

**PCN# 20130924000**  
**Add Cu as Alternative Wire Base Metal for Selected Device(s)**  
**on T0-220 (KCS) and SOT-23 (DBV) packages**  
**Change Notification / Sample Request**

**Date:** 9/27/2013  
**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

**20130924000**

**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>
LM237KCSE3	null
LM337KCSE3	null
TL750L05CKCS	null
TL750M05CKCSE3	null
TL750M10CKCSE3	null
TL780-05KCS	null
TL780-12KCSE3	null
TL783CKCSE3	null
TLV1117CKCS	null
TLV2217-25KCSE3	null
TLV2217-33KCSE3	null
TPD2S017DBVR	null
UA7810CKCS	null
UA7812CKCS	null
UA7812CKCSE3	null
UA7815CKCS	null
UA7815CKCSE3	null
UA7824CKCS	null
UA78M05CKCS	null
UA78M05CKCSE3	null
UA78M12CKCS	null
UA78M33CKCS	null
UA78M33CKCSE3	null

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

<b>PCN Number:</b>	20130924000			<b>PCN Date:</b>	09/27/2013
<b>Title:</b>	Add Cu as Alternative Wire Base Metal for Selected Device(s) on T0-220 (KCS) and SOT-23 (DBV) packages				
<b>Customer Contact:</b>	<a href="#">PCN Manager</a>	<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 type="checkbox"/>	Assembly Site	<input checked="" type="checkbox"/>	Assembly Process	<input checked="" type="checkbox"/>	Assembly Materials
<input type="checkbox"/>	Design	<input type="checkbox"/>	Electrical Specification	<input type="checkbox"/>	Mechanical Specification
<input type="checkbox"/>	Test Site	<input type="checkbox"/>	Packing/Shipping/Labeling	<input type="checkbox"/>	Test Process
<input type="checkbox"/>	Wafer Bump Site	<input type="checkbox"/>	Wafer Bump Material	<input type="checkbox"/>	Wafer Bump Process
<input type="checkbox"/>	Wafer Fab Site	<input type="checkbox"/>	Wafer Fab Materials	<input type="checkbox"/>	Wafer Fab Process
		<input type="checkbox"/>	Part number change		
<b>PCN Details</b>					
<b>Description of Change:</b>					
Texas Instruments is pleased to announce the qualification of Cu as an additional bond wire option for devices listed in "Product affected" section below. Devices will remain in current assembly facility and Material Differences are as follows:					
<b>Group 1 Devices:</b>					
<b>Material set</b>	<b>From</b>	<b>To</b>			
Wire	W-02	W-13			
<b>Group 2 Devices:</b>					
<b>Material set</b>	<b>From</b>	<b>To</b>			
Mold Compound	R-13	R-17			
Wire	W-04 (Au)	W-15 (Cu)			
Lead Finish	NiPdAu	Matte Sn			
Upon expiration of this PCN, TI will combine lead free solutions in a <i>single standard part number</i> , for example; <a href="#">TPD2S017DBVR</a> – can ship with both Matte Sn and NiPdAu.					
When available customers may specify NiPdAu finish by ordering the part with the G4 suffix, e.g. <a href="#">TPD2S017DBVRG4</a> .					
<b>Reason for Change:</b>					
Continuity of supply.					
<ol style="list-style-type: none"> <li>1) To align with world technology trends and use wiring with enhanced mechanical and electrical properties</li> <li>2) Maximize flexibility within our Assembly/Test production sites.</li> <li>3) Cu is easier to obtain and stock</li> </ol>					
<b>Anticipated impact on Fit, Form, Function, Quality or Reliability (positive / negative):</b>					
None.					
<b>Group 1 Device - Changes to product identification resulting from this PCN:</b>					
None					

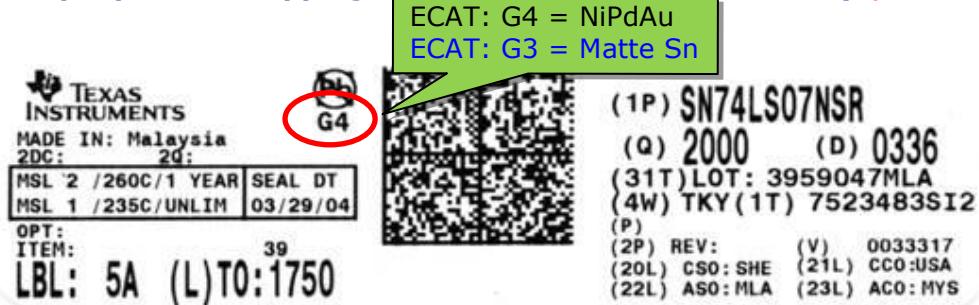
**Group 2 Device - Changes to product identification resulting from this PCN:**

**Sample Product Shipping Label (not actual product label)**

Assembly Site

NFME	Assembly Site Origin (22L)	ASO:NFME	ECAT:G4 (NiPdAu)
NFME	Assembly Site Origin (22L)	ASO: NFME	ECAT:G3 (Matte Sn)

**Sample product shipping label to show code location only (not actual product label)**



**Product Affected: Group 1**

LM237KCSE3	TL780-12KCS	UA7808CKCS	UA78M05IKCSE3
LM2940-50KCSE3	TL780-12KCSE3	UA7808CKCSE3	UA78M08CKCS
LM2940-50IKCSE3	TL780-15KCS	UA7810CKCS	UA78M08CKCSE3
LM337KCSE3	TL780-15KCSE3	UA7810CKCSE3	UA78M12CKCS
TL-SCSI285KCSE3	TL783CKCSE3	UA7812CKCS	UA78M12CKCSE3
TL750L05CKCS	TLV1117CKCS	UA7812CKCSE3	UA78M33CKCS
TL750L05CKCSE3	TLV1117CKCSE3	UA7815CKCS	UA78M33CKCSE3
TL750M05CKCSE3	TLV1117IKCS	UA7815CKCSE3	UA7908CKCS
TL750M08CKCSE3	TLV1117IKCSE3	UA7824CKCS	UA7908CKCSE3
TL750M10CKCSE3	TLV2217-18KCS	UA7824CKCSE3	UA79M05CKCS
TL750M12CKCSE3	TLV2217-18KCSE3	UA78M05CKCS	UA79M05CKCSE3
TL780-05KCS	TLV2217-25KCSE3	UA78M05CKCSE3	
TL780-05KCSE3	TLV2217-33KCSE3	UA78M05IKCS	

**Product Affected: Group 2**

TPD2S017DBVR

**Qualification Data: Group 1 Devices**

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 : UA7808CKCS**

Package Construction Details

Assembly Site:	NFME	Mold Compound:	R-12
# Pins-Designator, Family:	3-KCS, TO-220	Mount Compound:	A-05
Lead frame (Finish, Base):	Matte Sn, Cu	Bond Wire:	2.0 Mil Dia., Cu

<b>Qualification:</b> <input type="checkbox"/> Plan <input checked="" type="checkbox"/> Test Results			
Reliability Test		Conditions	Sample Size/Fail
Electrical Characterization		-	Pass
Life Test		150C(300 Hrs)	80/0
Thermal Shock		-65C/+150C (1000 Cyc)	76/0
Temperature Cycle		-65C/+150C (1000 Cyc)	77/0
Unbiased HAST		130C/85%RH (192 Hrs)	78/0
Biased HAST		130C/85%RH (192 Hrs)	77/0
High Temp Storage Bake		170C (600Hrs)	77/0
Manufacturability (Assembly)		(per mfg. Site specification)	Pass

#### **Qual Vehicle 2 : UA78M05CKCS**

Package Construction Details			
Assembly Site:	NFME	Mold Compound:	R-12
# Pins-Designator, Family:	3-KCS, TO-220	Mount Compound:	A-05
Lead frame (Finish, Base):	Matte Sn, Cu	Bond Wire:	2.0 Mil Dia., Cu

<b>Qualification:</b> <input type="checkbox"/> Plan <input checked="" type="checkbox"/> Test Results			
Reliability Test		Conditions	
		Lot# 1	Lot# 2
Electrical Characterization		Pass	-
Life Test		77/0	77/0
Thermal Shock		77/0	77/0
Temperature Cycle		77/0	77/0
Unbiased HAST		77/0	77/0
Biased HAST		77/0	77/0
High Temp Storage Bake		77/0	77/0
Manufacturability (Assembly)		Pass	Pass

#### **Qualification Data: Group 2 Devices**

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

<b>Qualification:</b> <input type="checkbox"/> Plan <input checked="" type="checkbox"/> Test Results			
Reliability Test		Conditions	
		Lot# 1	Lot# 2
Electrical Characterization		Pass	-
Life Test		77/0	77/0
**Autoclave		77/0	77/0
**Thermal Shock		77/0	77/0
**Temperature Cycle		77/0	77/0
**Unbiased HAST		77/0	77/0
**Biased HAST		77/0	77/0
**High Temp Storage Bake		77/0	77/0
Flammability (UL 94V-0)		5/0	5/0
Flammability (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>