

PCN Number:	20160610004	PCN Date:	06/17/2016
Title:	Qualification of AIZU as an additional Wafer Fab Site option for select devices in F05 Technology		
Customer Contact:	<u>PCN Manager</u>	Dept:	Quality Services
Proposed 1st Ship Date:	09/17/2016	Estimated Sample Availability:	Date provided at sample request.
Change Type:			
<input type="checkbox"/> Assembly Site	<input type="checkbox"/> Assembly Process	<input type="checkbox"/> Assembly Materials	
<input type="checkbox"/> Design	<input type="checkbox"/> Electrical Specification	<input type="checkbox"/> Mechanical Specification	
<input type="checkbox"/> Test Site	<input type="checkbox"/> Packing/Shipping/Labeling	<input type="checkbox"/> Test Process	
<input type="checkbox"/> Wafer Bump Site	<input type="checkbox"/> Wafer Bump Material	<input type="checkbox"/> Wafer Bump Process	
<input checked="" type="checkbox"/> Wafer Fab Site	<input type="checkbox"/> Wafer Fab Materials	<input type="checkbox"/> Wafer Fab Process	
	<input type="checkbox"/> 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.

Current Sites			Additional Sites		
Current Fab Site	Process	Wafer Diameter	Additional Fab Site	Process	Wafer Diameter
DP1DM5	F05	200mm	AIZU	F05	200mm

Qual details are provided in the Qual Data Section.

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	Richardson

New Fab Site

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)

 <p>MADE IN: Malaysia 2DC: 20:</p> <table border="1" style="font-size: small;"> <tr> <td>MSL '2 / 260C / 1 YEAR</td> <td>SEAL DT</td> </tr> <tr> <td>MSL 1 / 235C / UNLIM</td> <td>03/29/04</td> </tr> </table> <p>OPT: ITEM: 39 LBL: 5A (L)T0:1750</p>	MSL '2 / 260C / 1 YEAR	SEAL DT	MSL 1 / 235C / UNLIM	03/29/04	 	<p>(1P) SN74LS07NSR (Q) 2000 (D) 0336 (31T) LOT: 3959047MLA (4W) TKY (1T) 7523483SI2 (P) (2P) REV: (Y) 0033317 (20L) CS0: SHE (21L) CCO: USA (22L) AS0: MLA (23L) ACO: MYS</p>
MSL '2 / 260C / 1 YEAR	SEAL DT					
MSL 1 / 235C / UNLIM	03/29/04					

Product Affected Group:

ADD320F28069PNT	TMS320F28064UPZT	TMS320F28067PZPS	TMS320F28069MPZT
TMS320F28062FPNT	TMS320F28065PPFS	TMS320F28067PZT	TMS320F28069PPFS
TMS320F28062FPZT	TMS320F28065PNT	TMS320F28067UPFPS	TMS320F28069PPFSCS
TMS320F28062PPFS	TMS320F28065PZPS	TMS320F28067UPNT	TMS320F28069PNA
TMS320F28062PNT	TMS320F28065PZT	TMS320F28067UPZPS	TMS320F28069PNT
TMS320F28062PZPS	TMS320F28065UPFPS	TMS320F28067UPZT	TMS320F28069PZA
TMS320F28062PZT	TMS320F28065UPNT	TMS320F28068FPNT	TMS320F28069PZPS
TMS320F28062UPFPS	TMS320F28065UPZPS	TMS320F28068FPZT	TMS320F28069PZT
TMS320F28062UPNT	TMS320F28065UPZT	TMS320F28068MPNT	TMS320F28069UPFPS
TMS320F28062UPZPS	TMS320F28066PPFS	TMS320F28068MPZT	TMS320F28069UPNT
TMS320F28062UPZT	TMS320F28066PNT	TMS320F28068PNT	TMS320F28069UPZPS
TMS320F28063PNT	TMS320F28066PZPS	TMS320F28068PZPS	TMS320F28069UPZT
TMS320F28063PZT	TMS320F28066PZT	TMS320F28068UPFPS	TMS320F28PLC83PNT
TMS320F28063UPFPS	TMS320F28066UPFPS	TMS320F28068UPNT	TMS320F28PLC83PNTR
TMS320F28063UPZPS	TMS320F28066UPNT	TMS320F28068UPZPS	TMS320F28PLC84PNT
TMS320F28064PZT	TMS320F28066UPZPS	TMS320F28068UPZT	TMS320F28PLC84PNTR
TMS320F28064UPFPS	TMS320F28066UPZT	TMS320F28069FPNT	TMS320F28PLC85PNT
TMS320F28064UPNT	TMS320F28067PPFS	TMS320F28069FPZT	TMS320F28PLC93PNT
TMS320F28064UPZPS	TMS320F28067PNT	TMS320F28069MPNT	TMS320F28PLC95PZT

Qualification Report

INA231AIYFFR/T in AIZU as 2nd source
Approve Date 8-April-2016

Product Attributes

Attributes	Qual Device: INA231AIYFF	QBS Process Reference: CD3246B0YFFR	QBS Process Reference: TMP103AYFF	QBS Process Reference: TSC2014YZG	QBS Package Reference: CD3246B0YFFR	QBS Package Reference: TPS75105YFF
Assembly Site	CLARK-AT	CLARK-AT	CLARK-AT	CLARK-AT	CLARK-AT	CLARK-AT
Package Family	DSBGA	DSBGA	DSBGA	DSBGA	DSBGA	DSBGA
Wafer Fab Supplier	AIZU	AIZU	AIZU	AIZU	DMOSS	FFAB
Wafer Process	50HPA07HV	50HPA07HV	33HPA07	33HPA07	50HPA07HV	3370A12

-QBS: Qual by Similarity
-Qual Device INA231AIYFF is qualified at LEVEL1-260C

Qualification Results

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

Type	Test Name / Condition	Duration	Qual Device: INA231AIYFF	QBS Process Reference: CD3246B0YFFR	QBS Process Reference: TMP103AYFF	QBS Process Reference: TSC2014YZG	QBS Package Reference: CD3246B0YFFR	QBS Package Reference: TPS75105YFF
ED	Electrical Characterization	Per Datasheet Parameters	Pass	Pass	Pass	Pass	Pass	Pass
HAST	Biased HAST, 130C/85%RH	96 Hours	-	3/252/0	-	-	3/231/0	3/230/0
HBM	ESD - HBM	2500 V	1/3/0	2/12/0	1/3/0	1/3/0	2/12/0	-
CDM	ESD - CDM	1000 V	1/3/0	2/6/0	1/3/0	-	2/6/0	-
HTOL	Life Test, 150C	300 Hours	1/77/0	3/231/0	-	1/77/0	3/231/0	3/231/0
HTSL	High Temp. Storage Bake, 170C	420 Hours	-	3/231/0	-	-	3/231/0	3/231/0
LU	Latch-up (per JESD78)		1/6/0	3/18/0	1/6/0	1/6/0	3/18/0	-
PD	Physical Dimensions	-	-	-	-	-	-	-
SBS	Bump Shear	Unstressed	-	3/150/0	-	-	-	3/150/0
TC	Temperature Cycle, -40/125C	400 Cycles	-	-	-	-	3/230/0	-
TC	Temperature Cycle, -55/125C	700 Cycles	-	3/231/0	-	-	-	3/231/0
UHAST	Unbiased HAST, 130C/85%RH	96 Hours	-	3/231/0	-	-	3/231/0	3/231/0

-Preconditioning was performed for Autoclave, Unbiased HAST, TBi Biased HAST, Temperature Cycle, Thermal Shock, and HTSL, as applicable

-The following are equivalent HTOL options based on an activation energy of 0.7eV: 125C/1k Hours, 140C/480 Hours, 150C/300 Hours, and 155C/240 Hours

-The following are equivalent HTSL options based on an activation energy of 0.7eV: 150C/1k Hours, and 170C/420 Hours

-The following are equivalent Temp Cycle options per JESD47: -55C/125C/700 Cycles and -65C/150C/500 Cycles

Quality and Environmental data is available at TI's external Web site: <http://www.ti.com/>

Green/Pb-free Status:

Qualified Pb-Free (SMT) and Green

**Qualification Data: Aizu F05 Qualification
(Approved 4/14/2016)**

This qualification has been specifically developed for the validation of this change. The qualification data validates that the proposed change meets the applicable released technical specifications.

Qualification Device Construction Details:

Qualification Vehicle: TMS320F2803XAPN

Wafer Fab Site:	AIZU	Wafer Process:	F05
Assembly Site:	TI Philippines	Wafer Size Dia.	200mm

Qualification: Plan **Test Results**

Reliability Test	Conditions	Sample Size (PASS/FAIL)
20K W/E	20K Write / Erase Cycles prior to HTSL, HTOL, RTSL	1800/0
HTOL (High Temperature Op Life)	125C - 1000 Hours	231/0
HTSL (High Temp Storage Life)*	150C Bake - 1000 Hours	231/0
RTSL (Room Temp Storage Life)	25C - 1000 Hours	231/0
Package Reliability		
Preconditioning	MSL3/260C	693/0
THB	85C/85RH	231/0
Temp Cycle	-65C/150C 500 Cycles	231/0
Autoclave	121C/96hrs	231/0
ESD-HBM	2000v	15/0
ESD-CDM	750v	6/0
Latchup	1.5Vdd +/-100mA 125C	6/0

Notes:

* Test requires Moisture Preconditioning

Qualification tests "pass" on zero fails for each test

<optional> "QBS" stands for Qualification by Similarity

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
Japan	PCNJapanContact@list.ti.com