

**Surface Mount Ceramic Capacitors Specifications**

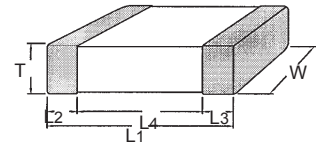


**Part Number Determination**

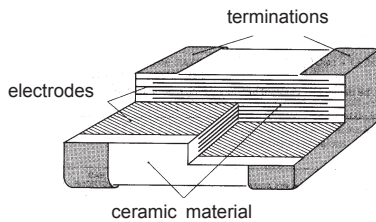
0603CG102J8B200								
0603	CG	102	J	8	B	2	0	0
SIZE	DIELECTRIC	CAPACITANCE	TOLERANCE	VOLTAGE	TERMINATION	PACKAGING	MARKING	RANGE IDENTIFIER
0402	CG=NPO 2B=X5R 2R=X7R 2F=Y5V 2E=Z5U	In pF, 2 significant digits + # of zeros	B=±0.1pF	5=6.3V	B=NiSn	"2=7" Reel/Paper Tape 3=13" Reel/Paper Tape B=7" Reel/Blister Tape F=13" Reel/Blister Tape P=Bulk"	0=No Marking	0=Conv. Ceramic D=BME L=Low Inductance M=Microwave
0603			C=±0.25pF	6=10V				
0805			D=±0.5pF	7=16V				
1206			F=±1%	8=25V				
1210			G=±2%	9=50V				
1808			J=±5%	0=100V				
1812	K=±10%	B=200V						
			M=±20%	C=250V				
			Z=+80-20%	D=500V				

**Package Dimensions (in/mm)**

Size	L1	W	T min	T max	L2, L3 min	L2, L3 max	L4 min
0402	0.04±0.002	0.02±0.002	0.018	0.022	0.008	0.012	0.016
	1.0±0.05	0.05±0.05	0.45	0.55	0.20	0.30	0.40
0606	0.063±0.004	0.032±0.003	0.029	0.035	0.010	0.026	0.016
	1.6±0.10	0.80±0.07	0.73	0.87	0.25	0.65	0.40
0805	0.079±0.004	0.049±0.004	0.020	0.053	0.010	0.030	0.022
	2.0±0.10	1.25±0.10	0.51	1.35	0.25	0.75	0.55
1206	0.126±0.006	0.063±0.006	0.020	0.069	0.010	0.030	0.056
	3.2±0.15	1.6±0.15	0.51	1.75	0.25	0.75	1.40



**Construction**



**Electrical Characteristics**

**TCC:** NPO:>16V±30ppm/°C, X7R:±15%  
X5R:±15%, Y5V:+22%~-82%, Z5U: +22~-56%  
**Dissipation Factor:** NPO<10pF: <=10(3°C+0.7)10-4,  
X5R=5%-7%, X7R: <2.5%-5%, Y5V: 5%-12.5%,  
Z5U:4%-6%  
**Operating Temp:** NPO:-55~+125°C  
X5R:-55~+85°C, X7R:-55~+125°C,  
Y5V: -30~+85°C, Z5U:+10~+85°C  
**Terminations:** Nickel Barrier with 100% tin plated finish (lead free)

**Land Pattern**

Size	A	B	C	D	E	F	G
0402 Reflow	1.5	0.5	0.5	0.5	0.10	1.75	0.95
0603 Reflow	2.3	0.7	0.8	0.9	0.26	2.7	1.5
0603 Wave	2.4	1.0	0.7	0.8	0.2	3.0	1.9
0805 Reflow	2.8	0.9	0.95	1.4	0.45	3.2	2.1
0805 Wave	3.2	1.4	0.9	1.3	0.36	4.1	2.5
1206 Reflow	4.0	2.0	1.0	1.8	1.4	4.4	2.5
1206 Wave	4.8	2.3	1.25	1.7	1.25	5.9	3.2

▨ Solder Land / Solder Paste Pattern

▭ Solder Resist Pattern

▭ Occupied Area

▨ Tracks

