

HIGH VOLTAGE SURFACE MOUNT MLCCs 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
- LAN/WAN Interface
- Lighting Ballast Circuits
- Voltage Multipliers
- DC-DC Converters
- Back-lighting Inverters

Polyterm® soft termination option for demanding environments & processes available on select parts, please contact the factory.

CASE SIZE

CAPACITANCE SELECTION





| JDI / EIA | INCHES | (MM) | RATED VOLTAGE | NP0 DIELECTRIC | | X7R DIELECTRIC | | |
|--|--------|------------|---------------|----------------|---------|----------------|---------|----------|
| | | | | MINIMUM | MAXIMUM | MINIMUM | MAXIMUM | |
| R15/0805  | L | .080 ±.010 | (2.03 ±.25) | 250 VDC | - | - | 1000 pF | 0.022 µF |
| | W | .050 ±.010 | (1.27 ±.25) | 500 VDC | 10 pF | 680 pF | 1000 pF | 0.010 µF |
| | T | .055 Max. | (1.40) | 630 VDC | 10 pF | 560 pF | 1000 pF | 6800 pF |
| | E/B | .020 ±.010 | (0.51±.25) | 1000 VDC | 10 pF | 390 pF | 100 pF | 2700 pF |
| | | | | 250 VDC | - | - | 1000 pF | 0.068 µF |
| R18/1206  | L | .125 ±.010 | (3.18 ±.25) | 500 VDC | 10 pF | 1500 pF | 1000 pF | 0.033 µF |
| | W | .062 ±.010 | (1.57 ±.25) | 630 VDC | 10 pF | 1200 pF | 1000 pF | 0.027 µF |
| | T | .067 Max. | (1.70) | 1000 VDC | 10 pF | 1000 pF | 100 pF | 0.010 µF |
| | E/B | .020 ±.010 | (0.51±.25) | 2000 VDC | 10 pF | 220 pF | 100 pF | 4700 pF |
| | | | | 3000 VDC | 10 pF | 82 pF | 100 pF | 1000 pF |
| | | | | 250 VDC | - | - | 1000 pF | 0.150 µF |
| S41/1210  | L | .125 ±.010 | (3.18 ±.25) | 500 VDC | 10 pF | 3900 pF | 1000 pF | 0.068 µF |
| | W | .095 ±.010 | (2.41 ±.25) | 630 VDC | 10 pF | 2700 pF | 1000 pF | 0.047 µF |
| | T | .080 Max. | (2.03) | 1000 VDC | 10 pF | 1800 pF | 100 pF | 0.015 µF |
| | E/B | .020 ±.010 | (0.51±.25) | 2000 VDC | 10 pF | 560 pF | 100 pF | 4700 pF |
| | | | | 3000 VDC | 10 pF | 220 pF | 100 pF | 1000 pF |
| | | | | 500 VDC | 10 pF | 4700 pF | 1000 pF | 0.100 µF |
| R29/1808  | L | .185 ±.020 | (4.70 ±.51) | 630 VDC | 10 pF | 3300 pF | 1000 pF | 0.047 µF |
| | W | .080 ±.010 | (2.03 ±.25) | 1000 VDC | 1.0 pF | 2200 pF | 100 pF | 0.022 µF |
| | T | .085 Max. | (2.16) | 2000 VDC | 1.0 pF | 820 pF | 100 pF | 0.010 µF |
| | 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 | 1800 pF |
| | | | | 5000 VDC | 1.0 pF | 75 pF | 47 pF | 390 pF |
| | | | | 6000 VDC | 1.0 pF | 75 pF | 47 pF | 150 pF |
| | | | | | | | | |

Available cap. values include these 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

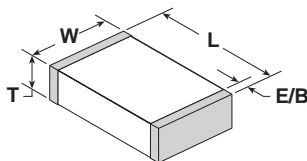
CASE SIZE

CAPACITANCE SELECTION

| JDI /EIA | INCHES | (MM) | RATED VOLTAGE | NP0 DIELECTRIC | | X7R DIELECTRIC | | | | | | |
|--|--------------------|---|--|--|--------------------|---|--|----------|---------|----------|---------|----------|
| | | | | MINIMUM | MAXIMUM | MINIMUM | MAXIMUM | | | | | |
| S43 / 1812  | L W T E/B | .177 ±.012 .125 ±.010 .110 Max. .025 ±.015 | (4.50 ±.30) (3.18 ±.25) (2.80) (0.64±.38) | 250 VDC | - | - | 0.010 µF | 0.470 µF | | | | |
| | | | | 500 VDC | 100 pF | 8200 pF | 1000 pF | 0.330 µF | | | | |
| | | | | 630 VDC | 100 pF | 6800 pF | 1000 pF | 0.120 µF | | | | |
| | | | | 1000 VDC | 10 pF | 5600 pF | 1000 pF | 0.100 µF | | | | |
| | | | | 2000 VDC | 10 pF | 1800 pF | 100 pF | 0.010 µF | | | | |
| | | | | 3000 VDC | 10 pF | 1000 pF | 100 pF | 4700 pF | | | | |
| | | | | 4000 VDC | 10 pF | 390 pF | 100 pF | 1200 pF | | | | |
| | | | | 5000 VDC | 10 pF | 150 pF | 100 pF | 820 pF | | | | |
| | | | | 6000 VDC | 10 pF | 150 pF | 10 pF | 330 pF | | | | |
| | | | | S49 / 1825  | L W T E/B | .180 ±.010 .250 ±.010 .140 Max. .025 ±.015 | (4.57 ±.25) (6.35 ±.25) (3.56) (0.64±.38) | 500 VDC | 100 pF | 0.018 µF | 0.01 µF | 0.390 µF |
| 630 VDC | 100 pF | 0.015 µF | 0.01 µF | | | | | 0.270 µF | | | | |
| 1000 VDC | 10 pF | 0.012 µF | 1000 pF | | | | | 0.180 µF | | | | |
| 2000 VDC | 10 pF | 5600 pF | 100 pF | | | | | 0.039 µF | | | | |
| 3000 VDC | 10 pF | 2200 pF | 100 pF | | | | | 8200 pF | | | | |
| 4000 VDC | 10 pF | 1200 pF | 100 pF | | | | | 2200 pF | | | | |
| 5000 VDC | 10 pF | 390 pF | 100 pF | | | | | 1500 pF | | | | |
| 6000 VDC | 10 pF | 390 pF | 100 pF | | | | | 820 pF | | | | |
| S47 / 2220  | L W T E/B | .225 ±.015 .200 ±.015 .150 Max. .025 ±.015 | (5.72 ±.38) (5.08 ±.38) (3.81) (0.64±.38) | | | | | 500 VDC | 1000 pF | 0.018 µF | 0.01 µF | 0.470 µF |
| | | | | | | | | 630 VDC | 1000 pF | 0.018 µF | 0.01 µF | 0.270 µF |
| | | | | 1000 VDC | 100 pF | 0.015 µF | 1000 pF | 0.120 µF | | | | |
| | | | | 2000 VDC | 100 pF | 5600 pF | 1000 pF | 0.039 µF | | | | |
| | | | | 3000 VDC | 10 pF | 2700 pF | 100 pF | 0.010 µF | | | | |
| | | | | 4000 VDC | 10 pF | 1500 pF | 100 pF | 2700 pF | | | | |
| | | | | 5000 VDC | 10 pF | 470 pF | 100 pF | 1500 pF | | | | |
| | | | | 6000 VDC | 10 pF | 470 pF | 100 pF | 820 pF | | | | |
| | | | | S48 / 2225  | L W T E/B | .225 ±.010 .255 ±.015 .160 Max. .025 ±.015 | (5.72 ±.25) (6.48 ±.38) (4.06) (0.64±.38) | 500 VDC | 1000 pF | 0.027 µF | 0.01 µF | 0.560 µF |
| | | | | | | | | 630 VDC | 1000 pF | 0.022 µF | 0.01 µF | 0.390 µF |
| 1000 VDC | 100 pF | 0.018 µF | 1000 pF | | | | | 0.180 µF | | | | |
| 2000 VDC | 100 pF | 8200 pF | 1000 pF | | | | | 0.056 µF | | | | |
| 3000 VDC | 10 pF | 3300 pF | 100 pF | | | | | 0.012 µF | | | | |
| 4000 VDC | 10 pF | 1800 pF | 100 pF | | | | | 3300 pF | | | | |
| 5000 VDC | 10 pF | 470 pF | 100 pF | | | | | 2700 pF | | | | |
| 6000 VDC | 10 pF | 470 pF | 100 pF | | | | | 1200 pF | | | | |

Available cap. values include these 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 NP0 & X7R dielectric specifications listed on page 78

DIELECTRIC WITHSTANDING VOLTAGE DWV = 1.5 X rated WVDC for ratings 500-999 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 HIGH VOLTAGE SURFACE MOUNT

P/N written: 202R18W102KV4E

| 202 | R18 | W | 102 | K | V | 4 | E |
|--|--|--------------------|--|------------------------------------|--|------------------------------|--|
| VOLTAGE | SIZE | DIELECTRIC | CAPACITANCE | TOLERANCE | TERMINATION | MARKING | PACKING |
| 501 = 500 V 631 = 630 V 102 = 1000 V 202 = 2000 V 302 = 3000 V 402 = 4000 V 502 = 5000 V 602 = 6000 V | R15 = 0805 R18 = 1206 R29 = 1808 S41 = 1210 S43 = 1812 S47 = 2220 S48 = 2225 S49 = 1825 | N = NP0 W = X7R | 1st two digits are significant; third digit denotes number of zeros. 102 = 1000 pF 104 = 0.10 µF | J = ± 5% K = ± 10% M = ± 20% | V = Ni Barrier with 100% Sn Plating (Matte) F = Polyterm flexible termination T = SnPb | 4 = Unmarked 6 = EIA Code | E = Embossed 7" T = Punched 7" No code = bulk Tape specs. per EIA RS481 |



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[CDR35BX104BKUR\M500](#) [69995D](#) [NMC0201X5R473K6.3TRPF](#) [NMC0201X7R221K25TRPF](#) [NMC0402X5R105K10TRPF](#)
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