PCN Number:	20210201000.2	PCN Date:	Feb. 02 2021
Title:	Qualification of TIPI as an additional assembly site for select Devices		
Customer Contact:	PCN Manager	Dept:	Quality Services
Proposed 1st Ship Date:	Aug. 1 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 TIPI as an alternate Assembly site for devices listed below in the product affected section. Construction differences and current assembly sites are as follows:

	TFME	TIPI
Mount Compound	SID# A-03	**4207123**
Mold Compound	SID#R-13	**4222198**
Bond wire, diameter	Au or Cu, 1.0mils	**Cu, 0.96mils**
Lead Frame Prep	non RLF	**RLF**

Reason for Change:

Supply continuity

Anticipated impact on Form, Fit, Function, Quality or Reliability (positive / negative):

None

Anticipated impact on Material Declaration

☐	No Impact to the Material Declaration	☒	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 at the site link below http://www.ti.com/quality/docs/materialcontentsearch.tsp

Changes to product identification resulting from this PCN:

Assembly Site	Assembly Site Origin (22L)	Assembly Country Code (23L)	Assembly City
TFME	NFM	CHN	Economic Development Zone
TIPI	**PHI**	**PHL**	**Baguio City**

Sample product shipping label (not actual product label)

G4

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)TO: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:

UCC27517AQDBVRQ1	UCC27518AQDBVRQ1	UCC27519AQDBVRQ1

TI Information
Selective Disclosure

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

UCC27517AQDBVRQ1, UCC27518AQDBVRQ1, UCC27519AQDBVRQ1: DBV SOT pkg in TIPI
Approved 09-Nov-2020

Product Attributes

Attributes	Qual Device: UCC27517AQDBVRQ1	QBS Product Reference: UCC27517AQDBVRQ1	QBS Product Reference: UCC27519AQDBVRQ1	QBS Process Reference: TPS2543QRTE	QBS Package Reference: TPS22810TDBVRQ1
Automotive Grade Level	Grade 1	Grade 1	Grade 1	Grade 1	Grade 2
Operating Temp Range	-40 to +125 C	-40 to +125 C	-40 to +125 C	-40 to +125 C	-40 to +105 C
Product Function	Power Management	Power Management	Power Management	Power Management	Power Management
Wafer Fab Supplier	RFAB	RFAB	RFAB	RFAB	RFAB
Die Revision	A	A	A	Rev-A (PG1.0)	A
Assembly Site	TIPI	NFME	NFME	CLARK-AT	TIPI
Package Type	SOT	SOT	SOT	TQFN	SOT
Package Designator	DBV	DBV	DBV	RTE	DBV
Ball/Lead Count	5	5	5	16	6

- QBS: Qual By Similarity
- Qual Device UCC27517AQDBVRQ1 is qualified at LEVEL1-260C

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: UCC27517AQDBVRQ1	QBS Product Reference: UCC27517AQDBVRQ1	QBS Product Reference: UCC27519AQDBVRQ1	QBS Process Reference: TPS2543QRTE	QBS Package Reference: TPS22810TDBVRQ1
Test Group A – Accelerated Environment Stress Tests											
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	-	-	1/80/0	3/237/0	3/231/0
TC	A4	JEDEC JESD22-A104 and Appendix 3	3	77	Temperature Cycle, -65/150C	500 Cycles	1/77/0	1/77/0	1/77/0	3/231/0	3/231/0
TC-BP	A4	MIL-STD883 Method 2011	1	60	Post Temp. Cycle Bond Pull	500 Cycles	1/5/0	1/5/0	1/5/0	1/5/0	1/5/0
PTC	A5	JEDEC JESD22-A105	1	45	Power Temperature Cycle, -40/125C	1000 Cycles	N/A	N/A	-	1/50/0	1/45/0
HTSL	A6	JEDEC JESD22-A103	1	45	High Temp Storage Bake 175C	500 Hours	1/77/0	-	1/45/0	3/145/0	-
HTSL	A6	JEDEC JESD22-A103	1	45	High Temp Storage Bake 150C	1000 Hours	-	-	-	-	3/135/0
Test Group B – Accelerated Lifetime Simulation Tests											
HTOL	B1	JEDEC JESD22-A108	3	77	Life Test, 125C	1000 Hours	-	-	1/80/0	-	3/231/0
HTOL	B1	JEDEC JESD22-A108	3	77	Life Test, 150C	408 Hours	-	-	-	3/231/0	-
ELFR	B2	AEC Q100-008	3	800	Early Life Failure Rate, 125C	48 Hours	-	-	-	-	-
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	-	-	-
Test Group C – Package Assembly Integrity Tests											
WBS	C1	AEC Q100-001	1	30	Wire Bond Shear (Cpk>1.67)	-	1/30/0	1/30/0	-	1/30/0	1/30/0
WBP	C2	MIL-STD883 Method 2011	1	30	Wire Bond Pull (Cpk>1.67)	-	1/30/0	-	-	-	1/30/0
SD	C3	JEDEC JESD22-B102	1	15	Surface Mount Solderability	Pb Free and SnPb	1/15/0	-	1/30/0	1/30/0	1/15/0
PD	C4	JEDEC JESD22-B100 and B108	3	10	Physical Dimensions	Cpk>1.67	3/90/0	1/30/0	-	3/90/0	3/30/0
LI	C6	JEDEC JESD22-B105	1	50	Lead Pull	# of leads to destruction,10 Leads ea. from min. 5 units	1/50/0	-	-	-	-
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	-	-	-	-
SM	D5	-	-	-	Stress Migration	-	Completed Per Process Technology Requirements	-	-	-	-

Test Group E – Electrical Verification Tests												
	HBM	E2	AEC Q100-002	1	3	ESD - HBM - Q100	4000 V	-	1/3/0	-	1/3/0	1/3/0
	CDM	E3	AEC Q100-011	1	3	ESD - CDM - Q100	1500 V	1/3/0	1/3/0	1/3/0	1/3/0	1/3/0
	LU	E4	AEC Q100-004	1	6	Auto Latch-up	(Per AEC Q100-004)	-	-	-	1/6/0	1/6/0
	LU	E4	AEC Q100-004	1	6	Auto Latch-up	Ta(max)	-	1/6/0	-	-	-
	LU	E4	AEC Q100-004	1	6	Latch-up	(per JESD78)	-	-	1/6/0	-	-
	ED	E5	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	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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