

PCN Number:	20230524000.1		PCN Date:	May 24, 2023									
Title:	Qualification of Cu as an alternate bond wire & other BOM elements for Select Devices												
Customer Contact:	PCN Manager	Dept:	Quality Services										
Proposed 1st Ship Date:	Aug 22, 2023	Sample Requests accepted until:	June 24, 2023										
*Sample requests received after Jun 24, 2023 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:													
This PCN is to inform of an alternative bond wire & new die coat qualification for the devices in the product affected section as follows:													
<table border="1" style="width: 100%; text-align: center;"> <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, 1.0 or 0.9 mil</td> <td>Cu, 0.96 mil</td> </tr> <tr> <td>Die Coat Material</td> <td>BCB</td> <td>PI</td> </tr> </tbody> </table>					What	Current	Additional	Current Bond wire, Diameter	Au, 1.0 or 0.9 mil	Cu, 0.96 mil	Die Coat Material	BCB	PI
What	Current	Additional											
Current Bond wire, Diameter	Au, 1.0 or 0.9 mil	Cu, 0.96 mil											
Die Coat Material	BCB	PI											
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 Form, Fit, 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" style="width: 100%; text-align: center;"> <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:													
LM25061PMM-1/NOPB	LMP2232AMMX/NOPB	LMP7718MM/NOPB	LMP90077MHX/NOPB										
LM25061PMM-2/NOPB	LMP2232BMA/NOPB	LMP7718MME/NOPB	LMP90078MH/NOPB										

LM25061PMME-1/NOPB	LMP2232BMAE/NOPB	LMP7721MA/NOPB	LMP90078MHE/NOPB
LM25061PMME-2/NOPB	LMP2232BMAX/NOPB	LMP7721MAX/NOPB	LMP90078MHX/NOPB
LM25061PMMX-1/NOPB	LMP2232BMM/NOPB	LMP7731MA/NOPB	LMP90079MH/NOPB
LM25061PMMX-2/NOPB	LMP2232BMME/NOPB	LMP7731MAX/NOPB	LMP90079MHE/NOPB
LM25069PMM-1/NOPB	LMP2234AMA/NOPB	LMP7731MF/NOPB	LMP90079MHX/NOPB
LM25069PMM-2/NOPB	LMP2234AMAE/NOPB	LMP7731MFE/NOPB	LMP90080MH/NOPB
LM25069PMME-1/NOPB	LMP2234AMAX/NOPB	LMP7731MFX/NOPB	LMP90080MHE/NOPB
LM25069PMME-2/NOPB	LMP2234BMA/NOPB	LMP7732MA/NOPB	LMP90080MHX/NOPB
LM25069PMMX-1/NOPB	LMP2234BMAE/NOPB	LMP7732MAX/NOPB	LMP90097MH/NOPB
LM25069PMMX-2/NOPB	LMP2234BMAX/NOPB	LMP7732MM/NOPB	LMP90097MHE/NOPB
LM25117PMH/NOPB	LMP7312MA/NOPB	LMP7732MME/NOPB	LMP90097MHX/NOPB
LM25117PMHX/NOPB	LMP7312MAX/NOPB	LMP7732MMX/NOPB	LMP90098MH/NOPB
LM34937PMH/NOPB	LMP7702MA/NOPB	LMP8350MA/NOPB	LMP90098MHE/NOPB
LM34937PMHX/NOPB	LMP7702MAX/NOPB	LMP8350MAX/NOPB	LMP90098MHX/NOPB
LM5117PMH/NOPB	LMP7702MM	LMP8481MM-H/NOPB	LMP90099MH/NOPB
LM5117PMHE/NOPB	LMP7702MM/NOPB	LMP8481MM-S/NOPB	LMP90099MHE/NOPB
LM5117PMHX/NOPB	LMP7702MMX/NOPB	LMP8481MM-T/NOPB	LMP90099MHX/NOPB
LMP2021MA/NOPB	LMP7704MA/NOPB	LMP8481MME-H/NOPB	LMP90100MH/NOPB
LMP2021MAX/NOPB	LMP7704MAX/NOPB	LMP8481MME-S/NOPB	LMP90100MHE/NOPB
LMP2021MF/NOPB	LMP7708MA/NOPB	LMP8481MME-T/NOPB	LMP90100MHX/NOPB
LMP2021MFE/NOPB	LMP7708MAX/NOPB	LMP8481MMX-H/NOPB	LMP91050MM/NOPB
LMP2021MFX/NOPB	LMP7708MM/NOPB	LMP8481MMX-S/NOPB	LMP91050MM/S7002917
LMP2022MA/NOPB	LMP7708MME/NOPB	LMP8481MMX-T/NOPB	LMP91050MME/NOPB
LMP2022MAX/NOPB	LMP7708MMX/NOPB	LMP8601MA/NOPB	LMP91050MMX/NOPB
LMP2022MM/NOPB	LMP7709MA/NOPB	LMP8601MAX/NOPB	LMP91050MMX/S7002917
LMP2022MME/NOPB	LMP7709MAX/NOPB	LMP8602MA/NOPB	LMP91051MT/NOPB
LMP2022MMX/NOPB	LMP7711MK/NOPB	LMP8602MAX/NOPB	LMP91051MTX/NOPB
LMP2231AMA/NOPB	LMP7711MKE/NOPB	LMP8602MM/NOPB	LMP91200MT/NOPB
LMP2231AMAE/NOPB	LMP7711MKX/NOPB	LMP8602MME/NOPB	LMP91200MTX/NOPB
LMP2231AMAX/NOPB	LMP7712MM/NOPB	LMP8602MMX/NOPB	LPV811DBVR
LMP2231AMF/NOPB	LMP7712MME/NOPB	LMP8603MA/NOPB	LPV811DBVT
LMP2231AMFE/NOPB	LMP7715MF/NOPB	LMP8603MAX/NOPB	SM73302MF/NOPB
LMP2231AMFX/NOPB	LMP7715MFE/NOPB	LMP8603MM/NOPB	SM73302MFE/NOPB
LMP2231BMA/NOPB	LMP7715MFX/NOPB	LMP8603MME/NOPB	SM73302MFX/NOPB
LMP2231BMAE/NOPB	LMP7716MM/NOPB	LMP8603MMX/NOPB	TDC1000PW
LMP2231BMF/NOPB	LMP7716MME/NOPB	LMP8650MM-T/NOPB	TDC1000PWR
LMP2231BMFE/NOPB	LMP7716MMX/NOPB	LMP8650MME-T/NOPB	TDC1011PW
LMP2231BMFX/NOPB	LMP7717MF/NOPB	LMP8650MMX-T/NOPB	TDC1011PWR
LMP2232AMA/NOPB	LMP7717MFE/NOPB	LMP8672MA/NOPB	TLV521DCKR
LMP2232AMAE/NOPB	LMP7717MFX/NOPB	LMP8672MAX/NOPB	TLV521DCKT

LMP2232AMAX/NOPB	LMP7718MA/NOPB	LMP90077MH/NOPB	TLV8811DBVR
LMP2232AMM/NOPB	LMP7718MAE/NOPB	LMP90077MHE/NOPB	TLV8811DBVT
LMP2232AMME/NOPB	LMP7718MAX/NOPB		

TI Information
Selective Disclosure

Qualification Report

Au wire change to Cu wire and BCB Spincoat change to PI Spincoat
Approve Date 27-APRIL -2023

Qualification Results

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

Type	#	Test Name	Condition	Duration	Qual Device: LMP7711MK/NOPB	Qual Device: LMP8481MME-S/NOPB	Qual Device: TDC1000PW	QBS Reference: LMP91300NHZJ	QBS Reference: LMP92066PWPR	QBS Reference: LPV811DBVR
HAST	A2	Biased HAST	110C/85%RH	264 Hours	-	-	-	3/231/0	-	-
UHAST	A3	Autoclave	121C/15psig	96 Hours	3/231/0	3/231/0	3/231/0	-	3/231/0	1/77/0
UHAST	A3	Unbiased HAST	110C/85%RH	264 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	1/77/0
HTSL	A6	High Temperature Storage Life	150C	1000 Hours	-	-	-	3/231/0	3/231/0	-
HTSL	A6	High Temperature Storage Life	170C	420 Hours	-	-	-	-	3/231/0	-
HTOL	B1	Life Test	125C	1000 Hours	-	-	-	3/231/0	3/231/0	-
ELFR	B2	Early Life Failure Rate	125C	48 Hours	-	-	-	3/2400/0	3/2400/0	-

Type	#	Test Name	Condition	Duration	Qual Device: LMP7711MK/NOPB	Qual Device: LMP8481MME-S/NOPB	Qual Device: TDC1000PW	QBS Reference: LMP91300NHZJ	QBS Reference: LMP92066PWPR	QBS Reference: LPV811DBVR
SD	C3	PB-Free Solderability	Precondition w.155C Dry Bake (4 hrs +/- 15 minutes); PB-Free Solder;	-	-	-	-	1/22/0	1/22/0	-
ESD	E2	ESD CDM	-	250 Volts	-	-	-	1/3/0	1/3/0	-
ESD	E2	ESD HBM	-	1000 Volts	-	-	-	1/3/0	1/3/0	-
LU	E4	Latch-Up	Per JESD78	-	-	-	-	1/3/0	1/3/0	-
CHAR	E5	Electrical Characterization	Per Datasheet Parameters	-	1/30/0	1/30/0	1/30/0	1/30/0	1/30/0	-

- QBS: Qual By Similarity
- Qual Device LMP7711MK/NOPB is qualified at MSL1 260C
- Qual Device LMP8481MME-S/NOPB is qualified at MSL1 260C
- Qual Device TDC1000PW 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/>

TI Qualification ID: R-CHG-2205-085

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