

SILICONE FOIL

fibreglass reinforced

BT-F-SI

BT-F-SI is a high performance electrically insulating thermally conductive silicone foil for an optimised thermal coupling between electronic packages and heat sinks. Through the specific formulation and filling with highly thermally conductive ceramic particles an excellent thermal conductivity is reached. Its conformal surface structure guarantees a very good compliance to the contact surfaces. Thus the total thermal resistance is minimised. The fibreglass reinforcement provides for an outstanding mechanic stability and cutthrough resistance as well as easy handling. For an easy and reliable preassembly the interface material is available with low tack pressure sensitive adhesive on one side.

PROPERTIES

- Thermal conductivity: 3.0 W/mK
- High surface compliance
- Excellent thermal contact
- Outstanding mechanic stability through fibreglass reinforcement
- Extraordinary chemical resistance and longterm stability
- Residue-free removal after use

AVAILABILITY

- Sheet 440 x 510 mm
- Non tacky (BT-FXXX-SI)
- Tacky on one side (BT-FXXX-SI-A1)
- Die cut parts
- Kiss cut parts on sheet

APPLICATION EXAMPLES

Thermal link of:

- MOSFETs or IGBTs
- Power diodes or AC/DC converters
- Power modules

For use in Switch mode power supplies / Motor control units / Automotive engine management systems / UPS units / Solar systems

Property	Unit	BT-F200-SI	BT-F300-SI	BT-F450-SI	BT-F800-SI
Material		Ceramic filled silicone	Ceramic filled silicone	Ceramic filled silicone	Ceramic filled silicone
Colour		White	White	White	White
Reinforcement		Fibreglass	Fibreglass	Fibreglass	Fibreglass
Thickness	mm	0.20	0.30	0.45	0.80
Tensile Strength ¹	kpsi	1.3	1.2	0.7	0.6
UL Flammability	UL 94	VO	VO	VO	VO
RoHS Conformity	2011 / 65 / EU	Yes	Yes	Yes	Yes
Thermal					
Resistance ² @ 150 PSI	°C-inch ² /W	0.11	0.15	0.17	0.27
Resistance ² @ 30 PSI	°C-inch ² /W	0.29	0.32	0.35	0.52
Thermal Conductivity	W/mK	5.0	5.0	5.0	5.0
Operating Temperature Range	°C	- 50 to + 200	- 50 to + 200	- 50 to + 200	- 50 to + 200
Electrical					
Breakdown Voltage ³	kV AC	3.0	6.0	9.0	> 10
Volume Resistivity	Ohm - cm	1.7 x 10 ¹⁵	7.9 x 10 ¹⁵	9.2 x 10 ¹⁵	8.9 x 10 ¹⁵
Dielectric Constant	@ 1 MHz	3.3	3.3	3.3	3.3

Test Methods: ¹ ASTM D 412, ² ASTM D 5470, ³ ASTM D 149. All data without warranty and subject to change. Please contact us for further data and information.
Shelf live adhesive: 6 months when stored in original packaging at room temperature and 50% relative humidity.

Thicknesses: 0.08 mm / 0.20 mm / 0.30 mm / 0.45 mm / 0.80 mm

R_{th} vs. N/cm² (PSI)

