



12500 TI Boulevard, MS 8640, Dallas, Texas 75243

**PCN# 20230206000.1**

**Qualification of additional Fab site (RFAB) and Assembly site (CDAT) options for  
select LBC7 devices  
Change Notification / Sample Request**

**Date:** February 06, 2023

**To:** TOKYO ELECTRON DEVICE (DSTR) PCN

Dear Customer:

This is an announcement of a change to a device that is currently offered by Texas Instruments. The details of this change are on the following pages.

Texas Instruments 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 of the change. If samples or additional data are required, requests must be received within **30 days** of this notification.

The changes discussed within this PCN will not take effect any earlier than the proposed first ship date on Page 3 of this notification, unless customer agreement has been reached on an earlier implementation of the change.

This notice does not change the end-of-life status of any product. Should product affected be on a previously issued product withdrawal/discontinuance notice, this notification does not extend the life of that product or change the life time buy offering/discontinuance plan.

For questions regarding this notice or to provide acknowledgement of this PCN, you may contact your local Field Sales Representative or the PCN Team ([PCN\\_admin\\_team@list.ti.com](mailto:PCN_admin_team@list.ti.com)). For sample requests or sample related questions, contact your local Field Sales Representative.

PCN Team  
SC Business Services

**20230206000.1**  
**Attachment: 1**

**Products Affected:**

The devices listed on this page are a subset of the complete list of affected devices. According to our records, these are the devices that you have purchased within the past twenty-four (24) months. The corresponding customer part number is also listed, if available.

<b>DEVICE</b>	<b>CUSTOMER PART NUMBER</b>
TPS564201DDCR	null
TPS563210ADDFT	null
TPS62261DRVR	null
TPS82084SILT	null
TPS82085SILT	null
TPS548A20RVET	null
TPS563209DDCT	null
TPS62242DRVT	null
TPS62243DRVT	null
TPS62290DRVT	null
TPS62291DRVT	null
TPS53318DQPR	null
TPS53319DQPR	null
TPS543C20RVFT	null
TPS544C20RVFT	null
TPS546C23RVFR	null
TPS546C23RVFT	null
TPS562209DDCR	null
TPS563200DDCT	null
TPS563219ADDFR	null
TPS563219DDFT	null
TPS62240DRVR	null
TPS62290DRVR	null
TPS62590DRVR	null
TPS62590DRVT	null
TPS82084SILR	null
TPS543B20RVFR	null
TPS548B22RVFT	null
TPS549B22RVFR	null
TPS55340PWP	null
TPS55340PWPR	null
TPS563209DDCR	null
TPS563210ADDFR	null
TPS62260DRVT	null
TPS82085SILR	null
TPS562200DDCR	null
TPS53915RVET	null
TPS544B20RVFT	null
TPS562200DDCT	null
TPSM41625MOVR	null
TPS53319DQPT	null
TPS53515RVET	null
TPS563219ADDFT	null
TPS62240DRVT	null
TPSM846C24MOLR	null
TLC59116IPWR	null
TPS563200DDCR	null
TPS62262DRVT	null
TPS53513RVER	null
TPS55340RTER	null
TPSM846C23MOLR	null
TPS62562DRVR	null
TPS62240DDCT	null
TPS62561DDCR	null
TPS544B20RVFR	null
TPS62250DRVR	null
TPS62260DRVR	null
TPS62260DDCR	null
TPS62260DDCT	null
TPS564208DDCR	null
TPS564201DDCT	null
TPSM41615MOVR	null

TPS563210DDFR  
TPS62240DDCR  
TPS548A20RVER

null  
null  
null

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

<b>PCN Number:</b>	20230206000.1		<b>PCN Date:</b>	February 06, 2023	
<b>Title:</b>	Qualification of additional Fab site (RFAB) and Assembly site (CDAT) options for select LBC7 devices				
<b>Customer Contact:</b>	<a href="#">PCN Manager</a>		<b>Dept:</b>	Quality Services	
<b>Proposed 1<sup>st</sup> Ship Date:</b>	May 6, 2023		<b>Sample requests accepted until:</b>	Mar 6, 2023*	
<b>*Sample requests received after March 6, 2023 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 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 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 an additional fab (RFAB) and assembly (CDAT) site 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>
MIHO	LBC7	200 mm	RFAB	LBC7	300 mm
For the devices in the group 2, construction differences are as follows:					
		<b>UTL1 &amp; UTL3</b>	<b>CDAT</b>		
Mold Compound		SID#CZ0141	4222198		
Mount Compound		SID#PZ0031	4207123		
Bond wire composition, diameter		Au, 1.3 mil	Cu, 0.8 mil		
Qual details are provided in the Qual Data Section.					
<b>Reason for Change:</b>					
Continuity of Supply					
<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>	
<input checked="" type="checkbox"/> No Change		<input checked="" type="checkbox"/> No Change		<input checked="" type="checkbox"/> No Change	
				<b>IEC 62474</b>	
				<input checked="" type="checkbox"/> No Change	

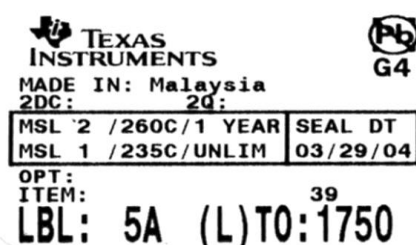
**Changes to product identification resulting from this PCN:****Fab Site Information:**

Chip Site	Chip Site Origin Code (20L)	Chip Site Country Code (21L)	Chip Site City
MIHO8	MH8	JPN	Ibaraki
<b>RFAB</b>	<b>RFB</b>	<b>USA</b>	<b>Richardson</b>

**Assembly Site Information:**

Assembly Site	Assembly Site Origin (22L)	Assembly Country Code (23L)	Assembly City
UTL1	NSE	THA	Bangkok
UTL3	UT3	THA	Bangpakong
<b>CDAT</b>	<b>CDA</b>	<b>CHN</b>	<b>Chengdu</b>

Sample product shipping label (not actual product label)



(1P) SN74LS07NSR  
(Q) 2000 (D) 0336  
(31T) LOT: 3959047MLA  
(4W) TKY (1T) 7523483SI2  
(P)  
(2P) REV: (V) 0053817  
(20L) CS0: SHE (21L) CCO: USA  
(22L) AS0: MLA (23L) ACO: MYS

**Product Affected:****Group 1 Devices Adding RFAB as an additional Wafer Fab site:**

SN1102023DBZR	SN2101029RVER	TPS544C20RVFT	TPS563200DDCR
SN1102023LP	TLC59116IPWR	TPS544C20ZRVFR	TPS563200DDCT
SN1102023LPB	TLC59116IRHBR	TPS544C20ZRVFT	TPS563209DDCR
SN1401038RTER	TPS53318DQPR	TPS546C20ARVFR	TPS563209DDCT
SN1401043RVER	TPS53318DQPT	TPS546C20ARVFT	TPS563210ADDFR
SN1402065RVER	TPS53319DQPR	TPS546C23RVFR	TPS563210ADDFT
SN1402065RVET	TPS53319DQPT	TPS546C23RVFT	TPS563210DDFR
SN1501019ADDCR	TPS53513RVER	TPS546C23ZRVFR	TPS563210DDFT
SN1501019DDCR	TPS53513RVER-P	TPS546C23ZRVFT	TPS563219ADDFR
SN1501019DDCT	TPS53513RVET	TPS548A20RVER	TPS563219ADDFT
SN1501020DDCR	TPS53515RVER	TPS548A20RVER-P	TPS563219DDFR
SN1501020DDCT	TPS53515RVET	TPS548A20RVET	TPS563219DDFT
SN1504025DDCR	TPS53913RVER	TPS548B22RVFR	TPS564201DDCR
SN1504025DDCT	TPS53913RVET	TPS548B22RVFT	TPS564201DDCT
SN1504026DDCR	TPS53915RVER	TPS549A20RVER	TPS564208DDCR
SN1504026DDCT	TPS53915RVET	TPS549A20RVET	TPS564208DDCT
SN1602018RVFR	TPS543B20RVFR	TPS549B22RVFR	TPS82084SILR
SN1602018RVFT	TPS543B20RVFT	TPS549B22RVFT	TPS82084SILT
SN1607018DQPR	TPS543C20ARVFR	TPS55340PWP	TPS82085SILR
SN1607021DQPR	TPS543C20RVFR	TPS55340PWPR	TPS82085SILT
SN1611045DDCR	TPS543C20RVFT	TPS55340RTER	TPSM41615MOVR
SN1804026DDFR	TPS544A20RVFR	TPS55340RTET	TPSM41625MOVR

SN1804026DDFT	TPS544A20RVFT	TPS562200DDCR	TPSM846C23MOLR
SN1807012RVFR	TPS544B20RVFR	TPS562200DDCT	TPSM846C24MOLR
SN1807013RVER	TPS544B20RVFT	TPS562209DDCR	
SN1812002RVFR	TPS544C20RVFR	TPS562209DDCT	

**Group 2 Devices Adding RFAB Fab site and CDAT as an additional Assembly site:**

TPS62240DRVR	TPS62250DRVT	TPS62262DRVR	TPS62291DRVT
TPS62240DRVT	TPS62260ADRVR	TPS62262DRVT	TPS62293DRVR
TPS62242DRVR	TPS62260ADRVT	TPS62263DRVR	TPS62562DRVR
TPS62242DRVT	TPS62260DRVR	TPS62263DRVT	TPS62562DRVT
TPS62243DRVR	TPS62260DRVT	TPS62290DRVR	TPS62590DRVR
TPS62243DRVT	TPS62261DRVR	TPS62290DRVT	TPS62590DRVT
TPS62250DRVR	TPS62261DRVT	TPS62291DRVR	

## Qualification Report

**Approve Date 6-October-2010**

### Qualification Results

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

Type	Test Name / Condition	Duration	Qual Device: TPS51217DSC
ED	Electrical Characterization	Per Datasheet Parameters	Pass
HAST	Biased HAST, 130C/85%RH	96 Hours	3/231/0
AC	Autoclave, 121C	96 Hours	3/231/0
HBM	ESD - HBM	2000 V	3/9/0
CDM	ESD - CDM	500 V	3/9/0
HTOL	Life Test, 135C	635 Hours	3/231/0
HTSL	High Temp. Storage Bake, 170C	420 Hours	3/231/0
LU	Latch-up	(per JESD78)	3/18/0
TC	Temperature Cycle, -65/150C	500 Cycles	3/18/0

- Qual Device TPS51217DSC is qualified at LEVEL2-260C

- 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/>

**Green/Pb-free Status:**

Qualified Pb-Free(SMT) and Green

**Automotive New Product Qualification Summary**  
**(As per AEC-Q100 and JEDEC Guidelines)**  
**Approved 15-Feb-2022**

**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: TPS62261TDRVRQ1	QBS Package Reference: Q25171QWDRCRQ1
<b>Test Group A – Accelerated Environment Stress Tests</b>								
PC	A1	JEDEC J-STD-020 JESD22-A113	3		MSL2/260C	-	3/693/0	3/693/0
HAST	A2	JEDEC JESD22-A110	3	77	Biased HAST, 130C/85%RH	96 hours	1/77/0 & QBS	3/231/0
AC	A3	JEDEC JESD22-A102	3	77	Autoclave 121C	96 hours	3/231/0	3/231/0
TC	A4	JEDEC JESD22-A104 and Appendix 3	3	77	Temperature Cycle, -65/150C	500 cycles	3/231/0	3/231/0
TC-WBP	A4	MIL-STD883 Method 2011	1	60	Bond Pull over Ball Post T/C 500 Cycles	Wires	QBS	1/30/0
PTC	A5	JEDEC JESD22-A105	1	45	Power Temperature Cycle	1000 Cycles	N/A	1/45/0
HTSL	A6	JEDEC JESD22-A103	1	45	High Temp Storage Bake 150C	1000 hours	QBS	3/231/0
<b>Test Group B – Accelerated Lifetime Simulation Tests</b>								
HTOL	B1	JEDEC JESD22-A108	3	77	Life Test, 125C	1000 hours	B1 Data carried over from original TPS62261TDRVRQ1 qualification	
ELFR	B2	AEC Q100-008	3	800	Early Life Failure Rate, 125C	48 hours	B2 Data carried over from original TPS62261TDRVRQ1 qualification	
EDR	B3	AEC Q100-005	3	77	NVM Endurance, Data Retention, and Operational Life	-	N/A	
<b>Test Group C – Package Assembly Integrity Tests</b>								
WBS	C1	AEC Q100-001	1	30	Wire Bond Shear (Cpk>1.67)	-	1/30/0	
WBS	C1	AEC Q100-001	1	30	Wire Bond Shear, Cpk >1.67	Wires	1/30/0	
SD	C3	JEDEC JESD22-B102	1	15	Surface Mount Solderability	Pb Free Solder	QBS to package family data	1/15/0
SD	C3	JEDEC JESD22-B102	1	15	Surface Mount Solderability	Pb Solder	QBS to package family data	1/15/0

Type	#	Test Spec	Min Lot Qty	SS/Lot	Test Name / Condition	Duration	Qual Device: TPS62261TDRVRQ1	QBS Package Reference: Q25171QWDRCRQ1
PD	C4	JEDEC JESD22-B100 and B108	3	10	Physical Dimensions	Cpk>1.67	QBS to package family data	3/30/0
<b>Test Group D – Die Fabrication Reliability Tests</b>								
EM	D1	JESD61	-	-	Electromigration	-	Completed Per Process Technology Requirements	-
TDDb	D2	JESD35	-	-	Time Dependent Dielectric Breakdown	-	Completed Per Process Technology Requirements	-
HCI	D3	JESD60 & 28	-	-	Hot Injection Carrier	-	Completed Per Process Technology Requirements	-
NBTI	D4	-	-	-	Negative Bias Temperature Instability	-	Completed Per Process Technology Requirements	-
SM	D5	-	-	-	Stress Migration	-	Completed Per Process Technology Requirements	-
<b>Test Group E – Electrical Verification Tests</b>								
HBM	E2	AEC Q100-002	1	3	ESD - HBM	2000 V	E2 Data carried over from original TPS62261TDRVRQ1 qualification	
CDM	E3	AEC Q100-011	1	3	ESD - CDM	500 V	E3 Data carried over from original TPS62261TDRVRQ1 qualification	
LU	E4	AEC Q100-004	1	6	Latch-up	Per AEC Q100-004	E4 Data carried over from original TPS62261TDRVRQ1 qualification	
ED	E5	AEC Q100-009	3	30	Electrical Distributions	Cpk>1.67	E5 Data carried over from original TPS62261TDRVRQ1 qualification	

- QBS: Qual By Similarity

**A1 (PC): Preconditioning:**

Performed for THB, Biased HAST, AC, uHAST, TC & PTC samples, as applicable.

**Ambient Operating Temperature by Automotive Grade Level:**

Grade 0 (or E): -40°C to +150°C

Grade 1 (or Q): -40°C to +125°C

Grade 2 (or T): -40°C to +105°C

Grade 3 (or I): -40°C to +85°C

**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

**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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