




PCN Number:	20220712002.2	PCN Date:	July 13, 2022
Title:	Qualification of UTL1 as an additional assembly and test site for select Devices		
Customer Contact:	PCN Manager	Dept:	Quality Services
Proposed 1st Ship Date:	Jan 9, 2023	Sample requests accepted until:	Aug 13, 2022*
*Sample requests received after Aug 13, 2022 will not be supported.			
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"/> Wafer Fab Process	
PCN Details			
Description of Change:			
Texas Instruments Incorporated is announcing the qualification of UTL1 as an alternate Assembly site and test site for devices listed below in the product affected section. Construction differences are as follows:			
	CDAT	UTL1	
Mount Compound	4207123	SID#PZ0035	
Test coverage, insertions, conditions will remain consistent with current testing and verified with test MQ			
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
CDAT	CDA	CHN	Chengdu
UTL1	NSE	THA	Bangkok
Sample product shipping label (not actual product label)			

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) 7523483SI2
 (P)
 (2P) REV: (V) 0033317
 (20L) CSO: SHE (21L) CCO:USA
 (22L) ASO: MLA (23L) ACO: MYS

Product Affected:		
LM74800QDRRRQ1	LM74801QDRRRQ1	LM74810QDRRRQ1



TI Information
Selective Disclosure

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

**Qualification of second assembly source for LM74810QDRRRQ1 and metal spins LM74801QDRRRQ1,
 LM74800QDRRRQ1 (Q100H, Grade1, -40/125C)
 Approve Date 07-Apr-2022**

Product Attributes

Attributes	Qual Device: LM74800QDRRRQ1	Qual Device: LM74801QDRRRQ1	Qual Device: LM74810QDRRRQ1	QBS Product Reference: LM74800QDRRRQ1 A1	QBS Product Reference: LM74801QDRRRQ1 A1	QBS Product Reference: LM74810QDRRRQ1 A1	QBS Product Reference: LM74810QDRRRQ1 A0	QBS Process Reference: LM74700QDBV- B0
Automotive Grade Level	Grade 1	Grade 1	Grade 1	Grade 1	Grade 1	Grade 1	Grade 1	Grade 1
Operating Temp Range	-40 to +125 C	-40 to +125 C	-40 to +125 C	-40 to +125 C	-40 to +125 C	-40 to +125 C	-40 to +125 C	-40 to +125 C
Product Function	Power Management	Power Management	Power Management	Power Management	Power Management	Power Management	Power Management	Power Management
Wafer Fab Supplier	RFAB	RFAB	RFAB	RFAB	RFAB	RFAB	RFAB	RFAB
Die Revision	A1	A1	A1	A1	A1	A1	A0	B0
Assembly Site	UTAC	UTAC	UTAC	CDAT	CDAT	CDAT	CDAT	NS2 (UTAC2)
Package Type	WSON	WSON	WSON	WSON	WSON	WSON	WSON	SOT23
Package Designator	DRR	DRR	DRR	DRR	DRR	DRR	DRR	DBV
Ball/Lead Count	12	12	12	12	12	12	12	6

- QBS: Qual By Similarity
 - Qual Devices LM74800QDRRRQ1, LM74801QDRRRQ1, and LM74810QDRRRQ1 are 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: LM74800QD RRQ1	Qual Device: LM74801QD RRQ1	Qual Device: LM74810QD RRQ1	QBS Product Reference: LM74800QDR RRQ1 A1	QBS Product Reference: LM74801QDR RRQ1 A1	QBS Product Reference: LM74810QDR RRQ1 A1	QBS Product Reference: LM74810QDR RRQ1 A0	QBS Process Reference: LM74700Q DBV-B0
Test Group A – Accelerated Environment Stress Tests														
PC	A1	JEDEC J-STD-020 JESD 22-A113	3	77	Automotive Preconditioning	Level 2-260C	-	-	Pass	-	-	-	Pass	Pass
HAST	A2	JEDEC JESD 22-A110	3	77	Biased HAST, 130C/85% RH	96 Hours	-	-	3/231/0	-	-	-	3/231/0	3/231/0
AC	A3	JEDEC JESD 22-A102	3	77	Autoclave 121C	96 Hours	-	-	3/231/0	-	-	-	3/231/0	3/231/0
TC	A4	JEDEC JESD 22-A104 and Appendix 3	3	77	Temperature Cycle, -65/150C	500 Cycles	-	-	3/231/0	-	-	-	3/231/0	2/154/0
TC-BP	A4	MIL-STD883 Method 2011	1	60	Post TC Bond Pull	500 Cycles	-	-	3/60/0	-	-	-	3/60/0	1/5/0
PTC	A5	JEDEC JESD 22-A105	1	45	Power Temperature Cycle	1000 Cycles	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Type	#	Test Spec	Min Lot Qty	SS/Lot	Test Name / Condition	Duration	Qual Device: LM74800QD RRQ1	Qual Device: LM74801QD RRQ1	Qual Device: LM74810QD RRQ1	QBS Product Reference: LM74800QDR RRQ1 A1	QBS Product Reference: LM74801QDR RRQ1 A1	QBS Product Reference: LM74810QDR RRQ1 A1	QBS Product Reference: LM74810QDR RRQ1 A0	QBS Process Reference: LM74700Q DBV-B0
HTSL	A6	JEDEC JESD 22-A103	1	45	High Temp Storage Bake 150C	1000 Hours	-	-	3/135/0	-	-	-	-	-
HTSL	A6	JEDEC JESD 22-A103	1	45	High Temp Storage Bake 175C	500 Hours	-	-	-	-	-	-	3/135/0	1/45/0
Test Group B – Accelerated Lifetime Simulation Tests														
HTOL	B1	JEDEC JESD 22-A108	3	77	Life Test, 150C	408 Hours	-	-	-	-	-	-	-	2/154/0
HTOL	B1	JEDEC JESD 22-A108	3	77	Life Test, 125C	1000 Hours	-	-	-	-	-	-	3/231/0	-
ELFR	B2	AEC Q100-008	3	800	Early Life Failure Rate, 150C	24 Hours	-	-	-	-	-	-	-	3/2400/0
EDR	B3	AEC Q100-005	3	77	NVM Endurance, Data Retention, and Operational Life	-	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Test Group C – Package Assembly Integrity Tests														
WBS	C1	AEC Q100-001	1	30	Auto Wire Bond Shear	Minimum of 5 devices, 30 wires Cpk>1.67	-	-	3/90/0	-	-	-	3/90/0	-

Type	#	Test Spec	Min Lot Qty	SS/Lot	Test Name / Condition	Duration	Qual Device: LM74800QDRRQ1	Qual Device: LM74801QDRRQ1	Qual Device: LM74810QDRRQ1	QBS Product Reference: LM74800QDRRQ1 A1	QBS Product Reference: LM74801QDRRQ1 A1	QBS Product Reference: LM74810QDRRQ1 A1	QBS Product Reference: LM74810QDRRQ1 A0	QBS Process Reference: LM74700QDBV-B0
WBP	C2	ML-STD883 Method 2011	1	30	Auto Wire Bond Pull	Minimum of 5 devices, 30 wires Cpk>1.67	-	-	3/90/0	-	-	-	3/90/0	-
SD	C3	JEDEC JESD 22-B102	1	15	Auto Solderability (Pb and Pb-Free)	>95% Lead Coverage 8 Hr Steam Age	-	-	1/15/0	-	-	-	1/20/0	-
PD	C4	JEDEC JESD 22-B100 and B108	3	10	Auto Physical Dimensions	Cpk>1.67	-	-	3/30/0	-	-	-	3/30	-
Test Group D – Die Fabrication Reliability Tests														
EM	D1	JESD 61	-	-	Electromigration	-	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements	-	-	-	-	-
TDDB	D2	JESD 35	-	-	Time Dependant Dielectric Breakdown	-	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements	-	-	-	-	-
HCI	D3	JESD 60 & 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	Completed Per Process Technology	Completed Per Process Technology	-	-	-	-	-
Type	#	Test Spec	Min Lot Qty	SS/Lot	Test Name / Condition	Duration	Qual Device: LM74800QDRRQ1	Qual Device: LM74801QDRRQ1	Qual Device: LM74810QDRRQ1	QBS Product Reference: LM74800QDRRQ1 A1	QBS Product Reference: LM74801QDRRQ1 A1	QBS Product Reference: LM74810QDRRQ1 A1	QBS Product Reference: LM74810QDRRQ1 A0	QBS Process Reference: LM74700QDBV-B0
							Requirements	Requirements	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 - Q100	2500 V	-	-	-	1/3/0	1/3/0	1/3/0	-	-
CDM	E3	AEC Q100-011	1	3	ESD - CDM - Q100	500 V	1/3/0	1/3/0	1/3/0	1/3/0	1/3/0	1/3/0	-	-
CDM	E3	AEC Q100-011	1	3	ESD - CDM - Q100 (Corner Pins)	1000 V	1/3/0	1/3/0	1/3/0	1/3/0	1/3/0	1/3/0	-	-
LU	E4	AEC Q100-004	1	6	Latch-up	Latchup-2/125C	-	-	-	1/6/0	1/6/0	1/6/0	-	-
ED	E5	AEC Q100-009	3	30	Auto Electrical Distributions	Cpk>1.67 Room, hot, and cold test	1/30/0	1/30/0	1/30/0	1/30/0	1/30/0	1/30/0	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

TI Qualification ID: 20200421-133774

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

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

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