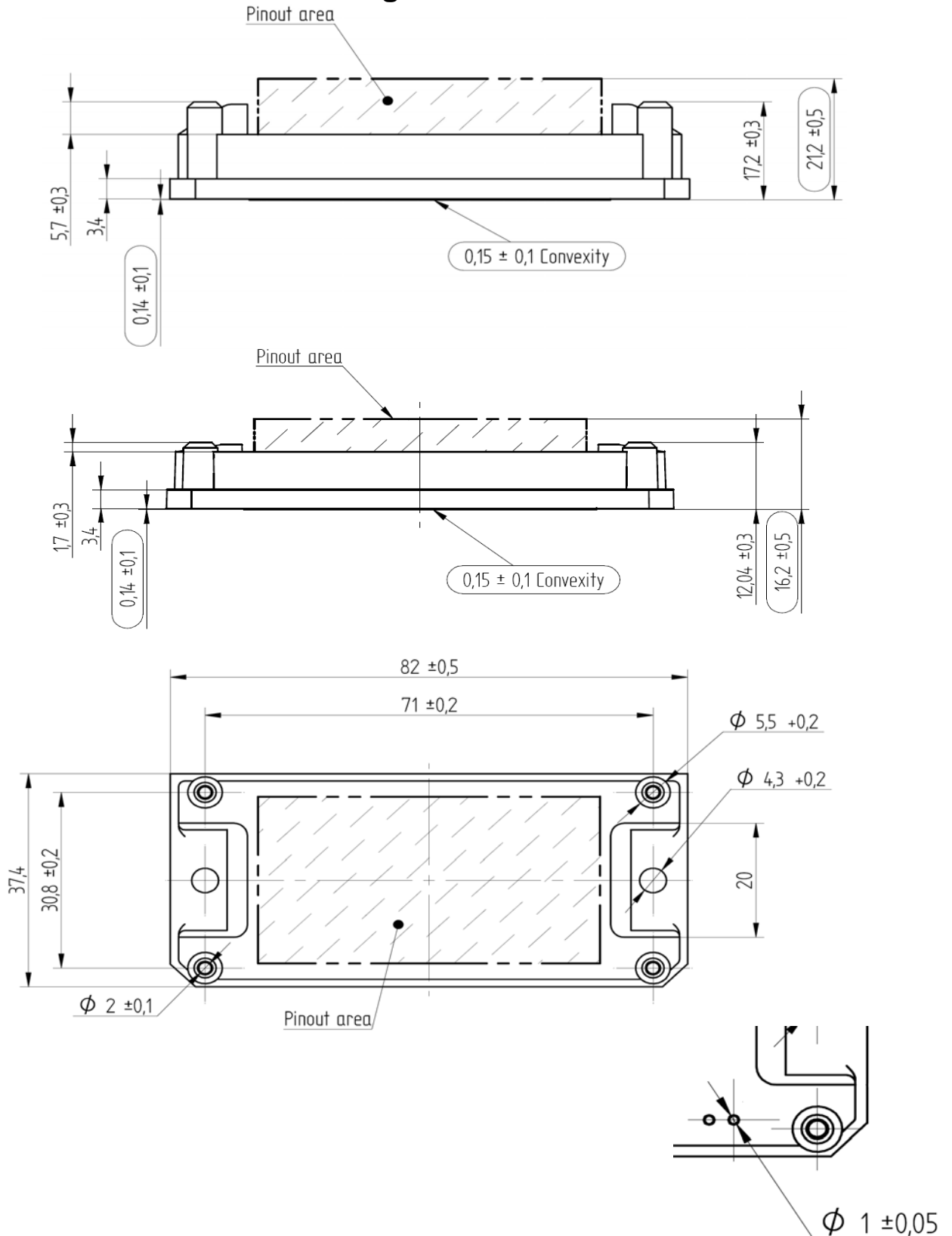


flow1

12mm and 17mm height

Package Dimensions



Handling Instructions

with respect to the PCB

- The module is to be screwed into the PCB using 4 screws of type BN82428 with D = 2,5mm and L = 6mm, mounting torque 0.4 Nm.
- After screwing, all pins are to be soldered into the PCB
- During assembly, at a max. Module temperature of 25°C, the pins are not to be drawn or pushed more than ± 0.2 mm or loaded with a force greater than 35N
- The load of the pin is not to exceed ± 5 N at a maximum substrate temperature of 100°C
- Vibration stress on the pins is to be avoided

with respect to the heatsink

- The heatsink surface must be clean and free of particles
- The flatness is to stay below 0.05 mm in 100 mm
- The surface roughness is not to exceed an R_z of 0.01 mm

with respect to the thermal paste

OPTION 1: thermal paste

- The thermal conducting paste is to be applied to the entire module plate with a thickness of max. 0.05 mm
- Thicker thermal paste can potentially raise the value of R_{th}

OPTION 2: thermal foil

- thermal foil with a aluminium core layer and two outer layer made of phase change material should be used.
- the total thichness of the foil has to be less than 0.08mm. Thicker foils could cause braking of the ceramic substrate and will increase the thermal resistance.
- recommended foil type: Kunze Folien KU-ALC5 or ALF5, fecommeded shape on page 4

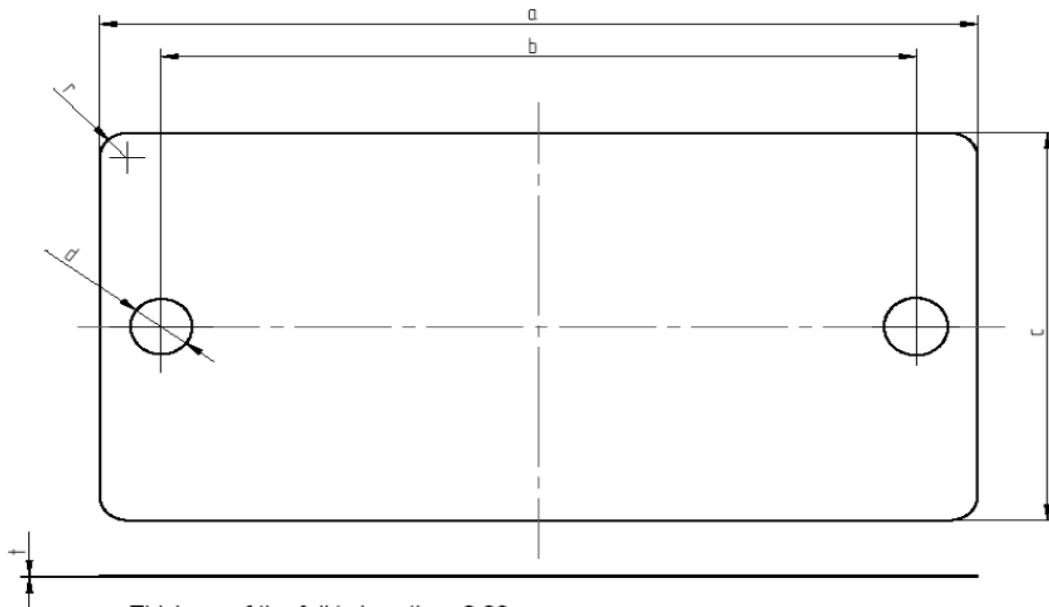
OPTION 3: Pre-applied phase change material

- Module is shipped with Vincotech pre-applied phase change material.

with respect to the fastening screws to the heatsink

- The screws are to be tightened using half torque first
- In the second step, all screws are to be tightened applying the full torque
- To be used is an M4 ISO 7045 (DIN 7985) screw - property class ≥ 4.8
- To be used is a ISO 7089 (DIN 125/A) flat washer
- To be used is a DIN 127 or DIN128 spring washer
- To be applied is a mounting torque of $2.0\text{Nm} \leq M_a \leq 2.2\text{Nm}$

Thermal Foil Dimensions



Thickness of the foil is less than 0,08 mm

Material of the foil is Aluminium,

covered with a phase change material

Type	a	b	c	d	r
Flow1	82±0,15	71±0,15	37,4±0,15	4,5 ±0,15	2±0,15
Flow1B	72±0,15	61±0,15	36±0,15	4,5 ±0,15	2±0,15

PRODUCT STATUS DEFINITIONS

Datasheet Status	Product Status	Definition
Target	Formative or In Design	This datasheet contains the design specifications for product development. Specifications may change in any manner without notice. The data contained is exclusively intended for technically trained staff.
Preliminary	First Production	This datasheet contains preliminary data, and supplementary data may be published at a later date. Vincotech reserves the right to make changes at any time without notice in order to improve design. The data contained is exclusively intended for technically trained staff.
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