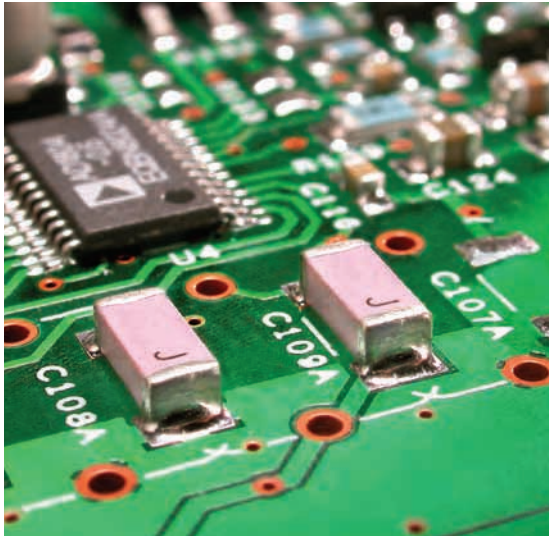


AC SAFETY CAPACITORS

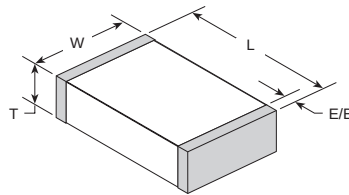


Johanson Dielectrics Type SC ceramic chip capacitors are designed for AC voltage surge and lightning protection in line-to-ground interface applications in computer networks, modem, facsimile and other equipment.

Johanson'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.



Polyterm® soft termination option available for demanding environments & processes.

SAFETY RATING	VOLTAGE RATING	WITHSTANDING VOLTAGE	IMPULSE VOLTAGE	CASE SIZE	JOHANSON ORDERING P/N
X2/Y3	250 VAC	1,500 VAC	2,500 V	1808	302R29____V3E-****-SC
STANDARDS: EN 60384-14:2005, EN 60950 2001 • UL 60950-01 CERTIFICATIONS: TUV Rheinland T72110251 • UL File E212609 • Semko 0026092-1 & 0003222-1					
Y3	250 VAC	1,500 VAC	2,500 V	1812	302S43____V3E-****-SC
STANDARDS: EN 60384-14:2005, EN 60950:2001 CERTIFICATIONS: TUV Rheinland T72110251					
X1/Y2	250 VAC	1,500 VAC	5,000 V	1808	502R29____V3E-****-SC
STANDARDS: EN 60384-14:2005 • UL 60950-01 CERTIFICATIONS: TUV Rheinland T72110897 / UL File E212609-A1-UL-1					
Y2	250 VAC	1,500 VAC	5,000 V	2211	502R30____V3E-****-SC
STANDARDS: EN 60384-14:2005 • UL 60950-01 CERTIFICATIONS: TUV Rheinland T72110897 • UL File: E212609-A1-UL-1					
X1/Y2	250 VAC	1,500 VAC	5,000 V	2220	502S47____V3E-****-SC
STANDARDS: EN 60384-14:2005 • UL 60950-01 CERTIFICATIONS: TUV Rheinland T72110897 • UL File: E212609-A1-UL-1					
Japan	250 VAC	1,500 VAC	N/A	2220	AC2____V4E-****-JS
STANDARDS: JIS-C-5102 • JIS-C-5150 CERTIFICATIONS: N/A					
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.					

HOW TO ORDER AC SAFETY CAPACITORS

P/N written: 302R29W102MV3E-****-SC

502	R29	W	102	M	V	3	E	****-SC
VOLTAGE	SIZE	DIELECTRIC	CAPACITANCE	TOLERANCE	TERMINATION	MARKING	PACKING	TYPE
302 = 250VAC [2500V Impulse] 502 = 250VAC [5000V Impulse] AC2 = 250VAC [N/A]	R29=1808 R30=2211 S43=1812 S47=2220 AC2=2220	N = NPO W = X7R	1st two digits are significant; third digit denotes number of zeros, R = decimal. 102 = 1000 pF 104 = 0.10 µF 5R0 = 5.0pF	J = ± 5% K = ± 10% M = ± 20%	V = NI Barrier with 100% Sn Plating (Matte) F = Polyterm flexible termination	3 = Special 4 = Unmarked	E = Embossed 7" No code = bulk Tape specs. per EIA RS481	SC = Safety Certified JS = Japan Safety



5 pF
10 pF
12 pF
15 pF
18 pF
22 pF
27 pF
33 pF
47 pF
56 pF
68 pF
100 pF
120 pF
150 pF
180 pF
220 pF
270 pF
330 pF
470 pF
560 pF
680 pF
1000 pF
1200 pF
1500 pF
1800 pF
2200 pF
2700 pF
3300 pF
4700 pF

R29 / 1808			INCHES (mm)		DIELECTRIC	
X2/Y3	L	.185 ±.015	(4.80 ±.25)			
	W	.080 ±.010	(2.03 ±.25)			
	T	.085 Max.	(2.16)			
	E/B	.020 ±.010	(0.51 ±.25)			
S43 / 1812			INCHES (mm)		DIELECTRIC	
Y3	L	.175 ±.010	(4.45 ±.25)			
	W	.125 ±.010	(3.17 ±.25)			
	T	.115 Max.	(2.92)			
	E/B	.025 ±.015	(0.64 ±.38)			
R29 / 1808			INCHES (mm)		DIELECTRIC	
X1/Y2	L	.185 ±.015	(4.80 ±.25)			
	W	.080 ±.010	(2.03 ±.25)			
	T	.085 Max.	(2.16)			
	E/B	.012 ±.005	(0.30 ±.13)			
R30 / 2211			INCHES (mm)		DIELECTRIC	
Y2	L	.225 ±.016	(5.72 ±.40)			
	W	.110 ±.010	(2.80 ±.25)			
	T	.115 Max.	(2.92)			
	E/B	.020 ±.010	(0.51 ±.25)			
S47 / 2220			INCHES (mm)		DIELECTRIC	
X1/Y2	L	.225 ±.015	(5.72 ±.38)			
	W	.200 ±.015	(5.08 ±.38)			
	T	.150 Max.	(3.81)			
	E/B	.025 ±.015	(0.64 ±.38)			

470pF 1000pF 2200pF 3300pF 4700pF 0.01μF 0.022μF 0.047μF 0.10μF

J29 / 1808										
		INCHES	(mm)							
	L	.189 ±.010	(4.80 ±.25)							
	W	.080 ±.010	(2.03 ±.25)							
	T	.085 Max.	(2.16)							
	E/B	.020 ±.010	(0.51±.25)							
Japan Safety										
J43 / 1812										
		INCHES	(mm)							
	L	.175 ±.010	(4.45 ±.25)							
	W	.125 ±.010	(3.17 ±.25)							
	T	.115 Max.	(2.92)							
	E/B	.025 ±.015	(0.64±.38)							
Japan Safety										
J47 / 2220										
		INCHES	(mm)							
	L	.225 ±.015	(5.72 ±.38)							
	W	.200 ±.015	(5.08 ±.38)							
	T	.150 Max.	(3.81)							
	E/B	.025 ±.015	(0.64±.38)							
Japan Safety										