SILICONE GAP FILLER PAD TGF-RSS-SI

very soft, flexible

HALA

TGF-RSS-SI is an electrically insulating thermally conductive high performance silicone gap filler. It is ideal for use in applications where thermal transfer over large gaps caused e.g. by big tolerances or different stack up heights must be achieved. Due to the specific formulation and filling with ceramic particles the silicone elastomer has a very high thermal conductivity. Through its extraordinary softness and flexibility the material perfectly mates to irregular surfaces thus filling gaps at very low pressure. By its use the total thermal resistance is minimised. The natural tackiness of the material allows for an easy and reliable pre-assembly. The material can be mechanically reinforced by a fibreglass mesh inlay or a film laminate with fibreglass or by a PI film laminate.

PROPERTIES

- Extraordinary soft and compliable
- Thermal conductivity: 3.0 W/mK
- Operates at very low pressure
- Extraordinary chemical resistance and longterm stability
- Shock absorbing
- Easy mounting through self tackiness
- Two-side self-tacky

AVAILABILITY

- Sheet 200 x 400 mm
- Two-side self-tacky (TGF-RSSXXXX-SI)
- With fibreglass mesh inlay (TGF-RSSXXXX-SI-GF)
- With fibreglass reinforced film laminate (TGF-RSSXXXX-SI-LGF)
- With PI film laminate (TGF-RSSXXXX-SI-LPI)
- Die cut parts
- Kiss cut parts on sheet

APPLICATION EXAMPLES

Thermal link of:

- SMD packages
- Through-hole vias
- RDRAMs memory modules
- Flip Chips, DSPs , BGAs, PPGAs

For use in Automotive applications / Laptops / Medical engineering / Embedded boards / Graphic cards / Memory modules / LED light / LCD and plasma TV

PROPERTY	UNIT	TGF-RSS0500-SI	TGF-RSS1000-SI	TGF-RSS2000-SI	TGF-RSS3000-SI	TGF-RSS4000-SI
MATERIAL		Ceramic filled silicone	Ceramic filled silicone	Ceramic filled silicone	Ceramic filled silicone	Ceramic filled silicone
Colour		Light blue	Light blue	Light blue	Light blue	Light blue
Thickness	mm	0.5 ±0.05	1.0 ±0.10	2.0 ±0.20	3.0 ±0.30	4.0 ±0.40
Hardness	Shore 00	43	43	43	43	43
UL Flammability	UL 94	V0	V0	V0	V0	V0
RoHS Conformity	2015 / 863 / EU	Yes	Yes	Yes	Yes	Yes
THERMAL						
Resistance[1] @ 60 PSI @ Thickness	°C-inch²/W (mm)	0.25 (0.41)	0.31 (0.52)	0.44 (0.73)	0.54 (0.93)	0.74 (1.33)
Resistance[1] @ 30 PSI @ Thickness	°C-inch²/W (mm)	0.27 (0.44)	0.37 (0.67)	0.59 (1.10)	0.75 (1.44)	0.95 (1.89)
Resistance[1] @ 10 PSI @ Thickness	°C-inch²/W (mm)	0.30 (0.48)	0.45 (0.81)	0.75 (1.48)	0.99 (2.08)	1.25 (2.74)
Thermal Conductivity[1]	W/mK	3.0	3.0	3.0	3.0	3.0
Operating Temperature Range	°C	- 50 to + 170	- 50 to + 170	- 50 to + 170	- 50 to + 170	- 50 to + 170
ELECTRICAL						
Dielectric Strength	kV / mm	>7.0	>7.0	>7.0	>7.0	>7.0
Volume Resistivity	Ohm - cm	1.0 x 10^{13}	1.0 x 10^{13}	1.0 x 10^{13}	1.0 x 10^{13}	1.0 x 10^{13}
Dielectric Constant	@ 1 MHz	5.6	5.6	5.6	5.6	5.6

Measurement technique according to: [1]ASTM D 5470. All data without warranty and subject to change. Please contact us for further data and information.

Thicknesses: 0.5 mm / 1.0 mm / 2.0 mm / 3.0 mm / 4.0 mm / 5.0 mm / ... / 10.0 mm

mm vs. N/cm² (PSI) / Rth vs. N/cm² (PSI)