TOSHIBA CORPORATION
SEMICONDUCTOR COMPANY
OITA OPERATIONS
3500, MATSUOKA, OITA, 870-0197 JAPAN
FACSIMILE: (097) 524-6287
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Date: September 30th, 2010
Ref. No.: H2009-KYU001(5)

To ANGLIA COMPONENTS LTD

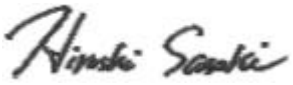
Dear Sir/ Madam:

Change Notification on Wafer Fab Transfer for System LSI

We greatly appreciate your continued business.
As informed before, wafer fab and final QA responsibility for our System LSI products will be transferred from Kitakyusyu Operations to Oita Operations.
Full details of this change with respect to products for your company are given in the following page and the latest update of Change Evaluation is provided by a separate attachment.

If you have any questions or requests regarding this change, please inform our Sales representatives nearest you by October 29th, 2010.
We appreciate your understanding and cooperation.

Sincerely yours,
Prepared by O. Nakagawa
S. Hirakawa
Approved by Hiroshi Sasaki, Manager,



Quality Assurance Group
Quality Assurance Dept.
Oita Operations
Toshiba Semiconductor Company
TOSHIBA Corporation

Details on Wafer Fab Transfer

1. Purpose of Change	:	To address rapidly worsening economic circumstances of our electronic device business due to impact of the global recession, Toshiba Semiconductor Company is carrying out drastic structural reforms of the said business by implementing this wafer fab transfer. Our system LSI division possesses 5, 6, 8 and 12-inch lines at the three sites: Kitakyusyu Operations, Oita Operations and Iwate Toshiba. In this situation, we have decided to transfer all system LSI manufacturing lines in Kitakyusyu Operations to Oita Operations to build a more robust and competitive manufacturing system.
2. Products for your company to be Affected	:	See attached file with overview about products which have been delivered in the previous 24 months to your company. This file shows for each product the old and the new part number and which of below listed changes is applicable.
3. Description of Change	:	List of changes - Transfer of wafer fab and final QA responsibility From : Toshiba Semiconductor Company, Kitakyusyu Operations (Kitakyusyu) To : Toshiba Semiconductor Company, Oita Operations (Oita) - Change of wafer diameter from 5 inch to 6 inch - For some products: Change of IC chip size from 1.16x2.65 to 0.98x2.49 [mm x mm] Note-1) Assembly site and package will be unchanged. Note-2) We ensure that the same process technologies as the current products will be used, and product characteristics and quality/reliability level will be unchanged.
4. Scheduled Date of Changeover	:	November 2010 (phase-in)
5. Schedule for Product Start-up	:	See Attached file for the details with respect to products for your company. Evaluation samples/data will be made available on your request.
6. Remarks	:	QA Dept. Oita Operations will take over QA responsibility as the quality contact window for you. You are kindly requested to fill in the form given at the final page of this file (Notice for Approval) for notifying us of your approval after consideration.

Notice of Approval (For customer use)

<Wafer fab & final QA responsibility transfer : Ref. No.: H2009-KYU001(5)>

To: Quality Assurance Group Quality Assurance Dept.
Oita Operations Toshiba Semiconductor Company

☐ We approve the above change.

☐ We approve the above change with the following conditions.

☐ We disapprove the above change for the following reasons.

[Specify the conditions/ reasons]

Date :

Company :

Department :

Approved by :

TOSHIBA
Leading Innovation

To: ANGLIA COMPONENTS LTD

Wafer Fab Transfer for System LSI
From: Toshiba Kitakyusyu (5-inch process)
To: Toshiba Oita (6-inch process)

September 30th, 2010
TOSHIBA Semiconductor Company
Oita Operations
Quality Assurance Dept.
Quality Assurance Group

Policies to Approach the Change

- We transfer the same process technology as the current products to ensure the equal product characteristics and quality level.

- For reliability evaluation, we have selected representative products per process technology considering the following items to promote the efficiency of the evaluations:
  Reliability margin/ number of device/ chip size/ presence or absence of optional circuit/ application/ production volume, etc.

Process Technology Affected & Basic Change Analysis

Process technology to be affected	Kitakyusyu	Oita	Change	
			Circuit	Layout
・ 5 to 6-inch process	5 inch	6 inch	None	None
・ 5 to 6-inch process + Chip Shrink	5 inch	6 inch	None	Change(*1)

(*1)The layout is reviewed and the size of chip is reduced.

List of Changes

5M - 1E		Kitakyusyu (Kyusyu)	Oita
		5 inch	6 inch
Man			Accept Engineers/Operators transferred from Kyusyu
Machine			Use same Facilities like Kyusyu Transfer some equipment used at Kyusyu
Measurement			Confirmed that measuring device at Oita shows the same performance like Kyusyu's
Method			Change some of the systems for work starting method etc.
Material			Use the same material like Kyusyu
Environment	Area of Clean Room	3500 m²	155500 m²
	Clean Room System	Bay System	Bay System
	Airflow System	Down Flow	Down Flow
	Cleanliness level	Class 1000 (Lithography room: Class100)	Class 100
	Lot size	2000 lots / month	3500 lots / month

➢This wafer fab transfer involves no design change.

Product Evaluation Items

1) Process verification:
   Device Characteristic

2) Characteristic evaluation:
   Manual evaluation and characteristic comparison using IC tester

3) Reliability test
   Test sample: Representative products selected per process technology

No.	Reliability test	Test conditions	Duration		Sample Qty
			Duration before initial jud.	Critical duration	
1	HTO (High temp operation)	Ta=Operation Max, Power supply=Max operating voltage	168hrs	2000hrs	30
2	HTS (high temp storage test)	Ta=150℃	168hrs	2000hrs	30
3	THB (temp humidity bias test)	Ta=85℃, RH=85%, Power supply=Max operating voltage	168hrs	2000hrs	30
4	PCT (pressure cooker test)	Ta=127℃, 250kPa (non-condensing)	24hrs	200hrs	30
5	TCT (temp cycle test)	-65℃(30min) ~ 150℃(30min)	100cycles	1000cycles	50
6	Reflow resistance	As pretreatment in Test No. 3, 4 & 5, moisture absorption + reflow are performed.	---	---	-

Results of Product Evaluation (5 to 6-inch process)

1) Process verification: Device Characteristic
There is no peculiar difference between Kitakyusyu and Oita.

2) Characteristic evaluation:
Manual evaluation and characteristic comparison using IC tester
There is no peculiar difference between Kitakyusyu and Oita.

3) Reliability test
Test sample: Representative products selected per process technology

No.	Reliability test	Duration & Result		
		Initial Judgment	Formal Judgment	Critical Judgment
1	HTO	168 Hours (0/30pcs)	1000 Hours (0/30pcs)	2000 Hours (0/30pcs)
2	HTS	168 Hours (0/30pcs)	1000 Hours (0/30pcs)	2000 Hours (0/30pcs)
3	THB	168 Hours (0/30pcs)	1000 Hours (0/30pcs)	2000 Hours (0/30pcs)
4	PCT	24 Hours (0/30pcs)	120 Hours (0/30pcs)	240 Hours (0/30pcs)
5	TCT	100 Cycles (0/50pcs)	500 Cycles (0/50pcs)	1000 Cycles (0/50pcs)
6	Reflow resistance	As pretreatment in Test No. 3, 4 & 5		

There is no defect in the Critical judgment. (Defect / Examinations)

Results of Product Evaluation (5 to 6-inch process + chip shrink)

1) Process verification: Device Characteristic
There is no peculiar difference between Kitakyusyu and Oita.

2) Characteristic evaluation:
Manual evaluation and characteristic comparison using IC tester
There is no peculiar difference between Kitakyusyu and Oita.

3) Reliability test
Test sample: Representative products selected per process technology

No.	Reliability test	Duration & Result		
		Initial Judgment	Formal Judgment	Critical Judgment
1	HTO	168 Hours (0/30pcs)	1000 Hours (0/30pcs)	2000 Hours (0/30pcs)
2	HTS	168 Hours (0/30pcs)	1000 Hours (0/30pcs)	2000 Hours (0/30pcs)
3	THB	168 Hours (0/30pcs)	1000 Hours (0/30pcs)	2000 Hours (0/30pcs)
4	PCT	24 Hours (0/30pcs)	120 Hours (0/30pcs)	240 Hours (0/30pcs)
5	TCT	100 Cycles (0/50pcs)	500 Cycles (0/50pcs)	1000 Cycles (0/50pcs)
6	Reflow resistance	As pretreatment in Test No. 3, 4 & 5		

There is no defect in the Critical judgment. (Defect / Examinations)

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