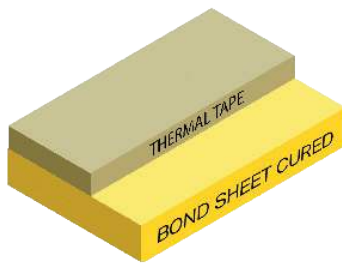


# BOND SHEET CURED + THERMAL TAPE TT50

Data Sheet DS\_59

1/2

## STANDARD CONSTRUCTION



**Thermal tape  $\mu\text{m}$  (mils)**  
50 (1,97)

**Bonsheet cured  $\mu\text{m}$  (mils)**  
70(2.8) / 100(3,9)



UL Approved QMST2  
File: E47820  
IPC-4101



RoHS 3 / REACH  
Last updated compliance directive



## DESCRIPTION

- Ultra-thin dielectric layer, high dielectric strength, high thermal conductivity and low thermal resistance.
- Consisting of a glass fabric base, enriched with mineral fillers.
- Thermal conductivity of 2.2 W/mK with dielectric strengths greater than 4 KV (70  $\mu\text{m}$  dielectric) or 6 KV (100  $\mu\text{m}$  dielectric thickness).
- Low thermal resistance  $R_{th}$  of 0.315 (70 $\mu\text{m}$ ), or 0.45 Kcm<sup>2</sup>/W (100 $\mu\text{m}$ ), which efficiently dissipates the heat generated by the power components to the cooling elements.
- Silicon free.
- Ideal for pick and place automation
- One side or 2 sides of self-adhesive pressure sensitive adhesive tape TT50 with excellent wettability and conformability to aluminum ,copper and FR4 surfaces.

| Properties  | BSC70 1TT50  | BSC100 1TT50 | UNITS                                       | TOLERANCE                    | TEST METHOD        |
|---|--------------|--------------|---|------------------------------|--------------------|
| Thermal conductivity                                      | 1,5 (0,038)  | 1,5 (0,038)  | W/mK (W/inK)                                | ± 15%                        | ASTM D5470         |
| Thermal Resistance  | 0,090        | 0,107        | K/W   | ± 15%                        | ASTM D5470         |
| Thermal impedance @10/30/50 psi                           | 0,77 (0,119) | 0,92 (0,143) | Kcm <sup>2</sup> / W (Kin <sup>2</sup> / W) | ± 15%                        | ASTM D5470         |
| Nominal thickness (pressed)                               | 120 (4,7)    | 150 (5,9)    | $\mu\text{m}$ (mils)                        | ± 15 $\mu\text{m}$ (0,6mils) | -                  |
| Filler type   | Ceramic      | Ceramic      | -   | -                            | -                  |
| Dielectric breakdown voltage, AC                          | ≥4           | ≥6           | kV  | -                            | IPC TM 650 2.5.6.3 |
| Initial Tack (Peel adhesion)                              | 4,3***       | 4,3          | N/cm  | -                            | ASTM D3330         |
| Continuous Working Temperature                            | 130*         | 130*         | °C  | -                            | UL-MOT             |
| Volume Resistivity (los tenemos H Tg)                     | 1.82E+14*    | 1.82E+14*    | Ohm-cm                                      | -                            | ASTM D257          |
| Surface Resistivity (los tenemos H Tg)                    | 2.14E+13*    | 2.14E+13*    | Ohm   | -                            | ASTM D257          |
| Decomposition Temperature (Td) Initial                    | 205*         | 205*         | °C  | -                            | IPC-TM 650-2.3.41  |
| Decomposition Temperature (Td) 5% loss                    | 327*         | 327*         | °C  | -                            | IPC-TM 650-2.3.41  |
| Glass transition temperature of dielectric layer (by DSC) | 120*         | 120*         | °C  | -                            | IPC-TM 650-2.4.24  |
| Permittivity  | 6,7 (0,170)* | 6,7 (0,170)* | pF/m (pF/in)                                | -                            | -                  |
| Flammability / Flame Rating                               | V-0**        | V-0**        | class                                       | -                            | UL-94              |
| Density   | 1,6          | 1,6          | gr/cm <sup>3</sup>                          | ± 5%                         |                    |

## STORAGE CONDITIONS

Keep storage climate conditions below 24°C and 55% relative humidity. In the event of storing under very low warehouse temperatures give some time for the packed TIM's to stabilize to room temperature before opening. Keeping the above mentioned storage conditions and avoiding TIM's damage by humidity uptake will give a useful life of 6 months after production date.

# BOND SHEET CURED + 2 THERMAL TAPE TT50

## DESCRIPTION

**Thermal tape  $\mu\text{m}$  (mils)**  
50 (1,97)

**Bonsheet cured  $\mu\text{m}$  (mils)**  
70(2,8) / 100(3,9)

**Thermal tape  $\mu\text{m}$  (mils)**  
50 (1,97)



UL Approved QMST2  
File: E47820  
IPC-4101



RoHS 3 / REACH  
Last updated compliance directive



| Properties                       | BSC70 2TT50   | BSC100 2TT50  | UNITS                                       | TOLERANCE                        | TEST METHOD        |
|----------------------------------|---------------|---------------|---|----------------------------------|--------------------|
| Thermal conductivity             | 1,5 (0,038)   | 1,5 (0,038)   | W/mK (W/inK)                                | $\pm$ 15%                        | ASTM D5470         |
| Thermal Resistance               | 0,138         | 0,156         | K/W   | $\pm$ 15%                        | ASTM D5470         |
| Thermal impedance @10/30/50 psi  | 1,183 (0,183) | 1,333 (0,207) | Kcm <sup>2</sup> / W (Kin <sup>2</sup> / W) | $\pm$ 15%                        | ASTM D5470         |
| Nominal thickness (pressed)      | 170 (6,7)     | 200 (7,8)     | $\mu\text{m}$ (mils)                        | $\pm$ 15 $\mu\text{m}$ (0,6mils) | -                  |
| Filler type                      | Ceramic       | Ceramic       | -   | -                                | -                  |
| Dielectric breakdown voltage, AC | $\geq$ 5      | $\geq$ 7      | kV  | -                                | IPC TM 650 2.5.6.3 |
|                                  |               |               |   |                                  |                    |
|                                  |               |               |   |                                  |                    |
|                                  |               |               |   |                                  |                    |
|                                  |               |               |   |                                  |                    |
|                                  |               |               |   |                                  |                    |
|                                  |               |               |   |                                  |                    |
|                                  |               |               |   |                                  |                    |
|                                  |               |               |   |                                  |                    |
|                                  |               |               |   |                                  |                    |
|                                  |               |               |   |                                  |                    |