

PCN Number:	20211005000.2		PCN Date:	October 06, 2021						
Title:	Qualification of CDAT as an alternate Assembly & Test site for Select Devices									
Customer Contact:	PCN Manager	Dept:	Quality Services							
Proposed 1st Ship Date:	Apr 6, 2022	Estimated Sample Availability:	Date provided at sample request							
Change Type:										
<input checked="" type="checkbox"/>	Assembly Site	<input type="checkbox"/>	Design	<input type="checkbox"/>	Wafer Bump Site					
<input type="checkbox"/>	Assembly Process	<input type="checkbox"/>	Data Sheet	<input type="checkbox"/>	Wafer Bump Material					
<input checked="" type="checkbox"/>	Assembly Materials	<input type="checkbox"/>	Part number change	<input type="checkbox"/>	Wafer Bump Process					
<input type="checkbox"/>	Mechanical Specification	<input checked="" type="checkbox"/>	Test Site	<input type="checkbox"/>	Wafer Fab Site					
<input type="checkbox"/>	Packing/Shipping/Labeling	<input type="checkbox"/>	Test Process	<input type="checkbox"/>	Wafer Fab Materials					
		<input type="checkbox"/>		<input type="checkbox"/>	Wafer Fab Process					
PCN Details										
Description of Change:										
<p>Texas Instruments Incorporated is announcing the qualification of CDAT as an additional Assembly & Test site for the list of devices shown below. Construction differences between the 2 sites are as follows:</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td></td> <td style="text-align: center;">UTL1</td> <td style="text-align: center;">CDAT</td> </tr> <tr> <td style="text-align: center;">Lead Finish</td> <td style="text-align: center;">Matte Sn</td> <td style="text-align: center;">NiPdAu</td> </tr> </table> <p>Test coverage, insertions, conditions will remain consistent with current testing and verified with test MQ</p> <p>Upon expiration of this PCN, TI will combine lead free solutions in a single <u>standard part number</u>, for example; <u>LMR34206FSC5RNXRQ1</u> – can ship with both Matte Sn and NiPdAu.</p>						UTL1	CDAT	Lead Finish	Matte Sn	NiPdAu
	UTL1	CDAT								
Lead Finish	Matte Sn	NiPdAu								
Reason for Change:										
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:										
Assembly Site	Assembly Site Origin (22L)	Assembly Country Code (23L)	Assembly City							
UTL1	NSE	THA	Bangkok							
CDAT	CDA	CHN	Chengdu							
Sample product shipping label (not actual product label)										



MADE IN: Malaysia
2DC: 20:

MSL '2 /260C/1 YEAR	SEAL DT
MSL 1 /235C/UNLIM	03/29/04

OPT:
ITEM:

LBL: 5A (L)T0:1750



(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:

LMR34206FSC3RNXRQ1	LMR34206SC5QRNXTQ1	LMR36006AQRNXTQ1	LMR36015FSC3RNXRQ1
LMR34206FSC3RNXTQ1	LMR34215FAQRNXRQ1	LMR36006FSC3RNXRQ1	LMR36015FSC3RNXTQ1
LMR34206FSC5RNXRQ1	LMR34215FAQRNXTQ1	LMR36006FSC3RNXTQ1	LMR36015FSCQRNXRQ1
LMR34206FSC5RNXTQ1	LMR34215FSC5RNXRQ1	LMR36006FSCQRNXRQ1	LMR36015FSCQRNXTQ1
LMR34206SC3QRNXRQ1	LMR34215FSC5RNXTQ1	LMR36006FSCQRNXTQ1	LMR36015SC3QRNXRQ1
LMR34206SC3QRNXTQ1	LMR34215SC5QRNXRQ1	LMR36015AQRNXRQ1	LMR36015SC3QRNXTQ1
LMR34206SC5QRNXRQ1	LMR36006AQRNXRQ1	LMR36015AQRNXTQ1	



TI Information
Selective Disclosure

Automotive New Product Qualification Summary

(As per AEC-Q100 and JEDEC Guidelines)

Approved 23-April-2021

Product Attributes

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	LMR336xx (RFAB/ CDAT flow)	Qual Device: LMR33630CQRNXRQ1 DMO56/ CDAT	Original Qual LMR33620CQRNXTQ1 (RFAB/ UTL1)
Test Group A – Accelerated Environment Stress Tests									
PC	A1	JEDEC J-STD-020 JESD22-A113	3	231	Automotive Preconditioning	Level 2-260C	QBS	Pass	Pass
bHAST	A2	JEDEC JESD22-A101	3	77	Biased HAST, 110C/85%RH	264 Hours	QBS	3/231/0	-
uHAST	A3	JEDEC JESD22-A102	3	77	Unbiased HAST, 110C/85%RH	264 Hours	QBS	3/231/0	-
THB		JEDEC JESD22-A101	3	77	Biased Temperature and Humidity, 85C/85%RH	1000 Hours	QBS	-	3/231/0
AC		JEDEC JESD22-A102	3	77	Autoclave 121C	96 Hours	QBS	-	3/231/0
TC	A4	JEDEC JESD22-A104 and Appendix 3	3	77	Temperature Cycle, -65/150C	500 Cycles	QBS	3/231/0	3/231/0
PTC	A5	JEDEC JESD22-A105	1	45	Power Temperature Cycle	1000 Cycles	QBS	1/44/1 (Note 1)	1/45/0
HTSL	A6	JEDEC JESD22-A103	1	45	High Temp. Storage Life, 150C	1000 Hours	QBS	3/231/0	3/231/0
Test Group B – Accelerated Lifetime Simulation Tests									
HTOL	B1	JEDEC JESD22-A108	3	77	Life Test, 125C	1000 Hours	QBS	3/231/0	3/231/0
ELFR	B2	AEC Q100-008	3	800	Early Life Failure Rate, 125C	48 Hours	QBS	3/2400/0	3/2400/0
EDR	B3	AEC Q100-005	3	77	NVM Endurance, Data Retention, and Operational Life	10000 Cycles	QBS	3/231/0	3/231/0
Test Group C – Package Assembly Integrity Tests									
WBS	C1	AEC Q100-001	1	30	Bond Shear (Cpk>1.67)	Wires	N/A	N/A	N/A
WBP	C2	MIL-STD883 Method 2011	1	30	Bond Pull (Cpk>1.67)	Wires	N/A	N/A	N/A
SD	C3	JEDEC JESD22-B102	1	15	Surface Mount Solderability >95% Lead Coverage	15	QBS	1/15/0	1/15/0
PD	C4	JEDEC JESD22-B100 and B108	3	10	Physical Dimensions (Cpk>1.67)	30 units	QBS	3/90/0	3/90/0
SBS	C5	AEC Q100-010	3	50	Solder Ball Shear (Cpk>1.67)	Solder Balls	N/A	N/A	N/A
LI	C6	JEDEC JESD22-B105	1	50	Lead Integrity	Leads	N/A	N/A	N/A
Test Group D – Die Fabrication Reliability Tests									
EM	D1	JESD61	-	-	Electromigration	--	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements
TDD	D2	JESD35	-	-	Time Dependent Dielectric Breakdown	--	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements

HCI	D3	JESD60 & 28	-	-	Hot Injection Carrier	--	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements
NBTI	D4	-	-	-	Negative Bias Temperature Instability	--	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements
SM	D5	-	-	-	Stress Migration	--	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements
Test Group E – Electrical Verification Tests									
HBM	E2	AEC Q100-002	1	3	ESD - HBM	2500 V	QBS	1/3/0	1/3/0
CDM	E3	AEC Q100-011	1	3	ESD - CDM	750 V	QBS	1/3/0	1/3/0
LU	E4	AEC Q100-004	1	6	Latch-up	+/-100mA, 150C	QBS	1/6/0	1/6/0
ED	E5	AEC Q100-005	3	30	Electrical Distribution	Cpk > 1.67	QBS	3/90/0	3/90/0

- QBS: Qual By Similarity

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

Note 1: 1 fail was attributed to test issue and was discounted.

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

Location	E-Mail
USA	PCNAmericasContact@list.ti.com
Europe	PCNEuropeContact@list.ti.com
Asia Pacific	PCNAsiaContact@list.ti.com
WW PCN Team	PCN_ww_admin_team@list.ti.com

IMPORTANT NOTICE AND DISCLAIMER

TI PROVIDES TECHNICAL AND RELIABILITY DATA (INCLUDING DATASHEETS), DESIGN RESOURCES (INCLUDING REFERENCE DESIGNS), APPLICATION OR OTHER DESIGN ADVICE, WEB TOOLS, SAFETY INFORMATION, AND OTHER RESOURCES “AS IS” AND WITH ALL FAULTS, AND DISCLAIMS ALL WARRANTIES, EXPRESS AND IMPLIED, INCLUDING WITHOUT LIMITATION ANY IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR NON-INFRINGEMENT OF THIRD PARTY INTELLECTUAL PROPERTY RIGHTS.

These resources are intended for skilled developers designing with TI products. You are solely responsible for (1) selecting the appropriate TI products for your application, (2) designing, validating and testing your application, and (3) ensuring your application meets applicable standards, and any other safety, security, or other requirements. These resources are subject to change without notice. TI grants you permission to use these resources only for development of an application that uses the TI products described in the resource. Other reproduction and display of these resources is prohibited. No license is granted to any other TI intellectual property right or to any third party intellectual property right. TI disclaims responsibility for, and you will fully indemnify TI and its representatives against, any claims, damages, costs, losses, and liabilities arising out of your use of these resources.

TI’s products are provided subject to TI’s Terms of Sale (www.ti.com/legal/termsofsale.html) or other applicable terms available either on ti.com or provided in conjunction with such TI products. TI’s provision of these resources does not expand or otherwise alter TI’s applicable warranties or warranty disclaimers for TI products.