

PCN Number:	20190322000.1A	PCN Date:	March 29 2019
Title:	Qualification of additional Fab site (DMOS6) and Assembly site (CDAT) options for select devices		
Customer Contact:	PCN Manager	Dept:	Quality Services
Proposed 1st Ship Date:	June 25 2019	Estimated Sample Availability:	Date provided at sample request.
Change Type:			
<input checked="" type="checkbox"/>	Assembly Site	<input type="checkbox"/>	Assembly Process
<input type="checkbox"/>	Design	<input type="checkbox"/>	Electrical Specification
<input checked="" type="checkbox"/>	Test Site	<input type="checkbox"/>	Packing/Shipping/Labeling
<input checked="" type="checkbox"/>	Wafer Bump Site	<input type="checkbox"/>	Wafer Bump Material
<input checked="" type="checkbox"/>	Wafer Fab Site	<input type="checkbox"/>	Wafer Fab Materials
		<input type="checkbox"/>	Part number change

PCN Details

Description of Change:

Revision A is to correct the change type section and include the Bump site check box above.

Texas Instruments is pleased to announce the qualification of an additional fab (DMOS6) and assembly (CDAT) site for selected devices as listed below in the product affected section.

Current Fab Site				Additional Fab Site			
Fab Site	Process	Bump Site	Wafer Diameter	Fab Site	Process	Bump Site	Wafer Diameter
RFAB	LBC8	Clark-BP	300 mm	DMOS6	LBC8	JCAP-BP	300 mm

There are no material difference between devices currently manufactured and devices built with this manufacturing option.

Reason for Change:

Continuity of Supply

Anticipated impact on Form, Fit, Function, Quality or Reliability (positive / negative):

None

Anticipated impact on Material Declaration

<input checked="" type="checkbox"/>	No Impact to the Material Declaration	<input type="checkbox"/>	Material Declarations or Product Content reports are driven from production data and will be available following the production release. Upon production release the revised reports can be obtained from the TI ECO website .
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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
DMOS6	DM6	USA	Dallas

Assembly Site Information:

Assembly Site	Assembly Site Origin (22L)	Assembly Country Code (21L)	Assembly City
TI Clark	QAB	PHL	Angeles City, Pampanga
CDAT	CDA	CHN	Chengdu

Sample product shipping label (not actual product label)

Product Affected:

Group 1 Devices (Fab + Assy site qualification):

LM3643AYFFR	LM3644TTYFFR	LM3648TTYFFR	TLV61310YFFR
LM3643YFFR	LM3644YFFR	LM3648YFFR	TLV61320YFFR

Group 2 Device (Fab only qualification):

TLV61321YFFR



TI Information
Selective Disclosures

Qualification Report

Qualification Results

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

Type	Test Name / Condition	Duration	Qual Device: TLV61320YFFR	QBS Product Reference: LM3643YFFR	QBS Product Reference: LM3643YFFR	QBS Process Reference: TAS2552YFF	QBS Process Reference: TAS2553YFF
AC	Autoclave 121C	96 Hours	-	-	-	-	-
ED	Electrical Characterization	Per Datasheet Parameters	1/30/0	1/30/0	1/30/0	-	3/90/0
ELFR	Early Life Failure Rate, 125C	48 Hours	-	-	-	-	3/3000/0
CDM	ESD - CDM	1000 V	-	-	1/3/0	-	-
CDM	ESD - CDM	1500 V	-	1/3/0	-	-	3/9/0
HBM	ESD - HBM	2500 V	-	1/3/0	1/3/0	-	3/9/0
HAST	Biased HAST, 130C/85%RH	96 Hours	-	-	1/77/0	3/231/0	-
HTOL	Life Test, 125C	1000 Hours	-	2/154/0	1/77/0	-	3/231/0
HTOL	Life Test, 150C	300 Hours	-	-	-	-	-
HTSL	High Temp. Storage Bake, 150C	1000 Hours	-	-	-	-	-
HTSL	High Temp. Storage Bake, 170C	420 Hours	-	-	-	3/228/0	-
LU	Latch-up	(per JESD78)	-	1/6/0	1/6/0	-	3/18/0
TC	Temperature Cycle, -55/125C	700 Cycles	-	-	-	3/231/0	-
TC	Temperature Cycle, -65/150C	500 Cycles	-	-	-	-	-
UHAST	Unbiased HAST 130C/85%RH	96 Hours	-	-	-	3/228/0	-

Type	Test Name / Condition	Duration	QBS Package Reference: TAS2553YFF	QBS Package Reference: LM3631YFFR	QBS Package Reference: TPD12S015YFFR	QBS Package Reference: TPS65830YFF
AC	Autoclave 121C	96 Hours	-	-	-	-
ED	Electrical Characterization	Per Datasheet Parameters	3/90/0	1/30/0	-	-
ELFR	Early Life Failure Rate, 125C	48 Hours	1/321/0	1/305/0	-	-
CDM	ESD - CDM	1000 V	-	-	-	-
CDM	ESD - CDM	1500 V	3/9/0	-	-	-
HBM	ESD - HBM	2500 V	3/9/0	-	-	-
HAST	Biased HAST, 130C/85%RH	96 Hours	1/77/0	1/66/0	3/231/0	-
HTOL	Life Test, 125C	1000 Hours	3/231/0	1/77/0	-	-
HTOL	Life Test, 150C	300 Hours	-	-	3/231/0	3/231/0
HTSL	High Temp. Storage Bake, 150C	1000 Hours	-	2/154/0	3/231/0	-
HTSL	High Temp. Storage Bake, 170C	420 Hours	1/77/0	-	-	-
LU	Latch-up	(per JESD78)	3/18/0	1/6/0	-	-
TC	Temperature Cycle, -55/125C	700 Cycles	1/77/0	2/154/0	3/231/0	3/229/0
TC	Temperature Cycle, -65/150C	500 Cycles	-	-	-	-
UHAST	Unbiased HAST 130C/85%RH	96 Hours	1/77/0	-	3/231/0	3/228/0

- QBS: Qual By Similarity
- Qual Device TLV61320YFFR (uses G2MLM3643B0XXX die) is qualified at LEVEL1-260C
- 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 Information
Selective Disclosure

Qualification Report

Qualification Results

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

Type	Test Name / Condition	Duration	Qual Device: LM36923HYFFR	QBS Product Reference: LM36923HYFFR	QBS Product Reference: LM36923YFFR	QBS Product Reference: LM36922YFFR	QBS Product Reference: LM3643YFFR
AC	Autoclave 121C	96 Hours	-	-	-	-	-
ED	Electrical Characterization	Per Datasheet Parameters	-	1/30/0	1/30/0	1/30/0	2/60/0
ELFR	Early Life Failure Rate, 125C	48 Hours	-	-	-	-	-
CDM	ESD - CDM	1000 V	-	-	-	-	1/3/0
CDM	ESD - CDM	1500 V	-	1/3/0	1/3/0	1/3/0	1/3/0
HBM	ESD - HBM	2500 V	-	1/3/0	1/3/0	1/3/0	1/3/0
HAST	Biased HAST, 130C/85%RH	96 Hours	-	-	-	-	1/77/0
HTSL	High Temp. Storage Bake, 170C	420 Hours	-	-	-	-	-
HTSL	High Temp. Storage Bake, 150C	1000 Hours	-	-	-	-	-
HTOL	Life Test, 125C	1000 Hours	-	-	1/77/0	1/77/0	3/231/0
HTOL	Life Test, 150C	300 Hours	-	1/77/0	-	-	-
TC	Temperature Cycle, -55/125C	700 Cycles	-	-	-	-	-
TC	Temperature Cycle, -65/150C	500 Cycles	-	-	-	-	-
LU	Latch-up	(per JESD78)	-	1/12/0	1/12/0	1/12/0	1/12/0
MQ	Manufacturability (Assembly)	(per mfg. Site specification)	1/Pass	-	-	-	-
MQ	Manufacturability (Fab)	(per mfg. Site specification)	-	-	-	-	-
VQR	Visual Quality Reliability Inspection	Post Temp Cycle	-	-	-	-	-

Type	Test Name / Condition	Duration	QBS Product Reference: LM3644YFFR/LM3644TTYFFR	QBS Product Reference: TLV61310YFFR/TLV61320YFFR	QBS Process Reference: SH8350BCA0PAPG4	QBS Package Reference: LM3638A0RDYFDR	QBS Package Reference: LM3638A3YFDR
AC	Autoclave 121C	96 Hours	-	-	3/231/0	-	3/231/0
ED	Electrical Characterization	Per Datasheet Parameters	-	2/60/0	3/90/0	-	3/90/0
ELFR	Early Life Failure Rate, 125C	48 Hours	-	-	-	-	3/3000/0
CDM	ESD - CDM	1000 V	-	-	-	-	3/9/0
CDM	ESD - CDM	1500 V	1/3/0	-	3/9/0	-	3/9/0
HBM	ESD - HBM	2500 V	1/3/0	-	3/9/0	-	3/9/0
HAST	Biased HAST, 130C/85%RH	96 Hours	-	-	3/231/0	-	3/231/0
HTSL	High Temp. Storage Bake, 170C	420 Hours	-	-	3/231/0	-	3/231/0
HTSL	High Temp. Storage Bake, 150C	1000 Hours	-	-	-	-	-
HTOL	Life Test, 125C	1000 Hours	-	-	3/224/0	-	3/231/0
HTOL	Life Test, 150C	300 Hours	-	-	-	-	-
TC	Temperature Cycle, -55/125C	700 Cycles	-	-	-	3/231/0	-
TC	Temperature Cycle, -65/150C	500 Cycles	-	-	3/231/0	-	3/231/0
LU	Latch-up	(per JEDEC78)	1/6/0	-	6/18/0	-	3/18/0
MQ	Manufacturability (Assembly)	(per mfg. Site specification)	-	-	3/Pass	3/Pass	3/Pass
MQ	Manufacturability (Fab)	(per mfg. Site specification)	-	-	3/Pass	-	-
VQR	Visual Quality Reliability Inspection	Post Temp Cycle	-	-	-	3/6/0	-

- QBS: Qual By Similarity
- Qual Device LM36923HYFFR is qualified at LEVEL1-260C
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 -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

For questions regarding this notice, e-mails can be sent to the contacts shown below or your local Field Sales Representative.

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