

Features and Benefits

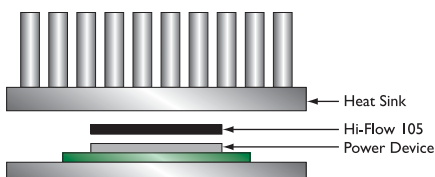
- Thermal impedance:
0.37°C-in²/W (@25 psi)
- Used where electrical isolation is not required
- Low volatility – less than 1%
- Easy to handle in the manufacturing environment
- Flows but doesn't run like grease



Hi-Flow 105 is a phase change material coated on both sides of an aluminum substrate. It is designed specifically to replace grease as a thermal interface, eliminating the mess, contamination and difficult handling associated with grease. Hi-Flow 105 is tack-free and scratch resistant at room temperature and does not require a protective liner in shipment when attached to a heat sink.

At 65°C (phase change temperature), Hi-Flow 105 changes from a solid and flows, thereby assuring total wet-out of the interface. The thixotropic characteristics of Hi-Flow 105 reduce the pump-out from the interface.

Hi-Flow 105 has thermal performance equal to grease with 0.10°C-in²/W contact thermal resistance.



TYPICAL PROPERTIES OF HI-FLOW 105							
PROPERTY		IMPERIAL VALUE		METRIC VALUE		TEST METHOD	
Color		Dark Gray		Dark Gray		Visual	
Reinforcement Carrier		Aluminum		Aluminum		—	
Thickness (inch) / (mm)		0.0055		0.139		ASTM D374	
Continuous Use Temp (°F) / (°C)		266		130		—	
Phase Change Temp (°F) / (°C)		149		65		ASTM D3418	
ELECTRICAL							
Dielectric Constant (1000 Hz)		3.2		3.2		ASTM D150	
Flame Rating		V-O		V-O		U.L. 94	
THERMAL							
Thermal Conductivity (W/m-K) (1)		0.9		0.9		ASTM D5470	
THERMAL PERFORMANCE vs PRESSURE							
		Pressure (psi)	10	25	50	100	200
TO-220 Thermal Performance (°C/W)			0.95	0.80	0.74	0.69	0.64
Thermal Impedance (°C-in²/W) (2)			0.39	0.37	0.36	0.33	0.30
1) This is the measured thermal conductivity of the Hi-Flow coating. It represents one conducting layer in a three-layer laminate. The Hi-Flow coatings are phase change compounds. These layers will respond to heat and pressure induced stresses. The overall conductivity of the material in post-phase change, thin film products is highly dependent upon the heat and pressure applied. This characteristic is not accounted for in ASTM D5470. Please contact Bergquist Product Management if additional specifications are required.							
2) The ASTM D5470 test fixture was used and the test sample was conditioned at 70°C prior to test. The recorded value includes interfacial thermal resistance. These values are provided for reference only. Actual application performance is directly related to the surface roughness, flatness and pressure applied.							

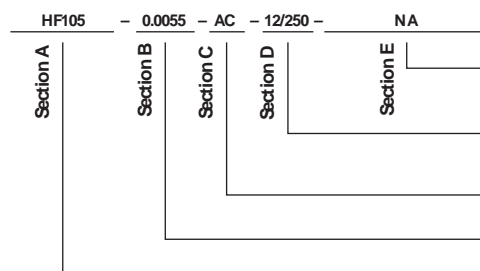
Typical Applications Include:

- Power semiconductors
- Microprocessors mounted on a heat sink
- Power conversion modules
- Spring or clip mount applications where thermal grease is used

Configurations Available:

- Sheet form, die-cut parts and roll form
- With or without pressure sensitive adhesive

Building a Part Number



Standard Options

◀ example

NA = Selected standard option. If not selecting a standard option, insert company name, drawing number, and revision level.

— = Standard configuration dash number, 1212 = 12" x 12" sheets, 12/250 = 12" x 250' rolls, or 00 = custom configuration

AC = Adhesive, one side
00 = No adhesive

Standard thicknesses available: 0.0055"

HF105 = Hi-Flow 105 Phase Change Material

Note: To build a part number, visit our website at www.bergquistcompany.com.

Hi-Flow®: U.S. Patents 6,197,859 and 5,950,066.



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