



12500 TI Boulevard, MS 8640, Dallas, Texas 75243

**PCN# 20221031002.1**

**Qualification of new Fab site (RFAB) using qualified Process Technology, Die Revision, Datasheet update and additional Assembly site option for select devices  
Change Notification / Sample Request**

**Date:** November 01, 2022

**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 of the 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 PCN Team ([PCN\\_admin\\_team@list.ti.com](mailto:PCN_admin_team@list.ti.com)). For sample requests or sample related questions, contact your local Field Sales Representative. As always, we thank you for your continued business.

PCN Team  
SC Business Services


**20221031002.1**  
**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.

| <b>DEVICE</b> | <b>CUSTOMER PART NUMBER</b> |
|---------------|-----------------------------|
| MAX3243EIDBR  | null                        |
| MAX3243CPWRG4 | null                        |
| MAX3243ECPWR  | null                        |
| MAX3243EIPWR  | null                        |
| MAX3243IPWR   | null                        |
| TRS3243EIPWR  | null                        |
| MAX3243CDBR   | null                        |
| MAX3243CPWR   | null                        |
| TRS3243ECDBR  | null                        |
| MAX3243IDBR   | null                        |
| TRS3243ECPWR  | null                        |
| MAX3243EIRHBR | null                        |
| SN75C3243PWR  | null                        |
| SN75C3243DBR  | null                        |
| MAX3243ECDBR  | null                        |
| TRSF3243IPWR  | null                        |

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

|   |  |                                     |   |                                     |                          |
|---|--|-------------------------------------|---|-------------------------------------|--------------------------|
| <b>PCN Number:</b>  | 20221031002.1  |                                     | <b>PCN Date:</b>  | November 01, 2022                   |                          |
| <b>Title:</b>   | Qualification of new Fab site (RFAB) using qualified Process Technology, Die Revision, Datasheet update and additional Assembly site option for select devices |                                     |   |                                     |                          |
| <b>Customer Contact:</b>  | <a href="#">PCN Manager</a>  |                                     | <b>Dept:</b>  | Quality Services                    |                          |
| <b>Proposed 1<sup>st</sup> Ship Date:</b>   | Jan 31, 2023   |                                     | <b>Sample requests accepted until:</b>                          | Nov 30, 2022*                       |                          |
| <b>*Sample requests received after November 30, 2022 will not be supported.</b>   |  |                                     |   |                                     |                          |
| <b>Change Type:</b>   |  |                                     |   |                                     |                          |
| <input checked="" type="checkbox"/>   | Assembly Site  | <input type="checkbox"/>            | Assembly Process  | <input checked="" type="checkbox"/> | Assembly Materials       |
| <input checked="" type="checkbox"/>   | Design   | <input checked="" type="checkbox"/> | Electrical Specification  | <input type="checkbox"/>            | Mechanical Specification |
| <input type="checkbox"/>  | Test Site  | <input checked="" type="checkbox"/> | Packing/Shipping/Labeling                                       | <input type="checkbox"/>            | Test Process             |
| <input type="checkbox"/>  | Wafer Bump Site  | <input type="checkbox"/>            | Wafer Bump Material   | <input type="checkbox"/>            | Wafer Bump Process       |
| <input checked="" type="checkbox"/>   | Wafer Fab Site   | <input checked="" type="checkbox"/> | Wafer Fab Materials   | <input checked="" type="checkbox"/> | Wafer Fab Process        |
|   |  | <input type="checkbox"/>            | Part number change  |                                     |                          |
| <b>PCN Details</b>  |  |                                     |   |                                     |                          |
| <b>Description of Change:</b>   |  |                                     |   |                                     |                          |
| Texas Instruments is pleased to announce the qualification of a new fab & process technology (RFAB, LBC7) and additional Assembly site (CDAT) for selected devices listed below in the product affected section.  |  |                                     |   |                                     |                          |
| <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  | 150 mm                              | RFAB  | LBC7                                | 300 mm                   |
| DL-LIN  | LBC3S  | 200 mm                              |   |                                     |                          |
| The die was also changed as a result of the process change.   |  |                                     |   |                                     |                          |
| Construction differences are as follows:  |  |                                     |   |                                     |                          |
| <b>Group 2 Devices (RFAB/Process migration &amp; CDAT as an alternate Assembly site):</b>   |  |                                     |   |                                     |                          |
|   |  | <b>MLA</b>                          | <b>CDAT</b>   |                                     |                          |
|   | Mold Compound  | 4208625                             | <a href="#">4222198</a>   |                                     |                          |
|   | Mount Compound   | 4205846                             | <a href="#">4207123</a>   |                                     |                          |
| The datasheets will be changing as a result of the above mentioned changes. The datasheet change details can be reviewed in the datasheet revision history. The links to the revised datasheets are available in the table below.   |  |                                     |   |                                     |                          |
|    |  |                                     | <b>MAX3243E</b><br>SLLS657E – APRIL 2005 – REVISED OCTOBER 2022 |                                     |                          |
| <b>Changes from Revision D (September 2011) to Revision E (October 2022)</b>  |  |                                     |   |                                     | <b>Page</b>              |
| <ul style="list-style-type: none"> <li>Added Device Information table, ESD Ratings, ESD Ratings - IEC Specifications, Thermal Information, Detailed Description, Power Supply Recommendations, Layout, Device and Documentation Support Mechanical, Packaging, and Orderable Information .....</li> </ul> |  |                                     |   |                                     | 1                        |
| Deleted Ordering Information table.....   |  |                                     |   |                                     | 1                        |
| Changed From: 250 kbit/s To: 500 kbit/s in the Description .....  |  |                                     |   |                                     | 1                        |
| Changed the I <sub>CC</sub> Supply current auto-powerdown disabled MAX value from 1 mA to 1.2 mA in the Electrical Characteristics .....  |  |                                     |   |                                     | 7                        |

| <b>Changes from Revision C (September 2011) to Revision D (October 2022)</b>  | <b>Page</b> |
|---|-------------|
| • Deleted the <i>Ordering Information</i> table.....  | 1           |
| • Added <i>Device Information</i> table, <i>Pin Configuration and Functions</i> section, <i>Feature Description</i> section, <i>Device Functional Modes</i> , <i>Application and Implementation</i> section, <i>Device and Documentation Support</i> section, and <i>Mechanical, Packaging, and Orderable Information</i> section. .... | 1           |
| • Changed the front page image from Block Diagram to Simplified Circuit.....  | 1           |
| • Added the <i>ESD Ratings - IEC Specifications</i> table.....  | 6           |
| • Changed the I <sub>CC</sub> Supply current auto-powerdown disabled MAX value from 1 mA to 1.2 mA in the <i>Electrical Characteristics</i> .....   | 8           |

| <b>Changes from Revision O (January 2015) to Revision P (October 2022)</b>   | <b>Page</b> |
|--|-------------|
| • Changed the <i>Thermal Information</i> table.....  | 5           |
| • Changed the MAX value of I <sub>CC</sub> Supply current auto-powerdown disabled from 1 mA to 1.2 mA in <i>Electrical Characteristics—Auto Power Down</i> ..... | 5           |

| <b>Changes from Revision H (September 2008) to Revision I (October 2022)</b>  | <b>Page</b> |
|---|-------------|
| • Added the <i>Device Information</i> table, <i>Pin Configuration and Functions</i> section, <i>ESD Ratings</i> table, <i>Thermal Information</i> table, <i>Detailed Description</i> section, <i>Device and Documentation Support</i> , and <i>Mechanical, Packaging, and Orderable Information</i> sections..... | 1           |
| • Changed the I <sub>CC</sub> Supply current auto-powerdown disabled MAX value from 1 mA to 1.2 mA in the <i>Electrical Characteristics</i> .....   | 5           |

| <b>Changes from Revision A (September 2008) to Revision B (October 2022)</b>  | <b>Page</b> |
|---|-------------|
| • Deleted the <i>Ordering Information</i> table.....  | 1           |
| • Changed the <i>Package Information</i> table.....   | 1           |
| • Added the <i>Simplified Schematic</i> .....   | 1           |
| • Added the <i>Pin Configuration and Functions</i> .....  | 3           |
| • Added the <i>Thermal Information</i> table.....   | 4           |
| • Changed the I <sub>CC</sub> Supply current auto-powerdown disabled MAX value from 1 mA to 1.2 mA in the <i>Electrical Characteristics</i> ..... | 5           |
| • Added the <i>Detailed Description</i> section.....  | 12          |

| <b>Changes from Revision B (June 2015) to Revision C (October 2022)</b>   | <b>Page</b> |
|---|-------------|
| • Changed the <i>Thermal Information</i> table.....   | 5           |
| • Changed the MAX value of I <sub>CC</sub> Supply current auto-powerdown disabled from 1 mA to 1.2 mA in <i>Electrical Characteristics—Power and Status</i> ..... | 5           |

| Product Folder | Current Datasheet Number | New Datasheet Number     | Link to full datasheet  |
|----------------|--------------------------|--------------------------|---|
| MAX3243E       | SLLS657D                 | <a href="#">SLLS657E</a> | <a href="http://www.ti.com/product/MAX3243E">http://www.ti.com/product/MAX3243E</a>   |
| TRS3243E       | SLLS789C                 | <a href="#">SLLS789D</a> | <a href="http://www.ti.com/product/TRS3243E">http://www.ti.com/product/TRS3243E</a>   |
| MAX3243        | SLLS350O                 | <a href="#">SLLS350P</a> | <a href="http://www.ti.com/product/MAX3243">http://www.ti.com/product/MAX3243</a>     |
| SN75C3243      | SLLS353H                 | <a href="#">SLLS353I</a> | <a href="http://www.ti.com/product/SN75C3243">http://www.ti.com/product/SN75C3243</a> |
| TRSF3243       | SLLS862A                 | <a href="#">SLLS862B</a> | <a href="http://www.ti.com/product/TRSF3243">http://www.ti.com/product/TRSF3243</a>   |
| TRS3243        | SLLS806B                 | <a href="#">SLLS806C</a> | <a href="http://www.ti.com/product/TRS3243">http://www.ti.com/product/TRS3243</a>     |

Tube, Temp, ESD and G4 variants of the devices are included in EOL notice PDN# 20221031003.3

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-millimeter 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>RFAB</b> | <b>RFB</b>                  | <b>USA</b>                   | <b>Richardson</b> |

##### Die Rev:

| Current      | New                 |
|--------------|---------------------|
| Die Rev [2P] | <b>Die Rev [2P]</b> |
| L, H, C      | <b>A</b>            |

##### Assembly Site Information:

| Assembly Site | Assembly Site Origin (22L) | Assembly Country Code (23L) | Assembly City  |
|---------------|----------------------------|-----------------------------|----------------|
| TI Malaysia   | MLA                        | MYS                         | Kuala Lumpur   |
| <b>CDAT</b>   | <b>CDA</b>                 | <b>CHN</b>                  | <b>Chengdu</b> |

Sample product shipping label (not actual product label)



MADE IN: Malaysia  
2DC: 29:

MSL '2 / 260C / 1 YEAR SEAL DT  
MSL 1 / 235C / UNLIM 03 / 29 / 04

OPT:  
ITEM:

LBL: 5A (L)T0:1750



(1P) SN74LS07NSR  
(Q) 2000 (D) 0336  
(31T) LOT: 3959047MLA  
(4W) TKY (1T) 7523483SI2

(P) REV: 0033317  
(20L) CS0: SHE (21L) CCO: USA  
(22L) AS0: MLA (23L) ACO: MYS

## Product Affected:

### Group 1 Devices (RFAB/Process migration only):

|               |                |               |              |
|---------------|----------------|---------------|--------------|
| MAX3243CDBR   | MAX3243ECPWRG4 | MAX3243IPWRE4 | TRS3243ECDBR |
| MAX3243CDBRE4 | MAX3243EIDBR   | SN65C3243DBR  | TRS3243ECPWR |
| MAX3243CPWR   | MAX3243EIPWR   | SN65C3243PWR  | TRS3243EIDBR |
| MAX3243CPWRG4 | MAX3243EIPWRE4 | SN75C3243DBR  | TRS3243EIPWR |
| MAX3243ECDBR  | MAX3243IDBR    | SN75C3243PWR  | TRSF3243IPWR |
| MAX3243ECPWR  | MAX3243IPWR    | TRS3243CDBR   |              |

### Group 2 Devices (RFAB/Process migration & CDAT as an alternate Assembly site):

|               |                 |               |                 |
|---------------|-----------------|---------------|-----------------|
| MAX3243ECRHBR | MAX3243EIRHBRG4 | TRS3243EIRHBR | TRS3243EIRHBRG4 |
| MAX3243EIRHBR | TRS3243ECRHBR   |               |                 |

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

## Qualification Report Approve Date 27-September-2022

### Qualification Results

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

| Type  | #  | Test Name                     | Condition   | Duration   | Qual Device:<br>TRS3243EIDBR | QBS Reference:<br>TPS53605DSQR | QBS Reference:<br>TPS51217DSCR | QBS Reference:<br>TPS51218DSCR | QBS Reference:<br>TLC320AD77CDBR | QBS Reference:<br>TRS3243EIRHBR | QBS Reference:<br>TPD3S714QDBQRQ1 |
|-------|----|-------------------------------|-------------|------------|------------------------------|--------------------------------|--------------------------------|--------------------------------|----------------------------------|---------------------------------|-----------------------------------|
| HAST  | A2 | Biased HAST                   | 110C        | 264 Hours  | -                            | 3/231/0                        | -                              | -                              | -                                | -                               | -                                 |
| HAST  | A2 | Biased HAST                   | 130C/85%RH  | 96 Hours   | -                            | -                              | 3/231/0                        | -                              | -                                | -                               | -                                 |
| UHAST | A3 | Autoclave                     | 121C/15psig | 96 Hours   | 1/77/0                       | -                              | 3/231/0                        | -                              | 3/231/0                          | -                               | -                                 |
| UHAST | A3 | Autoclave                     | 121C/15psig | 96 Hours   | -                            | -                              | -                              | -                              | -                                | -                               | 3/231/0                           |
| UHAST | A3 | Unbiased HAST                 | 110C        | 264 Hours  | -                            | 3/231/0                        | -                              | -                              | -                                | -                               | -                                 |
| TC    | A4 | Temperature Cycle             | -65/150C    | 500 Cycles | -                            | 3/231/0                        | 3/231/0                        | -                              | -                                | -                               | -                                 |
| TC    | A4 | Temperature Cycle             | -65C/150C   | 500 Cycles | 1/77/0                       | 3/231/0                        | 3/231/0                        | -                              | 3/231/0                          | -                               | -                                 |
| HTSL  | A6 | High Temperature Storage Life | 170C        | 420 Hours  | -                            | 2/154/0                        | 3/231/0                        | -                              | 3/231/0                          | -                               | -                                 |
| HTOL  | B1 | CL (FF)                       | 125C        | 1000 Hours | -                            | 1/45/0                         | -                              | -                              | -                                | -                               | -                                 |
| HTOL  | B1 | CL (FS)                       | 125C        | 1000 Hours | -                            | 1/32/0                         | -                              | -                              | -                                | -                               | -                                 |
| HTOL  | B1 | CL (SF)                       | 125C        | 1000 Hours | -                            | 1/32/0                         | -                              | -                              | -                                | -                               | -                                 |
| HTOL  | B1 | CL (SS)                       | 125C        | 1000 Hours | -                            | 1/45/0                         | -                              | -                              | -                                | -                               | -                                 |
| HTOL  | B1 | Life Test                     | 125C        | 1000 Hours | -                            | 3/231/0                        | -                              | -                              | -                                | -                               | -                                 |

|      |    |                             |                              |            |        |          |         |        |   |        |          |
|------|----|-----------------------------|------------------------------|------------|--------|----------|---------|--------|---|--------|----------|
| HTOL | B1 | Life Test                   | 135C                         | 635 Hours  | -      | -        | 3/231/0 | -      | - | -      | -        |
| HTOL | B1 | Life Test                   | 150C                         | 408 Hours  | -      | -        | -       | -      | - | -      | 3/231/0  |
| ELFR | B2 | ELFR                        | 125C                         | 48 Hours   | -      | 3/2999/0 | -       | -      | - | -      | -        |
| ELFR | B2 | Early Life Failure Rate     | 150C                         | 24 Hours   | -      | -        | -       | -      | - | -      | 3/2400/0 |
| WBS  | C1 | Ball Shear                  | 76 balls, 3 units min        | Wires      | 1/76/0 | -        | -       | -      | - | -      | -        |
| WBS  | C1 | Ball Shear                  | 76 balls, 3 units min        | Wires      | -      | -        | -       | -      | - | 1/76/0 | -        |
| WBP  | C2 | Bond Pull                   | 76 Wires, 3 units min        | Wires      | 1/76/0 | -        | -       | -      | - | -      | -        |
| WBP  | C2 | Bond Pull                   | 76 Wires, 3 units min        | Wires      | -      | -        | -       | -      | - | 1/76/0 | 3/228/0  |
| PD   | C4 | Physical Dimensions         | (per mechanical drawing)     | -          | -      | 3/90/0   | -       | -      | - | -      | -        |
| PD   | C4 | Physical Dimensions         | Cpk>1.67                     | -          | -      | -        | -       | -      | - | -      | 3/30/0   |
| ESD  | E2 | ESD CDM                     | -                            | 1500 Volts | -      | -        | 3/9/0   | -      | - | -      | -        |
| ESD  | E2 | ESD CDM                     | -                            | 1500 Volts | -      | -        | -       | -      | - | -      | 3/9/0    |
| ESD  | E2 | ESD CDM                     | -                            | 250 Volts  | 1/3/0  | 3/9/0    | -       | -      | - | 1/3/0  | -        |
| ESD  | E2 | ESD HBM                     | -                            | 1000 Volts | -      | 3/9/0    | -       | -      | - | 1/3/0  | -        |
| ESD  | E2 | ESD HBM                     | -                            | 2000 Volts | -      | -        | 3/9/0   | -      | - | -      | -        |
| ESD  | E2 | ESD HBM                     | -                            | 4000 Volts | -      | -        | -       | -      | - | -      | 3/9/0    |
| LU   | E4 | Latch-Up                    | Per JESD78                   | -          | -      | -        | 3/18/0  | -      | - | 1/3/0  | -        |
| CHAR | E5 | Electrical Characterization | Min, Typ, Max Temp           | -          | 1/30/0 | 3/90/0   | 3/60/0  | 1/30/0 | - | 1/30/0 | -        |
| CHAR | E5 | Electrical Characterization | Per Datasheet Parameters     | -          | 1/30/0 | 3/90/0   | 3/60/0  | 1/30/0 | - | 1/30/0 | -        |
| CHAR | E5 | Electrical Distributions    | Cpk>1.67 Room, hot, and cold | -          | -      | -        | -       | -      | - | -      | 3/90/0   |

|     |    |                  |   |   |       |   |   |   |   |   |   |
|-----|----|------------------|---|---|-------|---|---|---|---|---|---|
| FTY | E6 | Final Test Yield | - | - | 1/1/0 | - | - | - | - | - | - |
|-----|----|------------------|---|---|-------|---|---|---|---|---|---|

- QBS: Qual By Similarity
- Qual Device TRS3243EIDBR is qualified at MSL1 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

**Qualification Report**  
Approved 24-Feb-2022

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

| Type | Test Name / Condition         | Duration                 | Qual Device: TRS3243EIRHBR | QBS Process Reference: TPS51217DSC | QBS Process Reference: TPS51218DSC | QBS Process Reference: TPS53605DSQ | QBS Package Reference: 430F2132IRHBR | QBS Package Reference: TPS2546QRTERQ1 |
|------|-------------------------------|--------------------------|----------------------------|------------------------------------|------------------------------------|------------------------------------|--------------------------------------|---------------------------------------|
| AC   | Autoclave 121C                | 96 Hours                 | -                          | 6/462/0                            | -                                  | -                                  | 3/231/0                              | 3/231/0                               |
| CDM  | ESD - CDM                     | 1500 V                   | 1/3/0                      | 3/9/0                              | -                                  | 2/6/0                              | -                                    | -                                     |
| ED   | Electrical Characterization   | Per Datasheet Parameters | Pass                       | Pass                               | Pass                               | Pass                               | -                                    | -                                     |
| ELFR | Early Life Failure Rate, 125C | 48 Hours                 | -                          | -                                  | -                                  | 3/2999/0                           | -                                    | -                                     |
| HAST | Biased HAST 130C/85%RH        | 96 Hours                 | -                          | 3/231/0                            | -                                  | -                                  | -                                    | 3/231/0                               |
| HBM  | ESD HBM                       | 4000 V                   | 1/3/0                      | -                                  | -                                  | -                                  | -                                    | -                                     |
| HTOL | Life Test, 125C               | 1000 Hours               | -                          | -                                  | -                                  | 3/231/0                            | -                                    | -                                     |
| HTSL | High Temp Storage Bake 150C   | 1000 Hours               | -                          | -                                  | -                                  | -                                  | -                                    | 3/148/0                               |
| LU   | Latch-up                      | (per JESD78)             | 1/6/0                      | -                                  | -                                  | -                                  | -                                    | -                                     |
| TC   | Temperature Cycle, -65/150C   | 500 Cycles               | -                          | 3/231/0                            | -                                  | 3/231/0                            | 3/231/0                              | 3/430/0                               |
| WBP  | Bond Pull                     | Wires                    | 1/76/0                     | -                                  | -                                  | -                                  | 3/228/0                              | -                                     |
| WBS  | Ball Bond Shear               | Wires                    | 1/76/0                     | -                                  | -                                  | -                                  | 3/228/0                              | -                                     |

- QBS: Qual By Similarity

- Qual Device TRS3243EIRHBR is qualified at LEVEL2-260C

- 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

**Qualification Report**  
Approve Date 16-SEPTEMBER-2022

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

| Type  | #  | Test Name                     | Condition             | Duration   | Qual Device: TRSF3243EIPWR | QBS Reference: TCA6408AQPWRQ1 | QBS Reference: TPS23861PWR | QBS Reference: TPS51217DSCR | QBS Reference: TRSF3243EIRHBR |
|-------|----|-------------------------------|-----------------------|------------|----------------------------|-------------------------------|----------------------------|-----------------------------|-------------------------------|
| HAST  | A2 | Biased HAST                   | 130C                  | 96 Hours   | -                          | 3/231/0                       | -                          | -                           | -                             |
| HAST  | A2 | Biased HAST                   | 130C/85%RH            | 96 Hours   | -                          | -                             | -                          | 3/231/0                     | -                             |
| UHAST | A3 | Autoclave                     | 121C/15psig           | 96 Hours   | -                          | -                             | 3/231/0                    | 3/231/0                     | 1/77/0                        |
| UHAST | A3 | Autoclave                     | 121C/15psig           | 96 Hours   | -                          | 3/231/0                       | -                          | -                           | -                             |
| TC    | A4 | Temperature Cycle             | -65/150C              | 500 Cycles | -                          | 3/231/0                       | -                          | -                           | -                             |
| TC    | A4 | Temperature Cycle             | -65C/150C             | 500 Cycles | -                          | -                             | 3/231/0                    | 3/231/0                     | 1/77/0                        |
| HTSL  | A6 | High Temperature Storage Life | 170C                  | 420 Hours  | -                          | -                             | -                          | 3/231/0                     | -                             |
| HTSL  | A6 | High Temperature Storage Life | 175C                  | 500 Hours  | -                          | 1/45/0                        | -                          | -                           | -                             |
| HTOL  | B1 | Life Test                     | 125C                  | 1000 Hours | -                          | 1/77/0                        | -                          | -                           | -                             |
| HTOL  | B1 | Life Test                     | 135C                  | 635 Hours  | -                          | -                             | -                          | 3/231/0                     | -                             |
| WBS   | C1 | Ball Shear                    | 76 balls, 3 units min | Wires      | 1/76/0                     | -                             | -                          | -                           | -                             |
| WBP   | C2 | Bond Pull                     | 76 Wires, 3 units min | Wires      | 1/76/0                     | -                             | -                          | -                           | -                             |

|      |    |                             |                              |             |       |        |   |        |        |
|------|----|-----------------------------|------------------------------|-------------|-------|--------|---|--------|--------|
| PD   | C4 | Physical Dimensions         | Cpk>1.67                     | -           | -     | 3/30/0 | - | -      | -      |
| ESD  | E2 | ESD CDM                     | -                            | 1500 Volts  | -     | -      | - | 3/9/0  | -      |
| ESD  | E2 | ESD CDM                     | -                            | 1500 Volts  | -     | 1/3/0  | - | -      | -      |
| ESD  | E2 | ESD CDM                     | -                            | 250 Volts   | 1/3/0 | -      | - | -      | 1/3/0  |
| ESD  | E2 | ESD HBM                     | -                            | 1000 Volts  | -     | -      | - | -      | 1/3/0  |
| ESD  | E2 | ESD HBM                     | -                            | 16000 Volts | -     | -      | - | -      | 1/3/0  |
| ESD  | E2 | ESD HBM                     | -                            | 2000 Volts  | -     | -      | - | 3/9/0  | -      |
| ESD  | E2 | ESD HBM                     | -                            | 4000 Volts  | -     | 1/3/0  | - | -      | -      |
| LU   | E4 | Latch-Up                    | Per JESD78                   | -           | -     | -      | - | 3/18/0 | 1/3/0  |
| CHAR | E5 | Electrical Characterization | Per Datasheet Parameters     | -           | -     | -      | - | 3/60/0 | 1/30/0 |
| CHAR | E5 | Electrical Distributions    | Cpk>1.67 Room, hot, and cold | -           | -     | 3/90/0 | - | -      | -      |

- QBS: Qual By Similarity
- Qual Device TRSF3243EIPWR is qualified at MSL1 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

## Qualification Report Approve Date 16-September-2022

### Qualification Results

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

| Type  | #  | Test Name                     | Condition             | Duration   | Qual Device:<br><a href="#">PTRS3243EIPWR</a> | QBS Reference:<br><a href="#">TCA6408AQPWRQ1</a> | QBS Reference:<br><a href="#">TPS23861PWR</a> | QBS Reference:<br><a href="#">TPS51217DSCR</a> | QBS Reference:<br><a href="#">TRS3243EIRHBR</a> |
|-------|----|-------------------------------|-----------------------|------------|---|--|---|--|---|
| HAST  | A2 | Biased HAST                   | 130C                  | 96 Hours   | -   | 3/231/0  | -   | -  | -   |
| HAST  | A2 | Biased HAST                   | 130C/85%RH            | 96 Hours   | -   | -  | -   | 3/231/0  | -   |
| UHAST | A3 | Autoclave                     | 121C/15psig           | 96 Hours   | 1/77/0  | -  | 3/231/0                                       | 3/231/0  | -   |
| UHAST | A3 | Autoclave                     | 121C/15psig           | 96 Hours   | -   | 3/231/0  | -   | -  | -   |
| TC    | A4 | Temperature Cycle             | -65/150C              | 500 Cycles | -   | 3/231/0  | -   | -  | -   |
| TC    | A4 | Temperature Cycle             | -65C/150C             | 500 Cycles | 1/77/0  | -  | 3/231/0                                       | 3/231/0  | -   |
| HTSL  | A6 | High Temperature Storage Life | 170C                  | 420 Hours  | -   | -  | -   | 3/231/0  | -   |
| HTSL  | A6 | High Temperature Storage Life | 175C                  | 500 Hours  | -   | 1/45/0   | -   | -  | -   |
| HTOL  | B1 | Life Test                     | 125C                  | 1000 Hours | -   | 1/77/0   | -   | -  | -   |
| HTOL  | B1 | Life Test                     | 135C                  | 635 Hours  | -   | -  | -   | 3/231/0  | -   |
| WBS   | C1 | Ball Shear                    | 76 balls, 3 units min | Wires      | 1/76/0  | -  | -   | -  | 1/76/0  |
| WBP   | C2 | Bond Pull                     | 76 Wires, 3 units min | Wires      | 1/76/0  | -  | -   | -  | 1/76/0  |
| PD    | C4 | Physical Dimensions           | Cpk>1.67              | -          | -   | 3/30/0   | -   | -  | -   |

|      |    |                             |                              |            |       |        |   |        |        |
|------|----|-----------------------------|------------------------------|------------|-------|--------|---|--------|--------|
| ESD  | E2 | ESD CDM                     | -                            | 1500 Volts | -     | -      | - | 3/9/0  | -      |
| ESD  | E2 | ESD CDM                     | -                            | 1500 Volts | -     | 1/3/0  | - | -      | -      |
| ESD  | E2 | ESD CDM                     | -                            | 250 Volts  | 1/3/0 | -      | - | -      | 1/3/0  |
| ESD  | E2 | ESD HBM                     | -                            | 1000 Volts | -     | -      | - | -      | 1/3/0  |
| ESD  | E2 | ESD HBM                     | -                            | 2000 Volts | -     | -      | - | 3/9/0  | -      |
| ESD  | E2 | ESD HBM                     | -                            | 4000 Volts | -     | 1/3/0  | - | -      | -      |
| LU   | E4 | Latch-Up                    | Per JESD78                   | -          | -     | -      | - | 3/18/0 | 1/3/0  |
| CHAR | E5 | Electrical Characterization | Per Datasheet Parameters     | -          | -     | -      | - | 3/60/0 | 1/30/0 |
| CHAR | E5 | Electrical Distributions    | Cpk>1.67 Room, hot, and cold | -          | -     | 3/90/0 | - | -      | -      |

- QBS: Qual By Similarity
- Qual Device PTRS3243EIPWR is qualified at MSL1 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

### Qualification Report Approve Date 27-September-2022

#### Qualification Results

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

| Type  | #  | Test Name                     | Condition   | Duration   | Qual Device:<br>PTRSF3243EIDBR | QBS Reference:<br>TPS53605DSQR | QBS Reference:<br>TPS51217DSCR | QBS Reference:<br>TPS51218DSCR | QBS Reference:<br>TLC320AD77CDDBR | QBS Reference:<br>TRSF3243EIRHBR | QBS Reference:<br>TPD3S714Q0BQRQ1 |
|-------|----|-------------------------------|-------------|------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|-----------------------------------|----------------------------------|-----------------------------------|
| HAST  | A2 | Biased HAST                   | 110C        | 264 Hours  | -                              | 3/231/0                        | -                              | -                              | -                                 | -                                | -                                 |
| HAST  | A2 | Biased HAST                   | 130C/85%RH  | 96 Hours   | -                              | -                              | 3/231/0                        | -                              | -                                 | -                                | -                                 |
| UHAST | A3 | Autoclave                     | 121C/15psig | 96 Hours   | -                              | -                              | 3/231/0                        | -                              | 3/231/0                           | 1/77/0                           | -                                 |
| UHAST | A3 | Autoclave                     | 121C/15psig | 96 Hours   | -                              | -                              | -                              | -                              | -                                 | -                                | 3/231/0                           |
| UHAST | A3 | Unbiased HAST                 | 110C        | 264 Hours  | -                              | 3/231/0                        | -                              | -                              | -                                 | -                                | -                                 |
| TC    | A4 | Temperature Cycle             | -65/150C    | 500 Cycles | -                              | 3/231/0                        | 3/231/0                        | -                              | -                                 | 1/77/0                           | -                                 |
| TC    | A4 | Temperature Cycle             | -65C/150C   | 500 Cycles | -                              | 3/231/0                        | 3/231/0                        | -                              | 3/231/0                           | 1/77/0                           | -                                 |
| HTSL  | A6 | High Temperature Storage Life | 170C        | 420 Hours  | -                              | 2/154/0                        | 3/231/0                        | -                              | 3/231/0                           | -                                | -                                 |
| HTOL  | B1 | CL (FF)                       | 125C        | 1000 Hours | -                              | 1/45/0                         | -                              | -                              | -                                 | -                                | -                                 |
| HTOL  | B1 | CL (FS)                       | 125C        | 1000 Hours | -                              | 1/32/0                         | -                              | -                              | -                                 | -                                | -                                 |
| HTOL  | B1 | CL (SF)                       | 125C        | 1000 Hours | -                              | 1/32/0                         | -                              | -                              | -                                 | -                                | -                                 |
| HTOL  | B1 | CL (SS)                       | 125C        | 1000 Hours | -                              | 1/45/0                         | -                              | -                              | -                                 | -                                | -                                 |
| HTOL  | B1 | Life Test                     | 125C        | 1000 Hours | -                              | 3/231/0                        | -                              | -                              | -                                 | -                                | -                                 |
| HTOL  | B1 | Life Test                     | 135C        | 635 Hours  | -                              | -                              | 3/231/0                        | -                              | -                                 | -                                | -                                 |

|      |    |                             |                              |             |        |          |        |        |   |        |          |
|------|----|-----------------------------|------------------------------|-------------|--------|----------|--------|--------|---|--------|----------|
| HTOL | B1 | Life Test                   | 150C                         | 408 Hours   | -      | -        | -      | -      | - | -      | 3/231/0  |
| ELFR | B2 | ELFR                        | 125C                         | 48 Hours    | -      | 3/2999/0 | -      | -      | - | -      | -        |
| ELFR | B2 | Early Life Failure Rate     | 150C                         | 24 Hours    | -      | -        | -      | -      | - | -      | 3/2400/0 |
| WBS  | C1 | Ball Shear                  | 76 balls, 3 units min        | Wires       | 1/76/0 | -        | -      | -      | - | -      | -        |
| WBP  | C2 | Bond Pull                   | 76 Wires, 3 units min        | Wires       | 1/76/0 | -        | -      | -      | - | -      | 3/228/0  |
| PD   | C4 | Physical Dimensions         | (per mechanical drawing)     | -           | -      | 3/90/0   | -      | -      | - | -      | -        |
| PD   | C4 | Physical Dimensions         | Cpk>1.67                     | -           | -      | -        | -      | -      | - | -      | 3/30/0   |
| ESD  | E2 | ESD CDM                     | -                            | 1500 Volts  | -      | -        | 3/9/0  | -      | - | -      | -        |
| ESD  | E2 | ESD CDM                     | -                            | 1500 Volts  | -      | -        | -      | -      | - | -      | 3/9/0    |
| ESD  | E2 | ESD CDM                     | -                            | 250 Volts   | 1/3/0  | 3/9/0    | -      | -      | - | 1/3/0  | -        |
| ESD  | E2 | ESD HBM                     | -                            | 1000 Volts  | -      | 3/9/0    | -      | -      | - | 1/3/0  | -        |
| ESD  | E2 | ESD HBM                     | -                            | 16000 Volts | -      | -        | -      | -      | - | 1/3/0  | -        |
| ESD  | E2 | ESD HBM                     | -                            | 2000 Volts  | -      | -        | 3/9/0  | -      | - | -      | -        |
| ESD  | E2 | ESD HBM                     | -                            | 4000 Volts  | -      | -        | -      | -      | - | -      | 3/9/0    |
| LU   | E4 | Latch-Up                    | Per JESD78                   | -           | -      | -        | 3/18/0 | -      | - | 1/3/0  | -        |
| CHAR | E5 | Electrical Characterization | Min, Typ, Max Temp           | -           | -      | 3/90/0   | 3/60/0 | 1/30/0 | - | 1/30/0 | -        |
| CHAR | E5 | Electrical Characterization | Per Datasheet Parameters     | -           | -      | 3/90/0   | 3/60/0 | 1/30/0 | - | 1/30/0 | -        |
| CHAR | E5 | Electrical Distributions    | Cpk>1.67 Room, hot, and cold | -           | -      | -        | -      | -      | - | -      | 3/90/0   |

- QBS: Qual By Similarity
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- 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

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**Green/Pb-free Status:**

Qualified Pb-Free(SMT) and Green

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| Location                  | E-Mail   |
|---------------------------|--|
| WW Change Management Team | <a href="mailto:PCN_ww_admin_team@list.ti.com">PCN_ww_admin_team@list.ti.com</a> |

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