DTS113
Design Tip

Stand-alone use of STM32 CPU in STSPIN32F0

Main components	
STSPIN32F0, STSPIN32F0A	Advanced BLDC controller with embedded STM32 MCU

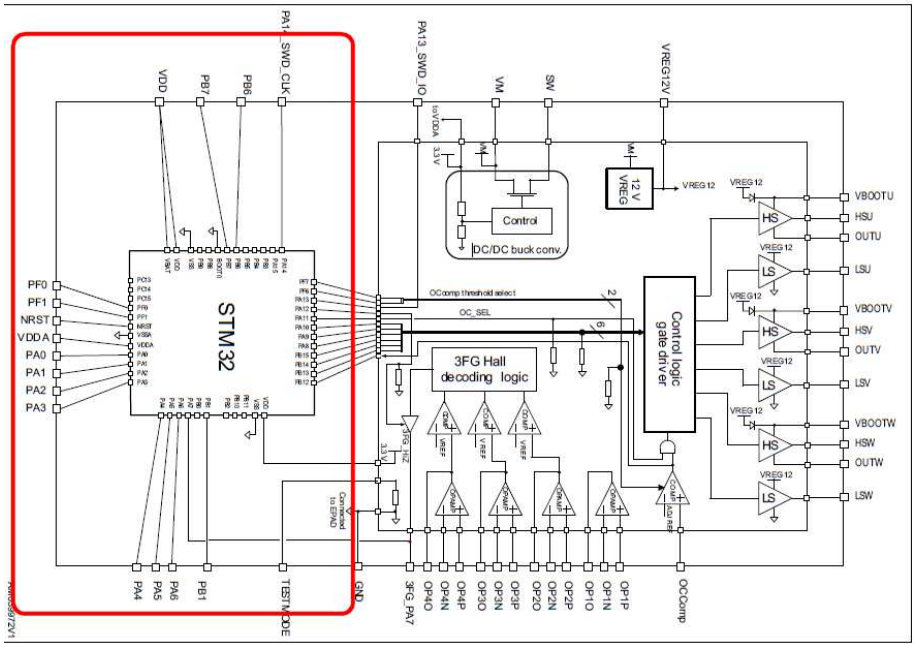
Description of Design Problem, Question

We would like to use the embedded STM32 in the SPIN for calculation purposes if no V_M power supply voltage is available.

But datasheet is mentioning that $V_{DD} < V_M$ - and the circuit diagram shows connections between V_{DD}, V_{DDA} and internal 3.3V.

Question 1: Is it possible to use only V_{DD} and V_{DDA} (both 3.3V) to run the chip ?

Question 2: Under this condition which max. input current we would have to expect if CPU runs in low power mode ?



Design Tip

Question1: Is it possible to use only V_{DD} and V_{DDA} (both 3.3V) to run the chip ?

Answer 1: Yes, you can but in this case you will not able to control the embedded gate driver.

Question 2: Under this condition which max. input current we would have to expect if CPU runs in low power mode ?

Answer 2: Current consumption in Standby mode will be around 125 uA.

Support Material

All related documentation and support material are provided on www.st.com:

Product folder URL
STSPIN32F0: https://www.st.com/en/product/STSPIN32F0
STSPIN32F0A: https://www.st.com/en/product/STSPIN32F0A

Customer Feedback

For any kind of feedback, suggestions, etc. please post your comments by email to kb.feedback@st.com. Thank you.

Customer Support

For further product support please refer to our **Support Home** to select a suitable service from a variety of online support options.

Revision History

Date	Version	Changes
13-Nov-2018	1	Initial release

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