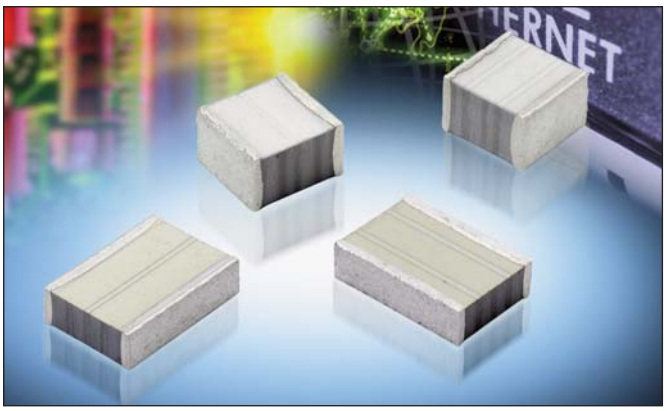
Film Chip Capacitors

High Surge Voltage SMD Film Capacitors – CL Series



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GENERAL DESCRIPTION

Film chip capacitor using a naked and stacked construction with metallized Polyethylene Naphtalate film (PEN) Usage of a multitrack technology results to an equivalent serial construction which gives better high voltage surge handling capability.

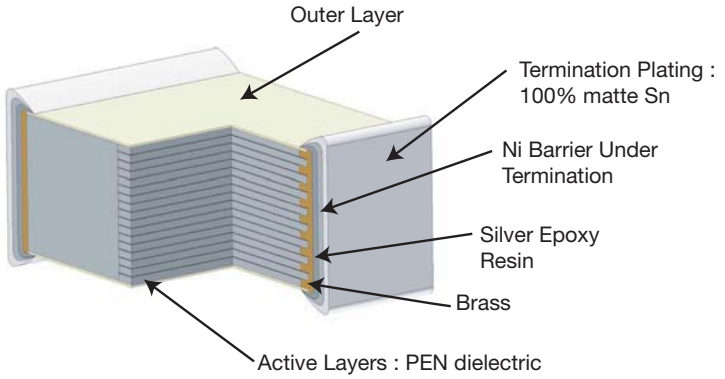
APPLICATIONS

This new version of our High Voltage SMD range has been developed to withstand high line surges common in telecom application.

These capacitors meet the telecom lightning strike protection standards.

ADVANTAGES

- Surge Voltage up to 1500V (10/700 µs)
- Self healing
- Safe open failure mode
- Low ESR
- Surface Mount (IR/Vapor reflow) solution



PERFORMANCE CHARACTERISTICS

Climatic Category	55/125/56
Capacitance Range	6.8nF to 33nF
Tolerance on C_R	±5%, ±10%
Nominal Voltages	630Vdc
Test Voltage	1500V (10/700µs)
Soldering methods	IR or vapor phase reflow (not suitable for wave soldering)
Tangent of Loss Angle at 1kHz (DF)	< 100 x 10^{-4}
Insulation resistance minimum : IR	IR > 1000 MΩ
Temperature range	-55°C to 125°C with voltage derating of 1.25%/°C between 105°C and 125°C

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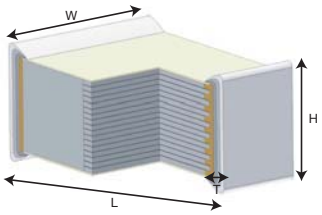
CAPACITANCE VALUES (CR) AND NOMINAL VOLTAGES (VR)



millimeters (inches)

Capacitance Range (CR)	Ordering Code	VOLTAGE Vdc: 630V												
		Chip Dimensions *Tolerances (page 6)				Tape Dimensions			Reel Dimensions			Packaging Unit		Reel Pkg Code
		L	W	H max	T	W	P1	K0	A	W1	W2 max	Bulk	Reel	
0.0068µF	CL057K0682+ --	7.20 (0.283)	6.10 (0.240)	2.50 (0.099)	0.80 (0.032)	24.0 (0.944)	12.0 (0.472)	3.73 (0.147)	330 (12.99)	24.4 (0.961)	30.4 (1.196)	1000	1600	BC
0.0082	CL057K0822+ --	7.20 (0.283)	6.10 (0.240)	2.70 (0.106)	0.80 (0.032)	24.0 (0.944)	12.0 (0.472)	3.73 (0.147)	330 (12.99)	24.4 (0.961)	30.4 (1.196)	1000	1600	BC
0.010µF	CL057K0103+ --	7.20 (0.283)	6.10 (0.240)	2.70 (0.106)	0.80 (0.032)	24.0 (0.944)	12.0 (0.472)	3.73 (0.147)	330 (12.99)	24.4 (0.961)	30.4 (1.196)	1000	1600	BC
0.012	CL057K0123+ --	7.20 (0.283)	6.10 (0.240)	2.70 (0.106)	0.80 (0.032)	24.0 (0.944)	12.0 (0.472)	3.73 (0.147)	330 (12.99)	24.4 (0.961)	30.4 (1.196)	1000	1600	BC
0.015	CL057K0153+ --	7.20 (0.283)	6.10 (0.240)	3.50 (0.138)	0.80 (0.032)	24.0 (0.944)	12.0 (0.472)	3.73 (0.147)	330 (12.99)	24.4 (0.961)	30.4 (1.196)	1000	1600	BC
0.018	CL057K0183+ --	7.20 (0.283)	6.10 (0.240)	4.00 (0.158)	0.80 (0.032)	16.0 (0.629)	12.0 (0.472)	5.23 (0.206)	330 (12.99)	16.4 (0.645)	22.4 (0.881)	1000	1100	BC
0.022	CL957K0223+ --	7.20 (0.283)	10.0 (0.394)	3.00 (0.118)	0.80 (0.032)	16.0 (0.629)	12.0 (0.472)	4.80 (0.189)	330 (12.99)	16.4 (0.645)	22.4 (0.881)	1000	1100	BC
0.027	CL957K0273+ --	7.20 (0.283)	10.0 (0.394)	3.70 (0.146)	0.80 (0.032)	16.0 (0.629)	12.0 (0.472)	4.80 (0.189)	330 (12.99)	16.4 (0.645)	22.4 (0.881)	1000	1100	BC
0.033µF	CL957K0333+ --	7.20 (0.283)	10.0 (0.394)	4.00 (0.158)	0.80 (0.032)	16.0 (0.629)	12.0 (0.472)	5.23 (0.206)	330 (12.99)	16.4 (0.645)	22.4 (0.881)	1000	1100	BC

For other Values: upon request
Replace the + by the tolerance code: J = 5% or K = 10%
Replace the -- by the packaging suffix: -- = bulk
BC = tape & reel

MATERIALS CONTROLLED BY ROHS (PPM BY WEIGHT):

Mass / unit (g)	Lead	Mercury	Cadmium	Hexavalent Chromium	PBB	PBDE
CB range	0	0	0	0	0	0
RoHS Limit (ppm)	1	1	100	1	1	1
Pass/Fail	Pass	Pass	Pass	Pass	Pass	Pass

This product has been tested and found to be compliant with all requirements, provisions, and exemptions of EU Directive 2002/95/EC of the European Parliament and Council of January 27, 2003. On the Restriction of use of certain Hazardous Substances (RoHS) in electrical and electronic equipment and EU Directive 2000/53/EC regarding ELV or End of Life Vehicle.

ROHS / ELV STATUS

External Plating

100% Matte Sn as standard

LEAD-FREE STATUS / MOISTURE SENSITIVITY RANKING

Pb Free Reflow Solder compliant, MSL = 3.

Reflow soldering referring to Jedec Standard with some limitations. Additional JESD-97 data to be phased in MSL e3 termination.

PRODUCT LABELING:

(For informational purposes only to be phased in on reel and container.)

Pb Free:

RoHS Compliant:

PRODUCT TRACEABILITY:

Full internal material traceability by reference to unique lot number marked on reel and external package.