

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

# PCN# 20231127001.1A Qualification alternate Lead finish material for select devices Change Notification / Sample Request

Date: February 23, 2024

**To:** Digi-Key PCN

Dear Customer:

**Revision A** is to announce the <u>addition</u> of a new devices that was not included on the original PCN notification.

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 and approval of this 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 change management team.

For sample requests or sample related questions, contact your local Field Sales Representative.

Sincerely,

Change Management Team SC Business Services

## 20231127001.1A Change Notification / Sample Request Attachments

#### **Products Affected:**

The devices listed on this page are a subset of the complete list of affected devices. According to our records, you have recently purchased these devices. The corresponding customer part number is also listed, if available.

DEVICE	<b>CUSTOMER PART NUMBER</b>
CC1120RHBR	null
CC1120RHBT	null
CC1121RHBR	null
CC1121RHBT	null
CC1125RHBR	null
CC1125RHBT	null
CC1175RHBR	null
CC1175RHBT	null
CC1200RHBR	null
CC1200RHBT	null
CC1201RHBR	null
CC1201RHBT	null

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

<b>PCN Number:</b> 2023112700			01.1A					PCN Date:		e:	February 23, 2024		
Title	e:	Qualifica	ation of alter	nate	lead	finish	material	for selec	ct dev	ices	5		
Cus	tome	er Conta	ct:	Char	Change Management team Dept				ot:		Qual	lity Services	
					2024 Sample Req 2024 (rev A) accepted					Mar	23, 2024*		
*Sa	mple	reques	ts received	after	· Ma	r 23,	2024 wi	ll not be	supp	orte	ed.		
Cha	nge 1	Туре:											
	Asse	mbly Site	9			Desig	gn			] V	Wafer	Bump	Material
☐ Assembly Process					Data Sheet				] \ V	Wafer	Bump	Process	
Assembly Materials					Part number change				\ 	Wafer	Fab S	Site	
☐ Mechanical Specification					Test Site			\ 	Wafer Fab Material				
☐ Packing/Shipping/Labeling				Test Process			] \	Wafer	Fab F	Process			
		•	_			PC	N Deta	ils				•	_

#### **Description of Change:**

**Revision A** is to announce the <u>addition</u> of new devices that was not included on the original PCN notification. The new device is highlighted and **bolded** in the device list below. The expected first shipment date for the new device will be 90 days from this notice (May 23, 2024) for the newly added device only. The proposed 1<sup>st</sup> ship date of Feb 28, 2024 still applies for the original set of devices.

This PCN is to inform of an alternate lead finish material set for the list of devices in the product affected sections below.

What	Current	Additional
Lead finish	NiPdAu	Matte Sn

Upon expiry of this PCN, there will be a transition period where TI will combine lead free solutions in a single <u>standard part number</u> For example; <u>TPS61291DRVR</u> – can ship with both Matte Sn and NiPdAu.

#### Example:

- Customer order for 7500 units of TPS61291DRVR with 2500 units SPQ (Standard Pack Quantity per Reel).
- TI can satisfy the above order in one of the following ways.
  - 3 Reels of NiPdAu finish.
  - II. 3 Reels of Matte Sn finish
  - III. 2 Reels of Matte Sn and 1 reel of NiPdAu finish.
  - IV. 2 Reels of NiPdAu and 1 reel of Matte Sn finish.

# **Reason for Change:**

Standardization

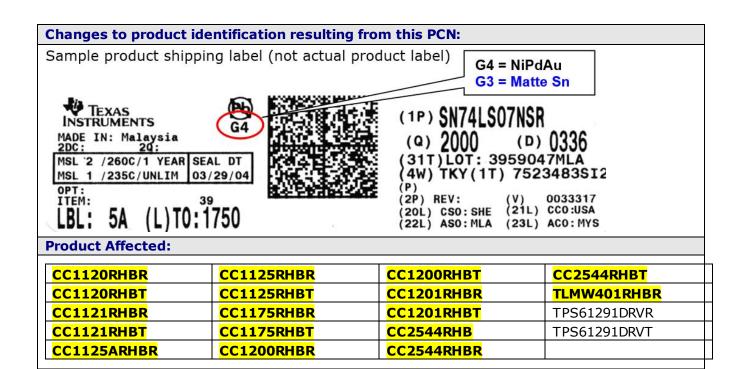
#### Anticipated impact on Form, Fit, Function, Quality or Reliability (positive / negative):

None

#### **Impact on Environmental Ratings**

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.

RoHS	REACH	Green Status	IEC 62474	
No Change     ■     No Change     N	No Change	No Change	No Change      Output     Description     Descrip	



# **Qualification Report**

Approve Date 11-October -2023

# **Qualification Results**

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

Туре	Test Name	Condition	Duration	Qual Device: <u>TPS61291DRVR</u>
AC	Autoclave	121C/15psig	96 Hours	3/231/0
TC	Temperature Cycle	-65C/150C	500 Cycles	3/231/0
HTSL	High Temperature Storage Life	175C	420 Hours	3/231/0
MQ	Manufacturability (Assembly)	(per mfg. Site specification)	(per mfg. Site specification)	Pass

QBS: Qual By Similarity

Qual Device TPS61291DRVR 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 0.7 eV: 150C/1 k 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 Tl's external Web site: <a href="http://www.ti.com/">http://www.ti.com/</a>

# **Qualification Report**

Approve Date 16-February -2024

#### **Qualification Results**

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

Туре	Test Name	Condition	Duration	Qual Device: <u>CC2544RHB</u>
AC	Autoclave	121C/15psig	96 Hours	3/231/0
TC	Temperature Cycle	-65C/150C	500 Cycles	3/231/0
HTSL	High Temperature Storage Life	175C	420 Hours	3/231/0
SD	PB-Free Solderability	PB-Free Solderability	PB-Free Solderability	1/22/0
MQ	Manufacturability (Assembly)	(per mfg. Site specification)	(per mfg. Site specification)	Pass

QBS: Qual By Similarity

Qual Device CC2544RHB is qualified at MSL3 260C

Preconditioning was performed for Autoclave, Unbiased HAST, THB/Biased HAST, Temperature Cycle, Therm al 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 Tl's external Web site: <a href="http://www.ti.com/">http://www.ti.com/</a>

For questions regarding this notice, e-mails can be sent to the Change Management team or your local Field Sales Representative.

### **IMPORTANT NOTICE AND DISCLAIMER**

TI PROVIDES TECHNICAL AND RELIABILITY DATA (INCLUDING DATASHEETS), DESIGN RESOURCES (INCLUDING REFERENCE DESIGNS), APPLICATION OR OTHER DESIGN ADVICE, WEB TOOLS, SAFETY INFORMATION, AND OTHER RESOURCES "AS IS" AND WITH ALL FAULTS, AND DISCLAIMS ALL WARRANTIES, EXPRESS AND IMPLIED, INCLUDING WITHOUT LIMITATION ANY IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR NON-INFRINGEMENT OF THIRD PARTY INTELLECTUAL PROPERTY RIGHTS.

These resources are intended for skilled developers designing with TI products. You are solely responsible for (1) selecting the appropriate TI products for your application, (2) designing, validating and testing your application, and (3) ensuring your application meets applicable standards, and any other safety, security, or other requirements. These resources are subject to change without notice. TI grants you permission to use these resources only for development of an application that uses the TI products described in the resource. Other reproduction and display of these resources is prohibited. No license is granted to any other TI intellectual property right or to any third party intellectual property right. TI disclaims responsibility for, and you will fully indemnify TI and its representatives against, any claims, damages, costs, losses, and liabilities arising out of your use of these resources.

TI's products are provided subject to TI's Terms of Sale (<a href="www.ti.com/legal/termsofsale.html">www.ti.com/legal/termsofsale.html</a>) or other applicable terms available either on <a href="ti.com">ti.com</a> or provided in conjunction with such TI products. TI's provision of these resources does not expand or otherwise alter TI's applicable warranties or warranty disclaimers for TI products.