



12500 TI Boulevard, MS 8640, Dallas, Texas 75243

**PCN#20230728000.1**

**Qualification of additional Fab site (DL-LIN) using qualified Process Technology and additional Assembly sites options for select devices  
Change Notification / Sample Request**

**Date:** July 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 (TI). The details of this change are on the following pages, and are in alignment with our standard product change notification (PCN) [process](#).

TI 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 this change. If samples or additional data are required, requests must be received within 30 days of this notification, given that samples are not built ahead of the change.

The Proposed First Ship date in this PCN letter is the earliest possible date that customers could receive the changed material. It is our commitment that the changed device will not ship before that date. If samples are requested within the 30 day sample request window, customers will still have 30-days to complete their evaluation regardless of the proposed 1st ship date.

This particular PCN is related to TI's multiyear transition plan for our two remaining factories with 150-millimeter production (DFAB in Dallas, Texas, and SFAB in Sherman, Texas). DFAB will remain open, but will focus on 200-mm production, with a smaller set of technologies. SFAB will close no earlier than 2024 and no later than 2025. As referenced in the "reason for change" below, these changes are part of our multiyear plan to transition these products to newer, more efficient manufacturing processes and technologies, underscoring our commitment to product longevity and supply continuity.

For questions regarding this notice or to provide acknowledgement of this PCN, you may contact your local Field Sales Representative or the Change Management team. For sample requests or sample related questions, contact your local Field Sales Representative. As always, we thank you for your continued business.

Change Management Team  
SC Business Services

**20230728000.1**  
**Attachment: 1**

**Products Affected:**

The devices listed on this page are a subset of the complete list of affected devices. According to our records, you have recently purchased these devices. The corresponding customer part number is also listed, if available.

| <b>DEVICE</b>   | <b>CUSTOMER PART NUMBER</b> |
|-----------------|-----------------------------|
| UCC2893PWR      | null                        |
| MAX3238IPWR     | null                        |
| SN65HVD232DR    | null                        |
| TPS3305-33DGN   | null                        |
| TPS3305-33DGNR  | null                        |
| TPS3307-18D     | null                        |
| TPS3307-25D     | null                        |
| TPS76733QPWP    | null                        |
| TPS767D325PWP   | null                        |
| TPS767D325PWPR  | null                        |
| TPS76801QPWPRG4 | null                        |
| TPS76850QD      | null                        |
| TLV2401IDBVR    | null                        |
| TLV2461CDR      | null                        |
| TLV272CD        | null                        |
| TPS2030D        | null                        |
| TPS3305-33DR    | null                        |
| TPS3307-33D     | null                        |
| TPS3836K33DBVT  | null                        |
| TPS77801PWP     | null                        |
| SN65HVD233DR    | null                        |
| TPS2024D        | null                        |
| TPS2032D        | null                        |
| TPS2032DR       | null                        |
| TPS2033DR       | null                        |
| TPS2350PW       | null                        |
| TPS2350PWR      | null                        |
| TPS3305-18D     | null                        |
| TPS3306-25DGK   | null                        |
| TPS3306-33DGKR  | null                        |
| TPS3307-18DGNR  | null                        |
| TPS3307-33DGNR  | null                        |
| TPS3307-33DR    | null                        |
| TPS3613-01DGS   | null                        |
| TPS3613-01DGSR  | null                        |
| TPS3801K33DCKR  | null                        |
| TPS40055PWPR    | null                        |
| TPS77516D       | null                        |
| TPS77701D       | null                        |
| TLV2472AID      | null                        |
| TPS2013AD       | null                        |
| TPS2013ADR      | null                        |
| TPS2024DR       | null                        |
| TPS3306-33DR    | null                        |
| TPS3307-18DR    | null                        |
| TPS3307-25DR    | null                        |
| TPS3707-33D     | null                        |
| TPS3801-01DCKR  | null                        |
| TPS76701QPWP    | null                        |
| TPS76715QPWP    | null                        |
| TPS76725QPWPR   | null                        |
| TPS767D301PWP   | null                        |
| TPS77815PWPR    | null                        |
| TPS77833PWPR    | null                        |
| UCC2891D        | null                        |
| TLV2381IDBVR    | null                        |
| TLV2381IDR      | null                        |
| TLV2404IPWR     | null                        |
| TLV2471CDBVR    | null                        |
| TPS2021D        | null                        |
| TPS3306-18DGKR  | null                        |
| TLV2472IDGN     | null                        |

|                |      |
|----------------|------|
| TLV2472IDGNR   | null |
| SN65HVD231DR   | null |
| TPS3307-25DGNR | null |
| UCC28089DR     | null |
| TLV2472AIDR    | null |
| TPS76733QPWPR  | null |
| TLV2381IDBVT   | null |
| TPS3305-18DGNR | null |
| TPA301DR       | null |
| TPS2034DR      | null |
| TPS3306-15DGKR | null |
| TPS76815QDR    | null |
| UCC2891DR      | null |
| TLV2461IDBVT   | null |
| TPS2031D       | null |
| TPS2331IPW     | null |
| TPS3305-25DGN  | null |
| TPS3305-25DGNR | null |
| TPS3307-33DGN  | null |
| TPS76801QPWP   | null |
| TLV2461CDBVT   | null |
| TPS2024DRG4    | null |
| TLV2451IDR     | null |
| TLC071IDR      | null |
| TLV2241IDBVR   | null |
| TLV2242IDR     | null |
| TLV2401IDBVT   | null |
| TPS2080DR      | null |
| TPS2090DR      | null |
| TPS3836H30DBVR | null |
| TPS3836J25DBVR | null |
| TPS2085D       | null |
| TPS76718QPWP   | null |
| TPS76801QPWPR  | null |
| TPS2330IPWR    | null |
| TLV2474AIPWR   | null |
| TPS77601D      | null |
| SN65HVD235DR   | null |
| TPS77518D      | null |
| TPS77533D      | null |
| TLV2241IDR     | null |
| TPS3802L30DCKR | null |
| TPS2034D       | null |
| TLV27L1IDBVR   | null |
| TPS3802K33DCKR | null |
| TPS3836K33DBVR | null |
| TPS77701PWPR   | null |
| TPS77801PWPR   | null |
| TPS3707-33DR   | null |
| TLV2373IDGS    | null |
| TPS77633PWP    | null |
| TPS2021DR      | null |
| TPS767D301PWPR | null |
| TLV2242IDGKR   | null |
| TLV2452CDR     | null |
| TPS40055PWP    | null |
| XTR300AIRGWR   | null |
| TLV2402IDGK    | null |
| TLV6003DBVR    | null |
| TPS76718QDR    | null |
| TPS2031DR      | null |
| TPS767D318PWPR | null |
| TLV2451IDBVR   | null |
| TLV2373IDGSR   | null |
| TLV2401IDR     | null |
| TPS2082DR      | null |
| TPS2022DR      | null |

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

|                                                                                                                                                                                       |                                                                                                                                           |                          |                                        |                                     |                       |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|----------------------------------------|-------------------------------------|-----------------------|
| <b>PCN Number:</b>                                                                                                                                                                    | 20230728000.1                                                                                                                             |                          | <b>PCN Date:</b>                       | July 31, 2023                       |                       |
| <b>Title:</b>                                                                                                                                                                         | Qualification of additional Fab site (DL-LIN) using qualified Process Technology and additional Assembly sites options for select devices |                          |                                        |                                     |                       |
| <b>Customer Contact:</b>                                                                                                                                                              | Change Management team                                                                                                                    |                          | <b>Dept:</b>                           | Quality Services                    |                       |
| <b>Proposed 1<sup>st</sup> Ship Date:</b>                                                                                                                                             | Oct 31, 2023                                                                                                                              |                          | <b>Sample Requests accepted until:</b> | Aug 31, 2023*                       |                       |
| <b>*Sample requests received after Aug 31, 2023 will not be supported.</b>                                                                                                            |                                                                                                                                           |                          |                                        |                                     |                       |
| <b>Change Type:</b>                                                                                                                                                                   |                                                                                                                                           |                          |                                        |                                     |                       |
| <input checked="" type="checkbox"/>                                                                                                                                                   | Assembly Site                                                                                                                             | <input type="checkbox"/> | Design                                 | <input type="checkbox"/>            | Wafer Bump Material   |
| <input checked="" type="checkbox"/>                                                                                                                                                   | Assembly Process                                                                                                                          | <input type="checkbox"/> | Data Sheet                             | <input type="checkbox"/>            | Wafer Bump Process    |
| <input checked="" type="checkbox"/>                                                                                                                                                   | Assembly Materials                                                                                                                        | <input type="checkbox"/> | Part number change                     | <input checked="" type="checkbox"/> | Wafer Fab Site        |
| <input type="checkbox"/>                                                                                                                                                              | Mechanical Specification                                                                                                                  | <input type="checkbox"/> | Test Site                              | <input checked="" type="checkbox"/> | Wafer Fab Materials   |
| <input type="checkbox"/>                                                                                                                                                              | Packing/Shipping/Labeling                                                                                                                 | <input type="checkbox"/> | Test Process                           | <input type="checkbox"/>            | Wafer Fab Process     |
| <b>PCN Details</b>                                                                                                                                                                    |                                                                                                                                           |                          |                                        |                                     |                       |
| <b>Description of Change:</b>                                                                                                                                                         |                                                                                                                                           |                          |                                        |                                     |                       |
| Qualification of additional Fab site (DL-LIN) using qualified Process Technology and additional Assembly sites options for the list of devices in the product affected section below. |                                                                                                                                           |                          |                                        |                                     |                       |
| <b>Current Fab Site</b>                                                                                                                                                               |                                                                                                                                           |                          | <b>Additional Fab site</b>             |                                     |                       |
| <b>Current Fab Site</b>                                                                                                                                                               | <b>Process</b>                                                                                                                            | <b>Wafer Diameter</b>    | <b>Additional Fab site</b>             | <b>Process</b>                      | <b>Wafer Diameter</b> |
| DL-LIN                                                                                                                                                                                | LBC3S<br>LBC4                                                                                                                             | 150mm                    | DL-LIN                                 | LBC3S<br>LBC4                       | 200mm                 |
| Construction differences are noted below (There are no construction differences for Group 1)                                                                                          |                                                                                                                                           |                          |                                        |                                     |                       |
| <b>Group 2 (DFAB8 qualification plus Bond wire change) BOM Table</b>                                                                                                                  |                                                                                                                                           |                          |                                        |                                     |                       |
|                                                                                                                                                                                       |                                                                                                                                           | <b>Current</b>           | <b>Additional</b>                      |                                     |                       |
| Bond wire composition, diameter                                                                                                                                                       |                                                                                                                                           | Au, 1.15 mil             | Cu, 1.0 mil                            |                                     |                       |
| <b>Group 2A (DFAB8 qualification plus Bond wire change) BOM Table</b>                                                                                                                 |                                                                                                                                           |                          |                                        |                                     |                       |
|                                                                                                                                                                                       |                                                                                                                                           | <b>Current</b>           | <b>Additional</b>                      |                                     |                       |
| Bond wire composition, diameter                                                                                                                                                       |                                                                                                                                           | Cu, 1.3 mil              | Cu, 0.96 mil                           |                                     |                       |
| <b>Group 3 (DFAB8 qualification plus BOM changes) BOM Table</b>                                                                                                                       |                                                                                                                                           |                          |                                        |                                     |                       |
|                                                                                                                                                                                       |                                                                                                                                           | <b>Current</b>           | <b>Additional</b>                      |                                     |                       |
| Mold Compound                                                                                                                                                                         |                                                                                                                                           | 4205443                  | 4211649                                |                                     |                       |
| Mount Compound                                                                                                                                                                        |                                                                                                                                           | 4042504                  | 4208458                                |                                     |                       |
| <b>Group 4 (DFAB8 qualification plus PHI as additional site) BOM Table</b>                                                                                                            |                                                                                                                                           |                          |                                        |                                     |                       |
|                                                                                                                                                                                       |                                                                                                                                           | <b>LEN</b>               | <b>PHI</b>                             |                                     |                       |
| Mold Compound                                                                                                                                                                         |                                                                                                                                           | SID#0011G60007           | 4222198                                |                                     |                       |
| Bond wire composition, diameter                                                                                                                                                       |                                                                                                                                           | Au, 1.0 mil              | Cu, 1.0 mil                            |                                     |                       |
| Mount Compound                                                                                                                                                                        |                                                                                                                                           | SID#0003C10332           | 8095733                                |                                     |                       |
| Lead finish                                                                                                                                                                           |                                                                                                                                           | NiPdAu                   | Matte Sn                               |                                     |                       |

**Group 5 (DFAB8 qualification plus CDAT as additional Assembly site)BOM Table**

|                                    | LEN            | CDAT        |
|------------------------------------|----------------|-------------|
| Mold Compound                      | SID#0011G60007 | 4222198     |
| Bond wire composition,<br>diameter | Au, 1.0 mil    | Cu, 1.0 mil |
| Mount Compound                     | SID#0003C10332 | 4207123     |
| Lead finish                        | NiPdAu         | Matte Sn    |

Upon expiry of this PCN, there will be a transition period where TI will combine lead free solutions in a single [standard part number](#). For example; [TLV2381IDBVT](#) – can ship with both Matte Sn and NiPdAu.

Example:

- Customer order for 7500 units of TLV2381IDBVT with 2500 units SPQ (Standard Pack Quantity per Reel).
- TI can satisfy the above order in one of the following ways.
  - I. 3 Reels of NiPdAu finish.
  - II. 3 Reels of Matte Sn finish
  - III. 2 Reels of Matte Sn and 1 reel of NiPdAu finish.
  - IV. 2 Reels of NiPdAu and 1 reel of Matte Sn finish.

Qual details are provided in the Qual Data Section.

**Reason for Change:**

These changes are part of our multiyear plan to transition products from our 150-milimeter factories to newer, more efficient manufacturing processes and technologies, underscoring our commitment to product longevity and 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                                     |
|-----------------------------------------------|-----------------------------------------------|-----------------------------------------------|-----------------------------------------------|
| <input checked="" type="checkbox"/> No Change | <input checked="" type="checkbox"/> No Change | <input checked="" type="checkbox"/> No Change | <input checked="" type="checkbox"/> No Change |

**Changes to product identification resulting from this PCN:****Fab Site Information:**

| Chip Site     | Chip Site Origin Code (20L) | Chip Site Country Code (21L) | Chip Site City |
|---------------|-----------------------------|------------------------------|----------------|
| DL-LIN        | DLN                         | USA                          | Dallas         |
| <b>DL-LIN</b> | <b>DLN</b>                  | <b>USA</b>                   | <b>Dallas</b>  |

**Assembly Site Information:**

| Assembly Site | Assembly Site Origin (22L) | Assembly Country Code (23L) | Assembly City  |
|---------------|----------------------------|-----------------------------|----------------|
| LEN           | LIN                        | TWN                         | Taichung       |
| <b>CDAT</b>   | <b>CDA</b>                 | <b>CHN</b>                  | <b>Chengdu</b> |

| TIPI                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | PHI | PHL | Baguio City |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-----|-------------|
| Sample product shipping label (not actual product label)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |     |     |             |
|  <b>TEXAS INSTRUMENTS</b><br>MADE IN: Malaysia<br>2DC: 20:<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>  <div> (1P) <b>SN74LS07NSR</b><br/> (Q) <b>2000</b> (D) <b>0336</b><br/> (31T) LOT: 3959047MLA<br/> (4W) TKY (1T) 7523483SI2<br/> (P)<br/> (2P) REV: (V) 8833317<br/> (20L) CS0: SHE (21L) CCO:USA<br/> (22L) AS0: MLA (23L) ACO: MYS </div> |     |     |             |

| Product Affected:                              |               |                |                 |
|------------------------------------------------|---------------|----------------|-----------------|
| Group 1 Device list (DFAB8 qualification only) |               |                |                 |
| MAX3238CPWR                                    | TLV2461AIDR   | TPS3305-18D    | TPS76815QD      |
| MAX3238IDBR                                    | TLV2461CD     | TPS3305-18DGN  | TPS76815QDR     |
| MAX3238IPWR                                    | TLV2461CDBVR  | TPS3305-18DGNR | TPS76815QPWP    |
| SN0806054PWPR                                  | TLV2461CDBVT  | TPS3305-18DR   | TPS76815QPWPR   |
| SN1002026YS                                    | TLV2461CDR    | TPS3305-25D    | TPS76818QD      |
| SN1006055YS                                    | TLV2461CP     | TPS3305-25DGN  | TPS76818QDR     |
| SN1311018YS                                    | TLV2461IDBVR  | TPS3305-25DGNR | TPS76818QPWP    |
| SN1401036PWPR                                  | TLV2461IDBVT  | TPS3305-25DR   | TPS76818QPWPR   |
| SN1402014YS                                    | TLV2461IDR    | TPS3305-33D    | TPS76825QD      |
| SN1407001PWPR                                  | TLV2462IP     | TPS3305-33DGN  | TPS76825QDR     |
| SN40057PWPR                                    | TLV2470AID    | TPS3305-33DGNR | TPS76825QPWP    |
| SN65HVD231DR                                   | TLV2470CDBVR  | TPS3305-33DR   | TPS76825QPWPR   |
| SN65HVD231DRG4                                 | TLV2470ID     | TPS3306-15D    | TPS76827QD      |
| SN65HVD232DR                                   | TLV2470IDBVR  | TPS3306-15DGK  | TPS76828QD      |
| SN65HVD232DRG4                                 | TLV2470IDBVT  | TPS3306-15DGKR | TPS76830QD      |
| SN65HVD233DR                                   | TLV2470IDR    | TPS3306-15DR   | TPS76830QPWP    |
| SN65HVD233DRG4                                 | TLV2471AID    | TPS3306-18D    | TPS76833QD      |
| SN65HVD233MDREP                                | TLV2471AIDR   | TPS3306-18DGK  | TPS76833QDR     |
| SN65HVD235DR                                   | TLV2471CD     | TPS3306-18DGKR | TPS76833QPWP    |
| TLC070CDR                                      | TLV2471CDR    | TPS3306-18DR   | TPS76833QPWPG4  |
| TLC070IDR                                      | TLV2471ID     | TPS3306-25D    | TPS76833QPWPR   |
| TLC070IP                                       | TLV2472AID    | TPS3306-25DGK  | TPS76833QPWPRG4 |
| TLC071AID                                      | TLV2472AIDG4  | TPS3306-25DGKR | TPS76850QD      |
| TLC071CD                                       | TLV2472AIDR   | TPS3306-25DR   | TPS76850QDG4    |
| TLC071CDG4                                     | TLV2472AIP    | TPS3306-33D    | TPS76850QDR     |
| TLC071CDGN                                     | TLV2472CDGN   | TPS3306-33DGK  | TPS77501D       |
| TLC071CDGNR                                    | TLV2472CDGNR  | TPS3306-33DGKR | TPS77501DR      |
| TLC071CDR                                      | TLV2472CDR    | TPS3306-33DR   | TPS77501PWP     |
| TLC071IDGNR                                    | TLV2472ID     | TPS3307-18D    | TPS77501PWPR    |
| TLC071IDR                                      | TLV2472IDGN   | TPS3307-18DGN  | TPS77515D       |
| TLC072CDGN                                     | TLV2472IDGNG4 | TPS3307-18DGNR | TPS77515DG4     |
| TLC072CP                                       | TLV2472IDGNR  | TPS3307-18DR   | TPS77515DR      |
| TLC072IDGN                                     | TLV2472IDR    | TPS3307-25D    | TPS77515PWP     |

|                |                |                |               |
|----------------|----------------|----------------|---------------|
| TLC073CDGQ     | TLV2472IP      | TPS3307-25DGN  | TPS77515PWPR  |
| TLC073IDGQ     | TLV2473AIDR    | TPS3307-25DGNR | TPS77516D     |
| TLC073IDGQR    | TLV2473CDGQR   | TPS3307-25DR   | TPS77516DG4   |
| TLC080AIDR     | TLV2473CDR     | TPS3307-33D    | TPS77516DR    |
| TLC080AIP      | TLV2473IDGQR   | TPS3307-33DGN  | TPS77516PWP   |
| TLC080CDGNR    | TLV2474AIPWR   | TPS3307-33DGNR | TPS77516PWPR  |
| TLC080CDGNRG4  | TLV2475AIPWP   | TPS3307-33DR   | TPS77518D     |
| TLC080CDR      | TLV2475AIPWPR  | TPS3600D25PW   | TPS77518DR    |
| TLC080IDGNR    | TLV2475CPWPR   | TPS3600D33PW   | TPS77518PWP   |
| TLC080IDR      | TLV2475IPWPR   | TPS3600D33PWR  | TPS77518PWPR  |
| TLC081AIDR     | TLV272CD       | TPS3600D50PW   | TPS77525D     |
| TLC081AIP      | TLV272CDG4     | TPS3613-01DGS  | TPS77525DR    |
| TLC081CD       | TLV272IP       | TPS3613-01DGSR | TPS77525PWP   |
| TLC081CDGNR    | TLV27L1IDR     | TPS3707-25D    | TPS77533D     |
| TLC081CDR      | TLV4112IDGNR   | TPS3707-25DGN  | TPS77533DR    |
| TLC081ID       | TLV4112IDR     | TPS3707-25DGNR | TPS77533PWP   |
| TLC081IDGNR    | TLV6003DBVR    | TPS3707-25DR   | TPS77533PWPR  |
| TLC081IDR      | TPA2001D1PW    | TPS3707-30D    | TPS77601D     |
| TLC082CDGN     | TPA2001D1PWR   | TPS3707-30DGN  | TPS77601DG4   |
| TLC082CDGNR    | TPA2001D1PWRG4 | TPS3707-30DGNR | TPS77601DR    |
| TLC082IDGN     | TPA301D        | TPS3707-30DR   | TPS77601DRG4  |
| TLC082IDGNR    | TPA301DGN      | TPS3707-33D    | TPS77601PWP   |
| TLC2262QDR     | TPA301DGNR     | TPS3707-33DGN  | TPS77601PWPR  |
| TLV2241IDBVR   | TPA301DR       | TPS3707-33DGNR | TPS77618D     |
| TLV2241IDBVT   | TPS2010AD      | TPS3707-33DR   | TPS77618DR    |
| TLV2241IDR     | TPS2010ADR     | TPS3707-50D    | TPS77618PWP   |
| TLV2242ID      | TPS2011AD      | TPS3707-50DGN  | TPS77618PWPR  |
| TLV2242IDGK    | TPS2011ADR     | TPS3707-50DGNR | TPS77625D     |
| TLV2242IDGKR   | TPS2011ADRG4   | TPS3707-50DR   | TPS77625DG4   |
| TLV2242IDGKRG4 | TPS2012AD      | TPS3801-01DCKR | TPS77625DR    |
| TLV2242IDR     | TPS2012ADG4    | TPS3801E18DCKR | TPS77625DRG4  |
| TLV2244IDR     | TPS2012ADR     | TPS3801I50DCKR | TPS77625PWP   |
| TLV2244IPW     | TPS2013AD      | TPS3801J25DCKR | TPS77633D     |
| TLV2244IPWR    | TPS2013ADR     | TPS3801K33DCKR | TPS77633DG4   |
| TLV2373IDGS    | TPS2020D       | TPS3801L30DCKR | TPS77633DR    |
| TLV2373IDGSR   | TPS2020DR      | TPS3801T50DCKR | TPS77633DRG4  |
| TLV2373IDGSRG4 | TPS2021D       | TPS3802K33DCKR | TPS77633PWP   |
| TLV2375ID      | TPS2021DG4     | TPS3802L30DCKR | TPS77633PWPR  |
| TLV2375IDR     | TPS2021DR      | TPS3836E18DBVR | TPS77701D     |
| TLV2375IPW     | TPS2021DRG4    | TPS3836E18DBVT | TPS77701DR    |
| TLV2381ID      | TPS2021P       | TPS3836H30DBVR | TPS77715D     |
| TLV2381IDR     | TPS2022D       | TPS3836H30DBVT | TPS77715DR    |
| TLV2401CDBVR   | TPS2022DG4     | TPS3836J25DBVR | TPS77715PWP   |
| TLV2401CDBVT   | TPS2022DR      | TPS3836J25DBVT | TPS77715PWPG4 |
| TLV2401CDR     | TPS2023D       | TPS3836K33DBVR | TPS77718D     |
| TLV2401ID      | TPS2023DR      | TPS3836K33DBVT | TPS77718DR    |
| TLV2401IDBVR   | TPS2023P       | TPS3836L30DBVR | TPS77718PWP   |
| TLV2401IDBVT   | TPS2024D       | TPS3836L30DBVT | TPS77718PWPG4 |

|                |             |                  |                |
|----------------|-------------|------------------|----------------|
| TLV2401IDBVTG4 | TPS2024DR   | TPS3837E18DBVT   | TPS77718PWPR   |
| TLV2401IDR     | TPS2024DRG4 | TPS3837J25DBVR   | TPS77725D      |
| TLV2402CDGKR   | TPS2024P    | TPS3837J25DBVT   | TPS77725PWP    |
| TLV2402CDR     | TPS2030D    | TPS40055PWP      | TPS77725PWPR   |
| TLV2402ID      | TPS2030DR   | TPS40055PWPG4    | TPS77733D      |
| TLV2402IDG4    | TPS2030P    | TPS40055PWPR     | TPS77733DR     |
| TLV2402IDGK    | TPS2031D    | TPS40055PWPRG4   | TPS77733PWP    |
| TLV2402IDGKR   | TPS2031DG4  | TPS40057ZPWPR    | TPS77733PWPR   |
| TLV2402IDR     | TPS2031DR   | TPS54010PWP      | TPS77801D      |
| TLV2402IDRG4   | TPS2031DRG4 | TPS54010PWPG4    | TPS77801DG4    |
| TLV2404CPW     | TPS2031P    | TPS54010PWPR     | TPS77801DR     |
| TLV2404CPWR    | TPS2032D    | TPS54010PWPRG4   | TPS77801PWP    |
| TLV2404ID      | TPS2032DR   | TPS76701QD       | TPS77801PWPG4  |
| TLV2404IDR     | TPS2033D    | TPS76701QDR      | TPS77801PWPR   |
| TLV2404IPW     | TPS2033DR   | TPS76701QPWP     | TPS77801PWPRG4 |
| TLV2404IPWR    | TPS2034D    | TPS76701QPWPG4   | TPS77815D      |
| TLV2450AIDR    | TPS2034DG4  | TPS76701QPWPR    | TPS77815DR     |
| TLV2450ID      | TPS2034DR   | TPS76701QPWPRG4  | TPS77815PWP    |
| TLV2451AIDR    | TPS2034P    | TPS76715QD       | TPS77815PWPG4  |
| TLV2451CD      | TPS2080D    | TPS76715QDR      | TPS77815PWPR   |
| TLV2451CDG4    | TPS2080DG4  | TPS76715QPWP     | TPS77818D      |
| TLV2451CDR     | TPS2080DR   | TPS76718QD       | TPS77818PWP    |
| TLV2451IDR     | TPS2081D    | TPS76718QDR      | TPS77818PWPG4  |
| TLV2451IP      | TPS2082D    | TPS76718QPWP     | TPS77818PWPR   |
| TLV2452AID     | TPS2082DR   | TPS76718QPWPR    | TPS77825D      |
| TLV2452AIDR    | TPS2085D    | TPS76725QD       | TPS77825DR     |
| TLV2452CD      | TPS2085DR   | TPS76725QPWP     | TPS77825PWP    |
| TLV2452CDGK    | TPS2087D    | TPS76725QPWPG4   | TPS77825PWPR   |
| TLV2452CDGKR   | TPS2087DR   | TPS76725QPWPR    | TPS77833D      |
| TLV2452CDR     | TPS2090D    | TPS76727QD       | TPS77833DR     |
| TLV2452ID      | TPS2090DR   | TPS76727QPWP     | TPS77833PWP    |
| TLV2452IDGK    | TPS2092D    | TPS76728QD       | TPS77833PWPR   |
| TLV2452IDGKR   | TPS2092DR   | TPS76730QD       | UCC28051D      |
| TLV2452IDGKRG4 | TPS2095D    | TPS76730QPWP     | UCC28051DG4    |
| TLV2452IDR     | TPS2095DR   | TPS76730QPWPG4   | UCC28051DR     |
| TLV2453CDGSR   | TPS2097D    | TPS76730QPWPR    | UCC28051DRG4   |
| TLV2453CDR     | TPS2300IPW  | TPS76733QD       | UCC28089D      |
| TLV2453IDGSR   | TPS2300IPWR | TPS76733QDR      | UCC28089DR     |
| TLV2454AID     | TPS2301IPW  | TPS76733QPWP     | UCC28220D      |
| TLV2454AIDR    | TPS2301IPWR | TPS76733QPWPG4   | UCC28220DR     |
| TLV2454AIN     | TPS2320IDR  | TPS76733QPWPR    | UCC28512DW     |
| TLV2454AIPWR   | TPS2320IPW  | TPS76733QPWPRG4  | UCC28512DWG4   |
| TLV2454CN      | TPS2320IPWR | TPS76750QD       | UCC28512DWR    |
| TLV2454CPW     | TPS2321IPW  | TPS76750QDR      | UCC28810D      |
| TLV2454CPWR    | TPS2321IPWR | TPS767D301PWP    | UCC28810DG4    |
| TLV2454ID      | TPS2330ID   | TPS767D301PWPG4  | UCC28810DR     |
| TLV2454IDR     | TPS2330IDR  | TPS767D301PWPR   | UCC28810DRG4   |
| TLV2454IN      | TPS2330IPW  | TPS767D301PWPRG4 | UCC28811D      |



|                |               |                 |                |
|----------------|---------------|-----------------|----------------|
| TLV2454IPW     | TPS2330IPWG4  | TPS767D318PWP   | UCC28811DR     |
| TLV2454IPWR    | TPS2330IPWR   | TPS767D318PWPG4 | UCC2891D       |
| TLV2455AIPWR   | TPS2330IPWRG4 | TPS767D318PWPR  | UCC2891DG4     |
| TLV2455IDR     | TPS2331ID     | TPS767D325PWP   | UCC2891DR      |
| TLV2455IPW     | TPS2331IDR    | TPS767D325PWPR  | UCC2891DRG4    |
| TLV2460CD      | TPS2331IPW    | TPS76801QD      | UCC2893D       |
| TLV2460CDBVR   | TPS2331IPWR   | TPS76801QDR     | UCC2893DR      |
| TLV2460CDBVT   | TPS2350D      | TPS76801QDRG4   | V62/09611-01XE |
| TLV2460CDBVTG4 | TPS2350DR     | TPS76801QPWP    | XTR300AIRGWR   |
| TLV2460CDR     | TPS2350PW     | TPS76801QPWPG4  | XTR300AIRGWT   |
| TLV2460IDBVR   | TPS2350PWG4   | TPS76801QPWPR   | XTR300AIRGWTG4 |
| TLV2460IDBVT   | TPS2350PWR    | TPS76801QPWPRG4 | XTR305IRGWR    |

#### Group 2 Device list (DFAB8 qualification plus Bond wire change)

|               |               |
|---------------|---------------|
| TPS76750QPWP  | TPS76850QPWP  |
| TPS76750QPWPR | TPS76850QPWPR |

#### Group 2A Device list (DFAB8 qualification plus Bond wire change)

|            |               |
|------------|---------------|
| UCC2893PW  | UCC2893PW RG4 |
| UCC2893PWR |               |

#### Group 3 Device list (DFAB8 qualification plus BOM changes)

|             |              |
|-------------|--------------|
| TPS77701PWP | TPS77701PWPR |
|-------------|--------------|

#### Group 4 Device list (DFAB8 qualification plus PHI as additional site)

|              |              |              |
|--------------|--------------|--------------|
| TLV2450CDBVR | TLV2450IDBVR | TLV2450IDBVT |
|--------------|--------------|--------------|

#### Group 5 Device list (DFAB8 qualification plus CDAT as additional Assembly site)

|              |              |              |              |
|--------------|--------------|--------------|--------------|
| TLV2381IDBVR | TLV2451IDBVR | TLV2471IDBVR | TLV27L1CDBVT |
| TLV2381IDBVT | TLV2451IDBVT | TLV2471IDBVT | TLV27L1IDBVR |
| TLV2451CDBVR | TLV2471CDBVR | TLV27L1CDBVR | TLV27L1IDBVT |
| TLV2451CDBVT | TLV2471CDBVT |              |              |

For alternate parts with similar or improved performance, please visit the product page on [TI.com](http://TI.com)

## Qualification Results

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

| Type | Test Name / Condition            | Duration                    | Qual Device:<br>TLV2401QDBVRQ1 | QBS Process<br>Reference:<br>MAX3243IPWG4DL |
|------|----------------------------------|-----------------------------|--------------------------------|---------------------------------------------|
| HAST | Biased HAST, 130C/85%RH          | 96 Hours                    | 3/231/0                        | 3/231/0                                     |
| AC   | Autoclave 121C                   | 96 Hours                    | 3/231/0                        | 3/231/0                                     |
| TC   | Temperature Cycle, -<br>65/150C  | 500 Cycles                  | 3/231/0                        | 3/231/0                                     |
| HTSL | High Temp Storage Bake<br>150C   | 1000 Hours                  | -                              | 3/231/0                                     |
| HTSL | High Temp Storage Bake<br>175C   | 500 Hours                   | 3/135/0                        | -                                           |
| HTOL | Life Test, 150C                  | 408 Hours                   | 3/231/0                        | 3/231/0                                     |
| ELFR | Early Life Failure Rate,<br>125C | 48 Hours                    | -                              | 3/2400/0                                    |
| HBM  | ESD - HBM - Q100                 | 500 V                       | 1/3/0                          | -                                           |
| CDM  | ESD - CDM - Q100                 | 1500 V                      | 1/3/0                          | -                                           |
| LU   | Latch-up                         | (per JESD78)                | 1/6/0                          | -                                           |
| ED   | Electrical Characterization      | Per Datasheet<br>parameters | 3/90/0                         | -                                           |

- QBS: Qual by Similarity

- Qual Device TLV2401QDBVRQ1 is qualified at LEVEL1-260C

**A1 (PC): Preconditioning:**

Performed for THB, Biased HAST, AC, uHAST, TC & PTC samples, as applicable.

**Ambient Operating Temperature by Automotive Grade Level:**

Grade 0 (or E): -40°C to +150°C

Grade 1 (or Q): -40°C to +125°C

Grade 2 (or T): -40°C to +105°C

Grade 3 (or L): -40°C to +85°C

**E1 (TEST): Electrical test temperatures of Qual samples (High temperature according to Grade level):**

Room/Hot/Cold: HTOL, ED

Room/Hot: THB / HAST, TC / PTC, HTSL, ELFR, ESD & LU

Room: AC/uHAST

**Green/Pb-free Status:**

Qualified Pb-Free(SMT) and Green

Change Number: NA

TI Qualification ID: 20190124-128331

## Qualification Results

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

| Type  | Test Name / Condition                               | Duration                       | Qual Device:<br>ALM2402QPWPRQ1 | QBS Process Reference:<br>TPS51604QDSGQ1 |
|-------|-----------------------------------------------------|--------------------------------|--------------------------------|------------------------------------------|
| HAST  | Biased HAST, 130C/85%RH                             | 96 Hours                       | 3/231/0                        | 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                                  |
| TC-BP | Post Temp Cycle Bond Pull                           | per MIL-STD 883<br>Method 2011 | 1/30/0                         | 1/30/0                                   |
| PTC   | Power Temperature Cycle, -40/125C                   | 1000 Cycles                    | 1/45/0                         | -                                        |
| HTSL  | High Temp. Storage Bake, 150C                       | 1000 Hours                     | -                              | 3/135/0                                  |
| HTSL  | High Temp. Storage Bake, 175C                       | 500 hours                      | 1/45/0                         | -                                        |
| HTOL  | Life Test, 125C                                     | 1000 Hours                     | -                              | 3/231/0                                  |
| HTOL  | Life Test, 150C                                     | 300 Hours                      | 3/231/0                        | -                                        |
| ELFR  | Early Life Failure Rate, 125C                       | 48 Hours                       | -                              | 3/2400/0                                 |
| EDR   | NVM Endurance, Data Retention, and Operational Life | -                              | N/A                            | -                                        |
| WBS   | Bond Shear (Cpk>1.67)                               | Wires                          | 3/90/0                         | 1/30/0                                   |
| WBP   | Bond Pull (Cpk>1.67)                                | Wires                          | 3/90/0                         | 1/30/0                                   |
| SD    | Surface Mount Solderability                         | Pb-Free                        | 3/45/0                         | 1/30/0                                   |
| SD    | Surface Mount Solderability                         | Pb                             | 3/45/0                         | -                                        |
| PD    | Physical Dimensions (Cpk>1.67)                      | --                             | 3/30/0                         | 3/30/0                                   |
| HBM   | ESD - HBM                                           | 2000 V                         | 1/3/0                          | 1/3/0                                    |
| CDM   | ESD - CDM                                           | 250 V                          | 1/3/0                          | 1/3/0                                    |
| LU    | Latch-up                                            | (Per AEC Q100-004)             | 1/6/0                          | 1/12/0                                   |
| ED    | Electrical Distributions                            | Cpk>1.67                       | 3/90/0                         | 3/90/0                                   |

- Qual Device ALM2402QPWPRQ1 is qualified at LEVEL3-260C  
- QBS: Qual By Similarity

### A1 (PC): Preconditioning:

Performed for THB, Biased HAST, AC, uHAST & TC samples, as applicable.

### Junction Operating Temperature by Automotive Grade Level:

Grade 0 (or E): -40°C to +150°C

Grade 1 (or Q): -40°C to +125°C

Grade 2 (or T): -40°C to +105°C

Grade 3 (or I): -40°C to +85°C

### E1 (TEST): Electrical test temperatures of Qual samples (High temperature according to Grade level):

Room/Hot/Cold: HTOL, ED

Room/Hot: THB / HAST, TC / PTC, HTSL, ELFR, ESD & LU

Room: AC/uHAST

### Green/Pb-free Status:

Qualified Pb-Free(SMT) and Green

Note (1): One continuity failure due to mishandling – discounted.

TI Qualification ID: 20150211-111605

### Qualification Results

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

| Type | Test Name / Condition         | Duration                 | Qual Device:<br>SN65HVDA1040AQDRQ1 |
|------|-------------------------------|--------------------------|------------------------------------|
| HAST | Biased HAST, 130C/85%RH       | 96 Hours                 | 3/231/0                            |
| AC   | Autoclave 121C                | 96 Hours                 | 3/231/0                            |
| TC   | Temperature Cycle, -65/150C   | 500 Cycles               | 3/231/0                            |
| HTSL | High Temp Storage Bake 150C   | 1000 Hours               | 3/135/0                            |
| HTOL | Life Test, 125C               | 1000 Hours               | 3/231/0                            |
| ELFR | Early Life Failure Rate, 125C | 48 Hours                 | 3/2400/0                           |
| HBM  | ESD - HBM                     | 4000 V                   | 1/3/0                              |
| HBM  | ESD - HBM (Pin 5)             | 10000 V                  | 1/3/0                              |
| HBM  | ESD - HBM (Pin 6 & 7)         | 12000 V                  | 1/3/0                              |
| CDM  | ESD - CDM                     | 1500 V                   | 1/3/0                              |
| LU   | Latch-up                      | (per JESD78)             | 1/6/0                              |
| ED   | Electrical Distributions      | Per Datasheet parameters | 3/90/0                             |

- QBS: Qual by Similarity

- Qual Devices SN65HVDA1040AQDRQ1 (MLA) and SN65HVDA1040AQDRQ1 (TAI) are qualified at LEVEL1-260C

#### A1 (PC): Preconditioning:

Performed for THB, Biased HAST, AC, uHAST, TC & PTC samples, as applicable.

#### Ambient Operating Temperature by Automotive Grade Level:

Grade 0 (or E): -40°C to +150°C

Grade 1 (or Q): -40°C to +125°C

Grade 2 (or T): -40°C to +105°C

Grade 3 (or I): -40°C to +85°C

#### E1 (TEST): Electrical test temperatures of Qual samples (High temperature according to Grade level):

Room/Hot/Cold: HTOL, ED

Room/Hot: THB / HAST, TC / PTC, HTSL, ELFR, ESD & LU

Room: AC/uHAST

#### Green/Pb-free Status:

Qualified Pb-Free(SMT) and Green

TI Qualification ID: 20170424-121679

## Qualification Results

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

| Type   | Test Name / Condition       | Duration                          | Qual Device:<br><u>3840PH30DBVRQ1</u> |
|--------|-----------------------------|-----------------------------------|---------------------------------------|
| PC     | Preconditioning             | Level 1-260C                      | No Fails                              |
| HAST   | Biased HAST, 130C/85%RH     | 96 Hours                          | 3/231/0                               |
| UHAST  | Unbiased HAST 130C/85%RH    | 96 Hours                          | 3/231/0                               |
| TC     | Temperature Cycle, -65/150C | 500 Cycles                        | 3/231/0                               |
| TC-WBP | Post Temp Cycle Bond Pull   | Wires                             | 3/108/0                               |
| PTC    | Power Temperature Cycle     | 1000 Cycles                       | N/A                                   |
| HTSL   | High Temp Storage Bake 150C | 1000 Hours                        | 3/231/0                               |
| HTOL   | Life Test, 125C             | 1000 Hours                        | 3/231/0                               |
| WBS    | Wire Bond Shear, Cpk>1.67   | Wires                             | 3/90/0                                |
| WBP    | Bond Pull, Cpk>1.67         | Wires                             | 3/90/0                                |
| SD     | Surface Mount Solderability | Pb Free Solder                    | 3/45/0                                |
| SD     | Surface Mount Solderability | Pb Solder                         | 3/45/0                                |
| PD     | Physical Dimensions         | Cpk>1.67                          | 3/30/0                                |
| LI     | Lead Fatigue                | Leads                             | 3/66/0                                |
| LI     | Lead Pull to Destruction    | Leads                             | 3/66/0                                |
| ED     | Electrical Distributions    | Cpk>1.67 Room, hot, and cold test | 3/90/0                                |

- QBS: Qual By Similarity

- Qual Device 3840PH30DBVRQ1 is qualified at LEVEL1-260CG

### A1 (PC): Preconditioning:

Performed for THB, Biased HAST, AC, uHAST, TC & PTC samples, as applicable.

### Ambient Operating Temperature by Automotive Grade Level:

Grade 0 (or E): -40°C to +150°C

Grade 1 (or Q): -40°C to +125°C

Grade 2 (or T): -40°C to +105°C

Grade 3 (or I): -40°C to +85°C

### E1 (TEST): Electrical test temperatures of Qual samples (High temperature according to Grade level):

Room/Hot/Cold: HTOL, ED

Room/Hot: THB / HAST, TC / PTC, HTSL, ELFR, ESD & LU

Room: AC/uHAST

### Green/Pb-free Status:

Qualified Pb-Free(SMT) and Green

Change Number: C2004431

TI Qualification ID: 20201126-137339

### Qualification Results

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

| Type       | Test Name / Condition            | Duration            | Qual Device:<br><u>SN3257QPWRQ1</u> | QBS Process<br>Reference:<br><u>SN3257QDYYRQ1</u> |
|------------|----------------------------------|---------------------|-------------------------------------|---------------------------------------------------|
| PC         | Preconditioning                  | Level 1-260C        | No Fails                            | -                                                 |
| HAST       | Biased HAST,<br>130C/85%RH       | 96 Hours            | 3/231/0                             | -                                                 |
| AC         | Autoclave 121C                   | 96 Hours            | 3/231/0                             | -                                                 |
| TC         | Temperature Cycle, -<br>55/150C  | 1000 Cycles         | 3/231/0                             | -                                                 |
| TC-<br>WBP | Bond Pull Post Temp<br>Cycle     | Wires               | 1/60/0                              | -                                                 |
| HTSL       | High Temp Storage<br>Bake 175C   | 500 Hours           | 3/135/0                             | -                                                 |
| HTOL       | Life Test, 150C                  | 300 Hours           | 3/231/0                             | 3/231/0                                           |
| ELFR       | Early Life Failure Rate,<br>150C | 24 Hours            | -                                   | 3/2400/0                                          |
| WBS        | Wire Bond Shear, Cpk<br>>1.67    | Wires               | 3/90/0                              | -                                                 |
| WBP        | Bond Pull, Cpk >1.67             | Wires               | 3/90/0                              | -                                                 |
| SD         | Surface Mount<br>Solderability   | PB Solder           | 1/15/0                              | -                                                 |
| SD         | Surface Mount<br>Solderability   | Pb Free<br>Solder   | 1/15/0                              | -                                                 |
| PD         | Physical Dimensions              | Cpk>1.67            | 3/30/0                              | -                                                 |
| HBM        | ESD - HBM                        | 5000 V              | 1/3/0                               | -                                                 |
| CDM        | ESD - CDM                        | 2000 V              | 1/3/0                               | -                                                 |
| LU         | Latch-up                         | Per AEC<br>Q100-004 | 1/6/0                               | -                                                 |
| ED         | Electrical Distributions         | Cpk >1.67           | 3/90/0                              | -                                                 |

- QBS: Qual By Similarity

- Qual Device SN3257QPWRQ1 is qualified at LEVEL1-260C

#### **A1 (PC): Preconditioning:**

Performed for THB, Biased HAST, AC, uHAST, TC & PTC samples, as applicable.

#### **E1 (TEST): Electrical test temperatures of Qual samples (High temperature according to Grade level):**

Room/Hot/Cold: HTOL, ED

Room/Hot: THB / HAST, TC / PTC, HTSL, ELFR, ESD & LU

Room: AC/uHAST

#### **Green/Pb-free Status:**

Qualified Pb-Free(SMT) and Green

TI Qualification ID: 20190311-128972

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

| Type | Test Name / Condition         | Duration                      | Qual Device:<br>TLV3401IDBVT | QBS Product Reference :<br>TLV2241D | QBS Package Reference :<br>TPS76933DBVR |
|------|-------------------------------|-------------------------------|------------------------------|-------------------------------------|-----------------------------------------|
| AC   | Autoclave 121C                | 96 Hours                      | -                            | -                                   | 3/231/0                                 |
| ED   | Electrical Characterization   | Per Datasheet Parameters      | 1/Pass                       | -                                   | -                                       |
| HAST | Biased HAST, 110C/85%RH       | 96 Hours                      | -                            | -                                   | 3/231/0                                 |
| HTOL | Life Test, 155C               | 240 Hours                     | -                            | 1/77/0                              | -                                       |
| HTSL | High Temp. Storage Bake, 170C | 420 Hours                     | -                            | -                                   | 3/231/0                                 |
| HBM  | ESD-HBM                       | 2000 V                        | 1/3/0                        | -                                   | -                                       |
| TC   | Temperature Cycle, -65/150C   | 500 Cycles                    | -                            | -                                   | 3/231/0                                 |
| MQ   | Manufacturability (Assembly)  | (per mfg. Site specification) | 1/Pass                       | -                                   | -                                       |
| MQ   | Test MQ                       | (per specification)           | Pass                         | -                                   | -                                       |
| YLD  | Yield Evaluation              | (per mfg. Site specification) | Pass                         | -                                   | -                                       |

- QBS: Qual By Similarity

- Qual Device TLV3401IDBVT 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

Change Number: C1811100

TI Qualification ID: 20181113-127568

For questions regarding this notice, e-mails can be sent to the Change Management team or your local Field Sales Representative.

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