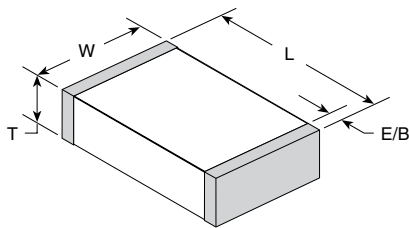
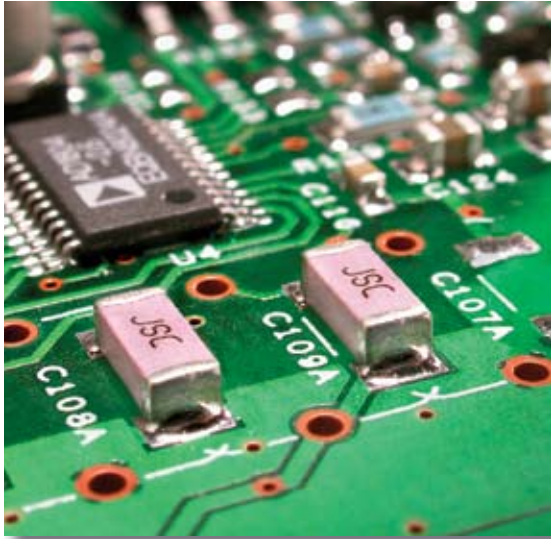


SAFETY CERTIFIED CAPACITORS



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

Additional information on capacitor safety ratings may be found below. Specific certification details may be found under each product listing on the facing page.

SAFETY RATING	RATED VAC	DWV VAC	IMPULSE VOLTAGE
Y2	250	1,500	5,000
Y3	250	1,500	N/A
X1	250	1,500	4,000
X2	250	1,500	2,500

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.

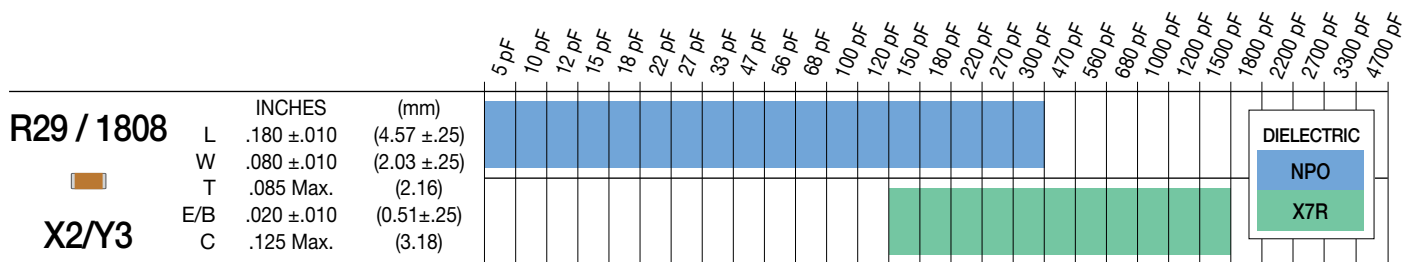
SAFETY RATING	VOLTAGE RATING WVAC	CASE SIZE	JOHANSON ORDERING P/N
X2/Y3	250	1808	302R29____V_E-****-SC
Y3	250	1812	302S43____V_E-****-SC
X1/Y2	250	1808	502R29____V_E-****-SC
Y2	250	2211	502R30____V_E-****-SC
X1/Y2	250	2220	502S47____V3E-****-SC

HOW TO ORDER SAFETY CERTIFIED

302	R29	N	101	K	V	3	E - ***** - SC							
IMPULSE VOLTAGE 302 = 3000V 502 = 5000V	SIZE See Size Chart	DIELECTRIC N = NPO W = X7R	CAPACITANCE 1st two digits are significant; third digit denotes number of zeros; 101 = 100 pF	TOLERANCE NPO: J = ± 5% K = ± 10% X7R: K = ± 10% M = ± 20%	TERMINATION V = Ni barrier w/ 100% Sn Plating	MARKING 3 = Special (JSC) 4 = No marking	TAPE MODIFIER <table><tr><td>Code</td><td>Tape</td><td>Reel</td></tr><tr><td>E</td><td>Embossed</td><td>7"</td></tr></table> Tape specifications conform to EIA RS481	Code	Tape	Reel	E	Embossed	7"	TYPE SC = Safety Certified
Code	Tape	Reel												
E	Embossed	7"												

P/N written: 302R29N101KV3E-****-SC

SAFETY CERTIFIED CAPACITORS



TUV Rheinland Certificate Numbers 2172792 & 2172793

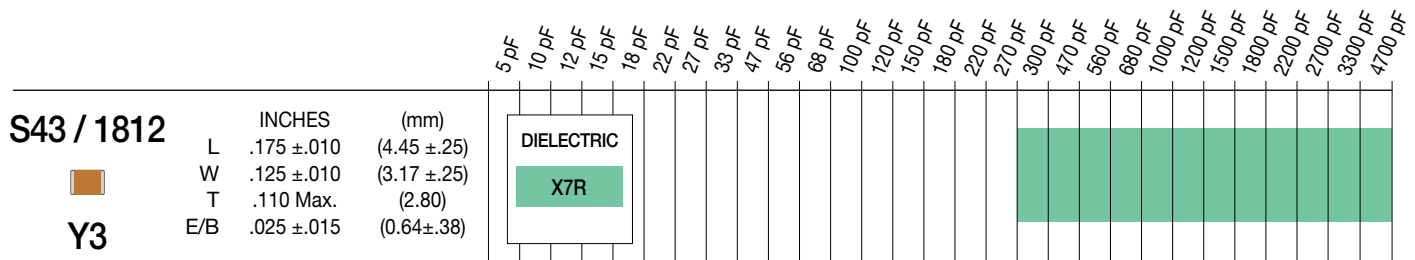
Standards: EN132400:1994+A1, IEC 60384-14:1993+A1, EN 60950:1992+A1+A2+A3+A4+A11

UL File Number E212609 Standards:UL 1950, Third Edition

Semko Reference Numbers 0026092-1 & 0003222-1

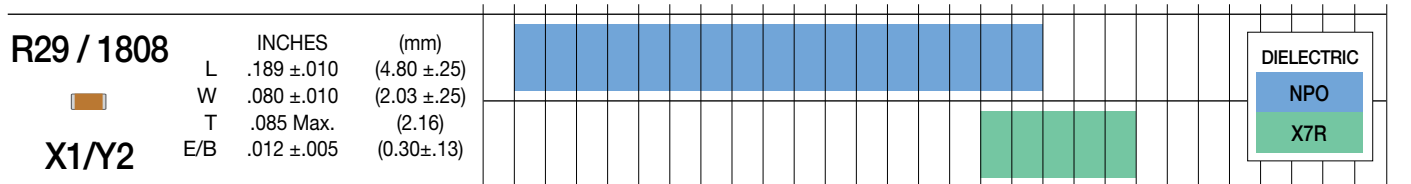
Standards: EN 132400:1994+A2:1998, IEC 60384-14, Second Edition:1993+A1:1995, Robustness of Terminations (cl 4.3) tested according to IEC 60384-1 amendment 3 cl 4.34 & 4.35, Resistance to Soldering Heat (cl 4.4) tested according to IEC 60384-1 amendment 3 cl 4.14.2

Impulse test made with 2.5KV according to clause 6.4.2.1 in IEC 60950, Creepage distance between live parts of different polarity meets the requirements in IEC 60950



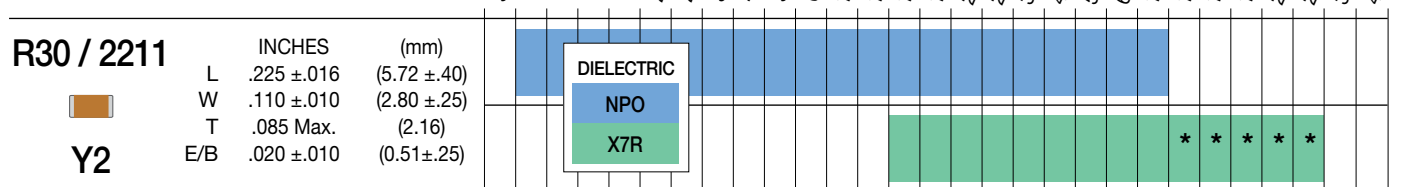
TUV Rheinland Certificate Number 2172792

Standards: EN132400:1994+A1, IEC 60384-14:1993+A1, EN 60950:1992+A1+A2+A3+A4+A11



TUV Rheinland Certificate Numbers T72041313 and T72041314

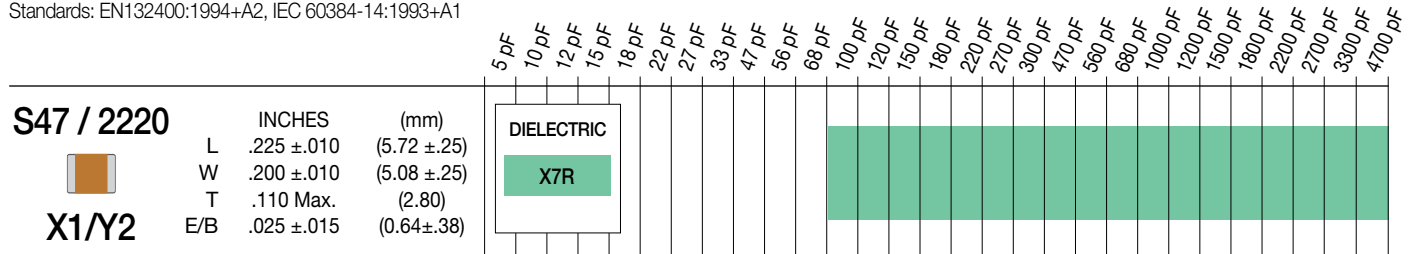
Standards: EN132400:1994+A2+A3+A4, EN60950-1:2001, IEC 384-14:1993+A1



TUV Rheinland Certificate Numbers 2279224 & 2172779

Standards: EN132400:1994+A2, IEC 60384-14:1993+A1

*Certification Pending



TUV Rheinland Certificate Number 2272848

Standards: IEC 60384-14:1993+A, EN 132400:1994+A2

