

<b>PCN Number:</b>	20161130000			<b>PCN Date:</b>	Dec 5, 2016																										
<b>Title:</b>	Alternate Fab (MIHO8) and Assembly (CDAT) site Qualifications for select devices																														
<b>Customer Contact:</b>	<a href="#">PCN Manager</a>			<b>Dept:</b>	Quality Services																										
<b>Proposed 1<sup>st</sup> Ship Date:</b>	March 5, 2017		<b>Estimated Sample Availability:</b>	Date provided at sample request.																											
<b>Change Type:</b>																															
<input checked="" type="checkbox"/>	Assembly Site	<input type="checkbox"/>	Assembly Process	<input checked="" type="checkbox"/>	Assembly Materials																										
<input type="checkbox"/>	Design	<input type="checkbox"/>	Electrical Specification	<input type="checkbox"/>	Mechanical Specification																										
<input checked="" type="checkbox"/>	Test Site	<input type="checkbox"/>	Packing/Shipping/Labeling	<input type="checkbox"/>	Test Process																										
<input type="checkbox"/>	Wafer Bump Site	<input type="checkbox"/>	Wafer Bump Material	<input type="checkbox"/>	Wafer Bump Process																										
<input checked="" type="checkbox"/>	Wafer Fab Site	<input type="checkbox"/>	Wafer Fab Materials	<input type="checkbox"/>	Wafer Fab Process																										
		<input type="checkbox"/>	Part number change																												
<b>PCN Details</b>																															
<b>Description of Change:</b>																															
<p>Texas Instruments is pleased to announce the qualification of both an additional fab (MIHO8) and Assembly/Test (CDAT) site for the devices listed in the "Product Affected" section of this document. Construction differences are noted below:</p>																															
<table border="1"> <thead> <tr> <th></th> <th>Clark AT</th> <th>CDAT</th> </tr> </thead> <tbody> <tr> <td><b>Mount Compound</b></td> <td>4207768</td> <td><b>4207123</b></td> </tr> <tr> <td><b>Mold Compound</b></td> <td>4208625</td> <td><b>4222198</b></td> </tr> </tbody> </table>									Clark AT	CDAT	<b>Mount Compound</b>	4207768	<b>4207123</b>	<b>Mold Compound</b>	4208625	<b>4222198</b>															
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Current Sites				Additional Sites																											
Current Fab Site	Fab Process	Bump Site	Wafer Diameter	Additional Fab Site	Fab Process	Bump Site	Wafer Diameter																								
RFAB	LBC7	CLARK-BP	300 mm	MIHO8	LBC7	CLARK-BP	200 mm																								
<p>Test coverage, insertions, conditions will remain consistent with current testing and verified with test MQ.</p> <p>Qual details are provided in the Qual Data Section.</p>																															
<b>Reason for Change:</b>																															
Continuity of Supply																															
<b>Anticipated impact on Form, Fit, Function, Quality or Reliability (positive / negative):</b>																															
<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 at the site link below <a href="http://www.ti.com/quality/docs/materialcontentsearch.tsp">http://www.ti.com/quality/docs/materialcontentsearch.tsp</a>																											

**Changes to product identification resulting from this PCN:**

**Fab**

Chip Sites	Chip Site Origin Code (20L)	Chip Site Country Code (21L)	Chip Site City
RFAB	RFB	USA	Richardson

Chip Site	Chip Site Origin Code (20L)	Chip Site Country Code (21L)	Chip Site City
<b>MIHOS</b>	<b>MH8</b>	<b>JPN</b>	<b>Ibaraki</b>

Assembly Site	Assembly Site Origin (22L)	Assembly Country Code (21L)	Assembly City
Clark AT	QAB	PHL	Angeles City, Pampanga
<b>CDAT</b>	<b>CDA</b>	<b>CHN</b>	<b>Chengdu</b>

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: 39  
 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 (if included):**

Assembly site code for QAB= 1

**Assembly site code for CDA = 8**

**Product Affected:**

BQ25890RTWR	BQ25892RTWT	BQ25895RTWR	BQ25896RTWR
BQ25890RTWT	BQ25895MRTWR	BQ25895RTWT	BQ25896RTWT
BQ25892RTWR	BQ25895MRTWT		

## Qualification Report

### Qualification of BQ2589XRTW family in CDAT including BQ25890, BQ25892, BQ25895M, and BQ25896RTW using materials from MIHO8/LBC7 Approve Date 07-Nov-2016

#### Product Attributes

Attributes	Qual Device: BQ25892RTW	Qual Device: BQ25895MRTW	QBS Process Reference: TPS62110RSA	QBS Package Reference: BQ25895MRTW	QBS Package Reference: TPS62140RGTR
<b>Assembly Site</b>	CHENGDU A/T	CHENGDU A/T	CAR	CHENGDU A/T	CHENGDU A/T
<b>Package Family</b>	QFN, 4 x 4 MM	QFN, 4 x 4 MM	QFN	QFN	VQFN
<b>Flammability Rating</b>	-	-	UL 94 V-0	UL 94 V-0	UL 94 V-0
<b>Wafer Fab Supplier</b>	MIHO8	MIHO8	MIHO8	RFAB	MIHO-8
<b>Wafer Fab Process</b>	LBC7	LBC7	LBC7	LBC7X+1UM VIATOP+6DU SEAL	LBC7X

- QBS: Qual By Similarity
- Qual Device BQ25896RTW is qualified at LEVEL2-260CG
- Qual Device BQ25890RTW is qualified at LEVEL2-260C
- Qual Device BQ25895MRTW is qualified at LEVEL2-260CG
- Qual Device BQ25892RTW is qualified at LEVEL2-260CG

#### Qualification Results

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

Type	Test Name / Condition	Duration	Qual Device: BQ25892RTW	Qual Device: BQ25895MRTW	QBS Process Reference: TPS62110RSA	QBS Package Reference: BQ25895MRTW	QBS Package Reference: TPS62140RGTR
AC	Autoclave 121C	192 Hours	-	-	-	-	3/231/0
AC	Autoclave 121C	96	-	-	-	3/270/0	-
AC	Autoclave 121C	96 Hours	-	-	3/231/0	-	3/231/0
CDM	ESD - CDM	1000 V	1/3/0	1/3/0	-	-	-
ED	Electrical Characterization	(Per Datasheet Parameters)	1/Pass	1/Pass	-	-	-
ED	Electrical Characterization	Per Datasheet Parameters	-	-	-	-	1/Pass
ELFR	Early Life Failure Rate, 140C	48 Hours	-	-	3/1881/0	-	-
HAST	Biased HAST, 130C/85%RH	96 Hours	-	-	3/231/0	-	-
HBM	ESD - HBM	2500 V	1/3/0	1/3/0	-	-	-
HTOL	Life Test, 140C	480 Hours	-	-	3/231/0	-	-
HTSL	High Temp Storage Bake 170C	420 Hours	-	-	3/231/0	3/270/0	-
LU	Latch-up	(per JESD78)	1/6/0	1/6/0	3/15/0	-	-
MSL	Thermal Path Integrity	Level 2-260C	-	-	-	-	3/36/0
TC	Temperature Cycle, -65/150C	500	-	-	-	3/270/0	-
TC	Temperature Cycle, -65/150C	500 Cycles	-	-	3/231/0	-	3/231/0
TS	Thermal Shock, -65/150C	500 Cycles	-	-	3/231/0	-	-
WBP	Bond Pull	76 Wire, 3 units min	-	-	-	-	3/228/0
WBS	Ball Bond Shear	76 balls, 3 units min	-	-	-	-	3/228/0

- 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 you can contact your local Field Sales Representative.

<b>Location</b>	<b>E-Mail</b>
USA	<a href="mailto:PCNAmericasContact@list.ti.com">PCNAmericasContact@list.ti.com</a>
Europe	<a href="mailto:PCNEuropeContact@list.ti.com">PCNEuropeContact@list.ti.com</a>
Asia Pacific	<a href="mailto:PCNAsiaContact@list.ti.com">PCNAsiaContact@list.ti.com</a>
Japan	<a href="mailto:PCNJapanContact@list.ti.com">PCNJapanContact@list.ti.com</a>