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# Thermasil III - Insulating Pads & Films

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**RoHS Compliant**

Thermally Conductive Silicone Rubber Insulators

Composed of a silicone elastomer binder with a thermally conductive filler, Thermasil III's formula has been fully optimized for thermal conductivity. The electrically insulating pads are reinforced with finely woven glass cloth to resist tearing due to burrs and to enhance thermal resistance.

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

**AVAILABLE SIZES:**

Thermasil III is available in standard sizes for TO-3, TO-218 and TO-220 devices as well as in washer and 328ft bulk rolls. The Bulk rolls are offered in three different widths with and without adhesive backing

Any configuration is also available with adhesive backing. Order by adding "AC" after the part number. For example: 53-03-2AC

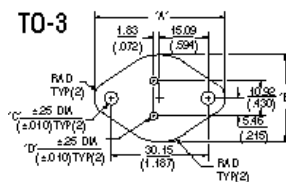
**Bulk Thermasil III**

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

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

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

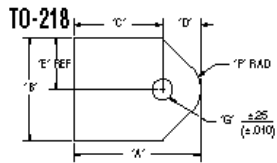
**Standard Thermasil Configurations**



Part Number	RoHS	PCN	A	B	C	D
53-03-2G	RoHS <b>Compliant</b>		42.04 (1.655)	27.00 (1.063)	3.96 (0.156)	1.57 (0.062)
53-03-11G	RoHS <b>Compliant</b>	N/A	41.81 (1.646)	28.58 (1.125)	3.96 (0.156)	2.36 (0.093)
53-03-12G	RoHS <b>Compliant</b>	N/A	41.91 (1.650)	28.96 (1.140)	3.56 (0.140)	2.36 (0.093)
			39.70	26.67	3.56	2.36

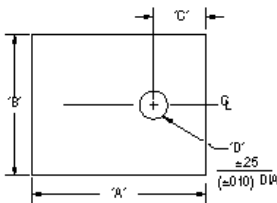
Thermasil III - Insulating Pads & Films - heat sink interface material

53-03-14G	RoHS Compliant	N/A	(1.563)	(1.050)	(0.140)	(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)



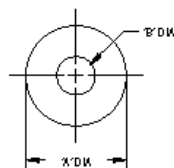
Part Number	A	B	C	D	E	F	G
53-02-95G	23.24 (0.915)	18.80 (0.740)	16.26 (0.640)	6.99 (0.275)	9.40 (0.370)	5.59 (0.220)	3.66 (0.144)
53-02-103G**	23.80 (0.937)	19.05 (0.750)	16.66 (0.656)	7.14 (0.281)	9.53 (0.375)		3.18 (0.125)
53-78-3G* **	25.40 (1.000)	20.32 (0.800)					

TO-220



Part Number	RoHS	PCN	A	B	C	D
53-77-2G	RoHS Compliant		17.50 (0.687)	14.27 (0.562)	5.54 (0.218)	3.18 (0.125)
53-77-3G	RoHS Compliant		17.50 (0.687)	41.27 (0.562)	4.70 (0.185)	2.36 (0.093)
53-77-4G	RoHS Compliant		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.

### Thermalsil III

Property	Typical Value 25°C	Test Method
<b>Electrical</b>		
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 <sup>15</sup> ohm-cm	ASTM D257
Dielectric Dissipation Factor	.008@50 Hz .004 @103 Hz .004 @106 Hz	ASTM D150
<b>Physical</b>		
Thickness	.15 + .03/-0.05mm (0.006 + .001/-0.002 in.)	
Color	Gray-Green	
Tensile Strength	6.1 x 10 <sup>7</sup> Pa (8786 psil)	
Hardness, Shore A	87	
Elongation	2% or less	
<b>Thermal</b>		
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)	

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