



12500 TI Boulevard, MS 8640, Dallas, Texas 75243

PCN#20230322001.1

Qualification of new Fab site (RFAB) using qualified Process Technology, Die Revision, and datasheet for select devices

Change Notification / Sample Request

Date: March 23, 2023

To: TOKYO ELECTRON DEVICE (DSTR) PCN

Dear Customer:

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.

Texas Instruments requires acknowledgement of 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 additional data is required, requests must be received within **30 days** of this notification.

The changes discussed within this PCN will not take effect any earlier than the proposed first ship date 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 or to provide acknowledgement of this PCN, you may contact your local Field Sales Representative or the PCN Team (PCN_ww_admin_team@list.ti.com). For sample requests or sample related questions, contact your local Field Sales Representative.

Sincerely,

PCN Team
SC Business Services

20230322001.1
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 |
|------------------|----------------------|
| SN74LVC4245ADBR | null |
| SN74LVCC3245ADBR | null |
| SN74LVCH8T245PWR | null |

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

| | | | |
|---|---|--|------------------|
| 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: | | | |
| <input type="checkbox"/> | Assembly Site | <input type="checkbox"/> | Assembly Process |
| <input checked="" type="checkbox"/> | Design | <input checked="" type="checkbox"/> | Electrical Specification |
| <input type="checkbox"/> | Test Site | <input type="checkbox"/> | Packing/Shipping/Labeling |
| <input type="checkbox"/> | Wafer Bump Site | <input type="checkbox"/> | Wafer Bump Material |
| <input checked="" type="checkbox"/> | Wafer Fab Site | <input checked="" type="checkbox"/> | Wafer Fab Materials |
| | | <input type="checkbox"/> | 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 |
|---|---|---|---|
| <input checked="" type="checkbox"/> No Change | <input checked="" type="checkbox"/> No Change | <input checked="" type="checkbox"/> No Change | <input checked="" type="checkbox"/> 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 |
| UHA | A3 | Autoclave | 121C/15psig | 96 Hours | - | - | 3/231/0 | 1/77/0 |
| UHA | A3 | Autoclave | 121C/15psig | 96 Hours | - | 3/231/0 | - | - |
| UHA | 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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