

Accredited entity according to ČSN EN ISO/IEC 17025:2018:

Element Metech s.r.o.
 Calibration Laboratory
 Toužimská 767, Letňany, 199 00 Praha 9

CMC for the field of measured quantity: Length

Ord. number ₁	Calibrated quantity / Subject of calibration	Nominal range				Parameter(s) of the meas. quantity	Lowest expanded measurement uncertainty specified ²	Calibration principle	Calibration procedure identification ³	Work-place
		min	unit	max	unit					
1	Slide gauges	0 mm	to	300 mm		(30L+ 30) μm	Direct measurement using parallel gauge blocks	LIII-D001		
2	Micrometers	0 mm	to	100 mm		(10L+ 3) μm	Direct measurement using parallel gauge blocks	LIII-D002		

¹⁾ Asterisk at the ordinal number identifies the calibrations, which the Laboratory is qualified to carry out outside the permanent laboratory premises.

²⁾ The expanded measurement uncertainty is in accordance with ILAC-P14 and EA-4/02 M, part of CMC, and it is the lowest value of the respective uncertainty. If not stated otherwise, its coverage probability is approx. 95 %. If not stated otherwise, the uncertainty values stated without a unit are relative to the value measured. If the calibration is carried out outside the laboratory premises, the measurement uncertainty may be affected.

³⁾ If the document identifying the calibration procedure is dated, only these specific procedures are used. If the document identifying the calibration procedure is not dated, the latest edition of the specified procedure is used (including any changes).

L [m] - characteristic dimension

Accredited entity according to ČSN EN ISO/IEC 17025:2018:

Element Metech s.r.o.
 Calibration Laboratory
 Toužimská 767, Letňany, 199 00 Praha 9

CMC for the field of measured quantity: Electrical quantities

Ord. number ¹	Calibrated quantity / Subject of calibration	Nominal range				Parameter(s) of the meas. quantity	Lowest expanded measurement uncertainty specified ²	Calibration principle	Calibration procedure identification ³	Work place
		min	unit	max	unit					
1*	DC voltage / DC voltage meters	0 mV	to	220 mV		0.00075 % + 0.4 μV	Direct generation by a voltage calibrator	LIII-001		
		220 mV	to	2.2 V		0.00048 % + 0.7 μV				
		2.2 V	to	11 V		0.00044 %				
		11 V	to	22 V		0.00037 %				
		22 V	to	220 V		0.00065 %				
		220 V	to	1,000 V		0.00081 %				
2*	DC voltage / DC voltage sources	10 mV	to	120 mV		0.00075 % + 1.0 μV	Direct measurement by a standard multimeter	LIII-001		
		120 mV	to	1.2 V		0.00055 % + 1.0 μV				
		1.2 V	to	12 V		0.00055 %				
		12 V	to	120 V		0.00087 %				
		120 V	to	1 kV		0.0016 %				
3*	AC voltage / AC voltage meters	0.22 mV	to	2.2 mV	10 Hz to 40 Hz	0.079 % + 4 μV	Direct generation by a voltage calibrator	LIII-005		
					40 Hz to 20 kHz	0.044 % + 4 μV				
			20 kHz to 50 kHz	0.085 % + 4 μV						
			50 kHz to 100 kHz	0.13 % + 5 μV						
			100 kHz to 300 kHz	0.26 % + 10 μV						
			300 kHz to 500 kHz	0.28 % + 20 μV						
			500 kHz to 1 MHz	0.44 % + 20 μV						
		2.2 mV	to	22 mV	10 Hz to 20 Hz	0.038 % + 4 μV				
				20 Hz to 40 Hz	0.022 % + 4 μV					

Accredited entity according to ČSN EN ISO/IEC 17025:2018:

Element Metech s.r.o.
 Calibration Laboratory
 Toužimská 767, Letňany, 199 00 Praha 9

Ord. number ¹	Calibrated quantity / Subject of calibration	Nominal range				Parameter(s) of the meas. quantity	Lowest expanded measurement uncertainty specified ²	Calibration principle	Calibration procedure identification ³	Work place
		min	unit	max	unit					
						40 Hz to 20 kHz 20 kHz to 50 kHz 50 kHz to 100 kHz 100 kHz to 300 kHz 300 kHz to 500 kHz 500 kHz to 1 MHz	0.014 % + 4 μV 0.029 % + 4 μV 0.056 % + 5 μV 0.13 % + 10 μV 0.16 % + 20 μV 0.32 % + 20 μV			
		22 mV	to	220 mV		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 300 kHz 300 kHz to 500 kHz 500 kHz to 1 MHz	0.085 % 0.042 % 0.038 % 0.050 % 0.12 % 0.18 % 0.25 % 0.49 %			
		220 mV	to	2.2 V		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 300 kHz 300 kHz to 500 kHz 500 kHz to 1 MHz	0.050 % 0.018 % 0.0085 % 0.013 % 0.015 % 0.078 % 0.19 % 0.32 %			
		2.2 V	to	22 V		10 Hz to 20 Hz 20 Hz to 40 Hz 40 Hz to 20 kHz	0.049 % 0.018 % 0.0075 %			

Accredited entity according to ČSN EN ISO/IEC 17025:2018:

Element Metech s.r.o.
 Calibration Laboratory
 Toužimská 767, Letňany, 199 00 Praha 9

Ord. number ¹	Calibrated quantity / Subject of calibration	Nominal range				Parameter(s) of the meas. quantity	Lowest expanded measurement uncertainty specified ²	Calibration principle	Calibration procedure identification ³	Work place
		min	unit	max	unit					
						20 kHz to 50 kHz 50 kHz to 100 kHz 100 kHz to 300 kHz 300 kHz to 500 kHz 500 kHz to 1 MHz	0.013 % 0.022 % 0.060 % 0.19 % 0.33 %			
		22 V	to	220 V		10 Hz to 20 Hz 20 Hz to 40 Hz 40 Hz to 20 kHz 20 to 50 kHz 50 kHz to 100 kHz	0.049 % 0.018 % 0.0085 % 0.015 % 0.028 %			
		220 V	to	1,000 V		50 Hz to 1 kHz	0.023 %			
4*	AC voltage / AC voltage sources	1 mV	to	12 mV		1 kHz	4.5 μV	Direct measurement by a standard multimeter	LIII-005	
		12 mV	to	120 mV		1 kHz	11 μV			
		120 mV	to	12 V		40 Hz to 1 kHz 1 kHz to 20 kHz 20 kHz to 50 kHz 50 kHz to 100 kHz	0.027 % 0.030 % 0.043 % 0.096 %			
		12 V	to	120 V		40 Hz to 20 kHz 20 kHz to 50 kHz 50 kHz to 100 kHz	0.035 % 0.048 % 0.14 %			
		120 V	to	700 V		40 Hz to 20 kHz	0.075 %			

Accredited entity according to ČSN EN ISO/IEC 17025:2018:

Element Metech s.r.o.
 Calibration Laboratory
 Toužimská 767, Letňany, 199 00 Praha 9

Ord. number ¹	Calibrated quantity / Subject of calibration	Nominal range				Parameter(s) of the meas. quantity	Lowest expanded measurement uncertainty specified ²	Calibration principle	Calibration procedure identification ³	Work place
		min	unit	max	unit					
5*	DC current / DC current meters	0 μA	to	220 μA		0.0040 % + 6 nA	Direct generation by a current calibrator	LIII-004		
		220 μA	to	2.2 mA		0.0032 % + 7 nA				
		2.2 mA	to	22 mA		0.0050 %				
		22 mA	to	220 mA		0.0069 %				
		220 mA	to	2.2 A		0.013 %				
6*	DC current / DC current sources	100 nA	to	1 μA		0.47 nA	Direct measurement by a standard multimeter	LIII-004		
		1 μA	to	10 μA		0.30 nA				
		10 μA	to	100 μA		0.0097 %				
		100 μA	to	1 mA		0.0064 %				
		1 mA	to	10 mA		0.0064 %				
		10 mA	to	100 mA		0.0077 %				
		100 mA	to	1 A		0.021 %				
		1 A	to	10 A		0.029 %	Indirect measurement of voltage drop on a standard shunt			
		10 A	to	20 A		0.030 %				
		20 A	to	30 A		0.031 %				
		30 A	to	40 A		0.032 %				
		40 A	to	50 A		0.038 %				

Accredited entity according to ČSN EN ISO/IEC 17025:2018:

Element Metech s.r.o.
 Calibration Laboratory
 Toužimská 767, Letňany, 199 00 Praha 9

Ord. number ¹	Calibrated quantity / Subject of calibration	Nominal range				Parameter(s) of the meas. quantity	Lowest expanded measurement uncertainty specified ²	Calibration principle	Calibration procedure identification ³	Work place
		min	unit	max	unit					
7*	AC current / AC current meters	9 μA	to	220 μA		10 Hz to 40 Hz 40 Hz to 1 kHz 1 kHz to 5 kHz 5 kHz to 10 kHz	0.041 % + 18 nA 0.036 % + 8 nA 0.047 % + 12 nA 0.11 % + 65 nA	Direct generation by a current calibrator	LIII-002	
		200 μA	to	2.2 mA		10 Hz to 40 Hz 40 Hz to 1 kHz 1 kHz to 5 kHz 5 kHz to 10 kHz	0.059 % 0.049 % 0.095 % 0.39 %			
		2.2 mA	to	22 mA		10 Hz to 40 Hz 40 Hz to 1 kHz 1 kHz to 5 kHz 5 kHz to 10 kHz	0.045 % 0.031 % 0.057 % 0.32 %			
		22 mA	to	220 mA		10 Hz to 40 Hz 40 Hz to 1 kHz 1 kHz to 5 kHz 5 kHz to 10 kHz	0.045 % 0.028 % 0.046 % 0.15 %			
		220 mA	to	2.2 A		20 Hz to 1 kHz 1 kHz to 5 kHz 5 kHz to 10 kHz	0.046 % 0.083 % 0.70 %			

Accredited entity according to ČSN EN ISO/IEC 17025:2018:

Element Metech s.r.o.
 Calibration Laboratory
 Toužimská 767, Letňany, 199 00 Praha 9

Ord. number ¹	Calibrated quantity / Subject of calibration	Nominal range		Parameter(s) of the meas. quantity	Lowest expanded measurement uncertainty specified ²	Calibration principle	Calibration procedure identification ³	Work place
		min	unit					
8*	AC current / AC current sources	10 μ A	to	120 μ A	45 Hz to 1 kHz	82 nA	Direct measurement by a standard multimeter	LIII-002
		120 μ A	to	1.2 mA	45 Hz to 5 kHz	0.49 μ A		
		1.2 mA	to	12 mA	45 Hz to 5 kHz	0.26 %		
		12 mA	to	120 mA	45 Hz to 5 kHz	0.26 %		
		120 mA	to	1 A	45 Hz to 5 kHz	0.28 %		
9*	DC resistance / DC resistance standards	0 Ω	to	0.1 Ω		68 $\mu\Omega$	Direct measurement by a standard multimeter	LIII-006
		0.1 Ω	to	1 Ω		0.0020 %		
		1 Ω	to	10 Ω		0.0020 %		
		10 Ω	to	100 Ω		0.0060 %		
		100 Ω	to	1 k Ω		0.0014 %		
		1 k Ω	to	10 k Ω		0.0014 %		
		10 k Ω	to	100 k Ω		0.0014 %		
		100 k Ω	to	1 M Ω		0.0032 %		
		1 M Ω	to	10 M Ω		0.015 %		
		10 M Ω	to	100 M Ω		0.083 %		
		100 M Ω	to	1 G Ω		0.87 %		
10*	DC resistance / DC resistance meters			1 Ω		0.0087 %	Direct generation by a resistance calibrator	LIII-006
				1.9 Ω		0.0096 %		
				10 Ω		0.0022 %		
				19 Ω		0.0022 %		
				100 Ω		0.0010 %		

Accredited entity according to ČSN EN ISO/IEC 17025:2018:

Element Metech s.r.o.
 Calibration Laboratory
 Toužimská 767, Letňany, 199 00 Praha 9

Ord. number ¹	Calibrated quantity / Subject of calibration	Nominal range				Parameter(s) of the meas. quantity	Lowest expanded measurement uncertainty specified ²	Calibration principle	Calibration procedure identification ³	Work place
		min	unit	max	unit					
				190 Ω		0.0011 %				
				1 kΩ		0.00080 %				
				1.9 kΩ		0.00086 %				
				10 kΩ		0.00078 %				
				19 kΩ		0.00079 %				
				100 kΩ		0.0011 %				
				190 kΩ		0.0011 %				
				1 MΩ		0.0019 %				
				1.9 MΩ		0.0021 %				
				10 MΩ		0.0039 %				
				19 MΩ		0.0047 %				
				100 MΩ		0.012 %				
11*	AC resistance / AC resistance meters		100 mΩ		20 Hz	0.08 %	Direct generation using an AC resistance standard	LIII-070		
					60 Hz	0.08 %				
					100 Hz	0.06 %				
					1 kHz	0.06 %				
					10 kHz	0.15 %				
					100 kHz	1.1 %				
			1 Ω		20 Hz	0.02 %				
					60 Hz	0.02 %				
					100 Hz	0.02 %				
					1 kHz	0.02 %				
					10 kHz	0.02 %				
					100 kHz	0.11 %				

Accredited entity according to ČSN EN ISO/IEC 17025:2018:

Element Metech s.r.o.
 Calibration Laboratory
 Toužimská 767, Letňany, 199 00 Praha 9

Ord. number ¹	Calibrated quantity / Subject of calibration	Nominal range				Parameter(s) of the meas. quantity	Lowest expanded measurement uncertainty specified ²	Calibration principle	Calibration procedure identification ³	Work place
		min	unit	max	unit					
		10 Ω				20 Hz	0.02 %			
						60 Hz	0.02 %			
						100 Hz	0.02 %			
						1 kHz	0.02 %			
						10 kHz	0.02 %			
						100 kHz	0.05 %			
		100 Ω				20 Hz	0.02 %			
						60 Hz	0.02 %			
						100 Hz	0.02 %			
						1 kHz	0.02 %			
						10 kHz	0.02 %			
						100 kHz	0.05 %			
		1 kΩ				20 Hz	0.02 %			
						60 Hz	0.02 %			
						100 Hz	0.02 %			
						1 kHz	0.02 %			
						10 kHz	0.02 %			
						100 kHz	0.05 %			
		10 kΩ				20 Hz	0.02 %			
						60 Hz	0.02 %			
						100 Hz	0.02 %			
						1 kHz	0.02 %			
						10 kHz	0.02 %			
						100 kHz	0.05 %			

Accredited entity according to ČSN EN ISO/IEC 17025:2018:

Element Metech s.r.o.
 Calibration Laboratory
 Toužimská 767, Letňany, 199 00 Praha 9

Ord. number ¹	Calibrated quantity / Subject of calibration	Nominal range				Parameter(s) of the meas. quantity	Lowest expanded measurement uncertainty specified ²	Calibration principle	Calibration procedure identification ³	Work place
		min	unit	max	unit					
				100 kΩ		20 Hz 60 Hz 100 Hz 1 kHz 10 kHz 100 kHz	0.02 % 0.02 % 0.02 % 0.02 % 0.02 % 0.21 %			
				1 MΩ		20 Hz 60 Hz 100 Hz 1 kHz 10 kHz 100 kHz	0.04 % 0.02 % 0.02 % 0.02 % 0.07 % 0.61 %			
				10 MΩ		20 Hz 60 Hz 100 Hz 1 kHz 10 kHz	0.11 % 0.07 % 0.05 % 0.05 % 0.81 %			
12*	AC resistance / AC resistance standards	100 mΩ		± 5 %		20 Hz to 100 Hz 100 Hz to 10 kHz 10 kHz to 100 kHz	0.28 % 0.15 % 1.3 %	Direct measurement by a standard LCR meter	LIII-071	
		100 mΩ	to	1 Ω		20 Hz to 100 Hz 100 Hz to 10 kHz 10 kHz to 100 kHz	0.30 % 0.15 % 1.4 %			

Accredited entity according to ČSN EN ISO/IEC 17025:2018:

Element Metech s.r.o.
 Calibration Laboratory
 Toužimská 767, Letňany, 199 00 Praha 9

Ord. number ¹	Calibrated quantity / Subject of calibration	Nominal range				Parameter(s) of the meas. quantity	Lowest expanded measurement uncertainty specified ²	Calibration principle	Calibration procedure identification ³	Work place
		min	unit	max	unit					
		1 Ω		± 5 %		20 Hz to 100 Hz 100 Hz to 10 kHz 10 kHz to 100 kHz	0.12 % 0.11 % 0.11 %			
		1 Ω	to	10 Ω		20 Hz to 100 Hz 100 Hz to 10 kHz 10 kHz to 100 kHz	0.12 % 0.12 % 0.12 %			
		10 Ω		± 5 %		20 Hz to 100 Hz 100 Hz to 10 kHz 10 kHz to 100 kHz	0.10 % 0.08 % 0.09 %			
		10 Ω	to	100 Ω		20 Hz to 100 Hz 100 Hz to 10 kHz 10 kHz to 100 kHz	0.11 % 0.09 % 0.10 %			
		100 Ω		± 5 %		20 Hz to 100 Hz 100 Hz to 10 kHz 10 kHz to 100 kHz	0.05 % 0.05 % 0.06 %			
		100 Ω	to	1 kΩ		20 Hz to 100 Hz 100 Hz to 10 kHz 10 kHz to 100 kHz	0.06 % 0.06 % 0.06 %			
		1 kΩ		± 5 %		20 Hz to 100 Hz 100 Hz to 10 kHz 10 kHz to 100 kHz	0.06 % 0.05 % 0.05 %			
		1 kΩ	to	10 kΩ		20 Hz to 100 Hz 100 Hz to 10 kHz 10 kHz to 100 kHz	0.06 % 0.06 % 0.06 %			

Accredited entity according to ČSN EN ISO/IEC 17025:2018:

Element Metech s.r.o.
 Calibration Laboratory
 Toužimská 767, Letňany, 199 00 Praha 9

Ord. number ¹	Calibrated quantity / Subject of calibration	Nominal range				Parameter(s) of the meas. quantity	Lowest expanded measurement uncertainty specified ²	Calibration principle	Calibration procedure identification ³	Work place	
		min	unit	max	unit						
		10 kΩ		± 5 %		20 Hz to 100 Hz 100 Hz to 10 kHz 10 kHz to 100 kHz	0.05 % 0.05 % 0.05 %				
		10 kΩ	to	100 kΩ		20 Hz to 100 Hz 100 Hz to 10 kHz 10 kHz to 100 kHz	0.06 % 0.06 % 0.21 %				
		100 kΩ		± 5 %		20 Hz to 100 Hz 100 Hz to 10 kHz 10 kHz to 100 kHz	0.05 % 0.05 % 0.21 %				
		100 kΩ	to	1 MΩ		20 Hz to 100 Hz 100 Hz to 10 kHz 10 kHz to 100 kHz	0.08 % 0.07 % 0.61 %				
		1 MΩ		± 5 %		20 Hz to 100 Hz 100 Hz to 10 kHz 10 kHz to 100 kHz	0.08 % 0.07 % 0.61 %				
		1 MΩ	to	10 MΩ		20 Hz to 100 Hz 100 Hz to 10 kHz	0.18 % 0.81 %				
		10 MΩ		± 5 %		20 Hz to 100 Hz 100 Hz to 10 kHz	0.17 % 0.81 %				
13*	Amplitude modulation depth / signal sources	10 %	to	90 %		Carrier frequency 150 kHz to 10 MHz 10 MHz to 1.3 GHz	Modulation frequency 20 Hz to 50 Hz 50 Hz to 50 kHz 20 Hz to 50 Hz 50 Hz to 100 kHz	2.7 % 3.8 % 1.6 % 3.8 %	Direct measurement using a standard modulation analyzer	LIII-050	

Accredited entity according to ČSN EN ISO/IEC 17025:2018:

Element Metech s.r.o.
Calibration Laboratory
Toužimská 767, Letňany, 199 00 Praha 9

Ord. number ¹	Calibrated quantity / Subject of calibration	Nominal range				Parameter(s) of the meas. quantity	Lowest expanded measurement uncertainty specified ²	Calibration principle	Calibration procedure identification ³	Work place	
		min	unit	max	unit						
14*	Modulation swing of frequency modulation / signal sources	50 Hz	to	40 kHz		Carrier frequency 250 kHz to 10 MHz	Modulation frequency 50 Hz to 10 kHz	2.6 %	Measurement by a frequency swing analyzer	LIII-051	
		50 Hz	to	400 kHz		10 MHz to 1.3 GHz	50 Hz to 100 kHz	1.5 %			
						10 MHz to 1.3 GHz	100 kHz to 200 kHz	6.1 %			
15*	Signal distortion (THD) / signal sources (50 mV to 300 V)	0.001 %	to	0.1 %		Fundamental harmonic frequency 20 Hz to 20 kHz	Measurement bandwidth 80 kHz	0.04 % (abs.)	Direct measurement using a standard distortion analyzer	LIII-056	
		0.1 %	to	3 %		20 kHz to 100 kHz	500 kHz	0.11 % (abs.)			
		0.1 %	to	3 %		20 Hz to 20 kHz	80 kHz	0.15 % (abs.)			
		3 %	to	30 %		20 kHz to 100 kHz	500 kHz	0.32 % (abs.)			
		3 %	to	30 %		20 Hz to 20 kHz	80 kHz	0.42 % (abs.)			
		30 %	to	100 %		20 kHz to 100 kHz	500 kHz	0.90 % (abs.)			
		30 %	to	100 %		20 Hz to 20 kHz	80 kHz	4.2 % (abs.)			
						20 kHz to 100 kHz	500 kHz	9.0 % (abs.)			
16*	Reflection factor / Instruments and circuit elements with coaxial connection (N connector, 50 Ω)	0	to	0.02		30 kHz to 50 MHz		0.010 (abs.)	Measurement by a circuit analyzer	LIII-055	
						50 MHz to 2 GHz		0.006 (abs.)			
						2 GHz to 5 GHz		0.009 (abs.)			
						5 GHz to 6 GHz		0.011 (abs.)			
						6 GHz to 13 GHz		0.029 (abs.)			
						13 GHz to 18 GHz		0.030 (abs.)			

Accredited entity according to ČSN EN ISO/IEC 17025:2018:

Element Metech s.r.o.
 Calibration Laboratory
 Toužimská 767, Letňany, 199 00 Praha 9

Ord. number ¹	Calibrated quantity / Subject of calibration	Nominal range				Parameter(s) of the meas. quantity	Lowest expanded measurement uncertainty specified ²	Calibration principle	Calibration procedure identification ³	Work place
		min	unit	max	unit					
		0.02	to	0.1		30 kHz to 50 MHz 50 MHz to 2 GHz 2 GHz to 5 GHz 5 GHz to 6 GHz 6 GHz to 13 GHz 13 GHz to 18 GHz	0.011 (abs.) 0.006 (abs.) 0.009 (abs.) 0.011 (abs.) 0.029 (abs.) 0.030 (abs.)			
		0.1	to	0.2		30 kHz to 50 MHz 50 MHz to 1 GHz 1 GHz to 2 GHz 2 GHz to 4 GHz 4 GHz to 5 GHz 5 GHz to 6 GHz 6 GHz to 11 GHz 11 GHz to 18 GHz	0.011 (abs.) 0.006 (abs.) 0.007 (abs.) 0.009 (abs.) 0.010 (abs.) 0.011 (abs.) 0.029 (abs.) 0.030 (abs.)			
		0.2	to	0.3		30 kHz to 300 kHz 300 kHz to 50 MHz 50 MHz to 200 MHz 200 MHz to 2 GHz 2 GHz to 4 GHz 4 GHz to 5 GHz 5 GHz to 6 GHz 6 GHz to 11 GHz 11 GHz to 13 GHz 13 GHz to 18 GHz	0.016 (abs.) 0.017 (abs.) 0.007 (abs.) 0.008 (abs.) 0.010 (abs.) 0.011 (abs.) 0.012 (abs.) 0.029 (abs.) 0.030 (abs.) 0.031 (abs.)			

Accredited entity according to ČSN EN ISO/IEC 17025:2018:

Element Metech s.r.o.
 Calibration Laboratory
 Toužimská 767, Letňany, 199 00 Praha 9

Ord. number ¹	Calibrated quantity / Subject of calibration	Nominal range				Parameter(s) of the meas. quantity	Lowest expanded measurement uncertainty specified ²	Calibration principle	Calibration procedure identification ³	Work place
		min	unit	max	unit					
		0.3	to	0.4		30 kHz to 300 kHz 300 kHz to 50 MHz 50 MHz to 200 MHz 200 MHz to 2 GHz 2 GHz to 5 GHz 5 GHz to 6 GHz 6 GHz to 13 GHz 13 GHz to 18 GHz	0.016 (abs.) 0.017 (abs.) 0.010 (abs.) 0.011 (abs.) 0.013 (abs.) 0.014 (abs.) 0.031 (abs.) 0.032 (abs.)			
		0.4	to	0.5		30 kHz to 300 kHz 300 kHz to 50 MHz 50 MHz to 1 GHz 1 GHz to 2 GHz 2 GHz to 4 GHz 4 GHz to 6 GHz 6 GHz to 13 GHz 13 GHz to 18 GHz	0.020 (abs.) 0.023 (abs.) 0.015 (abs.) 0.016 (abs.) 0.017 (abs.) 0.018 (abs.) 0.033 (abs.) 0.034 (abs.)			
		0.5	to	0.6		30 kHz to 300 kHz 300 kHz to 50 MHz 50 MHz to 1 GHz 1 GHz to 2 GHz 2 GHz to 5 GHz 5 GHz to 6 GHz 6 GHz to 11 GHz 11 GHz to 18 GHz	0.020 (abs.) 0.023 (abs.) 0.021 (abs.) 0.022 (abs.) 0.023 (abs.) 0.024 (abs.) 0.036 (abs.) 0.037 (abs.)			

Accredited entity according to ČSN EN ISO/IEC 17025:2018:

Element Metech s.r.o.
 Calibration Laboratory
 Toužimská 767, Letňany, 199 00 Praha 9

Ord. number ¹	Calibrated quantity / Subject of calibration	Nominal range				Parameter(s) of the meas. quantity	Lowest expanded measurement uncertainty specified ²	Calibration principle	Calibration procedure identification ³	Work place
		min	unit	max	unit					
		0.6	to	0.7	30 kHz to 300 kHz	0.026 (abs.)				
					300 kHz to 50 MHz	0.030 (abs.)				
					50 MHz to 1 GHz	0.028 (abs.)				
					1 GHz to 3 GHz	0.030 (abs.)				
					3 GHz to 6 GHz	0.031 (abs.)				
					6 GHz to 11 GHz	0.041 (abs.)				
					11 GHz to 18 GHz	0.042 (abs.)				
		0.7	to	0.8	30 kHz to 300 kHz	0.026 (abs.)				
					300 kHz to 1.3 GHz	0.030 (abs.)				
					1.3 GHz to 4 GHz	0.039 (abs.)				
					4 GHz to 6 GHz	0.040 (abs.)				
					6 GHz to 13 GHz	0.048 (abs.)				
		0.8	to	0.9	13 GHz to 18 GHz	0.049 (abs.)				
					30 kHz to 300 kHz	0.032 (abs.)				
					300 kHz to 1.3 GHz	0.039 (abs.)				
					1.3 GHz to 4 GHz	0.049 (abs.)				
0.9	to	1.0	4 GHz to 6 GHz	0.050 (abs.)						
			6 GHz to 18 GHz	0.057 (abs.)						
			30 kHz to 300 kHz	0.032 (abs.)						
			300 kHz to 1.3 GHz	0.039 (abs.)						
			1.3 GHz to 2 GHz	0.060 (abs.)						
			2 GHz to 6 GHz	0.061 (abs.)						
			6 GHz to 18 GHz	0.067 (abs.)						

Accredited entity according to ČSN EN ISO/IEC 17025:2018:

Element Metech s.r.o.
 Calibration Laboratory
 Toužimská 767, Letňany, 199 00 Praha 9

Ord. number ¹	Calibrated quantity / Subject of calibration	Nominal range				Parameter(s) of the meas. quantity	Lowest expanded measurement uncertainty specified ²	Calibration principle	Calibration procedure identification ³	Work place
		min	unit	max	unit					
	Reflection factor / Instruments and circuit elements with coaxial connection (3.5mm connector, 50 Ω)	0	to	0.2	50 MHz to 250 MHz	0.007 (abs.)				
					250 MHz to 500 MHz	0.008 (abs.)				
					500 MHz to 1 GHz	0.009 (abs.)				
					1 GHz to 2 GHz	0.012 (abs.)				
					2 GHz to 3 GHz	0.013 (abs.)				
					3 GHz to 4 GHz	0.014 (abs.)				
					4 GHz to 5 GHz	0.017 (abs.)				
					5 GHz to 6 GHz	0.018 (abs.)				
					6 GHz to 26.5 GHz	0.045 (abs.)				
		0.2	to	0.3	50 MHz to 500 MHz	0.010 (abs.)				
					500 MHz to 1 GHz	0.011 (abs.)				
					1 GHz to 2 GHz	0.014 (abs.)				
					2 GHz to 3 GHz	0.015 (abs.)				
					3 GHz to 4 GHz	0.016 (abs.)				
					4 GHz to 5 GHz	0.018 (abs.)				
					5 GHz to 6 GHz	0.019 (abs.)				
6 GHz to 26.5 GHz	0.046 (abs.)									
		0.3	to	0.4	50 MHz to 250 MHz	0.014 (abs.)				
					250 MHz to 500 MHz	0.015 (abs.)				
					500 MHz to 1 GHz	0.016 (abs.)				

Accredited entity according to ČSN EN ISO/IEC 17025:2018:

Element Metech s.r.o.
 Calibration Laboratory
 Toužimská 767, Letňany, 199 00 Praha 9

Ord. number ¹	Calibrated quantity / Subject of calibration	Nominal range				Parameter(s) of the meas. quantity	Lowest expanded measurement uncertainty specified ²	Calibration principle	Calibration procedure identification ³	Work place
		min	unit	max	unit					
						1 GHz to 2 GHz 0.018 (abs.) 2 GHz to 4 GHz 0.019 (abs.) 4 GHz to 5 GHz 0.021 (abs.) 5 GHz to 6 GHz 0.022 (abs.) 6 GHz to 19 GHz 0.047 (abs.) 19 GHz to 26.5 GHz 0.048 (abs.)				
		0.4	to	0.5		50 MHz to 500 MHz 0.021 (abs.) 500 MHz to 1 GHz 0.022 (abs.) 1 GHz to 3 GHz 0.024 (abs.) 3 GHz to 4 GHz 0.025 (abs.) 4 GHz to 5 GHz 0.026 (abs.) 5 GHz to 6 GHz 0.027 (abs.) 6 GHz to 10 GHz 0.049 (abs.) 10 GHz to 20 GHz 0.050 (abs.) 20 GHz to 26.5 GHz 0.051 (abs.)				
		0.5	to	0.6		50 MHz to 250 MHz 0.029 (abs.) 250 MHz to 1 GHz 0.030 (abs.) 1 GHz to 3 GHz 0.032 (abs.) 3 GHz to 4 GHz 0.033 (abs.) 4 GHz to 5 GHz 0.034 (abs.) 5 GHz to 6 GHz 0.035 (abs.) 6 GHz to 20 GHz 0.054 (abs.)				

Accredited entity according to ČSN EN ISO/IEC 17025:2018:

Element Metech s.r.o.
 Calibration Laboratory
 Toužimská 767, Letňany, 199 00 Praha 9

Ord. number ¹	Calibrated quantity / Subject of calibration	Nominal range				Parameter(s) of the meas. quantity	Lowest expanded measurement uncertainty specified ²	Calibration principle	Calibration procedure identification ³	Work place
		min	unit	max	unit					
						20 GHz to 26.5 GHz	0.057 (abs.)			
		0.6	to	0.7		50 MHz to 250 MHz 250 MHz to 1 GHz 1 GHz to 3 GHz 3 GHz to 4 GHz 4 GHz to 6 GHz 6 GHz to 17 GHz 17 GHz to 20 GHz 20 GHz to 26.5 GHz	0.039 (abs.) 0.040 (abs.) 0.042 (abs.) 0.043 (abs.) 0.044 (abs.) 0.060 (abs.) 0.061 (abs.) 0.065 (abs.)			
		0.7	to	0.8		50 MHz to 500 MHz 500 MHz to 1 GHz 1 GHz to 4 GHz 4 GHz to 5 GHz 5 GHz to 6 GHz 6 GHz to 20 GHz 20 GHz to 26.5 GHz	0.051 (abs.) 0.052 (abs.) 0.054 (abs.) 0.055 (abs.) 0.056 (abs.) 0.069 (abs.) 0.076 (abs.)			
		0.8	to	0.9		50 MHz to 1 GHz 1 GHz to 4 GHz 4 GHz to 6 GHz 6 GHz to 17 GHz 17 GHz to 20 GHz	0.065 (abs.) 0.068 (abs.) 0.069 (abs.) 0.080 (abs.) 0.081 (abs.)			

Accredited entity according to ČSN EN ISO/IEC 17025:2018:

Element Metech s.r.o.
 Calibration Laboratory
 Toužimská 767, Letňany, 199 00 Praha 9

Ord. number ¹	Calibrated quantity / Subject of calibration	Nominal range				Parameter(s) of the meas. quantity	Lowest expanded measurement uncertainty specified ²	Calibration principle	Calibration procedure identification ³	Work place
		min	unit	max	unit					
						20 GHz to 26.5 GHz	0.090 (abs.)			
		0.9	to	1.0		50 MHz to 1 GHz 1 GHz to 4 GHz 4 GHz to 6 GHz 6 GHz to 20 GHz 20 GHz to 26.5 GHz	0.080 (abs.) 0.083 (abs.) 0.084 (abs.) 0.94 (abs.) 0.11 (abs.)			
	Reflection factor / Instruments and circuit elements with coaxial connection (2.4 mm connector, 50 Ω)	0	to	0.1		50 MHz to 2 GHz 2 GHz to 3 GHz 3 GHz to 4 GHz 4 GHz to 12 GHz 12 GHz to 14 GHz 14 GHz to 20 GHz 20 GHz to 26 GHz 26 GHz to 30 GHz 30 GHz to 34 GHz 34 GHz to 36 GHz 36 GHz to 39 GHz 39 GHz to 40 GHz 40 GHz to 43 GHz 43 GHz to 44 GHz 44 GHz to 47 GHz	0.010 (abs.) 0.011 (abs.) 0.012 (abs.) 0.013 (abs.) 0.014 (abs.) 0.016 (abs.) 0.017 (abs.) 0.018 (abs.) 0.021 (abs.) 0.022 (abs.) 0.024 (abs.) 0.020 (abs.) 0.023 (abs.) 0.021 (abs.) 0.031 (abs.)			

Accredited entity according to ČSN EN ISO/IEC 17025:2018:

Element Metech s.r.o.
 Calibration Laboratory
 Toužimská 767, Letňany, 199 00 Praha 9

Ord. number ¹	Calibrated quantity / Subject of calibration	Nominal range				Parameter(s) of the meas. quantity	Lowest expanded measurement uncertainty specified ²	Calibration principle	Calibration procedure identification ³	Work place
		min	unit	max	unit					
						47 GHz to 50 GHz	0.035 (abs.)			
		0.1	to	0.2		50 MHz to 2 GHz	0.010 (abs.)			
						2 GHz to 3 GHz	0.012 (abs.)			
						3 GHz to 12 GHz	0.013 (abs.)			
						12 GHz to 14 GHz	0.014 (abs.)			
						14 GHz to 20 GHz	0.016 (abs.)			
						20 GHz to 26 GHz	0.017 (abs.)			
						26 GHz to 30 GHz	0.018 (abs.)			
						30 GHz to 34 GHz	0.021 (abs.)			
						34 GHz to 36 GHz	0.022 (abs.)			
						36 GHz to 39 GHz	0.024 (abs.)			
						39 GHz to 40 GHz	0.020 (abs.)			
						40 GHz to 43 GHz	0.023 (abs.)			
						43 GHz to 44 GHz	0.021 (abs.)			
						44 GHz to 47 GHz	0.031 (abs.)			
						47 GHz to 50 GHz	0.036 (abs.)			
		0.2	to	0.3		50 MHz to 2 GHz	0.010 (abs.)			
						2 GHz to 3 GHz	0.012 (abs.)			
						3 GHz to 12 GHz	0.013 (abs.)			
						12 GHz to 14 GHz	0.014 (abs.)			
						14 GHz to 20 GHz	0.016 (abs.)			
						20 GHz to 22 GHz	0.018 (abs.)			
						22 GHz to 26 GHz	0.017 (abs.)			
						26 GHz to 30 GHz	0.019 (abs.)			
						30 GHz to 34 GHz	0.021 (abs.)			
						34 GHz to 36 GHz	0.022 (abs.)			

Accredited entity according to ČSN EN ISO/IEC 17025:2018:

Element Metech s.r.o.
 Calibration Laboratory
 Toužimská 767, Letňany, 199 00 Praha 9

Ord. number ¹	Calibrated quantity / Subject of calibration	Nominal range				Parameter(s) of the meas. quantity	Lowest expanded measurement uncertainty specified ²	Calibration principle	Calibration procedure identification ³	Work place
		min	unit	max	unit					
						36 GHz to 39 GHz	0.024 (abs.)			
						39 GHz to 40 GHz	0.020 (abs.)			
						40 GHz to 43 GHz	0.023 (abs.)			
						43 GHz to 44 GHz	0.022 (abs.)			
						44 GHz to 47 GHz	0.032 (abs.)			
						47 GHz to 50 GHz	0.036 (abs.)			
		0.3	to	0.4		50 MHz to 2 GHz	0.011 (abs.)			
						2 GHz to 3 GHz	0.012 (abs.)			
						3 GHz to 12 GHz	0.013 (abs.)			
						12 GHz to 14 GHz	0.015 (abs.)			
						14 GHz to 18 GHz	0.016 (abs.)			
						18 GHz to 20 GHz	0.017 (abs.)			
						20 GHz to 26 GHz	0.019 (abs.)			
						26 GHz to 30 GHz	0.020 (abs.)			
						30 GHz to 36 GHz	0.023 (abs.)			
						36 GHz to 39 GHz	0.025 (abs.)			
						39 GHz to 40 GHz	0.022 (abs.)			
						40 GHz to 43 GHz	0.025 (abs.)			
						43 GHz to 44 GHz	0.024 (abs.)			
						44 GHz to 47 GHz	0.033 (abs.)			
						47 GHz to 50 GHz	0.037 (abs.)			
		0.4	to	0.5		50 MHz to 2 GHz	0.011 (abs.)			
						2 GHz to 3 GHz	0.013 (abs.)			
						3 GHz to 12 GHz	0.014 (abs.)			
						12 GHz to 14 GHz	0.015 (abs.)			
						14 GHz to 20 GHz	0.017 (abs.)			

Accredited entity according to ČSN EN ISO/IEC 17025:2018:

Element Metech s.r.o.
 Calibration Laboratory
 Toužimská 767, Letňany, 199 00 Praha 9

Ord. number ¹	Calibrated quantity / Subject of calibration	Nominal range				Parameter(s) of the meas. quantity	Lowest expanded measurement uncertainty specified ²	Calibration principle	Calibration procedure identification ³	Work place
		min	unit	max	unit					
						20 GHz to 22 GHz	0.022 (abs.)			
						22 GHz to 26 GHz	0.021 (abs.)			
						26 GHz to 30 GHz	0.023 (abs.)			
						30 GHz to 34 GHz	0.025 (abs.)			
						34 GHz to 36 GHz	0.026 (abs.)			
						36 GHz to 39 GHz	0.028 (abs.)			
						39 GHz to 40 GHz	0.024 (abs.)			
						40 GHz to 43 GHz	0.029 (abs.)			
						43 GHz to 44 GHz	0.028 (abs.)			
						44 GHz to 47 GHz	0.036 (abs.)			
						47 GHz to 50 GHz	0.040 (abs.)			
		0.5	to	0.6		50 MHz to 2 GHz	0.011 (abs.)			
						2 GHz to 3 GHz	0.014 (abs.)			
						3 GHz to 12 GHz	0.015 (abs.)			
						12 GHz to 14 GHz	0.016 (abs.)			
						14 GHz to 20 GHz	0.018 (abs.)			
						20 GHz to 26 GHz	0.026 (abs.)			
						26 GHz to 30 GHz	0.027 (abs.)			
						30 GHz to 34 GHz	0.029 (abs.)			
						34 GHz to 35 GHz	0.030 (abs.)			
						35 GHz to 36 GHz	0.029 (abs.)			
						36 GHz to 39 GHz	0.031 (abs.)			
						39 GHz to 40 GHz	0.028 (abs.)			
						40 GHz to 43 GHz	0.035 (abs.)			

Accredited entity according to ČSN EN ISO/IEC 17025:2018:

Element Metech s.r.o.
 Calibration Laboratory
 Toužimská 767, Letňany, 199 00 Praha 9

Ord. number ¹	Calibrated quantity / Subject of calibration	Nominal range				Parameter(s) of the meas. quantity	Lowest expanded measurement uncertainty specified ²	Calibration principle	Calibration procedure identification ³	Work place
		min	unit	max	unit					
						43 GHz to 44 GHz	0.034 (abs.)			
						44 GHz to 47 GHz	0.041 (abs.)			
						47 GHz to 50 GHz	0.045 (abs.)			
		0.6	to	0.7		50 MHz to 100 MHz	0.011 (abs.)			
						100 MHz to 2 GHz	0.012 (abs.)			
						2 GHz to 3 GHz	0.016 (abs.)			
						3 GHz to 8 GHz	0.017 (abs.)			
						8 GHz to 11 GHz	0.018 (abs.)			
						11 GHz to 12 GHz	0.017 (abs.)			
						12 GHz to 14 GHz	0.018 (abs.)			
						14 GHz to 16 GHz	0.019 (abs.)			
						16 GHz to 20 GHz	0.020 (abs.)			
						20 GHz to 22 GHz	0.032 (abs.)			
						22 GHz to 26 GHz	0.031 (abs.)			
						26 GHz to 30 GHz	0.032 (abs.)			
						30 GHz to 34 GHz	0.034 (abs.)			
						34 GHz to 36 GHz	0.035 (abs.)			
						36 GHz to 39 GHz	0.036 (abs.)			
						39 GHz to 40 GHz	0.034 (abs.)			
						40 GHz to 43 GHz	0.043 (abs.)			
						43 GHz to 44 GHz	0.042 (abs.)			
						44 GHz to 47 GHz	0.048 (abs.)			
						47 GHz to 50 GHz	0.051 (abs.)			

Accredited entity according to ČSN EN ISO/IEC 17025:2018:

Element Metech s.r.o.
 Calibration Laboratory
 Toužimská 767, Letňany, 199 00 Praha 9

Ord. number ¹	Calibrated quantity / Subject of calibration	Nominal range				Parameter(s) of the meas. quantity	Lowest expanded measurement uncertainty specified ²	Calibration principle	Calibration procedure identification ³	Work place
		min	unit	max	unit					
		0.7	to	0.8		50 MHz to 100 MHz 100 MHz to 2 GHz 2 GHz to 3 GHz 3 GHz to 12 GHz 12 GHz to 14 GHz 14 GHz to 18 GHz 18 GHz to 19 GHz 19 GHz to 20 GHz 20 GHz to 29 GHz 26 GHz to 30 GHz 30 GHz to 34 GHz 34 GHz to 36 GHz 36 GHz to 39 GHz 39 GHz to 40 GHz 40 GHz to 43 GHz 43 GHz to 44 GHz 44 GHz to 47 GHz 47 GHz to 50 GHz	0.012 (abs.) 0.013 (abs.) 0.019 (abs.) 0.020 (abs.) 0.021 (abs.) 0.022 (abs.) 0.023 (abs.) 0.022 (abs.) 0.039 (abs.) 0.040 (abs.) 0.041 (abs.) 0.042 (abs.) 0.043 (abs.) 0.041 (abs.) 0.053 (abs.) 0.052 (abs.) 0.057 (abs.) 0.060 (abs.)			
		0.8	to	0.9		50 MHz to 100 MHz 100 MHz to 2 GHz 2 GHz to 3 GHz 3 GHz to 8 GHz 8 GHz to 11 GHz 11 GHz to 12 GHz	0.013 (abs.) 0.014 (abs.) 0.022 (abs.) 0.023 (abs.) 0.024 (abs.) 0.023 (abs.)			

Accredited entity according to ČSN EN ISO/IEC 17025:2018:

Element Metech s.r.o.
 Calibration Laboratory
 Toužimská 767, Letňany, 199 00 Praha 9

Ord. number ¹	Calibrated quantity / Subject of calibration	Nominal range				Parameter(s) of the meas. quantity	Lowest expanded measurement uncertainty specified ²	Calibration principle	Calibration procedure identification ³	Work place
		min	unit	max	unit					
						12 GHz to 14 GHz	0.024 (abs.)			
						14 GHz to 18 GHz	0.025 (abs.)			
						18 GHz to 19 GHz	0.026 (abs.)			
						19 GHz to 20 GHz	0.025 (abs.)			
						20 GHz to 26 GHz	0.047 (abs.)			
						26 GHz to 30 GHz	0.048 (abs.)			
						30 GHz to 36 GHz	0.050 (abs.)			
						36 GHz to 37 GHz	0.052 (abs.)			
						37 GHz to 39 GHz	0.051 (abs.)			
						39 GHz to 40 GHz	0.049 (abs.)			
						40 GHz to 43 GHz	0.064 (abs.)			
						43 GHz to 44 GHz	0.063 (abs.)			
						44 GHz to 47 GHz	0.068 (abs.)			
						47 GHz to 50 GHz	0.070 (abs.)			
		0.8	to	0.9		50 MHz to 100 MHz	0.014 (abs.)			
						100 MHz to 2 GHz	0.015 (abs.)			
						2 GHz to 3 GHz	0.026 (abs.)			
						3 GHz to 8 GHz	0.027 (abs.)			
						8 GHz to 11 GHz	0.028 (abs.)			
						11 GHz to 14 GHz	0.027 (abs.)			
						14 GHz to 16 GHz	0.028 (abs.)			
						16 GHz to 18 GHz	0.029 (abs.)			
						18 GHz to 19 GHz	0.030 (abs.)			
						19 GHz to 20 GHz	0.029 (abs.)			
						20 GHz to 26 GHz	0.057 (abs.)			

Accredited entity according to ČSN EN ISO/IEC 17025:2018:

Element Metech s.r.o.
 Calibration Laboratory
 Toužimská 767, Letňany, 199 00 Praha 9

Ord. number ¹	Calibrated quantity / Subject of calibration	Nominal range				Parameter(s) of the meas. quantity	Lowest expanded measurement uncertainty specified ²	Calibration principle	Calibration procedure identification ³	Work place
		min	unit	max	unit					
						26 GHz to 30 GHz 0.058 (abs.) 30 GHz to 36 GHz 0.060 (abs.) 36 GHz to 39 GHz 0.061 (abs.) 39 GHz to 40 GHz 0.059 (abs.) 40 GHz to 43 GHz 0.078 (abs.) 43 GHz to 44 GHz 0.077 (abs.) 44 GHz to 47 GHz 0.080 (abs.) 47 GHz to 50 GHz 0.083 (abs.)				
17*	HF power - calibration factor / HF power meters (N connector, 50 Ω, 1 mW)	0.5	to	1.5		10 MHz to 30 MHz 2.0 % 30 MHz to 100 MHz 1.6 % 100 MHz to 4 GHz 1.7 % 4 GHz to 7 GHz 2.1 % 7 GHz to 8 GHz 2.0 % 8 GHz to 9 GHz 2.2 % 9 GHz to 11 GHz 2.3 % 11 GHz to 12 GHz 2.5 % 12 GHz to 13 GHz 2.6 % 13 GHz to 15 GHz 2.7 % 15 GHz to 16 GHz 2.5 % 16 GHz to 17 GHz 2.9 % 17 GHz to 18 GHz 4.3 %	Comparison with a standard HF wattmeter	LIII-052		

Accredited entity according to ČSN EN ISO/IEC 17025:2018:

Element Metech s.r.o.
 Calibration Laboratory
 Toužimská 767, Letňany, 199 00 Praha 9

Ord. number ¹	Calibrated quantity / Subject of calibration	Nominal range				Parameter(s) of the meas. quantity	Lowest expanded measurement uncertainty specified ²	Calibration principle	Calibration procedure identification ³	Work place
		min	unit	max	unit					
	HF power - calibration factor / HF power meters (2.4mm connector, 50 Ω, 1 mW)	0.5		to	1.5	100 MHz to 300 MHz 300 MHz to 8 GHz 8 GHz to 20 GHz 20 GHz to 21 GHz 21 GHz to 23 GHz 23 GHz to 29 GHz 29 GHz to 31 GHz 31 GHz to 35 GHz 35 GHz to 37 GHz 37 GHz to 39 GHz 39 GHz to 41 GHz 41 GHz to 42 GHz 42 GHz to 45 GHz 45 GHz to 46 GHz 46 GHz to 47 GHz 47 GHz to 48 GHz 48 GHz to 50 GHz 50 GHz	2.4 % 2.5 % 2.6 % 2.8 % 2.9 % 2.9 % 3.6 % 3.0 % 3.0 % 3.1 % 3.2 % 3.3 % 3.7 % 3.6 % 3.6 % 3.7 % 5.8 % 4.8 %			
	HF power - calibration factor / HF power meters (2.4mm connector, 50 Ω, 1 μW)	0.5		to	1.5	100 MHz to 300 MHz 300 MHz to 8 GHz 8 GHz to 22 GHz 22 GHz to 26 GHz	2.5 % 2.6 % 2.7 % 2.8 %			

Accredited entity according to ČSN EN ISO/IEC 17025:2018:

Element Metech s.r.o.
 Calibration Laboratory
 Toužimská 767, Letňany, 199 00 Praha 9

Ord. number ¹	Calibrated quantity / Subject of calibration	Nominal range				Parameter(s) of the meas. quantity	Lowest expanded measurement uncertainty specified ²	Calibration principle	Calibration procedure identification ³	Work place
		min	unit	max	unit					
						26 GHz to 29 GHz 29 GHz to 32 GHz 32 GHz to 34 GHz 34 GHz to 37 GHz 37 GHz to 38 GHz 38 GHz to 40 GHz 40 GHz to 41 GHz 41 GHz to 43 GHz 43 GHz to 46 GHz 46 GHz to 48 GHz 48 GHz to 49 GHz 49 GHz to 50 GHz	2.9 % 2.9 % 3.0 % 2.9 % 3.0 % 3.1 % 3.2 % 3.3 % 3.5 % 3.6 % 3.8 % 4.1 %			
18*	Power output / signal sources	0.7 mW	to	30 W		400 MHz to 4 GHz	3.2 % + 0.10 mW	Direct measurement by a HF wattmeter	LIII-054	
		0.5 mW	to	1.5 mW		50 MHz	0.60 %	Measurement by a wattmeter	LIII-059	
		-20 dBm	to	20 dBm		100 kHz to 12 GHz 12 GHz to 18 GHz 18 GHz to 26.5 GHz 26.5 GHz to 47 GHz 47 GHz to 50 GHz	0.12 dB 0.14 dB 0.20 dB 0.23 dB 0.29 dB	Direct measurement by a HF wattmeter	LIII-054	

Accredited entity according to ČSN EN ISO/IEC 17025:2018:

Element Metech s.r.o.
Calibration Laboratory
Toužimská 767, Letňany, 199 00 Praha 9

Ord. number ¹	Calibrated quantity / Subject of calibration	Nominal range				Parameter(s) of the meas. quantity	Lowest expanded measurement uncertainty specified ²	Calibration principle	Calibration procedure identification ³	Work place
		min	unit	max	unit					
		-50 dBm	to	-20 dBm		100 kHz to 4 GHz	0.13 dB			
						4 GHz to 6 GHz	0.14 dB			
						6 GHz to 31 GHz	0.19 dB			
						31 GHz to 40 GHz	0.20 dB			
						40 GHz to 43 GHz	0.21 dB			
						43 GHz to 48 GHz	0.23 dB			
						48 GHz to 50 GHz	0.24 dB			
		-80 dBm	to	-50 dBm		2.5 MHz to 10 MHz	0.28 dB			
						10 MHz to 26.5 GHz	0.15 dB			
		-110 dBm	to	-80 dBm		2.5 MHz to 10 MHz	0.33 dB			
						10 MHz to 26.5 GHz	0.23 dB			
		-120 dBm	to	-110 dBm		2.5 MHz to 1.3 GHz	0.41 dB			
19*	HF attenuation / attenuation pads, lines (2 port, 50 Ω device with N connector)	0 dB	to	10 dB		2.5 MHz to 1.3 GHz	0.11 dB	Measurement by a selective HF signal meter	LIII-057	
		10 dB	to	20 dB			0.14 dB			
		20 dB	to	30 dB			0.15 dB			
		30 dB	to	40 dB			0.20 dB			
		40 dB	to	50 dB			0.20 dB			
		50 dB	to	60 dB			0.20 dB			
		60 dB	to	70 dB			0.25 dB			
		70 dB	to	80 dB			0.37 dB			
		80 dB	to	90 dB			0.56 dB			

Accredited entity according to ČSN EN ISO/IEC 17025:2018:

Element Metech s.r.o.
 Calibration Laboratory
 Toužimská 767, Letňany, 199 00 Praha 9

Ord. number ¹	Calibrated quantity / Subject of calibration	Nominal range				Parameter(s) of the meas. quantity	Lowest expanded measurement uncertainty specified ²	Calibration principle	Calibration procedure identification ³	Work place
		min	unit	max	unit					
	HF attenuation / attenuation pads, lines (2 port, 50 Ω device with N connector)	90 dB	to	100 dB		0.56 dB	Measurement by a circuit analyzer			
		100 dB	to	110 dB		0.65 dB				
		0 dB	to	3 dB	300 kHz to 2 GHz 2 GHz to 6 GHz 6 GHz to 11 GHz 11 GHz to 18 GHz	0.03 dB 0.04 dB 0.13 dB 0.14 dB				
		3 dB	to	6 dB	300 kHz to 50 MHz 50 MHz to 3 GHz 3 GHz to 6 GHz 6 GHz to 11 GHz 11 GHz to 18 GHz	0.05 dB 0.04 dB 0.05 dB 0.13 dB 0.14 dB				
		6 dB	to	10 dB	300 kHz to 50 MHz 50 MHz to 3 GHz 3 GHz to 6 GHz 6 GHz to 11 GHz 11 GHz to 18 GHz	0.07 dB 0.04 dB 0.07 dB 0.13 dB 0.14 dB				
		10 dB	to	20 dB	300 kHz to 50 MHz 50 MHz to 3 GHz 3 GHz to 6 GHz 6 GHz to 11 GHz 11 GHz to 18 GHz	0.12 dB 0.06 dB 0.12 dB 0.14 dB 0.15 dB				

Accredited entity according to ČSN EN ISO/IEC 17025:2018:

Element Metech s.r.o.
 Calibration Laboratory
 Toužimská 767, Letňany, 199 00 Praha 9

Ord. number ¹	Calibrated quantity / Subject of calibration	Nominal range				Parameter(s) of the meas. quantity	Lowest expanded measurement uncertainty specified ²	Calibration principle	Calibration procedure identification ³	Work place
		min	unit	max	unit					
		20 dB	to	30 dB		300 kHz to 50 MHz 50 MHz to 3 GHz 3 GHz to 6 GHz 6 GHz to 11 GHz 11 GHz to 18 GHz	0.17 dB 0.08 dB 0.14 dB 0.16 dB 0.17 dB			
		30 dB	to	40 dB		300 kHz to 50 MHz 50 MHz to 200 MHz 200 MHz to 3 GHz 3 GHz to 6 GHz 6 GHz to 11 GHz 11 GHz to 18 GHz	0.22 dB 0.12 dB 0.11 dB 0.17 dB 0.20 dB 0.22 dB			
		40 dB	to	50 dB		300 kHz to 50 MHz 50 MHz to 3 GHz 3 GHz to 6 GHz 6 GHz to 11 GHz 11 GHz to 18 GHz	0.27 dB 0.16 dB 0.20 dB 0.24 dB 0.30 dB			
		50 dB	to	60 dB		300 kHz to 50 MHz 50 MHz to 200 MHz 200 MHz to 3 GHz 3 GHz to 6 GHz 6 GHz to 11 GHz 11 GHz to 18 GHz	0.32 dB 0.27 dB 0.25 dB 0.28 dB 0.32 dB 0.47 dB			

Accredited entity according to ČSN EN ISO/IEC 17025:2018:

Element Metech s.r.o.
 Calibration Laboratory
 Toužimská 767, Letňany, 199 00 Praha 9

Ord. number ¹	Calibrated quantity / Subject of calibration	Nominal range				Parameter(s) of the meas. quantity	Lowest expanded measurement uncertainty specified ²	Calibration principle	Calibration procedure identification ³	Work place
		min	unit	max	unit					
		60 dB	to	70 dB		300 kHz to 6 GHz 6 GHz to 11 GHz 11 GHz to 18 GHz	0.37 dB 0.50 dB 0.85 dB			
	HF attenuation / attenuation pads, lines (2 port, 50 Ω device with 3.5mm connector)	0 dB	to	10 dB		50 MHz to 3 GHz 3 GHz to 11 GHz 11 GHz to 20 GHz 20 GHz to 26.5 GHz	0.06 dB 0.14 dB 0.15 dB 0.43 dB			
		10 dB	to	20 dB		50 MHz to 3 GHz 3 GHz to 6 GHz 6 GHz to 11 GHz 11 GHz to 20 GHz 20 GHz to 26.5 GHz	0.07 dB 0.14 dB 0.15 dB 0.16 dB 0.43 dB			
		20 dB	to	30 dB		50 MHz to 3 GHz 3 GHz to 6 GHz 6 GHz to 11 GHz 11 GHz to 20 GHz 20 GHz to 26.5 GHz	0.09 dB 0.15 dB 0.17 dB 0.18 dB 0.44 dB			
		30 dB	to	40 dB		50 MHz to 200 MHz 200 MHz to 3 GHz 3 GHz to 5 GHz	0.13 dB 0.12 dB 0.17 dB			

Accredited entity according to ČSN EN ISO/IEC 17025:2018:

Element Metech s.r.o.
 Calibration Laboratory
 Toužimská 767, Letňany, 199 00 Praha 9

Ord. number ¹	Calibrated quantity / Subject of calibration	Nominal range				Parameter(s) of the meas. quantity	Lowest expanded measurement uncertainty specified ²	Calibration principle	Calibration procedure identification ³	Work place
		min	unit	max	unit					
						5 GHz to 6 GHz 0.18 dB 6 GHz to 11 GHz 0.20 dB 11 GHz to 19 GHz 0.22 dB 19 GHz to 20 GHz 0.23 dB 20 GHz to 21 GHz 0.46 dB 21 GHz to 26.5 GHz 0.49 dB				
		40 dB	to	50 dB		50 MHz to 200 MHz 0.17 dB 200 MHz to 3 GHz 0.16 dB 3 GHz to 5 GHz 0.20 dB 5 GHz to 6 GHz 0.21 dB 6 GHz to 11 GHz 0.24 dB 11 GHz to 20 GHz 0.30 dB 20 GHz to 21 GHz 0.51 dB 21 GHz to 26.5 GHz 0.56 dB				
		50 dB	to	60 dB		50 MHz to 200 MHz 0.27 dB 200 MHz to 3 GHz 0.25 dB 3 GHz to 6 GHz 0.28 dB 6 GHz to 11 GHz 0.32 dB 11 GHz to 19 GHz 0.47 dB 19 GHz to 20 GHz 0.48 dB 20 GHz to 21 GHz 0.68 dB				

Accredited entity according to ČSN EN ISO/IEC 17025:2018:

Element Metech s.r.o.
 Calibration Laboratory
 Toužimská 767, Letňany, 199 00 Praha 9

Ord. number ¹	Calibrated quantity / Subject of calibration	Nominal range				Parameter(s) of the meas. quantity	Lowest expanded measurement uncertainty specified ²	Calibration principle	Calibration procedure identification ³	Work place
		min	unit	max	unit					
						21 GHz to 26.5 GHz	0.75 dB			
		60 dB	to	70 dB		50 MHz to 200 MHz 200 MHz to 3 GHz 3 GHz to 6 GHz 6 GHz to 11 GHz 11 GHz to 20 GHz 20 GHz to 21 GHz 21 GHz to 26.5 GHz	0.56 dB 0.45 dB 0.46 dB 0.50 dB 0.86 dB 1.3 dB 1.5 dB			
	HF attenuation / attenuation pads, lines (2 port, 50 Ω device with 2.4 mm connector)	0 dB	to	10 dB		50 MHz to 4 GHz 4 GHz to 12 GHz 12 GHz to 40 GHz 40 GHz to 41 GHz 41 GHz to 47 GHz 47 GHz to 50 GHz	0.04 dB 0.13 dB 0.14 dB 0.19 dB 0.20 dB 0.21 dB			
		10 dB	to	20 dB		50 MHz to 4 GHz 4 GHz to 7 GHz 7 GHz to 12 GHz 12 GHz to 29 GHz 29 GHz to 36 GHz 36 GHz to 37 GHz 37 GHz to 40 GHz	0.06 dB 0.13 dB 0.14 dB 0.15 dB 0.16 dB 0.17 dB 0.16 dB			

Accredited entity according to ČSN EN ISO/IEC 17025:2018:

Element Metech s.r.o.
 Calibration Laboratory
 Toužimská 767, Letňany, 199 00 Praha 9

Ord. number ¹	Calibrated quantity / Subject of calibration	Nominal range				Parameter(s) of the meas. quantity	Lowest expanded measurement uncertainty specified ²	Calibration principle	Calibration procedure identification ³	Work place
		min	unit	max	unit					
						40 GHz to 47 GHz	0.21 dB			
						47 GHz to 50 GHz	0.22 dB			
		20 dB	to	30 dB		50 MHz to 4 GHz	0.08 dB			
						4 GHz to 7 GHz	0.14 dB			
						7 GHz to 12 GHz	0.16 dB			
						12 GHz to 29 GHz	0.17 dB			
						29 GHz to 36 GHz	0.19 dB			
						36 GHz to 37 GHz	0.20 dB			
						37 GHz to 40 GHz	0.19 dB			
						40 GHz to 47 GHz	0.24 dB			
						47 GHz to 50 GHz	0.25 dB			
		30 dB	to	40 dB		50 MHz to 500 MHz	0.12 dB			
						500 MHz to 4 GHz	0.11 dB			
						4 GHz to 7 GHz	0.17 dB			
						7 GHz to 12 GHz	0.20 dB			
						12 GHz to 21 GHz	0.22 dB			
						21 GHz to 29 GHz	0.28 dB			
						29 GHz to 40 GHz	0.31 dB			
						40 GHz to 47 GHz	0.41 dB			
						47 GHz to 50 GHz	0.42 dB			
		40 dB	to	50 dB		50 MHz to 4 GHz	0.16 dB			
						4 GHz to 7 GHz	0.20 dB			
						7 GHz to 12 GHz	0.24 dB			
						12 GHz to 20 GHz	0.30 dB			
						20 GHz to 21 GHz	0.31 dB			

Accredited entity according to ČSN EN ISO/IEC 17025:2018:

Element Metech s.r.o.
 Calibration Laboratory
 Toužimská 767, Letňany, 199 00 Praha 9

Ord. number ¹	Calibrated quantity / Subject of calibration	Nominal range				Parameter(s) of the meas. quantity	Lowest expanded measurement uncertainty specified ²	Calibration principle	Calibration procedure identification ³	Work place
		min	unit	max	unit					
						21 GHz to 29 GHz 29 GHz to 40 GHz 40 GHz to 47 GHz 47 GHz to 50 GHz	0.38 dB 0.41 dB 0.59 dB 0.60 dB			
		50 dB	to	60 dB		50 MHz to 500 MHz 500 MHz to 4 GHz 4 GHz to 7 GHz 7 GHz to 12 GHz 12 GHz to 20 GHz 20 GHz to 21 GHz 21 GHz to 29 GHz 29 GHz to 40 GHz 40 GHz to 50 GHz	0.25 dB 0.25 dB 0.28 dB 0.32 dB 0.47 dB 0.55 dB 0.63 dB 0.65 dB 1.2 dB			
		60 dB	to	70 dB		50 MHz to 500 MHz 500 MHz to 4 GHz 4 GHz to 7 GHz 7 GHz to 12 GHz 12 GHz to 20 GHz 20 GHz to 21 GHz 21 GHz to 40 GHz 40 GHz to 50 GHz	0.56 dB 0.44 dB 0.46 dB 0.50 dB 0.85 dB 1.3 dB 1.4 dB 3.5 dB			

Accredited entity according to ČSN EN ISO/IEC 17025:2018:

Element Metech s.r.o.
 Calibration Laboratory
 Toužimská 767, Letňany, 199 00 Praha 9

Ord. number ¹	Calibrated quantity / Subject of calibration	Nominal range				Parameter(s) of the meas. quantity	Lowest expanded measurement uncertainty specified ²	Calibration principle	Calibration procedure identification ³	Work place
		min	unit	max	unit					
20*	Capacity / Electrical capacity meters	10 pF				60 Hz	1.1 %	Direct generation using a capacity standard	LIII-070	
						100 Hz	0.18 %			
						1 kHz	0.08 %			
						10 kHz	0.05 %			
						100 kHz	0.05 %			
		100 pF				60 Hz	0.16 %			
						100 Hz	0.11 %			
						1 kHz	0.06 %			
						10 kHz	0.05 %			
						100 kHz	0.05 %			
		1 nF				60 Hz	0.05 %			
						100 Hz	0.05 %			
						1 kHz	0.05 %			
						10 kHz	0.05 %			
						100 kHz	0.05 %			
		10 nF				60 Hz	0.05 %			
						100 Hz	0.05 %			
						1 kHz	0.05 %			
						10 kHz	0.05 %			
						100 kHz	0.06 %			
		100 nF				60 Hz	0.05 %			
						100 Hz	0.05 %			
						1 kHz	0.04 %			

Accredited entity according to ČSN EN ISO/IEC 17025:2018:

Element Metech s.r.o.
 Calibration Laboratory
 Toužimská 767, Letňany, 199 00 Praha 9

Ord. number ¹	Calibrated quantity / Subject of calibration	Nominal range				Parameter(s) of the meas. quantity	Lowest expanded measurement uncertainty specified ²	Calibration principle	Calibration procedure identification ³	Work place
		min	unit	max	unit					
				1 μF		20 Hz 60 Hz 100 Hz 1 kHz 10 kHz 100 kHz	0.05 % 0.05 % 0.05 % 0.04 % 0.05 % 0.09 %			
				10 μF		20 Hz 60 Hz 100 Hz 1 kHz 10 kHz	0.08 % 0.08 % 0.08 % 0.08 % 0.10 %			
				100 μF		20 Hz 60 Hz 100 Hz 1 kHz 10 kHz	0.08 % 0.08 % 0.08 % 0.08 % 0.20 %			
21*	Capacity / capacity standards	10 pF		± 5 %		60 Hz to 100 Hz 100 Hz to 10 kHz 10 kHz to 100 kHz	1.1 % 0.18 % 0.05 %	Direct measurement using a standard RLC bridge	LIII-071	
		10 pF	to	100 pF		60 Hz to 100 Hz 100 Hz to 10 kHz 10 kHz to 100 kHz	1.2 % 0.20 % 0.07 %			

Accredited entity according to ČSN EN ISO/IEC 17025:2018:

Element Metech s.r.o.
 Calibration Laboratory
 Toužimská 767, Letňany, 199 00 Praha 9

Ord. number ¹	Calibrated quantity / Subject of calibration	Nominal range		Parameter(s) of the meas. quantity	Lowest expanded measurement uncertainty specified ²	Calibration principle	Calibration procedure identification ³	Work place
		min unit	max unit					
		100 pF	± 5 %	60 Hz to 100 Hz 100 Hz to 10 kHz 10 kHz to 100 kHz	0.16 % 0.11 % 0.05 %			
		100 pF to	1 nF	60 Hz to 100 Hz 100 Hz to 10 kHz 10 kHz to 100 kHz	0.20 % 0.15 % 0.06 %			
		1 nF	± 5 %	60 Hz to 100 Hz 100 Hz to 10 kHz 10 kHz to 100 kHz	0.06 % 0.06 % 0.05 %			
		1 nF to	10 nF	60 Hz to 100 Hz 100 Hz to 10 kHz 10 kHz to 100 kHz	0.07 % 0.06 % 0.06 %			
		10 nF	± 5 %	60 Hz to 100 Hz 100 Hz to 10 kHz 10 kHz to 100 kHz	0.06 % 0.06 % 0.06 %			
		10 nF to	100 nF	60 Hz to 100 Hz 100 Hz to 10 kHz	0.07 % 0.09 %			
		100 nF	± 5 %	60 Hz to 100 Hz 100 Hz to 10 kHz	0.06 % 0.06 %			
		100 nF to	1 μF	60 Hz to 100 Hz 100 Hz to 10 kHz	0.07 % 0.07 %			
		1 μF	± 5 %	60 Hz to 100 Hz 100 Hz to 10 kHz	0.06 % 0.06 %			
		1 μF to	10 μF	60 Hz to 100 Hz 100 Hz to 10 kHz	0.09 % 0.10 %			

Accredited entity according to ČSN EN ISO/IEC 17025:2018:

Element Metech s.r.o.
 Calibration Laboratory
 Toužimská 767, Letňany, 199 00 Praha 9

Ord. number ¹	Calibrated quantity / Subject of calibration	Nominal range		Parameter(s) of the meas. quantity	Lowest expanded measurement uncertainty specified ²	Calibration principle	Calibration procedure identification ³	Work place
		min unit	max unit					
		10 μF	± 5 %	60 Hz to 100 Hz 100 Hz to 10 kHz	0.08 % 0.10 %			
		10 μF to 100 μF		60 Hz to 100 Hz 100 Hz to 10 kHz	0.13 % 0.76 %			
		100 μF	± 5 %	60 Hz to 100 Hz 100 Hz to 10 kHz	0.12 % 0.69 %			
22*	Inductance / Electric inductance meters	10 μH		10 kHz 50 kHz 100 kHz	0.21 % 0.21 % 0.21 %	Direct generation using an inductance standard	LIII-070	
		100 μH		1 kHz 10 kHz 50 kHz 100 kHz	0.21 % 0.11 % 0.11 % 0.11 %			
		1 mH		1 kHz 10 kHz 50 kHz 100 kHz	0.11 % 0.11 % 0.11 % 0.11 %			
		10 mH		100 Hz 1 kHz 10 kHz	0.15 % 0.08 % 0.08 %			
		100 mH		100 Hz 1 kHz 10 kHz	0.08 % 0.05 % 0.06 %			

Accredited entity according to ČSN EN ISO/IEC 17025:2018:

Element Metech s.r.o.
 Calibration Laboratory
 Toužimská 767, Letňany, 199 00 Praha 9

Ord. number ¹	Calibrated quantity / Subject of calibration	Nominal range				Parameter(s) of the meas. quantity	Lowest expanded measurement uncertainty specified ²	Calibration principle	Calibration procedure identification ³	Work place
		min	unit	max	unit					
		1	H			100 Hz 1 kHz	0.06 % 0.06 %			
		10	H			100 kHz 1 kHz	0.06 % 0.06 %			
23*	Inductance / Inductance standards	10	μH	± 5 %		10 kHz to 100 kHz	0.37 %	Direct measurement using a standard RLC bridge	LIII-071	
		10	μH	to	100 μH	10 kHz to 100 kHz	0.40 %			
		100	μH	± 5 %		1 kHz to 10 kHz 10 kHz to 100 kHz	0.27 % 0.11 %			
		100	μH	to	1 mH	1 kHz to 10 kHz 10 kHz to 100 kHz	0.29 % 0.12 %			
		1	mH	± 5 %		1 kHz to 10 kHz 10 kHz to 100 kHz	0.18 % 0.11 %			
		1	mH	to	10 mH	1 kHz to 10 kHz	0.20 %			
		10	mH	± 5 %		100 Hz to 1 kHz 1 kHz to 10 kHz	0.15 % 0.13 %			
		10	mH	to	100 mH	100 Hz to 1 kHz 1 kHz to 10 kHz	0.16 % 0.14 %			
		100	mH	± 5 %		100 Hz to 1 kHz 1 kHz to 10 kHz	0.09 % 0.06 %			
		100	mH	to	1 H	100 Hz to 1 kHz	0.14 %			
		1	H	± 5 %		100 Hz to 1 kHz	0.13 %			
		1	H	to	10 H	100 Hz to 1 kHz	0.14 %			
		10	H	± 5 %		100 Hz to 1 kHz	0.14 %			

Accredited entity according to ČSN EN ISO/IEC 17025:2018:

Element Metech s.r.o.
Calibration Laboratory
Toužimská 767, Letňany, 199 00 Praha 9

- ¹⁾ Asterisk at the ordinal number identifies the calibrations, which the Laboratory is qualified to carry out outside the permanent laboratory premises.
- ²⁾ The expanded measurement uncertainty is in accordance with ILAC-P14 and EA-4/02 M, part of CMC, and it is the lowest value of the respective uncertainty. If not stated otherwise, its coverage probability is approx. 95 %. If not stated otherwise, the uncertainty values stated without a unit are relative to the value measured. If the calibration is carried out outside the laboratory premises, the measurement uncertainty may be affected.
- ³⁾ If the document identifying the calibration procedure is dated, only these specific procedures are used. If the document identifying the calibration procedure is not dated, the latest edition of the specified procedure is used (including any changes).

Accredited entity according to ČSN EN ISO/IEC 17025:2018:

Element Metech s.r.o.
 Calibration Laboratory
 Toužimská 767, Letňany, 199 00 Praha 9

CMC for the field of measured quantity: Time and frequency quantities

Ord. number ¹	Calibrated quantity / Subject of calibration	Nominal range				Parameter(s) of the meas. quantity	Lowest expanded measurement uncertainty specified ²	Calibration principle	Calibration procedure identification ³	Work-place
		min	unit	max	unit					
1*	Frequency / frequency meters	0.01 Hz	to	0.1 Hz		$2.0 \cdot 10^{-3}$	Direct measurement by a reference counter	LIII-053		
		0.1 Hz	to	1 Hz		$2.0 \cdot 10^{-4}$				
		1 Hz	to	10 Hz		$2.0 \cdot 10^{-5}$				
		10 Hz	to	100 Hz		$2.0 \cdot 10^{-6}$				
		100 Hz	to	1 kHz		$2.0 \cdot 10^{-7}$				
		1 kHz	to	10 kHz		$2.0 \cdot 10^{-8}$				
		10 kHz	to	100 kHz		$2.0 \cdot 10^{-9}$				
		100 kHz	to	1 MHz		$7.0 \cdot 10^{-10}$				
		1 MHz	to	10 MHz		$5.0 \cdot 10^{-10}$				
		10 MHz	to	1.3 GHz		$5.0 \cdot 10^{-10}$				
		1.3 GHz	to	10 GHz		$2.0 \cdot 10^{-9}$				
10 GHz	to	26.5 GHz		$2.0 \cdot 10^{-10}$						
2*	Frequency / signal sources	10 MHz				$2.0 \cdot 10^{-12}$	Generation by a GPS receiver	LIII-053		
		0.01 Hz	to	0.1 Hz		$2.0 \cdot 10^{-3}$	Generation by a standard frequency generator			
		0.1 Hz	to	1 Hz		$2.0 \cdot 10^{-4}$				
		1 Hz	to	10 Hz		$2.0 \cdot 10^{-5}$				
		10 Hz	to	100 Hz		$2.0 \cdot 10^{-6}$				
		100 Hz	to	1 kHz		$2.0 \cdot 10^{-7}$				
		1 kHz	to	10 kHz		$2.0 \cdot 10^{-8}$				
		10 kHz	to	100 kHz		$2.0 \cdot 10^{-9}$				
		100 kHz	to	1 MHz		$7.0 \cdot 10^{-10}$				

Accredited entity according to ČSN EN ISO/IEC 17025:2018:

Element Metech s.r.o.
 Calibration Laboratory
 Toužimská 767, Letňany, 199 00 Praha 9

Ord. number ¹	Calibrated quantity / Subject of calibration	Nominal range				Parameter(s) of the meas. quantity	Lowest expanded measurement uncertainty specified ²	Calibration principle	Calibration procedure identification ³	Work-place
		min	unit	max	unit					
		1 MHz	to	10 MHz		$5.0 \cdot 10^{-10}$				
		10 MHz	to	1.3 GHz		$5.0 \cdot 10^{-10}$				
		1.3 GHz	to	10 GHz		$2.0 \cdot 10^{-9}$				
		10 GHz	to	26.5 GHz		$2.0 \cdot 10^{-10}$				
3*	Time interval / frequency meters, signal sources	10 ns	to	1,000 s		15 ns	Direct measurement by a reference counter	LIII-053		

¹⁾ Asterisk at the ordinal number identifies the calibrations, which the Laboratory is qualified to carry out outside the permanent laboratory premises.

²⁾ The expanded measurement uncertainty is in accordance with ILAC-P14 and EA-4/02 M, part of CMC, and it is the lowest value of the respective uncertainty. If not stated otherwise, its coverage probability is approx. 95 %. If not stated otherwise, the uncertainty values stated without a unit are relative to the value measured. If the calibration is carried out outside the laboratory premises, the measurement uncertainty may be affected.

³⁾ If the document identifying the calibration procedure is dated, only these specific procedures are used. If the document identifying the calibration procedure is not dated, the latest edition of the specified procedure is used (including any changes).