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Stocking Distributor

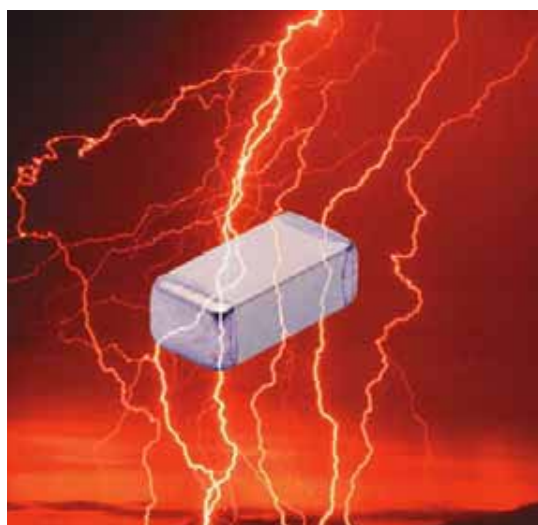
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[Johanson Dielectrics Inc.](#)
[602S47W102KV4E](#)

For any questions, you can email us directly:

sales@integrated-circuit.com

HIGH VOLTAGE SURFACE MOUNT MLCC s 250 - 6,000 VDC



These high voltage capacitors feature a special internal electrode design which reduces voltage concentrations by distributing voltage gradients throughout the entire capacitor. This unique design also affords increased capacitance values in a given case size and voltage rating. The capacitors are designed and manufactured to the general requirement of EIA198 and are subjected to a 100% electrical testing making them well suited for a wide variety of telecommunication, commercial, and industrial applications.

APPLICATIONS

- Analog & Digital Modems
- Lighting Ballast Circuits
- DC-DC Converters
- LAN/WAN Interface
- Voltage Multipliers
- Back-lighting Inverters

NOW AVAILABLE with Polyterm[®] soft termination option for demanding environments & processes. Visit our website for full details.

Mechanical Characteristics

Available Capacitance

Part Number	Inches	(mm)	Rated Voltage	NPO Dielectric		X7R Dielectric	
				Minimum	Maximum	Minimum	Maximum
R15/0805	L	.080 ±.010	250 VDC	-	-	1000 pF	0.022 µF
	W	.050 ±.010	500 VDC	10 pF	680 pF	1000 pF	0.010 µF
	T	.055 Max.	630 VDC	10 pF	560 pF	1000 pF	3900 pF
	E/B	.020 ±.010	1000 VDC	10 pF	390 pF	100 pF	3300 pF
R18/1206	L	.125 ±.010	250 VDC	-	-	1000 pF	0.068 µF
	W	.062 ±.010	500 VDC	10 pF	1500 pF	1000 pF	0.047 µF
	T	.067 Max.	630 VDC	10 pF	1200 pF	1000 pF	0.027 µF
	E/B	.020 ±.010	1000 VDC	10 pF	1000 pF	100 pF	0.018 µF
			2000 VDC	10 pF	220 pF	100 pF	1000 pF
			3000 VDC	10 pF	82 pF	100 pF	220 pF
S41/1210	L	.125 ±.010	250 VDC	-	-	1000 pF	0.120 µF
	W	.095 ±.010	500 VDC	10 pF	3900 pF	1000 pF	0.082 µF
	T	.080 Max.	630 VDC	10 pF	2700 pF	1000 pF	0.056 µF
	E/B	.020 ±.010	1000 VDC	10 pF	1800 pF	100 pF	0.027 µF
			2000 VDC	10 pF	560 pF	100 pF	2200 pF
			3000 VDC	10 pF	220 pF	100 pF	560 pF
R29/1808	L	.185 ±.015	500 VDC	10 pF	4700 pF	1000 pF	0.056 µF
	W	.080 ±.010	630 VDC	10 pF	3300 pF	1000 pF	0.047 µF
	T	.085 Max.	1000 VDC	1.0 pF	2200 pF	100 pF	0.033 µF
	E/B	.020 ±.010	2000 VDC	1.0 pF	820 pF	100 pF	6800 pF
			3000 VDC	1.0 pF	470 pF	100 pF	3300 pF
			4000 VDC	1.0 pF	180 pF	100 pF	270 pF
			5000 VDC	1.0 pF	75 pF	47 pF	120 pF
			6000 VDC	1.0 pF	75 pF	47 pF	100 pF

Available capacitance values include the following significant retma values and their multiples:

1.0 1.2 1.5 1.8 2.2 2.7 3.3 3.9 4.7 5.6 6.8 8.2 (1.0 = 1.0, 10, 100, 1000, etc.)

Consult factory for non-retma values and sizes or voltages not shown.

HIGH VOLTAGE SURFACE MOUNT MLCCs 250 - 6,000 VDC

Mechanical Characteristics

Available Capacitance

Part Number	Inches	(mm)	Rated Voltage	NPO Dielectric		X7R Dielectric	
				Minimum	Maximum	Minimum	Maximum
S43 / 1812 L .180 ±.010 (4.57 ±.25) W .125 ±.010 (3.17 ±.25) T .110 Max. (2.80) E/B .025 ±.015 (0.64 ±.38)			250 VDC	-	-	0.010 µF	0.270 µF
			500 VDC	100 pF	8200 pF	1000 pF	0.150 µF
			630 VDC	100 pF	6800 pF	1000 pF	0.100 µF
			1000 VDC	10 pF	5600 pF	1000 pF	0.056 µF
			2000 VDC	10 pF	1800 pF	100 pF	6800 pF
			3000 VDC	10 pF	1000 pF	100 pF	4700 pF
			4000 VDC	10 pF	390 pF	100 pF	1500 pF
			5000 VDC	10 pF	150 pF	100 pF	680 pF
			6000 VDC	10 pF	150 pF	10 pF	680 pF
S49 / 1825 L .180 ±.010 (4.57 ±.25) W .250 ±.010 (6.35 ±.25) T .140 Max. (3.56) E/B .025 ±.015 (0.64 ±.38)			500 VDC	100 pF	0.018 µF	0.01 µF	0.330 µF
			630 VDC	100 pF	0.015 µF	0.01 µF	0.220 µF
			1000 VDC	10 pF	0.012 µF	1000 pF	0.039 µF
			2000 VDC	10 pF	5600 pF	100 pF	0.018 µF
			3000 VDC	10 pF	2200 pF	100 pF	8200 pF
			4000 VDC	10 pF	1200 pF	100 pF	2000 pF
			5000 VDC	10 pF	390 pF	100 pF	820 pF
			6000 VDC	10 pF	390 pF	100 pF	820 pF
			500 VDC	1000 pF	0.018 µF	0.01 µF	0.330 µF
S47 / 2220 L .225 ±.015 (5.72 ±.38) W .200 ±.015 (5.08 ±.38) T .150 Max. (3.81) E/B .025 ±.015 (0.64 ±.38)			630 VDC	1000 pF	0.018 µF	0.01 µF	0.270 µF
			1000 VDC	100 pF	0.015 µF	1000 pF	0.056 µF
			2000 VDC	100 pF	5600 pF	1000 pF	0.027 µF
			3000 VDC	10 pF	2700 pF	100 pF	0.010 µF
			4000 VDC	10 pF	1500 pF	100 pF	2200 pF
			5000 VDC	10 pF	470 pF	100 pF	1500 pF
			6000 VDC	10 pF	470 pF	100 pF	1500 pF
			500 VDC	1000 pF	0.027 µF	0.01 µF	0.470 µF
			630 VDC	1000 pF	0.022 µF	0.01 µF	0.330 µF
S48 / 2225 L .225 ±.010 (5.72 ±.25) W .255 ±.015 (6.48 ±.38) T .160 Max. (4.06) E/B .025 ±.015 (0.64 ±.38)			1000 VDC	100 pF	0.018 µF	1000 pF	0.120 µF
			2000 VDC	100 pF	8200 pF	1000 pF	0.039 µF
			3000 VDC	10 pF	3300 pF	100 pF	0.015 µF
			4000 VDC	10 pF	1800 pF	100 pF	5600 pF
			5000 VDC	10 pF	470 pF	100 pF	1500 pF
			6000 VDC	10 pF	470 pF	100 pF	1500 pF

Available capacitance values include the following significant retma values and their multiples: 1.0 1.2 1.5 1.8 2.2 2.7 3.3 3.9 4.7 5.6 6.8 8.2 (1.0 = 1.0, 10, 100, 1000, etc.) Consult factory for non-retma values and sizes or voltages not shown.

ELECTRICAL CHARACTERISTICS

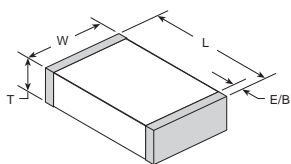
Meets the standard NPO & X7R dielectric specifications listed on page 20

Dielectric Withstanding Voltage

DWV = 1.5 X rated WVDC for ratings ≤ 500 WVDC,

DWV = 1.2 X rated WVDC for ratings ≥ 1,000 WVDC

NOTE: Capacitors may require a surface coating to prevent external arcing. Solder mask should not be used beneath capacitors. For more information see JDI Tech Note "Surface Arc Season"



HOW TO ORDER

Part number written: 202R29N101KV4E

202	R29	N	101	K	V	4	E															
VOLTAGE 501 = 500 V 631 = 630 V 102 = 1000 V 202 = 2000 V 302 = 3000 V 402 = 4000 V 502 = 5000 V 602 = 6000 V	CASE SIZE See Chart DIELECTRIC N = NPO/COG W = X7R	CAPACITANCE 1st two digits are significant; third digit denotes number of zeros, R = decimal. 1R0 = 1.0 pF 101 = 100 pF	TOLERANCE NPO: J = ± 5% K = ± 10% X7R: K = ± 10% M = ± 20%	TERMINATION V = Ni barrier w/ 100% Sn Plating F = Polyterm flexible termination	MARKING 4 = Unmarked 6 = EIA Code*	TAPE MODIFIER <table border="1"> <thead> <tr> <th>Code</th> <th>Tape</th> <th>Reel</th> </tr> </thead> <tbody> <tr> <td>E</td> <td>Embossed</td> <td>7"</td> </tr> <tr> <td>U</td> <td>Embossed</td> <td>13"</td> </tr> <tr> <td>T</td> <td>Paper</td> <td>7"</td> </tr> <tr> <td>R</td> <td>Paper</td> <td>13"</td> </tr> </tbody> </table> Tape specs. per EIA RS481	Code	Tape	Reel	E	Embossed	7"	U	Embossed	13"	T	Paper	7"	R	Paper	13"	
Code	Tape	Reel																				
E	Embossed	7"																				
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