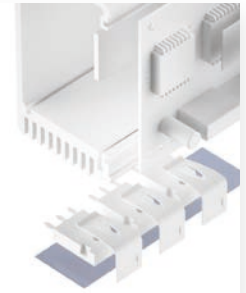


# SILICONE FOIL TFO-D-SI

fibreglass reinforced, highly dielectric



TFO-D-SI is an electrically insulating thermally conductive silicone foil for an optimised thermal coupling between electronic packages and heat sinks. Through the specific formulation and filling with thermally conductive ceramic particles a high thermal conductivity is reached. Under pressure the total thermal resistance is minimised. The material is characterised by its very high dielectric properties. The fibreglass reinforcement provides for an outstanding mechanic stability and cut-through resistance as well as easy handling. For an easy and reliable pre-assembly the interface material is available with self tackiness on one side with no need for an additional adhesive coating or with a one side adhesive coating.



### PROPERTIES

- Thermal conductivity: 1.2 W/mK
- High thermal contact
- Outstanding mechanic stability through fibreglass reinforcement
- Very high dielectric strength
- Extraordinary chemical resistance and longterm stability
- Residue-free removal after use

### AVAILABILITY

- Sheet 300 x 1000 mm
- Roll 300 mm x 50 m
- Non tacky (TFO-DXXX-SI)
- Self tacky on one side without adhesive coating (TFO-DXXX-SI-A0)
- One side adhesive (TFO-DXXX-SI-A1)
- Die cut parts
- Kiss cut parts on roll
- 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

PROPERTIES	UNIT	TFO-D230-SI	TFO-D300-SI	TFO-D450-SI
<b>MATERIAL</b>				
MATERIAL		Ceramic filled silicone	Ceramic filled silicone	Ceramic filled silicone
Colour		Grey	Grey	Grey
Reinforcement		Fibreglass	Fibreglass	Fibreglass
Thickness	mm	0.23 ±0.05	0.3 ±0.05	0.45 ±0.05
Tensile Strength <sup>1</sup>	kpsi	5.0	4.1	2.9
UL Flammability	UL 94	VO	VO	VO
RoHS Conformity	2015 / 863 / EU	Yes	Yes	Yes
<b>THERMAL</b>				
Resistance <sup>2</sup> @ 150 PSI	°C-inch <sup>2</sup> /W	0.55	0.75	1.25
Resistance <sup>2</sup> @ 30 PSI	°C-inch <sup>2</sup> /W	0.79	1.05	1.55
Thermal Conductivity	W/mK	1.2	1.2	1.2
Operating Temperature Range	°C	- 50 to + 180	- 50 to + 180	- 50 to + 180
<b>ELECTRICAL</b>				
Breakdown Voltage <sup>3</sup>	kV AC	5.5	> 6.0	> 6.0
Volume Resistivity	Ohm - cm	> 1.0 x 10 <sup>11</sup>	> 1.0 x 10 <sup>11</sup>	> 1.0 x 10 <sup>11</sup>
Dielectric Constant	@ 1 MHz	6.0	6.0	6.0

Measurement technique according to: <sup>1</sup> ASTM D 412, <sup>2</sup> ASTM D 5470, <sup>3</sup> ASTM D 149. All data without warranty and subject to change. Please contact us for further data and information. Shelf life adhesive: 6 months when stored in original packaging at room temperature and 50% relative humidity.

Thicknesses: 0.23 mm / 0.30 mm / 0.45 mm

Rth vs. N/cm<sup>2</sup> (PSI)

