



HIGH THERMAL AND DIELECTRIC PERFORMANCE INSULATOR PAD

Tgard[™] K52 is a high thermal and dielectric performance insulator pad consisting of a ceramic filled phase change compound coated on MT Kapton film.

Tgard[™] K52 phase change coating all but eliminates contact thermal resistance. The phase change coating melts at 52°C and replaces all contact areas that contain air. Tgard[™] K52-1 is ideal for applications requiring the best thermal performing insulator material.

Tgard[™] K52-2 has the best balance of thermal, dielectric and cut through performance. Tgard[™] K52-3 is a 3 mil MT Kapton film that provides the best crush and cut and tear resistance available with thermal properties that are still in the high performance category.

FEATURES AND BENEFITS

- High breakdown voltage of 4,000 – 9,000 range VAC
- Resistant to tears and cut through
- Total thermal resistance of 0.13 - 0.30 range °C-in²/watt at 20 psi clip force

APPLICATIONS

- Audio amps
- Power modules
- Switching mode power supplies

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Thermally Conductive Insulators

| PROPERTY | TEST METHOD | K52-1 | K52-2 | K52-3 |
|---|-------------|----------------------|----------------------|----------------------|
| ELECTRICAL PROPERTIES | | | | |
| Dielectric Withstand Voltage 6.4mm probe for 30 sec. | ASTM D149 | 3,000 volts DC | 6,000 volts DC | 7,500 volts DC |
| Dielectric Breakdown Voltage 6.4mm probe | ASTM D149 | 4,200 volts AC | 7,800 volts AC | 9,000 volts AC |
| Volume Resistivity | ASTM D257 | 4 x 10 ¹⁴ | 4 x 10 ¹⁴ | 4 x 10 ¹⁴ |
| Dielectric Constant @ 1 MHz | ASTM D257 | 1.8 | 1.8 | 1.8 |
| MECHANICAL PROPERTIES | | | | |
| Composite Thickness | ASTM D374 | 2 mil (0.051mm) | 3 mil (0.076mm) | 4 mil (0.102mm) |
| MT Kapton® Thickness | ASTM D374 | 1 mil (0.025mm) | 2 mil (0.051mm) | 3 mil (0.076mm) |
| Tensile Strength | ASTM D412 | 13.5 kpsi (93 mPa) | 18 kpsi (124 mPa) | 20 kpsi (139 mPa) |
| Elongation MD | ASTM D412 | 80% | 80% | 80% |
| Operating Temperature Range | | -60 - 150°C | -60 - 150°C | -60 - 150°C |
| Color | | Light amber | Light amber | Medium amber |

| PRESSURE, PSI (KPA) | 10 (69) | 20 (138) | 50 (345) | 100 (689) | 200 (1379) | 400 (2758) |
|--|-------------|-------------|-------------|-------------|-------------|-------------|
| TOTAL THERMAL RESISTANCE °C-in ² /watt (°C-cm ² /watt) | | | | | | |
| K52-1 | 0.14 (0.90) | 0.14 (0.90) | 0.13 (0.84) | 0.13 (0.84) | 0.13 (0.84) | 0.13 (0.84) |
| K52-2 | 0.23 (1.48) | 0.23 (1.48) | 0.22 (1.42) | 0.22 (1.42) | 0.22 (1.42) | 0.22 (1.42) |
| K52-3 | 0.33 (2.13) | 0.32 (2.06) | 0.31 (2.00) | 0.30 (1.94) | 0.30 (1.94) | 0.30 (1.94) |

STANDARD DIE CUT PARTS: Standard part sizes for TO-220, TO-247, TO-3P, TO-3PL, and TO-264

CUSTOM DIE CUT PARTS: Custom configurations available with standard tolerance of 0.5mm (0.020")
Ability to handle drawings in multiple file formats. (.DXF and .DWG preferred)

PRESSURE SENSITIVE

ADHESIVE: Single side adhesive available on request

Data for design engineer guidance only. Observed performance varies in application. Engineers are reminded to test the material in application.

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Наши преимущества:

- Оперативные поставки широкого спектра электронных компонентов отечественного и импортного производства напрямую от производителей и с крупнейших мировых складов;
- Поставка более 17-ти миллионов наименований электронных компонентов;
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
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- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- Лицензия ФСБ на осуществление работ с использованием сведений, составляющих государственную тайну;
- Поставка специализированных компонентов (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Aeroflex, Peregrine, Syfer, Eurofarad, Texas Instrument, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits, General Dynamics и др.);

Помимо этого, одним из направлений компании «ЭлектроПласт» является направление «Источники питания». Мы предлагаем Вам помощь Конструкторского отдела:

- Подбор оптимального решения, техническое обоснование при выборе компонента;
- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



Как с нами связаться

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