12500 TI Boulevard, MS 8640, Dallas, Texas 75243

PCN#20150316002A
Add Cu as Alternative Wire Base Metal for Selected Device(s)
Change Notification / Sample Request

Dear Customer:

Revision **A** is to announce the retraction of select devices.

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 proposed first ship date is indicated on page 3 of this notification, unless customer agreement has been reached on an earlier implementation of the change.

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

PCN#20150316002A
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.

TUSB8040PFP
TUSB9261PVP

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

PCN Number:	20150316002A	**PCN Date:**	03/7/2015
Title:	Add Cu as Alternative Wire Base Metal for Selected Device(s)		
Customer Contact:	PCN Manager	**Dept:**	Quality Services
Proposed 1st Ship Date:	06/20/2016	**Estimated Sample Availability:**	Date provided at sample request

Change Type:

☐	Assembly Site	☐	Design	☐	Wafer Bump Site
☒	Assembly Process	☐	Data Sheet	☐	Wafer Bump Material
☒	Assembly Materials	☐	Part number change	☐	Wafer Bump Process
☐	Mechanical Specification	☐	Test Site	☐	Wafer Fab Site
☐	Packing/Shipping/Labeling	☐	Test Process	☐	Wafer Fab Materials
				☐	Wafer Fab Process

PCN Details

Description of Change:

Revision A is to announce the retraction of select devices. These devices will continue to be manufactured as prior and will not be subjected to the change described in this notification. Affected devices are identified with a **~~strikethrough~~** and are highlighted in yellow in the Product Affected Section.

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 facilities and there will be no other piece part changes:

Pkg Family	Wire From	Wire To
JRBGA	Au, 0.96 mil	Cu, 0.8 mil
QFN	Au, 0.96 mil, 1.3 mil, 1.97mil	Cu, 0.8 mil, 0.96 mil, 1.98 mil
SOIC	Au, 0.9 mil, 1.15 mil, 1.31 mil	Cu, 0.96 mil
SOP	Au, 1.15 mil	Cu, 0.96 mil
SSOP	Au, 0.96 mil	Cu, 0.96 mil
TQFP	Au, 0.8 mil, 0.96 mils	Cu, 0.8 mil, 0.96 mil
TSSOP	Au, 0.96 mil	Cu, 0.96 mil
TVSOP	Au, 0.8 mil	Cu, 0.96 mil
UBGA	Au, 0.96 mil	Cu, 0.8 mil

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:

None

Product Affected:

DEVICE	PKG FAMILY	DEVICE	PKG FAMILY
CDCUN1208LPRHBR	QFN	SN74LVC00ADT	SOIC

CDCUN1208LPRHBT	QFN	SN75LVDS83CZQLR	JRBGA
HPABUS13RPFCR	TQFP	TCA9554PWR	TSSOP
OPA2335AID	SOIC	TMDS442PNP	TQFP
OPA2335AIDG4	SOIC	TMDS442PNPG4	TQFP
OPA2335AIDR	SOIC	TPA6120A2RGYR	QFN
OPA2335AIDRG4	SOIC	TPA6120A2RGYT	QFN
PCI2050BZHK	UBGA	TPS544C20RVFR	QFN
PCM1803DBR	SSOP	TPS544C20RVFT	QFN
SN65HVD72D	SOIC	TPS544C24RVFR	QFN
SN65HVD72DR	SOIC	TPS544C24RVFT	QFN
SN65HVD75D	SOIC	TPS74301RGWR	QFN
SN65HVD75DR	SOIC	TPS74301RGWRG4	QFN
SN74AVC8T245DGVR-P	TVSOP	TPS74301RGWT	QFN
SN74LVC00AD	SOIC	TPS74301RGWTG4	QFN
SN74LVC00ADE4	SOIC	~~TUSB8040PFP~~	TQFP
SN74LVC00ADG4	SOIC	~~TUSB9261PVP~~	TQFP
SN74LVC00ADR	SOIC	~~TUSB9261PVPT~~	TQFP
SN74LVC00ADRE4	SOIC	ULN2003AINSR	SOP
SN74LVC00ADRG4	SOIC		

TEXAS INSTRUMENTS

TI Information
Selective Disclosure

Qualification Report

Copper wire bonding Qualification on Aluminum Bond Pads
Approved 07/07/2011

Product Attributes

Attributes	Qual Device: ADS1230IPW	Qual Device: DRV590GQC	Qual Device: F741900APFB	Qual Device: SN75DP139RGZ	Qual Device: THS7303PW	Qual Device: TPA5050RSA	Qual Device: TSB12LV21BPGF	Qual Device: TSB81BA3EPFP	Qual Device: TVAIC3106IZQER
Assembly Site	TAI	TAI	TAI	MLA	TAI	MLA	PHI	TAI	PHI
Package Family	TSSOP	JRBGA	TQFP	VQFN	TSSOP	VQFN	LQFP	TQFP	JRBGA
Flammability Rating	UL 94 V-0	UL 94 V-0	UL 94 V-0	UL 94 V-0	UL 94 V-0	UL 94 V-0	UL 94 V-0	UL 94 V-0	UL 94 V-0
Wafer Fab Site	DMOS5	DFAB	DMOS5	FFAB	FFAB	DMOS5	DMOS5	DMOS5	DMOS5
Wafer Fab Process	50HPA07X3	LBC3S	1833C05X4	BICOM3XL	BICOM3	1833C05X4	33C12X3	1833C05X4	1833C05.24LRD

- QBS: Qual By Similarity
- Qual Devices qualified at LEVEL2-260C: ADS1230IPW, SN75LVDS84ADGG, THS7303PW, TPA5050RSA
- Qual Device DRV590GQC is qualified at LEVEL2A-235C

- Qual Devices qualified at LEVEL3-250C: F741900APFB, SN75DP139RGZ, TSB81BA3EPFP, TVAIC3106IZQER

Qualification Results

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

Type	Test Name / Condition	Duration	Qual Device: ADS1230IPW	Qual Device: DRV590GQC	Qual Device: F741900APFB	Qual Device: SN75DP139RGZ	Qual Device: THS7303PW	Qual Device: TPA5050RSA	Qual Device: TSB12LV21BPGF	Qual Device: TSB81BA3EPFP	Qual Device: TVAIC3106IZQER
AC	Autoclave 121C	96 Hours	3/231/0	-	-	1/77/0	-	3/230/0	-	3/231/0	-
UHAST	Unbiased HAST 110C/85%RH	264 Hours	-	-	-	-	-	-	-	-	3/231/0
UHAST	Unbiased HAST 130C/85%RH	96 Hours	-	-	-	-	-	-	-	-	-
TC	Temperature Cycle, -55/125C	700 Cycles	-	1/77/0	-	-	-	-	3/231/0	-	3/231/0
TC	Temperature Cycle, -65/150C	500 Cycles	3/231/0	-	3/231/0	1/77/0	3/231/0	3/231/0	3/231/0	3/231/0	-
HTSL	High Temp. Storage Bake, 150C	1000 Hours	-	-	-	-	-	-	-	-	3/231/0
HTSL	High Temp. Storage Bake, 170C	420 Hours	3/231/0	-	3/231/0	1/77/0	3/231/0	3/231/0	3/270/0	3/231/0	-

- Preconditioning was performed for Autoclave, Unbiased HAST, THB/Biased HAST, Temperature Cycle, Thermal Shock, and HTSL, as applicable
- The following are equivalent HTOL options based on an activation energy of 0.7eV : 125C/1k Hours, 140C/480 Hours, 150C/300 Hours, and 155C/240 Hours
- 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

Qualification Report

Copper wire bonding on Aluminum Bond Pads - (VQFN, VSON & WSON Packages)

Approved 07/01/2011

Product Attributes

Attributes	Qual Device: DRV401AIRGW	Qual Device: SN75DP122ARTQ	Qual Device: TLVDAC32IRHBR	Qual Device: TPA2005D1DRB	Qual Device: TPS51217DSCR	Qual Device: TPS51621RHA
Assembly Site	CLARK-AT	CLARK-AT	CLARK-AT	CLARK-AT	CLARK-AT	CLARK-AT
Package Family	VQFN	VQFN	VQFN	VSON	WSON	VQFN
Flammability Rating	UL 94 V-0	UL 94 V-0	UL 94 V-0	Class UL94-V0	UL 94 V-0	UL 94 V-0
Wafer Fab Site	DMOS5	FFAB	DMOS5	FR-BIP-1	RFAB	DFAB
Wafer Fab Process	50HPA07	50BICOM3XL	1833C05X4	3370A12X3	LBC7	LBC4

- QBS: Qual By Similarity
- Qual Devices qualified at LEVEL2-260C: DRV401AIRGW, TLVDAC32IRHBR, TPA2005D1DRB, TPS51217DSCR, TPS51217DSC
- Qual Devices qualified at LEVEL3-260C: SN75DP122ARTQ, TPS51621RHA

Qualification Results

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

Type	Test Name / Condition	Duration	Qual Device: DRV401AIRGW	Qual Device: SN75DP122ARTQ	Qual Device: TLVDAC32IRHBR	Qual Device: TPA2005D1DRB	Qual Device: TPS51217DSCR	Qual Device: TPS51621RHA
AC	Autoclave 121C	96 Hours	3/229/0	3/231/0	3/231/0	3/231/0	3/231/0	3/231/0
TC	Temperature Cycle - 65/150C	500 Cycles	3/230/0	3/231/0	3/231/0	3/231/0	3/231/0	3/231/0
HTSL	High Temp Storage Bake 170C	420 Hours	3/231/0	3/231/0	3/231/0	3/231/0	3/231/0	3/231/0
BHAST	Bias HAST 130C 85%RH	96 Hours	-	-	-	-	3/231/0	-
MQ	Manufacturability (Assembly)	(per mfg. Site specification)	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 HTOL options based on an activation energy of 0.7eV : 125C/1k Hours, 140C/480 Hours, 150C/300 Hours, and 155C/240 Hours
- 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

Qualification Report

Qualification 0.95 mils Wire Diameter- Cu

Approved 09/19/2012

Product Attributes

Attributes	Qual Device: MAX232DR	Qual Device: RC4558DR	Qual Device: SN74LV14ADR	Qual Device: ULN2003ADR
Assembly Site	MLA (TIM)	MLA (TIM)	MLA (TIM)	MLA (TIM)
Package Family	SOIC	SOIC	SOIC	SOIC
Flammability Rating	UL 94 V-0	UL 94 V-0	UL 94 V-0	UL 94 V-0
Wafer Fab Site	SFAB	SFAB	SFAB	SFAB
Wafer Fab Process	LBC3S	JI1-Lin	EPIC1-S_SLM	JI-SLM

- QBS: Qual By Similarity
- Qual Devices qualified at LEVEL1-260C: MAX232DR, RC4558DR, SN74LV14ADR, ULN2003ADR

Qualification Results

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

Type	Test Name / Condition	Duration	Qual Device: MAX232DR	Qual Device: RC4558DR	Qual Device: SN74LV14ADR	Qual Device: ULN2003ADR
HAST	Biased HAST, 130C/85%RH	96 Hours	3/231/0	1/77/0	1/77/0	1/77/0
AC	Autoclave 121C	96 Hours	3/231/0	1/77/0	1/77/0	1/77/0
TC	Temperature Cycle, -65/150C	500 Cycles	3/231/0	3/231/0	3/231/0	3/231/0
HTSL	High Temp Storage Bake 150C	1000 Hours	-	3/231/0	3/231/0	-
HTSL	High Temp Storage Bake 170C	420 Hours	3/231/0	-	-	3/231/0
HTOL	Life Test, 150C	300 Hours	3/231/0	1/77/0	1/77/0	1/77/0
ED	Electrical Characterization	Per Datasheet Parameters	Pass	Pass	Pass	Pass
	Bond Strength	Wires	3/228/0	1/76/0	1/76/0	1/76/0
DPA	Lead Pull to Destruction	Leads	3/66/0	1/22/0	1/22/0	1/22/0
FLAM	Flammability (IEC 695-2-2)	--	3/15/0	1/5/0	1/5/0	-
FLAM	Flammability (UL 94V-0)	--	3/15/0	1/5/0	1/5/0	-
FLAM	Flammability (UL-1694)	--	3/15/0	1/5/0	1/5/0	-
MQ	Manufacturability	(per mfg. Site specification)	Pass	Pass	Pass	Pass
MSL	Moisture Sensitivity, JEDEC	Level 1-260C	3/36/0	3/36/0	3/36/0	3/36/0
XRAY	X-ray	(top side only)	3/15/0	1/5/0	1/5/0	1/5/0

- Preconditioning was performed for Autoclave, Unbiased HAST, THB/Biased HAST, Temperature Cycle, Thermal Shock, and HTSL, as applicable
- The following are equivalent HTOL options based on an activation energy of 0.7eV : 125C/1k Hours, 140C/480 Hours, 150C/300 Hours, and 155C/240 Hours
- 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

Qualification Report

Analog Cu wire enterprise qualification

Approved 09/11/2014

Product Attributes

Attributes	Qual Device: UCD9246FRGCR
Assembly Site	CLARK-AT
Package Family	VQFN
Flammability Rating	UL 94 V-0
Wafer Fab Supplier	TSMC 11
Wafer Fab Process	0.18UM-TSMC

- QBS: Qual By Similarity
- Qual Device UCD9246FRGCR 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: UCD9246FRGCR
AC	Autoclave 121C	96 Hours	3/231/0
UHAST	Unbiased HAST 110C/85%RH	96 Hours	3/231/0
TC	Temperature Cycle, -65/+150C	500 Cycles	3/231/0
HTSL	High Temp Storage Bake 170C	420 Hours	3/231/0
MQ	Manufacturability	(per mfg Site specification)	Pass

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

- The following are equivalent HTOL options based on an activation energy of 0.7eV : 125C/1k Hours, 140C/480 Hours, 150C/300 Hours, and 155C/240 Hours
- 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	PCNAmericasContact@list.ti.com
Europe	PCNEuropeContact@list.ti.com
Asia Pacific	PCNAsiaContact@list.ti.com
Japan	PCNJapanContact@list.ti.com