PCN Number:	20140506000	PCN Date:	05/12/2014
Title:	Add Cu as Alternative Wire Base Metal for Selected Device(s)		

Customer Contact:	PCN Manager	Phone:	+1(214)480-6037	Dept:	Quality Services
Proposed 1st Ship Date:	08/12/2014	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:

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 piece part changes as follows.

Material Type	Current	Proposed
Wire	0.96 mil Au	0.8mil Cu

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 Fit, Form, Function, Quality or Reliability (positive / negative):

None.

Changes to product identification resulting from this PCN:

None.

Product Affected:

CC2500RGP	CC2545RGZR	MSP430F5242IRGZR	MSP430F5254IRGCT
CC2500RGPR	CC2545RGZT	MSP430F5242IRGZT	MSP430F5255IRGCR
CC2510F16RHH	FRE004RHBR	MSP430F5244IRGZR	MSP430F5255IRGCT
CC2510F16RHHR	FRE004RHBT	MSP430F5244IRGZT	MSP430F5256IRGCR
CC2510F16RHHT	FRE005RGZR	MSP430F5247IRGCR	MSP430F5256IRGCT
CC2510F32RHH	MSP430F5232IRGZR	MSP430F5247IRGCT	MSP430F5257IRGCR
CC2510F32RHHR	MSP430F5232IRGZT	MSP430F5249IRGCR	MSP430F5257IRGCT
CC2510F32RHHT	MSP430F5234IRGZR	MSP430F5249IRGCT	MSP430F5258IRGCR
CC2510F8RHH	MSP430F5234IRGZT	MSP430F5252IRGCR	MSP430F5258IRGCT
CC2510F8RHHR	MSP430F5237IRGCR	MSP430F5252IRGCT	MSP430F5259IRGCR
CC2510F8RHHT	MSP430F5237IRGCT	MSP430F5253IRGCR	MSP430F5259IRGCT
CC2543RHBR	MSP430F5239IRGCR	MSP430F5253IRGCT	
CC2543RHBT	MSP430F5239IRGCT	MSP430F5254IRGCR	

Qualification Data

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 : CC2533F96RHA (MSL 3-260C)

Package Construction Details			
Assembly Site:	TI-Clark	Mold Compound:	4208625
# Pins-Designator, Family:	40-RHA, QFN	Mount Compound:	4207123
Lead frame (Finish, Base):	NiPdAu, Cu	Bond Wire:	0.80 Mil Dia., Cu

Qualification: ☐ **Plan** ☒ **Test Results**

Reliability Test	Conditions	Sample Size/Fail		
		Lot# 1	Lot# 2	Lot# 3
**Temperature Cycle	-55C/+125C (1000 Cyc)	77/0	77/0	77/0
**High Temp Storage Bake	150C (1000 hrs)	77/0	77/0	77/0
**Unbiased HAST	110C/85%RH (264 hrs)	77/0	77/0	77/0
**Biased Temp and Humidity	85C/85%RH (1000 hrs)	26/0	26/0	25/0
ESD - HBM	1500V/1500V	3/0	3/0	3/0
ESD - CDM	500V/500V	3/0	3/0	3/0
Manufacturability (Assembly)	(per mfg. Site specification)	Pass	Pass	Pass
Notes	**- Preconditioning sequence: Level 3-260C.			

Qual Vehicle 2 : CC1101 RGP (MSL 3-260C)			
Package Construction Details			
Assembly Site:	TI-Clark	Mold Compound:	4208625
# Pins-Designator, Family:	20-RGP, QFN	Mount Compound:	4207123
Lead frame (Finish, Base):	NiPdAu, Cu	Bond Wire:	0.80 Mil Dia., Cu

Qualification: ☐ **Plan** ☒ **Test Results**

Reliability Test	Conditions	Sample Size/Fail		
		Lot# 1	Lot# 2	Lot# 3
**Temperature Cycle	-55C/+125C (1000 Cyc)	77/0	77/0	77/0
**High Temp Storage Bake	150C (600 hrs)	77/0	77/0	77/0
**Unbiased HAST	110C/85%RH (264 hrs)	77/0	77/0	77/0
**Biased Temp and Humidity	85C/85%RH (1000 hrs)	26/0	26/0	26/0
ESD - HBM	1500V/1500V	3/0	3/0	3/0
ESD - CDM	500V/500V	3/0	3/0	3/0
Manufacturability (Assembly)	(per mfg. Site specification)	Pass	Pass	Pass

Notes **- Preconditioning sequence: Level 3-260C.

Qual Vehicle 3 : CC1260 RGZ (MSL 3-260C)			
Package Construction Details			
Assembly Site:	TI-Clark	Mold Compound:	4208625
# Pins-Designator, Family:	48-RGZ, QFN	Mount Compound:	4207123
Lead frame (Finish, Base):	NiPdAu, Cu	Bond Wire:	0.80 Mil Dia., Cu

Qualification: ☐ **Plan** ☒ **Test Results**

Reliability Test	Conditions	Sample Size/Fail		
		Lot# 1	Lot# 2	Lot# 3
**Temperature Cycle	-55C/+125C (1000 Cyc)	77/0	77/0	77/0
**High Temp Storage Bake	150C (1000 hrs)	77/0	77/0	77/0
**Unbiased HAST	110C/85%RH (264 hrs)	77/0	77/0	77/0
**Biased Temp and Humidity	85C/85%RH (1000 hrs)	26/0	26/0	26/0
Manufacturability (Assembly)	(per mfg. Site specification)	Pass	Pass	Pass

Notes **- Preconditioning sequence: Level 3-260C.

Qual Vehicle 4 : MSP430F5528IRGC (MSL 3-260C)					
Package Construction Details					
Assembly Site:	TI-Clark	Mold Compound:	4208625		
# Pins-Designator, Family:	64-RGC, QFN	Mount Compound:	4207123		
Lead frame (Finish, Base):	NiPdAu, Cu	Bond Wire:	0.80 Mil Dia., Cu		
Qualification: ☐ Plan ☒ Test Results					
Reliability Test	Conditions	Sample Size/Fail			
		Lot# 1	Lot# 2	Lot# 3	
**Temperature Cycle	-65C/+150C (500 Cyc)	77/0	77/0	77/0	
**Autoclave	121C, 2atm (96 hrs)	77/0	77/0	77/0	
** High Temp Storage Bake	170C (420 hrs)	77/0	77/0	77/0	
Manufacturability (Assembly)	(per mfg. Site specification)	Pass	-	-	
Notes **- Preconditioning sequence: Level 3-260C.					

Qual Vehicle 5 : MSP430F5259IRGC (MSL 3-260C)			
Package Construction Details			
Assembly Site:	TI-Clark	Mold Compound:	4208625
# Pins-Designator, Family:	64-RGC, QFN	Mount Compound:	4207123
Lead frame (Finish, Base):	NiPdAu, Cu	Bond Wire:	0.80 Mil Dia., Cu
Qualification: ☐ Plan ☒ Test Results			
Reliability Test	Conditions	Sample Size/Fail	
**Temperature Cycle	-65C/+150C (500 Cyc)	77/0	
**Autoclave	121C, 2atm (96 hrs)	77/0	
Manufacturability (Assembly)	(per mfg. Site specification)	Pass	
Notes **- Preconditioning sequence: Level 3-260C.			

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	PCNAmericasContact@list.ti.com
Europe	PCNEuropeContact@list.ti.com
Asia Pacific	PCNAsiaContact@list.ti.com
Japan	PCNJapanContact@list.ti.com