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	Product Change Notice	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")

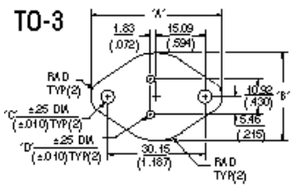
*Available in full (328 ft.) length rolls only

Thermalsil™ III

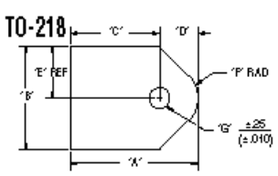
Property	Typical Value 25°C	Test Method
Electrical		
Dielectric Constant	2.5@50 Hz 2.5@103 Hz 2.5@106 Hz	ASTM D150
Dielectric Breakdown Voltage	26.3 x 103 volts/mm (667 volts/mil) ASTM D-149	ASTM D149
Volume Resistivity	5.7 x 1015 ohm-cm	ASTM D257
Dielectric Dissipation Factor	.008@50 Hz .004 @103 Hz .004 @106 Hz	ASTM D150
Physical		

Thickness	.15 + .03/-.05mm (0.006 + .001/-.002 in.)	
Color	Gray-Green	
Tensile Strength	6.1 x 107 Pa (8786 psil)	
Hardness, Shore A	87	
Elongation	2% or less	
Thermal		
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

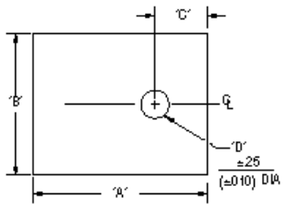


Part Number	RoHS	PCN	A	B	C	D
53-03-2G	RoHS ✓ Compliant	Product Change Notice	42.04 (1.655)	27.00 (1.063)	3.96 (0.156)	1.57 (0.062)
53-03-11G	RoHS ✓ Compliant	N/A	41.81 (1.646)	28.58 (1.125)	3.96 (0.156)	2.36 (0.093)
53-03-12G	RoHS ✓ Compliant	N/A	41.91 (1.650)	28.96 (1.140)	3.56 (0.140)	2.36 (0.093)
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)



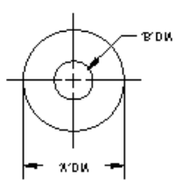
Part Number	A	B	C	D	E	F	G
53-02-95G	23.24 (0.915)	18.80 (0.740)	16.26 (0.640)	6.99 (0.275)	9.40 (0.370)	5.59 (0.220)	3.66 (0.144)
53-02-103G**	23.80 (0.937)	19.05 (0.750)	16.66 (0.656)	7.14 (0.281)	9.53 (0.375)		3.18 (0.125)
53-78-3G* **	25.40 (1.000)	20.32 (0.800)					

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 (0.562)	4.70 (0.185)	2.36 (0.093)
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)	1.57 (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.