

<b>PCN Number:</b>	20141009002			<b>PCN Date:</b>	10/15/2014						
<b>Title:</b>	Add Cu as Alternative Wire Base Metal for Selected Device(s)										
<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>	01/15/2015		<b>Estimated Sample Availability:</b>	Date provided at sample request							
<b>Change Type:</b>											
<input type="checkbox"/>	Assembly Site	<input type="checkbox"/>	Design	<input type="checkbox"/>	Wafer Bump Site						
<input checked="" type="checkbox"/>	Assembly Process	<input type="checkbox"/>	Data Sheet	<input type="checkbox"/>	Wafer Bump Material						
<input checked="" type="checkbox"/>	Assembly Materials	<input type="checkbox"/>	Part number change	<input type="checkbox"/>	Wafer Bump Process						
<input type="checkbox"/>	Mechanical Specification	<input type="checkbox"/>	Test Site	<input type="checkbox"/>	Wafer Fab Site						
<input type="checkbox"/>	Packing/Shipping/Labeling	<input type="checkbox"/>	Test Process	<input type="checkbox"/>	Wafer Fab Materials						
				<input type="checkbox"/>	Wafer Fab Process						
<b>PCN Details</b>											
<b>Description of Change:</b>											
<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 there will be no other piece part changes:</p>											
<table border="1"> <thead> <tr> <th>Pkg</th> <th>Wire From</th> <th>Wire To</th> </tr> </thead> <tbody> <tr> <td>QFN</td> <td>Au, 1.0mil</td> <td>Cu, 0.8mil or Au, 1.0mil</td> </tr> </tbody> </table>						Pkg	Wire From	Wire To	QFN	Au, 1.0mil	Cu, 0.8mil or Au, 1.0mil
Pkg	Wire From	Wire To									
QFN	Au, 1.0mil	Cu, 0.8mil or Au, 1.0mil									
<b>Reason for Change:</b>											
<p>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</p>											
<b>Anticipated impact on Form, Fit, Function, Quality or Reliability (positive / negative):</b>											
None											
<b>Changes to product identification resulting from this PCN:</b>											
None											
<b>Product Affected:</b>											
ADC081S021CISD/NOPB	DS100BR111ASQE/NOPB	DS64BR111SQE/NOPB	LMH6517SQE/NOPB								
ADC081S021CISDX/NOPB	DS100BR111SQ/NOPB	DS80PCI102SQ/NOPB	LMH6517SQX/NOPB								
ADC081S051CISD/NOPB	DS100BR111SQE/NOPB	DS80PCI102SQE/NOPB	LMH6521SQ/NOPB								
ADC081S051CISDX/NOPB	DS100BR210SQ/NOPB	DS80PCI402SQ/NOPB	LMH6521SQE/NOPB								
ADC081S101CISD/NOPB	DS100BR210SQE/NOPB	DS80PCI402SQE/NOPB	LMH6521SQX/NOPB								
ADC081S101CISDX/NOPB	DS100BR410SQ/NOPB	DS80PCI800SQ/NOPB	LMH6629SD/NOPB								
ADC08351CILQE/NOPB	DS100BR410SQE/NOPB	DS80PCI800SQE/NOPB	LMH6629SDE/NOPB								
ADC08351CILQX/NOPB	DS100BR410SQX/NOPB	DS91M040TSQ/NOPB	LMH6629SDX/NOPB								
ADC101S021CISD/NOPB	DS100DF400SQ/NOPB	DS91M040TSQE/NOPB	LMH6881SQ/NOPB								
ADC101S021CISDX/NOPB	DS100DF400SQE/NOPB	DS91M040TSQX/NOPB	LMH6881SQE/NOPB								
ADC101S051CISD/NOPB	DS100DF410SQ/NOPB	DS92001TLD	LMH6881SQX/NOPB								
ADC101S051CISDX/NOPB	DS100DF410SQE/NOPB	DS92001TLD/NOPB	LMH6882SQ/NOPB								
ADC101S101CISD/NOPB	DS100DX410SQ/NOPB	DS99R103TSQ/NOPB	LMH6882SQE/NOPB								
ADC101S101CISDX/NOPB	DS100DX410SQE/NOPB	DS99R103TSQX/NOPB	LMH6882SQX/NOPB								

DAC081C081CISD/NOPB	DS100KR401SQ/NOPB	DS99R104TSQ/NOPB	LMP91000SD/NOPB
DAC082S085CISD/NOPB	DS100KR401SQE/NOPB	DS99R104TSQX/NOPB	LMP91000SDE/NOPB
DAC082S085CISDX/NOPB	DS100KR800SQ/NOPB	DS99R105SQ/NOPB	LMP91000SDX/NOPB
DAC084S085CISD/NOPB	DS100KR800SQE/NOPB	DS99R105SQX/NOPB	LMP91001SD/NOPB
DAC084S085CISDX/NOPB	DS100MB203SQ/NOPB	DS99R106SQ/NOPB	LMP91001SDX/NOPB
DAC088S085CISQ/NOPB	DS100MB203SQE/NOPB	DS99R106SQX/NOPB	LMP91002SD/NOPB
DAC088S085CISQX/NOPB	DS100RT410SQ/NOPB	DS99R421ISQ/NOPB	LMP91002SDE/NOPB
DAC102S085CISD/NOPB	DS100RT410SQE/NOPB	DS99R421ISQX/NOPB	LMP91002SDX/NOPB
DAC102S085CISDX/NOPB	DS110DF410SQ/NOPB	LM10010SD/NOPB	LMV112SD
DAC104S085CISD/NOPB	DS110DF410SQE/NOPB	LM10010SDX/NOPB	LMV112SD/NOPB
DAC104S085CISDX/NOPB	DS110DX410SQ/NOPB	LM10011SD/NOPB	LMV112SDX/NOPB
DAC121C081CISD/NOPB	DS110DX410SQE/NOPB	LM10011SDX/NOPB	LP3943ISQ/NOPB
DAC121C081CISDX/NOPB	DS110RT410SQ/NOPB	LM3658SD	LP3943ISQX/NOPB
DAC122S085CISD/NOPB	DS110RT410SQE/NOPB	LM3658SD/NOPB	LP5900SD-1.5
DAC122S085CISDX/NOPB	DS125BR210SQ/NOPB	LM3658SD-A/NOPB	LP5900SD-1.5/NOPB
DAC124S085CISD/NOPB	DS125BR210SQE/NOPB	LM3658SD-B/NOPB	LP5900SD-1.8/NOPB
DAC124S085CISDX/NOPB	DS125BR401ANJYR	LM3658SDX/NOPB	LP5900SD-2.0/NOPB
DAC128S085CISQ/NOPB	DS125BR401ANJYT	LM3658SDX-A/NOPB	LP5900SD-2.2/NOPB
DAC128S085CISQX/NOPB	DS125BR401SQ/NOPB	LM3658SDX-B/NOPB	LP5900SD-2.5
DAC161P997CISQ/NOPB	DS125BR401SQE/NOPB	LM8342SD/NOPB	LP5900SD-2.5/NOPB
DAC161P997CISQX/NOPB	DS125BR800ANJYR	LM8342SDX/NOPB	LP5900SD-2.7/NOPB
DAC161S055CISQ/NOPB	DS125BR800ANJYT	LMH0366SQ/NOPB	LP5900SD-2.8/NOPB
DAC161S055CISQE/NOPB	DS125BR800SQ/NOPB	LMH0366SQE/NOPB	LP5900SD-3.0/NOPB
DAC161S055CISQX/NOPB	DS125BR800SQE/NOPB	LMH0366SQX/NOPB	LP5900SD-3.3/NOPB
DP83620SQ/NOPB	DS125DF410SQ/NOPB	LMH0376SQ/NOPB	LP5900SDX-1.5/NOPB
DP83620SQE/NOPB	DS125DF410SQE/NOPB	LMH0376SQE/NOPB	LP5900SDX-1.8
DP83620SQX/NOPB	DS125MB203ANJYR	LMH0376SQX/NOPB	LP5900SDX-1.8/NOPB
DP83630SQ/NOPB	DS125MB203ANJYT	LMH0394SQ/NOPB	LP5900SDX-2.0/NOPB
DP83630SQE/NOPB	DS125MB203SQ/NOPB	LMH0394SQE/NOPB	LP5900SDX-2.2/NOPB
DP83630SQX/NOPB	DS125MB203SQE/NOPB	LMH0394SQX/NOPB	LP5900SDX-2.5/NOPB
DP83848HSQ/NOPB	DS125RT410SQ/NOPB	LMH0395SQ/NOPB	LP5900SDX-2.7/NOPB
DP83848JSQ/NOPB	DS125RT410SQE/NOPB	LMH0395SQE/NOPB	LP5900SDX-2.8/NOPB
DP83848KSQ/NOPB	DS30EA101SQ/NOPB	LMH0395SQX/NOPB	LP5900SDX-3.0/NOPB
DP83848MSQ/NOPB	DS30EA101SQE/NOPB	LMH6300SQE/NOPB	LP5900SDX-3.3/NOPB
DP83848TSQ/NOPB	DS30EA101SQX/NOPB	LMH6300SQX/NOPB	MM9676B-SQ6/S7002101
DS100BR111ASQ/NOPB	DS64BR111SQ/NOPB	LMH6517SQ/NOPB	SCANSTA476TSD/NOPB

**Qualification Report**
**0.8 mils Cu wire qual on BC13, CMOS9T and CMOS7 in WQFN and WSON Packages**
**Approved 09/23/2014**
**Product Attributes**

Attributes	Qual Device: DP83848T SQ	Qual Device: DS91M040TSQ AW2	Qual Device: DS100DX410EL 16	Qual Device: DS80PCI402A2TT	Qual Device: LMH0366SQENOPB	Qual Device: LMH0394SQ/NOPB
<b>Assembly Site</b>	TIEM-AT	TIEM-AT	TIEM-AT	TIEM-AT	TIEM-AT	TIEM-AT
<b>Package Family</b>	WQFN	WQFN	WQFN	WQFN	WQFN	QFN
<b>Flammability Rating</b>	UL 94 V-0	UL 94 V-0	UL 94 V-0	UL 94 V-0	UL 94 V-0	UL 94 V-0
<b>Wafer Fab Supplier</b>	MAINEFAB	MAINEFAB	MAINEFAB	MAINEFAB	MAINEFAB	MAINEFAB
<b>Wafer Fab Process</b>	CMOS9T	CMOS7	BICMOS13	BICMOS13	BICMOS13	BICMOS13

- QBS: Qual By Similarity
- Qual Device DS100DX410EL16 is qualified at LEVEL3-260C
- Qual Device DS80PCI402A2TT is qualified at LEVEL2-260C
- Qual Device LMH0366SQENOPB is qualified at LEVEL1-260C
- Qual Device LMH0394SQ/NOPB is qualified at -
- Qual Device LMH0394SQ/NOPB REV A is qualified at LEVEL3-260C

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

Type	Test Name / Condition	Duration	Qual Device: DP83848T SQ	Qual Device: DS91M040TSQ AW	Qual Device: DS100DX410 EL16	Qual Device: DS80PCI402 A2TT	Qual Device: LMH0366SQEN OPB	Qual Device: LMH0394SQ/N OPB
PC	PreCon Level 1	Level 1-260C					3/720/0	
PC	PreCon Level 2	Level 2-260C	3/1079/0		-	3/720/0	-	-
PC	PreCon Level 3	Level 3-260C	-	1/255/0	3/720/0	-	-	3/231/0
HAST	Biased HAST, 130C/85%RH	96/hrs. @130C	-	-	-	-	-	3/231/0
AC	Autoclave 121C	96HRS	3/231/0	1/77/0	3/231/0	3/231/0	3/231/0	-
UHAST	Unbiased HAST 130C/85%RH	unHAST-96 HRS/-	3/231/0	1/77/0	3/231/0	3/231/0	3/231/0	-
TC	Temperature Cycle, -65/150C	TMCL500 X	3/231/0	1/77/0	3/231/0	3/231/0	3/231/0	-

HTSL	High Temp Storage Bake 170C	420 hrs. @170C	3/231/0	-	-	3/231/0	-	-
ED	Side By Side Electrical Characterization.	Per Datasheet Parameters	1/30/0	1/30/0	1/30/0	1/30/0	1/30/0	-
MQ	Manufacturability (Assembly)	(per mfg. Site specification)	Pass	Pass	Pass	Pass	Pass	Pass
MSL	Thermal Path Integrity	Level 2-260C	3/30/0	1/22/0	3/66/0	3/66/0	3/66/0	-
DPA	Destructive Physical Analysis Post 500 Temp Cycle	x-section and de process to examine assembly robustness, Check for stich bond and bond pad integrity	3/3/0	-	3/15/0	3/15/0	3/15/0	1/5/0 Post 96 hours HAST
YLD	FTY and Bin Summary	Compare against baseline	Pass	Pass	Pass	Pass	Pass	Pass

- Preconditioning was performed for Autoclave, Unbiased HAST, THB/Biased HAST, Temperature Cycle, Thermal Shock, and HTSL, as applicable

- The following are equivalent HTSL options based on an activation energy of 0.7eV : 150C/1k Hours, and 170C/420 Hours

- The following are equivalent Temp Cycle options per JESD47 : -55C/125C/700 Cycles and -65C/150C/500 Cycles

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	<a href="mailto:PCNAmericasContact@list.ti.com">PCNAmericasContact@list.ti.com</a>
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Asia Pacific	<a href="mailto:PCNAsiaContact@list.ti.com">PCNAsiaContact@list.ti.com</a>
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