PCN Number:	20231031008.1	**PCN Date:**	October 31, 2023
Title:	Qualification of RFAB using qualified Process Technology and Die Revision for select devices		
Customer Contact:	Change Management team	**Dept:**	Quality Services
Proposed 1st Ship Date:	Jan 31, 2024	**Estimated Sample Availability:**	Dec 1, 2023*

***Sample requests received after December 1, 2023 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 Materials
☐	Packing/Shipping/Labeling	☐	Test Process	☒	Wafer Fab Process

PCN Details

Description of Change:

Texas Instruments is pleased to announce the qualification of RFAB using the qualified process technology (TIB) for the selected devices listed below in the product affected section.

Current Fab Site			Additional Fab Site		
Current Fab Site	**Process**	**Wafer Diameter**	**Additional Fab Site**	**Process**	**Wafer Diameter**
CFAB	JI3	200 mm	RFAB	TIB	300 mm

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

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

Changes to product identification resulting from this PCN:

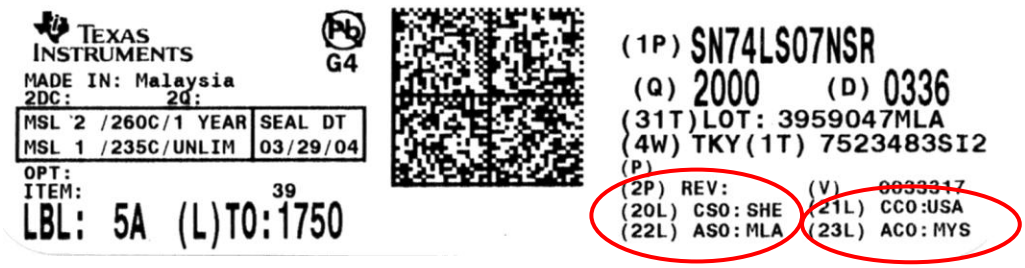
Fab Site Information:

Chip Site	Chip Site Origin Code (20L)	Chip Site Country Code (21L)	Chip Site City
CFAB	CU3	CHN	Chengdu
RFAB	**RFB**	**USA**	**Richardson**

Die Rev:

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

Sample product shipping label (not actual product label)



Product Affected:		
OP07CDR	OP07CP	

Qualification Results

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

Type	#	Test Name	Condition	Duration	Qual Device: OP07CDR	Qual Device: OP07CP	QBS Product Reference: OP07CDR	QBS Package Reference: NE5532P	QBS Package Reference: TS12A4514P	QBS Package Reference: UCC37322P	QBS Process Reference: LM2902BQPWRQ1	QBS Process Reference: TL431BQDBZR	QBS Package Reference: CD4093BQM96Q1	QBS Package Reference: TLC5916QDRQ1	QBS Package Reference: LM358BIDR
HAST	A2	Biased HAST	130C/85%RH	96 Hours	-	-	-	3/231/0	-	-	3/231/0	3/231/0	-	-	-
UHAST	A3	Autoclave	121C/15psig	96 Hours	-	-	-	-	1/77/0	3/231/0	-	-	3/231/0	3/231/0	-
UHAST	A3	Unbiased HAST	110C/85%RH	264 Hours	-	-	-	-	-	-	3/231/0	-	-	-	-
UHAST	A3	Unbiased HAST	130C/85%RH	96 Hours	-	-	-	-	-	-	-	3/231/0	-	-	3/231/0
TC	A4	Temperature Cycle	-65C/150C	500 Cycles	-	-	-	-	1/77/0	3/231/0	3/231/0	3/231/0	3/231/0	3/231/0	3/231/0
HTSL	A6	High Temperature Storage Life	150C	1000 Hours	-	-	-	-	-	-	3/231/0	3/231/0	-	-	-
HTSL	A6	High Temperature Storage Life	170C	420 Hours	-	-	-	-	1/77/0	3/231/0	-	-	-	-	1/77/0
HTOL	B1	Life Test	150C	300 Hours	-	-	1/77/0	3/231/0	-	-	-	3/231/0	-	-	-
HTOL	B1	Life Test	150C	408 Hours	-	-	-	-	-	-	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)	-	-	-	-	-	-	-	-	-	3/66/0	3/66/0	-
SD	C3	PB-Free Solderability	8 Hours Steam Age	-	-	-	-	3/66/0	-	3/66/0	-	-	-	-	-
ESD	E2	ESD CDM	-	1000 Volts	1/3/0	1/3/0	-	-	-	-	-	-	-	-	-
ESD	E2	ESD CDM	-	1500 Volts	-	-	-	-	-	-	3/9/0	-	-	-	-

Type	#	Test Name	Condition	Duration	Qual Device: OP07CDR	Qual Device: OP07CP	QBS Product Reference: OP07CDR	QBS Package Reference: NE5532P	QBS Package Reference: TS12A4514P	QBS Package Reference: UCC37322P	QBS Process Reference: LM2902BQPWRQ1	QBS Process Reference: TL431BQDBZR	QBS Package Reference: CD4093BQM96Q1	QBS Package Reference: TLC5916QDRQ1	QBS Package Reference: LM358BIDR
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	-	1/3/0	-	-	-	-	-	-	-	1/3/0
ESD	E2	ESD HBM	-	2000 Volts	-	-	-	-	-	-	3/9/0	1/3/0	-	-	-
LU	E4	Latch-Up	Per JESD78	-	1/3/0	-	1/3/0	-	-	-	3/18/0	1/6/0	-	-	1/3/0
CHAR	E5	Electrical Characterization	Per Datasheet Parameters	-	-	-	1/30/0	-	-	-	3/90/0	3/90/0	-	-	1/30/0

- QBS: Qual By Similarity
- Qual Device OP07CDR is qualified at MSL1 260C
- Qual Device OP07CP is qualified at NOT CLASSIFIED NOT CLASSIFIED

- 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-2208-083

Qualification Results

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

Type	#	Test Name	Condition	Duration	Qual Device: OP07CDR	QBS Process Reference: LM2902BQPWRQ1	QBS Process Reference: TL431BQDBZR	QBS Package Reference: OPA4991QDRQ1	QBS Package Reference: TMP1075DR
HAST	A2	Biased HAST	130C/85%RH	96 Hours	-	3/231/0	3/231/0	3/231/0	3/231/0
UHAST	A3	Autoclave	121C/15psig	96 Hours	-	-	-	3/231/0	-
UHAST	A3	Unbiased HAST	110C/85%RH	264 Hours	-	3/231/0	-	-	-
UHAST	A3	Unbiased HAST	130C/85%RH	96 Hours	-	-	3/231/0	-	3/231/0
TC	A4	Temperature Cycle	-65C/150C	500 Cycles	-	3/231/0	3/231/0	1/77/0	3/231/0
HTSL	A6	High Temperature Storage Life	150C	1000 Hours	-	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	-	-	-	1/45/0	-
HTOL	B1	Life Test	150C	300 Hours	1/77/0	-	3/231/0	-	-
HTOL	B1	Life Test	150C	408 Hours	-	3/231/0	-	1/77/0	-
ELFR	B2	Early Life Failure Rate	125C	48 Hours	-	3/2400/0	-	-	-
ESD	E2	ESD CDM	-	1500 Volts	-	3/9/0	-	1/3/0	1/3/0

Type	#	Test Name	Condition	Duration	Qual Device: OP07CDR	QBS Process Reference: LM2902BQPWRQ1	QBS Process Reference: TL431BQDBZR	QBS Package Reference: OPA4991QDRQ1	QBS Package Reference: TMP1075DR
ESD	E2	ESD CDM	-	1000 Volts	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	-	3/9/0	1/3/0	-	-
ESD	E2	ESD HBM	-	4000 Volts	-	-	-	1/3/0	-
LU	E4	Latch-Up	Per JESD78	-	1/3/0	3/18/0	1/6/0	1/6/0	-
CHAR	E5	Electrical Characterization	Per Datasheet Parameters	-	1/30/0	3/90/0	3/90/0	3/90/0	-

- QBS: Qual By Similarity
- Qual Device OP07CDR 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-2210-011

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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