12500 TI Boulevard, MS 8640, Dallas, Texas 75243

PCN#20210114000.1
Qualification of new Mold Compound for Select Devices
Change Notification / Sample Request

Date: February 24, 2021
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 Team (PCN_ww_admin_team@list.ti.com). For sample requests or sample related questions, contact your field sales representative.

Sincerely,

PCN Team
SC Business Services

20210114000.1
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
LM258P	null
NE555P	null
SN74HC02N	null
SN74HC595N	null
LM339AN	null
LM293P	null
SN74HC00N	null
SN74HC138N	null
SN74HC14N	null
LM239N	null
LM358AP	null
NA555P	null
ULN2003AN	null
CD4051BE	null
CD4052BE	null
CD4066BE	null
LM2902N	null
LM324N	null
LM339N	null
LM358P	null
LM393P	null
SN74HC04N	null
SN74HC165N	null
NE5532P	null
SN74HC164N	null
ULN2003AIN	null
LM393AP	null
CD4541BE	null

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

PCN Number:	20210114000.1	**PCN Date:**	Feb 24, 2021
Title:	Qualification of new Mold Compound for Select Devices		
Customer Contact:	PCN Manager	**Dept:**	Quality Services
Proposed 1st Ship Date:	May 24, 2021	**Estimated Sample Availability:**	Date provided at sample 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 mold compound for the devices in the Product Affected section below as follows. Device will remain on current Assembly site.

	Current	New
Mold Compound	013102024401	131010100248

Reason for Change:

Current mold compound material is no longer available

Anticipated impact on Form, Fit, 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 website.

Changes to product identification resulting from this PCN:

None

Product Affected:

CD4051BE	LM293P	LM393APE4	SN74HC14N
CD4052BE	LM324N	LM393P	SN74HC164N
CD4066BE	LM324NE3	LM393PE3	SN74HC165N
CD4541BE	LM339AN	NA555P	SN74HC165NE4
CD4541BEE4	LM339ANE4	NE5532P	SN74HC595N
LM239N	LM339N	NE5532PE4	ULN2003AIN
LM239NE4	LM339NE3	NE555P	ULN2003AINE4
LM258AP	LM358AP	SN74HC00N	ULN2003AN
LM258P	LM358P	SN74HC02N	ULN2003AN-SQ
LM2902N	LM358PE3	SN74HC04N	ULN2003BN
LM2904P	LM393AP	SN74HC138N	

Qualification Report

Approve Date 25-Nov-2020

Qualification Results

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

Type	Test Name / Condition	Duration	Qual Device: LM239N	Qual Device: LM293P	Qual Device: LM358P	Qual Device: ULN2003AIN
-	Preconditioning (PDIP)	260C – MSL1	1/308/0	1/308/0	2/616/0	2/616/0
AC	**Autoclave 121C	96 Hours	1/77/0	1/77/0	2/154/0	2/154/0
HAST	**Biased HAST, 130C/85%RH	96 Hours	1/77/0	1/77/0	2/154/0	2/154/0
HTSL	**High Temp. Storage Bake, 150C	1000 Hours	1/77/0	1/77/0	2/154/0	2/154/0
TC	**T/C -65C/150C, -65C/+150C	500 Cycles	1/77/0	1/77/0	2/154/0	2/154/0
LI	Lead Integrity	-	1/24/0	1/24/0	2/48/0	2480
MQ	Manufacturability (Assembly)	(per mfg. Site specification)	Pass	Pass	Pass	Pass
VM	Visual Quality Reliability Inspection	Post Autoclave	Pass	Pass	Pass	Pass
VM	Visual Quality Reliability Inspection	Post Biased HAST	Pass	Pass	Pass	-
VM	Visual Quality Reliability Inspection	Post Temp Cycle	Pass	Pass	Pass	Pass
VM	Visual Quality Reliability Inspection	Post biased HAST	-	-	-	Pass
XRAY	X-ray	(top side only)	Pass	Pass	Pass	Pass

- QBS: Qual By Similarity
- Qual Device LM239N is qualified at NC-P
- Qual Device LM358P is qualified at NC-P
- Qual Device ULN2003AIN is qualified at NC-P
- Qual Device LM293P is qualified at NC-P

- 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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