## Thermalsil ${ }^{\text {TM }}$ III

## RoHS Compliant

## Thermally Conductive Silicone Rubber Insulators

The newest Thermalsil ${ }^{T M}$ 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 cutthrough due to burns on transistors or heat sinks.

Thermalsil ${ }^{\text {m }}$ III eliminates the need for grease application and conforms to mounting surfaces under clamping pressure for optimum heat conduction.

Thermalsil ${ }^{\text {TM }}$ III is $.152 \mathrm{~mm}(.006$ ") thick and grey green in color. A finely woven glass cloth provides the thinnest possible matrix for enhanced thermal resistance.

To order Thermalsil ${ }^{\text {TM }}$ III with adhesive coated backing, add suffix "AC" to the part number. For example, 53-03-2AC.

Thermalsil ${ }^{\text {TM }}$ III is available in any configuration with adhesive backing. Order by adding "AC" after the part number. For example: 53-03-2AC.

## Bulk Thermalsil ${ }^{\text {TM }}$ III

Thermalsil ${ }^{T M}$ III is also available in three widths, with and without adhesive coated backing (AC). Thermalsil ${ }^{\text {m }}$ III is .152 mm (.006") thick.

Thermalsil ${ }^{m}$ III

| Property | Typical Value $25^{\circ} \mathrm{C}$ | Test Method |
| :---: | :---: | :---: |
| Electrical |  |  |
| Dielectric Constant | $\begin{aligned} & 2.5 @ 50 \mathrm{~Hz} \\ & 2.5 @ 10^{3} \mathrm{~Hz} \\ & 2.5 @ 10^{6} \mathrm{~Hz} \end{aligned}$ | ASTM D150 |
| Dielectric Breakdown Voltage | $26.3 \times 10^{3}$ volts $/ \mathrm{mm}(667$ volts/mil) ASTM D-149 | ASTM D149 |
| Volume Resistivity | $5.7 \times 10^{15}$ ohm-cm | ASTM D257 |
| Dielectric Dissipation Factor | $\begin{aligned} & .008 @ 50 \mathrm{~Hz} \\ & .004 @ 10^{3} \mathrm{~Hz} \\ & .004 @ 10^{6} \mathrm{~Hz} \end{aligned}$ | ASTM D150 |


| Physical |  |  |
| :---: | :---: | :---: |
| Thickness | $\begin{gathered} .15+.03 /-.05 \mathrm{~mm} \\ (.006+.001 /-.002 \mathrm{in} .) \end{gathered}$ |  |
| Color | Gray-Green |  |
| Tensile Strength | $6.1 \times 10^{7} \mathrm{~Pa}(8786$ psil) |  |
| Hardness, Shore A | 87 |  |
| Elongation | 2\% or less |  |
| Thermal |  |  |
| Thermal Conductivity | $0.92 \mathrm{w} / \mathrm{m}{ }^{\circ} \mathrm{C}$ |  |
| Flame Resistance | UL 94V-0 | UL card \#E- $58126 \text { (S) }$ |
| Service Temperature | $\begin{gathered} -60^{\circ} \mathrm{C} \text { to } 180^{\circ} \mathrm{C} \\ \left(-76^{\circ} \mathrm{F} \text { to } 356^{\circ} \mathrm{F}\right) \end{gathered}$ |  |

## Standard Thermalsil Configurations



| Part <br> Number | RoHS | A | B | C | D |
| :---: | :--- | :---: | :---: | :---: | :---: |
| $\mathbf{5 3 - 0 3 - 1 2}$ | RoHs <br> Compliant | 41.91 <br> $(1.650)$ | 28.96 <br> $(1.140)$ | 3.56 <br> $(.140)$ | 2.36 <br> $(.093)$ |

