



# PRODUCT/PROCESS CHANGE NOTIFICATION

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PCN IPD-IPC/12/7258  
Notification Date 05/16/2012

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**Back-End Transfer from Shenzhen to Long Gang of the  
products housed in PDIP7 and SDIP10 package (including  
ECOPACK 2 conversion)**

**Table 1. Change Implementation Schedule**


Forecasted implementation date for change	15-Jul-2012
Forecasted availability date of samples for customer	25-Jun-2012
Forecasted date for <b>STMicroelectronics</b> change Qualification Plan results availability	05-Jun-2012
Estimated date of changed product first shipment	15-Aug-2012

**Table 2. Change Identification**

Product Identification (Product Family/Commercial Product)	see attached list
Type of change	Multiple types of changes
Reason for change	To optimize ST's assets utilization
Description of the change	The production lines for the products housed in PDIP7 and SDIP10 package, currently located in Shenzhen plant, will be moved to the plant in Long Gang, in the same country (China). Besides this transfer, we will implement the ECOPACK2 grade.
Product Line(s) and/or Part Number(s)	See attached
Description of the Qualification Plan	See attached
Change Product Identification	Assembly plant area on marking as per attached description
Manufacturing Location(s)	

**Table 3. List of Attachments**

Customer Part numbers list	
Qualification Plan results	

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Customer Acknowledgement of Receipt		PCN IPD-IPC/12/7258
Please sign and return to STMicroelectronics Sales Office		Notification Date 05/16/2012
<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
Salanitri, Fabio Rosario	Division Marketing Manager
Borghi, Maria Rosa	Division Product Manager
Motta, Antonino	Division Q.A. Manager



**WHAT:**

Following the Company guidelines on the assets optimization, we are going to move our production lines for the products housed in PDIP 7 and SDIP 10 package from the plant in Shenzhen to the plant in Long Gang located in the same country, China.

The part numbers involved for the PDIP 7 are:

Product Line	Commercial Product
MT1301	VIPER26HN, VIPER26LN
MT2401	VIPER06HN, VIPER06LN, VIPER06XN
MV3401	VIPER17HN, VIPER17LN
MV3801	VIPER15HN, VIPER15LN
MV5401	VIPER28HN, VIPER28LN
MV5801	VIPER25HN, VIPER25LN
MV6101	VIPER16HN, VIPER16LN
MV6301	VIPER27HN, VIPER27LN

The part numbers involved for the SDIP 10 are:

Product Line	Commercial Product
MT1301	VIPER26HE, VIPER26LE
MT1901	VIPER37HE , VIPER37LE
MV5401	VIPER28HE, VIPER28LE

We will also implement the ECOPACK2 grade, the so called halogen-free, to comply with the environmental requirements of the Restricted Flame Retardant resin, as per the following B.O.M :

	Old material used in Shenzhen for the PDIP 7	New material used in Long Gang for the PDIP 7 and the SDIP 10
Glue	GLUE ABLEBOND 8390	GLUE ABLEBOND 8390S25
Resin	RESIN HYSOL MG46FAM	RESIN HENKEL GR360A-ST

**WHY:**

To optimize ST's assets utilization in compliance with the Company Roadmap.

**HOW:**

The Back-End relocation will be done moving the current equipments and tools from Shenzhen to Long Gang. The location transfer will not affect the electrical, dimensional and thermal parameters, keeping unchanged all the information reported on the relevant datasheets. There is as well no change in the packing process and in the standard delivery quantities.

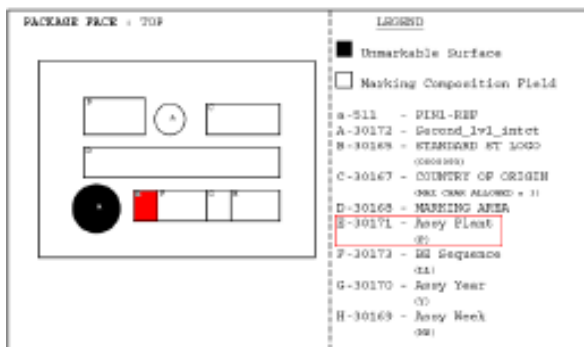
### **Qualification program and results**

The qualification program consists mainly of comparative electrical yield and reliability tests. The overall Reliability Report for all T.V. products will be available on request from week 23, 2012.

Qualification and Reliability Plan with Preliminary Results and electrical yield evaluations are enclosed herewith.

### **Marking and traceability**

The parts assembled in the Long Gang plant will have a differentiated marking on the package face of both PDIP 7 and SDIP 10, as shown in the picture below :



where

#### **B-e plant**

Shenzhen (old)

Long Gang (new)

#### **Assy plant**

K

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### **WHEN:**

#### **Implementation schedule**

Samples can be sent on request in 6/8 weeks A.R.O.

The production in Long Gang will start in week 26.



# *Product Reliability Qualification Plan*

## **QUALIFICATION TRANSFER OF SDIP7/10L FROM ST-SHENZHEN TO S LONG GANG (CHINA) Halogen Free vers.**

<i>Test Vehicle</i>	<i>Device Name (Commercial Name) Internal Dies-Diff . Plant.</i>	<i>Package on the Rel. Trials</i>
1	MV34 (ViPER17) UL39 CT-M5 / VZ8Q SuperMesh AMJ9	DIP7
2	MT19(ViPER37) UI01 CT-M5 / ZP82 SuperMesh3 CT6	SDIP10

# MV34 (DIP7) – Product Rel. Qualification Plan

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TEST	LOT #1
<b>T.C. (Temperature Cycles )</b> Conditions : <b>500CY</b> , -65°C/150°C in air Performed in Italy-Catania rel. Lab.	77 SAMPLES
<b>P.P. (Pressure Pot)</b> Conditions : 2atm, 121°C, 96/168h Performed in Italy-Catania rel. Lab.	0/77 (96h) SAMPLES
<b>H.T.S. (High Temperature Storage)</b> Conditions : No Bias, <b>Tj=150 °C</b> ; 168/500/1000 hrs Performed in Italy-Catania rel. Lab.	0/77(168h) SAMPLES
<b>T.C. (Temperature Cycles ) + P.P. (Pressure Pot)</b> Conditions : 300CY , -65°C/150°C in air Conditions : 2atm, 121°C, 168h Performed in Italy-Catania rel. Lab.	77 SAMPLES

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# MT19 (SDIP10) – Product Rel. Qualification Plan

3

TEST	LOT #1
<b>T.C. (Temperature Cycles )</b> Conditions : <b>500CY</b> , -65°C/150°C in air Performed in Italy-Catania rel. Lab.	77 SAMPLES
<b>P.P. (Pressure Pot)</b> Conditions : 2atm, 121°C, 96/168h Performed in Italy-Catania rel. Lab.	0/77 (96h) SAMPLES
<b>H.T.S. (High Temperature Storage)</b> Conditions : No Bias, <b>Tj=150 °C</b> ; 168/500/1000 hrs Performed in Italy-Catania rel. Lab.	0/77(168h) SAMPLES
<b>T.C. (Temperature Cycles ) + P.P. (Pressure Pot)</b> Conditions : 300CY , -65°C/150°C in air Conditions : 2atm, 121°C, 168h Performed in Italy-Catania rel. Lab.	77 SAMPLES

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## *Industrial & Power Conversion Division*

### **Qualification Plan for Testing&Finishing transfer to ST Long Gang (China)**

**(products assembled in dip7 and dip10)**

March,13 2012

	Product Line	Reference target yield (Shenzhen)	Target Yield in Long Gang	Qualification Lots Yield in Long Gang
	MV34 <small>(dip7)</small> MT19 <small>(sdip10)</small>	Actual Actual	Actual +-1% Actual +-1%	+0.3% +0.2%

## Conclusion

According to the results here above reported the testing transfer for the specified lines can be considered **qualified**.

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