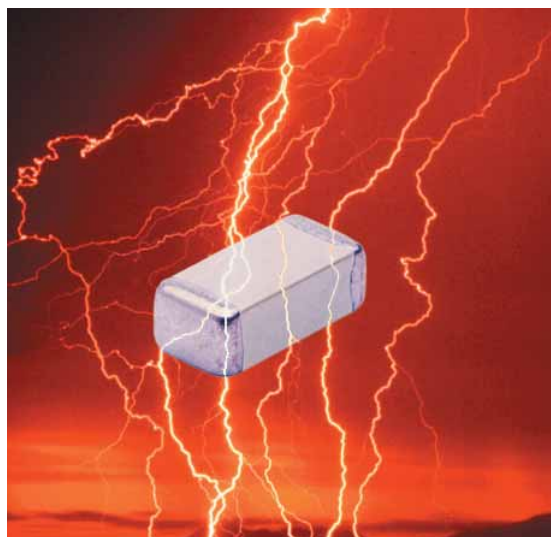


HIGH VOLTAGE SURFACE MOUNT MLCCs 250 - 5,000 VDC



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

Available Capacitance

| | | | Rated Voltage | NPO Dielectric | | X7R Dielectric | |
|----------------------|-----|------------------------|---------------|----------------|---------|----------------|----------|
| | | | | Minimum | Maximum | Minimum | Maximum |
| R15/0805 ■ | | Inches (mm) | 250 VDC | - | - | 1000 pF | 0.022 μF |
| | L | .080 ±.010 (2.03 ±.25) | 500 VDC | 10 pF | 680 pF | 1000 pF | 0.010 μF |
| | W | .050 ±.010 (1.27 ±.25) | 630 VDC | 10 pF | 560 pF | 1000 pF | 3900 pF |
| | T | .055 Max. (1.40) | 1000 VDC | 10 pF | 390 pF | 100 pF | 2700 pF |
| | E/B | .020 ±.010 (0.51±.25) | | | | | |
| R18/1206 ■ | | Inches (mm) | 250 VDC | - | - | 1000 pF | 0.068 μF |
| | L | .125 ±.010 (3.17 ±.25) | 500 VDC | 10 pF | 1500 pF | 1000 pF | 0.027 μF |
| | W | .062 ±.010 (1.57 ±.25) | 630 VDC | 10 pF | 1200 pF | 1000 pF | 0.010 μF |
| | T | .067 Max. (1.70) | 1000 VDC | 10 pF | 1000 pF | 100 pF | 6800 pF |
| | E/B | .020 ±.010 (0.51±.25) | 2000 VDC | 10 pF | 220 pF | 100 pF | 1000 pF |
| | | | 3000 VDC | 10 pF | 82 pF | 100 pF | 220 pF |
| S41/1210 ■ | | Inches (mm) | 250 VDC | - | - | 1000 pF | 0.120 μF |
| | L | .125 ±.010 (3.18 ±.25) | 500 VDC | 10 pF | 3900 pF | 1000 pF | 0.047 μF |
| | W | .095 ±.010 (2.41 ±.25) | 630 VDC | 10 pF | 2700 pF | 1000 pF | 0.027 μF |
| | T | .080 Max. (2.03) | 1000 VDC | 10 pF | 1800 pF | 100 pF | 0.018 μF |
| | E/B | .020 ±.010 (0.51±.25) | 2000 VDC | 10 pF | 560 pF | 100 pF | 6800 pF |
| | | | 3000 VDC | 10 pF | 220 pF | 100 pF | 560 pF |
| R29/1808 ■ | | Inches (mm) | 500 VDC | 10 pF | 4700 pF | 1000 pF | 0.056 μF |
| | L | .180 ±.010 (4.57 ±.25) | 630 VDC | 10 pF | 3300 pF | 1000 pF | 0.039 μF |
| | W | .080 ±.010 (2.03 ±.25) | 1000 VDC | 1.0 pF | 2200 pF | 100 pF | 0.018 μF |
| | T | .080 Max. (2.03) | 2000 VDC | 1.0 pF | 820 pF | 100 pF | 6800 pF |
| | E/B | .020 ±.010 (0.51±.25) | 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 | 100 pF | 120 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.

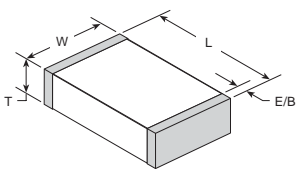
HIGH VOLTAGE SURFACE MOUNT MLCCs 250 - 5,000 VDC

Mechanical Characteristics

Available Capacitance

| | Rated Voltage | NPO Dielectric | | X7R Dielectric | |
|--|--|----------------|----------|----------------|----------|
| | | Minimum | Maximum | Minimum | Maximum |
| S43 / 1812  Inches (mm) 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 | 0.220 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 | 0.012 µF |
| | 3000 VDC | 10 pF | 1000 pF | 100 pF | 4700 pF |
| | 4000 VDC | 10 pF | 390 pF | 10 pF | 1500 pF |
| | 5000 VDC | 10 pF | 150 pF | 10 pF | 680 pF |
| S49 / 1825  Inches (mm) 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 | 0.100 µF |
| | 2000 VDC | 10 pF | 5600 pF | 100 pF | 0.022 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 |
| | S47 / 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) | 500 VDC | 1000 pF | 0.018 µF | 0.01 µF |
| 630 VDC | | 1000 pF | 0.018 µF | 0.01 µF | 0.270 µF |
| 1000 VDC | | 100 pF | 0.015 µF | 1000 pF | 0.180 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 |
| S48 / 2225  Inches (mm) L .225 ±.010 (5.72 ±.25) W .255 ±.015 (6.48 ±.38) T .150 Max. (3.81) E/B .025 ±.015 (0.64±.38) | | 500 VDC | 1000 pF | 0.027 µF | 0.01 µF |
| | 630 VDC | 1000 pF | 0.022 µF | 0.01 µF | 0.330 µF |
| | 1000 VDC | 100 pF | 0.018 µF | 1000 pF | 0.150 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 | 680 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.

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 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