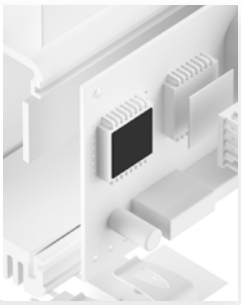
# ALU FILM / PHASE CHANGE TPC-T-AL-CB

phase change coating

HALA

TPC-T-AL-CB is an aluminum 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 unevenesses and expels any air enclosures from micro structures even at low pressure. The wettening of the contact areas is further on improved by volumetric material expansion at increasing temperature. Thus the total thermal resistance is minimised. The aluminum carrier effects high mechanical stability and easy handling.





## PROPERTIES

- Optimal thermal contact
- Silicone-free
- Process reliable coating thickness
- Ideal alternative and replacement of messy thermal grease

## AVAILABILITY

- Sheet 445 x 500 mm
- Roll 445 mm x 152 m
- Non tacky (TPC-TXXX-AL-CB)
- Die cut parts

## APPLICATION EXAMPLES

Thermal link of:

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

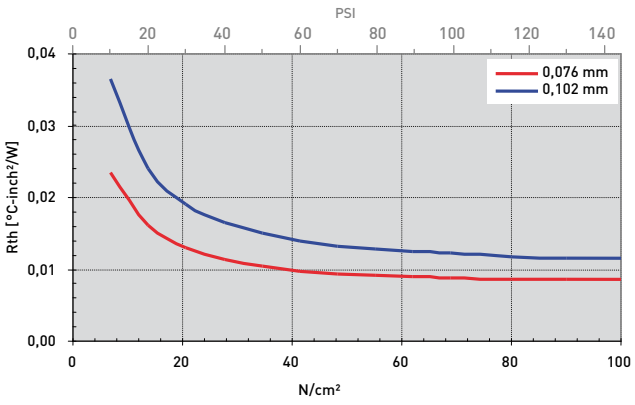
For use in Servo drive control units / Traction drives / Automation appliances / Microelectronics

| PROPERTY | UNIT | TPC-T076-AL-CB | TPC-T102-AL-CB |
|---|---|---|---|
| **MATERIAL** | | Aluminum with graphite filled phase change coating on both sides[1] | Aluminum with graphite filled phase change coating on both sides[1] |
| Colour | | Black | Black |
| Thickness Aluminum | µm | 51 ±8 | 51 ±8 |
| Thickness Phase Change (per side) | µm | 12.5 | 25.5 |
| Total Thickness | µm | 76 | 102 |
| RoHS Conformity | 2015 / 863 / EU | Yes | Yes |
| **THERMAL** | | | |
| Resistance[2] @ 150 PSI | °C-inch²/W | 0.009 | 0.011 |
| Resistance[2] @ 30 PSI | °C-inch²/W | 0.013 | 0.019 |
| Resistance[2] @ 10 PSI | °C-inch²/W | 0.022 | 0.037 |
| Phase Change Temperature | °C | ca. 52 | ca. 52 |

[1] Structural PCM coating variations are functionally neutral.
Measurement technique according to: [2] ASTM D 5470. Typical, non-binding values. Not intended for specification purposes. Subject to technical changes. Please contact us for further information.

Phase Change coatings per side: 12.5 µm / 25.5 µm
Total Thicknessess: 76 µm / 102 µm

Rth vs. N/cm² (PSI)

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