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**FINAL PRODUCT/PROCESS CHANGE NOTIFICATION #16513**Generic Copy

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Issue Date: 11-Aug-2010

**TITLE: Final Notification for Transfer of the Bidirectional TVS (Transient Voltage Suppressor) Diodes and Bidirectional ESD Diodes from ON Semiconductor ZR Fab in Phoenix (USA) to ON Semiconductor ISMF Fab in Seremban (Malaysia)**

**PROPOSED FIRST SHIP DATE: 11-Nov-2010**

**AFFECTED CHANGE CATEGORY(S): ON Semiconductor Fab Site**

**FOR ANY QUESTIONS CONCERNING THIS NOTIFICATION:**

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

Bidirectional TVS Diodes	Huey Shan Wong	<a href="mailto:hueyshon.wong@onsemi.com">hueyshon.wong@onsemi.com</a>
Bidirectional ESD Diodes	Yew Hee Soon	<a href="mailto:y.soon@onsemi.com">y.soon@onsemi.com</a>

**SAMPLES:** Contact your local ON Semiconductor Sales Office.

**ADDITIONAL RELIABILITY DATA:** Available

Contact your local ON Semiconductor Sales Office or Laura Rivers <[laura.rivers@onsemi.com](mailto:laura.rivers@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](mailto:quality@onsemi.com)>.

**DESCRIPTION AND PURPOSE:**

ON Semiconductor is notifying customers of its plan to transfer Bidirectional TVS Diodes 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 Diodes, Small Signal Bipolar Transistor, and USB array filter products. ON Semiconductor Seremban Wafer FAB is an internal factory that is TS16949, ISO-9001 and ISO-14000 certified.

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



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Products listed in this Final PCN should be transferred to ON Semiconductor ISMF Fab in Seremban (Malaysia) starting 4th November 2010. After 4th November 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 DATA SUMMARY FOR LOW VOLTAGE BIPOLAR PLANAR:**

**BIDIRECTIONAL TVS DIODES:**

Package: SMB  
Qual Vehicles:

**1SMB36CAT3G**

Test:	Conditions:	Interval:	Results
HTRB	TA=150C,80% Rated Voltage	1008 hrs	0/80
Autoclave	Ta=121C RH=100% ~15 psig	96 hrs	0/80
H3TRB	Ta=85C RH=85%	1008 hrs	0/80
	bias=80% rated V or 100V Max		
IOL	Ta=25C, Delta TJ = 100 C, Ton/off = 3.5 min.	15000 cyc	0/80
TC	Ta= -65 C to 150 C	1000 cyc	0/80
RSH	Ta=260C, 10 sec dwell		0/30
DPA	post TC		0/2
DPA	post H3TRB		0/2

**1SMB75CAT3G**

Test:	Conditions:	Interval:	Results
HTRB	TA=150C,80% Rated Voltage	1008 hrs	0/160
Autoclave	Ta=121C RH=100% ~15 psig	96 hrs	0/160
H3TRB	Ta=85C RH=85%	504 hrs	0/160
	bias=80% rated V or100V Max		
IOL	Ta=25C, Delta TJ = 100 C, Ton/off = 3.5 min.	7500 cyc	0/160
TC	Ta= -65 C to 150 C	1000 cyc	0/160
RSH	Ta=260C, 10 sec dwell		0/30
DPA	post TC		0/4

**BIDIRECTIONAL ESD DIODES:**

Package: flip chip  
Qual Vehicles:

**ESD11B5.0ST5G**

Test:	Conditions:	Interval:	Results
HTRB	Ta=150C,80% Rated Voltage	1008 hrs	0/231
Autoclave +PC	Ta=121C RH=100% ~15 psig	96 hrs	0/240
TC+PC	Ta= -40C to 125 C	1000 cyc	0/231
HTSL	Ta=150C	1008 hrs	0/240



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**ELECTRICAL CHARACTERISTIC SUMMARY:**

Available upon request.

**CHANGED PART IDENTIFICATION:**

Affected products from ON Semiconductor with date code 1044 or F representing WW44, 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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**List of affected General Parts:**

<b>BIDIRECTIONAL TVS DIODES</b>		<b>BIDIRECTIONAL ESD DIODES</b>
1SMA10CAT3G	1SMB36CAT3	ESD11B5.0ST5G
1SMA12CAT3G	1SMB36CAT3G	
1SMA13CAT3G	1SMB40CAT3G	
1SMA15CAT3G	1SMB43CAT3G	
1SMA16CAT3G	1SMB45CAT3G	
1SMA18CAT3G	1SMB48CAT3G	
1SMA20CAT3G	1SMB51CAT3G	
1SMA24CAT3G	1SMB54CAT3G	
1SMA26CAT3	1SMB58CAT3G	
1SMA26CAT3G	1SMB60CAT3G	
1SMA28CAT3G	1SMB64CAT3G	
1SMA30CAT3G	1SMB75CAT3G	
1SMA33CAT3G	P6SMB11CAT3	
1SMA36CAT3G	P6SMB11CAT3G	
1SMA40CAT3G	P6SMB12CAT3	
1SMA48CAT3G	P6SMB12CAT3G	
1SMA58CAT3G	P6SMB15CAT3G	
1SMA60CAT3G	P6SMB16CAT3G	
1SMA70CAT3G	P6SMB18CAT3	
1SMA78CAT3G	P6SMB18CAT3G	
1SMB10CAT3	P6SMB20CAT3G	
1SMB10CAT3G	P6SMB22CAT3G	
1SMB11CAT3G	P6SMB24CAT3G	
1SMB12CAT3G	P6SMB27CAT3G	
1SMB13CAT3G	P6SMB30CAT3G	
1SMB14CAT3G	P6SMB33CAT3G	
1SMB15CAT3G	P6SMB36CAT3G	
1SMB16CAT3G	P6SMB39CAT3G	
1SMB17CAT3G	P6SMB43CAT3	
1SMB18CAT3G	P6SMB43CAT3G	
1SMB20CAT3G	P6SMB47CAT3G	
1SMB22CAT3G	P6SMB51CAT3G	
1SMB24CAT3G	P6SMB56CAT3G	
1SMB26CAT3G	P6SMB62CAT3G	
1SMB28CAT3G	P6SMB68CAT3G	
1SMB30CAT3G	P6SMB82CAT3G	
1SMB33CAT3G		