12500 TI Boulevard, MS 8640, Dallas, Texas 75243

PCN# 20240724002.1
Qualification of RFAB using qualified Process Technology, Die Revision and additional Assembly Site/BOM options for select devices
Change Notification / Sample Request

Date: July 25, 2024
To: MOUSER 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 and approval of this 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 change management team.

For sample requests or sample related questions, contact your local Field Sales Representative.

Sincerely,

Change Management Team
SC Business Services

20240724002.1
Attachment: 1

Products Affected:

The devices listed on this page are a subset of the complete list of affected devices. According to our records, you have recently purchased these devices. The corresponding customer part number is also listed, if available.

DEVICE	CUSTOMER PART NUMBER
TS3USB221ARSER	NULL
TS3USB221ERSER	NULL
TS3USB221RSER	NULL

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

PCN Number:	20240724002.1	**PCN Date:**	July 25, 2024
Title:	Qualification of RFAB using qualified Process Technology, Die Revision, and additional Assembly Site/BOM options for select devices		
Customer Contact:	Change Management Team	**Dept:**	Quality Services
Proposed 1st Ship Date:	October 23, 2024	**Sample requests accepted until:**	August 24, 2024*

***Sample requests received after August 24, 2024 will not be supported.**

Change Type:

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

PCN Details

Description of Change:

Texas Instruments is pleased to announce the qualification of RFAB as an additional Wafer Fab options in addition to Assembly Site/BOM options for the devices listed in the "Product Affected" section.

Current Fab Site			Additional Fab Site		
Fab Site	**Process**	**Wafer Diameter**	**Fab Site**	**Process**	**Wafer Diameter**
FFAB	ASCL10	200 mm	RFAB	LBC7	300 mm

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

Construction differences are as follows:

	ASEN	UTL3	CDAT
Bond Wire composition/diameter	Au, 0.8 mil	**Cu, 0.8 mil**	**Cu, 0.8 mil**
Die attach material	SID#1400238112	**SID#PZ0076**	**4226215**
Mold Compound	SID#1801512111	**SID#CZ0297**	**4222198**

Qual details are provided in the Qual Data Section.

Reason for Change:

Continuity of Supply

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
FR-BIP-1	TID	DEU	Freising
RFAB	**RFB**	**USA**	**Richardson**

Die Rev:

Current	New
Die Rev [2P]	**Die Rev [2P]**
A, B, -	**A**

Assembly Site Information:

Assembly Site	Assembly Site Origin (22L)	Assembly Country Code (23L)	Assembly City
ASEN	ASN	CHN	Suzhou
CDAT	**CDA**	**CHN**	**Chengdu**
UTL3	**UT3**	**THA**	**Bangpakong**

Sample product shipping label (not actual product label):

Product Affected:

TS3USB221ARSER	TS3USB221ERSER	TS3USB221RSER

Qualification Results

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

Type	#	Test Name	Condition	Duration	Qual Device: PTS3USB221ERSER	Qual Device: PTS3USB221RSER	Qual Device: PTS3USB221ARSER	QBS Reference: SN3257QDYYRQ1
HAST	A2	Biased HAST	130C/85%RH	96 Hours	1/77/0	1/77/0	1/77/0	3/231/0
UHAST	A3	Autoclave	121C/15psig	96 Hours	-	-	-	3/231/0
UHAST	A3	Unbiased HAST	130C/85%RH	96 Hours	1/77/0	1/77/0	1/77/0	-
TC	A4	Temperature Cycle	-65C/150C	500 Cycles	1/77/0	1/77/0	1/77/0	3/231/0
HTSL	A6	High Temperature Storage Life	150C	1000 Hours	1/77/0	1/77/0	1/77/0	3/135/0
HTOL	B1	Life Test	150C	300 Hours	-	-	-	3/231/0
ELFR	B2	Early Life Failure Rate	150C	24 Hours	-	-	-	3/2400/0
SD	C3	PB Solderability	Precondition w.155C Dry Bake (4 hrs +/- 15 minutes)	-	-	-	-	1/15/0
SD	C3	PB-Free Solderability	Precondition w.155C Dry Bake (4 hrs +/- 15 minutes)	-	-	-	-	1/15/0
SD	C3	PB-Free Solderability	Precondition w.155C Dry Bake (4 hrs +/- 15 minutes); PB-Free Solder;	-	1/22/0	-	-	-
PD	C4	Physical Dimensions	Cpk>1.67	-	-	-	-	3/30/0
ESD	E2	ESD CDM	-	1000 Volts	1/3/0	-	-	-
ESD	E2	ESD CDM	-	1500 Volts	-	-	-	1/3/0
ESD	E2	ESD HBM	-	12000 Volts	1/3/0	-	-	-
ESD	E2	ESD HBM	-	2000 Volts	-	-	-	1/3/0
LU	E4	Latch-Up	Per JESD78	-	1/3/0	-	-	1/6/0
CHAR	E5	Electrical Characterization	Per Datasheet Parameters	-	1/30/0	-	-	-
CHAR	E5	Electrical Distributions	Cpk>1.67 Room, hot, and cold	-	-	-	-	3/90/0

- QBS: Qual By Similarity
- Qual Device PTS3USB221ERSER is qualified at MSL1 260C
- Qual Device PTS3USB221RSER is qualified at MSL1 260C
- Qual Device PTS3USB221ARSER is qualified at MSL1 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/

TI Qualification ID: R-CHG-2312-024

Qualification Results

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

Type	#	Test Name	Condition	Duration	Qual Device: PTS3USB221ERSER	QBS Reference: SN32STQQYYRQ1	QBS Reference: INA196A1IRSWR-S	QBS Reference: INA196A2IRSWR-S	QBS Reference: INA196A3IRSWR-S	QBS Reference: PTS3USB221ERSER	QBS Reference: PTS3USB221IRSER	QBS Reference: PTS3USB221ARSER
HAST	A2	Biased HAST	110C/85%RH	264 Hours	-	-	1/77/0	1/77/0	1/77/0	-	-	-
HAST	A2	Biased HAST	130C/85%RH	96 Hours	-	3/231/0	-	-	-	1/77/0	1/77/0	1/77/0
UHAST	A3	Autoclave	121C/15psig	96 Hours	-	3/231/0	-	-	-	-	-	-
UHAST	A3	Unbiased HAST	110C/85%RH	264 Hours	-	-	1/77/0	1/77/0	1/77/0	-	-	-
UHAST	A3	Unbiased HAST	130C/85%RH	96 Hours	-	-	-	-	-	1/77/0	1/77/0	1/77/0
TC	A4	Temperature Cycle	-55C/125C	700 Cycles	-	-	1/77/0	1/77/0	1/77/0	-	-	-
TC	A4	Temperature Cycle	-65C/150C	500 Cycles	-	3/231/0	-	-	-	1/77/0	1/77/0	1/77/0
HTSL	A6	High Temperature Storage Life	150C	1000 Hours	-	3/135/0	1/77/0	1/77/0	1/77/0	1/77/0	1/77/0	1/77/0
HTOL	B1	Life Test	125C	1000 Hours	-	-	1/77/0	1/77/0	1/77/0	-	-	-
HTOL	B1	Life Test	150C	300 Hours	-	3/231/0	-	-	-	-	-	-
ELFR	B2	Early Life Failure Rate	150C	24 Hours	-	3/2400/0	-	-	-	-	-	-
SD	C3	PB Solderability	Precondition w.155C Dry Bake (4 hrs +/- 15 minutes)	-	-	1/15/0	-	-	-	-	-	-
SD	C3	PB-Free Solderability	Precondition w.155C Dry Bake (4 hrs +/- 15 minutes)	-	-	1/15/0	-	-	-	-	-	-
SD	C3	PB-Free Solderability	Precondition w.155C Dry Bake (4 hrs +/- 15 minutes); PB-Free Solder;	-	-	-	1/5/0	1/5/0	1/5/0	1/22/0	-	-
PD	C4	Physical Dimensions	(per mechanical drawing)	-	-	-	1/5/0	1/5/0	1/5/0	-	-	-
PD	C4	Physical Dimensions	Cpk>1.67	-	-	3/30/0	-	-	-	-	-	-
ESD	E2	ESD CDM	-	1000 Volts	-	-	-	-	-	1/3/0	-	-
ESD	E2	ESD CDM	-	1500 Volts	-	1/3/0	-	-	-	-	-	-
ESD	E2	ESD HBM	-	12000 Volts	-	-	-	-	-	1/3/0	-	-
ESD	E2	ESD HBM	-	2000 Volts	-	1/3/0	-	-	-	-	-	-
LU	E4	Latch-Up	Per JESD78	-	-	1/6/0	-	-	-	1/3/0	-	-
CHAR	E5	Electrical Characterization	Per Datasheet Parameters	-	1/30/0	-	1/30/0	1/30/0	1/30/0	1/30/0	-	-
CHAR	E5	Electrical Distributions	Cpk>1.67 Room, hot, and cold	-	-	3/90/0	-	-	-	-	-	-
FTY	E6	Final Test Yield	-	-	-	-	1/1/0	1/1/0	1/1/0	-	-	-

- QBS: Qual By Similarity
- Qual Device PTS3USB221ERSER is qualified at MSL1 260C

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Quality and Environmental data is available at TI's external Web site: http://www.ti.com/

TI Qualification ID: R-CHG-2312-021

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