PCN Number:	20151027001	**PCN Date:**	10/30/2015
Title:	Qualification of NFME Additional Assembly & Test site for Select TO220 Packaged Devices		
Customer Contact:	PCN Manager	**Dept:**	Quality Services
Proposed 1st Ship Date:	1/30/2016	**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 Nantong Fujitsu Microelectronics (NFME) as an additional Assembly & Test site for select devices in the TO220 package shown in the table below. BOM differences are noted as follows:

	ASEWH	NFME
Mount Compound	SID#A-11	**SID#1110999A2**
Mold Compound	SID#4020026A3	**SID#R12**
Gate Bond Wire	Al, 3.0 mils	**Al, 5.0 mils**

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
ASEWH	AWH	CHN	Weihai
NFME	**NFM**	**CHN**	**Economic Development Zone**

Sample product shipping label (not actual product label)

Topside Device marking:
Assembly site code for ASEWH= I
Assembly site code for NFME = E

Product Affected

CSD19505KCS	CSD19506KCS	CSD19535KCS	CSD19536KCS

Qualification Report

Offload - 19505/19535/19506/19536 to NFME
Approve Date 25-Sep-2015

Product Attributes

Attributes	Qual Device: CSD19505KCS	Qual Device: CSD19506KCS	Qual Device: CSD19535KCS	Qual Device: CSD19536KCS
Assembly Site	NFME	NFME	NFME	NFME
Package Family	TO-220	TO-220	TO-220	TO-220
Flammability Rating	UL-94V-0	UL-94V-0	UL-94V-0	UL-94V-0
Wafer Fab Supplier	CFAB	CFAB	CFAB	CFAB
Wafer Fab Process	N35UMV09L2P1M0C6	N35UMV09L2P1M0C6	N35UMV09L2P1M0C6	N35UMV09L2P1M0C6

- QBS: Qual By Similarity
- Qual Device CSD19506KCS is qualified at NC-P
- Qual Device CSD19536KCS is qualified at NC-P
- Qual Device CSD19505KCS is qualified at NC-P
- Qual Device CSD19535KCS is qualified at NC-P

ASEWH KCS 80V & 100V Qualification Summary

CSD19536KCS Qualification Test Summary				
Stress	**Conditions**	**Test Duration**	**Sample Size**	**Results**
HTRB	175°C/80% Rated Vds	1K hrs	3 lots x 77 units	Pass
HTGB	175°C/80% Rated Vgs	1K hrs	3 lots x 77 units	Pass
THB	85°C/85%R.H./80% Rated Vds	1K hrs	3 lots x 77 units	Pass
Autoclave	121C/100% RH	96 hrs	3 lots x 77 units	Pass
Intermittent Op Life	Delta Tj = 100°C 2 min on/2 min off	10K cycles	3 lots x 77 units	Pass
Temp Cycle	-65°C to 150°C	500 cycles	3 lots x 77 units	Pass

Pass = 0/77 x 3 lots

Preconditioning performed on devices prior to THB, Autoclave, & Temp Cycle stresses

- Bake: 24 hours @ 125°C
- 3X reflow + flux + rinse, 260°C Pb free reflow temp

The CSD19505KCS, CSD19506KCS & CSD19535KCS were qualified by similarity and verified by performing qualification tests to the conditions shown in the table below:

CSD19505KCS, CSD19506KCS, & CSD19535KCS Qualification Test Summary				
Stress	**Conditions**	**Test Duration**	**Sample Size**	**Results**
HTRB	175°C/80% Rated Vds	168 hrs	1 lot x 77 units	Pass
HTGB	175°C/80% Rated Vgs	168 hrs	1 lot x 77 units	Pass

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

Type	Test Name / Condition	Duration	Qual Device: CSD19505KCS	Qual Device: CSD19506KCS	Qual Device: CSD19535KCS	Qual Device: CSD19536KCS
MQ	Manufacturability (Assembly)	(per mfg. Site specification)	3/1/0	3/1/0	3/1/0	3/1/0

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
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