

PCN Number:	20160807001		PCN Date:	08/11/2016													
Title:	Add Cu as Alternative Wire Base Metal for Selected Device(s)																
Customer Contact:	PCN Manager	Dept:	Quality Services														
Proposed 1st Ship Date:	11/11/2016	Estimated Sample Availability:	Date provided at sample request														
Change Type:																	
<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												
PCN Details																	
Description of Change:																	
<p>Texas Instruments is pleased to announce the qualification of Cu as an additional bond wire option for selected devices listed in "Product affected" section below. Devices will remain in current assembly facilities and there will be no other piece part changes:</p>																	
<table border="1"> <thead> <tr> <th>Pkg Family</th> <th>Current Wire</th> <th>Additional Wire</th> </tr> </thead> <tbody> <tr> <td>VQFN</td> <td>Au 0.8 mils</td> <td>Cu, 0.8 mils</td> </tr> <tr> <td>WQFN-MR</td> <td>Au, 1.0 mils</td> <td>Cu, 0.8 mils</td> </tr> <tr> <td>WQFN</td> <td>Au, 1.3 mils</td> <td>Cu, 1.3 mils</td> </tr> </tbody> </table>						Pkg Family	Current Wire	Additional Wire	VQFN	Au 0.8 mils	Cu, 0.8 mils	WQFN-MR	Au, 1.0 mils	Cu, 0.8 mils	WQFN	Au, 1.3 mils	Cu, 1.3 mils
Pkg Family	Current Wire	Additional Wire															
VQFN	Au 0.8 mils	Cu, 0.8 mils															
WQFN-MR	Au, 1.0 mils	Cu, 0.8 mils															
WQFN	Au, 1.3 mils	Cu, 1.3 mils															
Reason for Change:																	
<p>Continuity of supply.</p> <ol style="list-style-type: none"> 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																	
Anticipated impact on Material Declaration																	
<input type="checkbox"/>	No Impact to the Material Declaration	<input checked="" type="checkbox"/>	Material Declarations or Product Content reports are driven from production data and will be available following the production release. Upon production release the revised reports can be obtained from the TI ECO website .														
Changes to product identification resulting from this PCN:																	
None																	

Product Affected:

Device	Package Family	Device	Package Family
BCHW12RHH	VQFN	DAN001RHH	VQFN
DAC3482IRKD25	WQFN-MR	DRV8800RTYR	WQFN
DAC3482IRKDR	WQFN-MR	DRV8800RTYT	WQFN
DAC3482IRKDT	WQFN-MR	DRV8801RTYR	WQFN
DAC3484IRKD25	WQFN-MR	DRV8801RTYT	WQFN
DAC3484IRKDR	WQFN-MR	SN1206024IRKDR	WQFN-MR
DAC3484IRKDT	WQFN-MR	SN1206024IRKDT	WQFN-MR



TI Information
Selective Disclosure

Qualification Report

Naxos RTY Cu conversion
Approve Date 22-Jul-2016

Product Attributes

Attributes	Qual Device: DRV8800RTYR	QBS Process Reference: TA S5162DDV	QBS Package Reference: SN0701013DRC	QBS Package Reference: TPA6040A4RHB
Assembly Site	MLA	TAI	MLA	MLA
Package Family	WQFN	HTSSOP	SON	WQFN
Flammability Rating	UL 94 V-0	UL94-V0	UL94-V0	UL94-V0
Wafer Fab Supplier	DM5	DMOS5	MIHO-8	MIHO-8
Wafer Process	LBC5	LBC5X	LBC7	LBC7

- QBS: Qual by Similarity
- Qual Device DRV8800RTYR is qualified at LEVEL3-260CG

Qualification Results

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

Type	Test Name / Condition	Duration	Qual Device: DRV8800RTYR	QBS Process Reference: TA S5162DDV	QBS Package Reference: SN0701013DRC	QBS Package Reference: TPA6040A4RHB
AC	Autoclave 121C	96 Hours	-	3/231/0	3/231/0	3/231/0
ED	Electrical Characterization	Per Datasheet Parameters	1/30/0	-	-	-
ELFR	Early Life Failure Rate, 155C	24 Hours	-	3/2400/0	-	-
HAST	Biased HAST, 130C/85%RH	96 Hours	-	3/231/0	-	-
HBM	ESD - HBM	3000 V	-	-	-	-
CDM	ESD - CDM	1500 V	-	-	-	-
HTOL	Life Test, 125C	1000 Hours	-	-	-	-
HTOL	Life Test, 155C	240 Hours	-	3/348/0	-	-
HTSL	High Temp. Storage/Bake, 170C	420 Hours	-	3/231/0	3/231/0	3/231/0
LU	Latch-up	(per JESD78)	-	-	-	-
PD	Physical Dimensions	--	-	-	-	-
TC	Temperature Cycle, -65/150C	500 Cycles	1/77/0	3/231/0	3/231/0	3/231/0
TS	Thermal Shock, -65/150C	500 Cycles	-	3/231/0	-	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

PGA900ARHH Cu Qualification - PGA900, PGA300

Approve Date 05-Jul-2016

Product Attributes

Attributes	Qual Device: PGA900ARHHR	QBS Product Reference: PGA900ARHHR	QBS Process Reference: SH8000ABA0PAPG4	QBS Package Reference: SH6966ACC0RGCRG4_CU_WIRE
Assembly Site	CLARK AT	CLARK AT	TITL	CLARK-AT
Package Family	VQFN	VQFN	HTSSOP	VQFN
Flammability Rating	-	-	UL 94 V-0	UL 94 V-0
Wafer Fab Supplier	DMOS5	DMOS5	DMOS5	MIHO8
Wafer Process	LBC8LV	LBC8LV	LBC8LV	LBC7

- QBS: Qual by Similarity

- Qual Device PGA900ARHHR is qualified at LEVEL2-260C

Qualification Results

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

Type	Test Name / Condition	Duration	Qual Device: PGA900ARHHR	QBS Product Reference: PGA900ARHHR	QBS Process Reference: SH8000ABA0PAPG4	QBS Package Reference: SH6966ACC0RGCRG4
AC	Autoclave 121C	96 Hours	-	-	3/231/0	3/231/0
ED	Electrical Characterization	Per Datasheet Parameters	Pass	Pass	Pass	-
HAST	Biased HAST, 130C/85%RH	96 Hours	3/231/0	3/243/0	-	3/231/0
HBM	ESD - HBM	2000 V	-	1/3/0	-	-
CDM	ESD - CDM	500 V	-	1/3/0	-	-
HTOL	Life Test, 125C	1000 Hours	-	-	3/230/0	3/231/0
HTOL	Life Test, 140C	480 Hours	-	-	-	-
HTOL	Life Test, 150C	1000 Hours	2/140/0	3/225/0	-	-
HTOL	Life Test, 155C	240 Hours	-	-	-	-
HTSL	High Temp. Storage Bake, 170C	420 Hours	-	-	3/231/0	3/231/0
HTSL	High Temp. Storage Bake, 175C	500 Hours	3/231/0	3/231/0	-	-
LU	Latch-up	(per JESD78)	1/6/0	1/6/0	3/18/0	-
PD	Physical Dimensions	-	-	-	-	3/15/0
SD	Solderability	8 Hours Steam Age	-	-	-	3/66/0
TC	Temperature Cycle, -65/150C	500 Cycles	3/231/0	3/231/0	3/231/0	3/231/0
TS	Thermal Shock, -65/150C	500 Cycles	-	-	3/230/0	3/231/0
UHAST	Unbiased HAST, 130C/85%RH	96 Hours	3/231/0	3/231/0	-	-
WBP	Bond Pull	Wires	3/90/0	-	-	3/228/0
WBS	Ball Bond Shear	Wires	3/90/0	-	-	3/228/0

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 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

Cu wire qualification for DAC3482IRKD, DAC3484IRKD and SN1206024IRKD

Updated 07/29/2016-Added QBS Data

Product Attributes

Attributes	Qual Device: DAC3484IRKDR	QBS Process Reference: F761918AZDU	QBS Package Reference: TPS2559QWDRCRQ1
Assembly Site	NSE / UTAC	TIFI	NSE / UTAC
Package Family	WQFN-MR	PBGA	SON
Flammability Rating	UL 94 V-0	UL 94 V-0	UL 94 V-0
Wafer Fab Supplier	DM6	UMC 12A	RFAB
Wafer Process	1233C027	CMOS	LBC7

- QBS: Qual By Similarity

- Qual Device DAC3484IRKDR 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: DAC3484IRKDR	QBS Process Reference: F761918AZDU	QBS Package Reference: TPS2559QWDRCRQ1
AC	Autoclave 121C	96 Hours	3/231/0	-	3/231/0
ED	Electrical Characterization	Per Datasheet Parameters	-	-	Pass
HAST	Biased HAST, 110C/85%RH	264 Hours	3/231/0	-	-
HAST	Biased HAST, 130C/85%RH	96 Hours	-	-	3/231/0
HBM	ESD - HBM	4000 V	-	-	1/3/0
CDM	ESD - CDM	1000 V	-	-	1/3/0
HTOL	Life Test, 140C	240 Hours	-	-	-
HTOL	Life Test, 125C	1000 Hours	-	1/77/0	2/160/0
HTSL	High Temp. Storage Bake, 150C	1000	3/231/0	3/231/0	2/160/0
HTSL	High Temp. Storage Bake, 170C	420 Hours	-	-	-
LU	Latch-up	(per JESD78)	-	-	1/6/0
PD	Physical Dimensions	-	-	-	3/30/0
SD	Surface Mount Solderability	Pb Free	3/75/0	-	3/140/0
TC	Temperature Cycle, -55/125C	500 Cycles	-	3/231/0	-
TC	Temperature Cycle, -65/150C	500 Cycles	3/231/0	-	3/231/0
TS	Thermal Shock, -65/150C	500 Cycles	-	-	-
UHAST	Unbiased HAST, 130C/85%RH	96 Hours	-	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

For questions regarding this notice, e-mails can be sent to the regional contacts shown below or your local Field Sales Representative.

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