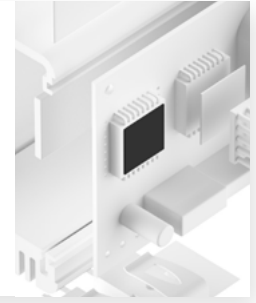


GRAPHITE FILM WITH PHASE CHANGE

TPC-V-PG-CB Pyrolytic graphite, phase change coating



TPC-V-PG-CB is an anisotropic thermally conductive pyrolytic graphite film which is coated with a thermally conductive phase changing compound on both sides thus optimising the thermal path e.g. between electronic packages and heat sinks. During warm-up the phase change coating starts filling up surface-specific roughnesses and unevennesses and expels any air enclosures from micro structures even at low pressure. The wetting of the contact areas is further on improved by volumetric material expansion at increasing temperature. Thus the total thermal resistance is minimised. The flexible pyrolytic graphite carrier effects mechanical stability and easy handling.



Release 02 / 2022

PROPERTIES

- Optimal thermal contact
- Silicone-free
- Flexible, easy to handle
- Process reliable coating thickness
- Ideal alternative and replacement of messy thermal grease
- EMI shielding

AVAILABILITY

- Sheet 190 x 355 mm (40 µm)
- Sheet 139 x 355 mm (70 / 100 µm)
- Roll 190 mm x 25 m (min.) (40 µm)
- Roll 139 mm x 25 m (min.) (70 / 100 µm)
- Non tacky (TPC-VXXX-PG-CB)
- Tacky on one side (TPC-VXXX-PG-CB-A1)
- Die cut parts

APPLICATION EXAMPLES

Thermal link of:

- MOSFETs or IGBTs
- Insulated diodes
- Power modules
- CPUs

For use in Servo drive control units / Heat Pipe Assemblies / Traction drives / Automation appliances / Microelectronics / IT-Servers

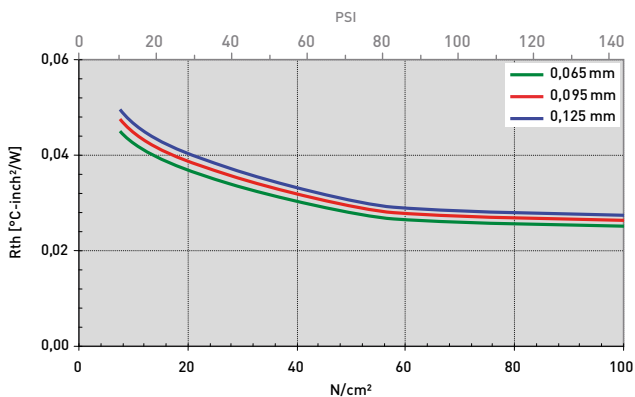
Technical Data Sheet

PROPERTY	UNIT	TPC-V065-PG-CB	TPC-V095-PG-CB	TPC-V125-PG-CB
MATERIAL				
Colour		Black	Black	Black
Thickness pyrolytic graphite	µm	40	70	100
Thickness Phase Change (per side)	µm	12.5	12.5	12.5
Total Thickness	µm	65 ±5	95 ±7	125 ±8
RoHS Conformity	2015 / 863 / EU	Yes	Yes	Yes
THERMAL				
Resistance ¹ @ 150 PSI	°C-inch ² /W	0.025	0.026	0.027
Resistance ¹ @ 30 PSI	°C-inch ² /W	0.037	0.039	0.041
Resistance ¹ @ 10 PSI	°C-inch ² /W	0.046	0.048	0.051
Thermal Conductivity Pyrolytic graphite (Z Direction)	W/mK	6	7	8
Thermal Conductivity Pyrolytic graphite (X-Y Direction)	W/mK	1,450	1,400	1,350
Phase Change Temperature	°C	ca. 52	ca. 52	ca. 52

Measurement technique according to: ASTM D 5470. 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.

Phase Change coatings per side: 12.5 µm / 25.5 µm / 31.8 µm
 Thicknesses pyrolytic graphite: 40 µm / 70 µm / 100 µm

Rth vs. N/cm² (PSI)



All technical data and information are without warranty and believed to be reliable and accurate corresponding to the latest state of the art. Since the products are not provided to conform with mutually agreed specifications and their use and processing are unknown we cannot guarantee results, freedom from patent infringement, or their suitability for any application. Product testing by the applicant is recommended. We reserve the right of changes.