



12500 TI Boulevard, MS 8640, Dallas, Texas 75243

PCN# 20240508001.1

**Qualification of RFAB using qualified Process Technology, Die Revision and additional Assembly site/BOM options for select devices
Change Notification / Sample Request**

Date: May 08, 2024

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 **30** days of the date of this notice. Lack of acknowledgement of this notice within 30 days constitutes acceptance and approval of this change. If samples or additional data are 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 change management team.

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

Sincerely,

Change Management Team
SC Business Services

20240508001.1
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 |
|---------------|-----------------------------|
| TMP102AIDRLR | NULL |
| TMP1075NDRLR | NULL |
| TMP112AIDRLR | NULL |
| TMP112BIDRLR | NULL |
| TMP112NAIDRLR | NULL |

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

| | | | | | |
|---|--|---|--|---|-----------------------|
| PCN Number: | 20240508001.1 | | PCN Date: | May 08, 2024 | |
| Title: | Qualification of RFAB using qualified Process Technology, Die Revision and additional Assembly site/BOM options for select devices | | | | |
| Customer Contact: | Change Management Team | | Dept: | Quality Services | |
| Proposed 1st Ship Date: | August 06, 2024 | | Sample requests accepted until: | June 07, 2024* | |
| *Sample requests received after June 07, 2024 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 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 its RFAB fabrication facility as an additional Wafer Fab option in addition to a new Assembly site (TIPI) for the devices listed in the "Product Affected" section. | | | | | |
| Current Fab Site | | | Additional Fab Site | | |
| Fab Site | Process | Wafer Diameter | Fab Site | Process | Wafer Diameter |
| AIZU | HPA07 | 200 mm | RFAB | LBC9 | 300 mm |
| The die was also changed as a result of the process change. | | | | | |
| Construction differences are as follows: | | | | | |
| Group 1 Device | | | | | |
| | Current | Proposed | | | |
| Wire diam/type | 0.8mil Au | 0.8mil Cu | | | |
| Group 2 Device | | | | | |
| | HNA | TIPI | | | |
| Wire diam/type | 0.8mil Au | 0.8mil Cu | | | |
| Mount compound | 400194 | 4226215 | | | |
| Mold compound | 450214 | 4222198 | | | |
| Qual details are provided in the Qual Data Section. | | | | | |
| Reason for Change: | | | | | |
| Continuity of Supply | | | | | |
| 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 | |
| <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 | | |

| | | | |
|---------------------|-------------------|-------------------|--|
| AIZU RFAB | CU2 RFB | JPN USA | Aizuwakamatsu-shi Richardson |
|---------------------|-------------------|-------------------|--|

Die Rev:
Current

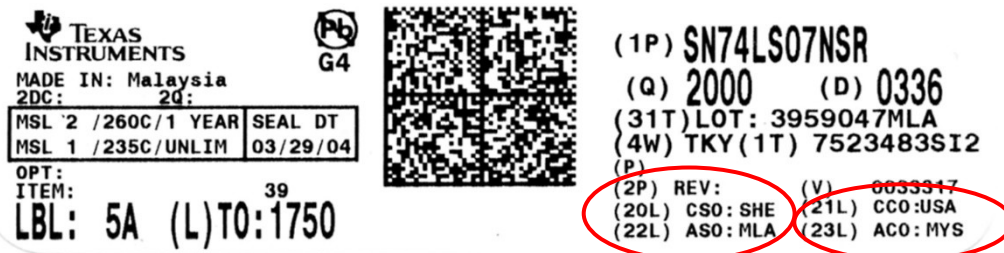
New

| | |
|--------------|---------------------|
| Die Rev [2P] | Die Rev [2P] |
| E | A |

Assembly Site Information:

| Assembly Site | Assembly Site Origin (22L) | Assembly Country Code (23L) | Assembly City |
|---------------|-------------------------------|--------------------------------|--------------------|
| HNA | HNT | THA | Ayutthaya |
| TUPI | PHI | PHL | Baguio City |

Sample product shipping label (not actual product label):



Product Affected:

Group 1 Device (Wafer fab, Die rev, BOM)

| | | |
|---------------|--------------|--------------|
| SN1608035DRLR | TMP102AIDRLR | TMP112AIDRLR |
| SN1710027DRLR | TMP1075NDRLR | |

Group 2 Device (Wafer fab, Die rev, Assembly site)

| | |
|--------------|---------------|
| TMP112BIDRLR | TMP112NAIDRLR |
|--------------|---------------|

Qualification Results

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

| Type | # | Test Name | Condition | Duration | Qual Device: TMP112AIDRLR (PGL0) | Qual Device: TMP112BIDRLR | Qual Device: TMP112NAIDRLR | Qual Device: SN1608035DRLR | Qual Device: TMP112AIDRLR(PGL1) | QBS Reference: SN74AHC145DRLR- S | QBS Reference: TMP350AQRRLRQ1 | QBS Reference: LM335LVQ0YYRQ1 | QBS Reference: TPD2E1B85DRLR |
|-------|----|-------------------------------|--------------------------|------------|--|------------------------------|-------------------------------|-------------------------------|------------------------------------|--|----------------------------------|----------------------------------|---------------------------------|
| HAST | A2 | Biased HAST | 130C/85%RH | 96 Hours | - | - | - | - | - | 3/231/0 | 3/231/0 | 1/77/0 | 3/231/0 |
| UHAST | A3 | Unbiased HAST | 130C/85%RH | 96 Hours | - | - | - | - | - | 3/231/0 | 3/231/0 | 1/77/0 | 3/231/0 |
| 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 | - | - | - | - | - | - | 3/231/0 | 1/77/0 | - |
| HTSL | A6 | High Temperature Storage Life | 170C | 420 Hours | - | - | - | - | - | - | - | - | 3/231/0 |
| HTOL | B1 | Life Test | 125C | 1000 Hours | - | - | - | - | - | - | 3/231/0 | 1/77/0 | - |
| ESD | E2 | ESD CDM | - | 1000 Volts | 1/3/0 | - | - | - | - | - | - | - | - |
| ESD | E2 | ESD HBM | - | 2000 Volts | 1/3/0 | - | - | - | - | - | - | - | - |
| LU | E4 | Latch-Up | Per JESD78 | - | 1/3/0 | - | - | - | 1/3/0 | - | - | - | - |
| CHAR | E5 | Electrical Characterization | Per Datasheet Parameters | - | 1/30/0 | - | - | - | 1/30/0 | - | - | - | - |

- QBS: Qual By Similarity
- Qual Device TMP112AIDRLR is qualified at MSL1 260C
- Qual Device TMP112BIDRLR is qualified at MSL1 260C
- Qual Device TMP112NAIDRLR is qualified at MSL1 260C
- Qual Device SN1608035DRLR is qualified at MSL1 260C
- Qual Device TMP112AIDRLR 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-NPD-2302-155

Qualification Results

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

| Type | # | Test Name | Condition | Duration | Qual Device: TMP1075NDRLR | QBS Reference: SN74AXC1T45DRLR- S | QBS Reference: TMP390AQDRLRQ1 | QBS Reference: LM339LVQDYRQ1 | QBS Reference: TPD2E1B06DRLR | QBS Reference: TMP112AIDRLR(PG1.1) |
|-------|----|-------------------------------|--------------------------|------------|------------------------------|---|----------------------------------|---------------------------------|---------------------------------|---------------------------------------|
| HAST | A2 | Biased HAST | 130C/85%RH | 96 Hours | - | 3/231/0 | 3/231/0 | 1/77/0 | 3/231/0 | - |
| UHAST | A3 | Unbiased HAST | 130C/85%RH | 96 Hours | - | 3/231/0 | 3/231/0 | 1/77/0 | 3/231/0 | - |
| 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 | - | - | 3/231/0 | 1/77/0 | - | - |
| HTSL | A6 | High Temperature Storage Life | 170C | 420 Hours | - | - | - | - | 3/231/0 | - |
| HTOL | B1 | Life Test | 125C | 1000 Hours | - | - | 3/231/0 | 1/77/0 | - | - |
| ESD | E2 | ESD CDM | - | 1000 Volts | 1/3/0 | - | - | - | - | - |
| ESD | E2 | ESD HBM | - | 2000 Volts | 1/3/0 | - | - | - | - | - |
| LU | E4 | Latch-Up | Per JESD78 | - | 1/3/0 | - | - | - | - | 1/3/0 |
| CHAR | E5 | Electrical Characterization | Per Datasheet Parameters | - | 1/30/0 | - | - | - | - | 1/30/0 |

- QBS: Qual By Similarity
- Qual Device TMP1075NDRLR 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-NPD-2312-006

Qualification Results

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

| Type | # | Test Name | Condition | Duration | Qual Device: TMP102AIDRLR | Qual Device: SN1710027DRLR | QBS Reference: SN74AXC1T45DRLR- S | QBS Reference: TMP390AQDRLRQ1 | QBS Reference: LM339LVQDYRQ1 | QBS Reference: TPD2E1B06DRLR | QBS Reference: TMP112AIDRLR(PG1.1) |
|-------|----|-------------------------------|--------------------------|------------|------------------------------|-------------------------------|---|----------------------------------|---------------------------------|---------------------------------|---------------------------------------|
| HAST | A2 | Biased HAST | 130C/85%RH | 96 Hours | - | - | 3/231/0 | 3/231/0 | 1/77/0 | 3/231/0 | - |
| UHAST | A3 | Unbiased HAST | 130C/85%RH | 96 Hours | - | - | 3/231/0 | 3/231/0 | 1/77/0 | 3/231/0 | - |
| 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 | - | - | - | 3/231/0 | 1/77/0 | - | - |
| HTSL | A6 | High Temperature Storage Life | 170C | 420 Hours | - | - | - | - | - | 3/231/0 | - |
| HTOL | B1 | Life Test | 125C | 1000 Hours | - | - | - | 3/231/0 | 1/77/0 | - | - |
| ESD | E2 | ESD CDM | - | 1000 Volts | 1/3/0 | - | - | - | - | - | - |
| ESD | E2 | ESD HBM | - | 2000 Volts | 1/3/0 | - | - | - | - | - | - |
| LU | E4 | Latch-Up | Per JESD78 | - | 1/3/0 | - | - | - | - | - | 1/3/0 |
| CHAR | E5 | Electrical Characterization | Per Datasheet Parameters | - | 1/30/0 | - | - | - | - | - | 1/30/0 |

- QBS: Qual By Similarity
- Qual Device TMP102AIDRLR is qualified at MSL1 260C
- Qual Device SN1710027DRLR 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-NPD-2302-154

For questions regarding this notice, e-mails can be sent to the Change Management team or your local Field Sales Representative.

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