




| <b>PCN Number:</b>   | 20191211003.1   |                                       | <b>PCN Date:</b>   | Jan. 14, 2020            |                     |  |      |      |               |            |          |
|--|---|---------------------------------------|--|--------------------------|---------------------|--|------|------|---------------|------------|----------|
| <b>Title:</b>  | Qualification of HFTF as an additional AT site for the TMUX1119DCKR |                                       |  |                          |                     |  |      |      |               |            |          |
| <b>Customer Contact:</b>   | <a href="#">PCN Manager</a>   | <b>Dept:</b>                          | Quality Services   |                          |                     |  |      |      |               |            |          |
| <b>Proposed 1<sup>st</sup> Ship Date:</b>  | April 13, 2020  | <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 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"/>              |  | <input type="checkbox"/> | Wafer Fab Process   |  |      |      |               |            |          |
| <b>PCN Details</b>   |   |                                       |  |                          |                     |  |      |      |               |            |          |
| <b>Description of Change:</b>  |   |                                       |  |                          |                     |  |      |      |               |            |          |
| Texas Instruments is pleased to announce the qualification of HFTF as an additional assembly site for the TMUX1119DCKR. Current assembly site and Material differences are as follows: |   |                                       |  |                          |                     |  |      |      |               |            |          |
| <table border="1"> <thead> <tr> <th></th> <th>Hana</th> <th>HFTF</th> </tr> </thead> <tbody> <tr> <td>Mold Compound</td> <td>SID#450179</td> <td>SID#R-27</td> </tr> </tbody> </table> |   |                                       |  |                          |                     |  | Hana | HFTF | Mold Compound | SID#450179 | SID#R-27 |
|  | Hana  | HFTF                                  |  |                          |                     |  |      |      |               |            |          |
| Mold Compound  | SID#450179  | SID#R-27                              |  |                          |                     |  |      |      |               |            |          |
| <b>Reason for Change:</b>  |   |                                       |  |                          |                     |  |      |      |               |            |          |
| Continuity of Supply   |   |                                       |  |                          |                     |  |      |      |               |            |          |
| <b>Anticipated impact on Form, Fit, Function, Quality or Reliability (positive / negative):</b>  |   |                                       |  |                          |                     |  |      |      |               |            |          |
| None   |   |                                       |  |                          |                     |  |      |      |               |            |          |
| <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 at the site link below<br><a href="http://www.ti.com/quality/docs/materialcontentsearch.tsp">http://www.ti.com/quality/docs/materialcontentsearch.tsp</a> |                          |                     |  |      |      |               |            |          |

| <b>Changes to product identification resulting from this PCN:</b> |                                   |                                    |                      |
|---|-----------------------------------|------------------------------------|----------------------|
| <b>Assembly Site</b>  | <b>Assembly Site Origin (22L)</b> | <b>Assembly Country Code (23L)</b> | <b>Assembly City</b> |
| Hana  | HNT                               | THA                                | Ayutthaya            |
| <b>HFTF</b>   | <b>HFT</b>                        | <b>CHN</b>                         | <b>Hefei</b>         |
| Sample product shipping label (not actual product label)          |                                   |                                    |                      |

|   |   |   |
|---|---|---|
| <br><b>TEXAS INSTRUMENTS</b><br>MADE IN: Malaysia<br>2DC: 2Q:<br>MSL 2 /260C/1 YEAR SEAL DT<br>MSL 1 /235C/UNLIM 03/29/04<br>OPT:<br>ITEM: 39<br><b>LBL: 5A (L)T0:1750</b> |  G4<br> | (1P) SN74LS07NSR<br>(Q) 2000 (D) 0336<br>(31T) LOT: 3959047MLA<br>(4W) TKY (1T) 7523483SI2<br>(P)<br>(2P) REV: (V) 0033317<br>(20L) CSO: SHE (21L) CCO:USA<br>(22L) ASO: MLA (23L) ACO: MYS |
| <b>Product Affected:</b>  |   |   |
| TMUX1119DCKR  |   |   |



TI Information  
Selective Disclosure

**Qualification Results**

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

| Type  | Test Name / Condition       | Duration       | Qual Device:<br>TMUX1119DCK | QBS Package Reference:<br>OPA1671IDCK |
|-------|-----------------------------|----------------|-----------------------------|---------------------------------------|
| AC    | Autoclave 121C              | 96 Hours       | 3/231/0                     | -                                     |
| CDM   | ESD - CDM                   | 2000 V         | 1/3/0                       | -                                     |
| HAST  | Biased HAST, 130C/85%RH     | 96 Hours       | 3/231/0                     | -                                     |
| HBM   | ESD - HBM                   | 6000 V         | 1/3/0                       | -                                     |
| HTOL  | Life Test, 150C             | 300 Hours      | -                           | 3/231/0                               |
| HTSL  | High Temp Storage Bake 170C | 420 Hours      | 3/231/0                     | -                                     |
| LU    | Latch-up                    | ( Per JESD78 ) | 1/6/0                       | -                                     |
| TC    | Temperature Cycle, -65/150C | 500 Cycles     | 3/231/0                     | -                                     |
| UHAST | Unbiased HAST 130C/85%RH    | 96 Hours       | -                           | -                                     |
| WBP   | Bond Pull                   | Wires          | 3/228/0                     | -                                     |
| WBS   | Wire Bond Shear             | Wires          | 3/228/0                     | -                                     |

- QBS: Qual By Similarity
  - Qual Device TMUX1119DCK is qualified at LEVEL1-260C
  - 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 contacts shown below or your local Field Sales Representative.

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