12500 TI Boulevard, MS 8640, Dallas, Texas 75243

PCN# 20230222000.1
Qualification of RFAB as an additional Fab site option for select LBC8 devices
Change Notification / Sample Request

Date: February 23, 2023
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.

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 of the 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 PCN Team (PCN_ww_admin_team@list.ti.com). For sample requests or sample related questions, contact your local Field Sales Representative.

PCN Team
SC Business Services

20230222000.1
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
ISO1541DR	null
ISO1540DR	null
ISO1640BDR	null
ISO1640DWR	null

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

PCN Number:	20230222000.1	**PCN Date:**	February 23, 2023
Title:	Qualification of RFAB as an additional Fab site option for select LBC8 devices		
Customer Contact:	PCN Manager	**Dept:**	Quality Services
Proposed 1st Ship Date:	May 22, 2023	**Sample requests accepted until:**	Mar 22, 2023*

***Sample requests received after March 22, 2023 will not be supported.**

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		

Notification Details

Description of Change:

Texas Instruments is pleased to announce the qualification of its RFAB fabrication facility as an additional Wafer Fab source for the selected devices listed in the "Product Affected" section.

Current Fab Site			Additional Fab Site		
Current Fab Site	**Process**	**Wafer Diameter**	**New Fab Site**	**Process**	**Wafer Diameter**
MIHO8	LBC8	200 mm	RFAB	LBC8	300 mm

Qual details are provided in the Qual Data Section.

Reason for Change:

Continuity of supply.

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

None.

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
MIHO8	MH8	JPN	Ibaraki
RFAB	**RFB**	**USA**	**Richardson**

Sample product shipping label (not actual product label)

Product Affected:

ISO1540DR	ISO1640BDR	ISO1641BDR
ISO1541DR	ISO1640DWR	ISO1641DWR

Qualification Report
Approve Date 09-February-2023

Qualification Results

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

Type	#	Test Name	Condition	Duration	Qual Device: ISO1640BDR	Qual Device: ISO1640DWR	Qual Device: ISO1641BDR	Qual Device: ISO1641DWR	QBS Reference: UCC23513QDWYQ1	QBS Reference: ISO1640BQDRQ1	QBS Reference: ISO6760QDWRQ1	QBS Reference: ISO6761QDWRQ1	QBS Reference: ISO6763QDWRQ1	QBS Reference: ISO6762QDWRQ1
HAST	A2	Biased HAST	130C/85%RH	96 Hours	-	-	-	-	3/231/0	3/231/0	1/77/0	-	1/77/0	1/77/0
UHAST	A3	Autoclave	121C/15psig	96 Hours	-	-	-	-	3/231/0	3/231/0	1/77/0	-	1/77/0	1/77/0
TC	A4	Temperature Cycle	-65C/150C	500 Cycles	1/77/0	-	-	-	3/231/0	3/231/0	1/77/0	1/77/0	1/77/0	-
HTSL	A6	High Temperature Storage Life	150C	1000 Hours	-	-	-	-	-	1/45/0	-	-	-	-
HTSL	A6	High Temperature Storage Life	175C	500 Hours	-	-	-	-	3/135/0	-	1/45/0	1/45/0	1/45/0	-
HTOL	B1	Life Test	125C	1000 Hours	-	-	-	-	3/231/0	-	1/77/0	1/77/0	-	-
ELFR	B2	Early Life Failure Rate	125C	48 Hours	-	-	-	-	3/2400/0	-	-	-	-	-
SD	C3	PB Solderability	Precondition w.155C Dry Bake (4 hrs +/- 15 minutes)	-	-	-	-	-	1/15/0	-	-	-	1/15/0	-
SD	C3	PB-Free Solderability	Precondition w.155C Dry Bake (4 hrs +/- 15 minutes)	-	-	-	-	-	1/15/0	-	-	-	1/15/0	-
PD	C4	Physical Dimensions	Cpk>1.67	-	-	-	-	-	3/30/0	-	-	-	-	-
ESD	E2	ESD CDM	-	250 Volts	-	1/3/0	-	-	1/3/0	1/3/0	1/3/0	1/3/0	1/3/0	1/3/0
ESD	E2	ESD HBM	-	1000 Volts	-	1/3/0	-	-	1/3/0	1/3/0	1/3/0	1/3/0	1/3/0	1/3/0
LU	E4	Latch-Up	Per JESD78	-	-	1/3/0	-	-	1/6/0	1/6/0	1/6/0	1/6/0	1/6/0	1/6/0
CHAR	E5	Electrical Characterization	Per Datasheet Parameters	-	1/30/0	1/30/0	-	-	3/90/0	3/90/0	-	-	-	-
FTY	E6	Final Test Yield	-	-	1/1/0	1/1/0	1/1/0	1/1/0	-	-	-	-	-	-

- QBS: Qual By Similarity
- Qual Device ISO1640BDR is qualified at MSL2 260C

- Qual Device ISO1640DWR is qualified at MSL2 260C
- Qual Device ISO1641BDR is qualified at MSL2 260C
- Qual Device ISO1641DWR is qualified at MSL2 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 12-OCTOBER -2022

Qualification Results

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

Type	#	Test Name	Condition	Duration	Qual Device: ISO1644DWR	QBS Reference: UCC23513QDWYQ1	QBS Reference: UCC21520ADW
HAST	A2	Biased HAST	130C/85%RH	96 Hours	-	-	3/231/0
UHAST	A3	Autoclave	121C/15psig	96 Hours	-	-	3/231/0
TC	A4	Temperature Cycle	-65C/150C	500 Cycles	-	-	3/231/0
HTSL	A6	High Temperature Storage Life	175C	300 Hours	-	-	3/135/0
HTOL	B1	Life Test	125C	1000 Hours	-	3/231/0	-
ELFR	B2	Early Life Failure Rate	125C	48 Hours	-	3/2400/0	-
WBS	C1	Ball Shear	76 balls, 3 units min	Wires	1/76/0	-	-
WBP	C2	Bond Pull	76 Wires, 3 units min	Wires	1/76/0	-	-
ESD	E2	ESD CDM	-	250 Volts	1/3/0	1/3/0	-
ESD	E2	ESD HBM	-	1000 Volts	1/3/0	1/3/0	-
LU	E4	Latch-Up	Per JESD78	-	1/3/0	-	-
CHAR	E5	Electrical Characterization	Per Datasheet Parameters	-	1/30/0	3/90/0	-

- QBS: Qual By Similarity
- Qual Device ISO1644DWR is qualified at MSL2 260C
- Qual Device ISO1643DWR is qualified at MSL2 260C
- Qual Device ISO1642DWR is qualified at MSL2 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

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Green/Pb-free Status:

Qualified Pb-Free(SMT) and Green

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

Location	E-Mail
WW Change Management Team	PCN_ww_admin_team@list.ti.com

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