Infineon Technologies Bipolar GmbH & Co. KG

Assembly instructions for clamp types V50 up to V100

AN 2013-07

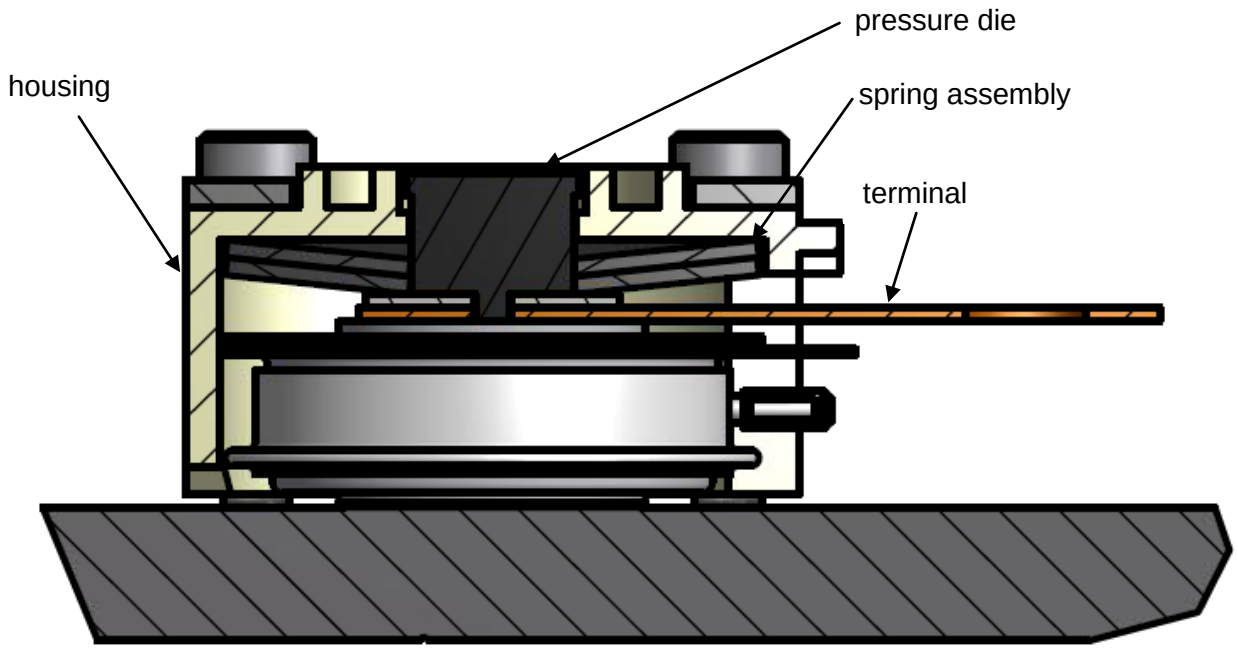
This application note is supposed to demonstrate how clamps and disk devices are used correctly

Application Note

AN 2013-07-Assembly instructions for clamps

1 Assembly instructions for clamp types V50 up to V72

The main parts of the clamp are the plastic housing, the pressure plate, the pressure die with the terminal (as a bent bar or a stud), the spring assembly, and the 4 clamping screws. The clamps' dimensions are in line with our disk types' diameters. The required clamping force is reached when the plastic housing is on the same level as the lower contact area (e.g. heatsink) of the disk. The pressure plate guarantees that the plastic housing will not be damaged.



1 sectional view type V50-V72 non clamped state

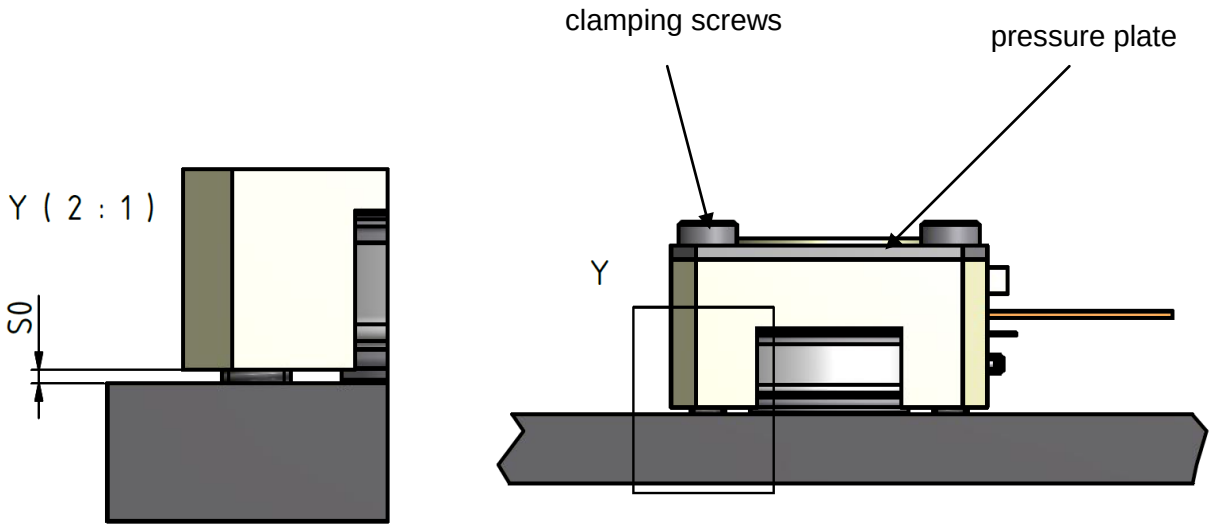
Example type name

Type: V72-26.120M

Clamping force: 120 x 100N = **12kN**
M = with connection bolt
N = with current busbar

Assembly:

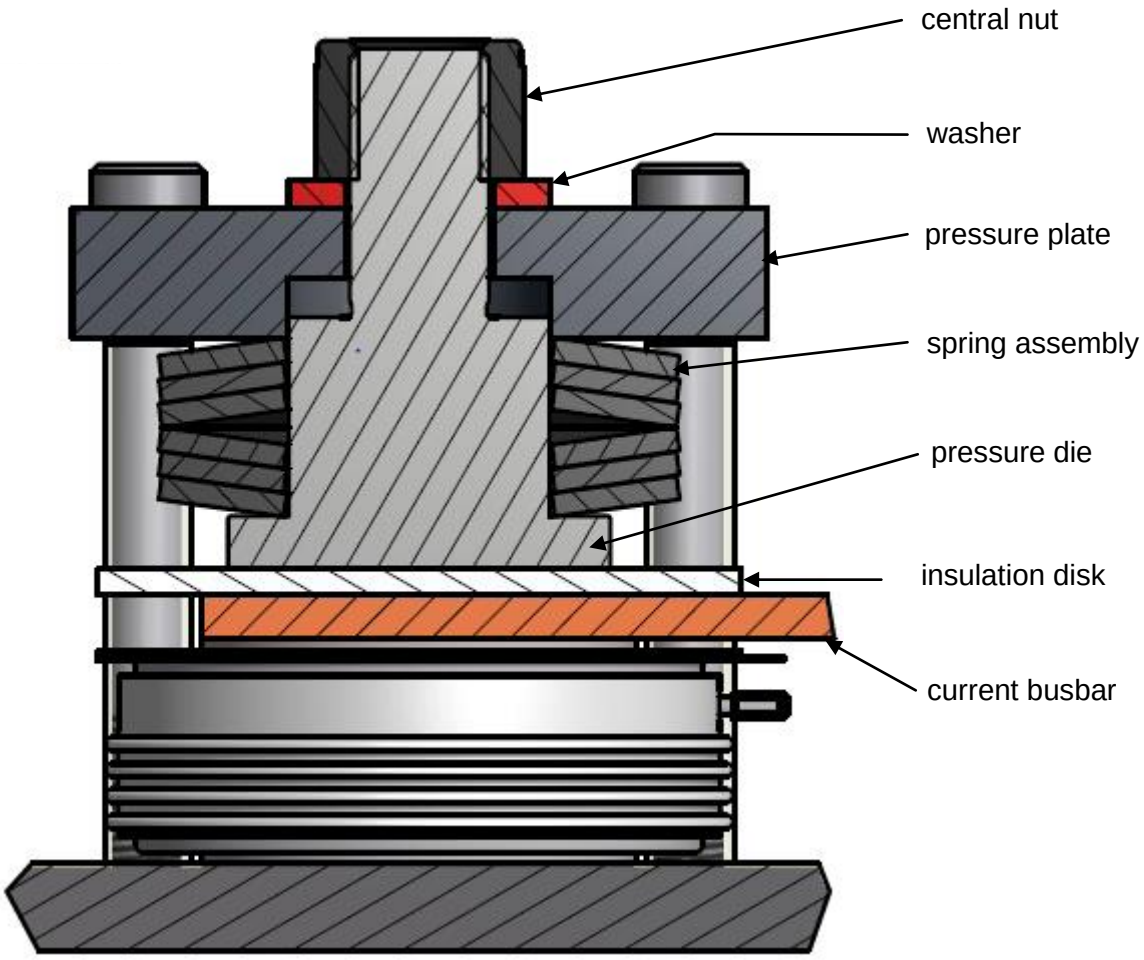
1. Adjust the disk in the clamping device
2. Screw the clamping device and the disk to the base plate (e.g. heatsink= by tightening the 4 clamping screws by hand
3. Tighten the clamping screws alternately by turns of 45°. This process is repeated till the plastic housing touches the base plate or till a gap of S0 max. 0,2mm is left.
4. The desired clamping force now is reached, even by a further tightening of the screws, the clamping force applied to the disks cannot be increased.



2 side view V50-V72 non clamped state

2 Assembly instructions for clamp types V89 up to V100

This clamp is a so-called **pre-stressed unit**. Its main parts are the pressure plate, the spring assembly, the pressure die with nut and washer, and an insulation disk. The spring assembly is pre-stressed as per the type marking and is fixed by the central nut.



3 sectional view V89-V100 non clamped state

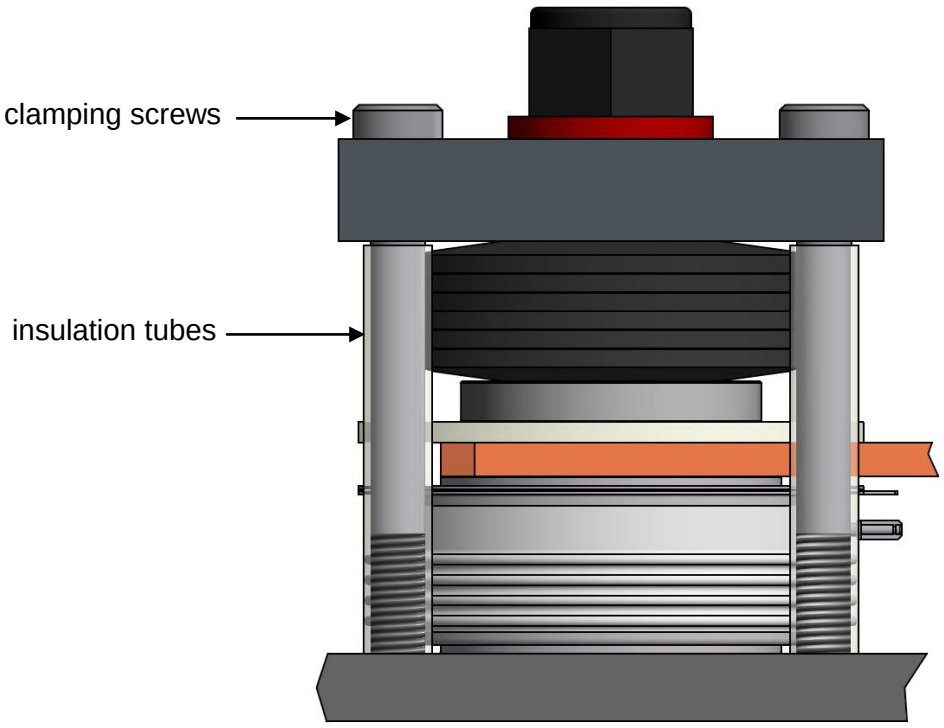
Example type name

Type: V89-26.400N

Clamping force: 400 x 100N = **40kN**

Assembly:

1. 4 screws (M8, stability 8.8) with a suitable length for the device stack consisting of clamp, insulation disk, terminals, and device. As the stack's length can vary, the screws are not part of our delivery.
2. Equip the screws with a suitable insulation (e.g. PTFE-tube). The insulation – as the screws – is not included in our delivery.
3. Staple the devices, then add the clamp with the insulation disk and tighten the 4 clamping screws M8 by hand
4. Alternately and by small turns of about 10°, the 4 clamping screws have to be tightened in such a way that the washer will loosen and that a gap towards the nut of about 0,3mm will result. The pre-stress now is fully taken over by the 4 clamping screws and the desired force is exerted on the devices to be clamped. Attention, do not turn the central nut, otherwise the clamping force will change during relaxation (change of devices). The nut is protected by a lacquer against turns caused by vibrations or accidental contacts.
5. If during operation and resulting from vibrations, noise is created by the moving washer, the washer can be fixed by a sealing lacquer



4 side view V89-V100 non clamped state

Assembly **instructions for clamp types V89 up to V100**

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