

12500 TI Boulevard, MS 8640, Dallas, Texas 75243

PCN# 20180423001 Qualification of GTBF as Additional Assembly/Test Site for Select Devices Change Notification / Sample Request

Date: April 25, 2018

To: PREMIER FARNELL PCN

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.

We request you acknowledge 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 you require samples or additional data to support your evaluation, please request within 30 days.

The proposed first ship date is indicated 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, contact your local Field Sales Representative or the PCN Manager (PCN www admin team@list.ti.com).

Sincerely,

PCN Team SC Business Services

20180423001 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 |
|-----------------|-----------------------------|
| TLV1117LV18DCYR | null |
| TLV1117LV12DCYR | null |
| TLV1117LV15DCYT | null |
| TLV1117LV25DCYR | null |
| TLV1117LV30DCYT | null |
| TLV1117LV33DCYR | null |
| TLV1117LV33DCYT | null |

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

| PCN | Num | ber: | | 2018042300 | | | | | | | | PCN | l Da | ate: | Apr 25, 2018 |
|--|--|-----------------------|----------|---|----------------|-----------|---------|--------------------|--------------------------------|------------|----------|---------------------|------|-------|------------------------------|
| Title | : | Qualific | ation of | of GTBF as Addition | | | ona | l Assembl | y/Test Site for Select Devices | | | | | | |
| Customer Contact: | | | et: E | PCN Manager Dept: Qua | | | Quality | / Ser | vic | es | | | | | |
| Prop | osed | 1 st Shi | Date: | | Jul 2 | 25, 20 | 18 | | Estima Availa | | | mp | le | | Provided at ple request |
| Char | nge T | уре: | | ' | | | | | | | | | | | • |
| | | bly Site | | | Design | | | | Wafer Bump Site | | | | | | |
| | | nbly Prod | | | | | Da | ta Sheet | | | | Wafer Bump Material | | | |
| | | nbly Mat | | | | | | Part number change | | | | | | | |
| | | nical Sp | | | | | | st Site | | | Щ | _ | | · Fab | |
| F | Packir | ng/Shipp | ing/Lab | eling | g | | Te | st Process | | | <u>Щ</u> | | | | Materials |
| | | | | | | | | | | | | W | afer | · Fab | Process |
| | | | | | | | PC | N Detai | <u>ls</u> | | | | | | |
| Desc | riptio | on of Ch | nange: | | | | | | | | | | | | |
| and 7 | Γest S | | elect de | vice | s liste | ed in tl | | | | | | | | | nal Assembly sembly sites |
| Ass | emb | ly Site | Asse | mbl | ly Site Origin | | | Co | ode Assembly Site City | | | | | | |
| | NFM | IE | | | NFM | | | | CHN | | | Chongchuan | | | |
| GTBF GTF | | | GTF | CHN | | | | Dong Guan | | | | | | | |
| Mate | erial [| Differen | ces: | | | | | | | | | | | | |
| | | | | | | | N | FME | | | | | G | TBF | |
| Mou | ınt Co | mpound | | | | SID# A-09 | | | | | | | Y000 | | |
| Mole | d Com | pound | | | | SID# R-17 | | | | SID | # EI | <u> 10000</u> | 0054 | | |
| Test coverage, insertions, conditions will remain consistent with current testing and verified with test MQ. | | | | | | | | | | | | | | | |
| Reas | on fo | or Chan | ge: | | | | | | | | | | | | |
| Conti | inuity | of Supp | ly | | | | | | | | | | | | |
| Anticipated impact on Form, Fit, Function, Quality or Reliability (positive / negative): | | | | | | | | | | | | | | | |
| None | | | | | | | | | | | | | | | |
| | Anticipated impact on Material Declaration | | | | | | | | | | | | | | |
| | Mate | npact to rial Decl | aration | 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 II Eco-Info website . There is no impact to the material meeting current regulatory compliance requirements with this PCN change. | | | | | | | | | | | |
| Char | iges t | to prod | uct ide | ntifi | catio | n res | ultii | na from t | his PCI | V : | | | | | |

| Assembly Site | | |
|-----------------------------------|----------------------------|----------|
| NFME | Assembly Site Origin (22L) | ASO: NFM |
| GTBF (Great Team Backend Foundry) | Assembly Site Origin (22L) | ASO: GTF |

Sample product shipping label (not actual product label)





(1P) \$N74L\$07N\$R (Q) 2000 (D) 0336 (31T)LOT: 3959047MLA (4W) TKY(1T) 7523483\$12 (P) (2P) REV: (V) 0033317

(2P) REV: (V) 0033317 (20L) CSO: SHE (21L) CCO:USA (22L) ASO: MLA (23L) ACO: MYS

Product Affected:

| TLV1117LV12DCYR | TLV1117LV15DCYT | TLV1117LV25DCYR | TLV1117LV30DCYT |
|-----------------|-----------------|-----------------|-----------------|
| TLV1117LV12DCYT | TLV1117LV18DCYR | TLV1117LV25DCYT | TLV1117LV33DCYR |
| TLV1117LV15DCYR | TLV1117LV18DCYT | TLV1117LV30DCYR | TLV1117LV33DCYT |

Qualification Report

Qualify GTBF as Subcon A/T Site for PWR Packages: Phase 3 APP-LP-LDO Devices (4 pin SOT 223)

Approve Date 17-Apr-2018

Product Attributes

| Attributes | Qual Device: <u>TLV1117LV33DCYR</u> | | | |
|---|-------------------------------------|--|--|--|
| Assembly Site | GTBF | | | |
| Package Family | SOT223 | | | |
| Flammability Rating | UL 94 V-0 | | | |
| Wafer Fab Supplier | MIHO8 | | | |
| Wafer Process | LBC7 | | | |
| O -1 D - 1 - TI V (4.4.71 V (60 D O V D 1 1) (7 - 1 - 1 1 E V E I 4 000 O O | | | | |

⁻ Qual Device TLV1117LV33DCYR is qualified at LEVEL1-260CG

Qualification Results

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

| Туре | Test Name / Condition | Duration | Qual Device: TLV1117LV33DCYR |
|------|---|-----------------------------|---------------------------------|
| AC | Autoclave 121C | 96 Hours | 3/231/0 |
| CDM | ESD - CDM | 500 V | 3/9/0 |
| ED | Electrical Characterization | Per Datasheet Parameters | 3/30/0 |
| HAST | Biased HAST, 130C/85%RH | 96 Hours | 3/231/0 |
| HTOL | Life Test, 125C | 336 Hours | 3/231/0 |
| HTSL | High Temp. Storage Bake, 170C | 420 Hours | 3/231/0 |
| MSL | Moisture Sensitivity | Level 1-260C | 3/36/0 |
| TC | Temperature Cycle, -65/150C | 500 Cycles | 3/231/0 |
| VM | Post Autoclave, Visual Quality Reliability Inspection | 96 Hours | Pass |
| VM | Post Biased HAST, Visual Quality Reliability | 96 Hours | Pass |

| | Inspection | | |
|-----|---|------------|------|
| VIV | Post Temp. Cycle, Visual Quality Reliability Inspection | 500 Cycles | Pass |
| YLI | FTY and Bin Summary | | Pass |

- 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/1000 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/1000 Hours, and 170C/420 Hours
- The following are equivalent Temperature Cycle options per JESD47: -55C/125C/700 Cycles and -65C/150C/500 Cycles

THIS INFORMATION RELATING TO QUALITY AND RELIABILITY IS PROVIDED "AS IS." Product information detailed in this report may not accurately reflect TI's current product materials, processes and testing used in the construction of the TI products. Customers are solely responsible to conduct sufficient engineering and additional qualification testing to determine whether a device is suitable for use in their applications. Using TI products outside limits stated in TI's datasheet may void TI's warranty. See TI's Terms of Sale at "http://www.ti.com/lsds/ti/legal/termsofsale.page".

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

| Location | E-Mail |
|--------------|--------------------------------|
| USA | PCNAmericasContact@list.ti.com |
| Europe | PCNEuropeContact@list.ti.com |
| Asia Pacific | PCNAsiaContact@list.ti.com |
| Japan | PCNJapanContact@list.ti.com |