



**PRODUCT/PROCESS  
CHANGE NOTIFICATION  
PCN 9484 - Detailed description**

**Capacity increase for LQFP 48 7x7 products  
listed below**

**MMS - Microcontrollers Division (MCD)**

**What are the changes?**

On LQFP 48 7x7 products listed below, the assembly plants and Bill Of Materials are as below:

	Existing Bill Of Materials			Added Bill Of Materials
Assembly site	STATS ChipPAC Shanghai (China)	Amkor ATP (Philippines)	ST Muar (Malaysia)	ST Muar (Malaysia)
Wire	Gold 0.8mil	Gold 0.8mil	Gold 0.8mil	Silver 0.8mil
Leadframe	Copper Frame Spot Ag	Copper Frame Spot Ag	Pre Plated Frame	Pre Plated Frame
Leadfinishing (*1)	Pure Tin (e3)	Pure Tin (e3)	Rough Ni Pd AgAu (e4)	Rough Ni Pd AgAu (e4)
Resin	Sumitomo G700E	Sumitomo G631HQ	Sumitomo G700LS	Sumitomo G700LS
Glue	Ablestik 3230	Evertch AP4200	Hitachi EN4900	Hitachi EN4900

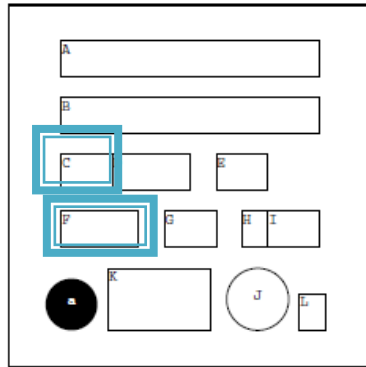
(\*1) Lead color and surface finished change depending on leadfinishing

**How & when will the change be qualified?**

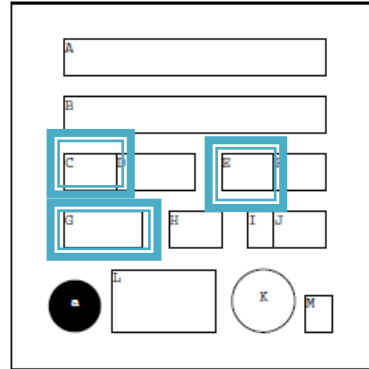
This change will be qualified using the standard STMicroelectronics Corporate Procedures for Quality and Reliability, in full compliancy with the JESD-47 international standard. You can find below Qualification Plan.

## How can the change be seen?

The marking instruction indicated on the products is changing.



**Previous marking**



**New marking**

1/ For products listed below changing from STATS ChipPAC Shanghai (China) to Muar (Malaysia) assembly site:

- C : Assembly plant changes from GH to 99
- Country Of Origin change from CHN (in F) to MYS (in G)
- E : 2 digits are added for enhanced traceability

2/ For products listed below changing from Amkor ATP (Philippines) to Muar (Malaysia) assembly site:

The marking instruction indicated on the products is changing from:

- C : Assembly plant changes from 7B to 99
- Country Of Origin change from PHL (in F) to MYS (in G)
- E: 2 digits are added for enhanced traceability

3/ For products listed below remaining at Muar (Malaysia) assembly site:

- E : 2 digits are added for enhanced traceability

## 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 9484" into the remarks of your order.
- place **non standard** sample order using the following field in your system.

Header

SO No: [ ] Customer: [ ] SO Type: 38 Sample Order

PO No: [ ] Carrier Code: [ ] Price Policy: [ ] Currency: [ ]

Notes: [ ] States: [ ] 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	EOO	St
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PO Item: [ ] Comm Prod: [ ] Qty: 0 RD: 06-Jan-15 Unit Price: 0.0000 Final Cust: [ ]

Cust Part No: [ ] Finishd 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 No: 7075S05890 Customer: 99800200 SGS-TH/USA PO No: Mos/TPapay/RBC-Ullmer

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

Carrier Code: 0001 \* Carriage Code: F1 F.I.S. Bill To: 9980020001 SGS-TH/USA

Transportn Mode: 01 AIR FREIGHT Confirm To: 81 Sales Rep. ID: 07R00C NO COMMISSION

Payment Term: 0006 FREE OF CHARGE Cust Serv Rep ID: 11A000 Dummy FSA SWISS

SO Remark Details

SO No: 7075S05890

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

## List of Commercial Products

STM32F030C6T6  
STM32F030C6T6TR  
STM32F030C8T6  
STM32F030C8T6TR  
STM32F030CCT6  
STM32F031C4T6  
STM32F031C4T6TR  
STM32F031C6T6  
STM32F031C6T6BOO  
STM32F031C6T6TR  
STM32F031C6T7  
STM32F038C6T6  
STM32F038C6T7  
STM32F042C4T6  
STM32F042C6T6  
STM32F042C6T6TR  
STM32F051C4T6  
STM32F051C6T6  
STM32F051C6T6TR  
STM32F051C6T7  
STM32F051C8T6  
STM32F051C8T6TR  
STM32F051C8T7  
STM32F051C8T7TR  
STM32F070C6T6  
STM32F070CBT6  
STM32F070CBT6TR  
STM32F071C8T6  
STM32F071CBT6  
STM32F071CBT6TR  
STM32F071CBT7  
STM32F072C8T6  
STM32F072C8T6TR  
STM32F072CBT6  
STM32F072CBT6TR  
STM32F072CBT7  
STM32F078CBT6  
STM32F091CBT6  
STM32F091CBT6TR  
STM32F091CCT6  
STM32F091CCT6J  
STM32F091CCT6TR  
STM32F091CCT7  
STM32F098CCT6  
STM32F100C4T6B  
STM32F100C4T6BTR  
STM32F100C4T7B  
STM32F100C6T6B  
STM32F100C6T6BTR  
STM32F100C6T7B  
STM32F100C8T6B  
STM32F100C8T6BTR  
STM32F100C8T7B  
STM32F100C8T7BTR  
STM32F100CBT6B  
STM32F100CBT6BTR  
STM32F100CBT7B  
STM32F100CBT7BTR  
STM32F101C4T6A  
STM32F101C6T6A  
STM32F101C6T6ATR  
STM32F101C8GAL  
STM32F101C8T6  
STM32F101C8T6TR  
STM32F101CBT6  
STM32F101CBT6TR  
STM32F102C4T6A  
STM32F102C4T6ATR  
STM32F102C6T6A  
STM32F102C6T6ATR  
STM32F102C8T6  
STM32F102C8T6TR  
STM32F102CBT6  
STM32F102CBT6TR  
STM32F103C4T6A  
STM32F103C6T6A  
STM32F103C6T6ATR  
STM32F103C6T7A  
STM32F103C6T7ATR  
STM32F103C8T6  
STM32F103C8T6TR  
STM32F103C8T7  
STM32F103C8T7TR  
STM32F103CBT6  
STM32F103CBT6TR  
STM32F103CBT7  
STM32F103CBT7TR  
STM32F301C4T6  
STM32F301C6T6  
STM32F301C6T6TR  
STM32F301C8T6  
STM32F301C8T6TR  
STM32F301C8T7  
STM32F302C4T6  
STM32F302C6T6  
STM32F302C8T6  
STM32F302C8T7  
STM32F302CBT6  
STM32F302CBT7  
STM32F302CCT6  
STM32F302CET6  
STM32F303C6T6  
STM32F303C8T6  
STM32F303CBT6  
STM32F303CBT6TR  
STM32F303CBT7  
STM32F303CCT6

STM32F303CCT6TR  
STM32F303CCT7  
STM32F303CET6  
STM32F303CET7  
STM32F318C8T6  
STM32F328C8T6  
STM32F334C4T6  
STM32F334C6T6  
STM32F334C6T7  
STM32F334C8T6  
STM32F334C8T7  
STM32F334C8T7TR  
STM32F358CCT6  
STM32F373C8T6  
STM32F373C8T6TR  
STM32F373CBT6  
STM32F373CCT6  
STM32F373CCT7  
STM32F378CCT6  
STM32F398CET6  
STM32FEBKC6T6A  
STM32FEBKC6T6ATR  
STM32L031C6T7  
STM32L041C6T7  
STM32L051C6T6  
STM32L051C6T6TR  
STM32L051C8T3  
STM32L051C8T6  
STM32L051C8T6TR  
STM32L051C8T7  
STM32L052C6T6  
STM32L052C8T6  
STM32L052C8T6D  
STM32L052C8T7  
STM32L053C6T6  
STM32L053C6T7  
STM32L053C8T6  
STM32L053C8T6D  
STM32L053C8T6TR  
STM32L053C8T7  
STM32L063C8T6  
STM32L071C8T6  
STM32L071CBT6  
STM32L071CZT6  
STM32L071CZT7  
STM32L073CZT6  
STM32L083CBT6  
STM32L083CZT6  
STM32L083CZT6TR  
STM32L151C6T6A  
STM32L151C8T6A  
STM32L151CBT6A

STM32L151CBT6D  
STM32L151CCT6  
STM32L151CCT6J  
STM32L151CCT6TR  
STM32L152C6T6A  
STM32L152C8T6A  
STM32L152CBT6A  
STM32L152CCT6  
STM32L152CCT6D  
STM32P051C8JAETR  
STM32P101CBMBD  
STM32P101CBMBDTR  
STM32P102C8MAPTR  
STM32P103C8MBCTR  
STM32P103CBMAZTR  
STM32P103MAYATR  
STM8S005C6T6  
STM8S005C6T6TR  
STM8S007C8T6  
STM8S007C8T6TR  
STM8S105C4T3  
STM8S105C4T6  
STM8S105C4T6TR  
STM8S105C6T3  
STM8S105C6T3TR  
STM8S105C6T6  
STM8S105C6T6TR  
STM8S207C6T3  
STM8S207C6T6  
STM8S207C6T6TR  
STM8S207C8T3  
STM8S207C8T6  
STM8S207C8T6TR  
STM8S207CBT3  
STM8S207CBT6  
STM8S207CBT6TR  
STM8S208C6T3  
STM8S208C6T6  
STM8S208C6T6TR  
STM8S208C8T6  
STM8S208C8T6TR  
STM8S208CBT6



# RERMCD1514 reliability plan for MUAR LQFP7\*7 48L - PCN 9484

## Reliability Evaluation Plan

Nov 4<sup>th</sup>,2015

MMS MCD Quality & Reliability Department

# PCN 9484 - RERMCD1514 reliability plan for ST Muar LQFP7\*7 48L – Capacity increase

- Context :
- In order to increase assembly capacity, ST Microcontrollers Division has decided to add a High Density line in ST Muar (Malaysia) assembly site, for LQFP 48 7x7 products.

## STM8 &amp; STM32 TEST VEHICLES

Package line	Assembly Line	Package	Device (Partial RawLine Code)	Diffusion Process	Number of Lots
HD LQFP	LQFP7*7	48L	STM8L (5B*765)	F9GO1	1
			STM32 (5B*410)	TSMC 0.18 $\mu$ m	1
			STM32L (5B*427)	F9GO2S	1



# RERMCD 1514 -STM8-STM32 LQFP7x7

## 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 1 (for MSL2 qual)  J-STD-020/ JESD22-A113	Bake (125°C / 24 hrs) Soak (85°C / 85% RH / 168 hrs) Convection reflow: 3 passes with Jedec level 1	308	1/ device
AC or Uhast(*)	Autoclave JESD22 A102 or UnBiased Highly Accelerated Temperature and Humidity Stress JESD22 A118	121°C, 100% RH, 2 Atm  130°C, 85%RH, 2 atm	77	1/ device
TC(*)	Thermal Cycling  JESD22 A104	-50°C, +150°C Or equivalent -65°C +150°C	77	1/ device
WPT/WBS After TC	Wire Bond Pull- Mil Std883 method 2011 Wire Bond Shear ,AECQ100-001	3g min pull strength  15g min bond shear	3 (30 wires)	1/ device
THB(*)	Temperature Humidity Bias JESD22 A101	85°C, 85% RH, bias	77	1/ device
HTSL	High Temperature Storage Life  JESD22 A103	150°C- no bias	77	1/ device
Construction analysis including Solderability, Physical demensions	JESD 22B102 JESDB100/B108		15 10	1/ device
ESD	ESD Charge Device Model ANSI/ESD STM5.3.1	250V	3	1/ device

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