



# PRODUCT/PROCESS CHANGE NOTIFICATION

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PCN APM-DIS/09/4435  
Notification Date 04/28/2009

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**APM - ASD & IPAD Division**

**AC Switches in TO-92 Package**

**Implementation of high temperature soldering alloy in assembly process**

**Table 1. Change Implementation Schedule**

Forecasted implementation date for change	21-Apr-2009
Forecasted availability date of samples for customer	21-Apr-2009
Forecasted date for <b>STMicroelectronics</b> change Qualification Plan results availability	21-Apr-2009
Estimated date of changed product first shipment	28-Jul-2009

**Table 2. Change Identification**

Product Identification (Product Family/Commercial Product)	AC Switches in TO-92 Package
Type of change	Package assembly material change
Reason for change	improve the robustness and manufacturability of products
Description of the change	The purpose of this document is to announce the use of the standard high temperature soldering alloy (soft solder) for the production of our AC Switches in TO-92 package at our subcontractor in China, in replacement of the current epoxy glue.
Product Line(s) and/or Part Number(s)	See attached
Description of the Qualification Plan	See attached
Change Product Identification	internal codification,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/09/4435
Please sign and return to STMicroelectronics Sales Office		Notification Date 04/28/2009
<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
Cazaubon, Guy	Division Q.A. Manager



**APM - ASD & IPAD Division<sup>1</sup>**

**AC Switches in TO-92 Package:**

**Implementation of high temperature soldering alloy in assembly  
process**



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

**WHY THIS CHANGE?**

The purpose of this document is to announce the use of **the standard high temperature soldering alloy** (soft solder) for the production of our **AC Switches** in **TO-92** package at our **subcontractor in China**, in replacement of the current epoxy glue.

The purpose of this change is to **improve the robustness and manufacturability of our products**, hence to ensure a higher service level to our customers.

**WHAT IS THE CHANGE?**

The **high temperature soldering alloy** is used as standard process for some of our SCRs and Triacs. It will be implemented according to the time schedule provided in the present document.

The P/Ns involved in this change are listed below.

Product Sub-Family	P/N	Product Description
AC Switches in TO-92	ACS102-6TA(-TR)	AC Switch 0.2A 600V 5 mA
	ACS108-6SA(-TR)	AC Switch 0.8A 600V 10 mA
	ACS108-6SA-AP	AC Switch 0.8A 600V 10 mA

The use of the soldering alloy will have **no impact** on the **dimensional, thermal and electrical parameters of the products** with reference to the product datasheet. This was verified by the qualification program.

There is no change in the **lead finish** and the products will be delivered in compliance with the **RoHS<sup>1</sup>** directive, following ST's ECOPACK<sup>®</sup> specification.

There is **no change** either in the **packing mode** and the standard **delivery quantities**.

(1) *Restriction of the use of certain Hazardous Substances*

**HOW AND WHEN?****Qualification and test results:**

The qualification has been done by similarities with the standard **SCRs and Triacs in TO-92 package** already qualified at this subcontractor.

This qualification is in accordance with the AEC-Q101 standard.

It is based on the following statements:

- **Die technology**, implementing same finishing backside,
- **Assembly technology**, involving same production line with same frame material, same die attach process and same die attach material.

For that reason, only the temperature cycling testing has been done, on two lots.

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

Sampling:

**Qualification samples** of the devices used as **test vehicles** produced with the soldering alloy are **available** on request **now**.

Product Sub-family	Salestypes (test vehicles)
AC Switches in TO-92	ACS102-6TA
	ACS108-6SA

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:

Production Start	1st Shipments
From Week 13 - 09	From Week 30 - 09

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 will constitute acceptance of the change (Jedec Standard No. 46-C). In any case, **first shipments** may start earlier with customer's **written agreement**.

Marking and Traceability:

The marking will remain unchanged and the **traceability** will be ensured by an **internal codification** and by the **Q.A. number printed on the labeling**.

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