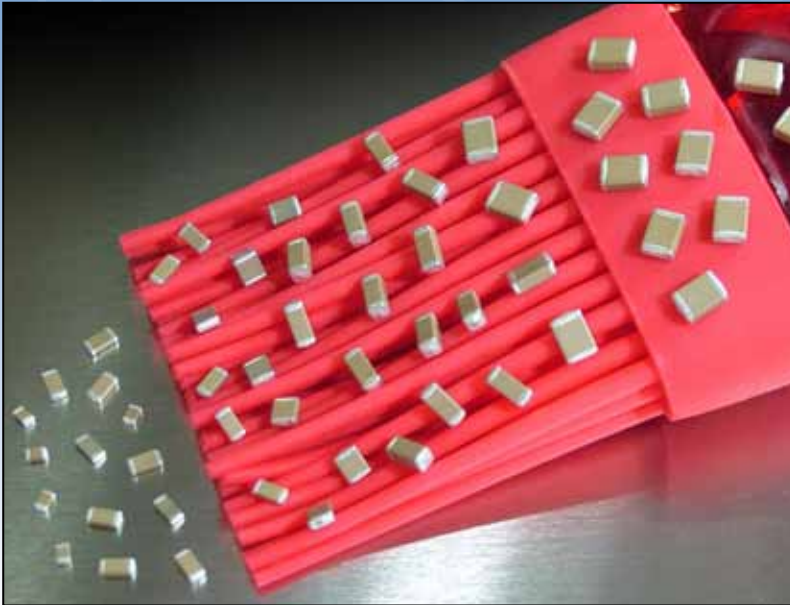


VC1 residual range of X7R MLC capacitors



X7R MLCCs

The VC1 residual capacitance range MLCCs provide a more stable capacitance value with voltage - not to drop below 50% of the 1Vrms 1kHz value, up to full rated DC voltage, at room temperature.

They can be operated continuously at full rated voltage, but if de-rated will maintain a larger percentage of their original capacitance value, e.g. at 80% RV capacitance value equals 60% approx - see graph.

Defined capacitance value in case sizes from 0805 to 3640, with voltage rating up to 3kV. Ideal for Power supplies, capacitance critical circuits, smoothing circuits and EMI suppression.

Specification

Capacitance Values

X7R

270pF - 2.2 μ F (See overleaf for full list of values)

Electrical

Operating Temperature

-55°C to +125°C

Temperature Coefficient of Capacitance (Typical)

\pm 15%

Insulation Resistance

Time constant ($R_i \times C_r$) (whichever is the least)

100G Ω or 1000s

Ageing Rate

Typical 1% 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.

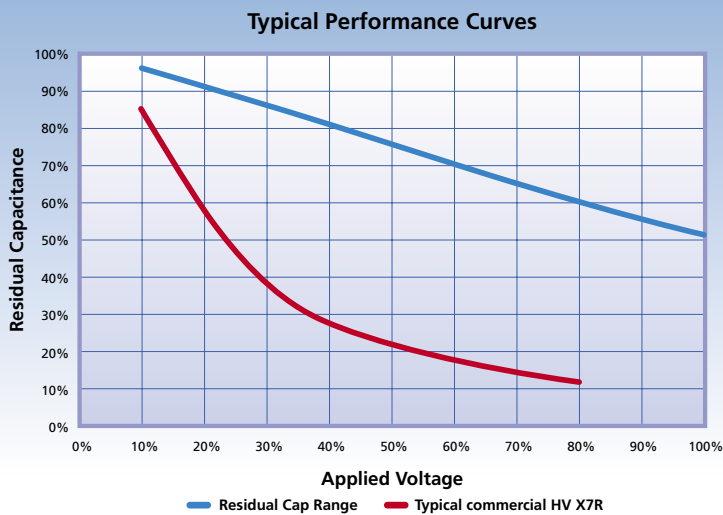
Climatic Category

55/125/56

Reeled Quantities

See capacitance table overleaf

Typical performance curves



knowles

DLI • Novacap • Syfer • Voltronics

www.knowlescapacitors.com

Taped quantities

Chip Size	0805	1206	1210	1808	1812	2220	2225	3640
7" Reel	3,000	2,500	2,000	500/1,000*	500/1,000*	500/1,000*	500/1,000*	n/a
13" Reel	12,000	10,000	8,000	2,000/4,000*	2,000/4,000*	2,000/4,000*	2,000/4,000*	500

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

Ordering information - VC1 capacitors

1206	Y	1K0	0152	K	X	T	VC1
Chip size	Termination	Voltage	Capacitance in picofarads (pF)	Capacitance tolerance	Dielectric	Packaging	Suffix
0805 1206 1210 1808 1812 2220 2225 3640	Y = FlexiCap™ termination base with nickel barrier (100% matte tin plating). RoHS compliant.	250 = 250V 500 = 500V 630V = 630V 1K0 = 1.0kV 1K2 = 1.2kV 1K5 = 1.5kV 2K0 = 2.0kV 2K5 = 2.5kV 3K0 = 3.0kV	First digit is 0. Second and third digits are significant figures of capacitance code. The fourth digit is number of 0's following Example: 0152 = 1500pF	J = ±5% K = ±10% M = ±20%	X = X7R	T = 178mm (7") reel R = 330mm (13") reel B = Bulk pack - tubs	

Chip Size	0805	1206	1210	1808	1812	2220	2225	3640
Min Cap	100pF	150pF	220pF	220pF	470pF	1nF	1nF	2.2nF
250V	12nF	39nF	82nF	82nF	220nF	680nF	1µF	1.8µF
500V	2.2nF	6.8nF	15nF	15nF	56nF	150nF	220nF	560nF
630V	1.5nF	4.7nF	8.2nF	8.2nF	39nF	100nF	120nF	470nF
1000V	390pF	1.5nF	2.7nF	2.7nF	15nF	39nF	56nF	180nF
1200V	-	1nF	2.2nF	2.2nF	10nF	27nF	39nF	120nF
1500V	-	560pF	1.2nF	1.2nF	5.6nF	15nF	22nF	68nF
2000V	-	270pF	560pF	560pF	3.3nF	10nF	12nF	39nF
2500V	-	-	-	-	1.8nF	5.6nF	8.2nF	22nF
3000V	-	-	-	-	-	3.9nF	5.6nF	12nF

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.



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



Phone: +1 315 655 8710
 Fax: +1 315 655 0445
DLISales@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