

# Capacitor Assemblies - ST & SM

These ranges of both High Capacitance and High Voltage MLC assemblies are available in COG and X7R dielectrics.

Low ESR and Low ESL are inherent in the design giving the assemblies a high capability up to 1MHz and offer far superior performance than either Aluminum or Tantalum electrolytic capacitors.

They are designed for use in high power or high frequency applications such as switched mode power supplies, DC-DC converters, high capacitance discharge circuits, high temperature filtering/decoupling.

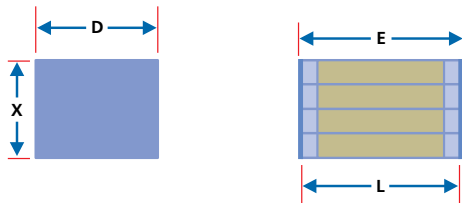
They can be made with up to five same size chips with various lead configurations to safeguard against thermal and mechanical stresses.

The commercial 'ST' series provide the highest capacitance available and are 100% tested for Dielectric Withstanding Voltage, Insulation Resistance, Capacitance, and Dissipation Factor.

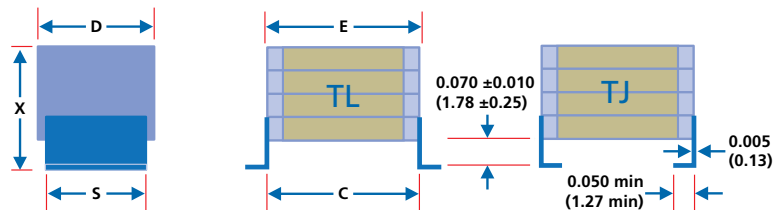
In contrast, the High Reliability 'SM' series is designed and tested for military and industrial applications and tested as per of MIL-PRF-49470 (DSCC 87106), Group A.

## Dimensions - inches/mm

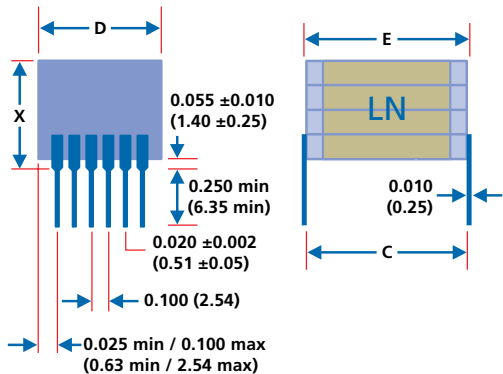
### NN or NP (no leads)



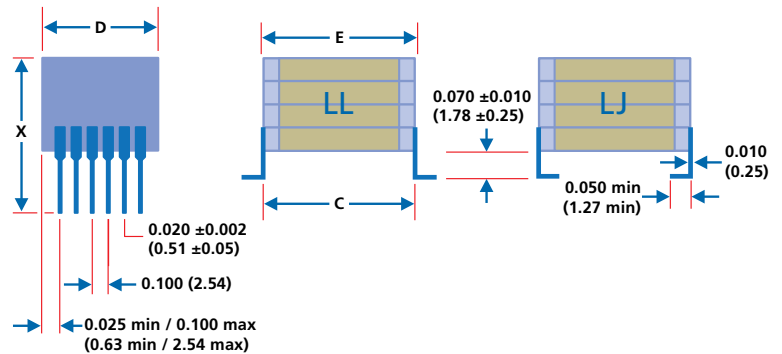
### TJ & TL (tab leads)



### LN (straight wire leads)



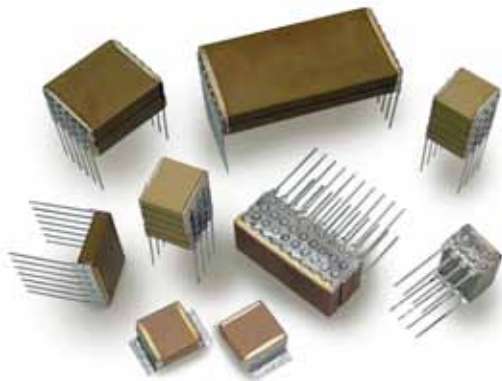
### LJ & LL (bent wire leads)



Size	1812	1825	2225	3640	4540	5550	7565
<b>C</b> inches ±0.025/mm ±0.64:	0.210/5.33	0.210/5.33	0.250/6.35	0.400/10.20	0.480/12.20	0.580/14.70	0.780/19.80
<b>D</b> inches ±0.025/mm ±0.64:	0.125/3.18	0.250/6.35	0.250/6.35	0.400/10.20	0.400/10.20	0.500/12.70	0.650*/16.50
<b>E max</b> inches/mm:	0.260/6.60	0.260/6.60	0.300/7.62	0.430/10.90	0.530/13.50	0.630/16.00	0.830/21.10
<b>L nom</b> inches/mm:	0.180/4.57	0.180/4.57	0.220/5.59	0.360/9.14	0.450/11.40	0.550/14.00	0.750/19.10
<b>Leads per side</b>	N/A	3	3	4	4	5	6

\*±0.035/1.89

# Capacitor Assemblies - ST & SM



Our complete testing facility is available for any additional military testing requirements.

Options available include thru-hole and surface mount lead styles, to make them suitable for mounting on ceramic substrates or epoxy PCBs.

Consult the Sales Office if your specific requirements exceed our catalog maximums (size, cap. value, and voltage).

## Maximum stack height, X dimension - inches/mm

No. of chips	Chip size	Style NN, NP	Style TJ & TL	Style LN, LJ & LL
1	1812	0.100/2.54	0.180/4.57	N/A
	1825	0.100/2.54	0.180/4.57	0.180/4.57
	2225	0.120/3.05	0.200/5.08	0.200/5.08
	>2225	N/A	0.200/5.08	0.200/5.08
2	1812	0.200/5.08	0.280/7.11	N/A
	1825	0.200/5.08	0.280/7.11	0.280/7.11
	2225	0.240/6.10	0.320/8.13	0.320/8.13
	>2225	N/A	0.320/8.13	0.320/8.13
3	812	0.300/7.62	0.380/9.65	N/A
	1825	0.300/7.62	0.380/9.65	0.380/9.65
	2225	0.360/9.14	0.440/11.2	0.440/11.20
	>2225	N/A	0.440/11.2	0.440/11.20
4	1812	0.400/10.20	0.480/12.2	N/A
	1825	0.400/10.20	0.480/12.2	0.480/12.20
	2225	0.480/12.20	0.560/14.2	0.560/14.20
	>2225	N/A	0.560/14.2	0.560/14.20
5	1812	0.520/13.20	0.600/15.2	N/A
	1825	0.520/13.20	0.600/15.2	0.600/15.2
	2225	0.635/16.10	0.715/18.2	0.715/18.2
	>2225	N/A	0.715/18.2	0.715/18.2

## How to Order - ST & SM Capacitor Assemblies

ST	3640	B	474	M	101	LJ	X	W	5
<b>STYLE</b> ST = Commercial SM = High Reliability	<b>SIZE</b> See Chart	<b>DIELECTRIC</b> N = COG B = X7R	<b>CAPACITANCE</b> Value in Picofarads. Two significant figures, followed by number of zeros: 825 = 8,200,000pF (8.2µF)	<b>TOLERANCE</b> F = ±1%* G = ±2%* H = ±3%* J = ±5% K = ±10% M = ±20% Z = +80 -20% P = +100 -0%  *COG only	<b>VOLTAGE-VDCW</b> Two significant figures, followed by number of zeros: 101 = 100V	<b>LEAD STYLE</b> LN = Straight* LL = L Lead* LJ = J Lead* TL = L Tab TJ = J tab NN = Nickel* NP = Pd/Ag  *Not 1812	<b>THICKNESS OPTION</b> Specify standoff dimension if less than max.	<b>PACKING</b> W = Waffle T = Tape & Reel*	<b>No. Chips</b> 1 to 5
								*Consult the sales office	



# Capacitor Assemblies - ST & SM - C0G



## C0G Capacitance & Voltage Selection

**Note:** Capacitance values are shown as 3 digit code: 2 significant figures followed by the no. of zeros e.g. 183 = 18,000pF.

Capacitance Values

Number of chips required to achieve the capacitance value

Size	4540								5550								6560								7565								Size	
	50V		100V		200V		500V		50V		100V		200V		500V		50V		100V		200V		500V		50V		100V		200V		500V			Rated Voltage
	Type	ST	SM	ST	SM	ST	SM	ST	SM	ST	SM	ST	SM	ST	SM	ST	SM	ST	SM	ST	SM	ST	SM	ST	SM	ST	SM	ST	SM	Type				
100																																100		
120																																	120	
150																																	150	
180																																	180	
220																																	220	
270																																	270	
330																																	330	
390	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		390		
470	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		470	
560	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		560	
680	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		680	
820	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		820	
101	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		101	
121	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		121	
151	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		151	
181	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		181	
221	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		221	
271	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		271	
331	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		331	
391	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		391	
471	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		471	
561	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		561	
681	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		681	
821	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		821	
102	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		102	
122	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		122	
152	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		152	
182	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		182	
222	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		222	
272	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		272	
332	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		332	
392	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		392	
472	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		472	
562	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		562	
682	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		682	
822	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		822	
103	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		103	
123	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		123	
153	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		153	
183	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		183	
223	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		223	
273	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		273	
333	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		333	
393	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		393	
473	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		473	
563	1	1	1	1	1	1	2	2	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		563	
683	1	1	1	1	1	1	2	2	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		683	
823	1	1	1	1	1	1	2	3	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1		823	
104	1	1	1	1	1	1	2	3	1	1	1	1	1	1	2	3	1	1	1	1	1	1	1	2	1	1	1	1	1	1	2		104	
124	1	1	1	1	1	1	3	4	1	1	1	1	1	1	2	3	1	1	1	1	1	1	2	2	1	1	1	1	1	1	2		124	
154	1	1	1	1	2	2	3	5	1	1	1	1	1	2	3	4	1	1	1	1	1	1	2	3	1	1	1	1	1	1	2		154	
184	1	1	1	1	2	2	4	5	1	1	1	1	2	2	3	4	1	1	1	1	1	1	2	3	1	1	1	1	1	1	2		184	
224	1	1	2	2	2	2	5		1	1	1	2	2	2	3	5	1	1	1	1	1	2	2	4	1	1	1	1	1	1	2	3		224
274	2	2	2	2	2	3			1	1	2	2	2	2	4		1	1	1	1	2	2	3	4	1	1	1	1	1	1	2	3		274
334	2	2	2	2	3	3			2	2	2	2	3	3	5		1	1	2	2	2	2	3	5	1	1	1	1	1	2	3	4		334
394	2	2	2	3	3	3			2	2	2	2	3	3			1	1	2	2	2	2	2		1	1	1	1	2	2	3	4		394
474	2	3	3	3	4	4			2	2	3	3	3	4			2</																	

# Capacitor Assemblies - ST & SM - X7R

## X7R Capacitance & Voltage Selection

Size	1812								1825								2225								3640								Size
	50V		100V		200V		500V		50V		100V		200V		500V		50V		100V		200V		500V		Vdc								
Type	ST	SM	ST	SM	ST	SM	ST	SM	ST	SM	ST	SM	ST	SM	ST	SM	ST	SM	ST	SM	ST	SM	ST	SM		Type							
102	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	102								
122	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	122								
152	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	152								
182	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	182								
222	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	222								
272	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	272								
332	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	332								
392	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	392								
472	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	472								
562	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	562								
682	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	682								
822	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	822								
103	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	103								
123	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	123								
153	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	153								
183	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	183								
223	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	223								
273	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	273								
333	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	333								
393	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	393								
473	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	473								
563	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	563								
683	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	683								
823	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	823								
104	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	104								
124	1	1	1	1	1	1	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	124								
154	1	1	1	1	1	1	2	3	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	154								
184	1	1	1	1	1	1	2	3	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	184								
224	1	1	1	1	1	1	3	4	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	224								
274	1	1	1	1	1	1	3	5	1	1	1	1	1	1	2	3	1	1	1	1	1	1	1	1	274								
334	1	1	1	1	1	1	4		1	1	1	1	1	1	2	3	1	1	1	1	1	1	1	1	334								
394	1	1	1	1	1	1	4		1	1	1	1	1	1	2	4	1	1	1	1	1	1	1	1	394								
474	1	1	1	1	1	1	5		1	1	1	1	1	1	3	4	1	1	1	1	1	1	1	1	474								
564	1	1	1	1	2	2			1	1	1	1	1	1	3	5	1	1	1	1	1	1	1	2	564								
684	1	1	2	2	2	3			1	1	1	1	1	2	4		1	1	1	1	1	1	1	2	684								
824	2	2	2	2	2	3			1	1	1	1	1	2	4		1	1	1	1	1	1	1	2	824								
105	2	2	2	2	3	3			1	1	1	1	2	2	5		1	1	1	1	1	1	1	2	105								
125	2	2	2	2	3	4			1	1	1	2	2	3			1	1	1	1	1	1	1	3	125								
155	2	3	3	3	4	5			2	2	2	2	2	3			1	1	1	1	1	1	1	3	155								
185	3	3	3	3	4				2	2	2	2	3	4			1	2	2	2	2	3		4	185								
225	3	3	4	4	5				2	2	2	3	3	4			2	2	2	2	2	3		5	225								
275	4	4	4	5					2	3	3	3	4	5			2	2	2	2	3	4			275								
335	5	5		5					3	3	3	4	4				2	2	3	3	3	4			335								
395	5								3	3	4	4	5				3	3	3	3	4	5			395								
475									4	4	4	5					3	3	4	4	5				475								
565									4	5	5						4	4	4	4					565								
685									5								4	4	5	5					685								
825																	5	5							825								
106																							3	3	106								
126																							3	3	126								
156																							4	4	156								
186																							4	5	186								
226																							5		226								
276																									276								
336																																	
396																																	
476																																	
566																																	
686																																	
826																																	
107																																	

Number of chips required to achieve the capacitance value

Capacitance Values

# Capacitor Assemblies - ST & SM - X7R



## X7R Capacitance & Voltage Selection

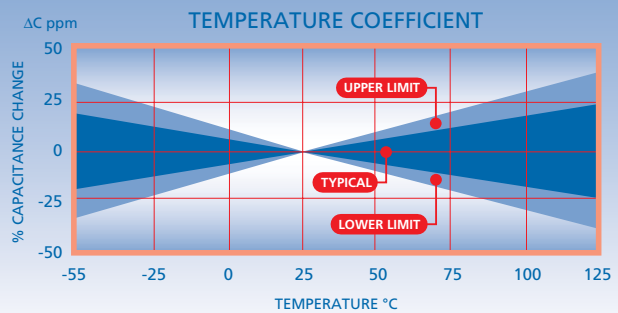
Note: Capacitance values are shown as 3 digit code: 2 significant figures followed by the no. of zeros e.g. 183 = 18,000pF.

Size	4540								5550								6560								7565								Size
	50V		100V		200V		500V		50V		100V		200V		500V		50V		100V		200V		500V		Vdc								
	ST	SM	ST	SM	ST	SM	ST	SM	ST	SM	ST	SM	ST	SM	ST	SM	ST	SM	ST	SM	ST	SM	ST	SM		Type							
102	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		102							
122	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	122								
152	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	152								
182	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	182								
222	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	222								
272	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	272								
332	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	332								
392	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	392								
472	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	472								
562	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	562								
682	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	682								
822	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	822								
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183	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	183								
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563	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	563								
683	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	683								
823	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	823								
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684	1	1	1	1	1	2	2	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	684								
824	1	1	1	1	1	2	2	1	1	1	1	2	2	1	1	1	1	1	1	1	1	1	1	1	824								
105	1	1	1	1	1	2	3	1	1	1	1	2	2	1	1	1	1	1	1	2	1	1	1	1	105								
125	1	1	1	1	1	2	3	1	1	1	1	2	2	1	1	1	1	1	2	2	1	1	1	1	125								
155	1	1	1	1	1	3	4	1	1	1	1	2	3	1	1	1	1	1	2	2	1	1	1	1	155								
185	1	1	1	1	1	3	4	1	1	1	1	3	3	1	1	1	1	1	2	3	1	1	1	1	185								
225	1	1	1	1	1	4	5	1	1	1	1	3	4	1	1	1	1	1	2	3	1	1	1	1	225								
275	1	1	1	1	2	2	5	1	1	1	1	2	4	5	1	1	1	1	1	3	4	1	1	1	275								
335	1	1	1	2	2	2		1	1	1	1	2	2	5	1	1	1	1	1	3	4	1	1	1	335								
395	1	1	2	2	2	3		1	1	1	2	2	2		1	1	1	1	1	4	5	1	1	1	395								
475	1	1	2	2	3	3		1	1	2	2	2	2		1	1	1	1	2	2	5	1	1	1	475								
565	2	2	2	2	3	3		1	1	2	2	2	3		1	1	1	1	2	2		1	1	1	565								
685	2	2	2	3	4	4		1	1	2	2	3	3		1	1	1	2	2	2		1	1	1	685								
825	2	2	3	3	4	5		2	2	2	3	3	4		1	1	2	2	2	3		1	1	2	825								
106	2	3	3	4	5			2	2	3	3	4	4		1	1	2	2	3	3		1	1	2	106								
126	3	3	4	5				2	2	3	4	4	5		1	2	2	3	3	3		1	1	2	126								
156	3	4	5					2	3	4	4	5			2	2	3	3	4	4		2	2	3	156								
186	4	4	5					3	3	5	5				2	2	3	4	4	5		2	2	3	186								
226	4	5						3	4	5					2	2	4	4	5			2	2	3	226								
276	5							4	5						3	3	5	5				2	3	4	276								
336								5	5						3	3	5					3	3	5	336								
396															4	4						3	4		396								
476															4	5						4	4		476								
566															5							4	5		566								
686																						5			686								
826																									826								
107																									107								

Number of chips required to achieve the capacitance value

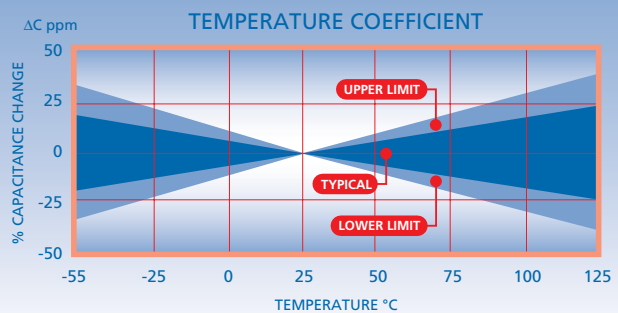
## COG/NP0 (N) Ultra Stable and RoHS 2013 (RN) type

Operating temperature range:	-55°C to 125°C
Temperature coefficient:	0 ±30 ppm/°C
Dissipation factor:	0.1% max @ 25°C
Insulation resistance	@25°C: >100GΩ or >1000ΩF whichever is less @125°C: >10GΩ or >100ΩF whichever is less
Dielectric withstanding voltage	≤200V: 250% 201-500V: 150% or 500V whichever is greater >500V: 120% or 750V whichever is greater
Ageing rate:	0% per decade
Test parameters:	1KHz, 1.0 ±0.2 VRMS, 25°C 1MHz for Capacitance ≤100pF



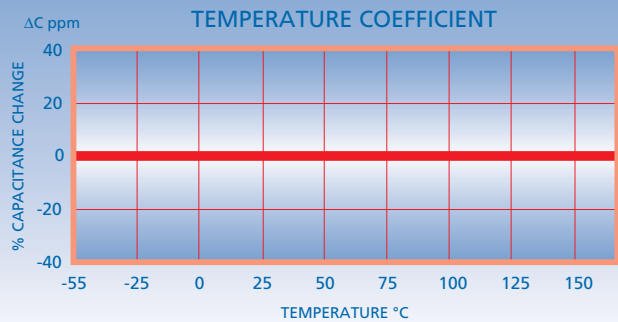
## COG/NP0 (M) Ultra Stable Non Magnetic

Operating temperature range:	-55°C to 125°C
Temperature coefficient:	0 ±30 ppm/°C
Dissipation factor:	0.1% max @ 25°C
Insulation resistance	@25°C: >1000ΩF or >10000ΩF whichever is less @125°C: >100ΩF or >1000ΩF whichever is less
Dielectric withstanding voltage	≤200V: 250% 201-500V: 150% or 500V whichever is greater >500V: 120% or 750V whichever is greater
Ageing rate:	0% per decade
Test parameters:	1KHz, 1.0 ±0.2 VRMS, 25°C 1MHz for Capacitance ≤100pF



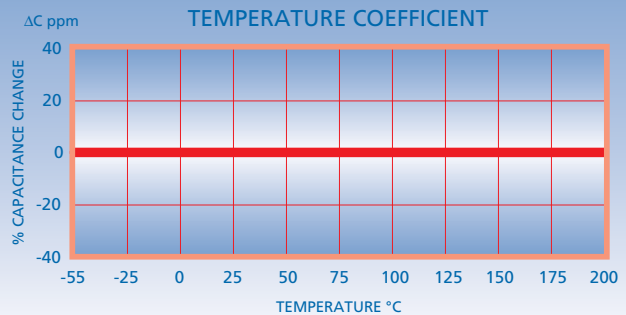
## COG/NP0 (F) Ultra Stable High Temperature (up to 160°C)

Operating temperature range:	-55°C to 160°C
Temperature coefficient:	0 ±30 ppm/°C
Dissipation factor:	0.1% max @ 25°C
Insulation resistance	@25°C: >100GΩ or >1000ΩF whichever is less @160°C: >1GΩ or >10ΩF whichever is less
Dielectric withstanding voltage	<200V: 250% 201-500V: 150% or 500V whichever is greater >500V: 120% or 750V whichever is greater
Ageing rate:	0% per decade
Test parameters:	1KHz, 1.0 ±0.2 VRMS, 25°C 1MHz for Capacitance ≤100pF



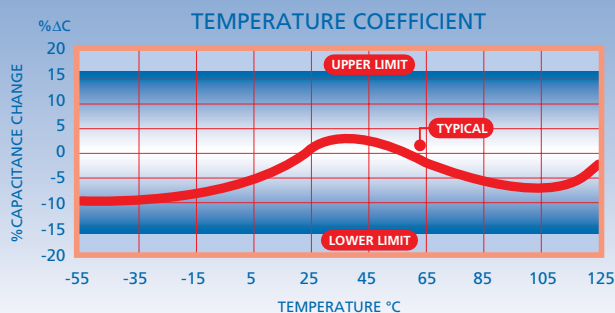
## COG/NP0 (D) Ultra Stable High Temperature (up to 200°C)

Operating temperature range:	-55°C to 200°C
Temp. coefficient ≤200°C:	0 ±30 ppm/°C
Dissipation factor @ 25°C:	0.1% Max.
Insulation resistance	@25°C: >100GΩ or >1000ΩF whichever is less @200°C: >1GΩ or >10ΩF whichever is less
Dielectric withstanding voltage	≤200V: 250% 201-500V: 150% or 500V whichever is greater >500V: 120% or 750V whichever is greater
Ageing rate:	0% per decade
Test parameters:	1KHz, 1.0 ±0.2 VRMS, 25°C 1MHz for capacitance ≤100pF



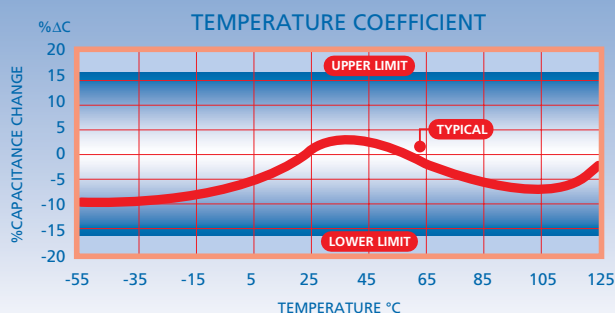
## X7R (B) Stable and RoHS 2013 (RB) type

Operating temperature range:	-55°C to 125°C
Temperature coefficient :	±15% ΔC Max.
Dissipation factor	>25V rating: 2.5% max ≤25V rating: 3.5% max
Insulation resistance:	@25°C: >100GΩ or >1000ΩF whichever is less @125°C: >10GΩ or >100ΩF whichever is less
Dielectric withstanding voltage	≤200V: 250% 201-500V: 150% or 500V whichever is greater >500V: 120% or 750V whichever is greater
Ageing rate:	<2.0% per decade
Test parameters:	1KHz, 1.0 ±0.2 VRMS, 25°C



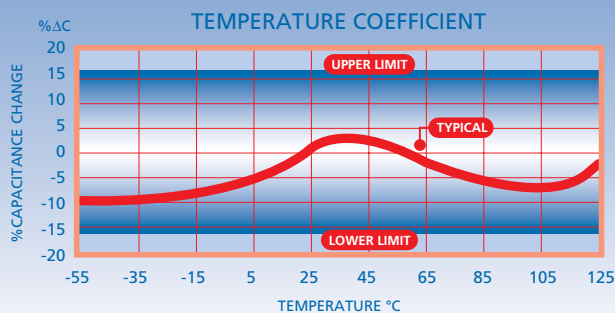
## X7R (C) Stable Non Magnetic

Operating temperature range:	-55°C to 125°C
Temperature coefficient:	±15% ΔC Max.
Dissipation factor	>25V rating: 2.5% max ≤25V rating: 3.5% max
Insulation resistance:	@25°C: >100GΩ or >1000ΩF whichever is less @125°C: >10GΩ or >100ΩF whichever is less
Dielectric withstanding voltage	≤200V: 250% 201-500V: 150% or 500V whichever is greater >500V: 120% or 750V whichever is greater
Ageing rate:	<2.0% per decade
Test parameters:	1KHz, 1.0 ±0.2 VRMS, 25°C



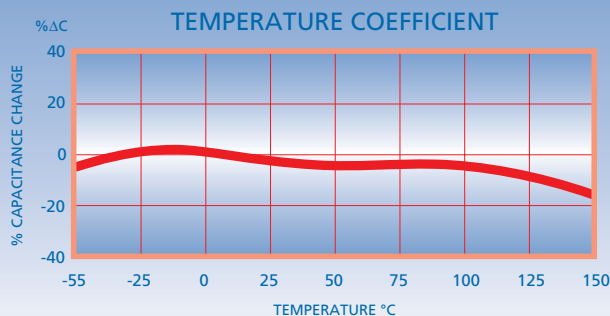
## BX (X) Stable

Operating temperature range:	-55°C to 125°C
Temperature coefficient:	±15% ΔC Max.
Temp-voltage coefficient:	+15% -25% ΔC Max.
Dissipation factor	>25V rating: 2.5% max ≤25V rating: 3.5% max
Insulation resistance:	@25°C: >100GΩ or >1000ΩF whichever is less @125°C: >10GΩ or >100ΩF whichever is less
Dielectric withstanding voltage	≤200V: 250% 201-500V: 150% or 500V whichever is greater >500V: 120% or 750V whichever is greater
Ageing rate:	<2.0% per decade
Test parameters:	1KHz, 1.0 ±0.2 VRMS, 25°C



## X8R (S) Stable

Operating temperature range:	-55°C to 150°C
Temp. coefficient ≤150°C:	±15% ΔC Max.
Dissipation factor	>25V rating: 2.5% max ≤25V rating: 3.5% max
Insulation resistance	@25°C: >100GΩ or >1000ΩF whichever is less @150°C: >10GΩ or >100ΩF whichever is less
Dielectric withstanding voltage	≤200V: 250% 201-500V: 150% or 500V whichever is greater >500V: 120% or 750V whichever is greater
Ageing rate:	<2.0% per decade
Test parameters:	1KHz, 1.0 ±0.2 VRMS, 25°C





Компания «Life Electronics» занимается поставками электронных компонентов импортного и отечественного производства от производителей и со складов крупных дистрибьюторов Европы, Америки и Азии.

С конца 2013 года компания активно расширяет линейку поставок компонентов по направлению коаксиальный кабель, кварцевые генераторы и конденсаторы (керамические, пленочные, электролитические), за счёт заключения дистрибьюторских договоров

Мы предлагаем:

- Конкуренеспособные цены и скидки постоянным клиентам.
- Специальные условия для постоянных клиентов.
- Подбор аналогов.
- Поставку компонентов в любых объемах, удовлетворяющих вашим потребностям.
- Приемлемые сроки поставки, возможна ускоренная поставка.
- Доставку товара в любую точку России и стран СНГ.
- Комплексную поставку.
- Работу по проектам и поставку образцов.
- Формирование склада под заказчика.
- Сертификаты соответствия на поставляемую продукцию (по желанию клиента).
- Тестирование поставляемой продукции.
- Поставку компонентов, требующих военную и космическую приемку.
- Входной контроль качества.
- Наличие сертификата ISO.

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Конструкторский отдел помогает осуществить:

- Регистрацию проекта у производителя компонентов.
- Техническую поддержку проекта.
- Защиту от снятия компонента с производства.
- Оценку стоимости проекта по компонентам.
- Изготовление тестовой платы монтаж и пусконаладочные работы.



Тел: +7 (812) 336 43 04 (многоканальный)

Email: [org@lifeelectronics.ru](mailto:org@lifeelectronics.ru)