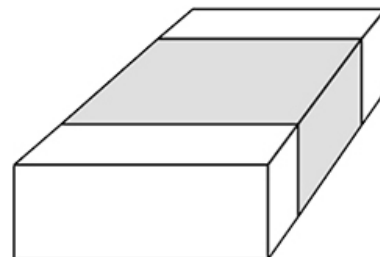


#### FEATURES

- Small size & high capacitance
- Suitable for reflow soldering
- Surface mount
- Safety standard approval by EN 132400 & UL 60950-1
- Certified to: UL E 245466; TUV 50082160, 50223394
- RoHS compliant and Lead (Pb) free option



#### APPLICATIONS

- Modem
- Facsimile
- Telephone
- Other telecommunication equipment
- Lighting
- Surge protection
- EMI filtering and isolation

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#### PART NUMBER EXAMPLE

CMX	-	2K0	/	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
Safety class: 2K0 = X2 250Vrms; 2K5 = X2 305Vrms; 5K0 = X1/Y2 250Vrms; 6K0 = X1/Y2 for sizes 2208, 2211 & 2220 only.										
Capacitance Code: First two digits represent significant figures, third digit represents multiplier (number of zeros).										
Dielectric Material: N = NP0; X = X7R										
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.										

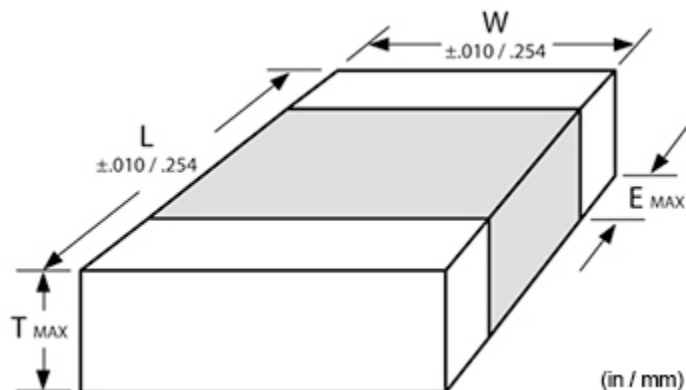
## GENERAL SPECIFICATIONS

Item	Performance
Operating temperature	
Capacitance range	2pF to 0.056μF
Capacitance tolerance	NP0: (2pF - 8.2pF) $\pm 0.25\text{pF}$ / $\pm 0.5\text{pF}$ NP0: (10pF - 1,200pF) 1% / 10% / 2% / 5% X7R: (100pF - 0.056μF) 10% / 20% / 5%
Rated voltage range (rms)	250 VAC to 305 VAC
Temperature characteristics	<30ppm/°C from -55°C ~ +125°C (EIA Class I) (NP0). < $\pm 15\%$ $\Delta^\circ\text{C}$ maximum from -55°C ~ +125°C (EIA Class II) (X7R).
Withstanding voltage (between leads)	Applied Voltage 1075VDC (4.3 x rated Vrms) (X Capacitor) for 1 second. Applied Voltage 1500VAC (Y Capacitor) for 60 second.
Minimum insulation resistance	10GΩ
Aging rate	NP0: 0%, X7R: 1% per decade hour, typical (X7R).
Climatic category	-55~125°C
Impulse	X2: 2.5KVDC, Y2: 5KVDC - 3 times

## SAFETY DETAIL SPECIFICATION

<b>EN 60384-1 : 2001</b> <b>EN 60384-14 : 2005</b>	Meets the electrical requirements and certification for equipment requiring Class X2.
<b>IEC 60950-1 : 2005</b>	Component certified for equipment requiring IEC 60950 compliance.
<b>IEC 60384 1999</b> <b>IEC 60384-14 : 2005</b>	Component certified for equipment requiring IEC-384 compliance.
<b>UL 60950-1 : 2007</b> <b>2nd Edition</b>	TNV/SELV isolation capacitors certified To UL 60950.

## DIMENSIONS



**SIZE mm (in)**

Size	Length	Width	Thickness	Endband
1808	4.57 (0.180)	2.01 (0.079)	2.21 (0.087)	0.31 (0.012)
1812	4.60 (0.181)	3.20 (0.126)	3.00 (0.118)	0.31 (0.012)
2208	5.59 (0.220)	2.01 (0.079)	2.54 (0.100)	0.31 (0.012)
2211	5.59 (0.220)	2.79 (0.110)	3.00 (0.118)	0.31 (0.012)
2220	5.59 (0.220)	5.00 (0.197)	3.00 (0.118)	0.31 (0.012)
2825	7.11 (0.280)	6.35 (0.250)	3.00 (0.118)	0.31 (0.012)

**MINIMUM/MAXIMUM CAPACITANCE VS. SIZE**

TC	Safety rating	VAC	Size					
			1808	1812	2208	2211	2220	2825
NP0	X1/Y2	250	2pF to 330pF	2pF to 680pF	2pF to 330pF	2pF to 1,000pF	2pF to 1,200pF	
NP0	X2	250	2pF to 1,000pF					
X7R	X1/Y2	250	150pF to 1,000pF	130pF to 1,000pF	100pF to 1,000pF	100pF to 4,700pF	100pF to 4,700pF	
X7R	X2	250	150pF to 2,200pF	330pF to 4,700pF			150pF to 0.033μF	0.047μF to 0.056μF
X7R	X2	305					150pF to 0.022μF	