

SILTEL SF-TC3.0

Thermally Conductive Silicone Film

0.008" (0.20mm) / 0.012" (0.30mm) / 0.018" (0.45mm)

Thermal Conductivity 3.0 W/m-K

SILTEL SF-TC3.0 is an electrically insulating fiberglass reinforced silicone film pad designed for optimized thermal performance between an electronic package and heat sink. A high thermal conductivity is achieved through the use of thermally conductive ceramic particles filled to a specific formulation to achieve a reduction of thermal resistance during compression as well as provide excellent handling characteristics during installation.

Through the use of a fiberglass reinforced carrier, SF-TC3.0 provides excellent mechanical stability and cut-through resistance.

SILTEL SF-TC3.0 is available standard as log rolls, slit rolls or TIMTEL die cuts to match a wide range of industry standard or customer defined outlines.

- High Performance Insulating thermal pad
- Soft and surface conformable film design
- Quality and reliable thermal performance
- Easy to handle....offers quick installation
- Rolls, sheets or TIMTEL die cuts
- Available with PSA backing



Standard SILTEL SF-TC3.0 Cross Section

Optional Pad Tack Backing (SIL1 or A1)



Typical Applications

- MOSFET or IGBTs
- Power Diodes or AC/DC Converters
- Power Modules
- Motor or Power Control Units
- Switch Mode Power Supplies / Motor Control Units / Solar Systems

Standard Thickness Options

- SF.20-TC3.0.....0.008" (0.20mm)
- SF.30-TC3.0.....0.012" (0.30mm)
- SF.45-TC3.0.....0.018" (0.45mm)

SILTEL SF-TC3.0 General Properties / Form Characteristics

SF-TC3.0 General Information

- Hardness (Shore A).....~ 70
- Operating Temperature.....-60°C to 180°C

0.008" / 0.20mm Properties (SF.20-TC3.0)

- Thermal Impedance @ 30 PSI.....0.550 °C in² / Watt
- Thermal Impedance @ 150 PSI.....0.220 °C in² / Watt
- Breakdown Voltage5.50 kV AC
- Volume resistivity.....3.3 x 10¹³ ohm-cm
- Tensile Strength.....3.8 kpsi

0.012" / 0.30mm Properties (SF.30-TC3.0)

- Thermal Impedance @ 30 PSI.....0.600 °C in² / Watt
- Thermal Impedance @ 150 PSI.....0.300 °C in² / Watt
- Breakdown Voltage>6.0 kV AC
- Volume resistivity.....3.30 x 10¹³ ohm-cm
- Tensile Strength.....2.5 kpsi

0.018" / 0.45mm Properties (SF.45-TC3.0)

- Thermal Impedance @ 30 PSI.....0.700 °C in² / Watt
- Thermal Impedance @ 150 PSI.....0.380 °C in² / Watt
- Breakdown Voltage>6.0 kV AC
- Volume resistivity.....3.30 x 10¹³ ohm-cm
- Tensile Strength.....1.3 kpsi

Characteristic	SILTEL SF-TC3.0
Base Material	Ceramic Filled Silicone
Substrate	Fiberglass Mesh (0.003" / 0.08mm)
Color	Gray
Available Formats	Master Rolls / Slit Rolls / Die Cuts (pieces or reels)
Maximum Roll Width	11.81" (30.00cm)
Slit Rolls	Customer Defined
Standard Sheet Sizes	18.00" x 11.81" (45.72cm x 30.00cm)
Custom Sheet Sizes	Yes, customer defined
TIMTEL Die Cutting Capabilities	Steel Rule Die / Flexible Die / Rotary Die / Laser Cutting
TIMTEL Die Cut Delivery Formats	Individuals, Multiples per Card or Continuous Reel
TIMTEL Die Cut Dimensional Tolerances	0.010"(0.25mm) to 0.020"(0.51mm) (determined at design review)
Storage (no TACK backing)	Cool, dry location at or below 95F / 35C
Storage (with TACK backing)	Cool, dry location at or below 80F/ 27C. Store away from UV
Shelf Life (with & without TACK backing)	2 years from date of manufacture

Thermal material evaluation is always critical when designing in a new material or developing a new product. These sheet samples of SILTEL are intended to determine the optimal SILTEL thickness as well as overall material construction and performance best suited within the scope of your application requirements.

Please contact us for more information on how to order specific sizes and shapes for your final design requirements.

TIMTEL
Thermal Management Materials

Supplied By: **PowerComp**