PRODUCT/PROCESS CHANGE NOTIFICATION

PCN MMS-MIC/14/8461
Dated 01 Jul 2014

STM32F2x & STM32F4x Low-speed external oscillator improvement - ref list products below

Table 1. Change Implementation Schedule

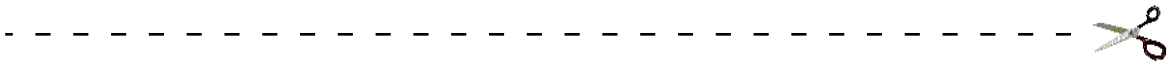
Forecasted implementation date for change	12-Oct-2014
Forecasted availability date of samples for customer	12-Sep-2014
Forecasted date for **STMicroelectronics** change Qualification Plan results availability	12-Sep-2014
Estimated date of changed product first shipment	12-Oct-2014

Table 2. Change Identification

Product Identification (Product Family/Commercial Product)	STM32F2x & STM32F4x products - ref list below
Type of change	Product design change
Reason for change	To improve manufacturing efficiency
Description of the change	The low-speed external (LSE) oscillator will be improved by adjusting a reference current through one metal layer. Dice revisions of the products will change. There is no change in the product logic and therefore no change to product functionality.
Change Product Identification	see indicated below
Manufacturing Location(s)	

Table 3. List of Attachments

Customer Part numbers list	
Qualification Plan results	



Customer Acknowledgement of Receipt	**PCN MMS-MIC/14/8461**
Please sign and return to STMicroelectronics Sales Office	**Dated 01 Jul 2014**

☐ Qualification Plan Denied	Name:
☐ Qualification Plan Approved	Title:
	Company:
☐ Change Denied	Date:
☐ Change Approved	Signature:

Remark

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DOCUMENT APPROVAL

Name	Function
Colonna, Daniel	Marketing Manager
Buffa, Michel	Product Manager
Narche, Pascal	Q.A. Manager

PRODUCT/PROCESS CHANGE NOTIFICATION

STM32F2x & STM32F4x Low-speed external oscillator improvement – ref list products below

MMS - Microcontrollers Division (MCD)

Dear Customer,

In order to improve manufacturing efficiency of the products listed below, and to provide a better service to our customers, ST MCD division is announcing that the low-speed external (LSE) oscillator has been fine tuned. Consequently, a new die revision on those products is introduced.

What is the change?

The low-speed external (LSE) oscillator will be improved by adjusting a reference current through one metal layer. Dice revisions of the products will change.

There is no change in the product logic and therefore no change to product functionality.

Why ?

The purpose of this change is to improve manufacturing efficiency and therefore to maintain a high level of customer service.

When ?

The production on the new dice revisions will start from:

Products	Wafer Fab site	**Samples availability date**	**Implementation date**
STM32F401xB & STM32F401xC	Crolles 300 (France)	Week 30 2014	Week 34 2014
STM32F401xD & STM32F401xE	Crolles 300 (France)	Week 32 2014	Week 36 2014
STM32F2x & STM32F405x & STM32F407x & STM32F415x & STM32F417x	ST SAS Rousset (France)	Week 37 2014	Week 41 2014
	Crolles 300 (France)	Week 37 2014	Week 41 2014

How 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 the qualification plan document.

How can the change be seen?

Traceability of the change is ensured by ST internal tools.

The die revision letter will change as indicated in the below table:

Products	Wafer Fab site	**Actual**	**New**
STM32F2x	ST SAS Rousset (France)	"X"	"V"
	Crolles 300 (France)	"1"	"2"
STM32F401x	Crolles 300 (France)	"A"	"Z"
STM32F405x & STM32F407x & STM32F415x & STM32F417x	ST SAS Rousset (France)	"Z"	"Y"
	Crolles 300 (France)	"1"	"2"

You can find the die revision letter marked on the package.

We remain available to discuss any concern that you may have regarding this Product Change Notification.

With our sincere regards.

Michel Buffa
Microcontroller Division General Manager

List of Commercial products impacted:

STM32F205RBT6
STM32F205RBT6EFG
STM32F205RBT7
STM32F205RCT6
STM32F205RCT6TR
STM32F205RCT7
STM32F205RET6
STM32F205RET6TR
STM32F205REY6TR
STM32F205RFT6
STM32F205RGT6
STM32F205RGT6TR
STM32F205RGT6V
STM32F205RGT6W
STM32F205RGT7
STM32F205RGY6TR
STM32F205VBT6
STM32F205VCT6
STM32F205VCT6TR
STM32F205VCT7
STM32F205VCT7TR
STM32F205VET6
STM32F205VET6TR
STM32F205VET7
STM32F205VFT6
STM32F205VFT6TR
STM32F205VGT6
STM32F205VGT6J
STM32F205VGT6V
STM32F205VGT6W
STM32F205VGT7
STM32F205VGT7TR
STM32F205ZCT6
STM32F205ZCT7
STM32F205ZCT7TR
STM32F205ZET6
STM32F205ZET6TR
STM32F205ZET7
STM32F205ZET7TR
STM32F205ZFT6
STM32F205ZGT6
STM32F205ZGT6J
STM32F205ZGT6TR
STM32F205ZGT6V
STM32F205ZGT6W
STM32F207GDIE1
STM32F207ICH6
STM32F207ICT6
STM32F207IEH6
STM32F207IEH6TR
STM32F207IET6
STM32F207IFH6
STM32F207IFH6TR
STM32F207IFT6
STM32F207IGH6
STM32F207IGH6J
STM32F207IGH6TR
STM32F207IGH6U
STM32F207IGH7
STM32F207IGT6
STM32F207IGT6U
STM32F207IGT7
STM32F207VCDEF
STM32F207VCT6
STM32F207VCT6TR
STM32F207VCT7
STM32F207VET6
STM32F207VET6TR
STM32F207VFT6
STM32F207VFT6TR
STM32F207VGT6
STM32F207VGT6J
STM32F207VGT6TR
STM32F207VGT6U
STM32F207VGT7
STM32F207ZCT6
STM32F207ZET6
STM32F207ZET6TR
STM32F207ZFT6
STM32F207ZGT6
STM32F207ZGT6J
STM32F207ZGT6TR
STM32F207ZGT6U
STM32F207ZGT7
STM32F215RET6
STM32F215RGT6
STM32F215RGT6TR
STM32F215VET6
STM32F215VGT6
STM32F215ZET6
STM32F215ZET6TR
STM32F215ZGT6
STM32F217GDIE1
STM32F217IEH6
STM32F217IET6
STM32F217IGH6
STM32F217IGH6U
STM32F217IGT6
STM32F217IGT7
STM32F217VET6
STM32F217VET6TR
STM32F217VGT6
STM32F217VGT6TR
STM32F217ZET6
STM32F217ZET7
STM32F217ZGT6
STM32F401CBU6
STM32F401CBY6TR
STM32F401CCU6
STM32F401CCU6U
STM32F401CCY6TR
STM32F401CCY6UTR
STM32F401CDU6
STM32F401CDY6TR
STM32F401CEU6
STM32F401CEY6TR
STM32F401RBT6
STM32F401RCT6
STM32F401RCT6U
STM32F401RDT6
STM32F401RET6
STM32F401RET6U
STM32F401VBH6
STM32F401VBT6
STM32F401VCH6
STM32F401VCH6U
STM32F401VCT6
STM32F401VCT6U
STM32F401VDH6
STM32F401VDT6
STM32F401VEH6
STM32F401VET6
STM32F401VET6U
STM32F405OEY6BTR
STM32F405OEY6TR
STM32F405OGY6TR
STM32F405OGY6VTR
STM32F405OGY6WTR
STM32F405RGT6
STM32F405RGT6TR
STM32F405RGT6V
STM32F405RGT6W
STM32F405RGT7
STM32F405RGT7TR
STM32F405VGT6
STM32F405VGT6J
STM32F405VGT6TR
STM32F405VGT6V
STM32F405VGT6W
STM32F405VGT7
STM32F405VGT7TR
STM32F405ZGT6
STM32F405ZGT6J
STM32F405ZGT6V
STM32F405ZGT6W
STM32F405ZGT7
STM32F407GDIE1
STM32F407GDIE5
STM32F407GDIE6
STM32F407IEH6
STM32F407IET6
STM32F407IGH6
STM32F407IGH6J
STM32F407IGH6TR
STM32F407IGH6U
STM32F407IGH7
STM32F407IGT6
STM32F407IGT6U
STM32F407IGT7
STM32F407VET6
STM32F407VET6TR
STM32F407VGT6
STM32F407VGT6J
STM32F407VGT6TR
STM32F407VGT6U
STM32F407VGT7
STM32F407ZET6
STM32F407ZET7
STM32F407ZGT6
STM32F407ZGT6J
STM32F407ZGT6U
STM32F407ZGT7
STM32F415OGY6TR
STM32F415RGT6
STM32F415VGT6
STM32F415VGT6TR
STM32F415ZGT6
STM32F417GDIE1
STM32F417GDIE6
STM32F417IEH6
STM32F417IET6
STM32F417IGH6
STM32F417IGH6U
STM32F417IGH6W
STM32F417IGT6
STM32F417IGT7
STM32F417VET6
STM32F417VET6TR
STM32F417VGT6
STM32F417VGT6TR
STM32F417VGT7
STM32F417ZET6
STM32F417ZGT6
STM32P207IGQC1TR

STM32F2x & STM32F4x Low-speed external oscillator improvement

Qualification Plan

May, 7th 2014

MMS MCD Quality & Reliability Department

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STM32F2x & STM32F4x
Low-speed external oscillator improvement

Qualification plan

- Context :

In order to improve manufacturing efficiency of the STM32F2x and STM32F4x products, it has been decided to fine tuned the low-speed external (LSE) oscillator.

The low-speed external (LSE) oscillator will be modified by changing one metal layer

STM32F2x & STM32F4x
Low-speed external oscillator improvement

Qualification plan

- LSE Fix Qualification Plan

Trial	Test	Method	Conditions	Criteria	Product / Package	Sample x lot
STM32F2xx - STM32F4xx – R8” (Rousset 8” Fab) – C12” (Crolles 12” Fab)						
DIE	LU	0018695 JESD78	N.A	125°C	Die 411 R8” / UFBGA176 Die 411 C12” / UFBGA176 Die 413 R8” / UFBGA176 Die 413 C12” / UFBGA176 Die 423 C12” / LQFP100 Die 433 C12” / LQFP100	6 x 1 For each product
	ESD HBM	ANSI/ESDA/JEDEC JS-001	1500Ω , 100pF	25°C 2kV (class 2)		3 x 1 For each product
	ESD CDM	ANSI/ESDSTM5.3.1	N.A	25°C Min 250V (Class C3)		3 x 1 For each product
	HTOL	MIL-STD-883 Method 1005 JESD22-A108	125°C , 3.6V	168h		77 x 1 For each product

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