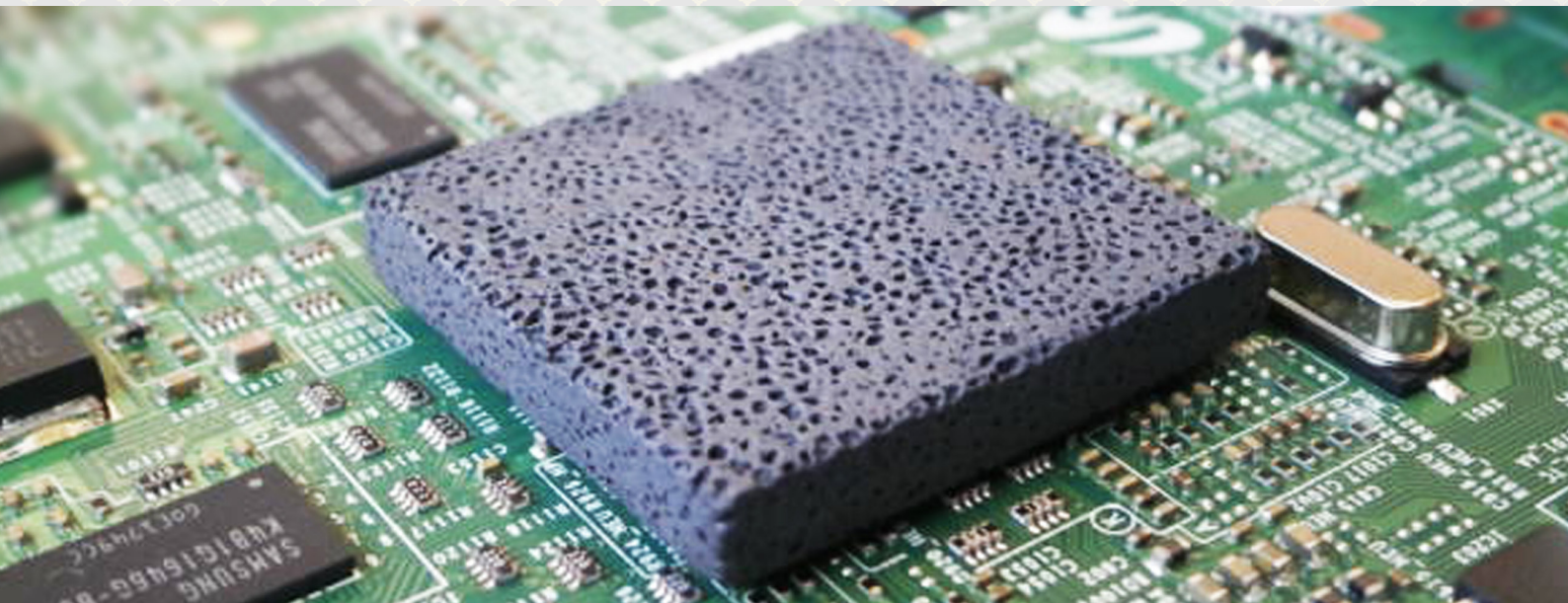


Low Profile Metallic Foam Heat Sinks



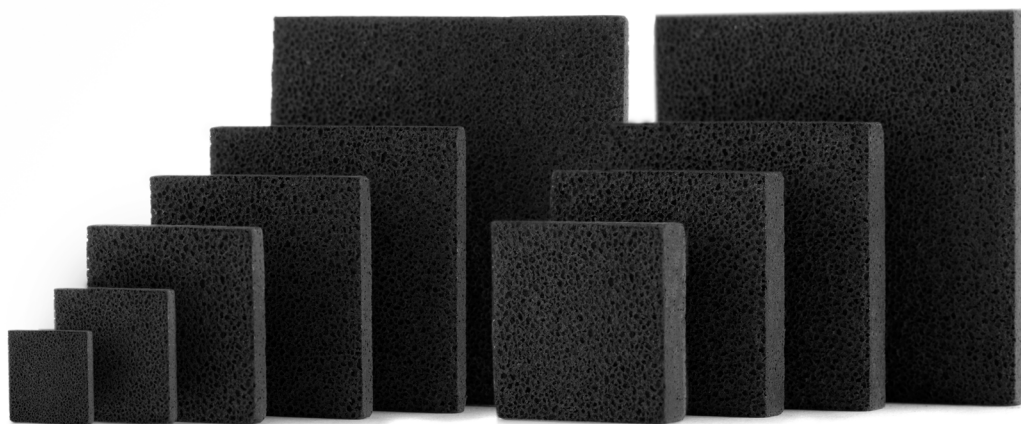
Introducing the next generation of low profile heat sinks from Versarien Technologies.

Using the incredible new material VersarienCu™, a micro-porous metallic copper foam, Versarien's heat sinks offer unparalleled thermal performance in low profile applications.

The large surface area created by the interconnected pores of the foam coupled with the excellent thermal conductivity of copper allows for the height of your heat sinks to be reduced, without sacrificing performance.

The copper foam is coated with a thin, hard layer of high temperature copper oxide that improves the emissivity of the foam to improve its radiant properties and reduce the temperature of your component.

This range is designed for use in passive cooling applications where space is at a premium and performance is crucial. VersarienCu™ heat sinks can be used to cool any IC component.



Contact us today
to find out more

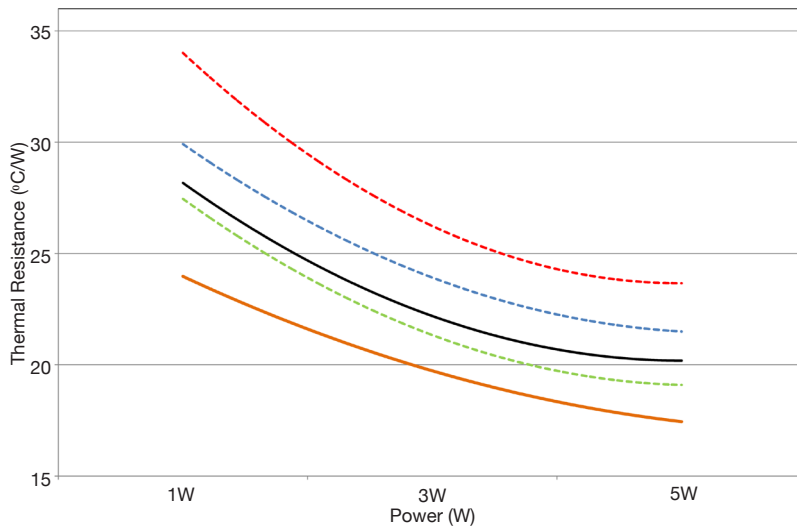
Versarien[®]
TECHNOLOGIES

e: sales@versarien.com
t: +44 (0) 1594 888 622
w: www.versarien-technologies.co.uk

Low Profile Metallic Foam Heat Sinks

| PRODUCT | APPLICATION | POWER IC | HIGH TEMP. COMPONENT | TRANSISTOR | STB | AP ROUTER | G PON | CABLE MODEM | BROADBAND | VOIP | LED TV | LED TV (SCALAR IC) |
|-------------------|-------------|----------|----------------------|------------|-----|-----------|-------|-------------|-----------|------|--------|--------------------|
| LPH0001 10x10x2 | | ● | ● | ● | | | | | | | | |
| LPH0002 15x15x2 | | ● | ● | ● | | | | | | | | |
| LPH0003 20x20x2.5 | | ● | ● | ● | ● | ● | ● | ● | ● | | ● | |
| LPH0004 20x20x5 | | ● | ● | ● | ● | ● | ● | ● | ● | | ● | |
| LPH0005 25x25x2.5 | | | | | ● | ● | ● | ● | ● | | ● | |
| LPH0006 25x25x5 | | | | | ● | ● | ● | ● | ● | | ● | |
| LPH0007 30x30x2.5 | | | | | ● | ● | | ● | ● | ● | | |
| LPH0008 30x30x5 | | | | | ● | ● | | ● | ● | | | ● |
| LPH0009 40x40x2.5 | | | | | ● | ● | | ● | ● | | | ● |
| LPH0010 40x40x5 | | | | | ● | ● | | ● | ● | | | ● |

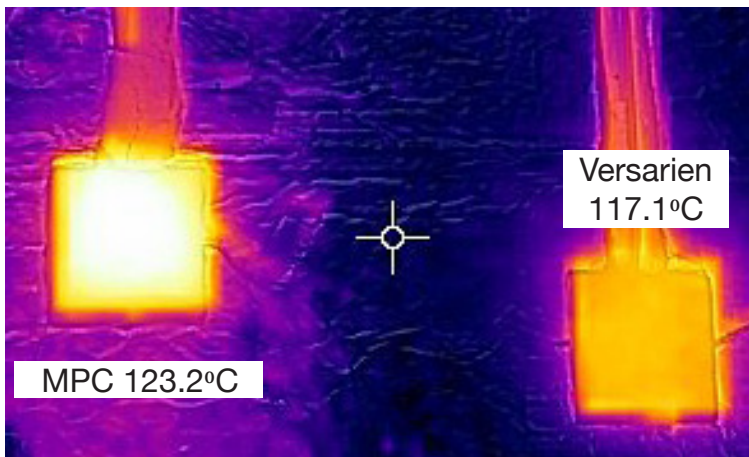
Performance Testing of 40X40 Low Profile Heat Sinks



- Blank (No Heat Sink)
- Micro-Porous Ceramic Heat Sink 2.5mm
- Aluminium Finned Heat Sink 5mm
- Versarien Copper Foam 2.5mm
- Versarien Copper Foam 5mm

Comparison testing of Versarien 63 % copper foam (solid lines) to market leading low profile ceramic and finned aluminium heat sinks (dashed lines).

Data presented is thermal resistance ($^{\circ}\text{C}/\text{W}$) vs applied power (W). Testing performed concurrently in still air with insulated load resistors.



Comparative heatmap of a 40x40x2.5 microporous ceramic and VersarienCu™ heat sink at 5W. The Versarien heat sink is 6.1 $^{\circ}\text{C}/\text{W}$ cooler.

At an applied load of 5W the thermal resistance of a 40x40x5 (mm) Versarien heat sink is 17.4 $^{\circ}\text{C}/\text{W}$

At an applied load of 2W the thermal resistance of a 20x20x5 (mm) Versarien heat sink is 35.8 $^{\circ}\text{C}/\text{W}$

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