TEXAS INSTRUMENTS 12500 TI Boulevard, MS 8640, Dallas, Texas 75243

# PCN# 20181011000.1
# Qualification of RFAB as an additional Wafer Fab Site option for select devices
## Change Notification / Sample Request

**Date:** October 15, 2018
**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.

We request you acknowledge 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 you require samples or additional data to support your evaluation, please request within 30 days.

The changes discussed within this PCN will not take effect any earlier than **90** days from the date of this notification, unless customer agreement has been reached on an earlier implementation of the change. This notification period is per TI's standard process.

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, contact your local Field Sales Representative or the PCN Manager (PCN_ww_admin_team@list.ti.com).

PCN Team
SC Business Services

## 20181011000.1
## 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 |
|---|---|
| DRV401AIRGWR | null |
| DRV401AIDWPR | null |

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

| | | | |
|---|---|---|---|
| **PCN Number:** | 20181011000.1 | **PCN Date:** | Oct 15, 2018 |
| **Title:** | Qualification of RFAB as an additional Wafer Fab Site option for select devices in HPA07 Technology | | |
| **Customer Contact:** | PCN Manager | **Dept:** | Quality Services |
| **Proposed 1st Ship Date:** | Jan 15, 2019 | **Estimated Sample Availability:** | Date provided at sample request. |

**Change Type:**

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

## PCN Details

### Description of Change:

Texas Instruments is pleased to announce the qualification of its RFAB fabrication facility as an additional Wafer Fab source for the selected devices listed in “Product Affected” section.

| Current Sites | | | Additional Sites | | |
|---|---|---|---|---|---|
| Current Fab Site | Process | Wafer Diameter | Additional Fab Site | Process | Wafer Diameter |
| DP1DM5 | HPA07 | 200mm | RFAB | HPA07 | 300mm |
| AIZU | HPA07 | 200mm | | | |

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

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

**Current**

| Chip Site | Chip Site Origin (20L) | Chip Site Country Code (21L) | Chip Site City |
|---|---|---|---|
| DP1DM5 | DM5 | USA | Dallas |
| AIZU | CU2 | JPN | Aizuwakamatsu-shi |

**New Fab Site**

| Chip Site | Chip Site Origin (20L) | Chip Site Country Code (21L) | Chip Site City |
|---|---|---|---|
| RFAB | RFB | USA | Richardson |

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

G4

(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

### Product Affected Group:

| | | | |
|---|---|---|---|
| DRV401AIDWP | DRV401AIDWPRG4 | DRV401AIRGWT | DRV401AIRGWTG4 |
| DRV401AIDWPR | DRV401AIRGWR | | |

# Qualification Report
## RFAB G4DRV401GAP offload from Aizu DRV401AIRGWR
### Approve Date 28-Sept-2018
### Product Attributes

| Attributes | Qual Device: DRV401AIRGWR | Process QBS Device: CD3232A1YFFR - | Package QBS Device: DRV401AIRGWR | Package QBS Device: BQ24196RGER |
|---|---|---|---|---|
| **Wafer Fab Supplier** | RFAB | RFAB | Aizu | RFAB |
| **Wafer Process** | HPA07 | HPA07 | HPA07 | LBC7 |
| **Assembly Site** | CDAT | JCAP | CDAT | CDAT |
| **Package Type** | VQFN | WCSP | VQFN | WSON |
| **Package Designator** | RGW | YFF | RGW | DRV |

- Qual Devices qualified at LEVEL2-260CG: DRV401AIRGWR

### Qualification Results

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

| Type | Test Name / Condition | Duration | Qual Device: DRV401AIRGWR | Process QBS Device: CD3232A1YFFR - | Package QBS Device: DRV401AIRGWR | Package QBS Device: BQ24196RGER |
|---|---|---|---|---|---|---|
| HAST | Biased HAST, 130C/85%RH | 96 Hours | - | 3/231/0 | - | 3/231/0 |
| UHAST | Unbiased HAST 130C/85%RH | 96 Hours | - | 3/231/0 | - | - |
| AC | Autoclave 121C | 96 Hours | - | - | 3/231/0 | 3/231/0 |
| TC | Temperature Cycle, -65/150C | 500 Cycles | - | 3/231/0 | 3/231/0 | - |
| HTSL | High Temp. Storage Bake, 170C | 420 Hours | - | 3/231/0 | 3/231/0 | - |
| HTOL | Life Test, 125C | 1000 Hours | 2/154/0 | 3/231/0 | - | - |
| ELFR | Early Life Failure Rate, 150C | 24 Hours | - | 3/2400/0 | - | - |
| HBM | ESD - HBM | 1500 V | 1/3/0 | 3/9/0 | - | - |
| HBM | ESD - HBM | 1000 V | 1/3/0 | - | | |
| CDM | ESD - CDM | 1000 V | 1/3/0 | 3/9/0 | – | |
| LU | Latch-up | (Per AEC Q100-004) | 1/6/0 | 3/18/0 | - | - |
| ED | Electrical Distributions | Cpk>1.67 Room, Hot, & Cold Test | 1/30/0 | 3/90/0 | - | - |
| MQ | Manufacturability (Assembly) | (per mfg. Site specification) | Pass | Pass | - | - |
| MQ | Manufacturability (Wafer Fab) | (per mfg. Site specification) | Pass | Pass | - | - |

- 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

For questions regarding this notice, e-mails can be sent to the regional contacts shown below, or you can contact your local Field Sales Representative.

| **Location** | **E-Mail** |
|---|---|
| USA | PCNAmericasContact@list.ti.com |
| Europe | PCNEuropeContact@list.ti.com |
| Asia Pacific | PCNAsiaContact@list.ti.com |
| Japan | PCNJapanContact@list.ti.com |