

PCN Number:	PCN#20240912000.1	PCN Date:	September 12, 2024
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Title: Qualification of additional Assembly sites for select TSSOP devices

Customer Contact: Change Management Team **Dept:** Quality Services

Proposed 1st Ship Date: December 11, 2024 **Sample requests accepted until:** October 12, 2024*

***Sample requests received after October 12, 2024 will not be supported.**

Change Type:					
<input checked="" type="checkbox"/>	Assembly Site	<input type="checkbox"/>	Design	<input type="checkbox"/>	Wafer Bump Material
<input type="checkbox"/>	Assembly Process	<input type="checkbox"/>	Data Sheet	<input type="checkbox"/>	Wafer Bump Process
<input checked="" type="checkbox"/>	Assembly Materials	<input type="checkbox"/>	Part number change	<input type="checkbox"/>	Wafer Fab Site
<input type="checkbox"/>	Mechanical Specification	<input type="checkbox"/>	Test Site	<input type="checkbox"/>	Wafer Fab Material
<input checked="" type="checkbox"/>	Packing/Shipping/Labeling	<input type="checkbox"/>	Test Process	<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:

TSSOP (PW) Build sites	
Assembly Sites	TAI, MLA, TIEMA, CDAT, ASEHAT, CAR, TFME
Mold Compound	SID#EN2000507
	SID#438518
	4211471
	4226323
	4206193
	4209002
	SID#R-31
	8095178
Mount Compound	SID#EY1000063
	SID#434165
	SID#446729
	4207768
	4211470
	4042500
	4208458
	4147858
4213245	
LeadFrame Finish	NiPdAu, Matte Sn
Bond Wire (mil)	Cu (0.7,0.8, 0.96, 1.0,1.15), Au (0.96)

As of today and until this PCN expires, the standard part number (for example, CD74HC4094PWR) is shipping with NiPdAu lead finish. Upon expiration of this PCN, the standard part number may ship with either MatteSn or NiPdAu lead finish. See example ship possibilities below. Customers who desire NiPdAu lead finish should order either a G4 or E4 equivalent (for example, CD74HC4094PWRG4). Note that part numbers with a G4 or E4 suffix will run through NiPdAu-only flows. For reference, details of TI's labeling and symbolization are available [here](#).

As two examples:

(A) For a customer order of 6000 units of CD74HC4094PWR with 2000 units SPQ (Standard Pack Quantity per Reel), TI can satisfy in one of the following ways:

- 3 Reels of NiPdAu finish.
- 3 Reels of Matte Sn finish
- 2 Reels of Matte Sn and 1 reel of NiPdAu finish.
- 2 Reels of NiPdAu and 1 reel of Matte Sn finish.

(B) For a customer order of 6000 units of CD74HC4094PWRG4 with 2000 units SPQ (Standard Pack Quantity per Reel), TI can satisfy in 3 Reels of NiPdAu finish.

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			

Changes to product identification resulting from this PCN:

Assembly Site	Assembly Site Origin (22L)	Assembly Country Code (23L)	Assembly City
TAI	TAI	TWN	Chung Ho, New Taipei City
TFME	NFM	CHN	Economic Development Zone
CAR	CAR	MYS	Ipoh
ASESH	ASH	CHN	Shanghai
CDAT	CDA	CNN	Chengdu
TIEM	CU6	MYS	Melaka
TI Malaysia	MLA	MYS	Kuala Lumpur

Sample product shipping label (not actual product label)

TEXAS INSTRUMENTS

MADE IN: Malaysia
2DC: 2G:

MSL 2 /260C/1 YEAR	SEAL DT
MSL 1 /235C/UNLIM	03/29/04

OPT:
ITEM:
LBL: 5A (L)T0:1750

G4



(1P) SN74LS07NSR
(Q) 2000 (D) 0336

(31T) LOT: 39590
(4W) TKY (1T) 752348351z

(P)
(2P) REV: (V) 0033317
(20L) CSO: SHE (21L) CCO:USA
(22L) ASO: MLA (23L) ACO: MYS

E4/G4: NiPdAu
E3/G3: Matte Sn

Product Affected:

CD4069UBPWR	SN74AHC14PWR	SN74HC125PWRG4	SN74LV04APWR
CD4069UBPWRG4	SN74AHC14PWRE4	SN74HC138PWR	SN74LV04APWRG4
CD74HC123PWR	SN74AHC14PWRG4	SN74HC138PWRG4	SN74LV07APWR
CD74HC123PWRG4	SN74AHC595PWR	SN74HC14PWR	SN74LV07APWRG4
CD74HC4094PWR	SN74AHC595PWRG4	SN74HC14PWRG4	SN74LV08APWR
CD74HC4094PWRE4	SN74AHCT08PWR	SN74HC164PWR	SN74LV08APWRE4
CD74HC4094PWRG4	SN74AHCT08PWRG4	SN74HC164PWRE4	SN74LV08APWRG4
LMV324IPWR	SN74AHCT125PWR	SN74HC164PWRG4	SN74LV123APWR
LMV324IPWRE4	SN74AHCT125PWRE4	SN74HC165PWR	SN74LV123APWRG4
LMV324IPWRG4	SN74AHCT125PWRG4	SN74HC165PWRG4	SN74LV138APWR
MAX3221EIPWR	SN74CB3Q3257PWR	SN74HC166PWR	SN74LV138APWRG4
MAX3221EIPWRG4	SN74CB3Q3257PWRG4	SN74HC166PWRG4	SN74LV14APWR
MAX3221IPWR	SN74CBT3257CPWR	SN74HC174PWR	SN74LV14APWRE4
MAX3221IPWRG4	SN74CBT3257CPWRE4	SN74HC174PWRG4	SN74LV14APWRG4
MAX3232CPWR	SN74CBT3257CPWRG4	SN74HC32PWR	SN74LV165APWR
MAX3232CPWRE4	SN74HC00PWR	SN74HC32PWRG4	SN74LV165APWRE4
MAX3232CPWRG4	SN74HC00PWRG4	SN74HC595PWR	SN74LV165APWRG4
MAX3232IPWR	SN74HC02PWR	SN74HC595PWRG4	SN74LV32APWR
MAX3232IPWRE4	SN74HC02PWRG4	SN74HCT04PWR	SN74LV32APWRG4
MAX3232IPWRG4	SN74HC04PWR	SN74HCT04PWRG4	SN74LV594APWR
SN74ACT08PWR	SN74HC04PWRG4	SN74HCT138PWR	SN74LV594APWRG4
SN74ACT08PWRG4	SN74HC05PWR	SN74HCT138PWRG4	SN74LV595APWR
SN74AHC08PWR	SN74HC05PWRG4	SN74HCT14PWR	SN74LV595APWRG4
SN74AHC08PWRG4	SN74HC08PWR	SN74HCT14PWRE4	SN74LV74APWR
SN74AHC123APWR	SN74HC08PWRG4	SN74HCT14PWRG4	SN74LV74APWRG4
SN74AHC123APWRG4	SN74HC125PWR		

TSSOP Qualification Report

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

	Stress Test	Duration	MLA TCA6416PW	TIEMA LM5037/MTNOPB
TC	Temperature Cycling -65/150C Or Temperature Cycling -55/125C	500 Cycles Or 700 Cycles	3/231/0	3/231/0
HAST/ THB	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
UHA ST /AC	Unbiased HAST, 130C/85%RH Or Autoclave 121C	96 hours	3/231/0	3/231/0
SD	Solderability	8 Hour Steam age or 155C Dry Bake	3/66/0 (DAC70004IPW)	3/66/0 (LDC1000PW)
MQ	Manufacturability	-	Pass	Pass

	Stress Test	Duration	TFME SN74HCS74PW	TAI TLC59116ITPWRQ1 LDC5072A0PWQ1
TC	Temperature Cycling -65/150C Or Temperature Cycling -55/125C	500 Cycles Or 700 Cycles	3/231/0	3/231/0
HAST/ THB	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
UHA ST /AC	Unbiased HAST, 130C/85%RH Or Autoclave 121C	96 hours	3/231/0	3/231/0
SD	Solderability	8 Hour Steam age or 155C Dry Bake	3/66/0	3/66/0 (SN0901056B1PW)
MQ	Manufacturability	-	Pass	Pass

	Stress Test	Duration	ASESHAT LSF0108QPWRQ1 LM2902PW	CAR BQ26501PW TP5S3125PW PGA309AIPW
TC	Temperature Cycling -65/150C Or Temperature Cycling -55/125C	500 Cycles Or 700 Cycles	3/231/0	3/231/0
HAST/ THB	Biased HAST 130C/85%RH Or Biased HAST 110C/85%RH	96 hours Or 264 hours	3/231/0	3/231/0

	Stress Test	Duration	ASESHAT LSF0108QPWRQ1 LM2902PW	CAR BQ26501PW TPS53125PW PGA309AIPW
	Or Temperature Humidity Bias, 85C/85%RH	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
UHA /AC	Unbiased HAST, 130C/85%RH Or Autoclave 121C	96 hours	3/231/0	3/231/0
SD	Solderability	8 Hour Steam age or 155C Dry Bake	3/66/0 (TL1431CPW)	3/66/0 (DRV603PW)
MQ	Manufacturability	-	Pass	Pass

	Stress Test	Duration	CDAT MAX202IPW
TC	Temperature Cycling -65/150C Or Temperature Cycling -55/125C	500 Cycles Or 700 Cycles	3/231/0
HAST/ THB	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 (Note 1)
HTSL	High Temp. Storage Bake 150C Or High Temp. Storage Bake 170C	1000 hours Or 420 hours	3/231/0
UHA /AC	Unbiased HAST, 130C/85%RH Or Autoclave 121C	96 hours	3/231/0
SD	Solderability	8 Hour Steam age or 155C Dry Bake	3/66/0
MQ	Manufacturability	-	Pass

Note 1 – bHAST performed on CD4060BPWR (MLA), with 1 lot performed TMUX1308QPWRQ1 (CDAT) as part of enterprise qualification.

Devices LSF0108QPWRQ1, LM2902PW, SN74HCS74PW, TPS53125PW, TCA6418PW, LM5037MTNOPB, TLC59116ITPWQ1, PGA309AIPW, MAX202IPW, CD4060BPWR qualified at MSL1 rating. Devices BQ26501PW qualified at MSL2 and device LDC5072A0PWQ1 qualified at MSL3.

- 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 Change Management team or your local Field Sales Representative.

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