

0508 IDC

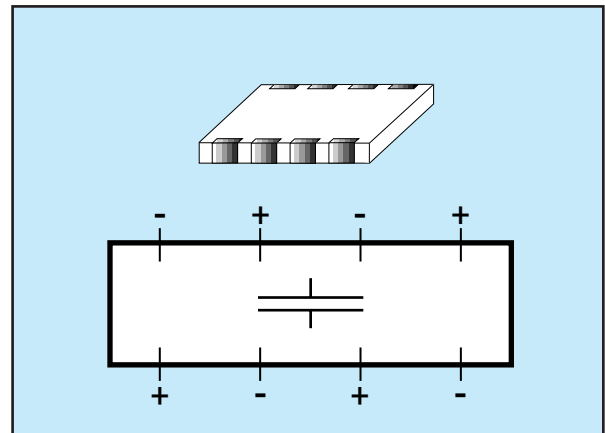


InterDigitated Capacitor

GENERAL DESCRIPTION

AVX's InterDigitated Capacitor is a very low inductance surface mount capacitor. The 0508 case size of the IDC has a measured inductance of 110pH which makes it the lowest FR4 mountable device in the industry. This device not only offers a solution for high speed decoupling needs brought about by high speed microprocessors, but it as well provides board space savings with the smaller 0508 case size. The 0508 IDC allows engineers to speed up board interconnect for current and next generation microprocessors. By connecting the device with eight (8) vias to power and ground planes, the inductance of the entire system can be lowered.

Size 0508



HOW TO ORDER

W	2	L	1	6	C	105	M	A	T	3	A
Style	Case Size	Low Inductance	Number of Caps	Voltage	Dielectric	Capacitance Code	Capacitance Tolerance	Failure Rate	Terminations	Packaging Code (Reel Size)	Special
	2 = 0508			Y = 16v Z = 10v 6 = 6.3v	C = X7R		M = ±20%	A = Standard	T = Plated Ni and Solder	Embossed Tape 1 = 7" Reel 3 = 13" Reel	A = Standard F = 1,000 per Reel Only

PERFORMANCE CHARACTERISTICS

Capacitance Tolerance	±20% X7R
Dissipation Factor	For 6.3 volts: 6.5% max. For 10 volts: 5.0% max. For 16 volts: 3.5% max.
Insulation Resistance (+25°C, VDC)	100,000 MΩ min. or 1,000 MΩ per μF min., whichever is less

MECHANICAL SPECS

CTE (ppm/°C)	X7R: 12.0
Thermal Conductivity	4-5 W / M°K
Terminations Available	Plated Nickel and Solder
Thickness	0.038" max* (0508) 0.048" max* (0612)

*Thickness will depend on cap value and dielectric.

AVAILABLE CAP VALUES

Capacitance (μF)	0.047	0.1	0.22	0.47	0.68	1.0
0508 X7R	6.3V					
	10V					
	16V					

COMPARISON OF ESL FOR VARIOUS PARTS

Package Style	Measured Inductance (pH)
0508 IDC	110
0612 IDC	175
Feedthru	375
0612	550
1206	1200

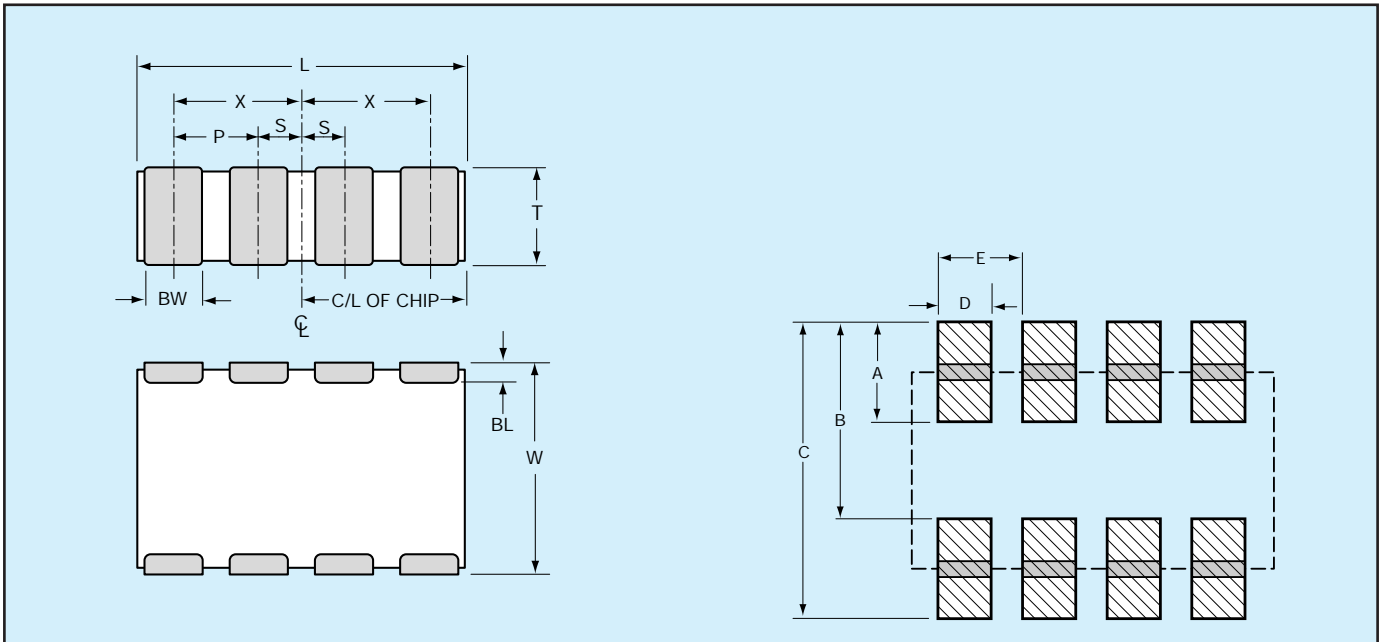


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PHYSICAL DIMENSIONS AND PAD LAYOUT



PART DIMENSIONS millimeters (inches)

L	W	T	BW	BL	P	X	S
2.03±0.2 (.080±.008)	1.27±0.2 (.050±.008)	0.965 (.038 MAX)	0.254±0.1 (.010±.004)	0.18 ^{+0.25} _{-.08} (.007 ^{+0.010} _{-.003})	0.508 REF (.020 REF)	0.76±0.1 (.030±.004)	0.254±0.1 (.010±.004)

PAD LAYOUT DIMENSIONS

A	B	C	D	E
0.64 (.025)	1.27 (.050)	1.91 (.075)	0.28 (.011)	0.51 (.020)

ASSEMBLY NOTES

AVX recommends a minimum spacing of 0.020" between parts when placing them end to end on assembly boards. The purpose of this spacing is to facilitate post assembly

board cleaning and inaccuracies in pick and placement, due to machine placement tolerances.

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