



FINAL PRODUCT/PROCESS CHANGE NOTIFICATION # 20386Generic Copy

Issue Date: 20-Feb-2014**TITLE:** Qualification of ON Semiconductor Vietnam (OSV) for the Assembly and Test of TMOS, HD3E, HVFET, SCR and TRIAC packaged in DPAK case 369C, 369AA & 369AD.**PROPOSED FIRST SHIP DATE:** 20-May-2014**AFFECTED CHANGE CATEGORY(S):** ON Semiconductor Assembly & Test**FOR ANY QUESTIONS CONCERNING THIS NOTIFICATION:**

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

FET (TMOS, HD3E, HVFET)
TRIAC & SCRSew Seng Tam
Raja Roziaht.sew-seng@onsemi.com
Raja.Roziah.Rahmat@onsemi.com**SAMPLES:** Contact your local ON Semiconductor Sales Office**ADDITIONAL RELIABILITY DATA:** AvailableContact 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 DPAK discrete packaged products, currently built at ON Semiconductor Seremban, Malaysia facility to ON Semiconductor Vietnam (OSV).

Upon the expiration of this FPCN, Trench Mosfet, Ultrafast Rectifier, Bipolar Power Transistor devices may be processed at either location. These products have been qualified to commodity/commercial requirements. These products will continue being Pb-free, Halide free and RoHS compliant.


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RELIABILITY DATA SUMMARY:
Reliability Test Results:
Device MBRD5H100T4G

Test:	Conditions:	Interval:	Results
HTRB	Ta=90°C 80% Rated Voltage	1008 hrs	0/84
Autoclave	Ta=121°C RH=100% 15 psig	96 hrs	0/84
H3TRB	Ta=85°C RH=85% bias=80% rated V or 100V Max	1008 hrs	0/84
IOL	Ta=25°C, Delta TJ = 100°C, Ton/off = 2 min.	15,000 cycles	0/84
TC	Ta= -65°C to 150°C	1000 cycles	0/84
HTSL	Ta = 150°C	1008 hrs	0/84
RSH	Ta=260°C, 10 sec dwell		0/30
Solderability	Ta=245°C, 10 sec dwell		0/15

Device MAC4DSNT4G

Test:	Conditions:	Interval:	Results
HTRB	Ta=100°C 80% Rated Voltage	1008 hrs	0/84
HTFB	Ta=100°C 80% Rated Voltage	1008 hrs	0/84
Autoclave	Ta=121°C RH=100% 15 psig	96 hrs	0/84
H3TRB	Ta=85°C RH=85% bias=80% rated V or 100V Max	1008 hrs	0/84
IOL	Ta=25°C, Delta TJ = 100°C, Ton/off = 2 min.	15,000 cycles	0/84
TC	Ta= -65°C to 150°C	1000 cycles	0/84
HTSL	Ta = 150°C	1008 hrs	0/84
RSH	Ta=260°C, 10 sec dwell		0/30
Solderability	Ta=245°C, 10 sec dwell		0/15

Device MCR12DSNT4G

Test:	Conditions:	Interval:	Results
HTRB	Ta=100°C 80% Rated Voltage	1008 hrs	0/252
HTFB	Ta=100°C 80% Rated Voltage	1008 hrs	0/84
Autoclave	Ta=121°C RH=100% 15 psig	96 hrs	0/252
H3TRB	Ta=85°C RH=85% bias=80% rated V or 100V Max	1008 hrs	0/252
IOL	Ta=25°C, Delta TJ = 100°C, Ton/off = 2 min.	15,000 cycles	0/252
TC	Ta= -65°C to 150°C	1000 cycles	0/252
HTSL	Ta = 150°C	1008 hrs	0/252
RSH	Ta=260°C, 10 sec dwell		0/90
Solderability	Ta=245°C, 10 sec dwell		0/45



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RELIABILITY DATA SUMMARY:

Reliability Test Results:

Device NTD110N02RT4G

Test:	Conditions:	Interval:	Results
HTRB	Ta=175°C 80% Rated Voltage	1008 hrs	0/84
HTGB	Ta=175°C 100% Rated Voltage	1008 hrs	0/84
Autoclave	Ta=121°C RH=100% 15 psig	96 hrs	0/84
H3TRB	Ta=85°C RH=85%	1008 hrs	0/84
	bias=80% rated V or 100V Max		
IOL	Ta=25°C, Delta TJ = 100°C, Ton/off = 2 min.	15,000 cycles	0/84
TC	Ta= -55°C to 150°C	1000 cycles	0/84
HTSL	Ta = 150°C	1008 hrs	0/84
RSH	Ta=260°C, 10 sec dwell		0/30
Solderability	Ta=245°C, 10 sec dwell		0/15

Device NTD6414ANT4G

Test:	Conditions:	Interval:	Results
HTRB	Ta=175°C 80% Rated Voltage	1008 hrs	0/84
HTGB	Ta=175°C 100% Rated Voltage	1008 hrs	0/84
Autoclave	Ta=121°C RH=100% 15 psig	96 hrs	0/84
H3TRB	Ta=85°C RH=85%	1008 hrs	0/84
	bias=80% rated V or 100V Max		
IOL	Ta=25°C, Delta TJ = 100°C, Ton/off = 2 min.	15,000 cycles	0/84
TC	Ta= -55°C to 150°C	1000 cycles	0/84
HTSL	Ta = 150°C	1008 hrs	0/84
RSH	Ta=260°C, 10 sec dwell		0/30
Solderability	Ta=245°C, 10 sec dwell		0/15

Device NDD03N80ZT4G

Test:	Conditions:	Interval:	Results
HTRB	Ta=150°C 80% Rated Voltage	1008 hrs	0/84
HTGB	Ta=150°C 100% Rated Voltage	1008 hrs	0/84
Autoclave	Ta=121°C RH=100% 15 psig	96 hrs	0/84
H3TRB	Ta=85°C RH=85%	1008 hrs	0/84
	bias=80% rated V or 100V Max		
IOL	Ta=25°C, Delta TJ = 100°C, Ton/off = 2 min.	15,000 cycles	0/84
TC	Ta= -55°C to 150°C	1000 cycles	0/84
HTSL	Ta = 150°C	1008 hrs	0/84
RSH	Ta=260°C, 10 sec dwell		0/30
Solderability	Ta=245°C, 10 sec dwell		0/15



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RELIABILITY DATA SUMMARY:

Reliability Test Results:

Device MTD6N20ET4G

Test:	Conditions:	Interval:	Results
HTRB	Ta=150°C 80% Rated Voltage	1008 hrs	0/84
HTGB	Ta=150°C 100% Rated Voltage	1008 hrs	0/84
Autoclave	Ta=121°C RH=100% 15 psig	96 hrs	0/84
H3TRB	Ta=85°C RH=85%	1008 hrs	0/84
	bias=80% rated V or 100V Max		
IOL	Ta=25°C, Delta TJ = 100°C, Ton/off = 2 min.	15,000 cycles	0/84
TC	Ta= -55°C to 150°C	1000 cycles	0/84
HTSL	Ta = 150°C	1008 hrs	0/84
RSH	Ta=260°C, 10 sec dwell		0/30
Solderability	Ta=245°C, 10 sec dwell		0/15

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 will be marked with site code VN prior to date code

AFFECTED DEVICE LIST MOSFET:

List of affected General Parts:

MTD6N15T4G	NDD60N900U1T4G	NTD3055L104G
MTD6N20ET4G	NTD110N02RT4G	NTD3055L104T4G
NDD02N60ZT4G	NTD14N03RT4G	NTD3055L170T4G
NDD03N50ZT4G	NTD18N06LT4G	NTD4302T4G
NDD03N60ZT4G	NTD20N03L27T4G	NTD4904N-35G
NDD03N80ZT4G	NTD20N06LT4G	NTD4904NT4G
NDD04N50ZT4G	NTD20N06T4G	NTD5406NT4G
NDD04N60ZT4G	NTD20P06LT4G	NTD5407NT4G
NDD05N50ZT4G	NTD24N06LT4G	NTD5806NT4G
NDD60N360U1-35G	NTD24N06T4G	NTD5807NT4G
NDD60N360U1T4G	NTD25P03LT4G	NTD6414ANT4G
NDD60N550U1-35G	NTD2955G	NTD6415ANLT4G
NDD60N550U1T4G	NTD2955T4G	NTD6415ANT4G
NDD60N745U1-35G	NTD3055-094T4G	NTD6416ANLT4G
NDD60N745U1T4G	NTD3055-150T4G	NTD6416ANT4G
NDD60N900U1-35G	NTD3055-150T4H	

**FINAL PRODUCT/PROCESS CHANGE NOTIFICATION # 20386****AFFECTED DEVICE LIST SCR & TRIAC:****List of affected General Parts:**

MAC4DCMT4G	MCR703AT4G
MAC4DCNT4G	MCR706AT4G
MAC4DHMT4G	MCR708AG
MAC4DLMT4G	MCR708AT4G
MAC4DSMT4G	MCR716T4G
MAC4DSNT4G	MCR718T4G
MCR12DCNT4G	MCR8DCMT4G
MCR12DSMT4G	MCR8DSMT4G
MCR12DSNT4G	

List of affected Customer Specific Parts:

SCR12DCMT4G