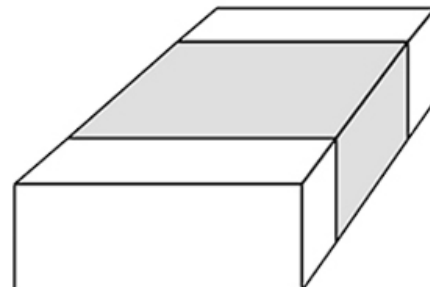


#### FEATURES

- Surface Mount
- Suitable for Reflow Soldering
- Excellent Frequency Characteristics
- RoHS Compliant
- Available with Flexible Termination
- Available with Arc Protection

#### APPLICATIONS

- Telecommunications
- Industrial
- Lighting/LED
- Automation
- Meters/Controls
- Audio



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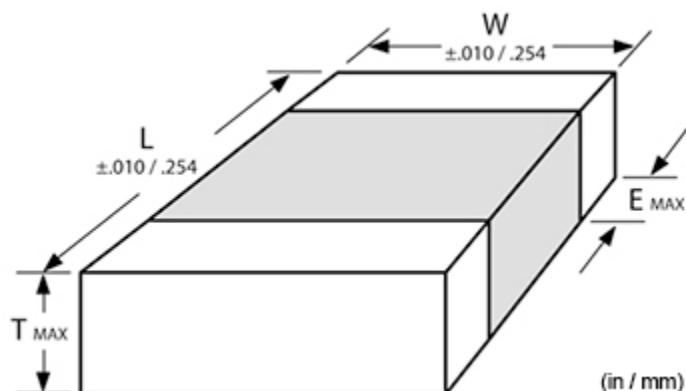
#### PART NUMBER EXAMPLE

CMC	-	3K0	/	102	K	X	1808	T	AF	F
Type		Rated DC voltage		Capacitance code (pF)	Tolerance code	Dielectric material	Case size	Package code	Option	RoHS compliant
Capacitance Code: First two digits represent significant figures, third digit represents multiplier (number of zeros).										
Rated Voltage: 250 = 250V; 500 = 500V; 630 = 630V; 1K0 = 1000V; 2K0 = 2000V; 3K0 = 3000V; 4K0 = 4000V; 5K0 = 5000V										
Dielectric Material: N = NP0, X = X7R, Y = Y5V										
Package Code: T = 7" Tape & Reel, T13 = 13" Tape & Reel, W = Waffle.										
Option: Blank=Standard, F=Flex term., AC=Arc protected, AF=Arc protected & Flex term.										

## GENERAL SPECIFICATIONS

Item	Performance
Operating temperature	
Capacitance range	2pF to 4.7μF
Capacitance tolerance	NP0: (2pF - 8.2pF) ±0.1pF (B)/ ±0.25pF (C)/ ±0.5pF (D) NP0: (10pF - 0.1μF) 1% (F)/ 2% (G)/ 5% (J)/ 10% (K) X7R: (150pF - 4.7μF) 5% (J)/ 10% (K)/ 20% (M)
Rated voltage range	250 VDC to 5000 VDC
Temperature coefficient	NP0: 0ppm/°C ± 30ppm/°C from -55°C ~ +125°C X7R: ±15% Δ°C maximum from -55°C ~ +125°C
Withstanding voltage (between leads)	1.2 times rated voltage, 50mA maximum for 5 seconds.
Minimum insulation resistance	10G Ω or 500meg Ω x Farads, whichever is less, measured @ rated voltage.
Dissipation factor	NP0: 0.1% Maximum X7R: 2.5% @ 1.0Vrms, except 16 & 25 VDC 3.5% @ 16 & 25 VDC
Testing Conditions	NP0: 1MHz ± 50Hz @ 1.0 Vrms ± 0.20 Vrms (Values ≤100pF) 1KHz ± 50Hz @ 1.0 Vrms ±0.20 Vrms (Values > 100pF)  X7R: 1KHz ± 50Hz @ 1.0 Vrms ± 0.20 Vrms (Values ≤10uF) 120Hz ± 50Hz @ 0.5 Vrms ±0.20 Vrms (Values > 10uF)

## DIMENSIONS



**SIZE mm (in)**

Size	Length	Width	Thickness	Endband
0603	1.60 (0.063)	0.81 (0.032)	0.94 (0.037)	0.41 (0.016)
0805	2.01 (0.079)	1.25 (0.049)	1.45 (0.057)	0.71 (0.028)
1206	3.20 (0.126)	1.60 (0.063)	1.78 (0.070)	0.51 (0.020)
1210	3.20 (0.126)	2.49 (0.098)	2.59 (0.102)	1.50 (0.059)
1808	4.60 (0.181)	2.01 (0.079)	2.21 (0.087)	0.31 (0.012)
1812	4.60 (0.181)	3.20 (0.126)	3.05 (0.120)	0.31 (0.012)
1825	4.60 (0.181)	6.35 (0.250)	3.05 (0.120)	0.31 (0.012)
2220	5.59 (0.220)	5.00 (0.197)	3.05 (0.120)	0.31 (0.012)
2225	5.59 (0.220)	6.35 (0.250)	3.05 (0.120)	0.31 (0.012)

**MINIMUM/MAXIMUM CAPACITANCE VS. SIZE**

TC	VDC	Size								
		0603	0805	1206	1210	1808	1812	1825	2220	2225
NP0	250	2pF to 680pF	2pF to 3,900pF	18pF to 0.01μF	47pF to 0.01μF		150pF to 0.018μF	1,000pF to 0.1μF	0.01μF to 0.047μF	1,000pF to 0.056μF
NP0	500		2pF to 680pF	18pF to 5,600pF	47pF to 6,800pF	2pF to 2,200pF	150pF to 8,200pF	1,000pF to 0.047μF	0.01μF to 0.039μF	1,000pF to 0.047μF
NP0	630			18pF to 4,700pF	47pF to 6,800pF	2pF to 2,200pF	150pF to 8,200pF	1,000pF to 0.033μF	0.01μF to 0.027μF	1,000pF to 0.033μF
NP0	1000			10pF to 1,000pF	68pF to 2,200pF	2pF to 1,200pF	68pF to 6,800pF	1,000pF to 0.012μF	100pF to 0.012μF	1,000pF to 0.015μF
NP0	2000			2pF to 390pF	10pF to 390pF	2pF to 1,000pF	68pF to 1,500pF		10pF to 2,200pF	10pF to 2,200pF
NP0	3000			2pF to 39pF		2pF to 1,000pF	10pF to 1,200pF		10pF to 1,200pF	10pF to 1,200pF
NP0	5000					2pF to 27pF			2pF to 120pF	
X7R	250		470pF to 0.068μF	180pF to 0.22μF	0.01μF to 0.68μF		0.01μF to 2.2μF	0.01μF to 3.3μF	1,000pF to 3.3μF	0.01μF to 4.7μF
X7R	500		470pF to 0.022μF	180pF to 0.068μF	1,000pF to 0.1μF	2,700pF to 0.047μF	0.01μF to 0.22μF	0.01μF to 0.22μF	0.01μF to 0.47μF	0.01μF to 0.47μF
X7R	630			220pF to 0.033μF						
X7R	1000		470pF to 1,000pF	220pF to 0.018μF	1,000pF to 0.047μF	1,000pF to 0.047μF	220pF to 0.15μF	0.01μF to 0.1μF	0.01μF to 0.22μF	0.01μF to 0.22μF
X7R	1500			220pF to 0.01μF						
X7R	2000		220pF to 1,000pF	220pF to 6,800pF	150pF to 6,800pF	150pF to 0.01μF	270pF to 0.015μF	0.01μF to 0.047μF	1,000pF to 0.068μF	1,000pF to 0.082μF
X7R	2500			1,000pF to 3,300pF						
X7R	3000			220pF to 1,000pF		150pF to 2,700pF	680pF to 0.01μF	0.01μF to 0.015μF	150pF to 0.01μF	150pF to 0.015μF
X7R	4000					150pF to 1,000pF				
X7R	5000								150pF to 4,700pF	150pF to 4,700pF