Fastron Electronics

- Power Semiconductors
- Electrical Measurement
- Process Control

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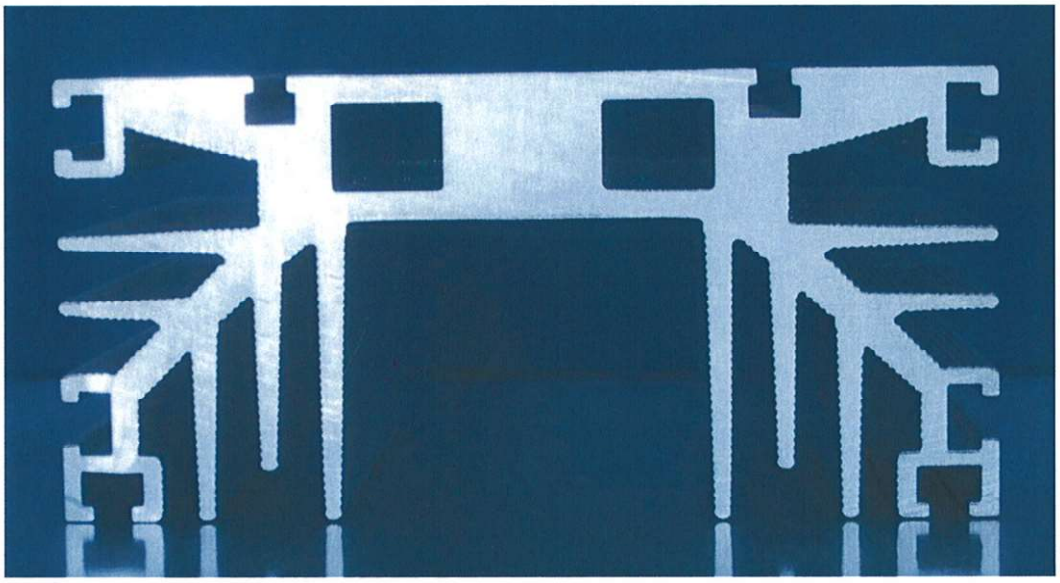
HEATSINK DATA BOOK



Issue 2.2

AUGUST 2001

N.A.T.A. Certified AS/NZS ISO 9002

INTERNATIONAL QUALITY MANAGEMENT SYSTEM ISO9002 NATA CERTIFIED

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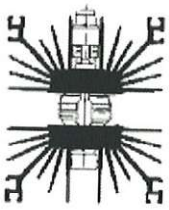

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Summary Data

Type	Weight/Unit Length kg/m	Area Sq mm	Perimeter mm	Thermal Resistance * ^{0}C/W
H1	10.73	3976	2078	0.40
H2	8.31	3067	1306	0.46
H31	18.89	6997	2646	0.34
H4	3.65	1352	837	1.09
H41	20.4	7556	2626	0.40
H45	3.28	1216	1118	1.00
H5	2.93	1103	803	1.06
H51	3.91	1447	1317	0.76
H6	13.07	4836	1755	0.38
H7	11.37	4212	1435	0.50
H8	10.65	3932	1324	0.24
H81	10.97	4064	1636	0.22
H10	24.99	9227	2543	0.15

*Convection cooled, 200mm length.

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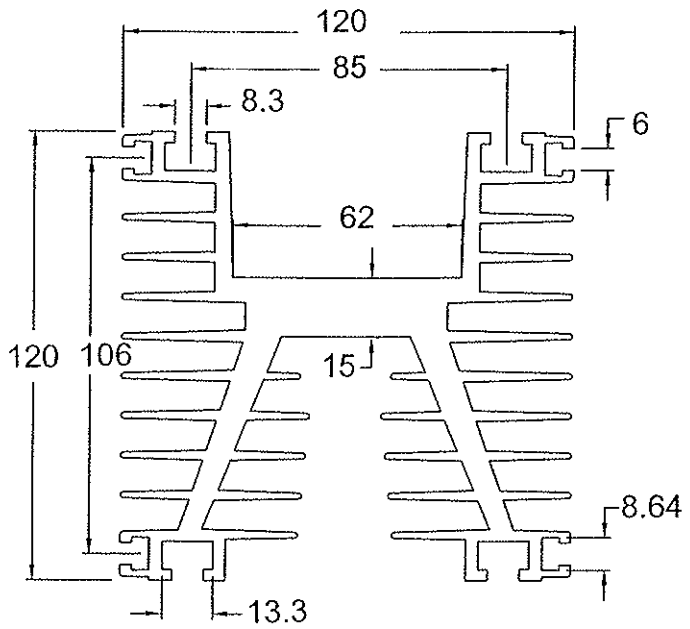
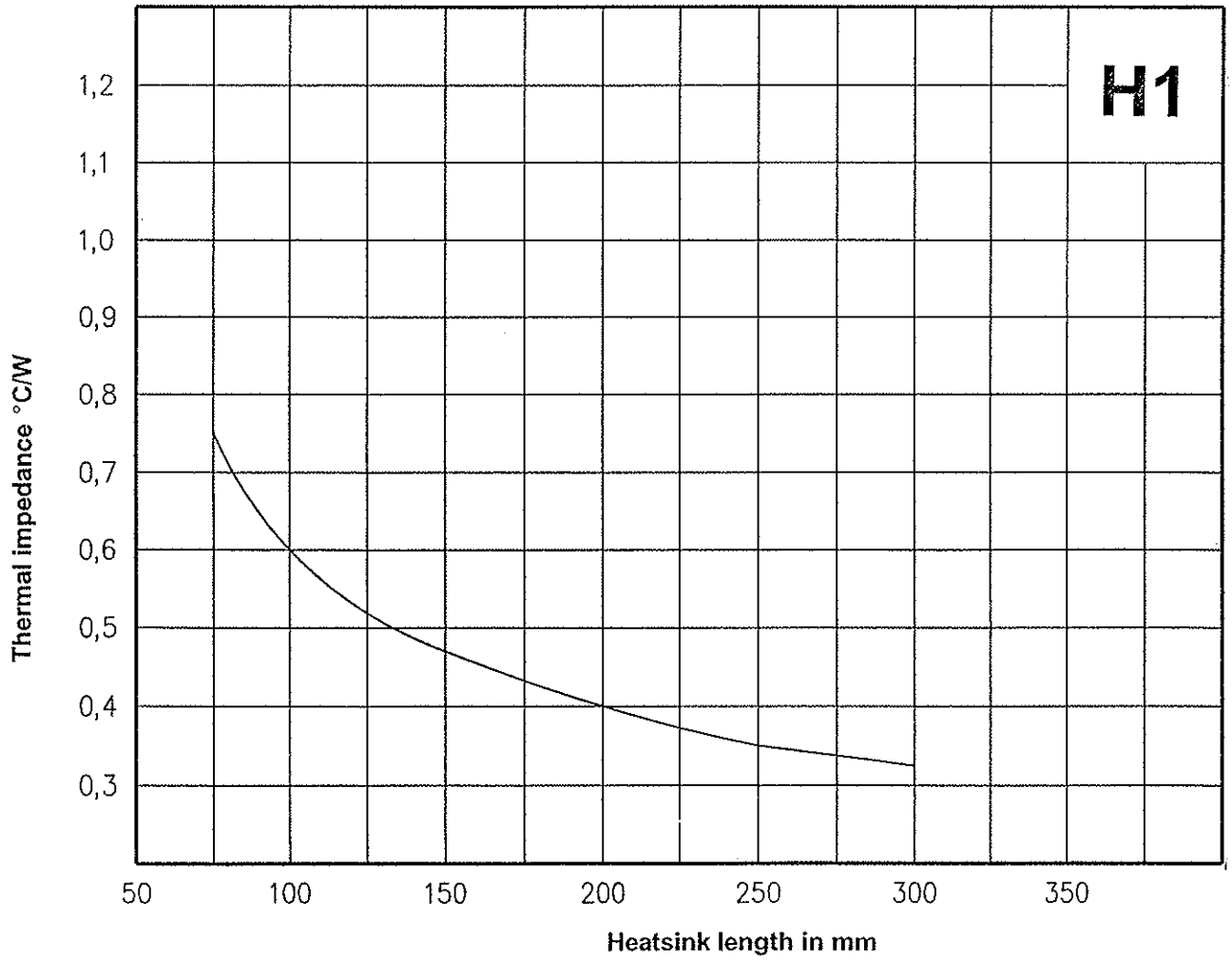
H1
HEATSINK



The H1 heatsink was designed for stud mounted power rectifiers, thyristors and triacs. Slots on all four corners of the extrusion allow easy assembly for additional components and gear tray mounting.

Weight/m	Area of Cross Section	Perimeter
kg/m	mm^2	mm
10.73	3976	2078



Graph above depicts thermal impedance at a temperature rise of 50°C against the length (mm)

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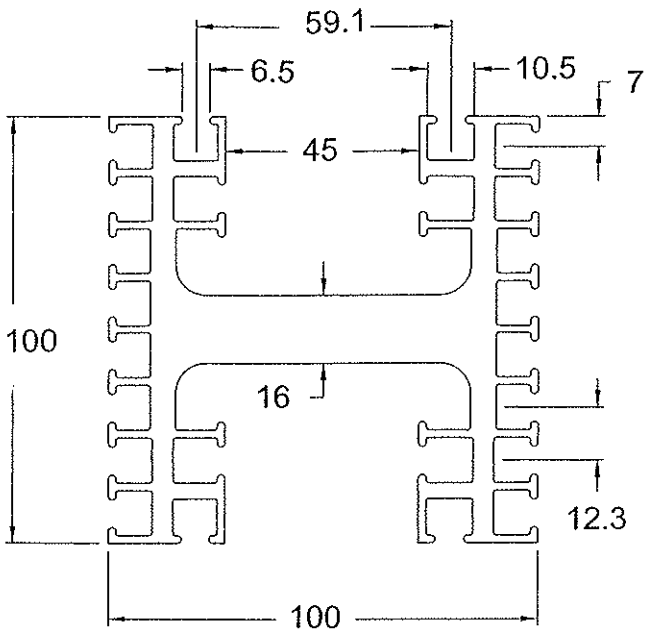
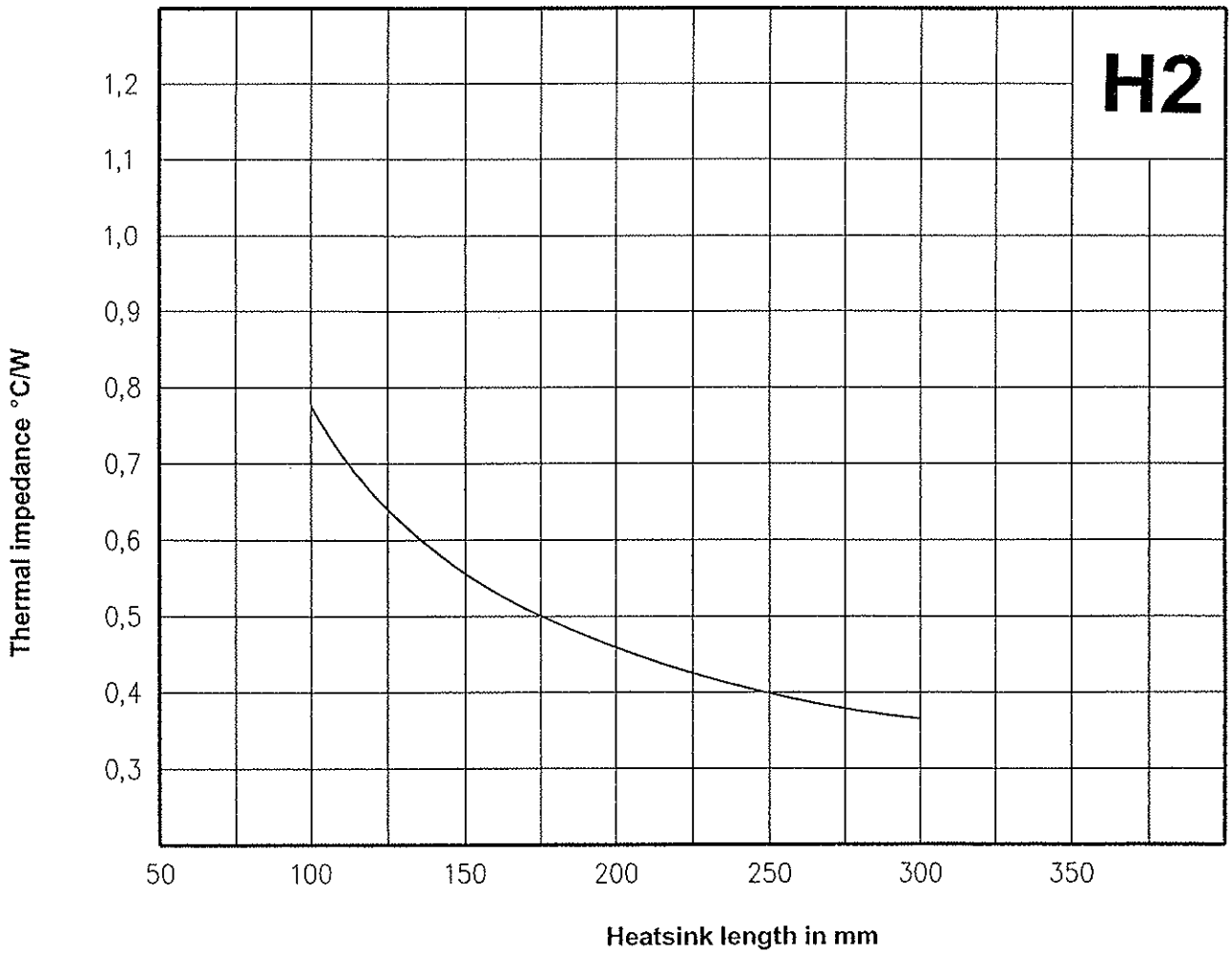
H2
HEATSINK



The H2 heatsink was designed for all kinds of stud mounted rectifiers, thyristors and triacs. Slots on all four corners of the extrusion allow easy assembly.

Weight/m	Area of Cross Section	Perimeter
kg/m	mm^2	mm
8.31	3067	1306



Graph above depicts thermal impedance at a temperature rise of 50°C against the length (mm)

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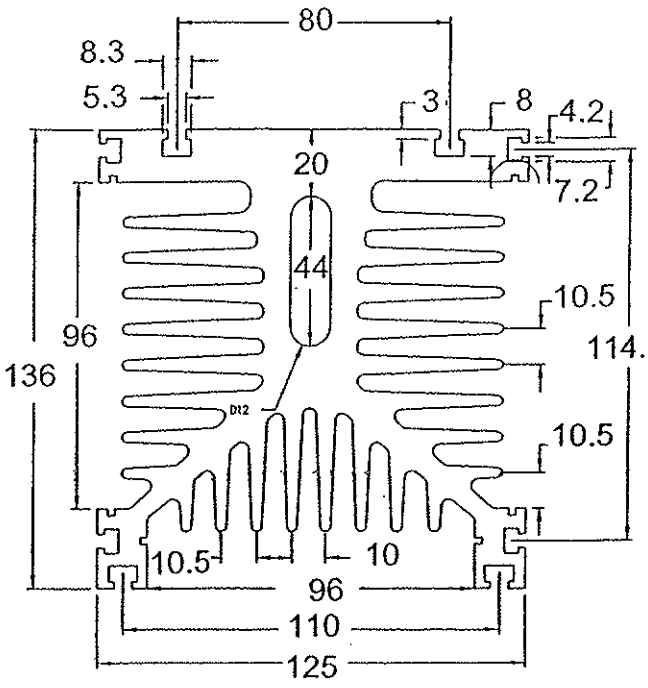
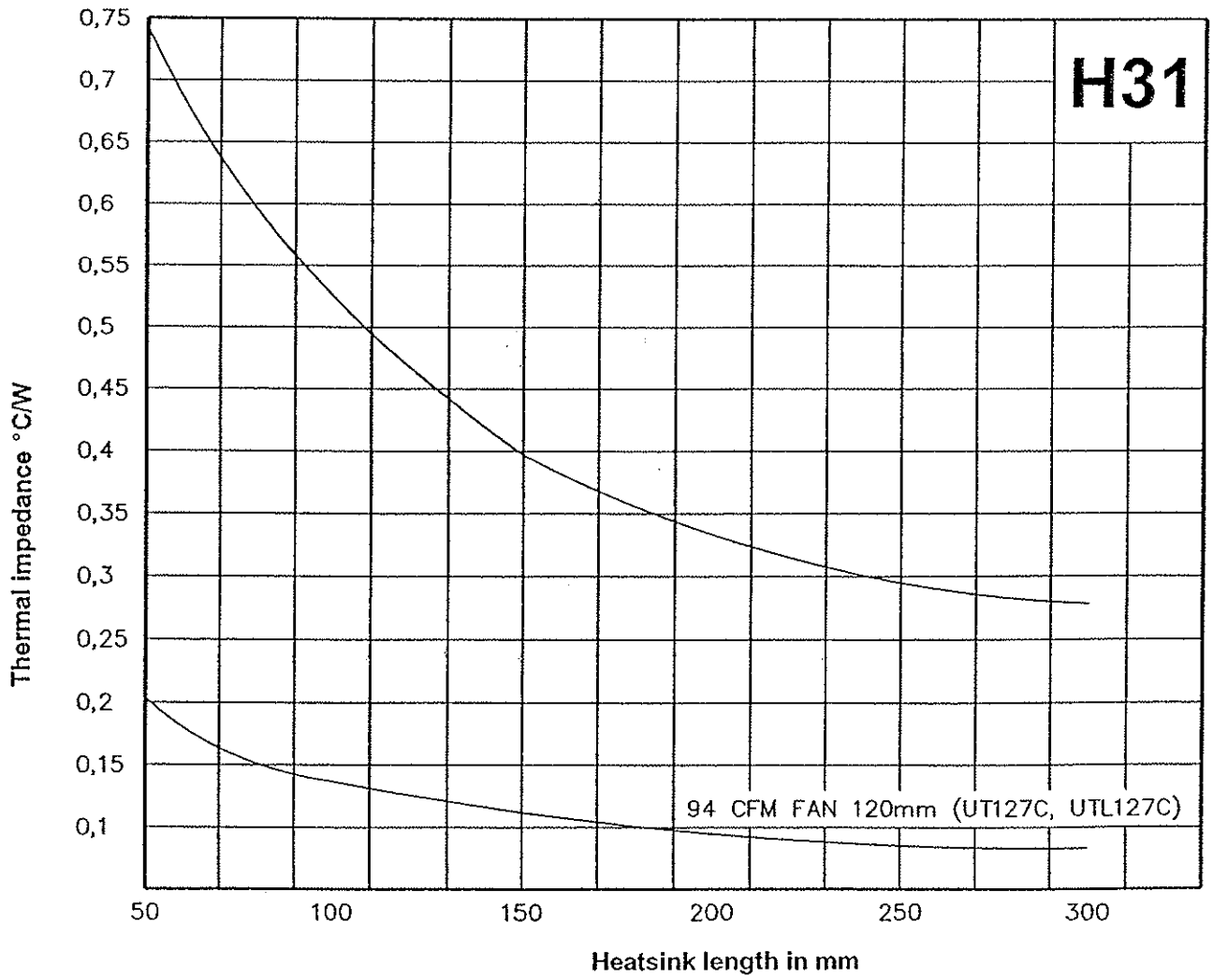


H31 HEATSINK

The H31 Heatsink was designed to provide a very economical forced air cooled solution for isolated modules. This design allows all three open sides of the heatsink to be enclosed by aluminium baffle plates which divert the forced air from an axial fan mounted on the end face. The linear air flow is significantly increased which in turn increases thermal efficiency and reduces thermal impedance.

Weight/m	Area of Cross Section	Perimeter
kg/m	mm^2	mm
18.89	6997	2646



Graph above depicts thermal impedance at a temperature rise of 50°C against the length (mm)

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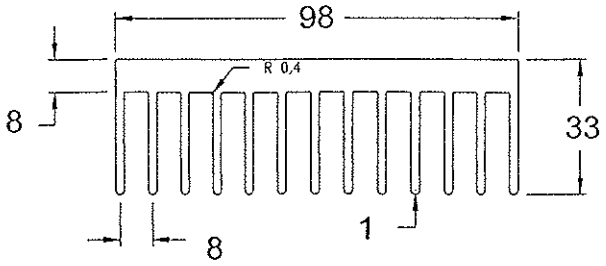
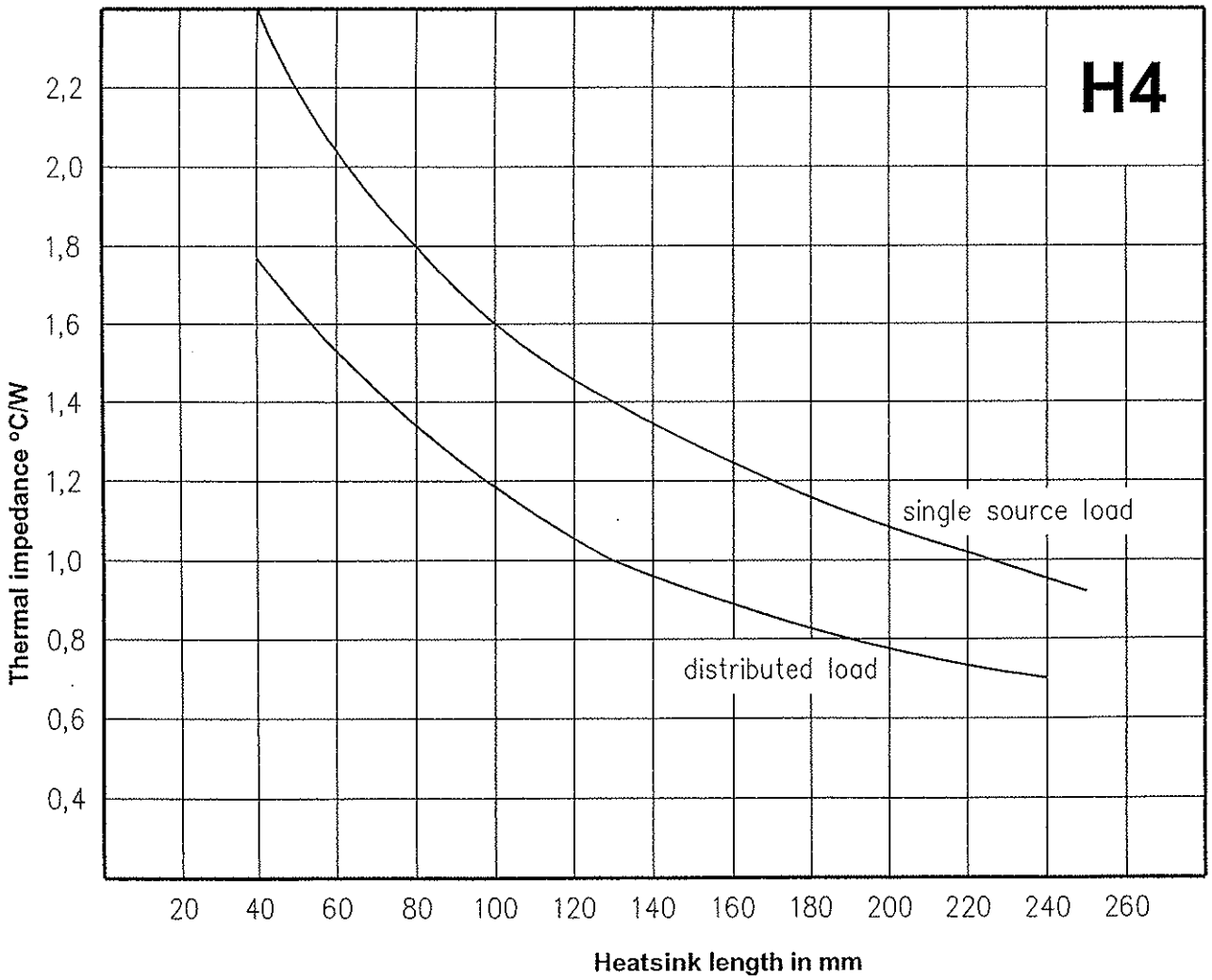
H4
HEATSINK



The H4 Heatsink was developed for effective cooling of flat based semiconductors, which are also available with isolated housings. Under these circumstances the heatsink is not 'alive' and can be used outside cubicles or even as part of a cabinet. Different curves are shown below for single source loads or distributed loads.

Weight/m	Area of Cross Section	Perimeter
kg/m	mm^2	mm
3.65	1352	837



Graph above depicts thermal impedance at a temperature rise of 50°C against the length (mm)

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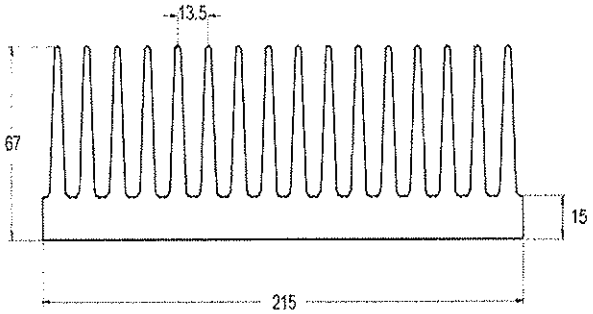
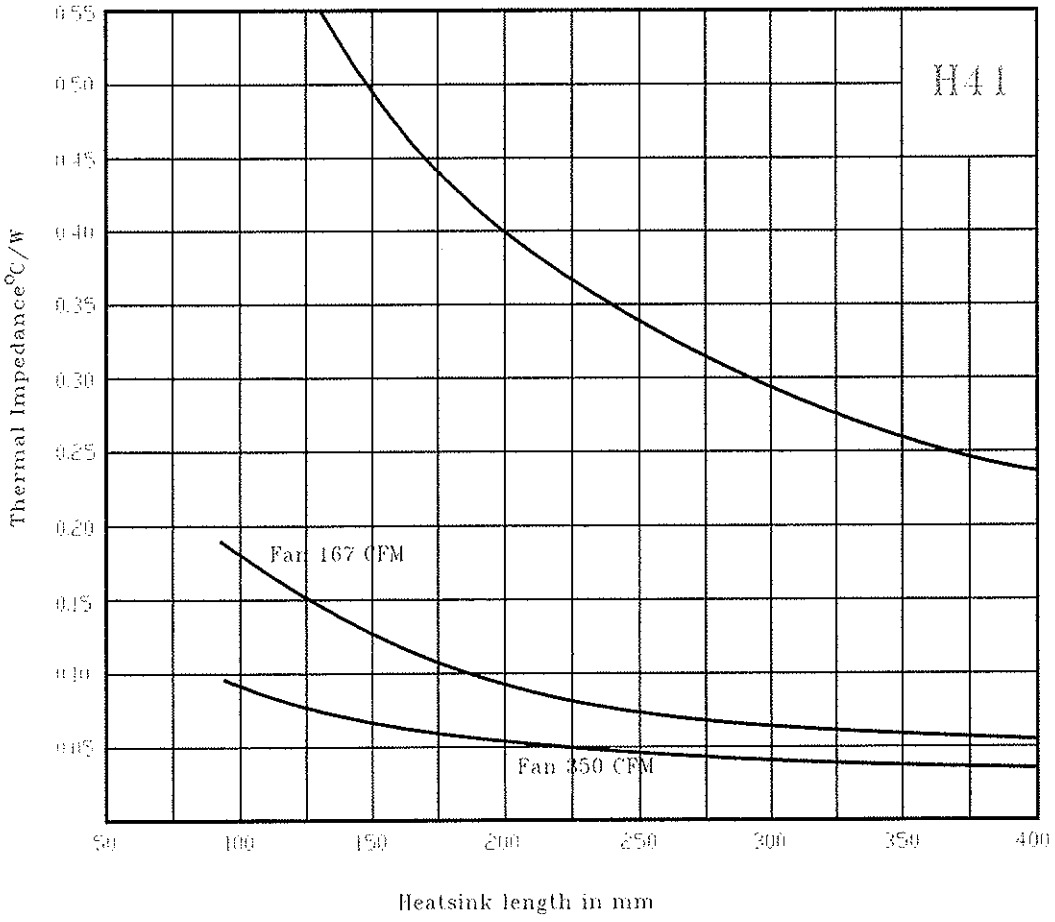
H41

HEATSINK



The H41 Heatsink is most suitable for IGBTs and Power Blocks

Weight/m	Area of Cross Section	Perimeter
kg/m	mm2	mm
20.4	7556	2626



Graph above depicts thermal impedance at a temperature rise of 50C against the length (mm)

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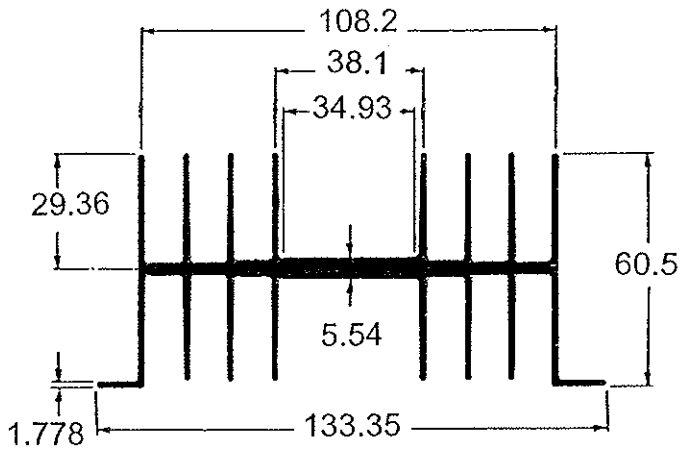
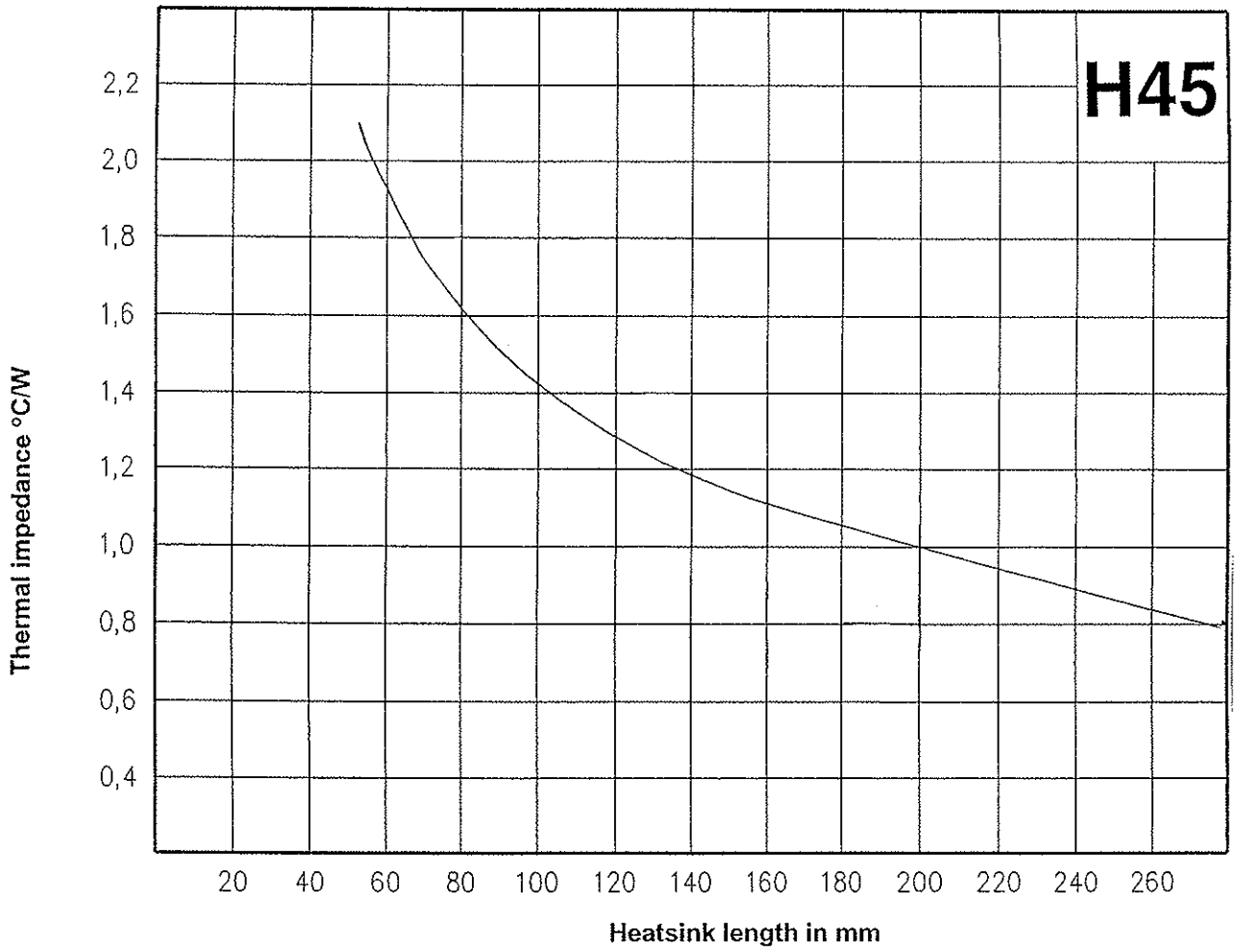
H45
HEATSINK



The H45 heatsink was developed for effective cooling of stud devices and small flat based semiconductors. These are also available with isolated housings and under these conditions the heatsink is not 'alive' and can be used outside cubicles or even as part of a cabinet. The end fins form a bracket for easy gear tray mounting

Weight/m	Area of Cross Section	Perimeter
kg/m	mm^2	mm
3.28	1215	1118



Graph above depicts thermal impedance at a temperature rise of 50^0C against the length (mm)

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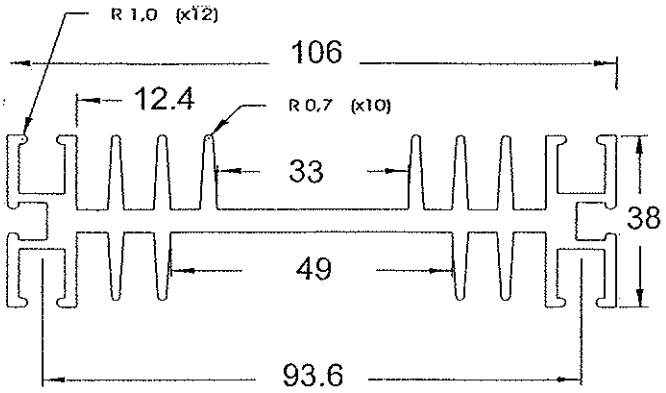
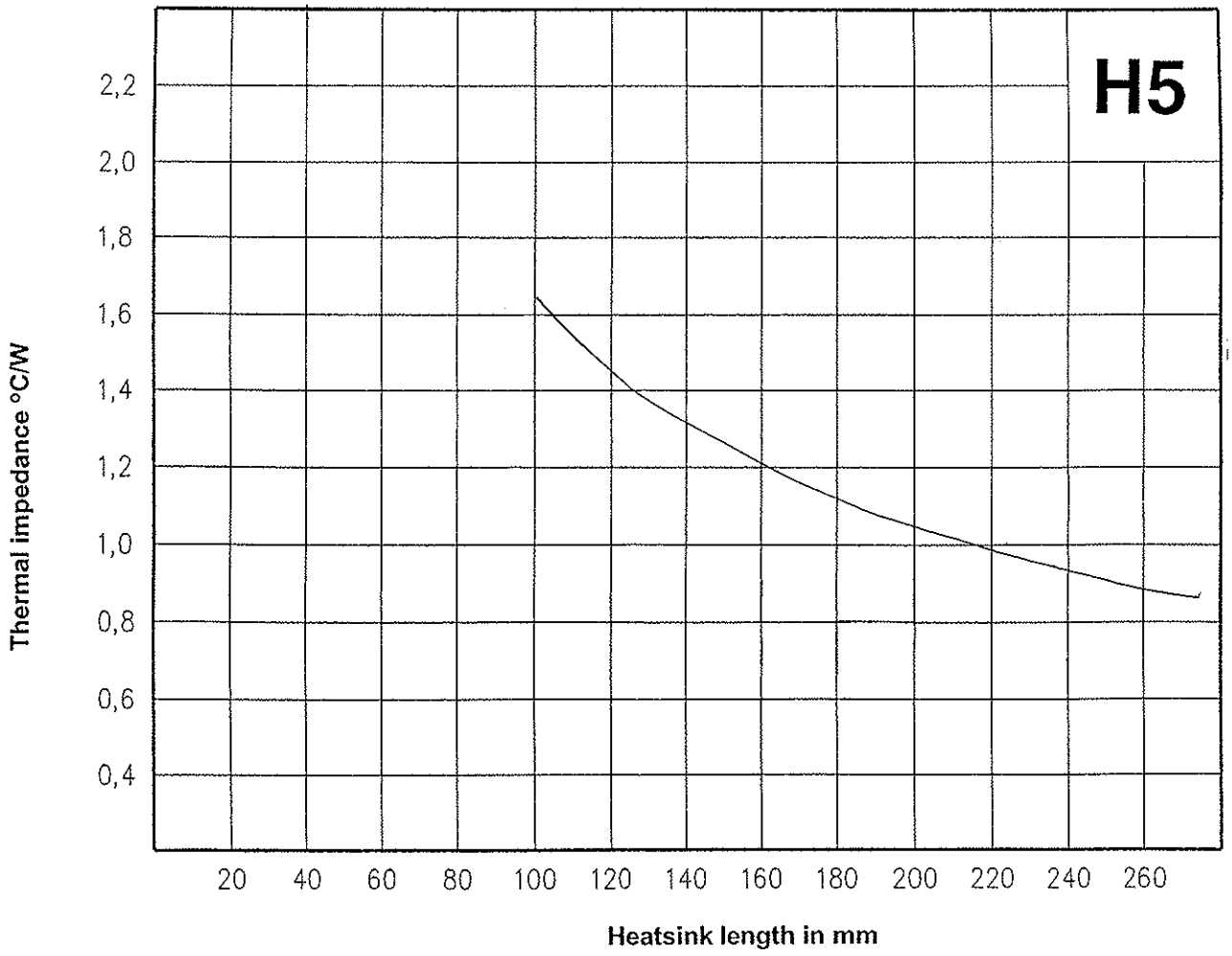
H5
HEATSINK



The H5 Heatsink was developed to dissipate small losses produced by small stud devices, encapsulated bridges, or solid state relays. Plastic mounting feet are available to assist installation.

Weight/m	Area of Cross Section	Perimeter
kg/m	mm^2	mm
2.93	1103	803



Graph above depicts thermal impedance at a temperature rise of 50^0C against the length (mm)

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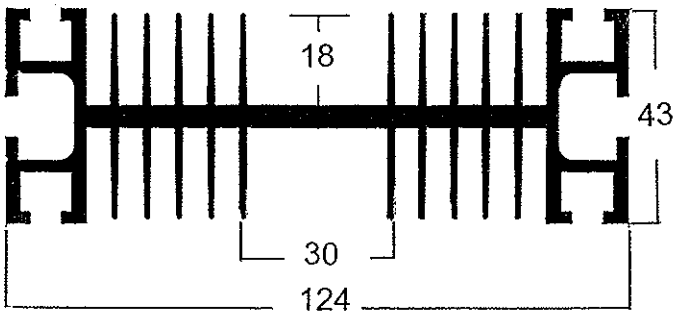
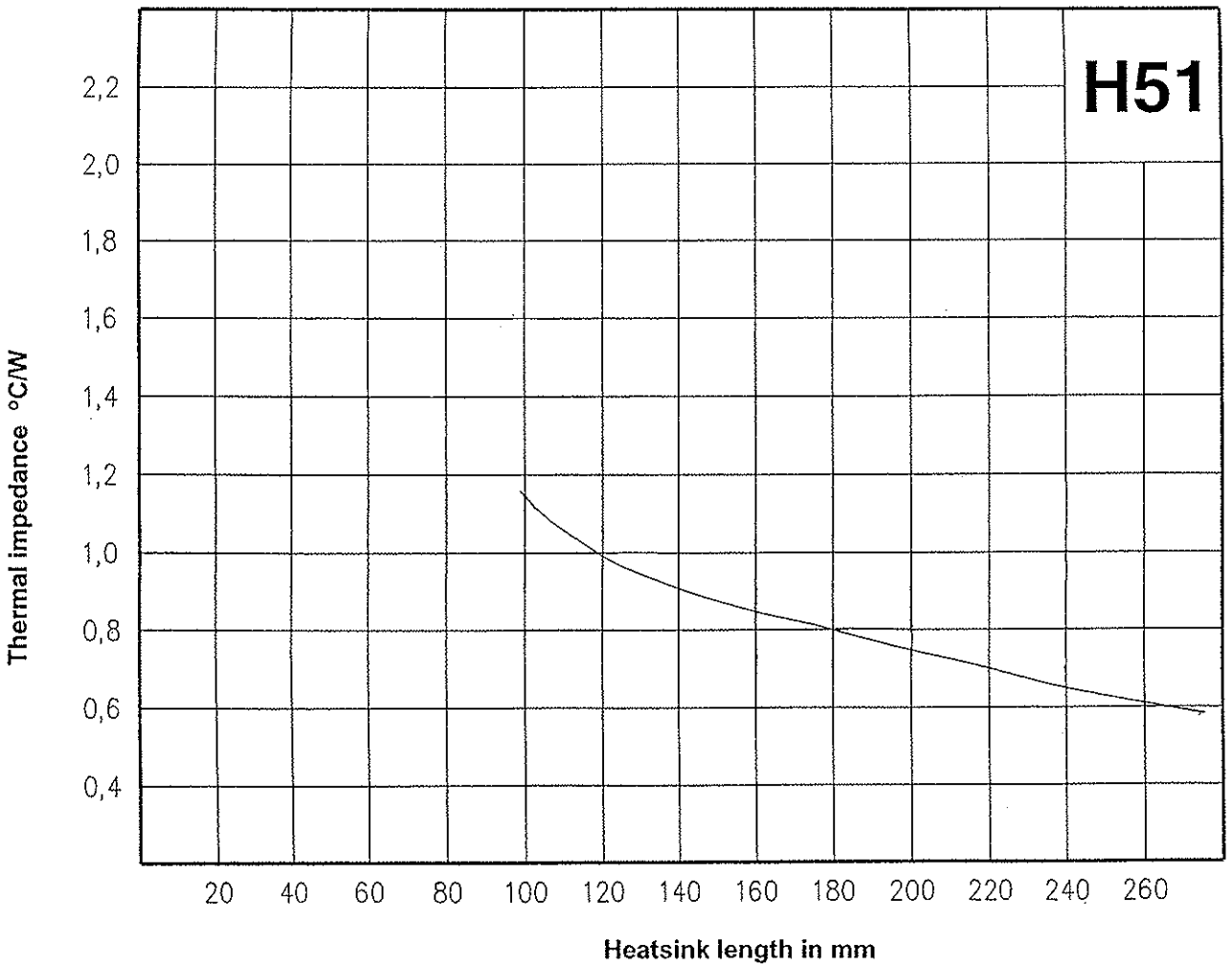
H51
HEATSINK



The H51 Heatsink was developed to dissipate low losses produced by small stud devices, encapsulated bridges, or solid state relays.

Weight/m	Area of Cross Section	Perimeter
kg/m	mm^2	mm
3.91	1447	1317



Graph above depicts thermal impedance at a temperature rise of 50^0C against the length (mm)

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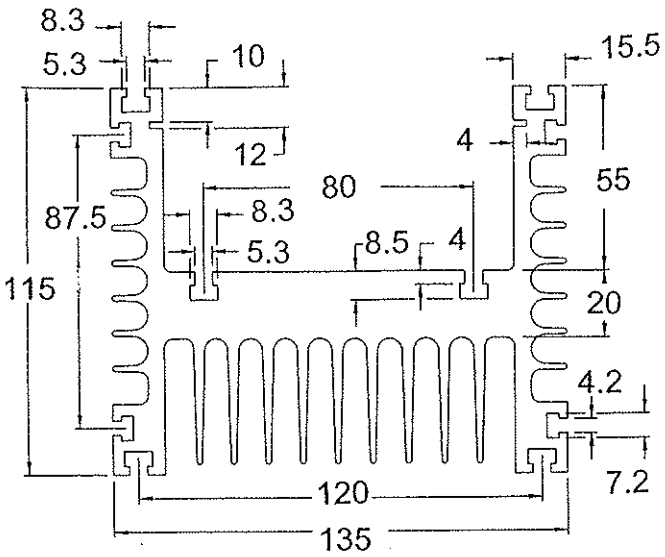
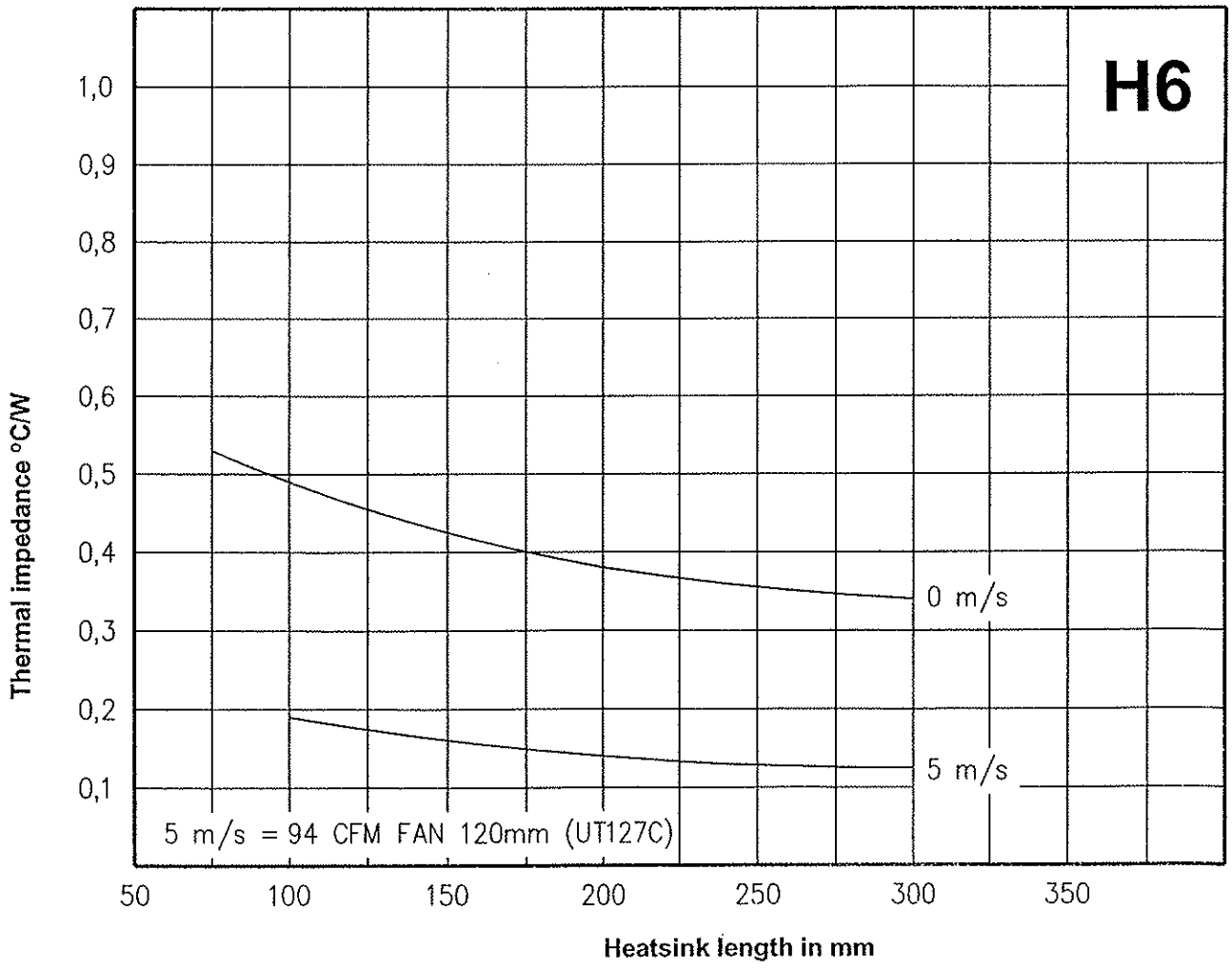
H6
HEATSINK



The H6 Heatsink was specially designed for all isolated power modules such as Powerblocks and Solid State Relays. If isolated semiconductors are used the heatsink is not 'alive' and can be used as an enclosure. Slots on top of the heatsink can carry necessary electronic boards, while the left and right sides of the heatsink can be used to carry snubbers or fuses. Slots on all four corners of the heatsink provide for universal assembly.

Weight/m	Area of Cross Section	Perimeter
kg/m	mm^2	mm
13.07	4836	1755



Graph above depicts thermal impedance at a temperature rise of 50°C against the length (mm)

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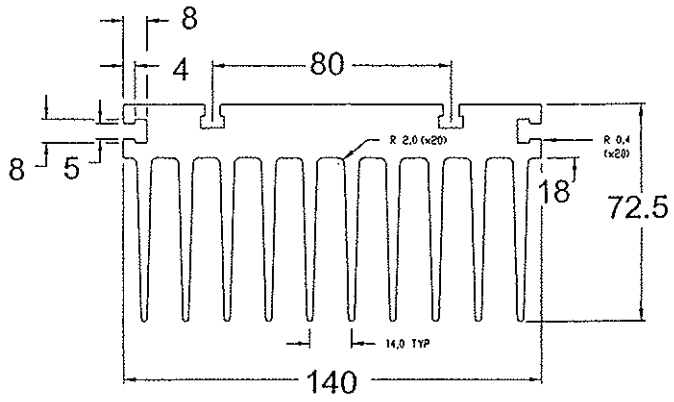
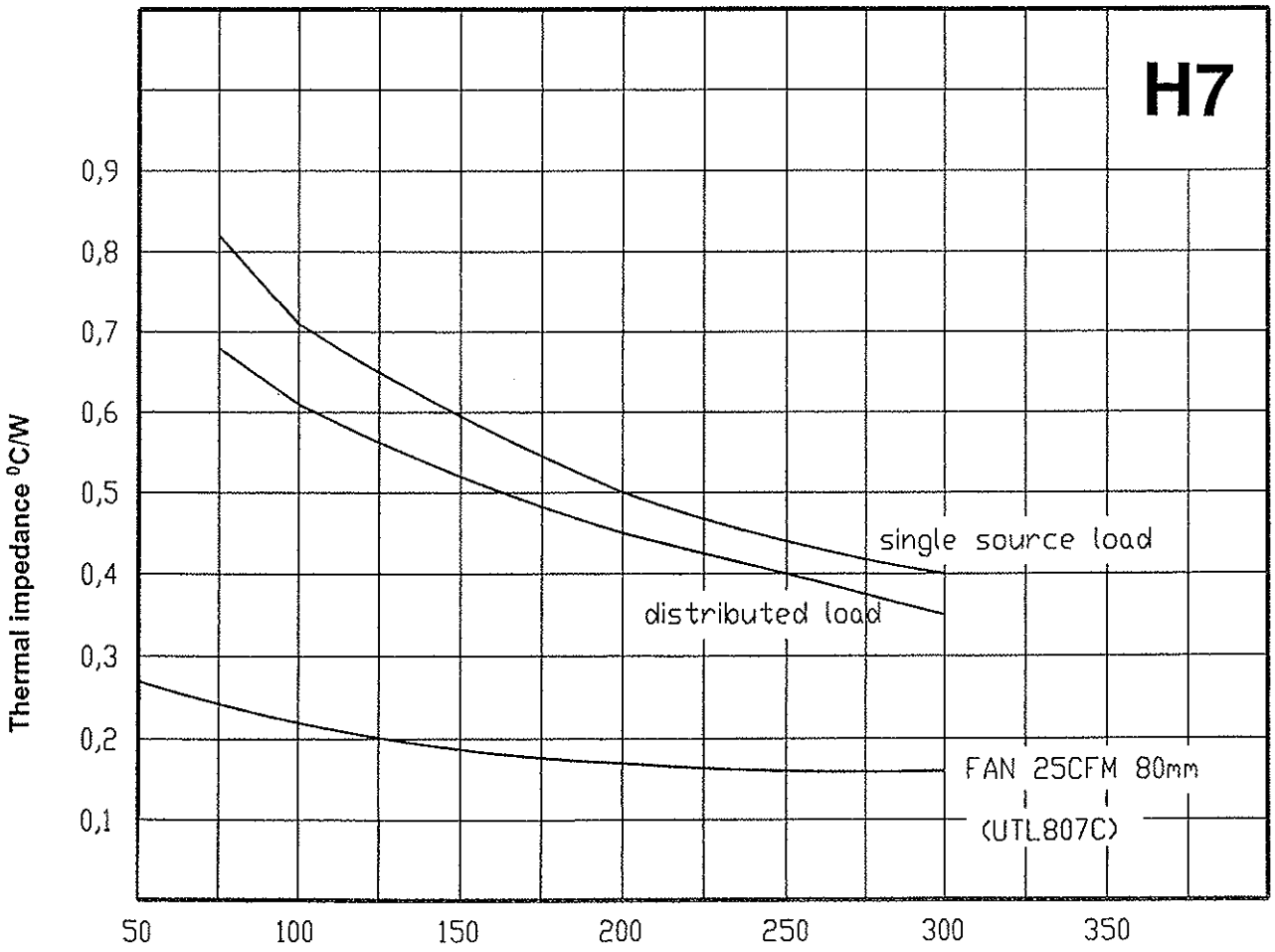
H7
HEATSINK



The H7 Heatsink was designed specifically for isolated power modules. The design allows for the mounting along its length of several modules. The heatsink fins can be located outside the cubicle allowing efficient cooling.

Weight/m	Area of Cross Section	Perimeter
kg/m	mm^2	mm
11.37	4212	1435



Graph above depicts thermal impedance at a temperature rise of 50°C against the length (mm)

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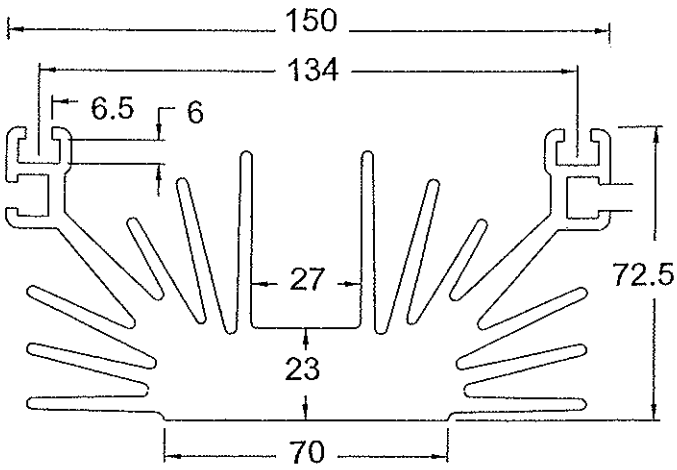
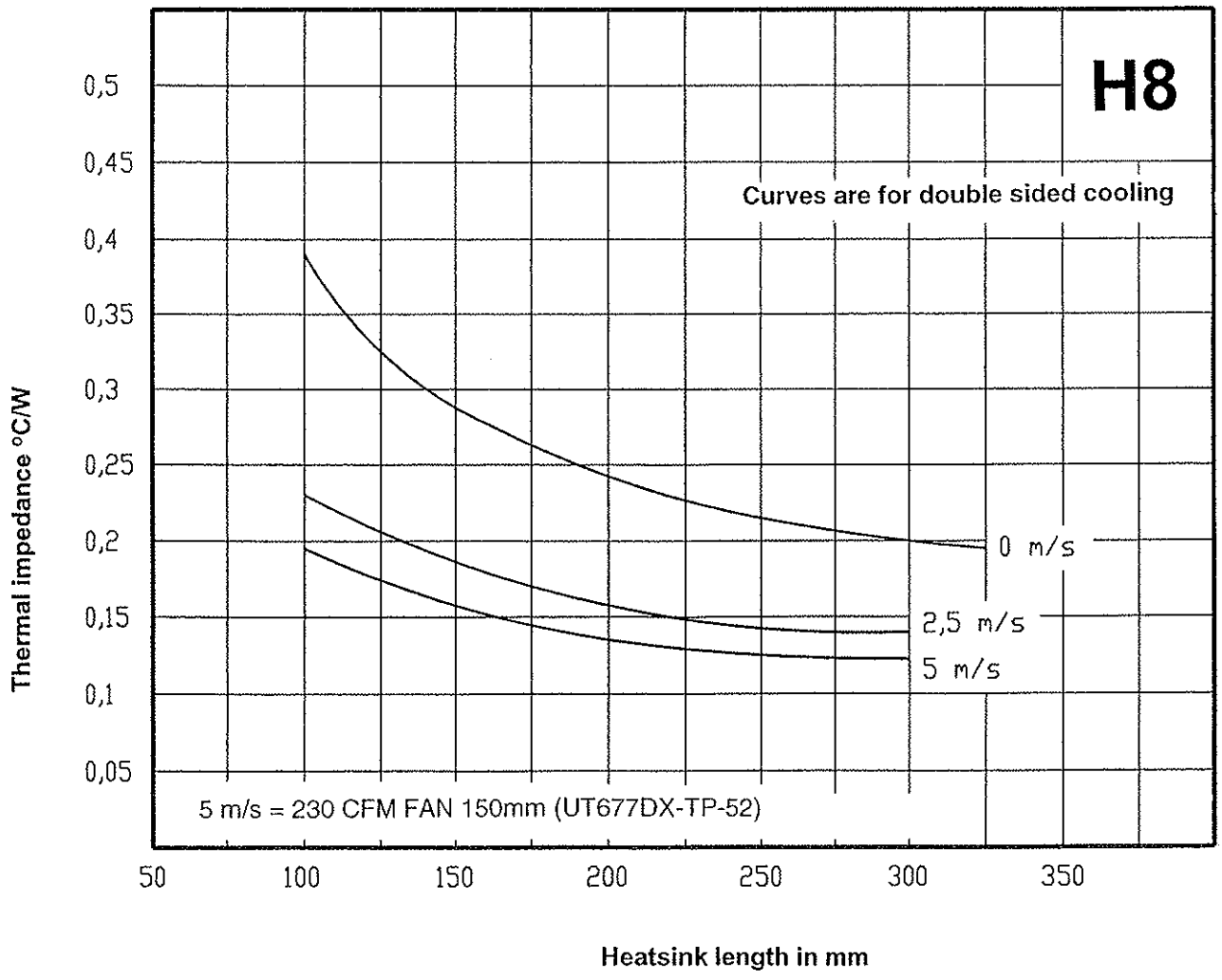
H8
HEATSINK



The H8 Heatsink is mostly used for all "Puk" or Capsule devices in double side or single side cooling arrangements. The construction of the heatsink allows the user to attach RC- snubber networks or fuses. To obtain the lowest possible thermal impedance H8 heatsink can also be forced air cooled.

Weight/m	Area of Cross Section	Perimeter
kg/m	mm^2	mm
10.65	3932	1324



Graph above depicts thermal impedance at a temperature rise of 50°C against the length (mm)

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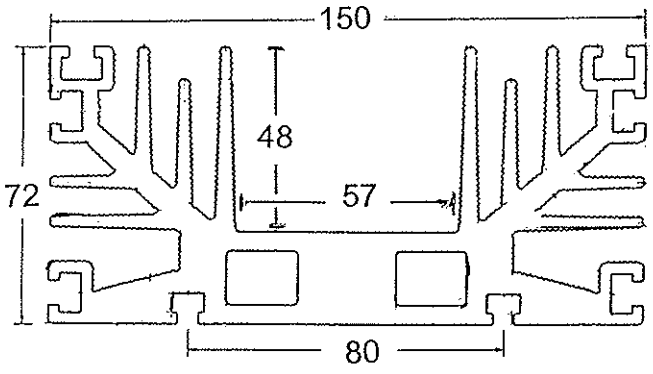
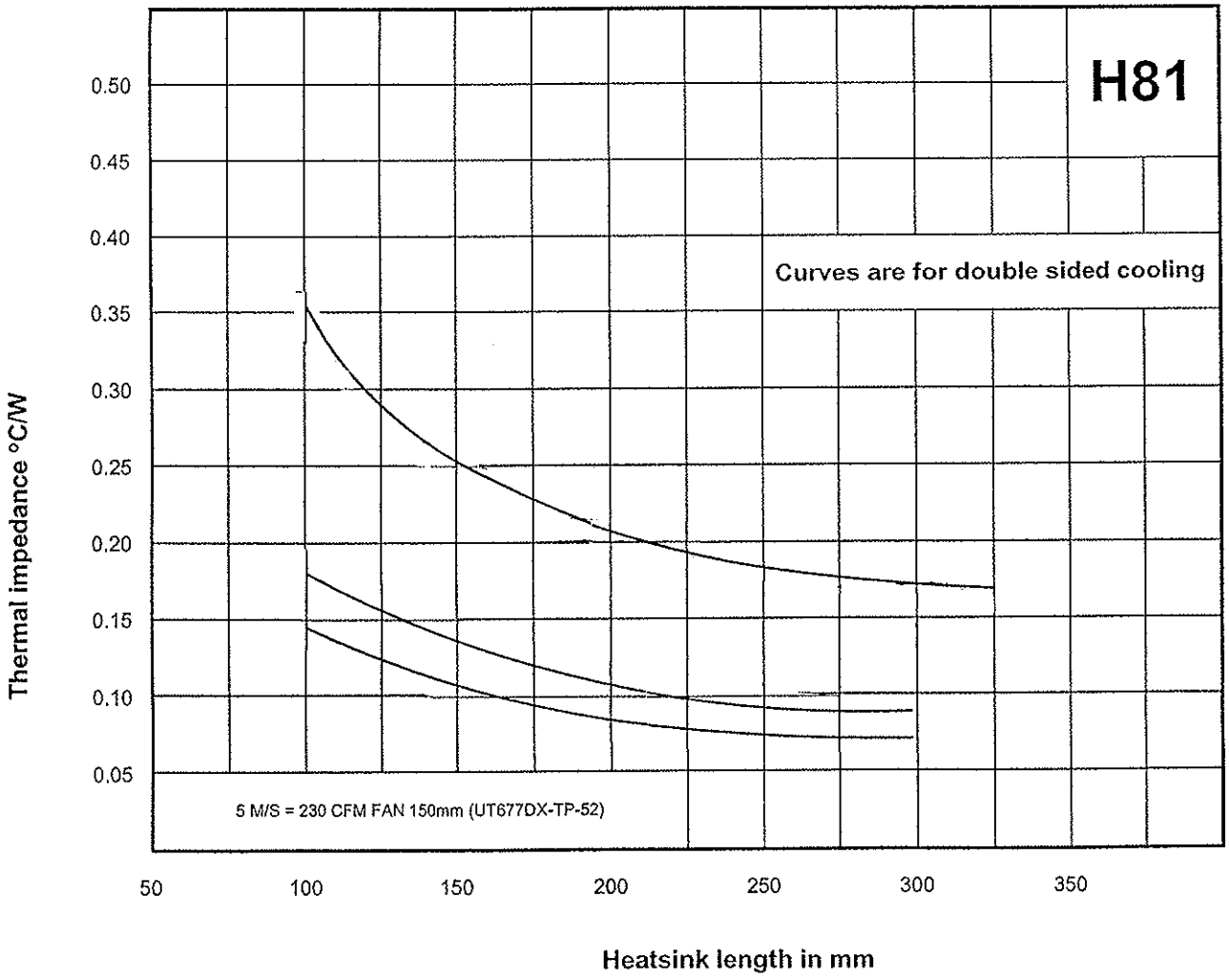
H81
HEATSINK



The H81 Heatsink is mostly used for all "Puk" or Capsule devices in double side or single side cooling arrangements. The construction of the heatsink allows the user to attach RC- snubber networks or fuses. To obtain the lowest possible thermal impedance H81 heatsink can also be forced air cooled.

Weight/m	Area of Cross Section	Perimeter
kg/m	mm^2	mm
10.97	4064	1636



Graph above depicts thermal impedance at a temperature rise of 50°C against the length (mm)

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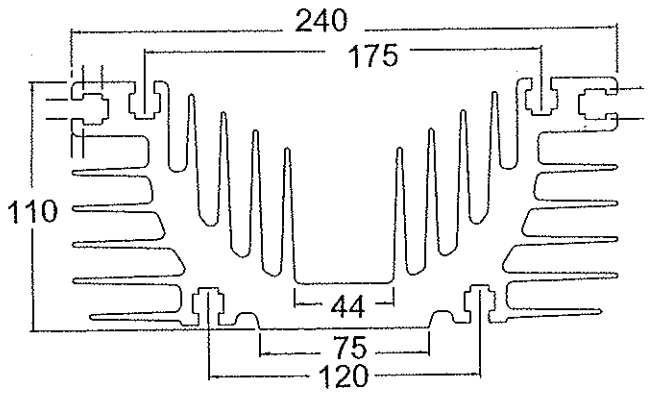
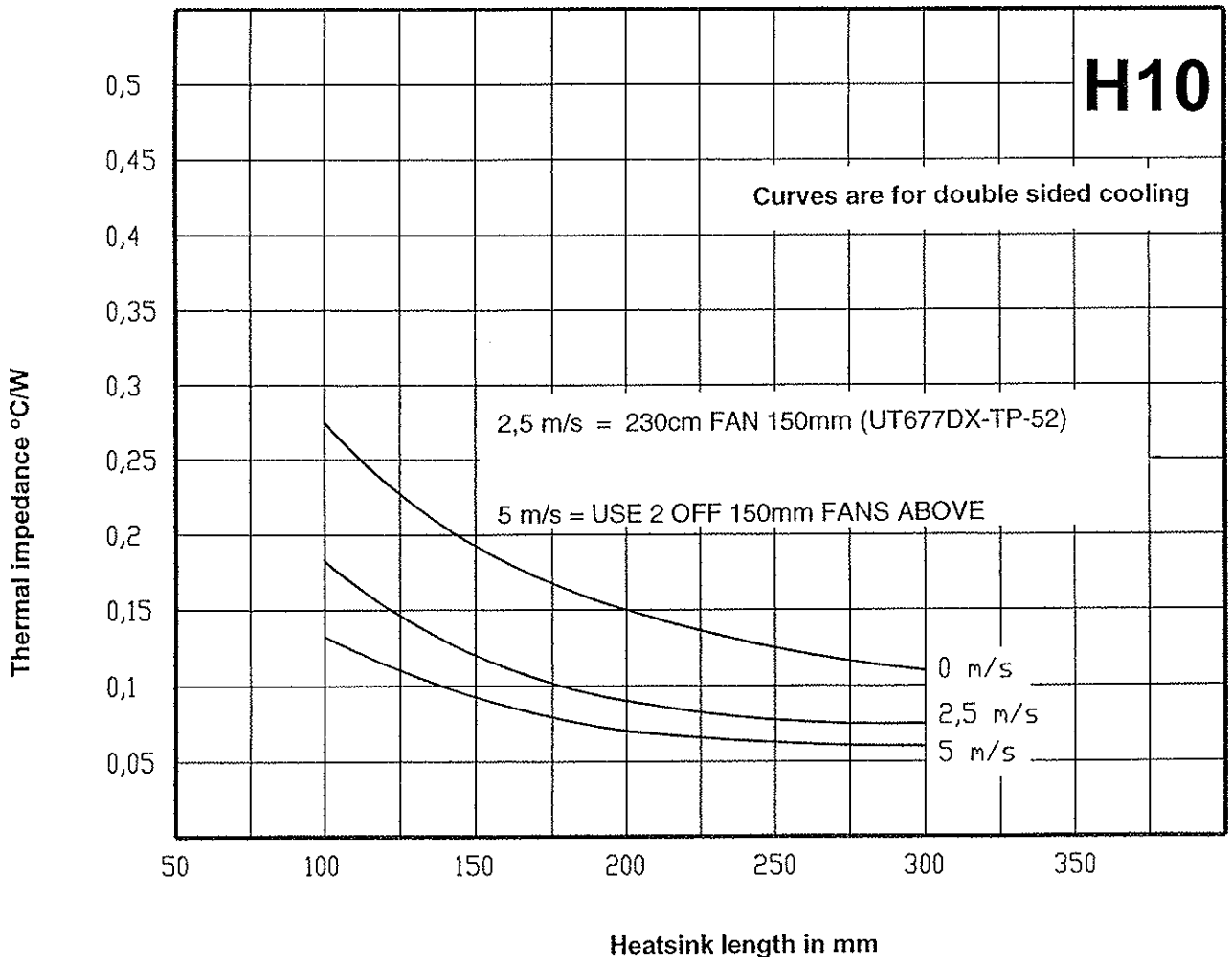
H10 HEATSINK



The H10 Heatsink has been designed for heavy duty applications where water cooling is not possible. In applications where forced air cooling can be used the performance of H10 heatsink can be improved considerably.

Weight/m	Area of Cross Section	Perimeter
kg/m	mm^2	mm
24.99	9227	2543



Graph above depicts thermal impedance at a temperature rise of 50°C against the length (mm)

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