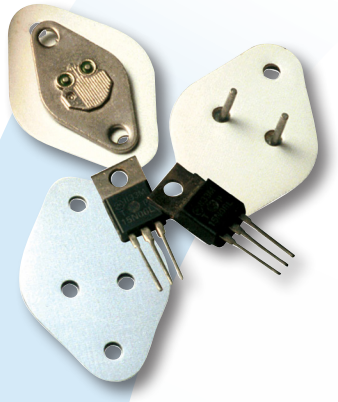
Laird

Smart Technology. Delivered.

Tgard™ 200 Series
Thermally Conductive Insulators



HIGH PERFORMANCE THERMAL INTERFACE PRODUCTS

The Tgard™ 200 is a high performance interface pad. Consisting of a silicone/boron nitride composite, 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 Tgard™ 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 Tgard™ 200 is available in the following sizes:

0.010" (0.25 mm) die cut shapes only
0.020" (0.51 mm) sheets and die cut shapes
0.030" (0.75 mm) sheets and die cut shapes

FEATURES AND BENEFITS

- High thermal Conductivity of 5.0 W/mK
- High breakdown voltage 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, M0SFETs and IGBTs

Americas: +1.800.843.4556
Europe: +49.8031.2460.0
Asia: +86.755.2714.1166

CLV-customerservice@lairdtech.com
www.lairdtech.com/thermal

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	TGARD™ 210	TGARD™ 220	TGARD™ 230	TEST METHOD
Construction & Composition	Reinforced boron nitride filled silcone elastomer	Reinforced boron nitride filled silcone elastomer	Reinforced boron nitride filled silcone 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 CVCM (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" (0.25 mm) die cut shapes only, 0.020" (0.51 mm), 0.030" (0.76 mm)
Standard sheet sizes:	0.020" and 0.030": 16" x 16" (406 mm x 406 mm) 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:	Tgard™ 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.

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

Laird Performance Materials:

A10113-80 A10114-25 A10114-26 A15427-004 A15718-004 A10114-02 A10113-81 A15427104 A15437004 A15431004 A15435104 A15037004 A15440104 A15440007 A15428004 A15432004 A15440004 A15436104 A15436004 A15392-01 A15441104 A15430004 A15434004 A15434104 A15038104 A15441004 A15432104 A15437104 A15428104 A15433104 A15036004 A15431104 A15433004 A15037104 A15435004 A15036104 A15392-02 A15038004 A15430104