

PCN Number:	20230714001.1			PCN Date:	July 14, 2023								
Title:	Qualification of Cu as an alternate bond wire for Select Devices												
Customer Contact:	Change Management Team		Dept:	Quality Services									
Proposed 1st Ship Date:	Oct 12, 2023		Sample Requests accepted until:	Aug 14, 2023									
*Sample requests received after Aug 14, 2023 will not be supported.													
Change Type:													
<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 wire & new die coat qualification for the devices in the product affected section as follows:</p> <table border="1" style="width: 100%;"> <thead> <tr> <th>What</th> <th>Current</th> <th>Additional</th> </tr> </thead> <tbody> <tr> <td>Current Bond wire, Diameter (die to die)</td> <td>Au, 1.0 or 0.9 mil</td> <td>Cu, 0.8 or 0.96 mil</td> </tr> </tbody> </table>						What	Current	Additional	Current Bond wire, Diameter (die to die)	Au, 1.0 or 0.9 mil	Cu, 0.8 or 0.96 mil		
What	Current	Additional											
Current Bond wire, Diameter (die to die)	Au, 1.0 or 0.9 mil	Cu, 0.8 or 0.96 mil											
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 border="1" style="width: 100%;"> <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:													
LM25056APSQE/NOPB	LM25066IPSQ/NOPB	LM5056PMH/NOPB	LM5066IPMHE/NOPB										
LM25056PSQ/NOPB	LM25066IPSQE/NOPB	LM5056PMHE/NOPB	LM5066IPMHX/NOPB										
LM25056PSQE/NOPB	LM25066IPSQX/NOPB	LM5056PMHX/NOPB	LM5066PMH/NOPB										
LM25066APSQ/NOPB	LM25066PSQ/NOPB	LM5064PMH/NOPB	LM5066PMHE/NOPB										

LM25066APSQE/NOPB	LM25066PSQE/NOPB	LM5064PMHE/NOPB	LM5066PMHX/NOPB
LM25066APSQX/NOPB	LM25066PSQX/NOPB	LM5064PMHX/NOPB	LM5066UPMH/NOPB
LM25066IAPSQ/NOPB	LM5056APMH/NOPB	LM5064UPMH/NOPB	LM5066UPMHE/NOPB
LM25066IAPSQE/NOPB	LM5056APMHE/NOPB	LM5064UPMHE/NOPB	LM5066UPMHX/NOPB
LM25066IAPSQX/NOPB	LM5056APMHX/NOPB	LM5064UPMHX/NOPB	

TI Information
Selective Disclosure

Qualification Report

Die-to-die bonding for 0.8mil PCC and 0.96mil Cu wire Qualification
Approve Date 04-July-2023

Qualification Results

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

Type	#	Test Name	Condition	Duration	Qual Device: LM5064PMH/NOPB	Qual Device: LM25056PSQ/NOPB	QBS Reference: DS90UB925QSOX/NOPB	QBS Reference: DS90UB940TNKDRQ1	QBS Reference: DS99R124AQSQE/NOPB
HAST	A2	Biased HAST	130C/85%RH	96 Hours	-	-	1/77/0	-	-
UHAST	A3	Autoclave	121C/15psig	96 Hours	3/231/0	3/231/0	-	-	-
UHAST	A3	Unbiased HAST	130C/85%RH	96 Hours	-	-	-	3/231/0	-
TC	A4	Temperature Cycle	-55C/125C	1000 Cycles	-	-	1/77/0	3/231/0	3/231/0
TC	A4	Temperature Cycle	-65C/150C	500 Cycles	3/231/0	3/231/0	-	-	-
HTSL	A6	High Temperature Storage Life	150C	500 Hours	-	-	1/45/0	3/135/0	-
PD	C4	Physical Dimensions	Cpk>1.67	-	-	-	1/10/0	3/30/0	3/30/0

- QBS: Qual By Similarity
- Qual Device LM5064PMH/NOPB is qualified at MSL3 260C
- Qual Device LM25056PSQ/NOPB is qualified at MSL3 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-2206-071

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

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