

<b>PCN Number:</b>	20221219005.1		<b>PCN Date:</b>	December 22, 2022	
<b>Title:</b>	Qualification of new Fab site (RFAB) using qualified Process Technology, Die Revision & Assembly Site (PHI) and BOM options for select devices				
<b>Customer Contact:</b>	<a href="#">PCN Manager</a>		<b>Dept:</b>	Quality Services	
<b>Proposed 1<sup>st</sup> Ship Date:</b>	Mar 22, 2023		<b>Sample Requests accepted until:</b>	Jan 22, 2023*	
<b>*Sample requests received after January 22, 2022 will not be supported.</b>					
<b>Change Type:</b>					
<input checked="" type="checkbox"/>	Assembly Site	<input checked="" type="checkbox"/>	Assembly Process	<input checked="" type="checkbox"/>	Assembly Materials
<input checked="" type="checkbox"/>	Design	<input type="checkbox"/>	Electrical Specification	<input type="checkbox"/>	Mechanical Specification
<input type="checkbox"/>	Test Site	<input checked="" type="checkbox"/>	Packing/Shipping/Labeling	<input type="checkbox"/>	Test Process
<input type="checkbox"/>	Wafer Bump Site	<input type="checkbox"/>	Wafer Bump Material	<input type="checkbox"/>	Wafer Bump Process
<input checked="" type="checkbox"/>	Wafer Fab Site	<input checked="" type="checkbox"/>	Wafer Fab Materials	<input checked="" type="checkbox"/>	Wafer Fab Process
		<input type="checkbox"/>	Part number change		
<b>PCN Details</b>					
<b>Description of Change:</b>					
Texas Instruments is pleased to announce the qualification of a new fab & process technology (RFAB, LBC9) die revision, additional Assembly site (PHI) and BOM options for selected devices as listed below in the product affected section.					
<b>Current Fab Site</b>			<b>Additional Fab Site</b>		
<b>Current Fab Site</b>	<b>Process</b>	<b>Wafer Diameter</b>	<b>Additional Fab Site</b>	<b>Process</b>	<b>Wafer Diameter</b>
TSMC-WF2 (Fab 2)	0.5DPDM	200 mm	RFAB	LBC9	300 mm
The die was also changed as a result of the process change. The changes described in the PCN will drive changes to the datasheet. The datasheet changes are not applicable until the change described in the PCN is implemented. The datasheet will be published after the proposed 1 <sup>st</sup> Ship Date include in this letter.					
Construction differences are noted below:					
	<b>TFME</b>	<b>TIPI</b>			
Mount Compound	SID# A-03	8095733			
Bond wire composition, diameter	Au, 1.0 mil	Cu, 0.8 mil			
Mold Compound	SID#R-13 or SID#434857	4222198			
Symbolization	Pin 1 marking - STRIPE 8 bit binary traceability	Pin 1 marking - DOT - 16 bit binary traceability			
Qual details are provided in the Qual Data Section.					
<b>Reason for Change:</b>					
Continuity of Supply					
<b>Anticipated impact on Form, Fit, Function, Quality or Reliability (positive / negative):</b>					
None					
<b>Impact on Environmental Ratings:</b>					
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.					
<b>RoHS</b>	<b>REACH</b>	<b>Green Status</b>	<b>IEC 62474</b>		
<input checked="" type="checkbox"/> No Change	<input checked="" type="checkbox"/> No Change	<input checked="" type="checkbox"/> No Change	<input checked="" type="checkbox"/> 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
TSMC-WF2 (Fab 2)	TS2	TWN	Hsinchu
<b>RFAB</b>	<b>RFB</b>	<b>USA</b>	<b>Richardson</b>

**Die Rev:**

Current	New
Die Rev [2P]	<b>Die Rev [2P]</b>
A	<b>A</b>

**Assembly site Information:**

Assembly Site	Assembly Site Origin (22L)	Assembly Country Code (23L)	Assembly City
TFME	NFM	CHN	Economic Development Zone
<b>TIPI</b>	<b>PHI</b>	<b>PHL</b>	<b>Baguio City</b>

Sample product shipping label (not actual product label)

**Product Affected:**

TLV3011AIDBVR	TLV3012AIDBVR	TLV3012AIDBVT	TLV3012CAIDBVR
TLV3011AIDBVT	TLV3012AIDBVRG4	TLV3012AIDBVT G4	TLV3012CAIDBVT
TLV3011AIDBVT G4			

**Qualification Report**  
**Approve Date 03-AUGUST -2022**

**Qualification Results**

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

Type	#	Test Name	Condition	Duration	Qual Device: TLV3011AIDBVR	Qual Device: TLV3012AIDBVR	QBS Reference: TLV9001IDBVR	QBS Reference: TLV9051SIDBVR
HAST	A2	Biased HAST	130C/85%RH	96 Hours	-	-	3/231/0	1/77/0
UHAST	A3	Unbiased HAST	130C/85%RH	96 Hours	-	-	3/231/0	1/77/0
TC	A4	Temperature Cycle	-65C/150C	500 Cycles	-	-	3/231/0	1/77/0
HTSL	A6	High Temperature Storage Life	150C	1000 Hours	-	-	3/231/0	-
HTOL	B1	Life Test	125C	1000 Hours	-	-	3/231/0	-
HTOL	B1	Life Test	150C	300 Hours	-	1/77/0	-	-
ESD	E2	ESD CDM	-	1000 Volts	1/3/0	1/3/0	-	-
ESD	E2	ESD HBM	-	2000 Volts	1/3/0	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 TLV3011AIDBVR is qualified at MSL1 260C
- Qual Device TLV3012AIDBVR 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/>

**Green/Pb-free Status:**

Qualified Pb-Free(SMT) and Green

For questions regarding this notice, e-mails can be sent to the contact shown below or your local Field Sales Representative.

Location	E-Mail
WW Change Management Team	<a href="mailto:PCN_ww_admin_team@list.ti.com">PCN_ww_admin_team@list.ti.com</a>

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