



**12500 TI Boulevard, MS 8640, Dallas, Texas 75243**

**PCN# 20250226003.1**

**Qualification of RFAB using qualified Process Technology, Die Revision, Datasheet  
and additional Assembly Site/BOM options for select devices  
Change Notification / Sample Request**

**Date:** February 26, 2025

**To:** MOUSER PCN

Dear Customer:

This is an announcement of a change to a device that is currently offered by Texas Instruments (TI). The details of this change are on the following pages, and are in alignment with our standard product change notification (PCN) [process](#).

TI requires acknowledgement of receipt of this notification within 60 days of the date of this notice. Lack of acknowledgement of this notice within 60 days constitutes acceptance and approval of this change. If samples or additional data are required, requests must be received within 60 days of this notification, given that samples are not built ahead of the change.

The Proposed First Ship date in this PCN letter is the earliest possible date that customers could receive the changed material. It is our commitment that the changed device will not ship before that date. If samples are requested within the 60 day sample request window, customers will still have 30-days to complete their evaluation regardless of the proposed 1st ship date.

Changes outlined in this notification underscore our commitment to product longevity and supply continuity, as well as our continued efforts to transition to newer, more efficient manufacturing processes and technologies. Specifically, this particular notification is related to TI's multiyear transition plan for our two remaining 150-millimeter production lines (DFAB in Dallas, Texas, and SFAB in Sherman, Texas). SFAB closure activities are expected to begin by the end of 2025. DFAB will remain open with a smaller set of 200mm technologies and GaN.

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. As always, we thank you for your continued business.

TI values customer engagement and feedback related to TI changes. Customers should contact TI if there are questions or concerns regarding a change notification.

Change Management Team  
SC Business Services


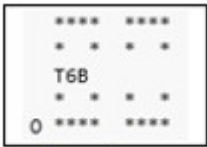

**20250226003.1**  
**Attachment: 1**



**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
LM60BIM3X/NOPB	NULL
LM60BIZ/NOPB	LM60BIZ/NOPB
LM60CIZ/NOPB	LM60CIZ/NOPB
LM60CIM3X/NOPB	LM60CIM3X/NOPB

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

<b>PCN Number:</b>	20250226003.1	<b>PCN Date:</b>	February 26, 2025																					
<b>Title:</b>	Qualification of RFAB using qualified Process Technology, Die Revision, Datasheet and additional Assembly Site/BOM 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>	May 27, 2025	<b>Sample requests accepted until:</b>	April 27, 2025*																					
<b>*Sample requests received after April 27, 2025 will not be supported.</b>																								
<b>Change Type:</b>																								
<input checked="" type="checkbox"/>	Assembly Site	<input checked="" type="checkbox"/>	Design																					
<input checked="" type="checkbox"/>	Assembly Process	<input checked="" type="checkbox"/>	Data Sheet																					
<input checked="" type="checkbox"/>	Assembly Materials	<input type="checkbox"/>	Part number change																					
<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"/>		<input type="checkbox"/>	Wafer Bump Material																					
<input type="checkbox"/>		<input type="checkbox"/>	Wafer Bump Process																					
<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	Wafer Fab Site																					
<input type="checkbox"/>		<input checked="" type="checkbox"/>	Wafer Fab Material																					
<input type="checkbox"/>		<input checked="" type="checkbox"/>	Wafer Fab Process																					
<b>PCN Details</b>																								
<b>Description of Change:</b>																								
Texas Instruments is pleased to announce the qualification of its RFAB fabrication facility as an additional Wafer Fab option in addition to an Assembly site/BOM options for the device listed below.																								
<table border="1"> <thead> <tr> <th colspan="3">Current Fab Site</th> <th colspan="3">Additional Fab Site</th> </tr> <tr> <th>Current Fab Site</th> <th>Process</th> <th>Wafer Diameter</th> <th>Additional Fab Site</th> <th>Process</th> <th>Wafer Diameter</th> </tr> </thead> <tbody> <tr> <td>SFAB</td> <td>LFAST</td> <td>150 mm</td> <td rowspan="2">RFAB</td> <td rowspan="2">TIB</td> <td rowspan="2">300 mm</td> </tr> <tr> <td>GFAB6</td> <td>LFAST</td> <td>150 mm</td> </tr> </tbody> </table>			Current Fab Site			Additional Fab Site			Current Fab Site	Process	Wafer Diameter	Additional Fab Site	Process	Wafer Diameter	SFAB	LFAST	150 mm	RFAB	TIB	300 mm	GFAB6	LFAST	150 mm	
Current Fab Site			Additional Fab Site																					
Current Fab Site	Process	Wafer Diameter	Additional Fab Site	Process	Wafer Diameter																			
SFAB	LFAST	150 mm	RFAB	TIB	300 mm																			
GFAB6	LFAST	150 mm																						
The die was also changed as a result of the process change.																								
Construction differences are as follows:																								
<b>Group 1 Device:</b>																								
	<b>TIEMA</b>	<b>TIPI</b>																						
Wire diam/type	1.0mil Au, 0.96mil Cu	0.8mil Cu																						
Mount compound	8075531	8095733																						
Mold compound	8097131	4222198																						
Lead finish	Matte Sn	NiPdAu																						
ECAT	G3	G4																						
Device marking (sample)	 <p>Top side O - pin 1 notch</p>	 <p>O - Pin 1 dot</p>																						
	 <p>Btm side</p>	None																						
<b>Group 2 Device:</b>																								
	<b>Current</b>	<b>Proposed</b>																						

Mount compound	Eutectic (SnAgCr)	S#112010300013
Device marking (sample)		

The datasheets will be changing as a result of the above mentioned changes. The datasheet change details can be reviewed in the datasheet revision history. The links to the revised datasheets are available in the table below.



**LM60**  
SNIS119G – MAY 2004 – REVISED FEBRUARY 2025

Changes from Revision F (August 2017) to Revision G (February 2025)	Page
• Updated the numbering format for tables, figures, and cross-references throughout the document .....	1
• Updated the <i>Device Comparison</i> section with existing OPNs and adding <i>Device Nomenclature</i> table.....	3
• Changed Machine model (MM) Electrostatic discharge to Charged-device model (CDM).....	4
• Changed minimum specified temperature for LM60B from -25°C to -40°C in the New chip.....	4
• Changed DBZ and LP packages Thermal Information section. in the New chip.....	4
• Added “operating current” and “Change of quiescent current” for the New chip.....	5
• Added graphs for new chip, reordered and corrected the graphs for legacy chip.....	6
• Corrected <i>Thermal Resistance Junction to Air (Legacy chip)</i> graph.....	6
• Added <i>Thermal Response in Stirred Oil Bath With Heat Sink (0.5 inches × 0.5 inches PCB board)</i> graph for both Legacy and New chips.....	6
• Added <i>Thermal Response in Stirred Oil Bath Without Heat Sink</i> graph for both Legacy and New chips.....	6
• Added <i>Thermal Response in Still Air Without a Heat Sink (Both Legacy and New chip together in a new test setup)</i> graph for both Legacy and New chips.....	6
• Added the <i>Start-Up Voltage vs Temperature</i> , <i>Quiescent Current vs Temperature</i> , <i>Accuracy vs Temperature</i> , <i>Noise Voltage</i> , <i>Supply Current vs Supply Voltage</i> and <i>Start-Up Response</i> graphs for New chip.....	6

Product Folder	Current Datasheet Number	New Datasheet Number	Link to full datasheet
LM60	SNIS119F	<b>SNIS119G</b>	<a href="http://www.ti.com/product/LM60">http://www.ti.com/product/LM60</a>

Qual details are provided in the Qual Data Section.

#### Reason for Change:

These changes are part of our multiyear plan to transition products from our 150-millimeter factories to newer, more efficient manufacturing processes and technologies, underscoring our commitment to product longevity and supply continuity.

#### 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.

RoHS	REACH	Green Status	IEC 62474
<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
GFAB6	GF6	GBR	Greenock
SH-BIP-1	SHE	USA	Sherman
<b>RFAB</b>	<b>RFB</b>	<b>USA</b>	<b>Richardson</b>

**Die Rev:****Current****New**

Die Rev [2P]	Die Rev [2P]
A	<b>B</b>

**Assembly Site Information:**

Assembly Site	Assembly Site Origin (22L)	Assembly Country Code (23L)	Assembly City
TIEMA	CU6	MYS	Melaka
<b>TIPI</b>	<b>PHI</b>	<b>PHL</b>	<b>Baguio City</b>

Sample product shipping label (not actual product label):

 **TEXAS INSTRUMENTS**  
MADE IN: Malaysia  
2DC: 20:  
G4

MSL '2 /260C/1 YEAR SEAL DT  
MSL 1 /235C/UNLIM 03/29/04

OPT: 39  
ITEM: 39  
LBL: 5A (L)T0:1750



(1P) SN74LS07NSR  
(Q) 2000 (D) 0336  
(31T) LOT: 3959047MLA  
(4W) TKY (1T) 7523483SI2  
(P) 0033317  
(2P) REV: (V) 0033317  
(20L) CS0: SHE (21L) CCO:USA  
(22L) AS0: MLA (23L) ACO: MYS

**Group 1 Product Affected:**

LM60BIM3X/NOPB	LM60CIM3X/NOPB
----------------	----------------

**Group 2 Product Affected:**

LM60BIZ/LFT3	LM60BIZ/NOPB	LM60CIZ/NOPB
--------------	--------------	--------------

For alternate parts with similar or improved performance, please visit the product page on [TI.com](https://www.ti.com)

## Qualification Results

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

Type	#	Test Name	Condition	Duration	Qual Device: <a href="#">LM60BIM3X/NOPB</a>	Qual Device: <a href="#">LM60CIM3X/NOPB</a>	QBS Reference: <a href="#">TL431BQDBZR</a>	QBS Reference: <a href="#">TL431BQDBZRQ1</a>	QBS Reference: <a href="#">TL432BQDBZRQ1</a>
HAST	A2	Biased HAST	130C/85%RH	96 Hours	-	-	-	2/160/0	1/80/0
UHAST	A3	Unbiased HAST	130C/85%RH	96 Hours	-	-	-	2/154/0	1/77/0
TC	A4	Temperature Cycle	-65C/150C	500 Cycles	-	-	-	2/154/0	1/77/0
HTSL	A6	High Temperature Storage Life	150C	1000 Hours	-	-	-	2/154/0	1/77/0
HTOL	B1	Life Test	150C	300 Hours	1/77/0	-	3/231/0	-	-
ESD	E2	ESD CDM	-	1000 Volts	1/3/0	-	-	-	-
ESD	E2	ESD HBM	-	2500 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, also known as Generic Data
- Qual Device LM60BIM3X/NOPB is qualified at MSL1 260C
- Qual Device LM60CIM3X/NOPB 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/>

TI Qualification ID: R-NPD-2309-027

## Qualification Results

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

Type	#	Test Name	Condition	Duration	Qual Device: <a href="#">LM60BIZ/LFT3 (Rev1.0)</a>	Qual Device: <a href="#">LM60BIZ/NOPB</a>	Qual Device: <a href="#">LM60CIZ/NOPB</a>	Qual Device: <a href="#">LM60BIZ/LFT3(Rev2.0)</a>	QBS Reference: <a href="#">ULQ2003AQDRQ1</a>	QBS Reference: <a href="#">SN1701009LP</a>	QBS Reference: <a href="#">LM60BIM3X/NOPB</a>	QBS Reference: <a href="#">LMT84LPR</a>
HAST	A2	Biased HAST	110C/85%RH	264 Hours	-	-	-	-	-	1/77/0	-	-
HAST	A2	Biased HAST	130C/85%RH	96 Hours	1/77/0	-	-	-	-	-	-	3/231/0
UHAST	A3	Autoclave	121C/15psig	96 Hours	-	-	-	-	-	1/77/0	-	-
UHAST	A3	Unbiased HAST	130C/85%RH	96 Hours	1/77/0	-	-	-	-	-	-	3/231/0
TC	A4	Temperature Cycle	-65C/150C	500 Cycles	1/77/0	-	-	-	-	1/77/0	-	3/231/0
HTSL	A6	High Temperature Storage Life	150C	1000 Hours	-	-	-	-	-	1/77/0	-	1/77/0
HTSL	A6	High Temperature Storage Life	170C	420 Hours	1/77/0	-	-	-	-	-	-	-
HTOL	B1	Life Test	125C	1000 Hours	1/77/0	-	-	1/77/0	-	-	1/77/0	1/77/0
HTOL	B1	Life Test	150C	300 Hours	1/77/0	-	-	-	3/231/0	-	1/77/0	-
ESD	E2	ESD CDM	-	1000 Volts	1/3/0	-	-	1/3/0	-	-	-	-
ESD	E2	ESD HBM	-	2500 Volts	1/3/0	-	-	1/3/0	-	-	-	-
LU	E4	Latch-Up	Per JESD78	-	1/3/0	-	-	1/3/0	1/6/0	-	-	-
CHAR	E5	Electrical Characterization	Per Datasheet Parameters	-	1/30/0	-	-	-	-	-	-	-



- QBS: Qual By Similarity, also known as Generic Data
- Qual Device LM60BIZ/LFT3 is qualified at NOT CLASSIFIED NOT CLASSIFIED
- Qual Device LM60BIZ/NOPB is qualified at NOT CLASSIFIED NOT CLASSIFIED
- Qual Device LM60CIZ/NOPB is qualified at NOT CLASSIFIED NOT CLASSIFIED
- Qual Device LM60BIZ/LFT3 is qualified at NOT CLASSIFIED NOT CLASSIFIED
- 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/>

TI Qualification ID: R-NPD-2309-029

For questions regarding this notice, e-mails can be sent to the Change Management team or your local Field Sales Representative.

### IMPORTANT NOTICE AND DISCLAIMER

TI PROVIDES TECHNICAL AND RELIABILITY DATA (INCLUDING DATASHEETS), DESIGN RESOURCES (INCLUDING REFERENCE DESIGNS), APPLICATION OR OTHER DESIGN ADVICE, WEB TOOLS, SAFETY INFORMATION, AND OTHER RESOURCES "AS IS" AND WITH ALL FAULTS, AND DISCLAIMS ALL WARRANTIES, EXPRESS AND IMPLIED, INCLUDING WITHOUT LIMITATION ANY IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR NON-INFRINGEMENT OF THIRD PARTY INTELLECTUAL PROPERTY RIGHTS.

These resources are intended for skilled developers designing with TI products. You are solely responsible for (1) selecting the appropriate TI products for your application, (2) designing, validating and testing your application, and (3) ensuring your application meets applicable standards, and any other safety, security, or other requirements. These resources are subject to change without notice. TI grants you permission to use these resources only for development of an application that uses the TI products described in the resource. Other reproduction and display of these resources is prohibited. No license is granted to any other TI intellectual property right or to any third party intellectual property right. TI disclaims responsibility for, and you will fully indemnify TI and its representatives against, any claims, damages, costs, losses, and liabilities arising out of your use of these resources.

TI's products are provided subject to TI's Terms of Sale ([www.ti.com/legal/termsofsale.html](http://www.ti.com/legal/termsofsale.html)) or other applicable terms available either on ti.com or provided in conjunction with such TI products. TI's provision of these resources does not expand or otherwise alter TI's applicable warranties or warranty disclaimers for TI products.