12500 TI Boulevard, MS 8640, Dallas, Texas 75243

# PCN#20230531000.1
# Qualification of TI CDAT as an additional Assembly site for select package devices
# Change Notification / Sample Request

**Date:** May 31, 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 and approval of the 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 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

# 20230531000.1
# Change Notification / Sample Request
# Attachments

## 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 |
|---|---|
| INA190A2IRSWR | null |
| TS3A5223RSWR | null |
| TMUX154ERSWR | null |
| INA190A3IRSWR | null |

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

| | | | |
|---|---|---|---|
| **PCN Number:** | 20230531000.1 | **PCN Date:** | May 31, 2023 |

| | |
|---|---|
| **Title:** | Qualification of TI CDAT as an additional Assembly site for select package devices |

| | | | |
|---|---|---|---|
| **Customer Contact:** | PCN Manager | **Dept:** | Quality Services |
| **Proposed 1st Ship Date:** | Aug 30, 2023 | **Sample Requests accepted until:** | June 30, 2023* |

*Sample requests received after June 30, 2023 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 Materials |
| ☐ | Packing/Shipping/Labeling | ☐ | Test Process | ☐ | Wafer Fab Process |

## PCN Details

### Description of Change:

Texas Instruments Incorporated is announcing the qualification of TI CDAT as an additional Assembly site for select devices. Material differences between sites are as follows:

**Group 1 Device:**

| | ASEN | TI CDAT |
|---|---|---|
| Wire type | 0.8mils Au | 0.8mils Cu |
| Mount compound | 1400336111 | 4226215 |
| Mold compound | 1801512111 | 4222198 |

**Group 2 Device:**

| | JCET | TI CDAT |
|---|---|---|
| Wire type | 0.8mils Au | 0.8mils Cu |
| Mount compound | 120402001600 | 4226215 |
| Mold compound | 120903003709 | 4222198 |

### 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 | | |
|---|---|---|
| ASEN | Assembly Site Origin (22L) | ASO: ASN |
| JCET | Assembly Site Origin (22L) | ASO: JC8 |
| TI-CDAT | Assembly Site Origin (22L) | ASO: CDA |

Sample product shipping label (not actual product label)


TEXAS INSTRUMENTS
MADE IN: Malaysia
2DC: 2Q:
MSL 2 /260C/1 YEAR SEAL DT
MSL 1 /235C/UNLIM 03/29/04
OPT:
ITEM: 39
LBL: 5A (L)TO:1750
(1P) SN74LS07NSR
(Q) 2000 (D) 0336
(31T)LOT: 3959047MLA
(4W) TKY(1T) 7523483SI2
(P)
(2P) REV: (V) 0033317
(20L) CSO: SHE (21L) CCO:USA
(22L) ASO: MLA (23L) ACO: MYS

## Group 1 Product Affected:

| | | | |
|---|---|---|---|
| INA190A1IRSWR | INA190A2IRSWT | INA190A4IRSWR | INA190A5IRSWT |
| INA190A1IRSWT | INA190A3IRSWR | INA190A4IRSWT | TMUX154ERSWR |
| INA190A2IRSWR | INA190A3IRSWT | INA190A5IRSWR | |

## Group 2 Product Affected:

TS3A5223RSWR

# Qualification Report

Approve Date 23-March-2023

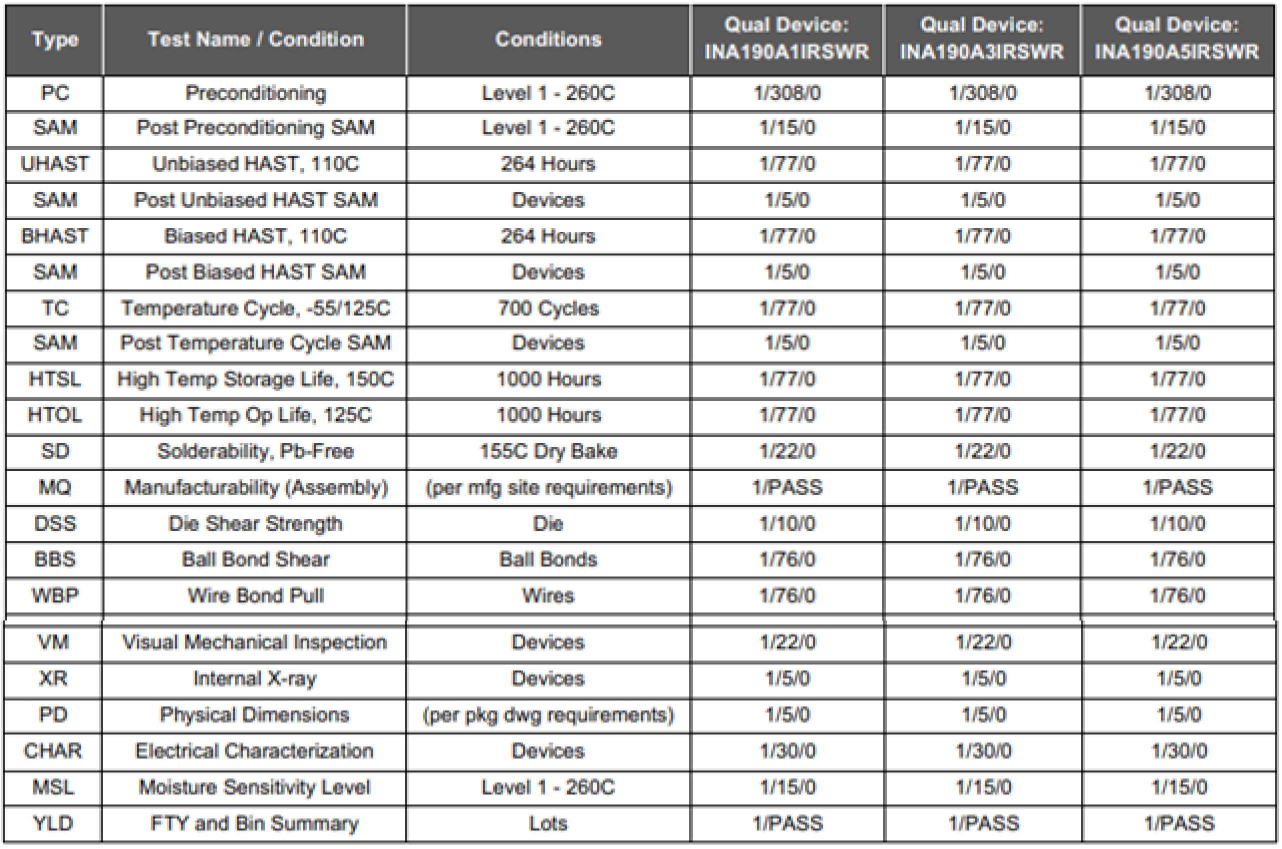
### Product Attributes

| Attributes | Qual Device: INA190A1IRSWR | Qual Device: INA190A3IRSWR | Qual Device: INA190A5IRSWR |
|---|---|---|---|
| Assembly Site | CDAT | CDAT | CDAT |
| Package Family | UQFN | UQFN | UQFN |
| Flammability Rating | UL 94 V-0 | UL 94 V-0 | UL 94 V-0 |
| Wafer Fab Supplier | RFAB | RFAB | RFAB |
| Wafer Process | LBC8LV | LBC8LV | LBC8LV |

Qual Device INA190A1IRSWR is qualified at MSL1 260C
Qual Device INA190A3IRSWR is qualified at MSL1 260C
Qual Device INA190A5IRSWR is qualified at MSL1 260C

### Qualification Results

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



| Type | Test Name / Condition | Conditions | Qual Device: INA190A1IRSWR | Qual Device: INA190A3IRSWR | Qual Device: INA190A5IRSWR |
|---|---|---|---|---|---|
| PC | Preconditioning | Level 1 - 260C | 1/308/0 | 1/308/0 | 1/308/0 |
| SAM | Post Preconditioning SAM | Level 1 - 260C | 1/15/0 | 1/15/0 | 1/15/0 |
| UHAST | Unbiased HAST, 110C | 264 Hours | 1/77/0 | 1/77/0 | 1/77/0 |
| SAM | Post Unbiased HAST SAM | Devices | 1/5/0 | 1/5/0 | 1/5/0 |
| BHAST | Biased HAST, 110C | 264 Hours | 1/77/0 | 1/77/0 | 1/77/0 |
| SAM | Post Biased HAST SAM | Devices | 1/5/0 | 1/5/0 | 1/5/0 |
| TC | Temperature Cycle, -55/125C | 700 Cycles | 1/77/0 | 1/77/0 | 1/77/0 |
| SAM | Post Temperature Cycle SAM | Devices | 1/5/0 | 1/5/0 | 1/5/0 |
| HTSL | High Temp Storage Life, 150C | 1000 Hours | 1/77/0 | 1/77/0 | 1/77/0 |
| HTOL | High Temp Op Life, 125C | 1000 Hours | 1/77/0 | 1/77/0 | 1/77/0 |
| SD | Solderability, Pb-Free | 155C Dry Bake | 1/22/0 | 1/22/0 | 1/22/0 |
| MQ | Manufacturability (Assembly) | (per mfg site requirements) | 1/PASS | 1/PASS | 1/PASS |
| DSS | Die Shear Strength | Die | 1/10/0 | 1/10/0 | 1/10/0 |
| BBS | Ball Bond Shear | Ball Bonds | 1/76/0 | 1/76/0 | 1/76/0 |
| WBP | Wire Bond Pull | Wires | 1/76/0 | 1/76/0 | 1/76/0 |
| VM | Visual Mechanical Inspection | Devices | 1/22/0 | 1/22/0 | 1/22/0 |
| XR | Internal X-ray | Devices | 1/5/0 | 1/5/0 | 1/5/0 |
| PD | Physical Dimensions | (per pkg dwg requirements) | 1/5/0 | 1/5/0 | 1/5/0 |
| CHAR | Electrical Characterization | Devices | 1/30/0 | 1/30/0 | 1/30/0 |
| MSL | Moisture Sensitivity Level | Level 1 - 260C | 1/15/0 | 1/15/0 | 1/15/0 |
| YLD | FTY and Bin Summary | Lots | 1/PASS | 1/PASS | 1/PASS |

Preconditioning was performed for Unbiased HAST, 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/1000 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/1000 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

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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