12500 TI Boulevard, MS 8640, Dallas, Texas 75243

Notification# 20240227008.0
Datasheet for TMS320F2837xD, TMS320F2837xS, and TMS320F2807x
Information Only

Date: February 27, 2024
To: MOUSER 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 Change Management team.

Sincerely,

Change Management Team
SC Business Services

20240227008.0
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**,** you have recently purchased these devices**.** The corresponding customer part number is also listed, if available.

DEVICE	CUSTOMER PART NUMBER
TMS320F28075PTPQ	NULL
TMS320F28075PTPQR	NULL
TMS320F28075PTPS	NULL
TMS320F28075PTPT	NULL
TMS320F28075PZPQ	NULL
TMS320F28075PZPS	NULL
TMS320F28075PZPT	NULL
TMS320F28076PTPS	NULL
TMS320F28076PZPS	NULL
TMS320F28374DPTPT	NULL
TMS320F28374DZWTS	NULL
TMS320F28374SPTPSR	NULL
TMS320F28374SPTPT	NULL
TMS320F28374SPZPS	NULL
TMS320F28374SPZPT	NULL
TMS320F28374SZWTT	NULL
TMS320F28375DPTPS	NULL
TMS320F28375DPTPT	NULL
TMS320F28375DPZPS	NULL
TMS320F28375DZWTT	NULL
TMS320F28375SPTPS	NULL
TMS320F28375SPTPT	NULL
TMS320F28375SPZPQ	NULL
TMS320F28375SPZPS	NULL
TMS320F28375SPZPT	NULL
TMS320F28375SZWTT	NULL
TMS320F28376SPTPT	NULL
TMS320F28376SPZPS	NULL
TMS320F28376SPZPT	NULL
TMS320F28377DPTPQ	NULL
TMS320F28377DPTPS	NULL
TMS320F28377DPTPT	NULL
TMS320F28377DZWTQ	NULL
TMS320F28377DZWTQR	NULL
TMS320F28377DZWTS	NULL
TMS320F28377DZWTT	NULL
TMS320F28377SPTPQ	NULL
TMS320F28377SPTPS	NULL
TMS320F28377SPTPT	NULL
TMS320F28377SPZPQ	NULL
TMS320F28377SPZPS	NULL
TMS320F28377SPZPT	NULL
TMS320F28377SZWTQ	NULL
TMS320F28377SZWTS	NULL
TMS320F28377SZWTT	NULL
TMS320F28378DPTPS	NULL
TMS320F28378SPTPS	NULL

TMS320F28378SPZPS	NULL
TMS320F28379DPTPQ	NULL
TMS320F28379DPTPS	NULL
TMS320F28379DPTPT	NULL
TMS320F28379DZWTQR	NULL
TMS320F28379DZWTS	NULL
TMS320F28379DZWTT	NULL
TMS320F28379SPTPS	NULL
TMS320F28379SPTPT	NULL
TMS320F28379SPZPS	NULL
TMS320F28379SPZPT	NULL
TMS320F28379SZWTS	NULL

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

PCN Number:	20240227008.0	PCN Date:	February 27, 2024
Title:	Datasheet for TMS320F2837xD, TMS320F2837xS, and TMS320F2807x		
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.

TEXAS INSTRUMENTS

TMS320F28379D, TMS320F28379D-Q1, TMS320F28378D, TMS320F28377D
TMS320F28377D-Q1, TMS320F28376D, TMS320F28375D, TMS320F28374D
SPRS880P – DECEMBER 2013 – REVISED FEBRUARY 2024

Changes from February 1, 2021 to February 20, 2024 (from Revision O (February 2021) to Revision P (February 2024)) **Page**

- Changed document title from *TMS320F2837xD Dual-Core Microcontrollers* to *TMS320F2837xD Dual-Core Real-Time Microcontrollers*.....1
- **Global:** Changed the title of the errata from *TMS320F2837xD Dual-Core MCUs Silicon Errata* to *TMS320F2837xD Dual-Core Real-Time MCUs Silicon Errata*. Changed the title of the Technical Reference Manual from *TMS320F2837xD Dual-Core Microcontrollers Technical Reference Manual* to *TMS320F2837xD Dual-Core Real-Time Microcontrollers Technical Reference Manual*.....1
- *Description* section: Updated section.....2
- *Package Information* table: Changed title of *Device Information* table to *Package Information*. Updated table and footnotes.....2
- *Device Comparison* table: Updated Serial Communications Interface (SCI) – Type 0 with (UART Compatible).....6
- *Pin Configuration and Functions* section: Changed section title from *Terminal Configuration and Functions* to *Pin Configuration and Functions*.....9
- *Signal Descriptions* table: Updated **DESCRIPTION** column of $\overline{\text{TRST}}$ and VDD. Updated **PTP PIN NO.** column and **PZP PIN NO.** column of VSS.....16
- *Input X-BAR* figure: Updated figure.....44
- *ESD Ratings – Commercial* table: Updated part numbers.....49
- *ESD Ratings – Automotive* table: Updated part numbers.....49
- *Device Current Consumption at 200-MHz SYSCLK* table: Added values for RESET MODE.....50
- *Electrical Characteristics* table: Moved parametric value of $V_{HYSTERESIS}$ (150 mV) from TYP column to MIN column.....55
- *Power-on Reset* figure: Updated figure.....60
- *Clocking System* figure: Updated figure.....62
- *XTAL Oscillator Characteristics* section: Added section.....64
- *XTAL Oscillator* section: Changed section title from *Crystal Oscillator* to *XTAL Oscillator*. Updated section.....66
- *Crystal Oscillator Electrical Characteristics* table: Updated table.....71
- *Negative Resistance Variation at 10 MHz* figure: Added figure.....71
- *Negative Resistance Variation at 20 MHz* figure: Added figure.....71
- *Flash Parameters* table: Updated table.....74
- *RAM Specifications* section: Added section.....75
- *ROM Specifications* section: Added section.....76
- *EMIF Asynchronous Memory Switching Characteristics* table: Updated Parameters 3, 10, 15, and 24. Added "Maximum wait time-out condition" footnote.....94
- *Analog Subsystem Block Diagram (100-Pin PZP)* figure: Updated figure.....101
- *ADC Characteristics (16-Bit Differential Mode)* table: Updated TYP values of SNR, THD, SFDR, SINAD, and ENOB.....110
- *ADC Characteristics (12-Bit Single-Ended Mode)* table: Updated TYP values of SNR, THD, SFDR, SINAD, and ENOB.....111
- *Single-Ended Input Model Parameters* section: Updated "These input models should be used along with actual signal source impedance ..." paragraph.....113
- *ADC Timings for 12-Bit Mode* figure: Updated figure.....116
- *Comparator Electrical Characteristics* table: Added MIN and MAX Hysteresis values. Added Power Supply Rejection Ratio (PSRR).....123

- *CMPSS DAC Static Electrical Characteristics* section: Added "Figures not drawn to scale" Note. 124
- *CMPSS DAC Dynamic Error* section: Added section. 131
- *Synchronization Chain Architecture* figure: Updated figure. 138
- *SDFM Timing Requirements When Using Asynchronous GPIO (ASYNC) Option* section: Updated WARNING about SDFM Manchester Mode (Mode 2). 147

- *I2C Electrical Data and Timing* section: Added "To meet all of the I2C protocol timing specifications, the I2C module clock must be configured in the range from 7 MHz to 12 MHz ..." Note. 156
- *I2C Timing Requirements* table: Added footnote. 156
- *I2C Timing Diagram* section: Added section title. 157
- *I2C Timing Diagram* section: Removed duplicate "To meet all of the I2C protocol timing specifications, the I2C module clock (Fmod) must be configured from 7 MHz to 12 MHz." Note. This Note is now in the *I2C Electrical Data and Timing* section. 157
- *Overview* section: Updated section. 185
- *EMIF Chip Select Memory Map* table: Updated SIZE for "EMIF2_CS0n - Data". 190
- *Peripheral Registers Memory Map* section: Added "None of the device peripherals have program bus access" Note. 190
- *Peripheral Registers Memory Map* table: Added CLB registers. 190
- *Applications, Implementation, and Layout* section: Updated section. 214
- *Tools and Software* section: Added C2000 Third-party search tool. Updated Training section. 232

Changes from February 1, 2021 to February 21, 2024 (from Revision J (February 2021) to Revision K (February 2024)) **Page**

- Changed document title from *TMS320F2837xS Microcontrollers* to *TMS320F2837xS Real-Time Microcontrollers*. 1
- **Global:** Changed the title of the errata from *TMS320F2837xS MCUs Silicon Errata* to *TMS320F2837xS Real-Time MCUs Silicon Errata*. Changed the title of the Technical Reference Manual from *TMS320F2837xS Microcontrollers Technical Reference Manual* to *TMS320F2837xS Real-Time Microcontrollers Technical Reference Manual*. 1
- *Description* section: Updated section. 2
- *Package Information* table: Changed title of *Device Information* table to *Package Information*. Updated table and footnotes. 2
- *Device Comparison* table: Updated Serial Communications Interface (SCI) – Type 0 with (UART Compatible). 6
- *Pin Configuration and Functions* section: Changed section title from *Terminal Configuration and Functions* to *Pin Configuration and Functions*. 9
- *Signal Descriptions* table: Updated **DESCRIPTION** column of $\overline{\text{TRST}}$ and VDD. Updated **PTP PIN NO.** column and **PZP PIN NO.** column of VSS. 16
- *Input X-BAR* figure: Updated figure. 44
- *ESD Ratings – Commercial* table: Updated part numbers. 49
- *ESD Ratings – Automotive* table: Updated part numbers. 49
- *Device Current Consumption at 200-MHz SYSCLK* table: Added values for RESET MODE. 51
- *Electrical Characteristics* table: Moved parametric value of $V_{HYSTERESIS}$ (150 mV) from TYP column to MIN column. 56
- *Power-on Reset* figure: Updated figure. 61
- *Clocking System* figure: Updated figure. 63
- *XTAL Oscillator Characteristics* section: Added section. 65
- *XTAL Oscillator* section: Changed section title from *Crystal Oscillator* to *XTAL Oscillator*. Updated section. 67
- *Crystal Oscillator Electrical Characteristics* table: Updated table. 72
- *Negative Resistance Variation at 10 MHz* figure: Added figure. 72
- *Negative Resistance Variation at 20 MHz* figure: Added figure. 72
- *Flash Parameters* table: Updated table. 75
- *RAM Specifications* section: Added section. 76
- *ROM Specifications* section: Added section. 76

- *EMIF Asynchronous Memory Switching Characteristics* table: Updated Parameters 3, 10, 15, and 24. Added "Maximum wait time-out condition" footnote....94
- *Analog Subsystem Block Diagram (100-Pin PZP)* figure: Updated figure. 101
- *ADC Characteristics (16-Bit Differential Mode)* table: Updated TYP values of SNR, THD, SFDR, SINAD, and ENOB....110
- *ADC Characteristics (12-Bit Single-Ended Mode)* table: Updated TYP values of SNR, THD, SFDR, SINAD, and ENOB....111
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- *Comparator Electrical Characteristics* table: Added MIN and MAX Hysteresis values. Added Power Supply Rejection Ratio (PSRR)....123
- *CMPSS DAC Static Electrical Characteristics* section: Added "Figures not drawn to scale" Note. 124
- *CMPSS DAC Dynamic Error* section: Added section....131
- *Synchronization Chain Architecture* figure: Updated figure....138
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- *Peripheral Registers Memory Map* table: Added CLB registers....191
- *Applications, Implementation, and Layout* section: Updated section....213
- *Tools and Software* section: Added C2000 Third-party search tool. Updated Training section....233

Changes from January 16, 2021 to February 21, 2024 (from Revision J (January 2021) to Revision K (February 2024)) **Page**

- Changed document title from *TMS320F2807x Microcontrollers* to *TMS320F2807x Real-Time Microcontrollers*....1
- **Global:** Changed the title of the errata from *TMS320F2807x MCUs Silicon Errata* to *TMS320F2807x Real-Time MCUs Silicon Errata*. Changed the title of the Technical Reference Manual from *TMS320F2807x Microcontrollers Technical Reference Manual* to *TMS320F2807x Real-Time Microcontrollers Technical Reference Manual*....1
- *Description* section: Updated section....2
- *Package Information* table: Changed title of *Device Information* table to *Package Information*. Updated table and footnotes....2
- *Device Comparison* table: Updated Serial Communications Interface (SCI) – Type 0 with (UART Compatible)....6
- *Device Comparison* table: Updated part numbers....6
- *Pin Configuration and Functions* section: Changed section title from *Terminal Configuration and Functions* to *Pin Configuration and Functions*....8
- *Signal Descriptions* table: Updated **DESCRIPTION** column of $\overline{\text{TRST}}$, VREGENZ, and VDD. Updated **PTP PIN NO.** column and **PZP PIN NO.** column of VSS....11
- *Input X-BAR* figure: Updated figure....31
- *ESD Ratings – Commercial* table: Updated part numbers....36
- *Device Current Consumption at 120-MHz SYSCLK* table: Added values for RESET MODE....37

- *Electrical Characteristics* table: Moved parametric value of $V_{HYSTERESIS}$ (150 mV) from TYP column to MIN column....43
- *Internal 1.2-V VREG* section: Updated section....46
- *Power-on Reset* figure: Updated figure....48
- *Clocking System* figure: Updated figure....50
- *XTAL Oscillator Characteristics* section: Added section....52
- *XTAL Oscillator* section: Changed section title from *Crystal Oscillator* to *XTAL Oscillator*. Updated section....54
- *Crystal Oscillator Electrical Characteristics* table: Updated table....59
- *Negative Resistance Variation at 10 MHz* figure: Added figure....59
- *Negative Resistance Variation at 20 MHz* figure: Added figure....59
- *Flash Parameters* table: Updated table....62
- *RAM Specifications* section: Added section....63
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- *EMIF Asynchronous Memory Switching Characteristics* table: Updated Parameters 3, 10, 15, and 24. Added "Maximum wait time-out condition" footnote....82
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- *Peripheral Registers Memory Map* table: Added CLB registers....166
- *Applications, Implementation, and Layout* section: Updated section....187
- *Tools and Software* section: Added C2000 Third-party search tool. Updated Training section....207

The datasheet number will be changing.

Device Family	Change From:	Change To:
TMS320F2837xD	SPRS880O	**SPRS880P**
TMS320F2837xS	SPRS881J	**SPRS881K**
TMS320F2807x	SPRS902J	**SPRS902K**

These changes may be reviewed at the datasheet links provided.
http://www.ti.com/product/TMS320F28379D
http://www.ti.com/product/TMS320F28379S
http://www.ti.com/product/TMS320F28076

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:

TMS320F28374SZWTT	TMS320F28075PZPQ	TMS320F28375SZWTT	TMS320F28376SPZPS
TMS320F28376SZWTT	TMS320F28374DZWTS	TMS320F28377DZWTT	TMS320F28377DPTPT
TMS320F28377DZWTQ	TMS320F28375DZWTT	TMS320F28379DPTPQ	TMS320F28377DZWTS
TMS320F28379DPTPS	TMS320F28375SZWTS	TMS320F28379SPZPT	TMS320F28377SZWTS
TMS320F28379DPTPT	TMS320F28376DPTPS	TMS320F28075PTPS	TMS320F28378SPTPS
TMS320F28379SPTPT	TMS320F28377DPTPQ	TMS320F2807NPTPT	TMS320F28379DZWTT
TMS320F28075PTPT	TMS320F28377SPTPS	TMS320F28075PTPQR	TMS320F28379SZWTT
TMS320F28374DPTPS	TMS320F28377SPZPS	TMS320F28375DZWTS	TMS320F28374SPZPS
TMS320F28374DPTPT	TMS320F28377SZWTT	TMS320F28375SPZPQ	TMS320F28374SZWTS
TMS320F28374SPTPS	TMS320F28377SPTPQ	TMS320F28376SPTPT	TMS320F28376DPTPT
TMS320F28374SPTPSR	TMS320F28377SPZPQ	TMS320F28377DZWTQR	TMS320F28377SPZPT
TMS320F28374SPZPT	TMS320F28378DPTPS	TMS320F28377SPTPT	TMS320F28379DZWTS
TMS320F28375SPZPS	TMS320F28075PTPQ	TMS320F28379DZWTQR	TMS320F2837HDPTPT
TMS320F28375SPZPQR	TMS320F28076PTPS	TMS320F28379SPTPS	TMS320F28374SPTPT
TMS320F28376SPZPT	TMS320F28076PZPS	TMS320F28379SPZPS	TMS320F28374SZWTTR
TMS320F28376SZWTS	TMS320F28374DZWTT	TMS320F28379SZWTS	TMS320F28375SPTPT
TMS320F28377DPTPS	TMS320F28375DPTPS	TMS320F28375DPTPT	TMS320F28375SPZPT
TMS320F28377SZWTQ	TMS320F28375SPTPS	TMS320F28375DPZPS	TMS320F28378SPZPS
TMS320F28075PZPS	TMS320F28075PZPT		

For questions regarding this notice, e-mails can be sent to the Change Management team or your local Field Sales Representative.

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