TEXAS INSTRUMENTS **12500 TI Boulevard, MS 8640, Dallas, Texas 75243**

PCN# 20210831001.1
Qualification of new Fab site (RFAB) using qualified Process Technology, Die Revision, Datasheet update and additional Assembly BOM options for select devices
Change Notification / Sample Request

Date: September 01, 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 (TI). The details of this change are on the following pages, and are in alignment with our standard product change notification (PCN) process.

TI 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, given that samples are not built ahead of the change.

The Proposed First Ship date in this PCN letter is the earliest possible date that customers could receive the changed material. It is our commitment that the changed device will not ship before that date. If samples are requested within the 30 day sample request window, customers will still have 30-days to complete their evaluation regardless of the proposed 1st ship date.

This particular PCN is related to TI's previous announcement to close our two remaining factories with 150-millimeter production (DFAB in Dallas, Texas, and SFAB in Sherman, Texas). As referenced in the "reason for change" below, these changes are part of our multiyear plan to transition these products to newer, more efficient manufacturing processes and technologies, underscoring our commitment to product longevity and supply continuity.

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_ww_admin_team@list.ti.com). For sample requests or sample related questions, contact your local Field Sales Representative. As always, we thank you for your continued business.

PCN Team
SC Business Services

20210831001.1
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
MAX3222EIPWR	null
MAX3222CPWR	null
MAX3222IPWR	null
MAX3222ECPWR	null
TRS3222EIPWR	null

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

PCN Number:	20210831001.1	**PCN Date:**	September 01, 2021
Title:	Qualification of new Fab site (RFAB) using qualified Process Technology, Die Revision, Datasheet update and additional Assembly BOM options for select devices		
Customer Contact:	PCN Manager	**Dept:**	Quality Services
Proposed 1st Ship Date:	Dec 1, 2021	**Estimated Sample Availability:**	Date provided at sample request.

Change Type:

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

PCN Details

Description of Change:

Texas Instruments is pleased to announce the qualification of a new fab & process technology (RFAB, LBC7) and updated BOM options for selected devices as listed below in the product affected section.

Current Fab Site			New Fab Site		
Fab Site	**Process**	**Wafer Diameter**	**Fab Site**	**Process**	**Wafer Diameter**
DL-LIN	LBC3S	150 mm	RFAB	LBC7	300 mm
DL-LIN	LBC3S	200 mm			

The die was also changed as a result of the process change.

Construction differences are noted below:

	From	To
Lead finish	Non-Roughened NiPdAu	Roughened NiPdAu (Single Side-Top)

The datasheets will be changing as a result of the above mentioned changes. The datasheet change details can be reviewed in the datasheet revision history. The link to the revised datasheet is available in the table below.

Product Family	Current Datasheet Number	New Datasheet Number	Link to full datasheet
TRSF3222E	SLLS823	SLLS823A	https://www.ti.com/product/TRSF3222E
TRS3222E	SLLS793	SLLS793A	https://www.ti.com/product/TRS3222E
SN65C3222E	SLLS725A	SLLS725B	https://www.ti.com/product/SN65C3222E
MAX3222E	SLLS708A	SLLS708B	https://www.ti.com/product/MAX3222E

Tube packing, temperature range, and ESD protection versions of the devices are included in EOL notice PDN# 20210831002.3

Qual details are provided in the Qual Data Section.

Reason for Change:

These changes are part of our multiyear plan to transition products from our 150-milimeter factories to newer, more efficient manufacturing processes and technologies, underscoring our commitment to product longevity and supply continuity.

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	☒ No Change	☒ No Change

Changes to product identification resulting from this PCN:

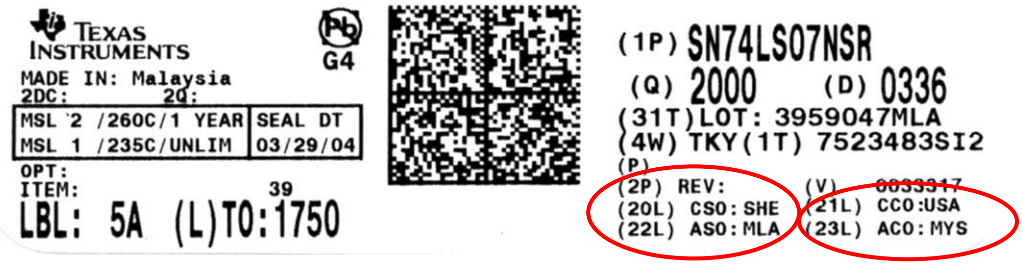
Fab Site Information:

Chip Site	Chip Site Origin Code (20L)	Chip Site Country Code (21L)	Chip Site City
DL-LIN	DLN	USA	Dallas
RFAB	**RFB**	**USA**	**Richardson**

Die Rev:

Current	**New**
Die Rev [2P]	**Die Rev [2P]**
B, G	**B**

Sample product shipping label (not actual product label)



TEXAS INSTRUMENTS
MADE IN: Malaysia
2DC: 2Q:
MSL 2 /260C/1 YEAR | SEAL DT
MSL 1 /235C/UNLIM | 03/29/04
OPT:
ITEM: 39
LBL: 5A (L)TO:1750
G4
(1P) SN74LS07NSR
(Q) 2000 (D) 0336
(31T)LOT: 3959047MLA
(4W) TKY(1T) 7523483SI2
(P)
(2P) REV: (V) ~~0033317~~
(20L) CSO: SHE (21L) CCO:USA
(22L) ASO: MLA (23L) ACO: MYS

Product Affected:

Group 1 - RFAB/Process migration, Die Revision, Datasheet and Assembly BOM updates:

MAX3222ECPWR	MAX3222EIPWR	SN65C3222EPWRG4	TRSF3222EIPWR
MAX3222ECPWRG4	SN65C3222EPWR	TRS3222EIPWR	

Group 2 - RFAB/Process migration, Die Revision and Assembly BOM updates:

MAX3222CPWR	MAX3222IPWR	MAX3222IPWRE4	

Qualification Report

Approve Date 03-Aug-2021

Qualification Results

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

Type	Test Name / Condition	Duration	Qual Device: TRS3222EIPWR	QBS Process Reference: TPS51217DSC	QBS Process Reference: TPS53605DSQ	QBS Package Reference: TMUX1308QPWRQ1
AC	Autoclave 121C	96 Hours	-	3/231/0	-	3/231/0
CDM	ESD - CDM	2000 V	1/3/0	-	-	-
ED	Electrical Characterization	Per Datasheet Parameters	Pass	-	-	-
ELFR	Early Life Failure Rate, 125C	48 Hours	-	-	3/2999/0	-
HAST	Biased HAST 130C/85%RH	96 Hours	-	3/231/0	-	3/231/0
HAST	Biased HAST, 110C/85%RH	264 Hours	-	-	3/231/0	-
HBM	ESD - HBM (All Pins)	4000 V	1/3/0	-	-	-
HBM	ESD - HBM (Bus Pins Only)	16000 V	1/3/0	-	-	-
HTOL	Life Test, 125C	1000 Hours	-	-	3/231/0	-
HTOL	Life Test, 135C	635 Hours	-	3/231/0	-	-
HTOL	Life Test, 150C	300 Hours	-	-	-	3/231/0
HTSL	High Temp Storage Bake 170C	420 Hours	-	3/231/0	2/90/0	-
HTSL	High Temp Storage Bake 175C	500 Hours	-	-	-	3/135/0
LU	Latch-up	(Per JESD78)	1/6/0	-	-	-
TC	Temperature Cycle, -65/150C	500 Cycles	-	3/231/0	3/231/0	3/231/0
UHAST	Unbiased HAST 110C/85%RH	264 Hours	-	-	3/231/0	-
WBP	Bond Pull	Wires	1/76/0	-	3/228/0	3/90/0
WBS	Ball Bond Shear	Wire	1/76/0	-	3/228/0	3/90/0

- QBS: Qual By Similarity
- Qual Device TRS3222EIPWR is qualified at LEVEL1-260C

- 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

Qualification Report

Approve Date 03-Aug-2021

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

Type	Test Name / Condition	Duration	Qual Device: TRSF3222EIPWR	QBS Process Reference: TPS51217DSC	QBS Process Reference: TPS53605DSQ	QBS Package Reference: TMUX1308QPWRQ1
AC	Autoclave 121C	96 Hours	-	3/231/0	-	3/231/0
CDM	ESD - CDM	2000 V	1/3/0	-	-	1/3/0
ED	Electrical Characterization	Per Datasheet Parameters	Pass	-	-	-
ELFR	Early Life Failure Rate, 125C	48 Hours	-	-	3/2999/0	-
HAST	Biased HAST 130C/85%RH	96 Hours	-	3/231/0	-	3/231/0
HAST	Biased HAST, 110C/85%RH	264 Hours	-	-	3/231/0	-
HBM	ESD - HBM (All Pins)	4000 V	1/3/0	-	-	-
HBM	ESD - HBM (Bus Pins Only)	16000 V	1/3/0	-	-	-
HTOL	Life Test, 125C	1000 Hours	-	-	3/231/0	-
HTOL	Life Test, 135C	635 Hours	-	3/231/0	-	-
HTOL	Life Test, 150C	300 Hours	-	-	-	3/231/0
HTSL	High Temp Storage Bake 170C	420 Hours	-	3/231/0	2/90/0	-
HTSL	High Temp Storage Bake 175C	500 Hours	-	-	-	3/135/0
LU	Latch-up	(Per JESD78)	1/6/0	-	-	-
TC	Temperature Cycle -65/150C	500 Cycles	-	3/231/0	3/231/0	3/231/0
UHAST	Unbiased HAST 110C/85%RH	264 Hours	-	-	3/231/0	-
WBP	Bond Pull	Wires	1/76/0	-	3/228/0	3/90/0
WBS	Ball Bond Shear	Wires	1/76/0	-	3/228/0	3/90/0

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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 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
WW PCN Team	PCN_ww_admin_team@list.ti.com

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