

PCN Number:	20231031007.1		PCN Date:	October 31, 2023																				
Title:	Qualification of RFAB using qualified Process Technology, Die Revision, and additional Assembly site (MLA)/BOM options for select devices																							
Customer Contact:	Change Management team		Dept:	Quality Services																				
Proposed 1st Ship Date:	Jan 29, 2024		Sample requests accepted until:	Dec 1, 2023*																				
*Sample requests received after December 1, 2023 will not be supported.																								
Change Type:																								
<input checked="" type="checkbox"/> Assembly Site	<input checked="" type="checkbox"/> Design	<input type="checkbox"/> Wafer Bump Material																						
<input checked="" type="checkbox"/> Assembly Process	<input type="checkbox"/> Data Sheet	<input type="checkbox"/> Wafer Bump Process																						
<input checked="" type="checkbox"/> Assembly Materials	<input type="checkbox"/> Part number change	<input checked="" type="checkbox"/> Wafer Fab Site																						
<input type="checkbox"/> Mechanical Specification	<input type="checkbox"/> Test Site	<input checked="" type="checkbox"/> Wafer Fab Materials																						
<input type="checkbox"/> Packing/Shipping/Labeling	<input type="checkbox"/> Test Process	<input checked="" type="checkbox"/> Wafer Fab Process																						
PCN Details																								
Description of Change:																								
Texas Instruments is pleased to announce the addition of RFAB using the LBC8LVISO.2 qualified process technology and additional Assembly site (MLA) and BOM options for select devices listed below in the product affected section.																								
<table border="1"> <thead> <tr> <th colspan="3">Current Fab Site</th> <th colspan="3">Additional Fab site</th> </tr> <tr> <th>Current Fab Site</th> <th>Process</th> <th>Wafer Diameter</th> <th>Additional Fab site</th> <th>Process</th> <th>Wafer Diameter</th> </tr> </thead> <tbody> <tr> <td>DP1DM5</td> <td rowspan="2">LBC8LVISO.1</td> <td rowspan="2">200mm</td> <td rowspan="2">RFAB</td> <td rowspan="2">LBC8LVISO.2</td> <td rowspan="2">300mm</td> </tr> <tr> <td>MIHO8</td> </tr> </tbody> </table>			Current Fab Site			Additional Fab site			Current Fab Site	Process	Wafer Diameter	Additional Fab site	Process	Wafer Diameter	DP1DM5	LBC8LVISO.1	200mm	RFAB	LBC8LVISO.2	300mm	MIHO8			
Current Fab Site			Additional Fab site																					
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DP1DM5	LBC8LVISO.1	200mm	RFAB	LBC8LVISO.2	300mm																			
MIHO8																								
The die was also changed as a result of the process change.																								
Construction differences are as follows:																								
<table border="1"> <thead> <tr> <th></th> <th>TAI</th> <th>MLA</th> </tr> </thead> <tbody> <tr> <td>Bond Wire Composition, diameter</td> <td>Au, 0.96</td> <td>Cu, 0.8</td> </tr> </tbody> </table>				TAI	MLA	Bond Wire Composition, diameter	Au, 0.96	Cu, 0.8																
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Bond Wire Composition, diameter	Au, 0.96	Cu, 0.8																						
Qual details are provided in the Qual Data Section.																								
Reason for Change:																								
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.																								
<table border="1"> <thead> <tr> <th>RoHS</th> <th>REACH</th> <th>Green Status</th> <th>IEC 62474</th> </tr> </thead> <tbody> <tr> <td><input checked="" type="checkbox"/> No Change</td> <td><input checked="" type="checkbox"/> No Change</td> <td><input checked="" type="checkbox"/> No Change</td> <td><input checked="" type="checkbox"/> No Change</td> </tr> </tbody> </table>	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																
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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
DP1DM5	DM5	USA	Dallas
MIHO8	MH8	JPN	Ibaraki
RFAB	RFB	USA	Richardson

Die Rev:**Current****New**

Die Rev [2P]	Die Rev [2P]
A	A

Assembly Site Information:

Assembly Site	Assembly Site Origin (22L)	Assembly Country Code (23L)	Assembly City
TI Taiwan	TAI	TWN	Chung Ho, New Taipei City
MLA	MLA	MYS	Kuala Lumpur

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) CCO:USA
 (22L) AS0: MLA (23L) ACO: MYS

Product Affected:

ISO7710DR	ISO7720DR	ISO7721DR	ISO7721FDR
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Qualification Report

ISO772X D RFAB REDBULL MLA
Approve Date 20-October-2023

Qualification Results

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

Type	#	Test Name	Condition	Duration	Qual Device: ISO7721QDRQ1	Qual Device: ISO7720QDRQ1	QBS Reference: ISO6721BQDRQ1	QBS Reference: UCC23513QDWYQ1	QBS Reference: ISO6763QDWRQ1
HAST	A2	Biased HAST	130C/85%RH	96 Hours	-	-	3/231/0	-	3/231/0
UHA	A3	Autoclave	121C/15psig	96 Hours	-	-	3/231/0	-	3/231/0
TC	A4	Temperature Cycle	-65C/150C	500 Cycles	1/77/0	-	3/231/0	-	3/231/0
HTSL	A6	High Temperature Storage Life	150C	1000 Hours	-	-	-	-	3/135/0
HTOL	B1	Life Test	125C	1000 Hours	-	-	-	3/231/0	-
ELFR	B2	Early Life Failure Rate	125C	48 Hours	-	-	-	3/2400/0	-
SD	C3	PB Solderability	Precondition w.155C Dry Bake (4 hrs +/- 15 minutes)	-	-	-	1/15/0	-	-
SD	C3	PB-Free Solderability	Precondition w.155C Dry Bake (4 hrs +/- 15 minutes)	-	-	-	1/15/0	-	-
PD	C4	Physical Dimensions	Cpk>1.67	-	1/10/0	-	3/30/0	-	-

Type	#	Test Name	Condition	Duration	Qual Device: ISO7721QDRQ1	Qual Device: ISO7720QDRQ1	QBS Reference: ISO6721BQDRQ1	QBS Reference: UCC23513QDWYQ1	QBS Reference: ISO6763QDWRQ1
ESD	E2	ESD CDM	-	500 Volts	1/3/0	1/3/0	1/3/0	1/3/0	-
ESD	E2	ESD HBM	-	2000 Volts	1/3/0	1/3/0	1/3/0	1/3/0	-
LU	E4	Latch-Up	Per JESD78	-	1/6/0	1/6/0	1/6/0	1/6/0	-
CHAR	E5	Electrical Distributions	Cpk>1.67 Room, hot, and cold	-	1/30/0	1/30/0	3/90/0	3/90/0	3/90/0

- QBS: Qual By Similarity
- Qual Device ISO7721QDRQ1 is qualified at MSL2 260C
- Qual Device ISO7720QDRQ1 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-NPD-2301-069

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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