

PCN Number:	20220804001.1		PCN Date:	August 04, 2022								
Title:	Add Cu as Alternative Wire Base Metal for Selected Device(s)											
Customer Contact:	PCN Manager	Dept:	Quality Services									
Proposed 1st Ship Date:	Nov 08, 2022	Sample requests accepted until:	Sept 08, 2022*									
*Sample requests received after (Sept 08, 2022) will not be supported.												
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:												
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:												
<table border="1"> <thead> <tr> <th>Material</th> <th>Current</th> <th>Proposed</th> </tr> </thead> <tbody> <tr> <td>Wire type</td> <td>0.96 mil Au</td> <td>1.00 mil Cu</td> </tr> </tbody> </table>					Material	Current	Proposed	Wire type	0.96 mil Au	1.00 mil Cu		
Material	Current	Proposed										
Wire type	0.96 mil Au	1.00 mil 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.												
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.												
<table border="1"> <thead> <tr> <th>RoHS</th> <th>REACH</th> <th>Green Status</th> <th>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:												
<table border="1"> <tr> <td>OPA1679IRUMR</td> <td>OPA1679IRUMT</td> </tr> </table>					OPA1679IRUMR	OPA1679IRUMT						
OPA1679IRUMR	OPA1679IRUMT											

Qualification Report

Approve Date 14-JULY -2022

Qualification Results

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

Type	#	Test Name	Condition	Duration	Qual Device: <u>OPA1679IR</u> <u>UMR</u>	QBS Package/Product Reference : OPA1679QRU MRQ1	QBS Package Reference : <u>BQ24193R</u> <u>GER</u>	QBS Package Reference: <u>BQ25890HR</u> <u>TWR</u>	QBS Package Reference : <u>BQ9003R</u> <u>SMR</u>	QBS Package Reference: <u>TMP451AI</u> <u>DQFR</u>
HAST	A2	Biased HAST	130C/85%RH	96 Hours	-	3/231/0	-	-	-	-
UHA ST	A3	Autoclave	121C/15psig	96 Hours	-	-	3/231/0	3/231/0	3/231/0	3/231/0
UHA ST	A3	Unbiased HAST	130C/85%RH	96 Hours	-	3/231/0	-	-	-	-
TC	A4	Temperature Cycle	- 65C/150C	500 Cycles	-	3/231/0-	3/231/0	3/231/0	3/231/0	3/231/0
HTS L	A6	High Temperature Storage Life	175C	500 Hours	-	1/45/0	-	-	-	-
HT OL	B1	Life Test	135C Ta/150C Tj	408 Hours	-	3/231/0	-	-	-	-
PD	C 4	Physical Dimensions	Cpk>1.67	-	-	3/30/0	-	-	-	-
CHA R	E5	Electrical Distributions	Cpk>1.67 Room, hot, and cold	-	-	3/90/0	-	-	-	-
MQ		Manufacturability	-	-	3/0					

QBS: Qual By Similarity

Qual Device OPA1679IRUMR is qualified at MSL1 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/>

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
WW PCN Team	PCN_ww_admin_team@list.ti.com

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