

XMPL



Aluminum Polymer Capacitors

SMD Solid Conductive (multilayer-type)

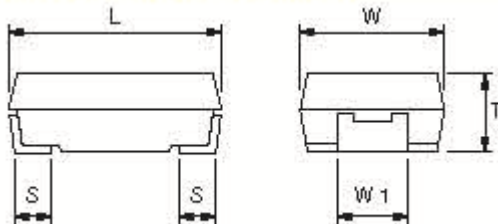
FEATURES

Small Size – Low Impedance – Halogen Free Epoxy – RoHS Compliant – Stable with Temperature, Applied Voltage and Frequency

APPLICATIONS

Decoupling – Noise Suppression

| | | | | | | | | | |
|---|--------------|--|--|---|-----|------------------|------|----|--|
| Operating Temperature Range | | -40°C to +105°C | | | | | | | |
| Capacitance Tolerance | | ±20% (M), -35% +10% (Y) 120 Hz, 20°C | | | | | | | |
| Surge Voltage | WVDC | 2 | 2.5 | 4 | 6.3 | 10 | 12.5 | 16 | |
| | SVDC | 1.25*WVDC | | | | | | | |
| Dissipation Factor | WVDC | 2 | 2.5 | 4 | 6.3 | 10 | 12.5 | 16 | |
| | Tan δ | .06 | | | | | | | |
| Leakage Current (25°C) MAX | | Time | ≤10 VDC | | | ≥12.5 VDC | | | |
| | | 2 Minutes | 0.04CV | | | 0.1CV | | | |
| Load Life | | 1000 hours at 105°C with rated WVDC applied | | | | | | | |
| | | Capacitance Change | ≤10% of initial measured value | | | | | | |
| | | Dissipation Factor | ≤100% of maximum specified value | | | | | | |
| | | Leakage Current | ≤100% of maximum specified value | | | | | | |
| Moisture Resistance Test | | 500 hours at 60°C and 90% relative Humidity with no voltage applied | | | | | | | |
| | | Capacitance Change | ≤20% to +70% of initially measured value | | | | | | |
| | | Dissipation Factor | ≤200% of maximum specified value | | | | | | |
| | | Leakage Current | ≤100% of maximum specified value | | | | | | |
| Moisture Sensitivity Level (MSL) | | 3 | | | | | | | |



| Case size | EIA Code | L±0.2 | W±0.2 | T±0.2 | W1±0.1 | S±0.3 |
|-----------|----------|-------|-------|-------|--------|-------|
| G19 | 7343 | 7.3 | 4.3 | 1.9 | 2.4 | 1.3 |
| G28 | 7343 | 7.3 | 4.3 | 2.8 | 2.4 | 1.3 |



Your Global Source for World-Class Capacitors

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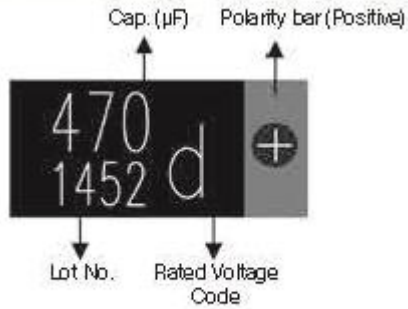
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Aluminum Polymer Capacitors

SMD Solid Conductive (multilayer-type)

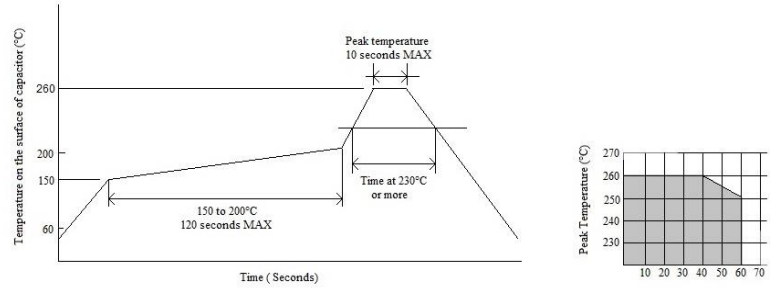


Markings



Example: 470 μF /2V

Recommended soldering profile



IC ILLINOIS CAPACITOR

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XMPL

+105°C Multi-layer Low Profile Chip

| Capacitance (µF) | WVDC | IC PART NUMBER | Maximum ESR (Ω) 120 Hz, +20°C | Maximum ESR (mΩ) 100 kHz, +20°C | Leakage Current (µA) | Maximum RMS Ripple Current (A) 100 kHz, +105°C | Dimensions LxHxT (mm) |
|------------------|------|-----------------|-------------------------------------|---------------------------------------|----------------------|--|-----------------------|
| 6.8 | 16 | 685XMPL016MG19 | 14.6282 | 70 | 32.64 | 2 | 7.3x4.3x1.9 |
| 10 | 6.3 | 106XMPL6R3MG19 | 9.9472 | 40 | 6.3 | 1 | 7.3x4.3x1.9 |
| 10 | 10 | 106XMPL010MG19 | 9.9472 | 45 | 30 | 1 | 7.3x4.3x1.9 |
| 10 | 12 | 106XMPL012MG19 | 9.9472 | 55 | 37.5 | 1 | 7.3x4.3x1.9 |
| 10 | 16 | 106XMPL016MG19 | 9.9472 | 40 | 48 | 2 | 7.3x4.3x1.9 |
| 15 | 12 | 156XMPL012MG19 | 6.6315 | 45 | 56.25 | 1 | 7.3x4.3x1.9 |
| 15 | 16 | 156XMPL016MG19 | 6.6315 | 40 | 72 | 3 | 7.3x4.3x1.9 |
| 22 | 6.3 | 226XMPL6R3MG19 | 4.5214 | 35 | 13.86 | 1 | 7.3x4.3x1.9 |
| 22 | 10 | 226XMPL010MG19 | 4.5214 | 40 | 66 | 1.8 | 7.3x4.3x1.9 |
| 22 | 12 | 226XMPL012MG19 | 4.5214 | 30 | 82.5 | 1.8 | 7.3x4.3x1.9 |
| 22 | 16 | 226XMPL016MG19 | 4.5214 | 40 | 105.6 | 3 | 7.3x4.3x1.9 |
| 22 | 16 | 226XMPL016MG28 | 4.5214 | 40 | 105.6 | 3 | 7.3x4.3x2.8 |
| 33 | 6.3 | 336XMPL6R3MG19 | 3.0143 | 25 | 20.79 | 1.8 | 7.3x4.3x1.9 |
| 33 | 10 | 336XMPL010MG19 | 3.0143 | 40 | 99 | 2 | 7.3x4.3x1.9 |
| 33 | 12 | 336XMPL012MG28 | 3.0143 | 25 | 123.75 | 2 | 7.3x4.3x2.8 |
| 47 | 6.3 | 476XMPL6R3MG19 | 2.1164 | 25 | 29.61 | 1.8 | 7.3x4.3x1.9 |
| 47 | 10 | 476XMPL010MG19 | 2.1164 | 40 | 141 | 3 | 7.3x4.3x1.9 |
| 47 | 12 | 476XMPL012MG28 | 2.1164 | 20 | 176.25 | 2 | 7.3x4.3x2.8 |
| 68 | 4 | 686XMPL004MG19 | 1.4628 | 20 | 27.2 | 1.9 | 7.3x4.3x1.9 |
| 68 | 6.3 | 686XMPL6R3MG19 | 1.4628 | 15 | 42.84 | 2 | 7.3x4.3x1.9 |
| 68 | 10 | 686XMPL010MG28 | 1.4628 | 40 | 204 | 3 | 7.3x4.3x2.8 |
| 82 | 4 | 826XMPL004MG19 | 1.2131 | 9 | 32.8 | 3 | 7.3x4.3x1.9 |
| 100 | 2 | 107XMPL002MG19 | 0.9947 | 16 | 20 | 2 | 7.3x4.3x1.9 |
| 100 | 4 | 107XMPL004MG19 | 0.9947 | 9 | 40 | 3 | 7.3x4.3x1.9 |
| 100 | 6.3 | 107XMPL6R3MG19 | 0.9947 | 15 | 63 | 2.7 | 7.3x4.3x1.9 |
| 100 | 6.3 | 107XMPL6R3MG19H | 0.9947 | 12 | 63 | 2.7 | 7.3x4.3x1.9 |
| 120 | 6.3 | 127XMPL6R3MG19X | 0.8289 | 9 | 75.6 | 2.7 | 7.3x4.3x1.9 |
| 120 | 6.3 | 127XMPL6R3MG19 | 0.8289 | 15 | 75.6 | 2.7 | 7.3x4.3x1.9 |
| 120 | 6.3 | 127XMPL6R3MG19H | 0.8289 | 12 | 75.6 | 2.7 | 7.3x4.3x1.9 |
| 150 | 2 | 157XMPL002MG19 | 0.6631 | 9 | 30 | 3 | 7.3x4.3x1.9 |
| 150 | 2.5 | 157XMPL2R5MG28 | 0.6631 | 9 | 37.5 | 3 | 7.3x4.3x2.8 |
| 150 | 2.5 | 157XMPL2R5MG19 | 0.6631 | 9 | 37.5 | 3 | 7.3x4.3x1.9 |
| 150 | 4 | 157XMPL004MG19 | 0.6631 | 12 | 60 | 3 | 7.3x4.3x1.9 |
| 150 | 4 | 157XMPL004MG19R | 0.6631 | 7 | 60 | 3 | 7.3x4.3x1.9 |
| 150 | 4 | 157XMPL004MG19X | 0.6631 | 9 | 60 | 3 | 7.3x4.3x1.9 |
| 150 | 6.3 | 157XMPL6R3MG28 | 0.6631 | 15 | 94.5 | 3 | 7.3x4.3x2.8 |
| 150 | 6.3 | 157XMPL6R3MG28H | 0.6631 | 12 | 94.5 | 3 | 7.3x4.3x2.8 |
| 150 | 6.3 | 157XMPL6R3MG19 | 0.6631 | 15 | 94.5 | 3 | 7.3x4.3x1.9 |
| 150 | 6.3 | 157XMPL6R3MG19H | 0.6631 | 12 | 94.5 | 3 | 7.3x4.3x1.9 |
| 150 | 6.3 | 157XMPL6R3MG19X | 0.6631 | 9 | 94.5 | 3 | 7.3x4.3x1.9 |
| 150 | 6.3 | 157XMPL6R3MG28X | 0.6631 | 9 | 94.5 | 3 | 7.3x4.3x2.8 |
| 180 | 2 | 187XMPL002MG19 | 0.5526 | 9 | 36 | 2.7 | 7.3x4.3x1.9 |
| 180 | 2.5 | 187XMPL2R5MG19 | 0.5526 | 9 | 45 | 3 | 7.3x4.3x1.9 |
| 180 | 2.5 | 187XMPL2R5MG28 | 0.5526 | 9 | 45 | 3 | 7.3x4.3x2.8 |
| 180 | 4 | 187XMPL004MG28R | 0.5526 | 7 | 72 | 3 | 7.3x4.3x2.8 |
| 180 | 4 | 187XMPL004MG28X | 0.5526 | 9 | 72 | 3 | 7.3x4.3x2.8 |
| 180 | 4 | 187XMPL004MG19H | 0.5526 | 12 | 72 | 3 | 7.3x4.3x1.9 |
| 180 | 4 | 187XMPL004MG19R | 0.5526 | 7 | 72 | 3 | 7.3x4.3x1.9 |
| 180 | 4 | 187XMPL004MG19X | 0.5526 | 9 | 72 | 3 | 7.3x4.3x1.9 |
| 180 | 4 | 187XMPL004MG28H | 0.5526 | 12 | 72 | 3 | 7.3x4.3x2.8 |
| 180 | 6.3 | 187XMPL6R3MG19 | 0.5526 | 15 | 113.4 | 2.7 | 7.3x4.3x1.9 |
| 220 | 2 | 227XMPL002MG19 | 0.4521 | 15 | 44 | 3 | 7.3x4.3x1.9 |
| 220 | 2.5 | 227XMPL2R5MG19H | 0.4521 | 12 | 55 | 3 | 7.3x4.3x1.9 |
| 220 | 2.5 | 227XMPL2R5MG19R | 0.4521 | 7 | 55 | 3 | 7.3x4.3x1.9 |
| 220 | 2.5 | 227XMPL2R5MG19X | 0.4521 | 9 | 55 | 3 | 7.3x4.3x1.9 |
| 220 | 2.5 | 227XMPL2R5MG28H | 0.4521 | 12 | 55 | 3 | 7.3x4.3x2.8 |
| 220 | 2.5 | 227XMPL2R5MG28R | 0.4521 | 7 | 55 | 3 | 7.3x4.3x2.8 |
| 220 | 2.5 | 227XMPL2R5MG28X | 0.4521 | 9 | 55 | 3 | 7.3x4.3x2.8 |

XMPL

+105°C Multi-layer Low Profile Chip

| Capacitance (µF) | WVDC | IC PART NUMBER | Maximum ESR (Ω) 120 Hz, +20°C | Maximum ESR (mΩ) 100 kHz, +20°C | Leakage Current (µA) | Maximum RMS Ripple Current (A) 100 kHz, +105°C | Dimensions LxHxT (mm) |
|------------------|------|-----------------|-------------------------------------|---------------------------------------|----------------------|--|-----------------------|
| 220 | 4 | 227XMPL004MG28R | 0.4521 | 7 | 88 | 3 | 7.3x4.3x2.8 |
| 220 | 4 | 227XMPL004MG28X | 0.4521 | 9 | 88 | 3 | 7.3x4.3x2.8 |
| 220 | 4 | 227XMPL004MG19H | 0.4521 | 12 | 88 | 3 | 7.3x4.3x1.9 |
| 220 | 4 | 227XMPL004MG19R | 0.4521 | 7 | 88 | 3 | 7.3x4.3x1.9 |
| 220 | 4 | 227XMPL004MG19X | 0.4521 | 9 | 88 | 3 | 7.3x4.3x1.9 |
| 220 | 4 | 227XMPL004MG28H | 0.4521 | 12 | 88 | 3 | 7.3x4.3x2.8 |
| 220 | 6.3 | 227XMPL6R3MG19 | 0.4521 | 10 | 138.6 | 3 | 7.3x4.3x1.9 |
| 220 | 6.3 | 227XMPL6R3MG28 | 0.4521 | 15 | 138.6 | 3 | 7.3x4.3x2.8 |
| 270 | 2 | 277XMPL002MG19H | 0.3684 | 12 | 54 | 3 | 7.3x4.3x1.9 |
| 270 | 2 | 277XMPL002MG19R | 0.3684 | 6 | 54 | 3 | 7.3x4.3x1.9 |
| 270 | 2 | 277XMPL002MG19X | 0.3684 | 9 | 54 | 3 | 7.3x4.3x1.9 |
| 270 | 2.5 | 277XMPL2R5MG28R | 0.3684 | 7 | 67.5 | 3 | 7.3x4.3x2.8 |
| 270 | 2.5 | 277XMPL2R5MG28X | 0.3684 | 9 | 67.5 | 3 | 7.3x4.3x2.8 |
| 270 | 2.5 | 277XMPL2R5MG19X | 0.3684 | 9 | 67.5 | 3 | 7.3x4.3x1.9 |
| 270 | 2.5 | 277XMPL2R5MG28H | 0.3684 | 12 | 67.5 | 3 | 7.3x4.3x2.8 |
| 270 | 2.5 | 277XMPL2R5MG19H | 0.3684 | 12 | 67.5 | 3 | 7.3x4.3x1.9 |
| 270 | 2.5 | 277XMPL2R5MG19R | 0.3684 | 7 | 67.5 | 3 | 7.3x4.3x1.9 |
| 270 | 4 | 277XMPL004MG19R | 0.3684 | 7 | 108 | 2.7 | 7.3x4.3x1.9 |
| 270 | 4 | 277XMPL004MG19X | 0.3684 | 9 | 108 | 2.7 | 7.3x4.3x1.9 |
| 270 | 4 | 277XMPL004MG19H | 0.3684 | 12 | 108 | 2.7 | 7.3x4.3x1.9 |
| 330 | 2 | 337XMPL002MG28H | 0.3014 | 12 | 66 | 3 | 7.3x4.3x2.8 |
| 330 | 2 | 337XMPL002MG28A | 0.3014 | 4.5 | 66 | 3 | 7.3x4.3x2.8 |
| 330 | 2 | 337XMPL002MG19A | 0.3014 | 4.5 | 66 | 3 | 7.3x4.3x1.9 |
| 330 | 2 | 337XMPL002MG19R | 0.3014 | 6 | 66 | 3 | 7.3x4.3x1.9 |
| 330 | 2 | 337XMPL002MG19H | 0.3014 | 12 | 66 | 3 | 7.3x4.3x1.9 |
| 330 | 2 | 337XMPL002MG28R | 0.3014 | 6 | 66 | 3 | 7.3x4.3x2.8 |
| 330 | 2 | 337XMPL002MG28X | 0.3014 | 9 | 66 | 3 | 7.3x4.3x2.8 |
| 330 | 2 | 337XMPL002MG19X | 0.3014 | 9 | 66 | 3 | 7.3x4.3x1.9 |
| 330 | 2.5 | 337XMPL2R5MG19A | 0.3014 | 4.5 | 82.5 | 3 | 7.3x4.3x1.9 |
| 330 | 2.5 | 337XMPL2R5MG19R | 0.3014 | 6 | 82.5 | 3 | 7.3x4.3x1.9 |
| 330 | 2.5 | 337XMPL2R5MG19X | 0.3014 | 9 | 82.5 | 3 | 7.3x4.3x1.9 |
| 330 | 2.5 | 337XMPL2R5MG19H | 0.3014 | 12 | 82.5 | 3 | 7.3x4.3x1.9 |
| 330 | 4 | 337XMPL004YG19X | 0.3014 | 9 | 132 | 2.7 | 7.3x4.3x1.9 |
| 330 | 4 | 337XMPL004YG19R | 0.3014 | 7 | 132 | 2.7 | 7.3x4.3x1.9 |
| 330 | 4 | 337XMPL004YG19H | 0.3014 | 12 | 132 | 2.7 | 7.3x4.3x1.9 |
| 330 | 6.3 | 337XMPL6R3YG19 | 0.3014 | 10 | 207.9 | 3 | 7.3x4.3x1.9 |
| 330 | 6.3 | 337XMPL6R3YG28 | 0.3014 | 10 | 207.9 | 3 | 7.3x4.3x2.8 |
| 390 | 2 | 397XMPL002MG19X | 0.2551 | 9 | 78 | 3 | 7.3x4.3x1.9 |
| 390 | 2 | 397XMPL002MG19R | 0.2551 | 6 | 78 | 3 | 7.3x4.3x1.9 |
| 390 | 2 | 397XMPL002MG19A | 0.2551 | 4.5 | 78 | 3 | 7.3x4.3x1.9 |
| 390 | 2.5 | 397XMPL2R5MG19R | 0.2551 | 6 | 97.5 | 3 | 7.3x4.3x1.9 |
| 390 | 2.5 | 397XMPL2R5MG19X | 0.2551 | 9 | 97.5 | 3 | 7.3x4.3x1.9 |
| 390 | 2.5 | 397XMPL2R5MG19H | 0.2551 | 12 | 97.5 | 3 | 7.3x4.3x1.9 |
| 390 | 2.5 | 397XMPL2R5MG19A | 0.2551 | 4.5 | 97.5 | 3 | 7.3x4.3x1.9 |
| 470 | 2 | 477XMPL002MG19X | 0.2116 | 9 | 94 | 3 | 7.3x4.3x1.9 |
| 470 | 2 | 477XMPL002MG28A | 0.2116 | 4.5 | 94 | 3 | 7.3x4.3x2.8 |
| 470 | 2 | 477XMPL002MG28X | 0.2116 | 9 | 94 | 3 | 7.3x4.3x2.8 |
| 470 | 2 | 477XMPL002MG28R | 0.2116 | 6 | 94 | 3 | 7.3x4.3x2.8 |
| 470 | 2 | 477XMPL002MG19A | 0.2116 | 4.5 | 94 | 3 | 7.3x4.3x1.9 |
| 470 | 2 | 477XMPL002MG19R | 0.2116 | 6 | 94 | 3 | 7.3x4.3x1.9 |
| 470 | 2.5 | 477XMPL2R5YG19R | 0.2116 | 6 | 117.5 | 3 | 7.3x4.3x1.9 |
| 470 | 2.5 | 477XMPL2R5YG28A | 0.2116 | 4.5 | 117.5 | 3 | 7.3x4.3x2.8 |
| 470 | 2.5 | 477XMPL2R5YG19X | 0.2116 | 9 | 117.5 | 3 | 7.3x4.3x1.9 |
| 470 | 2.5 | 477XMPL2R5YG28H | 0.2116 | 12 | 117.5 | 3 | 7.3x4.3x2.8 |
| 470 | 2.5 | 477XMPL2R5YG28R | 0.2116 | 6 | 117.5 | 3 | 7.3x4.3x2.8 |
| 470 | 2.5 | 477XMPL2R5YG28X | 0.2116 | 9 | 117.5 | 3 | 7.3x4.3x2.8 |
| 470 | 2.5 | 477XMPL2R5YG19A | 0.2116 | 4.5 | 117.5 | 3 | 7.3x4.3x1.9 |
| 470 | 2.5 | 477XMPL2R5YG19H | 0.2116 | 12 | 117.5 | 3 | 7.3x4.3x1.9 |