



12500 TI Boulevard, MS 8640, Dallas, Texas 75243

PCN# 20120418001C

**Transfer of select devices in the LBC4 process node to CFAB Facility
Change Notification / Sample Request**

Date: 9/20/2016

To: TOKYO ELECTRON DEVICE (DSTR) PCN

Dear Customer:

PCN Revision C is to announce the retraction of select devices.

In January, 2012, TI announced plans to close two older 6-inch manufacturing facilities in Hiji, Japan and Houston, Texas. Notification for transfer of devices will be distributed in phases, by technology, over the coming weeks. This product change announcement is to support transfer of products in the LBC4 process node from these wafer fabs to alternate sites. The details of this change are on the following pages.

We request you acknowledge 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 you require samples or additional data to support your evaluation, please request within 30 days to ensure you can complete your evaluation and product transfer to the new site can be completed prior to the fab closure.

The changes discussed within this PCN will not take effect any earlier than **90** days from the date of this notification, unless customer agreement has been reached on an earlier implementation of the change. This notification period is per TI's standard process.

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, contact your local Field Sales Representative or the PCN Manager (PCN_ww_admin_team@list.ti.com).

Sincerely,

PCN Team
SC Business Services

20120418001C
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
TPS54610PWPR	null
TPS54610PWP	null

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

PCN Number:	PCN20120418001 C	PCN Date:	Sept. 20, 2016									
Title:	Transfer of select devices in the LBC4 process node to CFAB Facility											
Customer Contact:	PCN Manager	Dept:	Quality Services									
Proposed 1st Ship Date:	April 2013	Estimated Sample Availability:	Samples support is currently being coordinated.									
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										
PCN Details												
Description of Change:												
The purpose of PCN Revision C is to announce the retraction of select devices. Retracted devices are identified with a strikethrough and are highlighted in yellow in the Product Affected Section. These devices will remain at the current Fab Site. This change notification is to announce the transfer of select devices in the LBC4 process node from HFAB and HIJI to the CFAB (Chengdu, China) facility. These devices are listed in "Product Affected" section. <table border="1"> <tr> <td>Current</td> <td>New</td> </tr> <tr> <td>Sites, Process, Wafer Diameter</td> <td>Site, Process, Wafer Diameter</td> </tr> <tr> <td>HFAB/HIJI/HU-BUMP, LBC4, 150mm</td> <td>CFAB/Clark-Bump/DBUMP, LBC4, 200mm</td> </tr> </table>				Current	New	Sites, Process, Wafer Diameter	Site, Process, Wafer Diameter	HFAB/HIJI/HU-BUMP, LBC4, 150mm	CFAB/Clark-Bump/DBUMP, LBC4, 200mm			
Current	New											
Sites, Process, Wafer Diameter	Site, Process, Wafer Diameter											
HFAB/HIJI/HU-BUMP, LBC4, 150mm	CFAB/Clark-Bump/DBUMP, LBC4, 200mm											
Device Groups in Product Affected Section Group 1: Devices with Fab Transfer and Bump site change to Clark-Bump/DBUMP Group 2: Devices with Fab Transfer Only												
*Proposed 1 st Ship Date is based on current Qual Schedule.												
Bump sites were previously qualified. Reference quals are provided in the Qual Data Section.												
Reason for Change:												
Continuity of Supply. HIJI/HFAB site shutdown.												
Anticipated impact on Form, Fit, Function, Quality or Reliability (positive / negative):												
None												
Changes to product identification resulting from this PCN:												
Current <table border="1"> <tr> <td>Chip Site</td> <td>Chip site code (20L)</td> <td>Chip country code (21L)</td> </tr> <tr> <td>HU-BIP-4</td> <td>HOU</td> <td>USA</td> </tr> <tr> <td>HIJI</td> <td>HIJ</td> <td>JPN</td> </tr> </table>				Chip Site	Chip site code (20L)	Chip country code (21L)	HU-BIP-4	HOU	USA	HIJI	HIJ	JPN
Chip Site	Chip site code (20L)	Chip country code (21L)										
HU-BIP-4	HOU	USA										
HIJI	HIJ	JPN										
New <table border="1"> <tr> <td>Chip Site</td> <td>Chip site code (20L)</td> <td>Chip country code (21L)</td> </tr> <tr> <td>CFAB</td> <td>CU3</td> <td>CHN</td> </tr> </table>				Chip Site	Chip site code (20L)	Chip country code (21L)	CFAB	CU3	CHN			
Chip Site	Chip site code (20L)	Chip country code (21L)										
CFAB	CU3	CHN										

Sample product shipping label (not actual product label)

 TEXAS INSTRUMENTS MADE IN: Malaysia 2DC: 20: MSL '2 / 260C/1 YEAR MSL 1 / 235C/UNLIM SEAL DT 03/29/04 OPT: ITEM: LBL: 5A (L)T0:1750	 	(1P) SN74LS07NSR (Q) 2000 (D) 0336 (31T) LOT: 3959047MLA (4W) TKY (1T) 7523483SI2 (P) (2P) REV: (V) 0033317 (20L) CS0: SHE (21L) CCO:USA (22L) ASD: MLA (23L) AGO: MYS
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Product Affected:

Group 1: Devices with Fab Transfer and Bump site change			
HPA00182DDAR	TLC5947RHBR	TPS2062ADG4	TPS54610PWP
HPA00295DDAR	TLC5947RHBRG4	TPS2062ADR	TPS54610PWPG4
HPA00393DDAR	TLC5947RHBT	TPS2062ADRBR	TPS54610PWPR
HPA00534DBQR	TLC5947RHBTG4	TPS2062ADRBRG4	TPS54610PWPRG4
HPA00596BDR	TLC5951DAP	TPS2062ADRBT	TPS54611PWP
HPA00638DAPR	TLC5951DAPR	TPS2062ADRBTG4	TPS54611PWPG4
HPA00796PWPR	TLC5951RHAR	TPS2062ADRG4	TPS54611PWPR
HPA01116RHBR	TLC5951RHAT	TPS2062D	TPS54611PWPRG4
SN0809080DAPR	TLC5952DAP	TPS2062DG4	TPS54612PWP
SN1002018DAPR	TLC5952DAPR	TPS2062DGN	TPS54612PWPG4
SN105116PWP	TLC5970RHPR	TPS2062DGNG4	TPS54612PWPR
SN105116PWPG4	TLC5970RHPT	TPS2062DGNR	TPS54612PWPRG4
SN105116PWPR	TLC59711PWP	TPS2062DGNRG4	TPS54613PWP
SN105116PWPRG4	TLC59711PWPR	TPS2062DR	TPS54613PWPG4
SN1107015PWPR	TLC5971PWP	TPS2062DRG4	TPS54613PWPR
TLC59281DBQ	TLC5971PWPR	TPS2064DGN	TPS54613PWPRG4
TLC59281DBQR	TLC5971RGER	TPS2064DGNG4	TPS54614PWP
TLC59281RGER	TLC5971RGET	TPS2064DGNR	TPS54614PWPG4
TLC59281RGET	TPS2042BD	TPS2064DGNRG4	TPS54614PWPR
TLC59282DBQ	TPS2042BDG4	TPS2064DRBR	TPS54614PWPRG4
TLC59282DBQR	TPS2042BDGN	TPS2064DRBT	TPS54615PWP
TLC59282RGER	TPS2042BDGNG4	TPS2066AD	TPS54615PWPG4
TLC59282RGET	TPS2042BDGNR	TPS2066ADG4	TPS54615PWPR
TLC5928DBQ	TPS2042BDGNG4	TPS2066ADR	TPS54615PWPRG4
TLC5928DBQG4	TPS2042BDR	TPS2066ADRBR	TPS54616PWP
TLC5928DBQR	TPS2042BDRBR	TPS2066ADRBRG4	TPS54616PWPG4
TLC5928DBQRG4	TPS2042BDRBT	TPS2066ADRBT	TPS54616PWPR
TLC5928PW	TPS2042BDRG4	TPS2066ADRBTG4	TPS54616PWPRG4
TLC5928PWG4	TPS2052BD	TPS2066ADRG4	TPS54810PWP
TLC5928PWP	TPS2052BDG4	TPS2066D	TPS54810PWPG4
TLC5928PWPG4	TPS2052BDGN	TPS2066DG4	TPS54810PWPR
TLC5928PWPR	TPS2052BDGNG4	TPS2066DGN	TPS54810PWPRG4
TLC5928PWPRG4	TPS2052BDGNR	TPS2066DGNG4	TPS65563ARGTR
TLC5928PWR	TPS2052BDGNG4	TPS2066DGNR	TPS65563ARGTRG4
TLC5928PWRG4	TPS2052BDR	TPS2066DGNRG4	TPS65563ARGTT
TLC5928RGER	TPS2052BDRBR	TPS2066DR	TPS65563ARGTTG4
TLC5928RGET	TPS2052BDRBT	TPS2066DRG4	TPS65563RGTR
TLC5944PWP	TPS2052BDRG4	TPS5430DDA	TPS65563RGTRG4
TLC5944PWPG4	TPS2060DGN	TPS5430DDAG4	TPS65563RGTT
TLC5944PWPR	TPS2060DGNG4	TPS5430DDAR	TPS65563RGTTG4
TLC5944PWPRG4	TPS2060DGNR	TPS5430DDARG4	TPS65573DSSR

TLC5944RHBR	TPS2060DGNGR4	TPS5431DDA	TPS65573DSST
TLC5944RHBRG4	TPS2060DRBR	TPS5431DDAG4	
TLC5944RHBT	TPS2060DRBT	TPS5431DDAR	
TLC5944RHBTG4	TPS2062AD	TPS5431DDARG4	
Group 2: Devices with Fab Transfer Only			
SN0707071PWR	TPS53124PWR	TPS53125RGER	TPS53127RGET
SN0707071PWRG4	TPS53124PWRG4	TPS53125RGET	TPS53128PW
SN0911044PWR	TPS53124RGER	TPS53126PW	TPS53128PWR
TPS53114APW	TPS53124RGERG4	TPS53126PWR	TPS53128RGER
TPS53114APWR	TPS53124RGET	TPS53126RGER	TPS53128RGET
TPS53114PW	TPS53124RGETG4	TPS53126RGET	TPS53129PW
TPS53114PWR	TPS53125PW	TPS53127PW	TPS53129PWR
TPS53124PW	TPS53125PWR	TPS53127PWR	TPS53129RGER
TPS53124PWG4	TPS53125PWR-SH	TPS53127RGER	TPS53129RGET

Qualification Plan:					
This qualification has been developed for the validation of this change. The qualification data will validate that the proposed change meets the applicable released technical specifications.					
Qualification Schedule:	Start:	February 2013	End:	April 2013	
Qual Vehicle 1: TPS54610PWP (MSL Level 2-260C)					
Wafer Fab Site:	CFAB	Metallization:	TiW/AlSiCu.5%		
Wafer Fab Process:	LBC4	Wafer Diameter:	200 mm		
Qualification:	☒ Plan	☐ Test Results			
Reliability Test	Conditions	Sample Size/Fails			
		Lot#1	Lot#2	Lot#3	
Preconditioning	(level 2 @ 260C peak +5/-0C)	385/0	385/0	385/0	
HTOL High Temp Op Life	125C (1000 Hrs)	77/0	77/0	77/0	
Electrical Characterization		30/0	30/0	30/0	
**High Temp. Storage Bake	170C (420 Hrs)	77/0	77/0	77/0	
**Biased HAST	130C/85%RH (96 Hrs)	77/0	77/0	77/0	
**Autoclave	121C (96 Hrs)	77/0	77/0	77/0	
**T/C -65C/150C	-65C/+150C (500 Cycles)	77/0	77/0	77/0	
ESD CDM	500V	3/0	3/0	3/0	
ESD HBM	2000V	3/0	3/0	3/0	
Wafer Level Reliability	Approved by TDQRE	1/0	1/0	1/0	
Latch-Up	1.5xVcc\25C\250mA	6/0	6/0	6/0	
Manufacturability (Assembly)	(per mfg. Site specification)	1/0	1/0	1/0	
Manufacturability (Wafer Fab)	(per mfg. Site specification)	1/0	1/0	1/0	
Moisture Level Sensitivity	Level 2 @ 260C +5/-0C	12/0	-	-	
**Preconditioning: Level 2-260C					

Reference Quals

DBUMP Facility Qualification for the copper processing on the Cu/BOAC/COA

Qualification Data: (Approved: 10/31/2003)

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

Qual Vehicle: SH6950DAA0PFP (MSL Level 1-235C)

Wafer Fab Site:	DFAB	Metallization:	TiW/AlSiCu.5%
Wafer Fab Process:	LBC4	Wafer Diameter:	200mm
		Passivation	4KAOX/8KACN

Qualification: ☐ Plan ☒ Test Results

Reliability Test	Conditions	Sample Size/Fails		
		Lot#1	Lot#2	Lot#3
**Life Test	125C (1000 hrs)	77/0	77/0	77/0
**Autoclave	121C, 15 PSIG (240 hrs)	77/0	77/0	77/0
**Temp Cycle	-65/+150C (500 Cycles)	77/0	77/0	77/0
**Thermal Shock	-65/+150C (500 Cycles)	77/0	77/0	77/0
Manufacturability (Assembly)	(per mfg. Site specification)	Approved	-	-
**Preconditioning: Level 3-260C				

Clark BOAC facility Qualification for 10um thick BOAC

Qualification Data: (Approved: 10/26/2010)

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

Qual Vehicle 1: SH6966ACC0RGC (MSL Level 3-260C)

Wafer Fab Site:	MIHO8	Metallization:	AlCu
Wafer Fab Process:	LBC7	Wafer Diameter:	200mm
Bump Site:	Clark		

Qualification: ☐ Plan ☒ Test Results

Reliability Test	Conditions	Sample Size/Fails		
		Lot#1	Lot#2	Lot#3
**Autoclave	121C (96 hrs)	77/0	77/0	77/0
**Biased HAST	130C/85%RH (96 hrs)	40/0	77/0	40/0
**High Temp. Storage Bake	170C (420 Hrs)	77/0	77/0	77/0
**Temp Cycle	-65/+150C (500 Cycles)	82/0	82/0	81/0
**Thermal Shock	-65/+150C (500 Cycles)	77/0	77/0	77/0
Backgrind Characterization	-	Pass	Pass	Pass
Ball Bond Shear	Wires	76/0	76/0	76/0
Bond Pull	Wires	76/0	76/0	76/0
Die Shear	-	10/0	10/0	10/0
Electrical Characterization	-	Pass	-	-
Manufacturability (Assembly)	(per mfg. Site specification)	Approved	-	-
Moisture Sensitivity, JEDEC	Level 3-260C	22/0	22/0	22/0
**Preconditioning: Level 3-260C				

Qual Vehicle 2: TPS65852ZQZ (MSL Level 3-260C)				
Wafer Fab Site:	MIHO8	Metallization:	AlCu	
Wafer Fab Process:	LBC7	Wafer Diameter:	200mm	
Bump Site:	Clark			
Qualification: ☐ Plan ☒ Test Results				
Reliability Test	Conditions	Sample Size/Fails		
		Lot#1	Lot#2	Lot#3
**Temperature Cycle	-55/125C (500 Cycles)	77/0	-	-
Ball Bond Shear	Wires	76/0	76/0	76/0
Bond Pull	Wires	76/0	76/0	76/0
Manufacturability (Assembly)	(per mfg. Site specification)	Approved	-	-
**Preconditioning: Level 3-260C				

For questions regarding this notice, e-mails can be sent to the regional 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
Japan	PCNJapanContact@list.ti.com