

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		—
ELECTRICAL						
Dielectric Breakdown Voltage (Vac)		6000		6000		ASTM D149
Dielectric Constant (1000 Hz)		3.7		3.7		ASTM D150
Volume Resistivity (Ohm-meter)		10 ¹²		10 ¹²		ASTM D257
Flame Rating		VTM-O		VTM-O		U.L.94
THERMAL						
Thermal Conductivity (W/m-K)		1.3		1.3		ASTM D5470
THERMAL PERFORMANCE vs PRESSURE						
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.						

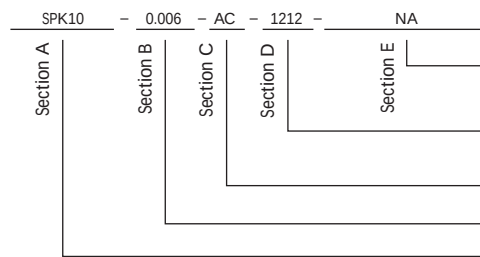
Typical Applications Include:

- 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

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

1212 = 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.

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.



www.bergquistcompany.com

The Bergquist Company -
North American Headquarters
18930 West 78th Street
Chanhassen, MN 55317
Phone: 800-347-4572
Fax: 952-835-0430

The Bergquist Company -
European Headquarters
Bramenberg 9a, 3755 BT Eemnes
Netherlands
Phone: 31-35-5380684
Fax: 31-35-5380295

The Bergquist Company - Asia
Room 15, 8/F Wah Wai Industrial Centre
No. 38-40, Au Pui Wan Street
Fotan, Shatin, N.T. Hong Kong
Ph: 852.2690.9296
Fax: 852.2690.2344

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