

<b>PCN Number:</b>	20120727001D			<b>PCN Date:</b>	09/24/2014												
<b>Title:</b>	Add Cu as Alternative Wire Base Metal for Selected Device(s) on SOT23 (DBV) packages using BOAC and Damascene-Cu Products																
<b>Customer Contact:</b>	<a href="#">PCN Manager</a>	<b>Phone:</b>	+1(214)480-6037	<b>Dept:</b>	Quality Services												
<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												
<b>PCN Details</b>																	
<b>Description of Change:</b>																	
<p>Revision D is to make correction on the following:</p> <p>1) Remove devices in the Product Affected Section with a <del>strikethrough</del> and highlighted in yellow. These devices were inadvertently added and not affected by this change.</p> <p>Devices with <del>strikethrough</del> and not highlighted in yellow have been retracted earlier under rev B.</p> <p>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 shown in the following table:</p> <table border="1"> <thead> <tr> <th></th> <th>From</th> <th>To</th> </tr> </thead> <tbody> <tr> <td><b>Wire</b></td> <td>Au</td> <td>Cu</td> </tr> <tr> <td><b>Mold Compound</b></td> <td>R-13</td> <td>R-17</td> </tr> <tr> <td><b>Leadframe Finish</b></td> <td>NiPdAu</td> <td>Matte Sn</td> </tr> </tbody> </table> <p>Upon expiration of this PCN, TI will combine lead free solutions in a single <b>standard part number</b>, for example; <a href="#">TMP125AIDBVT</a> – can ship with both Matte Sn and NiPdAu.</p> <p>When available customers may specify NiPdAu finish by ordering the part with the G4 suffix, e.g. <a href="#">TMP125AIDBVTG4</a>.</p>							From	To	<b>Wire</b>	Au	Cu	<b>Mold Compound</b>	R-13	R-17	<b>Leadframe Finish</b>	NiPdAu	Matte Sn
	From	To															
<b>Wire</b>	Au	Cu															
<b>Mold Compound</b>	R-13	R-17															
<b>Leadframe Finish</b>	NiPdAu	Matte Sn															
<b>Reason for Change:</b>																	
<p>Continuity of supply.</p> <p>1) To align with world technology trends and use wiring with enhanced mechanical and electrical properties</p> <p>2) Maximize flexibility within our Assembly/Test production sites.</p> <p>3) Cu is easier to obtain and stock</p>																	
<b>Anticipated impact on Fit, Form, Function, Quality or Reliability (positive / negative):</b>																	
None.																	

**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
NFME	Assembly Site Origin (22L)	ASO: NFME	ECAT:G3

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

ECAT: G4 = NiPdAu  
ECAT: G3 = Matte Sn

**TEXAS INSTRUMENTS**  
 MADE IN: Malaysia  
 2DC: 2d  
 MSL 2 /260C/1 YEAR SEAL DT  
 MSL 1 /235C/UNLIM 03/29/04  
 OPT: 39  
 ITEM: 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

**Product Affected:**

HPA00027DBVR	TPS2550DBVT	TPS73115DBVT	TPS73618DBVT
HPA00028DBVR	TPS2551DBVR	TPS73118DBVR	TPS73625DBVR
HPA00029DBVR	TPS2551DBVT	TPS73118DBVT	TPS73625DBVT
HPA00104DBVR	TPS2552DBVR	TPS73125DBVR	TPS73630DBVR
HPA00212DBVR	TPS2552DBVR-1	TPS73125DBVT	TPS73630DBVT
HPA00237DBVR	TPS2552DBVT	TPS73130DBVR	TPS73632DBVR
HPA00287DBVR	TPS2552DBVT-1	TPS73130DBVT	TPS73632DBVT
HPA00357DBVR	TPS2553DBVR	TPS73131DBVR	TPS73633DBVR
HPA00408DBVR	TPS2553DBVR-1	TPS73131DBVT	TPS73633DBVT
HPA00427DBVR	TPS2553DBVT	TPS73133DBVR	TPS79101DBVR
HPA00444AIDBVT	TPS2553DBVT-1	TPS73133DBVT	TPS79101DBVT
HPA00450DBVR	TPS61040DBVR	TPS73150DBVR	TPS79118DBVR
HPA00457DBVR	TPS61041DBVR	TPS73150DBVT	TPS79118DBVT
HPA00658DBVR	TPS72301DBVR	TPS73201DBVR	TPS79133DBVR
HPA00660DBVR	TPS72301DBVT	TPS73201DBVT	TPS79133DBVT
HPA00672DBVR	TPS72325DBVR	TPS73213DBVR	TPS79147DBVR
HPA00709DBVR-1	TPS72325DBVT	TPS73213DBVT	TPS79147DBVT
HPA00714DBVR	TPS73001DBVR	TPS73215DBVR	TPS79201DBVR
HPA00734DBVR	TPS73001DBVT	TPS73215DBVT	TPS79201DBVT
HPA01085DBVR	TPS73018DBVR	TPS73218DBVR	TPS79225DBVR
HPA01085DVBR	TPS73018DBVT	TPS73218DBVT	TPS79225DBVT
SN6501DBVR	TPS73025DBVR	TPS73219DBVR	TPS79228DBVR
TMP125AIDBVT	TPS73025DBVT	TPS73219DBVT	TPS79228DBVT
TMP300AIDBVR	TPS730285DBVR	TPS73225DBVR	TPS79230DBVR
TMP300AIDBVT	TPS730285DBVT	TPS73225DBVT	TPS79230DBVT
TPS2041BDBVR	TPS73028DBVR	TPS73230DBVR	TPS79301DBVR
TPS2041BDBVT	TPS73028DBVT	TPS73230DBVT	TPS79301DBVT
TPS2051BDBVR	TPS73030DBVR	TPS73233DBVR	TPS79318DBVR
TPS2051BDBVT	TPS73030DBVT	TPS73233DBVT	TPS79318DBVT
TPS2051CDBVR	TPS73033DBVR	TPS73250DBVR	TPS79325DBVR
TPS2051CDBVT	TPS73033DBVT	TPS73250DBVT	TPS793285DBVR

TPS2065CDBVR	TPS73101DBVR	TPS73601DBVR	TPS793285DBVT
TPS2065CDBVT	TPS73101DBVT	TPS73601DBVT	TPS79328DBVR
TPS2065DBVR	TPS731125DBVR	TPS73615DBVR	TPS79330DBVR
TPS2065DBVT	TPS731125DBVT	TPS73615DBVT	TPS79333DBVR
TPS2550DBVR	TPS73115DBVR	TPS73618DBVR	TPS793475DBVR

### Qualification Data: 9/12/2013

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 : TPS2051BDBVR (MSL 1-260C)

##### Package Construction Details

<b>Assembly Site:</b>	NFME	<b>Mold Compound:</b>	R-17
<b># Pins-Designator, Family:</b>	5-DBV, SOT-23	<b>Mount Compound:</b>	A-03
<b>Lead frame (Finish, Base):</b>	Matte Sn, Cu	<b>Bond Wire:</b>	1.3 Mil Dia., Cu

**Qualification:**  Plan  **Test Results**

Reliability Test	Conditions	Sample Size/Fail
Electrical Characterization	-	Pass
**T/C -65C/150C	-65C/+150C (500 Cyc)	77/0
Manufacturability (Assembly)	(per mfg. Site specification)	Pass
Moisture Sensitivity	(level 1 @ 260C peak +5/-0C)	12/0

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

#### Qual Vehicle 2 : TPS2552DBVR-1 (MSL 1-260C)

##### Package Construction Details

<b>Assembly Site:</b>	NFME	<b>Mold Compound:</b>	R-17
<b># Pins-Designator, Family:</b>	6-DBV, SOT-23	<b>Mount Compound:</b>	A-03
<b>Lead frame (Finish, Base):</b>	Matte Sn, Cu	<b>Bond Wire:</b>	1.3Mil Dia., Cu

**Qualification:**  Plan  **Test Results**

Reliability Test	Conditions	Sample Size/Fail		
		Lot 1	Lot 2	Lot 3
** High Temp Operating Life	125C (1000 Hrs)	40/0	40/0	40/0
Electrical Characterization	-	Pass	Pass	Pass
**High Temp. Storage Bake	170C (420 Hrs)	77/0	77/0	77/0
**Unbiased HAST	130C/85%RH/33.3 psia (96 Hrs)	77/0	77/0	77/0
**T/C -65C/150C	-65C/+150C (500 Cyc)	77/0	77/0	77/0
Manufacturability (Assembly)	(per mfg. Site specification)	Pass	Pass	Pass
Moisture Sensitivity	(level 1 @ 260C peak +5/-0C)	12/0	12/0	12/0

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

Qual Vehicle 3 : TPS61041DBVR (MSL 1-260C)				
Package Construction Details				
<b>Assembly Site:</b>	NFME	<b>Mold Compound:</b>	R-17	
<b># Pins-Designator, Family:</b>	5-DBV, SOT-23	<b>Mount Compound:</b>	A-03	
<b>Lead frame (Finish, Base):</b>	Matte Sn, Cu	<b>Bond Wire:</b>	1.3Mil Dia., Cu	
<b>Qualification:</b>	<input type="checkbox"/> Plan	<input checked="" type="checkbox"/> Test Results		
Reliability Test	Conditions	Sample Size/Fail		
		Lot 1	Lot 2	Lot 3
Electrical Characterization	-	Pass	Pass	Pass
**High Temp. Storage Bake	170C (420 Hrs)	77/0	77/0	77/0
**Unbiased HAST	130C/85%RH/33.3 psia (96 Hrs)	77/0	77/0	77/0
**T/C -65C/150C	-65C/+150C (500 Cyc)	77/0	77/0	77/0
Manufacturability (Assembly)	(per mfg. Site specification)	Pass	Pass	Pass
Moisture Sensitivity	(level 1 @ 260C peak +5/-0C)	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>