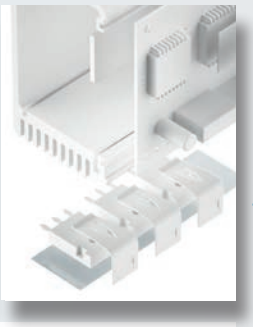
SILICONE FOIL TFO-Q-SI

fibreglass reinforced, highly dielectric

TFO-Q-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 very 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 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.



Release 01 / 2019

PROPERTIES

- Thermal conductivity: 6.0 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 420 x 500 mm
- Non tacky (TFO-QXXX-SI)
- Tacky on one side (TFO-QXXX-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

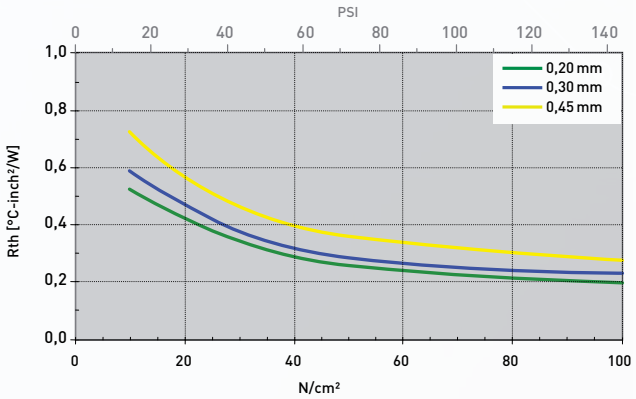
For use in Switch mode power supplies / Motor control units / Automotive engine management systems / UPS units / Solar systems

Property	Unit	TFO-Q200-SI	TFO-Q300-SI	TFO-Q450-SI
Material		Ceramic filled silicone	Ceramic filled silicone	Ceramic filled silicone
Colour		Pink	Pink	Pink
Reinforcement		Fibreglass	Fibreglass	Fibreglass
Thickness	mm	0.20	0.30	0.45
Tensile Strength[1]	kpsi	2.4	1.7	1.3
UL Flammability	UL 94	VO	VO	VO
RoHS Conformity	2011/65/EC	Yes	Yes	Yes
Thermal				
Resistance[2] @ 150 PSI	°C-inch²/W	0.20	0.23	0.28
Resistance[2] @ 30 PSI	°C-inch²/W	0.43	0.47	0.57
Thermal Conductivity	W/mK	6.0	6.0	6.0
Operating Temperature Range	°C	- 40 to + 180	- 40 to + 180	- 40 to + 180
Electrical				
Breakdown Voltage[3]	kV AC	5.0	7.0	10.0
Volume Resistivity	Ohm - cm	4.8×10^{14}	6.4×10^{14}	1.1×10^{15}
Dielectric Constant	@ 1 MHz	3.3	2.9	3.1

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.

Thicknesses: 0.20 mm / 0.30 mm / 0.45 mm

Rth vs. N/cm² (PSI)



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