PCN Number:	20240905000.1	**PCN Date:**	September 05, 2024
Title:	Qualification of UMC-F12 as additional Fab site for select LBC9 devices		
Customer Contact:	Change Management Team	**Dept:**	Quality Services
Proposed 1st Ship Date:	December 04, 2024	**Sample requests accepted until:**	October 05, 2024*

***Sample requests received after October 05, 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 addition of UMC-F12 as an additional Wafer Fab site option for the products listed in the "Product Affected" section of this document.

Current Fab Site			Additional Fab Site		
Current Fab Site	**Process**	**Wafer Diameter**	**Additional Fab Site**	**Process**	**Wafer Diameter**
RFAB	LBC9	300 mm	UMC-F12	LBC9	300 mm

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
RFAB	RFB	USA	Richardson
UMC-F12	**F12**	**TWN**	**Tainan**

Sample product shipping label (not actual product label):

Product Affected:

BQ25672RQMR	BQ25792RQMR	BQ25798RQMR
TPS25751DREFR	TPS25751SRSMR	

Qualification Results

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

Type	#	Test Name	Condition	Duration	Qual Device: BQ25792RQMR	QBS Reference: BQ25792RQMR
HAST	A2	Biased HAST	130C/85%RH	96 Hours	-	3/231/0
UHAST	A3	Unbiased HAST	130C/85%RH	96 Hours	-	3/231/0
TC	A4	Temperature Cycle	-55C/125C	700 Cycles	1/77/0	3/231/0
HTSL	A6	High Temperature Storage Life	170C	420 Hours	-	3/231/0
HTOL	B1	Life Test	125C	1000 Hours	1/77/0	3/231/0
PD	C4	Physical Dimensions	(per mechanical drawing)	-	-	3/15/0
ESD	E2	ESD CDM	-	1500 Volts	1/3/0	1/3/0
ESD	E2	ESD HBM	-	4000 Volts	1/3/0	1/3/0
LU	E4	Latch-Up	Per JESD78	-	1/6/0	1/3/0
CHAR	E5	Electrical Characterization	Min, Typ, Max Temp	-	-	1/30/0
FTY	E6	Final Test Yield	-	-	1/1/0	-

- QBS: Qual By Similarity
- Qual Device BQ25792RQMR 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

TI Qualification ID: R-CHG-2108-035

Qualification Results

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

Type	#	Test Name	Condition	Duration	Qual Device: BQ25798RQMR	QBS Package/Process/Product Reference: BQ25792RQMR	QBS Package/Process/Product Reference: BQ25792RQMR	QBS Process Reference: CD3253DB0YCHR
HAST	A2	Biased HAST	130C/85%RH	96 Hours	-	-	3/231/0	-
UHAST	A3	Unbiased HAST	130C/85%RH	96 Hours	-	-	3/231/0	-
TC	A4	Temperature Cycle	-55C/125C	700 Cycles	-	1/77/0	3/231/0	-
HTSL	A6	High Temperature Storage Life	170C	420 Hours	-	-	3/231/0	-
HTOL	B1	Life Test	125C	1000 Hours	-	1/77/0	3/231/0	3/231/0
ELFR	B2	ELFR	125C	48 Hours				3/3000/0
SD	C3	PB Solderability	Precondition w.155C Dry Bake (4 hrs +/- 15 minutes); PB Solder;	-	-	-	1/22/0	-

Type	#	Test Name	Condition	Duration	Qual Device: BQ25798RQMR	QBS Package/Process/Product Reference: BQ25792RQMR	QBS Package/Process/Product Reference: BQ25792RQMR	QBS Process Reference: CD3253DB0YCHR
SD	C3	PB-Free Solderability	Precondition w.155C Dry Bake (4 hrs +/- 15 minutes); PB-Free Solder;	-	-	-	3/66/0	-
PD	C4	Physical Dimensions	(per mechanical drawing)	-	-	-	3/15/0	-
ESD	E2	ESD CDM	-	250 Volts	1/3/0	-	-	-
ESD	E2	ESD HBM	-	1000 Volts	1/3/0	-	-	-
LU	E4	Latch-Up	Per JESD78	-	1/6/0	-	-	-
CHAR	E5	Electrical Characterization	Per Datasheet Parameters	-	1/30/0	-	-	-
FTY	E6	Final Test Yield	-	-	1/PASS	-	-	-

- QBS: Qual By Similarity
- Qual Device BQ25798RQMR 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/

TI Qualification ID: R-CHG-2108-003

Qualification Results

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

Type	#	Test Name	Condition	Duration	Qual Device: TPS65992SBGRSMR	Qual Device: TPS65992SBGRSMR	Qual Device: TPS65992EBGRSMR	Qual Device: TPS65992EBGRSMR	Qual Device: TPS65992DBGREFR	Qual Device: TPS65992DBGREFR	QBS Reference: PTPS65992SA0CRSMR	QBS Reference: PTPS65992SADRSMR
HAST	A2	Biased HAST	110C/85%RH	264 Hours	-	-	-	-	-	-	1/77/0	-
HAST	A2	Biased HAST	130C/85%RH	96 Hours	-	-	-	-	-	-	-	-
UHAST	A3	Autoclave	121C/15psig	96 Hours	-	-	-	-	-	-	1/77/0	-
UHAST	A3	Unbiased HAST	130C/85%RH	96 Hours	-	-	-	-	-	-	-	-
TC	A4	Temperature Cycle	-55C/125C	700 Cycles	-	-	-	-	-	-	-	-
TC	A4	Temperature Cycle	-65C/150C	500 Cycles	-	-	-	-	-	-	1/77/0	-
HTSL	A6	High Temperature Storage Life	170C	420 Hours	-	-	-	-	-	-	1/77/0	-
HTSL	A6	High Temperature Storage Life	175C	420 Hours	-	-	-	-	-	-	-	-
HTOL	B1	Life Test	125C	1000 Hours	-	-	-	-	-	-	2/154/0	1/77/0
ELFR	B2	Early Life Failure Rate	125C	48 Hours	-	-	-	-	-	-	2/1600/0	1/800/0
SD	C3	PB Solderability	Precondition w.155C Dry Bake (4 hrs +/- 15 minutes); PB Solder;	-	-	-	-	-	-	-	-	-
SD	C3	PB-Free Solderability	Precondition w.155C Dry Bake (4 hrs +/- 15 minutes); PB-Free Solder;	-	-	-	-	-	-	-	-	-
PD	C4	Physical Dimensions	(per mechanical drawing)	-	-	-	-	-	-	-	-	-

Type	#	Test Name	Condition	Duration	Qual Device: TPS65992SBGRSMR	Qual Device: TPS65992SBGRSMR	Qual Device: TPS65992EBGRSMR	Qual Device: TPS65992EBGRSMR	Qual Device: TPS65992DBGREFR	Qual Device: TPS65992DBGREFR	QBS Reference: PTPS65992SA0CRSMR	QBS Reference: PTPS65992SADRSMR
ESD	E2	ESD CDM	-	1000 Volts	-	-	-	-	-	-	-	-
ESD	E2	ESD CDM	-	1500 Volts	-	-	-	-	-	-	-	1/3/0
ESD	E2	ESD HBM	-	1500 Volts	-	-	-	-	-	-	-	1/3/0
ESD	E2	ESD HBM	-	2500 Volts	-	-	-	-	-	-	-	-
ESD	E2	ESD HBM	-	4000 Volts	-	-	-	-	-	-	-	-
LU	E4	Latch-Up	Per JESD78	-	-	-	-	-	-	-	-	1/3/0
CHAR	E5	Electrical Characterization	Per Datasheet Parameters	-	1/30/0	-	-	-	-	-	-	-
FTY	E6	Final Test Yield	-	-	1/1/0	1/1/0	1/1/0	1/1/0	1/1/0	1/1/0	-	-

- QBS: Qual By Similarity
- Qual Device TPS65992SBGRSMR is qualified at MSL2 260C
- Qual Device TPS65992SBGRSMR is qualified at MSL2 260C
- Qual Device TPS65992EBGRSMR is qualified at MSL2 260C
- Qual Device TPS65992EBGRSMR is qualified at MSL2 260C
- Qual Device TPS65992DBGREFR is qualified at MSL2 260C
- Qual Device TPS65992DBGREFR 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/

TI Qualification ID: R-CHG-2301-010

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