



12500 TI Boulevard, MS 8640, Dallas, Texas 75243

PCN# 20161027001A

**Transfer of select C10 devices from ANAM-1 to DMOS5 Wafer Fab site
Change Notification / Sample Request**

Date: November 30, 2016

To: TOKYO ELECTRON DEVICE (DSTR) PCN

Dear Customer:

The purpose of this Rev A PCN is to add additional devices to the product affected section of this document.

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.

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.

The proposed first ship date is indicated 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, contact your local Field Sales Representative or the PCN Manager (PCN_ww_admin_team@list.ti.com).

Sincerely,

PCN Team
SC Business Services

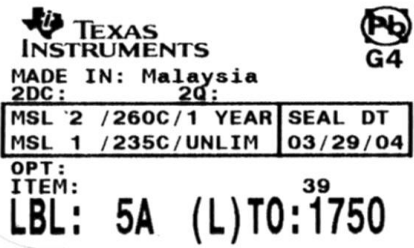

20161027001A
Attachment: 1

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
TUSB2046BIRHBT	null
TUSB2046BVFR	null
TUSB2046BVF	null

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

PCN Number:	20161027001A		PCN Date:	Nov 30, 2016																			
Title:	Transfer of select C10 devices from ANAM-1 to DMOS5 Wafer Fab site																						
Customer Contact:	PCN Manager		Dept:	Quality Services																			
Proposed 1st Ship Date:	Feb 28, 2017		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 checked="" type="checkbox"/> Wafer Fab Site	<input type="checkbox"/> Wafer Fab Materials	<input type="checkbox"/> Wafer Fab Process																					
	<input type="checkbox"/> Part number change																						
PCN Details																							
Description of Change:																							
The purpose of this Rev A PCN is to add additional devices to the product affected section of this document. Additional devices are shown as bold with a yellow highlight.																							
<p>This change notification is to announce the transfer of select devices from ANAM-1 to the DMOS5 Wafer Fab site. Fab support from ANAM-1 is being discontinued for the products listed in the product affected section of this document. Production at ANAM-1 will stop on February 28, 2017. Customers are advised to place their orders immediately to ensure fulfillment. Any orders placed after this date will be supported with DMOS5 material.</p>																							
<table border="1"> <thead> <tr> <th colspan="3">Current (Discontinued)</th> <th colspan="3">New (Transfer to Location)</th> </tr> <tr> <th>Current Fab Site</th> <th>Process</th> <th>Wafer Diameter</th> <th>New Fab Site</th> <th>Process</th> <th>Wafer Diameter</th> </tr> </thead> <tbody> <tr> <td>ANAM-1</td> <td>C10</td> <td>200mm</td> <td>DMOS5</td> <td>C10</td> <td>200mm</td> </tr> </tbody> </table>						Current (Discontinued)			New (Transfer to Location)			Current Fab Site	Process	Wafer Diameter	New Fab Site	Process	Wafer Diameter	ANAM-1	C10	200mm	DMOS5	C10	200mm
Current (Discontinued)			New (Transfer to Location)																				
Current Fab Site	Process	Wafer Diameter	New Fab Site	Process	Wafer Diameter																		
ANAM-1	C10	200mm	DMOS5	C10	200mm																		
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:																							
Current:																							
Chip Site	Chip Site Origin Code (20L)	Chip Site Country Code (21L)	Chip Site City																				
ANAM-1	ANM	KOR	Bucheon-si																				
New:																							
Chip Site	Chip Site Origin Code (20L)	Chip Site Country Code (21L)	Chip Site City																				
DP1DM5	DM5	USA	Dallas																				
Sample product shipping label (not actual product label)																							
  <div style="float: right;"> <p>(1P) SN74LS07NSR (Q) 2000 (D) 0336 (31T) LOT: 3959047MLA (4W) TKY (1T) 7523483S12 (P) (2P) REV: (V) 0033317 (20L) CS0: SHP (21L) CC0: USA (22L) AS0: MLA (23L) AC0: MYS</p> </div>																							

Product Affected:

CDCLVD110ARHBR	CDCV304PW	TLK2201BIRCPRG4	TUSB2046BIRHBRG4
CDCLVD110ARHBRG4	CDCV304PWG4	TLK2201BRCP	TUSB2046BIRHBT
CDCLVD110ARHBT	CDCV304PWR	TLK2201BRCPG4	TUSB2046BIRHBTG4
CDCLVD110ARHBTG4	CDCV304PWRG4	TLK2201BRCPR	TUSB2046BVF
CDCLVD110AVF	TLK2201BIRCP	TLK2201BRCPRG4	TUSB2046BVFG4
CDCLVD110AVFG4	TLK2201BIRCPG4	TUSB2046BIRHB	TUSB2046BVFR
CDCLVD110AVFR	TLK2201BIRCPR	TUSB2046BIRHBR	TUSB2046BVFRG4
CDCLVD110AVFRG4			

Qualification Report
CDCV304: Qualification of alternative FAB (DMOS5)

Approve Date 04-Dec-2015

Product Attributes

Attributes	Qual Device: CDCV304	QBS Product Reference: CDCV304	QBS Process Reference: SN74AVC16T245DGGR	QBS Package Reference: CDCVF2505PW	QBS Package Reference: LMV324IPWR	QBS Package Reference: RC4558PWR	QBS Package Reference: SN0508073PW
Wafer Fab Supplier	DMOS5	DMOS5	CFAB	ANAM-1	FFAB	SFAB	MLA
Wafer Process	33C10	33C10	33C10	33C10	BCB	JI-SLM	LBC4X
Assembly Site	MLA	MLA	MLA	MLA	ASE SHANGHAI	MLA (TIM)	MLA
Package Family	TSSOP	TSSOP	TSSOP	TSSOP	TSSOP	TSSOP	TSSOP

- QBS: Qual By Similarity

- Qual Device CDCV304 is qualified at LEVEL1-260C

Qualification Results

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

Type	Test Name / Condition	Duration	Qual Device: CDCV304	QBS Product Reference: CDCV304	QBS Process Reference: SN74AVC16T245DGGR	QBS Package Reference: CDCVF2505PW	QBS Package Reference: LMV324IPWR	QBS Package Reference: RC4558PWR	QBS Package Reference: SN0508073PW
AC	Autoclave 121C	96 Hours	-	1/77/0	3/231/0	3/231/0	-	1/77/0	3/231/0
ED	Electrical Characterization	Per Datasheet Parameters	Pass	Pass	Pass	-	Pass	Pass	-
HAST	Biased HAST, 130C/85%RH	96 Hours	-	3/231/0	3/231/0	-	2/154/0	1/77/0	-
HAST	Biased HAST, 130C/85%RH	192 Hours	-	-	-	-	2/154/0	-	-
HBM	ESD - HBM	2500 V	1/3/0	1/3/0	3/9/0	-	-	-	-
CDM	ESD - CDM	1000 V	1/3/0	1/3/0	3/9/0	-	-	-	-
HTSL	High Temp. Storage Bake, 150C	1000 Hours	-	-	-	-	-	-	-
HTSL	High Temp. Storage Bake, 170C	420 Hours	-	-	3/231/0	3/231/0	1/77/0	-	3/231/0
HTOL	High Temp Operating Life, 150C	300 Hours	-	-	3/231/0	-	-	-	-
LU	Latch-up	(per JESD78)	1/6/0	-	3/18/0	-	-	-	-
TC	Temperature Cycle, -55/125C	700 Cycles	-	-	-	-	-	-	3/231/0
TC	Temperature Cycle, -65/150C	500 Cycles	-	3/231/0	3/231/0	3/231/0	-	1/77/0	3/231/0
TS	Thermal Shock, -65/150C	500 Cycles	-	-	-	3/231/0	-	-	3/231/0
UHAST	Unbiased HAST, 130C/85%RH	96 Hours	-	-	-	-	1/77/0	-	-
WBP	Bond Strength	Wires	-	-	3/228/0	-	2/154/0	1/76/0	-
MQ	Manufacturability	(per mfg. Site specification)	Pass	Pass	-	-	-	-	-

- 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

TUSB2046B in DMOS5 (C10 offload from Dongbu to DMOS5)

Approve Date 15-Nov-2016

Product Attributes

Attributes	Qual Device: TUSB2046BIRHB	Qual Device: TUSB2046BVF	QBS Process Reference: TLK2500IRCP
Assembly Site	MLA	PHI	PHI
Package Family	QFN	LQFP	HTQFP
Wafer Fab Supplier	DMOS5	DMOS5	DMOS5
Wafer Fab Process	33C10	33C10	25C10

- QBS: Qual By Similarity

- Qual Device TUSB2046BIRHB is qualified at LEVEL2-260C

- Qual Device TUSB2046BVF is qualified at LEVEL3-260C

Qualification Results

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

Type	Test Name / Condition	Duration	Qual Device: TUSB2046BIRHB	Qual Device: TUSB2046BVF	QBS Process Reference: TLK2500IRCP
AC	Autoclave 121C	96 Hours	-	-	3/231/0
CDM	ESD - CDM	1500 V	-	1/3/0	-
ED	Electrical Characterization	Per Data Sheet Parameters	-	Pass	-
HAST	Biased HAST, 130C/85%RH	96 Hours	-	-	3/231/0
HBM	ESD - HBM	4000 V	-	1/3/0	-
HTOL	Life Test, 155C	240 Hours	-	-	3/231/0
HTSL	High Temp Storage Bake 170C	420 Hours	-	-	3/135/0
LU	Latch-up	(Per JESD78)	-	1/6/0	-
TS	Thermal Shock -65/150C	500 Cycles	-	-	3/231/0
WBP	Bond Pull	Wires	1/76/0	1/76/0	-
WBS	Ball Bond Shear	Wires	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

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