



12500 TI Boulevard, MS 8640, Dallas, Texas 75243

PCN#20250710000.1

**Qualification of RFAB as an additional Fab site option,
Die Revision, Datasheet, BOM options & additional Assembly site
option (CDAT, MLA, TFME) for select devices
Change Notification / Sample Request**

Date: July 10, 2025

To: MOUSER 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 60 days of the date of this notice. Lack of acknowledgement of this notice within 60 days constitutes acceptance and approval of this change. If samples or additional data are required, requests must be received within 60 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 change management team.

For sample requests or sample related questions, contact your local Field Sales Representative.

TI values customer engagement and feedback related to TI changes. Customers should contact TI if there are questions or concerns regarding a change notification.

Sincerely,

Change Management Team
SC Business Services

20250710000.1
Attachment: 1

Products Affected:

The devices listed on this page are a subset of the complete list of affected devices. According to our records, you have recently purchased these devices. The corresponding customer part number is also listed, if available.


| DEVICE | CUSTOMER PART NUMBER |
|-----------------|-----------------------------|
| SN74LVC257ADR | NULL |
| SN74LVC157ARGYR | NULL |
| SN74LVC112APWR | NULL |
| SN74LVC157ADR | NULL |
| SN74LVC112ADBR | NULL |


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


| PCN Number: | 20250710000.1 | | PCN Date: | July 10, 2025 | | | | | | | | | | | | | | | | | | | |
|--|---|-------------------------------------|--|-------------------------------------|---------------------|------------------|--|--|---------------------|--|--|------------------|---------|----------------|---------------------|---------|----------------|------|------------|-------|------|------|-------|
| Title: | Qualification of RFAB as an additional Fab site option, Die Revision, Datasheet, BOM options & additional Assembly site option (CDAT, MLA, TFME) for select devices | | | | | | | | | | | | | | | | | | | | | | |
| Customer Contact: | Change Management Team | | Dept: | Quality Services | | | | | | | | | | | | | | | | | | | |
| Proposed 1st Ship Date: | October 08, 2025 | | Sample requests accepted until: | September 08, 2025* | | | | | | | | | | | | | | | | | | | |
| *Sample requests received after September 08, 2025 will not be supported. | | | | | | | | | | | | | | | | | | | | | | | |
| Change Type: | | | | | | | | | | | | | | | | | | | | | | | |
| <input checked="" type="checkbox"/> | Assembly Site | <input checked="" type="checkbox"/> | Design | <input type="checkbox"/> | Wafer Bump Material | | | | | | | | | | | | | | | | | | |
| <input type="checkbox"/> | Assembly Process | <input checked="" type="checkbox"/> | Data Sheet | <input type="checkbox"/> | Wafer Bump Process | | | | | | | | | | | | | | | | | | |
| <input checked="" type="checkbox"/> | Assembly Materials | <input type="checkbox"/> | Part number change | <input checked="" type="checkbox"/> | Wafer Fab Site | | | | | | | | | | | | | | | | | | |
| <input type="checkbox"/> | Mechanical Specification | <input type="checkbox"/> | Test Site | <input checked="" type="checkbox"/> | Wafer Fab Material | | | | | | | | | | | | | | | | | | |
| <input checked="" type="checkbox"/> | Packing/Shipping/Labeling | <input type="checkbox"/> | Test Process | <input checked="" type="checkbox"/> | Wafer Fab Process | | | | | | | | | | | | | | | | | | |
| PCN Details | | | | | | | | | | | | | | | | | | | | | | | |
| Description of Change: | | | | | | | | | | | | | | | | | | | | | | | |
| Texas Instruments is pleased to announce the qualification of RFAB as an additional Fab site option & additional Assembly site options for the devices listed below. | | | | | | | | | | | | | | | | | | | | | | | |
| <table border="1"> <thead> <tr> <th colspan="3">Current Fab Site</th> <th colspan="3">Additional Fab site</th> </tr> <tr> <th>Current Fab Site</th> <th>Process</th> <th>Wafer Diameter</th> <th>Additional Fab site</th> <th>Process</th> <th>Wafer Diameter</th> </tr> </thead> <tbody> <tr> <td>FFAB</td> <td>ASLNONC 10</td> <td>200mm</td> <td>RFAB</td> <td>LBC7</td> <td>300mm</td> </tr> </tbody> </table> | | | | | | Current Fab Site | | | Additional Fab site | | | Current Fab Site | Process | Wafer Diameter | Additional Fab site | Process | Wafer Diameter | FFAB | ASLNONC 10 | 200mm | RFAB | LBC7 | 300mm |
| Current Fab Site | | | Additional Fab site | | | | | | | | | | | | | | | | | | | | |
| Current Fab Site | Process | Wafer Diameter | Additional Fab site | Process | Wafer Diameter | | | | | | | | | | | | | | | | | | |
| FFAB | ASLNONC 10 | 200mm | RFAB | LBC7 | 300mm | | | | | | | | | | | | | | | | | | |
| The die was also changed as a result of the process change. | | | | | | | | | | | | | | | | | | | | | | | |
| Construction differences are as follows: | | | | | | | | | | | | | | | | | | | | | | | |
| Group 1 device | | | | | | | | | | | | | | | | | | | | | | | |
| | Current BOM | | Additional BOM | | | | | | | | | | | | | | | | | | | | |
| Wire bond diam/type | 0.96mil Cu | | 0.8mil Cu | | | | | | | | | | | | | | | | | | | | |
| Group 2 device | | | | | | | | | | | | | | | | | | | | | | | |
| | Current site | | Additional site | | | | | | | | | | | | | | | | | | | | |
| Assembly site | MLA | | CDAT | | | | | | | | | | | | | | | | | | | | |
| Wire bond diam/type | 0.96mil Cu | | 0.8mil Cu | | | | | | | | | | | | | | | | | | | | |
| Mount compound | 4205846 | | 4207123 | | | | | | | | | | | | | | | | | | | | |
| Mold compound | 4208625 | | 4222198 | | | | | | | | | | | | | | | | | | | | |
| Group 3 device | | | | | | | | | | | | | | | | | | | | | | | |
| | Current site | | Additional site | | | | | | | | | | | | | | | | | | | | |
| Assembly site | MLA | MLA (New) | TFME | | | | | | | | | | | | | | | | | | | | |
| Wire bond diam/type | 0.96mil Cu | 0.8mil Cu | 0.8mil Cu | | | | | | | | | | | | | | | | | | | | |
| Mount compound | 4147858 | 4147858 | SID#A-03 | | | | | | | | | | | | | | | | | | | | |
| Mold compound | 4211471 | 4211471 | SID#R-31 | | | | | | | | | | | | | | | | | | | | |
| Lead finish | NiPdAu | NiPdAu | Matte Sn | | | | | | | | | | | | | | | | | | | | |
| Group 4 device | | | | | | | | | | | | | | | | | | | | | | | |
| | Current site | | | Additional site | | | | | | | | | | | | | | | | | | | |
| Assembly site | ASESH | FMX | FMX (New) | MLA | | | | | | | | | | | | | | | | | | | |
| Wire bond diam/type | 0.8mil Cu | 0.96mil Cu | 0.8mil Cu | 0.8mil Cu | | | | | | | | | | | | | | | | | | | |
| Mount compound | SID#EY1000 | 4147858 | 4147858 | 4147858 | | | | | | | | | | | | | | | | | | | |

| | | | | |
|---------------|-------------------|---------|---------|---------|
| | 063 | | | |
| Mold compound | SID#EN200 0511 | 4211880 | 4211880 | 4211880 |
| Lead finish | Matte Sn | NiPdAu | NiPdAu | NiPdAu |

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. The links to the revised datasheets are available in the table below.

| | | |
|---|------------------------------|---|
|  | TEXAS INSTRUMENTS | SN74LVC112A |
| | | SCAS2890 – JANUARY 1993 – REVISED JULY 2025 |
| Changes from Revision N (December 2024) to Revision O (July 2025) | | Page |
| <ul style="list-style-type: none"> Updated 85C <i>Switching Characteristics</i> table for $V_{CC} = 1.8$ and 2.5 V..... Updated 125C <i>Switching Characteristics</i> table for $V_{CC} = 1.8$ and 2.5 V..... | | 8 8 |

| | | |
|---|------------------------------|---|
|  | TEXAS INSTRUMENTS | SN54LVC157A, SN74LVC157A |
| | | SCAS292S – JANUARY 1993 – REVISED DECEMBER 2024 |
| Changes from Revision R (May 2024) to Revision S (December 2024) | | Page |
| <ul style="list-style-type: none"> Updated R0JA values: D = 73 to 118.1, PW = 108 to 141.8, RGY = 39 to 87.1; Updated D, PW, and RGY packages for R0JC(top), R0JB, ΨJT, ΨJB, and R0JC(bot), all values in $^{\circ}\text{C/W}$..... | | 5 |

| | | |
|---|------------------------------|---|
|  | TEXAS INSTRUMENTS | SN54LVC257A, SN74LVC257A |
| | | SCAS294Q – JANUARY 1993 – REVISED DECEMBER 2024 |
| Changes from Revision P (May 2024) to Revision Q (December 2024) | | Page |
| <ul style="list-style-type: none"> Updated R0JA values: D = 73 to 118.1, PW = 108 to 141.8, RGY = 39 to 87.1; Updated D, PW, and RGY packages for R0JC(top), R0JB, ΨJT, ΨJB, and R0JC(bot), all values in $^{\circ}\text{C/W}$..... | | 5 |

| Product Folder | Current Datasheet Number | New Datasheet Number | Link to full datasheet |
|----------------|--------------------------|----------------------|---|
| SN74LVC112A | SCAS289N | SCAS2890 | http://www.ti.com/product/SN74LVC112A |
| SN74LVC157A | SCAS292R | SCAS292S | http://www.ti.com/product/SN74LVC157A |
| SN54LVC257A | SCAS294P | SCAS294Q | http://www.ti.com/product/SN74LVC257A |

Qual details are provided in the Qual Data Section.

Test coverage, insertions, conditions will remain consistent with current testing.

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

☒ No Change

REACH

☒ No Change

Green Status

☒ No Change

IEC 62474

☒ 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 |
|-----------|-----------------------------|------------------------------|----------------|
| FFAB | TID | DEU | Freising |

| RFAB | RFB | USA | Richardson |
|------|-----|-----|------------|
|------|-----|-----|------------|


Die Rev:
Current **New**

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

Assembly Site Information:

| Assembly Site | Assembly Site Origin (22L) | Assembly Country Code (23L) | Assembly City |
|--------------------|----------------------------|-----------------------------|---------------------|
| ASESH | ASH | CHN | Shanghai |
| TI Mexico | MEX | MEX | Aguascalientes |
| TFME | NFM | CHN | Chongchuan |
| TI Chengdu | CDA | CHN | Chengdu |
| TI Malaysia | MLA | MYS | Kuala Lumpur |

Sample product shipping label (not actual product label):



TEXAS INSTRUMENTS
 MADE IN: Malaysia
 2DC: 20:
 MSL 2 / 260C/1 YEAR SEAL DT
 MSL 1 / 235C/UNLIM 03/29/04
 OPT:
 ITEM: 39
 LBL: 5A (L)T0:1750

(1P) SN74LS07NSR
 (Q) 2000 (D) 0336
 (31T) LOT: 3959047MLA
 (4W) TKY (1T) 7523483SI2
 (P)
 (2P) REV: (V) 0000017
 (20L) CS0: SHE (21L) CC0:USA
 (22L) AS0: MLA (23L) AC0: MYS

Group 1 Product Affected: (Fab, Die rev, BOM update)

| | | |
|------------------|--------------------|--------------------|
| SN74LVC112ADBR | SN74LVC112ANSR.A | SN74LVC112APWRG4.B |
| SN74LVC112ADBR.A | SN74LVC112ANSR.B | SN74LVC257APWRG4 |
| SN74LVC112ADBR.B | SN74LVC112APWRG4 | SN74LVC257APWRG4.B |
| SN74LVC112ANSR | SN74LVC112APWRG4.A | |

Group 2 Product Affected: (Fab, Die rev, Assembly site)

| | | |
|-------------------|-------------------|-------------------|
| SN74LVC157ARGYR | SN74LVC157ARGYR.B | SN74LVC257ARGYR.A |
| SN74LVC157ARGYR.A | SN74LVC257ARGYR | SN74LVC257ARGYR.B |

Group 3 Product Affected: (Fab, Die rev, Assembly site, BOM update)

| | | |
|----------------|------------------|------------------|
| SN74LVC112APWR | SN74LVC112APWR.A | SN74LVC112APWR.B |
|----------------|------------------|------------------|

Group 4 Product Affected: (Fab, Die rev, Assembly site, BOM update)

| | | |
|-----------------|-------------------|-----------------|
| SN74LVC112ADR | SN74LVC157ADR.B | SN74LVC257ADR |
| SN74LVC112ADR.A | SN74LVC157ADRG4 | SN74LVC257ADR.A |
| SN74LVC112ADR.B | SN74LVC157ADRE4 | SN74LVC257ADR.B |
| SN74LVC157ADR | SN74LVC157ADRG4.A | SN74LVC257ADRG4 |
| SN74LVC157ADR.A | SN74LVC157ADRG4.B | |

Group 1
SOP Qualification Report
 Approve Date 09-APRIL -2025

Qualification Results

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

| Type | # | Test Name | Condition | Duration | Qual Device: SN74LVC112ANSR | QBS Reference: SN3257QDYYRQ1 | QBS Reference: SN74LV14ANSR | QBS Reference: SN74LVC8T245NSR | QBS Reference: SN74LVC112APWR |
|-------|----|-------------------------------|--|------------|--|---|--|---|--|
| HAST | A2 | Biased HAST | 130C/85%RH | 96 Hours | - | 3/231/0 | - | - | - |
| UHAST | A3 | Autoclave | 121C/15psig | 96 Hours | - | 3/231/0 | 1/77/0 | - | - |
| TC | A4 | Temperature Cycle | -65C/150C | 500 Cycles | - | 3/231/0 | 1/77/0 | 3/231/0 | - |
| HTSL | A6 | High Temperature Storage Life | 150C | 1000 Hours | - | 3/135/0 | - | 3/231/0 | - |
| HTOL | B1 | Life Test | 150C | 300 Hours | - | 3/231/0 | - | - | - |
| ELFR | B2 | Early Life Failure Rate | 150C | 24 Hours | - | 3/2400/0 | - | - | - |
| WBS | C1 | Ball Shear | 76 balls, 3 units min | Wires | - | - | 1/76/0 | - | - |
| WBP | C2 | Bond Pull | 76 Wires, 3 units min | Wires | - | - | 1/76/0 | - | - |
| 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 | - | - | - |
| SD | C3 | PB-Free Solderability | Precondition w.155C Dry Bake (4 hrs +/- 15 minutes); PB-Free Solder; | - | 1/22/0 | - | - | - | - |
| PD | C4 | Physical Dimensions | Cpk>1.67 | - | - | 3/30/0 | - | - | - |
| ESD | E2 | ESD CDM | - | 1500 Volts | - | 1/3/0 | - | - | - |
| ESD | E2 | ESD CDM | - | 250 Volts | 1/3/0 | - | 1/3/0 | - | 1/3/0 |
| ESD | E2 | ESD HBM | - | 1000 Volts | - | - | - | - | 1/3/0 |
| ESD | E2 | ESD HBM | - | 2000 Volts | - | 1/3/0 | - | - | - |
| LU | E4 | Latch-Up | Per JESD78 | - | - | 1/6/0 | - | - | 1/3/0 |
| 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, also known as Generic Data

Qual Device SN74LVC112ANSR 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/>

TI Qualification ID: R-CHG-2408-025

Group 1
SSOP Qualification Report
Approve Date 28-MAY -2025

Qualification Results

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

| Type | # | Test Name | Condition | Duration | Qual Device: <u>SN74LVC112ADBR</u> | QBS Reference: <u>SN3257QDYRQ1</u> | QBS Reference: <u>SRC4190IDB</u> | QBS Reference: <u>GD75232DBR</u> | QBS Reference: <u>SN74LVC165ADRQ1</u> | QBS Reference: <u>SN74LVC112APWR</u> |
|-------|----|-------------------------------|--|------------|---------------------------------------|---------------------------------------|-------------------------------------|-------------------------------------|--|---|
| HAST | A2 | Biased HAST | 130C/85%RH | 96 Hours | - | 3/231/0 | - | 1/77/0 | 1/77/0 | - |
| UHAST | A3 | Autoclave | 121C/15psig | 96 Hours | - | 3/231/0 | 3/231/0 | - | 1/77/0 | - |
| UHAST | A3 | Unbiased HAST | 130C/85%RH | 96 Hours | - | - | - | 1/77/0 | - | - |
| TC | A4 | Temperature Cycle | -65C/150C | 500 Cycles | - | 3/231/0 | 3/231/0 | 1/77/0 | 1/77/0 | - |
| HTSL | A6 | High Temperature Storage Life | 150C | 1000 Hours | - | 3/135/0 | - | 1/77/0 | 1/45/0 | - |
| HTSL | A6 | High Temperature Storage Life | 170C | 420 Hours | - | - | 3/231/0 | - | - | - |
| HTOL | B1 | Life Test | 125C | 1000 Hours | - | - | - | - | 1/77/0 | - |
| HTOL | B1 | Life Test | 150C | 300 Hours | - | 3/231/0 | - | - | - | - |
| ELFR | B2 | Early Life Failure Rate | 150C | 24 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 | - | - | 1/15/0 | - |
| SD | C3 | PB-Free Solderability | Precondition w.155C Dry Bake (4 hrs +/- 15 minutes); PB-Free Solder; | - | 1/22/0 | - | - | - | - | - |
| PD | C4 | Physical Dimensions | Cpk>1.67 | - | - | 3/30/0 | - | - | 1/10/0 | - |
| ESD | E2 | ESD CDM | - | 1500 Volts | - | 1/3/0 | - | - | - | - |
| 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 |
| ESD | E2 | ESD HBM | - | 2000 Volts | - | 1/3/0 | - | - | - | - |
| LU | E4 | Latch-Up | Per JESD78 | - | - | 1/6/0 | - | - | - | 1/3/0 |
| CHAR | E5 | Electrical Characterization | Per Datasheet Parameters | - | 1/30/0 | - | - | - | - | 1/30/0 |
| CHAR | E5 | Electrical Distributions | Cpk>1.67 Room, hot, and cold | - | - | 3/90/0 | - | - | 1/30/0 | - |

QBS: Qual By Similarity, also known as Generic Data

Qual Device SN74LVC112ADBR 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/>

TI Qualification ID: R-CHG-2408-024

Group 1 TSSOP Qualification Report

Approve Date 09-APRIL -2025

Qualification Results

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

| Type | # | Test Name | Condition | Duration | Qual Device: SN74LVC112APWR | QBS Reference: SN3257QDYRQ1 | QBS Reference: SN74HCS74QPWRQ1 | QBS Reference: SN74LVC2G100PWRQ1 |
|------|----|-------------------------------|---|------------|--------------------------------|--------------------------------|-----------------------------------|-------------------------------------|
| HAST | A2 | Biased HAST | 130C/85%RH | 96 Hours | - | 3/231/0 | 3/231/0 | 1/77/0 |
| UHA | A3 | Autoclave | 121C/15psig | 96 Hours | - | 3/231/0 | 3/231/0 | - |
| UHA | A3 | Unbiased HAST | 130C/85%RH | 96 Hours | - | - | - | 1/77/0 |
| TC | A4 | Temperature Cycle | -65C/150C | 500 Cycles | - | 3/231/0 | 3/231/0 | 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 | - |
| HTOL | B1 | Life Test | 150C | 300 Hours | - | 3/231/0 | - | - |
| ELFR | B2 | Early Life Failure Rate | 125C | 48 Hours | - | - | 3/2400/0 | - |
| ELFR | B2 | Early Life Failure Rate | 150C | 24 Hours | - | 3/2400/0 | - | - |
| SD | C3 | PB Solderability | Precondition w.155C Dry Bake (4 hrs +/- 15 minutes) | - | - | 1/15/0 | 1/15/0 | - |
| SD | C3 | PB-Free Solderability | Precondition w.155C Dry Bake (4 hrs +/- 15 minutes) | - | - | 1/15/0 | 1/15/0 | - |
| PD | C4 | Physical Dimensions | Cpk>1.67 | - | - | 3/30/0 | 3/30/0 | 1/10/0 |
| ESD | E2 | ESD CDM | - | 1500 Volts | - | 1/3/0 | - | - |
| ESD | E2 | ESD CDM | - | 250 Volts | 1/3/0 | - | - | - |
| ESD | E2 | ESD CDM | - | 500 Volts | - | - | 1/3/0 | 1/3/0 |
| ESD | E2 | ESD HBM | - | 1000 Volts | 1/3/0 | - | - | - |
| ESD | E2 | ESD HBM | - | 2000 Volts | - | 1/3/0 | 1/3/0 | - |
| LU | E4 | Latch-Up | Per JESD78 | - | 1/3/0 | 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 | 1/30/0 |

QBS: Qual By Similarity, also known as Generic Data

Qual Device SN74LVC112APWR 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/>

TI Qualification ID: R-CHG-2409-084

Group 2 Qualification Report

Approve Date 15-APRIL -2025

Qualification Results

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

| Type | # | Test Name | Condition | Duration | Qual Device: SN74LVC157ARGYR | QBS Reference: SN3257QDYYRQ1 | QBS Reference: SN74HCS595QBOBRQ1 | QBS Reference: TXV0108QWRGYRQ1 | QBS Reference: SN74LVC2G100BOBR | QBS Reference: SN74LVC157AQPWRO1 | QBS Reference: SN74LVC157AWBOBRQ1 |
|-------|----|-------------------------------|--|------------|---------------------------------|---------------------------------|-------------------------------------|-----------------------------------|------------------------------------|-------------------------------------|--------------------------------------|
| HAST | A2 | Biased HAST | 130C/85%RH | 96 Hours | - | 3/231/0 | 3/231/0 | 1/77/0 | - | - | - |
| UHAST | A3 | Autoclave | 121C/15psig | 96 Hours | - | 3/231/0 | 3/231/0 | - | - | - | - |
| UHAST | A3 | Unbiased HAST | 130C/85%RH | 96 Hours | - | - | - | 1/77/0 | - | - | - |
| TC | A4 | Temperature Cycle | -65C/150C | 500 Cycles | - | 3/231/0 | 3/231/0 | 1/77/0 | - | - | - |
| HTSL | A6 | High Temperature Storage Life | 150C | 1000 Hours | - | 3/135/0 | 3/135/0 | 1/45/0 | - | - | - |
| HTOL | B1 | Life Test | 125C | 1000 Hours | - | - | 3/231/0 | 1/77/0 | - | - | - |
| HTOL | B1 | Life Test | 150C | 300 Hours | - | 3/231/0 | - | - | - | - | - |
| ELFR | B2 | Early Life Failure Rate | 150C | 24 Hours | - | 3/2400/0 | - | - | - | - | - |
| SD | C3 | PB Solderability | Precondition w.155C Dry Bake (4 hrs +/- 15 minutes) | - | - | 1/15/0 | - | - | - | - | - |
| SD | C3 | PB Solderability | 8 Hours Steam Age | - | - | - | 1/22/0 | - | - | - | - |
| SD | C3 | PB-Free Solderability | Precondition w.155C Dry Bake (4 hrs +/- 15 minutes) | - | - | 1/15/0 | - | 1/15/0 | - | - | 1/15/0 |
| SD | C3 | PB-Free Solderability | 8 Hours Steam Age | - | - | - | 1/22/0 | - | - | - | - |
| SD | C3 | PB-Free Solderability | Precondition w.155C Dry Bake (4 hrs +/- 15 minutes); PB-Free Solder; | - | - | - | - | - | 1/22/0 | - | - |
| PD | C4 | Physical Dimensions | Cpk>1.67 | - | - | 3/30/0 | 3/30/0 | 1/10/0 | - | - | - |
| ESD | E2 | ESD CDM | - | 1500 Volts | - | 1/3/0 | - | - | - | - | - |
| 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 | - | 1/3/0 | 1/3/0 |
| ESD | E2 | ESD HBM | - | 1000 Volts | - | - | - | - | 1/3/0 | - | - |
| ESD | E2 | ESD HBM | - | 2000 Volts | - | 1/3/0 | - | 1/3/0 | - | 1/3/0 | - |
| ESD | E2 | ESD HBM | - | 7000 Volts | - | - | 1/3/0 | - | - | - | - |
| LU | E4 | Latch-Up | Per JESD78 | - | - | 1/6/0 | 1/6/0 | 1/6/0 | 1/6/0 | 1/3/0 | - |
| CHAR | E5 | Electrical Characterization | Per Datasheet Parameters | - | 1/30/0 | - | - | - | 1/30/0 | - | - |
| CHAR | E5 | Electrical Distributions | Cpk>1.67 Room, hot, and cold | - | - | 3/90/0 | 3/90/0 | 3/90/0 | - | 1/30/0 | 1/30/0 |

QBS: Qual By Similarity, also known as Generic Data

Qual Device SN74LVC157ARGYR 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/>

TI Qualification ID: R-CHG-2408-023

Group 3 MLA Qualification Report

Approve Date 09-APRIL -2025

Qualification Results

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

| Type | # | Test Name | Condition | Duration | Qual Device: SN74LVC112APWR | QBS Reference: SN3257QDYRQ1 | QBS Reference: SN74HCS74QPWRQ1 | QBS Reference: SN74LVC2G100PWRQ1 |
|------|----|-------------------------------|---|------------|--------------------------------|--------------------------------|-----------------------------------|-------------------------------------|
| HAST | A2 | Biased HAST | 130C/85%RH | 96 Hours | - | 3/231/0 | 3/231/0 | 1/77/0 |
| UHA | A3 | Autoclave | 121C/15psig | 96 Hours | - | 3/231/0 | 3/231/0 | - |
| UHA | A3 | Unbiased HAST | 130C/85%RH | 96 Hours | - | - | - | 1/77/0 |
| TC | A4 | Temperature Cycle | -65C/150C | 500 Cycles | - | 3/231/0 | 3/231/0 | 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 | - |
| HTOL | B1 | Life Test | 150C | 300 Hours | - | 3/231/0 | - | - |
| ELFR | B2 | Early Life Failure Rate | 125C | 48 Hours | - | - | 3/2400/0 | - |
| ELFR | B2 | Early Life Failure Rate | 150C | 24 Hours | - | 3/2400/0 | - | - |
| SD | C3 | PB Solderability | Precondition w.155C Dry Bake (4 hrs +/- 15 minutes) | - | - | 1/15/0 | 1/15/0 | - |
| SD | C3 | PB-Free Solderability | Precondition w.155C Dry Bake (4 hrs +/- 15 minutes) | - | - | 1/15/0 | 1/15/0 | - |
| PD | C4 | Physical Dimensions | Cpk>1.67 | - | - | 3/30/0 | 3/30/0 | 1/10/0 |
| ESD | E2 | ESD CDM | - | 1500 Volts | - | 1/3/0 | - | - |
| ESD | E2 | ESD CDM | - | 250 Volts | 1/3/0 | - | - | - |
| ESD | E2 | ESD CDM | - | 500 Volts | - | - | 1/3/0 | 1/3/0 |
| ESD | E2 | ESD HBM | - | 1000 Volts | 1/3/0 | - | - | - |
| ESD | E2 | ESD HBM | - | 2000 Volts | - | 1/3/0 | 1/3/0 | - |
| LU | E4 | Latch-Up | Per JESD78 | - | 1/3/0 | 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 | 1/30/0 |

QBS: Qual By Similarity, also known as Generic Data

Qual Device SN74LVC112APWR 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/>

TI Qualification ID: R-CHG-2409-084

Group 3 TFME Qualification Report

Approve Date 09-APRIL -2025

Qualification Results

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

| Type | # | Test Name | Condition | Duration | Qual Device: SN74LVC112APWR | QBS Reference: SN3257QDYRQ1 | QBS Reference: SN74HCS74PWR | QBS Reference: SN74LVC157APWR |
|-------|----|-------------------------------|--|------------|--------------------------------|--------------------------------|--------------------------------|----------------------------------|
| HAST | A2 | Biased HAST | 130C/85%RH | 96 Hours | - | 3/231/0 | 3/231/0 | - |
| 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 | - | 3/231/0 | 3/231/0 | - |
| HTSL | A6 | High Temperature Storage Life | 150C | 1000 Hours | - | 3/135/0 | 3/231/0 | - |
| HTOL | B1 | Life Test | 150C | 300 Hours | - | 3/231/0 | - | - |
| ELFR | B2 | Early Life Failure Rate | 150C | 24 Hours | - | 3/2400/0 | - | - |
| SD | C3 | PB Solderability | Precondition w.155C Dry Bake (4 hrs +/- 15 minutes) | - | - | 1/15/0 | - | - |
| SD | C3 | PB Solderability | Precondition w.155C Dry Bake (4 hrs +/- 15 minutes); PB Solder; | - | - | - | 3/66/0 | - |
| SD | C3 | PB-Free 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); PB- Free Solder; | - | - | - | 3/66/0 | - |
| PD | C4 | Physical Dimensions | (per mechanical drawing) | - | - | - | 3/15/0 | - |
| PD | C4 | Physical Dimensions | Cpk>1.67 | - | - | 3/30/0 | - | - |
| ESD | E2 | ESD CDM | - | 1500 Volts | - | 1/3/0 | - | - |
| ESD | E2 | ESD CDM | - | 250 Volts | 1/3/0 | - | 3/9/0 | - |
| ESD | E2 | ESD HBM | - | 1000 Volts | 1/3/0 | - | - | - |
| ESD | E2 | ESD HBM | - | 2000 Volts | - | 1/3/0 | - | - |
| LU | E4 | Latch-Up | Per JESD78 | - | 1/3/0 | 1/6/0 | - | - |
| CHAR | E5 | Electrical Characterization | Per Datasheet Parameters | - | 1/30/0 | - | 3/90/0 | 1/30/0 |
| CHAR | E5 | Electrical Distributions | Cpk>1.67 Room, hot, and cold | - | - | 3/90/0 | - | - |

QBS: Qual By Similarity, also known as Generic Data

Qual Device SN74LVC112APWR 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/>

TI Qualification ID: R-CHG-2409-109

Group 4 MLA Qualification Report

Approve Date 09-APRIL -2025

Qualification Results

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

| Type | # | Test Name | Condition | Duration | Qual Device: SN74LVC157ADR | Qual Device: SN74LVC112ADR | QBS Reference: SN3257QDYRQ1 | QBS Reference: SN74HCS74QDRQ1 | QBS Reference: SN74LVC157APWR | QBS Reference: SN74LVC112APWR |
|------|----|-------------------------------|---|------------|-------------------------------|-------------------------------|--------------------------------|----------------------------------|----------------------------------|----------------------------------|
| HAST | A2 | Biased HAST | 130C/85%RH | 96 Hours | - | - | 3/231/0 | 3/231/0 | - | - |
| UHA | A3 | Autoclave | 121C/15psig | 96 Hours | - | - | 3/231/0 | 3/231/0 | - | - |
| UHA | A3 | Unbiased HAST | 130C/85%RH | 96 Hours | - | - | - | 3/231/0 | - | - |
| TC | A4 | Temperature Cycle | -65C/150C | 500 Cycles | - | - | 3/231/0 | 3/231/0 | - | - |
| HTSL | A6 | High Temperature Storage Life | 150C | 1000 Hours | - | - | 3/135/0 | 3/135/0 | - | - |
| HTOL | B1 | Life Test | 125C | 1000 Hours | - | - | - | 1/77/0 | - | - |
| HTOL | B1 | Life Test | 150C | 300 Hours | - | - | 3/231/0 | - | - | - |
| ELFR | B2 | Early Life Failure Rate | 150C | 24 Hours | - | - | 3/2400/0 | - | - | - |
| SD | C3 | PB Solderability | Precondition w.155C Dry Bake (4 hrs +/- 15 minutes) | - | - | - | 1/15/0 | 3/45/0 | - | - |
| SD | C3 | PB-Free Solderability | Precondition w.155C Dry Bake (4 hrs +/- 15 minutes) | - | - | - | 1/15/0 | 3/45/0 | - | - |
| PD | C4 | Physical Dimensions | Cpk>1.67 | - | - | - | 3/30/0 | 3/30/0 | - | - |
| ESD | E2 | ESD CDM | - | 1500 Volts | - | - | 1/3/0 | - | - | - |
| ESD | E2 | ESD CDM | - | 250 Volts | 1/3/0 | 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 |
| ESD | E2 | ESD HBM | - | 2000 Volts | - | - | 1/3/0 | 1/3/0 | - | - |
| LU | E4 | Latch-Up | Per JESD78 | - | - | - | 1/6/0 | 1/6/0 | 1/3/0 | 1/3/0 |
| CHAR | E5 | Electrical Characterization | Per Datasheet Parameters | - | 1/30/0 | 1/30/0 | - | - | 1/30/0 | 1/30/0 |
| CHAR | E5 | Electrical Distributions | Cpk>1.67 Room, hot, and cold | - | - | - | 3/90/0 | 3/90/0 | - | - |

QBS: Qual By Similarity, also known as Generic Data

Qual Device SN74LVC157ADR is qualified at MSL1 260C

Qual Device SN74LVC112ADR 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/>

TI Qualification ID: R-CHG-2408-026

Group 4 **FMX Qualification Report** Approve Date 09-APRIL -2025

Qualification Results

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

| Type | # | Test Name | Condition | Duration | Qual Device: SN74LVC157ADR | Qual Device: SN74LVC112ADR | QBS Reference: SN74LVC157PWR | QBS Reference: SN74LVC112APWR | QBS Reference: SN74LVC157PWR | QBS Reference: SN74LVC112APWR | QBS Reference: SN74LVC157PWR | QBS Reference: SN74LVC112APWR | QBS Reference: SN74LVC157PWR | QBS Reference: SN74LVC112APWR |
|------|----|-------------------------------|--|------------|-------------------------------|-------------------------------|---------------------------------|----------------------------------|---------------------------------|----------------------------------|---------------------------------|----------------------------------|---------------------------------|----------------------------------|
| HAST | A2 | Biased HAST | 130C/85%RH | 96 Hours | - | - | 3/231/0 | 1/77/0 | 1/77/0 | 1/77/0 | - | - | - | - |
| UHA | A3 | Autoclave | 121C/15psig | 96 Hours | - | - | 3/231/0 | 1/77/0 | 1/77/0 | 1/77/0 | - | - | - | - |
| TC | A4 | Temperature Cycle | -65C/150C | 500 Cycles | - | - | 3/231/0 | 1/77/0 | 1/77/0 | 1/77/0 | - | - | - | - |
| HTSL | A6 | High Temperature Storage Life | 150C | 1000 Hours | - | - | 3/135/0 | - | - | - | - | - | - | - |
| HTSL | A6 | High Temperature Storage Life | 175C | 500 Hours | - | - | - | 1/45/0 | 1/45/0 | 1/45/0 | - | - | - | - |
| HTOL | B1 | Life Test | 150C | 300 Hours | - | - | 3/231/0 | 1/77/0 | - | - | - | - | - | - |
| ELFR | B2 | Early Life Failure Rate | 150C | 24 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 | 1/15/0 | - | - | - | - | - | - |
| SD | C3 | PB-Free Solderability | Precondition w.155C Dry Bake (4 hrs +/- 15 minutes); PB-Free Solder; | - | - | - | - | - | - | - | - | 1/22/0 | - | - |
| PD | C4 | Physical Dimensions | Cpk>1.67 | - | - | - | 3/30/0 | 1/10/0 | 1/10/0 | 1/10/0 | - | - | - | - |
| ESD | E2 | ESD CDM | - | 1500 Volts | - | - | 1/3/0 | - | - | - | - | - | - | - |
| ESD | E2 | ESD CDM | - | 250 Volts | - | 1/3/0 | - | - | - | 1/3/0 | 1/3/0 | 1/3/0 | 1/3/0 | 1/3/0 |
| ESD | E2 | ESD CDM | - | 500 Volts | - | - | - | 1/3/0 | 1/3/0 | 1/3/0 | - | - | - | - |
| ESD | E2 | ESD HBM | - | 1000 Volts | - | - | - | - | - | 1/3/0 | 1/3/0 | - | - | - |
| ESD | E2 | ESD HBM | - | 2000 Volts | - | - | 1/3/0 | 1/3/0 | - | - | - | - | - | - |
| LU | E4 | Latch-Up | Per JESD78 | - | - | - | 1/6/0 | 1/3/0 | - | - | 1/3/0 | 1/3/0 | - | - |
| CHAR | E5 | Electrical Characterization | Per Datasheet Parameters | - | 1/30/0 | 1/30/0 | - | - | - | 1/30/0 | 1/30/0 | 1/30/0 | 1/30/0 | 1/30/0 |
| CHAR | E5 | Electrical Distributions | Cpk>1.67 Room, hot, and cold | - | - | - | 3/90/0 | 2/60/0 | 1/30/0 | 1/30/0 | - | - | - | - |

QBS: Qual By Similarity, also known as Generic Data

Qual Device SN74LVC157ADR is qualified at MSL1 260C

Qual Device SN74LVC112ADR 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/>

TI Qualification ID: R-CHG-2408-027

In performing change qualifications, Texas Instruments follows integrated circuit industry standards in performing defect mechanism analysis and failure mechanism-based accelerated environmental testing to ensure wafer fab process, assembly process and product quality and reliability. As encouraged by these standards, TI uses both product-specific and generic (family) data in qualifying its changes. For devices to be categorized as a 'product qualification family' for generic data purposes, they must share similar product, wafer fab process and assembly process elements. The applicability of generic data (also known at TI as Qualification by Similarity (QBS)) is determined by the Reliability Engineering function following these industry standards. Generic data is shown in the qualification report in columns titled "QBS Process" (for wafer fab process), "QBS Package" (for assembly process) and "QBS Product" (for product family).

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