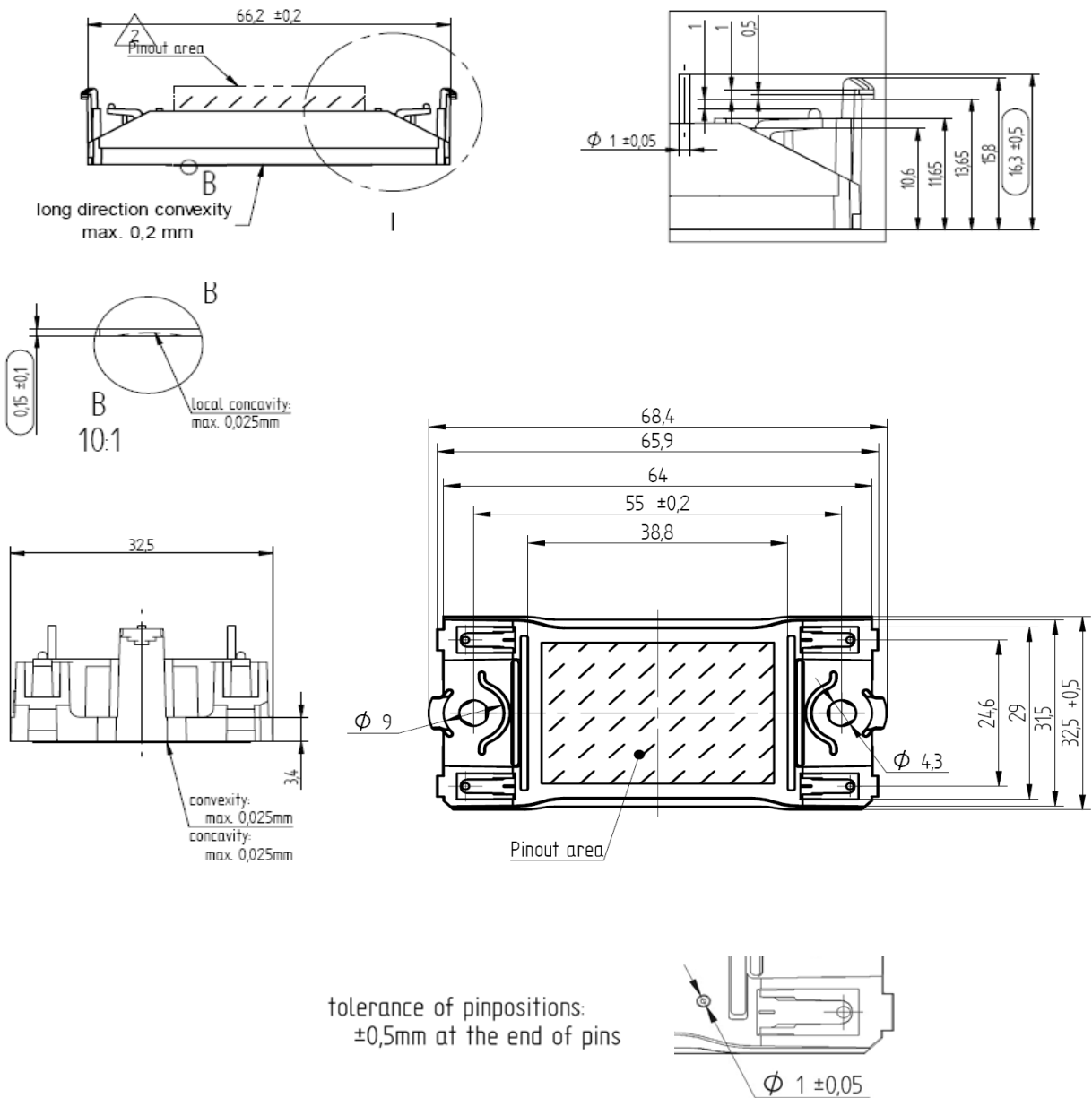
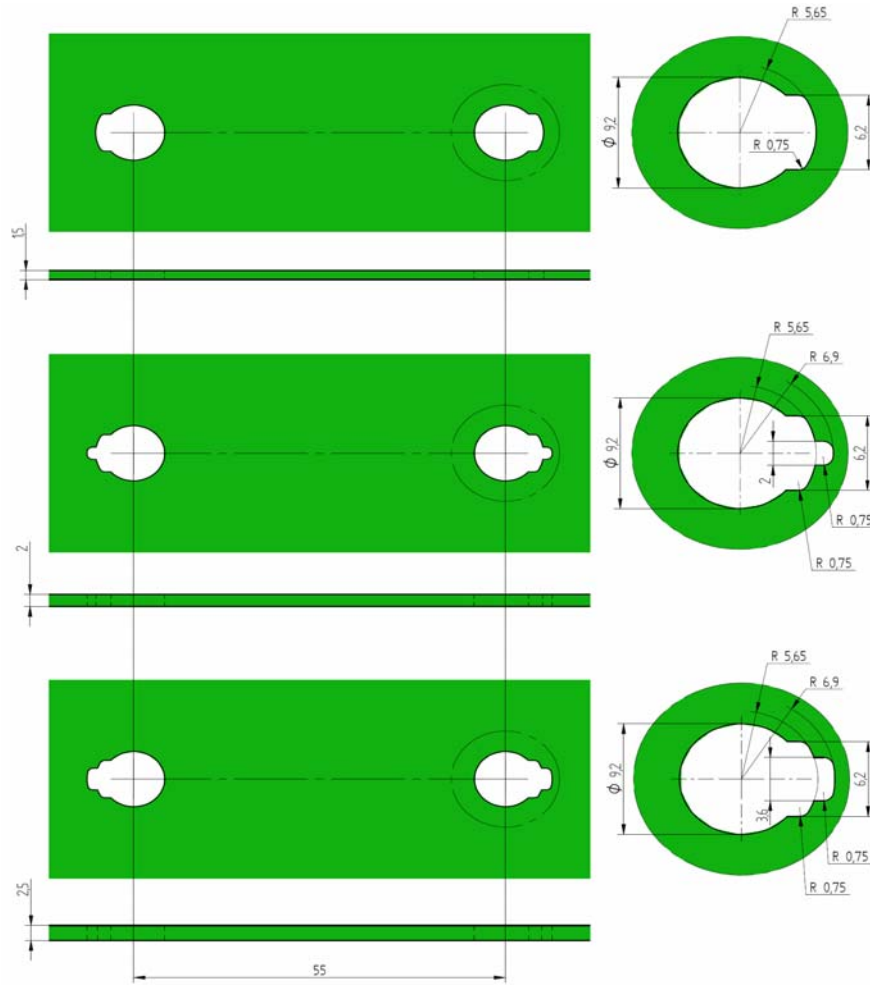


flow0 12mm

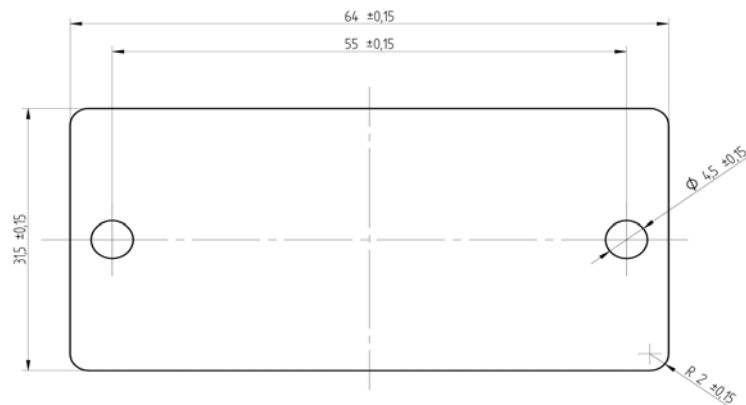
Package Dimensions



PCB Holes & Thermal Foil Dimensions



Thermal foil



Handling Instructions

with respect to the PCB

- The module is to be fixed to the PCB by clipping it into the appropriate holes before pin soldering
For details see unit 'PCB Holes & Thermal Foil Dimensions' on page 3
- After fixing, all pins are to be soldered into the PCB
- During assembly, the pins are not to be drawn or pushed more than $\pm 0.2\text{mm}$ or loaded with a force greater than 35N
- The load of the pin is not to exceed $\pm 5\text{N}$ 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 0.05mm in 100mm
- The surface roughness is not to exceed an R_z of 0.01mm

with respect to the thermal conduction material

using thermal paste

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

using thermal foil (strongly recommended for modules with AlN substrate)

- Recommended is a thermal foil with an aluminium core layer and two outer layers made of phase change material
- The total thickness of the foil is to stay below 0.08mm or 0.003inch ; thicker foils could cause the ceramic substrate to break and will increase the thermal resistance
- Recommended are the types KU-ALC5 and KU-ALF5 from the company Kunze-Folien
- For recommended foil dimensions see unit 'PCB Holes & Thermal Foil Dimensions' on page 3

with respect to the fastening screws to the heatsink

using a plain washer

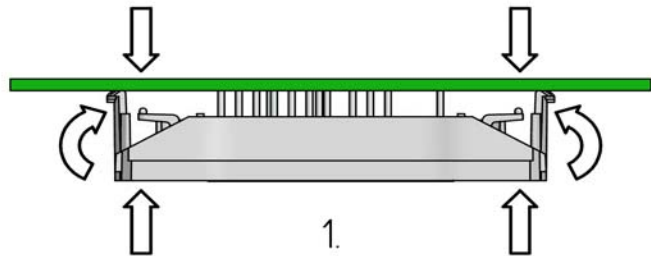
- The screws are to be tightened using half torque first
- In the second step, all screws are to be tightened applying the full torque
- To be used is a DIN 125 or DIN 433 flat washer
- To be used is an M4 DIN 7985 screw
- To be applied is a mounting torque of $2.0\text{Nm} \leq M_a \leq 2.2\text{Nm}$

using a plain washer with a spring lock washer

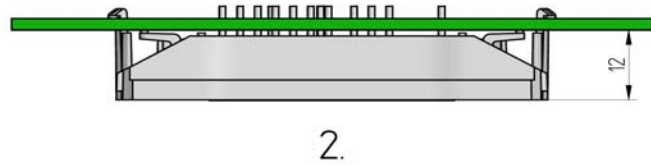
- The screws are to be tightened using maximum torque
- To be used is a DIN 125 or DIN433 flat washer
- To be used is a DIN 127 or DIN128 spring washer
- To be used is an M4 DIN 7985 screw
- To be applied is a mounting torque of $2.0\text{Nm} \leq M_a \leq 2.2\text{Nm}$

Mounting Instructions

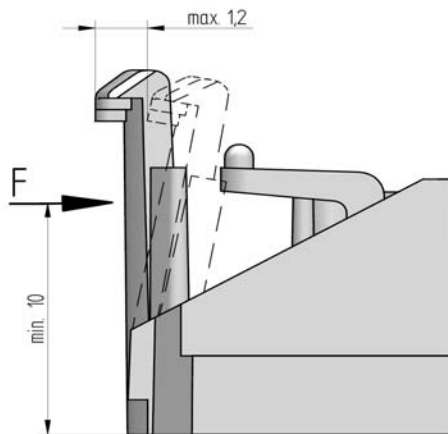
1. Insert the module pins to the PCB, press the clips to each other and press the module into the PCB as shown on figure 1. until the clips are locked



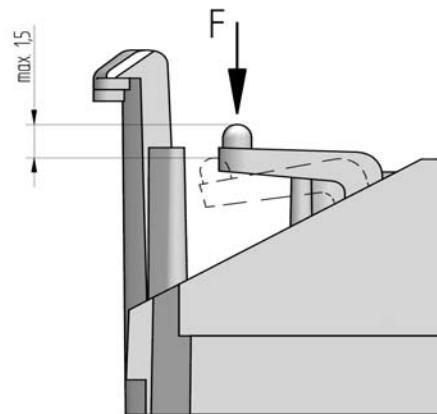
2. Module in place on PCB (figure 2.)



Allowable deformation of clip



Allowable deformation of spring



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.
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