



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:					
<input checked="" type="checkbox"/>	Assembly Site	<input checked="" type="checkbox"/>	Design	<input type="checkbox"/>	Wafer Bump Material
<input checked="" type="checkbox"/>	Assembly Process	<input type="checkbox"/>	Data Sheet	<input type="checkbox"/>	Wafer Bump Process
<input checked="" type="checkbox"/>	Assembly Materials	<input type="checkbox"/>	Part number change	<input checked="" type="checkbox"/>	Wafer Fab Site
<input type="checkbox"/>	Mechanical Specification	<input type="checkbox"/>	Test Site	<input checked="" type="checkbox"/>	Wafer Fab Material
<input checked="" type="checkbox"/>	Packing/Shipping/Labeling	<input type="checkbox"/>	Test Process	<input checked="" type="checkbox"/>	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		
<input checked="" type="checkbox"/> No Change	<input checked="" type="checkbox"/> No Change	<input checked="" type="checkbox"/> No Change	<input checked="" type="checkbox"/> 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):

**TEXAS INSTRUMENTS**
MADE IN: Malaysia
2DC: 2Q:
MSL 2 / 260C / 1 YEAR **SEAL DT**
MSL 1 / 235C / UNLIM **03/29/04**
OPT:
ITEM:
LBL: 5A (L)T0:1750

**G4**



(1P) **SN74LS07NSR**
(Q) **2000** (D) **0336**
(31T) **LOT: 3959047MLA**
(4W) **TKY (1T) 7523483SI2**
(P)
(2P) **REV:** (V) **0033317**
(20L) **CS0: SHE** (21L) **CC0: USA**
(22L) **AS0: MLA** (23L) **AC0: MYS**

Product Affected:

TS3USB221ARSR	TS3USB221ERSER	TS3USB221RSER
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Qualification Results

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

Type	#	Test Name	Condition	Duration	Qual Device: PT3USB221ERSER	Qual Device: PT3USB221ARSR	Qual Device: PT3USB221RSER	QES Reference: SN1257QYYR01
HAST	A2	Biased HAST	130C/85%RH	96 Hours	1/77/0	1/77/0	1/77/0	3/31/0
UHAST	A3	Autoclave	121C/100%RH	96 Hours	-	-	-	3/231/0
UHAST	A4	Unbiased HAST	130C/85%RH	96 Hours	1/77/0	1/77/0	1/77/0	-
TC	A4	Temperature Cycle	-55C/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:	-	1/2/0	-	-	-
PD	C4	Physical Dimensions	Cpk>1.67	-	-	-	-	3/300/0
ESD	B2	ESD CDM	-	1000 Volts	1/3/0	-	-	-
ESD	B2	ESD CDM	-	1500 Volts	-	-	-	1/3/0
ESD	B2	ESD HBM	-	12000 Volts	1/3/0	-	-	-
ESD	B2	ESD HBM	-	2000 Volts	-	-	-	1/3/0
LU	B4	Latch-Up	Per JE5078	-	1/3/0	-	-	1/6/0
CHAR	B5	Electrical Characterization	Per DataSheet Parameters	-	1/3/0	-	-	-
CHAR	B5	Electrical Distributions	Cpk>1.67 Room, hot, and cold	-	-	-	-	3/900/0

- QES: Qual By Similarity
- Qual Device PT3USB221ERSER is qualified at MSL1 260C
- Qual Device PT3USB221ARSR is qualified at MSL1 260C
- Qual Device PT3USB221RSER 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/200 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 JE5047: -55C/125C/700 Cycles and -55C/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: PT33USB211ER5R	QES Reference: PA137700YX01	QES Reference: BA139A183SW-S	QES Reference: BA139A183SW-S	QES Reference: BA139A183SW-S	QES Reference: PT33USB211ER5R	QES Reference: PT33USB211ER5R	QES Reference: PT33USB211ER5R
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/15psi	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	-55C/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)	-	-	1/5/0	-	-	-	-	-	-
SD	C3	PB-Free Solderability	Precondition w/155C Dry Bake (4 hrs +/- 15 minutes)	-	-	1/5/0	-	-	-	-	-	-
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	Cpin1.67	-	-	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 JEDEC78	-	-	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	Cpin1.67 Room, hot and cold	-	-	3/90/0	-	-	-	-	-	-
FTV	E6	Final Test Yield	-	-	-	-	1/1/0	1/1/0	1/1/0	-	-	-

- QES: Qual By Similarity
- Qual Device PT33USB211ER5R 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 JEDEC47: -55C/125C/700 Cycles and -55C/150C/500 Cycles

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

TI Qualification ID: R-CH0-2312-021

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

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