PCN# 20190506000.1B
Add Cu as Alternative Wire Base Metal for Selected Device(s)
Change Notification / Sample Request

Date: July 31, 2020

Dear Customer:

The purpose of this version B is to retract select devices that were inadvertently included and are not affected by this change. We apologize for any inconvenience this may have caused.

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 Team (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
LV2842XLVDDCT	null
LV2842XLVDDCR	null
LV2843DDCR	null
LMR14006XDDCR	null
LMR14006XDDCT	null
LMR14006YDDCR	null
LMR14010ADDCR	null
LMR14010ADDCT	null
LMR14006YDDCT	null

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

PCN Number:	20190506000.1B		PCN Date:	July 31, 2020
Title:	Add Cu as Alternative Wire Base Metal for Selected Device(s)			

Change Type:

☐	Assembly Site	☐	Design	☐	Wafer Bump Site		
☒	Assembly Process	☐	Data Sheet	☐	Wafer Bump Material		
☒	Assembly Materials	☐	Part number change	☐	Wafer Bump Process		
☐	Mechanical Specification	☐	Test Site	☐	Wafer Fab Site		
☐	Packing/Shipping/Labeling	☐	Test Process	☐	Wafer Fab Materials		
				☐	Wafer Fab Process		

PCN Details

Description of Change:

Revision B is to remove select devices under Group 1 in the Product Affected Section (in bold characters with ~~strikethrough~~) and highlighted in yellow. These devices were inadvertently added and not affected by this change.

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:

Group 1 Devices:

Material	Current	Proposed
Wire	Au	Cu

Note: Devices highlighted in Blue will continue to use Au wire for Die to Die bonding

Group 2 Devices:

Material	Current	Proposed
Protective Overcoat	BCB/Glob Top	PI
Wire	Au	Cu

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 Fit, Form, Function, Quality or Reliability (positive / negative):

None.

Anticipated impact on Material Declaration

☐	No Impact to the Material Declaration	☒	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.

Changes to product identification resulting from this PCN:

None.			

Group 1 Product Affected:

ADC16V130CISQ/NOPB	LMK03001DISQ/NOPB	LMC660AIM	UCC21520ADWR
ADC16V130CISQE/NOPB	LMK03001DISQE/NOPB	LMC660AIM/NOPB	UCC21520DW
ADC16V130CISQX/NOPB	LMK03001DISQX/NOPB	LMC660AIMX	UCC21520DWR
ADC31JB68RTAT	LMK03001ISQ/NOPB	LMC660AIMX/NOPB	UCC21521ADW
DS110DF111SQ/NOPB	LMK03002CISQ/NOPB	LMC660CM	UCC21521ADWR
DS110DF111SQE/NOPB	LMK03002CISQ/S7002367	LMC660CM/ELLI518	UCC21521CDW
DS125DF111SQ	LMK03002CISQX/NOPB	LMC660CM/NOPB	UCC21521CDWR
DS125DF111SQE	LMK03002ISQ/NOPB	LMC660CMX/NOPB	UCC21521DW
LDC6996AIME/NOPB	LMK03002ISQX/NOPB	LMH0318RTWR	UCC21521DWR
LDC6996AIMX/NOPB	LMK03033CISQ/NOPB	LMH0318RTWT	LM10500SQ-0.8/NOPB
LM10000SD/NOPB	LMK03033CISQE/NOPB	LMH0346SQ/NOPB	LM10500SQ-1.0/NOPB
LM10000SDE/NOPB	LMK03033CISQX/NOPB	LMH0346SQE/NOPB	LM10500SQE-0.8/NOPB
LM10000SDX/NOPB	LMK03033ISQ/NOPB	LMH0356SQ-40/NOPB	LM10500SQE-1.0/NOPB
LM10515SQ/NOPB	LMK03033ISQE/NOPB	LMH0356SQE-40/NOPB	LM10500SQX-0.8/NOPB
LM10515SQ-A/NOPB	LMK03033ISQX/NOPB	LMH1218RTWR	LM10500SQX-1.0/NOPB
LM10515SQE/NOPB	LMK03200ISQ/NOPB	LMH1218RTWT	LM21305SQ/J7002843
LM10515SQE-A/NOPB	LMK03200ISQE/NOPB	LMK01000ISQ/NOPB	LM21305SQ/NOPB
LM10515SQE-B/NOPB	LMK03200ISQX/NOPB	LMK01000ISQE/NOPB	LM21305SQ/S7002839
LM10515SQX/NOPB	LMK04000BISQ/NOPB	LMK01000ISQE/S7002207	LM21305SQE/NOPB
LM10515SQX-A/NOPB	LMK04000BISQE/NOPB	LMK01000ISQX/NOPB	LM21305SQX/NOPB
LM10515SQX-B/NOPB	LMK04000BISQX/NOPB	LMK01010ISQ/NOPB	LM21305SQX/S7002839
LM25085ASDX/NOPB	LMK04001BISQ/NOPB	LMK01010ISQE/NOPB	LM26420XSQ/NOPB
LM25101ASD-1/NOPB	LMK04001BISQE/NOPB	LMK01010ISQX/NOPB	LM26420XSQ/S7002797
LM25101ASDX/NOPB	LMK04001BISQX/NOPB	LMK04031BISQX/S7002381	LM26420XSQX/NOPB
LM25101CSD/NOPB	LMK04001BISQX/S7002440	LMK04033BISQ/NOPB	LM26420YSQ/NOPB
LM25115SDX/NOPB	LMK04002BISQ/NOPB	LMK04033BISQE/NOPB	LM26420YSQX/NOPB
LM2647LQ/NOPB	LMK04002BISQE/NOPB	LMK04033BISQE/S7002427	LM27341SD/NOPB
LM5001SDX/NOPB	LMK04002BISQX/NOPB	LMK04033BISQX/NOPB	LM27342SD/NOPB
LM5002SDX/NOPB	LMK04010BISQ/NOPB	LMK04100SQ/NOPB	LM27342SDX/NOPB
LM5025ASD/NOPB	LMK04010BISQE/NOPB	LMK04100SQE/NOPB	LM2833XSD/NOPB
LM5025ASDX/NOPB	LMK04010BISQX/NOPB	LMK04100SQX/NOPB	LM2833ZSD/NOPB
LM5025BSD/NOPB	LMK04011BISQ/NOPB	LMK04101SQ/NOPB	LMR10530XSD/NOPB
LM5025SD/NOPB	LMK04011BISQE/NOPB	LMK04101SQE/NOPB	LMR10530XSDX/NOPB
LM5027SQ-1/NOPB	LMK04011BISQX/NOPB	LMK04101SQX/NOPB	LMR10530YSD/NOPB
LM5035BSQX/NOPB	LMK04031BISQ/NOPB	LMK04102SQ/NOPB	LMR10530YSDX/NOPB
LM5035CSQ/NOPB	LMK04031BISQE/NOPB	LMK04102SQE/NOPB	LMR12015XSDX/NOPB
LM5035CSQX/NOPB	LMK04031BISQX/NOPB	LMK04102SQX/NOPB	LMR12020XSD/NOPB
LM5039SQ/NOPB	LM5101ASDX-1/NOPB	LMK04110SQ/NOPB	LMR12020XSDX/NOPB
LM5039SQX/NOPB	LM5102SD/NOPB	LMK04110SQE/NOPB	~~LMR14006XDDCR~~
LM5041ASD/NOPB	LM5102SDX/NOPB	LMK04110SQX/NOPB	~~LMR14006XDDCT~~
LM5041SD	LM5104SD/NOPB	LMK04111SQ/NOPB	~~LMR14006YDDCR~~
LM5041SD/NOPB	LM5104SDX/NOPB	LMK04111SQE/NOPB	~~LMR14006YDDCT~~
LM5041SDX/NOPB	LM5105SD/NOPB	LMK04111SQX/NOPB	~~LMR14010ADDCR~~
LM5085SDX/NOPB	LM5105SDX/NOPB	LMK04131SQ/NOPB	~~LMR14010ADDCT~~
LM5100ASD/NOPB	LM5107SD/NOPB	LMK04131SQE/NOPB	LMR16006XDDCR
LM5100BSD/NOPB	LM5109ASDX/NOPB	LMK04131SQX/NOPB	LMR16006XDDCT
LM5101ASD	LM5109BSDX/NOPB	LMK04133SQ/NOPB	LMR16006YDDCR
LM5101ASD/NOPB	LM5115SD/NOPB	LMK04133SQE/NOPB	LMR16006YDDCT

LM5101ASD-1/NOPB	LM5115SDX/NOPB	LMK04133SQX/NOPB	LV2832Y3DDCR
LM5101ASDX	LM5161PWPR	LP3972SQ-0514/NOPB	LV2832Y3DDCT
LM5101ASDX/NOPB	LM5161PWPT	LP3972SQ-5810/NOPB	LV2832Y5DDCR
LMK01020ISQ/NOPB	LMC6024IM/NOPB	LP3972SQ-A413/NOPB	LV2832Y5DDCT
LMK01020ISQE/NOPB	LMC6024IMX/NOPB	LP3972SQ-A514/NOPB	LV2832YDDCR
LMK01020ISQX/NOPB	LMC6034IM	LP3972SQ-E514/NOPB	LV2832YDDCT
LMK02000ISQ/NOPB	LMC6034IM/NOPB	LP3972SQ-I414/NOPB	~~LV2842XLVDDCR~~
LMK02002ISQ/NOPB	LMC6034IMX/NOPB	LP3972SQ-I514/NOPB	~~LV2842XLVDDCT~~
LMK02002ISQX/NOPB	LMC6036IM/NOPB	LPC660AIM/NOPB	~~LV2842YDDCR~~
LMK03000CISQ/NOPB	LMC6036IMX/NOPB	LPC660AIMX/NOPB	~~LV2842YDDCT~~
LMK03000CISQX/NOPB	LMC6044AIM	LPC660IM/NOPB	~~LV2843DDCR~~
LMK03000DISQ/NOPB	LMC6044AIM/NOPB	LPC660IMX/NOPB	~~LV2843DDCT~~
LMK03000DISQE/NOPB	LMC6044AIMX/NOPB	SM74104SDE/NOPB	LV2862XLVDDCR
LMK03000DISQX/NOPB	LMC6044IM/NOPB	SM74104SDX/NOPB	LV2862XLVDDCT
LMK03000ISQ/NOPB	LMC6044IMX/NOPB	UCC20520DW	LV2862YDDCR
LMK03001CISQ/NOPB	LMC6484AIMX	UCC20520DWR	LV2862YDDCT
LMK03001CISQX/NOPB	LMC6484AIMX/SL163019	UCC21520ADW	LMC6484AIMX/NOPB

Group 2 Product Affected:

LMP92066PWP	LM25119PSQ/NOPB	LM5160DNTR	LMP92064SDX/NOPB
LMP92066PWPR	LM25119PSQE/NOPB	LM5160DNTT	LMV7231SQ/NOPB
ADS1293CISQ/NOPB	LM25119PSQX/NOPB	LMP91000SD/NOPB	LMV7231SQE/NOPB
ADS1293CISQE/NOPB	LM27403SQ/NOPB	LMP91000SDE/NOPB	LMV7231SQX/NOPB
ADS1293CISQX/NOPB	LM27403SQE/NOPB	LMP91000SDX/NOPB	LP38788SD-ADJ/NOPB
DAC161P997CISQ/NOPB	LM27403SQX/NOPB	LMP91001SD/NOPB	LP38788SDE-ADJ/NOPB
DAC161P997CISQX/NOPB	LM34937PSQ/NOPB	LMP91001SDX/NOPB	LP38788SDX-ADJ/NOPB
DAC161S055CISQ/NOPB	LM34937PSQX/NOPB	LMP91002SD/NOPB	LP38798SD-ADJ/NOPB
DAC161S055CISQE/NOPB	LM3754SQ/NOPB	LMP91002SDE/NOPB	LP38798SDE-ADJ/NOPB
DAC161S055CISQX/NOPB	LM3754SQX/NOPB	LMP91002SDX/NOPB	LP38798SDX-ADJ/NOPB
DAC161S997RGHR	LM5117PSQ/NOPB	LMP91300NHZJ	SN1311034SQE/NOPB
DAC161S997RGHT	LM5117PSQE/NOPB	LMP91300NHZR	SN1311034SQX/NOPB
FDC1004DSCJ	LM5117PSQX/NOPB	LMP91300NHZT	SN1402039SQE/NOPB
FDC1004DSCR	LM5119PSQ/NOPB	LMP92001SQE/NOPB	SN1402039SQX/NOPB
FDC1004DSCT	LM5119PSQE/NOPB	LMP92001SQX/NOPB	SN1405006SQE/NOPB
LM10011SD/NOPB	LM5119PSQX/NOPB	LMP92018SQ/NOPB	SN1405006SQX/NOPB
LM10011SDX/NOPB	LM5160ADNTJ	LMP92018SQE/NOPB	
LM25117PSQ/NOPB	LM5160ADNTR	LMP92018SQX/NOPB	
LM25117PSQE/NOPB	LM5160ADNTT	LMP92064SD/NOPB	
LM25117PSQX/NOPB	LM5160DNTJ	LMP92064SDE/NOPB	

Group 1 Qualification Report

Qualification Report
Approved on 11-Nov-2013

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

Type	Test Name / Condition	Duration	Qual Device: DS90CP22MXA1CL	Qual Device: LMV324MX	Qual Device: LP2995MXNOPB	Qual Device: LMC6482AIM/NOPB

Type	Test Name	Condition				
PC	PreCon Level 1	Level 1-260C	3/462/0	-	3/462/0	3/693/0
HAST	Biased HAST, 130C/85%RH	96/hrs. @130C	-	-	-	3/231/0
AC	Autoclave 121C	96HRS	3/231/0	-	3/231/0	3/231/0
TC	Temperature Cycle, -65/150C	TMCL500X	3/231/0	-	3/231/0	3/231/0
HTSL	High Temp Storage Bake 150C	1000 hrs. @150C	-	-	-	1/77/0
MQ	Manufacturability (Assembly)	(per mfg. Site specification)	-	Pass	Pass	Pass
DPA	Destructive Physical Analysis Post 500 Temp Cycle	x-section and de process to examine assembly robustness, Check for stich bond and bond pad integrity	3/15/0	-	3/15/0	3/15/0
YLD	FTY and Bin Summary	Compare against baseline	-	Pass	Pass	Pass

- Preconditioning was performed for Autoclave, Unbiased HAST, THB/Biased HAST, Temperature Cycle, Thermal Shock, and HTSL, as applicable
- 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

Qualification Report
Approved on 23-Sep-2014

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

Type	Test Name / Condition	Duration	Qual Device: DP83848TSQ	Qual Device: DS91M040TSQAW	Qual Device: DS100DX410EL16	Qual Device: DS80PCI402A2TT	Qual Device: LMH0366SQENOPB	Qual Device: LMH0394SQ/NOPB
PC	PreCon Level 1	Level 1-260C					3/720/0	
PC	PreCon Level 2	Level 2-260C	3/1079/0		-	3/720/0	-	-
PC	PreCon Level 3	Level 3-260C	-	1/255/0	3/720/0	-	-	3/231/0
HAST	Biased HAST, 130C/85%RH	96/hrs. @130C	-	-	-	-	-	3/231/0
AC	Autoclave 121C	96HRS	3/231/0	1/77/0	3/231/0	3/231/0	3/231/0	-
UHAST	Unbiased HAST 130C/85%RH	unHAST-96 HRS/-	3/231/0	1/77/0	3/231/0	3/231/0	3/231/0	-
TC	Temperature Cycle, -65/150C	TMCL500X	3/231/0	1/77/0	3/231/0	3/231/0	3/231/0	-
HTSL	High Temp Storage Bake 170C	420 hrs. @170C	3/231/0	-	-	3/231/0	-	-

ED	Side By Side Electrical Characterization.	Per Datasheet Parameters	1/30/0	1/30/0	1/30/0	1/30/0	1/30/0	-
MQ	Manufacturability (Assembly)	(per mfg. Site specification)	Pass	Pass	Pass	Pass	Pass	Pass
MSL	Thermal Path Integrity	Level 2-260C	3/30/0	1/22/0	3/66/0	3/66/0	3/66/0	-
DPA	Destructive Physical Analysis Post 500 Temp Cycle	x-section and de process to examine assembly robustness, Check for stich bond and bond pad integrity	3/3/0	-	3/15/0	3/15/0	3/15/0	1/5/0 Post 96 hours HAST
YLD	FTY and Bin Summary	Compare against baseline	Pass	Pass	Pass	Pass	Pass	Pass

- QBS: Qual By Similarity
- Qual Device DS100DX410EL16 is qualified at LEVEL3-260C
- Qual Device DS80PCI402A2TT is qualified at LEVEL2-260C
- Qual Device LMH0366SQENOPB is qualified at LEVEL1-260C
- Qual Device LMH0394SQ/NOPB is qualified at -
- Qual Device LMH0394SQ/NOPB REV A is qualified at LEVEL3-260C

- Preconditioning was performed for Autoclave, Unbiased HAST, THB/Biased HAST, Temperature Cycle, Thermal Shock, and HTSL, as applicable
- 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

Qualification Report
Approved on 27-Dec-2018

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

Type	Test Name / Condition	Duration	Qual Device: UCC21520QDWR
AC	Autoclave 121C	96 Hours	3/231/0
HAST	Biased HAST, 130C/85%RH	96 Hours	3/77/0
HTOL	Life Test, 125C	1000 Hours	1/77/0
HTSL	High Temp. Storage Bake, 170C	420 Hours	3/231/0
TC	Temperature Cycle, -65/150C	500 Cycles	3/231/0

- Qual Device UCC21520QDWR is qualified at LEVEL2-260C
- Device UCC21520QDWR contains multiple dies.
- 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

Qualification Report
Approved on 25-Apr-2019

Qualification Results

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

Type	Test Name / Condition	Duration	Qual Device: LMX2581ESQJTYY	Qual Device: LP3971SQ2GZ85K
HAST	Biased HAST, 110C/85%RH	264 Hours	3/231/0	3/231/0
HAST	Biased HAST, 110C/85%RH	528 Hours (for info only)	3/231/0	3/231/0
TC	Temperature Cycle, -65/150C	500 Cycles	-	3/231/0
UHAST	Unbiased HAST 110C/85%RH	264 Hours	-	3/231/0
WBP	Bond Pull	Wires	3/228/0	3/228/0
WBS	Ball Bond Shear	Wires	3/228/0	3/228/0

- Qual Device LMX2581ESQJTYY is qualified at LEVEL3-260CG
- Qual Device LP3971SQ2GZ85K is qualified at LEVEL1-260CG
- 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

Qualification Report
Approved on 03-Jul-2019

Qualification Results

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

Type	Test Name / Condition	Duration	Qual Device: LM10500SQE10NO
HAST	Biased HAST, 110C/85%RH	264 Hours	1/77/0
HTSL	High Temp Storage Bake, 170C	420 Hours	1/77/0
MQ	Manufacturability (Assembly)	(per mfg. Site specification)	Pass
TC	Temperature Cycle, -65/150C	500 Cycles	1/77/0
UHAST	Unbiased HAST 110C/85%RH	264 Hours	1/77/0
WBP	Bond Pull	Wires	1/90/0
WBS	Bond Shear	Wires	1/90/0

- QBS: Qual By Similarity
- Qual Device LM10500SQE10NO is qualified at LEVEL1-260CG

- 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

Qualification Report
Approved on 27-May-2019

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

Type	Test Name / Condition	Duration	Qual Device: LMP91300NHZJ
HTSL	High Temp Storage Bake, 170C	420 Hours	3/231/0
MQ	Manufacturability (Assembly)	(per mfg. Site specification)	3/Pass
TC	Temperature Cycle, -55/125C	700 Cycles	3/231/0
UHAST	Unbiased HAST 110C/85%RH	264 Hours	3/231/0
WBP	Bond Pull	Wires	3/90/0
WBS	Bond Shear	Wires	3/90/0

- QBS: Qual By Similarity
- Qual Device LMP91300NHZJ is qualified at LEVEL3-260CG

- 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

Qualification Report
Approved on 18-Jun-2019

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

Type	Test Name / Condition	Duration	Qual Device: LMR16006XDDCR
AC	Autoclave 121C	96 Hours	3/231/0
HAST	Biased HAST, 130C/85%RH	96 Hours	3/231/0
HTSL	High Temp. Storage Bake, 170C	420 Hours	3/231/0
MQ	Manufacturability (Assembly)	(per mfg. Site specification)	3/Pass
TC	Temperature Cycle, -65/150C	500 Cycles	3/231/0
WBP	Bond Pull	Wires	3/90/0
WBS	Bond Shear	Wires	3/90/0

- QBS: Qual By Similarity
- Qual Device LMR16006XDDCR is qualified at LEVEL1-260CG

- 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

Group 2 Qualification Report
Approved on 26-Mar-2019

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

Type	Test Name / Condition	Duration	Qual Device: LMP92066PWPR
AC	Autoclave 121C	96 Hours	3/231/0
HTOL	Life Test, 125C	1000 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
MQ	Manufacturability (Assembly)	(per mfg. Site specification)	Pass

- QBS: Qual By Similarity
- Qual Device LMP92066PWPR is qualified at LEVEL1-260CG

- 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

Qualification Report
Approved on 27-May-2019

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

Type	Test Name / Condition	Duration	Qual Device: LMP91300NHZJ
HTSL	High Temp Storage Bake, 170C	420 Hours	3/231/0
MQ	Manufacturability (Assembly)	(per mfg. Site specification)	3/Pass

Type	Test Name / Condition	Duration	Qual Device: LMP91300NHZJ
TC	Temperature Cycle, -55/125C	700 Cycles	3/231/0
UHAST	Unbiased HAST 110C/85%RH	264 Hours	3/231/0
WBP	Bond Pull	Wires	3/90/0
WBS	Bond Shear	Wires	3/90/0

- QBS: Qual By Similarity
- Qual Device LMP91300NHZJ is qualified at LEVEL3-260CG

- 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

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