

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:																										
<input checked="" type="checkbox"/>	Assembly Site	<input type="checkbox"/>	Assembly Process	<input checked="" type="checkbox"/>	Assembly Materials																					
<input checked="" type="checkbox"/>	Design	<input type="checkbox"/>	Electrical Specification	<input type="checkbox"/>	Mechanical Specification																					
<input type="checkbox"/>	Test Site	<input type="checkbox"/>	Packing/Shipping/Labeling	<input type="checkbox"/>	Test Process																					
<input type="checkbox"/>	Wafer Bump Site	<input type="checkbox"/>	Wafer Bump Material	<input type="checkbox"/>	Wafer Bump Process																					
<input checked="" type="checkbox"/>	Wafer Fab Site	<input checked="" type="checkbox"/>	Wafer Fab Materials	<input checked="" type="checkbox"/>	Wafer Fab Process																					
		<input type="checkbox"/>	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.																										
<p>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.</p>																										
<table border="1"> <thead> <tr> <th colspan="3">Current Fab Site</th> <th colspan="3">New Fab Site</th> </tr> <tr> <th>Fab Site</th> <th>Process</th> <th>Wafer Diameter</th> <th>Fab Site</th> <th>Process</th> <th>Wafer Diameter</th> </tr> </thead> <tbody> <tr> <td>SFAB</td> <td>J11</td> <td>150 mm</td> <td>FFAB</td> <td>SLM</td> <td>200 mm</td> </tr> </tbody> </table>			Current Fab Site			New Fab Site			Fab Site	Process	Wafer Diameter	Fab Site	Process	Wafer Diameter	SFAB	J11	150 mm	FFAB	SLM	200 mm						
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Fab Site	Process	Wafer Diameter	Fab Site	Process	Wafer Diameter																					
SFAB	J11	150 mm	FFAB	SLM	200 mm																					
<p>The die was also changed as a result of the process change.</p> <p>Construction differences are noted below:</p>																										
<table border="1"> <thead> <tr> <th>What</th> <th>TFME</th> <th>JCETCZ</th> </tr> </thead> <tbody> <tr> <td>Mold Compound</td> <td>SID# SL7300HX</td> <td>SD# 13101015401</td> </tr> <tr> <td>Mount Compound</td> <td>SID# A-01</td> <td>EUTECTIC</td> </tr> <tr> <td>Top Protective Layer</td> <td>Nitride</td> <td>Oxide/nitride</td> </tr> <tr> <td>Device symbolization orientation</td> <td>Vertical</td> <td>Horizontal</td> </tr> <tr> <td>Reel Diameter</td> <td>357 mm</td> <td>360 mm</td> </tr> <tr> <td>Reel Width</td> <td>35 mm</td> <td>51.2 mm</td> </tr> </tbody> </table>						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
What	TFME	JCETCZ																								
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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
<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
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):



TEXAS INSTRUMENTS
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) CS0: SHE (21L) CC0:USA
(22L) AS0: MLA (23L) AC0: MYS

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: <u>LP385LP-2.5</u>	QBS Product Reference: <u>LM185-1.2RLQV</u>	QBS Product /Package Reference: <u>LM35CZ/NOPB</u>	QBS Process Reference: <u>LM2576HVT- 5.0/NOPB</u>
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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