12500 TI Boulevard, MS 8640, Dallas, Texas 75243

PCN# 20130926000
Qualification of NFME as Additional Assembly/Test Site for TPD4S009DBVR device
Change Notification / Sample Request

Date: 9/28/2013
To: Newark/Farnell 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

20130926000
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
TPD4S009DBVR	null

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

PCN Number:	20130926000			**PCN Date:**	09/27/2013
Title:	Qualification of NFME as Additional Assembly/Test Site for TPD4S009DBVR device				
Customer Contact:	PCN Manager	**Phone:**	+1(214)480-6037	**Dept:**	Quality Services
Proposed 1st Ship Date:	12/27/2013	**Estimated Sample Availability:**	Date Provided at Sample request		

Change Type:					
☒	Assembly Site	☐	Assembly Process	☒	Assembly Materials
☒	Test Site	☐	Packing/Shipping/Labeling	☐	Test Process

PCN Details

Description of Change:

Qualification of NFME as additional assembly and test site for TPD4S009DBVR device. Assembly differences are shown in the following table:

	HNC	NFME
Wire	500072T (Au)	W-15 (Cu)
Mold Compound	450228 (Sumitomo)	R-17 (Hitachi)
Lead Finish	NiPdAu	Matte Sn

Upon expiration of this PCN, TI will combine lead free solutions in a *single standard part number*, for example; *TPD4S009DBVR* – can ship with both Matte Sn and NiPdAu.

Customers may specify NiPdAu finish by ordering the part with the G4 suffix, *TPD4S009DBVRG4*.

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

Reason for Change:

Continuity of Supply

1) To align with world technology trends and use wiring with enhanced mechanical and electrical properties
2) Maximize flexibility within our Assembly/Test production sites.
3) Cu is easier to obtain and stock

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

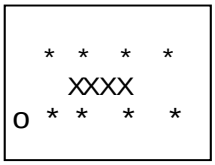
None

Changes to product identification resulting from this PCN:

Assembly Site		
HNC (Hana China)	Assembly Site Origin (22L)	ASO: CHS
NFME (Nantong Fujitsu Micro-Electronics)	Assembly Site Origin (22L)	ASO: NFM

Sample product shipping label (not actual product label)

Device Marking



1ST DIGIT = DEVICE FAMILY
2ND/3RD DIGIT = DEVICE FUNCTION CODE
4TH DIGIT = WAFER FAB/ASSEMBLY SITE CODE
*** * * *** = BINARY DATE PER TI DWG 4205087
O = PIN 1 INDICATOR

Topside Device marking:
Assembly site code for HNC = 9
Assembly site code for NFME = E

Product Affected:

TPD4S009DBVR

Qualification Data

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.

Qual Vehicle: TPD4S009DBVR (MSL1-260C)

Package Construction Details

Assembly Site:	NFME	Mold Compound:	R-17
# Pins-Designator, Family:	6-DBV, SOT-23	Mount Compound:	A-03
Lead Finish, Base	Matte Sn, Cu	Bond Wire:	1.0 Mil Dia. Cu

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

Reliability Test	Conditions	Sample Size / Fail		
		Lot# 1	Lot# 2	Lot# 3
** Temperature Cycle	-65/150C (1000 cycles)	77/0	77/0	77/0
Ball Bond Shear	76 ball bonds, min. 5 units	78/0	78/0	78/0
Bond Pull	76 ball bonds, min. 5 units	78/0	78/0	78/0
X-ray	(Top Side Only)	5/0	5/0	5/0
Manufacturability (MQ)	-	Pass	Pass	Pass

**- Preconditioning sequence: Level 1-260C.

Reference Qualification: SOT-23 Package at NFME

Qualification Data: Approved 05/14/2013

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

Qual Vehicle 1 : TL432ACDBVR

Package Construction Details

Assembly Site:	NFME	Mold Compound:	R-17
# Pins-Designator, Family:	5-DBV, SOT-23	Mount Compound:	A-03
Lead frame (Finish, Base):	Matte Sn, Cu	Bond Wire:	1.0 Mil Dia., Cu

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

Reliability Test	Conditions	Sample Size/Fail		
		Lot# 1	Lot# 2	Lot# 3
Electrical Characterization	-	Pass	-	-
Life Test	150C(300 Hrs)	77/0	77/0	-
**Autoclave	121C (192 Hrs)	77/0	77/0	77/0
**Thermal Shock	-65C/+150C (500 Cyc)	77/0	77/0	-
**Temperature Cycle	-65C/+150C (1000 Cyc)	77/0	77/0	77/0
**Unbiased HAST	130C/85%RH (96 Hrs)	77/0	77/0	77/0
**Biased HAST	130C/85%RH (192 Hrs)	77/0	77/0	-

**High Temp Storage Bake	170C (600Hrs)	77/0	77/0	77/0
Flammability (UL 94V-0)	(UL 94V-0)	5/0	5/0	-
Flammability (UL-1694)	(UL-1694)	5/0	5/0	-
Flammability (IEC 695-2-2)	(IEC 695-2-2)	5/0	5/0	-
Solderability	Steam age, 8 hours; PB-Free solder	22/0	22/0	-
Salt Atmosphere	-	22/0	22/0	-
X-ray	(top side only)	5/0	5/0	5/0
Manufacturability (Assembly)	(per mfg. Site specification)	Pass	Pass	Pass
Moisture Sensitivity	L1-260C	12/0	12/0	12/0
Notes **- Preconditioning sequence: Level 1-260C.				

Qual Vehicle 2 : TS321IDBVR

Package Construction Details			
Assembly Site:	NFME	Mold Compound:	R-17
# Pins-Designator, Family:	5-DBV, SOT-23	Mount Compound:	A-03
Lead frame (Finish, Base):	Matte Sn, Cu	Bond Wire:	1.0 Mil Dia., Cu

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

Reliability Test	Conditions	Sample Size/Fail		
		Lot# 1	Lot# 2	Lot# 3
Electrical Characterization	-	Pass	-	-
Life Test	150C(300 Hrs)	77/0	-	-
**Autoclave	121C (192 Hrs)	77/0	77/0	77/0
**Thermal Shock	-65C/+150C (500 Cyc)	77/0	-	-
**Temperature Cycle	-65C/+150C (1000 Cyc)	77/0	77/0	77/0
**Unbiased HAST	130C/85%RH (96 Hrs)	77/0	77/0	77/0
**Biased HAST	130C/85%RH (192 Hrs)	77/0	-	-
**High Temp Storage Bake	170C (600Hrs)	77/0	77/0	77/0
Flammability (UL 94V-0)	(UL 94V-0)	5/0	-	-
Flammability (UL-1694)	(UL-1694)	5/0	-	-
Flammability (IEC 695-2-2)	(IEC 695-2-2)	5/0	-	-
Solderability	Steam age, 8 hours; PB-Free solder	22/0	-	-
Salt Atmosphere	-	22/0	-	-
X-ray	(top side only)	5/0	5/0	5/0
Manufacturability (Assembly)	(per mfg. Site specification)	Pass	Pass	Pass
Moisture Sensitivity	L1-260C	12/0	12/0	12/0
Notes **- Preconditioning sequence: Level 1-260C.				

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