

<b>PCN Number:</b>	20220512000.1	<b>PCN Date:</b>	May 12, 2022
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<b>Title:</b>	Qualify additional Assembly sites for select VSSOP devices		
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<b>Customer Contact:</b>	<a href="#">PCN Manager</a>	<b>Dept:</b>	Quality Services
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<b>Proposed 1<sup>st</sup> Ship Date:</b>	Aug 12, 2022	<b>Sample requests accepted until:</b>	June 12 2022
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\*Sample requests received after June 12<sup>th</sup> 2022" will not be supported.

**Change Type:**

<input checked="" type="checkbox"/> Assembly Site	<input type="checkbox"/> Design	<input type="checkbox"/> Wafer Bump Site
<input 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 checked="" 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:**

Texas Instruments Incorporated is announcing the qualification of additional Assembly sites for devices listed below in the product affected section. Construction information and all assembly sites are as follows:

VSSOP (MSOP) build sites	
Assembly Sites	ASESHAT, HFTFAT, HNA, TIEM, TIM, UTAC
Lead Finish	NiPdAu; NiPdAuAg; MatteSn
Mold Compound	SID #450179 SID #EN2000631 SID #EN2000763 SID #R-30 4226323 8096859
Mount Compound	SID #A-18 SID #EY1000063 SID #PZ0031 SID #400180 4147858 8075531
Bond wire	Au, Cu

Upon expiration of this PCN, TI will combine lead free solutions in a single [standard part number](#), for example; [ADS1112IDGSR](#) – can ship with both Matte Sn and NiPdAu. When available customers may specify NiPdAu finish by ordering the part with the G4 suffix, e.g. [ADS1112IDGSRG4](#)."

**Reason for Change:**

Continuity of Supply

**Anticipated impact on Fit, Form, 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	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		
ASESH	Assembly Site Origin (22L)	ASO: ASH
HNA	Assembly Site Origin (22L)	ASO: HNT
UTAC	Assembly Site Origin (22L)	ASO: NS2
TI Melaka (TIEM)	Assembly Site Origin (22L)	ASO: CU6
TIM (Malaysia)	Assembly Site Origin (22L)	ASO: MLA
HFTF	Assembly Site Origin (22L)	ASO: HFT

Sample product shipping label (not actual product label)

**Product Affected:**

ADS1112IDGSR	DRV2605LDGST	OPA2316SIDGSR	TLV522DGKT
ADS1112IDGST	INA155E/250	OPA2317IDGKR	TLV5606CDGKR
ADS1244IDGSR	INA155EA/250	OPA2317IDGKT	TLV5606IDGKR
ADS1244IDGST	INA155EA/2K5	OPA2330AIDGKR	TLV5616IDGKR
ADS1245IDGST	INA156EA/250	OPA2330AIDGKT	TLV5623CDGKR
ADS7817E/250	INA156EA/2K5	OPA2333AIDGKR	TLV5623IDGKR
ADS7817E/2K5	INA2181A1IDGSR	OPA2333AIDGKT	TLV5624CDGKR
ADS7817EB/250	INA2181A1IDGST	OPA2334AIDGSR	TLV5624IDGKR
ADS7817EB/2K5	INA2181A2IDGSR	OPA2334AIDGST	TLV5636CDGKR
ADS7817EC/250	INA2181A2IDGST	OPA2341DGSA/250	TLV5636IDGKR
ADS7817EC/2K5	INA2181A3IDGSR	OPA2355DGSA/250	TLV7012DGKR
ADS7823E/250	INA2181A3IDGST	OPA2357AIDGSR	TLV7022DGKR
ADS7823E/2K5	INA2181A4IDGSR	OPA2357AIDGST	TLV7032DGKR
ADS7823EB/250	INA2181A4IDGST	OPA2363AIDGSR	TLV7042DGKR
ADS7823EB/2K5	INA228AIDGSR	OPA2363AIDGST	TLV8802DGKR
ADS8320E/250	INA228AIDGST	OPA2363IDGSR	TLV8802DGKT
ADS8320E/2K5	INA229AIDGSR	OPA2363IDGST	TLV8812DGKR

ADS8320EB/250	INA229AIDGST	OPA2373AIDGSR	TLV8812DGKT
ADS8320EB/2K5	INA237AIDGSR	OPA2373AIDGST	TMUX1072DGSR
ADS8321E/250	INA237AIDGST	OPA2380AIDGKR	TMUX1104DGSR
ADS8321E/2K5	INA238AIDGSR	OPA2380AIDGKT	TMUX1136DGSR
ADS8321EB/250	INA238AIDGST	OPA2381AIDGKR	TMUX1204DGSR
ADS8321EB/2K5	INA239AIDGSR	OPA2381AIDGKT	TMUX154EDGSR
ADS8324E/250	INA239AIDGST	OPA2388IDGKR	TMUX6121DGSR
ADS8324E/2K5	INA300AIDGSR	OPA2388IDGKT	TMUX6122DGSR
ADS8324EB/2K5	INA300AIDGST	OPA2683IDGST	TMUX6123DGSR
ADS8325IBDGKR	INA326EA/250	OPA2725AIDGKR	TPS2390DGKR
ADS8325IBDGKT	INA326EA/2K5	OPA2725AIDGKT	TPS2391DGKR
ADS8325IDGKR	INA327EA/250	OPA2726AIDGST	TPS2399DGKR
ADS8325IDGKT	INA327EA/2K5	OPA2734AIDGSR	TPS53014DGSR
ADS8326IBDGKR	INA330AIDGST	OPA2734AIDGST	TPS53015DGSR
ADS8326IBDGKT	INA337AIDGKR	OPA2822E/250	TPS62002DGSR
ADS8326IDGKR	INA337AIDGKT	OPA2822E/2K5	TPS62003DGSR
ADS8326IDGKT	INA338AIDGST	OPA2889IDGSR	TPS62004DGSR
BQ2057CDGKR	INA381A1IDGSR	OPA2889IDGST	TPS62005DGSR
BUF04701AIDGSR	INA381A1IDGST	OPA2890IDGSR	TPS62006DGSR
DAC5574IDGSR	INA381A2IDGSR	OPA2890IDGST	TPS62008DGSR
DAC60501MDGSR	INA381A2IDGST	OPA615IDGSR	TPS62050DGSR
DAC60501MDGST	INA381A3IDGSR	OPA615IDGST	TPS62160DGKR
DAC60501ZDGSR	INA381A3IDGST	OPA695IDGKR	TPS62160DGKT
DAC60501ZDGST	INA381A4IDGSR	OPA695IDGKT	UCC25705DGKTR
DAC6574IDGSR	INA381A4IDGST	OPA875IDGKT	UCC2809P-1
DAC70501MDGSR	INA592IDGKR	SN1001030DGKR	UCC2809P-2
DAC70501MDGST	INA592IDGKT	SN1206048DGSR	UCC2809PTR-1
DAC70501ZDGSR	INA597IDGKR	THVD1452DGSR	UCC2809PTR-2
DAC70501ZDGST	INA597IDGKT	THVD1512DGSR	UCC29002DGKR
DAC7554IDGSR	LM3401MM/NOPB	THVD1552DGSR	UCC3809P-1
DAC7574IDGSR	LM3401MMX/NOPB	THVD2410DGKR	UCC3809P-2
DAC7811IDGSR	LPV542DGKR	THVD2450DGKR	UCC3809PTR-1
DAC7811IDGST	LPV542DGKT	TLC2551CDGKR	UCC3809PTR-2
DAC80501MDGSR	LPV802DGKR	TLC3541IDGKR	UCC38C40DGKR
DAC80501MDGST	LPV802DGKT	TLC4541IDGKR	UCC38C42DGKR
DAC80501ZDGSR	LPV812DGKR	TLC5615CDGKR	UCC38C44DGKR
DAC80501ZDGST	LPV812DGKT	TLV1702AIDGKR	UCC38C45DGKR
DAC8532IDGKR	OPA1652AIDGKR	TLV2333IDGKR	UCC39002DGKR
DAC8552IDGKR	OPA1662AIDGKR	TLV2333IDGKT	VCA820IDGSR
DAC8552IDGKT	OPA2156IDGKR	TLV2541CDGKR	VCA820IDGST
DAC8571IDGKR	OPA2156IDGKT	TLV2541IDGKR	VCA821IDGST
DRV2604LDGSR	OPA2180IDGKR	TLV2542CDGKR	VCA822IDGST
DRV2604LDGST	OPA2300AIDGSR	TLV2542IDGKR	VCA824IDGST
DRV2605LDGSR	OPA2300AIDGST	TLV522DGKR	

## VSSOP Qualification Report

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

	Stress Test	Duration	HFTF LM5008MM/NOPB	ASESH THS4304DGK
TC	Temperature Cycling -65/150C	500 Cycles	3/231/0	3/231/0
HAST	Biased HAST 130C/85%RH	96 hours	3/231/0	3/231/0
THB	Temperature Humidity Bias, 85C/85%RH	1000 hours	-	-
HTSL	High Temp. Storage Bake 150C	1000 hours	-	-
HTSL	High Temp. Storage Bake 170C	420 hours	3/231/0	3/231/0
UHA	Unbiased HAST, 130C/85%RH	96 hours	3/231/0	-
AC	Autoclave 121C	96 hours	-	3/231/0
SD	Solderability	8 Hour Steam age or 155C Dry Bake	3/66/0 (PGA308AIDGSR)	3/66/0 (THS4304DGK)
MQ	Manufacturability	-	Pass	Pass

	Stress Test	Duration	HNA TPS77301DGK	TIEMA LM3489QMM
TC	Temperature Cycling -65/150C	500 Cycles	3/231/0	3/231/0
HAST	Biased HAST 130C/85%RH	96 hours	3/231/0	-
THB	Temperature Humidity Bias, 85C/85%RH	1000 hours	-	3/231/0
HTSL	High Temp. Storage Bake 150C	1000 hours	3/231/0	1/77/0
HTSL	High Temp. Storage Bake 170C	420 hours	-	-
UHA	Unbiased HAST, 130C/85%RH	96 hours	-	-
AC	Autoclave 121C	96 hours	3/231/0	3/231/0
SD	Solderability	8 Hour Steam age or 155C Dry Bake	3/66/0 (TS5A23160DGSR)	3/66/0 (LM2660MM/NOPB)
MQ	Manufacturability	-	Pass	Pass

	Stress Test	Duration	MLA OPA2206ADGK OPA2205ADGK OPA2145IDGK	UTAC TPS22958DGK
TC	Temperature Cycling -65/150C	500 Cycles	3/231/0	3/231/0
HAST	Biased HAST 130C/85%RH	96 hours	3/231/0	3/231/0 (Note a)
THB	Temperature Humidity Bias, 85C/85%RH	1000 hours	-	-

	Stress Test	Duration	MLA OPA2206ADGK OPA2205ADGK OPA2145IDGK	UTAC TPS22958DGK
HTSL	High Temp. Storage Bake 150C	1000 hours	-	-
HTSL	High Temp. Storage Bake 170C	420 hours	3/231/0	3/231/0
UHASt	Unbiased HAST, 130C/85%RH	96 hours	3/231/0	-
AC	Autoclave 121C	96 hours	-	3/231/0
SD	Solderability	8 Hour Steam age or 155C Dry Bake	3/66/0 (LMH5485DGKSEP)	3/66/0 (TPS61085TDGKRQ1)
MQ	Manufacturability	-	Pass	Pass

LM5008MM/NOPB, THS4304DGK, TPS77301DGK, LM3489QMM, TPS22958DGK, INA159AIDGK are qualified at L1-260C MSL rating.

OPA2206ADGK, OPA2205ADGK, OPA2145IDGK are qualified at L2-260C MSL rating.

Note a – 2 lots of Biased HAST were collected on INA159AIDGK

- 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

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
WW PCN Team	<a href="mailto:PCN_ww_admin_team@list.ti.com">PCN_ww_admin_team@list.ti.com</a>

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