12500 TI Boulevard, MS 8640, Dallas, Texas 75243

PCN# 20201217001.1B
Qualification of additional Fab site (RFAB), Datasheet update and additional Assembly site/BOM options for select LBC7 devices
Change Notification / Sample Request

Date: March 18, 2021
To: TOKYO ELECTRON DEVICE (DSTR) PCN

Dear Customer:

PCN Revision B is a correction to the Description of Change section. Devices highlighted in bold and yellow highlight will have the addition of a PI Layer as part of this change.

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_ww_admin_team@list.ti.com). For sample requests or sample related questions, contact your local Field Sales Representative.

PCN Team
SC Business Services

20201217001.1B
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.

DEVICE	CUSTOMER PART NUMBER
UCC27524DR	null
UCC27524DGNR	null
UCC27524ADGNR	null
UCC27524DSDT	null
UCC27524ADR	null

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

PCN Number:	20201217001.1B	PCN Date:	Mar 18, 2021
Title:	Qualification of additional Fab site (RFAB), Datasheet update and additional Assembly site/BOM options for select LBC7 devices		
Customer Contact:	PCN Manager	Dept:	Quality Services
Proposed 1st Ship Date:	Apr 25, 2021	Estimated Sample Availability:	Date provided at sample request.

Change Type:					
☒	Assembly Site	☒	Assembly Process	☒	Assembly Materials
☐	Design	☒	Electrical Specification	☐	Mechanical Specification
☐	Test Site	☒	Packing/Shipping/Labeling	☐	Test Process
☐	Wafer Bump Site	☐	Wafer Bump Material	☐	Wafer Bump Process
☒	Wafer Fab Site	☒	Wafer Fab Materials	☒	Wafer Fab Process
		☐	Part number change		

PCN Details

Description of Change:

PCN Revision B is a correction to the Description of Change section as shown below. Devices highlighted in bold and yellow highlight will have the addition of a PI Layer as part of this change.

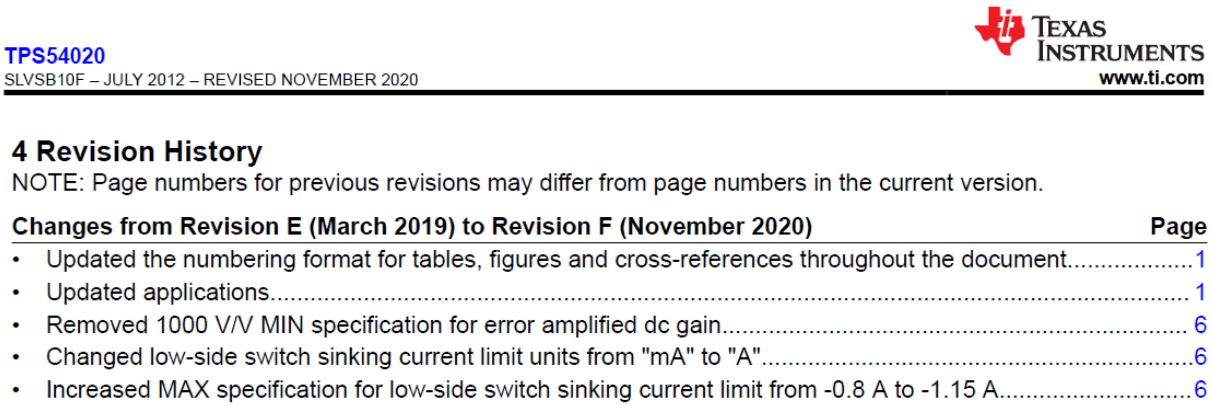
Texas Instruments is pleased to announce the qualification of an additional fab (RFAB) and assembly (CARZ, ASEN or Clark-AT) site/BOM options for selected devices as listed below in the product affected section.

Current Site			Additional Site		
Current Fab Site	Process	Wafer Diameter	Additional Fab Site	Process	Wafer Diameter
FFAB	LBC7	200mm	RFAB	LBC7	300mm

Current Top Layer Material	New Top Layer Material
BOAC (No PI)	**BOAC + PI**

In addition, the datasheet number will be changing for the devices listed in group 2:

Device Family	Change From:	Change To:
TPS54020	SLVSB10E	SLVSB10F



TPS54020
SLVSB10F – JULY 2012 – REVISED NOVEMBER 2020

TEXAS INSTRUMENTS
www.ti.com

4 Revision History

NOTE: Page numbers for previous revisions may differ from page numbers in the current version.

Changes from Revision E (March 2019) to Revision F (November 2020)	Page
• Updated the numbering format for tables, figures and cross-references throughout the document	1
• Updated applications	1
• Removed 1000 V/V MIN specification for error amplified dc gain	6
• Changed low-side switch sinking current limit units from "mA" to "A"	6
• Increased MAX specification for low-side switch sinking current limit from -0.8 A to -1.15 A	6

These changes may be reviewed at the datasheet links provided.
https://www.ti.com/product/TPS54020

There are no construction differences for Group 1 & Group 2 devices. Construction differences for Group 3 to Group 6 are as follows:

Group 3 BOM Compare (Adding RFAB + MLA adding CARZ A/T Site + BOM Change):

	TI Malaysia	CARZ
Mount Compound	4212088	435143
Mold Compound	4208625	444566
Bond Wire	Au, 1.15mil	Cu, 1.0mil

Group 4.1 BOM Compare (Adding RFAB Wafer Fab site + BOM change):

	Current	Proposed
Mount compound	4207768	4207123
Mold compound	4208625	4222198

Group 4.2 BOM Compare (Adding RFAB Wafer Fab site + BOM change):

	Current	Proposed
Mount compound	4207768	4207123
Bond Wire	1.3mil Cu	0.96mil Cu
Mold compound	4208625	4222198

Group 5 BOM Compare (Adding RFAB Wafer Fab site + MLA to Clark-AT + BOM change)

	TI Malaysia	TI Clark
Mold compound	4208625	4222198

Group 6 BOM Compare (Adding RFAB + UTAC to ASEN and CARZ + BOM Change):

	UTAC	ASEN	CARZ
Mold compound	CZ0140	1801512111	444566
Lead finish	NiPdAu	NiPdAu	NiPdAuAg

Qual details are provided in the Qual Data Section.

Reason for Change:

Continuity of Supply

Anticipated impact on Form, Fit, Function, Quality or Reliability (positive / negative):

None

Anticipated impact on Material Declaration

☐	No Impact to the Material Declaration	☒	Material Declarations or Product Content reports are driven from production data and will be available following the production release. Upon production release the revised reports can be obtained from the TI ECO website.

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
FR-BIP-1	TID	DEU	Freising
RFAB	**RFB**	**USA**	**Richardson**

Assembly Site Information:

Assembly Site	Assembly Site Origin (22L)	Assembly Country Code (23L)	Assembly City
UTAC	NSE	THA	Bangkok
TI Malaysia	MLA	MYS	Kuala Lumpur
TI CLARK	**QAB**	**PHL**	**Angeles City, Pampanga**
CARZ	**CSZ**	**CHN**	**Jiangsu**
ASEN	**ASN**	**CHN**	**Suzhou**

Sample product shipping label (not actual product label)

Product Affected:

Group 1 Device List: Adding RFAB Wafer Fab site			
LMZ31704RVQR	TPS621351RGXR	TPS62148RGXR	**UCC27524ADGNR**
LMZ31704RVQT	TPS621351RGXT	TPS62148RGXT	**UCC27524ADR**
LMZ31707RVQR	TPS62135RGXR	TPS84A20RVQR	**UCC27524D**
LMZ31707RVQT	TPS62135RGXT	TPS84A20RVQT	**UCC27524DGN**
LMZ31710RVQR	TPS621361RGXR	UCC27523D	**UCC27524DGNR**
LMZ31710RVQT	TPS621361RGXT	UCC27523DGN	**UCC27524DR**
TPS22910AYZVR	TPS62136RGXR	UCC27523DGNR	UCC27525D
TPS22910AYZVT	TPS62136RGXT	UCC27523DR	UCC27525DGN
TPS22912CYZVR	TPS62147RGXR	**UCC27524AD**	UCC27525DGNR
TPS22912CYZVT	TPS62147RGXT	**UCC27524ADGN**	UCC27525DR

Group 2 Device List: Adding RFAB Wafer Fab site + Datasheet change	
TPS54020RUWR	TPS54020RUWT

Group 3 Device List: Adding RFAB + MLA adding CARZ A/T Site + BOM Change	
TPS61260DRVT	TPS61260DRVR

Group 4.1 Device List: Adding RFAB Wafer Fab site + BOM change			
UCC27523DSDR	UCC27525DSDR	UCC27526DSDR	UCC27526DSDT
UCC27523DSDT	UCC27525DSDT		

Group 4.2 Device List: Adding RFAB Wafer Fab site + BOM change	
UCC27524DSDR	UCC27524DSDT

Group 5 Device List: Adding RFAB Wafer Fab site + MLA to Clark-AT + BOM change			
SN65HVD62RGT1R	SN65HVD62RGTT	SN65HVD63RGTR	SN65HVD63RGTT
SN65HVD62RGTR			

Group 6 Device List: Adding RFAB + UTAC to ASEN and CARZ + BOM Change			
TPS3897ADRYR	TPS3897ADRYT	TPS3897PDRYR	TPS3897PDRYT

Group 1 and 2 (Adding RFAB Wafer Fab site) Qual Memo:

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

Group 3 (Adding RFAB + MLA adding CARZ A/T Site + BOM Change) Qual Memo:

Qualification Report

Approve Date 4-December-2020

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

Type	Test Name / Condition	Duration	Qual Device: TPS61260DRVR	QBS Process Reference: TPS54620RGY	QBS Product Reference: TPS61260DRVR	QBS Package Reference: TPS3703C7500DSERQ1
HTOL	Life Test, 150C	300 Hours	-	3/231/0	1/77/0	-
HTOL	Life Test, 125C	1000 Hours	-	-	-	3/231/0
HTSL	High Temp Storage Bake 170C	420 Hours	-	3/231/0	-	3/231/0
HAST	Biased HAST, 130C/85%RH	96 Hours	-	3/228/0	-	3/231/0
AC	Autoclave, 121 C	96 Hours	-	3/231/0	-	-
UHAST	Unbiased HAST 130C/85%RH	96 Hours	-	-	-	3/231/0
TC	Temperature Cycle, -65/150C	500 Cycles	-	3/231/0	3/231/0	3/231/0
HBM	ESD - HBM	2000 V	-	-	1/3/0	1/3/0
CDM	ESD - CDM	500 V	-	-	1/3/0	1/3/0
LU	Latch-up	(per JESD78)	-	-	1/6/0	1/6/0
ED	Electrical Distributions	Per Datasheet Parameters	1/30/0	3/90/0	1/30/0	3/90/0
MQ	Assembly MQ	per mfg. Site specification	Pass	Pass	-	Pass
WBP	Bond Pull	Wires	1/80/0	3/240/0	-	3/240/0
WBS	Bond Shear	Wires	1/80/0	3/240/0	-	3/240/0

- QBS: Qual By Similarity
- Qual Device TPS61260DRVR is qualified at LEVEL1-260C
- 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

Group 4.1 and 4.2 (Adding RFAB Wafer Fab site + BOM change) Qual Memo:

Qualification Report
Approve Date 30-September-2020

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

Type	Test Name / Condition	Duration	Qual Device: UCC27523DSDR, UCC27524DSDR, UCC27525DSDR UCC27526DSDR	QBS Process Reference: TPS54620RGY	QBS Package Reference: TRS3122ERGER
HTOL	Life Test, 150C	300 Hours	-	3/231/0	-
HTSL	High Temp Storage Bake 170C	420 Hours	-	3/231/0	-
HTSL	High Temp Storage Bake 150C	1000 Hours			3/231/0
HAST	Biased HAST, 130C/85%RH	96 Hours	-	3/228/0	3/231/0
AC	Autoclave, 121 C	96 Hours	-	3/231/0	3/231/0
TC	Temperature Cycle, -65/150C	500 Cycles	-	3/231/0	3/231/0
HBM	ESD - HBM	2000 V	-	3/9/0	-
CDM	ESD - CDM	500 V	-	3/9/0	-
LU	Latch-up	(per JESD78)	-	3/18/0	-
MQ	Assembly MQ	per mfg. Site specification	Pass	Pass	Pass
WBP	Bond Pull	Wires	1/80/0	3/240/0	3/240/0
WBS	Bond Shear	Wires	1/80/0	3/240/0	3/240/0

- QBS: Qual By Similarity
- Qual Device UCC27523DSDR is qualified at LEVEL2-260C
- Qual Device UCC27524DSDR is qualified at LEVEL2-260C
- Qual Device UCC27525DSDR is qualified at LEVEL2-260C
- Qual Device UCC27526DSDR 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

Group 5 (Adding RFAB Wafer Fab site + MLA to Clark-AT + BOM change) Qual Memo:

Qualification Report

Approve Date 21-October-2020

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

Type	Test Name / Condition	Duration	Qual Device: SN65HVD62RGTR	QBS Process and Package Reference: TPS54620RGY	QBS Product Reference: SN65HVD62RGT
HTOL	Life Test, 150C	300 Hours	-	3/231/0	
HTSL	High Temp Storage Bake 170C	420 Hours	-	3/231/0	3/231/0
HAST	Biased HAST, 130C/85%RH	96 Hours	-	3/228/0	3/231/0
AC	Autoclave, 121 C	96 Hours	-	3/231/0	
UHAST	Unbiased HAST 130C/85%RH	96 Hours	-	-	3/231/0
TC	Temperature Cycle, -65/150C	500 Cycles	1/77/0	3/231/0	3/231/0
HBM	ESD - HBM	2500 V	1/3/0	-	1/3/0
CDM	ESD - CDM	1500 V	1/3/0	-	1/3/0
LU	Latch-up	(per JESD78)	1/6/0	-	1/6/0
WBP	Bond Pull	Wires	1/80/0	-	3/240/0
WBS	Bond Shear	Wires	1/80/0	-	3/240/0

- QBS: Qual By Similarity
- Qual Device SN65HVD62RGTR 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

Group 6 (Adding RFAB + UTAC to ASEN and CARZ + BOM Change) Qual Memo:

Qualification Report

Approve Date 27-October-2020

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

Type	Test Name / Condition	Duration	Qual Device: TPS3897ADRYR (ASEN)	Qual Device: TPS3897ADRYR (CARZ)	QBS Process TPS54620RGY	QBS Product Reference: TPS3895ADRYR	QBS Package Reference (ASEN) SN74LVC1GXX	QBS Package Reference (CARZ) TPS3703C750SERQ1
HTOL	Life Test, 150C	300 Hours	-	-	3/231/0	1/77/0	-	3/231/0
HTSL	High Temp Storage Bake 170C	420 Hours	-	-	3/231/0	1/77/0	3/135/0	-
HTSL	High Temp Storage Bake 140C	1000 Hours	-	-	-	-	-	3/231/0
HAST	Biased HAST, 130C/85%RH	96 Hours	-	-	3/228/0	2/154/0	3/231/0	3/231/0
AC	Autoclave, 121 C	96 Hours	-	-	3/231/0	-	3/231/0	-
UHAST	Unbiased HAST 130C/85%RH	96 Hours	-	-	-	-	-	3/231/0
TC	Temperature Cycle, -65/150C	500 Cycles	-	1/77/0	3/231/0	2/154/0	3/231/0	3/231/0
HBM	ESD - HBM	2000 V	1/3/0	-	-	1/3/0	-	-
CDM	ESD - CDM	750 V	1/3/0	-	-	1/3/0	-	-
LU	Latch-up	(per JESD78)	1/6/0	-	-	1/6/0	-	-
WBP	Bond Pull	Wires	1/80/0	1/80/0	-	-	3/90/0	1/30/0
WBS	Bond Shear	Wires	1/80/0	1/80/0	-	-	3/90/0	1/30/0

- QBS: Qual By Similarity
- Qual Device TPS3897ADRYR is qualified at LEVEL1-260C
- 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

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

Location	E-Mail
USA	PCNAmericasContact@list.ti.com
Europe	PCNEuropeContact@list.ti.com
Asia Pacific	PCNAsiaContact@list.ti.com
WW PCN Team	PCN_ww_admin_team@list.ti.com