12500 TI Boulevard, MS 8640, Dallas, Texas 75243

PCN#20190807004.2
Qualification of a new Green Mold Compound material for selected Devices
Change Notification / Sample Request

PCN re-issue to replace the previous PCN letter.

Date: August 19, 2019
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).

Sincerely,

PCN Team
SC Business Services

20190807004
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
TL431AILP	null
TL431AILPR	null
TL431ILP	null
TL431AILPM	null
TL431ILPR	null

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

PCN Number:	20190807004.2	PCN Date:	Aug 19, 2019
Title:	Qualification of a new Green Mold compound material for selected Devices		
Customer Contact:	PCN Manager	Dept:	Quality Services
Proposed 1st Ship Date:	Feb 19, 2020	Estimated Sample Availability:	Provided upon Request

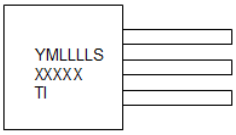
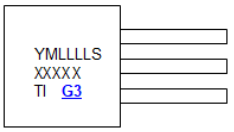
Change Type:

☐	Assembly Site	☐	Design	☐	Wafer Bump Site
☐	Assembly Process	☐	Data Sheet	☐	Wafer Bump Material
☒	Assembly Materials	☐	Part number change	☐	Wafer Bump Process
☐	Mechanical Specification	☐	Test Site	☐	Wafer Fab Site
☐	Packing/Shipping/Labeling	☐	Test Process	☐	Wafer Fab Materials
				☐	Wafer Fab Process

PCN Details

Description of Change:

Texas Instruments is pleased to announce the qualification of a new green Mold compound material for the devices list below as follows:

	Current	New
Mold compound material	4010025A1 (non-Green)	402042101 (Green)
Marking Difference	 YM = YEAR MONTH DATE CODE LLLL = ASSEMBLY LOT CODE X = DEVICE NAME S = ASSEMBLY SITE CODE	 YM = YEAR MONTH DATE CODE LLLL = ASSEMBLY LOT CODE X = DEVICE NAME S = ASSEMBLY SITE CODE G3 = ECAT VALUE

Reason for Change:

Current mold compound material is being discontinued by supplier.
ROHS compliance.

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

None

Anticipated impact on Material Declaration

☐	No Impact to the Material Declaration	☒	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 TI Eco-Info website. There is no impact to the material meeting current regulatory compliance requirements with this PCN change.

Changes to product identification resulting from this PCN:

Sample product shipping label (not actual product label)
The "**G3**" designator indicates Pb-Free/Green product with a terminal finish of Matte Sn

Product Affected:

TL431AILP	TL431AILPM-NT2	TL431ILP
TL431AILPM	TL431AILPR	TL431ILPR

Qualification Report

Approve Date 10-Jul-2019

Qualification Results

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

Type	Test Name / Condition	Duration	Qual Device: BQ2022ALPR	Qual Device: LP2950-50LPRE3	Qual Device: TL1431CLP
ED	Electrical Characterization	Per Datasheet Parameters	-	-	1/30/0
FLAM	Flammability	Method A - UL94 V-0	-	-	3/15/0
HAST	Biased HAST 130C/85%RH	96 Hours	-	-	3/231/0
HTSL	High Temp. Storage Bake, 170 C	420 Hours	-	-	3/231/0
MQ	Manufacturability (Assembly)	(per mfg. Site specification)	3/Pass	3/Pass	3/Pass
PD	Physical Dimensions	(per mechanical drawing)	-	-	3/15/0
PKG	Solder Heat, 260C	10 seconds	-	-	3/66/0
TC	Temperature Cycle -65C/150C	500 Cycles	3/231/0	3/231/0	3/231/0
UHAST	Unbiased HAST 130C/85%RH	96 Hours	3/231/0	-	3/231/0
VM	Visual / Mechanical	(per mfg. Site specification)	Pass	-	Pass
XRAY	X-ray	(top side only)	-	3/15/0	3/15/0
YLD	FTY and Bin Summary	-	1/Pass	-	-

- QBS: Qual By Similarity

- 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

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