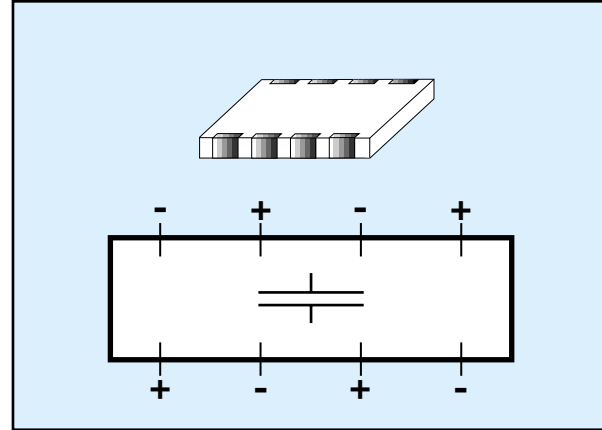


## Inter-Digitated Capacitor

### GENERAL DESCRIPTION

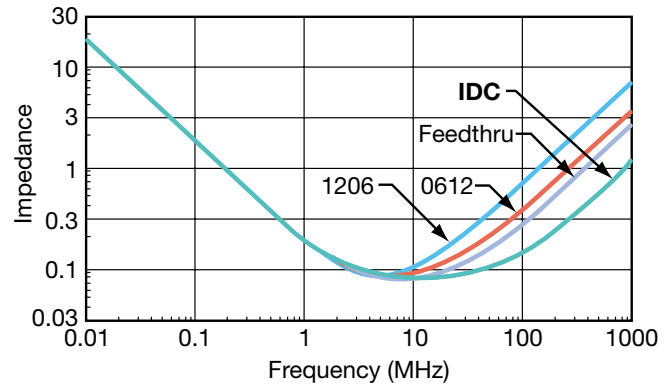
AVX's interdigitated capacitor is a very low inductance, surface mount capacitor. A measured inductance of 175pH makes this the lowest, FR4 mountable device in the industry. With the high speed microprocessors approaching 300MHz, and beyond, the need for low inductance, decoupling caps becomes critical. Also, by connecting the device with eight (8) vias to the power and ground planes, the inductance of the entire system can be lowered. This allows engineers to speed up board interconnect for the current, and next generation, of microprocessors.



### COMPARISON OF ESL FOR VARIOUS PARTS

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

### Impedance Characteristics of 1µF - X7R



### AVAILABLE CAP VALUES

Capacitance (µF)		0.047	0.1	0.22	0.47	0.68	1.0	2.2
X7R	6.3V							
	10V							
	16V							

### MECHANICAL SPECS

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

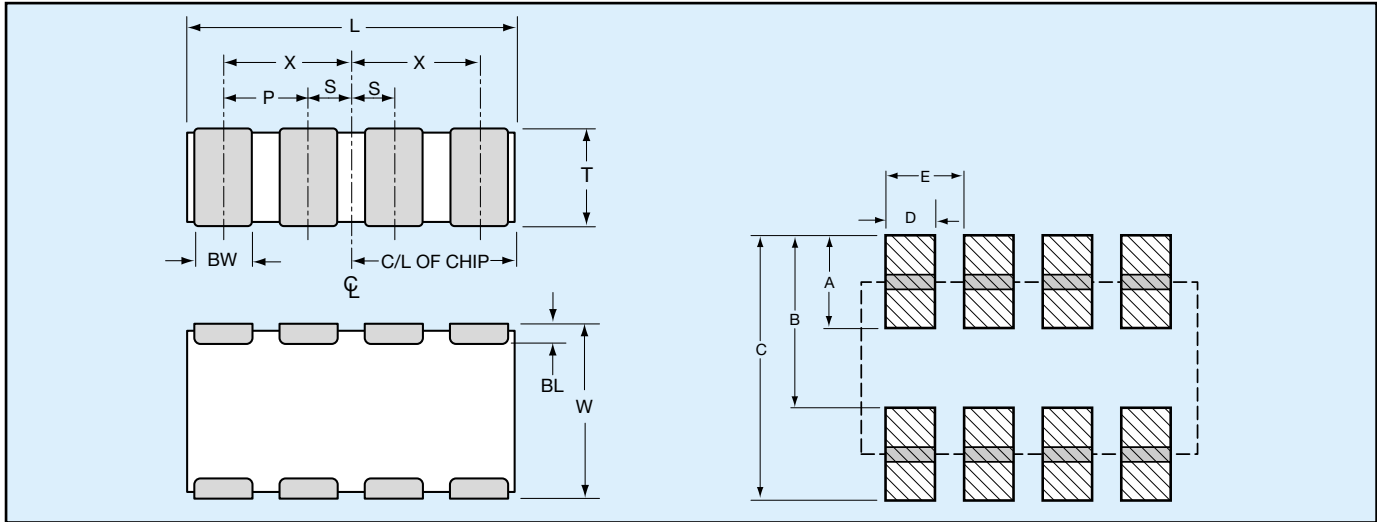
\*Thickness will depend on cap value and dielectric.

### PERFORMANCE CHARACTERISTICS

	X7R
Capacitance Tolerance	±20%
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

## Inter-Digitated Capacitor

### PHYSICAL DIMENSIONS AND PAD LAYOUT



### PART DIMENSIONS millimeters (inches)

L	W	T	BW	BL	P	X	S
3.20±0.20 (0.126±0.008)	1.60±0.20 (0.063±0.008)	1.22 MAX (0.048 MAX)	0.41±0.10 (0.016±0.004)	0.18 <sup>+0.25</sup> <sub>-0.08</sub> (0.007 <sup>+0.010</sup> <sub>-0.003</sub> )	0.76 REF (0.030 REF)	1.14±0.10 (0.045±0.004)	0.38±0.10 (0.015± 0.004)

### PAD LAYOUT DIMENSIONS

A	B	C	D	E
0.89 (0.035)	1.65 (0.065)	2.54 (0.100)	0.46 (0.018)	0.79 (0.030)

### HOW TO ORDER

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

NOTICE: Specifications are subject to change without notice. Contact your nearest AVX Sales Office for the latest specifications. All statements, information and data given herein are believed to be accurate and reliable, but are presented without guarantee, warranty, or responsibility of any kind, expressed or implied. Statements or suggestions concerning possible use of our products are made without representation or warranty that any such use is free of patent infringement and are not recommendations to infringe any patent. The user should not assume that all safety measures are indicated or that other measures may not be required. Specifications are typical and may not apply to all applications.

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