

PCN# 20190813001.1 Qualification of additional Fab site (RFAB) and Assembly site (MLA and CDAT) options for select LBC7 devices Change Notification / Sample Request

Date: August 23, 2019 To: Newark/Farnell PCN

Dear Customer:

This is an announcement of a change to a device that is currently offered by Texas Instruments. The details of this change are on the following pages.

Texas Instruments 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.

The changes discussed within this PCN will not take effect any earlier than the proposed first ship date on Page 3 of this notification, unless customer agreement has been reached on an earlier implementation of the change.

This notice does not change the end-of-life status of any product. Should product affected be on a previously issued product withdrawal/discontinuance notice, this notification does not extend the life of that product or change the life time buy offering/discontinuance plan.

For questions regarding this notice or to provide acknowledgement of this PCN, you may contact your local Field Sales Representative or the PCN Team (<u>PCN ww admin team@list.ti.com</u>). For sample requests or sample related questions, contact your local Field Sales Representative.

PCN Team SC Business Services

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.

| DEVICE | CUSTOMER PART NUMBER |
|---------------|-----------------------------|
| BQ76925PW | null |
| TPS22920YZPR | null |
| TPS54821RHLR | null |
| TPS54821RHLT | null |
| TPS70612DBVT | null |
| TPS70612DRVT | null |
| TPS70615DBVT | null |
| TPS70618DRVT | null |
| TPS70628DBVT | null |
| TPS70628DRVT | null |
| TPS70633DBVT | null |
| TPS70915DRVT | null |
| TPS70918DBVT | null |
| TPS70925DBVT | null |
| TPS70925DRVT | null |
| TPS70927DBVT | null |
| TPS70928DBVT | null |
| TPS70930DBVR | null |
| TPS70930DBVT | null |
| TPS70933DBVR | null |
| TPS70933DBVT | null |
| TPS70936DBVT | null |
| TPS70939DBVT | null |
| TPS70950DBVR | null |
| TPS70950DBVT | null |
| TPS70960DBVT | null |
| TPS709B33DBVT | null |
| TPS709B50DBVT | null |
| TPS70615DRVT | null |
| TPS70625DRVT | null |
| TPS70630DRVT | null |
| TPS70633DRVT | null |
| TPS70916DBVT | null |

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

| PCN Num | ber: | 201 | 908 | 90813001.1 PCN D | | | Date | e: | Aug 23, 2019 |
|---|-----------|------------|---------------------------------------|--------------------------|----------------------------------|------|------|-----|------------------------|
| Title:Qualification of additional Fab site (RFAB) and Assembly site (MLA and CDAT) options for select LBC7 devices | | | | | A and CDAT) options | | | | |
| Customer Contact: | | | PC | N Manager | | Dept | | | Quality Services |
| Proposed 1 st Ship Date: Nov | | v 23, 2019 | | | Date provided at sample request. | | | | |
| Change Type: | | | | | | | | | |
| 🛛 Assem | nbly Site | | | Assembly Process | | | | Ass | sembly Materials |
| Desig | n | | | Electrical Specifica | ation | | | Me | chanical Specification |
| Test S | Site | | | Packing/Shipping/Labelir | | | | Tes | st Process |
| Wafer | Bump Site | | | Wafer Bump Material | | | | Wa | afer Bump Process |
| 🛛 Wafer | Fab Site | | Wafer Fab Materials Wafer Fab Process | | afer Fab Process | | | | |
| | | | | Part number chan | ge | | | | |
| DCN Dataila | | | | | | | | | |

PCN Details

Description of Change:

Texas Instruments is pleased to announce the qualification of an additional fab (RFAB) and assembly (MLA and CDAT) sites for selected devices as listed below in the product affected section.

| | Current Site | | Α | dditional Site | |
|---------------------|--------------|-------------------|------------------------|----------------|-------------------|
| Current Fab Site | Process | Wafer Diameter | Additional Fab Site | Process | Wafer Diameter |
| FFAB | LBC7 | 200 mm | RFAB | LBC7 | 300 mm |

There are no material difference between devices currently manufactured and devices built with this manufacturing option.

Qual details are provided in the Qual Data Section.

Reason for Change:

Continuity of Supply

Anticipated impact on Form, Fit, Function, Quality or Reliability (positive / negative):

None

Anticipated impact on Material Declaration

| No Impact to the Material Declaration | Material Declarations or Product Content reports are driven from production data and will be available following the production release. Upon production release the revised reports can be | |
|--|---|--|
| | obtained from the <u>TI Eco-Info website</u> . There is no impact to the material meeting current regulatory compliance requirements with this PCN 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 |
|-----------|--------------------------------|------------------------------|----------------|
| FR-BIP-1 | TID | DEU | Freising |
| RFAB | RFB | USA | Richardson |

Assembly Site Information:

| Assembly Site | Assembly Site Origin (22L) | Assembly Country Code (23L) | Assembly City |
|---------------|-------------------------------|--------------------------------|---------------------------|
| TI Taiwan | TAI | TWN | Chung Ho, New Taipei City |
| TI Malaysia | MLA | MYS | Kuala Lumpur |
| TI Clark | QAB | PHL | Angeles City |

| TI Chengdu | CDA | CHN | Chengdu | |
|--|-----|-----|---------|--|
| Sample product shipping label (not actual product label) | | | | |
| Sample product shipt | | | | |



Product Affected:

| | AB as an additional site | | |
|---------------|--------------------------|--------------|---------------|
| BQ76925RGER | TPS70625DRVR | TPS70915DBVR | TPS70933DBVR |
| BQ76925RGET | TPS70625DRVT | TPS70915DBVT | TPS70933DBVT |
| SN1602044RHLR | TPS70628DBVR | TPS70915DRVR | TPS70936DBVR |
| SN1602044RHLT | TPS70628DBVT | TPS70915DRVT | TPS70936DBVT |
| SN1603068DBVR | TPS70628DRVR | TPS70916DBVR | TPS70938DBVR |
| TPS54821RHLR | TPS70628DRVT | TPS70916DBVT | TPS70938DBVT |
| TPS54821RHLT | TPS70630DBVR | TPS70918DBVR | TPS70939DBVR |
| TPS70612DBVR | TPS70630DBVT | TPS70918DBVT | TPS70939DBVT |
| TPS70612DBVT | TPS70630DRVR | TPS70919DBVR | TPS70950DBVR |
| TPS70612DRVR | TPS70630DRVT | TPS70919DBVT | TPS70950DBVT |
| TPS70612DRVT | TPS70633DBVR | TPS70925DBVR | TPS70960DBVR |
| TPS70615DBVR | TPS70633DBVT | TPS70925DBVT | TPS70960DBVT |
| TPS70615DBVT | TPS70633DRVR | TPS70925DRVR | TPS709A30DBVR |
| TPS70615DRVR | TPS70633DRVT | TPS70925DRVT | TPS709A30DBVT |
| TPS70615DRVT | TPS70912DBVR | TPS70927DBVR | TPS709A33DBVR |
| TPS70618DBVR | TPS70912DBVT | TPS70927DBVT | TPS709A33DBVT |
| TPS70618DBVT | TPS70912DRVR | TPS70928DBVR | TPS709B33DBVR |
| TPS70618DRVR | TPS70912DRVT | TPS70928DBVT | TPS709B33DBVT |
| TPS70618DRVT | TPS709135DBVR | TPS70930DBVR | TPS709B50DBVR |
| TPS70625DBVR | TPS709135DBVT | TPS70930DBVT | TPS709B50DBVT |
| TPS70625DBVT | | | |
| | | | |

Group 2: Adding RFAB and MLA Assembly as additional sitesBQ76925PWBQ76925PWR

| Group 3: Adding RFAB and CDAT Assembly as additional sites | | | |
|--|---------------|--------------|--|
| TPS22920YZPR | TPS22920YZPRB | TPS22920YZPT | |

Qualification Report

Approve Date 13-August-2019

Qualification Results

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

| Туре | Test Name / Condition | Duration | Qual Device: TP\$51217D\$C |
|------|-------------------------------|--------------------------|-------------------------------|
| ED | Electrical Characterization | Per Datasheet Parameters | Pass |
| HAST | Biased HAST, 130C/85%RH | 96 Hours | 3/231/0 |
| AC | Autoclave, 121C | 96 Hours | 3/231/0 |
| HBM | ESD - HBM | 2000 V | 3/9/0 |
| CDM | ESD - CDM | 500 V | 3/9/0 |
| HTOL | Life Test, 135C | 635 Hours | 3/231/0 |
| HTSL | High Temp. Storage Bake, 170C | 420 Hours | 3/231/0 |
| LU | Latch-up | (per JESD78) | 3/18/0 |
| TC | Temperature Cycle, -65/150C | 500 Cycles | 3/18/0 |

Qual Device TPS51217DSC 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 0.7 eV: 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 0.7 eV: 150C/1k Hours, and 170C/420 Hours

- The following are equivalent Temp Cycle options per JESD47:-55C/125C/700 Cycles and -65C/150C/500 Cycles

Quality and Environmental data is available at TI's external Web site: http://www.ti.com/

Green/Pb-free Status:

Qualified Pb-Free (SMT) and Green

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

| Location | E-Mail |
|--------------|--------------------------------|
| USA | PCNAmericasContact@list.ti.com |
| Europe | PCNEuropeContact@list.ti.com |
| Asia Pacific | PCNAsiaContact@list.ti.com |
| WW PCN Team | PCN ww admin team@list.ti.com |

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