



12500 TI Boulevard, MS 8640, Dallas, Texas 75243

Notification# 20190809000
Datasheet for TMS320x
Information Only

Date: August 26, 2019
To: Newark/Farnell PCN

Dear Customer:

This is an information-only announcement of a change to the datasheet for 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 team (PCN_ww_admin_team@list.ti.com).

Sincerely,

PCN Team
SC Business Services


Information Only 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
TMS320F2808PZA	null
TMS320F2808PZS	null
TMS320F2809PZA	null
TMS320F2809PZQ	null
TMS320F2802PZA	null
TMS320F2802PZS	null

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

PCN Number:	20190809000	PCN Date:	Aug. 26, 2019
Title:	Datasheet for TMS320x		
Customer Contact:	PCN Manager	Dept:	Quality Services
Change Type:			
<input type="checkbox"/>	Assembly Site	<input type="checkbox"/>	Design
<input type="checkbox"/>	Assembly Process	<input checked="" type="checkbox"/>	Data Sheet
<input type="checkbox"/>	Assembly Materials	<input type="checkbox"/>	Part number change
<input type="checkbox"/>	Mechanical Specification	<input type="checkbox"/>	Test Site
<input type="checkbox"/>	Packing/Shipping/Labeling	<input type="checkbox"/>	Test Process
<input type="checkbox"/>		<input type="checkbox"/>	Wafer Bump Site
<input type="checkbox"/>		<input type="checkbox"/>	Wafer Bump Material
<input type="checkbox"/>		<input type="checkbox"/>	Wafer Bump Process
<input type="checkbox"/>		<input type="checkbox"/>	Wafer Fab Site
<input type="checkbox"/>		<input type="checkbox"/>	Wafer Fab Materials
<input type="checkbox"/>		<input type="checkbox"/>	Wafer Fab Process
Notification Details			
Description of Change:			
<p>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.</p>			
		<p>TMS320F2809, TMS320F2808, TMS320F2806, TMS320F2802, TMS320F2801 TMS320C2802, TMS320C2801, TMS320F28016, TMS320F28015</p>	
<small>SPRS2300 – OCTOBER 2003 – REVISED MARCH 2019</small>			

• Global: Restructured document.	<u>1</u>
• Global: Replaced "DSP/BIOS" with "SYS/BIOS".	<u>1</u>
• Global: Changed "CAN 2.0B" to "ISO11898-1 (CAN 2.0B)".	<u>1</u>
• Global: Removed references to the <i>Reliability Data for TMS320LF24xx and TMS320F28xx Devices Application Report</i> (SPRA963).	<u>1</u>
• Section 1 (Device Overview): Changed section title from "F280x, F2801x, C280x DSPs" to "Device Overview".	<u>1</u>
• Section 1.1 (Features): Removed "Dynamic PLL Ratio Changes Supported" feature.	<u>1</u>
• Section 1.1: Added "(AEC-Q100 Qualification for Automotive Applications)" to Q temperature option.	<u>1</u>
• Section 1.2 (Applications): Added section.	<u>2</u>
• Section 1.3 (Description): Added section.	<u>2</u>
• Section 1.4 (Functional Block Diagram): Added section.	<u>3</u>
• Section 3 (Device Comparison): Added section.	<u>7</u>
• Table 3-1 (Device Comparison (100-MHz Devices)): Changed title from "Hardware Features (100-MHz Devices)" to "Device Comparison (100-MHz Devices)".	<u>7</u>
• Table 3-1: Changed "PWM outputs" to "PWM channels".	<u>7</u>
• Table 3-1: Added "(AEC-Q100 Qualification)" after Q temperature range.	<u>7</u>
• Table 3-1: Removed "Product status" row.	<u>7</u>
• Table 3-2 (Device Comparison (60-MHz Devices)): Changed title from "Hardware Features (60-MHz Devices)" to "Device Comparison (60-MHz Devices)".	<u>8</u>
• Table 3-2: Changed "PWM outputs" to "PWM channels".	<u>8</u>
• Table 3-2: Added "(AEC-Q100 Qualification)" after Q temperature range.	<u>8</u>
• Table 3-2: Removed "Product status" row.	<u>8</u>
• Section 3.1 (Related Products): Added section.	<u>9</u>
• Section 4 (Terminal Configuration and Functions): Added section.	<u>10</u>
• Section 4.1 (Pin Diagrams): Changed section title from "Pin Assignments" to "Pin Diagrams".	<u>10</u>
• Table 4-1 (Signal Descriptions): Updated DESCRIPTION of XRS.	<u>15</u>
• Section 5.2 (ESD Ratings – Automotive): Added section.	<u>22</u>
• Section 5.3 (ESD Ratings – Commercial): Added section.	<u>22</u>
• Section 5.4 (Recommended Operating Conditions): Changed "Q version (Q100 Qualification)" to "Q version (AEC-Q100 Qualification)".	<u>22</u>
• Section 5.5 (Power Consumption Summary): Changed section title from "Current Consumption" to "Power Consumption Summary".	<u>23</u>
• Section 5.13 (Thermal Design Considerations): Added section.	<u>33</u>
• Section 5.14 (Timing and Switching Characteristics): Added section.	<u>34</u>
• Section 5.14.2 (Power Sequencing): Updated "No voltage larger than a diode drop ..." paragraph.	<u>36</u>
• Section 5.14.2: Removed "Power Management and Supervisory Circuit Solutions" section.	<u>36</u>
• Figure 5-12 (General-Purpose Input Timing): Changed XCLKOUT to SYSCLK.	<u>44</u>
• Figure 5-16 (PWM Hi-Z Characteristics): Changed XCLKOUT to SYSCLK.	<u>48</u>
• Table 5-24 (High-Resolution PWM Characteristics at SYSCLKOUT = 60–100 MHz): Updated footnote.	<u>49</u>
• Section 5.14.4.5.1 (SPI Master Mode Timing): Updated section.	<u>52</u>
• Section 5.14.4.5.2 (SPI Slave Mode Timing): Updated section.	<u>55</u>
• Table 5-39 (Flash Parameters at 100-MHz SYSCLKOUT): Added MAX Program Time values and MAX Erase Time values. Updated and added footnotes.	<u>58</u>
• Table 5-41 (Flash Data Retention Duration): Added table.	<u>59</u>
• Section 5.16.1 (Migration Issues): Added NOTE about ROM versions of F280x device not being accepted by TI anymore.	<u>66</u>
• Section 6 (Detailed Description): Changed section title from "Functional Overview" to "Detailed Description".	<u>68</u>
• Section 6.1.6 (ROM): Added NOTE.	<u>69</u>
• Section 6.2.6 (Enhanced Analog-to-Digital Converter (ADC) Module): Updated equations by which the digital value of the input analog voltage is derived.	<u>85</u>
• Section 6.2.9 (Serial Peripheral Interface (SPI) Modules (SPI-A, SPI-B, SPI-C, SPI-D)): Updated "Rising edge with phase delay" clocking scheme.	<u>99</u>
• Table 6-27 (Device Emulation Registers): Updated REVID: Added Silicon rev. A for F2809 only.	<u>119</u>
• Table 6-28 (PIE Peripheral Interrupts): Added footnote about ADCINT.	<u>122</u>
• Figure 6-30 (Watchdog Module): Updated figure.	<u>130</u>
• Section 7 (Applications, Implementation, and Layout): Added section.	<u>132</u>
• Section 8 (Device and Documentation Support): Added section.	<u>133</u>
• Figure 8-1 (Example of TMS320x280x/2801x Device Nomenclature): Changed "(Q100 qualification)" to "(AEC-Q100 qualification)".	<u>135</u>
• Section 8.3 (Tools and Software): Added section.	<u>136</u>
• Section 8.4 (Documentation Support): Updated section.	<u>137</u>
• Section 8.5 (Related Links): Added section.	<u>139</u>

The datasheet number will be changing.

Device Family	Change From:	Change To:
TMS320x	SPRS230N	SPRS2300

These changes may be reviewed at the datasheet links provided.

<http://www.ti.com/product/TMS320F2809>

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:

TMS320F28015PZA	TMS320F2801PZS	TMS320F2806PZA	TMS320F2808PZS
TMS320F28015PZQ	TMS320F2801PZS-60	TMS320F2806PZQ	TMS320F2808ZGMA
TMS320F28015PZS	TMS320F2801ZGMA	TMS320F2806PZS	TMS320F2808ZGMS
TMS320F28015PZSR	TMS320F2802PZA	TMS320F2806ZGMA	TMS320F2809GGMA
TMS320F28015ZGMA	TMS320F2802PZA-60	TMS320F2806ZGMS	TMS320F2809GGMS
TMS320F28016PZA	TMS320F2802PZQ	TMS320F2808GGMA	TMS320F2809PZA
TMS320F28016PZQ	TMS320F2802PZS	TMS320F2808GGMS	TMS320F2809PZQ
TMS320F28016PZS	TMS320F2802PZS-60	TMS320F2808PZA	TMS320F2809PZS
TMS320F2801PZA	TMS320F2802ZGMA	TMS320F2808PZAR	TMS320F2809ZGMA
TMS320F2801PZA-60	TMS320F2802ZGMS	TMS320F2808PZQ	TMS320F2809ZGMS
TMS320F2801PZQ			

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

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