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## **FINAL PRODUCT/PROCESS CHANGE NOTIFICATION #20623**

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**Issue Date:** 28-Oct-2014

**TITLE:** R3110 Base Substrate Change

**PROPOSED FIRST SHIP DATE:** 04-Feb-2015 or sooner upon customer approval

**FOR ANY QUESTIONS CONCERNING THIS NOTIFICATION:**

Contact your local ON Semiconductor Sales Office or <Brenda.Johnston@onsemi.com>

**SAMPLES:** Contact your local ON Semiconductor Sales Office

**ADDITIONAL RELIABILITY DATA:** Available

Contact your local ON Semiconductor Sales Office or <Tara.McDonald@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:**

The products listed on this PCN are changing from a ceramic substrate to an FR4 based substrate. This introduces no changes in functionality or datasheet performance of the products.



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### RELIABILITY DATA SUMMARY:

#### Reliability Test Results:

Test	Condition	Test point	Results
Initial Electrical Test	MIL-STD-883 3xxx and 4xxx	Initial	Pass
External Visual	MIL-STD-883 method 2009	Initial	Pass
MSL4	30C/60%RH for 96 hours, 3x reflow @ 240C	3x	Pass
HAST	Precondition 30C/60%RH for 96 hours, Reflow at 240C on carrier. Reflow at 218C for lead attach. 85%RH / 130C / 1.3V bias	96hr	Pass
THB	Precondition 30C/60%RH for 96 hours, Reflow at 240C on carrier. Reflow at 218C for lead attach. 85%RH / 85C / 1.3V bias	288hr	Pass
Temperature Cycle	Precondition 30C/60%RH 96 hrs, 3x reflow @ 240C followed by cycling at: -40°C / +85°C, Air to Air, 15 min soak, 10C/min ramp.	100 cycles	Pass
Thermal Shock	Precondition 30C/60%RH 96 hrs, 3x reflow @ 240C followed by cycling at: -40°C / +85°C, liquid to liquid	15 cycles	Pass
Solderability	Inspection of solder joint wetting after mechanical removal from carrier.	Post 288hr THB	Pass
Construction Analysis	X-ray and cross sectioning	NA	Pass
Temperature Cycle Second Level Assembly	Dry single reflow @ 240C onto carriers followed by cycling at: -55C / +85C Air to Air, 15 min soak, 10C/min ramp.	50 cycles	Pass
Thermal Shock Second Level Assembly	Dry single reflow @ 240C onto carriers followed by cycling at: 0C / +100C liquid to liquid	10 cycles	Pass

### ELECTRICAL CHARACTERISTIC SUMMARY:

No changes in electrical characteristics.

### CHANGED PART IDENTIFICATION:

New parts will have a green base as opposed to a white base. No change in lasermark identification.

### List of affected General Parts:

R3110-CBAA-E1B

R3110-CBAA-E1T