



12500 TI Boulevard, MS 8640, Dallas, Texas 75243

**PCN#20240502002.1**

**Qualification of RFAB as an additional Fab site option, Die revision and  
Assembly Site (HFTF, TIPI) options for select devices  
Change Notification / Sample Request**

**Date:** May 02, 2024

**To:** MOUSER PCN

Dear Customer:

This is an announcement of a change to a device that is currently offered by Texas Instruments. The details of this change are on the following pages.

Texas Instruments requires acknowledgement of receipt of this notification within **30** days of the date of this notice. Lack of acknowledgement of this notice within 30 days constitutes acceptance and approval of this change. If samples or additional data are required, requests must be received within **30 days** of this notification.

The changes discussed within this PCN will not take effect any earlier than the proposed first ship date on Page 3 of this notification, unless customer agreement has been reached on an earlier implementation of the change.

This notice does not change the end-of-life status of any product. Should product affected be on a previously issued product withdrawal/discontinuance notice, this notification does not extend the life of that product or change the life time buy offering/discontinuance plan.

For questions regarding this notice or to provide acknowledgement of this PCN, you may contact your local Field Sales Representative or the change management team.

For sample requests or sample related questions, contact your local Field Sales Representative.

Sincerely,

Change Management Team  
SC Business Services

**20240502002.1**  
**Attachment: 1**

**Products Affected:**

The devices listed on this page are a subset of the complete list of affected devices. According to our records, you have recently purchased these devices. The corresponding customer part number is also listed, if available.

DEVICE	CUSTOMER PART NUMBER
LMV331IDBVR	NULL
LMV331IDBvre4	NULL
LMV331IDBVRG4	NULL
LMV331IDCKR	NULL
LMV331IDCKRE4	NULL
LMV331IDCKRG4	NULL

Technical details of this Product Change follow on the next page(s).

<b>PCN Number:</b>	20240502002.1	<b>PCN Date:</b>	May 02, 2024
<b>Title:</b>	Qualification of RFAB as an additional Fab site option, Die Revision and Assembly Site (HFTF, TIPI) options for select devices		
<b>Customer Contact:</b>	Change Management Team	<b>Dept:</b>	Quality Services
<b>Proposed 1<sup>st</sup> Ship Date:</b>	July 31, 2024	<b>Sample requests accepted until:</b>	June 01, 2024*

\*Sample requests received after June 01, 2024 will not be supported.

Example Request: I need a direct quote only 2021. Will need to be supported.

Change Type:	
<input checked="" type="checkbox"/> Assembly Site	<input checked="" type="checkbox"/> Design
<input checked="" type="checkbox"/> Assembly Process	<input type="checkbox"/> Data Sheet
<input checked="" type="checkbox"/> Assembly Materials	<input type="checkbox"/> Part number change
<input type="checkbox"/> Mechanical Specification	<input checked="" type="checkbox"/> Test Site
<input checked="" type="checkbox"/> Packing/Shipping/Labeling	<input type="checkbox"/> Test Process

<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 Material
<input checked="" type="checkbox"/> 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 an additional Assembly Site (HFTF, TIPI) options for the devices listed below.

Current Fab Site			Additional Fab site		
Current Fab Site	Process	Wafer Diameter	Additional Fab site	Process	Wafer Diameter
FR-BIP-1	BCB8	200mm	RFAB	LBC9	300mm



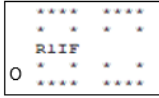
The die was also changed as a result of the process change to accommodate the change in Assembly technology

Construction differences are as follows:

### Group 1 Device:

	TFME	HNA	HFTF
Bond wire composition, diam.	Au, 1.0 mil	Au, 1.0 mil	Cu, 0.8 mil
Mount Compound	A-03	400180	A-18
Mold Compound	R-07	450179	R-27
Pin 1 ID marking	Stripe	Stripe	Dot

### Group 2 Device:

	TFME	HNC	TIPI
Bond wire composition, diam.	Au, 1.0 mil	Au, 1.0 mil	Cu, 0.8 mil
Mount Compound	A-03	400154	8095733
Mold Compound	R-13	450228	4222198
Marking appearance	 **** = BINARY DATECODE	 **** = BINARY DATECODE	 ***** = SECONDARY CODE **** = BINARY DATECODE

Reason for Change:			
Supply Continuity			
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			
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.			
<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:			
<b>Fab Site Information:</b>			
Chip Site	Chip Site Origin Code (20L)	Chip Site Country Code (21L)	Chip Site City
FR-BIP-1	TID	DEU	Freising
<b>RFAB</b>	<b>RFB</b>	<b>USA</b>	<b>Richardson</b>
<b>Die Rev:</b>			
<b>Current</b>		<b>New</b>	
Die Rev [2P]	Die Rev [2P]		
-	A		
<b>Assembly Site Information:</b>			
Assembly Site	Assembly Site Origin (22L)	Assembly Country Code (23L)	Assembly City
HNA	HNT	THA	Ayutthaya
HNC	CHS	CHN	Jiaxing
TFME	CDA	CHN	Chengdu
<b>TIPI</b>	<b>PHI</b>	<b>PHL</b>	<b>Baguio City</b>
<b>HFTF</b>	<b>HFT</b>	<b>CHN</b>	<b>Hefei</b>
Sample product shipping label (not actual product label):			
Group 1 Product Affected: Fab site, Assembly site			
LMV331IDCKR	LMV331IDCKRE4	LMV331IDCKRG4	
Group 2 Product Affected: Fab site, Assembly site			
LMV331IDBVR	LMV331IDBVRE4	LMV331IDBVRG4	

## Group 1 Qualification Report

Approve Date 05-SEPTEMBER-2023

### Qualification Results

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

Type	#	Test Name	Condition	Duration	Qual Device: LMV331IDCKR	QBS Reference: TLV1805QDBVRQ1	QBS Reference: TLV7031QDCKRQ1	QBS Reference: TLV9022QDRQ1	QBS Reference: TLV9021DCKR
HAST	A2	Biased HAST	130C/85%RH	96 Hours	-	-	3/231/0	-	-
UHAST	A3	Unbiased HAST	130C/85%RH	96 Hours	-	-	3/231/0	-	-
TC	A4	Temperature Cycle	-65C/150C	500 Cycles	-	-	3/231/0	-	-
HTSL	A6	High Temperature Storage Life	150C	1000 Hours	-	-	3/231/0	-	-
HTSL	A6	High Temperature Storage Life	175C	500 Hours	-	-	-	-	-
HTOL	B1	Life Test	125C	1000 Hours	-	-	3/231/0	3/231/0	-
ESD	E2	ESD CDM	-	500 Volts	1/3/0	-	-	-	-
ESD	E2	ESD HBM	-	2000 Volts	-	-	-	1/3/0	-
LU	E4	Latch-Up	Per JESD78	-	-	-	-	1/6/0	1/6/0
CHAR	E5	Electrical Distributions	Cpk>1.67 Room, hot, and cold	-	1/30/0	-	-	3/90/0	-

QBS: Qual By Similarity

Qual Device LMV331IDCKR 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/>

## Group 2 Qualification Report

Approve Date 20-OCTOBER -2023

### Qualification Results

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

Type	#	Test Name	Condition	Duration	Qual Device: LMV331IDBVR TLV9020DBVR TLV9021DBVR	QBS Reference: TLV1805QDBVRQ1	QBS Reference: TL331BIDBVR
HAST	A2	Biased HAST	130C/85%RH	96 Hours	-	3/231/0	-
UHAST	A3	Autoclave	121C/15psig	96 Hours	-	3/231/0	-
UHAST	A3	Unbiased HAST	110C/85%RH	264 Hours	-	-	3/231/0
TC	A4	Temperature Cycle	-65C/150C	500 Cycles	-	3/231/0	3/231/0
HTSL	A6	High Temperature Storage Life	170C	420 Hours	-	-	3/231/0
HTSL	A6	High Temperature Storage Life	175C	500 Hours	-	3/135/0	-
HTOL	B1	Life Test	125C	1000 Hours	-	3/231/0	-
WBS	C1	Ball Shear	76 balls, 3 units min	Wires	-	-	3/228/0
WBP	C2	Bond Pull	76 Wires, 3 units min	Wires	-	-	3/228/0
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	-	-
CHAR	E5	Electrical Characterization	Per Datasheet Parameters	-	1/30/0	-	-

QBS: Qual By Similarity

Qual Device LMV331IDBVR 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

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