

<b>PCN Number:</b>		20230814007.1		<b>PCN Date:</b>		September 18, 2023										
<b>Title:</b>		Add Cu as Alternative Wire Base Metal for Selected Device(s)														
<b>Customer Contact:</b>		Change Management team		<b>Dept:</b>		Quality Services										
<b>Proposed 1<sup>st</sup> Ship Date:</b>		Dec 18, 2023		<b>Sample requests accepted until:</b>		Oct 18, 2023*										
*Sample requests received after Oct 18, 2023 will not be supported.																
<b>Change Type:</b>																
<input type="checkbox"/>	Assembly Site	<input type="checkbox"/>	Design	<input type="checkbox"/>	Wafer Bump Material	<input type="checkbox"/>										
<input checked="" type="checkbox"/>	Assembly Process	<input type="checkbox"/>	Data Sheet	<input type="checkbox"/>	Wafer Bump Process	<input type="checkbox"/>										
<input checked="" type="checkbox"/>	Assembly Materials	<input type="checkbox"/>	Part number change	<input type="checkbox"/>	Wafer Fab Site	<input type="checkbox"/>										
<input type="checkbox"/>	Mechanical Specification	<input type="checkbox"/>	Test Site	<input type="checkbox"/>	Wafer Fab Materials	<input type="checkbox"/>										
<input type="checkbox"/>	Packing/Shipping/Labeling	<input type="checkbox"/>	Test Process	<input type="checkbox"/>	Wafer Fab Process	<input type="checkbox"/>										
<b>PCN Details</b>																
<b>Description of Change:</b>																
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" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 25%;">Material</th> <th style="width: 40%;">Current</th> <th style="width: 35%;">Proposed</th> </tr> </thead> <tbody> <tr> <td>Wire type</td> <td>0.96mil Au</td> <td>1.0 mil Cu</td> </tr> </tbody> </table>								Material	Current	Proposed	Wire type	0.96mil Au	1.0 mil Cu			
Material	Current	Proposed														
Wire type	0.96mil Au	1.0 mil Cu														
<b>Reason for Change:</b>																
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																
<b>Anticipated impact on Fit, Form, Function, Quality or Reliability (positive / negative):</b>																
None.																
<b>Impact on Environmental Ratings</b>																
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" style="width: 100%; border-collapse: collapse;"> <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> </tr> </tbody> </table>								RoHS	REACH	Green Status	IEC 62474	<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													
<b>Changes to product identification resulting from this PCN:</b>																
None.																
<b>Product Affected:</b>																
<table border="1" style="width: 100%; border-collapse: collapse;"> <tbody> <tr> <td style="width: 33%;">LMH32401IRGTR</td> <td style="width: 33%;">OPA855IDSGT</td> <td style="width: 33%;">OPA858IDSGT</td> </tr> <tr> <td>LMH32401IRGTT</td> <td>OPA856IDSGR</td> <td>OPA859IDSGR</td> </tr> <tr> <td>OPA855IDSGR</td> <td>OPA858IDSGR</td> <td>OPA859IDSGT</td> </tr> </tbody> </table>								LMH32401IRGTR	OPA855IDSGT	OPA858IDSGT	LMH32401IRGTT	OPA856IDSGR	OPA859IDSGR	OPA855IDSGR	OPA858IDSGR	OPA859IDSGT
LMH32401IRGTR	OPA855IDSGT	OPA858IDSGT														
LMH32401IRGTT	OPA856IDSGR	OPA859IDSGR														
OPA855IDSGR	OPA858IDSGR	OPA859IDSGT														

# Qualification Report

Approve Date 02-JUNE -2023

## Qualification Results

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

Type	#	Test Name	Condition	Duration	Qual Device: <u>LMH32401IRGTR</u>
UHAST	A3	Unbiased HAST	130C/85%RH	96 Hours	3/231/0
TC	A4	Temperature Cycle	-65C/150C	500 Cycles	3/231/0
HTSL	A6	High Temperature Storage Life	170C	420 Hours	3/231/0
WBP	C2	Bond Pull	76 Wires, 3 units min	Wires	3/228/0

QBS: Qual By Similarity

Qual Device LMH32401IRGTR 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/>

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

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