TEXAS INSTRUMENTS 12500 TI Boulevard, MS 8640, Dallas, Texas 75243

# PCN# 20130122002
# Qualification of Nantong Fujitsu as additional assembly and test site for the family of TLV1117LV devices in the SOT package
## Change Notification / Sample Request

**Date:** 1/24/2013
**To:** MOUSER 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.

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 changes discussed within this PCN will not take effect any earlier than **90** days from the date of this notification, unless customer agreement has been reached on an earlier implementation of the change. This notification period is per TI's standard process.

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_ww_admin_team@list.ti.com).

Sincerely,

PCN Team
SC Business Services
Phone: +1(214) 480-6037
Fax: +1(214) 480-6659

## 20130122002
## 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 |
|---|---|
| TLV1117LV12DCYR | null |
| TLV1117LV12DCYT | null |
| TLV1117LV18DCYR | null |

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

| | | | |
|---|---|---|---|
| **PCN Number:** | 20130122002 | **PCN Date:** | 01/24/2013 |

| | |
|---|---|
| **Title:** | Qualification of Nantong Fujitsu as additional assembly and test site for the family of TLV1117LV devices in the SOT package. |

| | | | | | |
|---|---|---|---|---|---|
| **Customer Contact:** | PCN Manager | **Phone:** | +1(214)480-6037 | **Dept:** | Quality Services |

| | | | |
|---|---|---|---|
| **Proposed 1st Ship Date:** | 04/24/2013 | **Estimated Sample Availability:** | 02/02/2013 |

**Change Type:**

| | | | | | |
|---|---|---|---|---|---|
| ☒ | Assembly Site | ☐ | Assembly Process | ☒ | Assembly Materials |
| ☐ | Design | ☐ | Electrical Specification | ☐ | Mechanical Specification |
| ☒ | Test Site | ☐ | Packing/Shipping/Labeling | ☐ | Test Process |
| ☐ | Wafer Bump Site | ☐ | Wafer Bump Material | ☐ | Wafer Bump Process |
| ☐ | Wafer Fab Site | ☐ | Wafer Fab Materials | ☐ | Wafer Fab Process |

## PCN Details

### Description of Change:

Qualification of Nantong Fujitsu as an additional assembly/test site for the family of TLV1117LV devices in the SOT package. The material set for each site is as follows:

| | HANA A/T | NFME A/T |
|---|---|---|
| **Mold Compound** | 450179 | **R-17** |
| **Mount Compound** | A-09 | **A-09** |
| **Bond Wire** | 1.0 Mil Dia., Au | **1.0 Mil Dia., Au** |

### Reason for Change:

Continuity of Supply

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

None

### Changes to product identification resulting from this PCN:

| Assembly Site | | |
|---|---|---|
| Hana Thailand | Assembly Site Origin (22L) | ASO: HNT |
| Nantong Fujitsu | Assembly Site Origin (22L) | ASO: NFME |

Sample product shipping label (not actual product label)

TEXAS INSTRUMENTS
G4
MADE IN: Malaysia
2DC: 2Q:

| | |
|---|---|
| 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

**Topside Device marking**:
Assembly site code for Hana Thailand = H
Assembly site code for Nantong Fujitsu = E

**Product Affected:**

| | | | |
|---|---|---|---|
| TLV1117LV12DCYR | TLV1117LV12DCYT | TLV1117LV18DCYR | TLV1117LV18DCYT |

## Qualification Plan

This qualification has been specifically developed for the validation of this change. The qualification data validates that the proposed change meets the applicable released technical specifications.

| | | | | |
|---|---|---|---|---|
| **Qualification Schedule:** | **Start:** | January 2013 | **End:** | February 2013 |

**Qualification Device: TLV1117LV18DCY (MSL 1-260C)**

**Package Construction Details**

| | | | |
|---|---|---|---|
| Assembly Site: | NFME A/T | Mold Compound: | R-17 |
| # Pins-Designator, Family: | 4-DCY, SOT | Mount Compound: | A-09 |
| Lead Finish: | MATTE TIN | Bond Wire: | 1.0 Mil Dia., Au |

**Qualification:** ☒ **Plan** ☐ **Test Results**

| Reliability Test | Conditions | Sample Size / Fail |
|---|---|---|
| Manufacturability (Assembly) | (per mfg. Site specification) | 1 lot |
| Manufacturability (Test) | (per mfg. Site specification) | 1 lot |

Notes: **Tests require preconditioning sequence: MSL1-260C

## Reference Qualification Data: Approved January 2007

This qualification has been specifically developed for the validation of this change. The qualification data validates that the proposed change meets the applicable released technical specifications.

**Qualification Device: LM317DCY (MSL 2-260C)**

**Package Construction Details**

| | | | |
|---|---|---|---|
| Assembly Site: | NFME A/T | Mold Compound: | R-17 |
| # Pins-Designator, Family: | 4-DCY, SOT | Mount Compound: | A-09 |
| Lead Finish: | MATTE TIN | Bond Wire: | 1.0 Mil Dia., Au |

**Qualification:** ☐ **Plan** ☒ **Test Results**

| Reliability Test | Conditions | Sample Size / Fail | | |
|---|---|---|---|---|
| | | Lot 1 | Lot 2 | Lot 3 |
| **Steady-state Life Test | 150C (168, 300 Hrs) | 40/0 | 40/0 | 40/0 |
| **High Temp. Storage Bake | 150C (500, 1000 Hrs) | 77/0 | 77/0 | 77/0 |
| **Biased HAST | 130C/85%RH (96 Hrs) | 26/0 | 26/0 | 26/0 |
| **Autoclave 121C | 121C, 2 atm (96 Hrs) | 77/0 | 77/0 | 77/0 |
| **T/C -65C/150C | -65C/+150C (500, 1000 Cyc) | 77/0 | 77/0 | 77/0 |
| Solderability | Steam age, 8 hours | pass | pass | pass |
| Lead Pull | # of leads to destruction, min. 3 units | pass | pass | pass |
| Lead Finish Adhesion | # of leads, min. 3 units | pass | pass | pass |
| Physical Dimensions | (per mechanical drawing) | pass | pass | pass |
| Die Shear | (per mfg. Site specification) | pass | pass | pass |
| Manufacturability (Assembly) | (per mfg. Site specification) | pass | pass | pass |
| Salt Atmosphere | 24 Hrs | 22/0 | 22/0 | 22/0 |
| X-ray | (top side only) | pass | pass | pass |
| Moisture Sensitivity | (level 2 @ 260C peak +0/-5C) | pass | pass | pass |

Notes: **Tests require preconditioning sequence: MSL3-260C

## Reference Qualification Data: Approved April 2012

This qualification has been specifically developed for the validation of this change. The qualification data validates that the proposed change meets the applicable released technical specifications.

**Qualification Device: TLV1117LV07DCY (MSL1-260C)**

**Package Construction Details**

| | | | |
|---|---|---|---|
| Assembly Site: | HNT A/T | Mold Compound: | 450179 |
| # Pins-Designator, Family: | 4-DCY, SOT | Mount Compound: | A-09 |
| Lead Finish: | MATTE TIN | Bond Wire: | 1.0 Mil Dia., Au |

**Qualification: ☐ Plan ☒ Test Results**

| Reliability Test | Conditions | Sample Size / Fail |
|---|---|---|
| Electrical Characterization | Per PDS range | Pass |
| ESD HBM | 500V, 1000V, 1500V, 2000V | 3/0 |
| Latch-up | (per JESD78) | 6/0 |

Notes: **Tests require preconditioning sequence: MSL1-260C

## Reference Qualification Data: Approved April 2012

This qualification has been specifically developed for the validation of this change. The qualification data validates that the proposed change meets the applicable released technical specifications.

**Qualification Device: TLV1117LV33DCY (MSL1-260C)**

**Package Construction Details**

| | | | |
|---|---|---|---|
| Assembly Site: | NFME A/T | Mold Compound: | R-17 |
| # Pins-Designator, Family: | 4-DCY, SOT | Mount Compound: | A-09 |
| Lead Finish: | MATTE TIN | Bond Wire: | 1.0 Mil Dia., Au |

**Qualification: ☐ Plan ☒ Test Results**

| Reliability Test | Conditions | Sample Size / Fail |
|---|---|---|
| **Unbiased HAST | 130C/85%RH/33.3 psia (96 Hrs) | 80/0 |
| **T/C -65C/150C | -65C/+150C (500Cyc) | 80/0 |
| ESD CDM | 500V | 3/0 |
| Manufacturability (Assembly) | (per mfg. Site specification) | Pass |
| Manufacturability (Test) | (per mfg. Site specification) | Pass |
| Moisture Sensitivity | (level 1 @ 260C peak +5/-0C) | Pass |

Notes: **Tests require preconditioning sequence: MSL1-260C

| **Reference Qualification Data: Approved May 2011** | | | |
|---|---|---|---|
| This qualification has been specifically developed for the validation of this change. The qualification data validates that the proposed change meets the applicable released technical specifications**.** | | | |
| **Qualification Device: TLV1117LV33DCY (MSL1-260C)** | | | |
| **Package Construction Details** | | | |
| Assembly Site: | HNT A/T | Mold Compound: | 450179 |
| # Pins-Designator, Family: | 4-DCY, SOT | Mount Compound: | A-09 |
| Lead Finish: | MATTE TIN | Bond Wire: | 1.0 Mil Dia., Au |
| **Qualification:** ☐ **Plan** ☒ **Test Results** | | | |
| Reliability Test | Conditions | | Sample Size / Fail |
| Electrical Characterization | Per PDS range | | Pass |
| Notes: **Tests require preconditioning sequence: MSL1-260C | | | |

| **Reference Qualification Data: Approved May 2011** | | | |
|---|---|---|---|
| This qualification has been specifically developed for the validation of this change. The qualification data validates that the proposed change meets the applicable released technical specifications**.** | | | |
| **Qualification Device: TLV1117LV45DCY (MSL1-260C)** | | | |
| **Package Construction Details** | | | |
| Assembly Site: | HNT A/T | Mold Compound: | 450179 |
| # Pins-Designator, Family: | 4-DCY, SOT | Mount Compound: | A-09 |
| Lead Finish: | MATTE TIN | Bond Wire: | 1.0 Mil Dia., Au |
| **Qualification:** ☐ **Plan** ☒ **Test Results** | | | |
| Reliability Test | Conditions | | Sample Size / Fail |
| Electrical Characterization | Per PDS range | | Pass |
| Notes: **Tests require preconditioning sequence: MSL1-260C | | | |

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 |