



PRODUCT DESCRIPTION

Tgard™ TNC-6 is a heat curable adhesive film providing high electrical insulation and low thermal resistance. It is comprised of a single homogeneous thermally conductive silicone compound. Tgard™ TNC-6 has a higher temperature rating and improved dielectric strength.

It is designed to simplify the application process, eliminating the need for mechanical attachment with clips or screw. Tgard™ TNC-6 adheres the power transistor to the heatsink with a low lamination pressure while providing strong adhesion, lowering contact resistance, and driving superior thermal transfer.

FEATURES & BENEFITS

- Eliminates mechanical fasteners.
- Simplifies application process and reduces the total cost.
- Provides more consistent thermal performance.
- Allows for tighter component spacing within a power supply

MARKETS

- Automotive Electronics
- Switching Mode Power Supplies
- LED lighting
- Power Converters / Inverters
- E-compressor
- MOSFETs and Discrete IGBTs
- On Board Charger

AVAILABILITY

- Thickness 0.2 mm (10mil); 0.38mm (15mil), 0.45 mm (18mil)
- Available in standard sheet sizes 9"x18" and die cut parts.

STORAGE CONDITIONS

- Product is temperature sensitive. It should be stored below ~ 10°C. After thawing from refrigerator, assemble within 12 hours .
- Shelf-life 6 months from date of manufacturing when refrigerated at (5°C ± 3°C)

TYPICAL PROPERTIES

PROPERTY	VALUE	TEST METHOD
Construction	Reinforced silicon adhesive	N/A
Color	Pink	Visual
Thickness	0.250mm 0.380mm 0.450mm	
Density	2.9 g/cc	Helium Pycnometer
Hardness	90 shore A	ASTM D2240
Lap Shear (cured)	3 Mpa	ASTM D1002
Tensile Strength (0.25mm)	31 MPa	ASTM D412
Bulk Thermal Conductivity	2.2 W/m-K	Hot Disk
Thermal Resistance		
0.25mm: 50 psi & 50°C (cured)	0.28 °C-in ² /W	ASTM D5470
0.45mm: 50 psi & 50°C (cured)	0.46 °C-in ² /W	
Operating Temperature Range	-45°C to 180°C	Laird Test Method
Electrical RTI Rating	>150°C	UL746
Dielectric Breakdown Voltage	>6000 VAC	Laird Test Method
Dielectric Constant	6.64 @1GHz	ASTM D150
Volume Resistivity	4.5X10 ¹⁵ Ω-cm	ASTM D991
UL Recognition	V0	UL94
Cure	30min @150°C or 60min @120°C	
Pot Life	12 hours @ 25°C	

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