

PCN Number:	20140903000			PCN Date:	09/11/2014	
Title:	Qualification of TIPI as new Assembly Site for Select Devices in the PBGA/nFBGA Package					
Customer Contact:	PCN Manager	Phone:	+1(214)480-6037	Dept:	Quality Services	
Proposed 1st Ship Date:	12/11/2014		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 checked="" 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"/>		<input type="checkbox"/>	Wafer Fab Process	
PCN Details						
Description of Change:						
Qualification of TIPI as a new Assembly Site for Select Devices in the PBGA/nFBGA Package. Assembly differences are as follows:						
Group 1 Devices:						
BGA Package Type	StatsChipPac Korea (CPK)			TI Philippines (TIPI)		
	Mount Compound	Mold Compound	Wire Type (mil)	Mount Compound	Mold Compound	Wire Type (mil)
GDP	R008-0022A	R005-B057	1.0 Au	4205412	4208515 / 4206745	0.80 Cu
ZDP						
ZDW	R008-0022A	R003-0088A			4206745	
ZAU	R008-0023A	R003-0035B	1.0 Au	4205412	4206745	0.96 Au
ZRH	R007-0045	R005-A074				
ZEN	R008-0022A	R003-0076E				
ZLS	R008-0052B (Bottom die) R008-0249B (Top die)	R003-0429K	0.80 Au	4205412 (Bottom die) 4211732 (Top die)	4206745	0.80 Au
ZJA	R008-0052B	R003-0035H	0.9 Au	4205412	4208515	0.9 Au
ZWQ	R008-0022A	R003-0035E	1.0 Au			0.96 Au

Group 2 Devices:

BGA Package Type	StatsChipPac Korea (CPK)			TI Philippines (TIPI)		
	Mount Compound	Mold Compound	Wire Type (mil)	Mount Compound	Mold Compound	Wire Type (mil)
GDY	R008-0022A	R003-0029A	1.0 Au	4205412	4218745	0.80 Cu
ZDY	R008-0022A	R003-0029A	1.0 Au			0.80 Cu
ZEL	R008-0022A	R003-0076C	1.0 Au			0.96 Au
ZEU	R008-0022A	R003-0076C	0.9 Au			0.9 Au
ZED	R008-0022A	R003-0029A	1.0 Au			0.80 Cu
ZPA	R008-0022A	R003-0029C	1.0 Au			0.80 Cu
ZWZ	R008-0022A	R003-0452A	1.0 Au			0.8 Cu

Group 3 Devices:

BGA Package Type	StatsChipPac Korea (CPK)			TI Philippines (TIPI)		
	Mount Compound	Mold Compound	Wire Type (mil)	Mount Compound	Mold Compound	Wire Type (mil)
ZWC	R008-0022A	R003-0035B	1.0 Au	4205412	TBD	0.80 Cu

• **Other Noticeable Package Difference on some devices by Group:**

- Group 1 Devices as follows:

CPK



19x19 Wizard-ZEL for reference purposes

TIPI



15x15 TLK3132ZEN actual TIPI unit

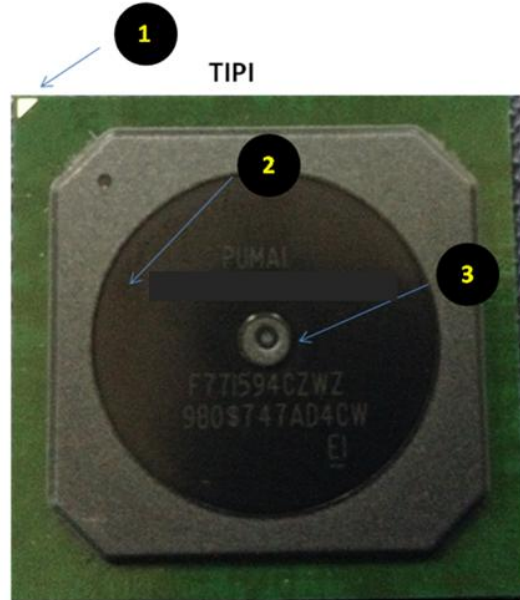
- Heat slug color is black.

- o Group 2 Devices as follows:

CPK



TIPI



TIPI:

- Pin 1 indicator is a small triangle.
- Heat slug is color black.
- Heat slug has hole in center for top gate.

CPK



TIPI



- Pin 1 indicator is a small triangle.
- Has indentation on center for top gate.

Reason for Change:

StatsChipPac Korea informed TI they will no longer be able to manufacture at this location.

Anticipated impact on Form, Fit, Function, Quality or Reliability (positive / negative):

None

Changes to product identification resulting from this PCN:**Sample Product Shipping Label** (not actual product label)

Assembly Site		
StatsChipPac Korea (CPK)	Assembly Site Origin (22L)	ASO: CPA
TI Philippines (TIPI)	Assembly Site Origin (22L)	ASO: PHI


**TEXAS
INSTRUMENTS**
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

Assembly Site Codes: CPK = 8, TIPI = W

Product Affected:

Device	BOM/Qual Group	Noticeable Visual Changes
TMS320C6711DGDP200	1	None
TMS320C6711DGDP250	1	None
TMS320C6711DZDP200	1	None
TMS320C6711DZDP250	1	None
TMS320C6712DGDP150	1	None
TMS320C6712DZDP150	1	None
TMS320C6713BGDP225	1	None
TMS320C6713BGDP300	1	None
TMS320C6713BZDP225	1	None
TMS320C6713BZDP300	1	None
TMS32C6711DGDPA167	1	None
TMS32C6711DZDPA167	1	None
TMS32C6713BGDP300B	1	None
TMS32C6713BGDPA200	1	None
TMS32C6713BZDPA200	1	None
D610A003BGDP225	1	None
D610A003BZDP225	1	None
C6713BZDPA200CIS	1	None

F751579AZDW	1	None
74SSTUB32868AZRHR	1	None
74SSTUB32868ZRHR	1	None
CC-SAP-ASIC1-ZAU	1	None
SN1103008IZLSR	1	None
TLK3132ZEN	1	Heat slug color
SN65LVCP114ZJA	1	None
TLK3131ZWQ	1	None
F751601AZPA	2	Pin 1 indicator, Center Pkg Indentation
F761769BZED-50	2	Pin 1 indicator, Heat slug color, Center Pkg Indentation
F771594CZWZ	2	Pin 1 indicator, Heat slug color, Center Pkg Indentation
OMAP5910JGDY2	2	Pin 1 indicator, Center Pkg Indentation
OMAP5910JZDY2	2	Pin 1 indicator, Center Pkg Indentation
OMAP5912ZDY	2	Pin 1 indicator, Center Pkg Indentation
TLK3134ZEL	2	Pin 1 indicator, Heat slug color, Center Pkg Indentation
TLK3142ZEL	2	Pin 1 indicator, Heat slug color, Center Pkg Indentation
TLK6002ZEU	2	Pin 1 indicator, Heat slug color, Center Pkg Indentation
TNETV1061ZWC	3	None
TNETV1061ZWCA	3	None
TNETV1061FIBZWC	3	None
TNETV1061FIBZWCA	3	None
TNETV1061FISZWC	3	None

Group 1: Qualification Data/Plan Qualification Data/Plan

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.

Qualification Data Approved:

September, 2014

Qual Vehicle # 1: D610A3BGDPA225 (MSL3-220C)

Package Construction Details

Assembly Site:	TIPI	Mold Compound:	4208515
# Pins-Designator, Family:	272-GDP, PBGA	Mount Compound:	4205412
Solder Ball Composition:	SnPb	Bond Wire:	0.80 Mil Dia., Cu

Qualification: Plan **Test Results**

Reliability Test	Conditions	Sample Size/Fail		
		Lot#1	Lot#2	Lot#3
Electrical Characterization	Per Datasheet Specifications	Pass	Pass	Pass
**High Temp Operating Life	125C (1000 Hrs)	77/0	77/0	77/0
** Biased Temp Humidity	85C/85%RH (1000 Hrs)	26/0	26/0	26/0
**Unbiased HAST	110C/85%RH (264 Hrs)	77/0	77/0	77/0
**T/C -55C/125C	-55C/125C (700 Cyc)	77/0	77/0	77/0
** High Temp Storage Bake	150C (1000 Hrs)	45/0	45/0	45/0

Notes **- Preconditioning sequence: Level 3-220C.

Qualification Data Approved:		September, 2014		
Qual Vehicle # 2: D610A3BZDPA225 (MSL4-260C)				
Package Construction Details				
Assembly Site:	TIPI	Mold Compound:	4208515	
# Pins-Designator, Family:	272-ZDP, PBGA	Mount Compound:	4205412	
Solder Ball Composition:	SnAgCu	Bond Wire:	0.80 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
Electrical Characterization	Per datasheet Specifications	Pass	Pass	Pass
**Unbiased HAST	110C/85%RH (264 Hrs)	77/0	77/0	77/0
**T/C -65C/150C	-55C/125C (700 Cyc)	77/0	77/0	77/0
Notes ** - Preconditioning sequence: Level 4-260C.				

Estimated Qualification Completion Date:		November, 2014		
Qual Vehicle # 3: 74SSTUB32868ZRHR (MSL3-260C)				
Package Construction Details				
Assembly Site:	TIPI	Mold Compound:	4206745	
# Pins-Designator, Family:	176-ZRH, nFBGA	Mount Compound:	4205412	
Solder Ball Composition:	SnAgCu	Bond Wire:	0.96 Mil Dia., Au	
Qualification: <input checked="" type="checkbox"/> Plan <input type="checkbox"/> Test Results				
Reliability Test	Conditions	Sample Size/Accept		
		Lot#1	Lot#2	Lot#3
Electrical Characterization	Per Datasheet Specifications	30/0	30/0	30/0
High Temp Operating Life	125C (1000 Hrs)	77/0	77/0	77/0
**Unbiased HAST	110C/85%RH (96 Hrs)	26/0	26/0	26/0
**High Temp. Storage Bake	150C (500 Hrs)	77/0	77/0	77/0
**T/C -55C/125C	-55C/+125C (700 Cyc)	77/0	77/0	77/0
Notes ** - Preconditioning sequence: Level 3-260C.				

Estimated Qualification Completion Date:		November, 2014		
Qual Vehicle # 4: CC-SAP-A1-ZAU (MSL3-260C)				
Package Construction Details				
Assembly Site:	TIPI	Mold Compound:	4206745	
# Pins-Designator, Family:	128-ZAU, nFBGA	Mount Compound:	4205412	
Solder Ball Composition:	SnAgCu	Bond Wire:	0.96 Mil Dia., Au	
Qualification: <input checked="" type="checkbox"/> Plan <input type="checkbox"/> Test Results				
Reliability Test	Conditions	Sample Size/Accept		
		Lot#1	Lot#2	Lot#3
Electrical Characterization	Per Datasheet Specifications	30/0	30/0	30/0
**Unbiased HAST	110C/85%RH (264 Hrs)	77/0	77/0	77/0
**T/C -55C/125C	-55C/+125C (700 Cyc)	77/0	77/0	77/0
Notes ** - Preconditioning sequence: Level 3-260C.				

Estimated Qualification Completion Date:		November, 2014		
Qual Vehicle # 5: TLK3132ZEN (MSL4-260C)				
Package Construction Details				
Assembly Site:	TIPI	Mold Compound:	4206745	
# Pins-Designator, Family:	196-ZEN, PBGA	Mount Compound:	4205412	
Solder Ball Composition:	SnAgCu	Bond Wire:	0.96 Mil Dia., Au	
Qualification: <input checked="" type="checkbox"/> Plan <input type="checkbox"/> Test Results				
Reliability Test	Conditions	Sample Size/Accept		
		Lot#1	Lot#2	Lot#3
Electrical Characterization	Per Datasheet Specifications	30/0	-	-

Qualification Data Approved:		November, 2009		
Qual Vehicle # 5B: GC5328IZER (MSL3-260C)				
Package Construction Details				
Assembly Site:	TIPI	Mold Compound:	4206745	
# Pins-Designator, Family:	484-ZER, PBGA	Mount Compound:	4205412	
Solder Ball Composition:	SnAgCu	Bond Wire:	0.80 Mil Dia., Au	
Qualification: <input type="checkbox"/> Plan <input checked="" type="checkbox"/> Test Results				
Reliability Test	Conditions	Sample Size/Accept		
		Lot#1	Lot#2	Lot#3
**Unbiased HAST	110C/85%RH (96 Hrs)	77/0	77/0	77/0
**T/C -55C/125C	-55C/+125C (1000 Cyc)	77/0	77/0	77/0
Notes ** - Preconditioning sequence: Level 3-260C.				

Estimated Qualification Completion Date:		March 2015		
Qual Vehicle # 6: SN65LVCP114ZJA (MSL3-260C)				
Package Construction Details				
Assembly Site:	TIPI	Mold Compound:	4208515	
# Pins-Designator, Family:	167-ZJA, nFBGA	Mount Compound:	4205412	
Solder Ball Composition:	SnAgCu	Bond Wire:	0.90 Mil Dia., Au	
Qualification: <input checked="" type="checkbox"/> Plan <input type="checkbox"/> Test Results				
Reliability Test	Conditions	Sample Size/Accept		
		Lot#1	Lot#2	Lot#3
**High Temp Operating Life	125C (1000 Hrs)	77/0	77/0	77/0
**T/C -55C/125C	-55C/125C (700 Cyc)	77/0	77/0	77/0
Notes ** - Preconditioning sequence: Level 3-260C.				

Group 2: Qualification Data/Plan

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.				
Estimated Qualification Completion Date:		February 2015		
Qual Vehicle # 1: OMAP5910JZDY2 (MSL3-260C)				
Package Construction Details				
Assembly Site:	TIPI	Mold Compound:	4218745	
# Pins-Designator, Family:	289-ZDY, PBGA	Mount Compound:	4205412	
Solder Ball Composition:	SnAgCu	Bond Wire:	0.80 Mil Dia., Cu	
Qualification: <input checked="" type="checkbox"/> Plan <input type="checkbox"/> Test Results				
Reliability Test	Conditions	Sample Size/Accept		
		Lot#1	Lot#2	Lot#3
Electrical Characterization	Per Datasheet Specifications	30/0	30/0	30/0
**High Temp Operating Life	125C (1000 Hrs)	77/0	77/0	77/0
** Biased Temp Humidity	85C/85%RH (1000 Hrs)	26/0	26/0	26/0
**Unbiased HAST	110C/85%RH (264 Hrs)	77/0	77/0	77/0
**T/C -55C/125C	-55C/125C (700 Cyc)	77/0	77/0	77/0
** High Temp Storage Bake	150C (1000 Hrs)	45/0	45/0	45/0
Notes **- Preconditioning sequence: Level 3-260C.				

Estimated Qualification Completion Date:		February 2015		
Qual Vehicle # 2: F751601AZPA (MSL3-260C)				
Package Construction Details				
Assembly Site:	TIPI	Mold Compound:	4218745	
# Pins-Designator, Family:	624-ZPA, PBGA	Mount Compound:	4205412	
Solder Ball Composition:	SnAgCu	Bond Wire:	0.80 Mil Dia., Cu	
Qualification: <input checked="" type="checkbox"/> Plan <input type="checkbox"/> Test Results				
Reliability Test	Conditions	Sample Size/Accept		
		Lot#1	Lot#2	Lot#3
**High Temp Operating Life	125C (1000 Hrs)	43/0	43/0	43/0
** Biased Temp Humidity	85C/85%RH (600 Hrs)	26/0	26/0	26/0
**Unbiased HAST	110C/85%RH (264 Hrs)	77/0	77/0	77/0
**T/C -55C/125C	-55C/125C (700 Cyc)	77/0	77/0	77/0
** High Temp Storage Bake	150C (1000 Hrs)	77/0	77/0	77/0
ESD CDM	+/- 250V, 500V	3/0	--	--
Notes **- Preconditioning sequence: Level 3-260C.				

Estimated Qualification Completion Date:		February 2015		
Qual Vehicle # 3: F771594CZWZ (MSL3-260C)				
Package Construction Details				
Assembly Site:	TIPI	Mold Compound:	4218745	
# Pins-Designator, Family:	976-ZWZ, PBGA	Mount Compound:	4205412	
Solder Ball Composition:	SnAgCu	Bond Wire:	0.80 Mil Dia., Cu	
Qualification: <input checked="" type="checkbox"/> Plan <input type="checkbox"/> Test Results				
Reliability Test	Conditions	Sample Size/Accept		
		Lot#1	Lot#2	Lot#3
**High Temp Operating Life	125C (1000 Hrs)	43/0	43/0	43/0
** Biased Temp Humidity	85C/85%RH (1000 Hrs)	26/0	26/0	26/0
**Unbiased HAST	110C/85%RH (264 Hrs)	77/0	77/0	77/0
**T/C -55C/125C	-55C/125C (1000 Cyc)	77/0	77/0	77/0
** High Temp Storage Bake	150C (1000 Hrs)	77/0	77/0	77/0
ESD CDM	+/- 250V, 500V	3/0	--	--
Notes **- Preconditioning sequence: Level 3-260C.				

Group 3: Qualification Data/Plan

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.

Estimated Qualification Completion Date:		March 2015		
Qual Vehicle # 8: TNETV1061ZWC (MSL4-260C)				
Package Construction Details				
Assembly Site:	TIPI	Mold Compound:	TBD	
# Pins-Designator, Family:	255-ZWC, nFBGA	Mount Compound:	4205412	
Solder Ball Composition:	SnAgCu	Bond Wire:	0.80 Mil Dia., Cu	
Qualification: <input checked="" type="checkbox"/> Plan <input type="checkbox"/> Test Results				
Reliability Test	Conditions	Sample Size/Accept		
		Lot#1	Lot#2	Lot#3
**High Temp Operating Life	125C (1000 Hrs)	77/0	77/0	77/0
** Biased Temp Humidity	85C/85%RH (1000 Hrs)	77/0	77/0	77/0
**Unbiased HAST	110C/85%RH (264 Hrs)	77/0	77/0	77/0
**T/C -55C/125C	-55C/125C (1000 Cyc)	77/0	77/0	77/0
** High Temp Storage Bake	150C (1000 Hrs)	77/0	77/0	77/0
ESD CDM	+/- 250V, 500V	3/0	--	--
Notes **- Preconditioning sequence: Level 4-260C.				

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