

12500 TI Boulevard, MS 8640, Dallas, Texas 75243

PCN# 20160823000 Qualification of RFAB for Select LBC8 Devices Change Notification / Sample Request

Date: 8/30/2016

To: PREMIER FARNELL PCN

Dear Customer:

This is an announcement of a change to a device that is currently offered by Texas Instruments. The details of this change are on the following pages.

We request you acknowledge receipt of this notification within **30** days of the date of this notice. Lack of acknowledgement of this notice within 30 days constitutes acceptance of the change. If you require samples or additional data to support your evaluation, please request within 30 days.

The proposed first ship date is indicated on page 3 of this notification, unless customer agreement has been reached on an earlier implementation of the change.

This notice does not change the end-of-life status of any product. Should product affected be on a previously issued product withdrawal/discontinuance notice, this notification does not extend the life of that product or change the life time buy offering/discontinuance plan.

For questions regarding this notice, contact your local Field Sales Representative or the PCN Manager (PCN www admin team@list.ti.com).

Sincerely,

PCN Team SC Business Services

20160823000 Attachment: 1

Products Affected:

The devices listed on this page are a subset of the complete list of affected devices. According to our records, these are the devices that you have purchased within the past twenty-four (24) months. The corresponding customer part number is also listed, if available.

DEVICE AFE4404YZPT **CUSTOMER PART NUMBER**

null

Technical details of this Product Change follow on the next page(s).

DCN Normalian		2016	0022000			-	CN D-4	.	00/20/2016
			0823000	. D		P	CN Dat	e:	08/30/2016
Title: Qualification of RFAB for Select LBC8 Devices									
Customer Contact:			PCN Manager Dep		ot:			Quality Services	
Proposed 1 st SI	nip Date:	:	11/30/2016 Estimated Sample Availability:				Date provided at sample request.		
Change Type:									
Assembly S	ite		Assembly Process Assembly Materia						
Design			Electrical Specification						l Specification
Test Site	C:L-		Packing/Shipping/Labeling			\blacksquare	Test Process Wafer Bump Process		
Wafer Bump Wafer Fab S			Wafer Bump Material Wafer Fab Materials				Wafer Fab Process		
Walei Fab S	oite	L [Part number				Wafer Fab Process		
		[·	Details					
Description of	Change:		T CIV	Details					
Texas Instrumer additional wafer		ce for		d in the "Product	Affe	cted		n.	unity as an
Current Fab	Proce		Wafer	Additional				<u> </u>	Wafer
Site	1 100	C33	Diameter	Fab Site		Process			Diameter
DP1DM5	LBC	:8	200 mm	RFAB		LBC	28		300 mm
Anticipated im None		Form,	Fit, Function, (Quality or Relia	bility	/ (p	ositive	/ n	egative):
Changes to pro	duct ide	ntifica	ation resulting	from this PCN:					
Current									
Chip Sites Chip		Chip S	Site Origin Code	•	Chip Site Country Code (211) Chip Site		te City		
			(20L)	Code (ZIL)		C11	•	-	
DP1DM5			DM5	USA	USA			Dal	las
New		<u> </u>							
Chip Site Chip		Chip	Site Origin Code	Chip Site Country Code (21L)		Ch	ip Si	te City	
RFAB			(20L) RFB	USA		R	icha	rdson	
	RFAB RFB USA Richardson Sample product shipping label (not actual product label)								
TEXAS INSTRUMENTS MADE IN: Malaysia 2DC: 2Q: MSL '2 /260C/1 YEAR SEAL DT MSL 1 /235C/UNLIM 03/29/04 OPT: ITEM: 39 LBL: 5A (L) T0: 1750 (1P) \$N74L\$07N\$R (Q) 2000 (D) 0336 (31T) LOT: 3959047MLA (4W) TKY(1T) 7523483\$I2 (P) (2P) REV. (21L) CCO:USA (22L) ASU: MLA (23L) ACO: MYS							2		
Product Affects	<u> </u>			,===,,		,,	,		
		A E E 4 4 4	24VZDT						
AFE4404YZPR		AFE44	04YZPT						

Qualification Report

AFE4404YZP (WCSP) at TI-CLARK and RFAB

Approve Date 04-Aug-2016

Product Attributes

Attributes	Qual Device: AFE4404YZP	QBS Product Reference: AFE4404YZP	QBS Process Reference: SH8350BCA0PAPG4_TIPI	QBS Package Reference: TPA2010D1YZF	QBS Package Reference: TPA4411YZH	
Assembly Site	CLARK-AT	CLARK-AT	PHI	CLARK-AT	TI-Clark	
Package Family	WCSP	WCSP	HTQFP	WCSP	WCSP	
Wafer Fab Supplier	RFAB	DMOS5	RFAB	MIHO8	DLN	
Wafer Process	LBC8LV	LBC8LV	LBC8LV	A12	LBC3S	

⁻ QBS: Qual By Similarity

Qualification Results

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

Туре	Test Name / Condition	Duration	Qual Device: AFE4404YZP	QBS Product Reference: AFE4404YZP	QBS Process Reference: SH8350BCA0PAPG4_TIPI	QBS Package Reference: TPA2010D1YZF	QBS Package Reference: TPA4411YZH
AC	Autoclave 121C	96 Hours	-	-	3/231/0	-	-
ED	Electrical Characterization	Per Datasheet Parameters	Pass	Pass	Pass	Pass	Pass
HAST	Biased HAST, 130C/85%RH	96 Hours	-	-	3/231/0	3/231/0	1/76/0
HBM	ESD - HBM	1500 V	1/3/0	-	-	-	-
CDM	ESD - CDM	1500 V	1/3/0	1/3/0	1/5/0	-	-
HTOL	Life Test, 125C	1000 Hours	-	-	3/224/0		-
HTOL	Life Test, 150C	300 Hours	-	-	-	3/231/0	1/77/0
HTSL	High Temp. StorageBake, 170C	420 Hours	-	-	3/231/0	3/231/0	1/77/0
LU	Latch-up	(per JESD78)	1/6/0	1/6/0	3/48/0	-	-
PD	Physical Dimensions		-	-	-	3/15/0	1/5/0
SBS	Bump Shear	Unstressed	-	-	-	3/150/0	1/50/0
TC	Temperature Cycle, -55/125C	700 Cycles	-	-	-	3/231/0	1/77/0
TC	Temperature Cycle, -65/150C	500 Cycles	-	-	3/231/0	-	-
UHAST	Unbiased HAST, 130C/85%RH	96 Hours	-	-	-	3/231/0	1/77/0

⁻ Preconditioning was performed for Autoclave, Unbiased HAST, THB/Biased HAST, Temperature Cycle, Thermal Shock, and HTSL, as applicable

Green/Pb-free Status: Qualified Pb-Free (SMT) and Green

Qualification Report

SN1502019YZP (WCSP) at TI-CLARK and RFAB Approve Date 04-Aug-2016

Product Attributes

Attributes	Qual Device: SN1502019YZPR	QBS Product Reference: AFE4404YZP	QBS Process Reference: SH8350BCA0PAPG4_TIPI	QBS Package Reference: TPA2010D1YZF	QBS Package Reference: TPA4411YZH
Assembly Site	CLARK AT	CLARK-AT	PHI	TI-Clark	TI-Clark
Package Family	WCSP	WCSP	HTQFP	WCSP	WCSP
Wafer Fab Supplier	RFAB	DMOS5	RFAB	MIHO8	DLN
Wafer Process	LBC8LV	LBC8LV	LBC8LV	3370A12	LBC3S

⁻ QBS: Qual by Similarity

Qualification Results

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

Туре	Test Name / Condition	Duration	Qual Device: SN1502019YZPR	QBS Product Reference: AFE4404YZP	QBS Process Reference: SH8350BCA0PAPG4_TIPI	QBS Package Reference: TPA2010D1YZF	QBS Package Reference: TPA4411YZH
AC	Autoclave 121C	96 Hours	-	-	3/231/0	-	-
ED	Electrical Characterization	Per Datasheet Parameters	-	Pass	Pass	Pass	Pass
HAST	Biased HAST, 130C/85%RH	96 Hours	-	-	3/231/0	3/231/0	1/76/0
HBM	ESD - HBM	1500 V	-	1/3/0	-	-	-
CDM	ESD - CDM	1500 V	-	1/3/0	1/5/0	-	-
HTOL	Life Test, 125C	1000 Hours	-	-	3/224/0	-	-
HTOL	Life Test, 150C	300 Hours	-	-	-	3/231/0	1/77/0
HTSL	High Temp. Storage Bake, 170C	420 Hours	-	-	3/231/0	3/231/0	1/77/0
LU	Latch-up	(per JESD78)	-	1/6/0	3/48/0	-	-
PD	Physical Dimensions	-	-	-	-	3/15/0	1/5/0
SBS	Bump-Shear	Unstressed	-	-	-	3/150/0	1/50/0
TC	Temperature Cycle, -55/125C	700 Cycles	-	-	-	3/231/0	1/77/0
TC	Temperature Cycle, -65/150C	500 Cycles	-	-	3/231/0	-	-
UHAST	Unbiased HAST, 130C/85%RH	96 Hours	-	-	-	3/231/0	1/77/0

Green/Pb-free Status: Qualified Pb-Free (SMT) and Green

⁻ Qual Device AFE4404YZP is qualified at LEVEL1-260CG

⁻ The following are equivalent HTOL options based on an activation energy of 0.7eV; 152C/1k Hours, 140C/480 Hours, 150C/300 Hours, and 155C/240 Hours
- The following are equivalent HTOL options based on an activation energy of 0.7eV; 150C/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/152C/700 Cycles and -55C/150C/500 Cycles
- Quality and Environmental data is available at TI's external Web site: http://www.ti.com/

⁻ Qual Device SN1502019YZPR is qualified at LEVEL1-260CG

⁻ Preconditioning was performed for Autoclave, Unbiased HAST, THB/Biased HAST, Temperature Cycle, Thermal Shook, 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/

For questions regarding this notice, e-mails can be sent to the regional contacts shown below, or you can contact your local Field Sales Representative.

Location	E-Mail
USA	PCNAmericasContact@list.ti.com
Europe	PCNEuropeContact@list.ti.com
Asia Pacific	PCNAsiaContact@list.ti.com
Japan	PCNJapanContact@list.ti.com