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**INITIAL PRODUCT/PROCESS CHANGE NOTIFICATION**  
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**12-Dec-2008**

**SUBJECT: ON Semiconductor Initial Product/Process Change Notification #16184**

**TITLE: Copper Wire replacing Gold Wire in the SO8FL Package for MOSFET Products**

**PROPOSED FIRST SHIP DATE: 01-June-2009**

**AFFECTED CHANGE CATEGORY: ON Semiconductor SO8FL Assembly Areas – Gate Wire Bond**

**AFFECTED PRODUCT DIVISION: PowerFET Business Unit**

**FOR ANY QUESTIONS CONCERNING THIS NOTIFICATION:**

Contact your local ON Semiconductor Sales Office or Larry DeLuca <[larry.deluca@onsemi.com](mailto:larry.deluca@onsemi.com)>

**NOTIFICATION TYPE:**

Initial Product/Process Change Notification (IPCEN)

First change notification sent to customers. IPCENs are issued at least 120 days prior to implementation of the change. An IPCEN is advance notification about an upcoming change and contains general information regarding the change details and devices affected. It also contains the preliminary reliability qualification plan.

The completed qualification and characterization data will be included in the Final Product/Process Change Notification (FPCN).

This IPCEN notification will be followed by a Final Product/Process Change Notification (FPCN) at least 90 days prior to implementation of the change.

**DESCRIPTION AND PURPOSE:**

ON Semiconductor is notifying customers of its plan to qualify Copper Wire (in place of Gold Wire) on their MOSFET Products in the SO8FL Packages. Products for both the Planar and Trench Silicon platforms will be affected.

The mold compound, die attach, and lead frame materials used for the SO8FL Package will not be changed. Reliability Qualification and full electrical characterization over temperature will be performed for each of the SO8FL products.

The Final PCN will be published upon the successful completion of the Package and Silicon qualification and electrical characterization. The Final PCN will list all the Devices being released, and the Date Code of products which will contain Copper Wire instead of Gold.

**Initial Product/Process Change Notification #16184****QUALIFICATION PLAN:**

SO8FL Package with Qualification Samples from both Planar and Trench Silicon platforms being tested.

Test: High Temperature Reverse Bias (HTRB)

Conditions:  $V_{ds} = 80\% V_{ds \text{ rating}}$ ,  $T_a = 150^\circ\text{C}$ , 504-Hrs

Results: 0/240

Test: High Temperature Gate Bias (HTGB)

Conditions:  $V_{gs} = 100\% V_{gs}$ ,  $T_a = 150^\circ\text{C}$ , 504-Hrs.

Results: 0/240

Test: Intermittent Operating Life (IOL-PC)

Conditions:  $T_a = +25^\circ\text{C}$ ,  $\Delta T_j = 100^\circ\text{C}$ , 2-min on/off, 7.5K-cycles

Results: 0/240

Test: Temperature Cycling (TC-PC)

Conditions:  $T_a = -65^\circ\text{C}/+150^\circ\text{C}$ , Air-to-Air, Dwell  $\geq 10$ -min, 500-cy

Results: 0/240

Test: Highly Accelerated Stress Test (HAST-PC)

Conditions:  $T_a = 130^\circ\text{C}$ , RH=85%,  $P = 18.8\text{psig}$ , 96-Hrs

Results: 0/240

Test: Highly Accelerated Stress Test (HAST-PC)

Conditions:  $T_a = 121^\circ\text{C}$ , RH=100%,  $P = 15\text{psig}$ , 96-Hrs

Results: 0/240

Test: Full Electrical Distribution Data

**Initial Product/Process Change Notification #16184****AFFECTED DEVICE LIST:**

NTMFS4108NT1G  
NTMFS4108NT3G  
NTMFS4119NT1G  
NTMFS4119NT3G  
NTMFS4120NT1G  
NTMFS4120NT3G  
NTMFS4121NT1G  
NTMFS4121NT1G  
NTMFS4121NT3G  
NTMFS4121NT3G  
NTMFS4122NT1G  
NTMFS4122NT1G  
NTMFS4122NT3G  
NTMFS4122NT3G  
NTMFS4701NT1G  
NTMFS4701NT3G  
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NTMFS4836NT1G  
NTMFS4836NT3G  
NTMFS4836NT3G  
NTMFS4837NHT1G  
NTMFS4837NHT1G  
NTMFS4837NHT3G

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NTMFS4837NHT3G  
NTMFS4837NT1G  
NTMFS4837NT3G  
NTMFS4839NHT1G  
NTMFS4839NHT1G  
NTMFS4839NHT3G  
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NTMFS5835NT3G