

PCN Number:	20201203000.1		PCN Date:	Dec 3, 2020																			
Title:	Qualification of additional Fab site (DMOS6) and additional Assembly site (CDAT) options for select LBC9 devices																						
Customer Contact:	PCN Manager		Dept:	Quality Services																			
Proposed 1st Ship Date:	Mar 3, 2021		Estimated Sample Availability:	Date provided at sample request.																			
Change Type:																							
<input checked="" 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 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 an additional fab (DMOS6) and assembly site (CDAT) for the selected devices listed in the "Product Affected" section.																							
<table border="1" style="width: 100%; border-collapse: collapse;"> <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>RFAB</td> <td>LBC9</td> <td>300 mm</td> <td>DMOS6</td> <td>LBC9</td> <td>300 mm</td> </tr> </tbody> </table>						Current Fab Site			Additional Fab Site			Current Fab Site	Process	Wafer Diameter	Additional Fab Site	Process	Wafer Diameter	RFAB	LBC9	300 mm	DMOS6	LBC9	300 mm
Current Fab Site			Additional Fab Site																				
Current Fab Site	Process	Wafer Diameter	Additional Fab Site	Process	Wafer Diameter																		
RFAB	LBC9	300 mm	DMOS6	LBC9	300 mm																		
Construction differences are as follows:																							
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th></th> <th>UTAC Current</th> <th>CDAT New</th> </tr> </thead> <tbody> <tr> <td>Lead finish</td> <td>Matte Sn</td> <td>NiPdAu</td> </tr> </tbody> </table>							UTAC Current	CDAT New	Lead finish	Matte Sn	NiPdAu												
	UTAC Current	CDAT New																					
Lead finish	Matte Sn	NiPdAu																					
Upon expiry of this PCN TI will combine lead free solutions in a single standard part number , for the devices in groups 1 & 2. For example; LMR33620BRNXT – can ship with both Matte Sn and NiPdAu.																							
Example:																							
<ul style="list-style-type: none"> – Customer order for 7500 units of LMR33620BRNXT with 2500 units SPQ (Standard Pack Quantity per Reel). – TI can satisfy the above order in one of the following ways. <ul style="list-style-type: none"> I. 3 Reels of NiPdAu finish. II. 3 Reels of Matte Sn finish III. 2 Reels of Matte Sn and 1 reel of NiPdAu finish. IV. 2 Reels of NiPdAu and 1 reel of Matte Sn finish. 																							
Qual details are provided in the Qual Data Section.																							
Reason for Change:																							
Continuity of Supply																							
Anticipated impact on Material Declaration																							
<input type="checkbox"/>	No Impact to the Material Declaration	<input checked="" type="checkbox"/>	Material Declarations or Product Content reports are driven from production data and will be available following the production release. Upon production release the revised reports can be obtained from the TI ECO website .																				

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
RFAB	RFB	USA	Richardson
DMOS6	DM6	USA	Dallas

Assembly Site Information:

Assembly Site	Assembly Site Origin (22L)	Assembly Country Code (23L)	Assembly City
UTAC	NSE	THA	Bangkok
CDAT	CDA	CHN	Chengdu

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) SN74LS07NSR
 (Q) 2000 (D) 0336
 (31T) LOT: 3959047MLA
 (4W) TKY (1T) 7523483S12
 (P)
 (2P) REV: 0033317
 (20L) CSO: SHE (21L) CCO:USA
 (22L) ASO:MLA (23L) ACO:MYS

Product Affected:

LMR33620ARNXR	LMR33620BRNXT	LMR33630ARNXR	LMR33630BRNXT
LMR33620ARNXT	LMR33620CRNXR	LMR33630ARNXT	LMR33630CRNXR
LMR33620BRNXR	LMR33620CRNXT	LMR33630BRNXR	LMR33630CRNXT

Qualification Report

Approved 28-Sept-2020

Qualification Results

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

Type	Test Name / Condition	Duration	Qual Device: LMR33630CQRNXRQ1 CDAT	Qual Device: LMR33630CQRNXRQ1 UTL1	QBS Package Qual UTL1: LMR33620CQRNXTQ1
PC	Automotive Preconditioning	Level 2-260C	Pass	-	Pass
bHAST	Biased HAST, 110C/85%RH	264 Hours	3/231/0	-	-
uHAST	Unbiased HAST, 110C/85%RH	264 Hours	3/231/0	-	-
THB	Biased Temperature and Humidity, 85C/85%RH	1000 Hours	-	-	3/231/0
AC	Autoclave 121C	96 Hours	-	-	3/231/0
TC	Temperature Cycle, -65/150C	500 Cycles	3/231/0	-	3/231/0
HTSL	High Temp. Storage Life, 150C	1000 Hours	3/231/0	-	3/231/0
HTOL	Life Test, 125C	1000 Hours	3/231/0	-	3/231/0
ELFR	Early Life Failure Rate, 125C	48 Hours	3/2400/0	-	3/2400/0
EDR	NVM Endurance, Data Retention, and Operational Life	10000 Cycles	3/231/0	-	-
WBS	Bond Shear (Cpk>1.67)	Wires	N/A	-	N/A
WBP	Bond Pull (Cpk>1.67)	Wires	N/A	-	N/A
SD	Surface Mount Solderability >95% Lead Coverage	15	1/15/0	-	Pass
PD	Physical Dimensions (Cpk>1.67)	30 units	3/90/0	-	Pass
SBS	Solder Ball Shear (Cpk>1.67)	Solder Balls	N/A	-	N/A
LI	Lead Integrity	Leads	N/A	-	N/A
HBM	ESD - HBM	2500 V	1/3/0	1/3/0	1/3/0
CDM	ESD - CDM	750 V	1/3/0	1/3/0	1/3/0
LU	Latch-up	+100mA, 150C	1/6/0	1/6/0	1/6/0
ED	Electrical Distribution	Cpk > 1.67	3/30/0	-	3/90/0

- QBS: Qual By Similarity
- Qual Device **LMR33630CQRNXRQ1** is qualified at LEVEL2-260C

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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