



INITIAL PRODUCT/PROCESS CHANGE NOTIFICATION
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31 Jan 2008

SUBJECT: ON Semiconductor Initial Product/Process Change Notification #16091

TITLE: Copper Wire replacing Gold Wire in the SO8, TSOP6, ChipFET Packages for MOSFET Products

PROPOSED FIRST SHIP DATE: 31 May 2008

AFFECTED CHANGE CATEGORY: ON Semiconductor SO8, TSOP6, ChipFET Assembly Areas – Wire Bond

AFFECTED PRODUCT DIVISION: PowerFET Business Unit

FOR ANY QUESTIONS CONCERNING THIS NOTIFICATION:

Contact your local ON Semiconductor Sales Office or Tom Huettl <Tom.Huettl@onsemi.com>

NOTIFICATION TYPE:

Initial Product/Process Change Notification (IPCN)

First change notification sent to customers. IPCNs are issued at least 120 days prior to implementation of the change. An IPCN 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 IPCN 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 SO8, ChipFET, and TSOP6 Packages. Products for both the Planar and Silicon platforms will be affected.

The mold compound, die attach, and lead frame materials used for each of the 3-Packages will not be changed. Reliability Qualification and full electrical characterization over temperature will be performed for each of the Packages and Silicon platforms.

Multiple Final PCN's will be published upon the successful completion of both the Package and Silicon qualification and electrical characterization. Each of the Final PCN's 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 #16091****QUALIFICATION PLAN:**

SO8, TSOP6, ChipFET Packages 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 ≥ 10 -min, 500-cy
Results: 0/240

Test: Highly Accelerated Stress Test (HAST-PC)
Conditions: $T_a = 130^\circ\text{C}$, RH=85%, P=18.8psig, 96-Hrs
Results: 0/240

Test: Highly Accelerated Stress Test (HAST-PC)
Conditions: $T_a = 121^\circ\text{C}$, RH=100%, P=15psig, 96-Hrs
Results: 0/240

Test: Full Electrical Distribution Data

AFFECTED DEVICE LIST:**PART**

NTHS2101PT1
NTHS4101PT1G
NTHS2101PT1G
NTHS4101PT1
NTHS4111PT1G
NTHS4111PT1
NTHS4166NT1G
NTHS4501NT1G
NTHS4501NT1
NTHS5404T1G
NTHS5404T1H
NTHS5404T1
NTHS5441T1G
NTHS5441T1
NTHS5443T1G
NTHS5443T1H
NTHS5443T1
NTHD2102PT1G
NTHD2102PT1
NTHD3100CT1G



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NTHD3100CT1
NTHD3100CT3
NTHD3101FT1G
NTHD3101FT1
NTHD3102CT1G
NTHD3133PFT1G
NTHD3133PFT3G
NTHD3138FT1G
NTHD4102PT1G
NTHD4102PT1
NTHD4102PT3G
NTHD4401PT1G
NTHD4401PT3G
NTHD4502NT1G
NTHD4502NT1
NTHD4508NT1G
NTHD4508NT1
NTHD4N02FT1G
NTHD4N02FT1
NTHD4P02FT1G
NTHD4P02FT1
NTHD5903T1G
NTHD5903T1
NTHD5904NT1G
NTHD5904NT1
MMSF3P02HDR2
MMSF3P02HDR2
MMSF3P02HDR2
MMSF3P02HDR2
MMSF3P02HDR2G
MMSF3P02HDR2G
MMSF3P02HDR2SG
MMSF3P02HDR2SG
MMSF7P03HDR2
MMSF7P03HDR2
MMSF7P03HDR2
MMSF7P03HDR2G
MMSF7P03HDR2G
NTMS10P02R2
NTMS10P02R2G
NTMS3P03R2
NTMS3P03R2G
NTMS4107NR2
NTMS4107NR2G
NTMS4404NR2
NTMS4503NR2
NTMS4503NR2G
NTMS4700NR2
NTMS4700NR2G
NTMS4704NR2
NTMS4704NR2G
NTMS4705NR2
NTMS4705NR2G
NTMS4706NR2
NTMS4706NR2G



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NTMS4807NR2G
NTMS4816NR2G
NTMS4N01R2
NTMS4N01R2G
NTMS5P02R2
NTMS5P02R2G
NTMS5P02R2SG
NTMS7N03R2
NTMS7N03R2G
NTMS4807NR2G
NTMS4816NR2G
NTMS4176PR2G
NTMS4177PR2G
NTMS4872NR2G
MMDF1N05ER2
MMDF1N05ER2G
MMDF2C03HDR2
MMDF2C03HDR2G
MMDF2N02ER2
MMDF2N02ER2G
MMDF2P02ER2
MMDF2P02ER2G
MMDF2P02HDR2
MMDF2P02HDR2G
MMDF3N02HDR2
MMDF3N02HDR2G
MMDF3N04HDR2
MMDF3N04HDR2G
NTMD2C02R2
NTMD2C02R2G
NTMD2C02R2SG
NTMD2P01R2
NTMD2P01R2G
NTMD3N08LR2
NTMD3P03R2
NTMD3P03R2G
NTMD4820NR2G
NTMD4840NR2G
NTMD4N03R2
NTMD4N03R2G
NTMD6601NG
NTMD6601NR2G
NTMD6N02R2
NTMD6N02R2G
NTMD6N03R2
NTMD6N03R2G
NTMD6N04R2G
NTMD6P02R2
NTMD6P02R2G
NTMD6P02R2SG
SMDF2C03HDR2
NTMD4820NR2G
NTMD4840NR2G
NTMD4184PFR2G
NTMD4884NFR2G
NTMS4873NFR2G



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NTMSD2P102LR2G
NTMSD2P102R2
NTMSD2P102R2SG
NTMSD3P102R2
NTMSD3P102R2G
NTMSD3P102R2SG
NTMSD3P303R2
NTMSD3P303R2G
NTMSD6N303R2
NTMSD6N303R2G
NTMSD6N303R2SG
NTGS3130NT1G
NTGS3136PT1G
NTGS3433T1G
NTGS3433T1
NTGS3441BT1G
NTGS3441PT1G
NTGS3441T1G
NTGS3441T1H
NTGS3441T1
NTGS3441T1
NTGS3443BT1G
NTGS3443T1G
NTGS3443T1H
NTGS3443T1
NTGS3443T2G
NTGS3443T2H
NTGS3446T1G
NTGS3446T1
NTGS3447PT1G
NTGS3455T1G
NTGS3455T1H
NTGS3455T1
NTGS4111PT1G
NTGS4111PT1
NTGS4111PT2G
NTGS4141NT1G
NTGS4141NT1
NTGD1100LT1G
NTGD1100LT1
NTGD3122CT1G
NTGD3133PT1G
NTGD4161PT1G