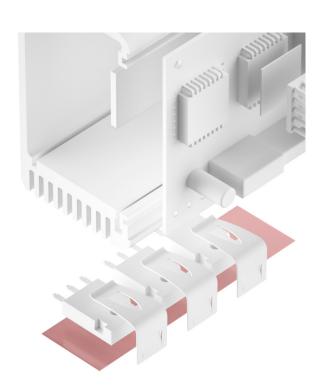
KØLEPROFILER

TERMISK LEDENDE MATERIALE









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-AO)
- 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:

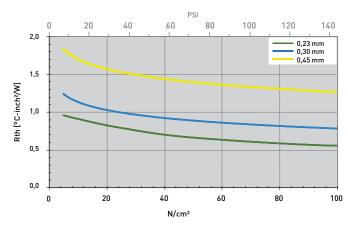
- MOSFETs or IGBTs
- Power diodes or AC/DC converters
- Power modules

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

| PROPERTIES | UNIT | TF0-D230-SI | TFO-D300-SI | TF0-D450-SI |
|-----------------------------------|-----------------|--------------------------|--------------------------|--------------------------|
| 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 ¹ | kpsi | 5.0 | 4.1 | 2.9 |
| UL Flammability | UL 94 | VO | VO | VO |
| RoHS Conformity | 2015 / 863 / EU | Yes | Yes | Yes |
| THERMAL | | | | |
| Resistance ² @ 150 PSI | °C-inch²/W | 0.55 | 0.75 | 1.25 |
| Resistance ² @ 30 PSI | °C-inch²/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 |
| ELECTRICAL | | | | |
| Breakdown Voltage³ | kV AC | 5.5 | > 6.0 | > 6.0 |
| Volume Resistivity | 0hm - cm | > 1.0 x 10 ¹¹ | > 1.0 x 10 ¹¹ | > 1.0 x 10 ¹¹ |
| Dielectric Constant | @ 1 MHz | 6.0 | 6.0 | 6.0 |

Measurement technique according to: 'ASTM D 412, 'ASTM D 5470, '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

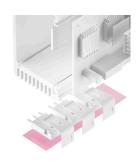




SILICONE FOIL TFO-G-SI

FIBREGLASS REINFORCED, HIGHLY DIELECTRIC

TFO-G-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 low tack pressure sensitive adhesive on one side.



PROPERTIES

- Thermal conductivity: 1.6 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
- Roll 290 mm x 50 m
- Non tacky (TFO-GXXX-SI)
- Tacky on one side (TFO-GXXX-SI-A1)
- Die cut parts
- · Kiss cut parts on sheet or roll

APPLICATION EXAMPLES

Thermal link of:

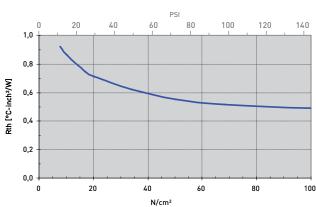
- MOSFETs or IGBTs
- Power diodes or AC/DC converters
- Power modules

For use in Switch mode power supplies / Motor control units / High voltage hybrid automotive applications / PS units / Solar systems

| PROPERTY | UNIT | TF0-G230-SI |
|-----------------------------------|---|-------------------------|
| MATERIAL | | Ceramic filled silicone |
| Colour | ••••••••••••••••••••••••••••••••••••••• | Pink |
| Reinforcement | ••••••••••••••••••••••••••••••••••••••• | Fibreglass |
| Thickness | mm | 0.23 + 0.023 |
| Tensile Strength¹ | kpsi | 2.9 |
| UL Flammability | UL 94 | V0 |
| RoHS Conformity | 2015 / 863 / EU | Yes |
| THERMAL | | |
| Resistance ² @ 150 PSI | °C-inch²/W | 0.49 |
| Resistance ² @ 30 PSI | °C-inch²/W | 0.71 |
| Thermal Conductivity | W/mK | 1.6 |
| Operating Temperature Range | °C | - 50 to + 180 |
| ELECTRICAL | | |
| Breakdown Voltage³ | kV AC | 5.5 |
| Volume Resistivity | Ohm - cm | 1.0 x 10 ¹¹ |

Measurement technique according to: 'ASTM D 412, 'ASTM D 5470, '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





SILICONE FOIL TFO-J-SI

FIBREGLASS REINFORCED, HIGHLY DIELECTRIC

TFO-J-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 preassembly the interface material is available with low tack pressure sensitive adhesive on one side.



PROPERTIES

- Thermal conductivity: 2.0 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
- Roll 300 mm x 50 m (0.20 / 0.30 mm)
- Roll 300 mm x 25 m (0.45 mm)
- Non tacky (TFO-JXXX-SI)
- Tacky on one side (TFO-IXXX-SI-A1)
- Die cut parts
- · Kiss cut parts on roll
- · Kiss cut parts on sheet

APPLICATION EXAMPLES

Thermal link of:

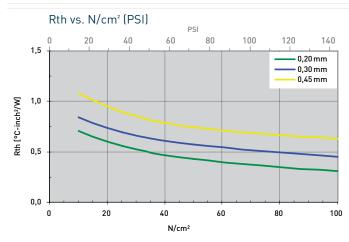
- MOSFETs or IGBTs
- Power diodes or AC/DC converters
- Power modules

For use in Switch mode power supplies / Motor control units / High voltage hybrid automotive applications / PS units / Solar systems

| PROPERTY | UNIT | TF0-J200-SI | TF0-J300-SI | TF0-J450-SI |
|-----------------------------------|---|-------------------------|-------------------------|-------------------------|
| MATERIAL | | Ceramic filled silicone | Ceramic filled silicone | Ceramic filled silicone |
| Colour | •••••••••••• | Dark Brown | Dark Brown | Dark Brown |
| Reinforcement | ••••••••••••••••••••••••••••••••••••••• | Fibreglass | Fibreglass | Fibreglass |
| Thickness | mm | 0.20 ±0.05 | 0.30 ±0.05 | 0.45 ±0.05 |
| Tensile Strength ¹ | kpsi | 5.8 | 4.0 | 2.9 |
| UL Flammability | UL 94 | V0 | V0 | V0 |
| RoHS Conformity | 2015 / 863 / EU | Yes | Yes | Yes |
| THERMAL | | | | |
| Resistance ² @ 150 PSI | °C-inch²/W | 0.31 | 0.45 | 0.63 |
| Resistance ² @ 30 PSI | °C-inch²/W | 0.61 | 0.74 | 0.96 |
| Thermal Conductivity | W/mK | 2.0 | 2.0 | 2.0 |
| Operating Temperature Range | °C | -40 to + 180 | -40 to +180 | -40 to + 180 |
| ELECTRICAL | | | | |
| Breakdown Voltage³ | kV AC | 5.0 | 7.0 | 10.0 |
| Volume Resistivity | 0hm - cm | 4.2 x 10 ¹⁴ | 3.5 x 10 ¹⁴ | 3.8 x 10 ¹⁴ |
| Dielectric Constant | @ 1 MHz | 3.8 | 4.2 | 4.3 |

Measurement technique according to: 'ASTM D 412, 'ASTM D 5470, '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: 0.20 mm / 0.30 mm / 0.45 mm / 0.80 mm

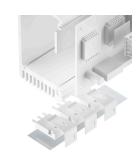




SILICONE FOIL TFO-K-SI

FIBREGLASS REINFORCED

TFO-K-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 fibreglass reinforcement provides for an outstanding mechanic stability and cut-through 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: 2.5 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 320 x 1000 mm
- Roll 320 mm x 50 m
- Non tacky (TFO-K200-SI)
- Tacky on one side (TFO-K200-SI-A1)
- Die cut parts
- · Kiss cut parts on roll
- Kiss cut parts on sheet

APPLICATION EXAMPLES

Thermal link of:

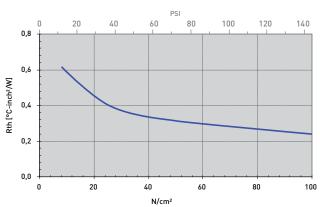
- MOSFETs or IGBTs
- Power diodes or AC/DC converters
- Power modules

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

| PROPERTIES | UNIT | TF0-K200-SI |
|-----------------------------------|---|-------------------------|
| MATERIAL | | Ceramic filled silicone |
| Colour | | Grey |
| Reinforcement | ••••••••••••••••••••••••••••••••••••••• | Fibreglass |
| Thickness | mm | 0.23 ±0.05 |
| Tensile Strength ¹ | kpsi | 2.9 |
| UL Flammability | UL 94 | V 0 |
| RoHS Conformity | 2015 / 863 / EU | Yes |
| THERMAL | | |
| Resistance ² @ 150 PSI | °C-inch²/W | 0.24 |
| Resistance ² @ 30 PSI | °C-inch²/W | 0.47 |
| Thermal Conductivity | W/mK | 2.5 |
| Operating Temperature Range | °C | - 50 to + 200 |
| ELECTRICAL | | |
| Breakdown Voltage³ | kV AC | 2.0 |
| Volume Resistivity | Ohm - cm | 2.0 x 10 ¹⁴ |
| Dielectric Constant | @ 1 MHz | 4.0 |

Measurement technique according to: 'ASTM D 412, 'ASTM D 5470, '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.

Thickness: 0.23 mm





SILICONE FOIL TFO-O-SI

FIBREGLASS REINFORCED, HIGHLY DIELECTRIC

TFO-O-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 cut-through resistance as well as easy handling. For an easy and reliable pre-assembly the interface material is available with low tack pressure sensitive adhesive on one side.



PROPERTIES

- Thermal conductivity: 3.0 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
- Roll 300 mm x 50 m (0.20 / 0.30 mm)
- Roll 300 mm x 25 m (0.45 mm)
- Non tacky (TFO-OXXX-SI)
- Tacky on one side (TFO-OXXX-SI-A1)
- Die cut parts
- · Kiss cut parts on roll
- · Kiss cut parts on sheet

APPLICATION EXAMPLES

Thermal link of:

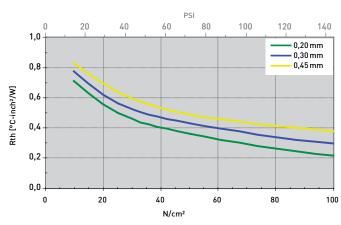
- MOSFETs or IGBTs
- Power diodes or AC/DC converters
- Power modules

For use in Switch mode power supplies / Motor control units / High voltage hybrid automotive applications / PS units / Solar systems

| PROPERTY | UNIT | TF0-0200-SI | TF0-0300-SI | TF0-0450-SI |
|-----------------------------------|-----------------|-------------------------|-------------------------|-------------------------|
| MATERIAL | | Ceramic filled silicone | Ceramic filled silicone | Ceramic filled silicone |
| Colour | | Grey | Grey | Grey |
| Reinforcement | | Fibreglass | Fibreglass | Fibreglass |
| Thickness | mm | 0.20 ±0.05 | 0.30 ±0.05 | 0.45 ±0.05 |
| Tensile Strength ¹ | kpsi | 3.3 | 2.3 | 1.6 |
| UL Flammability | UL 94 | V0 | V0 | V0 |
| RoHS Conformity | 2015 / 863 / EU | Yes | Yes | Yes |
| THERMAL | | | | |
| Resistance ² @ 150 PSI | °C-inch²/W | 0.22 | 0.30 | 0.38 |
| Resistance ² @ 30 PSI | °C-inch²/W | 0.55 | 0.60 | 0.70 |
| Thermal Conductivity | W/mK | 3.0 | 3.0 | 3.0 |
| Operating Temperature Range | °C | -40 to + 180 | -40 to +180 | -40 to + 180 |
| ELECTRICAL | | | | |
| Breakdown Voltage³ | kV AC | 5.0 | 7.0 | 8.0 |
| Volume Resistivity | 0hm - cm | 9,2 x 10 ¹³ | 8,8 x 10 ¹³ | 3,4 x 10 ¹² |
| Dielectric Constant | @ 1 MHz | 4.8 | 5.6 | 6.2 |

Measurement technique according to: 'ASTM D 412, 'ASTM D 5470, '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: 0.20 mm / 0.30 mm / 0.45 mm





SILICONE FOIL TFO-T-SI

FIBREGLASS REINFORCED

TFO-T-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 a very high 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: 4.1 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 (TFO-TXXX-SI)
- Tacky on one side (TFO-TXXX-SI-A1)
- Die cut parts
- · Kiss cut parts on sheet

APPLICATION EXAMPLES

Thermal link of:

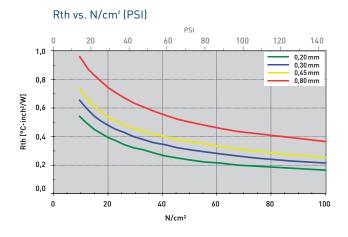
- MOSFETs or IGBTs
- Power diodes or AC/DC converters
- Power modules

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

| PROPERTY | UNIT | TF0-T200-SI | TF0-T300-SI | TF0-T450-SI | TF0-T800-SI |
|-----------------------------------|-----------------|-------------------------|-------------------------|-------------------------|-------------------------|
| MATERIAL | | Ceramic filled silicone | Ceramic filled silicone | Ceramic filled silicone | Ceramic filled silicone |
| Colour | | Light green | White | White | White |
| Reinforcement | | Fibreglass | Fibreglass | Fibreglass | Fibreglass |
| Thickness | mm | 0.20 ±0.05 | 0.30 ±0.05 | 0.45 ±0.05 | 0.80 +0.20 |
| Tensile Strength ¹ | kpsi | 3.6 | 2.9 | 2.0 | 1.3 |
| UL Flammability | UL 94 | VO | VO | VO | VO |
| RoHS Conformity | 2015 / 863 / EU | Yes | Yes | Yes | Yes |
| THERMAL | | | | | |
| Resistance ² @ 150 PSI | °C-inch²/W | 0.16 | 0.21 | 0.24 | 0.36 |
| Resistance ² @ 30 PSI | °C-inch²/W | 0.39 | 0.47 | 0.53 | 0.74 |
| Thermal Conductivity ² | W/mK | 4.1 | 4.1 | 4.1 | 4.1 |
| Operating Temperature Range | °C | - 50 to + 200 |
| ELECTRICAL | | | | | |
| Breakdown Voltage³ | kV AC | 3.0 | 6.5 | 9.0 | > 10 |
| Volume Resistivity | 0hm - cm | 1.9 x 10 ¹⁵ | 2.4 x 10 ¹⁵ | 3.3 x 10 ¹⁵ | 4.1 x 10 ¹⁵ |
| Dielectric Constant | @ 1 MHz | 3.6 | 3.6 | 3.6 | 3.6 |

Measurement technique according to: 'ASTM D 412, 'ASTM D 5470,' 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: 0.20 mm / 0.30 mm / 0.45 mm / 0.80 mm





SILICONE FOIL TFO-X-SI

FIBREGLASS REINFORCED

TFO-X-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: 5.0 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 (TFO-XXXX-SI)
- Tacky on one side (TFO-XXXX-SI-A1)
- Die cut parts
- · Kiss cut parts on sheet

APPLICATION EXAMPLES

Thermal link of:

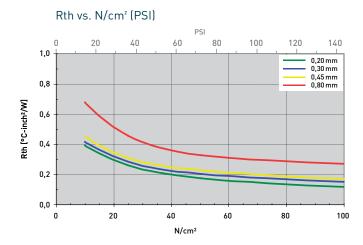
- MOSFETs or IGBTs
- Power diodes or AC/DC converters
- Power modules

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

| PROPERTY | UNIT | TF0-X200-SI | TF0-X300-SI | TFO-X450-SI | TFO-X800-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 ±0.05 | 0.30 ±0.05 | 0.45 ±0.05 | 0.80 + 0.20 |
| Tensile Strength ¹ | kpsi | 1.3 | 1.2 | 0.7 | 0.6 |
| UL Flammability | UL 94 | VO | V0 | V0 | VO |
| RoHS Conformity | 2015 / 863 / EU | Yes | Yes | Yes | Yes |
| Thermal | | | | | |
| Resistance ² @ 150 PSI | °C-inch²/W | 0.11 | 0.15 | 0.17 | 0.27 |
| Resistance ² @ 30 PSI | °C-inch²/W | 0.29 | 0.32 | 0.35 | 0.52 |
| Thermal Conductivity ² | W/mK | 5.0 | 5.0 | 5.0 | 5.0 |
| Operating Temperature Range | °C | - 50 to + 200 |
| Electrical | | | | | |
| Breakdown Voltage³ | kV AC | 3.0 | 6.0 | 9.0 | > 10 |
| Volume Resistivity | 0hm - 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 |

Measurement technique according to: 'ASTM D 412, 'ASTM D 5470, '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: 0.08 mm / 0.20 mm / 0.30 mm / 0.45 mm / 0.80 mm





SILICONE FOIL TFO-ZS-SI

FIBREGLASS REINFORCED

TFO-ZS-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 extremely high thermal conductivity is reached. Its conformal surface structure and flexibility 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.



PROPERTIES

- Thermal conductivity: 8.0 W/mK
- · High surface compliance and flexibility
- 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 (TFO-ZSXXXX-SI)
- Die cut parts

APPLICATION EXAMPLES

Thermal link of:

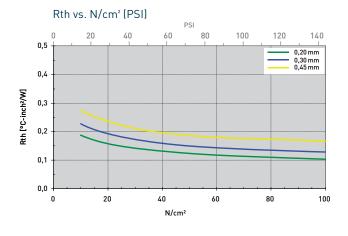
- MOSFETs or IGBTs
- Power diodes or AC/DC converters
- Power modules

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

| PROPERTY | UNIT | TF0-ZS0200-SI | TF0-ZS0300-SI | TF0-ZS0450-SI |
|-----------------------------------|-----------------|-------------------------|-------------------------|-------------------------|
| MATERIAL | | Ceramic filled silicone | Ceramic filled silicone | Ceramic filled silicone |
| Colour | | White | White | White |
| Reinforcement | | Fibreglass | Fibreglass | Fibreglass |
| Thickness | mm | 0.20 ±0.05 | 0.30 ±0.05 | 0.45 ^{±0.05} |
| Tensile Strength¹ | kpsi | 1.32 | 0.97 | 0.67 |
| UL Flammability (Equivalent) | UL 94 | VO | VO | VO |
| RoHS Conformity | 2015 / 863 / EU | Yes | Yes | Yes |
| THERMAL | | | | |
| Resistance ² @ 150 PSI | °C-inch²/W | 0.10 | 0.13 | 0.17 |
| Resistance ² @ 30 PSI | °C-inch²/W | 0.15 | 0.19 | 0.24 |
| Thermal Conductivity ² | W/mK | 8.0 | 8.0 | 8.0 |
| Operating Temperature Range | °C | -40 to + 180 | -40 to +180 | -40 to + 180 |
| ELECTRICAL | | | | |
| Breakdown Voltage³ | kV AC | 3.6 | 4.5 | 5.0 |

Measurement technique according to: ASTM D 412, ASTM D 5470, 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





SILICONE FOIL TFO-L-SI

NOT REINFORCED

TFO-L-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. Its conformal surface structure guarantees a very good compliance to the contact surfaces even at low pressure. Thus the total thermal resistance is minimised. The material can be applied in a broad field of applications.



PROPERTIES

- Thermal conductivity: 2.1 W/mK
- · Very good surface compliance
- · Very low thermal resistance
- Extraordinary chemical resistance and longterm stability
- · Residue-free removal after use

AVAILABILITY

- Sheet 440 x 480 mm
- · Non tacky (TFO-LXXX-SI)
- · Die cut parts

APPLICATION EXAMPLES

Thermal link of:

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

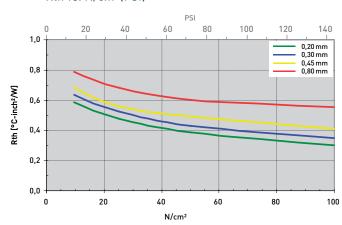
For use in Switch mode power supplies / Motor control units / Automotive engine management systems / UPS units / Solar systems

| PROPERTY | UNIT | TF0-L200-SI | TF0-L300-SI | TF0-L450-SI | TFO-L800-SI |
|-----------------------------------|-----------------|-------------------------|-------------------------|-------------------------|-------------------------|
| MATERIAL | | Ceramic filled silicone | Ceramic filled silicone | Ceramic filled silicone | Ceramic filled silicone |
| Colour | | Grey | Grey | Grey | Grey |
| Reinforcement | | None | None | None | None |
| Thickness | mm | 0.20 ±0.05 | 0.30 ±0.05 | 0.45 ±0.05 | 0.80 ±0.05 |
| Tensile Strength ¹ | kpsi | 0.45 | 0.45 | 0.45 | 0.45 |
| UL Flammability | UL 94 | VO | VO | V0 | VO |
| RoHS Conformity | 2015 / 863 / EU | Yes | Yes | Yes | Yes |
| THERMAL | | | | | |
| Resistance ² @ 1 MPa | °C-inch²/W | 0.30 | 0.35 | 0.41 | 0.55 |
| Resistance ² @ 200 kPa | °C-inch²/W | 0.50 | 0.56 | 0.59 | 0.71 |
| Thermal Conductivity ² | W/mK | 2.1 | 2.1 | 2.1 | 2.1 |
| Operating Temperature Range | °C | - 50 to + 200 |
| ELECTRICAL | | | | | |
| Breakdown Voltage³ | kV AC | 3 | 5 | 8 | 9 |
| Volume Resistivity | 0hm - cm | 1.5 x 10 ¹³ | 6.0 x 10 ¹³ | 5.4 x 10 ¹³ | 7.7 x 10 ¹³ |
| Dielectric Constant | @ 1 MHz | 5.5 | 5.5 | 5.5 | 5.5 |

Measurement technique according to: 'ASTM D 412, 'ASTM D 5470, '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 / 0.80 mm

Rth vs. N/cm² (PSI)





INSULATING FILM TFO-M-SI-PI

SILICONE COATED, HIGHLY DIELECTRIC

TFO-M-SI-PI is an electrically insulating thermally conductive foil made of a high voltage resistant Polyimide film with thermally conductive silicone coating on both sides 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 substrate film provides for an outstanding mechanic stability and cutthrough resistance as well as easy handling.



PROPERTIES

- High thermal contact
- · Very high dielectric strength
- Outstanding mechanic stability through substrate film
- Extraordinary chemical resistance and longterm stability
- · Residue-free removal after use

AVAILABILITY

- Sheet 320 x 400 mm Others on request
- Roll 320 mm x 50 m
- Non tacky (TFO-MXXX-SI-PI)
- Die cut parts

APPLICATION EXAMPLES

Thermal link of:

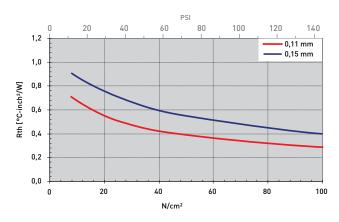
- MOSFETs or IGBTs
- Power diodes or AC/DC converters
- Power modules

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

| PROPERTY | UNIT | TF0-M110-SI-PI | TF0-M150-SI-PI |
|-----------------------------|-----------------|---|---|
| MATERIAL | | Insulating film coated with ceramic filled silicone | Insulating film coated with ceramic filled silicone |
| Colour | | Light brown | Light brown |
| Reinforcement | | Polyimide film | Polyimide film |
| Thickness | mm | 0.11 ±0.02 | 0.15 ^{±0.02} |
| UL Flammability | UL 94 | V0 | VO |
| RoHS Conformity | 2015 / 863 / EU | Yes | Yes |
| THERMAL | | | |
| Resistance¹ @ 150 PSI | °C-inch²/W | 0.29 | 0.40 |
| Resistance¹ @ 30 PSI | °C-inch²/W | 0.55 | 0.75 |
| Operating Temperature Range | °C | - 40 to + 180 | - 40 to + 180 |
| ELECTRICAL | | | |
| Breakdown Voltage² | kV AC | 6 | > 6 |

Measurement technique according to: 'ASTM D 5470, 'ASTM D 149. All data without warranty and subject to change. Please contact us for further data and information.

Thickness: 0.11 / 0.15 mm





VORES PRODUKTSORTIMENT INKLUDERER:













VI FØRER PRODUKTER INDENFOR KATEGORIERNE:



AUTOMATIK



HVAC & BYGNINGS-AUTOMATIK



ELVARME



