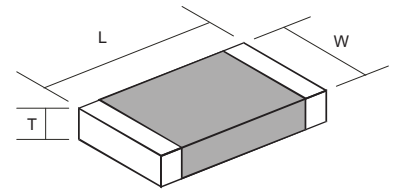


INTRODUCTION

Multilayer chip capacitors are ideal for applications that require a large capacitance to size ratio. The Nickel barrier termination prevents excessive leaching during wave (reflow) or dip (flow) soldering.

FEATURES

- Miniature Size
- High Mounting Density
- Nickel Barrier Termination
- High voltages are available up to 3000 volts.
- RoHS Compliant



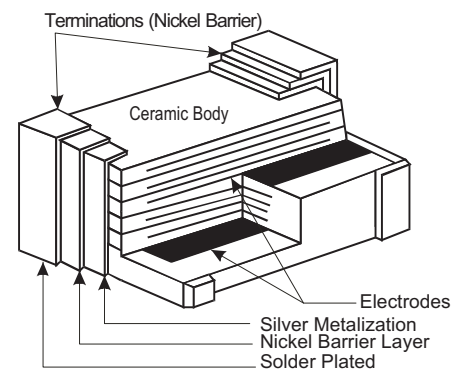
DIMENSIONS

Size		0402	0603	0805	1206	1210	1812	2220
LXW	IN	0.04 x 0.02	0.063 x 0.03	0.08 x 0.05	0.125 x 0.06	0.125 x 0.100	0.180 x 0.125	0.224 x 0.197
	MM	1.00 x 0.50	1.60 x 0.80	2.03 x 1.27	3.18 x 1.60	3.18 x 2.54	4.50 x 3.20	5.7 x 5.0
T (max)	IN	0.022	0.036	0.053	0.073	0.106	0.106	0.106
	MM	0.55	0.92	1.35	1.85	2.7	2.7	2.7

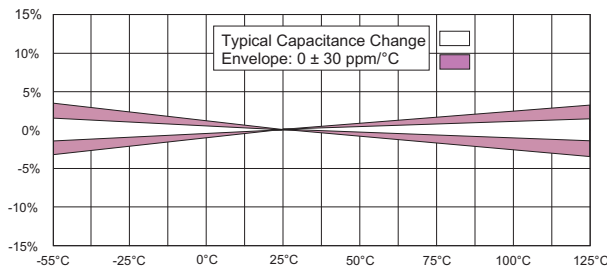
*Thicknesses noted are maximum. Thicknesses are less on low capacitance values.

SPECIFICATIONS

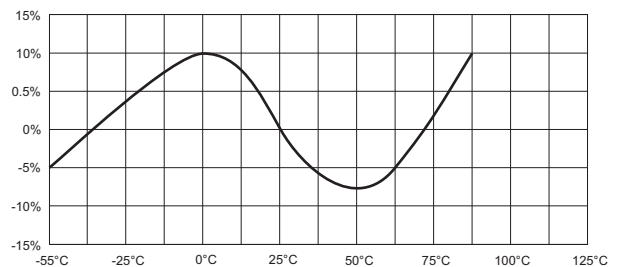
Specification	COG(NPO)	X7R/X5R	Y5V
Temp(°C)	-55~ +125	-55~ +125/-55~ +85	-30~ +85
TempCoeff	0% ±30PPM	0±15%	ΔC%+22 to -82%
Dissipation (25°C)	<0.001@1KHz	<0.025@1KHz	<0.025@1KHz
Insulation Resistance	>1000MΩF or 100GΩ	>1000MΩF or 100GΩ	>500MΩF or 10,000MΩ



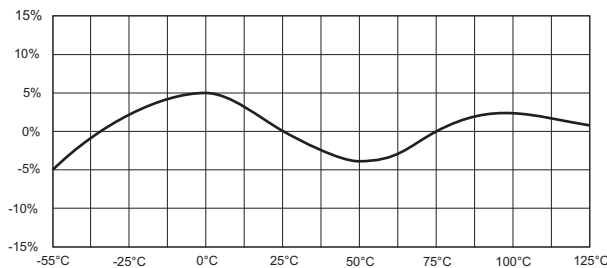
COG/NPO: Typical Capacitance Change vs. Temperature



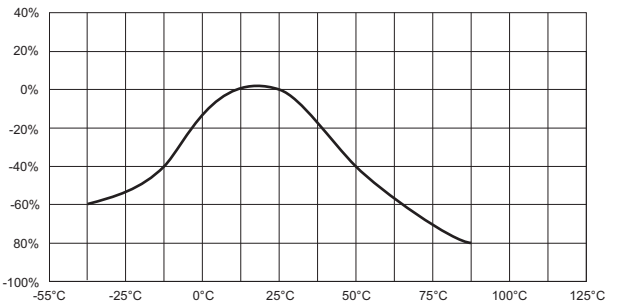
X5R: Typical Capacitance Change vs. Temperature



X7R: Typical Capacitance Change vs. Temperature



Y5V: Typical Capacitance Change vs. Temperature



PART NUMBER EXAMPLE

MA 1206 XR 104 K 500 R

*Surface mount offerings continue to change, please contact RFE International, for values, sizes, and voltages not listed.

STANDARD VOLTAGES AND CAPACITANCE RANGES (pF)

Temperature Coefficient		COG/NPO	X7R	X5R	Y5V	
Size Code	Voltage	Code	(CG)	(XR)	(X5R)	(YV)
0402	6.3V	060				470,000 ~ 1,000,000
	10V	100		33,000 ~ 100,000	220,000 ~ 1,000,000	220,000 ~ 470,000
	16V	160		5,600 ~ 47,000	68,000 ~ 220,000	10,000 ~ 100,000
	25V	250	330 ~ 1,000	3,900 ~ 10,000		
	50V	500	0.47 ~ 470	100 ~ 10,000		
0603	6.3V	060			2,200,000 ~ 10,000,000	2,200,000 ~ 4,700,000
	10V	100		150,000 ~ 470,000	330,000 ~ 2,200,000	470,000 ~ 2,200,000
	16V	160		100,000 ~ 470,000	150,000 ~ 1,000,000	270,000 ~ 1,000,000
	25V	250	3900 ~ 10,000	47,000 ~ 100,000		150,000 ~ 470,000
	50V	500	0.47 ~ 3,300	100,000 ~ 100,000		10,000 ~ 220,000
	100V	101	0.47 ~ 680	100,000 ~ 22,000		
0805	6.3V	060			2,200,000 ~ 10,000,000	10,000,000 ~ 22,000,000
	10V	100		220,000 ~ 3,300,000	2,200,000 ~ 10,000,000	2,200,000 ~ 10,000,000
	16V	160		150,000 ~ 2,200,000	1,000,000 ~ 10,000,000	470,000 ~ 4,700,000
	25V	250	3900 ~ 33,000	100 ~ 1,000,000	1,000,000	100,000 ~ 2,200,000
	50V	500	0.47 ~ 10,000	100 ~ 330,000		10,000 ~ 1,000,000
	100V	101	0.47 ~ 27,000	100 ~ 100,000		
	250V	251	10 ~ 1,200	100 ~ 22,000		
	500V	501	10 ~ 470	100 ~ 15,000		
1206	6.3V	060			10,000,000 ~ 47,000,000	22,000,000 ~ 47,000,000
	10V	100			10,000,000 ~ 22,000,000	10,000,000 ~ 22,000,000
	16V	160		680,000 ~ 10,000,000	3,300,000 ~ 10,000,000	2,200,000 ~ 10,000,000
	25V	250	8200 ~ 100,000	330,000 ~ 3,300,000	3,300,000 ~ 10,000,000	680,000 ~ 4,700,000
	50V	500	0.47 ~ 33,000	220 ~ 1,000,000		10,000 ~ 2,200,000
	100V	101	0.47 ~ 6,800	100 ~ 470,000		
	250V	251	10 ~ 3,900	100 ~ 100,000		
	500V	501	10 ~ 2,200	100 ~ 33,000		
	1000V	102	10 ~ 1,500	100 ~ 4,700		
	2000V	202	10 ~ 470	100 ~ 1,000		
1210	6.3V	060			47,000,000 ~ 100,000,000	47,000,000 ~ 100,000,000
	10V	100			22,000,000 ~ 47,000,000	10,000,000 ~ 47,000,000
	16V	160		10,000,000 ~ 22,000,000	3,300,000 ~ 10,000,000	10,000,000 ~ 22,000,000
	25V	250		3,300,000 ~ 10,000,000	3,300,000 ~ 10,000,000	
	50V	500	1000 ~ 100,000	1,000,000 ~ 3,300,000		
	100V	101	1000 ~ 10,000	100,000 ~ 1,000,000		
	250V	251	1000 ~ 6,800	22,000 ~ 220,000		
	500V	501	1000 ~ 3,300	3,300 ~ 47,000		
	1000V	102	10 ~ 2,200	220 ~ 4,700		
	2000V	202	10 ~ 560	220 ~ 1,500		
1812 (also 1808 size for 250V - 3KV * = 1812 Only)	6.3V	060			*47,000,000 ~ 100,000,000*	
	10V	100			*22,000,000 ~ 47,000,000*	100,000,000
	16V	160			*22,000,000*	47,000,000
	25V	250		4,700,000 ~ 22,000,000	*10,000,000*	22,000,000
	50V	500	*10,000 ~ 220,000*	1,000,000 ~ 4,700,000		10,000,000
	100V	101	*1,200 ~ 15,000*	470,000 ~ 2,200,000		
	250V	251	1,000 ~ 10,000	*47,000 ~ 470,000*		
	500V	501	1,000 ~ 6,800	*4,700 ~ 150,000*		
	1000V	102	10 ~ 4,700	470 ~ 15,000		
	2000V	202	10 ~ 1,200	470 ~ 4,700		
2220	16V	160			47,000,000	
	25V	250		10,000,000 ~ 22,000,000	10,000,000 ~ 22,000,000	
	50V	500		4,700,000	10,000,000	
	100V	101		680,000 ~ 4,700,000		
	250V	251		330,000 ~ 1,000,000		
	500V	501		68,000 ~ 220,000		
	1000V	102		1,000 ~ 47,000		
	2000V	202		1,000 ~ 10,000		
3000V	302		1,000 ~ 3,300			

*Surface mount offerings continue to change, please contact RFE International, for values, sizes, and voltages not listed.

PART NUMBER EXAMPLE

MA 1206 XR 104 K 500 R