

PCN Number:	20180626001.1		PCN Date:	June 28, 2018									
Title:	Qualification of Carsem as additional Assembly and Bump Site for Select Devices												
Customer Contact:	PCN Manager	Dept:	Quality Services										
Proposed 1st Ship Date:	Sept 28, 2018	Estimated Sample Availability:	Date provided at sample 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 type="checkbox"/>	Packing/Shipping/Labeling	<input type="checkbox"/>	Test Process	<input type="checkbox"/>	Wafer Fab Materials								
		<input type="checkbox"/>		<input type="checkbox"/>	Wafer Fab Process								
PCN Details													
Description of Change:													
Texas Instruments is pleased to announce the Qualification of Carsem as additional Assembly and Bump Site for select devices shown below in the product affected section. Construction differences are noted below:													
<table border="1"> <thead> <tr> <th></th> <th>Clark AT</th> <th>Carsem</th> </tr> </thead> <tbody> <tr> <td>Mount compound</td> <td>4207123</td> <td>SID#443156</td> </tr> <tr> <td>Mold compound</td> <td>4208625</td> <td>SID#441086</td> </tr> </tbody> </table>						Clark AT	Carsem	Mount compound	4207123	SID#443156	Mold compound	4208625	SID#441086
	Clark AT	Carsem											
Mount compound	4207123	SID#443156											
Mold compound	4208625	SID#441086											
Reason for Change:													
Continuity of supply.													
Anticipated impact on Form, Fit, 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 Information:													
Assembly Site	Assembly Site Origin (22L)	Assembly Country Code (21L)	Assembly City										
Clark AT	QAB	PHL	Angeles City, Pampanga										
Carsem	CSZ	CHN	Jiangsu										
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:

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

TLC59581RTQR	TLC59581RTQT	TLC59582RTQR	TLC59582RTQT
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TI Information
Selective Disclosure

Qualification Report

TLC59581RTQ Product Off-load Qualification/Assembled in 56ld QFN (RTQ) at Carsem
Approve Date 12-June-2018

Product Attributes

Attributes	Qual Device: TLC59581RTQR	QBS Product Reference: SN015120ARTQR	QBS Package Reference: TPS650240RHBR	QBS Package Reference: SNA1010017RSAR	QBS Package Reference: TPS51123RGER
Assembly Site	CARZ	CARZ	CARZ	CARZ	CARZ
Package Family	VQFN	VQFN	VQFN	VQFN	VQFN
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	FR-BIP-1	MH8	DL-LIN
Wafer Process	LBC7	LBC7	3370A12X3	LBC7	LBC4

- QBS: Qual By Similarity
- Qual Device TLC59581RTQR is qualified at LEVEL3-260C

Qualification Results

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

Type	Test Name / Condition	Duration	Qual Device: TLC59581RTQR	QBS Product Reference: SN015120ARTQR	QBS Package Reference: TPS650240RHBR	QBS Package Reference: SNA1010017RSAR	QBS Package Reference: TPS51123RGER
AC	Autoclave 121C	96 Hours	-	-	3/231/0	3/231/0	3/231/0
ED	Electrical Characterization	Per Datasheet Parameters	1/Pass	1/Pass	-	1/Pass	1/Pass
HAST	Biased HAST, 110C/85%RH	264 Hours	-	3/231/0	-	-	-
HBM	ESD - HBM	4000 V	-	-	-	-	-
HBM	ESD - HBM	1000 V	-	-	-	-	-
CDM	ESD - CDM	1500 V	-	-	-	-	-
CDM	ESD - CDM	250 V	-	-	-	-	-
HTOL	Life Test, 125C	1000 Hours	-	-	-	-	3/112/0
HTOL	Life Test, 135C	635 Hours	-	-	-	-	-
HTSL	High Temp. Storage Bake, 150C	1000 Hours	-	3/231/0	-	-	-
HTSL	High Temp. Storage Bake, 170C	420 Hours	-	-	3/231/0	3/231/0	3/231/0
LU	Latch-up (per JESD78)	-	-	-	-	-	-
MQ	Manufacturing (Assembly)	Per Mfg Site Specification	-	3/Pass	3/Pass	3/Pass	3/Pass
PD	Physical Dimensions	-	-	-	-	-	-
SA	Salt Atmosphere	-	-	-	-	-	3/66/0
SD	Solderability	8 Hours Steam Age	-	-	-	-	3/66/0
TC	Temperature Cycle, -65/150C	500 Cycles	-	3/231/0	3/231/0	3/231/0	3/231/0
TS	Thermal Shock -65/150C	500 Cycles	-	-	-	-	-
UHAST	Unbiased HAST, 110C/85%RH	264 Hours	-	3/231/0	-	-	-
WBP	Bond Pull	Wires	-	-	-	-	-
WBS	Bond Shear	Wires	-	-	-	-	-

-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/>

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
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