

<b>PCN Number:</b>	20150603000	<b>PCN Date:</b>	06/08/2015
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**Title:** Qualification of GTBF as Additional Assembly/Test Site for Select Devices

**Customer Contact:** [PCN Manager](#) **Dept:** Quality Services

**Proposed 1<sup>st</sup> Ship Date:** 09/08/2015 **Estimated Sample Availability:** Date Provided at Sample request

<input checked="" type="checkbox"/>	Assembly Site	<input type="checkbox"/>	Design	<input type="checkbox"/>	Wafer Bump Site
<input type="checkbox"/>	Assembly Process	<input type="checkbox"/>	Data Sheet	<input type="checkbox"/>	Wafer Bump Material
<input checked="" type="checkbox"/>	Assembly Materials	<input type="checkbox"/>	Part number change	<input type="checkbox"/>	Wafer Bump Process
<input type="checkbox"/>	Mechanical Specification	<input checked="" type="checkbox"/>	Test Site	<input type="checkbox"/>	Wafer Fab Site
<input type="checkbox"/>	Packing/Shipping/Labeling	<input type="checkbox"/>	Test Process	<input type="checkbox"/>	Wafer Fab Materials
				<input type="checkbox"/>	Wafer Fab Process

**PCN Details**

**Description of Change:**

Qualification of GTBF as additional assembly and test site for Select Devices. Assembly differences are shown in the following table:

**Group 1 Device:**

	NFME	GTBF
Mount Compound	SID# MC-05	SID# EY0000006
Mold Compound	SID# R-12	SID# EN0000038

**Group 2 Device:**

	NFME	GTBF
Mount Compound	SID# MC-05	SID# EY0000006
Mold Compound	SID# R-12	SID# EN0000038
Wire type	Au	Cu

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: 2d:  
 MSL 2 /260C/1 YEAR SEAL DT  
 MSL 1 /235C/UNLIM 03/29/04  
 OPT: ITEM: 39  
 LBL: 5A (L)T0:1750  
 (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

ASSEMBLY SITE CODES: NFME = E, GTBF = TBD

<b>Group 1 Product Affected:</b>			
TLV1117CKCS	UA78M05CKCS	UA78M08CKCS	UA78M33CKCS
TLV1117CKCSE3	UA78M05CKCSE3	UA78M08CKCSE3	UA78M33CKCSE3
TLV1117IKCS	UA78M05IKCS	UA78M12CKCS	
TLV1117IKCSE3	UA78M05IKCSE3	UA78M12CKCSE3	
<b>Group 2 Product Affected:</b>			
LM317KCS	LM317KCSE3		

## Qualification Report

### Qualify GTBF as subcon A/T site for 3pin TO-220 KCS PWR Packages

#### Product Attributes

Attributes	Qual Device: LM317KCS
<b>Assembly Site</b>	GTBF
<b>Package Family</b>	TO-220
<b>Flammability Rating</b>	UL-V94-0
<b>Wafer Fab Supplier</b>	SFAB
<b>Wafer Fab Process</b>	J11

- QBS: Qual By Similarity
- Qual Device LM317KCS 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: LM317KCS
AC	Autoclave 121C	96 Hours	3/237/0
HAST	Biased HAST, 130C/85%RH	96 Hours	3/255/0
HTSL	High Temp. Storage Bake, 150C	1000 Hours	3/231/0
LI	Lead Fatigue	Leads	3/24/0
LI	Lead Pull to Destruction	Leads	3/24/0
MISC	Salt Atmosphere	Salt/Atmos	3/66/0
MQ	Manufacturability	(per mfg. Site specification)	3/Pass
PD	Physical Dimensions	(per mechanical drawing)	3/15/0
PKG	Lead Finish Adhesion	Leads	3/24/0
PKG	Solder Heat	10 sec	3/66/0
SD	Solderability	8 Hours Steam Age	3/66/0
TC	Temperature Cycle, -65/150C	500 Cycles	3/273/0

- 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

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

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