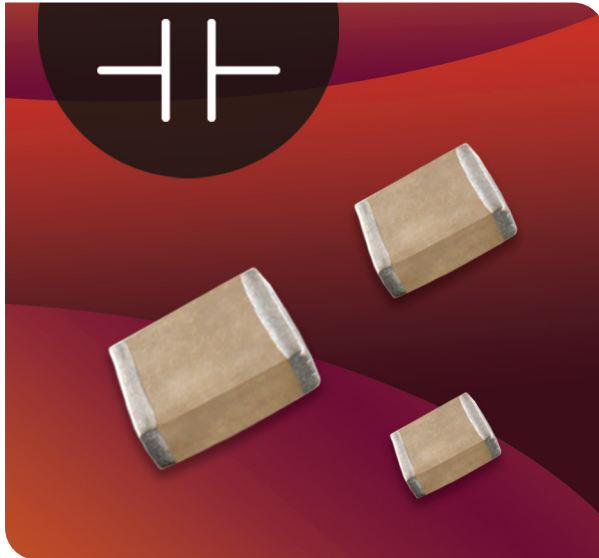




Capacitors - Ceramic Chip Components

AC Power



Features:

- Optimized for Power Handling
- Superior Lead-Free Solder Reflow Performance
- MSL = 1.0 polyterm® Terminations Available
- RoHS Compliant

Common Applications:

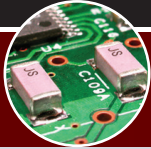
- Superior Film Cap Replacement
- Florescent and HID Lighting Ballasts
- Industrial Controls
- Networking

EIA	Inches		(mm)	DC	AC	NP0 Dielectric		X7R Dielectric	
						Minimum	Maximum	Minimum	Maximum
1206	L	.125 ± .010	(3.17 ± .25)	250 VDC	141 Vrms	-	-	1000 pF	.068 pF
	W	.062 ± .010	(1.57 ± .25)	500 VDC	283 Vrms	10 pF	1500 pF	1000 pF	.027µF
	T	.067 Max.	(1.70)	630 VDC	356 Vrms	10 pF	1200 pF	1000 pF	.010 µF
	E/B	.020 ± .010	(0.51 ± .25)	1000 VDC	566 Vrms	10 pF	1000 pF	100 pF	5600 pF
1210	L	.125 ± .010	(3.18 ± .25)	250 VDC	141 Vrms	-	-	1000 pF	0.120 µF
	W	.095 ± .010	(2.41 ± .25)	500 VDC	283 Vrms	10 pF	3900 pF	1000 pF	.047 µF
	T	.080 Max.	(2.03)	630 VDC	356 Vrms	10 pF	2700 pF	1000 pF	.027 µF
	E/B	.020 ± .010	(0.51 ± .25)	1000 VDC	566 Vrms	10 pF	1800 pF	100 pF	.010 µF
1812	L	.180 ± .010	(4.57 ± .25)	250 VDC	141 Vrms	-	-	0.010 uF	0.220 µF
	W	.125 ± .010	(3.17 ± .25)	500 VDC	283 Vrms	100 pF	100 pF	1000 pF	0.150 µF
	T	.110 Max.	(2.80)	630 VDC	356 Vrms	100 pF	100 pF	1000 pF	0.100 µF
	E/B	.025 ± .015	(0.64 ± .38)	1000 VDC	566 Vrms	10 pF	10 pF	1000 pF	0.022 µF

HOW TO ORDER

AC	DD	102	W	102	K	1	GV	001	E
Subfamily	Size	Voltage	DTC	Capacitance	Tolerance	Mark	Term	Special Code	Pack
AC = Power Capacitor	See Chart Above	251 = 250V 501 = 500V 631 = 630V 102 = 1000V	G = NP0/ COG W = X7R	1st two digits are significant; 3rd digit denotes number of zeros. 102 = 1000 pF 104 = 0.10 µF	NP0: J = 5% K = 10% X7R: K = 10% M = 20%	1 = No Mark Z = Special Code	GV = Ni/Sn (RoHS) NT = Ni/Sn ZZ = Special Code	001 = Default catalog Item 002 = 1st special code 999 = Last special code	E = 7" Reel Emb Tape U = 13" Reel Emb Tape T = 7" Reel Paper Tape R = 13" Reel Paper Tape

Example: **ACDD102W102K1GV001U** AC Power Capacitors, 1206, X7R cap, 1,000.0V, 1,000.00pF±10% cap, Ni/Sn (RoHS) cap, 13" Reel Embossed Tape cap



Capacitors
AC Safety (UL / TUV Certified)

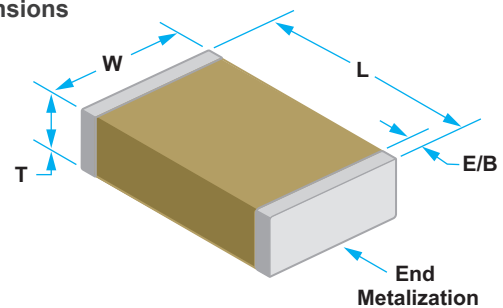
X1, X2 and Y2 Capacitor Type Safety ceramic chip are designed for AC voltage surge and lightning protection in line-to-ground interface applications in computer networks, modem, facsimile and other equipment. Johanson Dielectric's safety capacitor offering includes four different case sizes and NPO and X7R dielectric materials. These devices are surface mount ready with barrier terminations and tape and reel packaging. Information on capacitor safety ratings and certification details may be found below.

General Specifications:

- Case Sizes: 1808 - 2220
- Safety Ratings: X2, X1/Y2, Y2
- Dielectrics Type: NPO, X7R
- Capacitance Range: 2.4 pF - 4700 pF

Polyterm® soft termination option for demanding environments & processes available on select parts, please contact the factory.

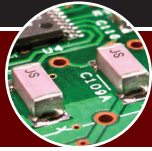
Dimensions



Safety Ratings

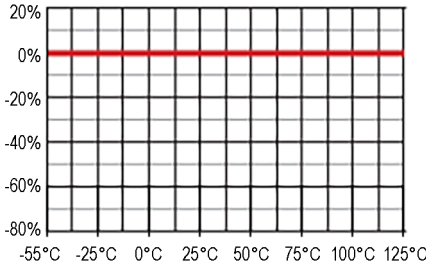
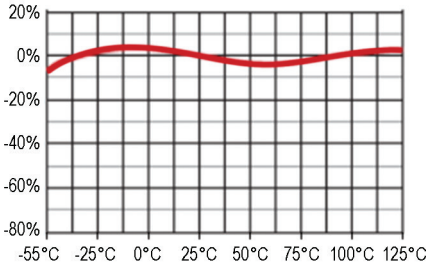
Safety Rating	Voltage Rating	Withstanding Voltage	Impulse Voltage	Case Size
X2	250 VAC	1,500 VAC	2,500 V	1808
STANDARDS: IEC/EN 60384-14:2013+A1:2016 • CERTIFICATIONS: TUV T 72210484 • UL File E472557				
X2	250 VAC	1,500 VAC	2,500 V	1812
STANDARDS: IEC/EN 60384-14:2013+A1:2016 • CERTIFICATIONS: TUV T 72210484 • UL File E472557				
X1/Y2	250 VAC	1,500 VAC	5,000 V	1808
STANDARDS: IEC/EN 60384-14:2013+A1:2016 • CERTIFICATIONS: TUV T 72210484 • UL File E472557				
X1/Y2	250 VAC	1,500 VAC	5,000 V	1812
STANDARDS: IEC/EN 60384-14:2013+A1:2016 • CERTIFICATIONS: TUV T 72210484 • UL File E472557				
X1/Y2	250 VAC	1,500 VAC	5,000 V	2211
STANDARDS: IEC/EN 60384-14:2013+A1:2016 • CERTIFICATIONS: TUV T 72210484 • UL File E472557				
X1/Y2	250 VAC	1,500 VAC	5,000 V	2220
STANDARDS: IEC/EN 60384-14:2013+A1:2016 • CERTIFICATIONS: TUV T 72210484 • UL File E472557				

X Capacitors are defined as suitable for use in situations where failure of the capacitor would not lead to danger of electric shock. Y Capacitors are defined as suitable for use in situations where failure of the capacitor could lead to danger of electric shock.



Capacitors - High Temperature Capacitors (HTC)
AC Safety (UL / TUV Certified) Continued

Electrical Characteristics

Parameter	NPO		X7R	
		0 ± 30 ppm/°C	-55 to + 125°C	± 15%
Temperature Coefficient				
	Dissipation Factor	.001 (0.1%) max		WVDC > 50 VDC, DF = 2.5% max WVDC = 25 VDC, DF = 30% max WVDC = 16 VDC, DF = 3.5% max
Aging	None		2.5% / decade hour	
Insulation Resistance	100ΩF or 100GΩ Whichever is less @ 25°C, WVDC		500ΩF or 50GΩ Whichever is less @ 25°C, WVDC	
Dielectric Strength	For Vrated = 6 - 200 VDC, DWV = 2.5 X WVDC, 25°C, 50mA max. For Vrated = 201 - 499 VDC, DWV = 2.0 X WVDC, 25°C, 50mA max. For Vrated = 500 - 999 VDC, DWV = 1.5 X WVDC, 25°C, 50mA max. For Vrated = 1000 + VDC, DWV = 1.2 X WVDC, 25°C, 50mA max.			
Test Parameters	C > 100 pF; 1kHz ± 50Hz; 1.0 ± 0.2 VRMS C > 100 pF; 1kHz ± 50Hz; 1.0 ± 0.2 VRMS		1KHz ± 50Hz; 1.0 ± 0.2 VRMS	
Notes	Tanceram IR = 100 ΩF or 10 GΩ, Tanceram DF for Vrated > 50 VDC = 5% max., & Tanceram DF for Vrated < 25 VDC, DF = 10% max.			

HOW TO ORDER

SC	DP	502	W	102	J	4	GF	001	E
Subfamily	Size	Voltage	DTC	Capacitance	Tol	Mark	Termination	Special Code	Pack
SC = AC Safety Caps PME	DP = 1808 ED = 2211 DR = 1812 EF = 2220	302 = 250VAC [2500V Impulse] 502 = 250VAC [5000V Impulse]	G = NPO/COG W = X7R	1st two digits are significant; 3rd digit denotes number of zeros. 101 = 100 pF 103 = 0.01 μF 105 = 1.00 μF	J = ± 5% K = ± 10% M = ± 20%	4 = Required safety mark	GV = Ni/Sn (RoHS) GF = Polyterm Sn (RoHS)	001 = Default catalog item	B = Bulk E = 7" Reel Emb Tape U = 13" Reel Emb Tape

Example: **SCDP502W102J4GF001E** Capacitors Safety Caps - PME, X1/Y2, 1808, X7R, 5000V, 1000pF±5%, Polyterm Sn (RoHS), 7" Reel Embossed Tape