

PCN Number:	20131028000A		PCN Date:	04/11/2016															
Title:	Qualification of Carsem Suzhou (CSZ) as Additional Assembly and Test Site for Select Devices on QFN/SON package																		
Customer Contact:	PCN Manager		Dept:	Quality Services															
Change Type:																			
<input checked="" type="checkbox"/>	Assembly Site	<input type="checkbox"/>	Assembly Process	<input 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 checked="" 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 type="checkbox"/>	Wafer Fab Site	<input type="checkbox"/>	Wafer Fab Materials	<input type="checkbox"/>	Wafer Fab Process														
		<input type="checkbox"/>	Part number change																
PCN Details																			
Description of Change:																			
Revision A is to remove select devices in the Product Affected Section (with strikethrough) and highlighted in yellow. These devices were inadvertently added and not affected by this change.																			
Qualification of Carsem Suzhou (CSZ) as Additional Assembly and Test Site for Select Devices on QFN/SON package.																			
Test coverage, insertions, conditions will remain consistent with current testing and verified with test MQ.																			
Reason for Change:																			
Continuity of supply.																			
Anticipated impact on Form, Fit, Function, Quality or Reliability (positive / negative):																			
None																			
Changes to product identification resulting from this PCN:																			
<table border="1"> <tr> <td>Assembly Site</td> <td></td> <td></td> </tr> <tr> <td>UTAC Thailand</td> <td>Assembly Site Origin (22L)</td> <td>ASO: NSE</td> </tr> <tr> <td>TI Malaysia</td> <td>Assembly Site Origin (22L)</td> <td>ASO: MLA</td> </tr> <tr> <td>TI Clark - Philippines</td> <td>Assembly Site Origin (22L)</td> <td>ASO: QAB</td> </tr> <tr> <td>Carsem Suzhou</td> <td>Assembly Site Origin (22L)</td> <td>ASO: CSZ</td> </tr> </table>					Assembly Site			UTAC Thailand	Assembly Site Origin (22L)	ASO: NSE	TI Malaysia	Assembly Site Origin (22L)	ASO: MLA	TI Clark - Philippines	Assembly Site Origin (22L)	ASO: QAB	Carsem Suzhou	Assembly Site Origin (22L)	ASO: CSZ
Assembly Site																			
UTAC Thailand	Assembly Site Origin (22L)	ASO: NSE																	
TI Malaysia	Assembly Site Origin (22L)	ASO: MLA																	
TI Clark - Philippines	Assembly Site Origin (22L)	ASO: QAB																	
Carsem Suzhou	Assembly Site Origin (22L)	ASO: CSZ																	
Sample product shipping label (not actual product label)																			
ASSEMBLY SITE CODES: NSE =J, TI-Malaysia = K , TI-Clark = I, Carsem Suzhou = F																			

Product Affected:

BQ24072RGTR	BQ24314ADSGT	SN1004052RTER	TPS51461RGET
BQ24072RGTRG4	BQ24314ADSGTG4	TLV62065DSGR	TPS51462RGER
BQ24072RGTT	BQ24314DSGR	TLV62065DSGT	TPS51462RGET
BQ24072RGTTG4	BQ24314DSGRG4	TPS2540ARTER	TPS53311RGTR
BQ24075RGTR	BQ24314ADSGT	TPS2540ARTET	TPS53311RGTT
BQ24075RGTRG4	BQ24314ADSGTG4	TPS2541ARTER	TPS53312RGTR
BQ24075RGTT	BQ24315DSGR	TPS2541ARTET	TPS53312RGTT
BQ24075RGTTG4	BQ24315DSGRG4	TPS2541RTER	TPS54319RTER
BQ24210DQCR	BQ24315ADSGT	TPS2541RTET	TPS54319RTET
BQ24210DQCT	BQ24315ADSGTG4	TPS2546RTER	TPS62065DSGR
BQ24300DSGR	BQ24316DSGR	TPS2546RTET	TPS62065DSGT
BQ24300DSGRG4	BQ24316DSGRG4	TPS2554DRCCR	TPS62090RGTR
BQ24300ADSGT	BQ24316ADSGT	TPS2554DRCT	TPS62090RGTT
BQ24300ADSGTG4	BQ24316ADSGTG4	TPS2560DRCCR	TPS62091RGTR
BQ24304DSGR	FX006	TPS2560DRCT	TPS62091RGTT
BQ24304DSGRG4	FX016	TPS51200DRC/2801	TPS62092RGTR
BQ24304ADSGT	HPA00512DRCCR	TPS51200DRCCR	TPS62092RGTT
BQ24304ADSGTG4	HPA00810RGTR-1/2	TPS51200DRCCR/2801	TPS62093RGTR
BQ24313DSGR	HPA00935RGTR	TPS51200DRCRG4	TPS62093RGTT
BQ24313ADSGT	HPA01187DSGR	TPS51200DRCT	
BQ24314ADSGR	SN0803054DRCCR	TPS51200DRCTG4	
BQ24314ADSGRG4	SN0803054DRCRG4	TPS51461RGER	

Qualification Data

This qualification has been specifically developed for the validation of this change. The qualification data validates that the proposed change meets the applicable released technical specifications.

Qual Vehicle # 1: TPA3117D2RHBR (MSL2-260C)**Package Construction Details**

Assembly Site:	CARSEM SUZHOU	Mold Compound:	SID#441086
# Pins-Designator, Family:	32-RHB, VQFN	Mount Compound:	SID#435143
Lead frame (Finish, Base):	NiPdAu, Cu	Bond Wire:	1.3 Mil Dia., Cu

Qualification: Plan Test Results

Reliability Test	Conditions	Sample Size/Fail		
		Lot#1	Lot#2	Lot#3
**High Temp. Storage Bake	170C (420hrs)	77/0	77/0	77/0
**Biased HAST	130C/85%RH (96hrs)	77/0	77/0	77/0
**Autoclave 121C	121C, 2 atm (96 Hrs)	77/0	77/0	77/0
**T/C -65C/150C	-65C/+150C (500 Cyc)	77/0	77/0	77/0
Manufacturability	(per mfg. Site specification)	Pass	Pass	Pass
Moisture Sensitivity	(level 2 @ 260C peak +5/-0C)	12/0	12/0	12/0

Notes **- Preconditioning sequence: Level 3-260C.

Qual Vehicle #2: TPA6132A2RTER (MSL2-260C)**Package Construction Details**

Assembly Site:	CARSEM SUZHOU	Mold Compound:	SID#441086
# Pins-Designator, Family:	16-RTE, WQFN	Mount Compound:	SID#435933
Lead frame (Finish, Base):	NiPdAu, Cu	Bond Wire:	0.96 Mil Dia., Cu

Qualification: Plan Test Results

Reliability Test	Conditions	Sample Size/Fail	
		Lot#1	Lot#2
**Autoclave 121C	121C, 2 atm (96 Hrs)	77/0	77/0
**T/C -65C/150C	-65C/+150C (500 Cyc)	77/0	77/0
Manufacturability	(per mfg. Site specification)	Pass	-

Notes ** - Preconditioning sequence: Level 2-260C.

Qual Vehicle # 3: TPS2540RTER (MSL2-260C)**Package Construction Details**

Assembly Site:	CARSEM SUZHOU	Mold Compound:	SID#441086
# Pins-Designator, Family:	16-RTE, WQFN	Mount Compound:	SID#435143
Lead frame (Finish, Base):	NiPdAu, Cu	Bond Wire:	1.98 Mil Dia., Cu

Qualification: Plan Test Results

Reliability Test	Conditions	Sample Size/Fail		
		Lot#1	Lot#2	Lot#3
High Temp Life Test	125C (168 Hrs)	80/0	80/0	80/0
**T/C -65C/150C	-65C/+150C (500 Cyc)	77/0	77/0	-

Notes ** - Preconditioning sequence: Level 2-260C.

Reference Qualification Data

This qualification has been specifically developed for the validation of this change. The qualification data validates that the proposed change meets the applicable released technical specifications.

Qual Vehicle # 1: 2ELVC412CDRTJR (MSL2-260C)**Package Construction Details**

Assembly Site:	CARSEM SUZHOU	Mold Compound:	SID#441086
# Pins-Designator, Family:	20-RTJ, WQFN	Mount Compound:	SID#435143
Lead frame (Finish, Base):	NiPdAu, Cu	Bond Wire:	1.0 Mil Dia., Cu

Qualification: Plan Test Results

Reliability Test	Conditions	Sample Size/Fail		
		Lot#1	Lot#2	Lot#3
**High Temp. Storage Bake	170C (420hrs)	77/0	77/0	77/0
**Autoclave 121C	121C, 2 atm (96 Hrs)	77/0	77/0	77/0
**T/C -65C/150C	-65C/+150C (500 Cyc)	77/0	77/0	77/0
Manufacturability	(per mfg. Site specification)	Pass	Pass	Pass
Moisture Sensitivity	(level 2 @ 260C peak +5/-0C)	12/0	-	-

Notes ** - Preconditioning sequence: Level 2-260C.

Qual Vehicle # 2: ONET8501PBRGTR (MSL2-260C)**Package Construction Details**

Assembly Site:	CARSEM SUZHOU	Mold Compound:	SID#441086
# Pins-Designator, Family:	16-RGT, VQFN	Mount Compound:	SID#435143
Lead frame (Finish, Base):	NiPdAu, Cu	Bond Wire:	1.0 Mil Dia., Cu

Qualification: Plan Test Results

Reliability Test	Conditions	Sample Size/Fail		
		Lot#1	Lot#2	Lot#3
**High Temp. Storage Bake	170C (420hrs)	77/0	77/0	77/0
**Autoclave 121C	121C, 2 atm (96 Hrs)	77/0	77/0	77/0
**T/C -65C/150C	-65C/+150C (500 Cyc)	77/0	77/0	77/0
Manufacturability (Assembly)	(per mfg. Site specification)	Pass	Pass	Pass
Moisture Sensitivity	(level 2 @ 260C peak +5/-0C)	12/0	-	-

Notes ** - Preconditioning sequence: Level 2-260C.

Qual Vehicle # 3: TPS51728RHAR (MSL3-260C)**Package Construction Details**

Assembly Site:	CARSEM SUZHOU	Mold Compound:	SID#441086
# Pins-Designator, Family:	20-RTJ, VQFN	Mount Compound:	SID#435143
Lead frame (Finish, Base):	NiPdAu, Cu	Bond Wire:	1.0 Mil Dia., Cu

Qualification: Plan Test Results

Reliability Test	Conditions	Sample Size/Fail		
		Lot#1	Lot#2	Lot#3
**High Temp. Storage Bake	170C (420 Hrs)	77/0	77/0	77/0
**Autoclave 121C	121C, 2 atm (96 Hrs)	76/0	75/0	77/0
**T/C -65C/150C	-65C/+150C (500 Cyc)	77/0	77/0	77/0
Manufacturability	(per mfg. Site specification)	Pass	Pass	Pass
Moisture Sensitivity	(level 3 @ 260C peak +5/-0C)	12/0	-	-

Notes ** - Preconditioning sequence: Level 3-260C.

Qual Vehicle # 4: TPS53211RGTR (MSL2-260C)**Package Construction Details**

Assembly Site:	CARSEM SUZHOU	Mold Compound:	SID#441086
# Pins-Designator, Family:	16-RGT, VQFN	Mount Compound:	SID#435143
Lead frame (Finish, Base):	NiPdAu, Cu	Bond Wire:	1.0 Mil Dia., Cu

Qualification: Plan Test Results

Reliability Test	Conditions	Sample Size/Fail		
		Lot#1	Lot#2	Lot#3
**Biased HAST	130C/85%RH (96hrs)	77/0	76/0	77/0
**High Temp. Storage Bake	170C (420hrs)	77/0	77/0	77/0
**Autoclave 121C	121C, 2 atm (96 Hrs)	77/0	77/0	77/0
**T/C -65C/150C	-65C/+150C (500 Cyc)	77/0	77/0	77/0
Manufacturability (Assembly)	(per mfg. Site specification)	Pass	Pass	Pass
Moisture Sensitivity	(level 2 @ 260C peak +5/-0C)	12/0	-	-

Notes ** - Preconditioning sequence: Level 2-260C.

Qual Vehicle # 5: UCD9211RHAR (MSL3-260C)**Package Construction Details**

Assembly Site:	CARSEM SUZHOU	Mold Compound:	SID#441086		
# Pins-Designator, Family:	40-RHA, VQFN	Mount Compound:	SID#435143		
Lead frame (Finish, Base):	NiPdAu, Cu	Bond Wire:	0.8 Mil Dia., Cu		
Qualification: <input type="checkbox"/> Plan <input checked="" type="checkbox"/> Test Results					
Reliability Test	Conditions	Sample Size/Fail			
		Lot#1	Lot#2	Lot#3	
**High Temp. Storage Bake	170C (420hrs)	77/0	77/0	77/0	
**Autoclave 121C	121C, 2 atm (96 Hrs)	77/0	77/0	77/0	
**T/C -65C/150C	-65C/+150C (500 Cyc)	77/0	77/0	77/0	
Salt Atmosphere	24 hrs	22/0	22/0	22/0	
Manufacturability (Assembly)	(per mfg. Site specification)	Pass	Pass	Pass	
Moisture Sensitivity	(level 3 @ 260C peak +5/-0C)	12/0	-	-	
Notes ** - Preconditioning sequence: Level 3-260C.					

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