PCN Number:	20151130000	**PCN Date:**	12/04/2015
Title:	Qualification of GTBF as Additional Assembly/Test Site for Select Devices		
Customer Contact:	PCN Manager	**Dept:**	Quality Services
Proposed 1st Ship Date:	03/04/2016	**Estimated Sample Availability:**	Date Provided at Sample request

Change Type:

☒	Assembly Site	☐	Design	☐	Wafer Bump Site
☐	Assembly Process	☐	Data Sheet	☐	Wafer Bump Material
☒	Assembly Materials	☐	Part number change	☐	Wafer Bump Process
☐	Mechanical Specification	☒	Test Site	☐	Wafer Fab Site
☐	Packing/Shipping/Labeling	☐	Test Process	☐	Wafer Fab Materials
				☐	Wafer Fab Process

PCN Details

Description of Change:

Texas Instruments Incorporated is announcing the qualification of GTBF as additional assembly and test site for select devices listed in the "Product Affected" Section. Current assembly sites and Material differences are as follows.

Assembly Site	Assembly Site Origin	Assembly Country Code	Assembly Site City
NFME	NFM	CN	Nantong Jiangsu
GTBF Ltd.	**GTF**	**CN**	**Sci. Park PhaseII Shatin**

Material Differences:

Group 1 Device (TO-263):

	NFME	**GTBF**
Mount Compound	SID# A-05	EY0000006
Mold Compound	SID# R-07	EN0000030
Wire type	Au	Cu

Group 2 Device (TO-220):

	NFME	**GTBF**
Mold Compound	SID#R-12	EN0000038
Mount Compound (Solder)	SID#A-11	SS0000001

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

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		
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)

TEXAS INSTRUMENTS
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
G4
(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

ASSEMBLY SITE CODES: NFME = E, GTBF = T

Group 1 Product Affected:

LM317KTTR	TL2575-ADJIKTTRG3	TL750L05CKTTRG3	TLV1117IKTTRG3
LM317KTTRG3	TL2575HV-05IKTTR	TL783CKTTR	UA7805CKTTR
TL2575-05IKTTR	TL2575HV-05IKTTRG3	TL783CKTTRG3	UA7805CKTTRG3
TL2575-05IKTTRG3	TL2575HV-33IKTTR	TLV1117CKTTR	UA7812CKTTR
TL2575-33IKTTR	TL2575HV-ADJIKTTR	TLV1117CKTTRG3	UA7812CKTTRG3
TL2575-ADJIKTTR	TL750L05CKTTR	TLV1117IKTTR	

Group 2 Product Affected:

CSD18502KCS	CSD18532KCS	CSD18542KCS	CSD19533KCS
CSD18503KCS	CSD18533KCS	CSD19501KCS	CSD19534KCS
CSD18504KCS	CSD18534KCS	CSD19503KCS	XCSD18542KCS
CSD18532DKCS	CSD18537NKCS	CSD19531KCS	

Group 1: Qualification Report
Qualify GTBF as Subcon A/T site for PWR Packages:
Phase 1 Devices for KTT (3 and 5 pin)

Product Attributes

Attributes	Qual Device: LM317KTTR	Qual Device: TL2575-05IKTTR	Qual Device: TL750L05CKTTR
Assembly Site	GTBF	GTBF	GTBF
Package Family	TO-263 -KTT	TO-263 -KTT	TO-263 -KTT
Flammability Rating	UL 94 V-0	-	UL 94 V-0
Wafer Fab Supplier	SFAB	SFAB	SFAB
Wafer Process	JI1	JI1	JI1

- QBS: Qual By Similarity
- Qual Devices qualified at LEVEL3-245C: TL2575-05IKTTR, LM317KTTR, TL750L05CKTTR

Qualification Results

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

Type	Test Name / Condition	Duration	Qual Device: LM317KTTR	Qual Device: TL2575-05IKTTR	Qual Device: TL750L05CKTTR
AC	Autoclave 121C	96 Hours	3/231/0	1/77/0	3/231/0
CDM	ESD - CDM	1000 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	-	1/77/0	-
HTSL	High Temp. Storage Bake, 170C	420 Hours	3/231/0	-	3/231/0
PD	Physical Dimensions	--	3/15/0	-	3/15/0
TC	Temperature Cycle, -65/150C	500 Cycles	3/231/0	1/77/0	3/231/0
TS	Thermal Shock -65/150C	500 Cycles	-	-	3/231/0
WBP	Bond Pull	Wires	3/228/0	-	3/228/0
WBS	Ball Bond Shear	Wires	3/228/0	-	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 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

Group 2 Qualification Report
A/T Site Qualification of GTBF using CSD18532KCS (TO-220) as Driver Vehicle

Product Attributes

Attributes	Qual Device: CSD18532KCS
Assembly Site	GTBF
Package Family	TO-220
Flammability Rating	UL-94V-0
Wafer Fab Supplier	CFAB
Wafer Fab Process	FET

- QBS: Qual By Similarity
- Qual Device CSD18532KCS is qualified at Not Classified

Qualification Results

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

Type	Test Name / Condition	Duration	Qual Device: CSD18532KCS
IOL	Intermittent Operating Life	2min ‘on’/ 2min ‘off’ for 10K cycles; 100°C Tj rise from 25°C to 125°C	3/231/0
PC	Convection Reflow	24hrs/125°C dry bake	3/900/0
PC	Convection Reflow	3x reflows/260°C +5°C/-0°C	3/900/0
AC	Autoclave 121°C	121°C, ~100%RH, 2Atm, 96hrs	3/231/0
TC	Temperature Cycle	-65°C/+150°C, 500 cycles	3/231/0
THB	Biased Temperature and Humidity	85°C/85%RH/80%Vds(max), 1000hrs	3/231/0
MQ	A/T Site Manufacturability	(per mfg. Site specification)	Pass

- Preconditioning was performed prior to Autoclave, THB & Temperature Cycle, as applicable
- The following are equivalent Temp Cycle options per JESD47: -55°C/125°C/700 Cycles and -65°C/150°C/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
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