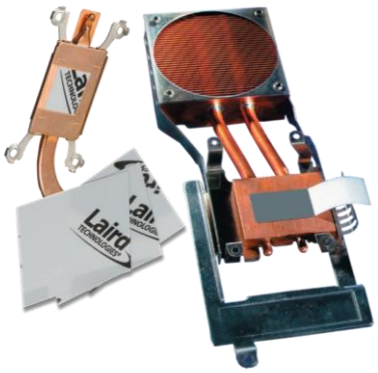
Tpcm™ 580
High Performance TIM



PRODUCT DESCRIPTION

Tpcm™ 580 is a thin bondline, high-performance TIM designed for high end thermal management applications. At temperatures above its transition temperature of 50°C, Tpcm™ 580 begins to soften and flow, filling the microscopic irregularities of the components it comes into contact with. The result is an interface with minimal thermal contact resistance. Due to the gradual change in viscosity (softening), it minimizes migration (pump-out). Tpcm™ 580 reliability has been demonstrated though exposure to 1000 hours of various aging tests resulting in proven dependability at an operating temperature of 125°C.

Tpcm™ 580 is inherently tacky, flexible and exceptionally easy-to-use. This material is available in four thicknesses. Tpcm™ 580 can be supplied as cut parts in strips and rolls with top tabbed liners for easy application. The top tabbed liner can be removed immediately or provide a protective cover during shipping and removed at assembly.

FEATURES & BENEFITS

- 3.8 W/mK bulk thermal conductivity
- Non silicone formulation that provides naturally tacky surface
- Fully characterized long term reliability
- No pump out
- Easy rework

MARKETS

- Graphics Card
- Servers
- IGBTs
- Automotive
- Memory Modules
- Game Consoles

AVAILABILITY

- Sheets and Die Cuts
- Die cut on strips w/tabs
- Die cut on rolls w/tabs
- Production Volume Manufacturing:
  - Designed for use with the TIM Print
  - Refer to “TIM Print Application Guide”

STORAGE CONDITIONS

- Store in original packaging or a light-proof package
- Store at 0-30ºC & maximum 50% RH
- Shelf Life: 1 year from date of shipment when stored at above conditions

TYPICAL PROPERTIES

PROPERTY	VALUE	TEST METHOD
Construction	Free Standing, Filled, Non-Silicone Thermoplastic	N/A
Color	Grey	Visual
Thickness & Tolerance	0.125mm±0.025mm 0.200mm±0.025mm 0.250mm±0.025mm 0.400mm±0.050mm	
Density	2.9 g/cc	Helium Pycnometer
Bulk Thermal Conductivity	3.8 W/m-K	Hot Disk
Thermal Resistance **10 psi & 70°C** **50 psi & 70°C**	 <0.40°C-cm^2/W <0.15°C-cm^2/W	ASTM D5470
Operating Temperature Range	-40°C to 125°C	Laird Test Method
Softening Temperature Range	50°C	Laird Test Method
Minimum Bondline Thickness	~25µm	Laird Test Method
Dielectric Constant	5.5 @1MHz	ASTM D150
Volume Resistivity	3.0X10^{13} Ω-cm	ASTM D991
UL Recognition	V0	UL94

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