



12500 TI Boulevard, MS 8640, Dallas, Texas 75243

PCN#20240306000.1

Qualification of new Fab site (RFAB) using qualified Process Technology, Die Revision, and additional Assembly site & BOM options for select devices

Change Notification / Sample Request

Date: March 06, 2024

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 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, 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 30 day sample request window, customers will still have 30-days to complete their evaluation regardless of the proposed 1st ship date.

This particular PCN is related to TI's multiyear transition plan for our two remaining factories with 150-millimeter production (DFAB in Dallas, Texas, and SFAB in Sherman, Texas). DFAB will remain open, but will focus on 200-mm production, with a smaller set of technologies. SFAB will close no earlier than 2024 and no later than 2025. As referenced in the "reason for change" below, these changes are part of our multiyear plan to transition these products to newer, more efficient manufacturing processes and technologies, underscoring our commitment to product longevity and supply continuity.

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.

Change Management Team
SC Business Services

20240306000.1
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
LM4431M3-2.5/NOPB	NULL
LM4431M3X-2.5/NOPB	NULL

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

PCN Number:	20240306000.1		PCN Date:	March 06, 2024																					
Title:	Qualification of new Fab site (RFAB) using qualified Process Technology, Die Revision, and additional Assembly site & BOM options for select devices																								
Customer Contact:	Change Management Team		Dept:	Quality Services																					
Proposed 1st Ship Date:	June 04, 2024		Sample requests accepted until:	April 05, 2024*																					
*Sample requests received after April 05, 2024 will not be supported.																									
Change Type:																									
☒ Assembly Site	☒ Design	☐ Wafer Bump Material																							
☒ Assembly Process	☐ Data Sheet	☐ Wafer Bump Process																							
☒ Assembly Materials	☐ Part number change	☒ Wafer Fab Site																							
☐ Mechanical Specification	☐ Test Site	☒ Wafer Fab Material																							
☐ Packing/Shipping/Labeling	☐ Test Process	☒ Wafer Fab Process																							
PCN Details																									
Description of Change:																									
Texas Instruments is pleased to announce the qualification of a new fab & process technology (RFAB, TIB) die revision, and Assembly site & BOM option for selected devices as listed below in the product affected section. Construction differences are noted 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 rowspan="2">LFAST</td> <td>150 mm</td> <td rowspan="2">RFAB</td> <td rowspan="2">LBC9</td> <td rowspan="2">300 mm</td> </tr> <tr> <td>GFAB</td> <td>200 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	LBC9	300 mm	GFAB	200 mm	The die was also changed as a result of the process change.		
Current Fab Site			Additional Fab Site																						
Current Fab Site	Process	Wafer Diameter	Additional Fab Site	Process	Wafer Diameter																				
SFAB	LFAST	150 mm	RFAB	LBC9	300 mm																				
GFAB		200 mm																							
Construction differences are as follows:																									
		TIEMA	CDAT																						
Mount Compound		4213245	4207123																						
Mold Compound		8097131	4222198																						
Bond wire composition, diameter		Au, 1.0 mil	Cu, 0.8 mil																						
Pin one designator		notch	dot																						
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																						
☒ No Change	☒ No Change	☒ No Change	☒ 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
SH-BIP-1	SHE	USA	Sherman
RFAB	RFB	USA	Richardson

Die Rev:

Current

New

Die Rev [2P]	Die Rev [2P]
D	A

Assembly Site	Assembly Site Origin (22L)	Assembly Country Code (23L)	Assembly City
TIEMA	CU6	MYS	Melaka
CDAT	CDA	CHN	Chengdu

Sample product shipping label (not actual product label)


TEXAS INSTRUMENTS
 MADE IN: Malaysia
 2DC: 29:





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

MSL 2 /260C/1 YEAR SEAL DT
 MSL 1 /235C/UNLIM 03/29/04
 OPT:
 ITEM: 39
 LBL: 5A (L)T0:1750

Product Affected:

LM4431M3-2.5/NOPB	LM4431M3X-2.5/NOPB
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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: <u>LM4040QAIM3-5.0/NO</u>	QBS Product Reference: <u>LM4040QAIM3-5.0/NO</u>	QBS Package Reference: <u>TLV803EA43VDBZ</u>	QBS Package Reference: <u>TPS3840PH30DBV RQ1</u>	QBS Process Reference: <u>TLC6CS816QPWP RQ1</u>
HAST	A2	Biased HAST	130C/85%RH	96 Hours	-	1/77/0	-	3/231/0	3/231/0
ACLV	A3	Autoclave	121C/33.3psig	96 Hours	-	-	3/231/0	-	3/231/0
UHAIST	A3	Biased HAST	130C/85%RH	96 Hours	-	1/77/0	-	3/231/0	-
TC	A4	Temperature Cycle	-65C/150C	500 Cycles	-	1/77/0	3/231/0	3/231/0	3/231/0
HTSL	A6	High Temperature Storage Life	150C	1000 Hours	-	-	-	3/135/0	3/231/0
HTSL	A6	High Temperature Storage Life	170C	420 Hours	-	-	3/231/0	-	-
HTOL	B1	Life Test	140C	480 Hours	-	-	-	-	3/231/0
HTOL	B1	Life Test	125C	1000 Hours	-	3/231/0	-	3/231/0	-
EFR	B2	Early Life	150C	24 Hours	-	-	-	-	3/2400/0
ESD	E2	ESD HBM	-	2000 Volts	-	1/3/0	-	-	1/3/0
ESD	E2	ESD HBM	-	4000 Volts	-	1/3/0	-	-	1/3/0
ESD	E3	ESD CDM	-	250 Volts	-	1/3/0	-	-	1/3/0
ESD	E3	ESD CDM	-	1500 Volts	-	1/3/0	1/3/0	-	1/3/0
LU	E4	Latch-Up	Per JESD78	-	-	1/6/0	-	-	1/6/0
CHAR	E5	Electrical Characterization	Per Datasheet Parameters	-	1/30/0	1/30/0	1/30/0	-	3/90/0
MQ	-	MQ (Assembly)	Per site specification	-	1/1/0	1/1/0	3/3/0	3/3/0	3/3/0
MQ	-	MQ (Fab)	Per site specification	-	-	1/1/0	-	-	-

- QBS: Qual By Similarity
- Qual Device LM4040QAIM3-5.0/NO is qualified at MSL1 260C.

Concurrently qualifies the LM4040 Family:

- LM4040XXYYzDBZrG4:
- X = 0 or 1 (0 is fixed, 1 is adjustable; x = Accuracy Grade (A, B, C, D); YY = 2-digit voltage option (1.225 – 5V); z = 1 letter temperature designator; DBZ – package designator; r = size option
- LM4040XQgTM3X-v.o
- X = 0 or 1 (0 is fixed, 1 is adjustable; Q = Automotive designator; g = Tolerance Grade (A, B, C, D); T = temperature Grade (I, E) M3 = Package Designator SOT23 YY; X = Optional packing designator; v.o = 2-digit voltage option (1.225 – 5V); NOPB = Environmental Standard
- 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

TI Qualification ID: R-CHG-2207-027

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

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