TEXAS INSTRUMENTS 12500 TI Boulevard, MS 8640, Dallas, Texas 75243

Notification# 20161031000
Datasheet for TMS320F28335/TMS320F28334/TMS320F28333/TMS320F28332 TMS320F28235/TMS320F28234/MS320F28232
Information Only Datasheet

Date: November 07, 2016
To: Newark/Farnell PCN

Dear Customer:

This is an information-only announcement of a change to a device that is currently offered by Texas Instruments.

The changes discussed within this notification are for your information only.

Any negotiated alternative change requirements will be provided via the customer's defined process. Customers with previously negotiated, special requirements will be handled separately. Any inquiries should be directed to your local Field Sales Representative.

For questions regarding this notice, contact your local Field Sales Representative or the PCN Manager (PCN_ww_admin_team@list.ti.com).

Sincerely,

PCN Team
SC Business Services

20161031000
Information Only Datasheet
Attachments

Products Affected:

The devices listed on this page are a subset of the complete list of affected devices. According to our records, these are the devices that you have purchased within the past twenty-four (24) months. The corresponding customer part number is also listed, if available.

DEVICE	CUSTOMER PART NUMBER
TMS320F28335ZJZQ	null
TMS320F28335PTPQ	null

Technical details of this Product Change follow on the next page(s).

Notification Number:	20161031000	**Notification Date:**	Nov. 7, 2016

Title:	Datasheet for TMS320F28335/TMS320F28334/TMS320F28333/TMS320F28332 TMS320F28235/TMS320F28234/MS320F28232

Customer Contact:	PCN Manager	**Dept:**	Quality Services

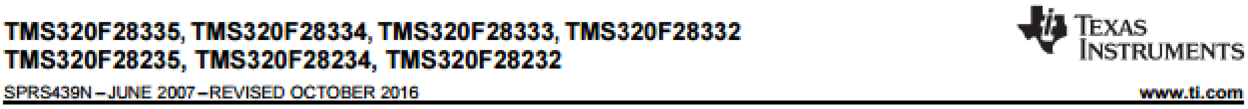
Change Type:

☐	Assembly Site	☐	Design	☐	Wafer Bump Site
☐	Assembly Process	☒	Data Sheet	☐	Wafer Bump Material
☐	Assembly Materials	☐	Part number change	☐	Wafer Bump Process
☐	Mechanical Specification	☐	Test Site	☐	Wafer Fab Site
☐	Packing/Shipping/Labeling	☐	Test Process	☐	Wafer Fab Materials
				☐	Wafer Fab Process

Notification Details

Description of Change:

Texas Instruments Incorporated is announcing an information only notification.
The product datasheet(s) is updated as seen in the change revision history below:



TMS320F28335, TMS320F28334, TMS320F28333, TMS320F28332
TMS320F28235, TMS320F28234, TMS320F28232

TEXAS INSTRUMENTS

SPRS439N – JUNE 2007 – REVISED OCTOBER 2016

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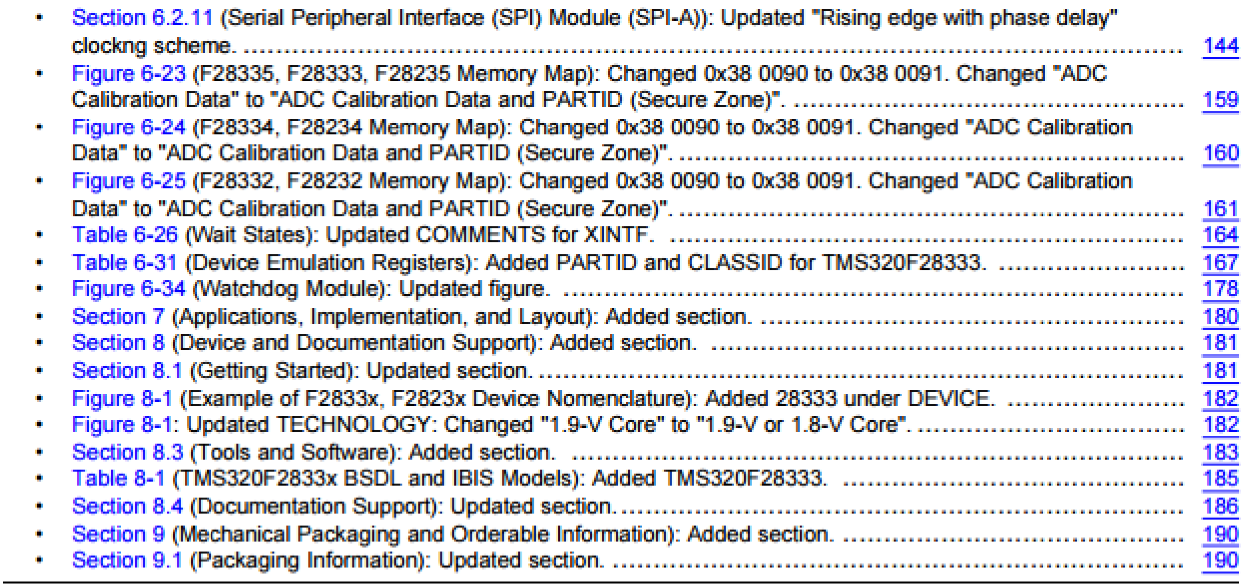
Changes from August 6, 2012 to October 18, 2016 (from M Revision (August 2012) to N Revision) **Page**

- **Global:** Added TMS320F28333. 1
- **Global:** Restructured document. 1
- **Global:** Removed *Reliability Data for TMS320LF24xx and TMS320F28xx Devices Application Report*. 1
- **Global:** Removed *C2833x, C2823x C/C++ Header Files and Peripheral Examples*. 1
- **Global:** Replaced "CAN 2.0B" with "ISO 11898-1 (CAN 2.0B)". 1
- **Global:** Added SYS/BIOS. 1
- Section 1.1 (Features): Removed "Dynamic PLL Ratio Changes Supported" feature. 1
- Section 1.1: Updated JTAG Boundary Scan Support feature. 1
- Section 1.1: Updated Package Options feature. 1
- Section 1.1: Added "(AEC Q100 Qualification for Automotive Applications)" to "Q" temperature option. 1
- Section 1.2 (Applications): Added section. 2
- Section 1.3 (Description): Added section. 3
- Section 1.3: Added Device Information table. 3
- Table 3-1 (F2833x Device Comparison): Changed title from "F2833x Hardware Features" to "F2833x Device Comparison". 8
- Table 3-1: Added data for F28333 device. 8
- Table 3-1: Changed "PWM outputs" to "PWM channels". 8
- Table 3-1: Removed "Product status" row and associated footnote. 8
- Table 3-2 (F2823x Device Comparison): Changed title from "F2823x Hardware Features" to "F2823x Device Comparison". 9
- Table 3-2: Changed "PWM outputs" to "PWM channels". 9
- Table 3-2: Removed "Product status" row and associated footnote. 9
- Section 3.1 (Related Products): Added section. 10
- Section 4.1 (Pin Diagrams): Updated NOTE about PowerPAD. 12
- Section 5.2 (ESD Ratings – Automotive): Added section. 32
- Section 5.3 (ESD Ratings – Commercial): Added section. 32
- Section 5.5 (Power Consumption Summary): Changed section title from "Current Consumption" to "Power Consumption Summary". 34
- Section 5.9.2 (Power Sequencing): Updated XRSn requirement #2. 44
- Table 5-23 (High-Resolution PWM Characteristics at SYSCLKOUT = (60–150 MHz)): Updated footnote. 59
- Table 5-32 (SPI Master Mode External Timing (Clock Phase = 0)): Parameter 2: Updated parametric values. 62
- Table 5-32: Parameter 3: Updated parametric values. 62
- Table 5-32: Parameter 5: Updated parametric symbols and values. 62
- Table 5-32: Parameter 9: Updated parametric symbols, descriptions, and values. 62
- Table 5-33 (SPI Master Mode External Timing (Clock Phase = 1)): Parameter 2: Updated parametric values. 64
- Table 5-33: Parameter 3: Updated parametric values. 64
- Table 5-33: Parameter 6: Updated parametric symbols, descriptions, and values. 64
- Table 5-33: Parameter 7: Updated parametric symbols and values. 64
- Table 5-33: Parameter 11: Updated parametric symbols, descriptions, and values. 64
- Table 5-34 (SPI Slave Mode External Timing (Clock Phase = 0)): Parameter 16 [$t_{v(SPCL-SOMI)S}$, $t_{v(SPCH-SOMI)S}$]: Changed MIN values to 0. 66
- Table 5-35 (SPI Slave Mode External Timing (Clock Phase = 1)): Parameter 18 [$t_{v(SPCL-SOMI)S}$, $t_{v(SPCH-SOMI)S}$]: Changed MIN values to 0. 68
- Section 5.9.4.6.2 (McBSP as SPI Master or Slave Timing): Replaced "For all SPI slave modes ..." paragraphs with "For all SPI slave modes ..." table footnotes. 72
- Table 5-38 (McBSP as SPI Master or Slave Timing Requirements (CLKSTP = 10b, CLKXP = 0)): Added "For all SPI slave modes ..." footnote. 72
- Table 5-40 (McBSP as SPI Master or Slave Timing Requirements (CLKSTP = 11b, CLKXP = 0)): Added "For all SPI slave modes ..." footnote. 73
- Table 5-42 (McBSP as SPI Master or Slave Timing Requirements (CLKSTP = 10b, CLKXP = 1)): Added "For all SPI slave modes ..." footnote. 74
- Table 5-44 (McBSP as SPI Master or Slave Timing Requirements (CLKSTP = 11b, CLKXP = 1)): Added "For all SPI slave modes ..." footnote. 75
- Table 5-62 (Flash Parameters at 150-MHz SYSCLKOUT): Updated "Typical parameters as seen at room temperature ..." footnote 95
- Section 6.2.7.3 (ADC Calibration): Updated section. 131

SPI slave modes ..." footnote. 74

- Table 5-44 (McBSP as SPI Master or Slave Timing Requirements (CLKSTP = 11b, CLKXP = 1)): Added "For all SPI slave modes ..." footnote. 75
- Table 5-62 (Flash Parameters at 150-MHz SYSCLKOUT): Updated "Typical parameters as seen at room temperature ..." footnote 95
- Section 6.2.7.3 (ADC Calibration): Updated section. 131



- Section 6.2.11 (Serial Peripheral Interface (SPI) Module (SPI-A)): Updated "Rising edge with phase delay" clockng scheme. 144
- Figure 6-23 (F28335, F28333, F28235 Memory Map): Changed 0x38 0090 to 0x38 0091. Changed "ADC Calibration Data" to "ADC Calibration Data and PARTID (Secure Zone)". 159
- Figure 6-24 (F28334, F28234 Memory Map): Changed 0x38 0090 to 0x38 0091. Changed "ADC Calibration Data" to "ADC Calibration Data and PARTID (Secure Zone)". 160
- Figure 6-25 (F28332, F28232 Memory Map): Changed 0x38 0090 to 0x38 0091. Changed "ADC Calibration Data" to "ADC Calibration Data and PARTID (Secure Zone)". 161
- Table 6-26 (Wait States): Updated COMMENTS for XINTF. 164
- Table 6-31 (Device Emulation Registers): Added PARTID and CLASSID for TMS320F28333. 167
- Figure 6-34 (Watchdog Module): Updated figure. 178
- Section 7 (Applications, Implementation, and Layout): Added section. 180
- Section 8 (Device and Documentation Support): Added section. 181
- Section 8.1 (Getting Started): Updated section. 181
- Figure 8-1 (Example of F2833x, F2823x Device Nomenclature): Added 28333 under DEVICE. 182
- Figure 8-1: Updated TECHNOLOGY: Changed "1.9-V Core" to "1.9-V or 1.8-V Core". 182
- Section 8.3 (Tools and Software): Added section. 183
- Table 8-1 (TMS320F2833x BSDL and IBIS Models): Added TMS320F28333. 185
- Section 8.4 (Documentation Support): Updated section. 186
- Section 9 (Mechanical Packaging and Orderable Information): Added section. 190
- Section 9.1 (Packaging Information): Updated section. 190

The datasheet number will be changing.

Device Family	Change From:	Change To:
TMS320F2833x, TMS320F2823x	SPRS439M	**SPRS439N**

These changes may be reviewed at the datasheet links provided.

http://www.ti.com/lit/ds/symlink/tms320f28335.pdf

Reason for Change:

To more 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 notification:

None.

TMS320F28232PTPQ	TMS320F28234ZJZQR	TMS320F28332PTPQ	TMS320F28335PTPQ
TMS320F28232ZJZQ	TMS320F28235PTPQ	TMS320F28332ZJZQ	TMS320F28335ZJZQ
TMS320F28234PTPQ	TMS320F28235ZJZQ	TMS320F28334PTPQ	TMS320F28335ZJZQR
TMS320F28234ZJZQ	TMS320F28235ZJZQR	TMS320F28334ZJZQ	

For questions regarding this notice, e-mails can be sent to the regional contacts shown below or your local Field Sales Representative.

Location	**E-Mail**
USA	PCNAmericasContact@list.ti.com
Europe	PCNEuropeContact@list.ti.com
Asia Pacific	PCNAsiaContact@list.ti.com
Japan	PCNJapanContact@list.ti.com