PCN Number:	20210903001.2	**PCN Date:**	September 27, 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:	Mar 27, 2022	**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 CDAT as an additional Assembly & Test site for the list of devices shown below. Construction differences between the 2 sites are as follows:

	TI Clark	CDAT
Mold Compound	4208625	4222198

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

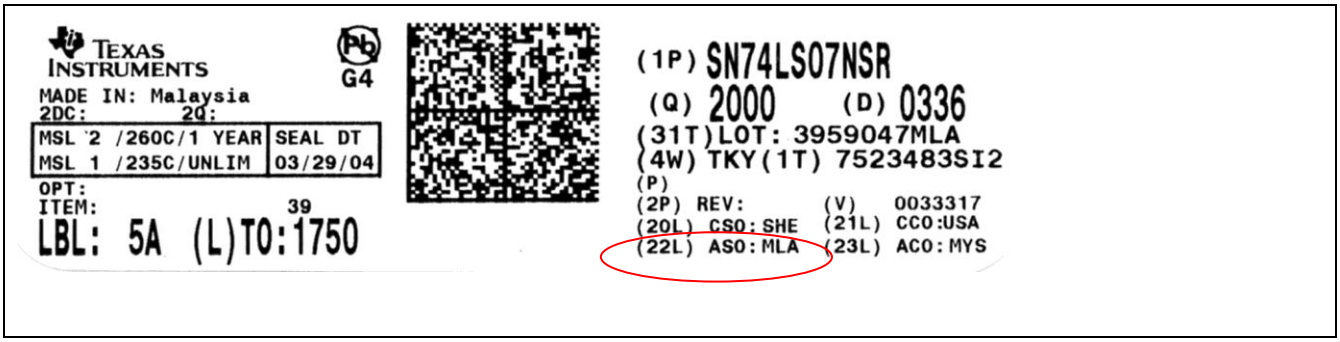
Checked boxes indicate the status of environmental ratings following implementation of this change. If below boxes are checked, there are no changes to the associated environmental ratings.

RoHS	REACH	Green Status	IEC 62474
☒ No Change	☒ No Change	☒ No Change	☒ No Change

Changes to product identification resulting from this PCN:

Assembly Site	Assembly Site Origin (22L)	Assembly Country Code (23L)	Assembly City
TI Clark	QAB	PHL	Angeles City, Pampanga
CDAT	**CDA**	**CHN**	**Chengdu**

Sample product shipping label (not actual product label)



Product Affected:

O917A11CTRGZRQ1	O917A134TRGZRQ1	O917A14FTRGZRQ1	O917A165TRGZTQ1
O917A123TRGZRQ1	O917A135TRGZRQ1	O917A14FTRGZTQ1	O917A16CTRGZRQ1
O917A12ETRGZRQ1	O917A136TRGZRQ1	O917A151TRGZRQ1	O917A16CTRGZTQ1
O917A130TRGZRQ1	O917A139TRGZRQ1	O917A152TRGZRQ1	O918A130TRGZRQ1
O917A130TRGZTQ1	O917A13BTRGZRQ1	O917A152TRGZTQ1	O919A14CTRGZRQ1
O917A131TRGZRQ1	O917A13FTWRTCRQ1	O917A154TRGZRQ1	O919A14CTRGZTQ1
O917A131TRGZTQ1	O917A142TRGZRQ1	O917A154TRGZTQ1	O919A14ETRGZRQ1
O917A132TRGZRQ1	O917A144TRGZRQ1	O917A15ATWRTCRQ1	O919A14ETRGZTQ1
O917A132TRGZTQ1	O917A144TRGZTQ1	O917A15ATWRTCTQ1	O919A152TRGZRQ1
O917A133TRGZRQ1	O917A148TRGZRQ1	O917A162TRGZRQ1	O919A152TRGZTQ1
O917A133TRGZTQ1	O917A14DTRGZRQ1	O917A162TRGZTQ1	O919A15BTRGZRQ1
O917A133TWRTCRQ1	O917A14DTRGZTQ1	O917A165TRGZRQ1	O919A15BTRGZTQ1

TEXAS INSTRUMENTS

TI Information
Selective Disclosure

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

TPS65917A1-Q1 (Lion Cub) offload to Chengdu
Approved 12-Aug-2021

Product Attributes

Attributes	Qual Device: O917A130TRGZRQ1	Pkg QBS Device LM2775QDSGRQ1
Automotive Grade Level	Grade 1	Grade 1
Operating Temp Range	-40 to +125 C	-40 to +125 C
Product Function	Power Management	Power Management
Wafer Fab Supplier	RFAB	RFAB
Die Revision	A1	A2
Assembly Site	CDAT	CDAT
Package Type	QFN	QFN
Package Designator	RGZ	DSG
Ball/Lead Count	48	8

- QBS: Qual By Similarity
- Qual Device O917A130TRGZRQ1 is qualified at LEVEL3-260CG

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: O917A130TRGZRQ1	Pkg QBS Device: LM2775QDSGRQ1
Test Group A – Accelerated Environment Stress Tests									
	HAST	A2	JEDEC JESD22-A110	3	77	Biased HAST, 130C/85%RH	192 hours	1/77/0	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	1/77/0	3/231/0
	PTC	A5	JEDEC JESD22-A105	1	45	Power Temperature Cycle, -40/125C	1000 cycles	1/45/0	1/45/0
	HTSL	A6	JEDEC JESD22-A103	1	45	High Temp Storage Bake 175C	1000 hours	1/45/0	3/132/1*
Test Group B – Accelerated Lifetime Simulation Tests									
	HTOL	B1	JEDEC JESD22-A108	3	77	Life Test, 125C	1000 hours	1/77/0	3/231/0
	EDR	B3	AEC Q100-005	3	77	NVM Endurance, Data Retention, and Operational Life	-	N/A	N/A
Test Group C – Package Assembly Integrity Tests									
	WBS	C1	AEC Q100-001	1	30	Wire Bond Shear (Cpk>1.67)	Wires	1/30/0	3/90/0
	WBP	C2	MIL-STD883 Method 2011	1	30	Wire Bond Pull (Cpk>1.67)	-	-	3/90/0
	SD	C3	JEDEC JESD22-B102	1	15	Surface Mount Solderability >95% Lead Coverage	-	-	3/45/0
	PD	C4	JEDEC JESD22-B100 and B108	3	10	Physical Dimensions (Cpk>1.67)	Cpk>1.67	1/10/0	3/90/0
Test Group D – Die Fabrication Reliability Tests									
	EM	D1	JESD61	-	-	Electromigration	-	Completed Per Process Technology Requirements	
	TDDB	D2	JESD35	-	-	Time Dependant Dielectric Breakdown	-	Completed Per Process Technology Requirements	
	HCI	D3	JESD60 & 28	-	-	Hot Injection Carrier	-	Completed Per Process Technology Requirements	
	NBTI	D4	-	-	-	Negative Bias Temperature Instability	-	Completed Per Process Technology Requirements	

	Type	#	Test Spec	Min Lot Qty	SS/Lot	Test Name / Condition	Duration	Qual Device: O917A130TRGZRQ1	Pkg QBS Device: LM2775QDSGRQ1
	SM	D5	-	-	-	Stress Migration	-	Completed Per Process Technology Requirements	
Test Group E – Electrical Verification Tests									
	CDM	E3	AEC Q100-011	1	3	ESD - CDM - Q100	1000 V	1/3/0	
	ED	E5	AEC Q100-009	3	30	Electrical Distributions	Cpk>1.67	3/90/0	3/90/0
Additional Tests									
	-			-	-	Bond Pull, over ball	Wires	1/30/0	
	MSL			-	-	Moist Sens. L3	(MSL 3 / 260C)	1/22/0	

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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