



12500 TI Boulevard, MS 8640, Dallas, Texas 75243

PCN#20231204001.1

**Qualification of RFAB as an additional Fab site option, Die Revision, and new Assembly site Option for select devices
Change Notification / Sample Request**

The watermark was inadvertantly included in the original notification. The PCN is being re-issued to remove the watermark. No change to the content of the letter.

Date: December 05, 2023

To: Digi- Key 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

20231204001.1
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
TLC3704CDR	null
TLC3704IDR	null

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

PCN Number:	20231204001.1		PCN Date:	December 05, 2023																			
Title:	Qualification of RFAB as an additional Fab site option, Die Revision, and new Assembly site Option for select devices																						
Customer Contact:	Change Management Team		Dept:	Quality Services																			
Proposed 1st Ship Date:	Mar 4, 2024		Sample requests accepted until:	Jan 5, 2024*																			
*Sample requests received after Jan 5, 2024 will not be supported.																							
Change Type:																							
<input checked="" type="checkbox"/>	Assembly Site	<input checked="" type="checkbox"/>	Design	<input type="checkbox"/>	Wafer Bump Material																		
<input checked="" type="checkbox"/>	Assembly Process	<input type="checkbox"/>	Data Sheet	<input type="checkbox"/>	Wafer Bump Process																		
<input checked="" type="checkbox"/>	Assembly Materials	<input type="checkbox"/>	Part number change	<input checked="" type="checkbox"/>	Wafer Fab Site																		
<input type="checkbox"/>	Mechanical Specification	<input type="checkbox"/>	Test Site	<input checked="" type="checkbox"/>	Wafer Fab Material																		
<input checked="" type="checkbox"/>	Packing/Shipping/Labeling	<input type="checkbox"/>	Test Process	<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 and Die revision in addition to Assembly site options for the devices 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>DFAB</td> <td>LINCMOS</td> <td>150mm</td> <td>RFAB</td> <td>LBC9</td> <td>300mm</td> </tr> </tbody> </table>						Current Fab Site			Additional Fab site			Current Fab Site	Process	Wafer Diameter	Additional Fab site	Process	Wafer Diameter	DFAB	LINCMOS	150mm	RFAB	LBC9	300mm
Current Fab Site			Additional Fab site																				
Current Fab Site	Process	Wafer Diameter	Additional Fab site	Process	Wafer Diameter																		
DFAB	LINCMOS	150mm	RFAB	LBC9	300mm																		
The die was also changed as a result of the process change.																							
Constriction differences are as follows:																							
BOM Table (RFAB/Process migration/Qualify MLA as and additional Assembly site):																							
<table border="1"> <thead> <tr> <th></th> <th>TAI</th> <th>MLA</th> </tr> </thead> <tbody> <tr> <td>Bond wire composition, diameter</td> <td>Cu, 0.96 mil</td> <td>Cu, 0.8 mil</td> </tr> </tbody> </table>							TAI	MLA	Bond wire composition, diameter	Cu, 0.96 mil	Cu, 0.8 mil												
	TAI	MLA																					
Bond wire composition, diameter	Cu, 0.96 mil	Cu, 0.8 mil																					
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.																							
<table border="1"> <thead> <tr> <th>RoHS</th> <th>REACH</th> <th>Green Status</th> <th>IEC 62474</th> </tr> </thead> <tbody> <tr> <td><input checked="" type="checkbox"/> No Change</td> <td><input checked="" type="checkbox"/> No Change</td> <td><input checked="" type="checkbox"/> No Change</td> <td><input checked="" type="checkbox"/> No Change</td> </tr> </tbody> </table>						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										
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
DL-LIN	DLN	USA	Dallas
RFAB	RFB	USA	Richardson

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

Die Rev [2P]	Die Rev [2P]
A,B	B

Assembly Site Information:

Assembly Site	Assembly Site Origin (22L)	Assembly Country Code (23L)	Assembly City
TI Taiwan	TAI	TWN	Chung Ho, New Taipei City
TI Malaysia	MLA	MYS	Kuala Lumpur

Sample product shipping label (not actual product label):

 **TEXAS INSTRUMENTS**
 MADE IN: Malaysia
 2DC: 20:
 MSL 2 / 260C/1 YEAR SEAL DT
 MSL 1 / 235C/UNLIM 03/29/04
 OPT:
 ITEM: 39
LBL: 5A (L)T0:1750



(1P) **SN74LS07NSR**
 (Q) **2000** (D) **0336**
 (31T) LOT: 3959047MLA
 (4W) TKY (1T) 7523483SI2
 (P)
 (2P) REV: (V) **0000017**
 (20L) CS0: SHE (21L) CCO:USA
 (22L) AS0: MLA (23L) ACO: MYS

Product Affected:

TLC3704CDR	TLC3704IDR
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For alternate parts with similar or improved performance, please visit the product page on TI.com

Qualification Report

TLC3704 Commercial SOIC 14 pin devices Red Bull Refresh Approve Date 13-NOVEMBER -2023

Qualification Results

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

Type	#	Test Name	Condition	Duration	Qual Device: TLC3704IDR	QBS Reference: TLV1805QDBVRQ1	QBS Reference: OPA4991QDRQ1	QBS Reference: TLV1812QDRQ1
HAST	A2	Biased HAST	130C/85%RH	96 Hours	-	-	3/231/0	1/77/0
UHA	A3	Autoclave	121C/15psig	96 Hours	-	-	3/231/0	-
UHA	A3	Unbiased HAST	130C/85%RH	96 Hours	-	-	-	1/77/0
TC	A4	Temperature Cycle	-65C/150C	500 Cycles	-	-	1/77/0	1/77/0
HTSL	A6	High Temperature Storage Life	175C	500 Hours	-	-	1/45/0	1/77/0
HTOL	B1	Life Test	125C	1000 Hours	-	3/231/0	-	-
HTOL	B1	Life Test	150C	300 Hours	-	-	-	1/77/0
HTOL	B1	Life Test	150C	408 Hours	-	-	1/77/0	-
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	-	1/6/0	-
CHAR	E5	Electrical Characterization	Per Datasheet Parameters	-	1/30/0	-	-	-

- QBS: Qual By Similarity

- Qual Device TLC3704IDR 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-CHG-2310-109

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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