

Позиции СМС по электрической емкости, обеспечиваемые лабораторией госэталонов в области измерений параметров электрических цепей (НИЛ 2202) ФГУП "ВНИИМ им. Д.И.Менделеева"



Calibration or Measurement Service			Measurand Level or Range			Measurement Conditions/Independent Variable		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?	Matrix Uncertainty	Service provider	NMI Internal Service Identifier	Comments
Capacitance: capacitance for low loss capacitors	Standard capacitor	Transformer bridge by substitution	1	1	fF	Frequency	1 kHz, 10 kHz	3	mF/F	2	95%	Yes		55	VNIIM	Oil and air bath
						Temperature	20 °C									
Capacitance: capacitance for low loss capacitors	Standard capacitor	Transformer bridge by substitution	10	10	fF	Frequency	1 kHz, 10 kHz	0.5	mF/F	2	95%	Yes		56	VNIIM	Oil and air bath
						Temperature	20 °C									
Capacitance: capacitance for low loss capacitors	Standard capacitor	Transformer bridge by substitution	0.1	0.5	pF	Frequency	1 kHz, 10 kHz	50	μF/F	2	95%	Yes		57	VNIIM	Oil and air bath
						Temperature	20 °C									

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Capacitance: capacitance for low loss capacitors	Standard capacitor	Transformer bridge by substitution	1	1	pF	Frequency	1 kHz, 1.6 kHz	1	μF/F	2	95%	Yes		58	VNIIM	Oil and air bath
						Temperature	20 °C									
Capacitance: capacitance for low loss capacitors	Standard capacitor	Transformer bridge by substitution	10	10	pF	Frequency	1 kHz, 1.6 kHz	0.5	μF/F	2	95%	Yes		59	VNIIM	
						Temperature	20 °C, 23 °C									
Capacitance: capacitance for low loss capacitors	Standard capacitor	Transformer bridge by substitution	100	4000	pF	Frequency	1 kHz, 10 kHz	10	μF/F	2	95%	Yes		60	VNIIM	Oil and air bath
						Temperature	20 °C									
Capacitance: capacitance for low loss capacitors	Standard capacitor	Transformer bridge by substitution	100	4000	pF	Frequency	100 kHz	0.1	mF/F	2	95%	Yes		61	VNIIM	Oil and air bath
						Temperature	20 °C									
Capacitance: capacitance for low loss capacitors	Standard capacitor	Transformer bridge by substitution	1	1000	pF	Frequency	1 MHz	0.3 to 1	mF/F	2	95%	Yes		62	VNIIM	Oil and air bath
						Temperature	20 °C									
Capacitance: capacitance for dielectric capacitors	Fixed capacitor, 1-2-3-4 sequence	Transformer or Schering bridge by substitution	0.1	40	nF	Frequency	50 Hz, 1 kHz, 10 kHz, 100 kHz	0.1 to 0.2	mF/F	2	95%	Yes		63	VNIIM	Oil and air bath
						Temperature	20 °C									
Capacitance: capacitance for dielectric capacitors	Fixed capacitor, 1-2-3-4 sequence	Transformer or Schering bridge by substitution	0.1	0.4	μF	Frequency	50 Hz, 1 kHz, 10 kHz, 100 kHz	0.1 to 0.2	mF/F	2	95%	Yes		64	VNIIM	Oil and air bath
						Temperature	20 °C									
Capacitance: capacitance for dielectric capacitors	Fixed capacitor	Schering bridge by substitution	1	10	μF	Frequency	50 Hz, 1 kHz	0.2	mF/F	2	95%	Yes		65	VNIIM	Oil and air bath
Capacitance: capacitance for dielectric capacitors	Fixed capacitor	Schering bridge by substitution	1	1	μF	Frequency	10 kHz, 100 kHz	0.3 to 0.5	mF/F	2	95%	Yes		66	VNIIM	Oil and air bath

Calibration or Measurement Service			Measurand Level or Range			Measurement Conditions/Independent Variable		Expanded Uncertainty							Service provider	NMI Internal Service Identifier	Comments
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?	Matrix Uncertainty				
Capacitance: capacitance for dielectric capacitors	Capacitance box	High capacitance bridge and transformed capacitance standard	0.1	1	mF	Frequency	50 Hz, 1 kHz	0.3	mF/F	2	95%	Yes		67	VNIIM	Oil and air bath	
Capacitance: capacitance for dielectric capacitors	Capacitance box	High capacitance bridge and transformed capacitance standard	2	10	mF	Frequency	50 Hz, 1 kHz	1	mF/F	2	95%	Yes		68	VNIIM	Oil and air bath	
Capacitance: capacitance for transformed capacitors	Switched capacitor	High capacitance bridge and transformed capacitance standard	0.02	0.1	F	Frequency	50 Hz	10	mF/F	2	95%	Yes		69	VNIIM	Oil and air bath	
Capacitance: capacitance for transformed capacitors	Switched capacitor	High capacitance bridge and transformed capacitance standard	0.1	1	F	Frequency	50 Hz	50	mF/F	2	95%	Yes		70	VNIIM	Oil and air bath	
Capacitance: meters	Capacitance bridge, LCR meter	Comparison to capacitance standard and loss angle standard	1	1E+06	pF	Frequency	1 kHz	1E-04		2	95%	Yes		78	VNIIM		
Capacitance: meters	Capacitance bridge, LCR meter	Comparison to capacitance standard and loss angle standard	1E-03	1	mF	Frequency	1 kHz	1E-03		2	95%	Yes		79	VNIIM		

