



INITIAL PRODUCT/PROCESS CHANGE NOTIFICATION
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Issue Date
28 Aug 2006

SUBJECT: ON Semiconductor Initial Product/Process Change Notification #15631

TITLE: Trench MOSFET Expansion to ON Semiconductor Gresham

PROPOSED FIRST SHIP DATE: 28-Dec-06

AFFECTED CHANGE CATEGORY: ON Semi FAB Site

AFFECTED PRODUCT DIVISION: PowerFET Business Unit

FOR ANY QUESTIONS CONCERNING THIS NOTIFICATION:

Contact Sales Office or John O'Neal at <j.o'neal@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 60 days prior to implementation of the change.

DESCRIPTION AND PURPOSE:

ON Semiconductor is adding another wafer fabrication facility for their Trench MOSFET Die. The facility is located in Gresham, Oregon, USA and is certified to ISO9001:200 and ISO14001. Device quality and reliability will continue to meet ON Semiconductors high standards. Product may begin to ship from the Gresham factory at the expiration of the Final PCN.

**Initial Product/Process Change Notification #15631****QUALIFICATION PLAN:**

- 1) High Temperature Gate Bias (HTGB):
Ta= 175'C, Vgs= 20V, Duration= 504 Hours, Sample Size= 240pcs
- 2) High Temperature Reverse Bias (HTRB):
Ta= 175'C, Vds= 24V, Duration= 504 Hours, Sample Size= 240pcs
- 3) Intermittent Operating Life (IOL):
Delta Ta= 70'C, Duration = 7500 Cycles, Ton= Toff= 2-minutes
Sample Size= 240pcs
- 4) Highly Accelerated Stress Test (HAST):
Ta= 121'C, Relative Humidity= 85%, Duration= 504 Hours, Sample
Size= 240pcs
- 5) Temperature Cycling (TC):
Temperature Extremes= -65'C to +150'C, Duration= 500 Cycles,
Sample Size= 240pcs
- 6) Autoclave Test (AC):
Ta= 121'C, Relative Humidity= 100%, Pressure= 15psi, Duration=
96 Hours, Sample Size= 240pcs
- 7) Destructive Physical Analysis
- 8) Electrical Distribution
- 9) Bond Pull & Shear Strength
- 10) Die Shear
- 11) Electro Static Discharge (ESD): Human Body and Machine Model

AFFECTED DEVICE LIST:**PART**

NTD4804N-1G
NTD4804NT4G
NTD4805N-1G
NTD4805NT4G
NTD4806N-1G
NTD4806N-35G
NTD4806NT4G
NTD4808N-1G
NTD4808NT4G
NTD4809N-1G
NTD4809N-35G
NTD4809NT4G
NTD4810N-1G
NTD4810N-35G
NTD4810NT4G
NTD4813N-1G
NTD4813NT4G
NTD4815N-1G
NTD4815NT4G