

PCN Number:	20211222000.1		PCN Date:						
Title:	Qualification of Cu as an alternate bond wire for select devices								
Customer Contact:	PCN Manager	Dept:	Quality Services						
Proposed 1st Ship Date:	Jun 16 2022	Estimated Sample Availability:	Date provided at sample request						
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 the qualification of an alternate bond wire qualification as follows:									
<table border="1" style="margin: auto;"> <thead> <tr> <th style="background-color: #d9e1f2;">Current Bond Diameter</th> <th style="background-color: #d9e1f2;">Additional Bond wire & diameter</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">Au, 1.0 or 1.3 mils</td> <td style="text-align: center;">Cu, 0.96 or 1.3 mils</td> </tr> </tbody> </table>						Current Bond Diameter	Additional Bond wire & diameter	Au, 1.0 or 1.3 mils	Cu, 0.96 or 1.3 mils
Current Bond Diameter	Additional Bond wire & diameter								
Au, 1.0 or 1.3 mils	Cu, 0.96 or 1.3 mils								
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.									
RoHS		REACH		Green Status					
<input checked="" type="checkbox"/> No Change		<input checked="" type="checkbox"/> No Change		<input checked="" type="checkbox"/> No Change					
<input type="checkbox"/> No Change		<input type="checkbox"/> No Change		<input type="checkbox"/> No Change					
Changes to product identification resulting from this PCN:									
None									
Product Affected:									

LM2936DT-3.0/NOPB	LP2950CDT-3.3/NOPB	LP38690DTX-1.8/NOPB	LP38691DTX-1.8/NOPB
LM2936DT-3.3/NOPB	LP2950CDT-5.0/NOPB	LP38690DTX-2.5/NOPB	LP38691DTX-2.5/NOPB
LM2936DT-5.0	LP2950CDTX-3.0/NOPB	LP38690DTX-3.3/NOPB	LP38691DTX-3.3/NOPB
LM2936DT-5.0/NOPB	LP2950CDTX-3.3/NOPB	LP38690DTX-5.0/NOPB	LP38691DTX-5.0/NOPB
LM2936DTX-3.3/NOPB	LP2950CDTX-5.0/NOPB	LP38691DT-1.8	SM72238TD-3.3/NOPB
LM2936DTX-3.3/S7002479	LP38690DT-1.8/NOPB	LP38691DT-1.8/NOPB	SM72238TD-5.0/NOPB
LM2936DTX-5.0/NOPB	LP38690DT-2.5/NOPB	LP38691DT-2.5/NOPB	SM72238TDE-3.3/NOPB
LM9036DT-5.0/NOPB	LP38690DT-3.3	LP38691DT-3.3	SM72238TDE-5.0/NOPB
LM9036DTX-5.0/NOPB	LP38690DT-3.3/NOPB	LP38691DT-3.3/NOPB	SM72238TDX-3.3/NOPB
LP2950CDT-3.0/NOPB	LP38690DT-5.0/NOPB	LP38691DT-5.0/NOPB	SM72238TDX-5.0/NOPB
LP2950CDT-3.3			



TI Information
Selective Disclosure

Qualification Report

Cu Wire Conversion for DPAK Devices Approve Date 31-Oct-2021

Qualification Results

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

Type	Test Name / Condition	Duration	Qual Device: LM2936DT50NOPB	Qual Device: LP38690DT-33	QBS Reference: LM1117DT50NOPB	QBS Reference: LM5037MTNOPB
TC	Temperature Cycle, -65/150C	500 Cycles	3/231/0	-	3/231/0	3/231/0
AC	Autoclave 121C	96 Hours	-	-	3/231/0	3/231/0
WBP	Bond Pull	Wires	3/90/0	3/90/0	3/90/0	3/90/0
WBS	Ball Bond Shear	Wires	3/90/0	3/90/0	3/90/0	3/90/0
THB	Biased Temperature and Humidity	1000 Hours				3/231/0
HTSL	High Temp. Storage Bake, 150C	1000 Hours				1/77/0

- QBS: Qual By Similarity
- Qual Device LM2936DT50NOPB is qualified at LEVEL2-260CG
- Qual Device LP38690DT-33 is qualified at LEVEL1-235CL
- 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

TI Qualification ID: 20210325-139321

For questions regarding this notice, e-mails can be sent to the contacts shown below or your local Field Sales Representative.

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