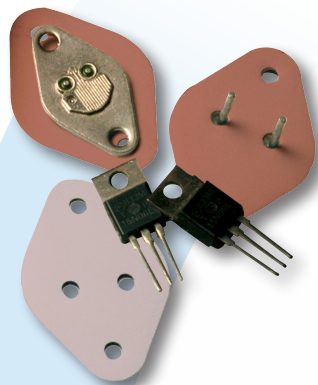


**THICKER THERMAL INSULATOR PAD PREVENTS ELECTRICAL SHORTS IN AUTOMOTIVE ELECTRONICS APPLICATIONS**

Tgard™ 500 is a medium thermal performance insulator pad consisting of a ceramic filled high temperature silicone rubber coated on electrical grade fiberglass.

Tgard™ 500 is designed for applications that require additional thickness to prevent electrical shorts from stamped aluminum heatsinks used in switching mode power supplies (SMPS) and debris from aluminum castings used in automotive motor controls.

Tgard™ 500 is used in applications that require interface of 2.4°C/watt or higher on a TO-220 mounted @ 50 psi pressure.

FEATURES AND BENEFITS

- High breakdown voltage of >6,000 volts AC
- Thermal resistance of 0.45°C-in²/watt at 50 psi
- Thermal resistance of 0.35°C-in²/watt at 400 psi
- Thick enough to encapsulate burrs of stamped heatsinks

APPLICATIONS

- Automotive motor controls
- Switching mode power supplies
 - Stamped aluminum heatsinks

global solutions: local support™

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Tgard™ 500

Thermally Conductive Insulators

PROPERTY		TEST METHOD		METRIC VALUES		IMPERIAL VALUES	
ELECTRICAL PROPERTIES							
Dielectric With Standard Voltage 50mm probe for 30 sec.		ASTM D149		4,500 volts AC		4,500 volts AC	
Dielectric Breakdown Voltage 50mm probe		ASTM D149		>6,000 volts AC		>6,000 volts AC	
Volume Resistivity		ASTM D257		>10 ¹² ohm-cm		>10 ¹² ohm-in	
Dielectric Constant @ 1 MHz		ASTM D257		3.3		3.3	
Electrical RTI Temperature rating		UL 746D		150°C		302°F	
MECHANICAL PROPERTIES							
Thickness				0.23 mm		0.009 inch	
Hardness		ASTM D2240		80 Shore A		80 Shore A	
Tensile Strength		ASTM D412		1.3 kpsi		9 mPa	
Elongation @ 45° to Warp/Fill		ASTM D412		20%		20%	
Elongation along width or length		ASTM D412		5%		5%	
Operating Temperature Range				-60 - 180°C		-76 - 357°F	
Color				Brown		Brown	
UL Flammability Rating		UL 94		V-0		V-0	
PRESSURE, PSI (KPA)	UNITS	10 (69)	25 (172)	50 (345)	100 (689)	200 (1379)	400 (2758)
TOTAL THERMAL RESISTANCE							
Modified ASTM D5470	°C-in ² /watt	0.86	0.68	0.55	0.40	0.37	0.35
Modified ASTM D5470	°C-cm ² /watt	5.6	4.4	3.6	2.6	2.4	2.3
TO-220	°C/watt	1.29	1.01	0.95	0.79	0.77	0.76

STANDARD THICKNESS: 9 mils (0.229mm)

DIE CUT PARTS: Standard and custom configurations available

PRESSURE SENSITIVE ADHESIVE: Single side adhesive available on request

Data for design engineer guidance only. Observed performance varies in application. Engineers are reminded to test the material in application.

THR-DS-TGARD-500 1112

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