

Modern design and manufacturing techniques have enabled the LCR range of polystyrene capacitors to be related to the new British Standard as follows: **25, 63, 160, 400, 630 and 2500 Volts.**

All capacitors except those in the 7mm size are marked with capacitance, tolerance, working voltage and manufacturing code date. The 7mm types are marked with capacitance and tolerance only.

Alternative sizes are available and capacitors with different ratios of length to diameter can be supplied on request, but users are advised that greater

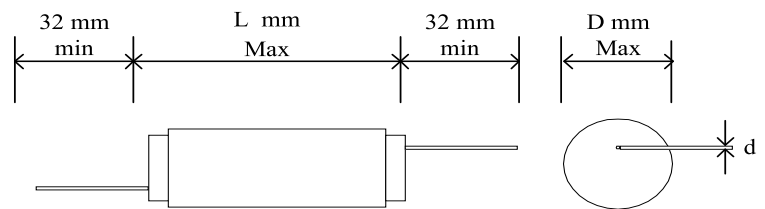
reliability, stability and resistance to humidity can be obtained by specifying the largest physical size possible. Other voltage ranges, up to 5000V are available and details of these will be available on request.

It should be noted that as the outer casing of these capacitors is formed from polystyrene it is liable to be damaged by contact with industrial solvents and cleaning agents. If in doubt please contact the LCR Sales Office. When ordering the HSQ type, customers are asked to adopt the following system:

HSQ Capacitance /Tolerance - Working Voltage e.g.
HSQ 150p/2.5-7/25.

SPECIFICATION

Capacitance Range	200p - 500n
Capacitance Tolerance	±1%, ± 2.5%, ± 5%, ± 10%, ±20% minimum of ± 1pF (±0.5pF under 10pF)
Voltage (DC working)	25, 63, 160, 400, 630, 2500 V.D.C
Operating temperature range	-40°C to +70°C
Temperature Coefficient	-140 ± 60 ppm/°C
Power Factor 1KHz > 1n0	≤ 0.0005
Power Factor 1 MHz ≤ 1n0	≤ 0.0015
Insulation Resistance (25, 63 V.D.C)	10,000S for C > 100nF 100GOhm for C , 100nF
Insulation Resistance (160, 400, 630, 2500 V.D.C)	250,000S for C > 330nF 750GOhm for C < 330nF
Environmental Class	40/70/21
Test Voltage	At least 1.5 times working voltage NOT TO BE REPEATED
Approvals	BS, EN, ISO 9001-2008



Capacitance Stability: Of the order of 0.3% over 2 years under normal conditions of usage.

Long term drift is of the order of 0.005% per month at 20°C, 0.05% per month at 70°C



RoHS Compliant Manufacturing

HSQ SERIES STANDARD RANGE AND DIMENSIONS

L and D are nominal D: maximum

Capacitance pF	25 V.D.C.			63 V.D.C.			160 V.D.C.			400 V.D.C.			630 V.D.C.			2500 V.D.C.		
	L mm	D mm	d mm	L mm	D mm	d mm	L mm	D mm	d mm	L mm	D mm	d mm	L mm	D mm	d mm	L mm	D mm	d mm
200p	7.0	3.0	0.3				7.0	3.5	0.3				7.0	6.0	0.4	20.0	9.0	0.5
400p	7.0	3.0	0.3	Use 160V			7.0	4.5	0.3	Use 630V			10.0	7.5	0.4	20.0	9.0	0.5
1n	7.0	3.5	0.3				10.0	5.5	0.4				10.0	11.0	0.4	20.0	10.5	0.5
2n	7.0	4.0	0.3	10.0	4.5	0.4	10.0	8.0	0.4	20.0	10.5	0.5	20.0	11.0	0.5	28.0	11.50	0.5
3n3	7.0	5.0	0.3	10.0	5.5	0.4	10.0	8.5	0.4	20.0	11.5	0.5	20.0	12.0	0.5	28.0	12.50	0.5
4n1	10.0	5.0	0.3	10.0	6.5	0.4	10.0	9.5	0.4	20.0	12.5	0.5	20.0	13.0	0.5	28.0	13.5	0.5
5n1	10.0	5.5	0.3	10.0	7.0	0.4	15.0	10.5	0.4	20.0	13.5	0.5	20.0	14.0	0.5	28.0	14.50	0.5
7n	10.0	6.0	0.3	10.0	8.0	0.4	15.0	11.5	0.4	20.0	15.5	0.5	28.0	12.5	0.5	28.0	16.5	0.5
8n	10.0	6.5	0.3	10.0	8.5	0.4	20.0	10.0	0.4	20.0	18.0	0.5	28.0	13.0	0.5	28.0	18.0	0.5
10n	10.0	7.0	0.3	10.0	9.5	0.4	20.0	10.5	0.4	20.0	18.0	0.5	28.0	14.0	0.5	28.0	19.5	0.5
12n	15.0	6.5	0.4	15.0	9.5	0.4	20.0	11.5	0.5	28.0	13.5	0.5	28.0	14.5	0.5*	44.0	17.0	0.8
14n	15.0	7.0	0.4	15.0	9.5	0.4	20.0	12.0	0.5	28.0	14.5	0.5	44.0	15.0	0.5*	44.0	17.0	0.8
16n	15.0	8.0	0.4	15.0	10.0	0.4	20.0	13.0	0.5	28.0	16.0	0.5	44.0	15.5	0.5*	55.0	17.5	0.8
18n	15.0	8.5	0.4	15.0	10.0	0.4	20.0	13.5	0.5	28.0	16.0	0.5	44.0	16.0	0.5*	55.0	17.5	0.8
20n	15.0	8.5	0.4	15.0	10.0	0.4	20.0	14.5	0.5	28.0	16.0	0.5	44.0	16.0	0.5*	55.0	18.0	0.8
22n	20.0	8.5	0.5	20.0	10.5	0.5	20.0	15.0	0.5	28.0	20.0	0.5*	44.0	16.5	0.5*	55.0	19.0	0.8
25n	20.0	9.0	0.5	20.0	11.0	0.5	20.0	16.5	0.5	28.0	20.0	0.5*	44.0	17.0	0.5*	55.0	20.0	0.8
30n	20.0	9.0	0.5	20.0	11.5	0.5	28.0	13.0	0.5	28.0	20.0	0.5*	44.0	17.5	0.5*	55.0	22.0	0.8
40n	20.0	9.5	0.5	20.0	13.0	0.5	28.0	14.5	0.5	28.0	23.0	0.5*	50.0	18.0	0.5*	55.0	23.0	0.8
50n	20.0	10.0	0.5	20.0	14.5	0.5	28.0	15.5	0.5	28.0	23.0	0.5*	50.0	20.0	0.5*	55.0	27.0	0.8
60n	28.0	11.0	0.5	20.0	16.0	0.5	28.0	17.0	0.5	50.0	18.0	0.5*	50.0	21.0	0.5*	55.0	28.0	0.8
70n	28.0	11.0	0.5	20.0	17.0	0.5	28.0	18.0	0.5	50.0	20.5	0.5*	50.0	22.0	0.5*	55.0	29.0	0.8
80n	28.0	11.5	0.5	20.0	18.5	0.5	28.0	19.5	0.5*	50.0	20.5	0.5*	50.0	23.0	0.5*	55.0	30.0	0.8
90n	28.0	12.0	0.5	20.0	20.0	0.5	28.0	21.0	0.5*	50.0	23.0	0.5*	50.0	25.0	0.5*	55.0	32.0	0.8
100n	28.0	12.0	0.5	28.0	20.5	0.5	28.0	22.0	0.5*	50.0	23.0	0.5*	50.0	26.0	0.5*	55.0	36.0	0.8
150n	28.0	13.0	0.5	28.0	21.0	0.5	44.0	20.0	0.5*	50.0	30.5	0.5*	50.0	31.0	0.5*			
200n	28.0	14.5	0.5	28.0	22.5	0.5*	44.0	22.0	0.5*	50.0	30.5	0.5*	50.0	39.0	0.5*			
250n	28.0	14.5	0.5	28.0	24.5	0.5*	44.0	25.0	0.5*									
300n	28.0	16.5	0.5	28.0	26.0	0.5*	50.0	27.0	0.5*									
400n	28.0	18.5	0.5	34.0	22.0	0.5*	50.0	31.0	0.5*									
500n	28.0	21.0	0.5	34.0	25.0	0.5*	50.0	34.0	0.5*									

Minimum Capacitance 2p0 * Twisted pairs of tinned copper wire. All wires are tin coated copper. Minimum wire length - 30mm

LCR CAPACITORS (EU) Ltd

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