PCN Number:	20231024001.1	**PCN Date:**	October 24, 2023
Title:	Qualification of RFAB as an additional Fab site option and Assembly Site (PHI) and BOM Options for select devices		
Customer Contact:	Change Management Team	**Dept:**	Quality Services
Proposed 1st Ship Date:	Jan 22, 2024	**Sample requests accepted until:**	Nov 24, 2023*

***Sample requests received after Nov 24, 2023 will not be supported.**

Change Type:

☒	Assembly Site	☒	Design	☐	Wafer Bump Material
☒	Assembly Process	☐	Data Sheet	☐	Wafer Bump Process
☒	Assembly Materials	☐	Part number change	☒	Wafer Fab Site
☐	Mechanical Specification	☐	Test Site	☒	Wafer Fab Material
☐	Packing/Shipping/Labeling	☐	Test Process	☐	Wafer Fab Process

PCN Details

Description of Change:

Texas Instruments is pleased to announce the qualification of its RFAB fabrication facility as an additional Wafer Fab option in addition to Assembly site (PHI) and BOM options for the devices listed below.

Current Fab Site			Additional Fab site		
Current Fab Site	**Process**	**Wafer Diameter**	**Additional Fab site**	**Process**	**Wafer Diameter**
AIZU	50HPA07	200mm	RFAB	50HPA07	300mm

The die was also changed as a result of the process change to accommodate the change in Assembly technology

Construction differences are as follows:

	UTL2	PHI
Bond wire composition, diameter diameter	Au, 1.0 mil	Cu, 0.8 mil
Mount Compound	SID#PZ0037	SID#A-09
Mold Compound	SID#CZ0096	4226215
Assembly Technology	Die Down	Die Up

Reason for Change:

Supply Continuity

Anticipated impact on Form, Fit, Function, Quality or Reliability (positive / negative):

None

Impact on Environmental Ratings

Checked boxes indicate the status of environmental ratings following implementation of this change. If below boxes are checked, there are no changes to the associated environmental ratings.

RoHS	REACH	Green Status	IEC 62474
☒ No Change	☒ No Change	☒ No Change	☒ No Change

Changes to product identification resulting from this PCN:

Fab Site Information:

Chip Site	Chip Site Origin Code (20L)	Chip Site Country Code (21L)	Chip Site City
AIZU	CU2	JPN	Aizuwakamatsu-shi
RFAB	**RFB**	**USA**	**Richardson**

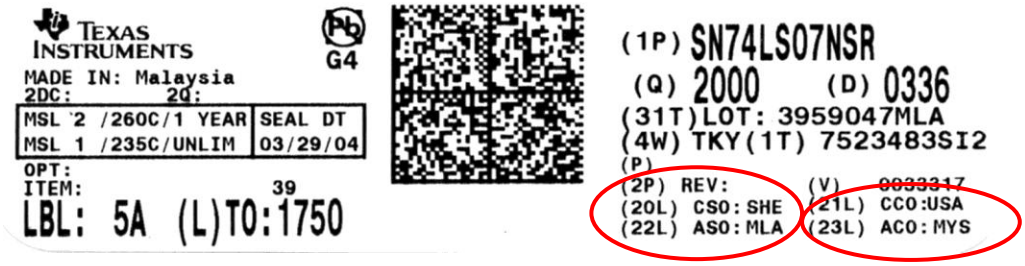
Die Rev:

Current	**New**
Die Rev [2P]	**Die Rev [2P]**
B	**D**

Assembly Site Information:

Assembly Site	Assembly Site Origin (22L)	Assembly Country Code (23L)	Assembly City
UTL2	NS2	THA	Bangpakong, Chachoengsao
TI Phillippines	**PHI**	**PHL**	**Baguio City**

Sample product shipping label (not actual product label):



Product Affected:

INA219AIDCNR	INA219AIDCNT	INA219BIDCNR	INA219BIDCNT

Qualification Report

INA219 Redbull
Approve Date 28-September-2023

Qualification Results

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

Type	#	Test Name	Condition	Duration	Qual Device: INA219BIDCNR	Qual Device: INA219BIDCNR	QBS Reference: INA219AIDCNR	QBS Reference: INA219AIDCNR	QBS Reference: INA219AIDCNR	QBS Reference: INA219AIDCNR	QBS Reference: INA219AIDCNR	QBS Reference: INA219BIDCNR/INA219AIDCNR	QBS Reference: INA219BIDCNR/INA219AIDCNR	QBS Reference: INA219BIDCNR/INA219AIDCNR	QBS Reference: INA219BIDCNR/INA219AIDCNR	QBS Reference: INA219BIDCNR/INA219AIDCNR	QBS Reference: INA219BIDCNR/INA219AIDCNR	QBS Reference: INA219BIDCNR/INA219AIDCNR	QBS Reference: INA219BIDCNR/INA219AIDCNR	QBS Reference: INA219BIDCNR/INA219AIDCNR	QBS Reference: INA219BIDCNR/INA219AIDCNR	QBS Reference: INA219BIDCNR/INA219AIDCNR	QBS Reference: INA219BIDCNR/INA219AIDCNR	QBS Reference: INA219BIDCNR/INA219AIDCNR	QBS Reference: INA219BIDCNR/INA219AIDCNR
HAST	A2	Biased HAST	110C/85%RH	264 Hours	-	-	-	-	-	-	-	-	-	3/231/0	-	-	-	-	-	-	-	-	-	-	-	-
HAST	A2	Biased HAST	130C/85%RH	96 Hours	-	-	-	-	-	-	-	-	3/231/0	-	1/77/0	1/77/0	1/77/0	-	-	-	3/231/0	3/231/0	-	-	-	1/77/0
UHAST	A3	Autoclave	121C/15psig	96 Hours	-	-	-	-	-	-	-	-	-	3/231/0	-	-	-	-	-	-	-	-	-	-	-	-
UHAST	A3	Unbiased HAST	130C/85%RH	96 Hours	-	-	-	-	-	-	-	-	-	-	1/77/0	1/77/0	1/77/0	-	-	-	3/231/0	3/231/0	-	-	-	1/77/0
TC	A4	Temperature Cycle	-55C/125C	700 Cycles	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3/231/0	3/231/0	-	-	-	-
TC	A4	Temperature Cycle	-65C/150C	500 Cycles	1/77/0	-	1/77/0	1/77/0	-	-	-	-	3/231/0	3/231/0	1/77/0	1/77/0	1/77/0	-	-	-	-	-	-	-	-	1/77/0
HTSL	A6	High Temperature Storage Life	150C	1000 Hours	-	-	-	1/77/0	1/77/1[4]	-	1/77/0	-	-	3/231/0	1/45/0	1/45/0	1/45/0	-	-	-	-	-	-	-	-	1/77/0
HTSL	A6	High Temperature Storage Life	170C	420 Hours	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3/231/0	3/231/0	1/77/0	2/154/0	-	-
HTOL	B1	CL (FF)	125C	1000 Hours	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1/45/0	-	-	-	-
HTOL	B1	CL (FS)	125C	1000 Hours	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1/52/0	-	-	-	-
HTOL	B1	CL (SF)	125C	1000 Hours	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1/52/0	-	-	-	-
HTOL	B1	CL (SS)	125C	1000 Hours	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1/45/0	-	-	-	-
HTOL	B1	Life Test	150C	300 Hours	-	-	-	-	-	-	-	-	-	-	1/77/0	1/77/0	1/77/0	-	-	-	-	-	1/77/0	2/154/0	-	-
HTOL	B1	Life Test	125C	1000 Hours	-	-	-	1/77/0	1/77/0	-	1/77/0	-	3/231/0	3/231/0	-	-	-	-	-	-	-	-	-	-	-	1/77/0
HTOL	B1	Life Test	140C	480 Hours	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1/77/0	2/154/0	-	-	-	-
ELFR	B2	ELFR	125C	48 Hours	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1/1000/0	2/2000/0	-	-	-	-
ELFR	B2	Early Life Failure Rate	125C	48 Hours	-	-	-	-	-	-	-	-	3/24000	-	-	-	-	-	-	-	-	-	1/10000	2/20000	-	-
SD	C3	PB Solderability	Steam Age, 8 Hours	-	-	-	-	-	-	-	-	-	-	1/15/0	1/15/0	1/15/0	1/15/0	-	-	-	-	-	-	-	-	-
SD	C3	PB Solderability	Preconditioni w/155C Dry Bake (4 hrs +/- 15 minutes)	-	-	-	-	-	-	-	-	-	-	1/15/0	1/15/0	1/15/0	1/15/0	-	-	-	-	-	-	-	-	-
SD	C3	PB-Free Solderability	Preconditioni w/155C Dry Bake (4 hrs +/- 15 minutes); PB-Free Solder;	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1/66/0	1/66/0	-	-	-	-
SD	C3	PB-Free Solderability	Preconditioni w/155C Dry Bake (4 hrs +/- 15 minutes); PB-Free Solder;	-	-	-	-	-	-	-	-	-	-	1/15/0	1/15/0	1/15/0	1/15/0	-	-	-	-	-	-	-	-	-
SD	C3	PB-Free Solderability	Steam Age, 8 Hours	-	-	-	-	-	-	-	-	-	-	1/15/0	1/15/0	1/15/0	1/15/0	-	-	-	-	-	-	-	-	-
PD	C4	Physical Dimensions	(per mechanical drawing)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1/6/0	1/6/0	1/0/0	2/4/0	-	-
PD	C4	Physical Dimensions	Cpk>1.67	-	-	-	-	-	-	-	-	-	-	3/30/0	1/10/0	1/10/0	1/10/0	-	-	-	-	-	-	-	-	-
ESD	E2	ESD CDM	-	250 Volts	1/3/0	-	1/3/0	1/1/0	1/1/0	1/1/0	1/1/0	-	-	-	-	-	-	-	-	-	-	3/6/1[2]	-	-	2/6/0	-	-	1/1/0
ESD	E2	ESD CDM	-	350 Volts	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1/1/0	-	-	-	-	-
ESD	E2	ESD CDM	-	200 Volts	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3/9/0	-	-	-	-	-	-
ESD	E2	ESD CDM	-	1000 Volts	-	-	-	-	-	-	-	-	-	1/3/0	-	-	-	-	-	-	-	-	-	-	-	1/3/0	1/3/0	-
ESD	E2	ESD CDM	-	1500 Volts	-	-	-	-	-	-	1/3/0	-	-	-	1/3/0	1/3/0	1/3/0	1/3/0	1/3/0	1/3/0	-	-	-	-	-	-	-	-
ESD	E2	ESD HBM	-	1000 Volts	1/3/0	-	-	1/1/0	1/1/0	1/1/0	1/1/0	-	-	-	-	-	-	-	-	-	-	3/9/0	3/9/0	-	2/6/0	-	-	1/1/0
ESD	E2	ESD HBM	-	1500 Volts	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1/1/0	-	-	-	-	-
ESD	E2	ESD HBM	-	2000 Volts	-	-	-	-	-	-	-	-	-	1/3/0	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESD	E2	ESD HBM	-	4000 Volts	-	-	-	-	-	-	1/3/0	-	-	-	1/3/0	1/3/0	1/3/0	1/3/0	1/3/0	-	-	-	-	-	-	-	1/3/0	-
LU	E4	LU	Per JESD78	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3/9/0	3/9/0	-	-	-	-	-	-
LU	E4	Latch-Up	Per JESD78	-	1/3/0	-	-	1/1/0	1/1/0	1/1/0	1/1/0	1/6/0	-	1/6/0	1/6/0	1/6/0	1/6/0	1/6/0	1/6/0	-	-	-	1/6/0	2/12/0	-	1/1/0	1/1/0	-
CHAR	E5	Electrical Distributions	Cpk>1.67 Room, hot, and cold	-	-	-	-	-	-	-	-	3/90/0	-	3/90/0	1/30/0	1/30/0	1/30/0	1/30/0	1/30/0	-	-	-	-	-	-	-	-	-
CHAR	E5	Electrical Characterization	Per Datasheet Parameters	-	1/30/0	1/30/0	1/30/0	1/30/0	1/30/0	1/30/0	1/30/0	-	-	-	-	-	-	-	-	-	1/30/0	1/30/0	1/30/0	1/30/0	2/60/0	1/30	-	1/30/0
CHAR	E5	Electrical Characterization	Min, Typ, Max Temp	-	1/30/0	1/30/0	1/30/0	1/30/0	1/30/0	1/30/0	1/30/0	-	-	-	-	-	-	-	-	-	1/30/0	1/30/0	1/30/0	1/30/0	2/60/0	1/30	-	1/30/0
FTY	E6	Final Test Yield	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1/1/0	1/1/0	-

- QBS: Qual By Similarity
- Qual Device INA219BIDCNR is qualified at MSL1 260C
- Qual Device INA219BIDCNR is qualified at MSL1 260C

- Preconditioning was performed for Autoclave, Unbiased HAST, THBiBiased 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 TIs external Web site: http://www.ti.com/

TI Qualification ID: R-NPD-2303-075

[1]-Incomplete deep trench etching that will be screen out by MP and SDS.
[2]-Waiver from CF

For questions regarding this notice, e-mails can be sent to the Change Management team or your local Field Sales Representative.

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