

SILTEL SF-TC8R is a high performance electrically insulating fiberglass reinforced silicone film pad designed for optimized thermal performance between an electronic package and heat sink. A very high thermal conductivity of 8.0 W/m-K is achieved through the use of thermally conductive ceramic particles filled to a specific formulation in order to achieve a reduction of thermal resistance during compression as well as provide excellent handling characteristics during pad installation.

Through the use of a fiberglass reinforced carrier, SF-TC8R provides excellent mechanical stability and cut-through resistance. With the ability to apply optional tack adhesive allows SILTEL SF-TC8R to be an excellent thermal interface material solution for demanding electronic assembly applications.

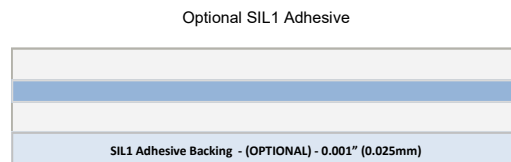
SILTEL SF-TC8R is available in sheets or TIMTEL die cuts to match a wide range of industry standard or customer defined outlines.

- High Thermal Conductivity of 8.0 W/m-K
- High Surface Compliance & Thermal Contact
- Excellent Mechanical Stability (Fiberglass Reinforced)
- High Temperature Stability (without and with tack)
- Long-Term Chemical Resistance and Stability
- Available with Tack for Pre-Applied Assembly
- Sheets or TIMTEL die cuts only
- Short Lead Times

Typical Applications

- MOSFET or IGBT's
- Power Diodes or AC/DC Converters
- Power Modules
- For use in Switch Mode Power Supplies
- Motor and Power Control Units
- Automotive Engine Management Systems
- UPS Units
- Solar Systems
- High-End Computing Systems
- Medical Electronics

Standard SILTEL SF-TC8R Cross Section



SILTEL SF-TC8R General Properties

Thermal Conductivity.....8.0 W/m-K
 Color.....Light Blue/Silver
 Operating Temperature.....-55°C to 200°C
 Filler System.....Ceramic Filled Silicone
 Support SystemFiberglass
 RoHS Conformability.....Yes

SILTEL SF-TC8R General Properties / Form Characteristics

Characteristic	SILTEL SF-TC8R
Base Material	Ceramic Filled Silicone
Substrate	Fiberglass Mesh
Color	Light Blue/Silver
Available Formats	Sheets or Die Cuts (individual pieces)
Standard Sheet Size (no SIL1 backing)	20.00" x 17.32" (510mm x 440mm)
TIMTEL Die Cutting Capabilities	Steel Rule Die / Flexible Die / Rotary Die / Laser Cutting
TIMTEL Die Cut Delivery Formats	Individuals, Multiples per Card
TIMTEL Die Cut Dimensional Tolerances	0.010"(0.25mm) to 0.020"(0.51mm) (determined at design review)
Storage (no SIL1 backing)	Cool, dry location at or below 95F / 35C
Storage (with SIL1 backing)	Cool, dry location at or below 80F/ 27C. Store away from UV
Shelf Life (no SIL1 backing)	Indefinite if stored per conditions above
Shelf Life (with SIL1 backing)	2 years from date of manufacture (due to PSA backing)

Standard Thickness Options

SF.20-TC8R.....0.008" (0.20mm)
 SF.20-TC8R-SIL1.....0.009" (0.23mm) - adhesive
 SF.30-TC8R.....0.012" (0.30mm)
 SF.30-TC8R-SIL1.....0.013" (0.33mm) - adhesive

SF.45-TC8R.....0.018" (0.45mm)
 SF.45-TC8R-SIL1.....0.019" (0.48mm) - adhesive

SIL1 = 0.001" / 0.025mm silicone adhesive

0.008" / 0.20mm Properties (SF.20-TC8R)

Thermal Impedance @ 30 PSI.....0.150 °C in² / Watt
 Thermal Impedance @ 150 PSI.....0.100 °C in² / Watt
 Breakdown Voltage3.6 kV AC
 Tensile Strength.....1.32 kpsi

0.012" / 0.30mm Properties (SF.30-TC8R)

Thermal Impedance @ 30 PSI.....0.190 °C in² / Watt
 Thermal Impedance @ 150 PSI.....0.130 °C in² / Watt
 Breakdown Voltage4.5 kV AC
 Tensile Strength.....0.97 kpsi

0.018" / 0.45mm Properties (SF.45-TC8R)

Thermal Impedance @ 30 PSI.....0.240 °C in² / Watt
 Thermal Impedance @ 150 PSI.....0.170 °C in² / Watt
 Breakdown Voltage>5.0 kV AC
 Tensile Strength.....0.67 kpsi

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.