



PRODUCT INFORMATION LETTER

PIL DCG-DAP/14/8382
Dated 11 Mar 2014

Consolidation of Utac site 1 and site 2

Sales Type/product family label	see enclosed list
Type of change	Testing location change
Reason for change	To improve manufacturing and operational efficiencies
Description	Operation of site 1 (Assembly operation) and site 2 (Wafer sort, Test and Finishing and End-of-Line operations) will be consolidated into Utac site 1 only
Forecasted date of implementation	31-May-2014
Forecasted date of samples for customer	20-Apr-2014
Forecasted date for STMicroelectronics change Qualification Plan results availability	20-May-2014
Involved ST facilities	Utac subcontractor

DOCUMENT APPROVAL

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Consolidation of Utac site 1 and site 2

WHAT:

The scope of this Product Information Letter is to inform our Customers about the transfer of a full process or process brick (process step, control plan, recipes) from one site to another site.

Operation of Site 1 (Assembly Operation) and Site 2 (Wafer sort, Test and Finishing and End-Of-Line Operations) will be consolidated into Utac Site1 only located in Serangoon North Avenue 5.

DAP Production Impact

- Only FT production
- Tester involved: 4x Verigy Pin Scale, 2x Verigy Single Density and 2x Catalyst

WHY:

UTAC Management Business Strategy to improve manufacturing and operational efficiencies.

HOW:

Procedure of Tester movement from UTAC site 2 to site 1

- Tester perform full calibration
- KGU/KBU for tester correlation
- Trial lots for test setup correlation
- Tester dismantle and ship from site 2 to site 1
- Tester install at site 1
- Tester perform full calibration
- KGU/KBU for tester correlation
- Trial lots for test setup correlation

STM Acceptance

- KGU/KBU correlation: yield difference < 1%
- Trial lots acceptance criteria:
 - Yield difference between old program and new program $\leq 1\%$
 - Mean value comparison difference $\leq 5\%$ spec range [lim max - lim min]
 - Sigma value comparison difference $\leq 1\%$ spec. range

Potential Impact during transfer

- Each test setup estimated to stop 1- 2 weeks during transfer
- Equipment transfer plan March 2014 – May 2014
- Stock based on foreseen volumes is built per any products before selected tester transfer to guarantee deliveries in case ST Acceptance criteria is not meet and installation/calibration/correlation need to be redone

Procedure to start Production at new site (site 1)

- Conditional release to monitor 5 production lot performance in term of yield, s/h bin & SBL failure rate with reference to historical data

Product vs tester matrix validation plan

Device	HPPS-17	# Qual lot	Lot Size
Test Vehicle A	√	1 lot	50
Test Vehicle B	√	1 lot	50
Test Vehicle C	√	1 lot	50

Device	HPPS-14	# Qual lot	Lot Size
Test Vehicle D	√	1	1200
Test Vehicle E	√	1	1200

Device	HPPS-20	# Qual lot	Lot Size
Test Vehicle F	√	1	600
Test Vehicle G	√	1	1200
Test Vehicle H	√	1	1200

Device	HPPS-21	# Qual lot	Lot Size
Test Vehicle I	√	1 lot	1200
Test Vehicle J	√	1 lot	1200
Test Vehicle K	√	1	1200
Test Vehicle L	√	1	600

Device	HP93-98	# Qual lot	Lot Size
Test Vehicle M	√	1	1200
Test Vehicle N	√	1	1200

Device	HP93-99	# Qual lot	Lot Size
Test Vehicle O	√	1	600
Test Vehicle P	√	1	1200
Test Vehicle Q	√	1	600

- *KGU / KBU Correlation Procedure
 - Current site
 - Test KGU (10x) and KBU (5x) units in sequence order and datalog
 - Looping 1x KGU for 50x and datalog
 - 100% testing of trial lot and datalog
 - New site
 - Test KGU (10x) and KBU (5x) units in sequence order and datalog
 - 1x KGU for 50x looping and datalog
 - 100% testing of trial lot and datalog
- Correlation Study between current and new site
 - KGU / KBU (applied to all products)
 - KGU (10x) and KBU (5x) test result 100% aligned
 - KGU looping (50x) 100% passing and aligned
 - TRIAL LOT (applied only on Test Vehicles)
 - Test yield & Hbin align within 1%.
 - Mean value comparison $\leq 5\%$ spec range [lim max - lim min]
 - Sigma value comparison difference $\leq 1\%$ spec. range

*KGU = Known Good Unit

*KBU = Known Bad Unit

ST will focus on Customer satisfaction and ensure a seamless transition in the supply of products from different sites.

WHEN:

The change will be implemented starting from end of May 2014

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