12500 TI Boulevard, MS 8640, Dallas, Texas 75243

PCN# 20161020001
Qualification of SID# 101380756 Mold Compound for Select SOIC Device(s)
Change Notification / Sample Request

Date: December 14, 2016
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

20161020001
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
LM78L05ACMX/NOPB	null
LM317LMX/NOPB	null

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

PCN Number:	20161020001	PCN Date:	Dec. 14, 2016
Title:	Qualification of SID# 101380756 Mold Compound for Select SOIC Device(s)		
Customer Contact:	PCN Manager	Dept:	Quality Services
Proposed 1st Ship Date:	Mar. 14, 2017	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 SID# 101380756 Mold Compound for Select SOIC devices listed in "Product affected" section below. Devices will remain in current assembly facility and there will be no other piece part changes.

Material	Current	Proposed
Mold compound	101323397	101380756

Reason for Change:

Continuity of supply.

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 website.

Changes to product identification resulting from this PCN:

None.

Product Affected:

LM1458M/NOPB	LM2936M-5.0/NOPB	LM6511IM/NOPB	LM78L12ACMX/NOPB
LM1458MX/NOPB	LM2936MX-5.0/NOPB	LM6511IMX/NOPB	LM78L15ACMX/NOPB
LM2931AM-5.0/NOPB	LM2936MX-5.0/SL110245	LM78L05ACMX/NOPB	
LM2931AMX-5.0/NOPB	LM317LMX/NOPB	LM78L05AIM/NOPB	
LM2931CMX/NOPB	LM431BCM/NOPB	LM78L05AIMX/NOPB	

Qualification Report

SOIC 8L- D package with SID# 101380756 Mold Compound at subcon AP1
Approve Date 16-Mar-2016

Product Attributes

Attributes	Qual Device: LM4808MX/NOPB	Qual Device: LMC7660IMXNOPB	QBS Package Reference: LM324ADR	QBS Package Reference: LM358DR	QBS Package Reference: LM393DR
Assembly Site	AMKOR P1	AMKOR P1	AMKOR P1	AMKOR AP1	AMKOR AP1
Package Family	SOIC	SOIC	SOIC	SOIC	SOIC
Flammability Rating	UL 94 V-0	UL 94 V-0	UL 94 V-0	UL 94 V-0	UL 94 V-0
Wafer Fab Supplier	MAINEFAB	GFAB 6	SFAB	SFAB	SFAB
Wafer Process	CS065SP	CMMGATE.8.1	JI1	JI1	JI1

- QBS: Qual By Similarity
- Qual Devices qualified at LEVEL1-260C: LMC7660IMXNOPB, LM4808MX/NOPB

Qualification Results

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

Type	Test Name / Condition	Duration	Qual Device: LM4808MX/NOPB	Qual Device: LMC7660IMXNOPB
AC	Autoclave 121C	96 Hours	-	3/231/0
HTSL	High Temp. Storage Bake, 170C	420 Hours	-	3/231/0
DS	Die Shear	--	1/10/0	3/30/0
FLAM	Flammability (IEC 695-2-2)	--	-	-
FLAM	Flammability (UL 94V-0)	--	-	-
FLAM	Flammability (UL-1694)	--	-	-
HAST	Biased HAST, 130C/85%RH	96 Hours	-	-
HTOL	Life Test, 150C	300 Hours	-	-
LI	Lead Fatigue	Leads	1/22/0	-
LI	Lead Pull to Destruction	Leads	1/22/0	-
LI	Lead Finish Adhesion	Leads	-	-
MISC	Salt Atmosphere	Salt Atmosphere	-	-
PD	Physical Dimensions	--	-	3/15/0
SD	Solderability	8 Hours Steam Age	-	3/66/0
TC	Temperature Cycle, -65C/150C	500 Cycles	1/77/0	3/231/0
WBP	Bond Pull	Wires	1/30/0	3/90/0
WBS	Ball Bond Shear	Wires	1/30/0	3/90/0

Type	Test Name / Condition	Duration	QBS Package Reference: LM324ADR	QBS Package Reference: LM358DR	QBS Package Reference: LM393DR
AC	Autoclave 121C	96 Hours	3/231/0	3/231/0	3/231/0
HTSL	High Temp. Storage Bake, 170C	420 Hours	3/229/0	3/229/0	3/231/0
DS	Die Shear	--	3/30/0	3/30/0	3/30/0
FLAM	Flammability (IEC 695-2-2)	--	3/15/0	3/15/0	3/15/0
FLAM	Flammability (UL 94V-0)	--	3/15/0	3/15/0	3/15/0
FLAM	Flammability (UL-1694)	--	3/15/0	3/15/0	3/15/0
HAST	Biased HAST, 130C/85%RH	96 Hours	3/231/0	3/231/0	3/231/0
HTOL	Life Test, 150C	300 Hours	3/231/0	3/231/0	-
LI	Lead Fatigue	Leads	3/66/0	3/66/0	3/66/0
LI	Lead Pull to Destruction	Leads	3/66/0	3/66/0	3/66/0
LI	Lead Finish Adhesion	Leads	3/45/0	3/45/0	3/45/0
MISC	Salt Atmosphere	Salt Atmosphere	3/65/0	3/66/0	-
PD	Physical Dimensions	--	3/60/0	3/60/0	3/60/0
SD	Solderability	8 Hours Steam Age	3/66/0	3/66/0	3/66/0
TC	Temperature Cycle, -65C/150C	500 Cycles	3/231/0	3/230/0	3/231/0
WBP	Bond Pull	Wires	3/228/0	3/228/0	3/228/0
WBS	Ball Bond Shear	Wires	3/228/0	3/228/0	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

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