12500 TI Boulevard, MS 8640, Dallas, Texas 75243

PCN#20161104001
Qualification of new Assembly & Test sites for select devices in the SOT Package

Change Notification / Sample Request

Date: November 07, 2016
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. 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

20161104001
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
TLV1117-33CDCYR	null
TLV1117-50IDCYR	null
TLV1117IDCYRG3	null
TLV1117CDCYR	null
TLV1117IDCYR	null
LM317MDCYR	null
UA78M05CDCYR	null

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

PCN Number:	20161104001	PCN Date:	Nov 07 2016
Title:	Qualification of additional Assembly & Test sites for select devices in the SOT Package		
Customer Contact:	PCN Manager	Dept:	Quality Services
Proposed 1st Ship Date:	Feb 07 2017	Estimated Sample Availability:	Provided upon Request

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
		☐	Part number change		

PCN Details

Description of Change:

Texas Instruments is pleased to announce the qualification of JCET Chuzhou and GTBF as alternate Assembly and Test sites for the devices listed in the Product Affected section below. Construction differences are as follows:

What	NFME	JCETCZ	GTBF
Mount Compound	SID# A-06	**S#011204001902**	**S#011204001902**
Mold Compound	SID#R-17	**S#013101006201**	**SID#EN0000052**

Test coverage, insertions, conditions will remain consistent with current testing and verified with test MQ.

Reason for Change:

Continuity of Supply

Anticipated impact on Fit, Form, 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 TI ECO website.

Changes to product identification resulting from this PCN:

Assembly Site	Assembly Site Origin (22L)	Assembly Country Code (21L)	Assembly City
NFME	NFM	CHN	Economic Development Zone
JCETCZ	**GP6**	**CHN**	**Chuzhou Anhui**
GTBF	**GTF**	**CHN**	**Sci. Park Phasell Shatin**

Sample product shipping label (not actual product label)

Topside Device marking (if included):
Assembly site code for NFM= E
Assembly site code for GP6 = F
Assembly site code for GTF= T

Product Affected

Group 1 Devices: Current AT - NFME; New AT - GTBF & JCETCZ:

TLV1117-15CDCYR	TLV1117-25CDCYRG3	TLV1117-33IDCYR	TLV1117-50IDCYR
TLV1117-15CDCYRG3	TLV1117-25IDCYR	TLV1117-33IDCYRG3	TLV1117-50IDCYRG3
TLV1117-15IDCYR	TLV1117-33CDCYR	TLV1117-50CDCYR	UA78M08CDCYR
TLV1117-25CDCYR	TLV1117-33CDCYRG3	TLV1117-50CDCYRG3	

Group 2 Devices: Current AT - NFME & JCETCZ; New AT – GTBF:

LM317DCYR	TLV1117-18CDCYRG3	TLV1117CDCYRG3	UA78M05CDCYRG3
LM317DCYRG3	TLV1117-18IDCYR	TLV1117IDCYR	UA78M05IDCYR
LM317MDCYR	TLV1117-18IDCYRG3	TLV1117IDCYRE3	UA78M05IDCYRG3
LM317MDCYRG3	TLV1117CDCYR	TLV1117IDCYRG3	UA78M33CDCYR
SN78MCDCYR	TLV1117CDCYRE3	UA78M05CDCYR	UA78M33CDCYRG3
TLV1117-18CDCYR			

Qualification Report

Additional 4 pin DCY package offload to JCETCZ
Approve Date 11-Aug-2016

Product Attributes

Attributes	Qual Device: TLV1117-15CDCYR	Qual Device: TLV1117-25CDCYR	Qual Device: TLV1117-33CDCYR	Qual Device: TLV1117-50CDCYR	Qual Device: UA78M08CDCYR	QBS Package Reference: LM317DCYR
Assembly Site	JCET CHUZHOU	JCET CHUZHOU	JCET CHUZHOU	JCET CHUZHOU	JCET CHUZHOU	JCET CHUZHOU
Package Family	SOT223	SOT223	SOT223	SOT223	SOT223	SOT223
Flammability Rating	UL 94 V-0	UL 94 V-0	UL 94 V-0	UL 94 V-0	UL 94 V-0	UL 94 V-0
Wafer Fab Supplier	SFAB	SFAB	SFAB	SFAB	SFAB	SFAB
Wafer Process	JI1	JI1	JI1	JI1	JI1	JI1

- QBS: Qual By Similarity
- Qual Devices qualified at LEVEL2-260CG: TLV1117-33CDCYR, TLV1117-25CDCYR, TLV1117-15CDCYR, TLV1117-50CDCYR, UA78M08CDCYR

Qualification Results

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

Type	Test Name / Condition	Duration	Qual Device: TLV1117-15CDCYR	Qual Device: TLV1117-25CDCYR	Qual Device: TLV1117-33CDCYR	Qual Device: TLV1117-50CDCYR	Qual Device: UA78M08CDCYR	QBS Package Reference: LM317DCYR
AC	Autoclave 121C, 2 atm	96 Hours	-	-	-	-	-	3/231/0
ED	Electrical Characterization	Datasheet Parameters	Pass	Pass	Pass	Pass	Pass	Pass
FLAM	Flammability (IEC 695-2-2)	--	-	-	-	-	-	3/15/0
FLAM	Flammability (UL 94V-0)	--	-	-	-	-	-	3/15/0
FLAM	Flammability (UL-1694)	--	-	-	-	-	-	3/15/0
HAST	Biased HAST, 130C/85%RH	96 Hours	-	-	-	-	-	3/231/0
HTOL	Life Test, 150C	300 Hours	-	-	-	-	-	3/231/0
HTSL	High Temp. Storage Bake, 170C	600 Hours	-	-	-	-	-	3/231/0
LI	Lead Fatigue	Leads	-	-	-	-	-	3/66/0
LI	Lead Pull to Destruction	Leads	-	-	-	-	-	3/66/0
PD	Physical Dimensions	--	-	-	-	-	-	Pass
SD	Surface Mount Solderability	Pb Free	-	-	-	-	-	3/66/0
TC	Temperature Cycle, -65/150C	1000 Cycles	-	-	-	-	-	3/227/0
WBP	Bond Pull	Wires	-	-	-	1/76/0	1/76/0	3/228/0
WBS	Ball Bond Shear	Wires	-	-	-	1/76/0	1/76/0	3/228/0

- 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 Report

Qualify GTBF as Subcon A/T Site for PWR Packages: Phase 2 Devices (SOT 223 –DCY (4-pin))

Product Attributes

Attributes	Qual Device: LM317DCY	Qual Device: LM317MDCYR	Qual Device: TLV1117-50IDCYR
Wafer Fab Supplier	SFAB	SFAB	SFAB
Wafer Process	JI1	JI1	JI1
Assembly Site	GTBF	GTBF	GTBF
Package Family	SOT223	SOT223	SOT223
Package Designator	DCY	DCY	DCY

- Qual Device LM317DCY is qualified at LEVEL2-260CG
- Qual Device TLV1117-50IDCYR is qualified at LEVEL2-260CG
- Qual Device LM317MDCYR is qualified at LEVEL2-260CG

Qualification Results

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

Type	Test Name / Condition	Duration	Qual Device: LM317DCY	Qual Device: LM317MDCYR	Qual Device: TLV1117-50IDCYR
-	Burn In, 125C	336 Hours	1/77/0	-	1/77/0
AC	Autoclave, 121C	96 Hours	3/77/0	1/77/0	1/77/0
CDM	ESD CDM	+/- 1000V	3/3/0	-	-
ED	Electrical Characterization	Per Datasheet Parameters	3/10/0	-	-
HAST	Biased HAST, 130C/85%RH	96 Hours	3/77/0	-	-
HTSL	High Temperature Storage Life, 170C	420 Hours	3/77/0	-	1/77/0
MSL	Moisture Sensitivity	Level 2 – 260CG	3/12/0	1/12/0	-
TC	Temperature Cycling, 65C/150C	500 Cycles	3/77/0	-	1/77/0
TS	Thermal Shock, -65C/+150C	200 Cycles	3/77/0	-	1/77/0
VM	Visual Quality Reliability Inspection	Post Autoclave (96 Hours)	PASS	PASS	PASS
VM	Visual Quality Reliability Inspection	Post Biased HAST (96 hours)	PASS	-	-
VM	Visual Quality Reliability Inspection	Post Temp Cycle (500 Cycles)	PASS	-	PASS
VM	Visual Quality Reliability Inspection	Post Thermal Shock (500 Cycles)	PASS	-	PASS
YLD	FTY and Bin Summary	-	PASS	PASS	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 0.7eV: 150C/1000 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 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