ON Semiconductor

FINAL PRODUCT/PROCESS CHANGE NOTIFICATION #16776

Generic Copy

Issue Date: 01-Dec-2011

TITLE: 0W635-002 Mold Compound Change in Tong Hsing

PROPOSED FIRST SHIP DATE: 01-Mar-2012

AFFECTED CHANGE CATEGORY(S): Mold Operations – Mold Compound

FOR ANY QUESTIONS CONCERNING THIS NOTIFICATION:
Contact your local ON Semiconductor Sales Office or <ffxxxh@onsemi.com>

SAMPLES: Contact your local ON Semiconductor Sales Office

ADDITIONAL RELIABILITY DATA: Available
Contact your local ON Semiconductor Sales Office or <phine.guevarra@onsemi.com>

NOTIFICATION TYPE:

Final Product/Process Change Notification (FPCN)

Final change notification sent to customers. FPCNs are issued at least 90 days prior to implementation of the change.

ON Semiconductor will consider this change approved unless specific conditions of acceptance are provided in writing within 30 days of receipt of this notice. To do so, contact <quality@onsemi.com>.

DESCRIPTION AND PURPOSE:

This is to qualify **Nitto GE-100-LFCS-KA2** mold compound in replacement to **Matsushita CV8710JHA** mold compound to improve assembly process stability.

GE-100-LFCS-KA2 has viscosity at 7.6 pa-2 which is comparing to Matsushita CV8710JHA with viscosity at 18 pa-s more robust solution to minimize risk of wire sweeping.

RELIABILITY DATA SUMMARY:

The assembly qualification tests have concluded with passing results. ON Semiconductor releases the package and materials set under consideration for dry pack level 5 of IPC/JEDEC standard J-STD-020 (Moisture/Reflow Sensitivity Classification for Non-Hermetic Solid State Surface Mount Devices).

This qualification covers stacked die system-in-a-package SIP hybrid with 2 stacked die and 8 passives. Convection reflow was done during this qualification with a maximum temperature of 260°C.

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Summary Table:

TEST	CONDITIONS	CHECKPOINTS	RESULT
Moisture Preconditioning • Bake • Humidity Soak • Reflow	125 deg C 30 deg C/ 60% RH 260 deg C	21 hrs 72 hrs 3 cycles	PASSED *Refer to Figure 1 and 2*
Scanning Acoustic Microscopy	Not Applicable	Pre and Post MSL	PASSED
Temperature Cycling	-55 deg C/ 125 deg C	250 cycles	PASSED
Unbiased – HAST	130 deg C/ 85% RH	96 hrs	PASSED
High Temperature Bake	150 deg C	500 hrs, 1000 hrs	PASSED
Electrical Testing	SW2, 25 deg C	Not applicable	PASSED
`	Not Applicable	Not Applicable	PASSED
Physical Dimension Inspection	Not Applicable	Not Applicable	PASSED
Solderability test	Not Applicable	Not Applicable	PASSED

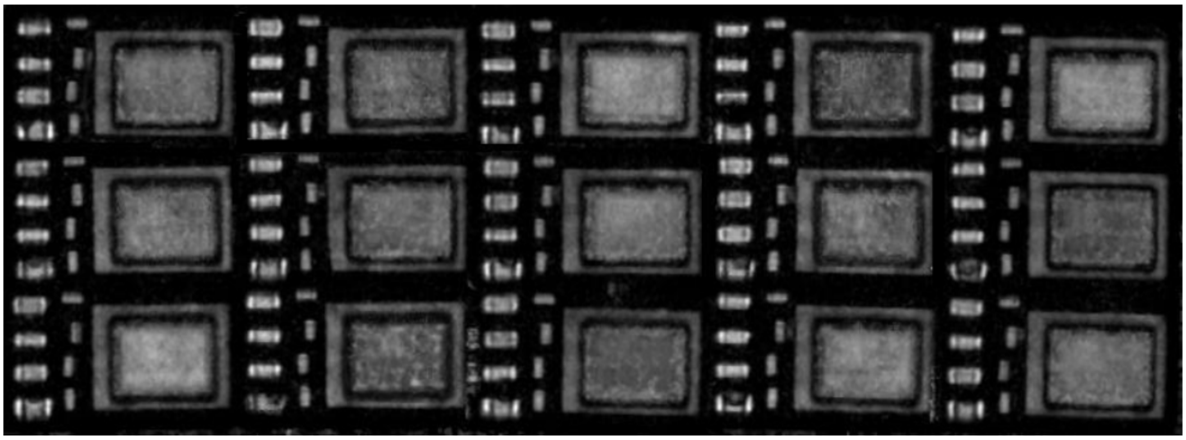

Figure 1: Acoustic Microscopy Image prior Moisture Resistance test.

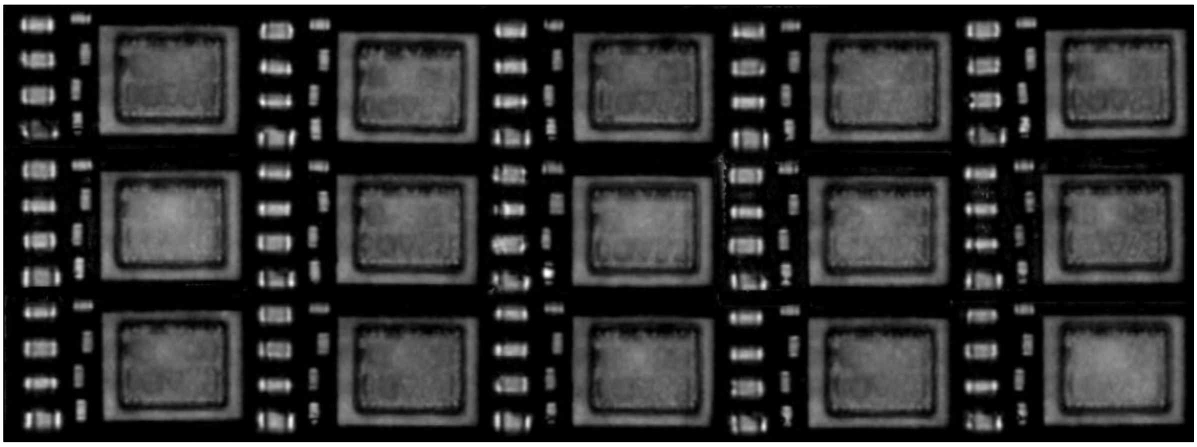

Figure 2: Acoustic Microscopy Image after Moisture Resistance test.

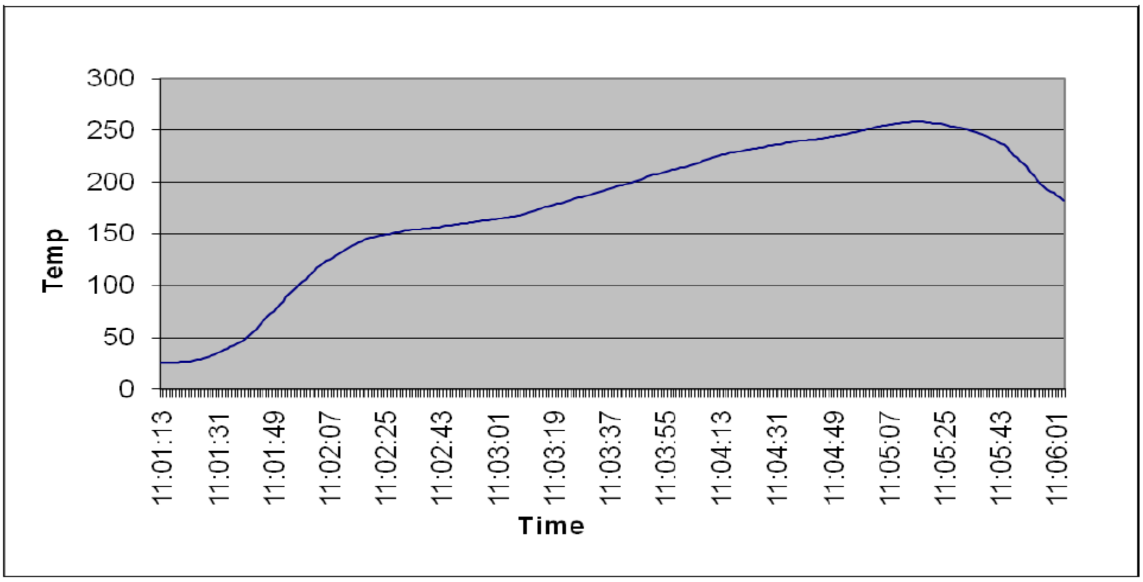

Figure 3: Reflow oven profile for SIP package at 260 deg C

CHANGED PART IDENTIFICATION:

No change in Assembly part number.

List of affected General Parts:

0W635-002-XTP