



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
<input type="checkbox"/> Qualification Plan Denied <input type="checkbox"/> Qualification Plan Approved <input type="checkbox"/> Change Denied <input type="checkbox"/> Change Approved	Name: Title: Company: Date: Signature:	
Remark		

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	<u>Samples availability date</u>	<u>Implementation date</u>
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	<u>Actual</u>	<u>New</u>
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	STM32F207IFH6	STM32F217VGT6TR	STM32F405ZGT6V
STM32F205RBT6EFG	STM32F207IFH6TR	STM32F217ZE T6	STM32F405ZGT6W
STM32F205RBT7	STM32F207IFT6	STM32F217ZE T7	STM32F405ZGT7
STM32F205RCT6	STM32F207IGH6	STM32F217ZG T6	STM32F407GDIE1
STM32F205RCT6TR	STM32F207IGH6J	STM32F401CBU6	STM32F407GDIE5
STM32F205RCT7	STM32F207IGH6TR	STM32F401CBY6TR	STM32F407GDIE6
STM32F205RET6	STM32F207IGH6U	STM32F401CCU6	STM32F407IEH6
STM32F205RET6TR	STM32F207IGH7	STM32F401CCU6U	STM32F407IET6
STM32F205REY6TR	STM32F207IG T6	STM32F401CCY6TR	STM32F407IGH6
STM32F205RFT6	STM32F207IGT6U	STM32F401CCY6UTR	STM32F407IGH6J
STM32F205RG T6	STM32F207IGT7	STM32F401CDU6	STM32F407IGH6TR
STM32F205RG T6TR	STM32F207VCDEF	STM32F401CDY6TR	STM32F407IGH6U
STM32F205RG T6V	STM32F207VCT6	STM32F401CEU6	STM32F407IGH7
STM32F205RG T6W	STM32F207VCT6 TR	STM32F401CE Y6TR	STM32F407IG T6
STM32F205RG T7	STM32F207VCT7	STM32F401RBT6	STM32F407IG T6U
STM32F205RGY6TR	STM32F207VET6	STM32F401RCT6	STM32F407IG T7
STM32F205VBT6	STM32F207VET6TR	STM32F401RCT6U	STM32F407VET6
STM32F205VCT6	STM32F207VFT6	STM32F401RDT6	STM32F407VET6TR
STM32F205VCT6TR	STM32F207VFT6TR	STM32F401RET6	STM32F407VGT6
STM32F205VCT7	STM32F207VGT6	STM32F401RET6U	STM32F407VGT6J
STM32F205VCT7TR	STM32F207VGT6J	STM32F401VBH6	STM32F407VGT6TR
STM32F205VET6	STM32F207VGT6TR	STM32F401VBT6	STM32F407VGT6U
STM32F205VET6TR	STM32F207VGT6U	STM32F401VCH6	STM32F407VGT7
STM32F205VET7	STM32F207VGT7	STM32F401VCH6U	STM32F407ZE T6
STM32F205VFT6	STM32F207ZCT6	STM32F401VCT6	STM32F407ZE T7
STM32F205VFT6TR	STM32F207ZE T6	STM32F401VCT6U	STM32F407ZG T6
STM32F205VGT6	STM32F207ZE T6 TR	STM32F401VDH6	STM32F407ZG T6J
STM32F205VGT6J	STM32F207ZF T6	STM32F401VDT6	STM32F407ZG T6U
STM32F205VGT6V	STM32F207ZG T6	STM32F401VEH6	STM32F407ZG T7
STM32F205VGT6W	STM32F207ZG T6J	STM32F401VET6	STM32F415OGY6TR
STM32F205VGT7	STM32F207ZG T6 TR	STM32F401VET6U	STM32F415RG T6
STM32F205VGT7TR	STM32F207ZG T6U	STM32F405OEY6BTR	STM32F415VGT6
STM32F205ZCT6	STM32F207ZG T7	STM32F405OEY6TR	STM32F415VGT6TR
STM32F205ZCT7	STM32F215RET6	STM32F405OGY6TR	STM32F415ZG T6
STM32F205ZCT7TR	STM32F215RG T6	STM32F405OGY6V TR	STM32F417GDIE1
STM32F205ZE T6	STM32F215RG T6 TR	STM32F405OGY6WTR	STM32F417GDIE6
STM32F205ZE T6TR	STM32F215VET6	STM32F405RG T6	STM32F417IEH6
STM32F205ZE T7	STM32F215VGT6	STM32F405RG T6 TR	STM32F417IET6
STM32F205ZE T7 TR	STM32F215ZE T6	STM32F405RG T6V	STM32F417IGH6
STM32F205ZF T6	STM32F215ZE T6 TR	STM32F405RG T6W	STM32F417IGH6U
STM32F205ZG T6	STM32F215ZG T6	STM32F405RG T7	STM32F417IGH6W
STM32F205ZG T6J	STM32F217GDIE1	STM32F405RG T7 TR	STM32F417IG T6
STM32F205ZG T6TR	STM32F217IEH6	STM32F405VGT6	STM32F417IG T7
STM32F205ZG T6V	STM32F217IET6	STM32F405VGT6J	STM32F417VET6
STM32F205ZG T6W	STM32F217IGH6	STM32F405VGT6TR	STM32F417VET6TR
STM32F207GDIE1	STM32F217IGH6U	STM32F405VGT6V	STM32F417VGT6
STM32F207ICH6	STM32F217IG T6	STM32F405VGT6W	STM32F417VGT6TR
STM32F207ICT6	STM32F217IG T7	STM32F405VGT7	STM32F417VGT7
STM32F207IEH6	STM32F217VET6	STM32F405VGT7TR	STM32F417ZE T6
STM32F207IEH6TR	STM32F217VET6TR	STM32F405ZG T6	STM32F417ZG T6
STM32F207IET6	STM32F217VGT6	STM32F405ZG T6J	STM32P207IGQC1 TR



STM32F2x & STM32F4x Low-speed external oscillator improvement

Qualification Plan

May, 7th 2014

MMS MCD Quality & Reliability Department

Low-speed external oscillator improvement

Qualification plan

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- Context :

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

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

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	6 x 1 For each product
	ESD HBM	ANSI/ESDA/JEDEC JS-001	1500Ω , 100pF	25°C 2kV (class 2)	Die 413 R8" / UFBGA176 Die 413 C12" / UFBGA176	3 x 1 For each product
	ESD CDM	ANSI/ESDSTM5.3.1	N.A	25°C Min 250V (Class C3)	Die 423 C12" / LQFP100	3 x 1 For each product
	HTOL	MIL-STD-883 Method 1005 JESD22-A108	125°C , 3.6V	168h	Die 433 C12" / LQFP100	77 x 1 For each product

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