

**PRODUCT / PROCESS CHANGE NOTIFICATION**

**1. PCN basic data**

<b>1.1 Company</b>		STMicroelectronics International N.V
<b>1.2 PCN No.</b>	IPD/15/9387	
<b>1.3 Title of PCN</b>	STPM32, STMP33 and STPM34 : Metal mask change	
<b>1.4 Product Category</b>	Metering ASSP	
<b>1.5 Issue date</b>	2015-09-08	

**2. PCN Team**

<b>2.1 Contact supplier</b>	
<b>2.1.1 Name</b>	ROBERTSON HEATHER
<b>2.1.2 Phone</b>	+1 8475853058
<b>2.1.3 Email</b>	heather.robertson@st.com
<b>2.2 Change responsibility</b>	
<b>2.2.1 Product Manager</b>	Domenico ARRIGO
<b>2.1.2 Marketing Manager</b>	Alessandro MOSCATELLI
<b>2.1.3 Quality Manager</b>	Paolo MORETTI

**3. Change**

<b>3.1 Category</b>	<b>3.2 Type of change</b>	<b>3.3 Manufacturing Location</b>
Die redesign	Functional / pin layout change	ST ROUSSET SAS

**4. Description of change**

	<b>Old</b>	<b>New</b>
<b>4.1 Description</b>	Current Wafer code FV862BAG	New Wafer code FV862BCG
<b>4.2 Anticipated Impact on form,fit, function, quality, reliability or processability?</b>	No impact.	

**5. Reason / motivation for change**

<b>5.1 Motivation</b>	In order to improve the product features.
<b>5.2 Customer Benefit</b>	QUALITY IMPROVEMENT

**6. Marking of parts / traceability of change**

<b>6.1 Description</b>	By a new internal part number (Finished Goods), i.e. STPM32TR-3/ STPM33TR-3/ STPM34TR-4/
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**7. Timing / schedule**

<b>7.1 Date of qualification results</b>	2015-09-02
<b>7.2 Intended start of delivery</b>	2015-12-07
<b>7.3 Qualification sample available?</b>	Upon Request

**8. Qualification / Validation**

<b>8.1 Description</b>	ProductReliabilityCertificate_V862BC DOC.pdf		
<b>8.2 Qualification report and qualification results</b>	Available (see attachment)	<b>Issue Date</b>	2015-09-08

**9. Attachments (additional documentations)**

9387PpPrdtLst.pdf  
ProductReliabilityCertificate\_V862BC DOC.pdf

**10. Affected parts**

10. 1 Current		10.2 New (if applicable)
10.1.1 Customer Part No	10.1.2 Supplier Part No	10.1.2 Supplier Part No
	STPM32TR	
	STPM33TR	
	STPM34TR	

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## Public Products List

**PCN Title :** STPM32, STMP33 and STPM34 : Metal mask change

**PCN Reference :** IPD/15/9387

**PCN Created on :** 02-Sep-2015

**Subject :** Public Products List

Dear Customer,

Please find below the Standard Public Products List impacted by the change.

STPM34TR	STPM33TR	STPM32TR
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# Product Reliability Certificate

**Line :** V862BCG / STPM3X  
**Division :** IPC  
**Function :** Triple Channel Energy Meter  
**Aim of the Qualification:** New silicon version

## Device construction note

DIE FEATURES		PACKAGE FEATURES	
Wafer Code 1	: V862BAG	Package Code	: VFQFPN 5X5x1.0
Wafer Code 2	: V862BCG	Description	: 32L Pitch 0.5
Diffusion Site	: Rousset	Assembly Site	: CARSEM S
Wafer Diameter	: 8 inch	Die Attach material	: EPOXY
Die Size 1 (X,Y)	: 1846 x 2416 micron	Bonding wire material	: CU
Die Size 2 (X,Y)	: 1846 x 2416 micron	Bonding wire diameter	: 0.8 mils
Process Technology	: HCMOS9A	Molding compound	: Epoxy
Passivation	: PSG + NITRIDE		
Ref	REL.6088-294W-13: Reliability Report STPM3X		
	STPM3x revBAG – revBCG changes		
	Validation Report of STPM3x Device Family, Product Line V862BCG		
	HBM, CDM and MM tests on V862BC version with positive results		
	LU test on V862BC version with positive results		
	ATE Result on V862BCG		

### Objectives:

Reliability evaluation on V862BC / STPM3X.

The device under discussion is a Triple Channel Energy Meter fabricated in HCMOS9A technology and assembled in HCMOS9A 32L package;

V862BCG to V862BAG fix description:

Some change has been implemented in order to improve the EFT tests (IEC61000-4).

The changes do not affect the reliability of the device because all involved components were present on the previous version; new connections have been realized following the technology design rules.

V862BCG can be considered as a minor change with reference to V862BAG, so the evaluation of this part has followed a simplified flow. The results of the fix V862BCG have been evaluated both at ATE and bench level with positive results:

1. The overall functionality of the device has been fully preserved
1. The device has been tested on the application board with positive results
2. HBM, CDM and MM tests have been completed with positive results
3. LU test has been completed with positive results
4. ATE results is aligned with the product datasheet

FPN Packages using Cu wires 0.8 mils are qualified in Carsem.



## **IPG – IPC PRODUCT RELIABILITY**

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### **Conclusion:**

This certificate assures that the device V862BCG, with the above construction notes, can be qualified by similarity and can be put in mass production.

Based on the above statements, the result of the fix on V862BCG device can be considered positive with the achievement of the expected target.

### **Approved by:**

Giovanni Presti

Andrea Lanzani

Domenico Cristaudo

QA & Reliability Manager

Product Manager

Design Manager