12500 TI Boulevard, MS 8640, Dallas, Texas 75243

PCN# 20180529001.1
Qualification of AIZU as an additional Wafer Fab Site option for select devices
Change Notification / Sample Request

Date: May 30, 2018
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.

We request you acknowledge 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 you require samples or additional data to support your evaluation, please request within 30 days.

The changes discussed within this PCN will not take effect any earlier than **90** days from the date of this notification, unless customer agreement has been reached on an earlier implementation of the change. This notification period is per TI's standard process.

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, contact your local Field Sales Representative or the PCN Manager (PCN_ww_admin_team@list.ti.com).

PCN Team
SC Business Services

20180529001.1
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 twenty-four (24) months. The corresponding customer part number is also listed, if available.

DEVICE	CUSTOMER PART NUMBER
TMP302BDRLT	null
INA226AIDGST	null
TMP435ADGST	null
INA226AIDGSR	null

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

PCN Number:	20180529001.1	**PCN Date:**	May 30, 2018
Title:	Qualification of AIZU as an additional Wafer Fab Site option for select devices in HPA07 Technology		
Customer Contact:	PCN Manager	**Dept:**	Quality Services
Proposed 1st Ship Date:	Aug 30, 2018	**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.

Current Sites			Additional Sites		
Current Fab Site	**Process**	**Wafer Diameter**	**Additional Fab Site**	**Process**	**Wafer Diameter**
DP1DM5	HPA07	200mm	AIZU	HPA07	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	Dallas

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)

Product Affected Group:

INA226AIDGSR	TMP302BDRLT	TMP302DDRLR	TMP435ADGST
INA226AIDGST	TMP302CDRLR	TMP302DDRLT	
TMP302BDRLR	TMP302CDRLT	TMP435ADGSR	

Qualification Report

INA226AIDGS DMOS 5 to AIZU Offload

Approve Date 23-Apr-2018

Product Attributes

Die Attributes	Qual Device: INA226AIDGS	QBS Product Reference: INA260AIPW	QBS Process Package Reference: INA301AxQDGKQ1	QBS Package Reference: TMP431ADGKR	QBS Package Reference: INA203AIDGSR
Assembly Site	ASE SHANGHAI	TIM	ASE SHANGHAI	ASE SHANGHAI	ASE SHANGHAI
Package Family	VSSOP	TSSOP	VSSOP	VSSOP	VSSOP
Flammability Rating	UL 94 V-0	UL 94 V-0	UL 94 V-0	UL 94 V-0	UL 94 V-0
Wafer Fab Supplier	AIZU	AIZU	AIZU	DMOS5	HIJI
Wafer Process	50HPA07HV	50HPA07HV	50HPA07HV	50HPA07	LBCSOI

- QBS: Qual By Similarity
- Qual Device INA226AIDGS is qualified at LEVEL2-260C

Qualification Results

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

Type	Test Name / Condition	Duration	Qual Device: INA226AIDGS	QBS Product Reference: INA260AIPW	QBS Process Package Reference: INA301AxQDGKQ1	QBS Package Reference: TMP431ADGKR	QBS Package Reference: INA203AIDGSR
AC	Autoclave 121C	96 Hours	-	-	3/231/0	-	-
ED	Electrical Characterization	Per Datasheet Parameters	Pass	Pass	-	-	-
HAST	Biased HAST, 130C/85%RH	96 Hours	-	-	3/231/0	1/77/0	1/77/0
UHAST	Unbiased HAST, 130C/85%RH	96 Hours	-		3/231/0	1/77/0	1/77/0
HBM	ESD - HBM	2000 V	1/3/0	1/3/0	3/9/0	-	-
CDM	ESD - CDM	1000 V	1/3/0	1/3/0	3/9/0	-	-
HTOL	Life Test, 150C	300 Hours	-	1/77/0	3/231/0	2/154/0	-
HTSL	High Temp. Storage Bake, 170C	420 Hours	-	-	-	1/77/0	3/231/0
LU	Latch-up	(per JESD78)	1/3/0	1/6/0	3/18/0	-	-
TC	Temperature Cycle, -65/150C	500 Cycles	-	-	-	1/77/0	1/77/0

- Preconditioning was performed for Autoclave, Unbiased HAST, THB/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 Report

TMP302B/C/D AIZU offloads
Approve Date 27-Mar-2018

Product Attributes

Attributes	Qual Device: TMP302BDRLR	Qual Device: TMP302BDRLR-JCET	Qual Device: TMP302CDRLR	Qual Device: TMP302DDRLR	QBS Product Reference: TMP302BQDRLRQ1	QBS Process Reference TMP112AQDRLRQ1
Assembly Site	HANA (HNT)	JCET	HANA (HNT)	HANA (HNT)	HANA (HNT)	HANA (HNT)
Package Family	SOT	SOT	SOT	SOT	SOT	SOT
Flammability Rating	UL94 V-0	UL94 V-0	UL94 V-0	UL94 V-0	UL 94 V-0	UL 94 V-0
Wafer Fab Supplier	AIZU	AIZU	AIZU	AIZU	AIZU	AIZU
Wafer Process	33HPA07	33HPA07	33HPA07	33HPA07	33HPA07	33HPA07

- QBS: Qual By Similarity
- Qual Device TMP302DDRLR is qualified at LEVEL1-260C
- Qual Device TMP302BDRLR is qualified at LEVEL1-260C
- Qual Device TMP302CDRLR 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: TMP302BDRLR	Qual Device: TMP302BDRLR-JCET	Qual Device: TMP302CDRLR	Qual Device: TMP302DDRLR	QBS Product Reference: TMP302BQDRLRQ1	QBS Process Reference TMP112AQDRLRQ1
ED	Electrical Characterization	Per Datasheet Parameters	1/30/0	-	1/30/0	1/30/0	3/90/0	
AC	Autoclave 121C	96 Hours	-	-	-	-	1/77/0	-
CDM	ESD - CDM	1500 Volts	-	-	-	-	1/3/0	-
HAST	Biased HAST, 130C/85%RH	96 Hours	-	3/240/0	-	-	1/77/0	-
HBM	ESD - HBM	2500 Volts	-	-	-	-	1/3/0	-
HTOL	Life Test, 150C	408 Hours	-	-	-	-	1/77/0	3/231/0
HTSL	High Temp Storage Bake 150C	1000 Hours	-	2/160/0	-	-	-	-
HTSL	High Temp Storage Bake 175C	500 Hours	-	-	-	-	1/45/0	-
LU	Latch-up	(per JESD78)	-	-	-	-	1/6/0	-
TC	Temperature Cycle, -65/150C	500 Cycle	-	3/240/0	-	-	1/77/0	-
TC-BP	Post TC Bond Pull	Wires	-	-	-	-	1/5/0	-
UHAST	Unbiased HAST 130C/85%RH	96 Hours	-	3/239/0	-	-	-	-
WBP	Auto Wire Bond Pull	Minimum of 5 devices, 30 wires Cpk>1.33, Ppk>1.67	-	-	-	-	1/80/0	-
WBS	Auto Wire Bond Shear	Minimum of 5 devices, 30 wires Cpk>1.33, Ppk>1.67	-	-	-	-	1/80/0	-

- Preconditioning was performed for Autoclave, Unbiased HAST, THB/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
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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

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