

| <b>PCN Number:</b>   | 20181113000.1A  |                                     | <b>PCN Date:</b>  | Dec 18, 2018                    |                     |  |      |                      |      |                |            |         |                 |
|--|---|-------------------------------------|---|---------------------------------|---------------------|--|------|----------------------|------|----------------|------------|---------|-----------------|
| <b>Title:</b>  | Qualification of CDAT as an additional Assembly/Test site for select devices in the QFN package |                                     |   |                                 |                     |  |      |                      |      |                |            |         |                 |
| <b>Customer Contact:</b>   | <a href="#">PCN Manager</a>   |                                     | <b>Dept:</b>  | Quality Services                |                     |  |      |                      |      |                |            |         |                 |
| <b>Proposed 1<sup>st</sup> Ship Date:</b>  | Feb 16, 2019  |                                     | <b>Estimated Sample Availability:</b>   | Date Provided at Sample request |                     |  |      |                      |      |                |            |         |                 |
| <b>Change Type:</b>  |   |                                     |   |                                 |                     |  |      |                      |      |                |            |         |                 |
| <input checked="" type="checkbox"/>  | Assembly Site   | <input type="checkbox"/>            | Design  | <input type="checkbox"/>        | Wafer Bump Site     |  |      |                      |      |                |            |         |                 |
| <input type="checkbox"/>   | Assembly Process  | <input type="checkbox"/>            | Data Sheet  | <input type="checkbox"/>        | Wafer Bump Material |  |      |                      |      |                |            |         |                 |
| <input checked="" type="checkbox"/>  | Assembly Materials  | <input type="checkbox"/>            | Part number change  | <input type="checkbox"/>        | Wafer Bump Process  |  |      |                      |      |                |            |         |                 |
| <input type="checkbox"/>   | Mechanical Specification  | <input checked="" type="checkbox"/> | Test Site   | <input type="checkbox"/>        | Wafer Fab Site      |  |      |                      |      |                |            |         |                 |
| <input type="checkbox"/>   | Packing/Shipping/Labeling   | <input type="checkbox"/>            | Test Process  | <input type="checkbox"/>        | Wafer Fab Materials |  |      |                      |      |                |            |         |                 |
|  |   |                                     |   | <input type="checkbox"/>        | Wafer Fab Process   |  |      |                      |      |                |            |         |                 |
| <b>PCN Details</b>   |   |                                     |   |                                 |                     |  |      |                      |      |                |            |         |                 |
| <b>Description of Change:</b>  |   |                                     |   |                                 |                     |  |      |                      |      |                |            |         |                 |
| <p><b>Revision A</b> is to correct the CDAT Mount compound reference number in the description of change section. Changes are indicted in yellow highlight below.</p> <p>Texas Instruments is pleased to announce the qualification of CDAT as additional Assembly and Test Site for Select Devices listed in the "Product Affected" Section. Current assembly sites and Material differences are as follows.</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th></th> <th>UTL1</th> <th>TI Clark (DRV6 Only)</th> <th>CDAT</th> </tr> </thead> <tbody> <tr> <td>Mount compound</td> <td>SID#PZ0031</td> <td>4207768</td> <td>4207123 4208625</td> </tr> </tbody> </table> <p>Test coverage, insertions, conditions will remain consistent with current testing and verified with test MQ.</p> |   |                                     |   |                                 |                     |  | UTL1 | TI Clark (DRV6 Only) | CDAT | Mount compound | SID#PZ0031 | 4207768 | 4207123 4208625 |
|  | UTL1  | TI Clark (DRV6 Only)                | CDAT  |                                 |                     |  |      |                      |      |                |            |         |                 |
| Mount compound   | SID#PZ0031  | 4207768                             | 4207123 4208625   |                                 |                     |  |      |                      |      |                |            |         |                 |
| <b>Reason for Change:</b>  |   |                                     |   |                                 |                     |  |      |                      |      |                |            |         |                 |
| Continuity of Supply   |   |                                     |   |                                 |                     |  |      |                      |      |                |            |         |                 |
| <b>Anticipated impact on Material Declaration</b>  |   |                                     |   |                                 |                     |  |      |                      |      |                |            |         |                 |
| <input type="checkbox"/>   | No Impact to the Material Declaration   | <input checked="" type="checkbox"/> | Material Declarations or Product Content reports are driven from production data and will be available following the production release. Upon production release the revised reports can be obtained from the <a href="#">TI Eco-Info website</a> . There is no impact to the material meeting current regulatory compliance requirements with this PCN change. |                                 |                     |  |      |                      |      |                |            |         |                 |
| <b>Anticipated impact on Form, Fit, Function, Quality or Reliability (positive / negative):</b>  |   |                                     |   |                                 |                     |  |      |                      |      |                |            |         |                 |
| None   |   |                                     |   |                                 |                     |  |      |                      |      |                |            |         |                 |

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

| Assembly Site | Assembly Site Origin (22L) | Assembly Country Code (21L) | Assembly City          |
|---------------|----------------------------|-----------------------------|------------------------|
| UTAC          | NSE                        | THA                         | Bangkok                |
| TI Clark      | QAB                        | PHL                         | Angeles City, Pampanga |
| <b>CDAT</b>   | <b>CDA</b>                 | <b>CHN</b>                  | <b>Chengdu</b>         |

Sample product shipping label (not actual product label)

**TEXAS INSTRUMENTS**  
 MADE IN: Malaysia  
 2DC: 2Q  
 (Pb) E3  
 MSL '2 / 260C / 1 YEAR SEAL DT  
 MSL 1 / 235C / UNLIM 03/29/04  
 OPT: 39  
 ITEM: LBL: 5A (L)T0:1750  
 (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

**Product Affected:**

|             |             |               |               |
|-------------|-------------|---------------|---------------|
| BQ24045DSQR | BQ24308DSGT | TPS2553DRVR-1 | UCC27201ADRMT |
| BQ24045DSQT | TPS2552DRVR | TPS2553DRVT-1 | UCC27201DRMR  |
| BQ24308DSGR | TPS2552DRVT | UCC27201ADRMR | UCC27201DRMT  |



TI Information  
Selective Disclosure

**Qualification Report**

Approve Date 12-Nov-2018

**Qualification Results**

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

| Type | Test Name / Condition       | Duration          | Qual Device:<br>UCC27201ADRMR | QBS Package Reference:<br>BQ24196RGER | QBS Package Reference:<br>TPS2373-4 | QBS Package Reference:<br>TPS62140RGTR |
|------|-----------------------------|-------------------|-------------------------------|---------------------------------------|-------------------------------------|--|
| AC   | Autoclave 121C              | 96 Hours          | -                             | 3/231/0                               | 3/231/0                             | 3/231/0                                |
| FLAM | Flammability (UL 94V-0)     | Method A/UL 94V-0 | -                             | -                                     | 3/15/0                              | -                                      |
| HAST | Biased HAST, 130C/85%RH     | 96 Hours          | -                             | -                                     | 3/231/0                             | -                                      |
| HTOL | Life Test, 140C             | 480 Hours         | -                             | -                                     | 1/77/0                              | -                                      |
| HTSL | High Temp Storage Bake 170C | 420 Hours         | -                             | -                                     | 3/231/0                             | -                                      |
| MSL  | Thermal Path Integrity      | Level 1-260C      | 3/36/0                        | -                                     | -                                   | -                                      |
| MSL  | Thermal Path Integrity      | Level 2-260C      | -                             | 3/36/0                                | 3/35/0                              | 3/36/0                                 |
| TC   | Temperature Cycle, -65/150C | 500 Cycles        | -                             | 3/231/0                               | 3/231/0                             | 3/231/0                                |
| WBP  | Bond Pull                   | Wires             | 3/228/0                       | 3/228/0                               | 3/228/0                             | 3/228/0                                |
| WBS  | Ball Bond Shear             | Wires             | 3/228/0                       | 3/228/0                               | 3/228/0                             | 3/228/0                                |

- QBS: Qual By Similarity
  - Qual Device UCC27201ADRMR is qualified at LEVEL1-260CG
  - 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 JEDEC47: -55C/125C/700 Cycles and -85C/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 your local Field Sales Representative.

| <b>Location</b> | <b>E-Mail</b>  |
|-----------------|--|
| USA             | <a href="mailto:PCNAmericasContact@list.ti.com">PCNAmericasContact@list.ti.com</a> |
| Europe          | <a href="mailto:PCNEuropeContact@list.ti.com">PCNEuropeContact@list.ti.com</a>     |
| Asia Pacific    | <a href="mailto:PCNAsiaContact@list.ti.com">PCNAsiaContact@list.ti.com</a>         |
| Japan           | <a href="mailto:PCNJapanContact@list.ti.com">PCNJapanContact@list.ti.com</a>       |