Electricity and Magnetism, Slovenia, MIRS/SIQ/Metrology (MIRS/Slovenian Institute of Quality and Metrology/Metrology)

Calibration or Measurement Services			Measurand Level or Range			Measurement Conditions/Independent variables		Expanded Uncertainty							
Quantity	**Instrument or artifact**	**Instrument Type or Method**	**Minimum value**	**Maximum value**	**units**	**Parameter**	**Specifications**	**Value**	**Units**	**Coverage Factor**	**Level of Confidence**	**Is the expanded uncertainty a relative one?**	**Uncertainty matrix**	**Comments**	**NMI Service Identifier**
DC voltage: sources: single values	Standard cell, solid state voltage standard	Voltage ratio with resistive divider	100	100	mV			2	µV/V	2	95%	Yes		Approved on 17 August 2011	163
DC voltage: sources: single values	Standard cell, solid state voltage standard	Direct comparison with standard	1	1.018	V	Voltage	1 V and 1.018 V	0.7	µV/V	2	95%	Yes		Approved on 17 August 2011	164
DC voltage: sources: single values	Standard cell, solid state voltage standard	Direct comparison with standard	10	10	V			0.5	µV/V	2	95%	Yes		Approved on 17 August 2011	1
DC voltage: sources: single values	Standard cell, solid state voltage standard	Voltage ratio with resistive divider	100	100	V			0.7	µV/V	2	95%	Yes		Approved on 17 August 2011	2
DC voltage: sources: single values	Multifunction calibrator	Voltage ratio with resistive divider	1	1	kV			0.9	µV/V	2	95%	Yes		Approved on 17 August 2011	3
DC voltage sources: low values	DC voltage source, calibrator	Measurement with nanovoltmeter	0	10	µV			40 to 190	nV	2	95%	No		Approved on 17 August 2011	4
DC voltage sources: low values	DC voltage source, calibrator	Measurement with nanovoltmeter	0.01	10	mV			55 to 190	nV	2	95%	No		Approved on 17 August 2011	5
DC voltage sources: low values	DC voltage source, calibrator, voltage U	Measurement with DMM	10	100	mV			(4E-05 + 5E-06U), U in mV	mV	2	95%	No		Approved on 17 August 2011	8
DC voltage sources: low values	DC voltage source, multifunction calibrator	Voltage ratio with resistive divider	0.1	1	V			2.5	µV/V	2	95%	Yes		Approved on 17 August 2011	9
DC voltage sources: low values	DC voltage source, multifunction calibrator	Voltage ratio with resistive divider	1	10	V			1.5	µV/V	2	95%	Yes		Approved on 17 August 2011	10
DC voltage sources: intermediate values	DC voltage source, multifunction calibrator	Voltage ratio with resistive divider	10	100	V			1.5	µV/V	2	95%	Yes		Approved on 17 August 2011	11
DC voltage sources: intermediate values	DC voltage source, multifunction calibrator	Voltage ratio with resistive divider	100	1000	V			4	µV/V	2	95%	Yes		Approved on 17 August 2011	12

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Calibration or Measurement Services			Measurand Level or Range			Measurement Conditions/Independent variables		Expanded Uncertainty							
Quantity	Instrument or artifact	Instrument Type or Method	Minimum value	Maximum value	units	Parameter	Specifications	Value	Units	Coverage Factor	Level of Confidence	Is the expanded uncertainty a relative one?	Uncertainty matrix	Comments	NMI Service Identifier
DC voltage meters: very low values	Nanovoltmeter, microvoltmeter	Voltage ratio with standard resistors	0	10	µV			10 to 80	nV	2	95%	No		Approved on 17 August 2011	13
DC voltage meters: very low values	Nanovoltmeter, microvoltmeter	Voltage ratio with standard resistors	0.01	1	mV			17 to 80	nV	2	95%	No		Approved on 17 August 2011	14
DC voltage meters: intermediate values	DC voltmeter, multimeter, multifunction transfer standard	Voltage ratio with standard resistors	1	10	mV			20 to 110	nV	2	95%	No		Approved on 17 August 2011	16
DC voltage meters: intermediate values	DC voltmeter, multimeter, multifunction transfer standard	Voltage ratio with standard resistors	10	100	mV			60 to 510	nV	2	95%	No		Approved on 17 August 2011	17
DC voltage meters: intermediate values	DC voltmeter, multimeter, multifunction transfer standard	Voltage ratio with resistive divider	100	100	mV			2	µV/V	2	95%	Yes		Approved on 17 August 2011	165
DC voltage meters: intermediate values	DC voltmeter, multimeter, multifunction transfer standard	Direct comparison with standard	1	1.018	V	Voltage	1 V and 1.018 V	0.7	µV/V	2	95%	Yes		Approved on 17 August 2011	166
DC voltage meters: intermediate values	DC voltmeter, multimeter, multifunction transfer standard	Direct comparison with standard	10	10	V			0.5	µV/V	2	95%	Yes		Approved on 17 August 2011	167
DC voltage meters: intermediate values	DC voltmeter, multimeter, multifunction transfer standard	Voltage ratio with resistive divider	100	100	V			0.7	µV/V	2	95%	Yes		Approved on 17 August 2011	168
DC voltage meters: intermediate values	DC voltmeter, multimeter, multifunction transfer standard	Voltage ratio with resistive divider	1	1	kV			0.9	µV/V	2	95%	Yes		Approved on 17 August 2011	169
DC voltage meters: intermediate values	DC voltmeter, multimeter, multifunction transfer standard	Voltage ratio with resistive divider	0.1	1	V			2.5	µV/V	2	95%	Yes		Approved on 17 August 2011	18
DC voltage meters: intermediate values	DC voltmeter, multimeter, multifunction transfer standard	Voltage ratio with resistive divider	1	100	V			1.5	µV/V	2	95%	Yes		Approved on 17 August 2011	19

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Calibration or Measurement Services			Measurand Level or Range			Measurement Conditions/Independent variables		Expanded Uncertainty							
Quantity	**Instrument or artifact**	**Instrument Type or Method**	**Minimum value**	**Maximum value**	**units**	**Parameter**	**Specifications**	**Value**	**Units**	**Coverage Factor**	**Level of Confidence**	**Is the expanded uncertainty a relative one?**	**Uncertainty matrix**	**Comments**	**NMI Service Identifier**
DC voltage meters: intermediate values	DC voltmeter, multimeter, multifunction transfer standard	Voltage ratio with resistive divider	100	1000	V			4	µV/V	2	95%	Yes		Approved on 17 August 2011	20
DC voltage ratios: up to 1100 V	Resistive divider, ratio meter	Comparison to reference divider	0.01:1	0.01:1		Input voltage	1000 V	6E-07		2	95%	Yes		Approved on 17 August 2011	21
DC voltage ratios: up to 1100 V	Resistive divider, ratio meter	Comparison to reference divider	0.01:1	0.1:1		Input voltage	10 V to 100 V	1.4E-06 to 2.5E-07		2	95%	Yes		Approved on 17 August 2011	170
DC voltage ratios: up to 1100 V	Resistive divider, ratio meter	Comparison to reference divider	0.1:1	1.1:1		Input voltage	1 V to 10 V	1.4E-06 to 2.5E-07		2	95%	Yes		Approved on 17 August 2011	171
DC voltage ratios: up to 1100 V	Resistive divider, ratio meter	Comparison to reference divider	0.1:1	1.1:1		Input voltage	10 V to 100 V	2.5E-07		2	95%	Yes		Approved on 17 August 2011	172
DC voltage ratios: up to 1100 V	Resistive divider, ratio meter	Comparison to reference divider	0.01:1	1.1:1		Input voltage	100 V to 300 V	3E-07		2	95%	Yes		Approved on 17 August 2011	173
DC voltage ratios: up to 1100 V	Resistive divider, ratio meter	Comparison to reference divider	0.01:1	1.1:1		Input voltage	300 V to 600 V	3E-07 to 9E-07		2	95%	Yes		Approved on 17 August 2011	174
DC voltage ratios: up to 1100 V	Resistive divider, ratio meter	Comparison to reference divider	0.01:1	1.1:1		Input voltage	600 V to 1000 V	9E-07 to 2.5E-06		2	95%	Yes		Approved on 17 August 2011	175
DC resistance standards and sources: low values	Fixed resistor, DCCT	Voltage drops method	0.1	1	µΩ	Test current	up to 500 A	1200 to 200	µΩ/Ω	2	95%	Yes		Approved on 17 August 2011	177
DC resistance standards and sources: low values	Fixed resistor, DCCT	Voltage drops method	1	10	µΩ	Test current	up to 500 A	200 to 120	µΩ/Ω	2	95%	Yes		Approved on 17 August 2011	178
DC resistance standards and sources: low values	Fixed resistor, DCCT	Voltage drops method	0.01	1	mΩ	Test current	up to 500 A	120 to 35	µΩ/Ω	2	95%	Yes		Approved on 17 August 2011	22
DC resistance standards and sources: low values	Fixed resistor, resistance box	Comparison by means of a current comparator bridge	1	10	mΩ	Test current	up to 500 A	15	µΩ/Ω	2	95%	Yes		Approved on 17 August 2011	179

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Calibration or Measurement Services			Measurand Level or Range			Measurement Conditions/Independent variables		Expanded Uncertainty							
Quantity	**Instrument or artifact**	**Instrument Type or Method**	**Minimum value**	**Maximum value**	**units**	**Parameter**	**Specifications**	**Value**	**Units**	**Coverage Factor**	**Level of Confidence**	**Is the expanded uncertainty a relative one?**	**Uncertainty matrix**	**Comments**	**NMI Service Identifier**
DC resistance standards and sources: low values	Fixed resistor, resistance box	Comparison by means of a current comparator bridge	10	100	mΩ			2	μΩ/Ω	2	95%	Yes		Approved on 17 August 2011	23
DC resistance standards and sources: low values	Fixed resistor, resistance box	Comparison by means of a current comparator bridge	0.1	1	Ω			0.9	μΩ/Ω	2	95%	Yes		Approved on 17 August 2011	24
DC resistance standards and sources: intermediate values	Fixed resistor, resistance box	Comparison by means of a current comparator bridge	1	100	Ω			0.8	μΩ/Ω	2	95%	Yes		Approved on 17 August 2011	25
DC resistance standards and sources: intermediate values	Fixed resistor, resistance box	Comparison by means of a current comparator bridge	0.1	10	kΩ			0.7 to 0.6	μΩ/Ω	2	95%	Yes		Approved on 17 August 2011	26
DC resistance standards and sources: intermediate values	Fixed resistor, resistance box	Comparison by means of a binary voltage divider bridge	10	100	kΩ			0.6 to 0.7	μΩ/Ω	2	95%	Yes		Approved on 17 August 2011	27
DC resistance standards and sources: intermediate values	Fixed resistor, resistance box	Comparison by means of a binary voltage divider bridge	0.1	1	MΩ			1	μΩ/Ω	2	95%	Yes		Approved on 17 August 2011	28
DC resistance standards and sources: high values	Fixed resistor, three terminal resistor, resistance box	Comparison by means of a binary voltage divider bridge	1	10	MΩ			2	μΩ/Ω	2	95%	Yes		Approved on 17 August 2011	29
DC resistance standards and sources: high values	Fixed resistor, three terminal resistor, resistance box	Comparison by means of a binary voltage divider bridge	10	100	MΩ			3	μΩ/Ω	2	95%	Yes		Approved on 17 August 2011	30
DC resistance standards and sources: high values	Fixed resistor, three terminal resistor, resistance box	Comparison by means of a binary voltage divider bridge	0.1	1	GΩ			15	μΩ/Ω	2	95%	Yes		Approved on 17 August 2011	31

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Calibration or Measurement Services			Measurand Level or Range			Measurement Conditions/Independent variables		Expanded Uncertainty							
Quantity	**Instrument or artifact**	**Instrument Type or Method**	**Minimum value**	**Maximum value**	**units**	**Parameter**	**Specifications**	**Value**	**Units**	**Coverage Factor**	**Level of Confidence**	**Is the expanded uncertainty a relative one?**	**Uncertainty matrix**	**Comments**	**NMI Service Identifier**
DC resistance standards and sources: high values	Fixed resistor, three terminal resistor, resistance box	Comparison by means of a binary voltage divider bridge	1	10	GΩ	Test voltage	up to 100 V	40	μΩ/Ω	2	95%	Yes		Approved on 17 August 2011	32
DC resistance standards and sources: high values	Fixed resistor, three terminal resistor, resistance box	Comparison by means of a binary voltage divider bridge	10	100	GΩ	Test voltage	up to 100 V	300	μΩ/Ω	2	95%	Yes		Approved on 17 August 2011	33
DC resistance standards and sources: high values	Fixed resistor, three terminal resistor, resistance box	Comparison by means of a binary voltage divider bridge	0.1	1	TΩ	Test voltage	up to 100 V	0.8	mΩ/Ω	2	95%	Yes		Approved on 17 August 2011	34
DC resistance standards and sources: high values	Fixed resistor, three terminal resistor, resistance box	Current integration	1	10	TΩ	Test voltage	up to 1000 V	4	mΩ/Ω	2	95%	Yes		Approved on 17 August 2011	35
DC resistance standards and sources: high values	Fixed resistor, three terminal resistor	Current integration	10	100	TΩ	Test voltage	up to 1000 V	6	mΩ/Ω	2	95%	Yes		Approved on 17 August 2011	36
DC resistance standards and sources: multiple ranges	Multifunction calibrator	Comparison by means of a current comparator bridge	1	100	Ω			0.8	μΩ/Ω	2	95%	Yes		Approved on 17 August 2011	37
DC resistance standards and sources: multiple ranges	Multifunction calibrator	Comparison by means of a current comparator bridge	0.1	10	kΩ			0.7 to 0.6	μΩ/Ω	2	95%	Yes		Approved on 17 August 2011	38
DC resistance standards and sources: multiple ranges	Multifunction calibrator	Comparison by means of a binary voltage divider bridge	10	100	kΩ			0.6 to 0.7	μΩ/Ω	2	95%	Yes		Approved on 17 August 2011	39
DC resistance standards and sources: multiple ranges	Multifunction calibrator	Comparison by means of a binary voltage divider bridge	0.1	1	MΩ			1	μΩ/Ω	2	95%	Yes		Approved on 17 August 2011	40
DC resistance standards and sources: multiple ranges	Multifunction calibrator	Comparison by means of a binary voltage divider bridge	1	10	MΩ			2	μΩ/Ω	2	95%	Yes		Approved on 17 August 2011	41

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Calibration or Measurement Services			Measurand Level or Range			Measurement Conditions/Independent variables		Expanded Uncertainty							
Quantity	Instrument or artifact	Instrument Type or Method	Minimum value	Maximum value	units	Parameter	Specifications	Value	Units	Coverage Factor	Level of Confidence	Is the expanded uncertainty a relative one?	Uncertainty matrix	Comments	NMI Service Identifier
DC resistance standards and sources: multiple ranges	Multifunction calibrator	Comparison by means of a binary voltage divider bridge	10	100	MΩ			3	μΩ/Ω	2	95%	Yes		Approved on 17 August 2011	42
DC resistance meters: low values	Microohmmeter, multimeter, multifunction transfer standard, resistance bridge	Comparison to standard resistor	0.1	0.1	mΩ			35	μΩ/Ω	2	95%	Yes		Approved on 17 August 2011	43
DC resistance meters: low values	Microohmmeter, multimeter, multifunction transfer standard, resistance bridge	Comparison to standard resistor	1	1	mΩ			25	μΩ/Ω	2	95%	Yes		Approved on 17 August 2011	44
DC resistance meters: low values	Microohmmeter, multimeter, multifunction transfer standard, resistance bridge	Comparison to standard resistor	10	10	mΩ			3	μΩ/Ω	2	95%	Yes		Approved on 17 August 2011	45
DC resistance meters: intermediate values	Microohmmeter, multimeter, multifunction transfer standard, resistance bridge	Comparison to standard resistor	0.0001	100	kΩ			1	μΩ/Ω	2	95%	Yes		Approved on 17 August 2011	46
DC resistance meters: intermediate values	Microohmmeter, multimeter, multifunction transfer standard, resistance bridge	Comparison to standard resistor	0.1	1	MΩ			1.5	μΩ/Ω	2	95%	Yes		Approved on 17 August 2011	47
DC resistance meters: intermediate values	Ohmmeter, multimeter, multifunction transfer standard, resistance bridge	Comparison to standard resistor	1	10	MΩ			2.5	μΩ/Ω	2	95%	Yes		Approved on 17 August 2011	48

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Quantity	Instrument or artifact	Instrument Type or Method	Minimum value	Maximum value	units	Parameter	Specifications	Value	Units	Coverage Factor	Level of Confidence	Is the expanded uncertainty a relative one?	Uncertainty matrix	Comments	NMI Service Identifier
DC resistance meters: intermediate values	Ohmmeter, multimeter, multifunction transfer standard, resistance bridge	Comparison to standard resistor	10	100	MΩ			12	μΩ/Ω	2	95%	Yes		Approved on 17 August 2011	49
DC resistance meters: intermediate values	Ohmmeter, multimeter, multifunction transfer standard, resistance bridge	Comparison to standard resistor	0.1	1	GΩ			20	μΩ/Ω	2	95%	Yes		Approved on 17 August 2011	53
DC resistance meters: high values	Teraohmmeter, resistance bridge	Comparison to standard resistor	1	10	GΩ			2	mΩ/Ω	2	95%	Yes		Approved on 17 August 2011	54
DC resistance meters: high values	Teraohmmeter, resistance bridge	Comparison to standard resistor	10	100	GΩ			2.5	mΩ/Ω	2	95%	Yes		Approved on 17 August 2011	55
DC resistance meters: high values	Teraohmmeter, resistance bridge	Comparison to standard resistor	0.1	1	TΩ			4	mΩ/Ω	2	95%	Yes		Approved on 17 August 2011	56
DC resistance meters: high values	Teraohmmeter, resistance bridge	Comparison to standard resistor	10	10	TΩ			6	mΩ/Ω	2	95%	Yes		Approved on 17 August 2011	182
DC resistance meters: high values	Teraohmmeter, resistance bridge	Comparison to standard resistor	100	100	TΩ			9	mΩ/Ω	2	95%	Yes		Approved on 17 August 2011	57
DC current sources: low values	Current generator, multifunction calibrator	*U* / *R* ratio	10	20	nA			90	μA/A	2	95%	Yes		Approved on 17 August 2011	183
DC current sources: low values	Current generator, multifunction calibrator	*U* / *R* ratio	20	50	nA			75	μA/A	2	95%	Yes		Approved on 17 August 2011	184
DC current sources: low values	Current generator, multifunction calibrator	*U* / *R* ratio	50	200	nA			25	μA/A	2	95%	Yes		Approved on 17 August 2011	58
DC current sources: low values	Current generator, multifunction calibrator	*U* / *R* ratio	0.2	2	μA			15	μA/A	2	95%	Yes		Approved on 17 August 2011	59

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Quantity	**Instrument or artifact**	**Instrument Type or Method**	**Minimum value**	**Maximum value**	**units**	**Parameter**	**Specifications**	**Value**	**Units**	**Coverage Factor**	**Level of Confidence**	**Is the expanded uncertainty a relative one?**	**Uncertainty matrix**	**Comments**	**NMI Service Identifier**
DC current sources: low values	Current generator, multifunction calibrator	*U* / *R* ratio	2	100	µA			8	µA/A	2	95%	Yes		Approved on 17 August 2011	60
DC current sources: imtermediate values	Current generator, multifunction calibrator	*U* / *R* ratio	100	200	µA			8	µA/A	2	95%	Yes		Approved on 17 August 2011	185
DC current sources: imtermediate values	Current generator, multifunction calibrator	*U* / *R* ratio	0.2	200	mA			5	µA/A	2	95%	Yes		Approved on 17 August 2011	61
DC current sources: imtermediate values	Current generator, multifunction calibrator	*U* / *R* ratio	0.2	1	A			8	µA/A	2	95%	Yes		Approved on 17 August 2011	62
DC current sources: imtermediate values	Current generator, multifunction calibrator	*U* / *R* ratio	1	2	A			18	µA/A	2	95%	Yes		Approved on 17 August 2011	63
DC current sources: imtermediate values	Current generator, multifunction calibrator	Zero flux method	2	20	A			30	µA/A	2	95%	Yes		Approved on 17 August 2011	186
DC current sources: high values	Current generator, multifunction calibrator	Zero flux method	20	100	A			30	µA/A	2	95%	Yes		Approved on 17 August 2011	187
DC current meters: low values	Nanoammeter, multimeter, multifunction transfer standard	*U* / *R* ratio	10	20	nA			90	µA/A	2	95%	Yes		Approved on 17 August 2011	188
DC current meters: low values	Nanoammeter, multimeter, multifunction transfer standard	*U* / *R* ratio	20	50	nA			75	µA/A	2	95%	Yes		Approved on 17 August 2011	189
DC current meters: low values	Nanoammeter, multimeter, multifunction transfer standard	*U* / *R* ratio	50	200	nA			25	µA/A	2	95%	Yes		Approved on 17 August 2011	64

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Calibration or Measurement Services			Measurand Level or Range			Measurement Conditions/Independent variables		Expanded Uncertainty							
Quantity	**Instrument or artifact**	**Instrument Type or Method**	**Minimum value**	**Maximum value**	**units**	**Parameter**	**Specifications**	**Value**	**Units**	**Coverage Factor**	**Level of Confidence**	**Is the expanded uncertainty a relative one?**	**Uncertainty matrix**	**Comments**	**NMI Service Identifier**
DC current meters: low values	Nanoammeter, multimeter, multifunction transfer standard	*U* / *R* ratio	0.2	2	µA			15	µA/A	2	95%	Yes		Approved on 17 August 2011	65
DC current meters: low values	Nanoammeter, multimeter, multifunction transfer standard	*U* / *R* ratio	2	100	µA			8	µA/A	2	95%	Yes		Approved on 17 August 2011	66
DC current meters: intermediate values	Multimeter, multifunction transfer standard	*U* / *R* ratio	100	200	µA			8	µA/A	2	95%	Yes		Approved on 17 August 2011	190
DC current meters: intermediate values	Multimeter, multifunction transfer standard	*U* / *R* ratio	0.2	200	mA			5	µA/A	2	95%	Yes		Approved on 17 August 2011	67
DC current meters: intermediate values	Multimeter, multifunction transfer standard	*U* / *R* ratio	0.2	1	A			8	µA/A	2	95%	Yes		Approved on 17 August 2011	68
DC current meters: intermediate values	Multimeter, multifunction transfer standard	*U* / *R* ratio	1	2	A			18	µA/A	2	95%	Yes		Approved on 17 August 2011	69
DC current meters: intermediate values	Current generator, multifunction calibrator	Zero flux method	2	20	A			30	µA/A	2	95%	Yes		Approved on 17 August 2011	191
DC current meters: high values	Current generator, multifunction calibrator	Zero flux method	20	100	A			30	µA/A	2	95%	Yes		Approved on 17 August 2011	192
AC resistance: real component	Fixed resistor	Comparison to standard resistor	0.001	10	kΩ	Frequency	40 Hz to 20 kHz	100	µΩ/Ω	2	95%	Yes		Approved on 17 August 2011	70
AC resistance: real component	Fixed resistor	Measurement with LCR meter	0.001	10000	kΩ	Frequency	100 Hz to 1 MHz	1.3 to 30	mΩ/Ω	2	95%	Yes			71
AC resistance: meters	LCR meter, impedance analyzer	Direct measurement	0.001	10	kΩ	Frequency	40 Hz to 20 kHz	100	µΩ/Ω	2	95%	Yes		Approved on 17 August 2011	72

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Quantity	**Instrument or artifact**	**Instrument Type or Method**	**Minimum value**	**Maximum value**	**units**	**Parameter**	**Specifications**	**Value**	**Units**	**Coverage Factor**	**Level of Confidence**	**Is the expanded uncertainty a relative one?**	**Uncertainty matrix**	**Comments**	**NMI Service Identifier**
Capacitance: low loss capacitors	Standard capacitor (air, fused silica)	Comparison by means of a transformer bridge	100	100	pF	Frequency	1 kHz	7	µF/F	2	95%	Yes		Approved on 17 August 2011	193
Capacitance: low loss capacitors	Standard capacitor (air, fused silica)	Measurement with transformer bridge	1	1000	pF	Frequency	1 kHz	0.015 to 0.030	mF/F	2	95%	Yes	Cap_1	Approved on 17 August 2011	73
Capacitance: dissipation factor for low loss capacitors	Standard capacitor (air, fused silica): dissipation factor *D*	Measurement with transformer bridge	0	0.1		Capacitance *C*	1 pF to 1 nF	2E-05 + 1E-03*D* + 5E+01*C*/F		2	95%	No		Approved on 17 August 2011	74
						Frequency	1 kHz								
Capacitance: low loss capacitors	Standard capacitor (air, fused silica)	Comparison to standard capacitor	1	1000	pF	Capacitance	1 pF, 10 pF, 100 pF and 1000 pF	0.015 to 5.1	mF/F	2	95%	Yes	Cap_1	Approved on 17 August 2011	75
						Frequency	100 Hz to 10 MHz								
Capacitance: low loss capacitors	Fixed capacitor, variable capacitor, capacitance box	Direct measurement	1	2000	pF	Frequency	20 Hz to 10 MHz	1E-03 to 3E-02	F/F	2	95%	Yes	Cap_3	Approved on 17 August 2011	194
Capacitance: dissipation factor for low loss capacitors	Fixed capacitor, variable capacitor, capacitance box	Direct measurement	0	0.1		Capacitance	1 pF to 2 nF	0.0005		2	95%	No		Approved on 17 August 2011	76
						Frequency	20 Hz to 1 MHz								
Capacitance: dissipation factor for low loss capacitors	Fixed capacitor, variable capacitor, capacitance box: dissipation factor *D*	Direct measurement	0.001	0.1		Capacitance	1 pF to 2 nF	5E-03*D* to 3E-02*D*		2	95%	No		Approved on 17 August 2011	78
						Frequency	1 MHz to 10 MHz								
Capacitance: dielectric capacitors	Fixed capacitor, variable capacitor, capacitance box	Measurement with transformer bridge	1E-12	1E-05	F	Frequency	1 kHz	0.015 to 0.1	mF/F	2	95%	Yes	Cap_1	Approved on 17 August 2011	80

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Calibration or Measurement Services			Measurand Level or Range			Measurement Conditions/Independent variables		Expanded Uncertainty							
Quantity	**Instrument or artifact**	**Instrument Type or Method**	**Minimum value**	**Maximum value**	**units**	**Parameter**	**Specifications**	**Value**	**Units**	**Coverage Factor**	**Level of Confidence**	**Is the expanded uncertainty a relative one?**	**Uncertainty matrix**	**Comments**	**NMI Service Identifier**
Capacitance: dissipation factor for dielectric capacitors	Fixed capacitor, variable capacitor, capacitance box : dissipation factor *D*	Fixed capacitor, variable capacitor, capacitance box	0	1		Capacitance *C*	1 pF to 10 µF	2E-05 + 1E-03*D* + 5E+01*C*/F		2	95%	No		Approved on 17 August 2011	81
						Frequency	1 kHz								
Capacitance: dielectric capacitors	Fixed capacitor, variable capacitor, capacitance box	Comparison to standard capacitor	10	10	nF	Frequency	100 Hz to 1 MHz	0.015 to 0.51	mF/F	2	95%	Yes	Cap_1	Approved on 17 August 2011	195
Capacitance: dielectric capacitors	Fixed capacitor, variable capacitor, capacitance box	Comparison to standard capacitor	100	100	nF	Frequency	100 Hz to 1 MHz	0.02 to 0.51	mF/F	2	95%	Yes	Cap_1	Approved on 17 August 2011	196
Capacitance: dielectric capacitors	Fixed capacitor, variable capacitor, capacitance box: capacitance *C*	Comparison to standard capacitor	1	10	µF	Capacitance	1 µF and 10 µF	0.1 to 0.41	mF/F	2	95%	Yes	Cap_1	Approved on 17 August 2011	197
						Frequency	100 Hz to 100 kHz								
Capacitance: dielectric capacitors	Fixed capacitor, variable capacitor, capacitance box	Comparison by means of a Schering bridge	0.01	100	nF	Capacitance	0.01 nF, 0.1 nF, 1 nF, 10 nF and 100 nF	0.2	mF/F	2	95%	Yes		Approved on 17 August 2011	83
						Frequency	50 Hz								
Capacitance: dielectric capacitors	Fixed capacitor, variable capacitor, capacitance box	Comparison by means of a Schering bridge	0.00001	100	µF	Frequency	50 Hz	0.5	mF/F	2	95%	Yes		Approved on 17 August 2011	84
Capacitance: dissipation factor for dielectric capacitors	Fixed capacitor, variable capacitor, capacitance box: dissipation factor *D*	Comparison by means of a Schering bridge	0	1		Capacitance	10 pF to 100 µF	0.00005 + 0.005*D*		2	95%	No		Approved on 17 August 2011	85
						Frequency	50 Hz								
Capacitance: dielectric capacitors	Fixed capacitor, variable capacitor, capacitance box	Comparison by means of a Schering bridge	0.1	1	mF	Frequency	50 Hz	1	mF/F	2	95%	Yes		Approved on 17 August 2011	86

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Calibration or Measurement Services			Measurand Level or Range			Measurement Conditions/Independent variables		Expanded Uncertainty							
Quantity	**Instrument or artifact**	**Instrument Type or Method**	**Minimum value**	**Maximum value**	**units**	**Parameter**	**Specifications**	**Value**	**Units**	**Coverage Factor**	**Level of Confidence**	**Is the expanded uncertainty a relative one?**	**Uncertainty matrix**	**Comments**	**NMI Service Identifier**
Capacitance: dissipation factor for dielectric capacitors	Fixed capacitor, variable capacitor, capacitance box: dissipation factor *D*	Comparison by means of a Schering bridge	0	1		Capacitance	0.1 mF to 1 mF	0.0001 + 0.005*D*		2	95%	No		Approved on 17 August 2011	87
						Frequency	50 Hz								
Capacitance: dielectric capacitors	Fixed capacitor	Comparison to transformed capacitor	0.1	1	mF	Frequency	100 Hz, 120 Hz, 1 kHz	0.7 to 5	mF/F	2	95%	Yes	Cap_2		88
Capacitance: transformed capacitors	Fixed capacitor, switched capacitor	Comparison to transformed capacitor	1	1000	mF	Frequency	100 Hz, 120 Hz, 1 kHz	2 to 20	mF/F	2	95%	Yes	Cap_2		89
Capacitance: meters	Capacitance bridge, LCR meter	Direct measurement	1	1	pF	Frequency	20 Hz to 1 kHz	30	µF/F	2	95%	Yes		Approved on 17 August 2011	211
Capacitance: meters	Capacitance bridge, LCR meter	Direct measurement	100	100	pF	Frequency	1 kHz	3	µF/F	2	95%	Yes		Approved on 17 August 2011	212
Capacitance: meters	Capacitance bridge, LCR meter	Direct measurement	10	100000	pF	Capacitance	0.01 nF, 0.1 nF, 1 nF, 10 nF and 100 nF	15	µF/F	2	95%	Yes		Approved on 17 August 2011	90
						Frequency	20 Hz to 1 kHz								
Capacitance: meters	Capacitance bridge, LCR meter	Direct measurement	1	10	µF	Capacitance	1 µF and 10 µF	100	µF/F	2	95%	Yes		Approved on 17 August 2011	91
						Frequency	20 Hz to 1 kHz								
Capacitance: meters	Capacitance bridge, LCR meter	Direct measurement	0.1	10	mF	Capacitance	0.1 mF, 1 mF and 10 mF	2 to 5	mF/F	2	95%	Yes	Cap_4	Approved on 17 August 2011	93
						Frequency	100 Hz to 1 kHz								
Capacitance: meters	Capacitance bridge, LCR meter	Direct measurement	0.1	1	F	Capacitance	0.1 F and 1 F	3 to 10	mF/F	2	95%	Yes	Cap_4	Approved on 17 August 2011	213
						Frequency	100 Hz to 120 Hz								
Capacitance: meters	LCR meter, impedance analyzer	Direct measurement	1	1000	pF	Capacitance	1 pF, 10 pF, 100 pF and 1000 pF	0.015 to 5.1	mF/F	2	95%	Yes	Cap_1	Approved on 17 August 2011	94
						Frequency	100 Hz to 10 MHz								

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Calibration or Measurement Services			Measurand Level or Range			Measurement Conditions/Independent variables		Expanded Uncertainty							
Quantity	Instrument or artifact	Instrument Type or Method	Minimum value	Maximum value	units	Parameter	Specifications	Value	Units	Coverage Factor	Level of Confidence	Is the expanded uncertainty a relative one?	Uncertainty matrix	Comments	NMI Service Identifier
Capacitance: meters	LCR meter, impedance analyzer	Direct measurement	10	10	nF	Frequency	100 Hz to 1 MHz	0.015 to 0.51	mF/F	2	95%	Yes	Cap_1	Approved on 17 August 2011	214
Capacitance: meters	LCR meter, impedance analyzer	Direct measurement	100	100	nF	Frequency	100 Hz to 1 MHz	0.02 to 0.51	mF/F	2	95%	Yes	Cap_1	Approved on 17 August 2011	215
Capacitance: meters	LCR meter, impedance analyzer	Direct measurement	1	10	µF	Capacitance	1 µF and 10 µF	0.1 to 0.41	mF/F	2	95%	Yes	Cap_1	Approved on 17 August 2011	216
						Frequency	100 Hz to 100 kHz								
Capacitance: meters	LCR meter, impedance analyzer	Comparison to reference LCR meter	0.001	10000	nF	Frequency	50 Hz to 1 kHz	15E-06 to 1E-04	F/F	2	95%	Yes		Approved on 17 August 2011	217
Capacitance: meters	LCR meter, impedance analyzer	Comparison to reference LCR meter	1	2000	pF	Frequency	20 Hz to 1 MHz	1E-03 to 3E-02	F/F	2	95%	Yes	Cap_3	Approved on 17 August 2011	218
Capacitance: meters	LCR meter, impedance analyzer	Comparison to reference LCR meter	1	2000	pF	Frequency	1 MHz to 10 MHz	3E-03 to 3E-02	F/F	2	95%	Yes	Cap_3	Approved on 17 August 2011	219
Inductance: self inductance, low values	Fixed inductor, variable inductor, inductance box	Comparison to standard inductor	0.1	0.1	mH	Frequency	100 Hz to 1 kHz	0.17 to 0.23	mH/H	2	95%	Yes	Ind_1	Approved on 17 August 2011	95
Inductance: self inductance, low values	Fixed inductor, variable inductor, inductance box	Direct measurement	0.1	1	mH	Frequency	100 Hz to 1 kHz	2 to 25	mH/H	2	95%	Yes	Ind_2	Approved on 17 August 2011	224
Inductance: self inductance, intermediate values	Fixed inductor, variable inductor, inductance box	Comparison to standard inductor	1	1000	mH	Inductance	1 mH, 10 mH, 100 mH and 1000 mH	0.14 to 0.17	mH/H	2	95%	Yes	Ind_1	Approved on 17 August 2011	97
						Frequency	100 Hz to 1 kHz								
Inductance: self inductance, intermediate values	Fixed inductor, variable inductor, inductance box	Direct measurement	1	1000	mH	Frequency	100 Hz to 1 kHz	1 to 4	mH/H	2	95%	Yes	Ind_2	Approved on 17 August 2011	98
Inductance: self inductance, high values	Fixed inductor, variable inductor, inductance box	Comparison to standard inductor	10	10	H	Frequency	100 Hz to 1 kHz	0.14 to 0.17	mH/H	2	95%	Yes	Ind_1	Approved on 17 August 2011	99
Inductance: self inductance, high values	Fixed inductor, variable inductor, inductance box	Direct measurement	1	10	H	Frequency	100 Hz to 1 kHz	1	mH/H	2	95%	Yes		Approved on 17 August 2011	100

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Calibration or Measurement Services			Measurand Level or Range			Measurement Conditions/Independent variables		Expanded Uncertainty							
Quantity	**Instrument or artifact**	**Instrument Type or Method**	**Minimum value**	**Maximum value**	**units**	**Parameter**	**Specifications**	**Value**	**Units**	**Coverage Factor**	**Level of Confidence**	**Is the expanded uncertainty a relative one?**	**Uncertainty matrix**	**Comments**	**NMI Service Identifier**
Inductance: meters	Inductance bridge, LCR meter	Direct measurement	0.1	10000	mH	Inductance	0.0001 H, 0.001 H, 0.01 H, 0.1 H, 1 H and 10 H	0.08 to 0.2	mH/H	2	95%	Yes	Ind_3	Approved on 17 August 2011	101
						Frequency	100 Hz to 1 kHz								
Inductance: meters	Inductance bridge, LCR meter	Comparison to reference LCR meter	0.1	10000	mH	Frequency	100 Hz to 1 kHz	1 to 25	mH/H	2	95%	Yes	Ind_2	Approved on 17 August 2011	102
AC voltage: AC-DC transfer difference at low voltages	Thermal converter, AC-DC transfer standard	Comparison with reference standard	0.002	0.5	V	Frequency	10 Hz to 1 MHz	0.025 to 1.4	mV/V	2	95%	Yes	AV_DV	Approved on 17 August 2011	225
AC voltage: AC-DC transfer difference at medium voltages	Thermal converter, AC-DC transfer standard	Comparison with reference standard	0.5	5	V	Frequency	10 Hz to 1 MHz	0.021 to 0.5	mV/V	2	95%	Yes	AV_DV	Approved on 17 August 2011	103
AC voltage: AC-DC transfer difference at higher voltages	Thermal converter, AC-DC transfer standard	Comparison with reference standard	5	1000	V	Frequency	10 Hz to 1 MHz	0.021 to 0.5	mV/V	2	95%	Yes	AV_DV	Approved on 17 August 2011	104
AC voltage up to 1100 V: sources	Multifunction calibrator	Comparison with reference standard	0.002	1000	V	Frequency	10 Hz to 1 MHz	0.028 to 7.8	mV/V	2	95%	Yes	AV	Approved on 17 August 2011	105
AC voltage up to 1100 V: meters	AC voltmeter, multimeter, multifunction transfer standard	Comparison with reference standard	0.002	1000	V	Frequency	10 Hz to 1 MHz	0.028 to 7.8	mV/V	2	95%	Yes	AV	Approved on 17 August 2011	106
AC current up to 100 A: sources	Multifunction calibrator, transconductance amplifier	Direct measurement with current shunts	0.0001	20	A	Frequency	10 Hz to 30 kHz	30 to 360	µA/A	2	95%	Yes	AC_1	Approved on 17 August 2011	107
AC current up to 100 A: meters	AC ammeter, multimeter, multifunction transfer standard	Direct measurement with current shunts	0.0001	20	A	Frequency	10 Hz to 30 kHz	30 to 360	µA/A	2	95%	Yes	AC_2	Approved on 17 August 2011	108
AC power and energy: single phase (*f* <= 400 Hz), apparent power	Power converter, power meter, wattmeter	Direct voltage sampling	0.0001	3500	VA	Frequency	45 Hz to 65 Hz	25	µVA/VA	2	95%	Yes		Approved on 17 August 2011	109
						Voltage	0.1 V to 700 V								

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Calibration or Measurement Services			Measurand Level or Range			Measurement Conditions/Independent variables		Expanded Uncertainty							
Quantity	**Instrument or artifact**	**Instrument Type or Method**	**Minimum value**	**Maximum value**	**units**	**Parameter**	**Specifications**	**Value**	**Units**	**Coverage Factor**	**Level of Confidence**	**Is the expanded uncertainty a relative one?**	**Uncertainty matrix**	**Comments**	**NMI Service Identifier**
						Current	1 mA to 20 mA, 1 A to 5 A								
AC power and energy: single phase (f <= 400 Hz), apparent power	Power converter, power meter, wattmeter	Direct voltage sampling	0.002	35000	VA	Frequency	45 Hz to 65 Hz	200	µVA/VA	2	95%	Yes		Approved on 17 August 2011	110
						Voltage	0.1 V to 700 V								
						Current	20 mA to 1 A, 5 A to 50 A								
AC power and energy: single phase (f <= 400 Hz), active power	Power converter, power meter, wattmeter: angle φ	Direct voltage sampling	0	3500	W	Power factor	1 to 0, inductive or capacitive	25	µW/VA	2	95%	Yes		Approved on 17 August 2011	112
						Voltage	0.1 V to 700 V								
						Current	1 mA to 20 mA, 1 A to 5 A								
						Frequency	45 Hz to 65 Hz								
AC power and energy: single phase (f <= 400 Hz), active power	Power converter, power meter, wattmeter: angle φ	Direct voltage sampling	0.0016	35000	W	Power factor	0.8 to 1, inductive or capacitive	250	µW/VA	2	95%	Yes		Approved on 17 August 2011	113
						Voltage	0.1 V to 700 V								
						Current	20 mA to 1 A, 5 A to 50 A								
						Frequency	45 Hz to 65 Hz								
AC power and energy: single phase (f <= 400 Hz), active power	Power converter, power meter, wattmeter: angle φ	Direct voltage sampling	0.001	28000	W	Power factor	0.5 to 0.8, inductive or capacitive	475	µW/VA	2	95%	Yes		Approved on 17 August 2011	114
						Voltage	0.1 V to 700 V								
						Current	20 mA to 1 A, 5 A to 50 A								
						Frequency	45 Hz to 65 Hz								
AC power and energy: single phase (f <= 400 Hz), active power	Power converter, power meter, wattmeter: angle φ	Direct voltage sampling	0	17500	W	Power factor	0 to 0.5, inductive or capacitive	800	µW/VA	2	95%	Yes		Approved on 17 August 2011	235
						Voltage	0.1 V to 700 V								

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Calibration or Measurement Services			Measurand Level or Range			Measurement Conditions/Independent variables		Expanded Uncertainty							
Quantity	**Instrument or artifact**	**Instrument Type or Method**	**Minimum value**	**Maximum value**	**units**	**Parameter**	**Specifications**	**Value**	**Units**	**Coverage Factor**	**Level of Confidence**	**Is the expanded uncertainty a relative one?**	**Uncertainty matrix**	**Comments**	**NMI Service Identifier**
						Current	20 mA to 1 A, 5 A to 50 A								
						Frequency	45 Hz to 65 Hz								
AC power and energy: single phase (*f* <= 400 Hz), reactive power	Power converter, power meter, wattmeter: angle *φ*	Direct voltage sampling	0.0001	3500	var	Power factor	0 to 1, inductive or capacitive	25	µvar/VA	2	95%	Yes		Approved on 17 August 2011	115
						Voltage	0.1 V to 700 V								
						Current	1 mA to 20 mA, 1 A to 5 A								
						Frequency	45 Hz to 65 Hz								
AC power and energy: single phase (*f* <= 400 Hz), reactive power	Power converter, power meter, wattmeter: angle *φ*	Direct voltage sampling	0	35000	var	Power factor	0 to 1, inductive or capacitive	320	µvar/VA	2	95%	Yes		Approved on 17 August 2011	116
						Voltage	0.1 V to 700 V								
						Current	20 mA to 1 A, 5 A to 50 A								
						Frequency	45 Hz to 65 Hz								
High DC voltage: high voltage sources	DC kilovolt source	Measurement with resistive divider	1	10	kV			0.3	mV/V	2	95%	Yes		Approved on 17 August 2011	118
High DC voltage: high voltage meters	DC kilovoltmeter, dedicated set-up for high voltage	Measurement with resistive divider	1	10	kV			0.3	mV/V	2	95%	Yes		Approved on 17 August 2011	119
DC current sources: high values	Current generator, multifunction calibrator	Zero flux method	100	500	A			30	µA/A	2	95%	Yes		Approved on 17 August 2011	235
DC current meters: high values	Current generator, multifunction calibrator	Zero flux method	100	500	A			30	µA/A	2	95%	Yes		Approved on 17 August 2011	236
RF power: absolute power on coaxials	Reference source	Reference power sensor	1	1	mW	Frequency	50 MHz	5	mW/W	2	95%	Yes		Approved on 17 August 2011	120
RF power: absolute power on coaxials	Power source, power meter	Power sensor	3E-10	25	W	Frequency	DC to 18 GHz	10 to 60	mW/W	2	95%	Yes	RF_P_1	Approved on 17 August 2011	121
						Connector	type N, 50 Ω								
						Bandwidth	wideband								

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Quantity	**Instrument or artifact**	**Instrument Type or Method**	**Minimum value**	**Maximum value**	**units**	**Parameter**	**Specifications**	**Value**	**Units**	**Coverage Factor**	**Level of Confidence**	**Is the expanded uncertainty a relative one?**	**Uncertainty matrix**	**Comments**	**NMI Service Identifier**
RF power: absolute power on coaxials	Power source, power meter	Thermocouple power sensor	0.001	100	mW	Frequency	DC to 26.5 GHz	10 to 40	mW/W	2	95%	Yes	RF_P_2	Approved on 17 August 2011	122
						Connector	PC-3.5								
						Bandwidth	wideband								
RF power: absolute power on coaxials	Power source, power meter	Comparison with reference measuring receiver	0.2	100	fW	Frequency	2.5 MHz to 1.3 GHz	50	mW/W	2	95%	Yes		Approved on 17 August 2011	123
						Connector	type N, 50 Ω								
						Bandwidth	approximatively 200 Hz								
RF power: absolute power on coaxials	Power source, power meter	Comparison with reference measuring receiver	1E-10	1	mW	Frequency	2.5 MHz to 1.3 GHz	10 to 40	mW/W	2	95%	Yes		Approved on 17 August 2011	124
						Connector	type N, 50 Ω								
						Bandwidth	approximatively 200 Hz								
RF power: absolute power on coaxials	Power meter: linearity	Comparison with reference attenuator	1E-10	100	mW	Frequency	10 MHz to 18 GHz	3 to 18	mW/W	2	95%	Yes		Approved on 17 August 2011	226
						Connector	type N, 50 Ω; PC-7; PC-3.5								
RF power: calibration factor on coaxials	Thermistor, power sensor	Comparison with reference sensor	0.7	1.1		Frequency	DC to 1 GHz	0.008		2	95%	No		Approved on 17 August 2011	125
						Power	1 mW to 10 mW								
						Connector	type N, 50 Ω; PC-7; PC-3.5								
RF power: calibration factor on coaxials	Thermistor, power sensor	Comparison with reference sensor	0.7	1.1		Frequency	1 GHz to 4 GHz	0.010		2	95%	No		Approved on 17 August 2011	126
						Power	1 mW to 10 mW								
						Connector	type N, 50 Ω; PC-7; PC-3.5								

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Quantity	**Instrument or artifact**	**Instrument Type or Method**	**Minimum value**	**Maximum value**	**units**	**Parameter**	**Specifications**	**Value**	**Units**	**Coverage Factor**	**Level of Confidence**	**Is the expanded uncertainty a relative one?**	**Uncertainty matrix**	**Comments**	**NMI Service Identifier**
RF power: calibration factor on coaxials	Thermistor, power sensor	Comparison with reference sensor	0.7	1.1		Frequency	4 GHz to 10 GHz	0.013		2	95%	No		Approved on 17 August 2011	127
						Power	1 mW to 10 mW								
						Connector	type N, 50 Ω; PC-7; PC-3.5								
RF power: calibration factor on coaxials	Thermistor, power sensor	Comparison with reference sensor	0.7	1.1		Frequency	10 GHz to 18 GHz	0.015		2	95%	No		Approved on 17 August 2011	128
						Power	1 mW to 10 mW								
						Connector	type N, 50 Ω; PC-7; PC-3.5								
RF power: calibration factor on coaxials	Thermistor, power sensor	Comparison with reference sensor	0.7	1.1		Frequency	18 GHz to 26.5 GHz	0.02		2	95%	No		Approved on 17 August 2011	130
						Power	1 mW to 10 mW								
						Connector	PC-3.5								
Scalar RF reflection coefficient: on coaxials	Passive device	Scalar network analyzer	0	0.1		Frequency	10 MHz to 18 GHz	0.010 to 0.020		2	95%	No		Approved on 17 August 2011	131
						Connector	type N, 50 Ω; PC-7								
Scalar RF reflection coefficient: on coaxials	Passive device	Scalar network analyzer	0.1	1		Frequency	10 MHz to 18 GHz	0.020 to 0.1		2	95%	No		Approved on 17 August 2011	132
						Connector	type N, 50 Ω; PC-7								
Scalar RF reflection coefficient: on coaxials	Passive device	Scalar network analyzer	0	0.1		Frequency	10 MHz to 26.5 GHz	0.010 to 0.025		2	95%	No		Approved on 17 August 2011	133
						Connector	type PC-3.5								

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Quantity	**Instrument or artifact**	**Instrument Type or Method**	**Minimum value**	**Maximum value**	**units**	**Parameter**	**Specifications**	**Value**	**Units**	**Coverage Factor**	**Level of Confidence**	**Is the expanded uncertainty a relative one?**	**Uncertainty matrix**	**Comments**	**NMI Service Identifier**
Scalar RF reflection coefficient: on coaxials	Passive device	Scalar network analyzer	0.1	1		Frequency	10 MHz to 26.5 GHz	0.025 to 0.150		2	95%	No		Approved on 17 August 2011	134
						Connector	type PC-3.5								
Scalar RF reflection coefficient: on coaxials	Passive device	Scalar network analyzer	0	0.1		Frequency	10 MHz to 3 GHz	0.015 to 0.020		2	95%	No		Approved on 17 August 2011	227
						Connector	type N, 75 Ω								
Scalar RF reflection coefficient: on coaxials	Passive device	Scalar network analyzer	0.1	1		Frequency	10 MHz to 3 GHz	0.020 to 0.150		2	95%	No		Approved on 17 August 2011	228
						Connector	type N, 75 Ω								
Scalar RF attenuation: on coaxials	Passive device	Broadband power ratio	0	30	dB	Frequency	DC to 26.5 GHz	0.03 to 0.12	dB	2	95%	No		Approved on 17 August 2011	135
						Connector	type N, 50 Ω; PC-3.5								
Scalar RF attenuation: on coaxials	Passive device	Broadband power ratio	30	60	dB	Frequency	10 MHz to 18 GHz	0.08 to 0.20	dB	2	95%	No		Approved on 17 August 2011	136
						Connector	type N, 50 Ω								
Scalar RF attenuation: on coaxials	Passive device	Comparison with reference measuring receiver	0	100	dB	Frequency	2.5 MHz to 1.3 GHz	0.02 to 0.08	dB	2	95%	No		Approved on 17 August 2011	137
						Connector	type N, 50 Ω								
Scalar RF attenuation: on coaxials	Passive device	Comparison with reference measuring receiver	100	120	dB	Frequency	2.5 MHz to 1.3 GHz	0.08 to 0.20	dB	2	95%	No		Approved on 17 August 2011	138
						Connector	type N, 50 Ω								
Scalar RF reflection and attenuation: directivity	Directional bridge	Reference load measurement	0	0.1		Frequency	10 MHz to 2 GHz	0.003		2	95%	No		Approved on 17 August 2011	229
						Connector	type N, 50 Ω; PC-7; PC-3.5								

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Quantity	**Instrument or artifact**	**Instrument Type or Method**	**Minimum value**	**Maximum value**	**units**	**Parameter**	**Specifications**	**Value**	**Units**	**Coverage Factor**	**Level of Confidence**	**Is the expanded uncertainty a relative one?**	**Uncertainty matrix**	**Comments**	**NMI Service Identifier**
Scalar RF reflection and attenuation: directivity	Directional bridge	Ripple extraction	0	0.1		Frequency	2 GHz to 18 GHz	0.003 to 0.020		2	95%	No		Approved on 17 August 2011	139
						Connector	type N, 50 Ω; PC-7								
Scalar RF reflection and attenuation: directivity	Directional bridge	Ripple extraction	0	0.1		Frequency	2 GHz to 26.5 GHz	0.003 to 0.020		2	95%	No		Approved on 17 August 2011	140
						Connector	type PC-3.5								
Scalar RF reflection and attenuation: directivity	Directional bridge	Reference load measurement	0	0.1		Frequency	10 MHz to 3 GHz	0.005		2	95%	No		Approved on 17 August 2011	230
						Connector	type N, 75 Ω								
Signal and pulse characteristics: pulse amplitude	Oscilloscope, pulse and function generator: pulse amplitude *U*	DC voltage sampling	0.2	2	mV	Frequency	DC or square wave at 1 kHz	(1E-03 + 1E-03*U*), *U* in mV	mV	2	95%	No		Approved on 17 August 2011	141
Signal and pulse characteristics: pulse amplitude	Oscilloscope, pulse and function generator	DC voltage sampling	0.002	100	V	Frequency	DC or square wave at 1 kHz	0.5	mV/V	2	95%	Yes		Approved on 17 August 2011	143
Signal and pulse characteristics: pulse amplitude	Oscilloscope, pulse and function generator	Measurement with sampling oscilloscope	-1.5	1.5	V	Pulse repetition frequency	< 1 GHz	2 to 17	mV	2	95%	No		Approved on 17 August 2011	144
Signal and pulse characteristics: pulse time parameters: time interval	Oscilloscope, pulse and function generator: time interval absolute *t*	Measurement with sampling oscilloscope	10	100	ps			(1 + 15E-03*t*), *t* in ps	ps	2	95%	No		Approved on 17 August 2011	145
Signal and pulse characteristics: pulse time parameters: time interval	Oscilloscope, pulse and function generator: time interval absolute *t*	Measurement with sampling oscilloscope	0.1	1	ns			(2 + 6E-03*t*), *t* in ps	ps	2	95%	No		Approved on 17 August 2011	146

Electricity and Magnetism, Slovenia, MIRS/SIQ/Metrology (MIRS/Slovenian Institute of Quality and Metrology/Metrology)

Calibration or Measurement Services			Measurand Level or Range			Measurement Conditions/Independent variables		Expanded Uncertainty							
Quantity	**Instrument or artifact**	**Instrument Type or Method**	**Minimum value**	**Maximum value**	**units**	**Parameter**	**Specifications**	**Value**	**Units**	**Coverage Factor**	**Level of Confidence**	**Is the expanded uncertainty a relative one?**	**Uncertainty matrix**	**Comments**	**NMI Service Identifier**
Signal and pulse characteristics: pulse time parameters: time interval	Oscilloscope, pulse and function generator: time interval absolute *t*	Measurement with sampling oscilloscope	1	1000	ns			(8 + 1E-04*t*), *t* in ps	ps	2	95%	No		Approved on 17 August 2011	147
Signal and pulse characteristics: pulse time parameters: time interval	Oscilloscope, pulse and function generator: time interval absolute *t*	Measurement with time interval counter	-1	5	s			(0.1 + 1E-09*t*), *t* in ns	ns	2	95%	No		Approved on 17 August 2011	148
Signal and pulse characteristics: pulse time parameters: time interval	Oscilloscope, pulse and function generator: time interval absolute *t*	Measurement with time interval counter	5	1E+05	s			(0.6 + 1E-09*t*), *t* in ns	ns	2	95%	No		Approved on 17 August 2011	231
Signal and pulse characteristics: pulse time parameters: risetime	Oscilloscope, pulse and function generator: risetime *tr*	Measurement with sampling oscilloscope	20	100	ps	Pulse repetition frequency	up to 100 kHz	(1 + 0.05*tr*), *tr* in ps	ps	2	95%	No		Approved on 17 August 2011	149
Signal and pulse characteristics: pulse time parameters: risetime	Oscilloscope, pulse and function generator: risetime *tr*	Measurement with sampling oscilloscope	1E-10	10	s	Pulse repetition frequency	up to 100 kHz	50	ms/s	2	95%	Yes		Approved on 17 August 2011	232
Signal and pulse characteristics: amplitude modulation	Signal generator, spectrum analyser, modulation meter: modulation index *m*	Amplitude measurement on sampling osciloscope	0.05	0.95		Carrier frequency	0.15 MHz to 26.5 GHz	(1E-03 + 1.5E-02*m*), *m* without units		2	95%	No		Approved on 17 August 2011	150
						Modulating frequency	0.05 kHz to 100 kHz								

Electricity and Magnetism, Slovenia, MIRS/SIQ/Metrology (MIRS/Slovenian Institute of Quality and Metrology/Metrology)

Calibration or Measurement Services			Measurand Level or Range			Measurement Conditions/Independent variables		Expanded Uncertainty							
Quantity	**Instrument or artifact**	**Instrument Type or Method**	**Minimum value**	**Maximum value**	**units**	**Parameter**	**Specifications**	**Value**	**Units**	**Coverage Factor**	**Level of Confidence**	**Is the expanded uncertainty a relative one?**	**Uncertainty matrix**	**Comments**	**NMI Service Identifier**
Signal and pulse characteristics: frequency modulation	Signal generator, spectrum analyser, modulation meter, jitter meter	Comparison by means of measuring receiver	1	200	kHz	Carrier frequency	0.15 MHz to 10 MHz	20	mHz/Hz	2	95%	Yes		Approved on 17 August 2011	154
						Modulating frequency	0.02 kHz to 10 kHz								
Signal and pulse characteristics: frequency modulation	Signal generator, spectrum analyser, modulation meter, jitter meter	Comparison by means of measuring receiver	1	200	kHz	Carrier frequency	10 MHz to 1300 MHz	10 to 50	mHz/Hz	2	95%	Yes		Approved on 17 August 2011	155
						Modulating frequency	0.02 kHz to 200 kHz								
Signal and pulse characteristics: frequency modulation	Signal generator, spectrum analyser, modulation meter, jitter meter	Bessel zero measurement	1	200	kHz	Carrier frequency	0.15 MHz to 26.5 GHz	5 to 10	mHz/Hz	2	95%	Yes		Only possible for combinations of FM deviations and modulation frequencies at which Bessel zeros occur Approved on 17 August 2011	156
						Modulating frequency	0.02 kHz to 200 kHz								
Signal and pulse characteristics: distortion	Signal generator, spectrum analyzer, distortion meter	AC voltage ratio	0	0.1		Frequency	20 Hz to 100 kHz	0.00007 to 0.027		2	95%	No			157
Signal and pulse characteristics: harmonic content	Signal generator, spectrum analyzer	Spectrum analyzer	0	70	dBc	Frequency of highest harmonic	up to 26.5 GHz	2 to 3	dB	2	95%	No			158
RF voltage: RF-DC transfer difference	Thermal voltage converter, AC-DC current standard	RF-DC voltage transfer	0.8	1.2	V	Frequency	1 MHz to 1 GHz	1 to 25	mV/V	2	95%	Yes	RF_V_1	Approved on 17 August 2011	159

Electricity and Magnetism, Slovenia, MIRS/SIQ/Metrology (MIRS/Slovenian Institute of Quality and Metrology/Metrology)

Calibration or Measurement Services			Measurand Level or Range			Measurement Conditions/Independent variables		Expanded Uncertainty							
Quantity	**Instrument or artifact**	**Instrument Type or Method**	**Minimum value**	**Maximum value**	**units**	**Parameter**	**Specifications**	**Value**	**Units**	**Coverage Factor**	**Level of Confidence**	**Is the expanded uncertainty a relative one?**	**Uncertainty matrix**	**Comments**	**NMI Service Identifier**
						Connector	N, 50 Ω; N, 200 Ω; BNC, 50 Ω; BNC, 200 Ω								
RF voltage sources	RF generator: matched output voltage	Thermocouple power sensor	0.02	2.2	V	Frequency	0.1 MHz to 2 GHz	4.5 to 5.5	mV/V	2	95%	Yes	RF_V_2	Reflection coefficient of the measured generator shall be less than 0.1 Approved on 17 August 2011	160
						Connector	N, 50 Ω								
RF voltage meters	RF voltmeter: incident voltage	Power splitter and thermocouple power sensor	0.02	2.2	V	Frequency	1 MHz to 2 GHz	5 to 6	mV/V	2	95%	Yes	RF_V_3	Reflection coefficient of the RF voltmeter shall be less than 0.05 Approved on 17 August 2011	161
						Connector	N, 50 Ω								
RF voltage meters	RF voltmeter: input voltage	Power splitter and thermocouple power sensor	0.02	2.2	V	Frequency	1 MHz to 2 GHz	6 to 7.5	mV/V	2	95%	Yes	RF_V_4	Reflection coefficient of the RF voltmeter shall be less than 0.05 Approved on 17 August 2011	162
						Connector	N, 50 Ω								

Electricity and Magnetism, Slovenia, MIRS/SIQ/Metrology (MIRS/Slovenian Institute of Quality and Metrology/Metrology)

Uncertainty table: Cap_1

Capacitance: low loss capacitors. Capacitance: dielectric capacitors. Capacitance meters.

MIRS/SIQ/Metrology Internal Identifiers: 73, 75, 80, 195, 196, 197, 94, 214, 215 and 216

	100 Hz to 1 kHz	> 1 kHz to 50 kHz	> 50 kHz to 100 kHz	300 kHz	500 kHz	1 MHz	3 MHz	5 MHz	10 MHz
1 pF	0.03	0.07	0.07	0.08	0.08	0.12	0.51	1.51	5.1
10 pF	0.015	0.07	0.07	0.08	0.08	0.12	0.26	0.41	1.1
100 pF	0.015	0.07	0.07	0.08	0.08	0.12	0.26	0.41	0.91
1000 pF	0.015	0.07	0.07	0.08	0.08	0.14	0.28	0.42	0.91
10 nF	0.015	0.12	0.21	0.31	0.31	0.51	-	-	-
100 nF	0.02	0.21	0.21	0.41	0.51	0.51	-	-	-
1000 nF	0.1	0.31	0.31	-	-	-	-	-	-
10 µF	0.1	0.31	0.41	-	-	-	-	-	-

The expanded uncertainties given in this table are expressed in mF/F

Electricity and Magnetism, Slovenia, MIRS/SIQ/Metrology (MIRS/Slovenian Institute of Quality and Metrology/Metrology)

Uncertainty table: Cap_2

Capacitance: dielectric capacitors. Capacitance: transformed capacitors.

MIRS/SIQ/Metrology Internal Identifiers: 88 and 89

	100 Hz	120 Hz	1 kHz
0.1 mF	0.7	0.7	1
1 mF	2	2	5
10 mF	5	5	-
100 mF	10	-	-
1 F	20	-	-

The expanded uncertainties given in this table are expressed in mF/F

Electricity and Magnetism, Slovenia, MIRS/SIQ/Metrology (MIRS/Slovenian Institute of Quality and Metrology/Metrology)

Uncertainty table: Cap_3

Capacitance: low loss capacitors. Capacitance meters.

MIRS/SIQ/Metrology Internal Identifiers: 194, 218 and 219

	20 Hz to 120 Hz	> 120 Hz to 1 kHz	> 1 kHz to 100 kHz	> 100 kHz to 1 MHz	> 1 MHz to 5 MHz	> 5 MHz to 10 MHz
1 pF	-	-	0.001	0.001	0.01	0.02
10 pF	-	0.001	0.001	0.001	0.003	0.01
100 pF	0.0025	0.001	0.001	0.001	0.003	0.01
2000 pF	0.001	0.001	0.001	0.001	0.005	0.03

The expanded uncertainties given in this table are expressed in F/F

Electricity and Magnetism, Slovenia, MIRS/SIQ/Metrology (MIRS/Slovenian Institute of Quality and Metrology/Metrology)

Uncertainty table: Cap_4

Capacitance meters.

MIRS/SIQ/Metrology Internal Identifiers: 93 and 213

	100 Hz	120 Hz	1 kHz
0.1 mF	2	2	5
1 mF	3	3	5
10 mF	3	3	5
100 mF	3	3	-
1 F	10	-	-

The expanded uncertainties given in this table are expressed in mF/F

Electricity and Magnetism, Slovenia, MIRS/SIQ/Metrology (MIRS/Slovenian Institute of Quality and Metrology/Metrology)

Uncertainty table: Ind_1

Self inductance: low, intermediate and high values.

MIRS/SIQ/Metrology Internal Identifiers: 95, 97 and 99

	100 Hz	100 Hz to 1 kHz	1 kHz
100 µH	0.22	0.23	0.17
1 mH	0.16	0.17	0.14
10 mH	0.16	0.17	0.14
100 mH	0.16	0.17	0.14
1 H	0.16	0.17	0.14
10 H	0.16	0.17	0.14

The expanded uncertainties given in this table are expressed in mH/H

Electricity and Magnetism, Slovenia, MIRS/SIQ/Metrology (MIRS/Slovenian Institute of Quality and Metrology/Metrology)

Uncertainty table: Ind_2

Self inductance: low and intermediate. Meters.

MIRS/SIQ/Metrology Internal Identifiers: 224, 98 and 102

	100 Hz	100 Hz to 1 kHz	1 kHz
100 µH	25	15	4
1 mH	4	3	2
10 mH	2	2	1
100 mH	1	1	1
1 H	1	1	1
10 H	1	1	1

The expanded uncertainties given in this table are expressed in mH/H

Electricity and Magnetism, Slovenia, MIRS/SIQ/Metrology (MIRS/Slovenian Institute of Quality and Metrology/Metrology)

Uncertainty table: Ind_3

Inductance meters.

MIRS/SIQ/Metrology Internal Identifier: 101

	100 Hz	100 Hz to 1 kHz	1 kHz
100 µH	0.18	0.2	0.1
1 mH	0.13	0.15	0.08
10 mH	0.13	0.15	0.08
100 mH	0.13	0.15	0.08
1 H	0.13	0.15	0.08
10 H	0.13	0.15	0.08

The expanded uncertainties given in this table are expressed in mH/H

Electricity and Magnetism, Slovenia, MIRS/SIQ/Metrology (MIRS/Slovenian Institute of Quality and Metrology/Metrology)

Uncertainty table: AV_DV

AC voltage: AC-DC transfer difference at low, medium and higher voltages

MIRS/SIQ/Metrology Internal Identifiers: 225, 103 and 104

	10 Hz	20 Hz	45 Hz	110 Hz	1 kHz	10 kHz	20 kHz	50 kHz	100 kHz	200 kHz	500 kHz	700 kHz	1 MHz
0.002 V	0.4	0.4	0.35	0.35	0.35	0.35	0.35	0.35	0.4	0.45	0.6	1	1.4
0.005 V	0.2	0.2	0.15	0.15	0.15	0.15	0.15	0.15	0.2	0.25	0.4	0.8	1
0.02 V	0.08	0.07	0.06	0.05	0.05	0.05	0.05	0.06	0.08	0.15	0.28	0.5	0.7
0.05 V	0.08	0.06	0.04	0.035	0.035	0.035	0.035	0.05	0.06	0.1	0.18	0.38	0.5
0.1 V	0.065	0.05	0.035	0.027	0.027	0.027	0.027	0.04	0.05	0.1	0.18	0.38	0.5
0.2 V	0.06	0.04	0.035	0.025	0.025	0.025	0.025	0.04	0.05	0.09	0.16	0.38	0.5
0.6 V	0.05	0.04	0.03	0.021	0.021	0.021	0.021	0.03	0.05	0.08	0.16	0.38	0.5
1 V	0.05	0.04	0.03	0.021	0.021	0.021	0.021	0.03	0.05	0.08	0.16	0.38	0.5
2 V	0.05	0.04	0.03	0.021	0.021	0.021	0.021	0.03	0.05	0.08	0.16	0.38	0.5
6 V	0.05	0.04	0.03	0.021	0.021	0.021	0.021	0.03	0.05	0.08	0.16	0.38	0.5
10 V	0.05	0.04	0.03	0.021	0.021	0.021	0.021	0.03	0.05	0.08	0.16	0.38	0.5
20 V	0.05	0.04	0.03	0.021	0.021	0.021	0.021	0.03	0.05	0.08	-	-	-
60 V	0.05	0.04	0.03	0.022	0.022	0.022	0.022	0.035	0.05	0.08	-	-	-
100 V	0.05	0.04	0.03	0.025	0.025	0.025	0.025	0.04	0.06	0.1	-	-	-
200 V	0.05	0.04	0.03	0.025	0.025	0.025	0.025	0.04	0.06	-	-	-	-
600 V	0.05	0.05	0.04	0.03	0.03	0.03	0.03	0.05	0.15	-	-	-	-
1000 V	0.05	0.05	0.04	0.03	0.03	0.03	0.04	0.05	0.15	-	-	-	-

The expanded uncertainties given in this table are expressed in mV/V

Electricity and Magnetism, Slovenia, MIRS/SIQ/Metrology (MIRS/Slovenian Institute of Quality and Metrology/Metrology)

Uncertainty table: AV

AC voltage up to 1000 V: sources and meters.

MIRS/SIQ/Metrology Internal Identifiers: 105 and 106

	10 Hz to 20 Hz	20 Hz to 40 Hz	40 Hz to 20 kHz	20 kHz to 50 kHz	50 kHz to 100 kHz	100 kHz to 200 kHz	200 kHz to 500 kHz	500 kHz to 1 MHz
2 mV to 5 mV	1.1	1	1	1.4	1.7	2.7	5.5	7.8
5 mV to 10 mV	0.5	0.41	0.41	0.6	0.7	1.1	2.4	4.3
10 mV to 20 mV	0.25	0.2	0.2	0.3	0.4	0.6	1.4	2.7
20 mV to 60 mV	0.12	0.08	0.08	0.1	0.15	0.25	0.55	1.4
60 mV to 200 mV	0.1	0.06	0.05	0.05	0.09	0.18	0.4	1.2
200 mV to 2 V	0.08	0.04	0.028	0.03	0.065	0.14	0.28	1.1
2 V to 20 V	0.08	0.04	0.028	0.035	0.08	0.18	0.45	1.4
20 V to 200 V	0.08	0.04	0.033	0.045	0.09	-	-	-
200 V to 1000 V	0.08	0.05	0.04	0.13	0.6	-	-	-

The expanded uncertainties given in this table are expressed in mV/V

Electricity and Magnetism, Slovenia, MIRS/SIQ/Metrology (MIRS/Slovenian Institute of Quality and Metrology/Metrology)

Uncertainty table: AC_1

AC current up to 100 A: sources, MIRS/SIQ/Metrology Internal Identifier: 107

	10 Hz to 20 Hz	20 Hz to 40 Hz	40 Hz to 1 kHz	1 kHz to 5 kHz	5 kHz to 10 kHz	10 kHz to 30 kHz
0.1 mA to 1 mA	-	120	120	160	360	-
1 mA to 1 A	55	45	30	30	30	35
1 A to 5 A	60	50	35	35	35	35
5 A to 10 A	60	55	40	40	40	55
10 A to 20 A	70	65	55	65	65	80

The expanded uncertainties given in this table are expressed in μA/A

Electricity and Magnetism, Slovenia, MIRS/SIQ/Metrology (MIRS/Slovenian Institute of Quality and Metrology/Metrology)

Uncertainty table: AC_2

AC current up to 100 A: meters, MIRS/SIQ/Metrology Internal Identifier: 108

	10 Hz to 20 Hz	20 Hz to 40 Hz	40 Hz to 1 kHz	1 kHz to 5 kHz	5 kHz to 10 kHz	10 kHz to 30 kHz
0.1 mA to 1 mA	-	120	120	160	360	-
1 mA to 1 A	55	45	30	30	30	35
1 A to 5 A	60	50	35	35	35	35
5 A to 10 A	60	55	40	40	40	55
10 A to 20 A	70	65	55	65	65	80

The expanded uncertainties given in this table are expressed in μA/A

Electricity and Magnetism, Slovenia, MIRS/SIQ/Metrology (MIRS/Slovenian Institute of Quality and Metrology/Metrology)

Uncertainty table: RF_P_1

RF power: absolute power on coaxials, MIRS/SIQ/Metrology Internal Identifier: 121

	DC to 100 kHz	100 kHz to 10 MHz	10 MHz to 1 GHz	1 GHz to 4 GHz	4 GHz to 8 GHz	8 GHz to 18 GHz
0.3 nW to 100 nW	-	-	40	50	50	50
100 nW to 10 µW	-	-	30	40	50	50
10 µW to 1 mW	20	10	10	20	30	40
1 mW to 10 mW	20	10	10	20	30	40
10 mW to 100 mW	20	10	10	20	30	40
0.1 W to 3 W	-	20	30	40	50	60
3 W to 25 W	-	20	30	40	-	-

The expanded uncertainties given in this table are expressed in mW/W

Electricity and Magnetism, Slovenia, MIRS/SIQ/Metrology (MIRS/Slovenian Institute of Quality and Metrology/Metrology)

Uncertainty table: RF_P_2

RF power: absolute power on coaxials, MIRS/SIQ/Metrology Internal Identifier: 122

	DC to 1 GHz	1 GHz to 4 GHz	4 GHz to 8 GHz	8 GHz to 18 GHz	18 GHz to 26.5 GHz
1 µW to 10 µW	20	25	30	35	40
10 µW to 100 µW	15	18	25	28	35
100 µW to 1 mW	12	18	22	25	35
1 mW to 10 mW	10	15	20	25	30
10 mW to 100 mW	12	18	22	25	35

The expanded uncertainties given in this table are expressed in mW/W

Electricity and Magnetism, Slovenia, MIRS/SIQ/Metrology (MIRS/Slovenian Institute of Quality and Metrology/Metrology)

Uncertainty table: RF_V_1

RF voltage: RF-DC transfer difference, MIRS/SIQ/Metrology Internal Identifier: 159

	1 MHz	1 MHz to 3 MHz	3 MHz to 10 MHz	10 MHz to 30 MHz	30 MHz to 50 MHz	0.05 GHz to 0.1 GHz	0.1 GHz to 0.2 GHz	0.2 GHz to 0.3 GHz	0.3 GHz to 0.5 GHz	0.5 GHz to 0.7 GHz	0.7 GHz to 1 GHz
type N, 50 Ω	1	1.1	1.3	1.6	2	4	5	5	7	8	9
type N, 200 Ω	1	1.1	1.3	1.7	2.5	4	6	8	12	16	21
BNC, 50 Ω	1	1.2	1.6	2.5	4	5	7	8	10	15	20
BNC, 200 Ω	1	1.2	1.6	2.5	4	5	7	8	10	16	25

The expanded uncertainties given in this table are expressed in mV/V

Electricity and Magnetism, Slovenia, MIRS/SIQ/Metrology (MIRS/Slovenian Institute of Quality and Metrology/Metrology)

Uncertainty table: RF_V_2

RF voltage sources, MIRS/SIQ/Metrology Internal Identifier: 160

	1 MHz to 30 MHz	0.03 GHz to 0.3 GHz	0.3 GHz to 0.5 GHz	0.5 GHz to 1.2 GHz	1.2 GHz to 2 GHz
0.05 V to 0.1 V	5.5	5.5	5.5	5.5	5.5
0.1 V to 0.2 V	5	5	5	5	5
0.2 V to 0.5 V	4.5	4.5	4.5	4.5	4.5
0.5 V to 1 V	4.5	4.5	4.5	4.5	4.5
1 V to 2.2 V	4.5	4.5	4.5	4.5	4.5

The expanded uncertainties given in this table are expressed in mV/V

Electricity and Magnetism, Slovenia, MIRS/SIQ/Metrology (MIRS/Slovenian Institute of Quality and Metrology/Metrology)

Uncertainty table: RF_V_3

RF voltage meters, MIRS/SIQ/Metrology Internal Identifier: 161

	1 MHz to 30 MHz	0.03 GHz to 0.3 GHz	0.3 GHz to 0.5 GHz	0.5 GHz to 1.2 GHz	1.2 GHz to 2 GHz
0.05 V to 0.1 V	6	6	6	6	6
0.1 V to 0.2 V	5.5	5.5	5.5	5.5	5.5
0.2 V to 0.5 V	5	5	5	5	5
0.5 V to 1 V	5	5	5	5	5
1 V to 2.2 V	5	5	5	5	5

The expanded uncertainties given in this table are expressed in mV/V

Electricity and Magnetism, Slovenia, MIRS/SIQ/Metrology (MIRS/Slovenian Institute of Quality and Metrology/Metrology)

Uncertainty table: RF_V_4

RF voltage meters, MIRS/SIQ/Metrology Internal Identifier: 162

	1 MHz to 30 MHz	0.03 GHz to 0.3 GHz	0.3 GHz to 0.5 GHz	0.5 GHz to 1.2 GHz	1.2 GHz to 2 GHz
0.05 V to 0.1 V	7.5	7.5	7.5	7.5	7.5
0.1 V to 0.2 V	7	7	7	7.5	7.5
0.2 V to 0.5 V	6	6	6	6.5	6.5
0.5 V to 1 V	6	6	6	6	6.5
1 V to 2.2 V	6	6	6	6	6.5

The expanded uncertainties given in this table are expressed in mV/V