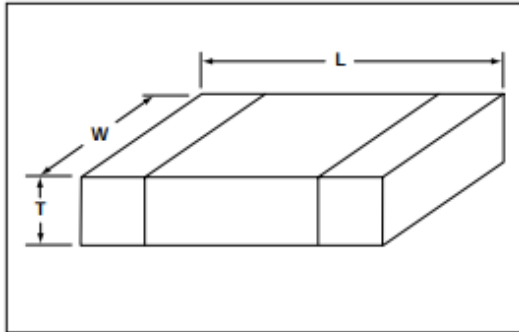


Multilayer Ceramic Chip Capacitor

Standard EIA Sizes



HOW TO ORDER

0603 5 A 271 J A T 2 A

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨

- ① **Size:** 0402, 0603, 0805, 1206, 1210, 1812, 1825
- ② **Voltage:** 10V=Z, 16V=Y, 25V=3, 50V=5, 100V=1, 200V=2
- ③ **Dielectric:** NP0=A, X7R=C, Z5U=E, Y5V=G
- ④ **Capacitance Code**
- ⑤ **Tolerance:**
F=±1% (≥50pF), G=±2% (≥25pF), J=±5%
K=±10%, M=±20%, Z=+80, -20%
- ⑥ **Failure Rate:** A = Standard
- ⑦ **Termination:**
T = Plated Ni and Solder
- ⑧ **Packaging:**
2 = 7" Reel/unmarked
4 = 13" Reel/unmarked
- ⑨ **Special Code:**
A = Standard Product

Dimensions: millimeters (inches)

	L	W	T
0402	1.0±0.1 (0.039±0.004)	0.5±0.1 (0.020±0.004)	0.6 max. (0.024 max.)
0603	1.6±0.15 (0.063±0.006)	0.8±0.15 (0.031±0.006)	0.9 max. (0.035 max.)
0805	2.0±0.2 (0.079±0.008)	1.25±0.2 (0.049±0.008)	1.3 max. (0.051 max.)
1206	3.2±0.2 (0.126±0.008)	1.6±0.2 (0.063±0.008)	1.5 max. (0.059 max.)
1210	3.2±0.2 (0.126±0.008)	2.5±0.2 (0.098±0.008)	1.7 max. (0.067 max.)
1812	4.5±0.3 (0.177±0.012)	3.2±0.2 (0.126±0.008)	1.7 max. (0.067 max.)
1825	4.5±0.3 (0.177±0.012)	6.4±0.4 (0.252±0.016)	1.7 max. (0.067 max.)

Standard Packaging

	BULK	TAPE & REEL	
		7"	13"
0402	50,000	10,000	N/A
0603	15,000	4,000	10,000
0805	10,000 (T=0.6mm) 5,000 (T=1.25mm)	4,000	10,000
1206	N/A	4,000	10,000
1210	N/A	4,000	10,000

Capacitance Range

Type		NP0				X7R					Z5U		Y5V				
		25V	50V	100V	200V	10V	16V	25V	50V	100V	200V	25V	50V	10V	16V	25V	50V
0402	Min.	0.5pF	0.5pF	—	—	—	100pF	100pF	100pF	—	—	—	—	2200pF	2200pF	2200pF	2200pF
	Max.	220pF	120pF	—	—	—	.047µF	6800pF	3900pF	—	—	—	—	0.1µF	.1µF	.022µF	0.01µF
0603	Min.	0.5pF	0.5pF	0.5pF	—	100pF	100pF	100pF	100pF	100pF	—	.01µF	.01µF	2200pF	2200pF	2200pF	2200pF
	Max.	1000pF	1000pF	330pF	—	.22µF	0.1µF	.047µF	.015µF	4700pF	—	.047µF	.027µF	1.0µF	.33µF	.22µF	.056µF
0805	Min.	0.5pF	0.5pF	0.5pF	0.5pF	100pF	100pF	100pF	100pF	100pF	220pF	.01µF	.01µF	.01pF	.01µF	.01µF	.01µF
	Max.	4700pF	2200pF	1000pF	470pF	2.2µF	.47µF	.22µF	.1µF	.022µF	1500pF	.12µF	.1µF	4.7µF	2.2µF	1.0µF	.33µF
1206	Min.	0.5pF	0.5pF	0.5pF	0.5pF	1000pF	1000pF	1000pF	1000pF	1000pF	330pF	.01µF	.01µF	.01µF	.01µF	.01µF	.01µF
	Max.	.01µF	4700pF	2200pF	1000pF	4.7µF	1.0µF	1.0µF	.22µF	0.1µF	5600pF	.33µF	.33µF	10.0µF	4.7µF	2.2µF	1.0µF
1210	Min.	560pF	560pF	560pF	560pF	—	1000pF	1000pF	1000pF	1000pF	470pF	.01µF	.01µF	.1µF	.1µF	.1µF	.1µF
	Max.	.01µF	.01µF	3900pF	1500pF	—	4.7µF	2.2µF	.22µF	.1µF	8200pF	.56µF	.47µF	22µF	10µF	4.7µF	1.0µF
1812	Min.	1000pF	1000pF	1000pF	1000pF	—	—	—	.01µF	.01µF	—	.01µF	.01pF	—	—	.15µF	.15µF
	Max.	.015µF	.01µF	4700pF	3300pF	—	—	—	1.0µF	.47µF	—	1.0µF	1.0µF	—	—	1.5µF	1.5µF
1825	Min.	—	1000pF	1000pF	1000pF	—	—	—	.01pF	.01pF	—	.01µF	.01pF	—	—	.47µF	.47µF
	Max.	—	.022µF	.012µF	6800pF	—	—	—	1.0µF	.47µF	—	1.0µF	1.0µF	—	—	1.5µF	1.0µF

Capacitor Letter Codes Table

Picofarad (pF)	Nanofarad (nF)	Microfarad (uF)	Code	Picofarad (pF)	Nanofarad (nF)	Microfarad (uF)	Code
10	0.01	0.00001	100	4700	4.7	0.0047	472
15	0.015	0.000015	150	5000	5.0	0.005	502
22	0.022	0.000022	220	5600	5.6	0.0056	562
33	0.033	0.000033	330	6800	6.8	0.0068	682
47	0.047	0.000047	470	10000	10	0.01	103
100	0.1	0.0001	101	15000	15	0.015	153
120	0.12	0.00012	121	22000	22	0.022	223
130	0.13	0.00013	131	33000	33	0.033	333
150	0.15	0.00015	151	47000	47	0.047	473
180	0.18	0.00018	181	68000	68	0.068	683
220	0.22	0.00022	221	100000	100	0.1	104
330	0.33	0.00033	331	150000	150	0.15	154
470	0.47	0.00047	471	200000	200	0.2	254
560	0.56	0.00056	561	220000	220	0.22	224
680	0.68	0.00068	681	330000	330	0.33	334
750	0.75	0.00075	751	470000	470	0.47	474
820	0.82	0.00082	821	680000	680	0.68	684
1000	1.0	0.001	102	1000000	1000	1.0	105
1500	1.5	0.0015	152	1500000	1500	1.5	155
2000	2.0	0.002	202	2000000	2000	2.0	205
2200	2.2	0.0022	222	2200000	2200	2.2	225
3300	3.3	0.0033	332	3300000	3300	3.3	335