Q-Pad® II

Foil-Format Grease Replacement for Maximum Heat Transfer

Features and Benefits

- Thermal impedance: 0.22°C-in²/W (@50 psi)
- Maximum heat transfer
- Aluminum foil coated both sides
- Designed to replace thermal grease

Q-Pad II is a composite of aluminum foil coated on both sides with thermally / electrically conductive Sil-Pad rubber. The material is designed for those applications in which maximum heat transfer is needed and electrical isolation is not required. Q-Pad II is the ideal thermal interface material to replace messy thermal grease compounds.

Q-Pad II eliminates problems associated with grease such as contamination of reflow solder or cleaning operations. Unlike grease, Q-Pad II can be used prior to these operations. Q-Pad II also eliminates dust collection which can cause possible surface shorting or heat buildup.

TYPICAL PROPERTIES OF Q-PAD II

PROPERTY	IMPERIAL VALUE	METRIC VALUE	TEST METHOD
Color	Black	Black	Visual
Reinforcement Carrier	Aluminum	Aluminum	—
Thickness (inch) / (mm)	0.006	0.152	ASTM D374
Hardness (Shore A)	93	93	ASTM D2240
Continuous Use Temp (°F) / (°C)	-76 to 356	-60 to 180	—
ELECTRICAL			
Dielectric Breakdown Voltage (Vac)	Non-Insulating	Non-Insulating	ASTM D149
Dielectric Constant (1000 Hz)	NA	NA	ASTM D150
Volume Resistivity (Ohm-meter)	10^2	10^2	ASTM D257
Flame Rating	V-O	V-O	U.L.94
THERMAL			
Thermal Conductivity (W/m-K)	2.5	2.5	ASTM D5470

THERMAL PERFORMANCE vs PRESSURE					
Pressure (psi)	10	25	50	100	200
TO-220 Thermal Performance (°C/W)	2.44	1.73	1.23	1.05	0.92
Thermal Impedance (°C-in²/W) (1)	0.52	0.30	0.22	0.15	0.12

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:

- Between a transistor and a heat sink
- Between two large surfaces such as an L-bracket and the chassis of an assembly
- Between a heat sink and a chassis
- Under electrically isolated power modules or devices such as resistors, transformers and solid state relays

Configurations Available:

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

Building a Part Number

QII – 0.006 – AC – 1212 – NA

Section A: QII = Q-Pad II Material

Section B: Standard thicknesses available: 0.006"

Section C: AC = Adhesive, one side; 00 = No adhesive

Section D: ____ = Standard configuration dash number; 1212 = 12" x 12" sheets, 12/250 = 12" x 250' rolls, or 00 = custom configuration

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

Standard Options

example

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

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