PCN Number:	20230921001.1	PCN Date:	September 22, 2023
Title:	Add Cu as Alternative Wire Base Metal for Selected Device(s)		
Customer Contact:	Change Management team	Dept:	Quality Services
Proposed 1st Ship Date:	Dec 22, 2023	Sample requests accepted until:	Oct 22, 2023

*Sample requests received after Oct 22, 2023 will not be supported.

Change Type:

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

PCN Details

Description of Change:

Texas Instruments is pleased to announce the qualification of new assembly material set to add 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	Current*	Proposed
Wire type	0.96mil Au, 1.0 mil Cu	0.8 mil Cu

Note: * - Au wire: Die to die bonding, Cu wire: Die to leadframe

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

Impact on Environmental Ratings

Checked boxes indicate the status of environmental ratings following implementation of this change. If below boxes are checked, there are no changes to the associated environmental ratings.

RoHS	REACH	Green Status	IEC 62474
☒ No Change	☒ No Change	☒ No Change	☒ No Change

Changes to product identification resulting from this PCN:

None

Product Affected:

ISO1410BDW	ISO1412DW	ISO1432BDW	ISO1450DW
ISO1410BDWR	ISO1412DWR	ISO1432BDWR	ISO1450DWR
ISO1410DW	ISO1430BDW	ISO1432DW	ISO1452BDW
ISO1410DWR	ISO1430BDWR	ISO1432DWR	ISO1452BDWR
ISO1412BDW	ISO1430DW	ISO1450BDW	ISO1452DW
ISO1412BDWR	ISO1430DWR	ISO1450BDWR	ISO1452DWR

Qualification Report

Approve Date 20-September-2023

Qualification Results

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

Type	#	Test Name	Condition	Duration	Qual Device: ISO1432DWR	QBS Reference: ISO6741QDWQ1	QBS Reference: ISO5452DWR
HAST	A2	Biased HAST	130C/85%RH	96 Hours	-	3/231/0	1/77/0
UHAST	A3	Autoclave	121C/15psig	96 Hours	-	3/231/0	1/77/0
UHAST	A3	Autoclave	130C/85%RH	96 Hours	-	3/231/0	1/77/0
TC	A4	Temperature Cycle	-65C/150C	500 Cycles	-	3/231/0	1/77/0
HTSL	A6	High Temperature Storage Life	150C	1000 Hours	-	3/135/0	1/45/0
SD	C3	PB Solderability	Precondition w.155C Dry Bake (4 hrs +/- 15 minutes)	-	-	1/15/0	-
SD	C3	PB-Free Solderability	Precondition w.155C Dry Bake (4 hrs +/- 15 minutes)	-	-	1/15/0	-
PD	C4	Physical Dimensions	Cpk>1.67	-	-	3/30/0	-
CHAR	E5	Electrical Distributions	Cpk>1.67 Room, hot, and cold	-	-	3/90/0	1/30/0

QBS: Qual By Similarity
Qual Device ISO1432DWR is qualified at MSL2 260C
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/

For questions regarding this notice, e-mails can be sent to Change Management team or your local Field Sales Representative.

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