



FINAL PRODUCT/PROCESS CHANGE NOTIFICATION

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29 Jul 2009

SUBJECT: ON Semiconductor Final Product/Process Change Notification #16309

TITLE: Trench and HD3e Die Transfer to ON Semiconductor in Aizu, Japan

PROPOSED FIRST SHIP DATE: 29 Oct 2009

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

AFFECTED PRODUCT DIVISION(S): PowerFET Business Unit

FOR ANY QUESTIONS CONCERNING THIS NOTIFICATION:

Contact your local ON Semiconductor Sales Office or Jennie Shen <Jennie.Shen@onsemi.com>

SAMPLES: Contact your local ON Semiconductor Sales Office

ADDITIONAL RELIABILITY DATA: Available

Contact your local ON Semiconductor Sales Office Donna Scheuch <d.scheuch@onsemi.com> or
Phone number: 602-244-4328

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:

This Process Change Notice is the final version to Process Change Notice #16249. PCN #16249 announced that the ON Semiconductor's Wafer Fab facilities in Aizu, Japan, along with the current Wafer Foundry will both be sources for Trench and High Cell Density Planar MOSFET Die.

The Aizu Wafer Fab facility is fully certified, and has been a continuous source for MOSFET Die for over 20-years. Since March 2002, the High Cell Density Planar MOSFET Die platform has been qualified in the Aizu facility. The Trench MOSFET Die platform was qualified at the Aizu facility in May 2007.

**Final Product/Process Change Notification #16309****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

**Final Product/Process Change Notification #16309****Products assembled with High Cell Density Planar Die from Aizu Wafer Fab:****NTB5404NT4G: N-Ch, 40Vds, 20Vgs, D2pak Package**

Test: High Temperature Reverse Bias (HTRB)

Conditions: Vds= 32V, Ta=175°C, Duration= 1008Hrs, 3-Lots

Results: 0/231

Test: High Temperature Gate Bias (HTGB)

Conditions: Vgs= 20V, Ta=175°C, Duration= 1008Hrs, 3-Lots

Results: 0/231

Test: Highly Accelerated Stress Test (HAST)

Conditions: Ta=130°C, P= 18.8psi, RH= 85%, Duration= 96Hrs, 2-Lots

Results: 0/154

Test: Intermittent Operating Life (IOL-PC)

Conditions: Ta=25°C, delta Tj=100°C, 3.5-min on/off, 15K-cycles, 2-Lots

Results: 0/154

Test: Temperature Cycling (TC-PC)

Conditions: Ta=-65°C/150°C, Air-to-Air, Dwell >=10-min, 1000-cy, 2-Lots

Results: 0/154

Test: Autoclave Test (AC-PC)

Conditions: Ta=121°C, P=15psi, RH=100%, 96-Hrs, 2-Lots

Results: 0/154

Test: Resistance to Solder Heat

Conditions: Ta=260°C, Dwell Time=10-Seconds, 1-Lot

Results: 0/30

NTD5404NT4G: N-Ch, 40Vds, 20Vgs, Dpak Package

Test: Highly Accelerated Stress Test (HAST)

Conditions: Ta=130°C, P= 18.8psi, RH= 85%, Duration= 96Hrs, 1-Lot

Results: 0/77

Test: Intermittent Operating Life (IOL-PC)

Conditions: Ta=25°C, delta Tj=100°C, 2.0-min on/off, 15K-cycles, 1-Lot

Results: 0/77

Test: Temperature Cycling (TC-PC)

Conditions: Ta=-65°C/150°C, Air-to-Air, Dwell >=10-min, 1000-cy, 1-Lot

Results: 0/77

Test: Autoclave Test (AC-PC)

Conditions: Ta=121°C, P=15psi, RH=100%, 96-Hrs, 1-Lot

Results: 0/77

NTR4502PT1G: P-Ch, 30Vds, 20Vgs, SOT23 Package

Test: High Temperature Reverse Bias (HTRB)

Conditions: Vds= 24V, Ta=150°C, Duration= 1008Hrs, 3-Lots

Results: 0/252

Test: High Temperature Gate Bias (HTGB)

Conditions: Vgs= 20V, Ta=150°C, Duration= 1008Hrs, 3-Lots

Results: 0/252



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Test: Highly Accelerated Stress Test (HAST)
Conditions: Ta=130°C, P= 18.8psi, RH= 85%, Duration= 96Hrs, 3-Lots
Results: 0/252

Test: Intermittent Operating Life (IOL-PC)
Conditions: Ta=25°C, delta Tj=100°C, 2-min on/off, 15K-cycles, 3-Lots
Results: 0/252

Test: Temperature Cycling (TC-PC)
Conditions: Ta=-65°C/150°C, Air-to-Air, Dwell >=10-min, 1000-cy, 3-Lots
Results: 0/252

Test: Autoclave Test (AC-PC)
Conditions: Ta=121°C, P=15psi, RH=100%, 96-Hrs, 3-Lots
Results: 0/252

Test: High Temperature Storage (HTS)
Conditions: Ta=175°C, Duration= 1008Hrs, 3-Lots
Results: 0/252

ELECTRICAL CHARACTERISTIC SUMMARY:

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

CHANGED PART IDENTIFICATION:

Products (listed on this FPCN) assembled with either MagnaChip or ON Semiconductor Die will have a Finish Good Date Code representing Work Week 43, 2009 or newer.



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AFFECTED DEVICE LIST

2N7002ET1G	NLJD2104PTBG
2N7002ET3G	NLJD2105LTBG
2N7002KT1G	NLJD3115PT1G
2N7002KT1H	NLJD3115PTAG
2N7002KT3G	NLJD3119CTAG
2N7002WT1G	NLJD3119CTBG
2N7002WT3G	NLJD4116NT1G
NTD95N02RT4G	NLJD4150PTBG
NTGD3133PT1G	NLJF3117PT1G
NTGD3133PT1H	NLJF3117PTAG
NTGD3147FT1G	NLJF3118NTAG
NTGD3148NT1G	NLJF3118NTBG
NTGD3149CT1G	NLJF4156NT1G
NTGD4161PT1G	NLJF4156NTAG
NTGD4167CT1G	NLJS1102PTAG
NTGD4169FT1G	NLJS1102PTBG
NTGS1135PT1G	NLJS2103PTAG
NTGS3130NT1G	NLJS2103PTBG
NTGS3441BT1G	NLJS3113PT1G
NTGS3447PT1G	NLJS3113PTAG
NTGS4111PT1	NLJS4114NT1G
NTGS4111PT1G	NLJS4149PTAG
NTGS4111PT2G	NLJS4149PTBG
NTGS4141NT1	NLJS4159NT1G
NTGS4141NT1G	NTVD3144N2T2G
NTGS4141NT1H	NTVS3141PT2G
NTHD2110TT1G	NTZD5110NT1G
NTJD5121NT1G	NTZD5110NT5G
NTJD5121NT2G	NUS3116M2R2G
NLJD2104PTAG	STLJD3115PT1G
	STLJD3115PTAG