



Tpcm™ HP105 Series Phase Change Material

FOR EXCEPTIONALLY LOW THERMAL RESISTANCE

The Tpcm™ HP105 Series is a high-performance phase change material (PCM) product with exceptionally low thermal resistance.

It has a softening range of approximately 50°C to 60°C. Proprietary technology prevents excessive pump-out after the initial heat cycle. The material is naturally tacky and requires no adhesive coating or heat sink preheat for attachment.

The Tpcm HP105 Series does not cure and can be easily removed without pulling the processor out of the socket. It is supplied in rolls with a top tabbed liner for easy manual or large volume automated applications

FEATURES AND BENEFITS

- Softening range of 50°C to 60°C
- Prevents excessive pump-out after initial heat cycle
- High reliability
- Naturally tacky

APPLICATIONS

- Microprocessors
- Chipsets
- Graphic processing chips
- Custom ASICS

SPECIFICATIONS

| PROPERTIES | Tpcm™ HP105 | TEST METHOD |
|---|--|-----------------------|
| Construction & composition | Non-reinforced boron nitride filled film | |
| Color | Off-white | |
| Thickness | 0.005" (0.125 mm) | |
| Thickness tolerance | ± 0.001 (± 0.0025 mm) | |
| Specific gravity | 1.30 g/cc | |
| Shelf life | 1 Year | |
| Temperature range | -25°C to 125°C | |
| Phase change softening temperature | 50°C to 60°C | |
| Optimal performance – recommend "Burn-In" | 5 minutes @ 70°C or greater | |
| Thermal conductivity | 0.73 W/mK | ATSM D5470 (modified) |
| Thermal Impedance °C-in ² /W (°C-cm ² /W) | | |
| 10 psi (69 Kpa) | 0.024 (0.15) | |
| 50 psi (345 Kpa) | 0.017 (0.11) | ATSM D5470 (modified) |
| 100 psi (689 Kpa) | 0.015 (0.10) | |
| Volume resistivity | 3 x 10 ¹⁴ ohm-cm | ATSM D257 |

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