



PRODUCT/PROCESS CHANGE NOTIFICATION

PCN APM-DIS/08/3972
Notification Date 08/21/2008

APM - ASD & IPAD Division
X02xxx SCRs and Z01xxx TRIACs in TO-92
Additional assembly and test location in China

Table 1. Change Implementation Schedule

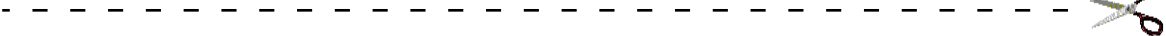
Forecasted implementation date for change	15-Sep-2008
Forecasted availability date of samples for customer	14-Aug-2008
Forecasted date for STMicroelectronics change Qualification Plan results availability	14-Aug-2008
Estimated date of changed product first shipment	20-Nov-2008

Table 2. Change Identification

Product Identification (Product Family/Commercial Product)	X02xxx SCRs and Z01xxx TRIACs in TO-92
Type of change	Multiple locations change
Reason for change	Capacity extension
Description of the change	The change that is announced in the present document is the multi-sourcing of our SCRs and Triacs housed in TO-92 package implementing a soft solder die attach technology. This additional assembly and test location will bring some capacity increase for the manufacturing of our X02xxx and Z01xxx Thyristors devices
Product Line(s) and/or Part Number(s)	See attached
Description of the Qualification Plan	See attached
Change Product Identification	Traceability is ensured by a differentiated marking, an internal codification and by the Q.A. number
Manufacturing Location(s)	

Table 3. List of Attachments

Customer Part numbers list	
Qualification Plan results	



Customer Acknowledgement of Receipt		PCN APM-DIS/08/3972
Please sign and return to STMicroelectronics Sales Office		Notification Date 08/21/2008
<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
Paris, Eric	Division Marketing Manager
Duclos, Franck	Division Product Manager
Besson, Andre	Division Q.A. Manager



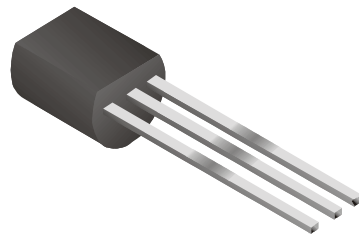
**PRODUCT/PROCESS
CHANGE NOTIFICATION**

PCN APM-DIS/08/3972

APM - ASD & IPAD Division¹

X02xxx SCRs and Z01xxx TRIACs in TO-92:

Additional assembly and test location in China



(1) APM: Analog, Power & MEMS Group - ASD: Application Specific Device - IPAD: Integrated Passive and Active Devices

WHY THIS CHANGE?

The change that is announced in the present document is the multi-sourcing of our **SCRs and Triacs housed in TO-92** package implementing a soft solder die attach technology. This additional assembly and test location will bring some **capacity increase** for the manufacturing of our **XO2xxx** and **Z01xxx** Thyristors devices.

WHAT IS THE CHANGE?

This plant located in China is already producing our SCRs and Triacs in TO-92 package with **epoxy** or **eutectic** die attach. The line is being extended to the **soft solder** die attach process.

There is **no impact** on the **electrical, dimensional** and **thermal parameters** of the products with respect to the product datasheet. This was verified in the qualification program.

There is **no change** in the **packing modes** and the standard **delivery quantities**. The products will be delivered in compliance with the RoHS (Restriction of the use of certain Hazardous Substances).

The **product series** involved in this production extension are listed below.

Product Family	TO-92 series
SCRs	XO2xxxA
TRIACs	Z01xxxA

Specific XO2xxx and Z01xxx Thyristors, even if not expressly included in the above table, are affected by this change.

HOW AND WHEN?Qualification and test results:

The **reliability tests plan** supporting the qualification program for the China assembly line is provided in **appendix 1** of the present document.

The **qualification report** is available on request **now**.

Sampling:

Qualification samples of the devices used as **test vehicle** produced in China are **available** on request as indicated below:

Product Family	Salestypes	Availability
SCRs	X0225MA	From now
TRIACs	Z0103MA	

Change implementation schedule:

The **production start** and **first shipments** will be implemented according to our work in progress and materials availability as indicated in the schedule below:

Salestypes	Production Start	1st Shipments
All	From Week 38-2008	From Week 47-2008

Other samples are available on request for delivery within notice period if ordered within 30 days.

Lack of acknowledgement of the PCN within **30 days** will constitute acceptance of the change. After acknowledgement, lack of additional response within the **90 day** period after PCN notification will constitute acceptance of the change (Jedec Standard No. 46-B). In any case, **first shipments** may start earlier with customer's **written agreement**.

Marking and Traceability:

Parts assembled on the new assembly line are differentiated by the **date code marking** of the component as indicated below:

Assembly location	Date code marking		
	Assy code	3 last digits	
China (new)	GX	xyy	x = 1 digit indicating the year yy = 2 digits indicating the week number
China	GE		
Philippines	7S		

The **traceability** for the assembly plant will also be ensured by an **internal codification** and by the **Q.A. number**.

Appendix 1: Reliability tests for qualification of XO2xxx and Z01xxx Thyristors in TO-92



X02xxx SCRs and Z01xxx TRIACs in TO-92: Additional assembly and test location in China (soft solder die attach)

Reliability tests plan for QUALIFICATION PROGRAM

Product Family	Test Vehicle Salestypes
SCRs	X0202MA
TRIACs	Z0103MA

QUALIFICATION TESTS					
TEST	CONDITIONS	DURATION	NBR OF LOTS (*)	SAMPLE SIZE	ACCEPTANCE CRITERIA
Parametric verification	Data sheet specification	Not applicable	3	30 pcs / lot	Datasheet
Temperature Cycling JESD22 A104	-65°C/+150°C - Air/Air	1000 cycles	3	25 pcs / lot	0 failure
Temperature Humidity Bias JESD22 A101	Tamb = 85°C RH = 85% V = 100V max	1000 hours	2	20 pcs / lot	0 failure
High Temperature Reverse Bias JESD22-A108	V = V _{ac peak} Tj = 125°C	1000 hours	1	40 pcs / lot	0 failure
Construction analysis	Random samples	Not applicable	1	5pcs	Assembly rules
Resistance to Solder Heat Jedec JESD22-B106-B	2 oil dipping at 260°C	10s on / 15 s off	3	30 pcs / lot min	0 failure
Die shear MIL750-2037	Die shear resistance	Not applicable	3	5 pcs	0/5

(*) Lots selected among test vehicles indicated above.

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