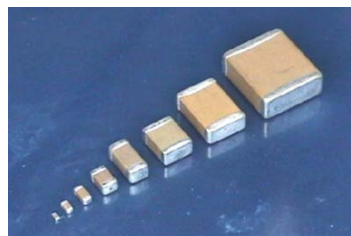


## Multilayer Ceramic Chip Capacitors [ Normal Chip Capacitors – NP0,X7R,X5R,Y5V ]

### NCC Series



Standard Multilayer Ceramic Chip Capacitors are available in a full range of sizes and temperature coefficients, with voltage ratings from 6.3V to 50V.

#### ◆ Features

- ❑ Surface mount suitable for wave and reflow soldering
- ❑ Small size and high reliability
- ❑ Excellent in high frequency characteristics
- ❑ RoHS compliant

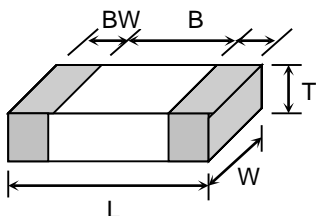
#### ◆ Applications

- ❑ Suitable for general electronics circuit, telecommunication, personal computers and peripheral, power circuit, mobile application & etc ....

#### ◆ Summary of Specifications

Operation Temperature	NP0 & X7R : -55 °C ~ +125 °C , X5R : -55 °C ~ +85 °C , Y5V : -30 °C ~ +85 °C
Rated Voltage	6.3Vdc to 50Vdc
Temperature Coefficient	NP0 : $\leq \pm 30\text{ppm}/^\circ\text{C}$ , -55 °C ~ +125 °C (EIA Class I)
	X7R : $\leq \pm 15\%$ , -55 °C ~ +125 °C (EIA Class II)
	X5R : $\leq \pm 15\%$ , -55 °C ~ +85 °C (EIA Class II)
	Y5V : +22%/-82% , -30 °C ~ +85 °C (EIA Class II)
Dissipation Factor	NP0 : More than 30pF: $Q \geq 1000$ (0.001) , 30pF and below : $Q \geq 400 + 20C$ (C=pF)
	X7R, X5R : Max. 0.10; Y5V : Max. 0.2
Insulation Resistance	10GΩ or 500/CΩ whichever is smaller (C in Farads)
Aging	NP0 : 0% , X7R/X5R : typically 1.0% , Y5V $\leq 7\%$ per decade of time
Dielectric Strength	250% Rated Voltage

#### ◆ Dimension



TYPE	L	W	T (max)	B (min)	BW (min)
0201	0.60±0.03 [.024±.001]	0.30±0.03 [.011 ±.001]	0.33 [.013]	0.20 [.008]	0.10 [.004]
0402	1.00±0.05 [.039±.002]	0.50±0.05 [.020 ±.002]	0.55 [.022]	0.30 [.012]	0.15 [.006]
0603	1.60±0.10 [.063±.004]	0.80±0.10 [.031 ±.004]	0.95 [.037]	0.40 [.016]	0.15 [.006]
0805	2.00±0.20 [.079±.012]	1.25±0.20 [.049 ±.008]	1.45 [.057]	0.70 [.028]	0.20 [.008]
1206	3.20±0.30 [.126±.012]	1.60±0.20 [.063±.008]	1.80 [.071]	1.50 [.059]	0.30 [.012]

#### ◆ How To Order

Product Code	Chip Size	Dielectric	Capacitance Unit : pF	Tolerance	Rated Voltage	Packaging	Suffix Code
C: MLCC (Multilayer Ceramic Capacitor)	Ex.: 0201 0402 0603 0805 1206	Ex.: N: NP0 X: X7R B: X5R Y: Y5V	Ex.: 102 : $10 \times 10^2$ 473 : $47 \times 10^3$ 104 : $10 \times 10^4$	Ex.: F : +/- 1% G : +/- 2% J : +/- 5% K : +/- 10% M : +/- 20% Z : +80/-20%	Ex.: 007 : 6.3Vdc 010 : 10Vdc 016 : 16Vdc 025 : 25Vdc 050 : 50Vdc	T: T&R 7" R: T&R 13" B: Bulk	Y

