

Tpcm[™] 780 High Performance TIM



PRODUCT DESCRIPTION

Tpcm[™] 780 is a high performance, inherently tacky, easy to rework phase change thermal interface material. Developed specifically to meet the high thermal conductivity and low thermal resistance requirements of today's demanding processors.

Tpcm [™] 780 is a silicone-free material that begins to further soften and flow at approximately 45°C. This minimizes contact thermal resistance by filling the microscopic irregularities of the components it contacts. Designed with a specialty polymeric matrix which does not fully change phase, Tpcm[™] 780 drastically minimizes migration (pump out) over thermal greases and other phase change materials

Tpcm[™] 780 reliability has been demonstrated though exposure to 2000 hours of various aging tests resulting in proven dependability at an operating temperature of 125°C.

VALUE

Grev

2.5 g/cc

5.4 W/m-K

0.120°C-cm²/W

0.085°C-cm²/W

-40°C to 125°C

≈45°C to 70°C

1.5x10¹³ O-cm

22.3@1KHz, 22.9@1MHz

25µm

V-0

Free Standing, Filled, Non-

0.25mm, 0.40mm, 0.64mm

Silicone Thermoplastic

0.13mm, 0.20mm,

FEATURES & BENEFITS

- Silicone-free for applications that are silicone sensitive
- No mess due to thixotropic characteristics which prevent flow outside of interface
- Very soft at room temperature, therefore less stress on board
- RoHS Compliant
- 4V0 UL Flammability Rating
- Naturally tacky at room temperature, requiring no adhesive

AVAILABILITY

- Sheets and Die Cuts
- Die cut on strips w/tabs
- Die cut on rolls w/tabs

PROPERTY

Color

Thickness

Density

Construction

- Production Volume Manufacturing:
- Designed for use with the TIM Print
- Refer to "TIM Print Application Guide"

TYPICAL PROPERTIES

Bulk Thermal Conductivity

Operating Temperature Range

Softening Temperature Range Minimum Bondline Thickness

Thermal Resistance

Dielectric Constant

Volume Resistivity

UL Recognition

10 psi & 70°C

50 psi & 70°C

MARKETS

- Semiconductor Packaging
- Graphics Card
- Notebooks
- Desktops
- Servers
- IGBTs
- Automotive
- Memory Modules
- Game Consoles

STORAGE CONDITIONS

- 0°C to 40°C in sealed bag. No humidity requirements.
- If stored above 30°C or below 15°C, material must be stabilized between 15°C and 30°C for a minimum of 24 hours prior to use for best application
- Shelf Life: 1 year from date of shipment when stored at above conditions

TEST METHOD

Helium Pycnometer

N/A

Visual

Hot Disk

ASTM D5470

Laird Test Method

Laird Test Method

Laird Test Method

ASTM D150

ASTM D991

UL94

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