

PCN Number: 20180130000-001 **PCN Date:** Jan 31, 2018

Title: Wafer Diameter Change for Select Devices in the LBC3S Process at DL-LIN

Customer Contact: [PCN Manager](#) **Dept:** Quality Services

Proposed 1st Ship Date: Jul 31, 2018 **Estimated Sample Availability:** Date provided at sample request.

Change Type:		
<input type="checkbox"/> Assembly Site	<input type="checkbox"/> Assembly Process	<input type="checkbox"/> Assembly Materials
<input type="checkbox"/> Design	<input type="checkbox"/> Electrical Specification	<input type="checkbox"/> Mechanical Specification
<input type="checkbox"/> Test Site	<input type="checkbox"/> Packing/Shipping/Labeling	<input type="checkbox"/> Test Process
<input type="checkbox"/> Wafer Bump Site	<input type="checkbox"/> Wafer Bump Material	<input type="checkbox"/> Wafer Bump Process
<input type="checkbox"/> Wafer Fab Site	<input type="checkbox"/> Wafer Fab Materials	<input checked="" type="checkbox"/> Wafer Fab Process
<input type="checkbox"/>	<input type="checkbox"/> Part number change	

PCN Details

Description of Change:

This change notification is to announce a wafer diameter change only for select devices in the LBC3S process at DL-LIN. This is not a fab site change.

Current	New
Site/Process/Wafer Diameter	Site/Process/ Wafer Diameter
DL-LIN/LBC3S Process/150mm	DL-LIN/LBC3S Process/ 200mm

DL-LIN was qualified to process 200mm wafers in Feb 2000. See attached qualification reports.

Reason for Change:

Continuity of supply.

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.

Chip Site	Chip site code (20L)	Chip country code (21L)	Chip Site City
DL-LIN	DLN	USA	Dallas

Sample Product Shipping Label (not actual product label)



MADE IN: Malaysia
2DC: 20:

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) 7523483S12
 (P)
 (2P) REV: (V) 0033317
 (20L) CS0: SHE (21L) CCO:USA
 (22L) AS0: MLA (23L) ACO: MYS

Product Affected:

TLC2252AQDREP	TLV2252AQDREP	UCC27424MDGNREP	V62/07624-01XE
TLC2254AQDREP	TLV2254AQDREP		

Qualification Report

Conversion of select devices from 150mm wafers to 200mm wafers in DFAB
Approve Date 05-Nov-2015

Product Attributes

Attributes	Qual Device: SN65HVD1176D	Qual Device: SN65HVD22P	Qual Device: SN65HVD234D	Qual Device: TLC085AIPWP	Qual Device: TLV2252ID	Qual Device: TLV2254IN	Qual Device: TLV2262ID	Qual Device: TLV2372IDGK	Qual Device: TLV2463IDGS	Qual Device: UCC27424D	QBS Process Reference: SN104605PN
Assembly Site	FMX	FMX	FMX	TAI	FMX	FMX	FMX	HNT	-	FMX	TAI
Package Family	SOIC	PDIP	SOIC	HTSSOP	SOIC	PDIP	SOIC	MSOP	MSOP	SOIC	LQFP
Flammability Rating	UL 94 V-0	UL 94 V-0	UL 94 V-0	UL 94 V-0	UL 94 V-0	UL 94 V-0	UL 94 V-0	UL 94 V-0	UL 94 V-0	UL 94 V-0	UL 94 V-0
Wafer Fab Supplier	DFAB	DFAB	DFAB	DFAB	DFAB	DFAB	DFAB	DFAB	DFAB	DFAB	DFAB
Wafer Process	LBC3S	LBC3S	LBC3S	LBC3S	LBC3S	LBC3S	LBC3S	LBC3S	LBC3S	LBC3S	LBC3S

- QBS: Qual By Similarity

- Qual Devices qualified at LEVEL1-260C: SN65HVD1176D, SN65HVD234D, TLV2372IDGK, TLV2262ID, TLV2252ID, UCC27424D, TLV2463IDGS,

- Qual Devices qualified at Not Classified: SN65HVD22P, TLV2254IN

- Qual Device TLC085AIPWP is qualified at LEVEL2-260C

Qualification Results

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

Type	Test Name / Condition	Duration	Qual Device: SN65HVD1176D	Qual Device: SN65HVD22P	Qual Device: SN65HVD234D	Qual Device: TLC085AIPWP	Qual Device: TLV2252ID	Qual Device: TLV2254IN	Qual Device: TLV2262ID	Qual Device: TLV2372IDGK	Qual Device: TLV2463IDGS	Qual Device: UCC27424D	QBS Process Reference: SN104605PN
ED	Electrical Characterization	Per Datasheet Parameters	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	-
HAST	Biased HAST, 130C/85%RH	96 Hours	-	-	-	-	-	-	-	-	-	-	3/231/0
HBM	ESD - HBM	2500 V	-	-	-	-	1/3/0	1/3/0	1/3/0	-	-	-	-
HBM	ESD - HBM	3000 V	-	-	-	1/3/0	-	-	-	1/3/0	-	-	-
HBM	ESD - HBM	4000 V	1/3/0	-	1/3/0	-	-	-	-	1/3/0	1/3/0	1/3/0	-
HBM	ESD - HBM	5000 V	-	1/3/0	-	-	-	-	-	-	-	-	-
HBM	ESD - HBM (Bus & Ground pins)	10000V	1/3/0	-	-	-	-	-	-	-	-	-	-
HBM	ESD - HBM (Pin 7, 8 and gnd)	16000 V	-	1/3/0	1/3/0	-	-	-	-	-	-	-	-
CDM	ESD - CDM	1500 V	1/3/0	1/3/0	1/3/0	1/3/0	1/3/0	1/3/0	1/3/0	1/3/0	1/3/0	1/3/0	-
HTOL	Life Test 155C	1000 Hours	-	-	-	-	-	-	-	-	-	-	3/231/0
LU	Latch-up	(per JESD78)	1/6/0	1/6/0	1/6/0	1/6/0	1/6/0	1/6/0	1/6/0	1/6/0	1/6/0	1/6/0	-
TS	Thermal Shock -65/150C	500 Cycles	-	-	-	-	-	-	-	-	-	-	3/231/0
WBP	Bond Pull	Wires	1/76/0	1/76/0	1/76/0	1/76/0	1/76/0	1/76/0	1/76/0	1/76/0	1/76/0	1/76/0	3/228/0
WBS	Ball Bond Shear	Wires	1/76/0	1/76/0	1/76/0	1/76/0	1/76/0	1/76/0	1/76/0	1/76/0	1/76/0	1/76/0	-

- 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

Qualification Report For
TLC2264 on 200mm Wafers in DFAB
09/24/2007

The TLC2264 on 200mm Wafers in DFAB is fully qualified and meets the Texas Instruments quality and reliability standards for Analog & Mixed Signal Products per the testing described below.

Qualification Description

Qualified product in qualified wafer size
 Product Group: HPA/ PA. PA LINEAR
 Product Qualification Reference (QBS) : TLC2264
 Process Qualification Reference (QBS): DFAB LBC3S 200mm

Device Attributes

Product & Process Related		Package Related	
Qualification Device:	TLC2264CN	Wafer Fab Site:	DFAB
Die Name:	CLBDLBC2264ABC	Wafer Fab Process:	LBC3S
Die Revision:	--		

Reliability Test Results

Test Type	Conditions/Duration	Sample Size/Results
		Lot# 1
Electrical Characterization		Complete
Manufacturability Qualification (Wafer Fab)		Approved

Preconditioning Information: ** Preconditioning sequence: N/A

Qualification Data:
Qualification of the DFAB 200mm LBC3S Process
02/22/2000

This qualification has been specifically developed for the validation of this change. The qualification data validates that the proposed change meets the applicable released technical specifications.

Qualification Device Construction Details:

Die Name:	BLBD104605CGW	Assembly Site:	TAI
Die Size (mils)	130 x 244	Pins/Package:	80/PN
Wafer Fab Site:	DFAB	Mold Compound:	HIT MC606
Technology:	LinBiCMOS-3S	Die Mount:	HIT EN-4085S2K3
1st Metal:	TiW/AlSiCu.5%	Bond Wire:	1.0 mil Au, TS
2nd Metal:	TiW/AlSiCu.5%	L/F Material:	Copper
Passivation:	10KA CN	L/F Finish:	Palladium

Qualification: Plan **Test Results**

Reliability Test	Conditions	Sample Size (PASS/FAIL)		
		Lot 1	Lot 2	Lot 3
*Life Test	155C, 240 Hrs, 500 hrs	116/0	116/0	116/0
	155C, 240 Hrs, 1000 hrs	116/0	116/0	116/0
*Biased HAST	130C,85%RH; 96 Hrs	77/0	77/0	77/0
*Thermal Shock	-65/+150C, 1000 Cyc	77/0	77/0	77/0
ESD	100pF,1500 Ohms,3000 V	3/0	3/0	3/0
	100pF,1500 Ohms, 2500 V	3/0	3/0	3/0
	200pF,0 Ohms, 200 V	3/0	3/0	3/0
	CDM, 500 V	3/0	3/0	3/0
Electrical Characterization		50	50	50
Bond Strength		76/0	76/0	76/0
Die Shear		5/0	5/0	5/0
Manufacturability (Wafer Fab)	Per site specification	Passed		
Manufacturability (Assembly Site)	Per site specification	Passed		

*Preconditioning Required: JEDEC A113

For questions regarding this notice, e-mails can be sent to the regional contacts shown below, or you can contact your local Field Sales Representative.

Location	E-Mail
USA	PCNAmericasContact@list.ti.com
Europe	PCNEuropeContact@list.ti.com
Asia Pacific	PCNAsiaContact@list.ti.com
Japan	PCNJapanContact@list.ti.com