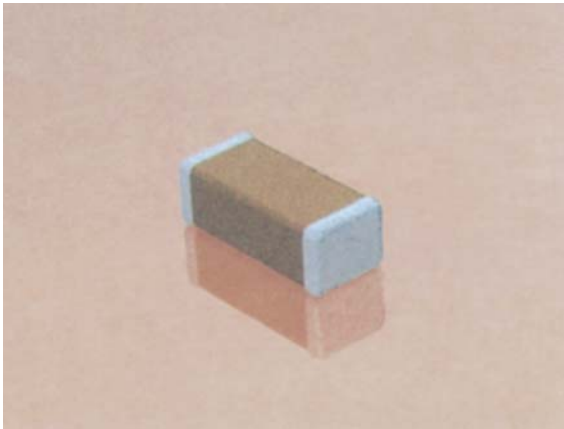


High Voltage MLC Chips FLEXITERM™



For 600V to 3000V Application



High value, low leakage and small size are difficult parameters to obtain in capacitors for high voltage systems. AVX special high voltage MLC chips capacitors meet these performance characteristics and are designed for applications such as snubbers in high frequency power converters, resonators in SMPS, and high voltage coupling/DC blocking. These high voltage chip designs exhibit low ESRs at high frequencies.

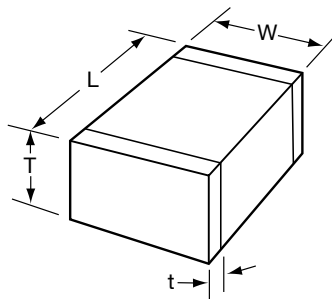
To make high voltage chips, larger physical sizes than are normally encountered are necessary. These larger sizes require that special precautions be taken in applying these chips in surface mount assemblies. In response to this, and to follow from the success of the FLEXITERM™ range of low voltage parts, AVX is delighted to offer a FLEXITERM™ high voltage range of capacitors, FLEXITERM™.

The FLEXITERM™ layer is designed to enhance the mechanical flexure and temperature cycling performance of a standard ceramic capacitor, giving customers a solution where board flexure or temperature cycle damage are concerns.

HOW TO ORDER

1808	A	C	272	K	A	Z	1	A
AVX Style	Voltage	Temperature Coefficient	Capacitance Code (2 significant digits + no. of zeros)	Capacitance Tolerance	Test Level	Termination*	Packaging	Special Code
0805 1206 1210 1808 1812 1825 2220 2225	600V/630V = C 1000V = A 1500V = S 2000V = G 2500V = W 3000V = H	X7R = C	Examples: 10 pF = 100 100 pF = 101 1,000 pF = 102 22,000 pF = 223 220,000 pF = 224 1 μF = 105	X7R:K = ±10% M = ±20% Z = +80%, -20%	A = Standard	Z = FLEXITERM™ 100% Tin (RoHS Compliant) X = FLEXITERM™ 5% min. Pb	1 = 7" Reel 3 = 13" Reel 9 = Bulk	A = Standard

Notes: Capacitors with X7R dielectrics are not intended for applications across AC supply mains or AC line filtering with polarity reversal. Contact plant for recommendations. Contact factory for availability of Termination and Tolerance options for Specific Part Numbers.



DIMENSIONS

millimeters (inches)

SIZE	0805	1206	1210*	1808*	1812*	1825*	2220*	2225*
(L) Length	2.01 ± 0.20 (0.079 ± 0.008)	3.20 ± 0.20 (0.126 ± 0.008)	3.20 ± 0.20 (0.126 ± 0.008)	4.57 ± 0.25 (0.180 ± 0.010)	4.50 ± 0.30 (0.177 ± 0.012)	4.50 ± 0.30 (0.177 ± 0.012)	5.7 ± 0.40 (0.224 ± 0.016)	5.72 ± 0.25 (0.225 ± 0.010)
(W) Width	1.25 ± 0.20 (0.049 ± 0.008)	1.60 ± 0.20 (0.063 ± 0.008)	2.50 ± 0.20 (0.098 ± 0.008)	2.03 ± 0.25 (0.080 ± 0.010)	3.20 ± 0.20 (0.126 ± 0.008)	6.40 ± 0.30 (0.252 ± 0.012)	5.0 ± 0.40 (0.197 ± 0.016)	6.35 ± 0.25 (0.250 ± 0.010)
(T) Thickness Max.	1.30 (0.051)	1.52 (0.060)	1.70 (0.067)	2.03 (0.080)	2.54 (0.100)	2.54 (0.100)	3.30 (0.130)	2.54 (0.100)
(t) terminal min. max.	0.50 ± 0.25 (0.020 ± 0.010)	0.25 (0.010) 0.75 (0.030)	0.25 (0.010) 0.75 (0.030)	0.25 (0.010) 1.02 (0.040)	0.25 (0.010) 1.02 (0.040)	0.25 (0.010) 1.02 (0.040)	0.25 (0.010) 1.02 (0.040)	0.25 (0.010) 1.02 (0.040)

*Reflow Soldering Only



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X7R Dielectric

Performance Characteristics

Capacitance Range	390 pF to 0.33 μ F (25°C, 1.0 \pm 0.2 Vrms at 1kHz)
Capacitance Tolerances	\pm 10%; \pm 20%; +80%, -20%
Dissipation Factor	2.5% max. (+25°C, 1.0 \pm 0.2 Vrms, 1kHz)
Operating Temperature Range	-55°C to +125°C
Temperature Characteristic	\pm 15% (0 VDC)
Voltage Ratings	600, 630, 1000, 1500, 2000, 2500 & 3000 VDC (+125°C)
Insulation Resistance (+25°C, at 500 VDC)	100K M Ω min. or 1000 M Ω - μ F min., whichever is less
Insulation Resistance (+125°C, at 500 VDC)	10K M Ω min. or 100 M Ω - μ F min., whichever is less
Dielectric Strength	Minimum 120% rated voltage for 5 seconds at 50 mA max. current

HIGH VOLTAGE X7R MAXIMUM CAPACITANCE VALUES

VOLTAGE		0805	1206	1210	1808	1812	1825	2220	2225
600/630	min.	1800pF	8200 pF	0.018 μ F	0.022 μ F	0.039 μ F	0.100 μ F	0.100 μ F	0.100 μ F
	max.	6800pF	0.022 μ F	0.056 μ F	0.068 μ F	0.120 μ F	0.270 μ F	0.270 μ F	0.330 μ F
1000	min.	390pF	3300 pF	8200 pF	8200 pF	0.015 μ F	0.047 μ F	0.047 μ F	0.047 μ F
	max.	1500pF	6800 pF	0.015 μ F	0.018 μ F	0.039 μ F	0.100 μ F	0.120 μ F	0.150 μ F
1500	min.	—	1800 pF	4700 pF	3900 pF	6800 pF	0.022 μ F	0.022 μ F	0.022 μ F
	max.	—	2700 pF	6800 pF	6800 pF	0.015 μ F	0.056 μ F	0.056 μ F	0.068 μ F
2000	min.	—	820 pF	1500 pF	2200 pF	4700 pF	0.015 μ F	0.015 μ F	0.015 μ F
	max.	—	1500 pF	3900 pF	3300 pF	8200 pF	0.027 μ F	0.027 μ F	0.033 μ F
2500	min.	—	—	—	1500 pF	3300 pF	8200 pF	0.010 μ F	0.012 μ F
	max.	—	—	—	2200 pF	5600 pF	0.015 μ F	0.018 μ F	0.022 μ F
3000	min.	—	—	—	1000 pF	1800 pF	5600 pF	6800 pF	8200 pF
	max.	—	—	—	1800 pF	4700 pF	0.012 μ F	0.012 μ F	0.015 μ F