



12500 TI Boulevard, MS 8640, Dallas, Texas 75243

**PCN# 20230515000.2**  
**Qualification of new BOM for select package Devices**  
**Change Notification / Sample Request**

**Date:** May 17, 2023  
**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.

Texas Instruments requires acknowledgement of 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 samples or additional data are required, requests must be received within **30 days** of this notification.

The changes discussed within this PCN will not take effect any earlier than the proposed first ship date 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 or to provide acknowledgement of this PCN, you may contact your local Field Sales Representative or the PCN Team ([PCN\\_admin\\_team@list.ti.com](mailto:PCN_admin_team@list.ti.com)). For sample requests or sample related questions, contact your local Field Sales Representative.

Sincerely,

PCN Team  
SC Business Services

**20230515000.2**  
**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.

DEVICE	CUSTOMER PART NUMBER
TL331IDBVR	null
TL331KDBVR	null
TL331IDBVT	null

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

<b>PCN Number:</b>	20230515000.2			<b>PCN Date:</b>	May 17, 2023								
<b>Title:</b>	Qualification of new BOM for select package Devices												
<b>Customer Contact:</b>	<a href="#">PCN Manager</a>	<b>Dept:</b>	Quality Services										
<b>Proposed 1<sup>st</sup> Ship Date:</b>	Nov 16, 2023		<b>Sample requests accepted until:</b>	June 16, 2023*									
*Sample requests received after June 16, 2023 will not be supported.													
<b>Change Type:</b>													
<input 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								
<b>PCN Details</b>													
<b>Description of Change:</b>													
<p>Texas Instruments Incorporated is announcing the qualification of new material set for the devices listed in the "Product Affected" Section. Devices will remain at current location.</p> <p><b>Material Difference:</b></p> <table border="1"> <thead> <tr> <th></th> <th>Current</th> <th>Proposed</th> </tr> </thead> <tbody> <tr> <td>Lead finish</td> <td>NiPdAu</td> <td>Matte Sn</td> </tr> </tbody> </table> <p>Upon expiration of this PCN, TI will combine lead free solutions in a single <a href="#">standard part number</a>, for example; <a href="#">TL331IDBVR</a> – can ship with both Matte Sn and NiPdAu.</p> <p>Example:</p> <ul style="list-style-type: none"> <li>– Customer order for 7500 units of SN566230RJER with 2500 units SPQ (Standard Pack Quantity per Reel).</li> <li>– TI can satisfy the above order in one of the following ways. <ul style="list-style-type: none"> <li>I. 3 Reels of NiPdAu finish.</li> <li>II. 3 Reels of Matte Sn finish</li> <li>III. 2 Reels of Matte Sn and 1 reel of NiPdAu finish.</li> <li>IV. 2 Reels of NiPdAu and 1 reel of Matte Sn finish.</li> </ul> </li> </ul>							Current	Proposed	Lead finish	NiPdAu	Matte Sn		
	Current	Proposed											
Lead finish	NiPdAu	Matte Sn											
<b>Reason for Change:</b>													
Continuity of supply.													
<b>Anticipated impact on Form, Fit, Function, Quality or Reliability (positive / negative):</b>													
None													
<b>Impact on Environmental Ratings</b>													
<p>Checked boxes indicate the status of environmental ratings following implementation of this change. If below boxes are checked, there are no changes to the associated environmental ratings.</p> <table border="1"> <thead> <tr> <th>RoHS</th> <th>REACH</th> <th>Green Status</th> <th>IEC 62474</th> </tr> </thead> <tbody> <tr> <td><input checked="" type="checkbox"/> No Change</td> <td><input checked="" type="checkbox"/> No Change</td> <td><input checked="" type="checkbox"/> No Change</td> <td><input checked="" type="checkbox"/> No Change</td> </tr> </tbody> </table>						RoHS	REACH	Green Status	IEC 62474	<input checked="" type="checkbox"/> No Change	<input checked="" type="checkbox"/> No Change	<input checked="" type="checkbox"/> No Change	<input checked="" type="checkbox"/> No Change
RoHS	REACH	Green Status	IEC 62474										
<input checked="" type="checkbox"/> No Change	<input checked="" type="checkbox"/> No Change	<input checked="" type="checkbox"/> No Change	<input checked="" type="checkbox"/> No Change										

## Changes to product identification resulting from this PCN:

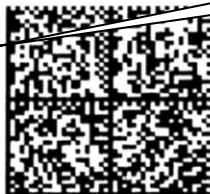
Sample product shipping label (not actual product label)

G4 = NiPdAu  
G3 = Matte Sn

TEXAS  
INSTRUMENTS  
MADE IN: Malaysia  
2DC: 20:

MSL 2 / 260C/1 YEAR SEAL DT  
MSL 1 / 235C/UNLIM 03/29/04

OPT:  
ITEM:  
LBL: 5A (L)T0:1750



(1P) SN74LS07NSR  
(Q) 2000 (D) 0336  
(31T) LOT: 3959047MLA  
(4W) TKY (1T) 7523483S12  
(P)  
(2P) REV: (V) 0033317  
(20L) CS0: SHE (21L) CC0: USA  
(22L) AS0: MLA (23L) AC0: MYS

## Product Affected:

TL331IDBVR	TL331IDBVT	TL331KDBVR
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## Qualification Report

Approve Date 03-Apr- 2023

## Qualification Results

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

Type	#	Test Name	Condition	Duration	Qual Device: TPS76933DBVR	Qual Device: TL331IDBVRG4	Qual Device: TLV9051SIDBVR	Qual Device: TPS2553DDBVR	Qual Device: LV3842XDBVR	QBS Reference: TLV9061IDBVR
HAST	A2	Biased HAST	130C/85%RH	96 Hours	-	-	-	-	-	3/231/0
UHAST	A3	Unbiased HAST	130C/85%RH	96 Hours	3/231/0	3/231/0	3/231/0	3/231/0	3/231/0	3/231/0
TC	A4	Temperature Cycle	-65C/150C	500 Cycles	3/231/0	3/231/0	3/231/0	3/231/0	-	3/231/0
TC	A4	Temperature Cycle	-65C/150C	500 Cycles	-	-	-	-	3/231/0	-
HTSL	A6	High Temperature Storage Life	150C	1000 Hours	3/231/0	3/231/0	3/231/0	3/231/0	3/231/0	-
HTSL	A6	High Temperature Storage Life	170C	420 Hours	-	-	-	-	-	3/231/0
HTOL	B1	Life Test	150C	300 Hours	-	-	-	-	-	3/231/0
WBS	C1	Ball Shear	76 balls, 3 units min	Wires	-	-	-	-	-	3/228/0
WBP	C2	Bond Pull	76 Wires, 3 units min	Wires	-	-	-	-	-	3/228/0
SD	C3	PB-Free Solderability	Precondition w.155C Dry Bake (4 hrs +/- 15 minutes); PB- Free Solder;	-	1/22/0	1/22/0	1/22/0	1/22/0	1/22/0	3/66/0
PD	C4	Physical Dimensions	(per mechanical drawing)	-	-	-	-	-	-	3/15/0
FTY	E6	Final Test Yield	-	-	-	-	-	-	-	3/3/0

QBS: Qual By Similarity

Qual Device TPS76933DBVR is qualified at MSL1 260C

Qual Device TL331IDBVRG4 is qualified at MSL1 260C  
 Qual Device TLV9051SIDBVR is qualified at MSL1 260C  
 Qual Device TPS2553DDBVR is qualified at MSL1 260C  
 Qual Device LV3842XDBVR is qualified at MSL1 260C  
 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
WW Change Management Team	<a href="mailto:PCN_ww_admin_team@list.ti.com">PCN_ww_admin_team@list.ti.com</a>

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