Flat or side-mounted heatsinks for inserting MPPT controllers (scale ½)

for use when a thermally conductive mounting base is not available (detailed drawings, scale 1, on request)

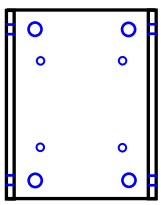
D1

50 x 40 x 20 mm
Rth = 10° / W

End view

"150W"

Top view



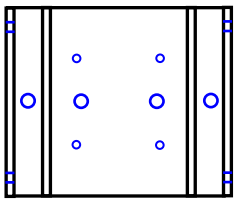
D3

50 x 60 x 20 mm
Rth = 4° / W

End view

"150W" or "300W"

Top view

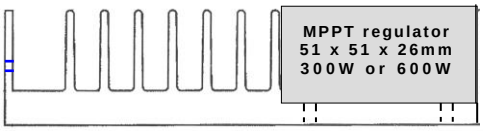


D4

124 x 50 x 30 mm
Rth = 2° / W

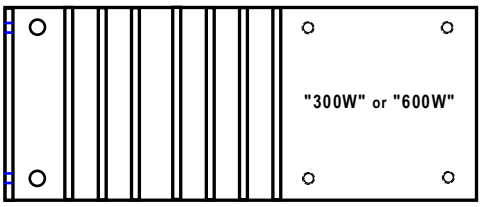
End view

MPPT regulator
51 x 51 x 26mm
300W or 600W



Top view (without the regulator)

"300W" or "600W"



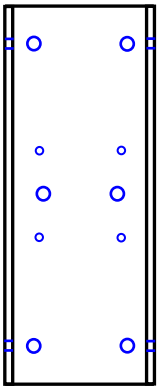
D2

100 x 40 x 20 mm
Rth = 5° / W

End view

"150W" or "300W"

Top view

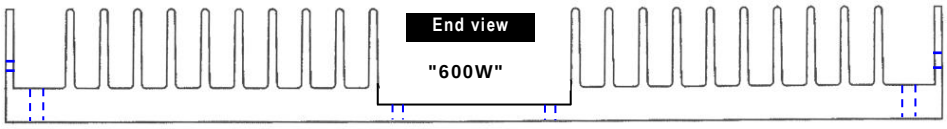


D5

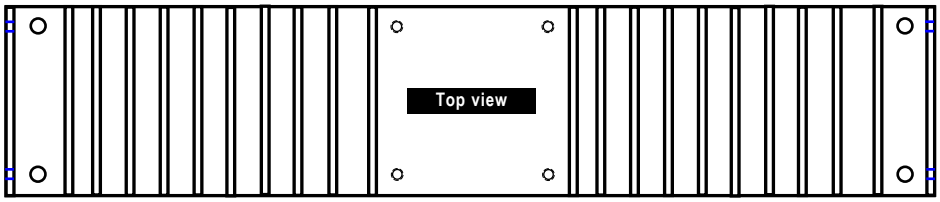
250 x 50 x 30 mm
Rth = 1° / W

End view

"600W"



Top view

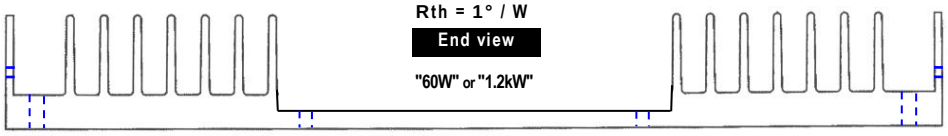


D6

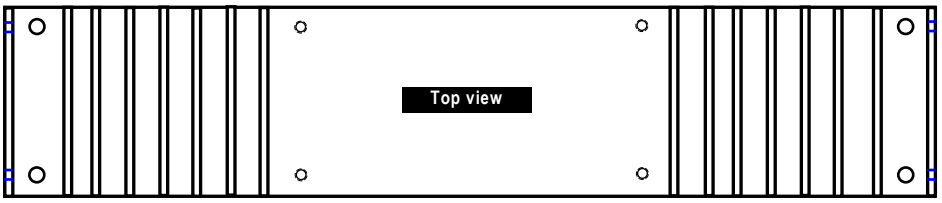
250 x 50 x 30 mm
Rth = 1° / W

End view

"60W" or "1.2kW"



Top view

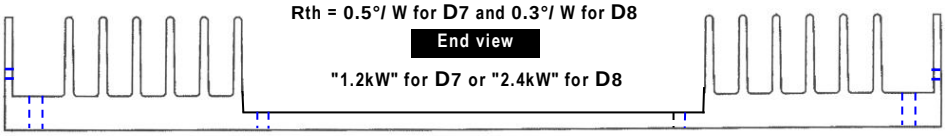


D7 & D8

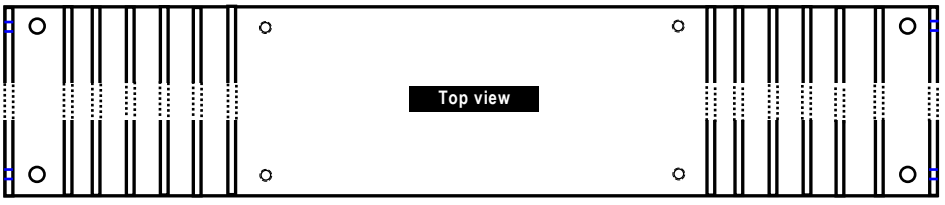
250x 100 mm for D7 and 250 x 200 for D8 (thickness 30mm)
Rth = 0.5°/ W for D7 and 0.3°/ W for D8

End view

"1.2kW" for D7 or "2.4kW" for D8



Top view



With natural convection, the case temperature depends on:

- its thermal resistance
- heatsink Rth
- the power generated
- conversion efficiency
- ambient temperature

1st example (sheet ❹) Case 300W

- Rth of the case 10°C / W
- Rth of D3 = 4° / W
- Rth resulting ≈ 3°C / W
- efficiency = 0,98
- maximum loss ≈ 6W
- Δ temperature = 18°C

Conclusion : Maximum permissible ambient temperature: 90° - 18° = 72°C

2nd example with the other 300W (sheet ❺) and the D4 heatsink, the maximum permissible ambient temperature would be around 80°C (instead of 72°C).

Note: the thickness (≤ 30mm) of our heatsinks (and MPPT regulators) means that, if desired, they can be placed directly against the panel's aluminum frame, secured by the 2 pre-drilled side holes.