

PCN Number:	20150317002	PCN Date:	03/20/2015
Title:	Qualification of TI Taiwan as Additional Assembly Site for LQFP package device		
Customer Contact:	PCN Manager	Dept:	Quality Services
Proposed 1st Ship Date:	06/20/2015	Estimated Sample Availability:	Date Provided at Sample request
Change Type:			
<input checked="" type="checkbox"/>	Assembly Site	<input type="checkbox"/>	Design
<input type="checkbox"/>	Assembly Process	<input type="checkbox"/>	Data Sheet
<input checked="" type="checkbox"/>	Assembly Materials	<input type="checkbox"/>	Part number change
<input type="checkbox"/>	Mechanical Specification	<input type="checkbox"/>	Test Site
<input type="checkbox"/>	Packing/Shipping/Labeling	<input type="checkbox"/>	Test Process
<input type="checkbox"/>		<input type="checkbox"/>	Wafer Bump Site
<input type="checkbox"/>		<input type="checkbox"/>	Wafer Bump Material
<input type="checkbox"/>		<input type="checkbox"/>	Wafer Bump Process
<input type="checkbox"/>		<input type="checkbox"/>	Wafer Fab Site
<input type="checkbox"/>		<input type="checkbox"/>	Wafer Fab Materials
<input type="checkbox"/>		<input type="checkbox"/>	Wafer Fab Process

PCN Details

Description of Change:

Qualification of TI Taiwan as Additional Assembly Site for LQFP package device. Assembly differences are shown in the following table:

	AMKOR P1	TI Taiwan
Mount Compound	101309244	4042504
Mold Compound	101320866	4209640
Lead Finish	Matte Sn	NiPdAu

Test coverage, insertions, conditions will remain consistent with current testing and verified with test MQ.

Upon expiration of this PCN, TI will combine lead free solutions in a single [standard part number](#), for example; [SN74V3640-6PEU](#) – can ship with both Matte Sn and NiPdAu.

Reason for Change:

Continuity of Supply

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

None

Changes to product identification resulting from this PCN:

Sample product shipping label (not actual product label)

Assembly Site:			
Amkor P1 Philippines	Assembly Site Origin (22L)	ASO: AKR	ECAT: G3
TI Taiwan	Assembly Site Origin (22L)	ASO: TAI	ECAT: G4

ECAT: G3 = Matte Sn
ECAT: G4 = NiPdAu

Sample product shipping label showing ECAT value and location code (not actual product label)

TEXAS INSTRUMENTS
 MADE IN: Malaysia
 2DC: 2d:
 MSL '2 /260C/1 YEAR SEAL DT
 MSL 1 /235C/UNLIM 03/29/04
 OPT:
 ITEM: 39
 LBL: 5A (L)T0:1750

(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

(Pb) G4

ASSEMBLY SITE CODES: AP1 =4, TI-Taiwan = T

Product Affected:

SN74V3640-6PEU	SN74V3660-7PEU	SN74V3680-6PEU	SN74V3690-7PEU
SN74V3640-7PEU	SN74V3670-6PEU	SN74V3680-7PEU	
SN74V3650-7PEU	SN74V3670-7PEU	SN74V3690-10PEU	
SN74V3660-6PEU	SN74V3680-15PEU	SN74V3690-6PEU	

Qualification Data

PEU package assembly offloads to TITL

Product Attributes

Attributes	Qual Device: SN74V3680-15PEU	QBS Package: MSP430F6779IPEU
Assembly Site	TITL	TITL
Package Family	LQFP	LQFP
Die Attributes		
Die Revision	-	A
Wafer Fab Site	DMOS5	TSMC FAB10
Wafer Fab Process	1833C05	TSMC 0.18UM EFLASH
Passivation	SION	SiO2/SiN
Package Attributes		
Assembly Site	TITL	TITL
Package Family	LQFP	LQFP
Package Designator	PEU	PEU
Pin Count	128	128
Lead Frame Material	Cu	Cu
Lead Finish	NiPdAu	NiPdAu
Lead Pitch (mils)	19.68	19.68
Mount Compound	4042504	4042504
Mold Compound	4209640	4209640
Bond Wire Composition	Au	Cu
Bond Wire Diameter (mils)	0.96	0.8

- QBS: Qual By Similarity
- Qual Device SN74V3680-15PEU is qualified at LEVEL3-260C

Qualification Results

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

Type	Test Name / Condition	Duration	Qual Device: SN74V3680-15PEU	QBS Package: MSP430F6779IPEU
HAST	Biased HAST, 130C/85%RH	96 Hours	-	4/90/0
AC	Autoclave, 121C	96 Hours	3/270/0	3/234/0
TC	Temperature Cycle, -65/150C	500 Cycles	3/300/0	3/231/0
HTSL	High Temp Storage Bake 150C	1000 Hours	3/300/0	-
HTSL	High Temp Storage Bake 170C	420 Hours	-	3/240/0

- Preconditioning was performed for Autoclave, Unbiased HAST, THB/Biased HAST, Temperature Cycle, Thermal Shock, and HTSL, as applicable
- The following are equivalent HTOL options based on an activation energy of 0.7eV : 125C/1k Hours, 140C/480 Hours, 150C/300 Hours, and 155C/240 Hours
- The following are equivalent HTSL options based on an activation energy of 0.7eV : 150C/1k Hours, and 170C/420 Hours

- The following are equivalent Temp Cycle options per JESD47 : -55C/125C/700 Cycles and -65C/150C/500 Cycles

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