



PRODUCT/PROCESS CHANGE NOTIFICATION PCN 9045 - Detailed description

ST Muar (Malaysia) additional source - UFBGA7x7 and UFBGA10x10 products

MMS - Microcontrollers Division (MCD)

What are the changes?

Changes are described in the below table on UFBGA7x7 and UFBGA10x10 packages:

		Existing manufacturing sites	Added manufacturing site
Assembly site		Amkor ATK (Korea) and ATP (Philippines)	ST Muar (Malaysia)
BOM	Substrate	Ni/Au on copper ball pads	OSP (Organic Surface Preservation) on copper ball pads
	Resin	Hitachi GE100LFCS	Hitachi GE-100LF1-2
	Die Attach Film	Ablestik ATB130U	Adwill LE-5739SP8AW
	Wire	Gold, 0.8 mil diameter	Silver 96.5%, 0.8 mil diameter
	Solder Ball	Tin-Silver alloy 3.5% Ag	SACN125 (Ag: 1.2% - Cu: 0.5% - Ni: 0.05% - Sn: 98.25%)

When?

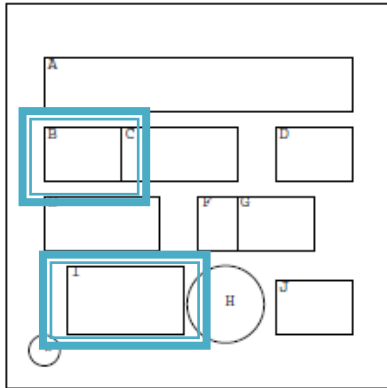
The production will start from :

Products	<u>Date of Final Qualification Report Availability</u>	<u>Date of First Shipment</u>
UFBGA 7x7	Week 05 2016	Week 12 2016
UFBGA 10x10	Week 26 2016	Week 30 2016

How can the change be seen?

Traceability of the change is ensured by ST internal tools.

The marking composition indicated on the products is changing from:



B : Assembly plant change from
- Amkor ATK (Korea) : HP
- AmkorATP (Philippines) : 7B
to ST Muar (Malaysia) : 99

I : Country Of Origin change from
Korea (KOR) or Philippines (PHL) to
Malaysia (MYS)

How to order samples?

For all sample request linked to this PCN, please:

- request sample(s) through Notice tool, indicating a single Commercial Product for each request.
- insert "PCN 9045" into the remarks of your order.
- place **non standard** sample order using the following field in your system.

SO | NPO Sample

Header

SO No: Customer: SO Type: 38 Sample Order

PO No: Carrier Code: Price Policy: Currency: Issuing Date: Ord Val: 0.0000

Sch I Nr	PO I Nr	Finished Good	Comm Qty	Open Qty	Plant Open Qty	Reqd Qty	Unit Price	RD	CD	EDD	St
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PO Item: Comm Prod: Qty: 0 RD: 06-Jan-15 Unit Price: 0.0000 Final Cust:

Cust Part Nr: Finisbd Good: Partial Ship: 01 Price Pol: Status: 01 Canc:

Notes: TAM K Pieces: 0 Our Share%: 0 Sample Type: Sample Non Std Type

Project Name: Closing Date: Closing Type:

Regional Sheet: Lab Sheet:

SO Nr: 7075S05890 Customer: 99800200 SGS-TH/USA PO Nr: Mos/TPapay/RBC-Ullmer

Company: STM Issuing Date: 29-JUL-2015 12:07:00 ShipTo: 9980020081 SGS/USANPD Price Policy: 05 Curr Code: 02 U.S. DOLLAR

Carrier Code: 0001 * Bill To: 9980020001 SGS-TH/USA
Carriage Code: F1 F.I.S. Confirm To: 81
Transportn Mode: 01 AIR FREIGHT Sales Rep. ID: 07R00C NO COMMISSION
Payment Term: 0006 FREE OF CHARGE Cust Serv Rep ID: 11A000 Dummy FSA SWISS

SO Remark Details

SO Nr: 7075S05890

	SO Remark Type	Text	Status Co	Last Update
▶	01 INVOICE & O/C REMARK	PER PCN 9108- THANK YOU	01	30-Jul-2015
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RERMCD1513

Reliability plan for MUAR UFBGA7*7 &
10*10 - PCN 9045

Reliability Evaluation Plan

December 17th 2015

MMS MCD Quality & Reliability Department

PCN9045- RERMCD1513

Reliability plan for MUAR UFBGA7*7 & 10*10 additional back end source

- Context :
- In order to sustain the strong demand on STM32 devices and provide a better service to our customers, ST Microcontrollers Division will add ST Muar (Malaysia) back-end source for STM32 family products in UFBGA 7x7 and 10x10 packages.

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STM32 TEST VEHICLES

RERMCD1513 Reliability evaluation plan will be conducted on 5 TV described in below table to qualify all STM32 products in UFBGA 7x7 and 10x10

Package line	Assembly Line	Package	Device (Partial RawLine Code)	Die code	Diffusion Process
UFBGA	UFBGA 7x7	100b	STM32 (MJ*427) STM32 (MJ*448)	427 448	F9GO2S TSMC 0.18 μ m
		132b	STM32 (PG*436) STM32 (PG*415)	436 415	F9GO2 TSMC 90nm
	UFBGA 10x10	201b	STM32 (MR*413)	413	CMOSM10

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STM32 UFBGA7*7 RELIABILITY TRIALS

Package Reliability Trials :

(* tests performed after preconditioning

Reliability Trial	Test Conditions	Pass Criteria	Unit per Lot	Lot qty	
PC	Pre Conditioning: Moisture Sensitivity Jedec Level 3 J-STD-020/ JESD22-A113	Bake (125°C / 24 hrs) Soak (30°C / 60% RH / 192 hrs) for level 3 Convection reflow: 3 passes with Jedec level 3	3 passes MSL3	256	3/ device
TC(*)	Thermal Cycling JESD22 A104	-65°C, +150°C	500Cy	77	3/ device
THB(*)	Temperature Humidity Bias JESD22 A101	85°C, 85% RH, bias	1000h	25	3/ device
THS(*)	Temperature Humidity Storage JESD22 A110	85°C, 85% RH, no bias	1000h	77	3/ device
HTSL(*)	High Temperature Storage Life JESD22 A103	150°C- no bias	1000h	77	3/ device
ESD	ESD Charge Device Model ANSI/ESD STM5.3.1	250V min	250V min	3	1/ device

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STM32 UFBGA10*10 RELIABILITY TRIALS

Package Reliability Trials :

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