

Features and Benefits

- Thermal impedance 0.49°C-in²/W (@50 psi)
- Tough dielectric barrier against cut-through
- Medium performance film



Sil-Pad K-6 is a medium performance film based thermally conductive insulator. The film is coated with a silicone elastomer to deliver high performance and provides a continuous physically tough dielectric barrier against "cut-through" and resultant assembly failures.

MIL SPEC. MIL-M-38527/8A MIL-M-38527C MIL-I-49456 MIL-M-87111 UL FILE NUMBER E59150 FSCM NUMBER 55285

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Sil-Pad[®]K-6

The Medium Performance Kapton[®] Based Insulator

Typical Properties of Sil-Pad K-6						
Property	Imperial Value		Metric Value		Test Method	
Color	Bluegreen		Bluegreen		Visual	
Reinforcement Carrier	Kapton		Kapton		***	
Thickness, (inch) / (mm)	0.006		0.152		ASTM D374	
Hardness, (Shore A)	90		90		ASTM D2240	
Breaking Strength, (lbs./inch) / (kN/m)	30		5		ASTM D1458	
Elongation, (%45° to Warp & Fill)	40		40		ASTM D412	
Tensile Strength, (psi) / (Mpa)	5000		34		ASTM D412	
Continuous Use Temp., (°F) / (°C)	-76 to 356		-60 to 180		***	
Electrical	Imperial Value		Metric Value		Test Method	
Dielectric Breakdown Voltage, (VAC)	6000		6000		ASTM D149	
Dielectric Constant, (1000 Hz)	4.0		4.0		ASTM D150	
Volume Resistivity, (Ohm-meter)	10 ¹²		1012		ASTM D257	
Flame Rating	VTM-O		VTM-O		U.L.	
Thermal	Imperial Value		Metric Value		Test Method	
Thermal Conductivity, (W/m-K)	1.1		1.1		ASTM D5470	
Thermal Impedance vs. Pressure						
Pressure (psi)		10	25	50	100	200
TO-220 Thermal Performance, (°C/W)		3.24	3.03	2.76	2.45	2.24
Thermal Impedance, (°C-in²/W) (1)		0.82	0.62	0.49	0.41	0.36

 The ASTM D5470 (Bergquist Modified) test fixture was used. The recorded value includes interfacial thermal resistance. These values are given to the customer for reference only. Actual application performance is directly related to the surface roughness, flatness and pressure applied.

Typical Applications Include

- Power supplies
- Motor controls
- Power semiconductors

Configurations

Available:

- Sheet form
- Die-Cut parts
- Roll form
- With or without pressure sensitive adhesive

We produce thousands of specials. Tooling charges vary depending on tolerances and complexity of the part.

Sil-Pad[®]: U.S. Patents 4,574,879; 4,602,125; 4,602,678; 4,685,987; 4,842,911 and others Kapton[®] is a registered trademark of DuPont.

Product Data Sheet / PDS-0602-001-01; Rev 01

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