



12500 TI Boulevard, MS 8640, Dallas, Texas 75243

**PCN# 20070821000A**  
**Notification of Product Redesign for TXB0104 A-Die**  
**(Die change from LVC4T55A to TXB0104A)**  
**Final Change Notification / Sample Request**

**Date:** \$Date\$  
**\$To\$** \$Recipients\_To\$  
**\$Cc\$** \$Recipients\_Cc\$

Dear Customer:

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

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.

We request you acknowledge receipt of this notification within **30** days of the date of this notice. If you require samples to conduct an evaluation, please make any request within the 30 days—samples are not built ahead of the change. Please see the schedule on the following pages for availability dates. You may contact the PCN Manager or your local Field Sales Representative to acknowledge this PCN and request samples.

The changes discussed within this PCN will not take effect any earlier than **90** days from the date of this notification. This notification period is per TI's standard process. Any negotiated alternative change requirements will be provided via the customer's defined process. Customers with previously negotiated, special requirements will be handled separately. Any inquiries should be directed to your local Field Sales Representative.

For questions regarding this notice, contact your local Field Sales Representative or the PCN Manager ([PCN\\_ww\\_admin\\_team@list.ti.com](mailto:PCN_ww_admin_team@list.ti.com)).

Sincerely,

PCN Team  
SC Business Services  
Phone: (214) 480-6037  
Fax: (214) 480-6659

**\$CRF\_PCNNumber\$A**  
**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.

\$DeviceTable\$

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

<b>PCN Number:</b>	20070821000A			<b>PCN Date:</b>	10/19/2007
<b>Title:</b>	Notification of Product Redesign for the TXB0104 (Die change from the LVC4T55 A-Die to the TXB0104 A-Die)				
<b>Customer Contact:</b>	<a href="#">Linda K Miles</a>	<b>Phone:</b>	903-868-7638	<b>Dept:</b>	Standard Linear and Logic
<b>Proposed 1<sup>st</sup> Ship Date:</b>	01/19/2008	<b>Estimated Sample Availability:</b>	* See Below 10/19/2007		
<b>Change Type:</b>					
<input type="checkbox"/>	Assembly Site	<input type="checkbox"/>	Assembly Process	<input type="checkbox"/>	Assembly Materials
<input type="checkbox"/>	Design	<input checked="" 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 type="checkbox"/>	Wafer Fab Site	<input type="checkbox"/>	Wafer Fab Materials	<input type="checkbox"/>	Wafer Fab Process

### PCN Details

#### Description of Change:

This is an amendment to the previously published PCN. The purpose is to show the updated datasheet characteristics in the tables below. Datasheet changes apply to "A" and prior revision.

Standard Linear and Logic released the TXB0104 to Market with the LVC4T55 A-Die. This Die was recently re-designed to improve the simultaneous switching requirements when switching all bits with both Vcc's at the same voltage level.

\* Samples are available in TXB0104D and TXB0104ZXUR.

#### Change From:

Absolute Maximum Ratings

Parameter	Description		Min	Max	Unit
V <sub>o</sub>	Voltage range applied to any output in the high-impedance or power-off state	A port	-0.5	6.5	V

#### Change To:

Absolute Maximum Ratings

Parameter	Description		Min	Max	Unit
V <sub>o</sub>	Voltage range applied to any output in the high-impedance or power-off state	A port	-0.5	<b>4.6</b>	V

#### Added:

Recommended Operating Conditions

Parameter	Description		V <sub>CCA</sub>	V <sub>CCB</sub>	Min	Max	Unit
V <sub>o</sub>	<b>Voltage range applied to any output in the high-impedance or power-off state</b>	A port	<b>1.2V to 3.6V</b>	<b>1.2V to 3.6V</b>	<b>0</b>	<b>3.6</b>	V
		B port			<b>0</b>	<b>5.5</b>	

#### Change From:

Electrical Characteristics

Parameter	Test Condition	V <sub>CCA</sub>	V <sub>CCB</sub>	T <sub>A</sub> = 25°C			-40°C to 85°C		Unit
				MIN	TYP	MAX	MIN	MAX	
I <sub>I</sub>	OE	1.2V to 3.6V	1.65V to 5.5V	±1			±2		µA
I <sub>off</sub>	A port	0V	0V to 5.5V	±1			±2		
	B port	0V to 3.6V	0V	±1			±2		

#### Change To:

Electrical Characteristics

Parameter	Test Condition	V <sub>CCA</sub>	V <sub>CCB</sub>	T <sub>A</sub> = 25°C			-40°C to 85°C		Unit	
				MIN	TYP	MAX	MIN	MAX		
I <sub>I</sub>	OE	<b>V<sub>I</sub> = V<sub>CCI</sub> or GND</b>	1.2V to 3.6V	1.65V to 5.5V	±1			±2		µA
I <sub>off</sub>	A port	<b>V<sub>I</sub> or V<sub>o</sub> = 0 to 3.6V</b>	0V	0V to 5.5V	±1			±2		
	B port	<b>V<sub>I</sub> or V<sub>o</sub> = 0 to 5.5V</b>	0V to 3.6V	0V	±1			±2		

Literature Number			
Device Type	Current Literature #	New Literature #	
TXB0104	SCES650B	SCES650C	
<b>Reason for Change:</b>			
This device now has a more stable Simultaneous Switching operation when used with both Vcc's at the same level and all four bits are switched.			
<b>Anticipated impact on Fit, Form, Function &amp; Reliability (positive / negative):</b>			
Texas Instruments does not anticipate a negative impact on Fit, Form, Function nor Reliability.			
<b>Changes to product identification resulting from this PCN:</b>			
There is no change to product identification.			
<b>Product Affected:</b>			
TXB0104D	TXB0104DRG4	TXB0104PWRG4	TXB0104ZXUR
TXB0104DG4	TXB0104GXUR	TXB0104RGYR	
TXB0104DR	TXB0104PWR	TXB0104RGYRG4	

### Qualification Data:

This qualification has been specifically developed for the validation of this change. The qualification data validates that the proposed change meets the applicable released technical specifications.			
<b>Actual Qualification Schedule:</b>	<b>Start:</b>	06/06/2007	<b>End:</b> 08/07/2007
<b>Qualification Device Construction Details:</b>			
Qualification Device:	TXB0104D	Die Size (mils):	57.795 x 36.457
Die Rev:	A	Assembly Site:	MLA
Wafer Fab Site:	Freising (FFAB)	Package:	D
Technology:	50b10.1	Pin Count:	14
Fab Process:	P9785	Mold Compound:	LOC GR825-73B
Metal1:	Ti/TiN/AlCu.5%/TiN	Mount Compound:	HIT EN-4088Z
Metal2:	Ti/TiN/AlCu.5%/TiN	Bond:	TS-0.95 Au
Metal3:	None	Leadframe:	4068286-0003
Passivation:	10KACN	L/F Finish:	NiPdAu
Composition:	Cu	Die Overcoat:	None

<b>Qualification Actual:</b>			
Device: TXB0104D			
Test Type	Condition/Duration	Assembly Lot#	
		20070417	20070417026
** Steady-State Life Test	150C, 300 hours		116/0
ESD - HBM	1000 V	3/0	
ESD - HBM	1500 V	3/0	
ESD - HBM	2000 V	3/0	
ESD - HBM	2500 V	3/0	
ESD - HBM -HIGH	15000 V		3/0
ESD - MM	100 V		3/0
ESD - MM	150 V		3/0
ESD - MM	200 V		3/0
ESD - CDM	1000 V	3/0	

ESD - CDM	1500 V	3/0	
Latch-up	JESD78, Class II		6/0
X-RAY	-		5/0
Electrical Char.	approved by product engineering	pass	
** Preconditioning Sequence - JEDEC Level 1/260C			

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

<b>Location</b>	<b>E-Mail</b>
USA	<a href="mailto:PCNAmericasContact@list.ti.com">PCNAmericasContact@list.ti.com</a>
Europe	<a href="mailto:PCNEuropeContact@list.ti.com">PCNEuropeContact@list.ti.com</a>
Asia Pacific	<a href="mailto:PCNAsiaContact@list.ti.com">PCNAsiaContact@list.ti.com</a>
Japan	<a href="mailto:PCNJapanContact@list.ti.com">PCNJapanContact@list.ti.com</a>