

## Application Note

# Mechanical Handling of PCB-Based CONCEPT Drivers

## Introduction

PCBs are rugged media widely used to connect electronics components. However, several measures must be considered in order to avoid applying excessive mechanical stress that could damage the PCB itself or the assembled components.

This Application Note describes the correct mechanical handling of PCB-based CONCEPT drivers. It particularly points out that no excessive mechanical force must be applied to transformers and that excessive PCB bending must be avoided to prevent cracks in ceramic capacitors.

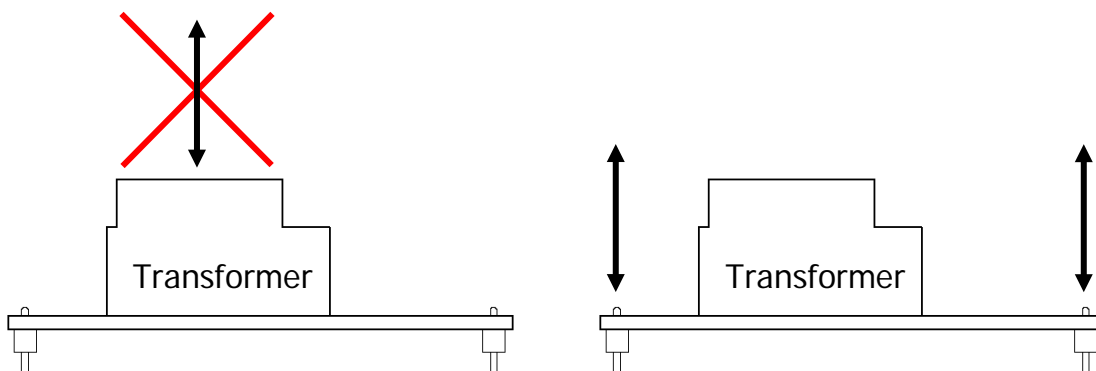
## Mechanical Handling of CONCEPT Drivers

### Insertion of gate driver cores into the destination PCB

CONCEPT recommends that no mechanical force be applied to the transformers of gate drivers. This could happen, for example, when the transformers of CONCEPT drivers are used as a mechanical hand-hold, particularly to remove or insert the driver from/into the packaging or destination/carrier PCB (as needed for driver cores) during assembly.

Applying excessive mechanical force to the transformers bends the PCB and considerably stresses the transformer solder joints, leading to potential pre-damages. This increases the probability of cracks at the transformer solder points, which could lead to loss of functionality of the driver under worst case conditions. PCB bending may also lead to cracks in assembled ceramic capacitors that typically produce a short circuit within the ceramic body of the capacitor.

Fig. 1 shows a standard CONCEPT gate driver core. It illustrates that the force required to insert/remove the driver into/from the packaging or destination PCB must be applied directly to the corresponding terminals of the driver PCB, but not to the transformer.



*Fig. 1 Not recommended (left) and recommended (right) ways of handling CONCEPT gate driver cores during assembly (body plan of a driver)*



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### Legal Disclaimer

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