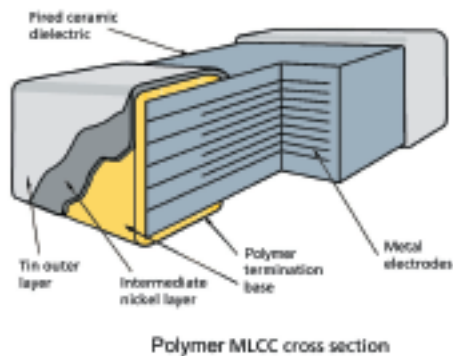




# FLEXICAP® POLYMER TERMINATION

NOVACAP offers polymer terminated capacitors, which are able to accommodate a significantly increased degree of board flexure compared with standard terminated capacitors. These devices will afford a wider process window, increased safety margin, and substantially reduce the cracks from mechanical stress.<sup>1</sup> These devices require no change to the assembly process, equipment set up, or storage procedures. The polymer terminated capacitors are offered in all dielectrics but the most significant benefit occurs with X7R and Y5V dielectrics. All combination of voltage ratings and capacitance offerings listed in the catalog for case sizes 0603 through 3640 are available.



## PCB BEND TEST RESULTS

Size/Dielectric	Mean Bend Standard Term. INCHES (MM)	Mean Bend Polymer Term. INCHES (MM)	Improvement with Polymer
0603 X7R	.079 (2.0)	.252 (6.4)	+220%
0805 X7R	.142 (3.6)	.248 (6.3)	+ 75%
1206 X7R	.134 (3.4)	.252 (6.4)	+ 88%
1812 X7R	.161 (4.1)	.335 (8.5)	+108%
2225 X7R	.076 (1.9)	.143 (3.6)	+ 88%
3333 X7R	.070 (1.8)	.104 (2.6)	+ 49%
1812 Y5V	.116 (2.9)	.232 (5.9)	+100%
3015 Y5V	.040 (1.0)	.068 (1.7)	+ 70%

## X7R CAPACITANCE & VOLTAGE SELECTION FOR POPULAR CHIP SIZES

3 digit code: two significant digits, followed by number of zeros eg: 473 = 47,000 pF

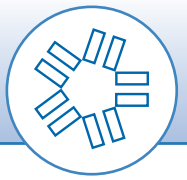
SIZE	0504	0603	0805	1005	1206	1210	1808	1812	1825	2221	2225
Min Cap	121	121	121	121	121	121	121	151	151	471	471

MAX CAP & VOLTAGE	16V	393	273	124	154	334	474	684	125	185	155	225
	25V	333	223	104	124	274	474	564	105	155	125	185
	50V	333	223	104	124	274	474	394	824	155	125	185
	100V	333	223	683	823	184	334	274	564	125	125	155
	200V	153	103	333	473	104	184	184	334	824	684	105
	250V	103	682	273	393	683	124	124	224	684	564	824
	500V	•	•	123	822	223	563	563	104	334	274	334
	1000V*	•	•	272	272	682	153	153	273	823	823	104
	2000V*	•	•	•	•	102	222	272	472	123	123	153
	3000V*	•	•	•	•	•	•	821	152	472	472	562
4000V*	•	•	•	•	•	•	331	681	152	152	152	

\*Units rated above 800V may require conformal coating in use to preclude arcing over the chip surface.

1- The user must not assume use of the polymer terminated capacitors will totally eliminate mechanical cracking. Good process controls are still required for this objective to be achieved.

# FLEXICAP® POLYMER TERMINATION



## Y5V CAPACITANCE & VOLTAGE SELECTION FOR POPULAR CHIP SIZES

3 digit code: two significant digits, followed by number of zeros eg: 473 = 47,000 pF

MAX CAP & VOLTAGE

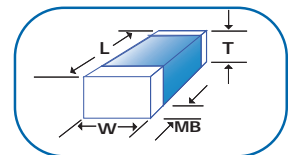
SIZE	0504	0603	0805	1005	1206	1210	1808	1812	1825	2221	2225
Min Cap	121	121	471	681	681	681	222	332	103	103	103
16V	474	334	125	185	225	475	565	106	226	186	226
25V	394	224	105	155	225	395	395	685	186	156	226
50V	224	154	684	105	185	335	335	565	156	126	186
100V	823	563	224	334	474	105	105	185	395	395	475
200V	223	153	563	823	154	334	334	564	155	155	185
250V	183	123	473	683	104	224	224	394	105	105	125

## DIMENSIONS - INCHES (MM)

SIZE	0504	0603	0805	1005	1206	1210	1808	1812	1825	2221	2225
LENGTH L	.050 (1.27)	.060 (1.52)	.080 (2.03)	.100 (2.54)	.125 (3.18)	.125 (3.18)	.180 (4.57)	.180 (4.57)	.180 (4.57)	.220 (5.59)	.220 (5.59)
WIDTH W	.040 (1.02)	.030 (.760)	.050 (1.27)	.050 (1.27)	.060 (1.52)	.100 (2.54)	.080 (2.03)	.125 (3.18)	.250 (6.35)	.210 (5.33)	.250 (6.35)
T MAX.	.044 (1.12)	.035 (.889)	.054 (1.37)	.054 (1.37)	.064 (1.63)	.065 (1.65)	.065 (1.65)	.065 (1.65)	.080 (2.03)	.080 (2.03)	.080 (2.03)
MB	.014 (.355)	.014 (.355)	.020 (.508)	.020 (.508)	.020 (.508)	.020 (.508)	.024 (.610)	.024 (.610)	.024 (.610)	.030 (.760)	.030 (.760)

## TOLERANCES +/- INCHES (MM)

LENGTH	.006 (.152)	.006 (.152)	.008 (.203)	.008 (.203)	.008 (.203)	.008 (.203)	.012 (.305)	.012 (.305)	.012 (.305)	.015 (.380)	.015 (.380)
WIDTH	.006 (.152)	.006 (.152)	.008 (.203)	.008 (.203)	.008 (.203)	.008 (.203)	.008 (.203)	.008 (.203)	.015 (.380)	.015 (.380)	.015 (.380)
MB	.006 (.152)	.006 (.152)	.010 (.254)	.010 (.254)	.010 (.254)	.010 (.254)	.014 (.355)	.014 (.355)	.014 (.355)	.015 (.380)	.015 (.380)



## HOW TO ORDER

0805	B	273	M	251	C	X	T	M
<b>SIZE</b> See Chart	<b>DIELECTRIC</b> B = X7R Y = Y5V	<b>CAPACITANCE</b> Value in Picofarads Two significant figures, followed by number of zeros: 104=100,000 pF	<b>TOLERANCE</b> J = +/- 5% K = +/- 10% M = +/- 20% Z = +80% -20% P = +100% -0%	<b>VOLTAGE-VDCW</b> Two significant figures, followed by number of zeros: 251 = 250V	<b>TERMINATION</b> C = Polymer with Nickel Barrier (100% Tin) D = Polymer with Nickel Barrier (90Tin/10Lead)	<b>THICKNESS OPTION</b> X=Non-standard thickness. Specify in Mils if non-standard is required. Standard items are any thickness to maximum shown	<b>PACKING OPTION</b> T=Reeled	<b>MARKING OPTION</b> M=Marked