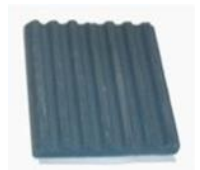


As each new generation of electronic equipment exhibits higher performance into ever smaller packages, the need for dissipating power in the form of heat grows ever more demanding and requires some degree of thermal management.

AMEC Thermasol markets a comprehensive range of Thermal Management Materials, our products include thermally conductive pads and gap fillers, thermally conductive adhesive tapes, phase change interface materials and graphite foil.

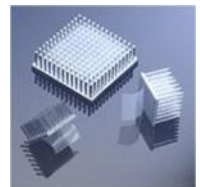
**Ceramic Heat sinks**

The structure of the Micro Porous Ceramic Heat Sink allows it to provide low thermal capacity in unit volume compared to Copper and Aluminium Heat Sinks. The MPCHS dissipates heat faster than metal Heat Sinks without storing heat within itself. Available in flat type and finned type.



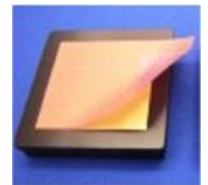
**Pressfin heat sinks**

Pressfin heat sinks react much faster as the manufacturing process ensures the atomic structure of the aluminium is in the direction of the heat flow. They are particularly suitable for applications generating high levels of heat where space and weight are at a premium.



**Thermal Interface Materials**

Wide range of materials such as High Thermally Conductive Artificial Graphite sheet (up to 6.5 W/mk), Phase Change Filler Pads (up to 5.0 W/mk) and other materials.



**Flat Cool Pipes**

Flat Cool Pipes with thermal conductivity up to 10,000W/mk and power rating up to 250W, can be used to replace heat sinks and fans, thus reducing power consumption, product noise and cost. Heat can be directly removed from source and transferred to the chassis or to an external heat sink.



**For your EMC/EMI and Anti-Vibration requirements please see our other divisions:**



# **Heat sinks**

## **Ceramic Heat sink**

The structure of the micro porous ceramic heat sink provides a very large surface area compared to conventional copper and aluminium heat sinks. Even though the thermal resistance of the ceramic is much higher than aluminium, because of the micro porous structure it provides excellent heat dissipation and heat convection.

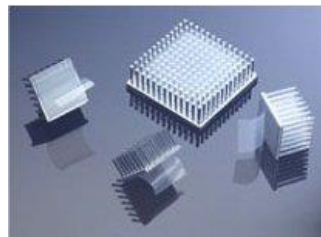
- Non-electrically conductive, no antennae effect.
- Large surface area compared to Aluminium Heat Sinks.
- With and without thermally conductive silicone adhesive tape.



## **Aluminium Heat sinks**

Pressfin heat sinks are 30-40% more efficient when compared to extracted or die cast heat sinks, this ensuring a low thermal difference between heat sink and the device.

- Round pins which are more heat efficient compared to square heat sinks.
- Pure Aluminium – DIN EN 1050 with 220 W/mk.
- Sizes from 10x10mm up to 100x100mm with variety of pin forms.



# Thermal Interface Materials

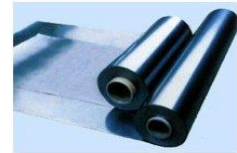
## Thermal Adhesive Tape

- No Need for clips or screws due to excellent adhesive strength.
- Thickness available from 0.05mm to 0.3mm.
- No need for clips or screws due to excellent adhesive strength.



## Artificial Graphite

- Ultra high thermal conductivity (up to 1500W/m.K).
- Ultra-thin – available in thickness 0.017-1.5mm.
- Roll format available for mass production.



## Thermal Filler Pads

- Some products available with PSA.
- Temperature range from -60C to 200C.
- Thermal Conductivity up to 6.0 W/mk.



## Grease and Paste

- High performance solution for irregular services.
- Thermal conductivity up to 10W/mk.
- Broad temperature range from -60C to 200C.



## Phase Change Pad

- Available in wax based or elastomer based material.
- Easier to handle compared to paste or grease.
- Can be supplied die cut to special order.



## Silicone Free Film

- Ultra-thin material available in either 0.15mm or 0.20mm.
- Available with adhesive one side.
- Can be supplied die cut to special order.



## Flat Cool Pipes

By using an ultra-flat Heat Pipe (also known as cool pipe) it may be possible to eliminate the need for a costly fan and heat sink, with the additional benefits of reducing power consumption, noise output, product thickness and cost. The flat heat pipes can directly remove heat from the source and be transferred direct to the chassis or to an external heat sink. It also negates the requirement for ventilation holes and thereby reduce ingress of dust (no air filters required) and static. The thickness of the cool pipes ranges from 1.2-2.5mm with lengths from 60-500mm. They can achieve up to 270w of heat transfer.

- Can achieve heat transfer up to 270W.
- Available in thickness 1.2-4.0mm and length 60mm-500mm.
- Eliminates need for ventilation holes and therefore reduces ingress of dust.



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