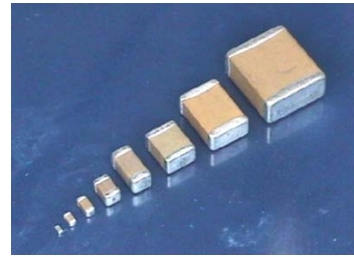


NCC Series

Normal Chip Capacitors

NP0, X7R, X5R, Y5V



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

◆ Features

- ❑ Surface mount suited for wave and reflow soldering.
- ❑ Small size and high reliability.
- ❑ Excellent in high frequency characteristic.
- ❑ RoHS compliant.

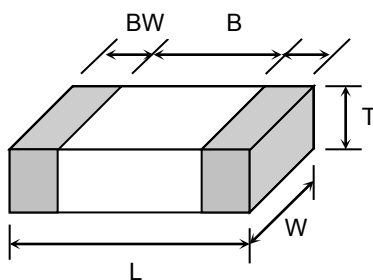
◆ Application

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

◆ Summary of Specifications

| | |
|-------------------------|--|
| Operating Temperature | -55°C~+125 °C for NP0 and X7R: -55°C ~+85°C for X5R: -30°C~+85°C for Y5V |
| 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 and Y5V: please see table 1 on page 39 for details |
| Insulation Resistance | 10GΩ or 500/C Ω whichever is smaller |
| Ageing | NP0:0% ; X7R/X5R: typically 1.0% and Y5V $\leq 7\%$ per decade of time |
| Dielectric Strength | 250% rated voltage |

◆ Dimensions



| 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] | 0.90 [.035] | 0.40 [.016] | 0.15 [.006] |
| 0805 | 2.00±0.20 [.079±.008] | 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 |
|---------------------------------------|---|---|---|---|---|-----------------------------|
| C : MLCC Multilayer Ceramic Capacitor | Ex. : 0201 0402 0603 0805 1206 | Ex. : N : NP0 X : X7R B : X5R Y : Y5V | Ex. : 102 : 10×10 ² 473 : 47×10 ³ 104 : 10×10 ⁴ | Ex. : C : +/- 0.25pF D : +/- 0.50pF 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 : Tape & Reel B : Bulk |

