



**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:** MOUSER 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](mailto: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.

<b>DEVICE</b>	<b>CUSTOMER PART NUMBER</b>
TPD4S009DBVR	null

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

<b>PCN Number:</b>	20130926000			<b>PCN Date:</b>	09/27/2013
<b>Title:</b>	Qualification of NFME as Additional Assembly/Test Site for TPD4S009DBVR device				
<b>Customer Contact:</b>	PCN Manager	<b>Phone:</b>	+1(214)480-6037		<b>Dept:</b> Quality Services
<b>Proposed 1<sup>st</sup> Ship Date:</b>	12/27/2013	<b>Estimated Sample Availability:</b>	Date Provided at Sample request		
<b>Change Type:</b>					
<input checked="" type="checkbox"/> Assembly Site	<input type="checkbox"/>	Assembly Process	<input checked="" type="checkbox"/>	Assembly Materials	
<input checked="" type="checkbox"/> Test Site	<input type="checkbox"/>	Packing/Shipping/Labeling	<input type="checkbox"/>	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):

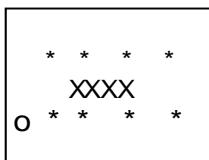
None

#### Changes to product identification resulting from this PCN:

Assembly Site	Assembly Site Origin (22L)	ASO: CHS
HNC (Hana China)	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	<a href="mailto:PCNAmericasContact@list.ti.com">PCNAmericasContact@list.ti.com</a>
Europe	<a href="mailto:PCNEuropeContact@list.ti.com">PCNEuropeContact@list.ti.com</a>
Asia Pacific	<a href="mailto:PCNAsiaContact@list.ti.com">PCNAsiaContact@list.ti.com</a>
Japan	<a href="mailto:PCNJapanContact@list.ti.com">PCNJapanContact@list.ti.com</a>