

PCN Number:	20140114001		PCN Date:	01/17/2014
Title:	Qualification of ASESH and JCET as Additional Assembly and Test Site for Select Devices			
Customer Contact:	PCN Manager	Phone:	+1(214)480-6037	Dept: Quality Services
Proposed 1st Ship Date:	04/17/2014	Estimated Sample Availability:	Date Provided at Sample request	
Change Type:				
<input checked="" type="checkbox"/>	Assembly Site	<input type="checkbox"/>	Assembly Process	<input checked="" type="checkbox"/>
<input type="checkbox"/>	Design	<input type="checkbox"/>	Electrical Specification	<input type="checkbox"/>
<input checked="" type="checkbox"/>	Test Site	<input type="checkbox"/>	Packing/Shipping/Labeling	<input type="checkbox"/>
<input type="checkbox"/>	Wafer Bump Site	<input type="checkbox"/>	Wafer Bump Material	<input type="checkbox"/>
<input type="checkbox"/>	Wafer Fab Site	<input type="checkbox"/>	Wafer Fab Materials	<input type="checkbox"/>
		<input type="checkbox"/>	Part number change	
PCN Details				
Description of Change:				
<p>Texas Instruments Incorporated is announcing the qualification of ASESH and JCET as additional assembly/test site for select devices listed in the "Product Affected" Section. Current assembly sites are indicated in the "Changes to Product Identification" tables below. Assembly differences are as follows:</p>				
Group 1 Device: NS2 to ASESH				
	NS2	ASESH		
Wire (mils)	Au (1.3)	Cu (1.0)		
Mold Compound	SID#CZ0094	SID#EN2000515		
Lead Finish	NiPdAu	NiPdAuAg		
Group 2 Device: HNT to JCET				
	HNT	JCET		
Lead Finish	NiPdAu-Ag	NiPdAu		
<p>Test coverage, insertions, conditions will remain consistent with current testing and verified with test MQ.</p>				
Reason for Change:				
<p>Continuity of supply.</p> <ol style="list-style-type: none"> 1) To align with world technology trends and use wiring with enhanced mechanical and electrical properties 2) Maximize flexibility within our Assembly/Test production sites. 3) Cu is easier to obtain and stock 				
Anticipated impact on Form, Fit, Function, Quality or Reliability (positive / negative):				
None				

Changes to product identification resulting from this PCN:

Group 1 Device: NS2 to ASESH

Assembly Site		
UTAC 2 Thailand	Assembly Site Origin (22L)	ASO: NS2
ASE Shanghai	Assembly Site Origin (22L)	ASO: ASH

ASSEMBLY SITE CODES: NS2 = B, ASESH = A

Group 2 Device: HNT to JCET

Assembly Site		
Hana Thailand	Assembly Site Origin (22L)	ASO: HNT
JCET Co., Ltd	Assembly Site Origin (22L)	ASO: JCE

ASSEMBLY SITE CODES: HNT = H, JCET = F

Sample product shipping label (not actual product label)

Product Affected: Group 1 Device

TPS54140ADGQ	TPS54140ADGQR	TPS54160ADGQ	TPS54160ADGQR
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Product Affected: Group 2 Device

OPA2363AIRSVR

Qualification Data : Group 1

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: TPS62040DGQ (MSL1-260C)

Package Construction Details

Assembly Site:	ASE Shanghai	Mold Compound:	EN2000515
# Pins-Designator, Family:	10-DGQ, VSSOP	Mount Compound:	EY1000063
Lead frame (Finish, Base):	NiPdAuAg, Cu	Bond Wire:	1.0 Mil Dia., Cu

Qualification: <input type="checkbox"/> Plan <input checked="" type="checkbox"/> Test Results				
Reliability Test	Conditions	Sample Size/Fail		
		Lot#1	Lot#2	Lot#3
Electrical Characterization	-	Pass	-	-
** High temp Storage Bake	170C (1000hrs)	76/0	77/0	77/0
**Biased HAST	130C/85%RH (96 Hrs)	77/0	77/0	77/0
**T/C -65C/150C	-65C/+150C (500 Cyc)	77/0	77/0	77/0
Manufacturability	(per mfg. Site specification)	Pass	Pass	Pass
Moisture Sensitivity	(level 1 @ 260C peak +5/-0C)	12/0	12/0	12/0
Notes ** - Preconditioning sequence: Level 1-260C.				
Qual Vehicle 2: TPS4009DGQ (MSL1-260C)				
Package Construction Details				
Assembly Site:	ASE Shanghai	Mold Compound:	EN2000515	
# Pins-Designator, Family:	10-DGQ, VSSOP	Mount Compound:	EY1000063	
Lead frame (Finish, Base):	NiPdAuAg, Cu	Bond Wire:	1.0 Mil Dia., Cu	
Qualification: <input type="checkbox"/> Plan <input checked="" type="checkbox"/> Test Results				
Reliability Test	Conditions	Sample Size/Fail		
		Lot#1	Lot#2	
Electrical Characterization	-	Pass	-	
**Steady-state Life Test	125C (1000hrs)	76/0	-	
Manufacturability	(per mfg. Site specification)	Pass	Pass	
Notes ** - Preconditioning sequence: Level 1-260C.				
Qual Vehicle 3: TPS2066DGN (MSL1-260C)				
Package Construction Details				
Assembly Site:	ASE Shanghai	Mold Compound:	EN2000515	
# Pins-Designator, Family:	8-DGN, VSSOP	Mount Compound:	EY1000063	
Lead frame (Finish, Base):	NiPdAuAg, Cu	Bond Wire:	2.0 Mil Dia., Cu	
Qualification: <input type="checkbox"/> Plan <input checked="" type="checkbox"/> Test Results				
Reliability Test	Conditions	Sample Size/Fail		
Electrical Characterization	-	Pass		
** T/C -65C/150C	-65C/+150C (500 Cyc)	77/0		
Manufacturability	(per mfg. Site specification)	Pass		
Notes ** - Preconditioning sequence: Level 1-260C.				
Qual Vehicle 4: TPS51100DGQ (MSL1-260C)				
Package Construction Details				
Assembly Site:	ASE Shanghai	Mold Compound:	EN2000515	
# Pins-Designator, Family:	10-DGQ, VSSOP	Mount Compound:	EY1000063	
Lead frame (Finish, Base):	NiPdAuAg, Cu	Bond Wire:	1.0 Mil Dia., Cu	
Qualification: <input type="checkbox"/> Plan <input checked="" type="checkbox"/> Test Results				
Reliability Test	Conditions	Sample Size/Fail		
Electrical Characterization	-	Pass		
** T/C -65C/150C	-65C/+150C (500 Cyc)	77/0		
Manufacturability	(per mfg. Site specification)	Pass		
Notes ** - Preconditioning sequence: Level 1-260C.				

Qualification Data: Group 2

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: OPA2363AIRSV (MSL2-260C)			
Package Construction Details			
Assembly Site:	JCET	Mold Compound:	120903003709
# Pins-Designator, Family:	16-RSV, QFN	Mount Compound:	120402001600
Lead frame (Finish, Base):	NiPdAu, Cu	Bond Wire:	0.8 Mil Dia., Au
Qualification: <input type="checkbox"/> Plan <input checked="" type="checkbox"/> Test Results			
Reliability Test	Conditions	Sample Size/Fail	
Electrical Characterization	-	Pass	
** HAST	130C/85%RH (96 Hrs)	89/0	
**Autoclave	121C, 100%/ (96 Hrs)	80/0	
**High Temp Storage Bake	150C (1000 Hrs)	80/0	
** T/C -55C/125C	-55C/+125C (500 Cyc)	82/0	
Solderability	Pb-Free/Solder	22/0	
Manufacturability	(per mfg. Site specification)	Pass	
Moisture Sensitivity	(level 2 @ 260C peak +5/-0C)	12/0	
Notes ** - Preconditioning sequence: Level 2-260C.			

Reference Qualification:

Qual Vehicle: CD3285A0RSVR (MSL1-260C)				
Package Construction Details				
Assembly Site:	JCET	Mold Compound:	120903003709	
# Pins-Designator, Family:	16-RSV, QFN	Mount Compound:	120402001600	
Lead frame (Finish, Base):	NiPdAu, Cu	Bond Wire:	0.8 Mil Dia., Au	
Qualification: <input type="checkbox"/> Plan <input checked="" type="checkbox"/> Test Results				
Reliability Test	Conditions	Sample Size/Fail		
		Lot#1	Lot#2	Lot#3
** High temp Storage Bake	170C (420hrs)	80/0	80/0	80/0
**Biased HAST	130C/85%RH (96 Hrs)	77/0	77/0	77/0
**Unbiased HAST	130C/85%RH (96 Hrs)	77/0	77/0	77/0
**T/C -65C/150C	-65C/+150C (500 Cyc)	77/0	77/0	77/0
Solderability	Steam age, 8 hours	22/0	22/0	22/0
X-ray	(Topside only)	5/0	5/0	5/0
Manufacturability	(per mfg. Site specification)	Pass	Pass	Pass
Moisture Sensitivity	(level 1 @ 260C peak +5/-0C)	12/0	12/0	12/0
Notes ** - Preconditioning sequence: Level 1-260C.				

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