PCN Number:		20240129003.0		PCN Date:	February 02, 2024	
Title:	Title: Datasheet for TMS320F28003x					
Customer Contact:		Change Management team	Dept:	Quality Services		
Change Type:		Electrical Specification				
PCN Details						

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.



TMS320F280039C, TMS320F280039C-Q1, TMS320F280039-Q1, TMS320F280038C-Q1 TMS320F280037C, TMS320F280037C-Q1, TMS320F280037, TMS320F280036C-Q1
TMS320F280036-Q1, TMS320F280034, TMS320F280034-Q1
SPRSP61C - OCTOBER 2021 - REVISED DECEMBER 2023

С	hanges from November 30, 2022 to December 7, 2023	Page		
	This Revision History lists the changes from SPRSP61B to SPRSP61C.	1		
	Global: Added TMS320F280033-Q1 device [Preview information (not Production Data)]	1		
	Global: Information on the TMS320F280039-Q1, TMS320F280039, TMS320F280038-Q1, TMS320F			
	Q1, TMS320F280036C-Q1, TMS320F280036-Q1, TMS320F280034-Q1, and TMS320F280033 devi			
	now Production Data	1		
	Global: TMS320F280039C-Q1, TMS320F280039-Q1, TMS320F280037C-Q1, and TMS320F28003-			
	now available in the 80-pin PN package	1		
	Features section: Changed Security features under "On-chip memory" feature			
	Features section: Updated "Functional Safety-Compliant" feature and "Safety-related certification" features section: Updated "Functional Block Diagram figure: Updated "Buses Legend" by changing "CLU" to "CLA"			
•				
	Device Comparison table: Changed "Code security for on-chip flash and RAM" to "Security: JTAGLOCK,			
	Zero-pin boot, Dual-zone security"			
	Device Comparison table: Changed the number of ADC channels for the 100-pin PZ package from 2	3 to 25.8		
	Device Comparison table: TMS320F280039C-Q1, TMS320F280039-Q1, TMS320F280037C-Q1,			
	TMS320F280034-Q1, and TMS320F280033-Q1 are now available in the 80-pin PN package			
	Pin Attributes table: Updated description of VREGENZ			
	Power and Ground table: Updated description of VREGENZ			
	Electrical Characteristics table: Updated ROH and ROL values. Added RPULLDOWN and RPULLUP	59		
	ESD Ratings – Commercial table: Added values for corner pins			
	ESD Ratings - Automotive table: TMS320F280039C-Q1, TMS320F280039-Q1, TMS320F280037C-	Q1,		
	TMS320F280034-Q1, and TMS320F280033-Q1 are now available in the 80-pin PN package			
	Current Consumption Graphs section: Added section			
	External Supervisor Usage section: Updated section			
	VREGENZ section: Updated section VDDIO Decoupling section: Updated section VDD Decoupling section: Updated section Supply Pins Ganging section: Updated section Signal Pins Power Sequence section: Updated section			
				Supply Sequencing Summary and Effects of Violations section: Updated section
			Supply Slew Rate section: Updated section	79
	System PLL figure: Updated figure	85		
	Introduction section: Updated section	90		
	Electrical Oscillator section: Updated section	90		
	RAM and ROM Parameters section: Added section	100		
	Analog-to-Digital Converter (ADC) section: Updated section			
	ADC Electrical Data and Timing section: Updated "The ADC inputs should be kept below VDDA + 0.	3 V		
	" Note			
	ADC Timing Parameter Descriptions table: Changed title from ADC Timing Parameters to ADC Timing	ng		
	Parameter Descriptions. Updated table			
	Comparator Subsystem (CMPSS) section: Updated section. Added "Two digital filters, 65536 max fil			
	prescale" to "Each CMPSS includes" list			
	Block Diagram section: Added "Each reference 12-bit DAC can be configured to drive a reference vo			
	into the negative input of the respective comparator" paragraph. Added "Reference DAC Block Diagrams and Diag			
	figure			
	-			
	CMPSS DAC Dynamic Error section: Added section			
	DAC Module Block Diagram: Updated diagram			
	Enhanced Capture (eCAP) section: Updated section			
	Sigma-Delta Filter Module (SDFM) section: Changed "Master Filter Enable (MFE) bit" to "Main Fil			
	(MFE) bit"	1		
	Modular Controller Area Network (MCAN) section: Updated list of MCAN module features	1		

	I2C Electrical Data and Timing section: Updated Note	166
•	I2C Timing Requirements table: Added footnotes	166
•	PMBus Fast Mode Switching Characteristics table: Added f _{FSM CLK} , FSM_CLK clock frequency	
:	PMBus Standard Mode Switching Characteristics table: Added f _{FSM_CLK} , FSM_CLK clock frequency SCI Block Diagram: Updated diagram	169
•	Functional Block Diagram figure: Updated "Buses Legend" by changing "CLU" to "CLA"	
•	Peripheral Registers Memory Map table: Changed table title from "Peripheral Registers Memory Map to "Peripheral Registers Memory Map". Updated table	(C28)"
•	Device Identification Registers table: Changed UID_UNIQUE from "0x0007 01F4" to "0x0007 020C"	
•	Trigonometric Math Unit (TMU) section: Added "Exponent instruction IEXP2F32 and logarithmic instru	
	LOG2F32 have been added" paragraph	
•	Added second paragraph in Section 7.6.3	
•	Control Law Accelerator (CLA) section: Added "C compilers are available for CLA software developm	
	list of major features.	
•	Security section: Changed Dual Code Security Module section to Security section	
•	Functional Safety section: Added section.	
•	Applications, Implementation, and Layout section: Changed section	
•	Merchant Telecom Rectifier Single-chip Architecture figure: Corrected EPWM labels of lower FETs	
	Merchant Telecom Rectifier Dual-chip Architecture figure: Corrected EPWM labels of lower FETs	

The datasheet number will be changing.

Device Family	Change From:	Change To:
TMS320F28003x	SPRSP61B	SPRSP61C

These changes may be reviewed at the datasheet links provided. http://www.ti.com/product/TMS320F280039C

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:

F280037CSPM	F280037CSPTR	F280039SPZ	F280037SPT
F280036PMRQ1	F280036CPMRQ1	F280038PMRQ1	F280037SPZ
F280034SPZ	F280033SPZ	F280037CSPN	F280033SPN
F280039CSPNR	F280039CSPMR	F280037SPMR	F280037PTRQ1
F280039CSPZ	F280037SPM	F280034SPM	F280037CSPZ
F280039CSPZR	F280037SPNR	F280034SPN	F280037SPN
F280039SPM	F280034PTRQ1	F280039CPZRQ1	F280034SPT
F280039SPN	F280033SPM	F280039CSPN	F280033SPT
F280037CPTQ1	F280039CPZQ1	F280037PZRQ1	F280038CPMRQ1
F280037CPTRQ1	F280039CSPM	F280039PZRQ1	F280038CPMQ1
F280037CSPT	F280037CPZRQ1		

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