PCN Number:	20240508001.1	**PCN Date:**	May 08, 2024
Title:	Qualification of RFAB using qualified Process Technology, Die Revision and additional Assembly site/BOM options for select devices		
Customer Contact:	Change Management Team	**Dept:**	Quality Services
Proposed 1st Ship Date:	August 06, 2024	**Sample requests accepted until:**	June 07, 2024*

***Sample requests received after June 07, 2024 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 a new Assembly site (TIPI) for the devices listed in the "Product Affected" section.

Current Fab Site			Additional Fab Site		
Fab Site	**Process**	**Wafer Diameter**	**Fab Site**	**Process**	**Wafer Diameter**
AIZU	HPA07	200 mm	RFAB	LBC9	300 mm

The die was also changed as a result of the process change.

Construction differences are as follows:

Group 1 Device

	Current	Proposed
Wire diam/type	0.8mil Au	0.8mil Cu

Group 2 Device

	HNA	TIPI
Wire diam/type	0.8mil Au	0.8mil Cu
Mount compound	400194	4226215
Mold compound	450214	4222198

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

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**

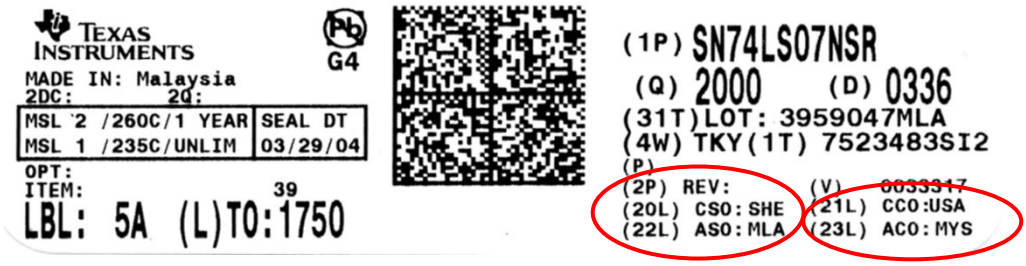
Die Rev:

Current	**New**
Die Rev [2P]	**Die Rev [2P]**
E	**A**

Assembly Site Information:

Assembly Site	Assembly Site Origin (22L)	Assembly Country Code (23L)	Assembly City
HNA	HNT	THA	Ayutthaya
TIPI	**PHI**	**PHL**	**Baguio City**

Sample product shipping label (not actual product label):



Product Affected:

Group 1 Device (Wafer fab, Die rev, BOM)

SN1608035DRLR	TMP102AIDRLR	TMP112AIDRLR
SN1710027DRLR	TMP1075NDRLR	

Group 2 Device (Wafer fab, Die rev, Assembly site)

TMP112BIDRLR	TMP112NAIDRLR

Qualification Results

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

Type	#	Test Name	Condition	Duration	Qual Device: TMP112AIDRLR (PG1.0)	Qual Device: TMP112BIDRLR	Qual Device: TMP112NAIDRLR	Qual Device: SN1608035DRLR	Qual Device: TMP112AIDRLR(PG1.1)	QBS Reference: SN74AXC1T45DRLR-S	QBS Reference: TMP390AQDRLRQ1	QBS Reference: LM339LVQDYYRQ1	QBS Reference: TPD2E1B06DRLR
HAST	A2	Biased HAST	130C/85%RH	96 Hours	-	-	-	-	-	3/231/0	3/231/0	1/77/0	3/231/0
UHAST	A3	Unbiased HAST	130C/85%RH	96 Hours	-	-	-	-	-	3/231/0	3/231/0	1/77/0	3/231/0
TC	A4	Temperature Cycle	-65C/150C	500 Cycles	-	-	-	-	-	-	3/231/0	1/77/0	3/231/0
HTSL	A6	High Temperature Storage Life	150C	1000 Hours	-	-	-	-	-	-	3/231/0	1/77/0	-
HTSL	A6	High Temperature Storage Life	170C	420 Hours	-	-	-	-	-	-	-	-	3/231/0
HTOL	B1	Life Test	125C	1000 Hours	-	-	-	-	-	-	3/231/0	1/77/0	-
ESD	E2	ESD CDM	-	1000 Volts	1/3/0	-	-	-	-	-	-	-	-
ESD	E2	ESD HBM	-	2000 Volts	1/3/0	-	-	-	-	-	-	-	-
LU	E4	Latch-Up	Per JESD78	-	1/3/0	-	-	-	1/3/0	-	-	-	-
CHAR	E5	Electrical Characterization	Per Datasheet Parameters	-	1/30/0	-	-	-	1/30/0	-	-	-	-

- QBS: Qual By Similarity
- Qual Device TMP112AIDRLR is qualified at MSL1 260C
- Qual Device TMP112BIDRLR is qualified at MSL1 260C
- Qual Device TMP112NAIDRLR is qualified at MSL1 260C
- Qual Device SN1608035DRLR is qualified at MSL1 260C
- Qual Device TMP112AIDRLR is qualified at MSL1 260C

- 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/

TI Qualification ID: R-NPD-2302-155

Qualification Results

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

Type	#	Test Name	Condition	Duration	Qual Device: TMP1075NDRLR	QBS Reference: SN74AXC1T45DRLR-S	QBS Reference: TMP390AQDRLRQ1	QBS Reference: LM339LVQDYYRQ1	QBS Reference: TPD2E1B06DRLR	QBS Reference: TMP112AIDRLR(PG1.1)
HAST	A2	Biased HAST	130C/85%RH	96 Hours	-	3/231/0	3/231/0	1/77/0	3/231/0	-
UHAST	A3	Unbiased HAST	130C/85%RH	96 Hours	-	3/231/0	3/231/0	1/77/0	3/231/0	-
TC	A4	Temperature Cycle	-65C/150C	500 Cycles	-	-	3/231/0	1/77/0	3/231/0	-
HTSL	A6	High Temperature Storage Life	150C	1000 Hours	-	-	3/231/0	1/77/0	-	-
HTSL	A6	High Temperature Storage Life	170C	420 Hours	-	-	-	-	3/231/0	-
HTOL	B1	Life Test	125C	1000 Hours	-	-	3/231/0	1/77/0	-	-
ESD	E2	ESD CDM	-	1000 Volts	1/3/0	-	-	-	-	-
ESD	E2	ESD HBM	-	2000 Volts	1/3/0	-	-	-	-	-
LU	E4	Latch-Up	Per JESD78	-	1/3/0	-	-	-	-	1/3/0
CHAR	E5	Electrical Characterization	Per Datasheet Parameters	-	1/30/0	-	-	-	-	1/30/0

- QBS: Qual By Similarity
- Qual Device TMP1075NDRLR is qualified at MSL1 260C
- 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/

TI Qualification ID: R-NPD-2312-006

Qualification Results

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

Type	#	Test Name	Condition	Duration	Qual Device: TMP102AIDRLR	Qual Device: SN1710027DRLR	QBS Reference: SN74AXC1T45DRLR-S	QBS Reference: TMP390AQDRLRQ1	QBS Reference: LM339LVQDYYRQ1	QBS Reference: TPD2E1B06DRLR	QBS Reference: TMP112AIDRLR(PG1.1)
HAST	A2	Biased HAST	130C/85%RH	96 Hours	-	-	3/231/0	3/231/0	1/77/0	3/231/0	-
UHAST	A3	Unbiased HAST	130C/85%RH	96 Hours	-	-	3/231/0	3/231/0	1/77/0	3/231/0	-
TC	A4	Temperature Cycle	-65C/150C	500 Cycles	-	-	-	3/231/0	1/77/0	3/231/0	-
HTSL	A6	High Temperature Storage Life	150C	1000 Hours	-	-	-	3/231/0	1/77/0	-	-
HTSL	A6	High Temperature Storage Life	170C	420 Hours	-	-	-	-	-	3/231/0	-
HTOL	B1	Life Test	125C	1000 Hours	-	-	-	3/231/0	1/77/0	-	-
ESD	E2	ESD CDM	-	1000 Volts	1/3/0	-	-	-	-	-	-
ESD	E2	ESD HBM	-	2000 Volts	1/3/0	-	-	-	-	-	-
LU	E4	Latch-Up	Per JESD78	-	1/3/0	-	-	-	-	-	1/3/0
CHAR	E5	Electrical Characterization	Per Datasheet Parameters	-	1/30/0	-	-	-	-	-	1/30/0

- QBS: Qual By Similarity
- Qual Device TMP102AIDRLR is qualified at MSL1 260C
- Qual Device SN1710027DRLR is qualified at MSL1 260C

- 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/

  TI Qualification ID: R-NPD-2302-154

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