



FINAL PRODUCT/PROCESS CHANGE NOTIFICATION

Generic Copy

02-Nov-2009

SUBJECT: ON Semiconductor Final Product/Process Change Notification #16350

TITLE: Final Notification for Transfer of Small Signal Schottky and Bidirectional ESD Diodes from ON Semiconductor ZR Fab in Phoenix (USA) to ON Semiconductor ISMF Fab in Seremban (Malaysia)

PROPOSED FIRST SHIP DATE: 02-Feb-2010

AFFECTED CHANGE CATEGORY: ON Semiconductor Fab Site

AFFECTED PRODUCT DIVISION: Discrete Products

FOR SAMPLES: Contact your local ON Semiconductor Sales Office

FOR ANY QUESTIONS CONCERNING RELIABILITY DATA:

Contact your local ON Semiconductor Sales Office or Laura Rivers < laura.rivers@onsemi.com >

FOR ANY QUESTIONS CONCERNING THIS NOTIFICATION:

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

FPCN Contact person by Affected Technology:

Small Signal Schottky

Masitah Aznam

masitah.aznam@onsemi.com

Bidirectional ESD Diodes

Yew Hee Soon

y.soon@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 your local ON Semiconductor Sales Office.

DESCRIPTION AND PURPOSE:

ON Semiconductor is notifying customers of its plan to transfer Small Signal Schottky and Bidirectional ESD Diodes products from ON Semiconductor ZR Fab in Phoenix (USA) to ON Semiconductor ISMF Fab in Seremban (Malaysia).

The ISMF facility is an ON Semiconductor owned wafer fab that has been producing products for ON Semiconductor since 1998. Several existing technologies within ON Semiconductor's product families are currently sourced from ISMF, including Zener, Diodes, Small Signal Transistor, and USB array filter products. ON Semiconductor Seremban Wafer FAB is an internal factory that is TS16949, ISO-9001 and ISO-14000 certified.



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Qualification tests are designed to show that the reliability of transferred devices will continue to meet or exceed ON Semiconductor standards.

Products listed in this final PCN should be transferred to ON Semiconductor ISMF Fab in Seremban (Malaysia) starting 1st Feb 2010. After 1st Feb 2010, customer may receive products from either facility.

QUALIFICATION PLAN:

Reliability testing was performed on qualification vehicles chosen based on die size, voltage rating, and run rates.

RELIABILITY RESULTS FOR SMALL SIGNAL SCHOTTKY:

Package: SOT23, SOD523, SOD923

Qual Vehicles:

- BAT54LT1G
- RB521S30T1G
- NSR0170P2T5G

BAT54LT1G

Test:	Conditions:	Interval:	Results
HTRB	TA=150C,80% Rated Voltage	1008 hrs	0/84
Precondition	MSL1 @ 260C , 3 X IR at 260 C		0/336
Autoclave+PC	Ta=121C RH=100% ~15 psig	96 hrs	0/84
H3TRB+PC	Ta=85C RH=85%	1008 hrs	0/84
	Bias = 80% rated V or100V Max		
IOL+PC	Ta=25C, Delta TJ = 100 C, Ton/off = 2 min.	15000 cyc	0/84
TC+PC	Ta= -65 C to 150 C	1000 cyc	0/84
RSH	Ta=260C, 10 sec dwell		0/30

RB521S30T1G

Test:	Conditions:	Interval:	Results
HTRB	TA=150C,80% Rated Voltage	1008 hrs	0/240
Precondition	MSL1 @ 260C , 3 X IR at 260 C		0/960
Autoclave+PC	Ta=121C RH=100% ~15 psig	96 hrs	0/240
H3TRB+PC	Ta=85C RH=85%	1008 hrs	0/240
	Bias = 80% rated V or100V Max		
IOL+PC	Ta=25C, Delta TJ = 100 C, Ton/off = 2 min.	15000 cyc	0/240
TC+PC	Ta= -65 C to 150 C	1000 cyc	0/240
RSH	Ta=260C, 10 sec dwell		0/90



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NSR0170P2T5G

Test:	Conditions:	Interval:	Results
HTRB	TA=150C, 80% Rated Voltage	1008 hrs	0/160
Precondition	MSL1 @ 260C, 3 X IR at 260 C		0/640
Autoclave+PC	Ta=121C RH=100% ~15 psig	96 hrs	0/160
H3TRB+PC	Ta=85C RH=85%	1008 hrs	0/160
	Bias = 80% rated V or 100V Max		
IOL+PC	Ta=25C, Delta TJ = 100 C, Ton/off = 2 min.	15000 cyc	0/160
TC+PC	Ta= -65 C to 150 C	1000 cyc	0/160
RSH	Ta=260C, 10 sec dwell		0/60

RELIABILITY RESULTS FOR BIDIRECTIONAL ESD DIODES:

Package: SOD523

Qual Vehicles:
ESD5B5.0ST5G

ESD5B5.0ST5G

Test:	Conditions:	Interval:	Results
HTRB	TA=150C, 80% Rated Voltage	504 hrs	0/240
Precondition	MSL1 @ 260C, 3 X IR at 260 C		0/960
Autoclave+PC	Ta=121C RH=100% ~15 psig	96 hrs	0/240
H3TRB+PC	Ta=85C RH=85%	504 hrs	0/240
	Bias = 80% rated V or 100V Max		
IOL+PC	Ta=25C, Delta TJ = 100 C, Ton/off = 2 min.	7500 cyc	0/240
TC+PC	Ta= -65 C to 150 C	1000 cyc	0/240
RSH	Ta=260C, 10 sec dwell		0/90

ELECTRICAL CHARACTERIZATION RESULTS:

Available upon request

CHANGED PART IDENTIFICATION:

Affected products from ON Semiconductor with date code 1005 or F representing WW05, 2010 and greater may be sourced from either the ISMF Fab in Seremban (Malaysia) or the ZR Fab in Phoenix (USA).



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AFFECTED DEVICE LIST:

- BAS40-04LT1
- BAS40-04LT1G
- BAS40-04LT1H
- BAS40-06LT1G
- BAS40LT1
- BAS40LT1G
- BAS40LT3G
- BAS70-04LT1
- BAS70-04LT1G
- BAS70LT1
- BAS70LT1G
- BAT54ALT1
- BAT54ALT1G
- BAT54ALT1H
- BAT54AWT1G
- BAT54AWT1H
- BAT54CLT1
- BAT54CLT1G
- BAT54CLT1H
- BAT54CLT3G
- BAT54CTT1G
- BAT54CWT1G
- BAT54CWT1H
- BAT54CXV3T1G
- BAT54HT1
- BAT54HT1G
- BAT54HT1H
- BAT54LT1
- BAT54LT1G
- BAT54LT1H
- BAT54M3T5G
- BAT54SLT1
- BAT54SLT1G
- BAT54SLT1H
- BAT54SWT1
- BAT54SWT1G
- BAT54SWT1H
- BAT54T1
- BAT54T1G
- BAT54WT1G
- BAT54XV2T1G
- BAT54XV2T1H
- BAT54XV2T5G
- LDZ75S790ZWP
- MBD301G
- MBD330DWT1
- MBD330DWT1G
- MBD54DWT1G
- MBD770DWT1G
- MMBD101LT1G
- MMBD301LT1
- MMBD301LT1G
- MMBD301LT1H



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MMBD301LT3G
MMBD301M3T5G
MMBD330T1G
MMBD352LT1
MMBD352LT1G
MMBD352WT1
MMBD352WT1G
MMBD353LT1G
MMBD354LT1G
MMBD355LT1G
MMBD452LT1G
MMBD701LT1
MMBD701LT1G
MMBD717LT1G
MMBD770T1G
MMDL101T1G
MMDL301T1G
MMDL301T1H
MMDL770T1G
MMSD301T1
MMSD301T1G
MMSD301T1H
MMSD701T1G
NSR0130P2T5G
NSR0130P2T5H
NSR0140P2T5G
NSR0140P2T5H
NSR0170P2T5G
NSR0230M2T5G
NSR0230M2T5H
NSR0230P2T5G
NSR0230P2T5H
NSR0240HT1G
NSR0240P2T5G
NSR0240V2T1G
NSR0320MW2T1G
NSR0320MW2T1H
NSR0320MW2T3G
NSR0320XV6T1G
NSR0320XV6T5
NSR0320XV6T5G
NSR0340HT1G
NSR0340P2T5G
NSR0340V2T1G
NSR0520V2T1G
NSR0530P2T5G
NSR0620P2T5G
NSR1020MW2T1G
NSR1020MW2T3G
NSR15TW1T2G
NSR30CM3T5G
NSR30CM3T5H
NSRLL30XV2T1G
NSRLV20MW2T1G
NSVBAS70LT1G



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NSVBAT54HT1
NSVBAT54HT1G
NSVBAT54LT1G
NSVMMBD352WT1G
NSVMMBD353LT1
NSVMMBD353LT1G
NSVMMBD354LT1G
NTLUF4189NZTAG
NTLUF4189NZTBG
NUP4302MR6T1G
RB520S30T1
RB520S30T1G
RB521S30T1
RB521S30T1G
RB751S40T1G
RB751V40T1G
SBAS40-04LT1G
SBAS40-06LT1G
SBAS40LT1G
SBAS70-04LT1G
SBAT54ALT1G
SBAT54ALT3
SBAT54ALT3G
SBAT54AWT1G
SBAT54CLT1G
SBAT54SLT1G
SMBD1022LT1G
SMMBD301LT1
SMMBD301LT1G
SMMBD301LT3G
SMMSD301T1G
SMSD1001T1G

AFFECTED DEVICE LIST FOR BIDIRECTIONAL ESD DIODES:

ESD5B5.0ST1G
ESD9B3.3ST5G
ESD9B5.0ST5G
NUP4004M5T1G