PCN Number:	20130613001	**PCN Date:**	06/27/2013
Title:	Add Matte Sn as Alternative Lead Finish for Selected SOIC Device(s)		
Customer Contact:	PCN Manager	**Phone:**	+1(214)480-6037
Dept:	Quality Services		
Proposed 1st Ship Date:	09/27/2013	**Estimated Sample Availability:**	Date provided at sample request

Change Type:

☐	Assembly Site	☐	Assembly Process	☒	Assembly Materials
☐	Design	☐	Electrical Specification	☐	Mechanical Specification
☐	Test Site	☐	Packing/Shipping/Labeling	☐	Test Process
☐	Wafer Bump Site	☐	Wafer Bump Material	☐	Wafer Bump Process
☐	Wafer Fab Site	☐	Wafer Fab Materials	☐	Wafer Fab Process

PCN Details

Description of Change:

Texas Instruments is improving flexibility of supply with the qualification of Matte Sn finish as an additional Lead Free (Pb Free) Leadframe finish for selected SOIC devices.

Upon expiry of this PCN TI will combine lead free solutions in a single ***standard part number***, for example; **SN1101002DDAR** – can ship with either Matte Sn or NiPdAu leadframe finish.

Example:

- Customer order for 5000units of SN1101002DDAR with 2500 units SPQ (Standard Pack Quantity per Reel).
- TI can satisfy the above order in one of the following ways.
  - I. 2 Reels of NiPdAu finish.
  - II. 2 Reels of Matte Sn finish
  - III. 1 Reels of Matte Sn and 1 reel of NiPdAu finish.
  - IV. 1 Reels of NiPdAu and 1 reel of Matte Sn finish.

Assembly differences are shown in the following table:

	From	To
Leadframe Finish	NiPdAu	NiPdAu or Matte Sn

Reason for Change:

Continuity of supply.
Improve customer service with supply flexibility and improved lead times.

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

TI does not anticipate any negative impact from this change.

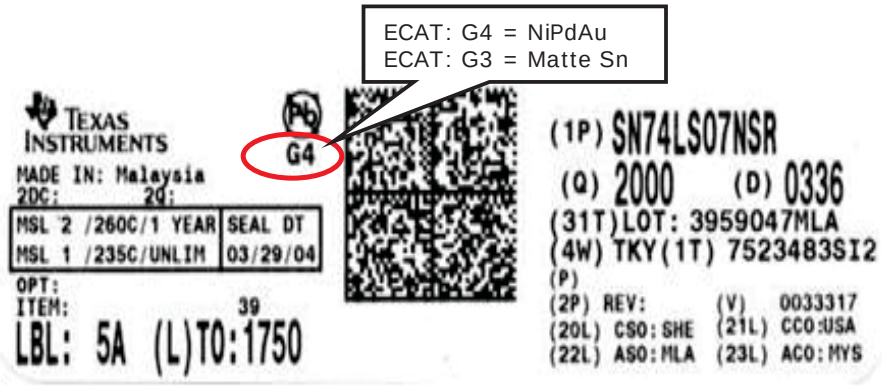
Changes to product identification resulting from this PCN:

Sample Product Shipping Label (not actual product label)

Assembly Site

ASEH	Assembly Site Origin (22L)	ASO:ASH	ECAT:G4
ASEH	Assembly Site Origin (22L)	ASO:ASH	ECAT:G3

Sample product shipping label to show code location only (not actual product label)



Product Affected:

HPA01069DDAR	TPS54229DDA	TPS54329EDDAR	TPS54527DDA
HPA01123DDAR	TPS54229DDAR	TPS5432DDA	TPS54527DDAR
SN1101002DDAR	TPS54229EDDA	TPS5432DDAR	TPS54528DDA
SN1101003DDAR	TPS54229EDDAR	TPS54334DDA	TPS54528DDAR
SN1101004DDAR	TPS54239DDA	TPS54335DDA	TPS54531DDA
SN1101005DDAR	TPS54239DDAR	TPS54335DDAR	TPS54627DDA
SN1106039DDAR	TPS54239EDDA	TPS54336DDA	TPS54627DDAR
SN1106041DDAR	TPS54239EDDAR	TPS54336DDAR	TPS54628DDA
SN1106042DDAR	TPS54327DDA	TPS54339DDA	TPS54628DDAR
SN1110024DDAR	TPS54327DDAR	TPS54339DDAR	TPS56428DDA
SN1208017DDAR	TPS54328DDA	TPS54339EDDA	TPS56428DDAR
SN1208022DDAR	TPS54328DDAR	TPS54339EDDAR	TPS56528DDA
TPS54227DDA	TPS54328RDDAR	TPS54427DDA	TPS56528DDAR
TPS54227DDAR	TPS54329DDA	TPS54427DDAR	TPS7A7001DDA
TPS54228DDA	TPS54329DDAR	TPS54428DDA	
TPS54228DDAR	TPS54329EDDA	TPS54428DDAR	

Qualification Data: Approved 06/11/2013

This qualification has been specifically developed for the validation of this change. The qualification data validates that the proposed change meets the applicable released technical specifications.

Qual Vehicle #1: TPS54227DDA (MSL 2-260C)

Package Construction Details

Assembly Site:	ASESH	Mold Compound:	EN2000509
# Pins-Designator, Family:	8DDA, HSOIC	Mount Compound:	EY1000063
Leadframe (Finish, Base):	Matte SN, Cu	Bond Wire:	2.0 Mil Dia., Cu

Qualification: ☐ **Plan** ☒ **Test Results**

Reliability Test	Conditions	Sample Size / Fail		
		Lot#1	Lot#2	Lot#3
**Autoclave 121C	121C, 2 atm (96 hrs)	77/0	77/0	77/0
**Temp Cycle	-65C/+150C (500 Cycles)	77/0	77/0	77/0
Manufacturability (Assembly)	Per mfg. Site specification	PASS	PASS	PASS
Moisture Sensitivity	(level 2 @ 260C peak +5/-0C)	12/0	12/0	12/0

Notes: ** Preconditioning sequence: Level 2-260C

Qual Vehicle #2: TPS54527DDA (MSL 2-260C)

Package Construction Details

Assembly Site:	ASESH	Mold Compound:	EN2000509
# Pins-Designator, Family:	8DDA, HSOIC	Mount Compound:	EY1000063
Leadframe (Finish, Base):	Matte SN, Cu	Bond Wire:	2.0 Mil Dia., Cu

Qualification: ☐ **Plan** ☒ **Test Results**

Reliability Test	Conditions	Sample Size / Fail		
		Lot#1	Lot#2	Lot#3
**Autoclave 121C	121C, 2 atm (96 hrs)	77/0	77/0	77/0
**High Temp. Storage Bake	170C (420 hrs)	77/0	77/0	77/0
**Temp Cycle	-65C/+150C (500 Cycles)	77/0	77/0	77/0
Solderability	Steam age, 8 hours; PB-Free solder	22/0	22/0	22/0
Manufacturability (Assembly)	Per mfg. Site specification	PASS	PASS	PASS
Moisture Sensitivity	(level 2 @ 260C peak +5/-0C)	12/0	12/0	12/0

Notes: ** Preconditioning sequence: Level 2-260C

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
USA	PCNAmericasContact@list.ti.com
Europe	PCNEuropeContact@list.ti.com
Asia Pacific	PCNAsiaContact@list.ti.com
Japan	PCNJapanContact@list.ti.com