

PCN Number:	20230322001.1	PCN Date:	March 23, 2023
Title:	Qualification of new Fab site (RFAB) using qualified Process Technology, Die Revision, and datasheet for select devices		
Customer Contact:	PCN Manager	Dept:	Quality Services
Proposed 1st Ship Date:	June 21, 2023	Sample requests accepted until:	April 23, 2023*

***Sample requests received after April 23, 2023 will not be supported.**

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

PCN Details

Description of Change:

Texas Instruments is pleased to announce the qualification of a new fab & process technology (RFAB, LBC9) for selected devices as listed below in the product affected section. There are no construction differences.

Current Fab Site			Additional Fab Site		
Current Fab Site	Process	Wafer Diameter	Additional Fab Site	Process	Wafer Diameter
FR-BIP-1	ASLNONC10	200 mm	RFAB	LBC9	300 mm

The die was also changed as a result of the process change.

The datasheets will be changing as a result of the above mentioned changes. The datasheet change details can be reviewed in the datasheet revision history shown below. The links to the revised datasheets are available in the table below.

Product Folder	Current Datasheet Number	New Datasheet Number	Link to full datasheet
SN74LVC4245A	SCAS375I	SCAS375J	https://www.ti.com/product/SN74LVC4245A
SN74LVCC3245A	SCAS585P	SCAS585Q	https://www.ti.com/product/SN74LVCC3245A
SN74LVCH8T245	SCES637B	SCES637C	https://www.ti.com/product/SN74LVCH8T245



SN74LVC4245A

SCAS375J – MARCH 1994 – REVISED DECEMBER 2022

SN74LVC4245A Octal Bus Transceiver and 3.3-V to 5-V Shifter With 3-State Outputs

Changes from Revision I (January 2015) to Revision J (December 2022)

Page

- Updated the numbering format for tables, figures, and cross-references throughout the document.....1
- Updated thermals for DB and PW package.....5

SN74LVCC3245A Octal Bus Transceiver With Adjustable Output Voltage and 3-State Outputs

Changes from Revision P (December 2015) to Revision Q (December 2022)	Page
• Updated the numbering format for tables, figures, and cross-references throughout the document.....	1
• Added thermal information for DB and PW package.....	6
• Added inclusive terminology.....	15

SN74LVCH8T245 8-BIT Dual-Supply Bus Transceiver With Configurable Level-Shifting, Voltage Translation, and 3-State Outputs

4 Revision History

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

Changes from Revision B (January 2016) to Revision C (December 2022)	Page
• Updated the numbering format for tables, figures, and cross-references throughout the document.....	1
• Updated thermals for PW package.....	5
• Removed the <i>Supports High-Speed Translation</i> and added the <i>Balanced High-Drive CMOS Push-Pull Outputs</i> section.....	13

Reason for Change:

Supply Continuity

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

None

Impact on Environmental Ratings

Checked boxes indicate the status of environmental ratings following implementation of this change. If below boxes are checked, there are no changes to the associated environmental ratings.

RoHS	REACH	Green Status	IEC 62474
☒ No Change	☒ No Change	☒ No Change	☒ No Change

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

Die Rev:

Current

New

Die Rev [2P]	Die Rev [2P]
-,B	A

Sample product shipping label (not actual product label)

TEXAS
INSTRUMENTS

MADE IN: Malaysia
2DC: 29:

MSL '2 /260C/1 YEAR SEAL DT
MSL 1 /235C/UNLIM 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) C80: CHE (21L) CCO: USA
(22L) ASO: MLA (23L) ACO: MYS

Product Affected:

SN74LVCC3245ADBR

SN74LVC4245ADBR

SN74LVCH8T245PWR

TI Information
Selective Disclosure

Qualification Report Approve Date 01-MARCH -2023

Qualification Results

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

Type	#	Test Name	Condition	Duration	Qual Device: SN74LVC4245ADBR	Qual Device: SN74LVCC3245ADBR	QBS Reference: SN74HCS74QPWRQ1	QBS Reference: SN74LVCH8T245PWR	QBS Reference: TL494IDR	QBS Reference: TPS2074DB
HAST	A2	Biased HAST	130C/85%RH	96 Hours	-	-	-	1/77/0	3/231/0	-
HAST	A2	Biased HAST	130C/85%RH	96 Hours	-	-	3/231/0	-	-	-
UHAST	A3	Autoclave	121C/15psig	96 Hours	-	-	-	1/77/0	-	-
UHAST	A3	Autoclave	121C/15psig	96 Hours	-	-	3/231/0	-	-	-
UHAST	A3	Unbiased HAST	130C/85%RH	96 Hours	-	-	-	-	-	3/231/0
TC	A4	Temperature Cycle	-65C/150C	500 Cycles	-	-	-	1/77/0	-	3/231/0
TC	A4	Temperature Cycle	-65C/150C	500 Cycles	-	-	3/231/0	-	-	-
HTSL	A6	High Temperature Storage Life	150C	1000 Hours	-	-	-	-	-	3/231/0
HTSL	A6	High Temperature Storage Life	150C	1000 Hours	-	-	3/135/0	-	-	-
HTSL	A6	High Temperature Storage Life	170C	420 Hours	-	-	-	1/77/0	-	-

HTOL	B1	Life Test	125C	1000 Hours	-	-	3/231/0	-	-	-
ELFR	B2	Early Life Failure Rate	125C	48 Hours	-	-	3/2400/0	-	-	-
SD	C3	PB Solderability	Precondition w.155C Dry Bake (4 hrs +/- 15 minutes)	-	-	-	1/15/0	-	-	-
SD	C3	PB-Free Solderability	Precondition w.155C Dry Bake (4 hrs +/- 15 minutes)	-	-	-	1/15/0	-	-	-
PD	C4	Physical Dimensions	Cpk>1.67	-	-	-	3/30/0	-	-	-
ESD	E2	ESD CDM	-	250 Volts	1/3/0	1/3/0	-	1/3/0	-	-
ESD	E2	ESD CDM	-	500 Volts	-	-	1/3/0	-	-	-
ESD	E2	ESD HBM	-	1000 Volts	1/3/0	1/3/0	-	1/3/0	-	-
ESD	E2	ESD HBM	-	2000 Volts	-	-	1/3/0	-	-	-
LU	E4	Latch-Up	Per JESD78	-	1/3/0	1/3/0	-	1/3/0	-	-
LU	E4	Latch-Up	Per JESD78	-	-	-	1/6/0	-	-	-
CHAR	E5	Electrical Characterization	Per Datasheet Parameters	-	1/30/0	1/30/0	-	1/30/0	-	-
CHAR	E5	Electrical Distributions	Cpk>1.67 Room, hot, and cold	-	-	-	3/90/0	-	-	-

- QBS: Qual By Similarity
- Qual Device SN74LVC4245ADBR is qualified at MSL1 260C
- Qual Device SN74LVCC3245ADBR is qualified at MSL1 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

TI Qualification ID: R-CHG-2211-069

Qualification Report

Approve Date 01-MARCH -2023

Qualification Results

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

Type	#	Test Name	Condition	Duration	Qual Device: SN74LVCH8T245PWR	QBS Reference: SN74HCS74QPWRQ1	QBS Reference: SN74AXC8T245QPWRQ1	QBS Reference: SN74LXC8T245QPWRQ1
HAST	A2	Biased HAST	130C/85%RH	96 Hours	-	3/231/0	3/231/0	-
HAST	A2	Biased HAST	130C/85%RH	96 Hours	-	-	-	1/77/0
UFAST	A3	Autoclave	121C/15psig	96 Hours	-	-	3/231/0	1/77/0
UFAST	A3	Autoclave	121C/15psig	96 Hours	-	3/231/0	-	-
UFAST	A3	Autoclave	130C/85%RH	96 Hours	-	-	3/231/0	1/77/0
TC	A4	Temperature Cycle	-65C/150C	500 Cycles	-	3/231/0	3/231/0	-
TC	A4	Temperature Cycle	-65C/150C	500 Cycles	-	-	-	1/77/0
HTSL	A6	High Temperature Storage Life	150C	1000 Hours	-	3/135/0	3/135/0	-
HTSL	A6	High Temperature Storage Life	175C	500 Hours	-	-	-	1/45/0
HTOL	B1	Life Test	125C	1000 Hours	-	3/231/0	3/231/0	1/77/0
ELFR	B2	Early Life Failure Rate	125C	48 Hours	-	3/2400/0	-	-

SD	C3	PB Solderability	Precondition w.155C Dry Bake (4 hrs +/- 15 minutes)	-	-	1/15/0	-	-
SD	C3	PB-Free Solderability	Precondition w.155C Dry Bake (4 hrs +/- 15 minutes)	-	-	1/15/0	-	-
PD	C4	Physical Dimensions	Cpk>1.67	-	-	3/30/0	-	1/10/0
ESD	E2	ESD CDM	-	2000 Volts	-	-	-	1/3/0
ESD	E2	ESD CDM	-	250 Volts	1/3/0	-	-	-
ESD	E2	ESD CDM	-	500 Volts	-	1/3/0	-	-
ESD	E2	ESD HBM	-	1000 Volts	1/3/0	-	-	-
ESD	E2	ESD HBM	-	2000 Volts	-	1/3/0	-	-
ESD	E2	ESD HBM	-	4500 Volts	-	-	-	1/3/0
LU	E4	Latch-Up	Per JESD78	-	1/3/0	-	-	-
LU	E4	Latch-Up	Per JESD78	-	-	1/6/0	1/6/0	1/6/0
CHAR	E5	Electrical Characterization	Per Datasheet Parameters	-	1/30/0	-	-	-
CHAR	E5	Electrical Distributions	Cpk>1.67 Room, hot, and cold	-	-	3/90/0	3/90/0	3/90/0

- QBS: Qual By Similarity
- Qual Device SN74LVCH8T245PWR is qualified at MSL1 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

TI Qualification ID: R-CHG-2211-068

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

Location	E-Mail
WW Change Management Team	PCN_ww_admin_team@list.ti.com

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