12500 TI Boulevard, MS 8640, Dallas, Texas 75243

# PCN# 20250922000.1
# Qualification of TIEM as an additional Assembly site for select devices
# Change Notification / Sample Request

**Date:** September 22, 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

**20250922000.1**
**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 |
|---|---|
| UCC5350MCDR | UCC5350MCDR |
| ISO1540DR | ISO1540DR |
| UCC5310MCDR | UCC5310MCDR |
| ISO1541DR | ISO1541DR |
| UCC5350SBDR | UCC5350SBDR |

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

| PCN Number: | 20250922000.1 | PCN Date: | September 22, 2025 |
|---|---|---|---|
| Title: | Qualification of TIEM as an additional Assembly site for select devices | | |
| Customer Contact: | Change Management team | Dept: | Quality Services |
| Proposed 1st Ship Date: | December 21, 2025 | Sample requests accepted until: | November 21, 2025* |

*Sample requests received after November 21, 2025 will not be supported.

**Change Type:**

| | | | | | |
|---|---|---|---|---|---|
| ☒ | Assembly Site | ☐ | Design | ☐ | Wafer Bump Material |
| ☒ | Assembly Process | ☐ | Data Sheet | ☐ | Wafer Bump Process |
| ☒ | Assembly Materials | ☐ | Part number change | ☐ | Wafer Fab Site |
| ☐ | Mechanical Specification | ☐ | Test Site | ☐ | Wafer Fab Material |
| ☒ | Packing/Shipping/Labeling | ☐ | Test Process | ☐ | Wafer Fab Process |

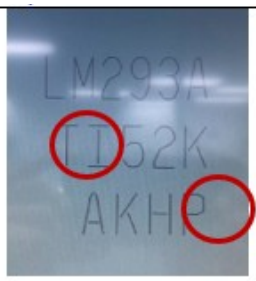
## PCN Details

**Description of Change:**

Texas Instruments is pleased to announce the qualification of TIEM as an additional Assembly site for select devices. Assembly differences are as follows:

| | Current A/T site | | Additional A/T site |
|---|---|---|---|
| | **TITL** | **TIM** | **TIEM** |
| Wire diam/type | 0.96mil Au | 0.96mil Au, 1.0mil Cu | 0.8mil Cu |
| Mold Compound | 4209640 | 4211880 | 4211880 |
| Marking differences | TI logo, pin 1 stripe, with G4 | TI letter, pin 1 dot/dimple, without G4 | TI letter, pin 1 dot, without G4 |

**Marking differences sample:**

| | | |
|---|---|---|
| Example |  |  |

**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 | IEC 62474 |
|---|---|---|---|
| ☒ No Change | ☒ No Change | ☒ No Change | ☒ No Change |

**Changes to product identification resulting from this PCN:**

**Assembly Site Information:**

| Assembly Site | Assembly Site Origin | Assembly Country | Assembly City |
|---|---|---|---|

| | (22L) | Code (23L) | |
|---|---|---|---|
| TI Taiwan | TAI | TWN | Chung Ho, New Taipei City |
| TI Malaysia | MLA | MYS | Kuala Lumpur |
| **TI Melaka** | **CU6** | **MYS** | **Melaka** |

**Sample Product Shipping Label (**not actual product label)


**Product Affected:**

| | | |
|---|---|---|
| ISO1540DR | UCC5310MCDR | UCC5350SBDR |
| ISO1541DR | UCC5350MCDR | |

# Qualification Report

## Automotive Qualification Summary

## (As per AEC-Q100 Rev. J and JEDEC Guidelines)

Approve Date 11-December-2024

### Product Attributes

| Attributes | Qual Device: ISO6721FBQDRQ1 | Qual Device: UCC21330BQDRQ1 | QBS Process Reference: UCC23513QDWYQ1 | QBS Product Reference: UCC21330BQDRQ1 |
|---|---|---|---|---|
| **Automotive Grade Level** | Grade 1 | Grade 1 | Grade 1 | Grade 1 |
| **Operating Temp Range (C)** | -40 to 125 | -40 to 125 | -40 to 125 | -40 to 125 |
| **Product Function** | Interface | Power Management | Power Management | Power Management |
| **Wafer Fab Supplier** | RFAB, RFAB | RFAB, RFAB, RFAB | RFAB, RFAB | RFAB, RFAB, RFAB |
| **Assembly Site** | TIEMA | TIEMA | TAI | MLA |
| **Package Group** | SOIC | SOIC | SOIC | SOIC |
| **Package Designator** | D | D | DWY | D |
| **Pin Count** | 8 | 16 | 6 | 16 |

QBS: Qual By Similarity, also known as Generic Data
Qual Device ISO6721FBQDRQ1 is qualified at MSL2 260C
Qual Device UCC5350MCQDRQ1 is qualified at MSL2 260C
Qual Device UCC5350SBQDRQ1 is qualified at MSL2 260C
Qual Device UCC5350SBQDRQ1 is qualified at MSL2 260C
Qual Device UCC21330BQDRQ1 is qualified at MSL3 260C

### Qualification Results

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

| Type | # | Test Spec | Lot Qty | SS/ Lot | Test Name | Condition | Duration | ISO6721FBQDRQ1 | UCC21330BQDRQ1 | Reference: UCC23513QDWYQ1 | Reference: UCC21330BQDRQ1 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Test Group A - Accelerated Environment Stress Tests** | | | | | | | | | | | |
| PC | A1 | JEDEC J-STD-020 JESD22-A113 | 3 | 77 | Preconditioning | MSL2 260C | - | No Fails | - | - | - |
| PC | A1 | JEDEC J-STD-020 JESD22-A113 | 3 | 77 | Preconditioning | MSL3 260C | - | - | No Fails | - | - |
| HAST | A2 | JEDEC JESD22-A110 | 3 | 77 | Biased HAST | 130C/85%RH | 96 Hours | - | 3/231/0 | - | - |
| AC/UHAST | A3 | JEDEC JESD22-A102/JEDEC JESD22-A118 | 3 | 77 | Autoclave | 121C/15psig | 96 Hours | 1/77/0 | 3/231/0 | - | - |
| TC | A4 | JEDEC JESD22-A104 and Appendix 3 | 3 | 77 | Temperature Cycle | -65C/150C | 500 Cycles | 1/77/0 | 3/231/0 | - | - |
| TC-BP | A4 | MIL-STD883 Method 2011 | 1 | 5 | Post Temp Cycle Bond Pull | - | - | 1/5/0 | 1/5/0 | - | - |
| HTSL | A6 | JEDEC JESD22-A103 | 1 | 45 | High Temperature Storage Life | 150C | 1000 Hours | - | 3/135/0 | - | - |
| **Test Group B - Accelerated Lifetime Simulation Tests** | | | | | | | | | | | |
| HTOL | B1 | JEDEC JESD22-A108 | 3 | 77 | Life Test | 125C | 1000 Hours | - | - | 3/231/0 | - |
| ELFR | B2 | AEC Q100-008 | 3 | 800 | Early Life Failure Rate | 125C | 48 Hours | - | - | 3/2400/0 | - |
| **Test Group C - Package Assembly Integrity Tests** | | | | | | | | | | | |
| WBS | C1 | AEC Q100-001 | 1 | 30 | Wire Bond Shear | Minimum of 5 devices, 30 wires Cpk>1.67 | Wires | 1/30/0 | 3/90/0 | - | - |
| WBP | C2 | MIL-STD883 Method 2011 | 1 | 30 | Wire Bond Pull | Minimum of 5 devices, 30 wires Cpk>1.67 | Wires | 1/30/0 | 3/90/0 | - | - |
| SD | C3 | JEDEC J-STD-002 | 1 | 15 | PB-Free Solderability | >95% Lead Coverage | - | - | 1/15/0 | - | - |
| PD | C4 | JEDEC JESD22-B100 and B108 | 3 | 10 | Physical Dimensions | Cpk>1.67 | - | 1/10/0 | 3/30/0 | - | - |
| **Test Group D - Die Fabrication Reliability Tests** | | | | | | | | | | | |
| EM | D1 | JESD61 | - | - | Electromigration | - | - | Completed Per Process Technology Requirements | Completed Per Process Technology Requirements | Completed Per Process Technology Requirements | Completed Per Process Technology Requirements |
| TDDB | D2 | JESD35 | - | - | Time Dependent Dielectric Breakdown | - | - | Completed Per Process Technology Requirements | Completed Per Process Technology Requirements | Completed Per Process Technology Requirements | Completed Per Process Technology Requirements |
| HCI | D3 | JESD60 & 28 | - | - | Hot Carrier Injection | - | - | Completed Per Process Technology Requirements | Completed Per Process Technology Requirements | Completed Per Process Technology Requirements | Completed Per Process Technology Requirements |
| BTI | D4 | - | - | - | Bias Temperature Instability | - | - | Completed Per Process Technology Requirements | Completed Per Process Technology Requirements | Completed Per Process Technology Requirements | Completed Per Process Technology Requirements |
| SM | D5 | - | - | - | Stress Migration | - | - | Completed Per Process Technology Requirements | Completed Per Process Technology Requirements | Completed Per Process Technology Requirements | Completed Per Process Technology Requirements |
| **Test Group E - Electrical Verification Tests** | | | | | | | | | | | |
| ESD | E2 | AEC Q100-002 | 1 | 3 | ESD HBM | - | 2000 Volts | - | - | 1/3/0 | 1/3/0 |

| Type | # | Test Spec | Min Lot Qty | SS / Lot | Test Name | Condition | Duration | Qual Device: ISO6721FBQDRQ1 | Qual Device: UCC21330BQDRQ1 | QBS Process Reference: UCC23513QDWYQ1 | QBS Product Reference: UCC21330BQDRQ1 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ESD | E3 | AEC Q100-011 | 1 | 3 | ESD CDM | - | 500 Volts | - | - | 1/3/0 | 1/3/0 |
| LU | E4 | AEC Q100-004 | 1 | 3 | Latch-Up | Per AEC Q100-004 | - | - | - | 1/6/0 | 1/6/0 |
| ED | E5 | AEC Q100-009 | 3 | 30 | Electrical Distributions | Cpk>1.67 Room, hot, and cold | - | - | 1/30/0 | 3/90/0 | 1/30/0 |

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
**Ambient Operating Temperature by Automotive Grade Level:**
Grade 0 (or E): -40C to +150C
Grade 1 (or Q): -40C to +125C
Grade 2 (or T): -40C to +105C
Grade 3 (or I) : -40C to +85C
**E1 (TEST): Electrical test temperatures of Qual samples (High temperature according to Grade level):**
Room/Hot/Cold : HTOL, ED
Room/Hot : THB / HAST, TC / PTC, HTSL, ELFR, ESD & LU
Room : AC/uHAST
Quality and Environmental data is available at TI's external Web site: http://www.ti.com

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

## IMPORTANT NOTICE AND DISCLAIMER

TI PROVIDES TECHNICAL AND RELIABILITY DATA (INCLUDING DATASHEETS), DESIGN RESOURCES (INCLUDING REFERENCE DESIGNS), APPLICATION OR OTHER DESIGN ADVICE, WEB TOOLS, SAFETY INFORMATION, AND OTHER RESOURCES “AS IS” AND WITH ALL FAULTS, AND DISCLAIMS ALL WARRANTIES, EXPRESS AND IMPLIED, INCLUDING WITHOUT LIMITATION ANY IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR NON-INFRINGEMENT OF THIRD PARTY INTELLECTUAL PROPERTY RIGHTS.

These resources are intended for skilled developers designing with TI products. You are solely responsible for (1) selecting the appropriate TI products for your application, (2) designing, validating and testing your application, and (3) ensuring your application meets applicable standards, and any other safety, security, or other requirements. These resources are subject to change without notice. TI grants you permission to use these resources only for development of an application that uses the TI products described in the resource. Other reproduction and display of these resources is prohibited. No license is granted to any other TI intellectual property right or to any third party intellectual property right. TI disclaims responsibility for, and you will fully indemnify TI and its representatives against, any claims, damages, costs, losses, and liabilities arising out of your use of these resources.

TI’s products are provided subject to TI’s Terms of Sale (www.ti.com/legal/termsofsale.html) or other applicable terms available either on ti.com or provided in conjunction with such TI products. TI’s provision of these resources does not expand or otherwise alter TI’s applicable warranties or warranty disclaimers for TI products.