| PCN Number: | | 20210205000.1A | | | | | PCN Date: | | August 26, 2021 | | |
|--|-----------|----------------|--------------------|--------------------|---|--|------------------|----------------|-----------------|---------------|--|
| Title: Qualification of UTL3 as a | | | | | n additional assembly site for select Devices | | | | | | |
| Custon | ner Conta | ct: | PCN A | Nanager | | Dept: Quality Ser | | /ices | ces | | |
| Proposed 1 st Ship Date: Aug. | | | 11, 2021 Estimated | | | Sample Date provided a sample request | | | | | |
| Change Type: | | | | | | | | | | | |
| Assembly Site | | | | | Design Wafer E | | | r Bump Site | | | |
| Assembly Process | | | | Data Sheet | | | | Wafe | r Bump Material | | |
| Assembly Materials | | | | Part number change | | | Wafe | r Bump Process | | | |
| ■ Mechanical Specification | | | | Test Site | | | Wafe | r Fab Site | | | |
| Packing/Shipping/Labeling | | | | | Test Process | | | Wafe | r Fab Materials | | |
| | | | | | | | | | Wafe | r Fab Process | |
| DCN Details | | | | | | | | | | | |

PCN Details

Description of Change:

Revision A is to announce the addition of TMP451AIDQFT device that was not included on the original PCN notification. The new device is highlighted and **bolded** in the device list below. The expected first shipment date for the new device will be 90 days from this notice (Nov 26, 2021) for the newly added device only. The proposed 1st ship date of Aug 11, 2021 still applies for the original set of devices.

Texas Instruments Incorporated is announcing the qualification of UTL3 as an alternate Assembly site for devices listed below in the product affected section. There are no construction differences between the two sites

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 | REACH | Green Status | IEC 62474 |
|------|-------------|-----------------------------|-----------------------------|
| | ☑ No Change | $oxed{\boxtimes}$ No Change | $oxed{\boxtimes}$ No Change |

Changes to product identification resulting from this PCN:

| Assembly Site | Assembly Site Origin (22L) | Assembly Country Code (23L) | Assembly City |
|---------------|----------------------------|-----------------------------|---------------|
| UTL1 | NSE | THA | Bangkok |
| UTL3 | UT3 | THA | Bangpakong |

Sample product shipping label (not actual product label)



| Product Affected: | | | |
|----------------------------------|-------------------|------------------|------------------|
| 74AVC4T245RSVRG4 | SN74LVC1G07DRYRG4 | TPS3898ADRYR | TPS73701DRVR |
| 74AVC4T774RSVRG4 SN74LVC1G126DRY | | TPS3898PDRYR | TPS73733DRVR |
| 74AVC4T774RSVR-NT | SN74LVC1G175DRYR | TPS60151DRVR | TPS78001DRVR |
| 74AVCH4T245RSVRG4 | SN74LVC1G3157DRYR | TPS61240DRVR | TPS78001DRVRG4 |
| 74LVC1G3157DRYRG4 | TCA6424ARGJR | TPS622311DRYR | TPS780180300DRVR |
| ADS1013IRUGR | TCA6507RUER | TPS622311DRYT | TPS78101DRVR |
| ADS1014IRUGR | TLA2021IRUGR | TPS622314DRYR | TPS78227DRVR |
| ADS1015IRUGR | TLA2022IRUGR | TPS62231DRYR | TPS78227DRVT |
| ADS1015IRUGT | TLA2024IRUGR | TPS62232DRYR | TPS79901DRVR |
| ADS1018IRUGR | TLA2024IRUGT | TPS62232DRYT | TPS79901DRVRG4 |
| ADS1113IRUGT | TLV342IRUGR | TPS62240DRVR | TPS79912DRVR |
| ADS1114IRUGR | TLV70018DSER | TPS62240DRVRG4 | TPS79918DRVR |
| ADS1115IRUGR | TLV7101828DSER | TPS62240DRVT | TPS79918DRVRG4 |
| ADS1115IRUGT | TLV7111533DDSER | TPS62242DRVR | TPS79918DRVT |
| ADS1118IRUGR | TMP451AIDQFR | TPS62242DRVRG4 | TPS79927DRVR |
| HPA00719RSVR | TMP451AIDQFT | TPS62243DRVR | TPS79928DRVR |
| INA199A2RSWR | TPD2E001DRYR | TPS62250DRVR | TPS79928DRVT |
| INA199B1RSWR | TPD2E001DRYRG4 | TPS62261DRVT | TPS79933DRVR |
| INA199B2RSWT | TPD3E001DRYR | TPS62270DRVT | TPS79933DRVRG4 |
| INA199C3RSWR | TPD3E001DRYRG4 | TPS62291DRVR | TPS7A3701DRVR |
| INA211BIRSWR | TPD4E004DRYR | TPS62291DRVT | TPS7A3701DRVT |
| INA211BIRSWT | TPD4E004DRYRG4 | TPS62293DRVR | TS3A24157RSER |
| INA213AIRSWR | TPD4S009DRYR | TPS62293DRVRG4 | TS3A24157RSERG4 |
| INA213BIRSWR | TPD4S012DRYR | TPS62560DRVR | TS3A44159RSVR |
| INA216A1RSWR | TPD6E001RSER | TPS62560DRVRG4 | TS3A44159RSVRG4 |
| INA216A2RSWR | TPD6E001RSERG4 | TPS62560DRVT | TS3A4751RUCR |
| INA216A2RSWT | TPD6E004RSER | TPS62560DRVTG4 | TS3A5017RSVR |
| INA216A3RSWR | TPS3421EGDRYR | TPS62562DRVR | TS3A5018RSVR |
| INA216A4RSWR | TPS3422EGDRYR | TPS62730DRYR | TS3USB221ERSER |
| REG71050DRVR | TPS3422EGDRYT | TPS62730DRYT | TS3USB30RSWR |
| SN1203086RSWR | TPS3710DSER | TPS62732DRYR | TS3USB31RSER |
| SN170670025DSER | TPS3808G18DRVR | TPS62733DRYR | TS3USB31RSERG4 |
| SN74AVC2T245RSWR | TPS3808G33DRVR | TPS70918DRVR | TS3USB3200RSVR |
| SN74AVC4T245RSVR | TPS3895PDRYR | TPS71401DRVR | TS5A23157HRSER |
| SN74AVC4T774RSVR | TPS3896ADRYR | TPS715A01DRVR | TS5A23157RSER |
| SN74AVCH4T245RSVR TPS3897ADRYR | | TPS715A33DRVR | TS5A23159RSER |
| SN74LVC1G07DRYR | TPS3897ADRYT | TPS728100180DRVR | TS5A23159RSERG4 |



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

| Туре | Test Name / Condition | Duration | Qual Device: CC2541F256RHAR | Qual Device: INA210AIRSWR | Qual Device: TPS22990DMLR |
|-------|--------------------------------|-------------------------------|--------------------------------|------------------------------|------------------------------|
| PC | Preconditioning | Level 1 - 260C | - | 3/462/0 | - |
| PC | Preconditioning | Level 2 - 260C | - | - | 3/693/0 |
| PC | Preconditioning | Level 3 - 260C | 3/693/0 | - | - |
| AC | Autoclave, 121C | 96 Hours | 3/230/0 1 | 3/231/0 | 3/231/0 |
| BHAST | Biased HAST, 110C | 264 Hours | 3/230/0 ² | - | 3/231/0 |
| ED | Electrical Characterization | Side by side | = | 3/90/0 | - |
| HTSL | High Temp. Storage Bake, 150C | 1000 Hours | 3/231/0 | 3/231/0 | 3/231/0 |
| MSL | Moisture Sensitivity | Level 1 - 260C | = | 3/36/0 | - |
| MSL | Moisture Sensitivity (Cu Wire) | Level 2 - 260C | - | - | 3/36/0 |
| MSL | Moisture Sensitivity (Cu Wire) | Level 3 - 260C | 3/36/0 | - | - |
| SA | Salt Atmosphere | 24 Hours | 3/66/0 | - | - |
| SD | Solderability, Pb-free | Steam age, 8 hours | 3/66/0 | 3/66/0 | 3/66/0 |
| TC | Temperature Cycle, -65C/150C | 500 Cycles | 3/231/0 | 3/231/0 | 3/231/0 |
| MQ | Manufacturability (Assembly) | (per mfg. site specification) | 3/Pass | 3/Pass | 3/Pass |
| BPCC | Bond Pad Cratering Check | Post Final Test | 3/15/0 | 3/15/0 | 3/15/0 |
| DS | Die Shear | Die | 3/30/0 | - | 3/30/0 |
| WBP | Wire Bond Pull | Wires | 3/228/0 | 3/228/0 | 3/228/0 |
| PD | Physical Dimensions | (per mechanical drawing) | 3/15/0 | 3/15/0 | 3/15/0 |
| VM | Visual / Mechanical | (per mfg. site specification) | 3/36/0 | 3/36/0 | 3/36/0 |
| XRAY | X-Ray | Top side only | 3/15/0 | 3/15/0 | 3/15/0 |
| YLD | FTY and Bin Summary | - | 3/Pass | 3/Pass | 3/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/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

Notes:

- 1. One device failed post-stress. Bin and failure analysis did not assign root cause to packaging issue, handling, or new factory. Discounted.
- 2. One device failed post-stress. Unit passed on retest. Discounted.

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

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