

Mounting Instructions for L2 and L3 modules



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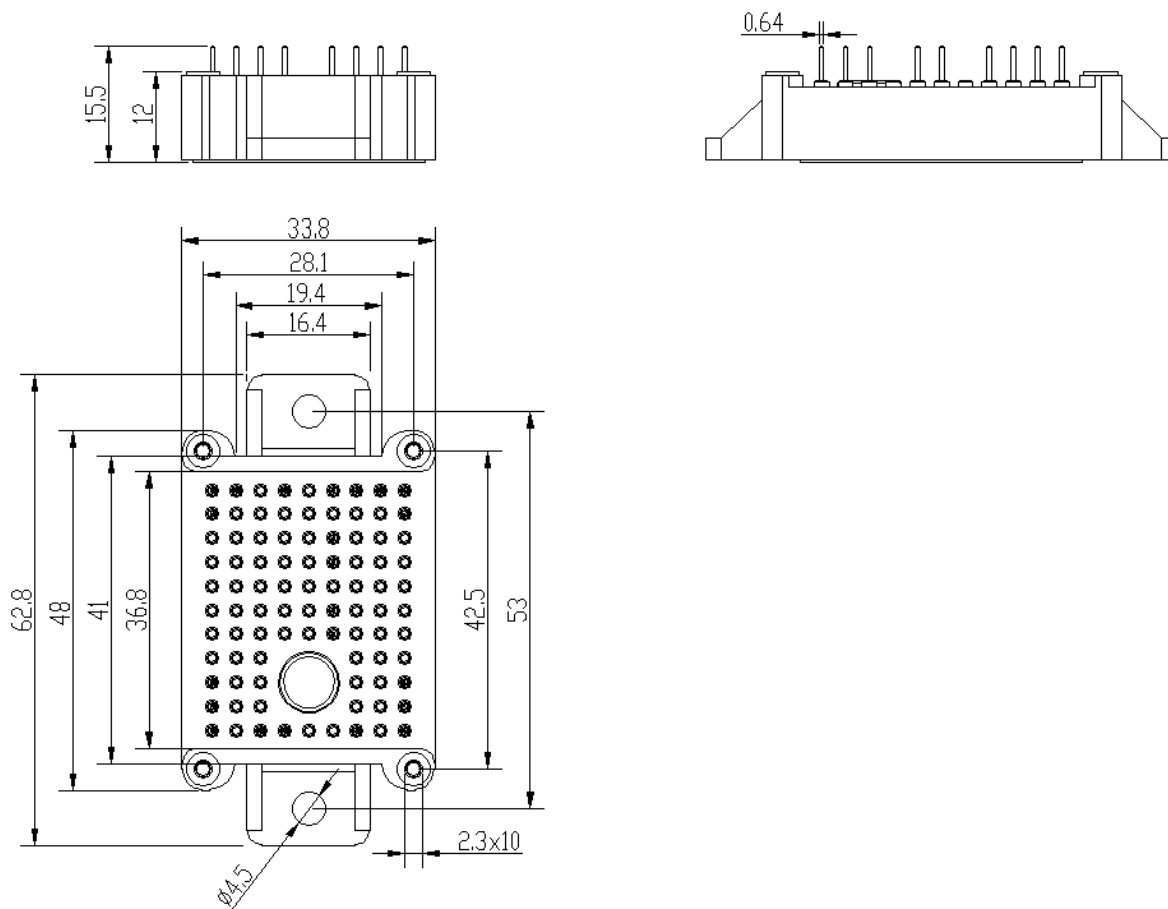
1.L2/L3 application

Benefits

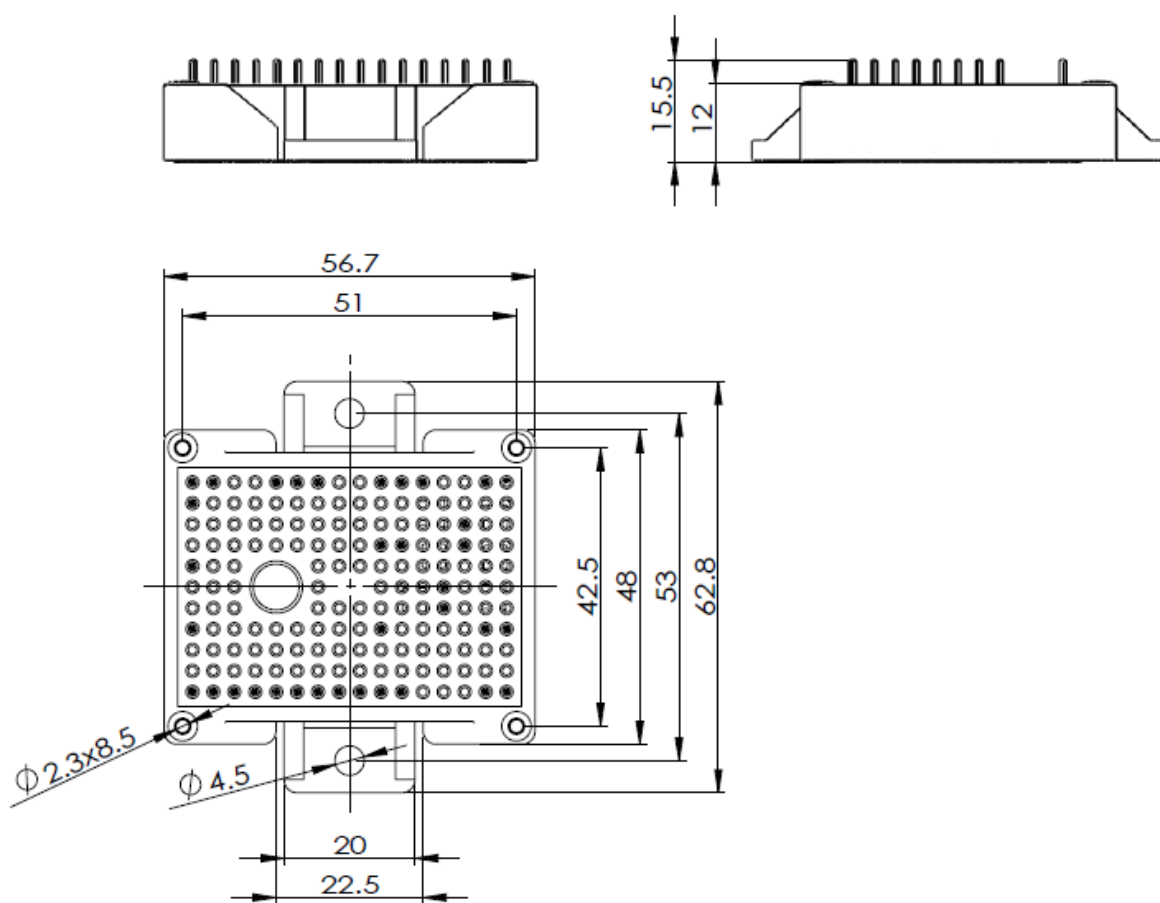
- 1) Low thermal resistance
- 2) High power density
- 3) Optimized layout, convenient driving control
- 4) Typical Applications: Motor drives /Variable-frequency Drive

2. Package outlines

2.1 L2 Package outlines



2.2 L3 Package outlines



2.3 Main dimensions of the module and screws

Item	L2	L3
length	62.8mm	62.8mm
width	33.8mm	56.7mm
height	15.5mm	15.5mm
Mounting screw	M4	M4

3. Condition of the heat sink

3.1 Heat sink requirements for module assembly

The power loss occurring in the module has to be dissipated via heat sink in order not to exceed the maximum permissible temperature T_{vjop} specified in the datasheets during operation. The condition of the heat sink surface in the area where the module is mounted is of great importance, as this interface between heat sink and module is of decisive influence on the heat transfer of the entire system. The contact surfaces, the surface below the module and the surface of the heat sink, have to be free of degradation and contamination, and need to be cleaned with nonwovens.

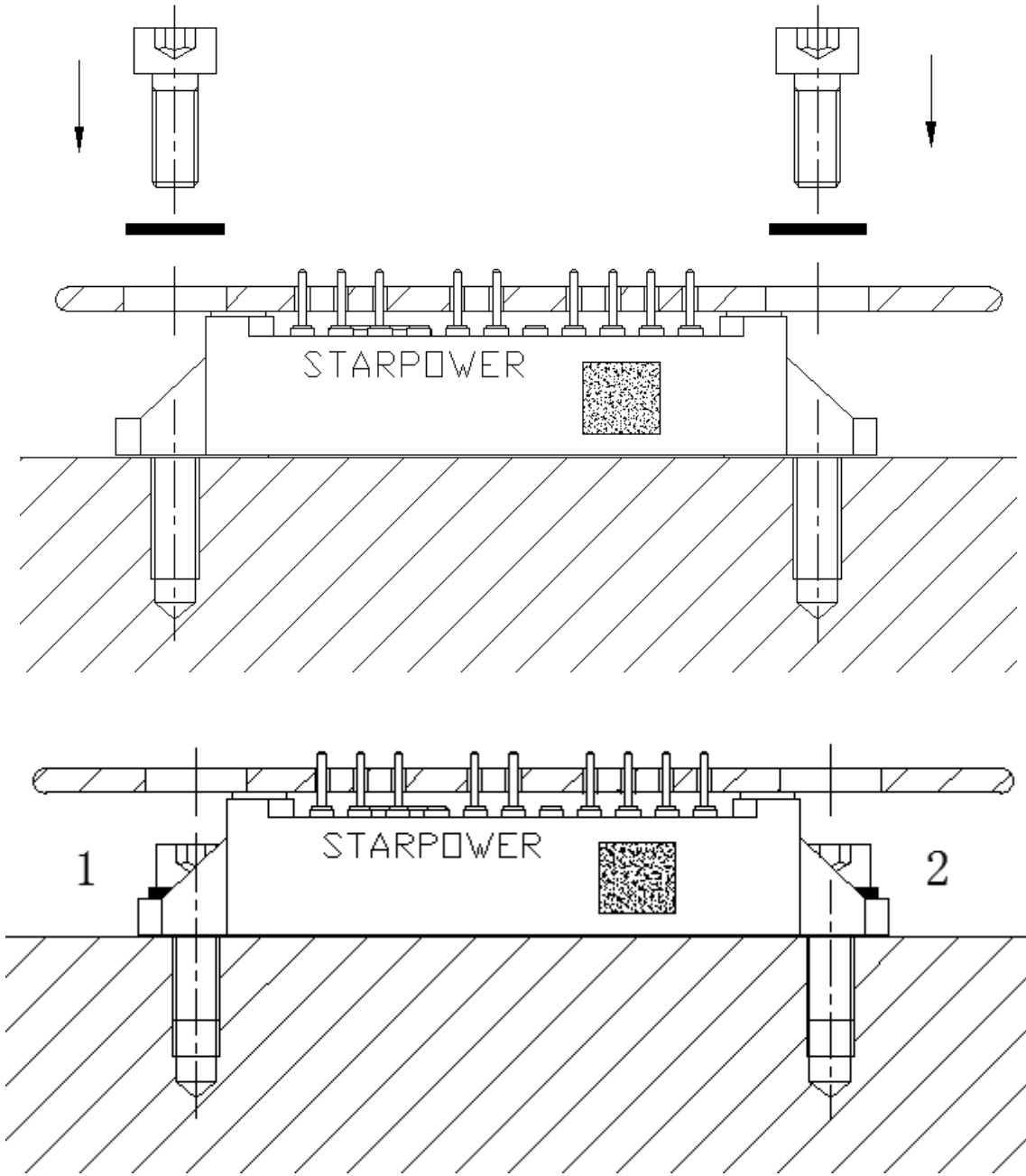
The heat sink must have good roughness and flatness, and must be rigid enough to prevent excess mechanical stress to the module during assembly or transport.

4. Applying the thermal paste

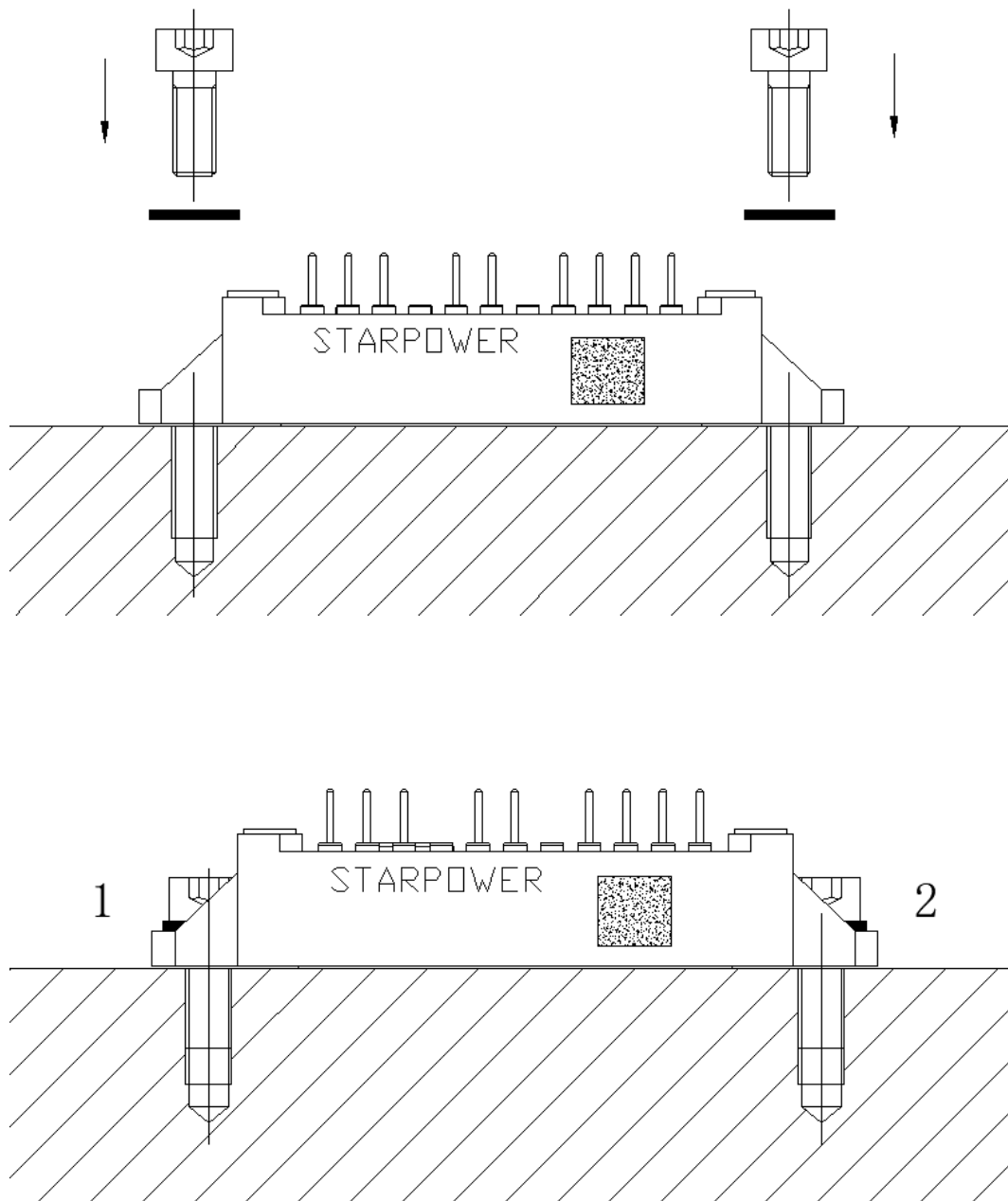
Before the module is mounted onto the heat sink an even layer of thermal paste, 100 μm thick, should be applied to the module base. This paste can be applied using either a roller or by a silk screen printing.

5. Module mounting processes and requirements

5.1 Assembling the module on the heat sink with a PCB



5.2 Assembling the module on the heat sink without a PCB



Recommended parameters for heat sink mounting :

Item		Values
Mounting screw		M4 (The effective length of the thread in the thread holes should have a minimum of 4mm)
Recommended washer		M4
Pre-tightening torque		0.3-0.5Nm
Tightening torque		1.6-2.3Nm
Assembling without a PCB	Screw velocity (pre-tightening)	max. 250rpm
	Screw velocity (tightening)	max. 15rpm
Assembling with a PCB	Screw velocity (pre-tightening)	max. 120rpm
	Screw velocity (tightening)	max. 15rpm
Minimal thread length into the heatsink		min. 5mm

说明:

- ① Tighten all screws using a torque of approximately 0.3-0.5 Nm in the following sequence: e.g. screw No. 1 – 2. After this, tighten the screws using a torque of 1.6 – 2.3Nm in the same sequence.
- ② The module is mounted onto the heat sink using M4 screws.
- ③ The screw length depends on the threaded holes in heat sink. It is recommended that the depth of threaded hole is at least 5 mm.
- ④ For applications with vibration, screws shall be provided with spring washers.