

PCN# 20200901001.1
Qualification of additional Fab site (RFAB) and Assembly site (CARZ) options for
select LBC7 devices
Change Notification / Sample Request

Date: September 18, 2020
To: Sanmina SCI 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 (PCN_ww_admin_team@list.ti.com). For sample requests or sample related questions, contact your local Field Sales Representative.

PCN Team
SC Business Services

20200901001.1
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.

| DEVICE | CUSTOMER PART NUMBER |
|---------------|-----------------------------|
| TCA9539PWR | BRN-245-00204-01 |
| TCA9539PWR | IC001369A01 |
| TPS70933DRVR | KLN000296A01 |
| TCA9555PWR | LF40-TCA009-555 |
| TCA9555PWR | LFARIIC-00030 |
| TCA9555PWR | LFARISIC-00030 |
| TPS70933DRVR | LFBOZ826801-330R |
| TCA9555PWR | LFCW606C013701 |
| TCA9555PWR | LFGB111-01082 |
| TCA9555PWR | LFHHEU000184-00A |
| TCA9555RGER | LFIGEME2109484-001 |
| TCA9555PWR | LFMBL606C013701 |
| TPS70933DRVT | LN000296A01 |
| TPS70933DRVR | MQLN000296A01 |
| TPS70918DRVR | MQLN000912A01 |
| TCA9539PWR | WTOCE508764-001 |
| TCA6416APWR | LFHCEU000271-00A |
| TCA9555DBR | null |
| TPS70950DRVT | null |
| TCA9555PWR | WTOCE508867-001 |
| TCA9555PWR | LFARISIC-01095 |

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

| | | | | | |
|---|--|-------------------------------------|--|-------------------------------------|--------------------------|
| PCN Number: | 20200901001.1 | | PCN Date: | Sep 18, 2020 | |
| Title: | Qualification of additional Fab site (RFAB) and Assembly site (CARZ) options for select LBC7 devices | | | | |
| Customer Contact: | PCN Manager | | Dept: | Quality Services | |
| Proposed 1st Ship Date: | Dec 18, 2020 | | Estimated Sample Availability: | Date provided at sample request. | |
| Change Type: | | | | | |
| <input checked="" type="checkbox"/> | Assembly Site | <input type="checkbox"/> | Assembly Process | <input checked="" type="checkbox"/> | Assembly Materials |
| <input type="checkbox"/> | Design | <input type="checkbox"/> | Electrical Specification | <input type="checkbox"/> | Mechanical Specification |
| <input type="checkbox"/> | Test Site | <input 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 type="checkbox"/> | Wafer Fab Process |
| | <input type="checkbox"/> | | Part number change | | |
| PCN Details | | | | | |
| Description of Change: | | | | | |
| Texas Instruments is pleased to announce the qualification of an additional fab (RFAB) and assembly (CARZ) site for selected devices as listed below in the product affected section. | | | | | |
| Current Site | | | Additional Site | | |
| Current Fab Site | Process | Wafer Diameter | Additional Fab Site | Process | Wafer Diameter |
| FFAB | LBC7 | 200 mm | RFAB | LBC7 | 300 mm |
| For the devices in the group 2 device list below, construction differences are as follows: | | | | | |
| | TI Clark - Current | Carsem - New | | | |
| Mount compound | 4207768 | SID#435143 | | | |
| 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 | | | | | |
| <input type="checkbox"/> | No Impact to the Material Declaration | <input checked="" type="checkbox"/> | Material Declarations or Product Content reports are driven from production data and will be available following the production release. Upon production release the revised reports can be obtained from the TI ECO website . | | |
| 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 (21L) | Assembly City | | |
| TI Clark | QAB | PHL | Angeles City | | |
| Carsem | CSZ | CHN | Jiangsu | | |

Sample product shipping label (not actual product label)



MADE IN: Malaysia
2DC: 20:



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

OPT:
ITEM: 39
LBL: 5A (L) TO: 1750

(1P) SN74LS07NSR
(Q) 2000 (D) 0336
(31T) LOT: 3959047MLA
(4W) TKY (1T) 7523483SI2
(P)
(2P) REV: (V) 0033317
(20L) CSO: SHE (21L) CCO: USA
(22L) ASO: MLA (23L) ACO: MYS

Product Affected:

Group 1 Device List (Adding RFAB)

| | | | |
|-------------|--------------|--------------|--------------|
| TCA1116PWR | TCA9555DBT | TPS70918DRVR | TPS70933DRVR |
| TCA6416APWR | TCA9555PWR | TPS70918DRVT | TPS70933DRVT |
| TCA9539PWR | TCA9555RGER | TPS70930DRVR | TPS70950DRVR |
| TCA9539RGER | TPS22946YZPR | TPS70930DRVT | TPS70950DRVT |
| TCA9555DBR | | | |

Group 2 Device List (Adding RFAB and CARZ AT)

| | |
|---------------|---------------|
| TLV62084ADSGR | TLV62084ADSGT |
|---------------|---------------|

Qualification Report

Approve Date 6-October-2010

Qualification Results

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

| Type | Test Name / Condition | Duration | Qual Device: TPS51217DSC |
|------|-------------------------------|--------------------------|-----------------------------|
| 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 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 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 Results

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

| Type | Test Name / Condition | Duration | Qual Device: TLV62084DSGR | QBS Process Reference: TPS2543QRTE | QBS Package Reference: TPS61021DSG | QBS Package Reference: TPS62170DSG |
|-------|-------------------------------|-----------------------------|------------------------------|--|--|--|
| AC | Autoclave, 2 atm, 121C | 96 Hours | - | 3/231/0 | - | - |
| ED | Electrical Characterization | Per Datasheet Parameters | Pass | Pass | Pass | Pass |
| ELFR | Early Life Failure Rate, 125C | 48 Hours | - | 3/2400/0 | - | - |
| HAST | Biased HAST, 130C/85%RH | 96 Hours | - | - | - | 3/231/0 |
| HAST | Biased HAST, 110C/85%RH | 264 Hours | - | 3/231/0 | 3/231/0 | - |
| HBM | ESD - HBM | 2000 V | 1/3/0 | 1/3/0 | - | - |
| CDM | ESD - CDM | 500 V | 1/3/0 | 1/3/0 | - | - |
| HTOL | Life Test, 150C | 300 Hours | - | 3/231/0 | - | - |
| HTSL | High Temp. Storage Bake, 170C | 420 Hours | - | - | 2/90/0 | 2/90/0 |
| LU | Latch-up | (per JESD78) | 1/6/0 | 1/6/0 | - | - |
| TC | Temperature Cycle, -65/150C | 500 Cycles | - | 3/231/0 | 3/231/0 | - |
| UHAST | Unbiased HAST, 130C/85%RH | 96 Hours | - | - | 3/231/0 | 3/231/0 |

- QBS: Qual By Similarity
- Qual Device TLV62084DSGR is qualified at LEVEL2-260C
- This also qualifies TLV62084ADSGR
- 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 25-June-2019

Qualification Results

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

| Type | Test Name / Condition | Duration | Qual Device: TPS70633DRVR | QBS Process Reference: TPS2543QRTE | QBS Package Reference: PGA900ARHHR |
|-------|-------------------------------|--------------------------|------------------------------|---------------------------------------|---------------------------------------|
| ED | Electrical Characterization | Per Datasheet Parameters | Pass | Pass | Pass |
| ELFR | Early Life Failure Rate, 125C | 48 Hours | - | 3/2400/0 | - |
| HAST | Biased HAST, 130C/85%RH | 96 Hours | - | 3/231/0 | 3/231/0 |
| HBM | ESD - HBM | 1000 V | 1/3/0 | 1/3/0 | - |
| CDM | ESD - CDM | 500 V | 1/3/0 | 1/3/0 | - |
| HTOL | Life Test, 150C | 300 Hours | - | 3/231/0 | 3/231/0 |
| HTSL | High Temp. Storage Bake, 175C | 500 Hours | - | 3/135/0 | 3/231/0 |
| LU | Latch-up | (per JESD78) | 1/6/0 | 1/6/0 | - |
| TC | Temperature Cycle, -65/150C | 500 Cycles | - | 3/231/0 | 3/231/0 |
| UHAST | Unbiased HAST, 130C/85%RH | 96 Hours | - | - | 3/231/0 |

- QBS: Qual By Similarity
 - Qual Device TPS70633DRVR is qualified at LEVEL1-260C
 - Preconditioning was performed for Autoclave, Unbiased HAST, THB/Biased HAST, Temperature Cycle, Thermal Shock, and HTSL, as applicable
 - The following are equivalent HTOL options based on an activation energy of 0.7eV: 125C/1k Hours, 140C/480 Hours, 150C/300 Hours, and 155C/240 Hours
 - The following are equivalent HTSL options based on an activation energy of 0.7eV: 150C/1k Hours, and 170C/420 Hours
 - The following are equivalent Temp Cycle options per JESD47: -55C/125C/700 Cycles and -65C/150C/500 Cycles
- Quality and Environmental data is available at TI's external Web site: <http://www.ti.com/>

Green/Pb-free Status:

Qualified Pb-Free (SMT) and Green

For questions regarding this notice, e-mails can be sent to the 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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