PCN Number:	20201109000.1	PCN Date:	Nov 10, 2020
Title:	Qualification of RFAB as an additional Fab site option using qualified Process Technology, Die Revision and New Assembly Material for select devices		
Customer Contact:	PCN Manager	Dept:	Quality Services
Proposed 1st Ship Date:	Feb 10, 2021	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 RFAB fabrication facility as an additional Wafer Fab source and new Assembly Material for the selected devices listed in the "Product Affected" section. Devices will remain in current assembly facility:

Wafer Fab site:

Current Site			Additional Site		
Current Fab Site	**Process**	**Wafer Diameter**	**Additional Fab Site**	**Process**	**Wafer Diameter**
TSMC-WF2 (Fab 2)	TSMC/0.5DPDM	200 mm	RFAB	LBC9	300 mm

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

Assembly Material:

Material	Current	Proposed
Wire diameter	1.0mil Cu	0.8mil Cu

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

Anticipated impact on Material Declaration

☒	No Impact to the Material Declaration	☐	Material Declarations or Product Content reports are driven from production data and will be available following the production release. Upon production release the revised reports can be obtained at the site link below http://www.ti.com/quality/docs/materialcontentsearch.tsp

Changes to product identification resulting from this PCN:

Current:

Current Chip Site	Chip Site Origin Code (20L)	Chip Site Country Code (21L)	Chip Site City
TSMC-WF2 (Fab 2)	TS2	TWN	Hsinchu

New Fab Site:

New Chip Site	Chip Site Origin Code (20L)	Chip Site Country Code (21L)	Chip Site City
RFAB	**RFB**	**USA**	**Richardson**

Die Rev:

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

Sample product shipping label (not actual product label)

Product Affected:

TMP75AID	TMP75AIDGKR	TMP75AIDGKT	TMP75AIDR
TMP75AIDG4	TMP75AIDGKRG4	TMP75AIDGKTG4	TMP75AIDRG4

Qualification Report

Approve Date 23-Jul-2020

Qualification Results

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

Type	Test Name / Condition	Duration	Qual Device: TMP75AIDGKR	QBS Product Reference: TMP1075DGKT
ELFR	Early Life Failure Rate, 125C	48 Hours	-	3/2400/0
HTOL	Life Test, 150C	300 Hours	-	3/231/0
HTSL	High Temp Storage Bake 170C	420 Hours	-	3/231/0
HAST	Biased HAST, 130C/85%RH	96 Hours	-	3/231/0
UHAST	Unbiased HAST 130C/85%RH	96 Hours	-	3/244/0
TC	Temperature Cycle, -65/150C	500 Cycles	-	3/231/0
Power Cycle	Power on/off	10000 Cycles	-	3/231/0
HBM	ESD - HBM	4000 V	-	1/3/0
CDM	ESD - CDM	1500 V	-	1/3/0
LU	Latch-up	(per JESD78)	-	1/6/0
ED	Electrical Characterization	Per Datasheet Parameters	-	3/90/0
WBP	Bond Pull	Wires	-	3/240/0
WBS	Bond Shear	Wires	-	3/240/0

- QBS: Qual By Similarity
- Qual Device TMP75AIDGKR is qualified at LEVEL2-260C

- 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/

Green/Pb-free Status:

Qualified Pb-Free (SMT) and Green

Qualification Report

Approve Date 01-Sep-2020

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

Type	Test Name / Condition	Duration	Qual Device: TMP75AIDR	Qual Device: TMP1075D	QBS Product Reference: TMP1075DGKT
ELFR	Early Life Failure Rate, 125C	48 Hours	-	-	3/2400/0
HTOL	Life Test, 150C	300 Hours	-	-	3/231/0
HTSL	High Temp Storage Bake 170C	420 Hours	-	3/231/0	-
HAST	Biased HAST, 130C/85%RH	96 Hours	-	3/231/0	-
UHAST	Unbiased HAST 130C/85%RH	96 Hours	-	3/231/0	-
TC	Temperature Cycle, -65/150C	500 Cycles	-	3/231/0	-
Power Cycle	Power on/off	10000 Cycles	-	-	3/231/0
HBM	ESD - HBM	4000 V	-	-	1/3/0
CDM	ESD - CDM	1500 V	-	1/3/0	-
LU	Latch-up	(per JESD78)	-	-	1/6/0
ED	Electrical Characterization	Per Datasheet Parameters	-	-	3/90/0
WBP	Bond Pull	Wires	-	3/90/0	-
WBS	Bond Shear	Wires	-	3/90/0	-

- QBS: Qual By Similarity
- Qual Device TMP75D is qualified at LEVEL1-260C
- 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/

Green/Pb-free Status:
Qualified Pb-Free (SMT) and Green

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