FLEXTHERM®

AISMALIBAR

DATA SHEET DS_1207

DESCRIPTION

Insulated Metal Substrate (IMS), based on thick aluminium and clad with RA copper foil in the other side or two sides. It is designed for a reliable thermal dissipation circuitry.
Flextherm is ideal to produce conformable MPCB . Can be bended after MPCB production keeping the initial dielectric strength in between conductive layers (Al and Cu).

SPECIFICATIONS

- Stands Lead Free Soldering process
- Excellent for high temperature components applications
- Extremely low thermal impedance
- V-0 Granted
- Halogen Free
- High MOT values.
- Produced with RA copper to grant conformable properties

The material is supplied with a protective film on the aluminium side to protect it against wet PCB process.

ROHS compliance directive 2002/95/EC and REACH Nº 1907/2006

STANDARD CONSTRUCTIONS

Aluminium thickness, µm	800 - 1000 – 1500	Aluminium Alloy / Treat	1050-3003 -5052-5754
Insulation thickness, µm	25 -35	Dielectric thickness tolerance	± 3 µm
RA copper thickness, µm	35 – 70		
Other constructions available upon request			

PROPERTIES 1500 µm Al / 25 µm dielectric / 35 µm Cu	TEST METHOD	UNITS	TYPICAL VALUES	Guaranteed values
Time to blister at 288ºC, floating on solder (50 x 50 mm)	IEC-61189	sec	>60	>30
Copper Peel strength, after heat shock 20 sec/288ºC	IPC-TM 650-2.4.8	N/mm (Lb/inch)	1,5 (16,0)	>1,0 (>10,3)
Dielectric breakdown voltage, AC **(1) Flextherm 25µm**	IPC-TM 650-2.5.6.3	kV	2	2
Dielectric breakdown voltage, AC **(1) Flextherm 35µm**			4	4
Thermal conductivity (dielectric layer)	ASTM-D 5470	W/mK (W/in·K)	0,7 (0,018)	0,6 (0,015)
Flammability, according UL-94, class	UL-94	Class	V-0	V-0
Thermal Impedance ºC-m^2/watt **Flextherm 25 µm**	Calculated	Kcm^2/W (K in^2/W)	0,36 (0,055)	0,42 (0,065)
Thermal Impedance ºC-m^2/watt **Flextherm 35 µm**			0,50 (0,078)	0,58 (0,090)
Maximum Operational Temperature		ºC	140	130
Aluminium Thermal Conductivity	ASTM-D 5470	W/mK	135	130
Copper Thermal Conductivity	ASTM-D 5470	W/mK	375	380

AVAILABILITY	
Standard Panel Size mm (inch)	610x460 (24x18) 600x500 (23,5x20)
Sheet size tolerance mm (inch)	+5/-0 (+0.2/-0,0000)
Squareness mm (inch)	1,5 (0,1181) max., as differential between diagonal measurements.
Standard panel tolerance mm (inch)	+- 0,3 (+/- 0.0118)

The data is based on typical values of standard production and should be considered as general information. Our company reserves the right to future changes. It is the responsibility of the user to ensure that the product complies with his requirements.

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