



12500 TI Boulevard, MS 8640, Dallas, Texas 75243

PCN 20210729000.2
Qualification of AIZU as an additional Wafer Fab Site option for select PiccoloB
devices
Change Notification / Sample Request

Date: August 03, 2021
To: TOKYO ELECTRON DEVICE (DSTR) PCN

Dear Customer:

This is an announcement of a change to a device that is currently offered by Texas Instruments. The details of this change are on the following pages.

Texas Instruments requires acknowledgement of receipt of this notification within **30** days of the date of this notice. Lack of acknowledgement of this notice within 30 days constitutes acceptance of the change. If samples or additional data are required, requests must be received within **30 days** of this notification.

The changes discussed within this PCN will not take effect any earlier than the proposed first ship date on Page 3 of this notification, unless customer agreement has been reached on an earlier implementation of the change.

This notice does not change the end-of-life status of any product. Should product affected be on a previously issued product withdrawal/discontinuance notice, this notification does not extend the life of that product or change the life time buy offering/discontinuance plan.

For questions regarding this notice or to provide acknowledgement of this PCN, you may contact your local Field Sales Representative or the PCN Team ([PCN ww_admin_team@list.ti.com](mailto:PCN_admin_team@list.ti.com)). For sample requests or sample related questions, contact your local Field Sales Representative.

Sincerely,

PCN Team
SC Business Services

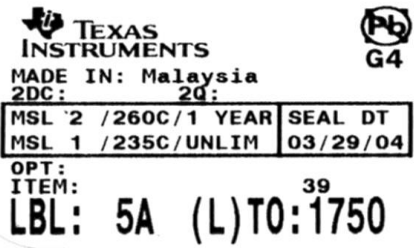
202107290002.2
Attachment: 1

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 sixty (60) months. The corresponding customer part number is also listed, if available.

DEVICE	CUSTOMER PART NUMBER
TMS320F28030PAGQ	null
TMS320F28034PAGQ	null
TMS320F28034PNQ	null

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

PCN Number:	20210729000.2		PCN Date:	August 3, 2021																			
Title:	Qualification of AIZU as an additional Wafer Fab Site option for select PiccoloB devices																						
Customer Contact:	PCN Manager		Dept:	Quality Services																			
Proposed 1st Ship Date:	Feb 3, 2022		Estimated Sample Availability:	Date provided at sample request.																			
Change Type:																							
☐	Assembly Site	☐	Assembly Process	☐	Assembly Materials																		
☐	Design	☐	Electrical Specification	☐	Mechanical Specification																		
☐	Test Site	☐	Packing/Shipping/Labeling	☐	Test Process																		
☐	Wafer Bump Site	☐	Wafer Bump Material	☐	Wafer Bump Process																		
☒	Wafer Fab Site	☐	Wafer Fab Materials	☐	Wafer Fab Process																		
		☐	Part number change																				
PCN Details																							
Description of Change:																							
Texas Instruments is pleased to announce the qualification of its AIZU fabrication facility as an additional Wafer Fab source for the selected devices listed in "Product Affected" section.																							
<table border="1"> <thead> <tr> <th colspan="3">Current Site</th> <th colspan="3">Additional Site</th> </tr> <tr> <th>Current Fab Site</th> <th>Process</th> <th>Wafer Diameter</th> <th>Additional Fab Site</th> <th>Process</th> <th>Wafer Diameter</th> </tr> </thead> <tbody> <tr> <td>DP1DM5</td> <td>F05</td> <td>200mm</td> <td>AIZU</td> <td>F05</td> <td>200mm</td> </tr> </tbody> </table>						Current Site			Additional Site			Current Fab Site	Process	Wafer Diameter	Additional Fab Site	Process	Wafer Diameter	DP1DM5	F05	200mm	AIZU	F05	200mm
Current Site			Additional Site																				
Current Fab Site	Process	Wafer Diameter	Additional Fab Site	Process	Wafer Diameter																		
DP1DM5	F05	200mm	AIZU	F05	200mm																		
Reason for Change:																							
Continuity of Supply																							
Anticipated impact on Form, Fit, Function, Quality or Reliability (positive / negative):																							
None																							
Changes to product identification resulting from this PCN:																							
Current																							
Chip Site	Chip Site Origin (20L)	Chip Site Country Code (21L)	Chip Site City																				
DP1DM5	DM5	USA	Dallas																				
Additional																							
Chip Site	Chip Site Origin (20L)	Chip Site Country Code (21L)	Chip Site City																				
AIZU	CU2	JPN	Aizuwakamatsu-shi																				
Sample product shipping label (not actual product label)																							
  (1P) SN74LS07NSR (Q) 2000 (D) 0336 (31T) LOT: 3959047MLA (4W) TKY (1T) 7523483S12 (P) (2P) REV: (V) 0033317 (20L) CS0: SHE (21L) CCO: USA (22L) AS0: MLA (23L) ACC: MYS																							
Product Affected Group:																							
KLITE32PAGQR	TMS320F28031PNQ	TMS320F28033PNQ	TMS320F28035PAGQ																				
TMS320F28030PAGQ	TMS320F28032PAGQ	TMS320F28034PAGQ	TMS320F28035PNQ																				
TMS320F28030PNQ	TMS320F28032PNQ	TMS320F28034PAGQR	TMS320F28035PAGQ																				
TMS320F28031PAGQ	TMS320F28033PAGQ	TMS320F28034PNQ																					

Automotive Change Qualification Summary (As per AEC-Q100 and JEDEC Guidelines)

Product Attributes

Attributes	Qual Device: <u>TMS320F28035PNQ</u>
Automotive Grade Level	Grade 1
Operating Temp Range Ta	-40 to +125 C
Product Function	Microprocessor
Die Attributes	-
Wafer Fab Supplier	AIZU
Other Attributes	Refer to CofDC
Package Attributes	-
Assembly Site	PHI
Package Type	LQFP
Package Designator	PN
Ball/Lead Count	80
Package Size (mils)	Refer to datasheet

- QBS: Qual By Similarity

- Qual Device TMS320F28035PNQ is qualified at LEVEL3-260C.

Qualification Results

Data Displayed as: Number of lots / Total sample size / Total failed

Type	#	Test Spec	Min Lot Qty	SS/ Lot	Test Name / Condition	Duration	Qual Device: <u>TMS320F28035PNQ</u>
Test Group A – Accelerated Environment Stress Tests							
PC	A1	JEDEC J-STD-020 JESD22-A113	3	77	Preconditioning	MSL3/260C	3/693/0
THB	A2	JEDEC JESD22-A101	3	77	Biased Temperature and Humidity, 85C/85%RH	1000 hours	3/231/0
AC	A3	JEDEC JESD22-A102	3	77	Autoclave 121C	96 hours	3/231/0
TC	A4	JEDEC JESD22-A104 and Appendix 3	3	77	Temperature Cycle, -65/150C	500 cycles	3/231/0
			1	5	Post Temp cycle bond pull	Post 500 cycles	1/5/0
PTC	A5	JEDEC JESD22-A105	1	45	Power Temperature Cycle	1000 Cycles	N/A
HTSL	A6	JEDEC JESD22-A103	1	45	High Temp Storage Bake 150C	1000 hours	3/231/0
Test Group B – Accelerated Lifetime Simulation Tests							
HTOL	B1	JEDEC JESD22-A108	3	77	Life Test, 125C	1000 hours	3/231/0
ELFR	B2	AEC Q100-008	3	800	Early Life Failure Rate, 125C	48 hours	3/2400/0
EDR	B3	AEC Q100-005	3	77	NVM Endurance, Data Retention, and Operational Life, 150C	1000 hours	3/231/0

	Type	#	Test Spec	Min Lot Qty	SS/Lot	Test Name / Condition	Duration	Qual Device: TMS320F28035PNQ
	EDR	B3	AEC Q100-005	3	77	Write/Erase Endurance prior to B1 and B3	1000 cycles	3/462/0
Test Group C – Package Assembly Integrity Tests								
	WBS	C1	AEC Q100-001	1	30	Wire Bond Shear (Cpk>1.67)	-	1/30/0
	WBP	C2	MIL-STD883 Method 2011	1	30	Wire Bond Pull (Cpk>1.67)	-	1/30/0
	SD	C3	JEDEC JESD22-B102	1	15	Surface Mount Solderability >95% Lead Coverage	-	1/15/0
	PD	C4	JEDEC JESD22-B100 and B108	3	10	Physical Dimensions (Cpk>1.67)	-	3/30/0
Test Group D – Die Fabrication Reliability Tests								
	EM	D1	JESD61	-	-	Electromigration	EM	Completed Per Process Technology Requirements
	TDDDB	D2	JESD35	-	-	Time Dependent Dielectric Breakdown	TDDDB	Completed Per Process Technology Requirements
	HCI	D3	JESD60 & 28	-	-	Hot Injection Carrier	HCI	Completed Per Process Technology Requirements
	NBTI	D4	-	-	-	Negative Bias Temperature Instability	NBTI	Completed Per Process Technology Requirements
	SM	D5	-	-	-	Stress Migration	SM	Completed Per Process Technology Requirements
Test Group E – Electrical Verification Tests								
	HBM	E2	AEC Q100-002	1	3	ESD - HBM	2000V	1/3/0
	CDM	E3	AEC Q100-011	1	3	ESD - CDM	750V	1/3/0
	LU	E4	AEC Q100-004	1	6	Latch-up	125C	1/6/0
	ED	E5	AEC Q100-009	3	30	Electrical Distributions	-	3/90/0

A1 (PC): Preconditioning:

Performed for THB, AC, TC & PTC samples, as applicable.

Ambient Operating Temperature by Automotive Grade Level:

Grade 0 (or E): -40°C to +150°C

Grade 1 (or Q): -40°C to +125°C

Grade 2 (or T): -40°C to +105°C

Grade 3 (or I) : -40°C to +85°C

E1 (TEST): Electrical test temperatures of Qual samples (High temperature according to Grade level):

Room/Hot/Cold : HTOL, ED

Room/Hot : THB / HAST, TC / PTC, HTSL, ELFR, ESD & LU

Room : AC/uHAST

Green/Pb-free Status:

Qualified Pb-Free(SMT) and Green

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

Location	E-Mail
USA	PCNAmericasContact@list.ti.com
Europe	PCNEuropeContact@list.ti.com
Asia Pacific	PCNAsiaContact@list.ti.com
WW PCN Team	PCN_ww_admin_team@list.ti.com

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