



**12500 TI Boulevard, MS 8640, Dallas, Texas 75243**

**PCN# 20150317002**  
**Qualification of TI Taiwan as Additional Assembly Site**  
**for LQFP package device**  
**Change Notification / Sample Request**

**Date:** 3/20/2015  
**To:** MOUSER 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 changes discussed within this PCN will not take effect any earlier than **90** days from the date of this notification, unless customer agreement has been reached on an earlier implementation of the change. This notification period is per TI's standard process.

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 Manager ([PCN\\_ww\\_admin\\_team@list.ti.com](mailto:PCN_ww_admin_team@list.ti.com)).

Sincerely,

PCN Team  
SC Business Services

**20150317002**  
**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.

<b>DEVICE</b>	<b>CUSTOMER PART NUMBER</b>
SN74V3670-6PEU	null
SN74V3670-7PEU	null

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

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

	<b>AMKOR P1</b>	<b>TI Taiwan</b>
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)

ECAT: G3 = Matte Sn  
ECAT: G4 = NiPdAu

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

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



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**

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

<b>Location</b>	<b>E-Mail</b>
USA	<a href="mailto:PCNAmericasContact@list.ti.com">PCNAmericasContact@list.ti.com</a>
Europe	<a href="mailto:PCNEuropeContact@list.ti.com">PCNEuropeContact@list.ti.com</a>
Asia Pacific	<a href="mailto:PCNAsiaContact@list.ti.com">PCNAsiaContact@list.ti.com</a>
Japan	<a href="mailto:PCNJapanContact@list.ti.com">PCNJapanContact@list.ti.com</a>