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# Sil-Pad® K-10

The High Performance Kapton®-Based Insulator

## Features and Benefits

- Thermal impedance: 0.41°C-in²/W (@50 psi)
- Tough dielectric barrier against cut-through
- High performance film
- Designed to replace ceramic insulators



Sil-Pad K-10 is a high performance insulator. It combines special film with a filled silicone rubber. The result is a product with good cut-through properties and excellent thermal performance.

Sil-Pad K-10 is designed to replace ceramic insulators such as Beryllium Oxide, Boron Nitride and Alumina. Ceramic insulators are expensive and they break easily. Sil-Pad K-10 eliminates breakage and costs much less than ceramics.

TYPICAL PROPERTIES OF SIL-PAD K-10						
PROPERTY	IMPERIAL VALUE	METRIC VALUE	TEST METHOD			
Color	Beige	Beige	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 (%)	40	40	ASTM D412			
Tensile Strength (psi) / (MPa)	5000	34	ASTM D412			
Continuous Use Temp (°F) / (°C)	-76 to 356	-60 to 180	—			
<b>ELECTRICAL</b>						
Dielectric Breakdown Voltage (Vac)	6000	6000	ASTM D149			
Dielectric Constant (1000 Hz)	3.7	3.7	ASTM D150			
Volume Resistivity (Ohm-meter)	10 <sup>12</sup>	10 <sup>12</sup>	ASTM D257			
Flame Rating	VTM-O	VTM-O	UL94			
<b>THERMAL</b>						
Thermal Conductivity (W/m-K)	1.3	1.3	ASTM D5470			
<b>THERMAL PERFORMANCE vs PRESSURE</b>						
	Pressure (psi)	10	25	50	100	200
	TO-220 Thermal Performance (°C/W)	2.35	2.19	2.01	1.87	1.76
	Thermal Impedance (°C-in²/W) (1)	0.86	0.56	0.41	0.38	0.33
1) The ASTM D5470 test fixture was used. 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.						

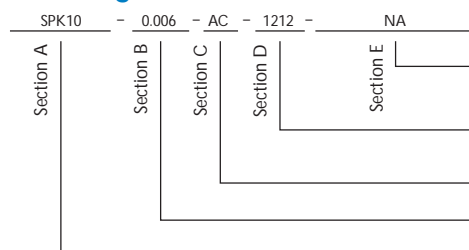
## Typical Applications Include:

- Power supplies
- Motor controls
- Power semiconductors

## 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: 0.006"

SPK10 = Sil-Pad K10 Material

Note: To build a part number, visit our website at [www.bergquistcompany.com](http://www.bergquistcompany.com).

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.