

PCN Number:	20241015003.1A		PCN Date:	November 05, 2024																																					
Title:	Qualification of RFAB using qualified Process Technology, Die Revision, & Assembly site (TI Mexico) & BOM options for select devices																																								
Customer Contact:	Change Management Team		Dept:	Quality Services																																					
Proposed 1st Ship Date:	Original: Jan 14, 2025 Rev A: Feb 5, 2025		Sample requests accepted until:	December 5, 2024*																																					
*Sample requests received after Dec 5, 2024 will not be supported (Rev A device only).																																									
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 Material																																				
<input checked="" type="checkbox"/>	Packing/Shipping/Labeling	<input type="checkbox"/>	Test Process	<input checked="" type="checkbox"/>	Wafer Fab Process																																				
PCN Details																																									
Description of Change:																																									
<p>Revision A is to announce the <u>addition</u> of a wire bond/diameter change for the Group 2 devices that was not included on the original PCN notification. For the devices in Group 2 ONLY, the expected first shipment date will be 90 days from the date of this notice, and sample requests will be accepted until 30 days from the date of this notice. The proposed 1st ship date of January 14, 2025 still applies for the Group 1 set of devices.</p> <p>Texas Instruments is pleased to announce the addition of RFAB using the TIB qualified process technology and additional Assembly site (TI Mexico) & BOM options for the devices listed below.</p> <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>SFAB</td> <td>J1-PWR1</td> <td>150 mm</td> <td>RFAB</td> <td>TIB</td> <td>300 mm</td> </tr> </tbody> </table> <p>The die was also changed as a result of the process change.</p> <p>Construction differences are as follows:</p> <p>Group 1 BOM Table (RFAB/Process migration, die change & BOM update)</p> <table border="1"> <thead> <tr> <th></th> <th>Current</th> <th>Proposed</th> </tr> </thead> <tbody> <tr> <td>Wire bond diam/type</td> <td>0.96mil Cu</td> <td>0.8mil Cu</td> </tr> <tr> <td>Pin 1 device marking</td> <td>Stripe</td> <td>Dot</td> </tr> </tbody> </table> <p>Group 2 BOM Table (RFAB/Process migration, die change plus TI Mexico as new Assembly site & device marking update)</p> <table border="1"> <thead> <tr> <th></th> <th>MLA</th> <th>FMX</th> </tr> </thead> <tbody> <tr> <td>Wire bond diam/type</td> <td>0.96mil Cu</td> <td>0.8mil Cu</td> </tr> <tr> <td>Pin 1 device marking</td> <td>Stripe</td> <td>Dot</td> </tr> </tbody> </table> <p>Datasheet updates are included in PCN # 20241015002.1.</p> <p>Qual details are provided in the Qual Data Section.</p> <p>Reason for Change:</p> <p>These changes are part of our multiyear plan to transition products from our 150-millimeter factories to newer, more efficient manufacturing processes and technologies, underscoring our commitment to product longevity and supply continuity.</p> <p>Anticipated impact on Form, Fit, Function, Quality or Reliability (positive / negative):</p> <p>None</p>						Current Fab Site			Additional Fab Site			Current Fab Site	Process	Wafer Diameter	Additional Fab Site	Process	Wafer Diameter	SFAB	J1-PWR1	150 mm	RFAB	TIB	300 mm		Current	Proposed	Wire bond diam/type	0.96mil Cu	0.8mil Cu	Pin 1 device marking	Stripe	Dot		MLA	FMX	Wire bond diam/type	0.96mil Cu	0.8mil Cu	Pin 1 device marking	Stripe	Dot
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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

☒ No Change

REACH

☒ No Change

Green Status

☒ No Change

IEC 62474

☒ 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
RFAB	RFB	USA	Richardson

Die Rev:

Current

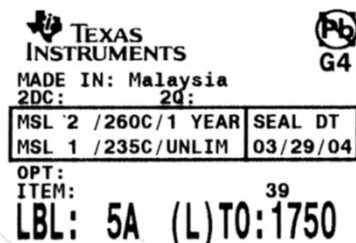
New

Die Rev [2P]	Die Rev [2P]
- , B	C

Assembly Site Information:

Assembly Site	Assembly Site Origin (22L)	Assembly Country Code (23L)	Assembly City
TI Malaysia	MLA	MYS	Kuala Lumpur
TI Mexico	MEX	MEX	Aguascalientes

Sample product shipping label (not actual product label):



(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 Device List: (RFAB/Process migration, die change & BOM update)

TL2842BDR	TL3842DRE4-8	UC2843AD8TRG4	UC3843AD8TR
TL2842BDR-8	TL3842P	UC2843ADTR	UC3843AD8TRG4
TL2842DR-8	TL3842PE4	UC2843D8TR	UC3843ADTR
TL2843BDR-8	TL3843BDR-8	UC2843D8TRG4	UC3843D8TR
TL2843BDRG4-8	TL3843DR-8	UC2844AD8TR	UC3843D8TRG4
TL2843DR-8	TL3843P	UC2844AD8TRG4	UC3843DTR
TL2843DRG4-8	TL3844BDR	UC2844ADTR	UC3844AD8TR
TL2844BDR	TL3844BDR-8	UC2844D8TR	UC3844ADTR
TL2844BDR-8	TL3844DR-8	UC2844DTR	UC3844D8TR
TL2844BDRG4-8	TL3844P	UC2844N	UC3844DTR
TL2844DR	TL3844PE4	UC2844NG4	UC3844DTRG4
TL2844DR-8	TL3845BDR-8	UC2845AD8TR	UC3845AD8TR
TL2844DRG4	TL3845DR-8	UC2845AD8TRG4	UC3845AD8TRG4
TL2845BDR-8	TL3845P	UC2845D8TR	UC3845AN

TL2845BDRG4-8	TL3845PE4	UC2845D8TRG4	UC3845ANG4
TL2845DR-8	UC2842AD8TR	UC3842AD8TR	UC3845D8TR
TL3842BDR-8	UC2842ADTR	UC3842AD8TRG4	UC3845D8TRG4
TL3842DR-8	UC2843AD8TR	UC3842ADTR	

Group 2 Device: (RFAB/Process migration, die change plus TI Mexico as new Assembly site & BOM update)

TL2843BDR	TL2843DRE4	TL2845DRG4	TL3843BDR
TL2843DR	TL2845DR	TL3842BDR	TL3843DR

For alternate parts with similar or improved performance, please visit the product page on [TI.com](http://ti.com)

Qualification Results

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

Type	#	Test Name	Condition	Duration	Qual Device: TL2843BD-8	Qual Device: TL3843P	Qual Device: UC2843AD	QBS Reference: UC2843AQD8RCT
HAST	A2	Biased HAST	130C/85%RH	96 Hours	1/77/0	-	-	3/231/0
UHAST	A3	Autoclave	121C/15psig	96 Hours	1/77/0	-	-	3/231/0
TC	A4	Temperature Cycle	-65C/150C	500 Cycles	3/231/0	1/77/0	-	3/231/0
HTSL	A6	High Temperature Storage Life	150C	1000 Hours	1/77/0	-	-	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	-	-	-	-	3/30/0
ESD	E2	ESD CDM	-	250 Volts	1/3/0	1/3/0	1/3/0	-
ESD	E2	ESD CDM	-	500 Volts	-	-	-	1/3/0
ESD	E2	ESD HBM	-	1000 Volts	1/3/0	-	1/3/0	-
ESD	E2	ESD HBM	-	2000 Volts	-	-	-	1/3/0

Type	#	Test Name	Condition	Duration	Qual Device: TL2843BD-8	Qual Device: TL3843P	Qual Device: UC2843AD	QBS Reference: UC2843AQD8RCT
LU	E4	Latch-Up	Per JESD78	-	1/3/0	-	1/3/0	1/6/0
CHAR	E5	Electrical Characterization	Per Datasheet Parameters	-	1/30/0	-	-	-
CHAR	E5	Electrical Distributions	Cpk>1.67 Room, hot, and cold	-	-	-	-	3/90/0

- QBS: Qual By Similarity, also known as Generic Data
- Qual Device TL2842BD-8 is qualified at MSL1 260C
- Qual Device TL2843BD-8 is qualified at MSL1 260C
- Qual Device TL2844BD-8 is qualified at MSL1 260C
- Qual Device TL2845BD-8 is qualified at MSL1 260C
- Qual Device UC2843AD is qualified at MSL1 260C
- Qual Device TL2844D is qualified at MSL1 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-2111-122

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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