

# Recommendations regarding ABB Mounting Clamps for clamping press-pack high power semiconductor assemblies

## Introduction

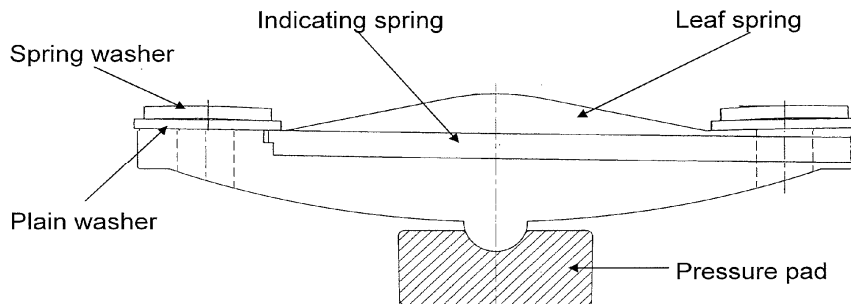
ABB supplies a serie of mounting clamps for mounting forces 4 - 135 kN. The ABB mounting clamps are designed to ensure right clamping force in press-pack high power semiconductor assemblies. It will also assist to facilitate homogeneous pressure distribution over the whole contact surface of the device.

In this application note some important issues how to use and manage the ABB mounting clamps are addressed.

For further information regarding mechanical design and assembly work for high power semiconductor and heat sink stacks, refer to ABB application note "Recommendations regarding mechanical clamping of press-pack high power semiconductors".

## Principal function of the ABB mounting clamps for press-pack high power semiconductor assemblies.

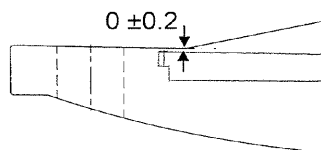
The ABB patented mountig clamp indicating system makes it easy to ensure right clamping force. The indicating spring measure the deflection of the leaf spring and snaps over when correct press force is achieved.



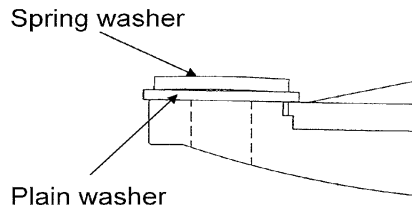
## Recommendations to secure right mounting force:

All parts of the clamping system, clamp, indicating spring, pressure pad and washers are important to ensure right mounting force. Use only recommended dimensions of bolts and washers indicated in the product data sheet.

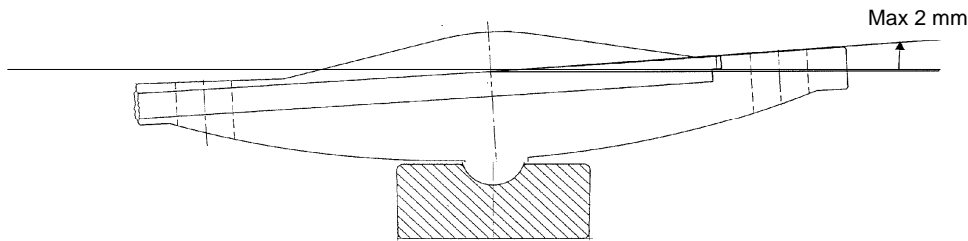
Ensure that the mounting clamp is applied to the center of the semiconductor device. It is important to secure that the force from mounting clamp is transferred symmetrically to the device.



The leaf springs are delivered with the indicating spring adjusted to the neutral position. See figure. Adjust carefully if the indicating spring not flush with the edge of leaf spring to secure correct mounting force.



Place the washers in right order and oriented as in figure above. Put some grease on the threads and on the pressure side of the nuts.



Then tighten the two nuts in an equal manner ensuring that the spring is kept horizontal. Alter between the nuts, half a turn at a time, until the indicating spring snaps over for the correct press force.

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**ABB AB**  
**Logistics Center**  
S-721 59 Västerås, Sweden  
Tel: +46 21 32 28 00, Fax: +46 21 14 65 37  
Emergency Spare Parts: +46 70 575 00 85

Parts OnLine: [www.abb.com/partsonline](http://www.abb.com/partsonline)  
Offers: [offer.selog@se.abb.com](mailto:offer.selog@se.abb.com)