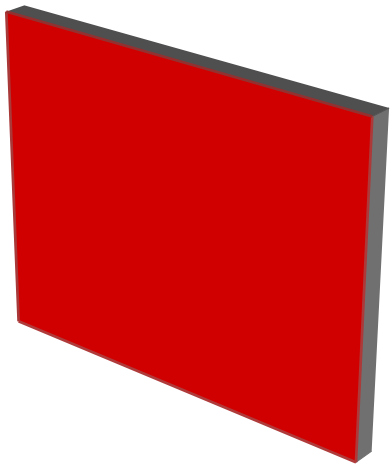
TM-HMX Thermally Conductive Silicone Foil

TM-HMX is an electrically insulating thermally conductive 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 high thermal conductivity. Through its extreme softness and flexibility the material perfectly mates to irregular surfaces thus filling gaps at minimum pressure. By its use the total thermal resistance is minimised. The thermally conductive glass fibre reinforced silicone laminate on one side provides for a high mechanic stability and strength. The natural tackiness of the material allows for an easy and reliable pre-assembly.



Properties

- Extremely soft and compliable
- Thermal conductivi of 2.4 W/mK
- Operates at lowest pressures
- Extraordinary chemical resistance and longterm stability
- Residue-free removal after use
- Easy mounting through natural self tackiness
- One-sided laminated with glass fibre reinforced silicone foil

Availability

- Sheet of 200 mm x 400 mm

- Die cut parts
- Kiss cut parts on sheet

Application Examples

Thermal link of :
- SMD packages
- Through-hole vias
- Capacitors
- Electronic parts to heat pipes

For use in :
- Automotive applications
- Laptops
- Medicine engineering
- Industrial PCs

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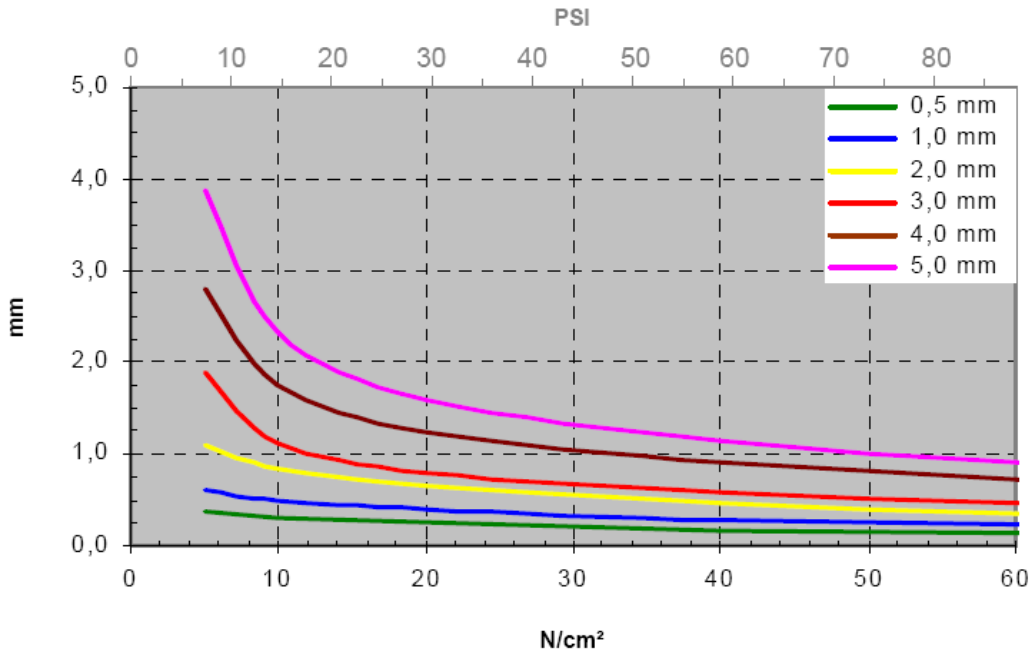
Technical Data

Part	TM-HMX050	TM-HMX100	TM-HMX200	TM-HMX300	TM-HMX500
Material	Ceramic filled silicone				
Colour	Grey/Red				
Reinforcement	Glass fibre laminate				
Thickness [mm]	0,5	1,0	2,0	3,0	5,0
Hardness [Shore 00]	15	15	15	15	15
UL Flammability [UL 94]	V0	V0	V0	V0	V0
RoHS Conformity [2002/95/EC]	Yes	Yes	Yes	Yes	Yes
Thermal Resistance @60 PSI @ Thickness [°C-inch^2/W (mm)]	0,20 (0,17)	0,25 (0,28)	0,35 (0,45)	0,45 (0,60)	0,75 (1,16)
Thermal Resistance @30 PSI @ Thickness [°C-inch^2/W (mm)]	0,25 (0,26)	0,30 (0,43)	0,50 (0,70)	0,57 (0,83)	1,05 (1,58)
Thermal Resistance @10 PSI @ Thickness [°C-inch^2/W (mm)]	0,30 (0,34)	0,42 (0,57)	0,68 (0,95)	1,02 (1,50)	2,00 (3,10)
Thermal Conductivity [W/mK]	2,4	2,4	2,4	2,4	2,4
Operating Temperature Range [°C]	-40 to +200	-40 to +200	-40 to +200	-40 to +200	-40 to +200
Dielectric Strenght [kV/mm]	>4	>4	>4	>4	>4
Volume Resistivity [Ohm-cm]	1,7 x 10^{13}	1,7 x 10^{13}	1,7 x 10^{13}	1,7 x 10^{13}	1,7 x 10^{13}

R_{th} vs. N/cm^2 (PSI)



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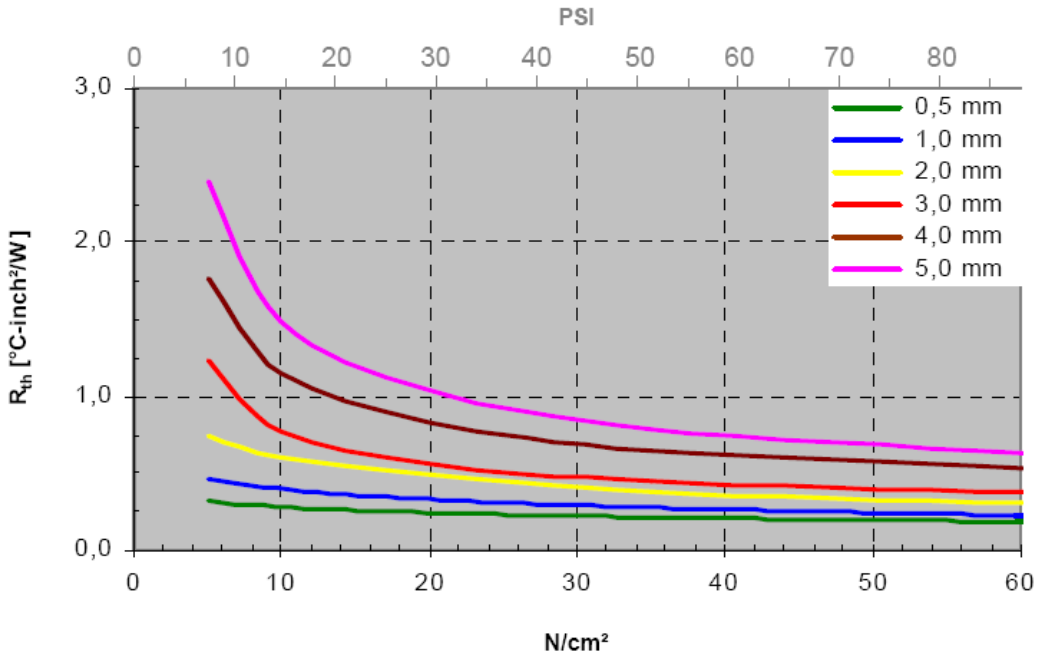

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