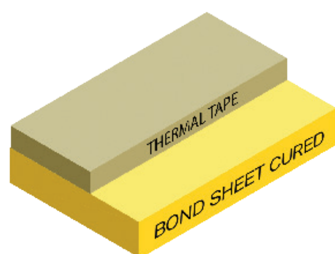
BOND SHEET CURED HTG + THERMAL TAPE

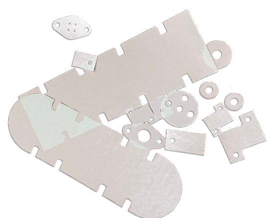
Data Sheet DS_64

STANDARD CONSTRUCTION



Thermal tape µm (mils)
50 (1,97)

Bonsheet cured **µm (mils)**
80 (3,15)



UL Approved QMTS2
File: E47820
IPC-4101

RoHS 3 / REACH
Last updated compliance directive

DESCRIPTION

- Hight Tg 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 3.2 W/mK with dielectric strengths greater than 4 KV (80 µm dielectric)
- Low thermal resistance, which efficiently dissipates the heat generated by the power components to the cooling elements.
- Silicon free.
- One side or 2 sides of self-adhesive pressure sensitive adhesive tape TT50 with excellent wettability and conformability to aluminum ,copper and FR4 surfaces.
- Very Low CTE expansion

Properties	BSC80 HTG 1TT50	UNITS	TOLERANCE	TEST METHOD
Thermal conductivity	2,2 (0,056)	W/mK (W/inK)	+/- 15%	ASTM D5470
Thermal Resistance	0,080	K/W	+/- 15%	ASTM D5470
Thermal impedance @10/30/50 psi	0,683 (0,106)	Kcm²/ W (Kin²/ W)	+/- 15%	ASTM D5470
Nominal thickness (pressed)	130 (5,1)	µm (mils)	+/- 15µm (0,6mils)	-
Reinforcement Carrier on BSC	Glass fiber	-	-	-
Dielectric breakdown voltage, AC	≥4	kV	-	IPC TM 650 2.5.6.3
Initial Tack (Peel adhesion)	4,3***	N/cm	-	ASTM D3330
180º Peeling Strength (aluminium)	-	N/25mm	-	PSTC-101
Continuous Working Temperature	130*	ºC	-	UL-MOT
Volume Resistivity (los tenemos H Tg)	1.82E+14*	Ohm-cm	-	ASTM D257
Surface Resistivity (los tenemos H Tg)	2.14E+13*	Ohm	-	ASTM D257
Decomposition Temperature (Td) Initial	340*	ºC	-	IPC-TM 650-2.3.41
Decomposition Temperature (Td) 5% loss	420*	ºC	-	IPC-TM 650-2.3.41
Glass transition temperature of dielectric layer (by DSC)	180*	ºC	-	IPC-TM 650-2.4.24
Permitivity	6,7 (0,170)*	pF/m (pF/in)	-	-
CTE (x,y)	14-15*	ppm/ºC	-	IPC-TM 650-2.4.41
CTE (z) <Tg	37*	ppm/ºC	-	IPC-TM 650-2.4.24
CTE (z) >Tg	172*	ppm/ºC	-	IPC-TM 650-2.4.24
Z-axis Expansion (50-250ºC)	1.8 (77ppm)*	%	-	IPC-TM 650-2.4.24
Flammability / Flame Rating	V-0**	class	-	UL-94
Density	1,6	gr/cm³	+/- 5%	

STORAGE CONDITIONS

Keep storage climate conditions below 24ºC 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.

(*) Value only of the Bond Sheet Cured HTg
(**)Flammability rating is only valid when TT50 or TT100 is cladded to an aluminium laminate of 0,8mm or higher and at the other side an FR4 with V-0 recognition with 0,8mm or higher.
(***) Only on thermal tape side.

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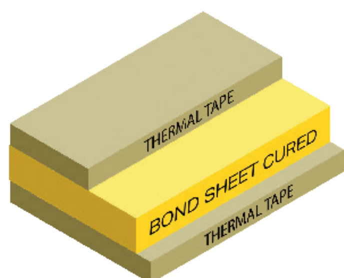
BOND SHEET CURED HTG + 2 THERMAL TAPE

STANDARD CONSTRUCTION



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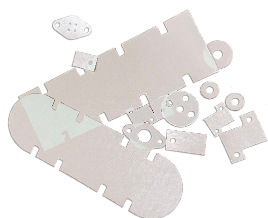

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Thermal conductivity	2,2 (0,056)	W/mK (W/inK)	+/- 15%	ASTM D5470
Thermal Resistance	0,128	K/W	+/- 15%	ASTM D5470
Thermal impedance @10/30/50 psi	1 (0,155)	Kcm²/ W (Kin²/ W)	+/- 15%	ASTM D5470
Nominal thickness (pressed)	180 (7,1)	µm (mils)	+/- 15µm (0,6mils)	-
Reinforcement Carrier on BSC	Glass fiber	-	-	-
Dielectric breakdown voltage, AC	≥5	kV	-	IPC TM 650 2.5.6.3
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