

PCN Number:	PCN#20240412000.1			PCN Date:	April 14, 2024								
Title:	Qualification of Cu as an alternate bond wire for select devices												
Customer Contact:	Change Management Team		Dept:	Quality Services									
Proposed 1st Ship Date:	July 13, 2024		Sample Requests accepted until:	May 14, 2024*									
*Sample requests received after May 14, 2024 will not be supported.													
<input type="checkbox"/>	Assembly Site	<input type="checkbox"/>	Design	<input type="checkbox"/>	Wafer Bump Material								
<input checked="" type="checkbox"/>	Assembly Process	<input type="checkbox"/>	Data Sheet	<input type="checkbox"/>	Wafer Bump Process								
<input checked="" type="checkbox"/>	Assembly Materials	<input type="checkbox"/>	Part number change	<input type="checkbox"/>	Wafer Fab Site								
<input type="checkbox"/>	Mechanical Specification	<input type="checkbox"/>	Test Site	<input type="checkbox"/>	Wafer Fab Material								
<input type="checkbox"/>	Packing/Shipping/Labeling	<input type="checkbox"/>	Test Process	<input type="checkbox"/>	Wafer Fab Process								
PCN Details													
Description of Change:													
<p>This PCN is to inform of an alternative bond qualification for the devices in the product affected section as follows:</p> <table border="1" style="width: 100%;"> <thead> <tr> <th style="width: 33%;">What</th> <th style="width: 33%;">Current</th> <th style="width: 33%;">Additional</th> </tr> </thead> <tbody> <tr> <td>Current Bond wire, Diameter</td> <td>Au, 0.96 mil (die to die) + 1.0 mil Cu (die to leadframe)</td> <td>Cu, 0.8 mil (all)</td> </tr> </tbody> </table>						What	Current	Additional	Current Bond wire, Diameter	Au, 0.96 mil (die to die) + 1.0 mil Cu (die to leadframe)	Cu, 0.8 mil (all)		
What	Current	Additional											
Current Bond wire, Diameter	Au, 0.96 mil (die to die) + 1.0 mil Cu (die to leadframe)	Cu, 0.8 mil (all)											
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													
Impact on Environmental Ratings													
<p>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.</p> <table style="width: 100%;"> <thead> <tr> <th style="width: 25%;">RoHS</th> <th style="width: 25%;">REACH</th> <th style="width: 25%;">Green Status</th> <th style="width: 25%;">IEC 62474</th> </tr> </thead> <tbody> <tr> <td><input checked="" type="checkbox"/> No Change</td> <td><input checked="" type="checkbox"/> No Change</td> <td><input checked="" type="checkbox"/> No Change</td> <td><input checked="" type="checkbox"/> No Change</td> </tr> </tbody> </table>						RoHS	REACH	Green Status	IEC 62474	<input checked="" type="checkbox"/> No Change	<input checked="" type="checkbox"/> No Change	<input checked="" type="checkbox"/> No Change	<input checked="" type="checkbox"/> No Change
RoHS	REACH	Green Status	IEC 62474										
<input checked="" type="checkbox"/> No Change	<input checked="" type="checkbox"/> No Change	<input checked="" type="checkbox"/> No Change	<input checked="" type="checkbox"/> No Change										
Changes to product identification resulting from this PCN:													
None													
Product Affected:													
ISO1042BDWV	UCC23113DWYR	UCC23511DWYR	UCC23514EDWVR										
ISO1042BDWVR	UCC23313BDWY	UCC23513BDWY	UCC23514MDWV										
ISO1042DWV	UCC23313BDWYR	UCC23513BDWYR	UCC23514MDWVR										
ISO1042DWVR	UCC23313DWY	UCC23513DWY	UCC23514SDWV										
SN23511DWY	UCC23313DWYR	UCC23513DWYR	UCC23514SDWVR										

SN23511DWYR	UCC23511BDWY	UCC23513HDWYR	UCC23514VDWV
SN23513DWY	UCC23511BDWYR	UCC23514EDWV	UCC23514VDWVR
SN23513DWYR	UCC23511DWY		

TI Information
Selective Disclosure

Qualification Report
8DWV/6DWY ISO.2 full PCC wire qualification
Approve Date 23-FEBRUARY -2024

Qualification Results

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

Type	#	Test Name	Condition	Duration	Qual Device: UCC23513DWY	QBS Reference: UCC23513QDWYRQ1	QBS Reference: UCC23513QDWYQ1	QBS Reference: ISO7741FEDWRQ1	QBS Reference: ISO6721QDWVRQ1	QBS Reference: SN5350MCQDWVRQ1	QBS Reference: ISO6763QDWVRQ1	QBS Reference: UCC21540QDWKRQ1
HAST	A2	Biased HAST	130C/85%RH	96 Hours	-	1/77/0	3/231/0	-	-	-	3/231/0	1/77/0
UHAST	A3	Autoclave	121C/15psig	96 Hours	-	3/231/0	3/231/0	-	1/77/0	3/231/0	3/231/0	3/231/0
TC	A4	Temperature Cycle	-65C/150C	500 Cycles	-	1/77/0	3/231/0	-	1/77/0	3/231/0	3/231/0	1/77/0
HTSL	A6	High Temperature Storage Life	150C	1000 Hours	-	1/77/0	-	-	-	-	3/135/0	1/45/0
HTSL	A6	High Temperature Storage Life	175C	500 Hours	-	-	3/135/0	-	-	-	-	-
HTOL	B1	Life Test	125C	1000 Hours	-	-	3/231/0	-	-	-	-	-
HTOL	B1	Life Test	150C	1000 Hours	-	-	-	3/231/0	-	-	-	-
ELFR	B2	Early Life Failure Rate	125C	48 Hours	-	-	3/2400/0	-	-	-	-	-
ELFR	B2	Early Life Failure Rate	150C	48 Hours	-	-	-	3/2400/0	-	-	-	-
SD	C3	PB Solderability	Precondition w/155C Dry Bake (4 hrs +/- 15 minutes)	-	-	-	1/15/0	1/15/0	-	-	-	-
SD	C3	PB-Free Solderability	Precondition w/155C Dry Bake (4 hrs +/- 15 minutes)	-	-	-	1/15/0	1/15/0	-	-	-	-
PD	C4	Physical Dimensions	Cpk>1.67	-	-	3/30/0	3/30/0	3/30/0	-	3/30/0	-	-
ESD	E2	ESD CDM	-	500 Volts	-	-	1/3/0	1/3/0	1/3/0	1/3/0	-	-

Type	#	Test Name	Condition	Duration	Qual Device: UCC23513DWY	QBS Reference: UCC23513QDWYRQ1	QBS Reference: UCC23513QDWYQ1	QBS Reference: ISO7741FEDWRQ1	QBS Reference: ISO6721QDWVRQ1	QBS Reference: SN5350MCQDWVRQ1	QBS Reference: ISO6763QDWVRQ1	QBS Reference: UCC21540QDWKRQ1
ESD	E2	ESD HBM	-	2000 Volts	-	-	1/3/0	1/3/0	1/3/0	1/3/0	-	-
LU	E4	Latch-Up	Per JESD78	-	-	-	1/6/0	1/6/0	1/6/0	1/6/0	-	-
CHAR	E5	Electrical Distributions	Cpk>1.67 Room, hot, and cold	-	-	1/30/0	3/90/0	3/90/0	1/30/0	3/90/0	3/90/0	3/90/0
FTY	E6	Final Test Yield	-	-	1/1/0	3/3/0	-	-	-	-	20/20/0	20/20

- QBS: Qual By Similarity
- Qual Device UCC23513DWY 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/>

TI Qualification ID: R-CHG-2310-004

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

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