PCN Number:	20200113000.1	PCN Date:	Jan 14, 2020
Title:	Qualification of RFAB as an additional Wafer Fab Site option, a new leadframe & Cu as an alternate bond wire option for select devices in HPA07 Technology		
Customer Contact:	PCN Manager	Dept:	Quality Services
Proposed 1st Ship Date:	Apr 13, 2020	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, a new leadframe & Cu as an alternate bond wire option 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
AIZU	HPA07	200mm	RFAB	HPA07	300mm

	Current	New
Bond Wire/Diameter	Au, 0.96 mils	Cu, 0.8 mils or Au, 0.96 mils
Leadframe	Selected roughened	Single Side roughened

Qual details are provided in the Qual Data Section.

Reason for Change:

Continuity of Supply for Fab site and below for Cu wire:
Continuity of supply.

1) To align with world technology trends and use wiring with enhanced mechanical and electrical properties
2) Maximize flexibility within our Assembly/Test production sites.
3) Cu is easier to obtain and stock

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

Chip Site	Chip Site Origin (20L)	Chip Site Country Code (21L)	Chip Site City
AIZU	CU2	JPN	Aizuwakamatsu-shi

New Fab Site

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

Sample product shipping label (not actual product label)

Product Affected Group:

AMC7836IPAP	AMC7836IPAPR

TEXAS INSTRUMENTS

TI Information
Selective Disclosure

Qualification Results

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

Type	Test Name / Condition	Duration	Qual Device: AMC7836IPAPR	QBS Package Reference: AMC7832IPAP
HTOL	Life Test, 150C	300 Hours	-	1/77/0
HAST	Biased HAST, 130C/85%RH	96 Hours	-	3/231/0
AC	Autoclave 121C	96 Hours	3/231/0	3/231/0
TC	Temperature Cycle - 65/150C	500 Cycles	3/231/0	3/231/0
HTSL	High Temp Storage Bake 170C	420 Hours	3/231/0	3/231/0
UHAST	Unbiased HAST 130C/85%RH	96 Hours	-	-
ED	Electrical Characterization	Per datasheet parameters	-	Pass
CDM	ESD - CDM	1000 V	-	1/3/0
CDM	ESD - CDM	250 V	-	-
CDM	ESD - CDM	500 V	-	-
HBM	ESD - HBM	1000 V	-	
HBM	ESD - HBM	2000 V	-	
HBM	ESD - HBM	2500 V	-	1/3/0
LU	Latch-up	(per JESD78)	-	1/6/0
SD	Solderability	8 Hrs/Stm Age	-	-
XRAY	X-RAY	Top side	-	-

- QBS: Qual By Similarity
- Qual Device AMC7836IPAPR is qualified at LEVEL3-260CG
- 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 Results

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

Type	Test Name / Condition	Duration	Qual Device: AMC7836IPAPR	QBS Product Reference: AMC7836IPAP	QBS Process Reference: CD3232A1YFFR
HTOL	Life Test, 140C	480 hours	-	-	2/154/0
HTOL	Life Test, 150C	300 Hours	-	1/77/0	-
-	CLHTOL - Life Test, 140C	480 hours	-	-	4/180/0
ELFR	Early Life Failure Rate, 140C	48 hours	-	-	11/2012/0
HTSL	High Temp Storage Bake 170C	420 hours	-	-	3/231/0
CDM	ESD - CDM	250 V	-	1/3/0	-
CDM	ESD - CDM	1000 V / All pins (excluding PLDO_SUP_IN and VCPH)	-	-	3/9/0
HBM	ESD - HBM	1000 V	-	1/3/0	1/3/0
LU	Latch-up	per JESD78	-	1/6/0	3/18/0
AC	Autoclave 121C	96 Hours	1/77/0	-	-
DS	Die Shear	-	1/76/0	-	-
ED	Electrical Characterization	Per Datasheet Parameters	Pass	Pass	Pass
HAST	Biased HAST, 130C/85%RH	96 hours	-	-	3/231/0
TC	Temperature Cycle, -55/125C	700 cycles	-	-	3/231/0
TC	Temperature Cycle, -65/150C	500 Cycles	1/77/0	-	-
UHAST	Unbiased HAST 130C/85%RH	96 hours	-	-	3/231/0
DS	Die Shear	-	1/76/0	-	-
WBP	Bond Pull	76 Wires, 3 units min	1/76/0	-	-
WBS	Ball Bond Shear	76 balls, 3 units min	1/76/0	-	-
SD	Pb Free Surface Mount Solderability	Pb Free/Solder	1/22/0	-	3/15/0
-	Pb Surface Mount Solderability	-	1/22/0	-	-

- 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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Green/Pb-free Status:

Qualified Pb-Free(SMT) and Green

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