pF 600 pF 1 nF 2 nF 3 nF 10 nF 30 nF 100 nF 200 nF 300 nF	 0.26 % 0.16 % 0.13 % 0.070 % 0.080 % 0.080 % 0.080 % 0.061 % 0.061 % 0.068 % 0.065 %	

Measured Quantity Instrument or Gauge	Range	Expanded Measurement Uncertainty (k = 2)	Remarks
FREQUENCY			
	10 MHz	6.2 parts in 10^{12}	Generation and measurement for calibration of frequency instruments.
Measurement	10 Hz to 100 Hz	2.5 parts in 10^{7}	
	100 Hz to 1 kHz	3.1 parts in 10^{8}	May be reported as 1/f for time.
	1 kHz to 100 kHz	3.3 parts in 10^{9}	
	100 kHz to 1 MHz	1.8 parts in 10^{10}	
	1 MHz to 10 MHz	1.4 parts in 10^{11}	
	10 MHz to 30 MHz	7.2 parts in 10^{12}	
	30 MHz to 40 GHz	6.6 parts in 10^{12}	
Time interval	50 ns to 1 s	0.82 ns	For the calibration of timers & stopwatches
	1 s to 100 s	1.1 ns	
	100 s to 1 000 s	6.3 ns	
	1 000 s to 10 000s	63 ns	
	10 000 s to 100 000 s	630 ns	
Wideband Voltage	1 mV into 50 Ω		Sourcing and measurement capability for the calibration of voltage instruments
	10 Hz to 10 kHz	0.058 %	
	10 kHz to 50 kHz	0.063 %	
	50 kHz to 1.2 MHz	0.077 %	
	1.2 MHz to 10 MHz	0.094 %	
	10 MHz to 17 MHz	0.115 %	
	17 MHz to 30 MHz	0.190 %	
	30 MHz to 50 MHz	0.280 %	
	3 V to 3 mV into 50 Ω		
	10 Hz to 10 kHz	0.036 %	
	10 kHz to 50 kHz	0.054 %	
	50 kHz to 1.2 MHz	0.068 %	
	1.2 MHz to 10 MHz	0.084 %	
	10 MHz to 17 MHz	0.110 %	
	17 MHz to 30 MHz	0.200 %	
	30 MHz to 50 MHz	0.260 %	

Measured Quantity Instrument or Gauge	Range	Expanded Measurement Uncertainty (k = 2)	Remarks

Fluke 5790 Series AC Measurement Standard Calibration - AC/DC Voltage Difference

The table below shows the Calibration and Measurement Capability (CMC) for the calibration of Fluke 5790 Series AC Measurement Standards. The CMCs are in µV/V of the nominal voltage and relate to the measured AC/DC voltage difference of these instruments.

Frequenc	2.2 mV range	7 mV range	22 mV range		70 mV range	
y	2 mV	6 mV	10 mV	20 mV	20 mV	60 mV
10 Hz	570	230	110	83	74	45
20 Hz	570	220	87	70	58	33
30 Hz	610	220	87	70	58	29
40 Hz	570	180	87	70	58	29
55 Hz	570	170	87	70	58	29
60 Hz	570	170	87	70	58	32
120 Hz	570	170	87	70	58	32
300 Hz	570	170	87	70	58	32
400 Hz	570	170	87	67	55	29
500 Hz	610	170	97	67	55	29
1 kHz	560	170	90	67	55	29
10 kHz	570	170	90	75	65	29
20 kHz	570	170	106	67	55	29
30 kHz	570	170	90	65	52	32
50 kHz	610	170	97	65	51	30
70 kHz	570	170	90	72	60	33
100 kHz	570	180	140	67	55	59
200 kHz	570	250	120	76	66	51
300 kHz	570	250	120	80	71	47
500 kHz	570	260	160	127	130	84
700 kHz	620	270	180	140	140	90
800 kHz	610	280	200	170	160	104
1 MHz	660	310	220	180	170	140

Measured Quantity Instrument or Gauge	Range	Expanded Measurement Uncertainty (k = 2)	Remarks

Fluke 5790 Series AC Measurement Standard Calibration (continued) - AC/DC Voltage Difference

The table below shows the Calibration and Measurement Capability (CMC) for the calibration of Fluke 5790 Series AC Measurement Standards. The CMCs are in µV/V of the nominal voltage and relate to the measured AC/DC voltage difference of these instruments.

Frequency	220 mV range			700 mV range						2.2 V range		
	60 mV	100 mV	200 mV	200 mV	300 mV	400 mV	500 mV	600 mV	700 mV	600 mV	1 V	2 V
10 Hz	45	33	25	25	34	24	24	25	22	18	13	10.2
20 Hz	33	20	16	16	17	17	17	16	16	17	13	8.7
30 Hz	29	19	16	16	20	20	17	16	16	17	12	7.8
40 Hz	29	17	15	14	15	15	15	14	15	15	7.0	7.6
55 Hz	29	17	15	14	15	15	15	14	15	15	7.0	9.2
60 Hz	32	17	15	14	15	15	15	14	15	15	7.1	7.8
120 Hz	32	17	15	14	15	15	15	14	15	15	7.4	7.3
300 Hz	32	17	15	14	15	15	15	14	15	15	7.3	7.6
400 Hz	29	13	11	9.8	13	12	10.6	7.8	8.3	9.0	7.0	7.0
500 Hz	29	14	11	9.8	12	12	10.6	8.0	8.6	9.0	7.0	7.0
1 kHz	29	18	11	10	14	15	10.6	8.5	9.1	9.0	7.0	7.2
10 kHz	29	14	11	10	15	13	11.4	10.4	10.9	18	10.0	9.9
20 kHz	29	20	11	9.8	12	13	10.6	8.3	8.9	16	9.6	9.6
30 kHz	32	15	12	10	16	12	10.6	8.3	8.9	16	9.7	9.6
50 kHz	30	16	11	10	13	12	10.9	8.6	9.2	16	9.7	9.7
70 kHz	33	23	12	11	14	16	12	9.8	10.2	20	11.4	10.3
100 kHz	59	18	14	14	15	15	12	13	12	17	10.5	10.4
200 kHz	51	28	28	28	24	24	23	24	24	26	15	14
300 kHz	47	33	28	28	27	24	26	27	27	28	22	20
500 kHz	84	53	43	43	44	41	42	48	48	42	28	27
700 kHz	90	59	65	65	65	58	58	63	63	52	32	28
800 kHz	104	67	72	72	65	65	67	83	77	53	35	31
1 MHz	140	93	96	96	82	82	104	101	95	58	39	33

Frequency	7 V range						22 V range			
	2 V	3 V	4 V	5 V	6 V	7 V	6 V	8 V	10 V	20 V
10 Hz	12	10.3	29	16	13	9.7	15	18	15	13
20 Hz	10.1	9.2	27	8.4	8.8	9.5	12	12	12	13
30 Hz	9.4	9.5	11.1	8.6	8.4	9.0	7.1	8.6	7.6	10.0
40 Hz	7.6	7.9	9.7	6.2	6.1	7.1	6.9	7.5	7.8	10.0
55 Hz	9.2	7.5	9.9	6.5	6.2	7.1	7.0	8.1	8.6	10.0
60 Hz	7.8	7.1	10.1	6.5	6.2	7.2	7.0	7.6	7.9	8.6
120 Hz	7.3	8.3	7.5	6.3	6.2	7.1	7.0	7.5	7.5	8.6
300 Hz	7.6	7.2	6.1	6.5	6.1	7.0	6.9	7.4	7.6	8.6
400 Hz	7.0	7.9	6.1	6.2	6.4	7.3	7.2	7.3	7.5	8.6
500 Hz	7.0	7.7	6.4	6.2	6.1	7.0	6.9	7.7	7.5	8.6
1 kHz	7.2	7.3	7.2	6.2	6.1	7.1	6.9	7.6	7.5	8.6
10 kHz	9.9	8.3	10.6	10.9	7.0	7.0	7.3	7.5	7.7	8.6
20 kHz	9.6	10.1	9.7	8.3	8.3	7.1	8.0	7.5	7.5	8.6
30 kHz	9.6	9.7	9.7	8.4	8.3	7.1	8.0	7.5	7.8	6.9
50 kHz	9.7	9.9	10.9	8.8	11.4	7.5	9.9	7.4	8.4	7.2
70 kHz	10.3	11.3	11.1	9.6	13	9.2	11.2	8.5	9.2	7.5
100 kHz	10.4	11.0	13	14	15	9.8	12.5	8.4	12	10.2
200 kHz	13	14	20	18	16	15	16	12	19	15
300 kHz	18	20	21	22	20	20	18	15	25	17
500 kHz	81	81	81	81	68	67	68	68	55	29
700 kHz	81	82	81	81	69	69	68	68	56	28
800 kHz	82	81	82	82	82	81	69	67	68	33
1 MHz	81	82	82	82	82	82	70	68	68	38

Measured Quantity Instrument or Gauge	Range	Expanded Measurement Uncertainty (k = 2)	Remarks

Fluke 5790 Series AC Measurement Standard Calibration (continued) - AC/DC Voltage Difference

The table below shows the Calibration and Measurement Capability (CMC) for the calibration of Fluke 5790 Series AC Measurement Standards. The CMCs are in µV/V of the nominal voltage and relate to the measured AC/DC voltage difference of these instruments.

Frequency	70 V range						220 V range		
	20 V	30 V	40 V	50 V	60 V	70 V	60 V	100 V	200 V
10 Hz	15	24	17	14	15	15	16	20	15
20 Hz	12	13	11	10.6	10.6	10.6	12	15	15
30 Hz	9.5	10.1	12	10.6	10.6	10.6	12	15	15
40 Hz	9.5	11.0	10.4	10.6	10.6	10.6	12	15	15
55 Hz	12	13	10.4	10.6	10.6	10.6	12	15	15
60 Hz	9.3	13	11	10.7	10.6	10.6	12	15	15
120 Hz	9.3	10.0	12	10.6	10.6	10.6	12	15	15
300 Hz	9.3	10.0	12	10.6	10.6	10.6	12	15	15
400 Hz	9.3	12	12	10.9	10.0	10.0	12	15	14
500 Hz	9.3	10.7	14	10.0	10.0	10.0	12	15	14
1 kHz	9.3	10.6	10.3	10.0	10.0	10.0	12	15	14
10 kHz	9.3	10.8	9.3	10.4	10.9	10.1	13	15	15
20 kHz	9.3	10.0	9.2	10.0	10.1	10.1	13	15	15
30 kHz	7.7	10.0	12	10.0	10.8	10.8	13	15	15
50 kHz	7.9	10.6	10.1	10.0	10.5	10.5	13	15	15
70 kHz	8.3	12	15	16	19	19	18	21	21
100 kHz	10.4	13	16	16	20	20	26	32	32
200 kHz	19	25	-	-	-	-	-	-	-
300 kHz	21	32	-	-	-	-	-	-	-
500 kHz	35	38	-	-	-	-	-	-	-
700 kHz	35	51	-	-	-	-	-	-	-
800 kHz	40	-	-	-	-	-	-	-	-
1 MHz	39	-	-	-	-	-	-	-	-

Fluke 5790 Series AC Measurement Standard Calibration (continued) - AC/DC Voltage Difference

The table below shows the Calibration and Measurement Capability (CMC) for the calibration of Fluke 5790 Series AC Measurement Standards. The CMCs are in µV/V of the nominal voltage and relate to the measured AC/DC voltage difference of these instruments.

Frequency	700 V range				1000 V range		
	200 V	300 V	500 V	600 V	600 V	800 V	1000 V
10 Hz	22	24	27	22	22	24	25
20 Hz	16	15	15	15	15	15	15
30 Hz	16	15	15	15	15	15	15
40 Hz	16	14	14	15	15	15	15
55 Hz	16	14	14	15	15	15	14
60 Hz	16	14	14	15	15	15	14
120 Hz	16	14	15	15	15	15	14
300 Hz	15	14	15	15	15	15	14
400 Hz	14	15	15	15	15	15	14
500 Hz	14	15	15	15	15	15	14
1 kHz	15	15	15	15	15	15	14
10 kHz	16	15	15	15	15	15	14
20 kHz	16	17	16	15	15	15	15
30 kHz	16	17	17	20	20	17	16
50 kHz	18	20	21	23	23	19	22
70 kHz	24	29	28	28	28	26	28
100 kHz	34	45	41	45	45	54	50

Measured Quantity Instrument or Gauge	Range	Expanded Measurement Uncertainty (k = 2)	Remarks

Fluke 5790 Series AC Measurement Standard Calibration - AC Voltage

The table below shows the Calibration and Measurement Capability (CMC) for the calibration of Fluke 5790 Series AC Measurement Standards. The CMCs are in µV/V of the nominal voltage and relate to the AC voltage function of these instruments.

Frequenc	2.2 mV range	7 mV range	22 mV range		70 mV range	
y	2 mV	6 mV	10 mV	20 mV	20 mV	60 mV
10 Hz	630	240	120	88	79	47
20 Hz	630	230	110	75	65	34
30 Hz	680	230	110	75	65	31
40 Hz	640	190	110	75	65	31
55 Hz	630	190	110	75	65	31
60 Hz	640	190	110	75	65	33
120 Hz	630	190	110	75	65	33
300 Hz	630	190	110	75	65	33
400 Hz	630	190	110	73	62	31
500 Hz	670	190	120	73	62	31
1 kHz	620	190	110	73	62	31
10 kHz	630	180	110	80	71	31
20 kHz	630	190	130	73	62	31
30 kHz	630	190	110	71	60	33
50 kHz	680	190	120	71	59	31
70 kHz	630	190	110	77	67	34
100 kHz	630	200	150	73	62	60
200 kHz	640	260	130	82	73	52
300 kHz	630	260	130	85	77	48
500 kHz	630	260	170	140	130	85
700 kHz	690	280	190	150	140	91
800 kHz	670	290	200	170	170	105
1 MHz	730	320	220	180	170	140

Frequenc	220 mV range			700 mV range						2.2 V range		
y	60 mV	100 mV	200 mV	200 mV	300 mV	400 mV	500 mV	600 mV	700 mV	600 mV	1 V	2 V
10 Hz	47	33	25	26	34	24	24	25	22	18	13	10.3
20 Hz	34	21	16	16	17	17	17	16	17	17	13	8.7
30 Hz	31	20	16	16	20	20	17	16	17	17	12	7.8
40 Hz	31	18	15	14	16	16	15	14	15	16	7.2	7.7
55 Hz	31	18	15	14	16	16	15	14	15	15	7.2	9.2
60 Hz	33	18	15	14	16	16	15	14	15	15	7.3	7.8
120 Hz	33	19	15	14	16	16	15	14	15	15	7.6	7.4
300 Hz	33	18	15	14	16	16	15	14	15	15	7.4	7.7
400 Hz	31	14	12	11	13	12	11	8.0	8.5	9.3	7.2	7.1
500 Hz	31	16	12	11	13	12	11	8.2	8.7	9.3	7.2	7.1
1 kHz	31	19	12	11	15	15	11	8.7	9.2	9.3	7.2	7.2
10 kHz	31	16	12	11	15	13	12	11	11	18	10	10
20 kHz	31	21	12	11	13	13	11	8.5	9.0	16	9.7	9.7
30 kHz	33	17	12	11	17	12	11	8.5	9.0	16	9.8	10
50 kHz	31	17	12	11	13	13	11	8.8	9.3	16	9.8	9.7
70 kHz	34	23	12	12	14	16	12	9.9	10	20	12	11
100 kHz	60	19	15	14	15	15	12	13	12	17	11	11
200 kHz	52	29	28	28	24	24	23	24	24	26	16	14
300 kHz	48	34	28	28	27	24	26	27	27	28	22	20
500 kHz	85	54	44	44	44	41	42	48	48	42	28	27
700 kHz	91	59	66	66	66	58	58	63	63	52	32	28
800 kHz	110	67	72	72	66	66	67	83	77	53	35	31
1 MHz	140	93	96	96	82	82	104	100	95	58	39	33

Measured Quantity Instrument or Gauge	Range	Expanded Measurement Uncertainty (k = 2)	Remarks

Fluke 5790 Series AC Measurement Standard Calibration - AC Voltage (Continued)

The table below shows the Calibration and Measurement Capability (CMC) for the calibration of Fluke 5790 Series AC Measurement Standards. The CMCs are in µV/V of the nominal voltage and relate to the AC voltage function of these instruments.

Frequency	7 V range						22 V range			
	2 V	3 V	4 V	5 V	6 V	7 V	6 V	8 V	10 V	20 V
10 Hz	12	11	29	16	13	10	15	18	15	13
20 Hz	11	10	27	8.5	8.9	9.5	12	12	12	13
30 Hz	10	9.7	12	8.7	8.4	9.0	7.1	8.6	7.6	10
40 Hz	9.0	8.3	9.8	6.4	6.2	7.2	6.9	7.5	7.8	10
55 Hz	10.0	7.9	10	6.7	6.3	7.2	7.0	8.1	8.6	10
60 Hz	9.0	7.5	10	6.7	6.3	7.2	7.0	7.6	7.9	8.6
120 Hz	8.1	8.6	7.7	6.5	6.3	7.2	7.0	7.5	7.5	8.6
300 Hz	8.4	7.6	6.3	6.7	6.2	7.1	6.9	7.4	7.6	8.6
400 Hz	7.9	8.3	6.3	6.3	6.5	7.4	7.2	7.3	7.5	8.6
500 Hz	7.9	8.0	6.6	6.4	6.2	7.1	6.9	7.7	7.5	8.6
1 kHz	8.0	7.7	7.4	6.3	6.2	7.2	6.9	7.6	7.5	8.6
10 kHz	11	8.6	11	11	7.1	7.1	7.3	7.5	7.7	8.6
20 kHz	10	10	9.9	8.4	8.4	7.2	8.0	7.5	7.5	8.6
30 kHz	10	10	9.8	8.5	8.4	7.2	8.0	7.5	7.8	6.9
50 kHz	10	10	11	8.9	12	7.6	9.9	7.4	8.4	7.2
70 kHz	11	12	11	10	13	9.3	11.2	8.5	9.2	7.5
100 kHz	11	11	14	14	15	9.9	13	8.4	12	10
200 kHz	13	14	20	18	16	15	16	12	19	15
300 kHz	18	20	21	23	20	20	18	15	25	17
500 kHz	81	81	82	81	68	67	68	68	55	29
700 kHz	82	82	81	82	69	69	68	68	56	28
800 kHz	82	81	82	82	82	81	69	67	68	33
1 MHz	81	82	82	82	82	82	70	68	68	38

Frequency	70 V range						220 V range		
	20 V	30 V	40 V	50 V	60 V	70 V	60 V	100 V	200 V
10 Hz	16	25	17	14	15	15	17	20	15
20 Hz	13	13	11	10.8	11	11	12	15	15
30 Hz	11	11	12	10.8	11	11	12	15	15
40 Hz	11	12	11	10.8	11	11	12	15	15
55 Hz	13	13	11	10.8	11	11	12	15	15
60 Hz	11	14	11	10.9	11	11	12	15	15
120 Hz	11	11	12	10.8	11	11	12	15	15
300 Hz	11	11	12	10.8	11	11	12	15	15
400 Hz	11	12	12	11	10	10	12	15	14
500 Hz	11	11	14	10	10	10	12	15	14
1 kHz	11	11	12	10	10	10	12	15	14
10 kHz	11	11	9.6	10	11	10	13	15	15
20 kHz	11	11	9.5	10	10	10	13	15	15
30 kHz	10	11	11	10	11	11	13	15	15
50 kHz	10	12	10	10	11	11	13	15	15
70 kHz	10	13	15	16	19	19	18	21	21
100 kHz	12	14	16	16	20	20	26	32	32
200 kHz	20	25	-	-	-	-	-	-	-
300 kHz	22	33	-	-	-	-	-	-	-
500 kHz	35	39	-	-	-	-	-	-	-
700 kHz	36	51	-	-	-	-	-	-	-
800 kHz	40	-	-	-	-	-	-	-	-
1 MHz	39	-	-	-	-	-	-	-	-

Measured Quantity Instrument or Gauge	Range	Expanded Measurement Uncertainty (k = 2)	Remarks

Fluke 5790 Series AC Measurement Standard Calibration - AC Voltage (Continued)

The table below shows the Calibration and Measurement Capability (CMC) for the calibration of Fluke 5790 Series AC Measurement Standards. The CMCs are in µV/V of the nominal voltage and relate to the AC voltage function of these instruments.

Frequency	700 V range				1000 V range		
	200 V	300 V	500 V	600 V	600 V	800 V	1000 V
10 Hz	23	24	27	22	22	24	25
20 Hz	16	15	15	15	15	15	15
30 Hz	16	15	15	15	15	15	15
40 Hz	16	14	14	15	15	15	15
55 Hz	16	14	14	15	15	15	14
60 Hz	16	14	14	15	15	15	14
120 Hz	16	14	15	15	15	15	14
300 Hz	15	14	15	15	15	15	14
400 Hz	14	15	15	15	15	15	14
500 Hz	15	15	15	15	15	15	14
1 kHz	15	15	15	15	15	15	14
10 kHz	16	15	15	15	15	15	14
20 kHz	16	17	16	15	15	15	15
30 kHz	16	17	17	20	20	17	16
50 kHz	18	20	21	23	23	19	22
70 kHz	24	29	28	28	28	26	28
100 kHz	34	45	41	45	45	54	50

Measured Quantity Instrument or Gauge	Range	Expanded Measurement Uncertainty (k = 2)	Remarks

MEASUREMENT CAPABILITIES FOR THE CALIBRATION OF FLUKE 792A AC/DC TRANSFER STANDARDS

The table below shows the Calibration and Measurement Capability (CMC) for the calibration of Fluke 792A AC/DC transfer standards.

The CMCs are in µV/V of the nominal voltage and relate to the measured AC/DC voltage difference of these instruments. . For intermediate frequencies the CMC is that of the greater of the two adjacent frequencies.

Frequency	22 mV range				220 mV range			700 mV range						2.2 V range			7 V range					
	2 mV	6 mV	10 mV	20 mV	60 mV	100 mV	200 mV	200 mV	300 mV	400 mV	500 mV	600 mV	700 mV	600 mV	1 V	2 V	2 V	3 V	4 V	5 V	6 V	7 V
10 Hz	240	110	90	66	40	27	20	17	30	18	18	20	16	14	6.8	8.0	14	6.3	21	13	8.6	6.1
20 Hz	250	90	70	48	28	16	12	13	13	13	13	12	13	13	6.6	5.9	8.0	5.0	19	3.9	4.9	5.6
30 Hz	370	90	70	48	27	15	12	15	15	15	13	12	13	13	5.1	5.4	8.1	5.6	6.7	4.4	3.6	4.5
40 Hz	270	90	70	48	27	14	12	14	13	13	13	12	13	13	4.2	5.1	8.3	5.6	6.4	3.5	3.3	4.3
55 Hz	260	80	70	48	27	14	12	13	13	13	13	12	13	13	4.2	7.3	7.8	5.0	6.7	4.1	3.4	4.3
60 Hz	270	80	70	48	28	14	12	13	13	13	13	12	13	13	4.3	5.4	7.9	4.3	7.0	4.1	3.5	4.4
120 Hz	240	80	70	48	28	15	12	13	13	13	13	12	13	13	4.8	4.7	6.9	6.1	4.9	3.7	3.4	4.3
300 Hz	240	77	70	48	28	14	12	13	13	13	13	12	13	13	4.6	5.1	7.2	4.5	3.2	4.1	3.3	4.2
400 Hz	250	80	70	44	27	9.6	8.0	9.3	10	9.2	8.5	5.4	6.2	6.3	4.2	4.2	7.1	5.6	3.2	3.4	3.9	4.7
500 Hz	350	80	80	44	27	11	8.0	9.3	9.3	9.2	8.5	5.7	6.5	6.3	4.2	4.2	6.7	5.2	3.8	3.5	3.2	4.2
1 kHz	230	80	70	44	27	15	8.0	12	11	13	8.5	6.4	7.2	6.3	4.2	4.4	7.2	4.7	4.5	3.4	3.3	4.3
10 kHz	260	50	70	56	27	11	8.0	12	12	9.8	9.4	8.8	9.4	14	6.9	6.8	6.7	5.3	8.5	8.8	4.1	4.2
20 kHz	240	70	90	44	27	18	8.0	10	9.3	10	8.5	6.2	6.9	11	6.3	6.3	6.7	7.0	6.5	5.3	5.3	4.3
30 kHz	250	69	70	41	29	12	8.3	12	14	9.2	8.5	6.2	6.9	11	6.4	6.3	6.8	6.5	6.4	5.4	5.3	4.3
50 kHz	360	70	80	40	27	13	8.1	11	9.8	9.4	8.9	6.6	7.3	11	6.4	6.4	6.7	6.7	8.1	6.1	7.9	5.0
70 kHz	250	70	70	51	30	19	8.5	14	11	14	9.4	8.0	8.6	16	8.8	7.3	7.8	8.7	8.4	7.2	9.5	7.3
100 kHz	240	100	120	44	46	13	11	13	12	12	9.4	10	9.4	13	7.5	7.4	8.4	8.3	10	10	11	8.1
200 kHz	270	90	100	58	49	24	23	22	21	21	20	21	21	21	9	9	9.7	11	15	13	12	11
300 kHz	240	90	100	63	44	27	23	23	23	21	22	24	24	22	14	13	14	14	15	16	14	14
500 kHz	250	120	140	110	80	43	37	37	37	35	36	43	43	35	18	17	17	23	22	21	21	17
700 kHz	350	150	160	120	84	50	54	49	54	49	49	58	58	45	21	18	22	28	25	22	24	17
800 kHz	320	170	170	140	97	55	58	49	54	54	56	73	66	45	24	20	25	25	25	23	25	17
1 MHz	430	220	190	150	125	75	75	59	66	66	89	91	85	50	28	23	31	28	28	28	28	28

Frequency	22 V range				70 V range						220 V range			1 kV range					
	6 V	8 V	10 V	20 V	20 V	30 V	40 V	50 V	60 V	70 V	60 V	100 V	200 V	200 V	300 V	500 V	600 V	800 V	1000 V
10 Hz	18	14	10	7.8	16	23	15	11	13	13	15	17	13	35	20	21	18	20	20
20 Hz	5.3	6.1	5.7	7.7	9.4	11	9.1	8.5	8.5	8.5	12	13	13	15	13	13	13	13	13
30 Hz	5.8	6.3	4.9	7.7	7.1	7.9	10	8.5	8.5	8.5	15	13	13	15	13	13	13	13	13
40 Hz	4.7	4.7	5.3	7.7	7.1	9.0	8.8	8.5	8.5	8.5	14	13	13	15	12	12	13	13	13
55 Hz	5.7	5.6	6.4	7.7	9.4	11	8.8	8.5	8.5	8.5	12	13	13	15	12	12	13	13	12
60 Hz	4.9	4.8	5.4	6.8	7.8	11	9.3	8.6	8.5	8.5	13	13	13	15	12	12	13	13	12
120 Hz	4.7	4.6	4.7	6.8	7.8	7.7	10	8.5	8.5	8.5	12	13	13	15	12	13	13	13	12
300 Hz	4.6	4.5	4.9	6.8	7.8	7.7	10	8.5	8.5	8.5	12	13	13	14	12	13	13	13	12
400 Hz	4.9	4.3	4.7	6.8	7.8	9.5	9.7	8.8	7.7	7.7	15	13	12	13	13	13	13	13	12
500 Hz	5.3	5.0	4.7	6.8	7.8	8.6	13	7.7	7.7	7.7	12	13	12	13	13	13	13	13	12
1 kHz	7.2	4.8	4.7	6.8	7.8	8.5	8.7	7.7	7.7	7.7	11	13	12	14	13	13	13	13	12
10 kHz	5.5	4.6	5.0	6.8	7.8	8.7	7.4	8.2	8.9	7.9	11	13	13	14	13	13	13	13	12
20 kHz	4.6	4.7	4.7	6.8	7.8	7.7	7.3	7.7	7.9	7.9	11	13	13	15	14	14	13	13	13
30 kHz	4.7	4.7	5.2	4.3	5.8	7.7	9.1	7.7	8.7	8.7	11	13	13	14	14	14	16	14	14
50 kHz	4.5	4.5	6.1	4.6	6.0	8.5	7.9	7.7	8.3	8.3	12	13	13	15	16	17	20	16	18
70 kHz	7.0	6.1	7.2	5.3	7.1	10	13	14	15	15	16	19	19	22	24	24	23	22	23
100 kHz	6.3	6.0	11	8.2	8.6	11	14	14	16	16	16	31	31	33	38	38	40	45	43
200 kHz	12	8.5	17	12	14	20	-	-	-	-	-	-	-	-	-	-	-	-	-
300 kHz	11	11	22	13	15	28	-	-	-	-	-	-	-	-	-	-	-	-	-
500 kHz	14	16	19	22	30	31	-	-	-	-	-	-	-	-	-	-	-	-	-
700 kHz	21	20	24	23	36	45	-	-	-	-	-	-	-	-	-	-	-	-	-
800 kHz	21	18	20	23	40	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1 MHz	25	20	20	29	40	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Measured Quantity Instrument or Gauge	Range	Expanded Measurement Uncertainty (k = 2)	Remarks

AC VOLTAGE MEASUREMENTS USING FLUKE 792A AC/DC TRANSFER STANDARD

The CMCs shown relate to voltages and frequencies that lie within ± 10 % of the specified values. For intermediate frequencies the CMC is that of the greater of the two adjacent frequencies.

Voltage	*Calibration and Measurement Capability in The CMCs are in µV/V of the nominal voltage expressed as an Expanded Uncertainty (k = 2)*														
	22 mV Range				*220 mV Range*			*700 mV Range*		*2 V Range*		*7 V Range*		*22 V Range*	
	2 mV	**6 mV**	**10 mV**	**20 mV**	**60 mV**	**100 mV**	**200 mV**	**400 mV**	**600 mV**	**1 V**	**2 V**	**4 V**	**6 V**	**10 V**	**20 V**
10 Hz	500	270	120	100	48	35	31	22	24	22	23	30	23	24	23
20 Hz	530	260	85	66	34	22	20	16	14	14	13	23	14	14	15
40 Hz	530	260	85	66	33	20	18	16	14	8	9	11	9	8	10
55 Hz	500	260	85	66	33	20	18	16	14	8	10	11	9	9	10
300 Hz	520	260	85	66	32	20	18	16	14	8	9	9	8	8	9
500 Hz	520	260	93	63	32	18	15	12	9	8	8	9	8	8	9
1 kHz	510	260	85	63	32	21	15	15	10	8	8	9	8	8	9
10 kHz	520	260	85	71	32	18	15	13	10	10	9	10	9	8	9
20 kHz	500	260	93	63	32	23	15	13	9	10	9	10	9	8	9
30 kHz	530	260	77	61	33	19	15	12	9	10	9	10	9	8	7
50 kHz	500	260	93	61	32	20	15	13	10	10	10	11	11	9	8
70 kHz	510	260	85	68	34	24	16	13	11	10	10	12	12	10	8
100 kHz	500	300	120	63	50	20	17	15	12	10	10	13	14	13	10
200 kHz	530	270	111	73	53	28	27	23	23	12	12	16	15	19	15
300 kHz	510	260	111	80	50	35	31	23	26	16	15	18	17	24	15
500 kHz	500	290	150	121	90	51	43	40	45	24	23	27	27	21	24
700 kHz	570	310	170	130	100	60	63	61	68	27	24	30	29	27	26
1 MHz	810	650	200	170	140	90	110	85	106	37	32	37	37	24	32

Voltage	*Calibration and Measurement Capability in The CMCs are in µV/V of the nominal voltage expressed as an Expanded Uncertainty (k = 2)*					
	70 V Range		*220 V Range*		*1 kV Range*	
	40 V	*60 V*	**100 V**	**200 V**	*600 V*	*1 kV*
10 Hz	27	26	28	26	30	30
20 Hz	16	16	18	18	18	18
40 Hz	12	11	15	15	15	15
55 Hz	12	11	15	15	15	14
300 Hz	13	11	15	15	15	14
500 Hz	15	11	15	14	15	14
1 kHz	12	11	15	14	15	14
10 kHz	10	11	15	15	15	14
20 kHz	11	11	15	15	15	15
30 kHz	12	11	15	15	18	16
50 kHz	11	11	18	18	24	22
70 kHz	15	17	23	23	26	26
100 kHz	16	18	38	38	46	48

Measured Quantity Instrument or Gauge	Range	Expanded Measurement Uncertainty (k = 2)	Remarks

AC VOLTAGE MEASUREMENTS USING FLUKE 5790 Series AC MEASUREMENT STANDARD.

The CMCs shown relate to voltages and frequencies that lie within ± 10 % of the specified values. For intermediate frequencies the CMC will be increased. The CMCs are for the calibration of AC Voltage Sources and for AC Voltage measuring instruments simultaneously connected to the AC Voltage Source.

Range	2.2 mV	7 mV	22 mV		70 mV	220 mV		700 mV
Amplitude	2 mV	6 mV	10 mV	20 mV	60 mV	100 mV	200 mV	600 mV
10 Hz	1500	430	170	150	60	40	40	30
20 Hz	1500	420	170	140	51	27	23	24
40 Hz	1500	400	170	140	49	24	22	23
500 Hz	1500	400	170	140	49	23	20	19
1 kHz	1500	400	160	140	49	25	20	19
10 kHz	1500	400	160	140	49	23	20	24
20 kHz	1500	400	170	140	49	27	20	23
50 kHz	1500	400	170	140	130	24	20	23
100 kHz	1500	420	180	140	140	26	23	24
200 kHz	1500	440	170	150	130	35	35	33
500 kHz	1500	450	210	190	150	90	80	60
1 MHz	1600	504	280	240	610	260	170	150

Range	2.2 V		7 V	22 V		70 V	220 V		700 V	1 kV
Amplitude	1 V	2 V	6 V	10 V	20 V	60 V	100 V	200 V	600 V	1 kV
10 Hz	30	30	30	30	30	30	40	40	40	70
20 Hz	21	18	27	29	29	28	30	30	30	30
40 Hz	18	18	27	27	28	28	30	30	30	30
500 Hz	18	18	27	27	27	28	30	29	30	29
1 kHz	18	18	27	27	27	28	30	29	30	29
10 kHz	19	19	27	27	27	28	30	30	30	29
20 kHz	19	19	27	27	27	28	30	30	30	30
50 kHz	19	19	27	27	27	28	30	30	35	34
100 kHz	20	20	30	29	28	33	42	42	60	70
200 kHz	26	24	35	37	35					
500 kHz	50	50	90	70	65					
1 MHz	140	140	260	160	150					

Measured Quantity Instrument or Gauge	Range	Expanded Measurement Uncertainty (k = 2)	Remarks

AC/DC TRANSFER CURRENT DIFFERENCE

Calibrations may be performed at intermediate frequencies with the larger of the adjacent uncertainties

Frequency kHz	AC/DC Current Transfer Difference μA/A) for A40B shunts without detector																	
	1 mA	5 mA	10 mA	20 mA	30 mA	50 mA	100 mA	200 mA	300 mA	500 mA	1 A	2 A	3 A	5 A	10 A	20 A	50 A	100 A
0.01	34	29	10	10	19	10	10	12	22	10	10	11	23	16	22	28	32	42
1	34	29	9	9	19	10	10	12	23	9	10	10	23	16	23	28	32	42
10	34	30	11	11	19	11	10	12	23	9	10	10	23	17	23	28	32	42
30	37	30	11	12	19	12	12	13	22	11	12	13	24	18	33	35	54	83
70	39	28	16	18	19	13	13	15	22	12	14	20	33	30	63	75	104	140
100	37	29	19	20	21	16	13	15	22	13	16	25	35	33	79	100	140	170

Frequency kHz	AC/DC Current Transfer Difference (μA/A) for shunts with their own detector (Fluke 792A, 5790 Series or thermal converter)																	
	1 mA	5 mA	10 mA	20 mA	30 mA	50 mA	100 mA	200 mA	300 mA	500 mA	1 A	2 A	3 A	5 A	10 A	20 A	50 A	100 A
0.01	37	29	18	18	22	18	18	19	24	18	18	19	26	22	27	32	35	45
1	35	29	12	12	19	13	13	14	22	12	13	13	24	18	24	29	33	43
10	36	28	16	16	21	16	15	16	23	15	15	16	25	20	26	31	34	44
30	39	29	17	18	22	18	18	19	24	17	18	19	27	23	36	37	55	84
70	41	30	21	22	23	19	19	20	24	18	19	24	36	33	64	76	110	140
100	39	31	23	24	25	21	19	20	25	19	21	28	38	35	80	100	140	170

Frequency	Resistance at full rated current (μA/A)													
	1 mA	10 mA	20 mA	50 mA	100 mA	200 mA	500 mA	1 A	2 A	5 A	10 A	20 A	50 A	100 A
DC	6.9	6.8	6.6	7.8	7.9	8.2	8.5	11.0	8.5	13.0	12.0	9.9	19.0	20.0

Measured Quantity Instrument or Gauge	Range	Expanded Measurement Uncertainty (k = 2)	Remarks
PHASE ANGLE			
Zero crossing phase meter			
Voltage/voltage	0 °, 60 ° and 90 °		
3 V : 1 V	*60 Hz*	0.11 °	
	400 Hz	0.11 °	
	1 kHz	0.13 °	
	5 kHz	0.33 °	
	10 kHz	0.59 °	
Voltage/current			
33 V : 300 mA	0 °		
	65 Hz	0.082 °	
33 V : 2 A	0 °		
	65 Hz	0.12 °	
33 V : 5 A	0 °		
	65 Hz	0.23 °	
	400 Hz	0.36 °	

Measured Quantity Instrument or Gauge	Range	Expanded Measurement Uncertainty (k = 2)	Remarks
MEASUREMENT CAPABILITIES FOR THE CALIBRATION OF OSCILLOSCOPE CALIBRATORS			
Voltage Amplitude	DC Voltage		These voltages can be measured into either 50Ω upto 5.56 V or 1 MΩ up to 190 V
	1 mV to 2 mV	940 µV/V	
	2 mV to 6 mV	470 µV/V	
	6 mV to 190 V	52 µV/V	
	AC Squarewave		
	10 *Hz to 100 kHz*		
	1 mV to 2 mV	0.33 %	
	2 mV to 5 mV	0.18 %	
	5 mV to 19 mV	0.080 %	
	19 mV to 190 V	0.039 %	
	AC Sinewave		Measurement of incident Voltage into Z_0. BNC, SMA or PC3.5 mm
	Peak to peak value		
	10 mV to 5.56 V		
	10 Hz to 100 kHz	0.23 %	Into 50 Ω or 1 MΩ
	100 kHz to 200 MHz	0.97 %	Into 50 Ω
	200 MHz to 600 MHz	1.3 %	Into 50 Ω
	600 MHz to 2.02 GHz	1.3 %	Into 50 Ω
	2.02 GHz to 4 GHz	2.0 %	Into 50 Ω
	4 GHz to 6.4 GHz	2.3 %	
Current Amplitude	DC Current		
	0.1 mA to 100 mA	0.023 %	
	AC Squarewave		
	1 kHz		
	0.1 mA	0.075 %	
	1 mA to 10 mA	0.034 %	
Risetime			
	25 ps nom 500 mV	3.0 ps	Into 50 Ω
	70 ps 60 mV to 2 V	10 ps	Into 50 Ω
	150 ps or greater, 5 mV to 3 V		
	10 kHz to 2 MHz	7 ps	Into 50 Ω
	500 ps or greater, 5 mV to 3 V		
	10 kHz to 2 MHz		
	5 mV to 50 mV	18 ps	Into 50 Ω
	50 mV to 3 V	9 ps	Into 50 Ω
	Transition Amplitude		
	25 ps to 100 ns, 5 mV to 3 V	0.80 %	Into 50 Ω or 1 MΩ
Frequency and Markers	*50 mV to 3 V:*		
	0.02 Hz to 10 Hz	0.060 µHz/Hz	
	10 Hz to 1 MHz	0.030 µHz/Hz	
	1 MHz to 4.2 GHz	0.010 µHz/Hz	

Measured Quantity Instrument or Gauge	Range	Expanded Measurement Uncertainty (k = 2)	Remarks
Input Characteristics	Resistance 10 Ω to 12 MΩ	0.046 %	
	Capacitance 20 pF to 100 pF at 100 kHz	1.1 %	
Pulse Width	1 ns to 100 ns at 1 V	0.076 ns	

Measured Quantity Instrument or Gauge	Range	Expanded Measurement Uncertainty (k = 2)	Remarks

MEASUREMENT CAPABILITIES FOR THE CALIBRATION OF FLUKE ELECTRICAL POWER STANDARDS

Voltage Amplitude

Calibration and Measurement Capability in µV/V expressed as an Expanded Uncertainty (k = 2), from 10 % to 100 % of the stated voltage range. CMCs for intermediate frequencies may be provided upon request and will lie between the uncertainties at the adjacent points. The 2.4 V range is only accessible to drive the Fluke 52120A Transconductance Amplifier

Voltage range:	0.8 V	1.5 V	2.4 V	10 V	23 V	45 V	90 V		180 V	360 V	1008 V
Frequency							7 V	90 V			
DC	33	32	32	32	32	31	31	31	31	32	32
16 Hz	26	25	28	23	23	21	54	23	26	28	28
40 Hz	25	25	24	22	22	20	54	22	22	24	24
50 Hz	25	25	24	22	23	21	54	22	22	24	24
60 Hz	25	25	24	22	22	20	54	22	22	24	24
120 Hz	25	25	24	22	22	20	54	22	22	24	24
180 Hz	25	25	24	22	22	20	54	22	22	24	24
450 Hz	23	22	24	22	22	20	54	22	22	24	24
850 Hz	26	25	27	25	25	23	55	25	25	27	27
1.2 kHz	36	35	35	34	34	33	58	34	34	35	35
1.8 kHz	36	35	35	34	34	33	68	34	34	35	35
2.4 kHz	36	35	35	34	34	33	68	34	34	35	35
3.0 kHz	36	35	35	34	34	33	79	34	34	35	35
3.6 kHz	36	35	35	34	34	33	79	34	34	35	35
4.2 kHz	36	35	35	34	34	33	79	34	34	35	35
4.8 kHz	36	35	35	34	34	33	79	34	34	35	35
5.4 kHz	36	35	35	34	34	33	79	34	34	35	35
6.0 kHz	36	35	35	34	34	33	79	34	34	35	35

Measured Quantity Instrument or Gauge	Range	Expanded Measurement Uncertainty (k = 2)	Remarks

Voltage Phase

Calibration and Measurement Capability in millidegrees expressed as an Expanded Uncertainty (k = 2), from 10 % to 100 % of the stated voltage range The CMCs apply to the phase difference between the voltage channel and the master timing signal. Uncertainties for intermediate frequencies may be provided upon request and will lie between the uncertainties at the adjacent points. The 2.4 V range is only accessible to drive the Fluke 52120A Transconductance Amplifier.

Voltage range:	0.8 V	1.5 V	2.4 V	10 V	23 V	45 V	90 V Range	
							7 V	90 V
Frequency								
16 Hz	0.80	1.0	0.7	1.4	1.4	1.4	3.4	1.4
40 Hz	1.8	1.9	0.7	2.2	2.1	2.1	3.7	2.1
50 Hz	2.3	2.3	0.8	2.6	2.5	2.5	3.9	2.5
60 Hz	2.7	2.8	1.1	3.0	2.9	2.9	4.2	2.9
120 Hz	5.4	5.4	1.3	5.7	5.7	5.7	6.3	5.7
180 Hz	8.0	8.2	2.1	8.3	8.3	8.2	8.7	8.2
450 Hz	20	20	3.6	21	21	21	21	21
850 Hz	38	38	6.4	39	38	38	39	38
1.2 kHz	54	54	9.2	55	54	54	54	54
1.8 kHz	80	80	14	82	81	81	81	81
2.4 kHz	110	110	18	110	110	110	110	110
3.0 kHz	140	140	22	140	140	140	140	140
3.6 kHz	160	160	26	170	170	170	170	170
4.2 kHz	190	190	31	190	190	190	190	190
4.8 kHz	220	220	35	220	220	220	220	220
5.4 kHz	240	240	40	250	250	250	250	250
6.0 kHz	270	270	44	280	270	270	270	270

Voltage range:	180 V	360 V	1008 V
Frequency			
16 Hz	1.4	1.4	1.5
40 Hz	2.1	2.2	2.2
50 Hz	2.5	2.6	2.6
60 Hz	2.9	3.0	3.0
120 Hz	5.7	5.7	5.7
180 Hz	8.2	8.3	8.3
450 Hz	21	21	21
850 Hz	38	39	39
1.2 kHz	54	55	54
1.8 kHz	81	81	81
2.4 kHz	110	110	110
3.0 kHz	140	140	140
3.6 kHz	170	170	170
4.2 kHz	190	190	190
4.8 kHz	220	220	220
5.4 kHz	250	250	250
6.0 kHz	270	270	270

Measured Quantity Instrument or Gauge	Range	Expanded Measurement Uncertainty (k = 2)	Remarks

Current Amplitude

Calibration and Measurement Capability in µA/A expressed as an Expanded Uncertainty (k = 2), from 10 % to 100 % of the stated current range. CMCs for intermediate frequencies may be provided upon request and will lie between the uncertainties at the adjacent points.

Current range:	0.1 A	0.5 A	1 A	2 A	5 A	10 A		20 A	50 A	100 A
						0.5 A	10 A			
Frequency										
DC	26	27	27	26	28	42	28	28	27	33
16 Hz	27	27	27	27	32	45	34	34	34	38
40 Hz	27	27	27	27	32	45	34	34	34	38
50 Hz	27	27	27	27	32	45	34	34	34	38
60 Hz	27	27	27	27	32	45	34	34	34	38
120 Hz	27	27	27	27	32	78	35	41	50	61
180 Hz	27	27	27	27	32	78	35	41	50	61
450 Hz	25	25	25	24	30	46	34	40	48	60
850 Hz	27	27	27	27	32	47	35	41	50	61
1.2 kHz	28	29	29	28	34	48	37	42	50	62
1.8 kHz	28	29	29	28	34	48	37	51	59	80
2.4 kHz	28	29	29	28	34	48	37	51	59	80
3.0 kHz	28	29	29	28	34	48	37	51	59	80
3.6 kHz	28	29	29	28	34	48	37	51	59	80
4.2 kHz	28	29	29	28	34	48	37	51	59	80
4.8 kHz	28	29	29	28	34	48	37	51	59	80
5.4 kHz	28	29	29	28	34	48	37	51	59	80
6.0 kHz	28	29	29	28	34	48	37	51	59	80

Current Phase

Calibration and Measurement Capability in millidegrees expressed as an Expanded Uncertainty (k = 2), from 10 % to 100 % of the stated current range. The CMCs apply to the phase difference between the current channel and the master timing signal. CMCs for intermediate frequencies may be provided upon request and will lie between the uncertainties at the adjacent points. All uncertainties in m°

Current Range	0.1 A	0.5 A	1 A	2 A	5 A	10 A		20 A	50 A	100 A
						0.5 A	10 A			
Frequency										
16 Hz	1.0	1.0	1.0	1.0	1.0	3.6	1.0	1.0	1.0	1.0
40 Hz	1.9	1.9	1.9	1.9	1.9	3.9	1.9	1.9	1.9	1.9
50 Hz	2.4	2.4	2.4	2.4	2.4	4.1	2.4	2.4	2.4	2.4
60 Hz	2.8	2.8	2.8	2.8	2.8	4.3	2.8	2.8	2.8	2.8
120 Hz	5.4	5.4	5.4	5.4	5.4	6.9	5.4	5.4	5.4	5.4
180 Hz	8.1	8.1	8.0	8.0	8.1	9.2	8.1	8.1	8.1	8.1
450 Hz	20	20	20	20	20	21	20	21	21	21
850 Hz	38	38	38	38	38	38	38	38	38	38
1.2 kHz	54	54	54	54	54	54	54	54	54	54
1.8 kHz	80	80	80	80	80	81	80	81	81	81
2.4 kHz	110	110	110	110	110	110	110	110	110	110
3.0 kHz	140	140	140	140	140	140	140	140	140	140
3.6 kHz	160	160	160	160	160	160	160	170	170	170
4.2 kHz	190	190	190	190	190	190	190	190	190	190
4.8 kHz	220	220	220	220	220	220	220	220	220	220
5.4 kHz	240	240	240	240	240	240	240	250	250	250
6.0 kHz	270	270	270	270	270	270	270	270	270	270

Measured Quantity Instrument or Gauge	Range	Expanded Measurement Uncertainty (k = 2)	Remarks

Channel to channel phase difference

Calibration and Measurement Capability in millidegrees expressed as an Expanded Uncertainty (k = 2) from 10 % to 100 % of the stated range. CMCs for intermediate frequencies may be provided upon request and will lie between the uncertainties at the adjacent points.

Frequency	Voltage Channel Relative to any other Voltage Channel	Voltage Channel Relative to any Current Channel (Percent of Range) 10 %	100 %	Voltage Channel to Voltage Channel using the same Measurement System Range
16 Hz	1.3	4.3	1.1	1.3
40 Hz	1.4	4.3	1.2	1.3
50 Hz	1.4	4.4	1.2	1.3
60 Hz	1.4	4.4	1.2	1.3
120 Hz	1.9	5.4	1.7	1.3
180 Hz	2.8	5.5	2.3	1.7
450 Hz	5.7	6.3	4.9	1.7
850 Hz	11	10	8.9	1.7
1.2 kHz	16	14	14	5.1
1.8 kHz	23	20	20	5.1
2.4 kHz	30	26	26	5.1
3.0 kHz	37	32	32	5.1
3.6 kHz	45	38	38	5.1
4.2 kHz	52	44	44	6.5
4.8 kHz	60	50	50	9.4
5.4 kHz	67	57	57	9.4
6.0 kHz	74	63	63	9.4

DC and AC POWER (simulated)
Limiting voltage 1008 V
Limiting current 120 A

DC and 16 Hz to 6 kHz:
0 W to 100.8 kW
Power factor zero to unity, capacitive and inductive, single phase only

The RSS combination of the voltage, current and phase (expressed in terms of power factor) uncertainties as stated in calibration of Fluke Electrical Pwer Standards. At power factors approaching zero, the uncertainties will be stated in absolute terms.

Worked example of key values given in table below.

Frequency	Voltage	Current	Equivalent Powe	Uncertainnty µW/W PF 1.0 (0°)	PF 0.5 (60°)
50 Hz and 60 Hz	115 V	0.250 A	29 W	35	51
	115 V	0.375 A	43 W	35	51
	115 V	1.5 A	173 W	35	51
	115 V	3.0 A	345 W	39	54
	115 V	15.0 A	1725 W	41	55
	115 V	30.0 A	3 450 W	41	55
	115 V	50.0 A	5 750 W	41	55
	230 V	0.250 A	58 W	36	51
	230 V	0.375 A	86 W	35	51
	230 V	1.5 A	345 W	35	51
	230 V	3.0 A	690 W	39	54
	230 V	15.0 A	3 450 W	41	55
	230 V	30.0 A	6 900 W	41	55
	230 V	50.0 A	11 500 W	41	55

Measured Quantity Instrument or Gauge	Range	Expanded Measurement Uncertainty (k = 2)	Remarks

Power standards (continued)

Dips and Swells

Frequency	Range	Voltage	Interval	Uncertainty µV/V
50 Hz and 60 Hz	90 V	7 V	0.5 s	190
		70 V	0.5 s	35
		90 V	0.5 s	34
		7 V	60.0 s	26
		70 V	60.0 s	26
		90 V	60.0 s	26
	180 V	12 V	0.5 s	290
		115 V	0.5 s	38
		180 V	0.5 s	38
		12 V	60.0 s	42
		115 V	60.0 s	22
		180 V	60.0 s	22
	360 V	23 V	0.5 s	290
		23 V	0.5 s	32
		360 V	0.5 s	32
		23 V	60.0 s	38
		23 V	60.0 s	24
		360 V	60.0 s	24
	10 A	0.5 A	0.5 s	340
		5.0 A	0.5 s	45
		10.0 A	0.5 s	38
		0.5 A	60.0 s	220
		5.0 A	60.0 s	220
		10.0 A	60.0 s	35

Measured Quantity Instrument or Gauge	Range	Expanded Measurement Uncertainty (k = 2)	Remarks

MEASUREMENT CAPABILITIES FOR THE CALIBRATION OF FLUKE 52120A TRANSCONDUCTANCE AMPLIFIERS

Calibration and Measurement Capability expressed as an Expanded Uncertainty (k = 2) in stand-alone mode for both voltage inputs (V_{IN}) and current inputs (I_{IN}), expressed as μA/A of output current.

Frequency	2 A range				20 A range				120 A range			
	V_{IN}			I_{IN}	V_{IN}			I_{IN}	V_{IN}			I_{IN}
	0.4 A	1.0 A	2.0 A	2.0 A	4 A	10 A	20 A	20 A	20 A	60 A	120 A	120 A
DC	51	34	28	30	73	73	50	51	37	37	33	37
10 Hz	160	110	100	99	160	91	82	83	160	84	86	73
20 Hz	160	110	100	99	160	90	80	81	160	84	86	73
40 Hz	160	110	100	99	160	90	80	81	160	84	86	73
50 Hz	160	110	100	99	160	90	80	81	160	84	86	73
60 Hz	160	110	100	99	160	90	80	81	160	84	86	73
120 Hz	160	110	100	99	160	90	80	81	160	84	86	73
180 Hz	160	110	100	99	160	90	80	81	160	84	86	73
450 Hz	160	110	100	99	160	90	80	81	160	84	86	73
850 Hz	160	110	100	99	160	90	80	81	160	84	86	73
1.0 kHz	160	110	100	99	160	90	80	81	160	84	86	73
1.2 kHz	210	470	480	480	490	200	190	190	210	200	210	200
1.8 kHz	210	470	480	480	490	200	190	190	210	200	210	200
2.4 kHz	210	470	480	480	490	200	190	190	210	200	210	200
3.0 kHz	210	480	490	490	490	200	190	190	210	200	210	200
3.6 kHz	210	480	490	490	490	200	200	200	210	220	220	210
4.2 kHz	210	480	490	490	490	200	200	200	210	220	220	210
4.8 kHz	270	480	490	490	490	200	200	200	230	220	220	210
5.4 kHz	270	480	500	500	490	200	200	200	250	240	240	230
6.0 kHz	290	830	830	830	490	200	210	210	290	260	270	260
8.0 kHz	750	1100	1100	1100	500	830	840	840	750	740	730	740
10.0 kHz	920	1500	1500	1500	1500	840	840	840	770	750	760	760

Measured Quantity Instrument or Gauge	Range	Expanded Measurement Uncertainty (k = 2)	Remarks

MEASUREMENT CAPABILITIES FOR THE CALIBRATION OF FLUKE 52120A TRANSCONDUCTANCE AMPLIFIERS (continued**)**

Calibration and Measurement Capability expressed as an Expanded Uncertainty (k = 2) when under 6105A control, expressed as All values in µA/A of output current.

Frequency	2 A range			20 A range			120 A range		
	0.4 A	1 A	2 A	4 A	10 A	20 A	20 A	60 A	120 A
DC	60	48	44	78	78	78	51	52	51
16 Hz	79	59	49	65	65	56	79	77	72
40 Hz	79	59	49	65	65	56	79	77	72
50 Hz	79	59	49	65	65	56	79	77	72
60 Hz	79	59	49	65	65	56	79	77	72
120 Hz	79	59	49	65	65	56	79	77	72
180 Hz	79	59	49	65	65	56	79	77	72
450 Hz	79	59	49	65	65	56	79	77	72
850 Hz	79	59	49	65	65	56	79	77	72
1.0 kHz	79	59	49	65	65	56	79	77	72
1.2 kHz	79	59	49	71	71	63	95	92	89
1.8 kHz	79	59	49	71	71	63	95	92	89
2.4 kHz	79	59	49	71	71	63	95	92	89
3.0 kHz	90	72	64	71	71	63	95	92	89
3.6 kHz	92	76	68	74	74	67	97	95	92
4.2 kHz	92	76	68	74	74	67	97	95	92
4.8 kHz	92	76	68	74	74	67	97	95	92
5.4 kHz	98	83	76	74	74	67	97	95	92
6.0 kHz	98	83	76	78	78	70	97	95	92

Phase angle when under 6105A control	0° to 360° *16 Hz* *40 Hz* *50 Hz* *60 Hz* *120 Hz* *180 Hz* *450 Hz* *850 Hz* *1 000 Hz* *1 200 Hz* *1 800 Hz* *2 400 Hz* *3 000 Hz* *3 600 Hz* *4 200 Hz* *4 800 Hz* *5 400 Hz* *6 000 Hz*	 1.3 m° 1.8 m° 2.2 m° 2.5 m° 4.3 m° 6.4 m° 16 m° 30 m° 35 m° 58 m° 120 m° 130 m° 130 m° 150 m° 190 m° 220 m° 210 m° 240 m°	All ranges: 2 A, 20 A and 120 A

Measured Quantity Instrument or Gauge	Range	Expanded Measurement Uncertainty (k = 2)	Remarks

52120A PHASE: Uncertainty under 6105A Control as a system. Uncertainties in m°

Freq	2 Amp Range			20 Amp Range			20 Amp Range		
	0.4 A	1.0 A	2.0 A	4 A	10 A	20 A	20 A	60 A	120 A
16 Hz	1.2	1.2	1.2	1.2	1.2	1.2	1.3	1.3	1.3
40 Hz	1.7	1.7	1.7	1.7	1.7	1.7	1.8	1.8	1.8
50 Hz	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.2
60 Hz	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
120 Hz	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3
180 Hz	6.3	6.3	6.3	6.4	6.4	6.4	6.4	6.4	6.4
450 Hz	16	16	16	16	16	16	16	16	16
850 Hz	30	30	30	30	30	30	30	30	30
1 000 Hz	34	34	34	35	35	35	34	34	34
1 200 Hz	57	57	57	58	58	58	57	57	57
1 800 Hz	120	120	120	120	120	120	120	120	120
2 400 Hz	130	130	130	130	130	130	130	130	130
3 000 Hz	130	130	130	130	130	130	130	130	130
3 600 Hz	150	150	150	150	150	150	150	150	150
4 200 Hz	180	180	180	190	190	190	180	180	180
4 800 Hz	220	220	220	220	220	220	220	220	220
5 400 Hz	210	210	210	210	210	210	210	210	210
6 000 Hz	240	240	240	240	240	240	240	240	240

52120A PHASE: Uncertainty under 6105A Control as a separate system. Uncertainties in m°

Freq	2 Amp Range			20 Amp Range			20 Amp Range		
	0.4 A	1.0 A	2.0 A	4 A	10 A	20 A	20 A	60 A	120 A
16 Hz	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
40 Hz	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
50 Hz	3.1	3.1	3.1	3.1	3.1	3.1	3.2	3.2	3.2
60 Hz	3.7	3.7	3.7	3.7	3.7	3.7	3.8	3.8	3.8
120 Hz	6.9	6.9	6.9	7.0	7.0	7.0	6.9	6.9	6.9
180 Hz	11	11	11	11	11	11	11	11	11
450 Hz	26	26	26	27	27	27	27	27	27
850 Hz	48	48	48	49	49	49	48	48	48
1 000 Hz	57	57	57	58	58	58	57	57	57
1 200 Hz	78	78	78	79	79	79	78	78	78
1 800 Hz	140	140	140	140	140	140	140	140	140
2 400 Hz	170	170	170	170	170	170	170	170	170
3 000 Hz	190	190	190	190	190	190	190	190	190
3 600 Hz	230	230	230	230	230	230	230	230	230
4 200 Hz	260	260	260	270	270	270	260	260	260
4 800 Hz	310	310	310	310	310	310	310	310	310
5 400 Hz	330	330	330	330	330	330	330	330	330
6 000 Hz	360	360	360	360	360	360	360	360	360

Measured Quantity Instrument or Gauge	Range	Expanded Measurement Uncertainty (k = 2)	Remarks
CALIBRATION OF CURRENT COILS			
Effective current transfer ratio	*50 Hz to 400 Hz*		
	1 turn to 2 turn coils 10 turn to 25 turn coils 50 turn coils	0.097 % of ratio 0.088 % of ratio 0.097 % of ratio	1000 A Maximum simulated current
	50 turn coils	0..28 % of ratio	6000 A maximum simulated current
RF MEASUREMENTS			
RF POWER **Calibration Factor** 50 Ω Sensors	1 mW to 10 mW		
	100 kHz to 100 MHz 100 MHz to 1 GHz 1 GHz to 3 GHz 3 GHz to 8 GHz 8 GHz to 12 GHz 12 GHz to 18 GHz 18 GHz to 22 GHz 22 GHz to 26.5 GHz 26.5 GHz to 40 GHz	0.72 % 0.99 % 1.1 % 1.2 % 1.3 % 1.9 % 1.7 % 2.0 % 3.0 %	For power sensors with PC2.92 or PC3.5 connectors in good condition with a VSWR not exceeding 1.2. Larger VSWRs can be accommodated but at larger uncertainties. PC3.5 connectors are limited to 26.5 GHz.
	100 kHz to 100 MHz 100 MHz to 1 GHz 1 GHz to 3 GHz 3 GHz to 8 GHz 8 GHz to 12 GHz 12 GHz to 18 GHz	0.45 % 0.55 % 0.75 % 0.82 % 1.1 % 1.7 %	For power sensors with Type N connector in good condition with a VSWR not exceeding 1.2
VSWR	100 kHz to 100 MHz 100 MHz to 1 GHz 1 GHz to 3 GHz 3 GHz to 8 GHz 8 GHz to 12 GHz 12 GHz to 18 GHz 18 GHz to 22 GHz 22 GHz to 26.5 GHz 26.5 GHz to 40 GHz	0.015 0.021 0.025 0.026 0.033 0.032 0.041 0.044 0.055	For power sensors with PC2.92 or PC3.5 connectors in good condition with a VSWR not exceeding 1.2. Larger VSWRs can be accommodated but at larger uncertainties. PC3.5 connectors are limited to 26.5 GHz.

Measured Quantity Instrument or Gauge	Range	Expanded Measurement Uncertainty (k = 2)	Remarks
VSWR (continued)	100 kHz to 100 MHz 100 MHz to 1 GHz 1 GHz to 3 GHz 3 GHz to 8 GHz 8 GHz to 12 GHz 12 GHz to 18 GHz	0.014 0.015 0.018 0.018 0.022 0.024	For power sensors with Type N connectors in good condition with a VSWR not exceeding 1.2

Measurement capabilities for the calibration of Fluke 9600 series rf reference sources

Levelled sine wave output accuracy - 50 Ω system

Calibration and Measurement Capability in dB expressed as an Expanded Uncertainty (k = 2). For frequencies between those in the table the greater of the adjacent CMCs applies.

Frequency MHz	Level (dBm)														
	+ 24 to + 20	+ 20 to 0	0 to - 10	- 10 to - 20	- 20 to - 30	- 30 to - 40	- 40 to - 48	- 48 to - 58	- 58 to - 68	- 68 to - 78	- 78 to - 88	- 88 to - 98	- 98 to - 108	- 108 to - 118	- 118 to - 128
200 Hz	0.002 7	0.002 7	0.002 7	0.003 2	0.003 6	0.004 6	0.004 7								
1 kHz	0.002 5	0.002 5	0.002 5	0.002 7	0.003 2	0.004 2	0.004 4								
20 kHz	0.002 5	0.002 5	0.002 5	0.002 7	0.003 2	0.004 2	0.004 4	0.024							
75 kHz	0.002 5	0.002 5	0.002 5	0.003 2	0.003 2	0.004 2	0.004 4	0.024							
100 kHz	0.002 6	0.002 6	0.002 7	0.003 3	0.004 0	0.004 8	0.005 7	0.019	0.035	0.038	0.099	0.140	0.200	0.190	0.460
300 kHz	0.026	0.022	0.026	0.026	0.022	0.022	0.026	0.032	0.044	0.040	0.100	0.100	0.130	0.190	0.470
1 MHz	0.026	0.022	0.026	0.026	0.022	0.022	0.026	0.032	0.044	0.040	0.100	0.077	0.130	0.190	0.470
10 MHz	0.026	0.022	0.026	0.026	0.022	0.022	0.026	0.032	0.037	0.040	0.093	0.062	0.110	0.170	0.210
20 MHz	0.026	0.022	0.026	0.026	0.022	0.022	0.026	0.032	0.037	0.040	0.063	0.062	0.099	0.150	0.210
100 MHz	0.026	0.022	0.026	0.026	0.026	0.026	0.026	0.032	0.037	0.040	0.063	0.062	0.099	0.150	0.210
125 MHz	0.026	0.022	0.031	0.031	0.026	0.031	0.031	0.036	0.041	0.043	0.065	0.064	0.100	0.160	0.250
300 MHz		0.031	0.031	0.031	0.031	0.031	0.031	0.036	0.041	0.043	0.065	0.064	0.200	0.390	0.470
750 MHz		0.031	0.031	0.031	0.031	0.031	0.031	0.036	0.054	0.055	0.069	0.079	0.200	0.400	0.470
1 GHz		0.031	0.035	0.035	0.031	0.031	0.031	0.036	0.071	0.072	0.094	0.096	0.210	0.410	0.470
1.4 GHz		0.048	0.061	0.061	0.057	0.057	0.057	0.061	0.100	0.100	0.120	0.120	0.220	0.420	0.480
2 GHz		0.048	0.066	0.066	0.061	0.061	0.061	0.066	0.130	0.130	0.150	0.140	0.240	0.430	0.490
2.5 GHz		0.061	0.092	0.092	0.092	0.092	0.092	0.100	0.160	0.160	0.190	0.180	0.260	0.440	0.490
3 GHz		0.061	0.092	0.092	0.092	0.092	0.092	0.100	0.180	0.180	0.190	0.200	0.260	0.450	0.490
3.5 GHz		0.074	0.120	0.120	0.120	0.120	0.120	0.130	0.200	0.200	0.210	0.210	0.290	0.500	0.560
4 GHz		0.074	0.140	0.140	0.130	0.130	0.130	0.140	0.210	0.210	0.210	0.220			

Measured Quantity Instrument or Gauge	Range	Expanded Measurement Uncertainty (k = 2)	Remarks

Measurement capabilities for the calibration of Fluke 9600 series rf reference sources
(continued)

Levelled sine wave output accuracy - 75 Ω system

Calibration and Measurement Capability in dB expressed as an Expanded Uncertainty (k = 2). For frequencies between those in the table the greater of the adjacent CMCs applies.

Frequency	Level (dBm)														
	+ 18 to + 11	+11 to 0	0 to - 10	- 10 to - 20	- 20 to - 30	- 30 to - 40	- 40 to - 43	- 43 to - 55	- 55 to - 65	- 65 to - 75	- 75 to - 85	- 85 to - 95	- 95 to - 105	- 105 to - 115	- 115 to - 125
200 Hz	0.002 7	0.002 7	0.002 7	0.003 2	0.003 6	0.004 6	0.004 6								
1 kHz	0.002 5	0.002 5	0.002 5	0.002 7	0.003 2	0.004 2	0.004 6								
20 kHz	0.002 5	0.002 5	0.002 5	0.002 7	0.003 2	0.004 2	0.004 6	0.048	0.049						
75 kHz	0.002 6	0.002 6	0.002 6	0.003 3	0.003 3	0.004 3	0.004 6	0.048	0.049						
100 kHz	0.002 6	0.002 6	0.002 7	0.003 3	0.004 0	0.004 8	0.004 6	0.048	0.049	0.050	0.074	0.076	0.130	0.270	0.270
300 kHz	0.064	0.061	0.061	0.061	0.061	0.061	0.048	0.076	0.077	0.078	0.094	0.096	0.150	0.270	0.270
1 MHz	0.055	0.052	0.052	0.052	0.057	0.057	0.044	0.073	0.074	0.075	0.091	0.094	0.140	0.270	0.270
10 MHz	0.055	0.052	0.052	0.052	0.057	0.057	0.044	0.073	0.074	0.075	0.091	0.094	0.140	0.270	0.270
20 MHz	0.059	0.057	0.057	0.057	0.057	0.057	0.048	0.073	0.074	0.075	0.091	0.094	0.140	0.270	0.270
100 MHz	0.059	0.057	0.057	0.057	0.057	0.057	0.048	0.073	0.074	0.075	0.091	0.094	0.140	0.270	0.270
125 MHz	0.064	0.061	0.061	0.061	0.061	0.061	0.048	0.076	0.077	0.078	0.094	0.096	0.150	0.270	0.270
300 MHz	0.064	0.061	0.061	0.061	0.061	0.061	0.048	0.076	0.077	0.078	0.094	0.096	0.220	0.450	0.450
750 MHz	0.077	0.074	0.074	0.074	0.074	0.074	0.066	0.088	0.089	0.090	0.100	0.110	0.230	0.450	0.450
1 GHz	0.087	0.083	0.083	0.083	0.083	0.083	0.074	0.096	0.097	0.098	0.110	0.110	0.230	0.450	0.450
1.4 GHz	0.120	0.110	0.110	0.110	0.110	0.110	0.110	0.130	0.140	0.140	0.160	0.160	0.250	0.470	0.470
2 GHz		0.110	0.110	0.110	0.120	0.120	0.110	0.140	0.140	0.140	0.170	0.170	0.250	0.470	0.470
2.5 GHz		0.120	0.120	0.120	0.120	0.120	0.120	0.140	0.140	0.140	0.170	0.170	0.250	0.470	0.470
3 GHz		0.120	0.120	0.120	0.120	0.120	0.120	0.140	0.140	0.140	0.170	0.170	0.250	0.470	0.470

Note
The above uncertainties are applicable to the source amplitude measurement of the Fluke 96xxx series for the fundamental, specified harmonic frequencies and spurious signals using a dedicated measurement system.
Uncertainties may also be reported for differences in level reported as Attenuation, the attenuation uncertainty will be the combined uncertainties of the reference level and the uncertainty at the final level.

Measured Quantity Instrument or Gauge	Range	Expanded Measurement Uncertainty (k = 2)	Remarks

Measurement capabilities for the calibration of Fluke 9600 series rf reference sources
(continued)

50 Ω Level Sine Measurement Uncertainties Microwave Output 2.92 mm Front Panel Microwave Output

Calibration and Measurement Capability in dB expressed as an Expanded Uncertainty (k = 2). For frequencies between those in the table the greater of the adjacent CMCs applies.

Frequency	Level (dBm)										
	24 to 18	18 to 0	0 to - 10	- 10 to - 20	- 20 to - 30	- 30 to - 40	- 40 to - 50	- 50 to - 60	- 60 to - 70	- 70 to - 80	- 80 to - 90
200 Hz	0.004 9	0.004 9	0.004 9	0.005 1	0.005 3	0.006 0	0.006 0				
1 kHz	0.004 8	0.004 8	0.004 8	0.023 0	0.023 0	0.024 0	0.047 0				
20 kHz	0.004 8	0.004 8	0.004 8	0.023 0	0.023 0	0.024 0	0.047 0	0.110	0.130	0.160	0.160
100 kHz	0.004 8	0.004 8	0.004 8	0.024 0	0.024 0	0.024 0	0.047 0	0.080	0.082	0.160	0.160
300 kHz	0.094	0.087	0.094	0.095	0.096	0.097	0.110	0.110	0.120	0.130	0.130
1 MHz	0.094	0.087	0.094	0.095	0.096	0.097	0.110	0.110	0.120	0.130	0.130
10 MHz	0.094	0.087	0.094	0.095	0.096	0.097	0.110	0.110	0.120	0.130	0.130
20 MHz	0.094	0.087	0.094	0.095	0.096	0.097	0.110	0.110	0.120	0.130	0.130
100 MHz	0.094	0.087	0.094	0.095	0.096	0.097	0.110	0.120	0.120	0.130	0.130
125 MHz	0.099	0.092	0.098	0.099	0.100	0.100	0.120	0.120	0.120	0.130	0.130
300 MHz	0.099	0.092	0.098	0.099	0.100	0.100	0.120	0.120	0.120	0.130	0.130
750 MHz	0.110	0.095	0.110	0.110	0.110	0.110	0.120	0.120	0.120	0.130	0.130
1 GHz	0.110	0.095	0.110	0.110	0.110	0.110	0.120	0.120	0.120	0.130	0.130
1.4 GHz	0.120	0.110	0.120	0.120	0.120	0.120	0.130	0.130	0.130	0.140	0.140
2 GHz	0.120	0.110	0.120	0.120	0.120	0.120	0.130	0.130	0.130	0.140	0.150
2.5 GHz	0.120	0.110	0.120	0.120	0.120	0.120	0.130	0.130	0.130	0.140	0.150
3 GHz	0.120	0.110	0.120	0.120	0.120	0.120	0.130	0.130	0.130	0.140	0.150
3.5 GHz	0.120	0.110	0.120	0.120	0.120	0.120	0.130	0.130	0.130	0.140	0.150
4 GHz	0.120	0.110	0.120	0.120	0.120	0.120	0.130	0.130	0.130	0.140	0.150
5 GHz	0.120	0.110	0.120	0.120	0.120	0.120	0.130	0.130	0.130	0.140	0.150
6 GHz	0.120	0.110	0.120	0.120	0.120	0.130	0.150	0.150	0.140	0.150	0.150
7 GHZ	0.140	0.120	0.140	0.140	0.140	0.140	0.160	0.160	0.160	0.200	0.190
8 GHz	0.140	0.120	0.140	0.140	0.140	0.140	0.160	0.160	0.160	0.200	0.200
9 GHZ	0.140	0.120	0.140	0.140	0.140	0.140	0.160	0.170	0.170	0.200	0.200
10 GHz	0.140	0.120	0.140	0.150	0.150	0.150	0.170	0.170	0.170	0.200	0.200
11 GHZ	0.140	0.120	0.140	0.150	0.150	0.150	0.210	0.210	0.170	0.200	0.200
12 GHZ	0.140	0.120	0.140	0.160	0.160	0.160	0.210	0.210	0.180	0.200	0.200
13 GHz	0.190	0.180	0.200	0.210	0.210	0.210	0.250	0.250	0.220	0.240	0.200
14 GHz	0.190	0.180	0.200	0.210	0.210	0.210	0.250	0.250	0.280	0.240	0.240
16 GHz	0.190	0.180	0.200	0.210	0.220	0.220	0.280	0.280	0.300	0.270	0.270
17 GHz	0.200	0.180	0.200	0.220	0.220	0.220	0.280	0.280	0.300	0.270	0.270
18 GHz	0.200	0.180	0.210	0.220	0.220	0.220	0.460	0.320	0.300	0.300	0.300
19 GHz	0.200	0.180	0.210	0.220	0.230	0.230	0.460	0.320	0.310	0.310	0.300
20 GHz	0.200	0.180	0.210	0.230	0.230	0.230	0.460	0.330	0.540	0.370	0.370
21 GHz	0.200	0.180	0.210	0.250	0.250	0.250	0.460	0.330	0.540	0.370	0.370
22 GHz	0.200	0.180	0.210	0.250	0.250	0.250	0.460	0.330	0.540	0.370	0.370
23 GHz	0.210	0.190	0.220	0.260	0.260	0.260	0.460	0.330	0.540	0.370	0.370
24 GHz	0.210	0.190	0.220	0.270	0.270	0.270	0.460	0.440	0.620	0.540	0.540
25 GHz	0.210	0.190	0.230	0.280	0.280	0.280	0.730	0.490	0.620	0.540	0.540
26 GHz	0.220	0.200	0.240	0.280	0.280	0.280	0.730	0.490	0.700	0.910	0.5910
26.5 GHz	0.220	0.200	0.240	0.280	0.280	0.280	0.730	0.620	0.700	0.910	0.910

Note
The above uncertainties are applicable to the source amplitude measurement of the Fluke 9500 and Fluke 96xxx series for the fundamental, specified harmonic frequencies and RF Reference Source using a dedicated measurement system.
Uncertainties may also be reported for differences in level reported as Attenuation, the attenuation uncertainty will be the combined uncertainties of the reference level and the uncertainty at the final level.

Measured Quantity Instrument or Gauge	Range	Expanded Measurement Uncertainty (k = 2)	Remarks

Measurement capabilities for the calibration of Fluke 9600 series rf reference sources
(continued)

50 Ω Level Sine Measurement Uncertainties Sensor / splitter Levelled
PC3.5 mm Splitter / Sensor Levelled output

Calibration and Measurement Capability in dB expressed as an Expanded Uncertainty (k = 2). For frequencies between those in the table the greater of the adjacent CMCs applies.

Frequency	Level (dBm)		
	18 to 0	0 to -10	-10 to -20
200 Hz	0.004 9	0.004 9	0.005 1
1 kHz	0.004 8	0.004 8	0.023 4
20 kHz	0.004 8	0.004 8	0.023 4
100 kHz	0.004 8	0.004 8	0.023 5
300 kHz	0.031	0.033	0.044
1 MHz	0.031	0.033	0.044
10 MHz	0.031	0.033	0.044
20 MHz	0.031	0.033	0.044
100 MHz	0.031	0.033	0.044
125 MHz	0.033	0.034	0.045
300 MHz	0.033	0.034	0.045
750 MHz	0.033	0.035	0.046
1 GHz	0.033	0.035	0.046
1.4 GHz	0.036	0.037	0.047
2 GHz	0.038	0.040	0.049
2.5 GHz	0.038	0.040	0.049
3 GHz	0.038	0.040	0.049
3.5 GHz	0.038	0.040	0.049
4 GHz	0.039	0.040	0.049
5 GHz	0.040	0.041	0.051
6 GHz	0.041	0.042	0.051
7 GHz	0.044	0.045	0.054
8 GHz	0.044	0.045	0.054
9 GHz	0.047	0.048	0.057
10 GHz	0.047	0.048	0.057
11 GHz	0.048	0.049	0.057
12 GHz	0.048	0.049	0.057
13 GHz	0.062	0.063	0.069
14 GHz	0.062	0.063	0.069
15 GHz	0.062	0.063	0.069
16 GHz	0.064	0.065	0.071
17 GHz	0.064	0.065	0.071
18 GHz	0.064	0.065	0.071
19 GHz	0.076	0.077	0.083
20 GHz	0.077	0.077	0.083
21 GHz	0.077	0.077	0.083
22 GHz	0.077	0.077	0.083
23 GHz	0.087	0.088	0.092
24 GHz	0.087	0.088	0.092
25 GHz	0.087	0.088	0.092
26 GHz	0.106	0.107	0.110
26.5 GHz	0.106	0.107	0.110

Measured Quantity Instrument or Gauge	Range	Expanded Measurement Uncertainty (k = 2)	Remarks
Measurement capabilities for the calibration of Fluke 9600 series rf reference sources (continued)			
Output VSWR Fluke 9600 Series Results and uncertainties may also be reported in terms of VRC and return loss			
50Ω Type N connector	1.0 to 1.4		
	300 kHz to 0.99 MHz	0.057	
	1 MHz to 10 MHz	0.037	
	10 MHz to 1 GHz	0.028	
	1 GHz to 1.7 GHz	0.037	
	1.7 GHz to 2 GHz	0.047	
	2 GHz to 2.5 GHz	0.064	
	2.5 GHz to 3 GHz	0.102	
	3 GHz to 3.6 GHz	0.180	
	3.6 GHz to 4 GHz	0.210	
75Ω Type N connector	1.0 to 1.4		
	300 kHz to 0.99 MHz	0.061	
	1 MHz to 50 MHz	0.043	
	50 MHz to 1 GHz	0.036	
	1 GHz to 1.3 GHz	0.041	
	1.3 GHz to 2.0 GHz	0.067	
	2 GHz to 3 GHz	0.110	
Type K connector	1.0 to 1.4		
	2.5 GHz to 5 GHz	0.260	
	5 GHz to 11 GHz	0.420	
	11 GHz to 20 GHz	0.420	
	20 GHz to 27 GHz	0.650	
	1.4 to 2.4		
	2.5 GHz to 5 GHz	0.280	
	5 GHz to 11 GHz	0.450	
	11 GHz to 20 GHz	0.520	
	20 GHz to 27 GHz	0.760	

Measured Quantity Instrument or Gauge	Range	Expanded Measurement Uncertainty (k = 2)	Remarks
Measurement capabilities for the calibration of phasor measurement unit calibrators			
Total Vector Error (TVE)			
Steady State Tests	45 Hz to 65 Hz 16 V to 1008 V and 100 mA to 80 A	0.010 %	
Frequency Ramp Tests	16 V to 1008 V and 100 mA to 80 A 45 Hz to 55 Hz & 55 Hz to 65 Hz ±0.1 Hz/s to ±2 Hz/s	0.011 %	
Amplitude Modulation Tests	50 Hz & 60 Hz 16 V to 1008 V and 100 mA to 80 A Mod Factor 0.1 (10 %) Mod Freq: 0.1 Hz to 5 Hz	0.010 %	
Phase Modulation Tests	16 V to 1008 V and 100 mA to 80 A Mod Factor 0.1 radians Mod Freq: 0.1 Hz to 5 Hz	0.012 %	
Frequency Error (FE)			
Steady State Tests	45 Hz to 65 Hz 16 V to 1008 V and 100 mA to 80 A	1.8 µHz	
Frequency Ramp Tests	16 V to 1008 V and 100 mA to 80 A 45 Hz to 55 Hz & 55 Hz to 65 Hz ± 0.1 Hz/s to ± 2 Hz/s	5.2 µHz	
Amplitude Modulation Tests	16 V to 1008 V and 100 mA to 80 A Mod Factor 0.1 (10 %) Mod Freq: 0.1 Hz to 5 Hz	1.8 µHz	
Phase Modulation Tests	16 V to 1008 V and 100 mA to 80 A Mod Factor 0.1 radians Funamental: 50 Hz Mod Freq: 0.1 Hz 0.5 Hz 1.0 Hz 2.0 Hz 5.0 Hz Funamental: 60 Hz Mod Freq: 0.1 Hz 0.5 Hz 1.0 Hz 2.0 Hz 5.0 Hz	 5.2 µHz 16 µHz 30 µHz 62 µHz 140 µHz 5.7 µHz 16 µHz 33 µHz 73 µHz 170 µHz	

Measured Quantity Instrument or Gauge	Range	Expanded Measurement Uncertainty (k = 2)	Remarks
Rate of Change of Frequency Error (RFE)			
Steady State Tests	45 Hz to 65 Hz 16 V to 1008 V and 100 mA to 80 A	1.1 µHz	
Frequency Ramp Tests	16 V to 1008 V and 100 mA to 80 A 45 Hz to 55 Hz & 55 Hz to 65 Hz ± 0.1 Hz/s to ± 2 Hz/s	0.80 µHz	
Amplitude Modulation Tests	16 V to 1008 V and 100 mA to 80 A Mod Factor 0.1 (10 %) Mod Freq: 0.1 Hz to 5 Hz	1.0 µHz	
Phase Modulation Tests	16 V to 1008 V and 100 mA to 80 A Mod Factor 0.1 radians Funamental: 50 Hz Mod Freq: 0.1 Hz 0.5 Hz 1.0 Hz 2.0 Hz 5.0 Hz Funamental: 60 Hz Mod Freq: 0.1 Hz 0.5 Hz 1.0 Hz 2.0 Hz 5.0 Hz	 2.7 µHz 57 µHz 160 µHz 770 µHz 4 500 µHz 2.8 µHz 58 µHz 210 µHz 930 µHz 5 600 µHz	
Amplitude & Phase Step			
Delay Time 10% or 0.1 radian Step Size	45 Hz to 65 Hz 16 V to 1008 V and 100 mA to 80 A	2.8 µs	

Measured Quantity Instrument or Gauge	Range	Expanded Measurement Uncertainty (k = 2)	Remarks
Measurement capabilities for the calibration of rf and microwave spectrum analysers, signal analysers and other instruments with equivalent functionality.			
For calibrations performed at the main address and at customer premises. Calibrations may be performed in suitable areas within the customers' premises that must be appropriate for the nature of the particular calibrations undertaken, and will be the subject of contract review arrangements between the laboratory and the customer.			Depending on environmetal conditions, inceased uncertainites may apply to calibrations performed at customer premises.
FREQUENCY REFERENCE ACCURACY	Frequency		
	10 MHz	0.15 Hz	
	50 MHz	0.73 Hz	
	100 MHz	1.47 Hz	
FREQUENCY READOUT AND COUNTER ACCURACY	10 Hz to 40 GHz	1.0 mHz	
FREQUENCY SPAN ACCURACY	10 Hz to 40 GHz Frequency Span settings, at 10 Hz to 40 GHz	0.026 %	
RESOLUTION BANDWIDTH (RBW) ACCURACY	1 Hz to 10 MHz RBW settings, at 50 MHz to 128 MHz.		
Bandwidth frequency accuracy	-3 dB BW response	0.29 %	
	-60 dB BW response	0.30 %	
Level response accuracy at nominal BW frequency	-3 dB BW response	0.053 dB	
	-60 dB BW response	0.10 dB	
POWER BANDWIDTH ACCURACY	1 Hz to 10 MHz RBW settings, at 50 MHz to 128 MHz.	0.0030 dB	
RESOLUTION BANDWIDTH (RBW) SWITCHING ACCURACY	1 Hz to 10 MHz RBW settings, at 50 MHz to 128 MHz.	0.049 dB	
ABSOLUTE LEVEL/AMPLITUDE ACCURACY	At 10 Hz to 128 MHz		
	-80 dBm to -70dBm	0.51 dB	
	-70 dBm to -40 dBm	0.21 dB	
	-40 dBm to +10 dBm	0.053 dB	
FREQUENCY RESPONSE	-48 dBm to +24 dBm		
	10 Hz to 100 kHz	0.046 dB	
	100 kHz to 128 MHz	0.062 dB	
	128 MHz to 300 MHz	0.083 dB	
	300 MHz to 1.4 GHz	0.022dB	
	1.4 GHz to 4 GHz	0.035 dB	

Measured Quantity Instrument or Gauge	Range	Expanded Measurement Uncertainty (k = 2)	Remarks
FREQUENCY RESPONSE (continued)			
	-35 dBm to+18 dBm		
	1 kHz to 100 MHz	0.081 dB	
	100 MHz to 2.4 GHz	0.12 dB	
	2.4 GHz to 8 GHz	0.24 dB	
	8 GHz to 12.4 GHz	0.35 dB	
	12.4 GHz to 18 GHz	0.41 dB	
	18 GHz to 26.5 GHz	0.42 dB	
	-35 dBm to 0 dBm		
	26.5 GHz to 33 GHz	0.83 dB	
	33 GHz to 40 GHz	0.84 dB	
INPUT ATTENUATOR ACCURACY AND REFERENCE LEVEL SWITCHING ACCURACY	At 10 Hz to 128 MHz, relative to +10 dBm		
	0 to 49 dB	0.025 dB	
	49 to 59 dB	0.036 dB	
	59 to 69 dB	0.060 dB	
	69 to 94 dB	0.085 dB	
DISPLAY SCALE FIDELITY	At 10 Hz to 128 MHz, relative to +10 dBm		
	0 to 49 dB	0.021 dB	
	49 to 59 dB	0.031 dB	
	59 to 69 dB	0.051 dB	
	69 to 94 dB	0.071 dB	
NOISE FLOOR (DANL)		1.8 dB	
SECOND HARMONIC DISTORTION	At ≤ 1 GHz fundamental		
	Harmonic level		
	Down to -55 dBc	0.72 dB	
	-55 to -65 dBc	0.73 dB	
	-65 to -95 dBc	1.2 dB	
	At > 1 GHz fundamental		
	Harmonic level		
	Down to -55 dBc	1.1 dB	
	-55 to -95 dBc	1.5 dB	
NOISE SIDEBANDS (PHASE NOISE)	At 500 MHz to 1GHz		
	Offset frequency		
	10 Hz 100 Hz	2.3 dB	
	100 Hz to 1 MHz	2.2 dB	
	1MHz to 10 MHz	2.9 dB	
	10MHz to 100 MHz	3.2 dB	

Measured Quantity Instrument or Gauge	Range	Expanded Measurement Uncertainty (k = 2)	Remarks
INPUT VSWR	N Type connectors (50 Ω)		The listed uncertainties apply to UUTs with input connectors in good condition and VSWR not exceeding 1.2:1. Larger VSWRs can be accommodated, with increased uncertainties.
	100 kHz to 1 GHz	0.015	
	1 GHz to 8 GHz	0.018	
	8 GHz to 12 GHz	0.022	
	12 GHz to 18 GHz	0.024	
	PC 3.5 connectors		
	100 kHz to 100 MHz	0.015	
	100 MHz to 8 GHz	0.026	
	8 GHz to 18 GHz	0.033	
	18 GHz to 26.5 GHz	0.044	
	PC 2.92 connectors		
	100 kHz to 100 MHz	0.015	
	100 MHz to 8 GHz	0.026	
	8 GHz to 18 GHz	0.033	
	18 GHz to 26.5 GHz	0.044	
	26.5 GHz to 40 GHz	0.055	
END			

Appendix - Calibration and Measurement Capabilities

Introduction

The definitive statement of the accreditation status of a calibration laboratory is the Accreditation Certificate and the associated Schedule of Accreditation. This Schedule of Accreditation is a critical document, as it defines the measurement capabilities, ranges and boundaries of the calibration activities for which the organisation holds accreditation.

Calibration and Measurement Capabilities (CMCs)

The capabilities provided by accredited calibration laboratories are described by the Calibration and Measurement Capability (CMC), which expresses the lowest measurement uncertainty that can be achieved during a calibration. If a particular device under calibration itself contributes significantly to the uncertainty (for example, if it has limited resolution or exhibits significant non-repeatability) then the uncertainty quoted on a calibration certificate will be increased to account for such factors.

The CMC is normally used to describe the uncertainty that appears in an accredited calibration laboratory's schedule of accreditation and is the uncertainty for which the laboratory has been accredited using the procedure that was the subject of assessment. The measurement uncertainty is calculated according to the procedures given in the GUM and is normally stated as an expanded uncertainty at a coverage probability of 95 %, which usually requires the use of a coverage factor of $k = 2$. An accredited laboratory is not permitted to quote an uncertainty that is smaller than the published measurement uncertainty in certificates issued under its accreditation.

Expression of CMCs - symbols and units

It should be noted that the percentage symbol (%) represents the number 0.01. In cases where the measurement uncertainty is stated as a percentage, this is to be interpreted as meaning percentage of the measurand.
Thus, for example, a measurement uncertainty of 1.5 % means $1.5 \times 0.01 \times q$, where q is the quantity value.

The notation Q[a, b] stands for the root-sum-square of the terms between brackets: $Q[a, b] = [a^2 + b^2]^{1/2}$