



12500 TI Boulevard, MS 8640, Dallas, Texas 75243

PCN# 20240723007.2

**Wafer Diameter Change for Select Devices in the LBC3S Process at DFAB
Change Notification / Sample Request**

Date: July 23, 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

20240723007.2
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
SN65HVD235QDRQ1	NULL

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

PCN Number:	20240723007.2		PCN Date:	July 23, 2024																			
Title:	Wafer Diameter Change for Select Devices in the LBC3S Process at DFAB																						
Customer Contact:	Change Management Team		Dept:	Quality Services																			
Proposed 1st Ship Date:	January 19, 2025		Sample requests accepted until:	August 22, 2024*																			
*Sample requests received after August 22, 2024 will not be supported.																							
Change Type:																							
<input type="checkbox"/> Assembly Site	<input type="checkbox"/> Design	<input type="checkbox"/> Wafer Bump Material																					
<input type="checkbox"/> Assembly Process	<input type="checkbox"/> Data Sheet	<input type="checkbox"/> Wafer Bump Process																					
<input type="checkbox"/> Assembly Materials	<input type="checkbox"/> Part number change	<input type="checkbox"/> Wafer Fab Site																					
<input type="checkbox"/> Mechanical Specification	<input type="checkbox"/> Test Site	<input checked="" type="checkbox"/> Wafer Fab Material																					
<input type="checkbox"/> Packing/Shipping/Labeling	<input type="checkbox"/> Test Process	<input type="checkbox"/> Wafer Fab Process																					
PCN Details																							
Description of Change:																							
This change notification is to announce a wafer diameter change only for select devices in the LBC3S process at DFAB. This is not a fab site change.																							
<table border="1"> <thead> <tr> <th colspan="3">Current</th> <th colspan="3">New</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>DFAB</td> <td>LBC3S</td> <td>150 mm</td> <td>DFAB</td> <td>LBC3S</td> <td>200 mm</td> </tr> </tbody> </table>						Current			New			Fab Site	Process	Wafer Diameter	Fab Site	Process	Wafer Diameter	DFAB	LBC3S	150 mm	DFAB	LBC3S	200 mm
Current			New																				
Fab Site	Process	Wafer Diameter	Fab Site	Process	Wafer Diameter																		
DFAB	LBC3S	150 mm	DFAB	LBC3S	200 mm																		
The die was also changed as a result of the process change.																							
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 and 200-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																							
Changes to product identification resulting from this PCN:																							
Note: This is not a Fab site change. The 6" line and 8" line are in the same location.																							
Fab Site Information:																							
Chip Site	Chip Site Origin Code (20L)	Chip Site Country Code (21L)	Chip Site City																				
DL-LIN	DLN	USA	Dallas																				
Sample product shipping label (not actual product label):																							
Product Affected:																							
SN65HVD235QDRQ1																							

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

TI Information
Selective Disclosure

Automotive Qualification Summary
(As per AEC-Q100 Rev. J and JEDEC Guidelines)

SN65HVD235QDRQ1 Transition from 150mm to 200mm
Approve Date 07-MARCH -2024

Product Attributes

Attributes	Qual Device:	QBS Process Reference:
	SN65HVD235QDRQ1	SN65HVD233QDRQ1
Automotive Grade Level	-	Grade 1
Operating Temp Range (C)	-40 to 125	-40 to 125
Product Function	-	ASIC
Wafer Fab Supplier	DL-LIN	DL-LIN
Assembly Site	FMX	FMX
Package Group	SOIC	SOIC
Package Designator	D	D
Pin Count	8	8

- QBS: Qual By Similarity
- Qual Device SN65HVD235QDRQ1 is qualified at MSL1 260C

Qualification Results

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

Type	#	Test Spec	Min Lot Qty	SS / Lot	Test Name	Condition	Duration	Qual Device:	QBS Process Reference:
SN65HVD235QDRQ1									SN65HVD233QDRQ1
Test Group A - Accelerated Environment Stress Tests									
Test Group B - Accelerated Lifetime Simulation Tests									
Test Group C - Package Assembly Integrity Tests									
Test Group D - Die Fabrication Reliability Tests									
EM	D1	JESD61	-	-	Electromigration	-	-	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements
TDDb	D2	JESD35	-	-	Time Dependent Dielectric Breakdown	-	-	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements
HCI	D3	JESD60 & 28	-	-	Hot Carrier Injection	-	-	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements
BTI	D4	-	-	-	Bias Temperature Instability	-	-	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements
SM	D5	-	-	-	Stress Migration	-	-	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements
Test Group E - Electrical Verification Tests									
ESD	E2	AEC Q100-002	1	3	ESD HBM	-	12000 Volts	-	1/3/0
ESD	E2	AEC Q100-002	1	3	ESD HBM	-	16000 Volts	-	1/3/0
ESD	E2	AEC Q100-002	1	3	ESD HBM	-	3000 Volts	-	1/3/0
ESD	E3	AEC Q100-011	1	3	ESD CDM	-	1000 Volts	-	1/3/0

Type	#	Test Spec	Min Lot Qty	SS / Lot	Test Name	Condition	Duration	Qual Device: SN65HVD235QDRQ1	QBS Process Reference: SN65HVD233QDRQ1
LU	E4	AEC Q100-004	1	6	Latch-Up	Per AEC Q100-004	-	-	1/6/0
ED	E5	AEC Q100-009	3	30	Electrical Distributions	Cpk>1.67 Room, hot, and cold	-	-	3/90/0
Additional Tests									

- 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

Ambient Operating Temperature by Automotive Grade Level:

- Grade 0 (or E): -40C to +150C
- Grade 1 (or Q): -40C to +125C
- Grade 2 (or T): -40C to +105C
- Grade 3 (or I): -40C to +85C

E1 (TEST): Electrical test temperatures of Qual samples (High temperature according to Grade level):

- Room/Hot/Cold : HTOL, ED
- Room/Hot : THB / HAST, TC / PTC, HTSL, ELFR, ESD & LU
- Room : AC/uHAST

Quality and Environmental data is available at TI's external Web site: <http://www.ti.com/>

TI Qualification ID: R-CHG-2402-102

ZVEI ID: SEM-PW-02

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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