



FINAL PRODUCT/PROCESS CHANGE NOTIFICATION # 20656Generic Copy

Issue Date: 25-Sep-2014

TITLE: Qualification of ON Semiconductor Vietnam (OSV) for the Assembly and Test of Mesa Ultrafast Rectifier and Planar High Voltage (HV) MOSFET devices packaged in TO-220 Full Pack (TO-220FP).

PROPOSED FIRST SHIP DATE: 25-Dec-2014

AFFECTED CHANGE CATEGORY(S): ON Semiconductor Assembly & Test

FOR ANY QUESTIONS CONCERNING THIS NOTIFICATION:

Contact your local ON Semiconductor Sales Office or following Product Engineers:

**Mesa Ultrafast Rectifier
Planar HV MOSFETS**

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SAMPLES: Contact your local ON Semiconductor Sales Office

ADDITIONAL RELIABILITY DATA: Available

Contact your local ON Semiconductor Sales Office or Reliability Engineer Chean Ching Sim <cheanching.sim@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 FPCN announces the planned capacity expansion of ON Semiconductor's assembly and test operations of TO-220FP for Mesa Ultrafast Rectifier and HV MOSFET devices.

Mesa Ultrafast Rectifier:

The Mesa Ultrafast Rectifier products are currently built at Nantong Fujitsu Microelectronics Co., Ltd (NFME) and Nantong Huada Microelectronics Group Co. Ltd (Huada), China.

Upon the expiration of this FPCN, ON Semiconductor Vietnam will be added as an additional assembly and test facility for Mesa Ultrafast Rectifier devices. The Mesa Ultrafast Rectifier products have been qualified to Industrial requirements. These products will continue to be Pb-free, and RoHS compliant. All products sourced from OSV will also be Halide free.

HV MOSFET:

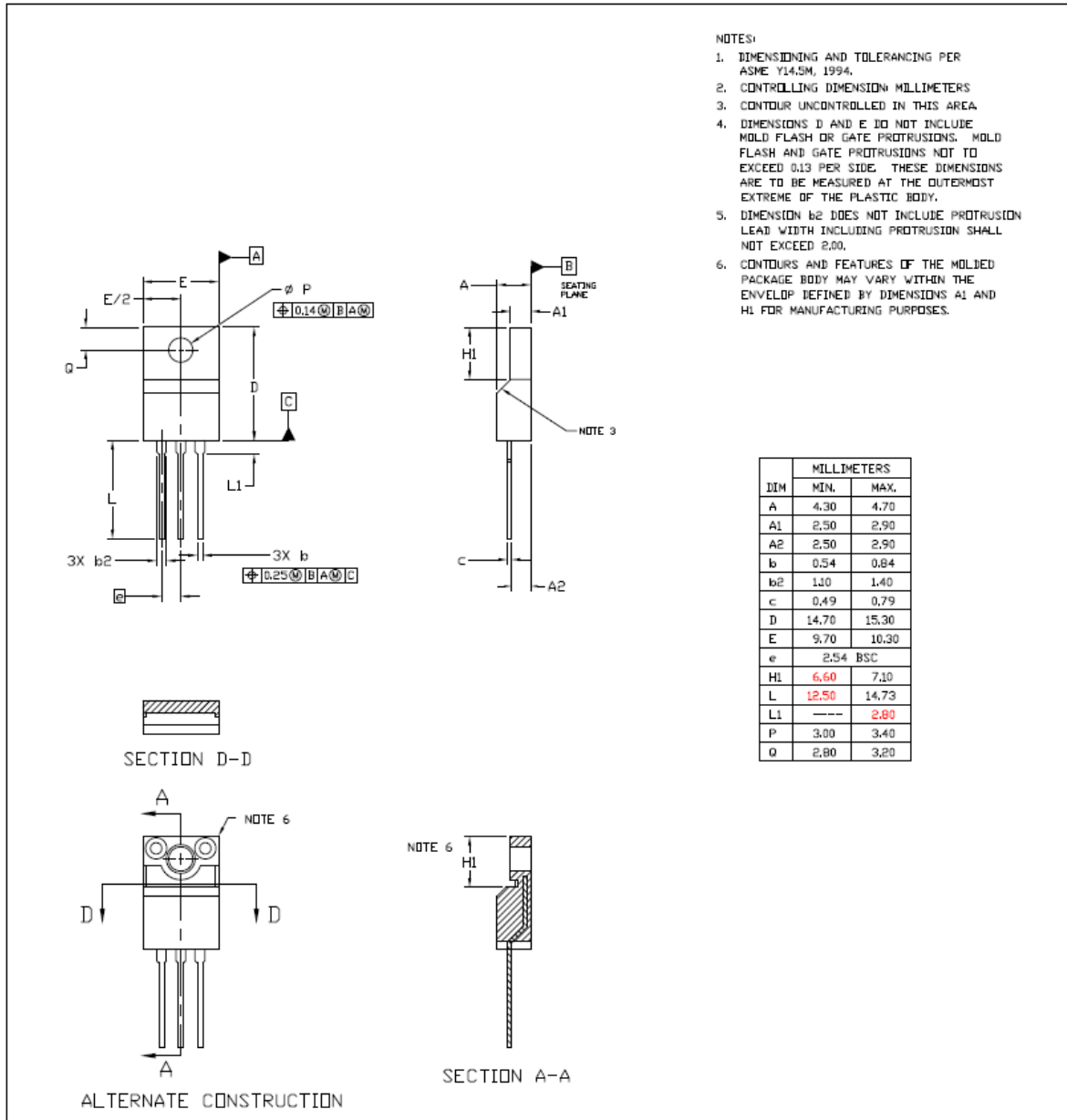
The HV MOSFET products are currently built at SP Semi (Korea) and ON Semiconductor Malaysia



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Upon the expiration of this FPCN, ON Semiconductor Vietnam will be added as an additional assembly and test facility for HV MOSFET devices. The HV MOSFET products have been qualified to Consumer requirements. These products will continue to be Pb-free, and RoHS compliant. All products sourced from OSV will also be Halide free.

OSV products will be assembled using an improved design requiring a new case outline





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RELIABILITY DATA SUMMARY:

MURF1660CTG

Test	Conditions	Interval	Result
H3TRB	Ta = 85°C RH=85%, Bias = 80% rated V or 100V	1008 hr	0/238
HTRB	Ta = 150°C, 80% Rated Voltage	1008 hr	0/238
IOL	Ta = 25°C, delta Tj = 100°C, On/off = 3.5 min.	8572 cyc	0/238
HTSL	Ta = 150°C	1008 hr	0/238
RSH	Ta = 260°C, 10 sec dwell		0/90
SD	Solderability	8 hr	0/45
TES	Terminal Strength		0/30
TC	Ta = -65°C to 150°C	1000 cyc	0/238
AC	Ta = 121°C RH=100% 15 psig	96 hr	0/238

NDF10N60ZG

Test	Conditions	Interval	Result
H3TRB	Ta=85°C, 85% RH, 80% rated Bvdss or 100V	504 hr	0/231
HTRB	Ta=150°C 80% rated Bvdss	504 hr	0/231
HTGB	Ta=150°C 100% rated Vgss	504 hr	0/231
IOL	Ta=25°C, delta Tj=100°C, On/off = 3.5 min	4286 cyc	0/231
uHAST	Ta=130°C, 85% RH, 18.8psig	96 hr	0/231
HTSL	Ta=150°C	504 hr	0/231
RSH	260°C Immersion		0/90
SD	Solderability	8 hr	0/45
TC	Ta= -55/150°C	500 cyc	0/231

ELECTRICAL CHARACTERISTIC SUMMARY:

There are no changes in electrical characteristics; product performance meets data sheet specifications. Characterization data is available upon request.

CHANGED PART IDENTIFICATION:

Product from On Semiconductor Vietnam (OSV) will be marked with site code VN prior to date code.



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List of affected General Parts:

MURF1620CTG
MURHF860CTG
MURF1660CTG
NDF05N50ZG
NDF08N50ZG
NDF11N50ZG
NDF02N60ZG
NDF08N60ZG
NDF10N60ZG
NDF06N60ZG
NDF03N60ZG
NDF04N60ZG
NDF02N60ZH
NDF03N60ZH
NDF08N60ZH
NDF04N60ZH
NDF05N50ZH
NDF06N60ZH
NDF08N50ZH
NDF10N60ZH
NDF11N50ZH