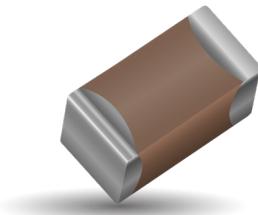


High Voltage MLC Chips

Tin/Lead Termination "B" - 600V to 5000V Applications



NEW 630V RANGE

HOW TO ORDER

LD08	A	A	271	K	A	B	1	A
AVX Style	Voltage	Temperature Coefficient	Capacitance Code	Capacitance Tolerance	Test Level	Termination*	Packaging	Special Code
LD05 - 0805	600V/630V = C	COG = A	(2 significant digits + no. of zeros)	COG: J = $\pm 5\%$ X7R: K = $\pm 10\%$ M = $\pm 20\%$	A = Standard 4 = Automotive*	B = 5% Min Pb X = FLEXITERM® 5% min. Pb*	2 = 7" Reel** 4 = 13" Reel	A = Standard
LD06 - 1206	1000V = A	X7R = C	Examples: 10 pF = 100 100 pF = 101 1,000 pF = 102 22,000 pF = 223 220,000 pF = 224 1 μ F = 105	X7R: K = $\pm 10\%$ M = $\pm 20\%$ Z = +80%, -20%				
LD10 - 1210	1500V = S							
LD08 - 1808	2000V = G							
LD12 - 1812	2500V = W							
LD13 - 1825	3000V = H							
LD20 - 2220	4000V = J							
LD14 - 2225	5000V = K							
LD40 - 3640								

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.

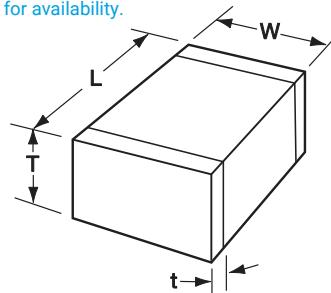
NOT RoHS Compliant

* FLEXITERM is not available in the LD40 Style

** The LD40 Style is not available on 7" Reels.

*** AVX offers nonstandard chip sizes. Contact factory for details.

* Not all values are supported in Automotive grade. Please contact factory for availability.



millimeters (inches)

DIMENSIONS

SIZE	LD05 (0805)	LD06 (1206)	LD10* (1210)	LD08* (1808)	LD12* (1812)	LD13* (1825)	LD20* (2220)	LD14* (2225)	LD40* (3640)
(L) Length	2.10 \pm 0.20 (0.083 \pm 0.008)	3.30 \pm 0.30 (0.130 \pm 0.012)	3.30 \pm 0.40 (0.130 \pm 0.016)	4.60 \pm 0.50 (0.181 \pm 0.020)	4.60 \pm 0.50 (0.181 \pm 0.020)	4.60 \pm 0.50 (0.181 \pm 0.020)	5.70 \pm 0.50 (0.224 \pm 0.020)	5.70 \pm 0.50 (0.224 \pm 0.020)	9.14 \pm 0.25 (0.360 \pm 0.010)
(W) Width	1.25 \pm 0.20 (0.049 \pm 0.008)	1.60 \pm 0.20 (0.063 \pm 0.008)	2.50 \pm 0.30 (0.098 \pm 0.012)	2.00 \pm 0.20 (0.079 \pm 0.008)	3.20 \pm 0.30 (0.126 \pm 0.012)	6.30 \pm 0.40 (0.248 \pm 0.016)	5.00 \pm 0.40 (0.197 \pm 0.016)	6.30 \pm 0.40 (0.248 \pm 0.016)	10.2 \pm 0.25 (0.400 \pm 0.010)
(T) Thickness Max.	1.35 (0.053)	1.80 (0.071)	2.80 (0.110)	2.20 (0.087)	2.80 (0.110)	3.40 (0.134)	3.40 (0.134)	3.40 (0.134)	2.54 (0.100)
(t) min. terminal max.	0.50 \pm 0.20 (0.020 \pm 0.008)	0.60 \pm 0.20 (0.024 \pm 0.008)	0.75 \pm 0.35 (0.030 \pm 0.014)	0.75 \pm 0.35 (0.030 \pm 0.014)	0.75 \pm 0.35 (0.030 \pm 0.014)	0.85 \pm 0.35 (0.033 \pm 0.014)	0.85 \pm 0.35 (0.033 \pm 0.014)	0.76 (0.030) (0.033 \pm 0.014)	1.52 (0.060)

*Reflow Soldering Only

Performance of ceramic capacitors can be simulated by using the online SpiMLCC software program - <http://spicat.avx.com/mlcc>
Custom values, ratings and configurations are also available.



The Important Information/Disclaimer is incorporated in the catalog where these specifications came from or available online at www.avx.com/disclaimer by reference and should be reviewed in full before placing any order.

High Voltage MLC Chips

Tin/Lead Termination "B" - 600V to 5000V Applications



NPO (COG) Dielectric Performance Characteristics

Capacitance Range	10 pF to 0.047 μ F (25°C, 1.0 \pm 0.2 Vrms at 1kHz, for \leq 1000 pF use 1 MHz)
Capacitance Tolerances	\pm 5%, \pm 10%, \pm 20%
Dissipation Factor	0.1% max. (+25°C, 1.0 \pm 0.2 Vrms, 1kHz, for \leq 1000 pF use 1 MHz)
Operating Temperature Range	-55°C to +125°C
Temperature Characteristic	0 \pm 30 ppm/ $^{\circ}$ C (0 VDC)
Voltage Ratings	600, 630, 1000, 1500, 2000, 2500, 3000, 4000 & 5000 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 COG CAPACITANCE VALUES

VOLTAGE	LD05 (0805)	LD06 (1206)	LD10 (1210)	LD08 (1808)	LD12 (1812)	LD13 (1825)	LD20 (2220)	LD14 (2225)	LD40 (3640)
600/630	min. max.	10 pF 330 pF	10 pF 1200 pF	100 pF 2700 pF	100 pF 3300 pF	100 pF 5600 pF	1000 pF 0.012 μ F	1000 pF 0.012 pF	1000 pF 0.018 μ F
	min. max.	10 pF 180 pF	10 pF 560 pF	10 pF 1500 pF	100 pF 2200 pF	100 pF 3300 pF	1000 pF 8200 pF	1000 pF 0.010 pF	1000 pF 0.022 μ F
1500	min. max.	— —	10 pF 270 pF	10 pF 680 pF	10 pF 820 pF	10 pF 1800 pF	100 pF 4700 pF	100 pF 4700 pF	100 pF 5600 pF
	min. max.	— —	10 pF 120 pF	10 pF 270 pF	10 pF 330 pF	10 pF 1000 pF	100 pF 1800 pF	100 pF 2200 pF	100 pF 2700 pF
2500	min. max.	— —	— —	10 pF 180 pF	10 pF 470 pF	10 pF 1200 pF	100 pF 1500 pF	100 pF 1800 pF	100 pF 3900 pF
	min. max.	— —	— —	10 pF 120 pF	10 pF 330 pF	10 pF 820 pF	10 pF 1000 pF	10 pF 1200 pF	100 pF 2700 pF
3000	min. max.	— —	— —	10 pF 120 pF	10 pF 330 pF	10 pF 820 pF	10 pF 1000 pF	10 pF 1200 pF	100 pF 2700 pF
	min. max.	— —	— —	10 pF 47 pF	10 pF 150 pF	10 pF 330 pF	10 pF 470 pF	10 pF 560 pF	100 pF 1200 pF
4000	min. max.	— —	— —	— —	— —	— —	— —	— —	100 pF 1200 pF
	min. max.	— —	— —	— —	— —	— —	10 pF 220 pF	10 pF 270 pF	10 pF 820 pF

X7R Dielectric Performance Characteristics

Capacitance Range	10 pF to 0.56 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, 4000 & 5000 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	3640
600/630	min. max.	100 pF 6800 pF	1000 pF 0.022 μ F	1000 pF 0.056 μ F	1000 pF 0.068 μ F	0.010 μ F 0.390 μ F	0.010 μ F 0.270 μ F	0.010 μ F 0.330 μ F	0.010 μ F 0.560 μ F
	min. max.	100 pF 1500 pF	100 pF 6800 pF	1000 pF 0.015 μ F	1000 pF 0.018 μ F	1000 pF 0.039 μ F	1000 pF 0.100 μ F	1000 pF 0.120 μ F	1000 pF 0.150 μ F
1500	min. max.	— —	100 pF 2700 pF	100 pF 5600 pF	100 pF 6800 pF	100 pF 0.015 μ F	1000 pF 0.056 μ F	1000 pF 0.068 μ F	1000 pF 0.100 μ F
	min. max.	— —	10 pF 1500 pF	100 pF 3300 pF	100 pF 3300 pF	100 pF 8200 pF	100 pF 0.022 μ F	1000 pF 0.027 μ F	1000 pF 0.033 μ F
2500	min. max.	— —	— —	10 pF 2200 pF	10 pF 5600 pF	100 pF 0.015 μ F	100 pF 0.018 μ F	100 pF 0.022 μ F	1000 pF 0.022 μ F
	min. max.	— —	— —	10 pF 1800 pF	10 pF 3900 pF	100 pF 0.010 μ F	100 pF 0.012 μ F	100 pF 0.015 μ F	1000 pF 0.018 μ F
4000	min. max.	— —	— —	— —	— —	— —	— —	— —	100 pF 6800 pF
	min. max.	— —	— —	— —	— —	— —	— —	— —	100 pF 3300 pF
5000	min. max.	— —	— —	— —	— —	— —	— —	— —	— —