



12500 TI Boulevard, MS 8640, Dallas, Texas 75243

**PCN 20200924007.2
Qualification of RFAB/Clark-PR for LP8756x devices
Final Change Notification**

Date: November 04, 2020
To: MOUSER PCN

Dear Customer:

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

Texas Instruments requires acknowledgement of 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. 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.

If samples or additional data are required, requests must be received within 30 days of acknowledgement as samples are not built ahead of the change. You may contact the PCN Manager or your local Field Sales Representative to acknowledge this PCN and request samples or additional data.

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 Team ([PCN ww admin team@list.ti.com](mailto:PCN_admin_team@list.ti.com)). For sample requests or sample related questions, contact your field sales representative.

Sincerely,

PCN Team
SC Business Services

20200924007.2
Final Change Notification
Attachments

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 sixty (60) months. The corresponding customer part number is also listed, if available.

DEVICE	CUSTOMER PART NUMBER
LP87521ERNFTQ1	null
LP87522BRNFTQ1	null
LP87523JRNFTQ1	null
LP87524BRNFRQ1	null
LP87524BRNFTQ1	null
LP87524JRNFRQ1	null
LP87524JRNFTQ1	null
LP87524PRNFTQ1	null
LP87524TRNFTQ1	null
LP87525BRNFTQ1	null
LP875610RNFTQ1	null
LP87561IRNFTQ1	null
LP875620RNFTQ1	null
LP875630RNFTQ1	null
LP875640RNFTQ1	null
LP875650RNFTQ1	null
LP87565CRNFRQ1	null
LP87565CRNFTQ1	null
LP875701ARNFTQ1	null

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

PCN Number:	20200924007.2		PCN Date:	Nov. 4, 2020																			
Title:	Qualification of RFAB/Clark-PR for LP875x devices																						
Customer Contact:	PCN Manager		Dept:	Quality Services																			
Proposed 1st Ship Date:	Apr. 4, 2021		Estimated Sample Availability:	Date provided at sample request																			
Change Type:																							
☐ Assembly Site	☐ Design	☐ Wafer Bump Site																					
☐ Assembly Process	☐ Data Sheet	☐ Wafer Bump Material																					
☐ Assembly Materials	☐ Part number change	☐ Wafer Bump Process																					
☐ Mechanical Specification	☒ Test Site	☒ Wafer Fab Site																					
☐ Packing/Shipping/Labeling	☐ Test Process	☒ Wafer Fab Materials																					
		☐ Wafer Fab Process																					
PCN Details																							
Description of Change:																							
Texas Instruments Incorporated is announcing the qualification of RFAB Wafer Fab site and Clark Probe site for LP8756x devices.																							
<table border="1"> <thead> <tr> <th colspan="3">Current</th> <th colspan="3">New</th> </tr> <tr> <th>Wafer Fab Site</th> <th>Process</th> <th>Wafer Diameter</th> <th>Wafer Fab Site</th> <th>Process</th> <th>Wafer Diameter</th> </tr> </thead> <tbody> <tr> <td>DP1DM5</td> <td>LBC8</td> <td>200 mm</td> <td>RFAB</td> <td>LBC8</td> <td>300 mm</td> </tr> </tbody> </table>						Current			New			Wafer Fab Site	Process	Wafer Diameter	Wafer Fab Site	Process	Wafer Diameter	DP1DM5	LBC8	200 mm	RFAB	LBC8	300 mm
Current			New																				
Wafer Fab Site	Process	Wafer Diameter	Wafer Fab Site	Process	Wafer Diameter																		
DP1DM5	LBC8	200 mm	RFAB	LBC8	300 mm																		
<table border="1"> <thead> <tr> <th>Current</th> <th>New</th> </tr> </thead> <tbody> <tr> <td>Probe Site</td> <td>Probe Site</td> </tr> <tr> <td>DL-LIN</td> <td>CLARK-PR</td> </tr> </tbody> </table>						Current	New	Probe Site	Probe Site	DL-LIN	CLARK-PR												
Current	New																						
Probe Site	Probe Site																						
DL-LIN	CLARK-PR																						
Reason for Change:																							
Continuity of Supply.																							
Anticipated impact on Fit, Form, Function, Quality or Reliability (positive / negative):																							
None.																							
Changes to product identification resulting from this PCN:																							
Current																							
Chip Sites	Chip Site Origin Code (20L)	Chip Site Country Code (21L)	Chip Site City																				
DP1DM5	DM5	USA	Dallas																				
New																							
Chip Site	Chip Site Origin Code (20L)	Chip Site Country Code (21L)	Chip Site City																				
RFAB	RFB	USA	Richardson																				
Sample product shipping label (not actual product label)																							
 TEXAS INSTRUMENTS MADE IN: Malaysia 2DC: 20: MSL 2 / 260C / 1 YEAR MSL 1 / 235C / UNLIM OPT: 39 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 (20) CS0: SHE (2) CCO: USA (22L) AS0: MLA (23L) ACO: MYS																							

Product Affected:

LP87514BRNFRQ1	LP87524BRNFTQ1	LP875613RNFRQ1	LP87563JRNFTQ1
LP87514BRNFTQ1	LP87524FRNFRQ1	LP875613RNFTQ1	LP87563LRNFRQ1
LP87521CRNFRQ1	LP87524IRNFRQ1	LP87561FRNFRQ1	LP87563LRNFTQ1
LP87521ERNFRQ1	LP87524IRNFTQ1	LP87561IRNFRQ1	LP87563QRNFRQ1
LP87521ERNFTQ1	LP87524JRNFRQ1	LP87561IRNFTQ1	LP87563QRNFTQ1
LP87521FRNFRQ1	LP87524JRNFTQ1	LP87561SRNFRQ1	LP875640RNFRQ1
LP87521FRNFTQ1	LP87524PRNFRQ1	LP87561SRNFTQ1	LP875640RNFTQ1
LP87521PRNFRQ1	LP87524PRNFTQ1	LP87561TRNFRQ1	LP87564ARNFRQ1
LP87521PRNFTQ1	LP87524RRNFRQ1	LP87561TRNFTQ1	LP87564JRNFRQ1
LP87522BRNFRQ1	LP87524RRNFTQ1	LP87561VRNFRQ1	LP87564JRNFTQ1
LP87522BRNFTQ1	LP87524TRNFRQ1	LP87561VRNFTQ1	LP87564LRNFRQ1
LP87523JRNFRQ1	LP87524TRNFTQ1	LP87561WRNFRQ1	LP87564LRNFTQ1
LP87523JRNFTQ1	LP87524URNFRQ1	LP87561WRNFTQ1	LP87564MRNFRQ1
LP87523LRNFRQ1	LP87524URNFTQ1	LP875620RNFRQ1	LP87564MRNFTQ1
LP87523LRNFTQ1	LP87524YRNFRQ1	LP875620RNFTQ1	LP87564QRNFRQ1
LP87523NRNFRQ1	LP87524YRNFTQ1	LP87562ERNFRQ1	LP87564QRNFTQ1
LP87523NRNFTQ1	LP87524ZRNFRQ1	LP87562ERNFTQ1	LP875650RNFRQ1
LP87523SRNFRQ1	LP87524ZRNFTQ1	LP87562HRNFRQ1	LP875650RNFTQ1
LP87523SRNFTQ1	LP87525ARNFRQ1	LP87562HRNFTQ1	LP87565CRNFRQ1
LP875240GRNFRQ1	LP87525BRNFRQ1	LP87562KRNFRQ1	LP87565CRNFTQ1
LP875240GRNFTQ1	LP87525BRNFTQ1	LP87562KRNFTQ1	LP875701ARNFRQ1
LP875240JRNFRQ1	LP87525JRNFRQ1	LP87562MRNFRQ1	LP875701ARNFTQ1
LP875240JRNFTQ1	LP87525JRNFTQ1	LP87562MRNFTQ1	LP875701BRNFRQ1
LP875240QRNFRQ1	LP87525KRNFRQ1	LP87562PRNFRQ1	LP875701BRNFTQ1
LP875240QRNFTQ1	LP87525KRNFTQ1	LP87562PRNFTQ1	LP875701CRNFRQ1
LP875240URNFRQ1	LP87525LRNFRQ1	LP875630RNFRQ1	LP875701CRNFTQ1
LP875240URNFTQ1	LP87525LRNFTQ1	LP875630RNFTQ1	LP875701DRNFRQ1
LP87524ARNFRQ1	LP875610RNFRQ1	LP87563ARNFRQ1	LP875701DRNFTQ1
LP87524BRNFRQ1	LP875610RNFTQ1	LP87563JRNFRQ1	

Automotive New Product Qualification Summary (As per AEC-Q100 and JEDEC Guidelines)

Approved 20-Apr-2020

Product Attributes

Attributes	Qual Device: <u>LP8756QRNFRQ1</u>	QBS Product Reference: <u>LP8756QRNFRQ1</u>	QBS Process Reference: <u>LP87702ARHBRO1</u>
Automotive Grade Level	Grade 1	Grade 1	Grade 1
Operating Temp Range	-40 to +125 C	-40 to +125 C	-40 to +125 C
Product Function	Power Management	Power Management	Power Management
Wafer Fab Supplier	DMOS6	DMOS5	DMOS6
Wafer Process Technology	LBC8	LBC8	LBC8
Assembly Site	UTAC-THAILAND	UTAC-THAILAND	UTAC-THAILAND
Package Type	QFN (FCOL)	QFN (FCOL)	QFN
Package Designator	RNF	RNF	RHB
Ball/Lead Count	26	26	32

- QBS: Qual By Similarity

- Qual Device LP8756QRNFRQ1 is qualified at LEVEL2-260C

Qualification Results

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

	Type	#	Test Spec	Min Lot Qty	SS/Lot	Test Name / Condition	Duration	Qual Device: <u>LP8756QRNFRQ1</u>	QBS Product Reference: <u>LP8756QRNFRQ1</u>	QBS Process Reference: <u>LP87702ARHBRO1</u>
Test Group A – Accelerated Environment Stress Tests										
	PC	A1	JEDEC J-STD-020 JESD22-A113	3	77	Automotive Preconditioning	Level 1-260C	3/Pass	3/Pass	-
	PC	A1	JEDEC J-STD-020 JESD22-A113	3	77	Automotive Preconditioning	Level 2-260C	-	-	3/Pass
	HAST	A2	JEDEC JESD22-A110	3	77	Biased HAST, 130C/85%RH	96 Hours	1/77/0	3/231/0	3/231/0
	AC	A3	JEDEC JESD22-A102	3	77	Autoclave 121C	96 Hours	1/77/0	-	3/231/0
	TC	A4	JEDEC JESD22-A104 and Appendix 3	3	77	Temperature Cycle, -65/150C	500 Cycles	3/231/0	3/231/0	3/231/0
	PTC	A5	JEDEC JESD22-A105	1	45	Power Temperature Cycle	1000 Cycles	1/45/0	1/44/0	1/45/0
	HTSL	A6	JEDEC JESD22-A103	1	45	High Temp Storage Bake 150C	1000 Hours	-	1/45/0	-

	H T S L	A 6	JEDEC JESD22-A103	1	45	High Temp Storage Bake 175C	500 Hours	1/45/0	-	3/135/0
Test Group B – Accelerated Lifetime Simulation Tests										
	H T O L	B 1	JEDEC JESD22-A108	3	77	Life Test, 125C	1000 Hours	1/77/0	-	3/231/0
	H T O L	B 1	JEDEC JESD22-A108	3	77	Life Test, 150C	1000 Hours	-	3/231/0	-
	EL FR	B 2	AEC Q100- 008	3	800	Early Life Failure Rate, 125C	48 Hours	-	-	3/2400/0
	EL FR	B 2	AEC Q100- 008	3	800	Early Life Failure Rate, 150C	48 Hours	-	1/800/0	-
	E D R	B 3	AEC Q100- 005	3	77	NVM Endurance, Data Retention, and Operational Life	-	-	-	-
Test Group C – Package Assembly Integrity Tests										
	W BS	C 1	AEC Q100- 001	3	30 bon ds, 5 dev ices	Wire Bond Shear	Cpk>1.67	NA	NA	3/15/0
	W BP	C 2	MIL-STD883 Method 2011	3	30 bon ds, 5 dev ices	Wire Bond Pull	Cpk>1.67	NA	NA	3/15/0
	S D	C 3	JEDEC JESD22-B102	1	15	Surface Mount Solderability	Steam Age	-	1/15/0	-
	S D	C 3	JEDEC JESD22-B102	1	15	Surface Mount Solderability	Pb Free	-	-	1/15/0
	P D	C 4	JEDEC JESD22-B100 and B108	3	10	Physical Dimensions	Cpk>1.67	-	3/30/0	3/30/0
Test Group D – Die Fabrication Reliability Tests										
	E M	D 1	JESD61	-	-	Electromigration	-	Completed Per Process Technolog y Requireme nts	-	-
	T D D B	D 2	JESD35	-	-	Time Dependant Dielectric Breakdown	-	Completed Per Process Technolog y Requireme nts	-	-
	H CI	D 3	JESD60 & 28	-	-	Hot Injection Carrier	-	Completed Per Process Technolog y	-	-

								Requirements		
	N B TI	D 4	-	-	-	Negative Bias Temperature Instability	-	Completed Per Process Technology Requirements	-	-
	S M	D 5	-	-	-	Stress Migration	-	Completed Per Process Technology Requirements	-	-
Test Group E – Electrical Verification Tests										
	H B M	E 2	AEC Q100-002	1	3	ESD - HBM - Q100	2500V	1/3/0	1/3/0	1/3/0
	C D M	E 3	AEC Q100-011	1	3	ESD - CDM - Q100	750V	1/3/0	1/3/0	1/3/0
	L U	E 4	AEC Q100-004	1	6	Latch-up	(Per AEC-Q100-004)	1/6/0	1/6/0	1/6/0
	E D	E 5	AEC Q100-009	3	30	Auto Electrical Distributions	Cpk>1.67 Room, hot, and cold test	3/90/0	3/90/0	3/90/0

A1 (PC): Preconditioning:

Performed for THB, Biased HAST, AC, uHAST, TC & PTC samples, as applicable.

Ambient Operating Temperature by Automotive Grade Level:

Grade 0 (or E): -40°C to +150°C

Grade 1 (or Q): -40°C to +125°C

Grade 2 (or T): -40°C to +105°C

Grade 3 (or I) : -40°C to +85°C

E1 (TEST): Electrical test temperatures of Qual samples (High temperature according to Grade level):

Room/Hot/Cold : HTOL, ED

Room/Hot : THB / HAST, TC / PTC, HTSL, ELFR, ESD & LU

Room : AC/uHAST

Green/Pb-free Status:

Qualified Pb-Free(SMT) and Green

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