TEXAS INSTRUMENTS 12500 TI Boulevard, MS 8640, Dallas, Texas 75243

PCN#20200924003.1
Qualification of additional assembly sites for select MSOP Devices
Change Notification / Sample Request

Date: September 25, 2020
To: TOKYO ELECTRON DEVICE (DSTR) 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 Team (PCN_ww_admin_team@list.ti.com). For sample requests or sample related questions, contact your field sales representative.

Sincerely,

PCN Team
SC Business Services

20200924003.1
Attachment: 1

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**
LM258DGKR	null

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

PCN Number:	20200924003.1	**PCN Date:**	Sept 25 2020
Title:	Qualification of additional assembly sites for select MSOP Devices		
Customer Contact:	PCN Manager	**Dept:**	Quality Services
Proposed 1st Ship Date:	Dec 23 2020	**Estimated Sample Availability:**	Date provided at sample request
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:

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:

VSSOP (MSOP) build sites	
Assembly Sites	ASESHAT, HFTFAT, HNA, TIEM, UTAC, HNC
Lead Finish	NiPdAu; NiPdAuAg; MatteSn
Mold Compound	SID#450179 SID#450240 SID#450265 SID#EN2000515 SID#R-30 8096859-0001
Mount Compound	SID#400154 SID#A-18 SID#EY1000063 SID#PZ0031 SID#PZ0037 4213245-0003

Upon expiry of this PCN TI will combine lead free solutions in a single ***standard part number***, for the devices in group 2. For example; ***INA225AIDGKT*** – can ship with both Matte Sn and NiPdAu/Ag.

Example:

- Customer order for 7500 units of INA225AIDGKT with 2500 units SPQ (Standard Pack Quantity per Reel).
- TI can satisfy the above order in one of the following ways.
    I. 3 Reels of NiPdAu finish.

II. 3 Reels of Matte Sn finish
III. 2 Reels of Matte Sn and 1 reel of NiPdAu finish.
IV. 2 Reels of NiPdAu and 1 reel of Matte Sn finish.

Reason for Change:

Supply continuity

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

None

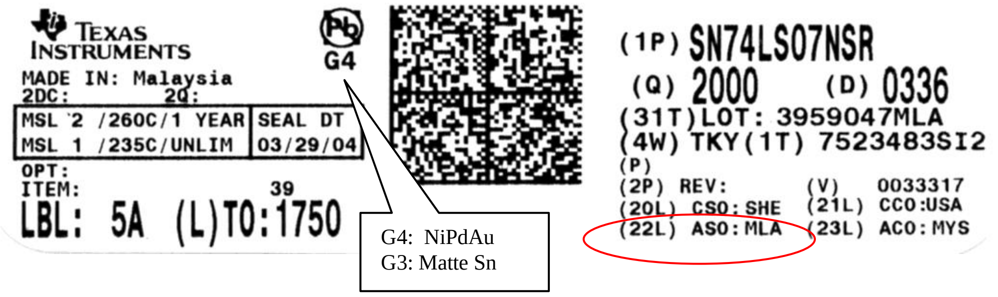
Anticipated impact on Material Declaration

☐	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 at the site link below http://www.ti.com/quality/docs/materialcontentsearch.tsp

Changes to product identification resulting from this PCN:

Assembly Site	Assembly Site Origin (22L)	Assembly Country Code (23L)	Assembly City
TI Melaka	CU6	MYS	Melaka
ASESH	ASH	CHN	Shanghai
HFTF	**HFT**	**CHN**	**Hefei**
Hana Thailand	**HNT**	**THA**	**Ayutthaya**
UTAC	**NSW**	**THA**	**Bangkok**
Hana China	**CHS**	**CHN**	**Jiaxing City**

Sample product shipping label (not actual product label)



TEXAS INSTRUMENTS
MADE IN: Malaysia
2DC: 2Q:
MSL 2 /260C/1 YEAR | SEAL DT
MSL 1 /235C/UNLIM | 03/29/04
OPT:
ITEM: 39
LBL: 5A (L)TO:1750

G4

(1P) SN74LS07NSR
(Q) 2000 (D) 0336
(31T)LOT: 3959047MLA
(4W) TKY(1T) 7523483SI2
(P)
(2P) REV: (V) 0033317
(20L) CSO: SHE (21L) CCO:USA
(22L) ASO: MLA (23L) ACO: MYS

G4: NiPdAu
G3: Matte Sn

Product Affected:

INA225AIDGKR	LM3478MM/NOPB	LM358DGKR	LM5008MMX/NOPB
INA225AIDGKT	LM3478MMX/NOPB	LM393DGKR	PGA308AIDGSR
LM258ADGKR	LM3481MM/NOPB	LM5007MM/NOPB	PGA308AIDGST
LM258DGKR	LM3481MMX/NOPB	LM5007MMX/NOPB	TMP75AIDGKR
LM2903DGKR	LM3485MM/NOPB	LM5008AMM/NOPB	TMP75AIDGKT
LM2904DGKR	LM3485MMX/NOPB	LM5008AMMX/NOPB	TPS2001DDGK
LM293DGKR	LM358ADGKR	LM5008MM/NOPB	TPS2001DDGKR

MSOP 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
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 (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	-	-
UHAST	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	HNC LM358DGKR	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	-	-
HTSL	High Temp. Storage Bake 150C	1000 hours	3/231/0	-
HTSL	High Temp. Storage Bake 170C	420 hours	-	3/231/0
UHAST	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 (MC33078DGKR)	3/66/0 (TPS61085TDGKRQ1)
MQ	Manufacturability	-	Pass	Pass

All qualification devices in the tables are qualified at L1-260C 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 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
WW PCN Team	PCN_ww_admin_team@list.ti.com

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