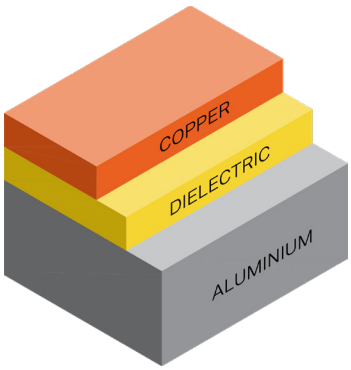
COBRITHERM HTC 3,2W 90-130µm

STANDARD CONSTRUCTION



*Other constructions available upon request

ED copper thickness µm (in)
35 (1 oz) / 70 (2 oz) / 105 (3 oz)

Isolation thickness µm (in)
90 (3 mils) / 130 (5 mils)

Dielectric thickness tolerance
+/- 15 µm (+/- 0,6 mils)

Aluminium thickness µm (in)
800 (0,031) / 1000 (0,0394) / 1200 (0,047) / 1500 (0,059) / 2000 (0,079) / 2500 (0,098)

Alloy/Treat
5052 / 6061

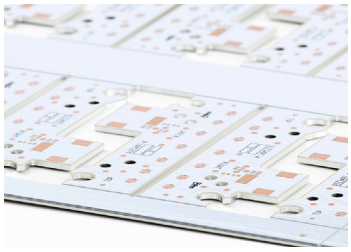
DESCRIPTION

Insulated Metal Substrate (IMS), based aluminum clad with ED copper foil on the opposite side. It is designed for the relia-

ble thermal dissipation of circuitry. A proprietarily formulated reinforced-polymer-ceramic bonding layer with a high thermal conductivity of 3.2 W/m·K and high dielectric strength allows us to guarantee thermal dissipation from electronic components to the aluminum base in fast and efficient way. High MOT values guaranty the reliability of the laminate.

The entire COBRITHERM range is 100% proof test guaranteed. AISMALIBAR tests the isolation in between the copper and aluminum layers under high voltage.

Ideal for power moduls, IGBTS and automotive power train.



UL Approved QMTS2
QMTS8 File: E47820
IPC-4101

RoHS 3 / REACH
Last updated compliance directive

PROPERTIES	TEST METHOD	UNITS	GUARANTEED VALUES	
Time to blister at 288°C, floating solder bath	IEC-61189	Sec	≥ 60	
Copper Peel strength, after heat shock 20 sec/288°C (Cu 70 µm)	IPC-TM 650-2.4.8	N/mm (Lb/in)	≥ 1,5 (≥ 8,6)	
Dielectric breakdown voltage, AC (1)	IPC-TM 650-2.5.6.3	KV	90 µm	≥ 4
			130 µm	≥ 6
Proof Test, DC	--	V	90 µm	1500
			130 µm	3000
Thermal conductivity (dielectric layer)	ASTM-D 5470	W/m·K (W/in·K)	3,00 (0,076) *	
Thermal resistance (dielectric layer)	ASTM-D 5470	K/W (K/W)	90 µm	0,035 *
			130 µm	0,051 *
Surface resistance after damp heat and recovery	IPC-TM-650 2.5.17.1	MΩ	≥ 10^5	
Volume resistivity after damp heat and recovery	IPC-TM-650 2.5.17.1	MΩm	≥ 10^4	
Relative permittivity after damp heat and recovery, 10 kHz	IPC-TM-650 2.5.5.9	-	5,2	
Dissipation factor after damp heat and recovery 10 kHz	IPC-TM-650 2.5.5.9	-	0,015	
Comparative tracking index (CTI)	IEC-61112	V	600	
Flammability, according UL-94, class	UL-94	Class	V-0	
Glass transition temperature of dielectric layer (by DSC)	IPC-TM-650 2.4.25	°C	120	
Maximum operating temperature	--	°C	150	
Decomposition Temperature (Td) 5% loss	IPC-TM 650-2.3.41	°C	422	

AVAILABILITY	
Standard Sheet Sizes Aluminium mm (in)	1225x925 (48,2x36,4), 1215x1015 (47,8x39,9). Also available in cut-to-size panels.
Standard Sheet Sizes Copper base mm (in)	610x460 (24x18)
Tolerance mm (in)	+5/-0 mm (0,2 in)
Squareness mm (in)	3 mm (0,12 in) max., as differential between diagonal measurements.
Standard size tolerance in panels mm (in)	+- 0,3 mm (0,0118 in)

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(*) Thermal conductivity and resistance values may deviate by up to +/- 15%.

(1) The Dielectric Breakdown test is conducted in a laboratory setting according to IPC-TM-650 part 2.5.6.3. It involves applying AC voltage until electrical failure occurs on a relatively small area of the dielectric layer using metal electrodes. These values serve as material references and should not be construed as guaranteed.

The data is based on typical values from standard production and is provided for general informational purposes. Our company reserves the right to make future changes. The user is responsible for ensuring that the product meets their requirements.