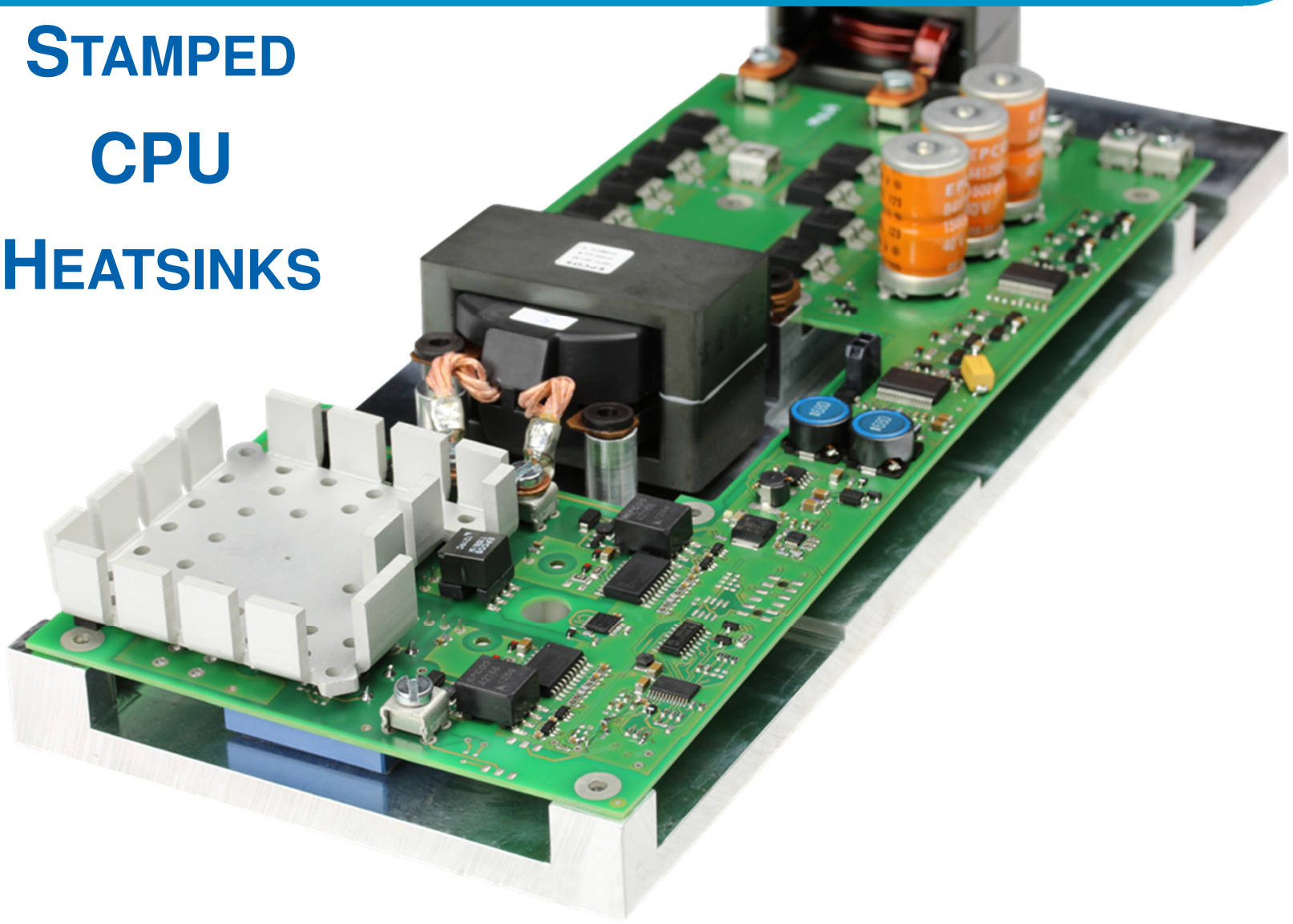
Thermal Management

WHY USE A STAMPED CPU HEATSINK?

ASSMANN WSW components

STAMPED CPU HEATSINKS



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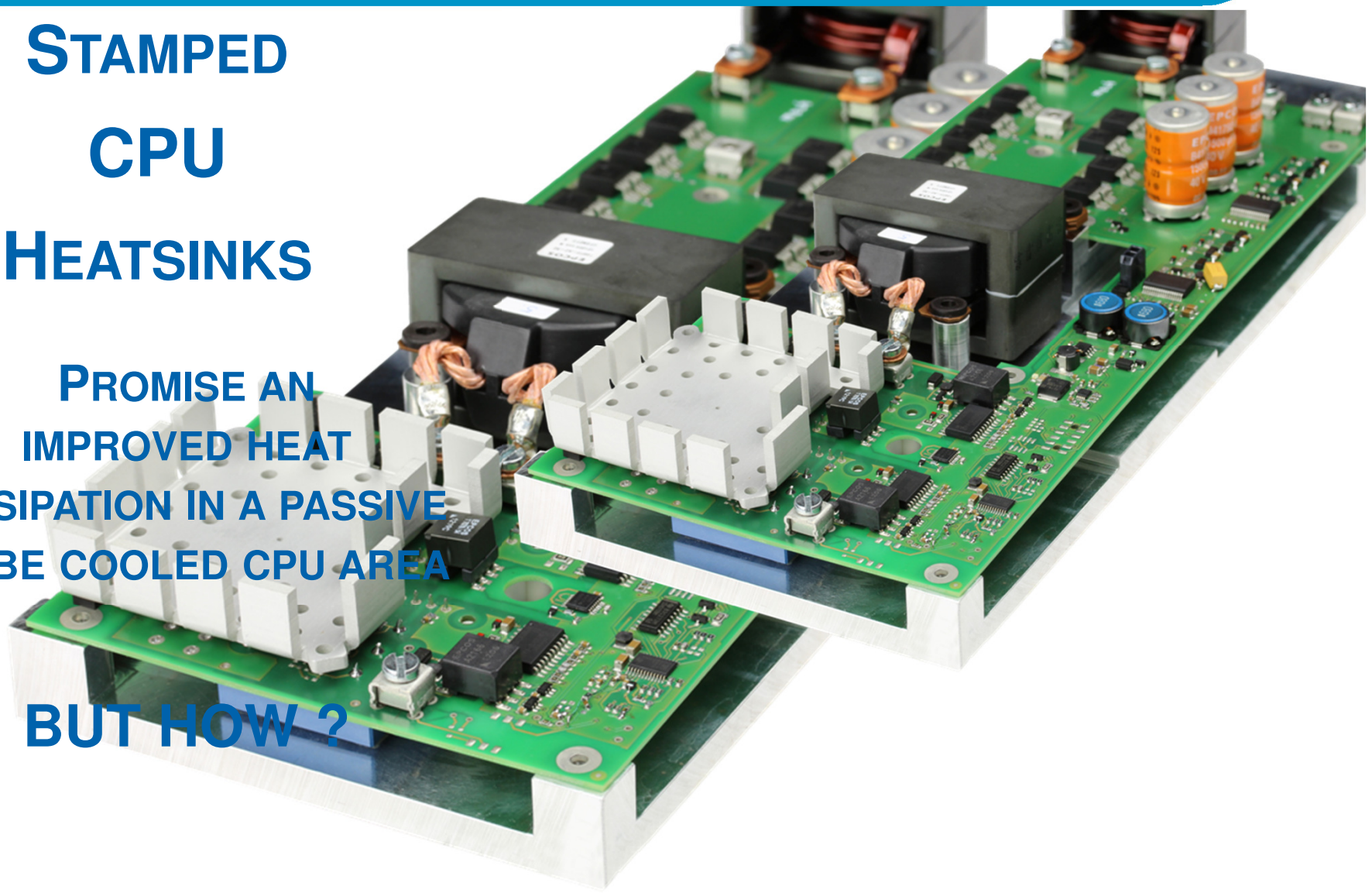

PROMISE AN IMPROVED HEAT DISSIPATION IN A PASSIVE TO BE COOLED CPU AREA

BUT HOW ?

Thermal Management

WHY USE A STAMPED CPU HEATSINK?

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BUT HOW ?

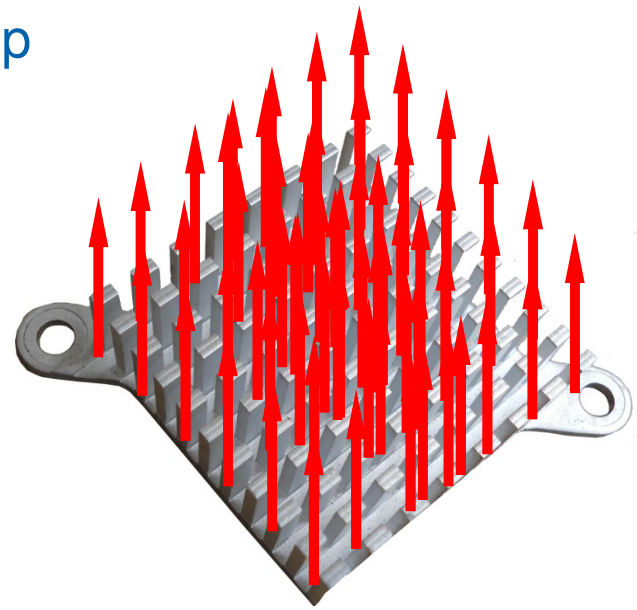
CROSS CUT heatsink

Cross Cut heatsink absorb heat from a chip

⇒Conduction

and releases it to the ambient air

⇒Convection



BUT HOW ?

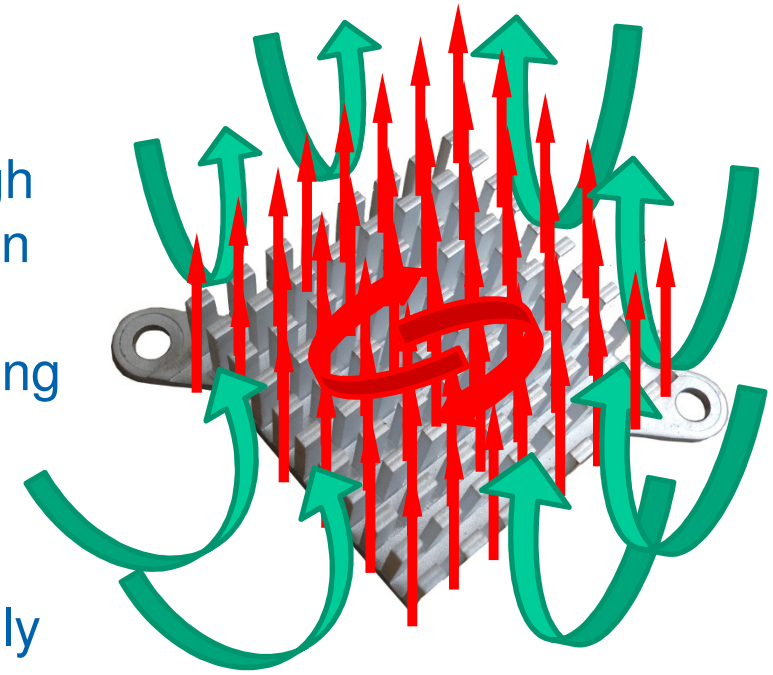
CROSS CUT heatsink

Hot spots

⇒ Heat accumulation is caused by high thermal radiation and low convection

⇒ Reason: Mutual heating of the cooling fins (square geometry)

⇒ Result: Formation of a hotspot. Convection and heat radiation is only optimal in the outer area.



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WHY USE A STAMPED CPU HEATSINK?

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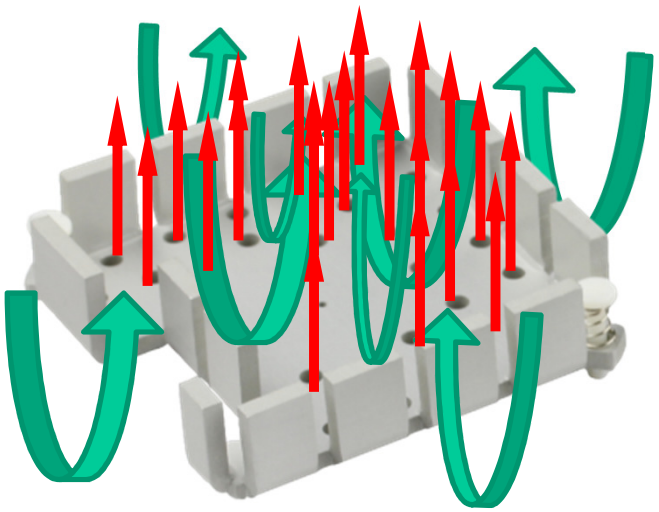
BUT HOW ?

STAMPED CPU heatsink

Optimized geometry of heatsink

⇒ improved convection, because of stack-effect (holes in the base plate)

⇒Improved heat radiation
(no heat accumulation of the cooling fins)



Mounting options/methods e.g.

Push Pin

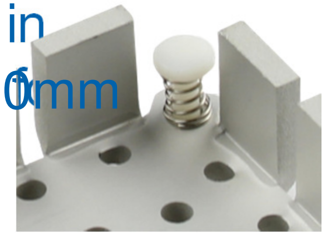
Example:

Existing or additional holes in the base plate can be used for this purpose.

Side length Cross Cut 30x30mm

⇒hole distance 50mm

⇒base size 900mm²



Additional advantage:

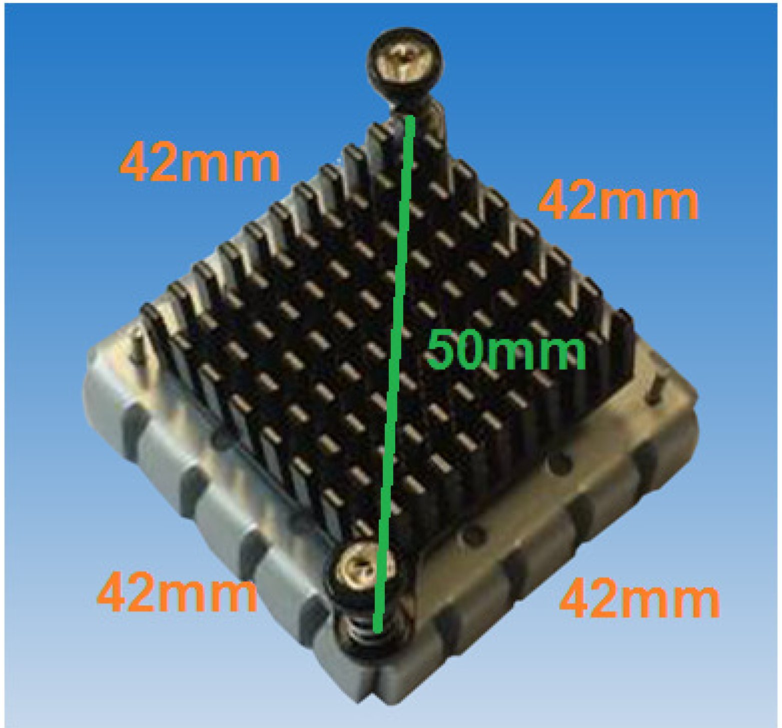
An enlarged base plate with the same push pin hole spacing

Side length STAMPED CPU heatsink 42x42mm

⇒same hole distance 50mm

⇒base size 764mm²

⇒difference 864mm²



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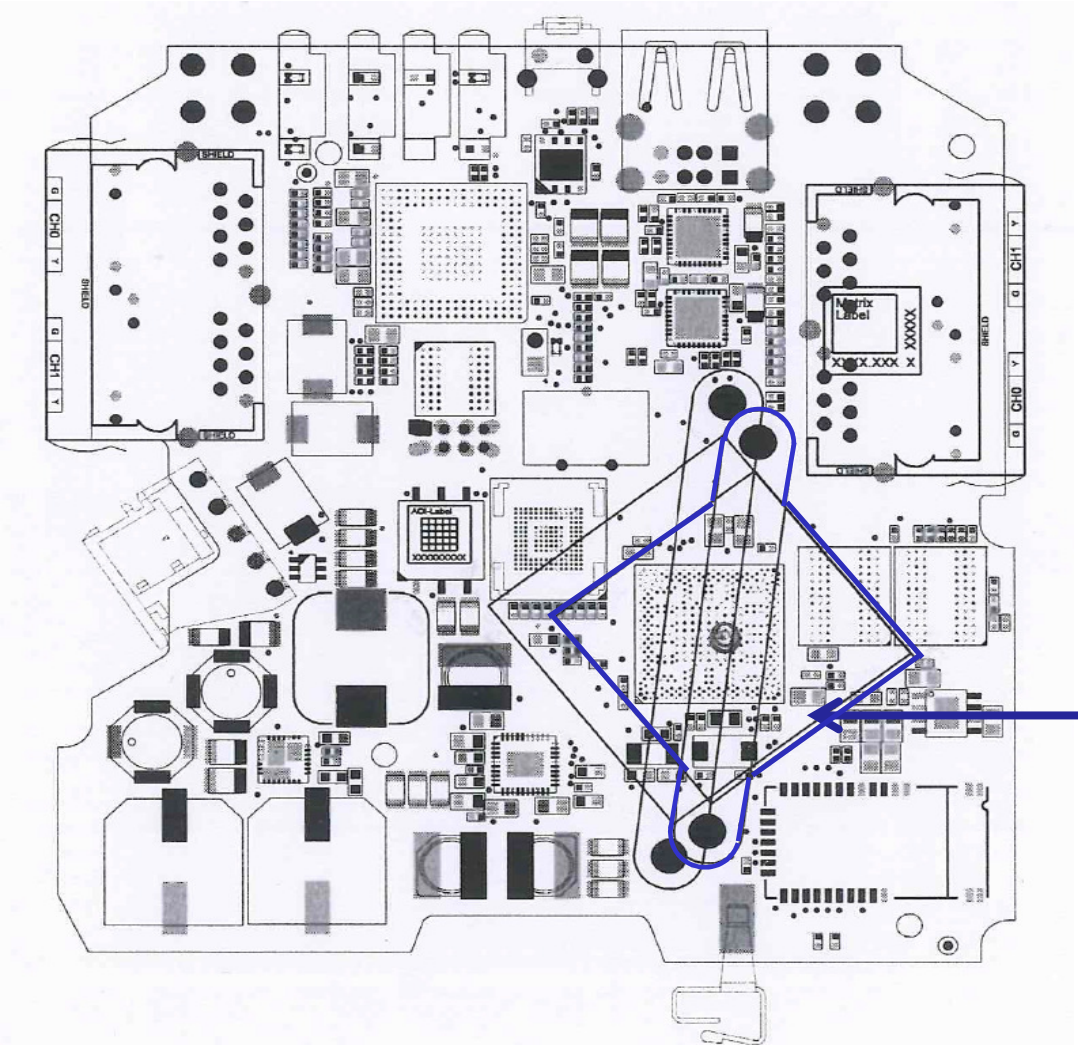

Application example
Due to optimized performance and space usage, two different Cross-Cut CPU heat sink (**1** + **2**) can be replaced by a stamped heat sink

cross cut 1

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WHY USE A STAMPED CPU HEATSINK?

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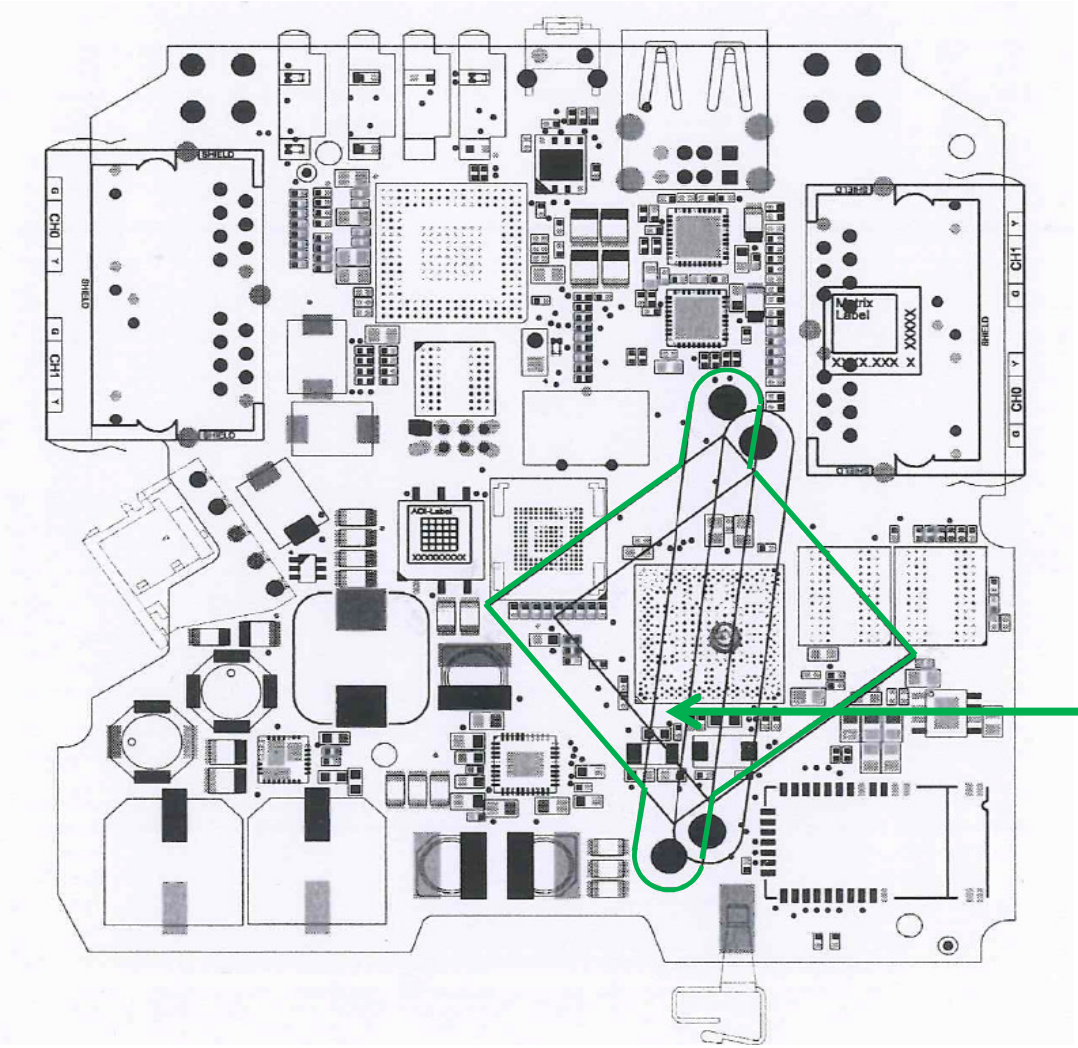

Application example
Due to optimized performance and space usage, two different Cross-Cut CPU heat sink (**1** + **2**) can be replaced by a stamped heat sink

cross cut 2

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WHY USE A STAMPED CPU HEATSINK?

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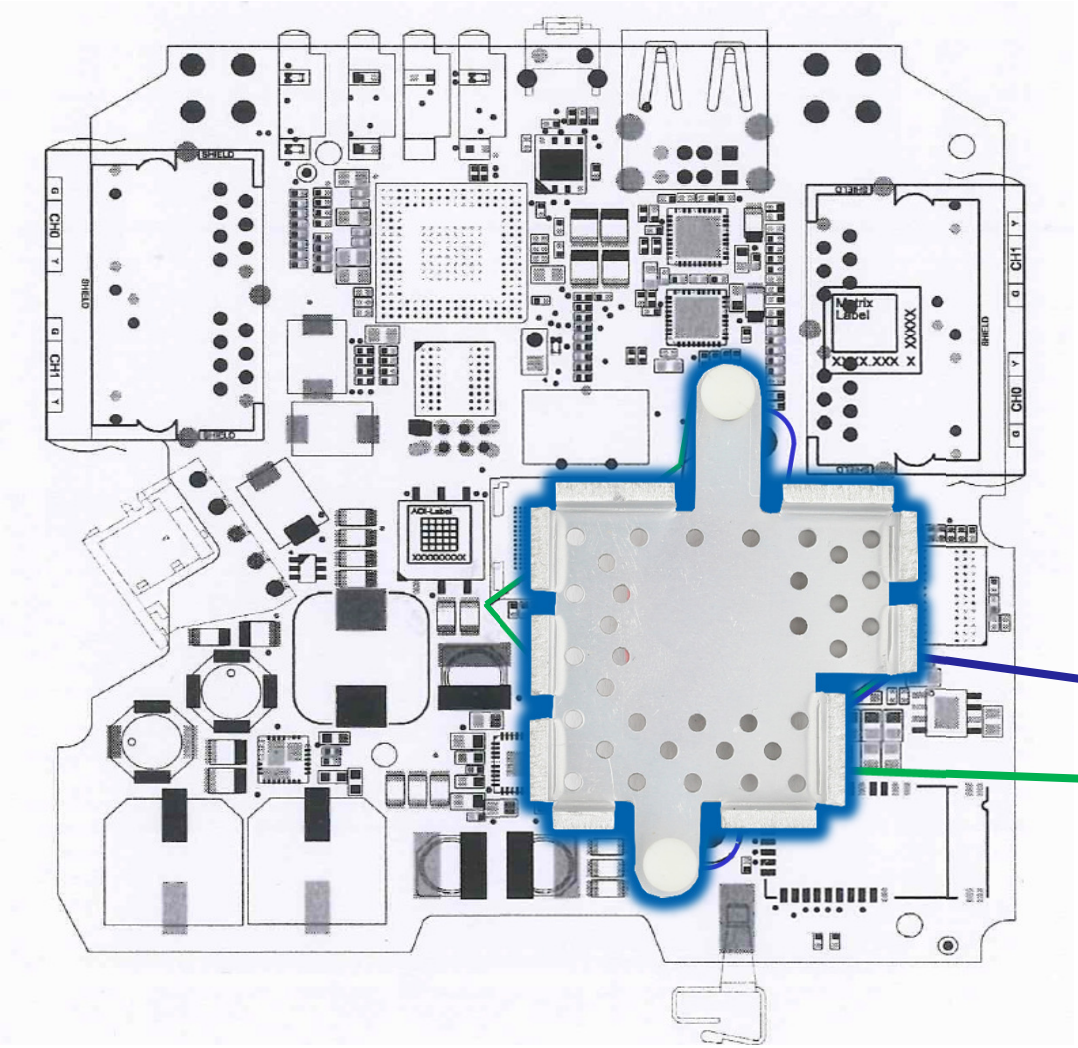

Application example

Due to optimized performance and space usage, two different Cross-Cut CPU heat sink (**1** + **2**) can be replaced by a stamped heat sink

cross cut 1

cross cut 2

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WHY USE A STAMPED CPU HEATSINK?

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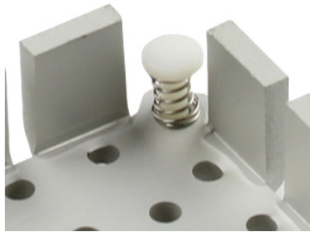
Mounting options/methods

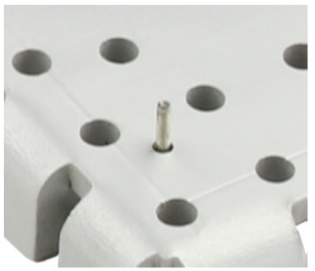
Push pin

Existing or additional holes in the base plate can be used for this purpose.



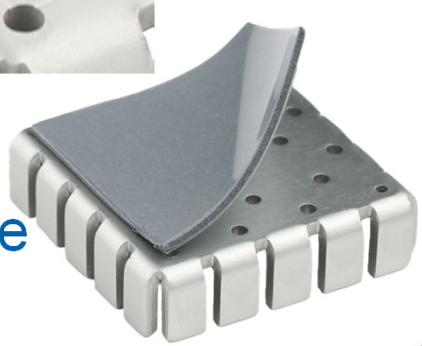
Solder Pin

Sodler pins can aditionally pressed in the base plate, to solder on PCB



Thermal Adhesive Tape

Thermal adhesive tape can be pre-applied to the heatsink for mounting onto the chip



Thermal adhesive

Can be ordered separately to glue the heatsink

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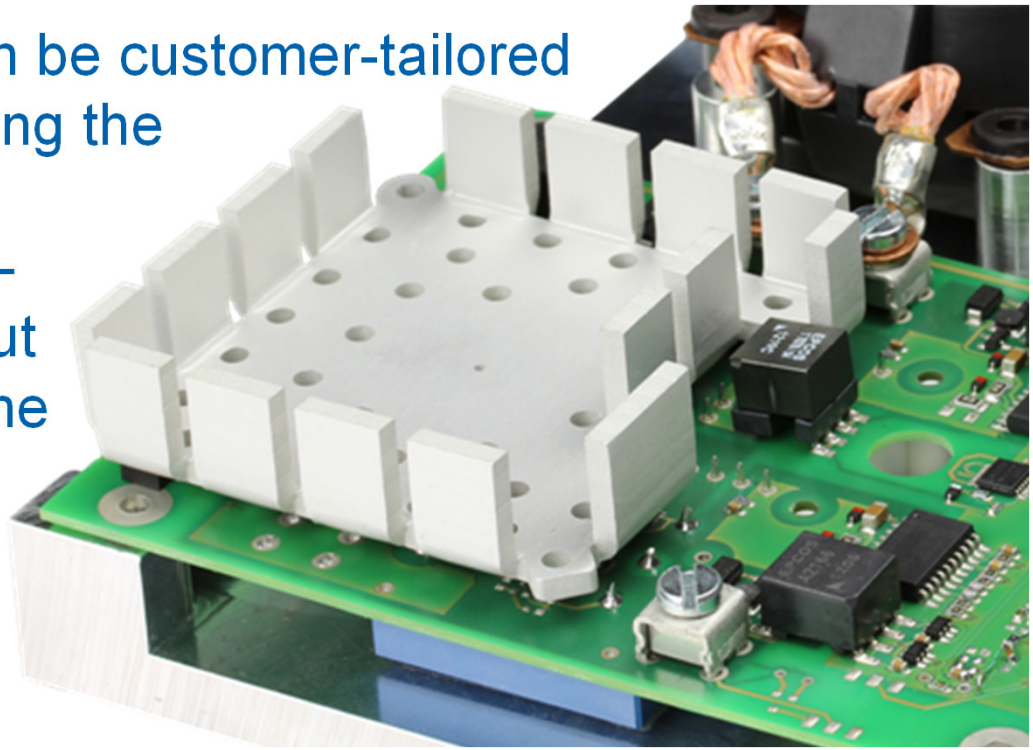
Modifications

Cut-outs in the heat sink can be customer-tailored to the application by modifying the tooling.
This allows adjacent compo-nents to be bypassed without reducing the base plate of the heat sink.



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WHY USE A STAMPED CPU HEATSINK?

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Material

Aluminium Alloy AL1050 in different material thickness

Customer tailored

Modifications of all dimensions
and special perforations are possible.

Samples can be handmade without
tooling charges.

Special surface treatment

Packing acc. customers request

Thermal Management

WEBSITE PRODUCT DETAILS

ASSMANN WSW components

CPU heatsinks

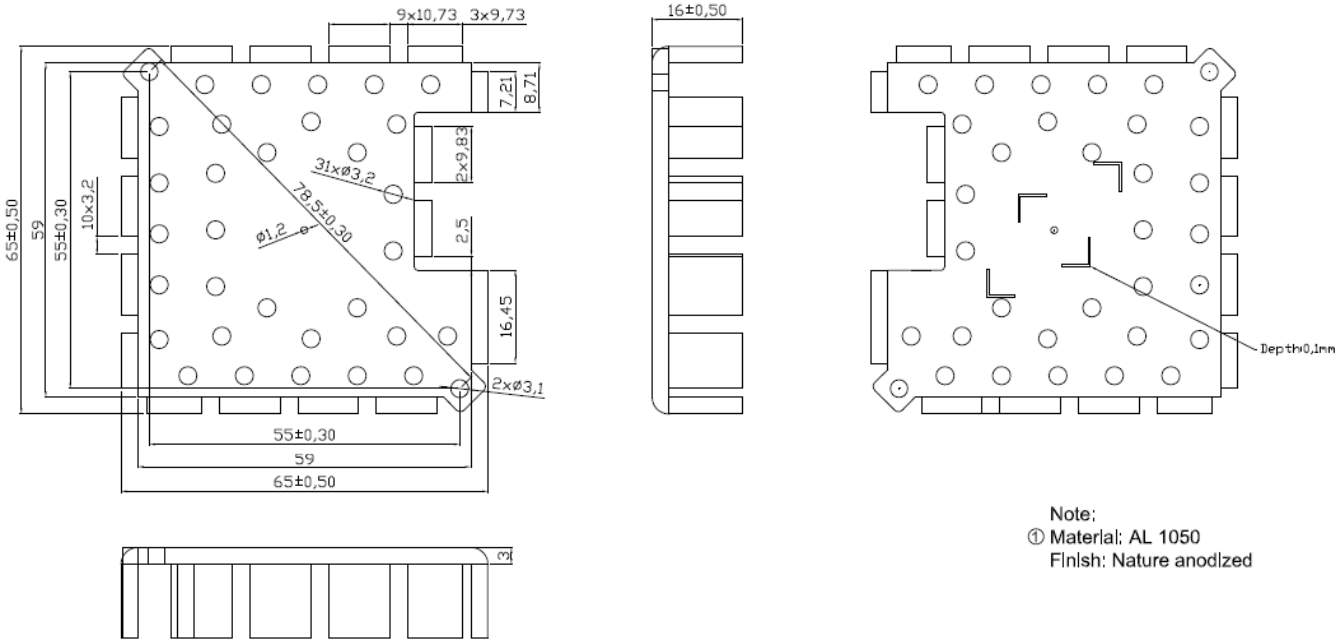
V2138N1
CPU heatsinks
Stamped version
dimensions 16x65x65mm
nature anodized
material AL1050
Picture: hand made sample

Part number:	V2138N1
product group:	CPU heatsinks
style:	Stamped version
height in mm:	16,00
width in mm:	65,00
length in mm:	65,00
surface:	nature anodized
material:	AL1050
version:	stamped

Thermal Management

WEBSITE PRODUCT DETAILS

ASSMANN WSW components



Note;
① Material: AL 1050
Finish: Nature anodized

RoHS compliant
Unit: mm

Scale	Free
TOLERANCE	
Less 10	±0,15
10~30	±0,20
31~50	±0.25
51~100	±0.30
DIM	Tol
Angle	±1°

Id.	Modification	Date	Name
①	Change the material	11.07.2014	Amy
⓪	Drawn	02.05.2013	Amy

	Date	Name
Drawn	02.05.2013	Amy
Approved	11.07.2014	Amy

ASSMANN WSW components

Customer-No.

ASSMANN WSW-No. V2138N1

Drawing-No. ASS 2106 HS rev01

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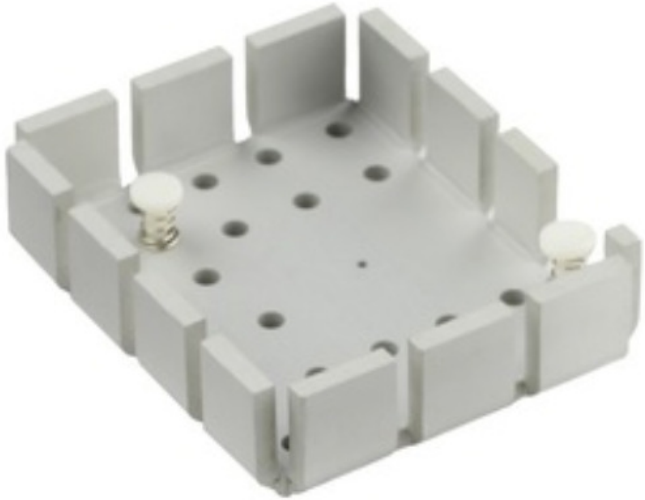
WEBSITE PRODUCT DETAILS

ASSMANN WSW components



CPU heatsinks

V2139N1
CPU heatsinks
Stamped version
dimensions 16x65x53mm
nature anodized
material AL1050
Picture: hand made sample

Part number:	V2139N1
product group:	CPU heatsinks
style:	Stamped version
height in mm:	16,00
width in mm:	65,00
length in mm:	53,00
surface:	nature anodized
material:	AL1050
version:	stamped

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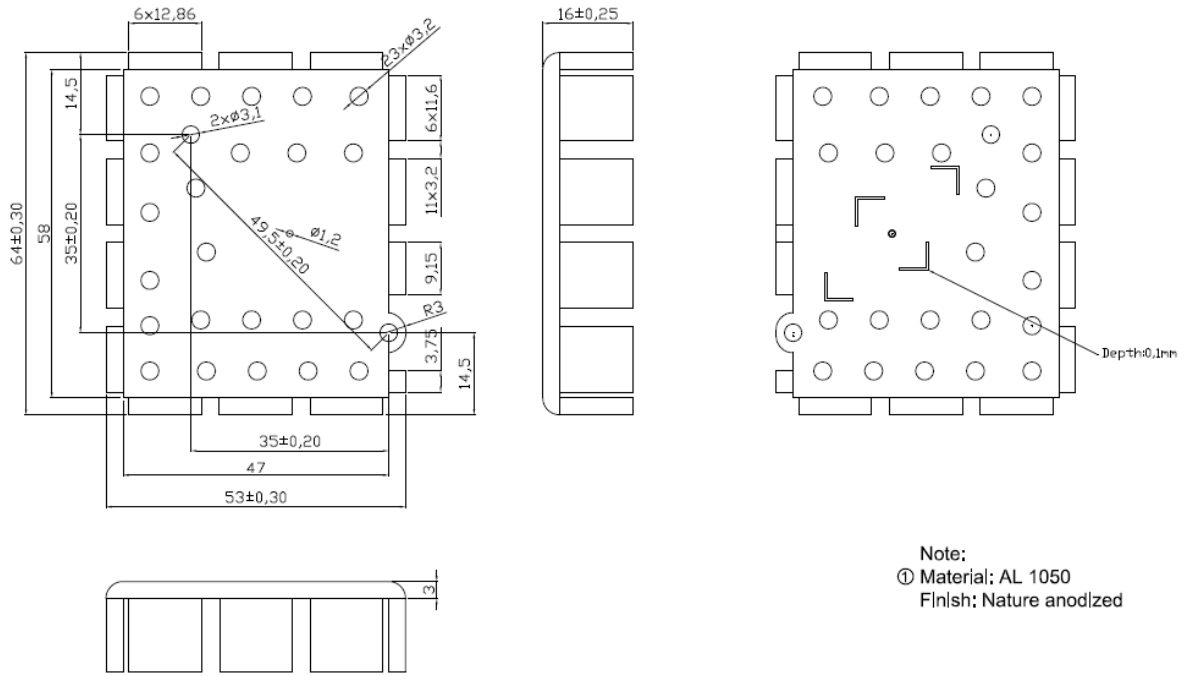
WEBSITE PRODUCT DETAILS

ASSMANN WSW components



Note:
① Material: AL 1050
Finish: Nature anodized

RoHS compliant
Unit: mm

Scale	Free
TOLERANCE	
Less 10	±0.15
10~30	±0.20
31~50	±0.25
51~100	±0.30
DIM	Tol
Angle	±1°

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	Date	Name
Drawn	02.05.2013	Amy
Approved	11.07.2014	Amy

ASSMANN WSW components

Customer-No.

ASSMANN WSW-No. V2139N1

Drawing-No. ASS 2107 HS rev01

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WEBSITE PRODUCT DETAILS

ASSMANN WSW components

CPU heatsinks

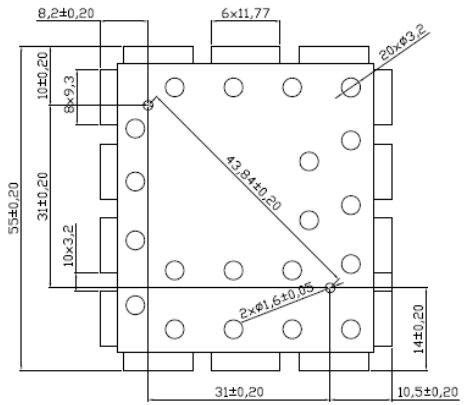
V2140N1
CPU heatsinks
Stamped version
dimensions 14x55x50mm
nature anodized
material AL1050
Picture: hand made sample

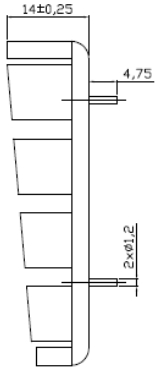
Part number:	V2140N1
product group:	CPU heatsinks
style:	Stamped version
height in mm:	14,00
width in mm:	55,00
length in mm:	50,00
surface:	nature anodized
material:	AL1050
version:	stamped

Thermal Management

WEBSITE PRODUCT DETAILS

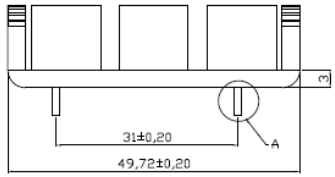
ASSMANN WSW components

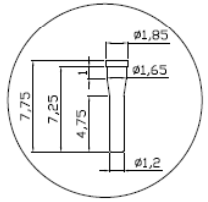




Note:
① Material: AL 1050
Finish: Nature anodized

Pin material: Fe
Plating: Tin





Detail A
2 ; 1

RoHS compliant
Unit: mm

Scale	Free
TOLERANCE	
Less 10	±0.15
10~30	±0.20
31~50	±0,25
51~100	±0,30
DIM	Tol
Angle	±1°

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	Date	Name
Drawn	02.05.2013	Amy
Approved	11.07.2014	Amy

ASSMANN WSW components

Customer-No.

ASSMANN WSW-No. V2140N1

Drawing-No. ASS 2108 HS rev01

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