

#### 12500 TI Boulevard, MS 8640, Dallas, Texas 75243

# PCN# 20170815000A Qualification of CIRTEK as an additional Assembly & Test site for select devices Change Notification / Sample Request

**Date:** September 06, 2017 **To:** PREMIER FARNELL PCN

#### Dear Customer:

Revision A is to announce the <u>addition</u> of new devices that were not included on the original PCN notification.

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

#### 20170815000A 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	<b>CUSTOMER PART NUMBER</b>
TPD1E05U06DPYR	null
TPD1E05U06DPYT	null
TPD1E10B06DPYR	null
TPD1E10B09DPYR	null

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

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PCN	N Number: 20170815000A					P	PCN Da	te:	Sept. 6	, 2017				
Title	:	Qualifica	ialification of CIRTEK as an additional Assembly & Test s					site	e for se	elect	devices			
<b>Customer Contact:</b>			t: PC	PCN Manager Der			Quality Services				es			
Prop	osed	1 <sup>st</sup> Ship	Date:	Nov. 30		•	Estima Availa	ated Sa	-				led at Sa	mple
Char	nge T	vpe:												
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		ng/Shipp			T	est Pr	ocess				Wafer	Fab	Materials	
											Wafer	Fab	Process	
						PCN	Detail	S	•					
Desc	riptio	on of Ch	ange:											
				he additi	on of n	ew de	evices th	nat wer	e not	inc	luded o	n the	original	PCN
													levice list	
													n this not	
		y added									,			
Texas	s Inst	ruments	Incorpoi	rated is a	announ	cing t	he quali	fication	n CIR	ΓΕΚ	as an	Addit	ional Ass	embly
and 1	Γest S	ite for se	lect dev	ices liste	d in the	e "Pro	duct Aff	ected"	Secti	on.	Curre	nt as	sembly s	ites
and N	<b>4</b> ateri	al differe	nces are	as follow	ws.									
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	JCE	Т		JCE				CHN				Ji	angyin	
				СТК										
	CIRT			СТК				PHL					Biñan	
	CIRT	EK	Differe											
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<b>Grou</b> Mou	CIRT  ip 1:	EK Material	1400	ences:		2040	_	<b>PHL</b> 0		NSI	NC10			
Mou Mo	cirt ip 1: int co	Material mpound npound	1400 1800	ences: ASEN 0238112 0819111		2040	200160	<b>PHL</b> 0	HNK6	NSI	NC10			
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#### Changes to product identification resulting from this PCN:

Assembly Site		
ASEN	Assembly Site Origin (22L)	ASO: ASN
JCET	Assembly Site Origin (22L)	ASO: JCE
CIRTEK	Assembly Site Origin (22L)	ASO: CTK

Sample product shipping label (not actual product label)





(1P) \$N74L\$07N\$R (Q) 2000 (D) 0336 (31T)LOT: 3959047MLA (4W) TKY(1T) 7523483SI2 (P) (2P) REV: (V) 0033317 (20L) CSO: SHE (21L) CCO:USA (22L) ASO: MLA (23L) ACO: MYS

ASSEMBLY SITE CODES: ASEN= J, JCET= F, CIRTEK=W

**Product Affected: Group 1** 

TPD4E02B04DQAR TPD4E05U06DQAR TPD4EUSB30DQAR TPD4S010DQAR

**Product Affected: Group 2** 

TPD1E04U04DPYR	TPD1E05U06DPYR	TPD1E10B06DPYR	TPD1E10B09DPYR
TPD1E04U04DPYT	TPD1E05U06DPYT	TPD1E10B06DPYT	TPD1E10B09DPYT

## **Group 1 Qualification Report**

New Pkg/A-T site: CIRTEK Subcon qual of 10-pin DQA package, several devices

Approve Date 09-Aug-2017

**Product Attributes** 

1 Todact Attributes								
Attributes	Qual Device: TPD4E02B04DQAR	Qual Device: TPD4E05U06DQAR	Qual Device: TPD4EUSB30DQAR	Qual Device: TPD4S010DQAR				
Assembly Site	CIRTEK	CIRTEK	CIRTEK	CIRTEK				
Package Family	SON	SON	SON	SON				
Flammability Rating	UL 94 V-0	UL 94 V-0	UL 94 V-0	UL 94 V-0				
Wafer Fab Supplier	CFAB	CFAB	FFAB	FFAB				
Wafer Process	VDIODE ULC	VDIODE ULC	50B10.13_BOPO/D9789	50B10.13_BOPO/D9789				

- Qual Devices qualified at LEVEL1-260C: TPD4E02B04DQAR, TPD4S010DQAR, TPD4E05U06DQAR, TPD4EUSB30DQAR
- Devices contain multiple dies: TPD4E05U06DQAR, TPD4EUSB30DQAR, TPD4S010DQAR, TPD4E02B04DQAR

### **Qualification Results**

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

Туре	Test Name / Condition	Duration	Qual Device: TPD4E02B04DQAR	Qual Device: TPD4E05U06DQAR	Qual Device: TPD4EUSB30DQAR	Qual Device: TPD4S010DQAR
AC	Autoclave 121C	96 Hours	-	3/231/0	3/231/0	-

CDM	ESD - CDM	1500 V	1/3/0	1/3/0	1/3/0	-
ED	Electrical Characterization	Per Datasheet Parameters	Pass	Pass	Pass	-
FLAM	Flammability (IEC 695-2-2)		-	-	3/15/0	-
FLAM	Flammability (UL 94V-0)		-	-	3/15/0	-
FLAM	Flammability (UL- 1694)		-	-	3/15/0	-
HAST	Biased HAST, 130C/85%RH	96 Hours	-	1/77/0	3/231/0	-
HTOL	Life Test, 125C	1000 Hours	-	1/77/0	3/231/0	-
HTSL	High Temp. Storage Bake, 170C	420 Hours	-	3/231/0	3/231/0	-
PD	Physical Dimensions		-	-	3/15/0	-
SD	Surface Mount Solderability	Pb Free	-	-	3/66/0	-
TC	Temperature Cycle, -65/150C	500 Cycles	-	3/231/0	3/231/0	-
WBP	Bond Pull	Wires	-	1/76/0	3/228/0	1/76/0
WBS	Ball Bond Shear	Wires	-	-	3/228/0	-

- 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 Tl's external Web site: http://www.ti.com/

#### Green/Pb-free Status:

Qualified Pb-Free(SMT) and Green

# **Group 2 Qualification Report**

New Pkg/A-T site: CIRTEK Subcon qual of 2-pin DPY package, several devices

Approve Date 30-Aug-2017

#### **Product Attributes**

Attributes	Qual Device: TPD1E04U04DPYR	QBS Package Reference: TPD1E05U06DPYR	QBS Package Reference: TPD1E10B06DPYR	QBS Package Reference: TPD1E10B09DPYR
Assembly Site	CIRTEK	CIRTEK	CIRTEK	CIRTEK
Package Family	SON	SON	SON	SON
Flammability Rating	UL 94 V-0	UL 94 V-0	UL 94 V-0	UL 94 V-0

Wafer Fab Supplier	CFAB	C FAB	C FAB	CFAB	
Wafer Process	VDIODE ULC	VDIODE ULC	VDIODE ULC	VDIODE ULC	

Attributes	QBS Package Reference: TPD4E02B04DQAR	QBS Package Reference: TPD4E05U06DQAR	QBS Package Reference: TPD4EUSB30DQAR	QBS Package Reference: TPD4S010DQAR
Assembly Site	CIRTEK	CIRTEK	CIRTEK	CIRTEK
Package Family	SON	SON SON		SON
Flammability Rating	UL 94 V-0	UL 94 V-0	UL 94 V-0	UL 94 V-0
Wafer Fab Supplier	CFAB CFAB		FFAB	FFAB
Wafer Process	VDIODE ULC	VDIODE ULC	50B10.13_BOPO/D9789	50B10.13_BOPO/D9789

- QBS: Qual By Similarity
- Qual Device TPD1E04U04DPYR is qualified at LEVEL1-260C
- Device TPD1E04U04DPYR contains multiple dies.

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

Туре	Test Name / Condition	Duration	Qual Device: TPD1E04U04DPYR	QBS Package Reference: TPD1E05U06DPYR	QBS Package Reference: TPD1E10B06DPYR	QBS Package Reference: TPD1E10B09DPYR
AC	Autoclave 121C	96 Hours	-	-	3/231/0	-
CDM	ESD - CDM	1500 V	1/3/0	1/3/0	1/3/0	1/3/0
ED	Electrical Characterization	Per Datasheet Parameters	-	-	Pass	-
FLAM	Flammability (IEC 695-2-2)		-	-	-	-
FLAM	Flammability (UL 94V-0)		-	-	-	-
FLAM	Flammability (UL- 1694)		-	-	-	-
HAST	Biased HAST, 130C/85%RH	96 Hours	-	-	1/77/0	-
HTOL	Life Test, 125C	1000 Hours	-	-	-	-
HTOL	Life Test, 125C	500 Hours	-	-	1/77/0	-
HTSL	High Temp. Storage Bake, 170C	420 Hours	-	-	3/231/0	-
PD	Physical Dimensions		-	-	3/15/0	-
SD	Surface Mount Solderability	Pb-Free	-	-	3/66/0	-
TC	Temperature Cycle, -65/150C	500 Cycles	-	-	3/231/0	-
TS	Thermal Shock - 65/150C	500 Cycles	-	-	3/231/0	-
WBP	Bond Pull	Wires	-	-	3/228/0	-
WBS	Ball Bond Shear	Wires	-	-	3/228/0	-

Туре	Test Name /	Duration	QBS Package Reference:	QBS Package Reference:	QBS Package Reference:	QBS Package Reference:
71	Condition		TPD4E02B04DQAR	TPD4E05U06DQAR	TPD4EUSB30DQAR	TPD4S010DQAR
AC	Autoclave 121C	96 Hours	-	3/231/0	3/231/0	-
CDM	ESD - CDM	1500 V	1/3/0	1/3/0	1/3/0	-
ED	Electrical Characterization	Per Datasheet Parameters	Pass	Pass	Pass	-
FLAM	Flammability (IEC 695-2-2)		-	-	3/15/0	-
FLAM	Flammability (UL 94V-0)		-	-	3/15/0	-
FLAM	Flammability (UL- 1694)		-	-	3/15/0	-
HAST	Biased HAST, 130C/85%RH	96 Hours	-	1/77/0	3/231/0	-
HTOL	Life Test, 125C	1000 Hours	-	1/77/0	3/231/0	-
HTOL	Life Test, 125C	500 Hours	-	-	-	-
HTSL	High Temp. Storage Bake, 170C	420 Hours	-	3/231/0	3/231/0	-
PD	Physical Dimensions		-	-	3/15/0	-
SD	Surface Mount Solderability	Pb-Free	-	-	3/66/0	-
TC	Temperature Cycle, -65/150C	500 Cycles	-	3/231/0	3/231/0	-
TS	Thermal Shock - 65/150C	500 Cycles	-	-	-	-
WBP	Bond Pull	Wires	-	1/76/0	3/228/0	1/76/0
WBS	Ball Bond Shear	Wires	-	-	3/228/0	-

<sup>-</sup> Preconditioning was performed for Autoclave, Unbiased HAST, THB/Biased HAST, Temperature Cycle, Thermal Shock, and HTSL, as applicable

#### 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 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

<sup>-</sup> 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

<sup>-</sup> The following are equivalent HTSL options based on an activation energy of 0.7eV: 150C/1k Hours, and 170C/420 Hours

<sup>-</sup> 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 Tl's external Web site: http://www.ti.com/