PCN Number:	20220817003.1A	PCN Date:	October 20, 2023
Title:	Qualification of new Fab site (FFAB) using qualified Process Technology, Die Revision and additional Assembly site/BOM options for select devices		
Customer Contact:	Change Management team	Dept:	Quality Services
Proposed 1st Ship Date:	Jan 18, 2024	Sample Requests accepted until:	N/A*

***No samples for pack changes**

Change Type:					
☒	Assembly Site	☐	Assembly Process	☒	Assembly Materials
☒	Design	☐	Electrical Specification	☐	Mechanical Specification
☐	Test Site	☐	Packing/Shipping/Labeling	☐	Test Process
☐	Wafer Bump Site	☐	Wafer Bump Material	☐	Wafer Bump Process
☒	Wafer Fab Site	☒	Wafer Fab Materials	☒	Wafer Fab Process
		☐	Part number change		

PCN Details

Description of Change:

Revision A is to include reel dimension changes that were not included in the original PCN notification. Updates are in **highlight bold font** below.

Texas Instruments is pleased to announce the qualification of a new fab & process technology (FFAB, SLM) and assembly (JCETCZ Chuzhou) site/BOM options for selected devices as listed below in the product affected section.

Current Fab Site			New Fab Site		
Fab Site	**Process**	**Wafer Diameter**	**Fab Site**	**Process**	**Wafer Diameter**
SFAB	JI1	150 mm	FFAB	SLM	200 mm

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

Construction differences are noted below:

What	TFME	JCETCZ
Mold Compound	**SID# SL7300HX**	**SD#13101015401**
Mount Compound	**SID#A-01**	**EUTECTIC**
Top Protective Layer	**Nitride**	**Oxide/nitride**
Device symbolization orientation	**Vertical**	**Horizontal**
Reel Diameter	**357 mm**	**360 mm**
Reel Width	**35 mm**	**51.2 mm**

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-milimeter 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
SH-BIP-1	SHE	USA	Sherman
FR-BIP-1	**TID**	**DEU**	**Freising**

Die Rev:

Current	New
Die Rev [2P]	**Die Rev [2P]**
C	**C**

Assembly Site Information:

Assembly Site	Assembly Site Origin (22L)	Assembly Country Code (23L)	Assembly City
TFME	NFM	CHN	Economic Development Zone
JCETCZ	**JCC**	**CHN**	**Chuzhou**

Sample product shipping label (not actual product label):

Product Affected:

LM285LP-1-2	LM285LPRE3-1-2	LM385BLPE3-2-5	LM385LP-2-5
LM285LP-2-5	LM285LPRE3-2-5	LM385BLPR-1-2	LM385LPE3-2-5
LM285LPE3-1-2	LM385BLP-1-2	LM385BLPR-2-5	LM385LPR-1-2
LM285LPE3-2-5	LM385BLP-2-5	LM385BLPRE3-1-2	LM385LPR-2-5
LM285LPR-2-5	LM385BLPE3-1-2	LM385LP-1-2	LM385LPRE3-1-2

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

Qualification Report
Approve Date 10-MAY -2022

Qualification Results

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

Type	#	Test Name	Condition	Duration	Qual Device: LP385LP-2.5	QBS Product Reference: LM185-1.2RLQV	QBS Product /Package Reference: LM35CZ/NOPB	QBS Process Reference: LM2576HVT-5.0/NOPB
HAST	A2	Biased HAST	130C/85%RH	96 Hours	-	-	3/231/0	3/231/0
ACLV	A3	Autoclave	121C/15psig	96 Hours	-	-	-	3/231/0
TC	A4	Temperature Cycle	-55C/125C	700 Cycles	-	-	-	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	-	-	-	3/231/0
HTOL	B1	Life Test	125C	1000 Hours	-	1/45/0	3/231/0	3/231/0
HTOL	B1	Life Test	140C	480 Hours	-	-	-	-
ELFR	B2	Early Life Failure Rate	150C	24 Hours	-	-	-	3/2400/0
ESD	E2	ESD CDM	-	1000 Volts	-	-	1/3/0	1/3/0
ESD	E2	ESD CDM	-	1500 Volts	1/3/0	-	-	-
ESD	E2	ESD HBM	-	2000 Volts	-	-	1/3/0	-
ESD	E2	ESD HBM	-	2500 Volts	-	-	-	1/3/0
LU	E4	Latch-Up	Per JESD78	-	-	-	3/18/0	3/18/0
CHAR	E5	Electrical Characterization	Per Datasheet Parameters	-	3/90/0	1/30/0	3/90/0	3/90/0
FTY	E6	Final Test Yield	-	-	1/Pass	-	-	-
MQ	-	Manufacturability (Wafer Fab)	-	-	3/Pass	1/Pass		
MQ	-	Manufacturability (Assembly)	-	-	1/Pass	1/Pass		

- QBS: Qual By Similarity
- Qual Device LM385LP-2-5 has non-classified MSL.

- 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

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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