

Dear Valued TRINAMIC Customer,

This notification is to inform you that a change will be done to the product listed below:

- **TMC236A-PA**
- **TMC236A-PA-T**
- **TMC236A-PA-X**

For samples and further questions, please contact your sales partner.

## Hardware changes

Due to product maintenance and to assure longevity of the TMC236 we qualified a new wafer fab for TMC236 motor driver MOSFETs full-bridges. Hardware changes:

- Motor driver N-channel MOSFET (4pcs. in total)
- Motor driver P-channel MOSFET (4pcs. in total)
- Revision field of IC label will change from "A" to "B". (TMC236A to TMC236B)
- New motor driver MOSFETs will improve power losses due to lower  $R_{dson}$

You can find the relevant MOSFETs (red marked) in the block diagram in figure 1. Due to the multi-chip structure of the TMC236 only motor driver MOSFET dies are affected to the changes. Complete digital and analog part of the core die as well as lead frame and IC structure stays unchanged.

## Compatibility

The new revision of the TMC236 is fully compatible. Notes on hardware compatibility:

- No change in mechanical dimensions. Test passed.
- No change in electrical behavior of digital and analog core die. Test passed.
- MOSFET electrical characteristic (e.g. slope, break before make,  $R_{dson}$ ) Test passed.
- Improved behavior of motor driver stage due to lower  $R_{dson}$ . (Power dissipation lower or equal to revision A)
- Assembly, production of core die and test facility stays unchanged.
- Digital and analog core die stays unchanged.
- Drop-in compatible.

This improvement is classified as a minor change.

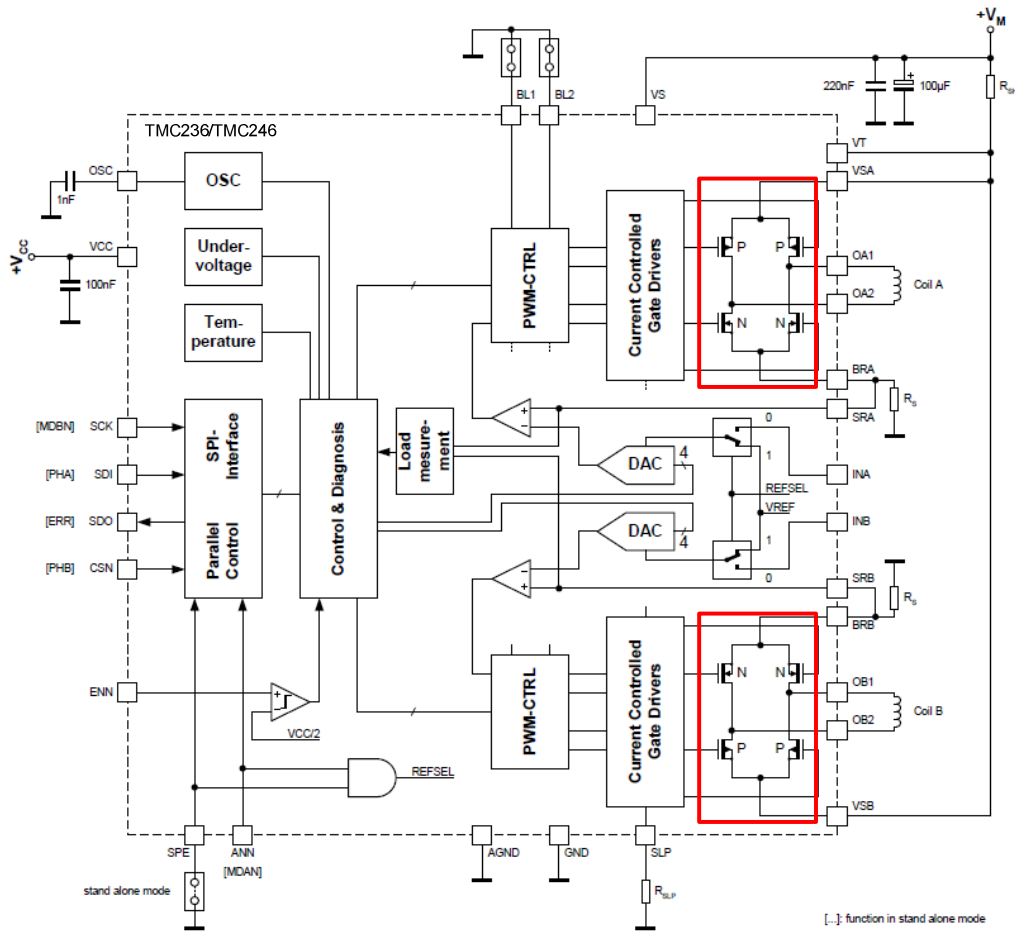


Figure 1: TMC236 block diagram



## Product Change Notification

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[www.trinamic.com](http://www.trinamic.com)

### Products Affected

Article Name	Affected Article Numbers	NEW Name	NEW Article Numbers
TMC236A-PA	00-0006	TMC236B-PA	00-0134
TMC236A-PA-T	00-0006T	TMC236B-PA-T	00-0134T
TMC236A-PA-X	00-0006X	TMC236B-PA-X	00-0134X

### Schedule

Samples of TMC236B-PA are available on request. Please contact your local sales partner.

Trinamic will include changes in new production lots.

Effective date for hardware release	30.09.2016
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Please note that Trinamic will automatically send new revision TMC236B-PA with end of TMC236A-PA stock.

This PCN notice should be acknowledged within 30 days. Lack of acknowledgement of PCN within 30 days constitutes acceptance of change.