



FINAL PRODUCT/PROCESS CHANGE NOTIFICATION

01 Apr 2009

SUBJECT: ON Semiconductor Final Product/Process Change Notification #16237

TITLE: Final Notification for Transfer of Zener Products from ON Semiconductor ZR Fab in Phoenix (USA) to ON Semiconductor ISMF Fab in Seremban (Malaysia)

PROPOSED FIRST SHIP DATE: 01 Jul 2009

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 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 Zener 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, 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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Devices listed in this final PCN should be transferred to ON Semiconductor ISMF Fab in Seremban (Malaysia) starting 01 July 2009. After 01 July 2009, customer may receive devices from either facility.

QUALIFICATION PLAN:

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

RELIABILITY RESULTS:

N-Zener:

SOT23: MMBZ5270BLT1 – 91V
 SMA: 1SMA5940BT3
 SMC: 1.5SMC91AT3 – 91V

Control and Qual.

Test:	Conditions:	Interval:	Sample Size: (UnitsxLots)	Failures:
HTRB	TA=150C,80% Rated Voltage	1008 hrs	77x3 (231)	0
Precondition	MSL1, IR at 235C/260C,	96 hrs	308x3	
Autoclave	T=121C/100% RH/15psig	96 hrs	77x3 (231)	0
H3TRB-PC	T=85C/85% RH/80% Rated Voltage 100v Max	1008 hrs	77x3 (231)	0
IOL-PC	T=25C, Delta TJ=100C Ton/off=2 min	15000 cyc	77x3 (231)	0
TC-PC	T= -65C to 150C	1000 cyc	77x3 (231)	0
DPA	Per AECQ101, after TC and H3TRB		4x1 (4)	0/4
RSH	Resistance to Solder Heat- 260C		10x3 (30)	0/30
ESD	Human Body Model		6x4 (24)	Class3 > 16kV
	Machine Model		6x4 (24)	>400V
	IEC-61000-4-2		6x4 (24)	Level 4

ELECTRICAL CHARACTERIZATION RESULTS:

Available upon request

CHANGED PART IDENTIFICATION:

Devices from ON Semiconductor with date code 0926 (or 926 or 7) 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:

Devices (N-Zener)

- BZX84B12LT1G
- BZX84B15LT1G
- BZX84B22LT1G
- BZX84B24LT1G
- SZP30082RLG
- SZ2229RL
- SZP30253RLG
- SZP40199RLG
- SMBZ1650VDLT1
- SMBZ1650VDLT1G
- SMBZ1650VDLT3G
- 1N5935BRLG
- ESD9X7.0ST5G
- S1ZMMBZ5242BLT1G
- S1ZMMBZ5245BLT1D
- S1ZMMBZ5245BLT1G
- S1ZMMBZ5253BLT1
- S1ZP6SMB36AT3
- SESD9X5.0JT5G
- SMBZ1449-20LT3
- SMBZ1449-20LT3G
- SMBZ1449-33LT3
- SMBZ1461LT1
- SMBZ1461LT1G
- SMBZ1461LT3G
- SMBZ1475LT3G
- SMBZ1481LT1G
- SMBZ1483LT1
- SMBZ1483LT1G
- SMBZ1484LT1
- SMBZ1484LT1G
- SMBZ1509LT1
- SMBZ1509LT1G
- SMBZ1516LT1
- SMBZ1516LT1G
- SMBZ1516LT3G
- SMBZ1599LT1
- SMBZ1611BT1
- SMBZ1611BT1G
- SMBZ1651VCLT1G
- SMBZ1660LT1G
- SMBZ2606-15LT3G
- SMBZ2606-16LT1G
- SMBZ2606-20LT3G
- SMBZ2606-21LT3G
- SMBZ2606-22LT3G
- SMBZ2606-24LT1
- SMBZ2606-24LT1G



SMBZ2606-30LT3
SMBZ2606-30LT3G
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SMSZ1013T1
SMSZ1013T1G
SMSZ1019T1G
SMSZ1023T1G
SMSZ1024T1G
SMSZ1025T1G
SMSZ1600-31T3
SMSZ1600-31T3DS
SMSZ1600-31T3DSG
SMSZ1600-31T3G
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SZP6SMB6.8AT3G
SZSMF14AT1G
SZSMF20AT1G
SZSMF24AT1G
SZSMF6.0AT1G



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QUALIFICATION PLAN for P-Zener:

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

RELIABILITY RESULTS for P-Zener:

P-Zener:

Lot A: SMS05T1: Zero failures.

Lot B: SMS24T1: Zero failures.

Autoclave: Ta=121C, P=15psig, RH=100% for 96hrs	0/231
Temp Cycle: Ta=-65C/150C, Air to air, Dwell>=10min for 1000 cycles	0/231
Resistance to Solder Heat: Ta=260C for 1X	0/45
High Temperature Reverse Bias: Ta=150C, Bias (V=80%rated) for 1008hrs	0/231
High Humidity High Temperature Reverse Bias: Ta=85C, RH=85%, Bias (V=80%rated) for 1008hrs	0/231
Intermittent Operating Life: Ton=2 min, Toff=2 min, delta Tj=100C for 15000 cycle	0/231
Lot C: MMQA33VT1: Zero failures.	
-High Temperature Reverse Bias: Ta=150C, Bias (V=80%rated) for 1008hrs	0/84

ELECTRICAL CHARACTERIZATION RESULTS:

Available upon request

CHANGED PART IDENTIFICATION:

Devices from ON Semiconductor with date code 0926 (or 926 or 7) 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:

Devices (P-Zener)

- NUP4105MUTAG
- NUP4106DR2G
- NUP3115UPMUTAG
- MMBZ27VAWT1G
- MMBZ27VCWT1G
- NUP3112UPMUTAG
- NUP4212UPMUTAG
- SZMMBZ12VALT1G
- SZMMBZ15VALT3G
- SZMMBZ15VDLT1
- SZMMBZ15VDLT1G
- SZMMBZ15VDLT3G
- SZMMBZ18VALT1
- SZMMBZ18VALT1G
- SZMMBZ18VALT3G
- SZMMBZ20VALT3G
- SZMMBZ27VALT3
- SZMMBZ27VALT3G
- SZMMBZ27VCLT3
- SZMMBZ27VCLT3G
- SZMMBZ33VALT1
- SZMMBZ33VALT1G
- SZMMBZ33VALT3G
- SZMMBZ4252T1
- SZMMBZ4252T1G
- SZMMBZ6V2ALT1
- SZMMBZ6V2ALT1G
- SZMMBZ9V1ALT1
- SZNUP2201MR6T1G
- SZNUP4201MR6T1G
- NUP3112UPMUTAG
- NUP4212UPMUTAG
- SMF05T1G
- SMF05T2G
- NZQA5V6XV5T1GH
- SMQA1000T1
- SMQA1000T1G
- SMQA2000T1
- SMQA2000T1G
- SZMMQA27VT1G
- SZMMQA33VT1G
- SZMMQA5V6T1
- SZMMQA5V6T1G
- SZMMQA6V2T1G
- SZSMF12CT1G
- NUP5120X6T2GH