

PCN Number:	20210916000.1	PCN Date:	September 20, 2021
Title:	Qualification of additional Fab site (UMC-F12) and additional Assembly site (CARZ) for select LBC9 devices		
Customer Contact:	PCN Manager	Dept:	Quality Services
Proposed 1st Ship Date:	Dec 20, 2021	Estimated Sample Availability:	Date provided at sample request.
Change Type:			
<input checked="" type="checkbox"/>	Assembly Site	<input type="checkbox"/>	Assembly Process
<input checked="" type="checkbox"/>	Assembly Materials	<input type="checkbox"/>	Assembly Process
<input type="checkbox"/>	Design	<input type="checkbox"/>	Electrical Specification
<input type="checkbox"/>	Mechanical Specification	<input type="checkbox"/>	Electrical Specification
<input type="checkbox"/>	Test Site	<input type="checkbox"/>	Packing/Shipping/Labeling
<input type="checkbox"/>	Test Process	<input type="checkbox"/>	Packing/Shipping/Labeling
<input type="checkbox"/>	Wafer Bump Site	<input type="checkbox"/>	Wafer Bump Material
<input type="checkbox"/>	Wafer Bump Process	<input type="checkbox"/>	Wafer Bump Material
<input checked="" type="checkbox"/>	Wafer Fab Site	<input type="checkbox"/>	Wafer Fab Materials
<input type="checkbox"/>	Wafer Fab Process	<input type="checkbox"/>	Wafer Fab Materials
<input type="checkbox"/>	Part number change		

PCN Details

Description of Change:

Texas Instruments is pleased to announce the qualification of an additional fab (UMC-F12) and assembly site (CARZ) for the selected devices listed in the "Product Affected" section.

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

For the devices in in the group 1 device list below, construction differences are as follows:

	CDAT	CARZ
Mold Compound	4222198	SID#441086
Mount Compound	4207123	SID#443156

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
RFAB	RFB	USA	Richardson
UMC-F12	F12	TWN	Tainan

Assembly Site Information:

Assembly Site	Assembly Site Origin (22L)	Assembly Country Code (23L)	Assembly City
CDAT	CDA	CHN	Chengdu
CARZ	CSZ	CHN	Jiangsu

Sample product shipping label (not actual product label)



MADE IN: Malaysia
 2DC: 20:
 MSL '2 /260C/1 YEAR SEAL DT
 MSL 1 /235C/UNLIM 03/29/04
 OPT:
 ITEM: 39
 LBL: 5A (L)T0:1750

(1P) SN74LS07NSR
 (Q) 2000 (D) 0336
 (31T) LOT: 3959047MLA
 (4W) TKY (1T) 7523483SI2
 (P)
 (2P) REV: (V) 0033317
 (20L) CSO: SHE (21L) CCO: USA
 (22L) ASO: MLA (23L) ACO: MYS

Product Affected:

Group 1 - Adding UMC-F12 Fab Site, CARZ Assembly Site and BOM updates:

SN1905015RSMR	SN1905031RSMR	SN2011036RSMR	TPS25814RSMT
SN1905016RSMR	SN2009014RSMR	SN2011037RSMR	TPS25815RSMR
SN1905020RSMR	SN2009015RSMR	SN2011054RSMR	TPS65991ADRSMR
SN1905022RSMR	SN2009016RSMR	SN2011055RSMR	TPS65991AERSMR
SN1905023RSMR	SN2009017RSMR	SN2011057RSMR	TPS65992SADRSMR
SN1905025RSMR	SN2009018RSMR	SN2102044RSMR	TPS65992SAERSMR
SN1905026RSMR	SN2009019RSMR	TPS25750SRSMR	
SN1905028RSMR	SN2010019RSMR	TPS25814RSMR	

Group 2 - Adding UMC-F12 Fab Site only:

SN1905024RJKR	SN2009016RJKR	SN2010020RJKR	SN2011053RJKR
SN1905027RJKR	SN2009017RJKR	SN2011031RJKR	TPS25750DRJKR
SN2009014RJKR	SN2009018RJKR	SN2011032RJKR	TPS65992DADRJKR
SN2009015RJKR	SN2009019RJKR	SN2011033RJKR	TPS65992DAERJKR

Qualification Report

Approve Date 19-May-2021

Qualification Results

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

Type	Test Name / Condition	Duration	Qual Device: TPS65992DADRJKR	Qual Device: TPS65992DADRJKR	Qual Device: TPS65992SADRSMR	Qual Device: TPS65992SADRSMR	QBS Process Reference: TPS51486RJKR	QBS Product Reference: TPS65992RSM	QBS Product Reference: TPS65992RSMR	QBS Package Reference: TPD5S330RJK
AC	Autoclave 121C	96 Hours	-	-	-	-	3/231/0	1/77/0	-	3/231/0
CDM	ESD - CDM	500 V	-	-	-	1/3/0	3/9/0	-	1/3/0	1/3/0
ED	Electrical Characterization	Per Datasheet Parameters	-	-	-	1/30/0	3/90/0	-	1/Pass	1/30/0
ELFR	Early Life Failure Rate, 125C	48 hours	-	-	-	-	3/2400/0	-	-	-
HAST	Biased HAST, 110C/85%RH	264 hours	-	-	-	-	2/231/0	1/77/0	-	3/231/0
HBM	ESD - HBM	1000 V	-	-	-	1/3/0	-	-	1/3/0	-
HBM	ESD - HBM	2000 V	-	-	-	-	3/9/0	-	-	-
HTOL	Life Test, 125C	1000 hours	-	-	-	1/77/0	3/231/0	2/154/0	1/77/0	3/231/0
HTSL	High Temp Storage Bake 170C	420 Hours	-	-	-	-	3/231/0	1/77/0	-	3/231/0
LU	Latch-up, 25C	(Per JESD78, Class I)	-	-	-	1/6/0	3/18/0	-	1/6/0	-
LU	Latch-up, 125C	(per JESD78)	-	-	-	1/6/0	3/18/0	-	-	-
MQ	Manufacturability (Assembly)	(per mfg. Site specification)	1/Pass	1/Pass	1/Pass	1/Pass	3/Pass	-	1/Pass	3/3/0
MQ	Manufacturability (Wafer Fab)	(Approved by Fab)	-	-	-	1/Pass	3/Pass	-	1/Pass	-
TC	Temperature Cycle, -65/150C	500 cycles	-	-	-	1/77/0	3/231/0	1/77/0	-	3/231/0

- QBS: Qual By Similarity

- Qual Device TPS65992DADRJKR is qualified at LEVEL2-260C

- Qual Device TPS65992SADRSMR is qualified at LEVEL2-260C

- Device TPS65992DADRJKR contains multiple dies.

- 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

Qualification Report

Approve Date 24-August-2021

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

Type	Test Name / Condition	Duration	Qual Device: TPS65991AERSMR	Qual Device: TPS65992SAERSMR	Qual Device: TP65992DAERJKR	QBS Product Reference: TP65992SADR SMR	QBS Process Reference: TP51486RJR	QBS Product Reference: TP65992R SM	QBS Product Reference: TP65992R SMR	QBS Package Reference: TPD5S330RJK
AC	Autoclave 121C	96 Hours	-	-	-	-	3/231/0	1/77/0	-	3/231/0
CDM	ESD - CDM	500 V	-	-	-	1/3/0	3/9/0	-	1/3/0	1/3/0
ED	Electrical Characterization	Per Datasheet Parameters	-	-	-	1/30/0	3/90/0	-	1/Pass	1/30/0
ELFR	Early Life Failure Rate, 125C	48 hours	-	-	-	-	3/2400/0	-	-	-
HAST	Biased HAST, 110C/85%RH	264 hours	-	-	-	-	2/231/0	1/77/0	-	3/231/0
HBM	ESD - HBM	1000 V	-	-	-	1/3/0	-	-	1/3/0	-
HBM	ESD - HBM	2000 V	-	-	-	-	3/9/0	-	-	-
HTOL	Life Test, 125C	1000 hours	-	-	-	1/77/0	3/231/0	2/154/0	1/77/0	3/231/0
HTSL	High Temp Storage Bake 170C	420 Hours	-	-	-	-	3/231/0	1/77/0	-	3/231/0
LU	Latch-up, 25C	(Per JESD78, Class I)	-	-	-	1/6/0	3/18/0	-	1/6/0	-
LU	Latch-up, 125C	(per JESD78)	-	-	-	1/6/0	3/18/0	-	-	-
MQ	Manufacturability (Assembly)	(per mfg. Site specification)	1/Pass	1/Pass	1/Pass	1/Pass	3/Pass	-	1/Pass	3/3/0
MQ	Manufacturability (Wafer Fab)	(Approved by Fab)	-	-	-	1/Pass	3/Pass	-	1/Pass	-
TC	Temperature Cycle, -85/150C	500 cycles	-	-	-	1/77/0	3/231/0	1/77/0	-	3/231/0
YLD	Yield Evaluation	(per mfg. Site specification)	1/Pass	1/Pass	1/Pass	-	-	-	-	-

- QBS: Qual By Similarity

- Qual Device TPS65991AERSMR is qualified at LEVEL2-260C

- Qual Device TPS65992DAERJKR is qualified at LEVEL2-260C

- Qual Device TPS65992SAERSMR is qualified at LEVEL2-260C

- Device TPS65992DAERJKR contains multiple die

- 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

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