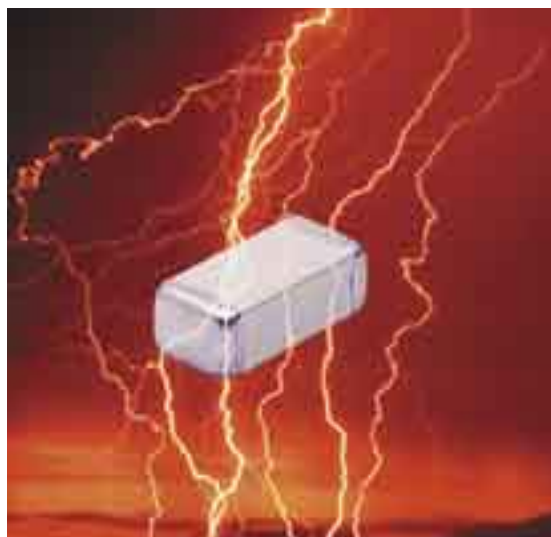


# HIGH VOLTAGE SURFACE MOUNT MLCCs 500 - 5,000 VDC







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

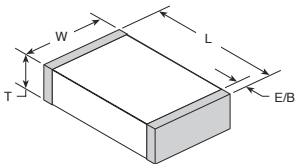
			RATED VOLTAGE	STANDARD THICKNESS (Ts)		EXTENDED THICKNESS (Tx)					
				NPO	X7R	NPO	X7R				
<b>S43 / 1812</b> 		INCHES (mm)	500 VDC	822	8200 pF	124	.120 μF	103	.010 μF	184	.180 uF
	L	.180 ±.010 (4.57 ±.25)	630 VDC	682	6800 pF	104	.100 μF	822	8200 pF	124	.120 μF
	W	.125 ±.010 (3.17 ±.25)	1000 VDC	472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

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 = 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

<b>202</b>	<b>R29</b>	<b>N</b>	<b>101</b>	<b>K</b>	<b>V</b>	<b>4</b>	<b>E</b>
<b>VOLTAGE</b> 501 = 500 V 631 = 630 V 102 = 1000 V 202 = 2000 V 302 = 3000 V 402 = 4000 V 502 = 5000 V	<b>CASE SIZE</b> See Chart	<b>DIELECTRIC</b> N = NPO/COG W = X7R	<b>CAPACITANCE</b> 1st two digits are significant; third digit denotes number of zeros, R = decimal. 1R0 = 1.0 pF 101 = 100 pF	<b>TOLERANCE</b> NPO: J = ± 5% K = ± 10% X7R: K = ± 10% M = ± 20%	<b>TERMINATION</b> V = Ni barrier w/ 100% Sn Plating	<b>MARKING</b> 4 = Unmarked 6 = EIA "J" Code*	<b>TAPE MODIFIER</b> Code Tape Reel E Embossed 7" U Embossed 13" T Paper 7" R Paper 13" Tape specs. per EIA RS481
Part number written: <b>202R29N101KV4E</b>							

