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Thermalsil III

RoHS Compliant

Thermally Conductive Silicone Rubber Insulators

The newest Thermalsil III formula has improved thermal conductivity, providing excellent thermal resistance. It is used as an electrically-isolating interface material composed of silicone elastomer binder with a thermally conductive filler. It is reinforced with glass cloth to resist tearing and cut-through due to burrs on transistors or heat sinks.

Thermalsil III eliminates the need for grease application and conforms to mounting surfaces under clamping pressure for optimum heat conduction.

Thermalsil III is 0.152mm (0.006") thick and grey green in color. A finely woven glass cloth provides the thinnest possible matrix for enhanced thermal resistance.

To order Thermalsil III with adhesive coated backing, add suffix "AC" to the part number. For example, 53-03-2AC.

Thermalsil III is available in any configuration with adhesive backing. Order by adding "AC" after the part number. For example: 53-03-2AC.

Bulk Thermalsil III

Thermalsil III is also available in three widths, with and without adhesive coated backing (AC). Thermalsil III is 0.152mm (0.006") thick.

| Part No.* | RoHS | PCN | Width |
|---------------|-----------------|-----|-------------------|
| 5300 1.500G | RoHS Compliant | N/A | 38.10mm (1.500") |
| 5300AC 1.500G | RoHS Compliant | | 38.10mm (1.500") |
| 5300 2.875G | RoHS Compliant | N/A | 76.20mm (3.000") |
| 5300AC 2.875G | RoHS Compliant | N/A | 76.20mm (3.000") |
| 5300 6.000G | RoHS Compliant | N/A | 152.40mm (6.000") |
| 5300AC 6.000G | RoHS Compliant | N/A | 152.40mm (6.000") |

*Available in full (328 ft.) length rolls only

Thermalsil III

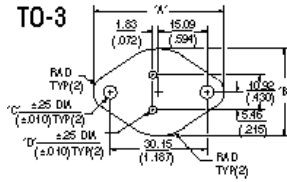
| Property | Typical Value 25°C | Test Method |
|-------------------------------|--|-------------|
| Electrical | | |
| Dielectric Constant | 2.5@50 Hz 2.5@103 Hz 2.5@106 Hz | ASTM D150 |
| Dielectric Breakdown Voltage | 26.3 x 103 volts/mm (667 volts/mil) ASTM D-149 | ASTM D149 |
| Volume Resistivity | 5.7 x 10 ¹⁵ ohm-cm | ASTM D257 |
| Dielectric Dissipation Factor | .008@50 Hz .004 @103 Hz .004 @106 Hz | ASTM D150 |
| Physical | | |
| Thickness | .15 + .03/- .05mm (0.006 + .001/- .002 in.) | |
| Color | Gray-Green | |
| Tensile Strength | 6.1 x 10 ⁷ Pa (8786 psil) | |
| Hardness, Shore A | 87 | |
| Elongation | 2% or less | |
| Thermal | | |

Check Distributor Stock

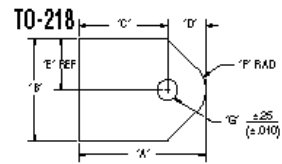
Enter a part number for pricing and availability.

| | | |
|----------------------|------------------------------------|----------------------|
| Thermal Conductivity | 0.92 w/m °C | |
| Flame Resistance | UL 94V-0 | UL card #E-58126 (S) |
| Service Temperature | -60°C to 180°C (-76°F to 356°F) | |

Standard Thermalsil Configurations

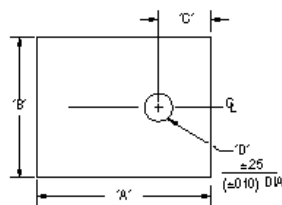


| Part Number | RoHS | PCN | A | B | C | D |
|-------------|-----------------------|-----------------------|------------------|------------------|-----------------|-----------------|
| 53-03-2G | RoHS Compliant | Product Change Notice | 42.04 (1.655) | 27.00 (1.063) | 3.96 (0.156) | 1.57 (0.062) |
| 53-03-11G | RoHS Compliant | N/A | 41.81 (1.646) | 28.58 (1.125) | 3.96 (0.156) | 2.36 (0.093) |
| 53-03-12G | RoHS Compliant | N/A | 41.91 (1.650) | 28.96 (1.140) | 3.56 (0.140) | 2.36 (0.093) |
| 53-03-14G | RoHS Compliant | N/A | 39.70 (1.563) | 26.67 (1.050) | 3.56 (0.140) | 2.36 (0.093) |
| 53-03-15G | RoHS Compliant | N/A | 40.46 (1.593) | 27.94 (1.100) | 3.96 (0.140) | 1.78 (0.070) |
| 53-03-16G | RoHS Compliant | N/A | 43.18 (1.700) | 30.15 (1.187) | 3.96 (0.156) | 1.60 (0.063) |



| Part Number | A | B | C | D | E | F | G |
|-----------------|------------------|------------------|------------------|-----------------|-----------------|-----------------|-----------------|
| 53-02-95G | 23.24 (0.915) | 18.80 (0.740) | 16.26 (0.640) | 6.99 (0.275) | 9.40 (0.370) | 5.59 (0.220) | 3.66 (0.144) |
| 53-02-103G** | 23.80 (0.937) | 19.05 (0.750) | 16.66 (0.656) | 7.14 (0.281) | 9.53 (0.375) | | 3.18 (0.125) |
| 53-78-3G* ** | 25.40 (1.000) | 20.32 (0.800) | | | | | |

TO-220

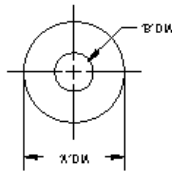


| Part Number | RoHS | PCN | A | B | C | D |
|-------------|-----------------------|-----------------------|------------------|------------------|-----------------|-----------------|
| 53-77-2G | RoHS Compliant | Product Change Notice | 17.50 (0.687) | 14.27 (0.562) | 5.54 (0.218) | 3.18 (0.125) |
| 53-77-3G | RoHS Compliant | Product Change Notice | 17.50 (0.687) | 41.27 (1.625) | 4.70 (0.185) | 2.36 (0.093) |

Thermalsil III - heat sink interface material

| | | | | | | |
|-----------|-------------------|---------------------------|------------------|------------------|-----------------|-----------------|
| 53-77-4G | RoHS Compliant | Product Change Notice | 19.05 (0.750) | 12.70 (0.500) | 4.75 (0.187) | 3.73 (0.147) |
| 53-77-5G | RoHS Compliant | N/A | 20.32 (0.800) | 15.24 (0.600) | 5.54 (0.218) | 2.79 (0.110) |
| 53-77-9G | RoHS Compliant | N/A | 18.42 (0.725) | 13.21 (0.520) | 4.32 (0.170) | 2.92 (0.115) |
| 53-77-10G | RoHS Compliant | N/A | 20.96 (0.825) | 22.99 (0.905) | 5.33 (0.210) | 3.68 (0.145) |
| 53-77-11G | RoHS Compliant | N/A | 26.16 (1.030) | 13.21 (0.520) | 3.81 (0.150) | 3.30 (0.130) |
| 53-77-13G | RoHS Compliant | N/A | 18.03 (0.710) | 12.70 (0.500) | 4.06 (0.160) | 3.58 (0.141) |
| 53-78-1G* | RoHS Compliant | N/A | 22.10 (0.870) | 15.70 (0.620) | | |

WASHER



| Part Number | A | B |
|-------------|---------------|--------------|
| 53-02-10G | 14.27 (0.562) | 5.16 (0.203) |
| 53-02-25G | 20.62 (0.812) | 6.73 (0.266) |

* This insulator is made especially for clip-mount heat sinks, thus requiring no mounting hole.
 ** These insulators may also be used for TO-3P and TO-247 devices.

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