ON Semiconductor

FINAL PRODUCT/PROCESS CHANGE NOTIFICATION
Generic Copy

23 Oct 2009

SUBJECT: ON Semiconductor Final Product/Process Change Notification #16353

TITLE: Qualification of Aizu, Japan Fab to Source NMOS Die in ON Semiconductor Over-Voltage Protection Devices.

PROPOSED FIRST SHIP DATE: 23 Jan 2010

AFFECTED CHANGE CATEGORY(S): ON Semiconductor Wafer Fab Site

AFFECTED PRODUCT DIVISION(S): Computing and Consumer Products Group

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

SAMPLES: Contact your local ON Semiconductor Sales Office

ADDITIONAL RELIABILITY DATA: Available
Contact your local ON Semiconductor Sales Office or Edmond Gallard <edmond.gallard@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 your local ON Semiconductor Sales Office.

DESCRIPTION AND PURPOSE:

ON Semiconductor is pleased to issue this final process change notice announcing the qualification of the ON Semiconductor wafer fabrication facility in Aizu, Japan as a source for the NMOS FET die used in the Over-Voltage Protection family of devices. This qualification was originally announced in Initial PCN #16249. Upon expiration of this Final PCN, both the existing wafer foundry and the ON Semiconductor Aizu, Japan facility will be qualified sources for this NMOS FET die.

The Aizu wafer fabrication facility is fully certified and has been a continuous source for MOSFET die for over 20 years. The Trench MOSFET die platform was qualified at the Aizu facility in May 2007.

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RELIABILITY DATA SUMMARY:

Products assembled with Trench Die from Aizu Wafer Fab:
NTMS4107NR2G, N-Ch, 30Vds, 20Vgs, SO8 Package
Test: High Temperature Reverse Bias (HTRB)
Conditions: Vds= 24V, Ta=150'C, Duration= 1008Hrs
Results: 0/231

Test: High Temperature Gate Bias (HTGB)
Conditions: Vgs= 20V, Ta=150'C, Duration= 504Hrs
Results: 0/231

Test: Highly Accelerated Stress Test (HAST)
Conditions: Ta=130'C, P= 18.8psi, RH= 85%, Duration= 96Hrs
Results: 0/231

Test: Intermittent Operating Life (IOL-PC)
Conditions: Ta=25'C, delta Tj=100'C, 2-min on/off, 15K-cycles
Results: 0/231

Test: Temperature Cycling (TC-PC)
Conditions: Ta=-65'C/150'C, Air-to-Air, Dwell >=10-min, 500-cy
Results: 0/231

Test: Autoclave Test (AC-PC)
Conditions: Ta=121'C, P=15psi, RH=100%, 96-Hrs
Results: 0/231

Test: Resistance to Solder Heat
Conditions: Ta=260'C, Dwell Time=10-Seconds,
Results: 0/135

NTZD3154NT1G, N-Ch, 20Vds, 6Vgs, SOT563 Package
Test: High Temperature Reverse Bias (HTRB)
Conditions: Vgs= 12V, Ta=150'C, Duration= 1008Hrs, 3-Lots
Results: 0/231

Test: High Temperature Gate Bias (HTGB)
Conditions: Vgs= 6V, Ta=150'C, Duration= 1008Hrs, 3-Lots
Results: 0/231

P-Ch, 30Vds, 8Vgs, ChipFET Package
Test: High Temperature Reverse Bias (HTRB)
Conditions: Vds= 24V, Ta=150'C, Duration= 504Hrs, 3-Lots
Results: 0/231

Test: High Temperature Gate Bias (HTGB)
Conditions: Vgs= 8V, Ta=150'C, Duration= 504Hrs, 3-Lots
Results: 0/231

NTJD4152PT1G, P-Ch, 20Vds, 12Vgs, SC88 Package
Test: High Temperature Gate Bias (HTGB)
Conditions: Vgs= 12V, Ta=150'C, Duration= 1008Hrs, 2-Lots
Results: 0/154

ELECTRICAL CHARACTERISTIC SUMMARY:

There is no significant change in electrical parametric performance.
Characterization data is available upon request.

CHANGED PART IDENTIFICATION:

Products listed in this PCN with Finished Good date codes representing WW 46, 2009 or later may be assembled with NMOS FET die from either qualified source.

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AFFECTED DEVICE LIST

NCP347MTAETBG
NCP347MTAFTBG
NCP347MTAHTBG
NCP347MTAITBG
NCP348AEMTTBG
NCP348AEMTTXG
NCP348AEMUTBG
NCP348AEMUTXG
NCP348MTTBG
NCP348MTTXG
NCP349MNAETBG
NCP349MNTBG
NCP349MNBGTBG
NCP349MNBKTBG
NCP370MUAITXG
NCP372MUAITXG