

PCN Number:	20221031001.1		PCN Date:	November 01, 2022	
Title:	Qualification of CFAB and additional assembly BOM options for select LBC4 devices				
Customer Contact:	PCN Manager		Dept:	Quality Services	
Proposed 1st Ship Date:	Jan 31, 2023		Sample requests accepted until:	Nov 30, 2022*	
*Sample requests received after November 30, 2022 will not be supported.					
Change Type:					
<input type="checkbox"/>	Assembly Site	<input type="checkbox"/>	Assembly Process	<input checked="" type="checkbox"/>	Assembly Materials
<input 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 type="checkbox"/>	Wafer Fab Process
		<input type="checkbox"/>	Part number change		
PCN Details					
Description of Change:					
Texas Instruments is pleased to announce the qualification of a new fab site (CFAB) and assembly 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
DL-LIN	LBC4	150 mm	CFAB	LBC4	200 mm
DL-LIN	LBC4	200 mm			
Additionally, there will be assembly BOM options introduced for these devices:					
Group 2: (DFAB to CFAB Wafer Fab site & BOM update)					
		Current	Additional		
	Bond wire composition, diameter	Au, 0.96 mils	Cu, 0.96 mils		
	Mold Compound	4211471	4205442		
	Mount Compound	4147858	4211470		
Reason for Change:					
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.					
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
DL-LIN	DLN	USA	Dallas
CFAB	CU3	CHN	Chengdu

Sample product shipping label (not actual product label):

Product Affected:

Group 1 Device list (DFAB to CFAB Wafer Fab site)

UCC28600D	UCC29002D	UCC29002DR	UCC39002D
UCC28600DR	UCC29002D/1	UCC29002DR/1	UCC39002DR

Group 2 Device list (DFAB to CFAB Wafer Fab site & BOM update)

BQ30421DBT	BQ3055DBT	BQ30Z55DBT	BQ77PL157APW-4225
BQ30421DBT R	BQ30Z551DBT R-V100	BQ30Z55DBT R	BQ77PL157APWR-4225
BQ30424DBT	BQ30Z551DBT-V100	BQ30Z55DBT-R1	BQ8055DBT-D1
BQ30424DBT R	BQ30Z555DBT	BQ30Z55DBT-R2	BQ8055DBT R-D1
BQ30471DBT R	BQ30Z555DBT R	BQ30Z55DBT R-R1	BQ80S55DBT
BQ30471DBT-R1	BQ30Z555DBT-R2	BQ30Z55DBT R-R2	BQ80S55DBT R
BQ30471DBT R-R1	BQ30Z555DBT R-R2	BQ30Z55DBT-V100	

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

Qualification Report
Approve Date 13-Jun-2022

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

Type	Test Name / Condition	Duration	Qual Device: BQ77PL157APWR-4225
ED	Electrical Characterization	Per Datasheet Parameters	1/30/0
CDM	ESD CDM	500V	1/3/0
HBM	ESD HBM	2500V	1/3/0
LU	Latch-up	per JESD78	1/6/0
MQ	Manufacturability (Assembly)	(per mfg. site specification)	1/PASS
MQ	Manufacturability (Wafer Fab)	(per mfg. site specification)	1/PASS

- Qual Device BQ77PL157APWR-4225 is qualified at LEVEL2-260CG
- Qual Device BQ77PL157APWR-4225 contains multiple dies.

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

Qualification Report
Approve Date 06-MAY-2022

Qualification Results

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

Type	#	Test Name	Condition	Duration	Qual Device: BQ24085DRCR	Package QBS: TPS63000DRCR	Package QBS: MSP430FR5969IRGZR	Process QBS: SN65HVDA195QDRQ1
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	3/231/0
TC	A4	Temperature Cycle	-65C/150C	500 Cycles	-	3/231/0	3/231/0	3/231/0
HTSL	A6	High Temperature Storage Life	175C	500 Hours	-	-	-	1/45/0
HTSL	A6	High Temperature Storage Life	150C	1000 Hours	-	-	3/231/0	-
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)	-	-	3/66/0	-	1/15/0
PD	C4	Physical Dimensions	Cpk>1.67	-	-	3/15/0	-	3/30/0
ESD	E2	ESD CDM	-	2000 Volts	1/3/0	-	-	-
ESD	E2	ESD HBM	-	3000 Volts	1/3/0	-	-	-
LU	E3	Latch-up	-	Per JESD78	1/6/0	-	-	-
CHAR	E5	Electrical Distributions	Cpk>1.67 Room, hot, and cold	-	1/Pass	-	-	3/90/0

- QBS: Qual By Similarity
- Qual Device BQ24085DRCR 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/>

Green/Pb-free Status:

Qualified Pb-Free(SMT) and Green

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Location	E-Mail
WW Change Management Team	PCN_ww_admin_team@list.ti.com

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