ON Semiconductor

# FINAL PRODUCT/PROCESS CHANGE NOTIFICATION #16727B

Generic Copy

**Issue Date:** 30-Jan-2012

**TITLE:** Copper Wire for SOIC and TSSOP packages in Carmona, Philippines

**PROPOSED FIRST SHIP DATE:** 30-Apr-2012

**AFFECTED CHANGE CATEGORY(S):** Assembly Process

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

**SAMPLES:** Contact your local ON Semiconductor Sales Office or John Flynn <j.flynn@onsemi.com>

**ADDITIONAL RELIABILITY DATA:** Available
Contact your local ON Semiconductor Sales Office or or Ken Fergus<Ken.Fergus@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:**
A General Announcement (GA#16200) was published on 1-29-09 regarding the ongoing Copper Wirebond conversion program at ON Semiconductor. This is a FPCN to notify customers of its plan to qualify Copper Wire (in place of Gold Wire) on SOIC and TSSOP packages assembled at the Carmona, Philippine assembly location. Reliability Qualification and full electrical characterization over temperature has now been completed on the designated package qualification vehicles.

The device listed in this update notification was inadvertently omitted from these prior notifications.

# FINAL PRODUCT/PROCESS CHANGE NOTIFICATION #16727B

## RELIABILITY DATA SUMMARY:

**Reliability Test Results:**

| # | Test | Name | Test Conditions | End Point Req's | Test Results | (rej/ ss) | (rej/ ss) | (rej/ ss) | (rej/ss) |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | Read Point | Lot A | Lot B | Lot C | Control |
| 1 | Prep | Sample preparation and initial part testing | Various | --- | Initial Electrical | Done | Done | Done | Done |
| A1 | PC | Preconditioning Test (Test@Room/hot) SMD only; Mositure preconditioning for THB/HAST, AC/UHAST, TC; Peak reflow Temp = 260C | MSL 1 260 | Test at R and Hot | 0/240 | 0/240 | 0/240 | 0/240 | 0/240 |
| A2 | PC -HAST | Preconditioned Highly accelerated stress test | TA= +130°C, RH = 85%, PSIG= 18.8, bias | c = 0, Room, Hot | **96 hours** | 0/80 | 0/80 | 0/80 | 0/80 |
| | | | | | 144 hours | 0/78 | 0/78 | 0/78 | 0/78 |
| | | | | | 192 hours | 0/78 | 0/78 | 0/78 | 0/78 |
| A3 | PC-TC | Preconditioned Temperature Cycle | -65/+150 C | c = 0, Room, Hot | 500 | 0/80 | 0/80 | 0/80 | 0/80 |
| | | | | | **1000cyc** | 0/78 | 0/80 | 0/68 | 0/78 |
| A4 | PC-AC | Preconditioned Autoclave/Unbiased HAST | 121C/100%RH,15psig | c = 0, Room | **96 hours** | 0/80 | 0/80 | 0/80 | 0/80 |
| | | | | | 192 hours | 0/80 | 0/78 | 0/78 | 0/78 |
| | | | | | 240 hours | 0/80 | 0/78 | 0/78 | 0/78 |
| A6 | HTSL | High Temperature Storage Life | 150C at 1008hrs | c = 0, Room, Hot | 504 hours | 0/80 | 0/80 | 0/80 | 0/80 |
| | | | | | **1008 hours** | 0/80 | 0/80 | 0/80 | 0/80 |
| B1 | HTOL | High Temp Op Life | TA = 150°C for 1008hrs | c = 0, Room, Hot | 504 hours | 0/80 | 0/80 | 0/80 | 0/80 |
| | | | | | **1008 hours** | 0/80 | 0/80 | 0/80 | 0/80 |
| C3 | SD | Solderability (>95% coverage) | | 10 units per lot | **Pass** | 0/10 | 0/10 | 0/10 | 0/10 |
| | RSH | Resistance to solder heat | JESD22 – B106 260°C Immersion | Test at R | **Pass** | 0/10 | 0/10 | 0/10 | 0/10 |

## ELECTRICAL CHARACTERISTIC SUMMARY:

There is no electrical characterization difference in products assembled with copper wire. Electrical data is available upon request.

## CHANGED PART IDENTIFICATION:

The product affected on this FPCN will have part number date code greater than WW16, 2012.

## List of affected General Part(s):

MC33262DR2G