PCN Number: 202)200625001.1		PCN	Date:	Jul 2, 2020			
Title: Qualification of A			IZU as an additional Fab Site option for select CMOS7 devices							
Cus	stomer	Contact:		PCN Manager		Dept:		Qual	Quality Services	
Proposed 1 st Ship Date:			Oct 2, 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		g		Test Process	
☐ Wafer Bump Site				Wafer Bump Material				Wafer Bump Process		
				Wafer Fab Materials				Wafer F	ab 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
•	MAINEFAB	CMOS7	200mm	AIZU	CMOS7	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
MAINEFAB	CUA	USA	South Portland

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)



(L)T0:1750

(1P) SN74LS07NSR (D) 0336 31T)LOT: 3959047MLA 4W) TKY(1T) 7523483S12 (20L) CSO: SHE (21L) CCO:USA (22L) ASO: MLA (23L) ACC: MYS (23L) ACO: MYS

Product Affected:

LBL:

5A

LM4901MMX/NOPB

Qualification Report

Approve Date 22-Jun-2020

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

Data Displayed as. Number of lots / Total sample size / Total failed					
Test Name / Condition	Duration	Qual Device: <u>LM4901MMX/NOPB</u>	QBS Process Reference <u>LM3668QDNTRQ1</u>		
Preconditioning Level 1	Level 1 260C	-	3/800/0		
Early Life Failure Rate, 125C	48 Hours	-	3/2400/0		
Life Test, 125C	1000 Hours	1/77/0	3/231/0		
Biased HAST, 130C/85%RH	96 Hours	-	3/231/0		
Biased Temperature and Humidity, 85C/85%RH	1000 Hours	1/77/0			
Unbiased HAST 130C/85%RH	96 Hours	1/77/0	3/231/0		
Temperature Cycle, -65/150C	500 Cycles	1/77/0	3/231/0		
High Temp Storage Bake / Data Retention, 150C	1000 Hours	-	1/77/0		
ESD - CDM	1000 V	1/3/0	-		
ESD - CDM	1250 V	-	3/9/0		
ESD - HBM	2000 V	1/3/0	-		
ESD - HBM	2500 V	-	3/9/0		
Latch-up	Per JESD78	1/6/0	3/18/0		
Surface Mount Solderability	Pb and Free	-	1/30/0		
Bond Pull	Wires	1/30/0	3/90/0		
Ball Bond Shear	Wires	1/30/0	3/90/0		
Electrical Characterization	Per Datasheet Parameters	1/30/0	3/90/0		
Manufacturability (Wafer Fab)		Pass	-		
	Test Name / Condition Preconditioning Level 1 Early Life Failure Rate, 125C Life Test, 125C Biased HAST, 130C/85%RH Biased Temperature and Humidity, 85C/85%RH Unbiased HAST 130C/85%RH Temperature Cycle, -65/150C High Temp Storage Bake / Data Retention, 150C ESD - CDM ESD - CDM ESD - HBM ESD - HBM ESD - HBM Latch-up Surface Mount Solderability Bond Pull Ball Bond Shear Electrical Characterization	Test Name / Condition Duration Preconditioning Level 1 Level 1 260C Early Life Failure Rate, 125C 48 Hours Life Test, 125C 1000 Hours Biased HAST, 130C/85%RH 96 Hours Biased Temperature and Humidity, 85C/85%RH 1000 Hours Unbiased HAST 130C/85%RH 96 Hours Temperature Cycle, -65/150C 500 Cycles High Temp Storage Bake / Data Retention, 150C 1000 Hours ESD - CDM 1000 V ESD - CDM 1250 V ESD - HBM 2000 V ESD - HBM 2500 V Latch-up Per JESD78 Surface Mount Solderability Pb and Free Bond Pull Wires Ball Bond Shear Wires Electrical Characterization Per Datasheet Parameters	Test Name / Condition Duration Qual Device: LM4901MMX/NOPB Preconditioning Level 1 Level 1 260C - Early Life Failure Rate, 125C 48 Hours - Life Test, 125C 1000 Hours 1/77/0 Biased HAST, 130C/85%RH 96 Hours - Biased Temperature and Humidity, 85C/85%RH 1000 Hours 1/77/0 Unbiased HAST 130C/85%RH 96 Hours 1/77/0 Temperature Cycle, -65/150C 500 Cycles 1/77/0 High Temp Storage Bake / Data Retention, 150C 1000 Hours - ESD - CDM 1000 V 1/3/0 ESD - CDM 1000 V 1/3/0 ESD - HBM 2000 V 1/3/0 ESD - HBM 2500 V - Latch-up Per JESD78 1/6/0 Surface Mount Solderability Pb and Free - Bond Pull Wires 1/30/0 Ball Bond Shear Wires 1/30/0 Electrical Characterization Per Datasheet Parameters 1/30/0		

- QBS: Qual By Similarity
- Qual Device LM4901MMX/NOPB is qualified at LEVEL1-260CG
- 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

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