

<b>PCN Number:</b>	20220926003.1		<b>PCN Date:</b>	September 28, 2022	
<b>Title:</b>	Qualification of new Fab site (RFAB) using qualified Process Technology, Die Revision, additional Assembly site and BOM options for select devices				
<b>Customer Contact:</b>	<a href="#">PCN Manager</a>		<b>Dept:</b>	Quality Services	
<b>Proposed 1<sup>st</sup> Ship Date:</b>	Dec. 28, 2022		<b>Sample requests accepted until:</b>	Oct 28, 2022*	
<b>*Sample requests received after October 28, 2022 will not be supported.</b>					
<b>Change Type:</b>					
<input checked="" type="checkbox"/>	Assembly Site	<input type="checkbox"/>	Assembly Process	<input checked="" type="checkbox"/>	Assembly Materials
<input checked="" type="checkbox"/>	Design	<input type="checkbox"/>	Electrical Specification	<input type="checkbox"/>	Mechanical Specification
<input type="checkbox"/>	Test Site	<input checked="" 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 checked="" type="checkbox"/>	Wafer Fab Site	<input checked="" type="checkbox"/>	Wafer Fab Materials	<input checked="" type="checkbox"/>	Wafer Fab Process
	<input type="checkbox"/>		Part number change		
<b>PCN Details</b>					
<b>Description of Change:</b>					
Texas Instruments is pleased to announce the qualification of a new fab & process technology (RFAB, LBC9) and additional Assembly site (HFTF) for selected devices as listed below in the product affected section.					
<b>Current Fab Site</b>			<b>Additional Fab Site</b>		
<b>Current Fab Site</b>	<b>Process</b>	<b>Wafer Diameter</b>	<b>Additional Fab Site</b>	<b>Process</b>	<b>Wafer Diameter</b>
DL-LIN	LBC3S	150 mm	RFAB	LBC9	300 mm
The die was also changed as a result of the process change.					
Construction differences are noted below:					
	<b>LEN</b>	<b>TFME</b>	<b>HFTF</b>		
Wire type	1.0 mil Au	1.0 mil Au	0.8 mil Cu		
Mount Compound	SID#0003C10332	SID# A-03	SID#A-18		
Mold Compound	SID#0011G60007	SID#R-13	SID#R-27		
Pin 1 Marking	Pin 1 stripe	Pin 1 Dot	Pin 1 Dot		
Qual details are provided in the Qual Data Section.					
<b>Reason for Change:</b>					
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.					
<b>Anticipated impact on Form, Fit, Function, Quality or Reliability (positive / negative):</b>					
None					
<b>Impact on Environmental Ratings</b>					
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.					
<b>RoHS</b>	<b>REACH</b>	<b>Green Status</b>	<b>IEC 62474</b>		
<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
<b>RFAB</b>	<b>RFB</b>	<b>USA</b>	<b>Richardson</b>

**Die Rev:**

Current	New
Die Rev [2P]	<b>Die Rev [2P]</b>
A	<b>A</b>

**Assembly Site Information:**

Assembly Site	Assembly Site Origin (22L)	Assembly Country Code (23L)	Assembly City
Lingsen (LEN)	LIN	TWN	Taichung
Tongfu Microelectronics (TFME)	NFM	CHN	Chongchuan
<b>Hefei Tongfu Microelectronics (HFTF)</b>	<b>HFT</b>	<b>CHN</b>	<b>Hefei</b>

Sample product shipping label (not actual product label)

**Product Affected:**

TLV809I50DBVR	TLV809K33DBVR	TPS3809I50DBVR	TPS3809K33DBVR
TLV809I50DBVT	TLV809K33DBVT	TPS3809I50DBVT	TPS3809K33DBVT
TLV809J25DBVR	TLV809L30DBVR	TPS3809J25DBVR	TPS3809L30DBVR
TLV809J25DBVT	TLV809L30DBVT	TPS3809J25DBVT	TPS3809L30DBVT

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

## Qualification Report

**Approve Date 22-August-2022**

### Qualification Results

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

Type	#	Test Name	Condition	Duration	Qual Device: TLV809I50DBVR	QBS Product Reference: TPS3809I50QDBVRQ1	QBS Product Reference: TPS3840DBVRQ1	QBS Process Reference: TLC6C5816PWPRO1
HAST	A2	Biased HAST	130C/85%RH	96 Hours	-	3/231/0	3/231/0	3/231/0
UHAST	A3	Autoclave	121C/15psig	96 Hours	-	-	-	3/231/0
UHAST	A3	Unbiased HAST	130C/85%RH	96 Hours	-	3/231/0	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	-	3/231/0	3/231/0	1/45/0
HTOL	B1	Life Test	125C	1000 Hours	-	1/77/0	3/231/0	3/231/0
ELFR	B2	Early Life Failure Rate	150C	24 Hours	-	-	-	3/2400/0
ESD	E2	ESD CDM	-	1500 Volts	-	1/3/0	1/3/0	1/3/0
ESD	E2	ESD HBM	-	4000 Volts	-	1/3/0	1/3/0	1/3/0
LU	E4	Latch-Up	Per JESD78	-	-	1/6/0	1/6/0	1/6/0
CHAR	E5	Electrical Characterization	Per Datasheet Parameters	-	-	-	-	-
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	-	-
MQ		Manufacturability (Assembly)	-	-	-	3/3/0	-	-

- QBS: Qual By Similarity
- Qual Device TLV809I50DBVR is qualified at MSL1 260C. Reliability tests performed on TPS3809I50QDBVRQ1
- 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

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

Location	E-Mail
WW Change Management Team	<a href="mailto:PCN_ww_admin_team@list.ti.com">PCN_ww_admin_team@list.ti.com</a>

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