



12500 TI Boulevard, MS 8640, Dallas, Texas 75243

PCN# 20180110006
Add Cu as Alternative Wire Base Metal for Selected Device(s)
Change Notification / Sample Request

Date: January 15, 2018
To: PREMIER FARNELL PCN

Dear Customer:

This is an announcement of a change to a device that is currently offered by Texas Instruments. The details of this change are on the following pages.

We request you acknowledge receipt of this notification within **30** days of the date of this notice. Lack of acknowledgement of this notice within 30 days constitutes acceptance of the change. If you require samples or additional data to support your evaluation, please request within 30 days.

The proposed first ship date is indicated on page 3 of this notification, unless customer agreement has been reached on an earlier implementation of the change.

This notice does not change the end-of-life status of any product. Should product affected be on a previously issued product withdrawal/discontinuance notice, this notification does not extend the life of that product or change the life time buy offering/discontinuance plan.

For questions regarding this notice, contact your local Field Sales Representative or the PCN Manager (PCN_ww_admin_team@list.ti.com).

Sincerely,

PCN Team
SC Business Services

Products Affected:

The devices listed on this page are a subset of the complete list of affected devices. According to our records, these are the devices that you have purchased within the past twenty-four (24) months. The corresponding customer part number is also listed, if available.

DEVICE	CUSTOMER PART NUMBER
LM22673MR-ADJ/NOPB	null
LM22675MR-ADJ/NOPB	null
LM22676MRE-ADJ/NOPB	null
LM22670MR-5.0/NOPB	null
LM22670MR-ADJ/NOPB	null
LM22670MRE-5.0/NOPB	null
LM22670MRE-ADJ/NOPB	null
LM22670MRX-ADJ/NOPB	null
LM22671MR-5.0/NOPB	null
LM22671MR-ADJ/NOPB	null
LM22671MRE-5.0/NOPB	null
LM22671MRE-ADJ/NOPB	null
LM22672MR-5.0/NOPB	null
LM22672MR-ADJ/NOPB	null
LM22672MRE-5.0/NOPB	null
LM22672MRE-ADJ/NOPB	null
LM22673MRE-5.0/NOPB	null
LM22673MRE-ADJ/NOPB	null
LM22674MR-5.0/NOPB	null
LM22674MR-ADJ/NOPB	null
LM22674MRE-5.0/NOPB	null
LM22674MRE-ADJ/NOPB	null
LM22675MR-5.0/NOPB	null
LM22675MRE-5.0/NOPB	null
LM22675MRE-ADJ/NOPB	null
LM22675MRX-5.0/NOPB	null
LM22675MRX-ADJ/NOPB	null
LM22676MR-5.0/NOPB	null
LM22676MR-ADJ/NOPB	null
LM22676MRE-5.0/NOPB	null
LM22676MRX-ADJ/NOPB	null
LM22680MR-ADJ/NOPB	null
LM22680MRE-ADJ/NOPB	null
LM22680MRX-ADJ/NOPB	null

Technical details of this Product Change follow on the next page(s).

PCN Number:	20180110006		PCN Date:	Jan 15, 2018						
Title:	Add Cu as Alternative Wire Base Metal for Selected Device(s)									
Customer Contact:	PCN Manager	Dept:	Quality Services							
Proposed 1st Ship Date:	Apr 15, 2018	Estimated Sample Availability:	Date provided at sample request							
Change Type:										
<input type="checkbox"/>	Assembly Site	<input type="checkbox"/>	Design	<input type="checkbox"/>						
<input checked="" type="checkbox"/>	Assembly Process	<input type="checkbox"/>	Data Sheet	<input type="checkbox"/>						
<input checked="" type="checkbox"/>	Assembly Materials	<input type="checkbox"/>	Part number change	<input type="checkbox"/>						
<input type="checkbox"/>	Mechanical Specification	<input type="checkbox"/>	Test Site	<input type="checkbox"/>						
<input type="checkbox"/>	Packing/Shipping/Labeling	<input type="checkbox"/>	Test Process	<input type="checkbox"/>						
		<input type="checkbox"/>	Wafer Bump Site	<input type="checkbox"/>						
		<input type="checkbox"/>	Wafer Bump Material	<input type="checkbox"/>						
		<input type="checkbox"/>	Wafer Bump Process	<input type="checkbox"/>						
		<input type="checkbox"/>	Wafer Fab Site	<input type="checkbox"/>						
		<input type="checkbox"/>	Wafer Fab Materials	<input type="checkbox"/>						
		<input type="checkbox"/>	Wafer Fab Process	<input type="checkbox"/>						
PCN Details										
Description of Change:										
<p>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:</p>										
<table border="1"> <thead> <tr> <th>Material</th> <th>Current</th> <th>Proposed</th> </tr> </thead> <tbody> <tr> <td>Wire</td> <td>Au</td> <td>Cu</td> </tr> </tbody> </table>					Material	Current	Proposed	Wire	Au	Cu
Material	Current	Proposed								
Wire	Au	Cu								
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 Material Declaration										
<input type="checkbox"/>	No Impact to the Material Declaration	<input checked="" type="checkbox"/>	Material Declarations or Product Content reports are driven from production data and will be available following the production release. Upon production release the revised reports can be obtained from the TI Eco-Info website . There is no impact to the material meeting current regulatory compliance requirements with this PCN change.							
Anticipated impact on Fit, Form, Function, Quality or Reliability (positive / negative):										
None.										
Changes to product identification resulting from this PCN:										
None.										
Product Affected:										

LM22670MR-5.0/NOPB	LM22673MR-5.0/NOPB	LM22676MR-ADJ/NOPB
LM22670MR-ADJ/NOPB	LM22673MR-ADJ/NOPB	LM22676MR-ADJ/S7002530
LM22670MRE-5.0/NOPB	LM22673MRE-5.0/NOPB	LM22676MRE-5.0/NOPB
LM22670MRE-ADJ/NOPB	LM22673MRE-ADJ/NOPB	LM22676MRE-ADJ/NOPB
LM22670MRX-5.0/NOPB	LM22673MRX-5.0/NOPB	LM22676MRX-5.0/NOPB
LM22670MRX-ADJ/NOPB	LM22673MRX-ADJ/NOPB	LM22676MRX-ADJ/NOPB
LM22671MR-5.0/NOPB	LM22674MR-5.0/NOPB	LM22676MRX-ADJ/S7002776
LM22671MR-ADJ/NOPB	LM22674MR-ADJ/NOPB	LM22680MR-ADJ/NOPB
LM22671MRE-5.0/NOPB	LM22674MRE-5.0/NOPB	LM22680MRE-ADJ/NOPB
LM22671MRE-ADJ/NOPB	LM22674MRE-ADJ/NOPB	LM22680MRX-ADJ/E7002609
LM22671MRX-5.0/NOPB	LM22674MRX-5.0/NOPB	LM22680MRX-ADJ/NOPB
LM22671MRX-ADJ/NOPB	LM22674MRX-ADJ/NOPB	LV13602MRX-ADJ/NOPB
LM22672MR-5.0/NOPB	LM22675MR-5.0/NOPB	LV13603AMRX-ADJ/NOPB
LM22672MR-ADJ/NOPB	LM22675MR-ADJ/NOPB	LV13603AMRX-H/NOPB
LM22672MRE-5.0/NOPB	LM22675MRE-5.0/NOPB	LV13603BMRX-ADJ/NOPB
LM22672MRE-ADJ/NOPB	LM22675MRE-ADJ/NOPB	LV13603BMRX-H/NOPB
LM22672MRX-5.0/NOPB	LM22675MRX-5.0/NOPB	LV13603CMRX-ADJ/NOPB
LM22672MRX-5.0S1	LM22675MRX-ADJ/NOPB	LV13603CMRX-H/NOPB
LM22672MRX-ADJ/NOPB	LM22676MR-5.0/NOPB	

Qualification Report

Cu wire Qualification for SOIC Devices at TIEMA
Approve Date 20-Dec-2017

Product Attributes

Attributes	Qual Device: <u>LV13603AMRJA6J</u>	QBS Package Reference: <u>LM3423MHX/NOPB</u>	QBS Package Reference: <u>LM34923MM/NOPB</u>	QBS Package Reference: <u>LM5010MH/NOPB</u>
Assembly Site	TIEMA-AT	TIEMA	TIEM	TIEMA
Package Family	HSOIC	HTSSOP	VSSOP	HTSSOP
Flammability Rating	UL 94 V-0	UL 94 V-0	UL 94 V-0	UL 94 V-0
Wafer Fab Supplier	MFAB	GFAB	MFAB	GFAB
Wafer Process	A5L27M3T	ABCD150XV1	ABCD05	ABCD150XV1

Attributes	QBS Package Reference: <u>LM5072MH-80/NOPB</u>	QBS Package Reference: <u>LP2996MRX TEST LEG</u>	QBS Package Reference: <u>TPS92560DGQR/NOPB</u>
Assembly Site	TIEMA	TIEMA	TIEM
Package Family	HTSSOP	HSOIC	HVSSOP
Flammability Rating	UL 94 V-0	UL 94 V-0	UL 94 V-0
Wafer Fab Supplier	GFAB	MAINEFAB	MFAB

Wafer Process	ABCD150XV2	CS065	ABCD5
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- QBS: Qual By Similarity

- Qual Device LV13603AMRJA6J is qualified at LEVEL3-260CG

Qualification Results

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

Type	Test Name / Condition	Duration	Qual Device: <u>LV13603AMRJA6J</u>	QBS Package Reference: <u>LM3423MHX/NOPB</u>	QBS Package Reference: <u>LM34923MM/NOPB</u>	QBS Package Reference: <u>LM5010MH/NOPB</u>
AC	Autoclave 121C	96 Hours	3/231/0	3/231/0	1/77/0	3/231/0
HAST	Biased HAST, 130C/85%RH	96 Hours	-	-	-	3/231/0
HTOL	Life Test, 150C	500 Hours	-	-	-	2/154/0
HTSL	High Temp. Storage Bake, 150C	500 Hours	-	3/231/0	-	-
HTSL	High Temp. Storage Bake, 170C	420 Hours	3/135/0	-	3/231/0	3/231/0
TC	Temperature Cycle, -65/150C	500 Cycles	3/231/0	3/231/0	-	3/231/0
UHA ST	Unbiased HAST, 130C/85%RH	96 Hours	-	-	-	-
WBP	Bond Pull	Wires	Pass	-	-	-
WBS	Ball Bond Shear	Wires	Pass	-	-	-

Type	Test Name / Condition	Duration	QBS Package Reference: <u>LM5072MH-80/NOPB</u>	QBS Package Reference: <u>LP2996MRX TEST LEG</u>	QBS Package Reference: <u>TPS92560DGQR/NOPB</u>
AC	Autoclave 121C	96 Hours	3/231/0	-	1/77/0
HAST	Biased HAST, 130C/85%RH	96 Hours	-	-	-
HTOL	Life Test, 150C	500 Hours	-	-	-
HTSL	High Temp. Storage Bake, 150C	500 Hours	3/231/0	-	-
HTSL	High Temp. Storage Bake, 170C	420 Hours	-	-	3/231/0
TC	Temperature Cycle, -65/150C	500 Cycles	3/231/0	1/77/0	-
UHA ST	Unbiased HAST, 130C/85%RH	96 Hours	-	1/77/0	-
WBP	Bond Pull	Wires	-	-	-
WBS	Ball Bond Shear	Wires	-	-	-

- 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
USA	PCNAmericasContact@list.ti.com
Europe	PCNEuropeContact@list.ti.com
Asia Pacific	PCNAsiaContact@list.ti.com
Japan	PCNJapanContact@list.ti.com