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| PCN Number: | 20240520011.0 | PCN Date: | May 24, 2024 |
| Title: | Datasheet for TMS320F28002x | | |
| Customer Contact: | Change Management team | Dept: | Quality Services |
| Change Type: | Electrical Specification | | |

PCN Details

Description of Change:

Texas Instruments Incorporated is announcing an information only notification. The product datasheet(s) is being updated as summarized below. The following change history provides further details.



TMS320F280025, TMS320F280025-Q1
TMS320F280025C, TMS320F280025C-Q1, TMS320F280023, TMS320F280023-Q1
TMS320F280023C, TMS320F280021, TMS320F280021-Q1
SPRSP45C – MARCH 2020 – REVISED APRIL 2024

Changes from December 18, 2020 to April 4, 2024 (from Revision B (December 2020) to Revision C (April 2024))

| | Page |
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| • <i>Features</i> section: Changed "On-chip crystal oscillator or external clock input" to "Crystal oscillator or external clock input". Changed the number of individually programmable multiplexed General-Purpose Input/Output (GPIO) pins from 39 to 43..... | 1 |
| • <i>Features</i> section: Added Functional Safety bullet..... | 1 |
| • <i>Applications</i> section: Updated "Hybrids, electric & powertrain systems" applications..... | 2 |
| • <i>Description</i> section: Added reference to <i>Getting Started With C2000™ Real-Time Control Microcontrollers (MCUs) Getting Started Guide</i> | 2 |
| • <i>Package Information</i> table: Added table..... | 2 |
| • <i>Functional Block Diagram</i> figure: Removed connection between BGCR0 and Flash Bank0. Changed "39x GPIO" to "43x GPIO"..... | 5 |
| • <i>Device Comparison</i> table: Updated pin counts of GPIO pins. Added Note to "Additional GPIO". Updated "eCAP/HRCAP modules – Type 1". Updated "ePWM/HRPWM channels – Type 4". | 7 |
| • <i>Device Comparison</i> table: Updated high resolution module numbers for eCAP and ePWM..... | 7 |
| • <i>Pin Attributes</i> table: Updated descriptions of VDD, VDDA, and VDDIO..... | 9 |
| • <i>Power and Ground</i> table: Updated descriptions of VDD, VDDA, and VDDIO..... | 27 |
| • <i>Specifications</i> section: Removed paragraph..... | 48 |
| • <i>Absolute Maximum Ratings</i> table: Updated "Input clamp current". Updated "Continuous clamp current per pin is ±2 mA ..." footnote. Added "Applying a V _{IN} greater than VDDIO/VDDA or less than VSS/VSSA ..." footnote. Added "Input clamp current must also be observed" footnote..... | 48 |
| • <i>Absolute Maximum Ratings</i> table: Added "Stresses beyond those listed under <i>Absolute Maximum Ratings</i> ..." footnote and "All voltage values are with respect to VSS, unless otherwise noted" footnote..... | 48 |
| • <i>Recommended Operating Conditions</i> table: Removed MIN and MAX SR _{SUPPLY} values. Removed SR _{SUPPLY} unit. Updated its associated footnote..... | 48 |
| • <i>Recommended Operating Conditions</i> table: Removed t _{VDDIO-RAMP FOW} | 48 |
| • <i>Recommended Operating Conditions</i> table: Updated T _J and T _A | 48 |
| • <i>Recommended Operating Conditions</i> table: Added "Applying a V _{IN} greater than VDDIO/VDDA or less than VSS/VSSA ..." footnote..... | 48 |
| • <i>ESD Ratings – Commercial</i> table: Removed JEDEC specification JESD22-C101 from description of Charged-device model (CDM). Added corner pins..... | 48 |
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| • <i>Internal 1.2-V LDO Voltage Regulator (VREG)</i> section: Removed "It is enabled by tying the VREGENZ pin low" sentence..... | 60 |

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The datasheet number will be changing.

| Device Family | Change From: | Change To: |
|---------------|--------------|-----------------|
| TMS320F28002x | SPRSP45B | SPRSP45C |

These changes may be reviewed at the datasheet links provided.
<http://www.ti.com/product/TMS320F280025>

Reason for Change:

To accurately reflect device characteristics.

| | | | |
|--|--------------|--------------|--------------|
| Anticipated impact on Fit, Form, Function, Quality or Reliability (positive / negative): | | | |
| No anticipated impact. This is a specification change announcement only. There are no changes to the actual device | | | |
| Changes to product identification resulting from this PCN: | | | |
| None. | | | |
| Product Affected: | | | |
| F280021PTSR | F280025CPMS | F280023CPNSR | F280025PNQR |
| F280023CPMSR | F280025CPMSR | F280025PMSR | F280025PTQR |
| F280025PTS | F280023PTQR | F280025PNSR | F280025CPNSR |
| F280023PMSR | F280023CPTSR | F280025CPTQR | F280025CPNQR |
| F280023PTSR | SM288888PMSR | F280021PTQR | F280023PNQR |
| F280025PNS | F280025CPTSR | F280023PNSR | F280025PMS |
| F280025PTSR | F280023PMQR | F280025PMQR | F280025CPMQR |

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