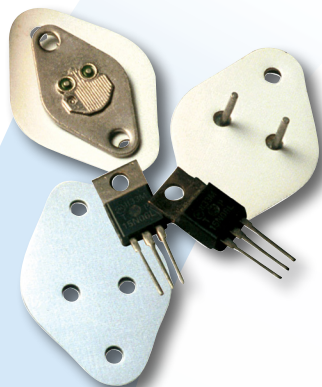


T-gard™ 200 Series

Thermally Conductive Insulators



HIGH PERFORMANCE THERMAL INTERFACE PRODUCTS

The T-gard™ 200 is a high performance interface pad. Consisting of silicon/boron composites, these fiberglass-reinforced pads are used when the lowest thermal resistance and highest dielectric strength are required.

A high-tear, cut-through and puncture-resistant product, the T-gard™ 200 is tough and strong. Burrs cause no problems for the material and the pad will not dry out, crack or fail when pressured between mating parts.

The T-gard™ 200 is available in 0.010" (0.25 mm), 0.020" (0.51 mm) and 0.030" (0.75mm) thicknesses.

FEATURES AND BENEFITS

- High thermal Conductivity of 5.0 W/mK
- High dielectric strength of > 6,000 volts
- Resistant to tears and punctures
- UL® 94 V0 rated

APPLICATIONS

- Audio and video components
- Automotive control units
- General high pressure interfaces
- Motor controllers
- Power conversion equipment
- Power semiconductors
 - T0 packages, MOSFETs and IGBTs

global solutions: local support™

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T-gard™ 200 Series

Thermally Conductive Insulators

	T-GARD™ 210	T-GARD™ 220	T-GARD™ 230	TEST METHOD
Construction & Composition	Reinforced boron nitride filled silicone elastomer	Reinforced boron nitride filled silicone elastomer	Reinforced boron nitride filled silicone elastomer	
Color	White	Blue	Green	Visual
Thickness	0.010" (0.25mm)	0.020" (0.51mm)	0.030" (0.76mm)	
Thickness tolerance	±0.002" (±0.05mm)	±0.002" (±0.05mm)	±0.003" (±0.075mm)	
Specific Gravity (Density)	1.52 g/cc	1.45 g/cc	1.47 g/cc	Helium Pycnometer
Hardness	85 Shore A	80 Shore A	80 Shore A	ASTM D2240
Tensile Strength	N/A	N/A	N/A	ASTM D412
% Elongation	N/A	N/A	N/A	ASTM D412
Outgassing TML (Post Cured)	0.06%	0.06%	0.06%	ASTM E595
Outgassing CVCN (Post Cured)	0.05%	0.05%	0.05%	ASTM E595
UL Flammability Rating	94 V0	94 V1	Not Rated	E180840
Temperature Range	-60°C to 200°C	-60°C to 200°C	-60°C to 200°C	
Thermal Conductivity	5 W/mK	5 W/mK	5 W/mK	ASTM D5470 (modified)
Thermal Impedance @ 100 psi @ 689 KPa	0.18°C-in²/W 1.17°C-cm²/W	0.35°C-in²/W 2.26°C-cm²/W	0.40°C-in²/W 2.28°C-cm²/W	ASTM D5470 (modified)
Breakdown Voltage	6,000 VAC	10,000 VAC	20,000 VAC	ASTM D149
Volume Resistivity	5x10 ¹³ ohm-cm	5x10 ¹³ ohm-cm	5x10 ¹³ ohm-cm	ASTM D257
Dielectric Constant @ 1 MHz	3.32	3.32	3.32	ASTM D150

Standard thicknesses:	0.010" (0.25mm), 0.020" (0.51mm), 0.030" (0.76mm) Please contact Laird Technologies for alternate thicknesses.
Standard sheet sizes:	0.010": 14" x 16" (356mm x 406mm), 0.020" and 0.030": 8" x 8" (203mm x 203mm) and 16" x 16" (406mm x 406mm) Individual die-cut shapes can be supplied.
Pressure sensitive adhesive:	Request no adhesive with "AO" suffix. Request adhesive on one side with "A1" suffix. Double-sided adhesive is not available.
Reinforcement:	T-gard™ 200 sheets are fiberglass reinforced.

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

THR-SPEC-T-GARD-200 0109

Our customers are reminded that they bear the responsibility for testing Laird Technologies' materials for their proposed use. Any information furnished by Laird Technologies and its agents is believed to be accurate and reliable, but our customers must bear all responsibility for the use and application of Laird Technologies' materials since Laird Technologies and its agents cannot be aware of all potential use. Laird Technologies makes no warranties as to the fitness, merchantability, or suitability of any Laird Technologies' materials or products for any specific or general uses. Laird Technologies shall not be liable for incidental or consequential damages of any kind. All Laird Technologies' products are sold pursuant to the Laird Technologies' domestic terms and conditions of sale in effect from time to time, a copy of which will be furnished upon request. A15561-00 Rev A, 2/05/07