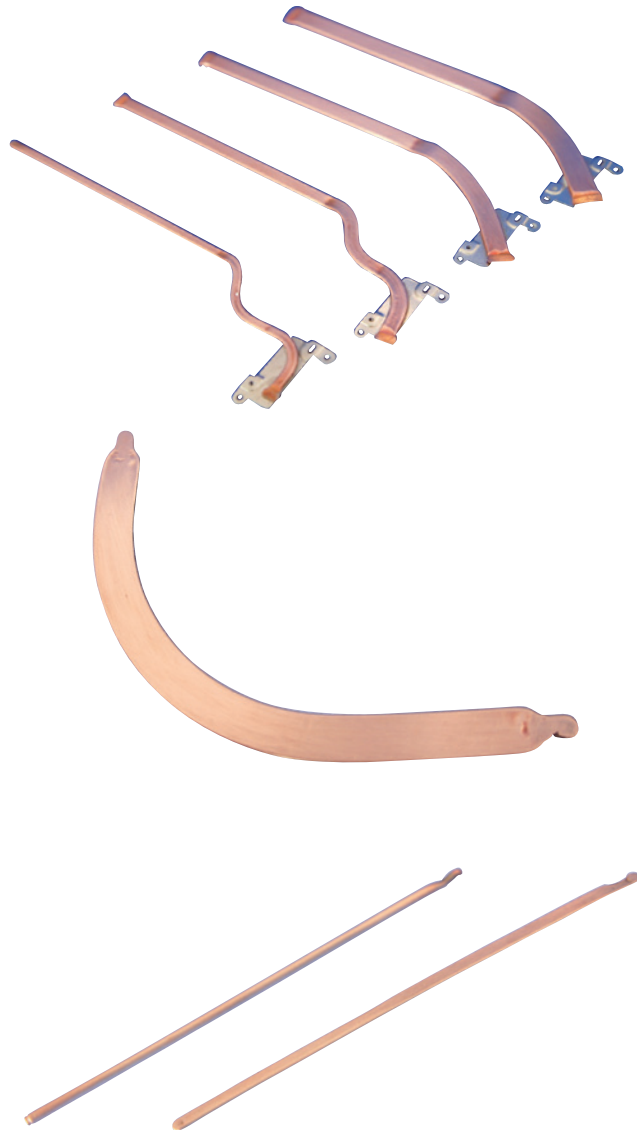


Ultra Thin Heat Pipe Solution for Smart Phone / Tablet

1W to 10W CPU / chipset for Smart Phone / Tablet



Material:
Copper Heat Pipe/Aluminum Plate

Application:
High performance smart phone and tablet are evolving to replace laptop computer especially in the consumer market. Thermal control of the CPU installed in these devices is critical to keep high and stable function though the physical space to allow heat sink installation is very limited. Most of these devices do not have a fan or an outlet to release hot air. Spreading the heat from hot spot to cooler wider area of the chassis is a general measure taken in smart phone and tablet.

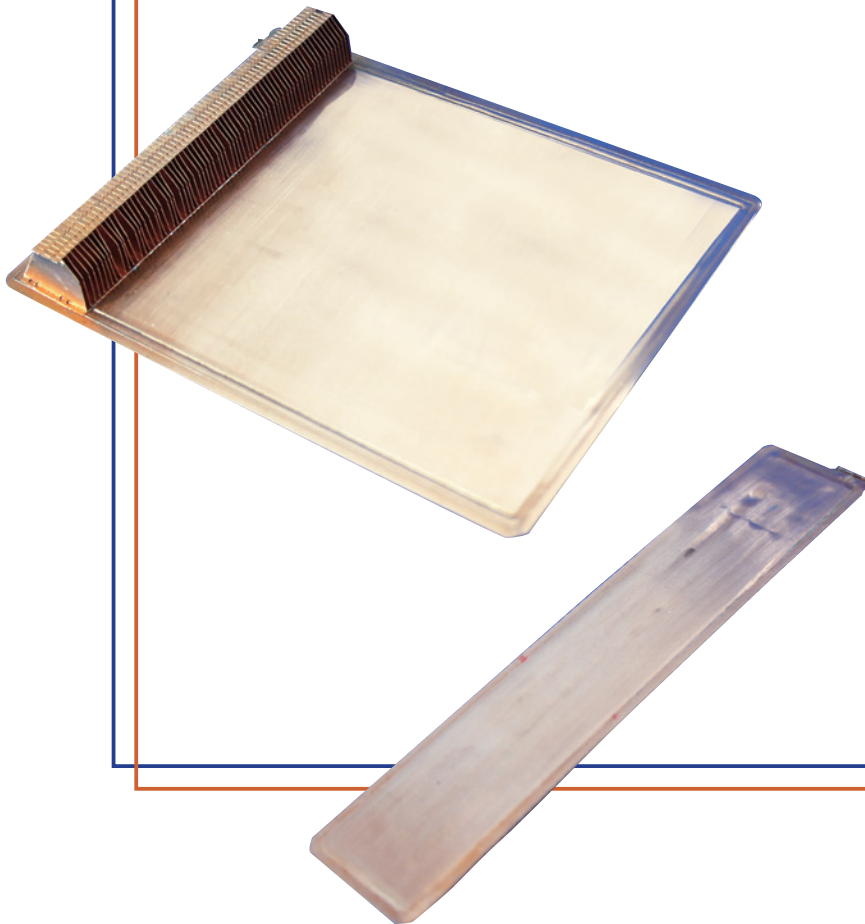
Design Concept:
Ultra thin heat pipe was developed to transfer small amount of heat (1W~10W) where space is extremely limited. The thickness of the heat pipe is less than 1mm (minimum 0.6mm) while the smallest diameter is 2 mm. Heat pipe can also be curved to an extent of minimum radius depending on the diameter of the heat pipe.

Advantage:
Hot spot temperature is 20% less than aluminum plate, 15% less than graphite sheet. Less cost than graphite sheet.



Ultra Thin Vapor Chamber for Smart Phone / Tablet (Under Development)

1W to 10W CPU / chipset for Smart Phone / Tablet



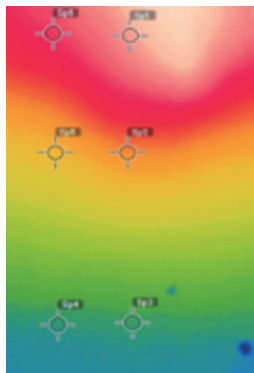
Material: Copper

Design Concept:

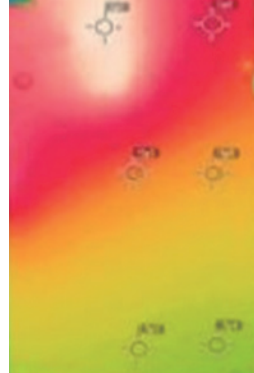
Ultra thin vapor chamber is an extremely thin heat spreader (less than 0.5mm) with design flexibility for solving hot spot in slim devices such as smart phone and tablet computer.

By using our ultra thin vapor chamber, the user will experience an even spread of heat in the chassis and will no longer feel the uncomfortable hot spot in one area of their portable device. This product is currently under development. Mass production is coming soon.

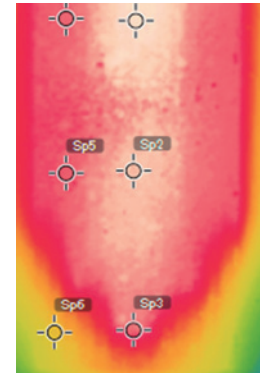
SUS plate + graphite



SUS plate + heat pipe



Ultra thin vapor chamber



Temperature distribution shows Ultra Thin Vapor Chamber has even spread of heat