



12500 TI Boulevard, MS 8640, Dallas, Texas 75243

PCN#20240723001.1

**Qualification of RFAB & CFAB using qualified Process Technologies, Die Revision, and additional Assembly site (MLA) options for select devices
Change Notification / Sample Request**

Date: July 24, 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

20240723001.1
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
SN65LBC184DR	NULL
SN65LBC184DRG4	NULL

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

PCN Number:	20240723001.1	PCN Date:	July 24, 2024																					
Title:	Qualification of RFAB & CFAB using qualified Process Technologies, Die Revision, and additional Assembly site (MLA) options for select devices																							
Customer Contact:	Change Management Team	Dept:	Quality Services																					
Proposed 1st Ship Date:	October 22, 2024	Sample requests accepted until:	August 23, 2024*																					
*Sample requests received after August 23, 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 type="checkbox"/> Assembly Process	<input checked="" type="checkbox"/> Data Sheet	<input type="checkbox"/> Wafer Bump Process																						
<input 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 & CFAB fabrication facilities as additional Wafer Fab options in addition to MLA as an Assembly site option 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>Fab Site</th> <th>Process</th> <th>Wafer Diameter</th> <th>Fab Site</th> <th>Process</th> <th>Wafer Diameter</th> </tr> </thead> <tbody> <tr> <td rowspan="2">SFAB</td> <td rowspan="2">LBC2</td> <td rowspan="2">150 mm</td> <td>RFAB</td> <td>LBC9</td> <td>300 mm</td> </tr> <tr> <td>CFAB</td> <td>ULC2.1</td> <td>200 mm</td> </tr> </tbody> </table>			Current Fab Site			Additional Fab Site			Fab Site	Process	Wafer Diameter	Fab Site	Process	Wafer Diameter	SFAB	LBC2	150 mm	RFAB	LBC9	300 mm	CFAB	ULC2.1	200 mm	
Current Fab Site			Additional Fab Site																					
Fab Site	Process	Wafer Diameter	Fab Site	Process	Wafer Diameter																			
SFAB	LBC2	150 mm	RFAB	LBC9	300 mm																			
			CFAB	ULC2.1	200 mm																			
The die was also changed as a result of the process change.																								
The current device is implemented with a monolithic die. The new device is implemented as a MCM (Multi Chip Module).																								
BOM differences are as follows:																								
<table border="1"> <thead> <tr> <th>What</th> <th>TI Mexico</th> <th>TI Malaysia</th> </tr> </thead> <tbody> <tr> <td># of Die</td> <td>1 die</td> <td>2 die</td> </tr> </tbody> </table>				What	TI Mexico	TI Malaysia	# of Die	1 die	2 die															
What	TI Mexico	TI Malaysia																						
# of Die	1 die	2 die																						
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
SH-BIP-1	SHE	USA	Sherman
RFAB	RFB	USA	Richardson
CFAB	CU3	CHN	CHENGDU

Die Rev:

Current

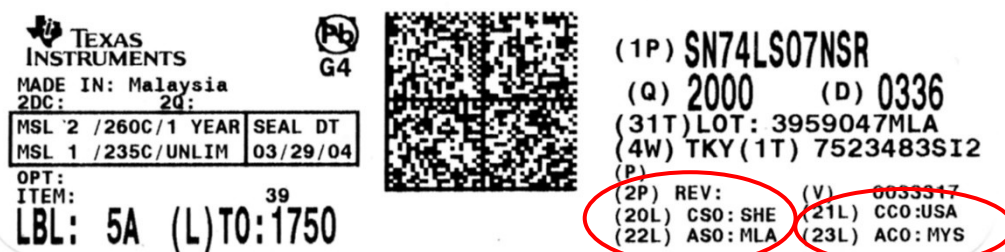
New

Die Rev [2P]	Die Rev [2P]
A	A (both die)

Assembly Site Information:

Assembly Site	Assembly Site Origin (22L)	Assembly Country Code (23L)	Assembly City
TI Mexico	MEX	MEX	Aguascalientes
MLA	MLA	MYS	Kuala Lumpur

Sample product shipping label (not actual product label):



Product Affected:

SN65LBC184DR SN65LBC184DRG4

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

Qualification Report

Approve Date 27-JUNE -2024

Qualification Results

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

Type	#	Test Name	Condition	Duration	Qual Device: SN65LBC184DR	Qual Device: SN65LBC184DR	QBS Reference: TLC6C5816QPWPRQ1	QBS Reference: AM26C32QDR	QBS Reference: SN65HVDA195QDRQ1
HAST	A2	Biased HAST	130C/85%RH	96 Hours	-	-	-	-	3/231/0
UHA	A3	Autoclave	121C/15psig	96 Hours	-	-	3/231/0	1/77/0	3/231/0
UHA	A3	Autoclave	130C/85%RH	96 Hours	-	-	-	1/77/0	3/231/0
UHA	A3	Unbiased HAST	130C/85%RH	96 Hours	3/231/0	-	-	-	-
TC	A4	Temperature Cycle	-65C/150C	500 Cycles	3/231/0	-	3/231/0	-	3/231/0
HTSL	A6	High Temperature Storage Life	150C	1000 Hours	-	-	3/135/0	1/45/0	-
HTSL	A6	High Temperature Storage Life	175C	500 Hours	-	-	-	-	1/45/0
HTOL	B1	Life Test	125C	1000 Hours	-	-	3/231/0	1/77/0	3/231/0
ELFR	B2	Early Life Failure Rate	125C	48 Hours	-	-	3/2400/0	-	3/2400/0

Type	#	Test Name	Condition	Duration	Qual Device: SN65LBC184DR	Qual Device: SN65LBC184DR	QBS Reference: TLC6C5816QPWPRQ1	QBS Reference: AM26C32QDR	QBS Reference: SN65HVDA195QDRQ1
SD	C3	PB Solderability	Precondition w.155C Dry Bake (4 hrs +/- 15 minutes)	-	-	-	1/15/0	-	1/15/0
SD	C3	PB-Free Solderability	Precondition w.155C Dry Bake (4 hrs +/- 15 minutes)	-	-	-	1/15/0	-	1/15/0
PD	C4	Physical Dimensions	Cpk>1.67	-	-	-	3/30/0	1/10/0	3/30/0
ESD	E2	ESD CDM	-	1500 Volts	-	-	-	1/3/0	1/3/0
ESD	E2	ESD CDM	-	250 Volts	1/3/0	-	-	-	-
ESD	E2	ESD CDM	-	500 Volts	-	-	-	1/3/0	-
ESD	E2	ESD HBM	-	1000 Volts	-	1/3/0	-	-	-
ESD	E2	ESD HBM	-	11000 Volts	-	-	-	-	1/3/0
ESD	E2	ESD HBM	-	12000 Volts	-	-	-	-	1/3/0
ESD	E2	ESD HBM	-	16000 Volts	-	1/3/0	-	-	-
ESD	E2	ESD HBM	-	2000 Volts	-	-	-	1/3/0	1/3/0
ESD	E2	ESD HBM	-	4000 Volts	-	-	-	1/3/0	1/3/0
LU	E4	Latch-Up	Per JESD78	-	-	1/3/0	1/6/0	1/6/0	1/6/0
CHAR	E5	Electrical Characterization	Per Datasheet Parameters	-	1/30/0	-	-	-	-

Type	#	Test Name	Condition	Duration	Qual Device: SN65LBC184DR	Qual Device: SN65LBC184DR	QBS Reference: TLC6C5816QPWPRQ1	QBS Reference: AM26C32QDR	QBS Reference: SN65HVDA195QDRQ1
CHAR	E5	Electrical Distributions	Cpk>1.67 Room, hot, and cold	-	-	-	3/90/0	3/90/0	3/90/0
FTY	E6	Final Test Yield	-	-	-	-	-	1/1/0	-

- QBS: Qual By Similarity
- Qual Device SN65LBC184DR is qualified at MSL1 260C
- Qual Device SN65LBC184DR 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-2304-004

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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