12500 TI Boulevard, MS 8640, Dallas, Texas 75243

PCN#20240910001.1
Qualification of RFAB using qualified Process Technologies, Die Revision, additional Assembly site (CDAT) and BOM options for select devices
Change Notification / Sample Request

Date: September 11, 2024
To: MOUSER 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 and approval of this 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 multiyear transition plan for our two remaining factories with 150-millimeter production (DFAB in Dallas, Texas, and SFAB in Sherman, Texas). DFAB will remain open, but will focus on 200-mm production, with a smaller set of technologies. SFAB will close no earlier than 2024 and no later than 2025. 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 Change Management team. For sample requests or sample related questions, contact your local Field Sales Representative. As always, we thank you for your continued business.

Change Management Team
SC Business Services

20240910001.1
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
PCF8575DBR	NULL
PCF8575DWR	NULL
PCF8575PWR	NULL
PCF8575PWRE4	NULL
PCF8575RGER	NULL

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

PCN Number:	20240910001.1	**PCN Date:**	September 11, 2024
Title:	Qualification of RFAB using qualified Process Technologies, Die Revision, additional Assembly site (CDAT) and BOM options for select devices		
Customer Contact:	Change Management Team	**Dept:**	Quality Services
Proposed 1st Ship Date:	December 10, 2024	**Sample requests accepted until:**	October 11, 2024*

***Sample requests received after October 11, 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 its RFAB fabrication facilities as additional Wafer Fab options in addition to a new assembly site (CDAT), & BOM options for the devices listed below.

Current Fab Site			Additional Fab Site		
Fab Site	**Process**	**Wafer Diameter**	**Fab Site**	**Process**	**Wafer Diameter**
DL-LIN	EPIC1ZS	200 mm	RFAB	LBC7	300 mm

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

BOM options are as follows:

Group 1 BOM Table (FAB/Process migration, die change plus BOM update):

What	Current	Additional
Bond wire composition/diameter	**Cu, 0.96 mil**	**Cu, 0.8 mil**

Group 2 BOM Table (FAB/Process migration, die change plus CDAT as additional assembly site):

What	TI Malaysia	CDAT
Bond wire composition/diameter	**Cu, 0.96 mil**	**Cu, 0.8 mil**
Mold Compound	**4208625**	**4222198**
Mount Compound	**4205846**	**4207123**

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-millimeter and 200-millimeter 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**

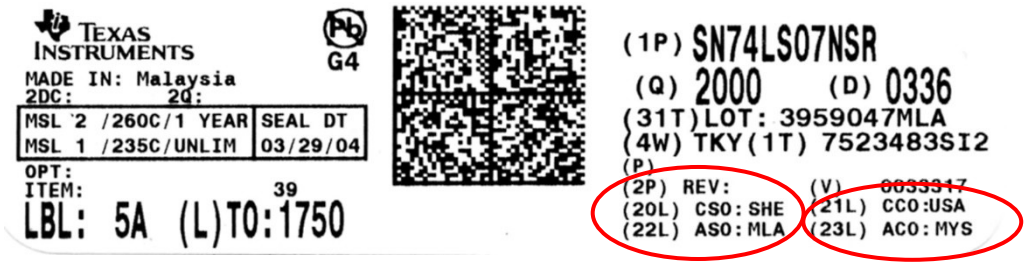
Die Rev:

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

Assembly Site Information:

Assembly Site	Assembly Site Origin (22L)	Assembly Country Code (23L)	Assembly City
TI Malaysia	MLA	MYS	KUALA LUMPUR
CDAT	**CDA**	**CHN**	**Chengdu**

Sample product shipping label (not actual product label):



Product Affected:

Group 1 Device list (FAB/Process migration, die change plus BOM update):

PCF8575DBR	PCF8575PWR	PCF8575PWRE4

Group 2 Device list (FAB/Process migration, die change plus CDAT as additional Assembly site):

PCF8575RGER

Group 3 Device list (FAB/Process migration, die change only):

PCF8575DWR

For alternate parts with similar or improved performance, please visit the product page on TI.com

Qualification Report
Approve Date 16-JULY -2024

Qualification Results

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

Type	#	Test Name	Condition	Duration	Qual Device: PCF8575DBR	QBS Reference: TPS2543QRTETQ1	QBS Reference: TPS2074DB	QBS Reference: SN74LV244AQDGSRQ1	QBS Reference: SN74LV273AQDGSRQ1	QBS Reference: SN74LV541AQDGSRQ1	QBS Reference: PCF8574DWR	QBS Reference: PCF8574ADWR
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	-	1/77/0	1/77/0	1/77/0	-	-
UHAST	A3	Unbiased HAST	130C/85%RH	96 Hours	-	-	3/231/0	-	-	-	-	-
TC	A4	Temperature Cycle	-65C/150C	500 Cycles	-	3/231/0	3/231/0	1/77/0	1/77/0	1/77/0	-	-
HTSL	A6	High Temperature Storage Life	150C	1000 Hours	-	-	3/231/0	1/45/0	1/45/0	1/45/0	-	-
HTSL	A6	High Temperature Storage Life	175C	500 Hours	-	3/135/0	-	-	-	-	-	-
HTOL	B1	Life Test	125C	1000 Hours	-	3/231/0	-	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	-	-	-	-
SD	C3	PB-Free 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); PB-Free Solder;	-	-	-	-	-	-	-	1/22/0	-
PD	C4	Physical Dimensions	Cpk>1.67	-	-	3/30/0	-	1/10/0	1/10/0	1/10/0	-	-

Type	#	Test Name	Condition	Duration	Qual Device: PCF8575DBR	QBS Reference: TPS2543QRTETQ1	QBS Reference: TPS2074DB	QBS Reference: SN74LV244AQDGSRQ1	QBS Reference: SN74LV273AQDGSRQ1	QBS Reference: SN74LV541AQDGSRQ1	QBS Reference: PCF8574DWR	QBS Reference: PCF8574ADWR
ESD	E2	ESD CDM	-	250 Volts	1/3	-	-	-	-	-	1/3/0	-
ESD	E2	ESD CDM	-	500 Volts	-	1/3/0	-	1/3/0	1/3/0	1/3/0	-	-
ESD	E2	ESD HBM	-	1000 Volts	1/3	-	-	-	-	-	1/3/0	-
ESD	E2	ESD HBM	-	2000 Volts	-	1/3/0	-	1/3/0	1/3/0	1/3/0	-	-
LU	E4	Latch-Up	Per JESD78	-	1/3	1/6/0	-	1/6/0	1/6/0	1/6/0	1/3/0	-
CHAR	E5	Electrical Characterization	Per Datasheet Parameters	-	1/30	-	-	-	-	-	1/30/0	1/30/0
CHAR	E5	Electrical Distributions	Cpk>1.67 Room, hot, and cold	-	-	3/90/0	-	1/30/0	1/30/0	1/30/0	-	-

- QBS: Qual By Similarity
- Qual Device PCF8575DBR 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-2403-090

Qualification Report
Approve Date 16-JULY -2024

Qualification Results

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

Type	#	Test Name	Condition	Duration	Qual Device: PCF8575PWR	QBS Reference: TMUX1308QPWRQ1	QBS Reference: TPS2543QRTETQ1	QBS Reference: BQ7721600PWR	QBS Reference: PCF8574DWR	QBS Reference: PCF8574ADWR
HAST	A2	Biased HAST	130C/85%RH	96 Hours	-	3/231/0	3/231/0	-	-	-
UHAST	A3	Autoclave	121C/15psig	96 Hours	-	3/231/0	3/231/0	-	-	-
TC	A4	Temperature Cycle	-65C/150C	500 Cycles	-	3/231/0	3/231/0	3/231/0	-	-
HTSL	A6	High Temperature Storage Life	150C	1000 Hours	-	-	-	3/231/0	-	-
HTSL	A6	High Temperature Storage Life	175C	500 Hours	-	3/135/0	3/135/0	-	-	-
HTSL	A6	High Temperature Storage Life	Per QSS-009-018	1 Step	-	-	-	3/231/0	-	-
HTOL	B1	Life Test	125C	1000 Hours	-	-	3/231/0	3/231/0	-	-
HTOL	B1	Life Test	150C	300 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	-	-	-	3/228/0	-	-
WBP	C2	Bond Pull	76 Wires, 3 units min	Wires	-	-	-	3/228/0	-	-
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	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	3/30/0	-	-	-
ESD	E2	ESD CDM	-	2000 Volts	-	1/3/0	-	-	-	-
ESD	E2	ESD CDM	-	250 Volts	1/3/0	-	-	-	1/3/0	-
ESD	E2	ESD CDM	-	500 Volts	-	-	1/3/0	-	-	-
ESD	E2	ESD HBM	-	1000 Volts	-	-	-	-	1/3/0	-
ESD	E2	ESD HBM	-	2000 Volts	-	-	1/3/0	-	-	-
ESD	E2	ESD HBM	-	5000 Volts	-	1/3/0	-	-	-	-
LU	E4	Latch-Up	Per JESD78	-	-	1/6/0	1/6/0	-	1/3/0	-
CHAR	E5	Electrical Characterization	Per Datasheet Parameters	-	1/30/0	-	-	-	1/30/0	1/30/0

Type	#	Test Name	Condition	Duration	Qual Device: PCF8575PWR	QBS Reference: TMUX1308QPWRQ1	QBS Reference: TPS2543QRTETQ1	QBS Reference: BQ7721600PWR	QBS Reference: PCF8574DWR	QBS Reference: PCF8574ADWR
CHAR	E5	Electrical Distributions	Cpk>1.67 Room, hot, and cold	-	-	3/90/0	3/90/0	-	-	-

- QBS: Qual By Similarity
- Qual Device PCF8575PWR 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-2403-089

TI Information
Selective Disclosure

Approve Date 19-AUGUST -2024

Qualification Results

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

Type	#	Test Name	Condition	Duration	Qual Device: PCF8575RGER	QBS Reference: TPS2543QRTETQ1	QBS Reference: TPS25740BRGER	QBS Reference: PCF8575PWR
HAST	A2	Biased HAST	130C/85%RH	96 Hours	-	3/231/0	3/231/0	-
UHAST	A3	Autoclave	121C/15psig	96 Hours	-	3/231/0	-	-
UHAST	A3	Unbiased HAST	130C/85%RH	96 Hours	-	-	3/231/0	-
TC	A4	Temperature Cycle	-65C/150C	500 Cycles	-	3/231/0	3/231/0	-
HTSL	A6	High Temperature Storage Life	170C	420 Hours	-	-	3/231/0	-
HTSL	A6	High Temperature Storage Life	175C	500 Hours	-	3/135/0	-	-
HTOL	B1	Life Test	125C	1000 Hours	-	3/231/0	1/77/0	-
ELFR	B2	Early Life Failure Rate	125C	48 Hours	-	3/2400/0	-	-
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	-	-	-

Type	#	Test Name	Condition	Duration	Qual Device: PCF8575RGER	QBS Reference: TPS2543QRTETQ1	QBS Reference: TPS25740BRGER	QBS Reference: PCF8575PWR
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
ESD	E2	ESD CDM	-	500 Volts	-	1/3/0	-	-
ESD	E2	ESD HBM	-	1000 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
CHAR	E5	Electrical Distributions	Cpk>1.67 Room, hot, and cold	-	-	3/90/0	-	-

- QBS: Qual By Similarity, also known as Generic Data
- Qual Device PCF8575RGER 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-2403-091

Qualification Report
Approve Date 08-AUGUST -2024

Qualification Results

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

Type	#	Test Name	Condition	Duration	Qual Device: PCF8575DWR	QBS Reference: TPS2543QRTETQ1	QBS Reference: TPIC6A596DWRG4	QBS Reference: PCF8575DBR
HAST	A2	Biased HAST	130C/85%RH	96 Hours	-	3/231/0	3/231/0	-
UHAST	A3	Autoclave	121C/15psig	96 Hours	-	3/231/0	-	-
UHAST	A3	Unbiased HAST	130C/85%RH	96 Hours	-	-	3/231/0	-
TC	A4	Temperature Cycle	-65C/150C	500 Cycles	-	3/231/0	3/231/0	-
HTSL	A6	High Temperature Storage Life	150C	1000 Hours	-	-	3/135/0	-
HTSL	A6	High Temperature Storage Life	175C	500 Hours	-	3/135/0	-	-
HTOL	B1	Life Test	125C	1000 Hours	-	3/231/0	3/231/0	-
ELFR	B2	Early Life Failure Rate	125C	48 Hours	-	3/2400/0	-	-
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	3/30/0	-
ESD	E2	ESD CDM	-	250 Volts	-	-	-	1/3

Type	#	Test Name	Condition	Duration	Qual Device: PCF8575DWR	QBS Reference: TPS2543QRTETQ1	QBS Reference: TPIC6A596DWRG4	QBS Reference: PCF8575DBR
ESD	E2	ESD CDM	-	500 Volts	-	1/3/0	1/3/0	-
ESD	E2	ESD HBM	-	1000 Volts	-	-	-	1/3
ESD	E2	ESD HBM	-	2000 Volts	-	1/3/0	1/3/0	-
LU	E4	Latch-Up	Per JESD78	-	-	1/6/0	1/6/0	1/3
CHAR	E5	Electrical Characterization	Per Datasheet Parameters	-	1/30/0	-	-	1/30
CHAR	E5	Electrical Distributions	Cpk>1.67 Room, hot, and cold	-	-	3/90/0	3/90/0	-

- QBS: Qual By Similarity
- Qual Device PCF8575DWR 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-2403-092

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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