ON Semiconductor

FINAL PRODUCT/PROCESS CHANGE NOTIFICATION #16690

Generic Copy

Issue Date: 02-Aug-2011

TITLE: NFME DPAK T3 MOSFET devices qualification

PROPOSED FIRST SHIP DATE: 02-Nov-2011

AFFECTED CHANGE CATEGORY(S): Power MOSFET Business Unit: Wafer Fabrication

FOR ANY QUESTIONS CONCERNING THIS NOTIFICATION:
Contact your local ON Semiconductor Sales Office or Melyssa Hutchins
<Melyssa.hutchins@onsemi.com>

SAMPLES: Contact your local ON Semiconductor Sales Office Brian Goodburn
<brian.goodburn@onsemi.com>

ADDITIONAL RELIABILITY DATA: Available
Contact your local ON Semiconductor Sales Office or Donna Scheuch<d.scheuch@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 <quality@onsemi.com>.

DESCRIPTION AND PURPOSE:

This Final Process Change Notification (FPCN) is being issued for Power MOSFET products.

ON Semiconductor is presenting this notification for their customers to announce that ON Semiconductor would be using Nantong Fujitsu Microelectronics Co. (NFME) as a manufacturing facility for their Low Voltage, N-Channel, and Trench 3X MOSFET products. The Devices listed in this notification will be built with Halide Free mold compound and qualified for commodity/commercial products requirement. NFME has been a qualified Dpak packages manufacturing site for On Semiconductor since early 2007.

NFME's DPAK package meets JEDEC case outline standards, however, does have minor backside visual differences with other manufacturing facilities used by ON Semiconductor. In addition to NFME, ON Semiconductor will continue to manufacture DPAK products in their internal factory in Seremban, Malaysia.

There will be no major Electrical, Switching, and Dynamic performance difference between NFME and Seremban, Malaysia. All Qualification and Reliability testing has been completed, and has passed all the required criteria.

FINAL PRODUCT/PROCESS CHANGE NOTIFICATION #16690

RELIABILITY DATA SUMMARY:

NTDS4906NT1G:
Test: High Temperature Reverse Bias (HTRB)
Conditions: Ta=175'C, Vds= 80% BVdss Rating, Duration: 504-Hrs, 3-Lots
Results: 0/240

Test: High Temperature Gate Bias (HTGB)
Conditions: Ta=175'C, Vgs= 100% Vgs Rating, Duration : 504-Hrs, 3-Lots
Results: 0/240

Test: Temperature Cycling (TC-PC)
Conditions: Ta=-65'C/150'C, Air-to-Air, Dwell >=10-min, Duration: 500-cy, 3-Lots
Results: 0/240

Test: Intermittent Operating Life (IOL-PC)
Conditions: Ta=25'C, delta Tj=70'C, 2-min on/off, 15K- cy, 3-Lots
Results: 0/240

Test: Highly Accelerated Stress Test (HAST)
Conditions: Ta=130'C, RH=85%, Duration: 96-Hrs, 3-Lots
Results: 0/240

Test: Autoclave Test (AC-PC)
Conditions: Ta=121'C, P=14.7psi, RH=100%, Duration: 96-Hrs, 3-Lots
Results: 0/240

Test: SAT (PC-SAT)
Condition: Pre and Post MSL
Results: 0/15

Test: Bond Pull Strength (BPS)
Condition: C
Results: 0/30

Test: Bond Shear (BS)
Results: 0/30

Test: Die Shear Strength (DSS)
Results: 0/30

ELECTRICAL CHARACTERISTIC SUMMARY:
No changes in electrical parameter distributions. This change will not result in any change to data sheet limits nor device performance. Characterization data is available upon request.

CHANGED PART IDENTIFICATION:
Product manufactured for ON Semiconductor at NFME will be marked with 'Nf' preceding the date code. Product will come from NFME at the expiration of this PCN. Date Code 1144.

FINAL PRODUCT/PROCESS CHANGE NOTIFICATION #16690

List of affected General Parts:

NTD4904N-1G	NTD4909NA-1G
NTD4904N-35G	NTD4909NA-1H
NTD4904NT4G	NTD4909NA-35G
NTD4905N-1G	NTD4909NA-35H
NTD4905N-35G	NTD4909NAT4G
NTD4905NT4G	NTD4909NAT4H
NTD4906N-1G	NTD4909NT4G
NTD4906N-1H	NTD4909NT4H
NTD4906N-35G	NTD4910N-1G
NTD4906N-35H	NTD4910N-35G
NTD4906NA-1G	NTD4910NT4G
NTD4906NA-1H	NTD4913N-1G
NTD4906NA-35G	NTD4913N-35G
NTD4906NA-35H	NTD4913NT4G
NTD4906NAT4G	NTD4965N-1G
NTD4906NAT4H	NTD4965N-35G
NTD4906NT4G	NTD4965NT4G
NTD4906NT4H	NTD4969N-1G
NTD4909N-1G	NTD4969N-35G
NTD4909N-1H	NTD4969NT4G
NTD4909N-35G	NTD4970N-1G
NTD4909N-35H	NTD4970N-35G
	NTD4970NT4G