

Now available with FlexiCap™ termination (X7R only)



PSL range of MLC capacitors



PSL Features

- 0805 to 2220 chip sizes
- COG/NP0 and X7R dielectric options
- Capacitance range COG/NP0 from 4.7pF up to 47nF
- Capacitance range X7R from 220pF up to 1.5µF
- Voltage ratings from 50V to 5kV
- AEC-Q200 qualified parts for Hi-Rel and Automotive applications
- RoHS compliant
- Available ex-stock from global distribution partners
- Sample kits available

COG/NP0 & X7R MLCCs

The PSL range of multilayer ceramic capacitors is suitable for a variety of applications including: commercial (such as power supplies, DC-DC converters, LED lighting), military, industrial, automotive and aerospace.

This range is manufactured to exacting standards using our unique screen printing process. This provides a high quality component suitable for demanding applications.

Specification

Capacitance Values

COG/NP0	X7R
4.7pF - 47nF	220pF - 1.5µF

See table for full list of values

Electrical

Operating Temperature

-55°C to +125°C

Temperature Coefficient of Capacitance (Typical)

COG/NP0	X7R
30ppm/°C	±15%

Insulation Resistance

Time constant (Ri xCr) (whichever is the least)

100GΩ or 1000s

Ageing Rate

COG/NP0	X7R
Zero	X7R typically less than 2% per time decade

Mechanical

Termination Material

See ordering information overleaf

Solderability

IEC 60068-2-58. Passed 3 times reflow profile defined in J-STD-020

Lead Free Soldering

This range is fully compliant with the RoHS and WEEE directives and parts are compatible with lead free solders.

Climatic Category

55/125/56

Reeled Quantities

See taped quantities table overleaf



knowles

DLI•Novacap•Syfer•Voltronics

www.knowlesc capacitors.com

Product ranges - Capacitance values

Rated Voltage	Chip Size											
	0805		1206		1210		1808		1812		2220	
	COG/NP0	X7R	COG/NP0	X7R	COG/NP0	X7R	COG/NP0	X7R	COG/NP0	X7R	COG/NP0	X7R
Min Cap	4.7pF	220pF	10pF	470pF	22pF	1nF	22pF	1nF	47pF	1nF	68pF	1nF
50V/63V	-	100nF	-	470nF	-	1µF	-	470nF	-	-	-	-
100V	1.8nF	47nF	4.7nF	150nF	8.2nF	330nF	8.2nF	270nF	18nF	680nF	47nF	1.5µF
200V/250V	1nF	27nF	3.3nF	100nF	6.8nF	180nF	6.8nF	180nF	15nF	470nF	33nF	1µF
500V	680pF	10nF	2.2nF	56nF	4.7nF	100nF	4.7nF	100nF	12nF	220nF	22nF	560nF
630V	330pF	5.6nF	1.8nF	47nF	3.3nF	68nF	3.3nF	68nF	10nF	150nF	12nF	330nF
1kV	150pF	3.3nF	1.5nF	10nF	2.2nF	22nF	2.2nF	22nF	5.6nF	68nF	10nF	100nF 120nF
1.5kV	68pF	-	390pF	-	680pF	-	680pF	-	2.2nF	-	4.7nF	-
2kV	47pF	-	220pF	1nF 2.2nF	470pF	4.7nF	470pF	3.3nF	1nF	10nF	2.2nF	-
2.5kV	-	-	100pF	-	180pF	-	270pF	-	680pF	-	1.5nF	-
3kV	-	-	68pF	-	150pF	-	220pF	-	470pF	-	1nF	-
4kV	-	-	-	-	-	-	100pF	-	220pF	-	680pF	-
5kV	-	-	-	-	-	-	68pF	-	180pF	-	330pF	-

NOTE: Other capacitance values may become available, please contact our Sales Office if you need values other than those shown in the above table. For dimensions and soldering information, please go to our website (www.syfer.com) or see our MLC Catalogue.

■ = AEC-Q200

Taped quantities

Chip Size	0805	1206	1210	1808	1812	2220
7" Reel	3,000	2,500	2,000	1,500	500/1,000*	500/1,000*
13" Reel	12,000	10,000	8,000	6,000	2,000/4,000*	2,000/4,000*

*Reel quantity depends on chip thickness. Please contact Sales Office.

Ordering information - PSL capacitors

1206	J	1K0	0103	K		J	T
Chip size	Termination	Voltage	Capacitance in picofarads (pF)	Capacitance tolerance		Dielectric	Packaging
0805 1206 1210 1808 1812 2220	J = Nickel barrier with 100% matte tin plating. RoHS compliant. Lead free. Y =FlexiCap™ termination base with nickel barrier (100% matte tin plating). RoHS compliant. Lead free. (X7R only). Note: AEC-Q200 qualified parts only available with FlexiCap™ termination.	050 = 50V 063 = 63V 100 = 100V 200 = 200V 250 = 250V 500 = 500V 630 = 630V 1K0 = 1kV 1K5 = 1.5kV 2K0 = 2kV 2K5 = 2.5kV 3K0 = 3kV 4K0 = 4kV 5K0 = 5kV	First digit is 0. Second and third digits are significant figures of capacitance code. The fourth digit is number of 0's following Example: 0103 = 10000pF	COG/NP0 F = ±1% G = ±2% J = ±5% K = ±10%	X7R K = ±10% M = ±20%	G = COG/NP0 J = X7R S = X7R AEC-Q200	T = 178mm (7") reel R = 330mm (13") reel B = Bulk pack - tubs



Knowles (Cazenovia)
2777 Route 20 East, Cazenovia,
NY 13035 USA



Phone: +1 315 655 8710
Fax: +1 315 655 0445
DLSales@knowles.com



Novacap
25111 Anza Drive, Valencia,
CA 91355 USA



Phone: +1 661 295 5920
Fax: +1 661 295 5928
NovacapSales@knowles.com



Knowles (UK) Ltd
Old Stoke Road, Arminghall, Norwich,
NR14 8SQ UK



Phone: +44 1603 723300
Fax: +44 1603 723301
SyferSales@knowles.com



Voltronics Corporation
2250 Northwood Drive, Salisbury,
MD 21801 USA



Phone: +1 410 749 2424
Fax: +1 443 260 2263
VoltronicsSales@knowles.com