

<b>PCN Number:</b>	20230327001.1A	<b>PCN Date:</b>	April 03, 2023
<b>Title:</b>	Qualify additional Assembly site for select SOT-23 Package devices		
<b>Customer Contact:</b>	<a href="#">PCN Manager</a>	<b>Dept:</b>	Quality Services
<b>Proposed 1<sup>st</sup> Ship Date:</b>	June 28, 2023	<b>Sample requests accepted until:</b>	Apr 28, 2023
*Sample requests received after (Apr. 28, 2023) will not be supported.			
<b>Change Type:</b>			
<input checked="" type="checkbox"/>	Assembly Site	<input type="checkbox"/>	Design
<input checked="" type="checkbox"/>	Assembly Process	<input type="checkbox"/>	Data Sheet
<input checked="" type="checkbox"/>	Assembly Materials	<input type="checkbox"/>	Part number change
<input type="checkbox"/>	Mechanical Specification	<input type="checkbox"/>	Test Site
<input checked="" type="checkbox"/>	Packing/Shipping/Labeling	<input type="checkbox"/>	Test Process
<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
<b>PCN Details</b>			
<b>Description of Change:</b>			
The purpose of Revision A is to retract devices which was included in error. The retracted device is highlighted in the Product Affected Section in bold font with a <del>strike through</del> .			
Texas Instruments Incorporated is announcing the qualification of additional Assembly sites for devices listed below in the product affected section. Construction differences and current assembly sites are as follows:			
<b>SOT-23</b>			
Assembly Sites	TFME, PHI, HNA, HFTFAT, ASEWH, CDAT, TIEMA		
Lead Finish	NiPdAu, NiPdAuAg, Matte Sn		
Mount Compound	A-09 A-03 4207123 400180 1120999A2 1120999A1 A-20		
Mold Compound	450207 R-04 R-17 450413 4222198 450042 8097131		
Bond wire type	Au, Cu		
Bond wire diameter	15.24 UM (0.6 MIL) 20.3 UM (0.8 MIL) 25.4 UM (1.0 MIL) 33 UM (1.3 MIL) 50.8 UM (2.0 MIL)		
<b>Reason for Change:</b>			
Continuity of Supply			
<b>Anticipated impact on Fit, Form, Function, Quality or Reliability (positive / negative):</b>			
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	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:

Assembly Site		
TFME	Assembly Site Origin (22L)	ASO: NFM
TI Philippines	Assembly Site Origin (22L)	ASO: PHI
Hana	Assembly Site Origin (22L)	ASO: HNT
ASEWH	Assembly Site Origin (22L)	ASO: AWH
HFTFAT	Assembly Site Origin (22L)	ASO: HFT
TI Chengdu	Assembly Site Origin (22L)	ASO: CDA
TI Melaka	Assembly Site Origin (22L)	ASO: CU6

Sample product shipping label (not actual product label!)

## Product Affected:

INA138NA/250	SN74LVC2G14DBVR	LM3880MFX-1AA/NOPB	DRV5021A2QDBZT
INA138NA/3K	SN74LVC2G17DBVR	LM3880MFX-1AB/NOPB	DRV5021A3QDBZR
INA168NA/250	SN74LVC2G34DBVR	LM3880MFX-1AC/NOPB	DRV5021A3QDBZT
INA168NA/3K	SN74LVC2GU04DBVR	LM3880MFX-1AD/NOPB	DRV5023AJQDBZR
INA193AIDBVR	SN74LVC2GU04DBVT	LM3880MFX-1AE/NOPB	DRV5023AJQDBZT
INA193AIDBVT	TLV61220DBVR	LM3880MFX-1AF/NOPB	DRV5023BIQDBZR
INA194AIDBVR	TLV61220DBVT	INA181A1IDBVR	DRV5023BIQDBZT
INA194AIDBVT	TMP100NA/250	INA181A1IDBVT	DRV5032AJDBZR
INA195AIDBVT	TMP100NA/3K	INA181A2IDBVR	DRV5032AJDBZT
INA196AIDBVR	TPD4E1U06DBVR	INA181A2IDBVT	DRV5032DUDBZR
INA196AIDBVT	TPS22917LDBVR	INA181A3IDBVR	DRV5032DUDBZT
INA197AIDBVR	TPS2513ADBVR	INA181A3IDBVT	DRV5032FADBZR
INA197AIDBVT	TPS2513ADBVT	INA181A4IDBVR	DRV5032FADBZT
INA198AIDBVT	TPS2513DBVR	INA181A4IDBVT	DRV5032FBDBZR
OPA340NA/250	TPS2513DBVT	LM2776DBVR	DRV5032FBDBZT
OPA340NA/3K	TPS2514ADBVR	LM2776DBVT	DRV5032FCDBZR
OPA365AIDBVR	TPS2514ADBVT	OPA322SAIDBVR	DRV5032FCDBZT
OPA365AIDBVT	TPS2552DBVR-1	OPA322SAIDBVT	DRV5032ZEDBZR
OPA376AIDBVR	TPS2552DBVT-1	REG710NA-3.3/250	DRV5032ZEDBZT
OPA376AIDBVT	TXS0101DBVR	REG710NA-3.3/3K	DRV5033AJQDBZR
SN74AUP1G04DBVR	TXS0101DBVT	REG710NA-5/250	DRV5033AJQDBZT

SN74AUP1G06DBVR	UCC27511DBVR	REG710NA-5/3K	DRV5033FAQDBZR
SN74AUP1G07DBVR	UCC27511DBVT	SN1511002DBVR	DRV5053CAQDBZR
SN74AUP1G17DBVR	UCC27531DBVR	SN74AUP1G57DBVR	DRV5053CAQDBZT
SN74LVC1G02DBVR	UCC27531DBVT	SN74AUP1G57DBVT	DRV5053EAQDBZR
SN74LVC1G02DBVT	UCC27532DBVR	SN74AUP1G58DBVR	DRV5053EAQDBZT
SN74LVC1G14DBVR	UCC27532DBVT	SN74AUP1G58DBVT	DRV5053OAQDBZR
SN74LVC1G17DBVR	UCC27538DBVR	SN74AUP1G97DBVR	DRV5053OAQDBZT
SN74LVC1G34DBVR	UCC27538DBVT	SN74AUP1G97DBVT	DRV5053PAQDBZR
TPS60400DBVR	UCC28704DBVR-1	SN74AUP1G98DBVR	DRV5053PAQDBZT
TPS60400DBVT	UCC28704DBVT-1	SN74AVC1T45DBVR	DRV5053RAQDBZR
TPS60401DBVR	UCC28742DBVR	SN74AVCH1T45DBVR	DRV5053RAQDBZT
TPS60401DBVT	UCC28742DBVT	SN74LVC1G11DBVR	DRV5053VAQDBZR
TPS60402DBVR	DRV5011ADDBZR	SN74LVC1G175DBVR	DRV5053VAQDBZT
TPS60402DBVT	DRV5011ADDBZT	SN74LVC1G19DBVR	DRV5056A6QDBZR
TPS60403DBVR	DRV5013ADEDDBZR	SN74LVC1G19DBVT	DRV5056A6QDBZT
TPS60403DBVT	DRV5013ADQDBZR	SN74LVC1G27DBVR	REF3020AIDBZR
TPS7A0218DBVR	DRV5013ADQDBZT	SN74LVC1G332DBVR	REF3020AIDBZT
TPS7A0228DBVR	DRV5013AGQDBZR	SN74LVC1G373DBVR	REF3025AIDBZR
TPS7A0233DBVR	DRV5013AGQDBZT	SN74LVC1G374DBVR	REF3025AIDBZT
LM3880MF-1AA/NOPB	DRV5013BCQDBZR	SN74LVC1G57DBVR	<b>REF3030AIDBZR</b>
LM3880MF-1AB/NOPB	DRV5013BCQDBZT	SN74LVC1G58DBVR	<b>REF3030AIDBZT</b>
LM3880MF-1AC/NOPB	DRV5013FAQDBZR	SN74LVC1G97DBVR	REF3033AIDBZR
LM3880MF-1AD/NOPB	DRV5015A1QDBZR	SN74LVC1G98DBVR	REF3033AIDBZT
LM3880MF-1AE/NOPB	DRV5015A1QDBZT	SN74LVC1G98DBVT	REF3040AIDBZR
LM3880MF-1AF/NOPB	DRV5015A2QDBZR	SN74LVC1GX04DBVR	REF3040AIDBZT
LM3880MFE-1AA/NOPB	DRV5015A2QDBZT	SN74LVC1GX04DBVT	TLV803EA30DBZR
LM3880MFE-1AB/NOPB	DRV5015A3QDBZR	SN74LVC1T45DBVR	TLV809EA17DBZR
LM3880MFE-1AC/NOPB	DRV5015A3QDBZT	SN74LVC1T45DBVT	TMAG5231B1DQDBZR
LM3880MFE-1AD/NOPB	DRV5021A1QDBZR	SN74LVC2G04DBVR	
LM3880MFE-1AE/NOPB	DRV5021A1QDBZT	SN74LVC2G06DBVR	
SN74LVC2G07DBVR	LM3880MFE-1AF/NOPB	DRV5021A2QDBZR	

## Qualification Report (SOT-23)

### Qualification Results

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

	Stress Test	Duration	PHI TPS76933DBV	CDAT TLV90611DBV
TC	Temperature Cycling -65/150C Or Temperature Cycling -55/150C Or Temperature Cycling -55/125C	500 Cycles Or 1000 Cycles Or 700 Cycles	3/231/0	3/231/0
HAST/T	Biased HAST 130C/85%RH	96 hours	3/231/0	3/231/0

	Stress Test	Duration	PHI TPS76933DBV	CDAT TLV90611DBV
HB	Or Biased HAST 110C/85%RH Or Temperature Humidity Bias, 85C/85%RH	Or 264 hours Or 1000 hours		
HTSL	High Temp. Storage Bake 150C Or High Temp. Storage Bake 170C	1000 hours Or 420 hours	3/231/0	3/231/0
AC/ UHA ST	Autoclave 121C Or Unbiased HAST, 130C/85%RH	96 hours	3/231/0	3/231/0
SD	Solderability	8 Hour Steam age or 155C Dry Bake	3/66/0	3/66/0
MQ	Manufacturability	-	Pass	Pass

	Stress Test	Duration	TFM E SN74AHC1G14DBV	HNA INA293A11DBV
TC	Temperature Cycling -65/150C Or Temperature Cycling -55/150C Or Temperature Cycling -55/125C	500 Cycles Or 1000 Cycles Or 700 Cycles	3/231/0	3/231/0
HAST/T HB	Biased HAST 130C/85%RH Or Biased HAST 110C/85%RH Or Temperature Humidity Bias, 85C/85%RH	96 hours Or 264 hours Or 1000 hours	3/231/0	3/231/0
HTSL	High Temp. Storage Bake 150C Or High Temp. Storage Bake 170C	1000 hours Or 420 hours	3/231/0	3/231/0
AC/ UHA ST	Autoclave 121C Or Unbiased HAST, 130C/85%RH	96 hours	3/231/0	3/231/0
SD	Solderability	8 Hour Steam age or 155C Dry Bake	3/66/0	3/66/0 (SN74LVC1GU04DBV)
MQ	Manufacturability	-	Pass	Pass

	Stress Test	Duration	TIEMA DAC121S101CIM K	HFTAT TLV70333DBV	ASEWH TL431CDBV
TC	Temperature Cycling -65/150C Or Temperature Cycling -55/150C Or Temperature Cycling -55/125C	500 Cycles Or 1000 Cycles Or 700 Cycles	3/231/0	3/231/0	3/231/0
HAST/T HB	Biased HAST 130C/85%RH Or Biased HAST 110C/85%RH Or Temperature Humidity Bias, 85C/85%RH	96 hours Or 264 hours Or 1000 hours	3/231/0	3/231/0	3/231/0

	Stress Test	Duration	TIEMA DAC121S101CIM K	HFTAT TLV70333DBV	ASEWH TL431CDBV
HTSL	High Temp. Storage Bake 150C Or High Temp. Storage Bake 170C	1000 hours Or 420 hours	3/231/0	3/231/0	3/231/0
AC/ UHA ST	Autoclave 121C Or Unbiased HAST, 130C/85%RH	96 hours	3/231/0	3/231/0	3/231/0
SD	Solderability	8 Hour Steam age or 155C Dry Bake	3/66/0 (LM2660MM/NOPB)	3/66/0 (TLV74333PDBV)	3/66/0
MQ	Manufacturability	-	Pass	Pass	Pass

All qualification devices in the tables are qualified at L1-260C MSL rating.

- Preconditioning was performed for Autoclave, Unbiased HAST, THB/Biased HAST, Temperature Cycle, and HTSL, as applicable
  - The following are equivalent HTSL options based on activation energy of 0.7eV: 150C/1k Hours, and 170C/420 Hours
- 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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