

SILTEL SG-TC2.5

Thermally Conductive Gap Filler Pad

Thermal Conductivity: 2.5 W/m-K

0.5mm / 1.0mm / 2.0mm / 3.0mm

SILTEL SG-TC2.5 is an electrically insulating thermally conductive silicone gap filler ideal for use in applications where thermal transfer over large gaps caused by big tolerances or different stack up heights must be achieved. Due to the specific formulation and filling of ceramic particles, the silicone elastomer has high thermal conductivity of 2.5 W/m-K. With its soft and flexible design, it perfectly mates to irregular surfaces thus filling gaps at low pressures.

SG-TC2.5 is designed with a natural tackiness in order to allow for easy and reliable pre-assembly of the pad to the application surface.

SILTEL SG-TC2.5 is available standard size sheets or TIMTEL cut parts to match a wide range of industry standard or customer defined outlines.

- Soft and Compliant Design
- Operates at Low Pressure
- Chemical Resistant with Long Term Stability
- Shock Absorbing
- Drop in Place Installation - Tacky Surface
- Sheets or TIMTEL Cut Parts (Standard or Custom)



Typical Applications

- * Low pressure / Gap Filling / High Surface Irregularity
- * SMD Packages
- * Through-Hole Via's
- * Capacitors
- * Devices to heat pipes for use within automotive, consumer electronics / medical device and industrial electronics.

Standard SILTEL SG-TC2.5 Cross Section

(Standard is tacky one side)



SG-TC2.5 General Properties

- * Thermal Conductivity.....2.5 W/m-K
- * Hardness.....50 Shore 00
- * Dielectric Strength.....10 kV/mm
- * Volume Resistivity.....1.0 x 10¹¹ Ohm-cm
- * Dielectric Constant.....5.2 (@ 1kHz)
- * Operating Temperature.....-60°C to 180°C
- * ColorLight Blue

Standard Thickness Options

- * SG.50-TC2.5.....0.020" (0.50mm)
- * SG1.0-TC2.5.....0.040" (1.00mm)
- * SG2.0-TC2.5.....0.078" (2.00mm)
- * SG3.0-TC2.5.....0.118" (3.00mm)

0.020" / 0.50mm Thermal Performance

- * Thermal Impedance @ 10 PSI.....0.320 °C in² / Watt
- * Thermal Impedance @ 30 PSI.....0.290 °C in² / Watt
- * Thermal Impedance @ 60 PSI.....0.270 °C in² / Watt

0.040" / 1.00mm Thermal Performance

- * Thermal Impedance @ 10 PSI.....0.550 °C in² / Watt
- * Thermal Impedance @ 30 PSI.....0.500 °C in² / Watt
- * Thermal Impedance @ 60 PSI.....0.450 °C in² / Watt

0.078" / 2.00mm Thermal Performance

- * Thermal Impedance @ 10 PSI.....0.950 °C in² / Watt
- * Thermal Impedance @ 30 PSI.....0.840 °C in² / Watt
- * Thermal Impedance @ 60 PSI.....0.750 °C in² / Watt

0.118" / 3.00mm Thermal Performance

- * Thermal Impedance @ 10 PSI.....1.260 °C in² / Watt
- * Thermal Impedance @ 30 PSI.....1.090 °C in² / Watt
- * Thermal Impedance @ 60 PSI.....0.960 °C in² / Watt

SILTEL SG-TC2.5 General Properties / Form Characteristics

| Characteristic | SILTEL SG-TC2.5 |
|---------------------------------------|--|
| Base Material | Ceramic Filled Silicone |
| Substrate | None |
| Color | Light Blue |
| Available Formats | Sheets or Cut Pads (standard or custom) |
| TIMTEL Cutting Capabilities | Razor Plotter Cut for Gap Filler Pads |
| TIMTEL Die Cut Delivery Formats | Individuals or Multiples per Card |
| TIMTEL Die Cut Dimensional Tolerances | 0.010"(0.25mm) to 0.020"(0.51mm) (depending on thickness) |
| Storage | Cool, dry location at or below 80F/ 27C. Store away from UV |
| Shelf Life | 2 years from date of manufacture |

SILTEL Samples for Testing

Thermal material evaluation is always critical when designing in a new material or developing a new product. Sheet samples of SILTEL are available for preliminary testing to determine the optimal SILTEL thickness as well as overall material construction best suited within the scope of your application requirements.

Want to test samples per your required die cut part? Our razor plotter sampling machine allows us to provide customers SILTEL material already cut to their required outline for testing. Plotter formed samples provide our customers the ability to test not only the SILTEL material itself, but their required outline as well without incurring the expense of production tooling.

Contact TIMTEL to request sample sheets or plotter formed samples for testing.