



PRODUCT/PROCESS CHANGE NOTIFICATION

PCN APG-BOD/07/2305
Notification Date 02/26/2007

Mold Compound Change on TO-220 (ShenZhen) for VIPower Products.

BOD - CAR BODY

Table 1. Change Identification

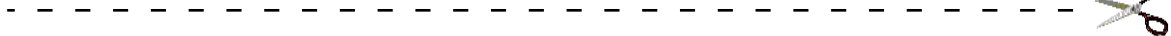
Product Identification (Product Family/Commercial Product)	see enclosed
Type of change	Package assembly material change
Reason for change	To improve quality and Service
Description of the change	In order to improve Quality and Service has been implemented on VIPower TO-220 products the change of molding compound from Kyocera KE-300SH to Samsung CHEIL SI7200DXC.
Product Line(s) and/or Part Number(s)	See attached
Description of the Qualification Plan	See attached
Change Product Identification	data-code
Manufacturing Location(s)	1]St Shenzhen -China

Table 2. Change Implementation Schedule

Forecasted implementation date for change	01-Jun-2007
Forecasted availability date of samples for customer	30-Mar-2007
Forecasted date for STMicroelectronics change Qualification Plan results availability	19-Feb-2007
Estimated date of changed product first shipment	01-Jun-2007

Table 3. List of Attachments

Customer Part numbers list	
Qualification Plan results	



Customer Acknowledgement of Receipt		PCN APG-BOD/07/2305	
Please sign and return to STMicroelectronics Sales Office		Notification Date 02/26/2007	
<input type="checkbox"/> Qualification Plan Denied <input type="checkbox"/> Qualification Plan Approved <input type="checkbox"/> Change Denied <input type="checkbox"/> Change Approved	Name: <hr/> Title: <hr/> Company: <hr/> Date: <hr/> Signature: <hr/>		
Remark			

DOCUMENT APPROVAL

Name	Function
Russo, Alfio	Division Marketing Manager
Aparo, Sebastiano	Division Product Manager
Parrino, Emanuele	Division Q.A. Manager



PRODUCT/PROCESS CHANGE NOTIFICATION[®]

CAR BODY DIVISION - VIPower Business Unit - Catania

Subject: Molding Compound Change on TO-220 Package (Assembly Plant ShenZhen) For VIPower Products.

INVOLVED P&L FAMILY: 30

WHAT: Looking at the continuous improvement approach in terms of quality and service, has been implemented on TO-220 package assembled in ShenZhen - China - (for VIPower products) the change of molding compound from **Kyocera KE-300SH** to **Samsung CHEIL SI7200DXC**.

WHY: The change is done in order to improve the cycle time and quality.

WHO: All customers using the following commercial products:

16230897
16230897-E
VNP14N04
VNP14N04-E
VNP10N07
VNP10N07-E
VN1160T
VN1160T-E
VN580T-E
VNP35NV04
VNP35NV04-E
VNP14NV04
VNP14NV04-E

WHEN: The change will be implemented in according to the following scheduling:

- Samples will be available on wk13/2007.
- Qualification report: Reliability report included to this PCN.
- Start production: on wk22/2007.
- 1st shipment: wk22/2007, but, according to Jedec standard we are available to supply new production parts prior to stated ship date, upon Customer/s approval.

WHERE: The plant involved in this change is ST ShenZhen (China).



Automotive Product Group - Car Body Division

AEC Q100 Rev.F Qualification Plan Results

Object: New molding compound Samsung Cheil SI7200DXC

Device: VNP14NV04 (VN7801)

Process: VIPower M0-3

Maskset: NVN78_3

Die Size: 3.54 * 2.54 mm

Package: TO-220

Fab: L1 Catania, Italy - AMK6 Ang Mo Kio (Singapore)

Assy: Shenzen (China)

Test: Shenzen (China)

Reliability: Catania (Italy)

PPAP Lev:3

Customer:

Various

ST Approved:

E. Parrino

APG Q&R Catania Mng - Car Body Division

AEC #	Test Name	STM Test Conditions	Sample Size/ Lots	Results Fails/SS/Lots	Comments
2	HTOL High Temp Op Life	Ta=125C, Vcc=28V for 1000 hours	77/3	0/77/3	
3	HTB High Temp Bake	Ta=150°C for 1000 hour. TST before and after at room and hot temperatures.	77/3	0/77/3	
4	PC Pre Cond	Preconditioning at Jedec Level 3, store 192 hours at Ta=30°C, RH=60%, IR reflow (3 times) at 260°C			All prior to AC, THB, TC
5	THB Temp Humidity Bias	Ta=85°C, RH=85%, Vcc=24V	77/3	0/77/3	
6	AC Autoclave	Ta=121°C, Pa=2atm for 96 hours	77/3	0/77/3	
7	TC Temp Cycling	Ta=-65°C +150°C for 500 cycles	77/3	0/77/3	
	TF Thermal Fatigue	?TC=105°C, Pd=4.8W for 10000 cycles	77/3	0/77/3	STM additional test
13	EV External Visual	External Visual Inspection. All qualification devices submitted for testing.	All units	All units	
14	PD Physical Dimensions	Per case outline. See applicable JEDEC standard outline and individual device spec for significant dimensions and tolerances. Ppk >= 1.66 or Cpk >= 1.33	30/1	0/30/1	
23	SD Solderability	Per JB102. Perform 8 hour steam aging prior to testing (1 hour for Au-plated leads).	15/3	0/15/3	

Please Read Carefully:

Information in this document is provided solely in connection with ST products. STMicroelectronics NV and its subsidiaries ("ST") reserve the right to make changes, corrections, modifications or improvements, to this document, and the products and services described herein at any time, without notice.

All ST products are sold pursuant to ST's terms and conditions of sale.

Purchasers are solely responsible for the choice, selection and use of the ST products and services described herein, and ST assumes no liability whatsoever relating to the choice, selection or use of the ST products and services described herein.

No license, express or implied, by estoppel or otherwise, to any intellectual property rights is granted under this document. If any part of this document refers to any third party products or services it shall not be deemed a license grant by ST for the use of such third party products or services, or any intellectual property contained therein or considered as a warranty covering the use in any manner whatsoever of such third party products or services or any intellectual property contained therein.

UNLESS OTHERWISE SET FORTH IN ST'S TERMS AND CONDITIONS OF SALE ST DISCLAIMS ANY EXPRESS OR IMPLIED WARRANTY WITH RESPECT TO THE USE AND/OR SALE OF ST PRODUCTS INCLUDING WITHOUT LIMITATION IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE (AND THEIR EQUIVALENTS UNDER THE LAWS OF ANY JURISDICTION), OR INFRINGEMENT OF ANY PATENT, COPYRIGHT OR OTHER INTELLECTUAL PROPERTY RIGHT.

UNLESS EXPRESSLY APPROVED IN WRITING BY AN AUTHORIZED ST REPRESENTATIVE, ST PRODUCTS ARE NOT RECOMMENDED, AUTHORIZED OR WARRANTED FOR USE IN MILITARY, AIR CRAFT, SPACE, LIFE SAVING, OR LIFE SUSTAINING APPLICATIONS, NOR IN PRODUCTS OR SYSTEMS WHERE FAILURE OR MALFUNCTION MAY RESULT IN PERSONAL INJURY, DEATH, OR SEVERE PROPERTY OR ENVIRONMENTAL DAMAGE. ST PRODUCTS WHICH ARE NOT SPECIFIED AS "AUTOMOTIVE GRADE" MAY ONLY BE USED IN AUTOMOTIVE APPLICATIONS AT USER'S OWN RISK.

Resale of ST products with provisions different from the statements and/or technical features set forth in this document shall immediately void any warranty granted by ST for the ST product or service described herein and shall not create or extend in any manner whatsoever, any liability of ST.

ST and the ST logo are trademarks or registered trademarks of ST in various countries.

Information in this document supersedes and replaces all information previously supplied.

The ST logo is a registered trademark of STMicroelectronics. All other names are the property of their respective owners

© 2007 STMicroelectronics - All rights reserved.

STMicroelectronics group of companies

Australia - Belgium - Brazil - Canada - China - Czech Republic - Finland - France - Germany - Hong Kong - India - Israel - Italy - Japan - Malaysia - Malta - Morocco - Singapore - Spain - Sweden - Switzerland - United Kingdom - United States of America

www.st.com

