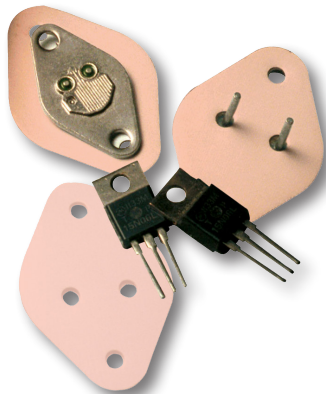




#### HIGH THERMAL AND DIELECTRIC PERFORMANCE INSULATOR PAD

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

Tgard<sup>™</sup> 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<sup>™</sup> K52-1 is ideal for applications requiring the best thermal performing insulator material.

Tgard<sup>™</sup> K52-2 has the best balance of thermal, dielectric and cut through performance. Tgard<sup>™</sup> 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-in<sup>2</sup>/watt at 20 psi clip force

#### APPLICATIONS

- Audio amps
- Power modules
- Switching mode power supplies

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Asia: +86.755.2714.1166

CLV-customerservice@lairdtech.com  
[www.lairdtech.com/thermal](http://www.lairdtech.com/thermal)

# Thermally Conductive Insulators

| PROPERTY                                                | TEST METHOD | K52-1                | K52-2                | K52-3                |
|---------------------------------------------------------|-------------|----------------------|----------------------|----------------------|
| <b>ELECTRICAL PROPERTIES</b>                            |             |                      |                      |                      |
| Dielectric Withstand Voltage<br>6.4mm probe for 30 sec. | ASTM D149   | 3,000 volts DC       | 6,000 volts DC       | 7,500 volts DC       |
| Dielectric Breakdown Voltage<br>6.4mm probe             | ASTM D149   | 4,200 volts AC       | 7,800 volts AC       | 9,000 volts AC       |
| Volume Resistivity                                      | ASTM D257   | 4 x 10 <sup>14</sup> | 4 x 10 <sup>14</sup> | 4 x 10 <sup>14</sup> |
| Dielectric Constant @ 1 MHz                             | ASTM D257   | 1.8                  | 1.8                  | 1.8                  |
| <b>MECHANICAL PROPERTIES</b>                            |             |                      |                      |                      |
| 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)  |
|-------------------------------------------------------------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|
| <b>TOTAL THERMAL RESISTANCE<br/>°C-in<sup>2</sup>/watt (°C-cm<sup>2</sup>/watt)</b> |             |             |             |             |             |             |
| 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.

THR-DS-Tgard-K52 032515

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A14644-00 REV F

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С конца 2013 года компания активно расширяет линейку поставок компонентов по направлению коаксиальный кабель, кварцевые генераторы и конденсаторы (керамические, пленочные, электролитические), за счёт заключения дистрибьюторских договоров

Мы предлагаем:

- Конкурентоспособные цены и скидки постоянным клиентам.
- Специальные условия для постоянных клиентов.
- Подбор аналогов.
- Поставку компонентов в любых объемах, удовлетворяющих вашим потребностям.
- Приемлемые сроки поставки, возможна ускоренная поставка.
- Доставку товара в любую точку России и стран СНГ.
- Комплексную поставку.
- Работу по проектам и поставку образцов.
- Формирование склада под заказчика.
- Сертификаты соответствия на поставляемую продукцию (по желанию клиента).
- Тестирование поставляемой продукции.
- Поставку компонентов, требующих военную и космическую приемку.
- Входной контроль качества.
- Наличие сертификата ISO.

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Конструкторский отдел помогает осуществить:

- Регистрацию проекта у производителя компонентов.
- Техническую поддержку проекта.
- Защиту от снятия компонента с производства.
- Оценку стоимости проекта по компонентам.
- Изготовление тестовой платы монтаж и пусконаладочные работы.



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