



PRODUCT/PROCESS CHANGE NOTIFICATION

PCN APM-SLI/09/4450
Notification Date 04/03/2009

**Cirtek: SOT89 Package - Additional Assy & Testing
line.Fujitsu Unit orientation change on carrier tape**

Table 1. Change Implementation Schedule


| | |
|--|-------------|
| Forecasted implementation date for change | 18-Jun-2009 |
| Forecasted availability date of samples for customer | 27-Mar-2009 |
| Forecasted date for STMicroelectronics change Qualification Plan results availability | 27-Mar-2009 |
| Estimated date of changed product first shipment | 03-Jul-2009 |

Table 2. Change Identification

| | |
|---|---|
| Product Identification (Product Family/Commercial Product) | see attached list |
| Type of change | Package assembly location change |
| Reason for change | Service improvement and capacity increase |
| Description of the change | A new Assembly and Testing line for SOT89 package has been installed in Subcontractor Cirtek for Voltage Regulators. This new additional line will increase production capacity in order to satisfy our Customers demand. No change in electrical and mechanical characteristics. The Unit orientation on carrier tape in Cirtek plant respects the attached specification. The Unit orientation on carrier tape in Fujitsu plant changes according to the attached specification; in particular, the package will be rotated of 180 on the carrier tape. Samples of L78L05ACUTR already available for qualification. |
| Product Line(s) and/or Part Number(s) | See attached |
| Description of the Qualification Plan | See attached |
| Change Product Identification | See "7C" in the Traceability Code as identification of Assy&Testing Plant. |
| Manufacturing Location(s) | |

Table 3. List of Attachments

| | |
|----------------------------|--|
| Customer Part numbers list | |
| Qualification Plan results | |

----- 

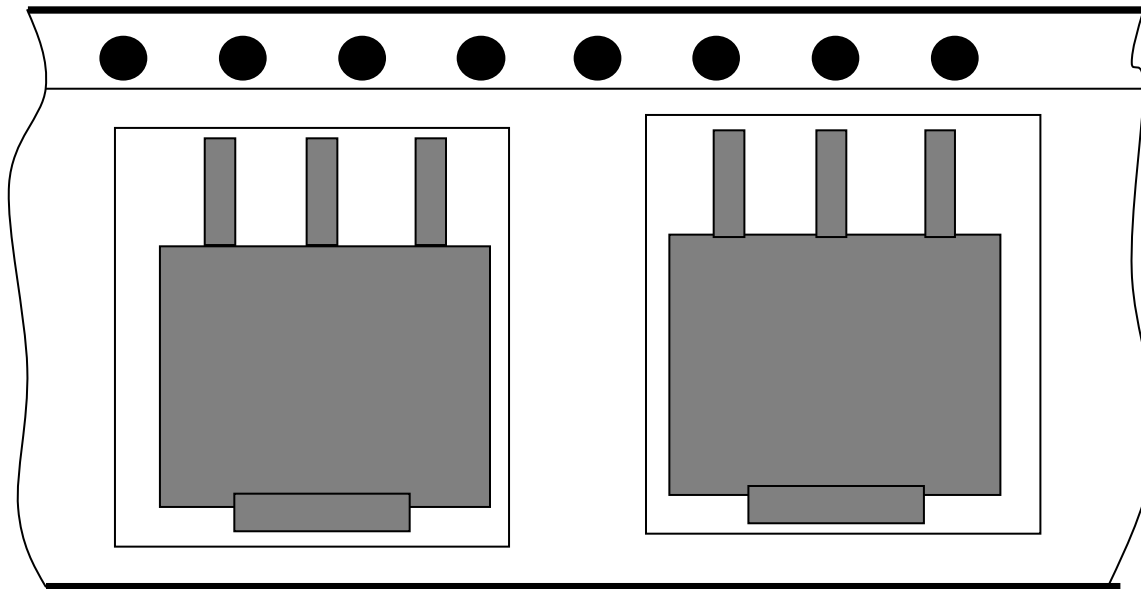
| | | |
|--|------------|------------------------------|
| Customer Acknowledgement of Receipt | | PCN APM-SLI/09/4450 |
| Please sign and return to STMicroelectronics Sales Office | | Notification Date 04/03/2009 |
| <input type="checkbox"/> Qualification Plan Denied <input type="checkbox"/> Qualification Plan Approved <input type="checkbox"/> Change Denied <input type="checkbox"/> Change Approved | Name: | |
| | Title: | |
| | Company: | |
| | Date: | |
| | Signature: | |
| Remark | | |

DOCUMENT APPROVAL

| Name | Function |
|--------------------|----------------------------|
| Riviera, Antonio | Division Marketing Manager |
| Naso, Lorenzo | Division Product Manager |
| Calderoni, Michele | Division Q.A. Manager |

STM SOT89 UNIT ORIENTATION IN THE CARRIER TAPE

According to both STM standard orientation rule and EIA-481-C specification the SOT89 package will be oriented as showed in below picture:





IMS (Industrial & Multisegment Sector)
APM (Analog, Power, MEMS) Group
Voltage Regulator, Interface, Advanced logic & Power RF
Quality & Reliability

Reliability Evaluation Plan and final results
on L78L05 (CIRTEK)

REL-6043-008.09W

Line.. LA05
Package. SOT89

| Test | Conditions | S.S. | Requirement | Results |
|--|---|---------------|--|--|
| PRECONDITIONING OF SMD DEVICES BEFORE TC/THB/PRESSURE POT H.T.S. | DRYNG 1H @ 125°C STORE 168H @ TA=85°C RH=85% IR REFLOW 3 CYCLES @ 260°C+0 -0 °C | 231x3 Lot | Parameter within spec. limits at end of preconditionings after go no go test. | No parameter deviation at end of preconditionings. |
| T.H.B. | TA=150 °C | 77 x 3 Lot | Parameter deviation within spec. limits | No parameter deviation at 1000 hours. |
| H.T.B. | <i>D.U.T. SMD PRECONDITIONED LEVEL 1 JEDEC</i> TA=85°C - RH=85% Vbias=24V | 77 x 3 Lot | Parameter deviation within spec. limits | No parameter deviation at 1000 hours. |
| PRESSURE POT | TA=125°C Vbias=35V | 77 x 3 Lot | Parameter deviation within spec. limits | No parameter deviation at 1000 hours. |
| THERMAL CYCLES AIR TO AIR | <i>D.U.T. SMD PRECONDITIONED LEVEL 1 JEDEC</i> TA=121°C - PA=2Atm | 77 x 3 Lot | Parameter deviation within spec. limits | No parameter deviation at 168 hours. |
| SMD MOISTURE INDUCED STRESS | <i>D.U.T. SMD PRECONDITIONED LEVEL 1 JEDEC</i> TA=-65°C TO 150°C 1 HOUR / CYCLE | 77 x 3 Lot | Parameter deviation within spec. limits | No parameter deviation at 500 cy |
| | DRYNG 1H @ 125°C STORE 168H @ TA=85°C RH=85% IR REFLOW 3 CYCLES @ 260°C+0 -0 °C | 25 x 3 Lot | Parameter deviation within spec. limits at end of test. | No parameter deviation at end of test. |

Comments: The reliability tests results are aligned to our STD production

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

© 2009 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

