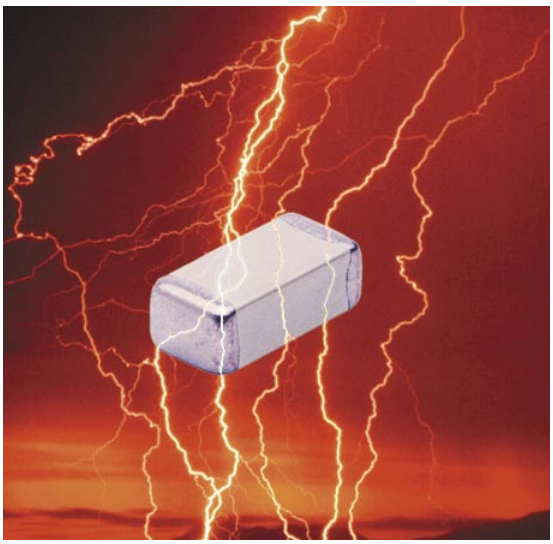
High Voltage Surface mount MLCCs 500 - 5,000 VDC



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

Mechanical Characteristics

Maximum Available Capacitance

				RATED VOLTAGE	STANDARD THICKNESS (Ts) NPO		STANDARD THICKNESS (Ts) X7R		EXTENDED THICKNESS (Tx) NPO		EXTENDED THICKNESS (Tx) X7R	
R15 / 0805		INCHES	(mm)	500 VDC	471	470 pF	103	.010 µF	681	680 pF	123	.012 µF
	L	.080 ±.010	(2.03 ±.25)	630 VDC	331	330 pF	562	5600 pF	561	560 pF	682	6800 pF
	W	.050 ±.010	(1.27 ±.25)	1000 VDC	271	270 pF	222	2200 pF	391	390 pF	272	2700 pF
	Ts	.050 Max.	(1.27)									
	Tx	.055 Max.	(1.40)									
	E/B	.020 ±.010	(0.51±.25)									
R18 / 1206		INCHES	(mm)	500 VDC	122	1200 pF	223	.022 µF	182	1800 pF	333	.033 µF
	L	.125 ±.010	(3.17 ±.25)	630 VDC	102	1000 pF	153	.015 µF	122	1200 pF	183	.018 µF
	W	.062 ±.010	(1.57 ±.25)	1000 VDC	681	680 pF	472	4700 pF	102	1000 pF	682	6800 pF
	Ts	.055 Max.	(1.40)	2000 VDC	221	220 pF	102	1000 pF	271	270 pF	122	1200 pF
	Tx	.067 Max.	(1.70)	3000 VDC	470	47 pF	121	120 pF	820	82 pF	221	220 pF
	E/B	.020 ±.010	(0.51±.25)									
S41 / 1210		INCHES	(mm)	500 VDC	272	2700 pF	473	.047 µF	392	3900 pF	683	.068 µF
	L	.125 ±.010	(3.18 ±.25)	630 VDC	222	2200 pF	333	.033 µF	332	3300 pF	393	.039 µF
	W	.095 ±.010	(2.41 ±.25)	1000 VDC	152	1500 pF	153	.015 µF	222	2200 pF	183	.018 µF
	Ts	.065 Max.	(1.65)	2000 VDC	471	470 pF	152	1500 pF	561	560 pF	272	2700 pF
	Tx	.080 Max.	(2.03)	3000 VDC	101	100 pF	221	220 pF	181	180 pF	561	560 pF
	E/B	.020 ±.010	(0.51±.25)									
R29 / 1808		INCHES	(mm)	500 VDC	272	2700 pF	473	.047 µF	332	3300 pF	683	.068 µF
	L	.180 ±.010	(4.57 ±.25)	630 VDC	222	2200 pF	273	.027 µF	272	2700 pF	393	.039 µF
	W	.080 ±.010	(2.03 ±.25)	1000 VDC	152	1500 pF	123	.012 µF	222	2200 pF	183	.018 µF
	Ts	.065 Max.	(1.65)	2000 VDC	561	560 pF	272	2700 pF	821	820 pF	392	3900 pF
	Tx	.080 Max.	(2.03)	3000 VDC	331	330 pF	102	1000 pF	471	470 pF	152	1500 pF
	E/B	.020 ±.010	(0.51±.25)	4000 VDC	121	120 pF	271	270 pF	221	220 pF	471	470 pF
				5000 VDC	470	47 pF	121	120 pF	820	82 pF	221	220 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 500 - 5,000 VDC

Mechanical Characteristics

Maximum Available Capacitance

		INCHES	(mm)	RATED VOLTAGE	STANDARD THICKNESS (Ts) NPO	STANDARD THICKNESS (Ts) X7R	EXTENDED THICKNESS (Tx) NPO	EXTENDED THICKNESS (Tx) X7R
S43 / 1812	L	.180 ±.010	(4.57 ±.25)	500 VDC	822 8200 pF	124 .120 µF	103 .010 µF	184 .180 uF
	W	.125 ±.010	(3.17 ±.25)	630 VDC	682 6800 pF	104 .100 µF	822 8200 pF	124 .120 µF
	Ts	.085 Max.	(2.16)	1000 VDC	472 4700 pF	333 .033 µF	682 6800 pF	563 .056 µF
	Tx	.110 Max.	(2.80)	2000 VDC	122 1200 pF	682 6800 pF	222 2200 pF	123 .012 µF
	E/B	.025 ±.015	(0.64±.38)	3000 VDC	681 680 pF	222 2200 pF	122 1200 pF	332 3300 pF
				4000 VDC	271 270 pF	821 820 pF	561 560 pF	152 1500 pF
				5000 VDC	101 100 pF	391 390 pF	151 150 pF	681 680 pF
S49 / 1825	L	.180 ±.010	(4.57 ±.25)	500 VDC	153 .015 µF	394 .390 µF	273 .027 µF	564 .560 µF
	W	.250 ±.010	(6.35 ±.25)	630 VDC	183 .018 µF	274 .270 µF	223 .022 µF	394 .390 µF
	Ts	.110 Max.	(2.80)	1000 VDC	103 .010 µF	104 .100 µF	153 .015 µF	154 .150 µF
	Tx	.140 Max.	(3.56)	2000 VDC	272 2700 pF	183 .018 µF	562 5600 pF	223 .022 µF
	E/B	.025 ±.015	(0.64±.38)	3000 VDC	152 1500 pF	562 5600 pF	222 2200 pF	682 6800 pF
				4000 VDC	681 680 pF	202 2000 pF	102 1000 pF	272 2700 pF
				5000 VDC	271 270 pF	821 820 pF	271 270 pF	122 1200 pF
S47 / 2220	L	.225 ±.015	(5.72 ±.38)	500 VDC	273 .027 µF	474 .470 µF	333 .027 µF	564 .560 µF
	W	.200 ±.015	(5.08 ±.38)	630 VDC	223 .022 µF	334 .330 µF	273 .027 µF	474 .470 µF
	Ts	.110 Max.	(2.80)	1000 VDC	153 .015 µF	124 .120 µF	183 .018 µF	184 .180 µF
	Tx	.150 Max.	(3.81)	2000 VDC	472 4700 pF	183 .018 µF	682 6800 pF	273 .027 µF
	E/B	.025 ±.015	(0.64±.38)	3000 VDC	222 2200 pF	682 6800 pF	272 2700 pF	822 8200 pF
				4000 VDC	102 1000 pF	222 2200 pF	122 1200 pF	332 3300 pF
				5000 VDC	271 270 pF	102 1000 pF	391 390 pF	152 1500 pF
S48 / 2225	L	.225 ±.010	(5.72 ±.25)	500 VDC	333 .033 µF	564 .560 µF	333 .033 µF	824 .820 µF
	W	.255 ±.015	(6.48 ±.38)	630 VDC	273 .027 µF	394 .390 µF	273 .027 µF	564 .820 µF
	Ts	.110 Max.	(2.80)	1000 VDC	183 .018 µF	154 .150 µF	223 .022 µF	224 .220 µF
	Tx	.150 Max.	(3.81)	2000 VDC	562 5600 pF	393 .039 µF	822 8200 pF	473 .047 µF
	E/B	.025 ±.015	(0.64±.38)	3000 VDC	332 3300 pF	103 .010 uF	472 4700 pF	153 .015 µF
				4000 VDC	152 1500 pF	392 3900 pF	222 2200 pF	562 5600 pF
				5000 VDC	561 560 pF	152 1500 pF	681 680 pF	222 2200 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.)
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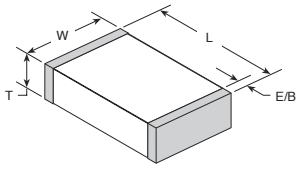

Electrical Characteristics

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

Dielectric Withstanding Voltage DWV = 750 VDC for 500 WVDC rated units,
DWV = 945 VDC for 630 WVDC rated units,
DWV = 1.2 X rated WVDC for ratings ≥ 1,000 WVDC

NOTE: Capacitors may require a surface coating to prevent external arcing.

How to Order

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	**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	**MARKING** 4 = Unmarked 6 = EIA "J" Code*	**TAPE MODIFIER** Code / Tape / Reel E Embossed 7" U Embossed 13" T Paper 7" R Paper 13" Tape specs. per EIA RS481

Part number written:
202R29N101KV4E