

SILTEL NSG-TC3.0 is an electrically isolating thermally conductive Silicone-FREE thermally conductive gap pad designed for use in applications where thermal transfer over large gaps (large tolerances) or different stack up heights must be achieved. NSG-TC3.0 is a silicone-free acrylate pad that does not contain any volatile siloxanes which are inevitably emitted by silicones. NSG-TC3.0's specific formulation with ceramic filled particles is designed to offer a thermal conductivity of 3.0 W/m-K.

Through NSG-TC3.0's soft design, the pad mates to irregular surfaces thus filling gaps and operates at low pressure offering low thermal resistance. The natural tackiness of the material allows for an easy and reliable pre-assembly. NSG-TC3.0's standard offering is a double sided surface tack configuration.

SILTEL NSG-TC3.0 is available in sheets or TIMTEL cut parts to match a wide range of industry standard or customer defined outlines.

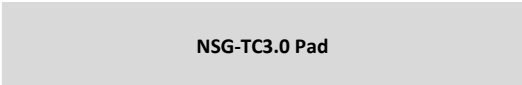
- Silicone Free Acrylate Design
- No Siloxanes
- Soft and Compliant
- Operates at Low Pressure
- Shock Absorbing
- Easy Mount with Dual Side Tack

Standard SILTEL NSG-TC3.0 Cross Section

Dual Side Tack

Typical Applications

- SMD Packages
- Through-hole Vias
- RDRAMs Memory Modules
- Interfaces with Large Gaps / Tolerances
- Industrial / Automotive / Laptop Markets
- Electronics to Heat Pipe Assemblies



Standard Thickness (Material Codes)

NSG0.5-TC3.0.....	0.020" (0.50mm)
NSG1.0-TC3.0.....	0.039" (1.00mm)
NSG2.0-TC3.0.....	0.078" (2.00mm)
NSG3.0-TC3.0.....	0.118 (3.00mm)

NSG-TC3.0 General Properties

Thermal Conductivity.....	3.0 W/m-K
Color.....	Light Gray
Hardness.....	75 (Shore 00)
Dielectric Strength.....	7.8 kV/mm
Volume Resistivity.....	1.0 x 10 ¹³
Operating Temperature.....	-40°C to 130°C

0.020" / 0.50mm Thermal Resistance

Thermal Impedance @ 10 PSI.....	0.450 °C in ² / Watt
Thermal Impedance @ 30 PSI.....	0.420 °C in ² / Watt
Thermal Impedance @ 60 PSI.....	0.380 °C in ² / Watt

0.039" / 1.00mm Thermal Resistance

Thermal Impedance @ 10 PSI.....	0.650 °C in ² / Watt
Thermal Impedance @ 30 PSI.....	0.640 °C in ² / Watt
Thermal Impedance @ 60 PSI.....	0.630 °C in ² / Watt

0.078" / 2.00mm Thermal Resistance

Thermal Impedance @ 10 PSI.....	1.250 °C in ² / Watt
Thermal Impedance @ 30 PSI.....	1.120 °C in ² / Watt
Thermal Impedance @ 60 PSI.....	1.030 °C in ² / Watt

0.118" / 3.00mm Thermal Resistance

Thermal Impedance @ 10 PSI.....	1.720 °C in ² / Watt
Thermal Impedance @ 30 PSI.....	1.570 °C in ² / Watt
Thermal Impedance @ 60 PSI.....	1.470 °C in ² / Watt

Characteristic	SILTEL NSG-TC3.0
Base Chemistry	Non-Silicone Acrylate
Substrate	NONE
Color	Light Gray
Available Formats	Sheets or Cut Pads
Standard Sheet Sizes (0.5mm / 1mm / 2mm / 3mm)	15.75" x 7.87" (400mm x 200mm)
TIMTEL Cutting Capabilities	Razor Plotter Cut for Gap Filler Pads
TIMTEL Die Cut Delivery Formats	Individuals or Multiples per Master Sheet
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

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.

