PCN Number:			20170804000B					PCN Date: Aug 11, 2017				
Title: Qualification of UTAC Thailand as additional Assembly and Test Site for Select De						Select Device	es					
Customer Contact: PCN Manager Dept: Quality Services						S						
Proposed 1 st Ship Date						Estimated Sample Date Provided at					c	
						Availability: Sample request						
	nge Type:											
	Assembly Site				Design			Wafer Bump Site				
	Assembly Process					Data Sheet			Wafer Bump Material			
Assembly Materials Mechanical Specification				Part number change Test Site			Wafer Bump Process Wafer Fab Site					
					Test Process			Wafer Fab Materials				
Packing/Shipping/Labeling				Test Flocess			Wafer Fab Process					
				P	CN Deta	ils			. Tu	Circ	10 11000000	
Des	cription of	Change:										
			e Green/	Pb-fre	e comment	on this notifie	catio	on	. We	apolo	ogize for any	,
	nvenience th		-								- <u> </u>	
		-										
						ation of UTAC						
						"Product Affe	cte	d″	Secti	ion.	Current	
asse	embly sites a	and Materia	al differen	ces are	as follows.							
Г	Assembly S	Site Ass	embly Site	Origin	Assembly	Country Code			Δ <u>ς</u> ςς	mbly	Site City	٦
-	TI Clark		QAB	Ongin	Assembly	PHL	,	Δ			, Pampanga	-
-	UTAC Thaila		NSE			THA			angele	Bang		-
L												_]
Mat	erial Differ	ences:										
					TI Clark	UTA	СТІ	ha	iland	ł		
		Lead finis	ad finish		NiPdAu Ma		att	itte Sn				
		Mount co	unt compound		4207123		PZ0138					
		Mold corr	npound		4208625 C			20351				
				-								
						inish solution						1
						th both Matte						
			респу ми	20AU III	ish by orde	ring the part v	NILI	ιt		• Sun	ix, e.g.	
	<i>"TPS51362RVERE4."</i>											
Test	coverage, i	nsertions,	condition	s will re	main consis	tent with curi	ent	t t	estinc	and	verified wit	h
	MQ.								-	-		
	Reason for Change:											
Con	Continuity of Supply											
Anticipated impact on Material Declaration												
	□ No Impact to the □ Material Declarations or Product Content reports are driven from											
	Material Declaration production data and will be available following the production											
	release. Upon production release the revised reports can be											
obtained from the <u>TI Eco-Info website</u> . There is no impact						no impact to						
material meeting current regulatory compliance requirement						requirement	5					
	with this PCN change.											
Anticipated impact on Form, Fit, Function, Quality or Reliability (positive / negative):												
None												
Changes to product identification resulting from this PCN:												

Assembly Site						
TI Clark Philippines	Assembly Site Or		ASO: QAB	ECAT: E4		
UTAC Thailand	Assembly Site Or	rigin (22L) 🦷 🖌	ASO: NSE	ECAT: E3		
Sample product shipp	ing label (not actual	product label)				
	ECAT: E4 = ECAT: E3 =					
TEXAS						
INSTRUMENTS	E3	(1P) SN74LS0				
MADE IN: Malaysia 2DC: 2Q:		(a) 2000	(D) 0336			
MSL 2 /260C/1 YEAR SEA MSL 1 /235C/UNLIM 03/		(31T)LOT: 39 (4W) TKY(1T)	7523483S	12		
OPT:		(P)				
ITEM: 39 (2P) REV: (V) 0033317 IDI: FA /I \ TA: 1750 (20L) CSO: SHE (21L) CCO: USA						
LBL: 5A (L)TO:1750						
LDL: DA (L)IU:I	/50					
		(22L) ASO: MLA				
SSEMBLY SITE CODE	S: TI-Clark = I, UTAC	(22L) ASO: MLA				
		(22L) ASO: MLA				
SSEMBLY SITE CODE		(22L) ASO: MLA	23L) ACO: MY			
SSEMBLY SITE CODE	S: TI-Clark = I, UTAC	(22L) ASO: MLA	/23L)́ ACO: MY	s		
SSEMBLY SITE CODE roduct Affected: CSD59924Q4M	S: TI-Clark = I, UTAC DPA02259RVER	(22L) ASO: MLA Thailand = J TPS51362RV	231) ACO: MY /ER /ET	s TPS53515RVET		
SSEMBLY SITE CODE roduct Affected: CSD59924Q4M CSD59930Q4M	S: TI-Clark = I, UTAC DPA02259RVER FX021	(22L) ASO: MLA Thailand = J TPS51362RV TPS51362RV	23L) ACO: MY /ER - /ET - /ER -	s TPS53515RVET TPS53913RVER		
SSEMBLY SITE CODE roduct Affected: CSD59924Q4M CSD59930Q4M CSD59935Q4M	S: TI-Clark = I, UTAC DPA02259RVER FX021 FX026	(22L) ASO: MLA Thailand = J TPS51362RV TPS51362RV TPS51363RV	23L) ACO: MY /ER - /ET - /ET -	s TPS53515RVET TPS53913RVER TPS53913RVET		
SSEMBLY SITE CODE roduct Affected: CSD59924Q4M CSD59930Q4M CSD59935Q4M CSD59998Q4M	S: TI-Clark = I, UTAC DPA02259RVER FX021 FX026 FX033	(22L) AS0: MLA Thailand = J TPS51362RV TPS51362RV TPS51363RV TPS51363RV	/ER - /ER - /ET - /ER - /ER -	s TPS53515RVET TPS53913RVER TPS53913RVET TPS53915RVER		
SSEMBLY SITE CODE roduct Affected: CSD59924Q4M CSD59930Q4M CSD59935Q4M CSD59998Q4M CSD59998Q4M CSD95377Q4M	S: TI-Clark = I, UTAC DPA02259RVER FX021 FX026 FX033 FX033Z	(22L) AS0: MLA Thailand = J TPS51362RV TPS51362RV TPS51363RV TPS51363RV TPS51363RV	23L) ACO: MY /ER - /ET - /ER - /ET - /ER - /ER -	s TPS53515RVET TPS53913RVER TPS53913RVET TPS53915RVER TPS53915RVET		
SSEMBLY SITE CODE roduct Affected: CSD59924Q4M CSD59930Q4M CSD59935Q4M CSD59998Q4M CSD95377Q4M CSD95377Q4MT	S: TI-Clark = I, UTAC DPA02259RVER FX021 FX026 FX033 FX033Z HPA02240RVER	(22L) AS0: MLA Thailand = J TPS51362RV TPS51362RV TPS51363RV TPS51363RV TPS51367RV TPS51367RV	23L) ACO: MY /ER - /ET - /ER - /ER - /ER - /ER - /ER -	s TPS53515RVET TPS53913RVER TPS53913RVET TPS53915RVER TPS53915RVET TPS548A20RVER		
SSEMBLY SITE CODE roduct Affected: CSD59924Q4M CSD59930Q4M CSD59935Q4M CSD59998Q4M CSD59998Q4M CSD95377Q4M CSD95377Q4MT CSD97374Q4M	S: TI-Clark = I, UTAC DPA02259RVER FX021 FX026 FX033 FX033Z HPA02240RVER SN1401043RVER	(22L) AS0: MLA Thailand = J TPS51362RV TPS51362RV TPS51363RV TPS51363RV TPS51367RV TPS51367RV TPS51367RV TPS51367RV	23L) ACO: MY	s TPS53515RVET TPS53913RVER TPS53913RVET TPS53915RVER TPS53915RVET TPS548A20RVER TPS548A20RVET		
SSEMBLY SITE CODE roduct Affected: CSD59924Q4M CSD59930Q4M CSD59935Q4M CSD59998Q4M CSD59998Q4M CSD95377Q4M CSD95377Q4MT CSD97374Q4M CSD97395Q4M	S: TI-Clark = I, UTAC DPA02259RVER FX021 FX026 FX033 FX033Z HPA02240RVER SN1401043RVER SN1402065RVER	(22L) AS0: MLA Thailand = J TPS51362RV TPS51362RV TPS51363RV TPS51363RV TPS51367RV TPS51367RV TPS51367RV TPS53513RV TPS53513RV	23L) ACO: MY	s TPS53515RVET TPS53913RVER TPS53913RVET TPS53915RVER TPS53915RVET TPS548A20RVER TPS548A20RVET TPS549A20RVER		

Qualification Plan Offload of Power Stage Clip QFN Devices from TI Clark to UTL1 (UTAC) Phase 1

(Qual target date: Oct 30, 2017)

Product Attributes

Qual Device: CSD97374Q4M	Qual Device: TPS51362RVER					
UTAC1 THAILAND	UTAC1 THAILAND					
VSON 3.5 X 4.5 (MM)	QFN 4.5 X 3.5 (MM)					
UL 94 V-0	UL 94 V-0					
CFAB, MIHO8	CFAB, MIHO 8					
FET, LBC7	FET, LBC7					
	CSD97374Q4M UTAC1 THAILAND VSON 3.5 X 4.5 (MM) UL 94 V-0 CFAB, MIHO8					

- Qual Device CSD97374Q4M is qualified at LEVEL2-260C

- Qual Device TPS51362RVER is qualified at LEVEL2-260CX

- Device CSD97374Q4M contains multiple dies.

- Device TPS51362RVER contains multiple dies.

Qualification Results expected Oct 30, 2017

			Qual Device:	Qual Device:	
Туре	Test Name / Condition	Duration	CSD97374Q4M	TPS51362RVER	
AC	Autoclave, 121C	96 Hours	3/231 - TBD	3/231 - TBD	
HAST	Biased HAST, 130C/85%RH	96 Hours	3/231 - TBD	3/231 - TBD	
BLR	BLR - Temperature Cycle, -40C / +125C	1000 Cycles	1/32 - TBD	-	
ED	Electrical Characterization	Per datasheet parameters	TBD	TBD	
CDM	ESD CDM	+/- 500V	3/9 - TBD	3/9 - TBD	
HBM	ESD HBM	+/- 2000V	3/9 - TBD	3/9 - TBD	
IOL	Intermittent Operating Life	2500, 5000, 10,000 Cycles	3/231 - TBD	-	
HTSL	High Temperature Storage Bake, 170C	420 Hours	3/231 - TBD	3/231 - TBD	
MSL	Thermal Integrity Sequence (Cu Wire)	Level 2 at 260C	3/36 - TBD	-	
MSL	Thermal Integrity Sequence	Level 2 at 260C	-	3/36 - TBD	
MQ	Manufacturability (Assembly)	Per Mfg. Site specification	TBD	TBD	
PD	Physical Dimensions	Per mechanical drawing	3/15 - TBD	3/15 - TBD	
SD	Solderability	Steam age, 8 hours; Pb-Free	3/66 - TBD	3/66 - TBD	
SD	Solderability	Steam age, 8 hours; Pb	3/66 - TBD	3/66 - TBD	
TC	Temperature Cycle, -55C/125C	700 Cycles	3/231 - TBD	3/231 - TBD	

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

- Preconditioning performed for Autoclave, Unbiased HAST, THB/Biased HAST, Temperature Cycle, Thermal Shock, and HTSL, as applicable.

- The following are equivalent HTOL options based on an activation energy of 0.7eV: 125C/1000 Hours, 140C/480 Hours, 150C/300 Hours, and 155C/240 Hours.

- The following are equivalent HTSL options based on an activation energy of 0.7eV: 150C/1000 Hours, and 170C/420 Hours.

- The following are equivalent Temperature Cycle options per JESD47: -55C/125C/700 Cycles and -65C/150C/500 Cycles.

Quality and Environmental data is available at TI's external Web site: http://www.ti.com/

Green/Pb-free Status: Qualified Pb-Free(SMT) and Green

For questions regarding this notice, e-mails can be sent to the regional 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
Japan	PCNJapanContact@list.ti.com