

PCN Number:	20171027000		PCN Date:	Nov. 9, 2017												
Title:	Qualify UTAC as an additional Assembly site for select devices															
Customer Contact:	PCN Manager	Dept:	Quality Services													
Proposed 1st Ship Date:	Feb. 9, 2018		Estimated Sample Availability:	Provided upon 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 type="checkbox"/>	Test Site	<input type="checkbox"/>	Wafer Fab Site											
<input checked="" 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 is pleased to announce the qualification of UTAC as an additional Assembly site for the list of devices shown below. Material differences as follows between sites.																
<table border="1"> <thead> <tr> <th>Assembly Site</th> <th>Assembly Site Origin</th> <th>Assembly Country Code</th> <th>Assembly City</th> </tr> </thead> <tbody> <tr> <td>Carsem Suzhou</td> <td>CSZ</td> <td>CHN</td> <td>Jiangsu</td> </tr> <tr> <td>UTAC Thai Limited</td> <td>NSE</td> <td>THA</td> <td>Bangkok</td> </tr> </tbody> </table>					Assembly Site	Assembly Site Origin	Assembly Country Code	Assembly City	Carsem Suzhou	CSZ	CHN	Jiangsu	UTAC Thai Limited	NSE	THA	Bangkok
Assembly Site	Assembly Site Origin	Assembly Country Code	Assembly City													
Carsem Suzhou	CSZ	CHN	Jiangsu													
UTAC Thai Limited	NSE	THA	Bangkok													
Material Differences:																
	CARZ	UTAC														
Mount compound	435143	PZ0035														
Mold compound	441086	CZ0289														
Reason for Change:																
Continuity of Supply																
Anticipated impact on Fit, Form, Function, Quality or Reliability (positive / negative):																
None																
Anticipated impact on Material Declaration																
<input type="checkbox"/>	No Impact to the Material Declaration	<input checked="" type="checkbox"/>	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 from the TI Eco-Info website . There is no impact to the material meeting current regulatory compliance requirements with this PCN change.													
Changes to product identification resulting from this PCN:																
Assembly Site																
Carsem Suzhou	Assembly Site Origin (22L)	ASO: CSZ														
UTAC Thai Limited	Assembly Site Origin (22L)	ASO: NSE														
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

Topside Device marking:

Assembly site code for CSZ = F, NSE = J

Product Affected

TPS53622RSBR	TPS53658RSBR	TPS53659RSBR	TPS53679RSBR
TPS53622RSBT	TPS53658RSBT	TPS53659RSBT	TPS53679RSBT

Qualification Report

TPS53679 TPS53659 TPS53622 TPS53658 RFAB/UTAC Qual Data

Approve Date 24-Oct-2017

Product Attributes

Attributes	Qual Device: TPS53622 PG2.1	Qual Device: TPS53658 PG2.1	Qual Device: TPS53659 PG2.1	Qual Device: TPS53679 PG2.1	QBS Product Reference 1: TPS53622RSB
Assembly Site	NSE/UTAC	NSE/UTAC	NSE/UTAC	NSE/UTAC	CARZ
Package Family	QFN/SON	QFN/SON	QFN/SON	QFN/SON	QFN/SON
Flammability Rating	-	-	-	-	UL 94 V-0
Wafer Fab Supplier	RFAB	RFAB	RFAB	RFAB	RFAB
Wafer Process	LBC7	LBC7	LBC7	LBC7	LBC7

Attributes	QBS Product Reference 1: TPS53658 PG1.2	QBS Product Reference 1: TPS53658 PG2.1	QBS Product Reference 1: TPS53659 PG1.2	QBS Product Reference 1: TPS53679 PG1.2	QBS Product Reference 1: TPS53679 PG2.1
Assembly Site	CARZ	CARZ	CARZ	CARZ	CARZ
Package Family	QFN/SON	QFN/SON	QFN/SON	QFN/SON	QFN/SON
Flammability Rating	UL 94 V-0	UL 94 V-0	UL 94 V-0	UL 94 V-0	UL 94 V-0
Wafer Fab Supplier	RFAB	RFAB	RFAB	RFAB	RFAB
Wafer Process	LBC7	LBC7	LBC7	LBC7	LBC7

Attributes	QBS Product Reference 1: TPS53681	QBS Package Reference 1: LM536015QDSXQ1	QBS Package Reference 1: LM53601AQDSXQ1	QBS Package Reference 1: TPS65981ABRTQR
Assembly Site	NSE/UTAC	NSE/UTAC	NSE/UTAC	NSE/UTAC
Package Family	QFN/SON	QFN/SON	QFN/SON	QFN/SON
Flammability Rating	UL 94 V-0	UL 94 V-0	UL 94 V-0	UL 94 V-0
Wafer Fab Supplier	RFAB	DMOS5	DMOS5	RFAB
Wafer Process	LBC7	LBC8	LBC8	LBC8

- QBS: Qual By Similarity

- Qual Devices qualified at LEVEL2-260CG: TPS53659 PG2.1, TPS53622 PG2.1, TPS53658 PG2.1, TPS53679 PG2.1

Qualification Results

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

Type	Test Name / Condition	Duration	Qual Device: TPS53622 PG2.1	Qual Device: TPS53658 PG2.1	Qual Device: TPS53659 PG2.1	Qual Device: TPS53679 PG2.1	QBS Product Reference1: TPS53622RSB
AC	Autoclave 121C	96 Hours	-	-	-	-	-
ED	Electrical Distributions	Cpk>1.67 Room, Hot, & Cold	-	-	-	-	-
ED	Electrical Characterization	Per Datasheet Parameters	-	-	-	Pass	-
FLAM	Flammability (IEC 695-2-2)	--	-	-	-	-	-
FLAM	Flammability (UL 94V-0)	--	-	-	-	-	-
FLAM	Flammability (UL-1694)	--	-	-	-	-	-
HAST	Biased HAST, 110C/85%RH	264 Hours	-	-	-	-	-
HAST	Biased HAST, 130C/85%RH	96 Hours	-	-	-	-	-
HBM	ESD - HBM	3000 V	-	-	-	-	-
CDM	ESD - CDM	1500 V	-	-	-	-	-
HTOL	Life Test, 125C	1000 Hours	-	-	-	-	-
HTOL	Life Test, 150C	300 Hours	-	-	-	-	-
HTSL	High Temp. Storage Bake, 170C	420 Hours	-	-	-	-	-
HTSL	High Temp. Storage Bake, 175C	500 Hours	-	-	-	-	-
LU	Latch-up	(per JESD78)	-	-	-	-	-
PD	Physical Dimensions	--	-	-	-	-	-
PTC	Power Temperature Cycle, -40/125C	1000 Cycles	-	-	-	-	-
SD	Solderability (>95% Lead Coverage)	Pb and Pb-Free	-	-	-	-	-
SD	Surface Mount Solderability	Pb Free	-	-	-	-	-
TC	Temperature Cycle, -65/150C	500 Cycles	-	-	-	-	-
WBP	Bond Pull	Wires	-	1/76/0	1/76/0	-	-
WBS	Ball Bond Shear	Wires	-	1/76/0	1/76/0	-	-
YLD	FTY and BIN Summary	--	Pass	Pass	Pass	Pass	Pass

Type	Test Name / Condition	Duration	QBS Product Reference1: TPS53658 PG1.2	QBS Product Reference1: TPS53658 PG2.1	QBS Product Reference1: TPS53659 PG1.2	QBS Product Reference1: TPS53679 PG1.2	QBS Product Reference1: TPS53679 PG2.1
AC	Autoclave 121C	96 Hours	1/77/0	-	1/77/0	1/77/0	-
ED	Electrical Distributions	Cpk>1.67 Room, Hot, & Cold	-	-	-	-	-
ED	Electrical Characterization	Per Datasheet Parameters	-	Pass	-	-	Pass
FLAM	Flammability (IEC 695-2-2)	--	-	-	-	-	-
FLAM	Flammability (UL 94V-0)	--	-	-	-	-	-
FLAM	Flammability (UL-1694)	--	-	-	-	-	-
HAST	Biased HAST, 110C/85%RH	264 Hours	-	-	1/77/0	2/153/0	-
HAST	Biased HAST, 130C/85%RH	96 Hours	-	-	-	-	-
HBM	ESD - HBM	3000 V	-	1/3/0	-	1/3/0	1/3/0
CDM	ESD - CDM	1500 V	-	1/3/0	-	-	1/3/0
HTOL	Life Test, 125C	1000 Hours	-	-	-	-	-
HTOL	Life Test, 150C	300 Hours	-	-	1/77/0	2/154/0	-
HTSL	High Temp. Storage Bake, 170C	420 Hours	-	-	-	-	-
HTSL	High Temp. Storage Bake, 175C	500 Hours	-	-	-	-	-
LU	Latch-up	(per JESD78)	-	1/6/0	-	1/6/0	1/6/0
PD	Physical Dimensions	--	-	-	-	-	-
PTC	Power Temperature Cycle, -40/125C	1000 Cycles	-	-	-	-	-
SD	Solderability (>95% Lead Coverage)	Pb and Pb-Free	-	-	-	-	-
SD	Surface Mount Solderability	Pb Free	-	-	-	-	-
TC	Temperature Cycle, -65/150C	500 Cycles	1/77/0	-	1/77/0	1/77/0	-
WBP	Bond Pull	Wires	-	-	1/5/0	1/5/0	-
WBS	Ball Bond Shear	Wires	-	-	-	-	-
YLD	FTY and BIN Summary	--	-	Pass	-	Pass	Pass

Type	Test Name / Condition	Duration	QBS Product Reference1: TPS53681	QBS Package Reference1: LM536015QDSX Q1	QBS Package Reference1: LM53601AQDSX Q1	QBS Package Reference1: TPS65981ABRT QR
AC	Autoclave 121C	96 Hours	-	3/231/0	-	3/231/0
ED	Electrical Distributions	Cpk>1.67 Room, Hot, & Cold	-	Pass	Pass	-
ED	Electrical Characterization	Per Datasheet Parameters	Pass	-	-	Pass
FLAM	Flammability (IEC 695-2-2)	--	-	-	-	3/15/0
FLAM	Flammability (UL 94V-0)	--	-	-	-	3/15/0
FLAM	Flammability (UL-1694)	--	-	-	-	3/15/0
HAST	Biased HAST, 110C/85%RH	264 Hours	-	-	-	-
HAST	Biased HAST, 130C/85%RH	96 Hours	-	2/157/0	1/77/0	3/231/0
HBM	ESD - HBM	3000 V	-	-	-	-
CDM	ESD - CDM	1500 V	1/3/0	-	-	-
HTOL	Life Test, 125C	1000 Hours	-	-	-	3/231/0
HTOL	Life Test, 150C	300 Hours	-	1/77/0	-	-
HTSL	High Temp. Storage Bake, 170C	420 Hours	-	-	-	3/231/0
HTSL	High Temp. Storage Bake, 175C	500 Hours	-	1/77/0	-	-
LU	Latch-up	(per JESD78)	1/6/0	-	1/6/0	1/6/0
PD	Physical Dimensions	--	1/5/0	1/10/0	1/10/0	3/15/0
PTC	Power Temperature Cycle, -40/125C	1000 Cycles	-	1/45/0	-	-
SD	Solderability (>95% Lead Coverage)	Pb and Pb-Free	-	1/30/0	1/30/0	-
SD	Surface Mount Solderability	Pb Free	-	-	-	3/66/0
TC	Temperature Cycle, -65/150C	500 Cycles	1/77/0	3/231/0	1/77/0	3/231/0
WBP	Bond Pull	Wires	1/76/0	1/30/0	1/30/0	3/228/0
WBS	Ball Bond Shear	Wires	1/76/0	1/30/0	1/30/0	3/228/0
YLD	FTY and BIN Summary	--	Pass	-	-	-

- Preconditioning was 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/1k 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/1k Hours, and 170C/420 Hours
 - The following are equivalent Temp 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