



HI FLOW THF 1600 P

Known as HI-FLOW 300P
November 2018

PRODUCT DESCRIPTION

Electrically Insulating, Thermally Conductive Phase Change Material.

Technology	Silicone
Appearance	Green
Reinforcement Carrier	Polyimide
Total Thickness , ASTM D374	0.102 to 0.127 mm
Film Thickness , ASTM D374	0.025 to 0.05 mm
Application	Thermal management, Thermally conductive adhesive
Operating Temperature	150 °C

FEATURES AND BENEFITS

- Thermal impedance: 0.13°C-in²/W @ 25 psi
- Field-proven polyimide film
 - excellent dielectric performance
 - excellent cut-through resistance
- Outstanding thermal performance in an insulated pad

TYPICAL APPLICATIONS

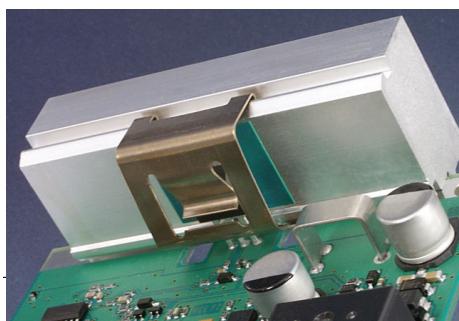
- Spring/clip mounted
- Discrete power semiconductors and modules

HI FLOW THF 1600 P consists of a thermally conductive 55°C phase change compound coated on a thermally conductive polyimide film. The polyimide reinforcement makes the material easy to handle and the 55°C phase change temperature minimizes shipping and handling problems.

HI FLOW THF 1600 P achieves superior values in voltage breakdown and thermal performance when compared to its competition. The product is supplied on an easy release liner for exceptional handling in high volume manual assemblies.

HI FLOW THF 1600 P is designed for use as a thermal interface material between electronic power devices requiring electrical isolation to the heat sink.

Henkel suggests the use of spring clips to assure constant pressure with the interface and power source. Please refer to thermal performance data to determine nominal spring pressure for your application.



TYPICAL PROPERTIES

Physical Properties

Elongation , ASTM D882A, %	40
Tensile Strength, ASTM D882A, MPa	48
Phase Change Temperature, ASTM D3418, °C	55
Flammability Rating, UL 94	V-0

Electrical Properties

Dielectric Breakdown Voltage , ASTM D149, VAC	5,000 ₂
Dielectric Constant , ASTM D150 @ 1,000 Hz	4.5
Volume Resistivity, ASTM D257, ohm-meter ⁽¹⁾	1×10 ¹⁶

Thermal Properties

Thermal Conductivity , ASTM D5470, W/(m-K)

Thermal Performance vs. Pressure

TO-220 Thermal Performance, °C/W	
@ 0.001"	
@ 10 psi	0.95
@ 25 psi	0.94
@ 50 psi	0.92
@ 100 psi	0.91
@ 200 psi	0.9
@ 0.0015"	
@ 10 psi	1.19
@ 25 psi	1.17
@ 50 psi	1.16
@ 100 psi	1.14
@ 200 psi	1.12
@ 0.002"	
@ 10 psi	1.38
@ 25 psi	1.37
@ 50 psi	1.35
@ 100 psi	1.33
@ 200 psi	1.32

Thermal Impedance, ASTM D5470, °C-in²/W ⁽²⁾

@ 0.001"	
@ 10 psi	0.13
@ 25 psi	0.13
@ 50 psi	0.12
@ 100 psi	0.12
@ 200 psi	0.12
@ 0.0015"	
@ 10 psi	0.17
@ 25 psi	0.16
@ 50 psi	0.16
@ 100 psi	0.16
@ 200 psi	0.15



