Honeywell
THE POWER OF CONNECTED

Thermal Interface Materials

PTM7900

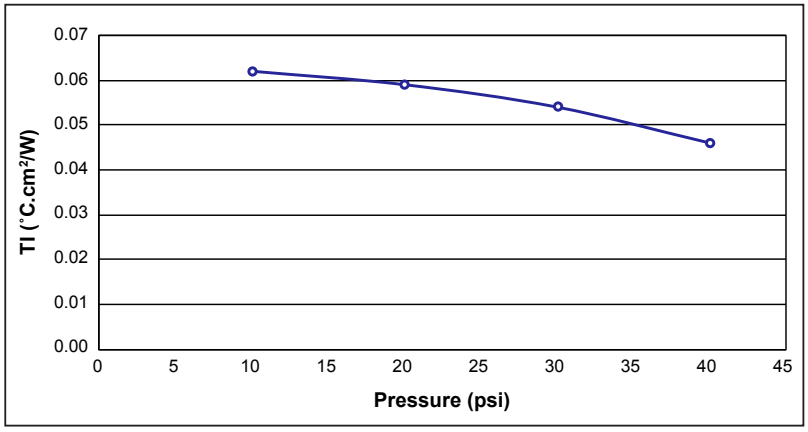
High Thermal Conductivity Phase Change Material

Honeywell's PTM7900 series, a super highly thermally conductive Phase Change Material (PCM) in both pad and paste formats, is designed to minimize thermal resistance at interfaces, maintain excellent performance through reliability testing, and provide scalable application at a competitive cost.

Based on a novel polymer PCM system, this material exhibits excellent interface wetability during typical operating temperature ranges, resulting in extremely low surface contact resistance.

A proprietary material provides superior reliability (pass 150˚C baking 1000 hours, T/C-B 1000 cycles) and maintains low thermal impedance (<0.045˚Ccm^2/W @ no shim), making the PTM7900 series desirable for high performance integrated circuit devices.

PTM7900 Thermal Impedance (TI) vs. Pressure



PTM7900 is ideal for high performance IT/Enterprise computing applications.

Honeywell TIMs Serve Multiple Applications

Automotive & Power

IT/Enterprise

Telecomm

Consumer Electronics

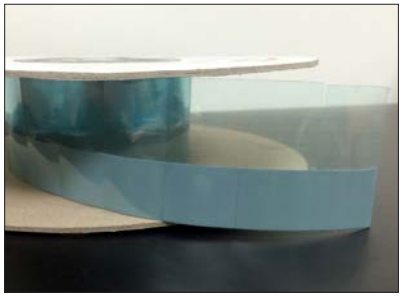
High-Brightness LED

FEATURES & BENEFITS

- High performance filler and polymer technology
- Highly conductive filler loading to optimize performance
- Superior handling and reworkability
- Superior reliable thermal performance
- Available in both pad and paste formats
- Phase change at 45°C

PTM7900 Technical Information

Physical Properties	Unit	Test Method	PTM7900	PTM7900-SP
Thermal Conductivity	W/m·K	ASTM D5470	8.0	8.0
Thermal Impedance @ no shim	°Ccm2/W	ASTM D5470 Modified	0.045	0.045
Specific Gravity	g/cm3	ASTM D374	2.8	2.5
Viscosity	Pa·s @2 1/s, 25°C	RehometerHON	NA	177
Volume Resistivity	Ω·cm	ASTM D257-700	$2.1x10^{14}$	$2.1x10^{14}$
Thickness Range	mm		0.20-1.00	NA



PTM7900 is available in both pad and paste/ printable formats

STORAGE CONDITION

Refer to product label.

THERMAL IMPEDANCE POST RELIABILITY (ASTM E1461)

End of Line	0.045°C-cm2/W
Bake 150°C, 1000 h	0.045°C-cm2/W
HAST, 96 h	0.045°C-cm2/W
Temperature Cycling "B" (-55°C to +125°C, 1000 cycles)	0.045°C-cm2/W

Product Use

Clamping pressure and temperature are suggested to achieve a minimum bond line thickness of the thermal interface material, typically less than 1.5 mil (0.038mm) for best performance. The material must go through the phase change temperature to exhibit entitlement performance.

More Honeywell TIMs

PTM7900 is part of Honeywell's TIM Solutions family of phase change materials. Whatever the thermal challenge, we offer a TIM product that provides just the right characteristics for your application. Find out more about:

- PTM7000 Series
- PTM6000 Series
- PTM5000 Series
- PCM45F Series
- HT Series
- LTM Series

By visiting: electronicmaterials.com

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