



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

**PCN# 20180423002**  
**Qualify New Assembly Material set for Selected Device(s)**  
**Change Notification / Sample Request**

**Date:** May 09, 2018  
**To:** TOKYO ELECTRON DEVICE (DSTR) 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 proposed first ship date is indicated on page 3 of this notification, unless customer agreement has been reached on an earlier implementation of the change.

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

**20180423002**  
**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>
OPA564AIDWP	null
TPA1517DWPR	null
THS6012IDWP	null
DRV401AIDWP	null
DRV401AIDWPR	null
TPA6120A2DWPR	null

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

<b>PCN Number:</b>	20180423002		<b>PCN Date:</b>	May 9, 2018													
<b>Title:</b>	Qualify New Assembly Material set for Selected Device(s)																
<b>Customer Contact:</b>	<a href="#">PCN Manager</a>		<b>Dept:</b>	Quality Services													
<b>Proposed 1<sup>st</sup> Ship Date:</b>	Aug. 9, 2018		<b>Estimated Sample Availability:</b>	Date provided at sample request													
<b>Change Type:</b>																	
<input type="checkbox"/>	Assembly Site	<input type="checkbox"/>	Design	<input type="checkbox"/>	Wafer Bump Site												
<input checked="" 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"/>		<input type="checkbox"/>	Wafer Fab Process												
<b>PCN Details</b>																	
<b>Description of Change:</b>																	
Texas Instruments is pleased to announce the qualification of new assembly material set for devices listed in "Product affected" section below. Devices will remain in current assembly facility and piece part changes as follows:																	
<table border="1" style="width: 100%;"> <thead> <tr> <th>Material</th> <th>Current</th> <th>Proposed</th> </tr> </thead> <tbody> <tr> <td>Mount Compound</td> <td>4042504, 4206201</td> <td>4208458</td> </tr> <tr> <td>Mold Compound</td> <td>4205443</td> <td>4211649</td> </tr> <tr> <td>Lead finish</td> <td>Standard NiPdAu</td> <td>Roughened NiPdAu (Single side)</td> </tr> </tbody> </table>						Material	Current	Proposed	Mount Compound	4042504, 4206201	4208458	Mold Compound	4205443	4211649	Lead finish	Standard NiPdAu	Roughened NiPdAu (Single side)
Material	Current	Proposed															
Mount Compound	4042504, 4206201	4208458															
Mold Compound	4205443	4211649															
Lead finish	Standard NiPdAu	Roughened NiPdAu (Single side)															
<b>Reason for Change:</b>																	
Continuity of supply.																	
<b>Anticipated impact on Fit, Form, Function, Quality or Reliability (positive / negative):</b>																	
None.																	
<b>Anticipated impact on Material Declaration</b>																	
<input type="checkbox"/>	No Impact to the Material Declaration	<input checked="" type="checkbox"/>	Material Declarations or Product Content reports are driven from production data and will be available following the production release. Upon production release the revised reports can be obtained from the <a href="#">TI Eco-Info website</a> . There is no impact to the material meeting current regulatory compliance requirements with this PCN change.														
<b>Changes to product identification resulting from this PCN:</b>																	
None.																	
<b>Product Affected:</b>																	
DRV401AIDWP	OPA569AIDWPG4	THS6012CDWPR	TPA6120A2DWP														
DRV401AIDWPG4	OPA569AIDWPR	THS6012IDWP	TPA6120A2DWPG4														
DRV401AIDWPR	SN0301043DWP	THS6012IDWPR	TPA6120A2DWPR														
DRV401AIDWPRG4	SN0301043DWPR	THS6032CDWP	TPA6120A2DWPRG4														
HPA00892DWPR	THS6002CDWP	THS6032IDWP	TPPM0110DWP														
OPA564AIDWD	THS6002CDWPG4	THS6032IDWPR	TPPM0110DWPR														
OPA564AIDWDR	THS6002IDWP	TPA1517DWP	TPPM0111DWP														
OPA564AIDWP	THS6002IDWPR	TPA1517DWPG4															
OPA564AIDWPR	THS6012CDWP	TPA1517DWPR															
OPA569AIDWP	THS6012CDWPG4	TPA1517DWPRG4															

# Qualification Report

## HSOIC G700LB + FS849 Enterprise Qualification in TITL

Approve Date 11-Apr-2018

### Product Attributes

Attributes	Qual Device: <u>DRV401AIDWPR</u>	QBS Package Reference: <u>TPS653853QDCARQ1</u>
Assembly Site	TAI	TAI
Package Family	HSOIC	HTSSOP
Flammability Rating	UL 94 V-0	UL 94 V-0
Wafer Fab Supplier	DMO5S	RFAB/DMOS6 (MFF)
Wafer Fab Process	50HPA07	LBC8

- QBS: Qual By Similarity
- Qual Device DRV401AIDWPR is qualified at LEVEL2-260C

### Qualification Results

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

Type	Test Name / Condition	Duration	Qual Device: <u>DRV401AIDWPR</u>	QBS Package Reference: <u>TPS653853QDCARQ1</u>
AC	Autoclave 121C	96 Hours	3/231/0	3/231/0
CDM	ESD - CDM - Q100	1000 V corner pins only	-	1/3/0
CDM	ESD - CDM - Q100	750 V (all pins)	-	1/3/0
ED	Auto Electrical Distributions	Cpk>1.67 Room, hot, and cold test	-	1/90/0
ELFR	Early Life Failure Rate, 125C	48 Hours	-	3/2400/0
ELFR	Early Life Failure Rate, 150C	48 Hours	-	1/805/0
HAST	Biased HAST, 130C/85%RH	192 Hours (for information)	-	3/231/0
HAST	Biased HAST, 130C/85%RH	96 Hours	-	3/231/0
HBM	ESD - HBM - Q100	2000 V	-	1/3/0
HTOL	Life Test, 125C	1000 Hours	-	3/231/0
HTSL	High Temp Storage Bake 150C	1000 Hours	-	3/231/0
HTSL	High Temp Storage Bake 170C	420 Hours	3/231/0	-
LI	Lead Integrity	Leads	3/135/0	-
LI	Lead Pull	Leads	3/135/0	-
LU	Latch-up	(per JESD78)	-	1/6/0
MQ	Manufacturability (Assembly)	(per mfg. Site specification)	Pass	-
MQ	Manufacturability (Auto Assembly)	(per automotive requirements)	-	Pass
PD	Physical Dimension	-	3/90/0	-
PTC	Power Temperature Cycle, -40/125C	1000 cycles	-	1/47/0
SD	Surface Mount Solderability	>95% Lead Coverage	3/66/0	-
TC	Temperature Cycle, -65/150C	500 Cycles	3/231/0	3/231/0
TC	Temperature Cycle, -65/150C	1000 Cycles	-	3/231/0
WBP	Post Temp. Cycle Bond Pull	500 Cycles	-	3/15/0
WBP	Bond Pull	Wires	3/228/0	-
WBS	Ball Bond Shear	Wires	3/228/0	-

- 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

THIS INFORMATION RELATING TO QUALITY AND RELIABILITY IS PROVIDED "AS IS." Product information detailed in this report may not accurately reflect TI's current product materials, processes and testing used in the construction of the TI products. Customers are solely responsible to conduct sufficient engineering and additional qualification testing to determine whether a device is suitable for use in their applications. Using TI products outside limits stated in TI's datasheet may void TI's warranty. See TI's Terms of Sale at "<http://www.ti.com/lscs/ti/legal/termsofsale.page>"

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	<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>