Differences
TC377TP and TC377TE
V1.0

07/2019

Limitation if TC377TE used on TC377TP

› Following features of TC377TE are not usable on TC377TP:

  – AGBT

  – DAPE on dedicated DAPE pins

  – Standby feature of EMEM, EMEM itself

  – Some pins have changed characteristic

  – 3rd Lockstep Core

  – 1 CAN module, 4 nodes

  – SDIO interface

  – 2nd Ethernet interface

  – CIF module

  – MCDS module

› Please note on TC377TE is VFLEX2 directly connected to VEXT, there is no separate pin for VFLEX2 available

AGBT on TC377TE

› All ABGT pins can be directly connected to ground as described in the datasheet

   – AGBTCLKN (VSS) -> VSS on TC377TP

   – AGBTCLKP (VSS) -> VSS on TC377TP

   – AGBTTXN (VSS) -> VSS on TC377TP

   – AGBTTXP (VSS) -> VSS on TC377TP

   – AGBTERR (VSS) -> VSS on TC377TP

› Because of that all ABGT pins are connected to VSS is the AGBT not usable

confidential

DAPE on TC377TE

› This DAPE pins can be directly connected to ground because they are default inputs with internal pull-down device active

  – DAPE1 -> VSS on TC377TP

  – DAPE2 -> VSS on TC377TP

› This DAPE pin can be left open because it is default input with internal pull-down device active, also direct connection to ground possible without any influence on TC377TP

  – DAPE0 -> NC on TC377TP

› Because of the VSS and open connection is the DAPE on the dedicated DAPE pins not usable

EMEM standby feature on TC377TE

› The supply pins of EMEM (VDDSB) needs the same voltage as VDD during runtime and can be connected together

  – VDDSB -> VDD on TC377TP

› Because of the direct connection of VDD to VDDSB is the EMEM standby feature not usable

Some pins have changed characteristic

› The pad type is changed from SLOW (TC377TP) to RFAST (TC377TE)

  – P22.10

  – P22.11

  – P23.2

  – P23.3

› The pad type is changed from FAST (TC377TP) to RFAST (TC377TE)

  – P23.4

› This results in higher leakage and pin capacitance (max. values) on this pins

Part of your life. Part of tomorrow.