

Woodpecker Heatspreader V1.0

Datasheet



Revision History

Date	Doc. Rev.	Heatspreader Version	Changes
11-March-09	Rev. 1.0	V1.00	Initial release
01-Feb-2011	Rev. 1.1	V1.00	New Disclaimer



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1. Introduction

The heatspreader is an interface between the Woodpecker and its components surfaces and a heat sink. Attaching a heatspreader to the Woodpecker module is not a complete thermal solution. The heatspreader is mounted to the Woodpecker by means of 4 screws of a M2.5 thread. It can be mounted from the top or from the bottom. There are additional threaded holes for attaching the heatspreader to a heat sink or a thermal management solution. After having mounted the heatspreader it is still possible to exchange the DDR2 module.

2. Technical specifications

The following table shows the technical specifications of the heatspreader.

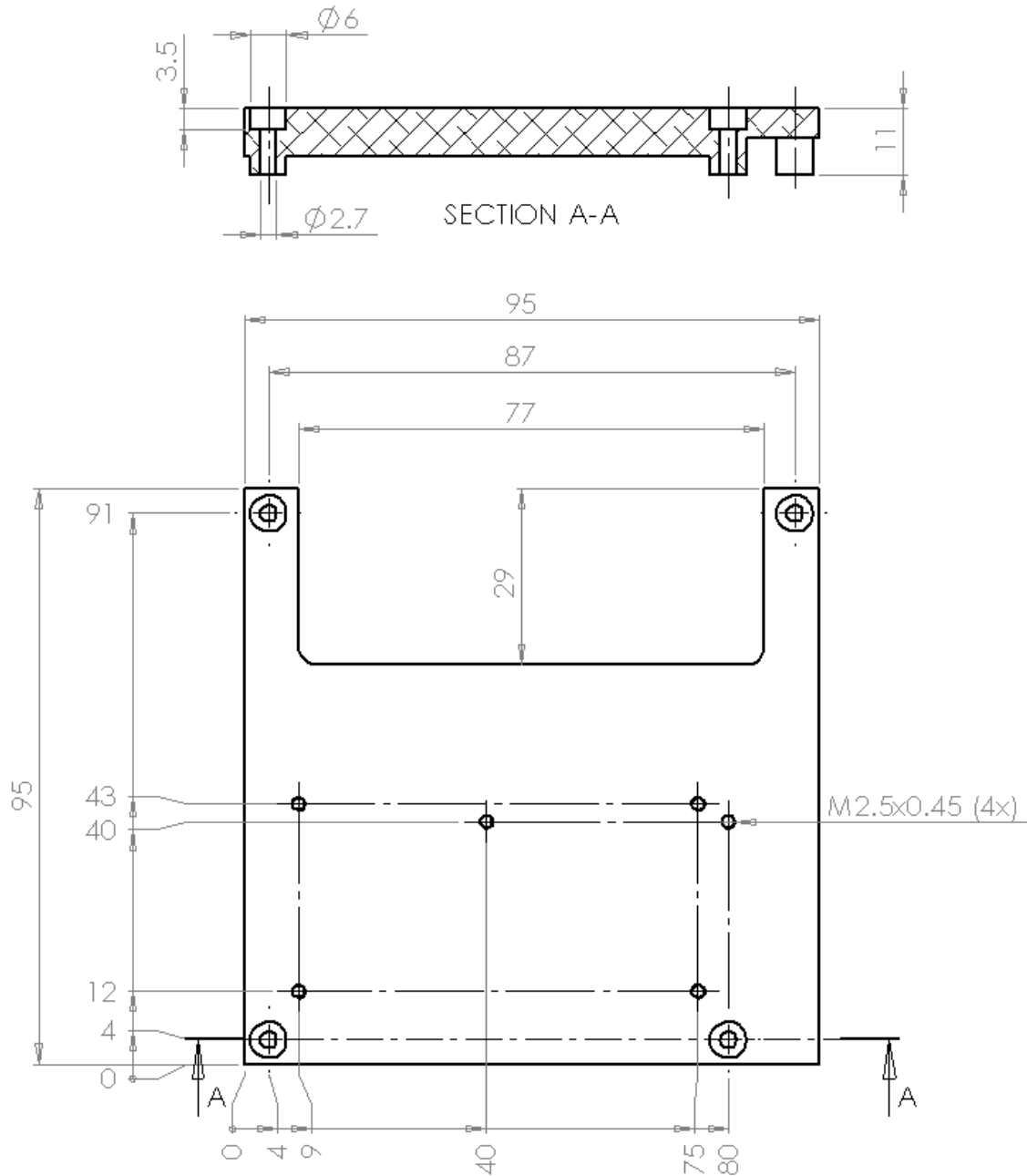
Material	aluminum alloy 6061
Coating	black anodized
Thermal conductivity	180 W/(mK)
Weight	132 gr.
TIM* thermal conductivity	5.5 W/(mK)

TIM = thermal interface material



3. Heatspreader dimensions

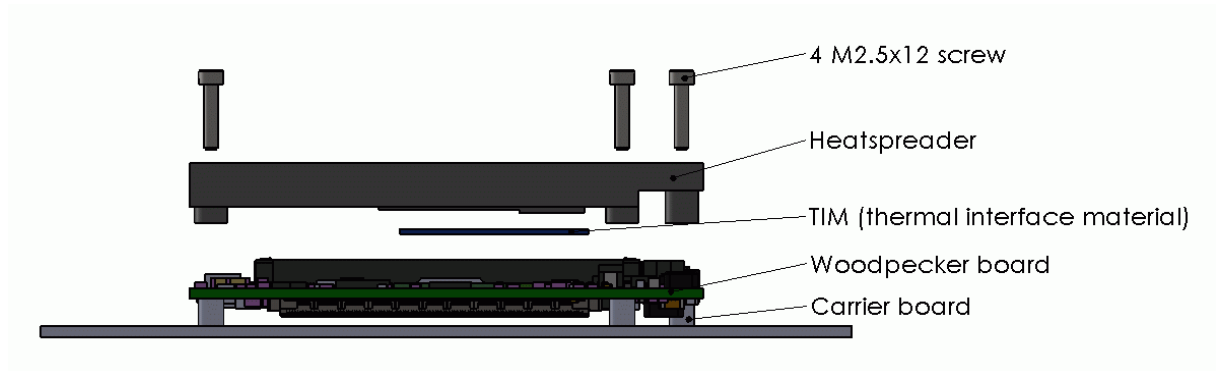
The following drawings illustrate the mechanical dimensions of the heatspreader. All measurements are in millimeter.





4. Assembly

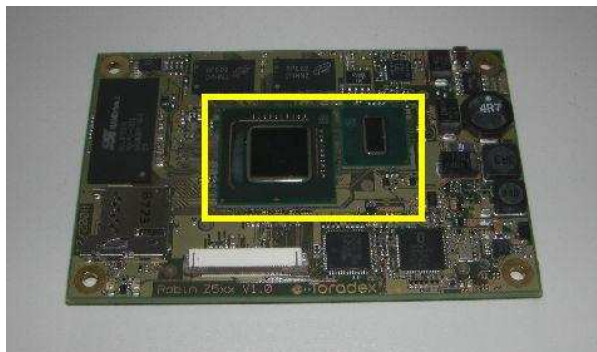
Assembly must be done very carefully since putting the heatspreader in a wrong way will damage the Woodpecker module or may prevent the system to work properly. The used screws depend on the solution, one possible solution is illustrated below.



4.1. Assembly procedure

The following procedure shows how to attach the thermal interface material (TIM) and the heatspreader on the example of assembling a complete heatsink solution to the Robin module. Please read the procedure very carefully in order not to damage the module.

1. The yellow rectangle shows where the TIM must be placed. That is on the left, the System Controller Hub (=SCH=Poulsbo=US15W) and on the right the Atom (=CPU=Silverthrone) processor.

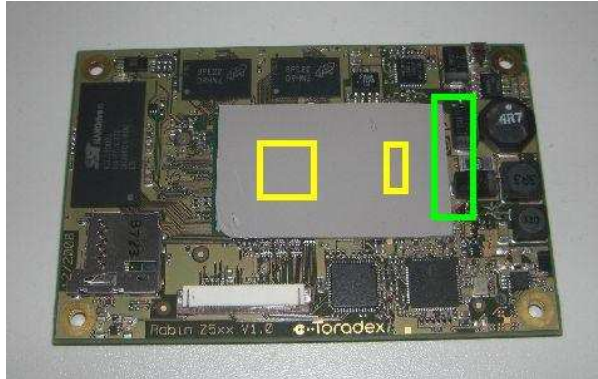


2. Remove the plastic foils on the TIM (on both sides) and attach the TIM as shown over the SCH and CPU.

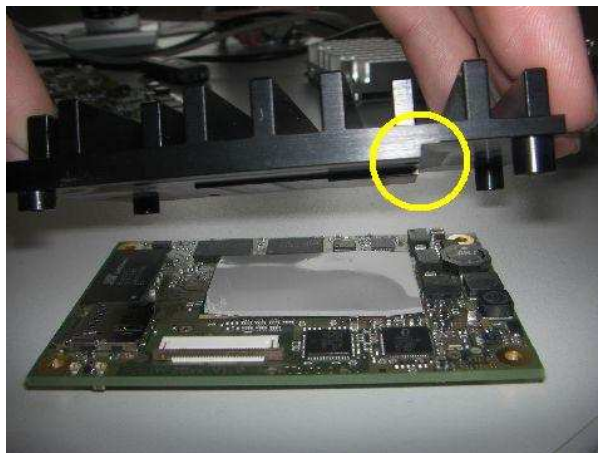




3. Make sure the TIM covers completely the Silicone of the SCH and CPU (yellow) and is not placed on the capacitor on the right side (green).



4. On attaching the heatsink, make sure the yellow marked corner is on the right side. (Very important for Robin since the position of the screws don't assure that it is mounted correctly).



5. Mount the heatsink in a way that the position of the holes is right from the beginning (moving it may not be possible since the TIM sticks the aluminium and print together).





6. Use M2.5 screws to fix the heatsink together with module.



7. Done.



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