PCN Number:	20131025002	**PCN Date:**	11/08/2013
Title:	Qualification of CFAB and Miho 8 as an additional Fab site options for select devices in the C10, LBC7 and LBC5 process technologies		
Customer Contact:	PCN Manager	**Phone:** +1(214)480-6037	**Dept:** Quality Services
***Proposed 1st Ship Date:**	02/08/2014	**Estimated Sample Availability:**	Date Provided at Sample request

Change Type:

☐	Assembly Site	☐	Assembly Process	☐	Assembly Materials
☐	Design	☐	Electrical Specification	☐	Mechanical Specification
☐	Test Site	☐	Packing/Shipping/Labeling	☐	Test Process
☐	Wafer Bump Site	☐	Wafer Bump Material	☐	Wafer Bump Process
☒	Wafer Fab Site	☐	Wafer Fab Materials	☐	Wafer Fab Process
		☐	Part number change		

PCN Details

Description of Change:

This change notification is to announce the addition of CFAB and Miho 8 as additional Fab site options for select devices in the C10, LBC7 and LBC5 process technologies.

Device Groupings	Current	Additional
	Site/Process/Wafer Diameter	**Site/Process/Wafer Diameter**
Group 1	DM5/LBC5 Process/200mm	**CFAB/LBC5 Process/200mm**
Group 2	FFAB/C10 Process/200mm	**CFAB/C10 Process/200mm**
Group 3	RFAB/LBC7 Process/300mm	**MIHO 8/LBC7 Process/200mm**

The LBC5 process was qualified at CFAB on 8/23/2013. The C10 process was previously qualified at CFAB on 12/4/2012. The LBC7 process was previously qualified in Miho 8 on 1/14/2005. Qualification results are shown below.

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:

Sample Product Shipping Label (not actual product label)

Current:

Chip Site	Chip Site Code (20L)	Chip Country Code (21L)
DP1DM5	DM5	USA
FR-BIP-1	TID	DEU
RFAB	RFB	USA

New:

Chip Site	Chip Site Code (20L)	Chip Country Code (21L)
CFAB	CU3	CHN
MIHO8	MH8	JPN

Product Affected:

Group 1: Device Currently at DM5, adding CFAB			
TPS65195YFFR			
Group 2: Devices Currently at FFAB, adding CFAB			
SN74AUP1G08DCKR	SN74LVC1G11DSFR	SN74LVC1G66DRYR	SN74LVC1G98DRYR
SN74AUP1G08DCKRE4	SN74LVC1G3157DSFR	SN74LVC1G66DSFR	SN74LVC1G98DSFR
SN74AUP1G08DCKRG4	SN74LVC1G32DRYR	SN74LVC1G97DRYR	TXB0102YZPR
SN74LVC1G11DRYR	SN74LVC1G32DRYRG4	SN74LVC1G97DSFR	TXB0104YZTR
Group 3: Devices Currently at RFAB, adding MIHO 8			
BQ24738HRGRR	BQ24738HRGRT		

Reference Qualification Data

CFAB for TPS65195YFF (Group 1 device)

Qualification Data: (Approved: 8/23/2013)			
This qualification has been developed for the validation of this change. The qualification data will validate that the proposed change meets the applicable released technical specifications.			
Qualification Device: TPS65195YFF			
Package / Die Attributes			
Wafer Fab Site:	CFAB	Metallization:	TiW/TiN/AlCu.5%/TiN
Wafer Fab Process:	LBC5X	Wafer Diameter:	200mm

Qualification: ☐ Plan ☒ Test Results				
Reliability Test	Conditions	Sample Size / Fail Lot#1	Lot#2	Lot#3
**Biased HAST	130C/85%RH (96 Hrs)	77/0	77/0	77/0
**High Temp Storage Bake	170C (420 Hrs)	77/0	77/0	77/0
Latch-up	(per JESD78)	6/0	6/0	6/0
Manufacturability (Wafer Fab)	(per mfg. Site specification)	Pass	Pass	Pass
Manufacturability (Assembly)	(per mfg. Site specification)	Pass	Pass	Pass
Electrical Characterization	(per datasheet spec)	Pass	Pass	Pass
**Temp Cycle	-55/+125C (700 Cycles)	77/0	77/0	77/0
Life Test	150C (300 Hrs)	77/0	77/0	77/0
ESD CDM	500V	3/0	3/0	3/0
ESD HBM	1500V	3/0	3/0	3/0
**Preconditioning: Level 1@260C				

Qualification of C10 process technology in CFAB (Group 2 devices)

Qualification Data: (Approved: 12/04/2012)

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

Qual Vehicle: TXS0102DQE

Wafer Fab Site:	CFAB	Metallization:	Ti/TiN/NCu0.5%/TiN
Wafer Fab Process:	C10	Wafer Diameter:	200mm
		Passivation	10KACN

Qualification: ☐ Plan ☒ Test Results				
Reliability Test	Conditions	Sample Size/Fails Lot#1	Lot#2	Lot#3
Bond Strength	76 ball bonds, min. 3 units	76/0	76/0	76/0
X-ray	(top side only)	5/0	5/0	5/0
**Autoclave 121C	121C, (96 Hrs)	77/0	77/0	77/0
**T/C -65C/150C	-65C/+150C (500 Cycles)	77/0	77/0	77/0
ESD HBM	2500V	3/0	3/0	3/0
ESD CDM	1500V	3/0	3/0	3/0
Electrical Characterization	-	77/0	77/0	77/0
Biased HAST	130C/85%RH (96 Hrs)	77/0	77/0	77/0
Life Test	150C (300 Hrs)	79/0	79/0	79/0
Latch-up	(per JESD78, Class II)	6/0	6/0	6/0
Wafer Fab MQ	Per site spec	Pass	Pass	Pass
Assembly / Test MQ	(per mfg. Site specification)	Pass	Pass	Pass
**Preconditioning: Level 1@260C				

LBC7 Process Qualification in MIHO 8 (Group 3 devices)

Qualification Data: (Approved 01/14/2005)			
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: TPS62110RSA			
Package Construction Details			
Wafer Fab Site:	Miho8	Wafer Fab Process:	LBC7
Wafer Diameter:	200mm	Metallization:	TiN/AlCu.5/TiN
Passivation:	Oxynitride 8000A		

Qualification: ☐ **Plan** ☒ **Test Results**				
Reliability Test	Conditions	Sample Size / Fails		
		Lot 1	Lot2	Lot 3
**Life Test	140C (480 Hrs)	130/0	130/0	130/0
**HAST	130C/85%RH (96 Hrs)	77/0	77/0	77/0
**Autoclave	121C (96 Hrs)	77/0	77/0	77/0
**Thermal Shock	-65C/150C (500 Cyc)	77/0	77/0	77/0
**Temp Cycle	-65C/150C (500 Cyc)	77/0	77/0	77/0
**High Temp. Storage Bake	170C (420 Hrs)	77/0	77/0	77/0
ESD HBM	2000V	3/0	3/0	3/0
ESD CDM	500V	3/0	3/0	3/0
Latch-up	JESD78	5/0	5/0	5/0
Manufacturability (Wafer Fab)	(per mfg. Site specification)	Pass	Pass	Pass
Wafer Level Reliability	Approved	Pass	Pass	Pass
EFR	140C, 48 Hrs	626/0	636/0	619/0
**Preconditioning sequence: Level 2-260C				

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