



PRODUCT/PROCESS CHANGE NOTIFICATION

PCN PPG/ 56/8005

PPG MICROCONTROLLERS

**ST62T52B, ST62T53B, ST62T55B - ST62T62B, ST62T63B, ST62T60B, ST62T65B
switch from 1.2 μ die to 0.8 μ die.**

Please find attached the change notice relating to the switch of all OTPs ST62T5xB, ST62T6xB from the 1.2 μ to the 0.8 μ die.

Production is planned to be switched in September 1998, thus resulting in first deliveries with the new die early December 1998. We will not be able to diffuse additional quantities of the old 1.2 μ die, so you are requested to carefully follow up all your customers.

The Product Change Notice, the information letter and the general information package have to be forwarded to the customers mentioned in the attached list of customers affected by the change. The present letter and the list of customers should not be forwarded.

Best regards,

Th.BRUNET
Microcontroller Marketing

Attachments:

- Customer notification letter
- General Information Package
- Product Change Notice
- List of customers affected by the change

Dear customer,

In search of continuous improvement, STMicroelectronics is replacing all ST62T5xB , ST62T6xB OTP devices from the current 1.2 μ die to the 0.8 μ die, using STMicroelectronics state of the art technology for OTP microcontrollers.

STMicroelectronics has used this opportunity to include new features such as a Low Voltage Detector for safe reset, an Oscillator Safeguard and a new RC oscillator, thus allowing STMicroelectronics to offer an improved product and better support its customers.

Existing devices have one "option byte" to select device options, while this new 0.8 μ die uses a double "option byte", allowing the selection of the new features. Consequently, programming tools and programming procedures must be updated to be able to support new features of the new 0.8 μ die.

Once programmed, the new 0,8 μ die is fully upward compatible with the current 1,2 μ one, with the exception of the RC oscillator frequency that has to be compensated by a resistor change.

The switch from one die to the other will start in September 1998. Sales types will be changed to underline the change of the programming features. The device marking is modified accordingly.

For any additional information concerning this change, please contact local MCU marketing in STMicroelectronics sales offices.

ATTACHMENTS:

- I General information package
- II Product / Process Change Notification

This information has been issued by PPG Microcontroller marketing

Th BRUNET / Rousset (France)
Microcontroller Marketing

GENERAL INFORMATION PACKAGE

WHAT IS THE CHANGE ?

The OTPs ST62T52B, ST62T53B, ST62T55B, ST62T62B, ST62T60B, ST62T63B, ST62T65B products produced today use the 1.2 μ technology. Now a new die has been designed, using 0.8 μ technology.

New features have been implemented on the die, including a Low Voltage Detector for safe reset, a new RC oscillator and an Oscillator Safeguard. A double "option byte" provides various device configurations using one single reference. The new die is fully upward compatible with the current one with the exception of the RC oscillator frequency that has to be compensated by a resistor change.

Sales types have been changed into ST62T5xC and ST62T6xC in order to show the new features availability.

New programming tools and programming flows have to be updated to support the new sales types.

The new die will replace the 1.2 μ one, the latter being phased out.

WHY A CHANGE ?

The ST62T5xB, ST62T6xB die have been redesigned to provide enhanced features and package versions (new DIP16) to customers, to simplify production flow by reducing the number of versions. In addition, this change to a more advanced technology allows STMicroelectronics to optimize wafer diffusion by focusing its efforts on the most advanced and most efficient OTP process.

HOW WILL THE CHANGE BE HANDLED ?

STMicroelectronics has made a thorough analysis to assure 100% compatibility of the 0.8 μ die with its predecessor. As a result, qualification procedures are not required in most cases. On an exceptional basis and upon request within 1 month after receipt of this notice, STMicroelectronics will process any customer specific qualification plan that is submitted to its attention.

In order to smooth the transition from one die to the other, purchase orders to STMicroelectronics should be entered using the 1.2 μ sales type until formal information for change to the 0.8 μ die is given by STMicroelectronics.

WHEN WILL THE CHANGE BE EFFECTIVE ?

The qualification of the 0.8 μ die is planned in September 1998.

From this date onward, diffusion will be done exclusively with the new 0.8 μ die. The first switch at the customer will occur in October 1998. Depending on STMicroelectronics inventory on the specific sales types, switchover will actually take place during the fourth quarter 1998 or later. In any case, customers will be requested to modify their purchase orders using the new sales types a few weeks before the requested delivery date.

The last deliveries of the 1.2 μ die are planned in February 1999. The corresponding Product Termination Procedure is sent together with this document.

HOW CAN THE CHANGE BE SEEN ?

Customers will be able to identify the die and the specification of a particular product at both order type and product marking level, as described below.

Sales Type	Sales Type	Marking	Marking
1.2 μ	0.8 μ	1.2 μ	0.8 μ
ST62T52BM6	ST62T52CM6	ST62T52B6	ST62T52C6
ST62T53BB6	ST62T53CB6	ST62T53B6	ST62T53C6
ST62T53BM6	ST62T53CM6	ST62T53B6	ST62T53C6
ST62T55BB6	ST62T55CB6	ST62T55B6	ST62T55C6
ST62T55BM6	ST62T55CM6	ST62T55B6	ST62T55C6
ST62T62BM6	ST62T62CM6	ST62T62B6	ST62T62C6
ST62T63BB6	ST62T63CB6	ST62T63B6	ST62T63C6
ST62T63BM6	ST62T63CM6	ST62T63B6	ST62T63C6
ST62T60BB6	ST62T60CB6	ST62T60B6	ST62T60C6
ST62T60BM6	ST62T60CM6	ST62T60B6	ST62T60C6
ST62T65BB6	ST62T65CB6	ST62T65B6	ST62T65C6
ST62T65BM6	ST62T65CM6	ST62T65B6	ST62T65C6

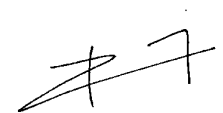
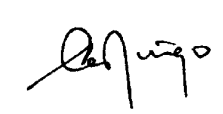
HOW TO PROGRAM THE NEW PARTS ?

Programming tools have been updated in order to support both 1.2 μ and 0.8 μ versions of the devices. The software and firmware references can be obtained by contacting STMicroelectronics sales offices or our Internet site :

[Http://www.st.com](http://www.st.com)

Appendix 1. Product/Process Change Notification

Ref: PPG/56/8005	
Sales Type/Product Family	ST62T5x & ST62T6x
Customer	See attached list
Type of change	Technology change
Reason for change	New features addition & wafer diffusion optimization
Description of the change	Change from 1.2μ to 0.8μ die
Forecasted date of change	September 98 for diffusion
Availability date of samples for customer	On request with agreed qualification plan at customer's
Forecasted date for internal STMicroelectronics change qualification report availability	October 98
Marking to identify changed product E.G. date code change	C letter added on sales type marking
Description of the qualification program	See attached qualification plan
Product Line(s) and/or Part Number(s)	ST62T5x & ST62T6x
Manufacturing Location(s)	Rousset (diffusion location is kept unchanged)
Estimated date of first shipment	October 98
Division Product Management	Ph. CALZI
Division Q.A. Manager :	F. de MINGO
Date :	July 8th, 98

Ref: PPG/56/8005	
Customer Acknowledgment of Receipt	
Please Sign and return to STMicroelectronics Sales Office	
<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 :



ST62T5x - ST62T6x switch from 1.2 μ to 0.8 μ

Qualification Plan

Qualification Schedule				
TEST VEHICLE	PACKAGE	NB OF LOT	START	END.
ST62T65C	PDIL28	1	AUGUST	SEPTEMBER

Reliability Tests			
TESTS	CONDITIONS	DURATION	SAMPLE/LOT
HIGH TEMPERATURE OPERATING LIFE TEST	140°C / 6 V	500 Hrs	76
HIGH TEMPERATURE RETENTION BAKE	150°C	1000 Hrs	43
EEPROM CYCLING & BAKE	25°C (CYCLING) 150°C (BAKE)	300 K CYCLES 168 HRS BAKE	43
TEMPERATURE & HUMIDITY	85°C / 85% RH / 5.5 V	1000 Hrs	76
PRESSURE POT	121°C / 2ATM	240 Hrs	43
THERMAL CYCLING	-40°C / 150°C	1000 CY	43
THERMAL SHOCKS	-55°C / 125°C	100 SH	32
ESD	HUMAN BODY MODEL	2000V	12
LATCH-UP	INTERNAL SPEC. 0018695	CLASS A/B	10

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