ON Semiconductor

FINAL PRODUCT/PROCESS CHANGE NOTIFICATION #16522

Generic Copy

Issue Date: 24-Sep-2010

TITLE: Final Notification for Transfer of the Bipolar Power Epi Base, Bipolar Power Base Technologies, TVS (Transient Voltage Suppressor) Arrays and Ultrafast Rectifier from ON Semiconductor ZR Fab in Phoenix (USA) to ON Semiconductor ISMF Fab in Seremban (Malaysia)

PROPOSED FIRST SHIP DATE: 24-Dec-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:

FPCN Contact person by Affected Technology:

Bipolar Power Epi Base	Farrah Awang	farrah.omar@onsemi.com
Bipolar Power Base Technology	Farrah Awang	farrah.omar@onsemi.com
Ultrafast Rectifier Technology	Raja Roziah	Raja.Raziah.Rahmat@onsemi.com
TVS Array	Huey Shan Wong	hueyshan.wong@onsemi.com

SAMPLES: Contact your local ON Semiconductor Sales Office or contacts listed above.

ADDITIONAL RELIABILITY DATA: Available

Contact your local ON Semiconductor Sales Office or Laura Rivers <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>.

DESCRIPTION AND PURPOSE:

ON Semiconductor is notifying customers of its plan to transfer Bipolar Power Epi Base and Bipolar Power Base Technologies and Ultrafast Rectifier 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.

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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 13th December 2010. After 13th December 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 BIPOLAR POWER EPI BASE:

Package: Dpak
Qual Vehicles:
MJD42CG

Test:	Conditions:	Interval:	Results
HTRB	TA=150C,80% Rated Voltage	1008 hrs	0/80
Autoclave+PC	Ta=121C RH=100% ~15 psig	96 hrs	0/80
H3TRB+PC	Ta=85C RH=85% bias=80% rated V or100V Max	1008 hrs	0/80
IOL+PC	Ta=25C, Delta TJ = 100 C, Ton/off = 2 min.	15000 cyc	0/80
TC+PC	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

Package: Dpak
MJD122G

Test:	Conditions:	Interval:	Results
HTRB	TA=150C,80% Rated Voltage	1008 hrs	0/160
Autoclave+PC	Ta=121C RH=100% ~15 psig	96 hrs	0/160
H3TRB+PC	Ta=85C RH=85% bias=80% rated V or100V Max	1008 hrs	0/160
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		0/30
DPA	post TC		0/4
DPA	post H3TRB		0/4

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RELIABILITY DATA SUMMARY FOR BIPOLAR POWER POWER BASE:

Qual Vehicles:

MJW21194G
Package: TO247

Test:	Conditions:	Interval:	Results
HTRB	Ta=150C,80% Rated Voltage	504 hrs	0/160
Autoclave+PC	Ta=121C RH=100% ~15 psig	96 hrs	0/160
H3TRB+PC	Ta=85C RH=85% bias=80% rated V or100V Max	504 hrs	0/160
IOL+PC	Ta=25C, Delta TJ = 100 C, Ton/off = 5 min.	3000 cyc	0/160
TC+PC	Ta= -65 C to 150 C	1000 cyc	0/160
RSH	Ta=260C, 10 sec dwell		0/30
DPA	post TC		0/4

MJ21193G
Package: TO-3

Test:	Conditions:	Interval:	Results
HTRB	TA=150C,80% Rated Voltage	1008 hrs	0/80
IOL+PC	Ta=25C, Delta TJ = 100 C, Ton/off = 2 min.	5000 cyc	0/77
TC+PC	Ta= -65 C to 150 C	1000 cyc	0/77

RELIABILITY DATA SUMMARY FOR ULTRAFAST RECTIFIER:

Package: 3A Axial
Qual Vehicle: MUR4100E Rectifier

Test	Condition	Interval	Results
HTRB	Tj=150C,80% Rated Voltage	168 hrs	0/231
Autoclave	Ta=121C RH=100% ~15 psig	96 hrs	0/231
H3TRB	Ta=85C RH=85% bias=80% rated V or100V Max	1008 hrs	0/231
IOL	Ta=25C, Delta TJ = 100 C, Ton/off = 2 min.	15000 cyc	0/231
TC	Ta= -65 C to 150 C	1000 cyc	0/231
RSH	Ta=260C, 10 sec dwell		0/30

Package: TO220
MUR8100E Rectifier

Test	Condition	Interval	Results
HTRB	Tj=150C, 80% Rated Voltage	168 hrs	0/80

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RELIABILITY DATA SUMMARY FOR TVS Array:

Package: SO-8
Qual Vehicles:

NUP4201DR2G
Test:

	Conditions:	Interval:	Results
HTRB	Ta=150C,80% Rated Voltage	504 hrs	0/231
Autoclave+PC	Ta=121C RH=100% ~15 psig	96 hrs	0/231
HAST+PC	Ta=130C RH=85% bias=80% rated V or100V Max	96 hrs	0/231
TC+PC	Ta= -65 C to 150 C	1000 cyc	0/231
RSH	Ta=260C, 10 sec dwell		0/30
DPA	post TC		0/6
DPA	post HAST		0/6

ELECTRICAL CHARACTERISTIC SUMMARY:

Available upon request

CHANGED PART IDENTIFICATION:

Affected products from ON Semiconductor with date code 1051 representing WW51, 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

Ultrafast Rectifier:

MURS480ET3G
MUR480EG
MUR480ERLG
MUR480ESG
MUR4100EG
MUR4100ERLG
MUR180EG
MUR180ERLG
MUR1100EG
MUR1100ERLG
MUR2100EG
MUR2100ERLG
MUR880EG
MUR8100EG
MUR8100EH
MURC8100EWP
SUR84100ERLG

Bipolar Power Epi Base Technology:

2N3055AG
2N3055G
2N3442G
2N3771G
2N3772G
2N3773G
2N4918G
2N4919G
2N4920G
2N4921G
2N4922G
2N4923G
2N5190G
2N5191G
2N5192G
2N5194G
2N5195G
2N5302G
2N5684G
2N5686G
2N5883G
2N5884G
2N5885G
2N5886G
2N6034G
2N6035G
2N6036G
2N6038G
2N6039G
2N6040G
2N6042G
2N6043G
2N6045G
2N6052G
2N6107G
2N6109G
2N6111G
2N6284G
2N6286G
BD810G
BDV64BG
BDV65BG
BDW42G
BDW46G
BDW47G
BDX34BG
BDX34CG
BDX54BG
BDX54CG
MJ11012G
MJ11015G
MJ11016G
MJ11028G
MJ11030G
MJ11032G
MJ11033G
MJ14002G
MJ15001G
MJ15015G
MJ15016G
MJ2955G
MJ4502G
MJ802G
MJB41CG
MJB41CT4G
MJB42CT4G
MJC11015WP
MJC11016WP
MJD112-1G
MJD112G
MJD112RLG
MJD112T4G
MJD117-1G
MJD117G
MJD117RLG
MJD117T4G
MJD122G
MJD122T4G
MJF31CG
MJF32CG
MJF6388G
MJH6284G
MJH6287G
NJV2N6045G
NJV2N6107G
NJV2N6109G
NJVMJ11028G
NJVMJB42CT4G
NJVMJD112T4G
NJVMJD117T4G
NJVMJD122T4G
NJVMJD128T4G
NJVMJD148T4G
NJVMJD2955T4G
NJVMJD31CT4G
NJVMJD32CT4G
NJVMJD41CT4G
NJVMJD42CRLG
NJVMJD42CT4G
NJVTIP122G
NJVTIP31CG
NJVTIP32BG
NJVTIP32CG
NJVTIP36CG
NJVTIP41CG
NJVTIP42CG
SJD112T4G
SJD127T4
SJD127T4G
SJD32CT4
SJD32CT4G
TIP100G
TIP101G
TIP102G
TIP106G
TIP107G
TIP110G

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Bipolar Power Epi Base Technology:

2N6287G
2N6288G
2N6292G
2N6487G
2N6488G
2N6490G
2N6491G
2N6667G
BD179G
BD180G
BD234G
BD237G
BD241CG
BD242BG
BD242CG
BD243CG
BD244BG
BD244CG
BD435G
BD436TG
BD437G
BD437TG
BD438G
BD439G
BD440G
BD441G
BD442G
BD675AG
BD675G
BD676AG
BD676G
BD677AG
BD677G
BD678AG
BD678G
BD679AG
BD679G
BD680AG
BD680G
BD681G
BD682G
BD682TG
BD809G
MJD127G
MJD127T4
MJD127T4G
MJD128T4G
MJD148T4
MJD148T4G
MJD2955-1G
MJD2955G
MJD2955T4G
MJD3055G
MJD3055T4G
MJD31C1G
MJD31CG
MJD31CRLG
MJD31CT4G
MJD31T4G
MJD32CG
MJD32CRLG
MJD32CT4
MJD32CT4G
MJD32RLG
MJD32T4G
MJD41CRLG
MJD41CT4G
MJD42C1G
MJD42CG
MJD42CRLG
MJD42CT4G
MJD6039T4G
MJE2955TG
MJE3055TG
MJE371G
MJE4353G
MJE700G
MJE702G
MJE703G
MJE800G
MJE802G
MJE803G
MJF122G
MJF127G
MJF2955G
MJF3055G
TIP111G
TIP112G
TIP115G
TIP116G
TIP117G
TIP120G
TIP121G
TIP122G
TIP125G
TIP126G
TIP127G
TIP140G
TIP141G
TIP142G
TIP147G
TIP2955G
TIP29AG
TIP29BG
TIP29CG
TIP3055G
TIP30CG
TIP31AG
TIP31BG
TIP31CG
TIP31G
TIP32AG
TIP32BG
TIP32CG
TIP32G
TIP33CG
TIP35AG
TIP35CG
TIP36AG
TIP36CG
TIP41AG
TIP41BG
TIP41CG
TIP42AG
TIP42BG
TIP42CG
TIP42G

Bipolar Power Base Technology:

- MJ11021G
- MJ11022G
- MJ15003G
- MJ15004G
- MJ15022G
- MJ15023G
- MJ15024G
- MJ15025G
- MJ21193G
- MJ21194G
- MJ21195G
- MJ21196G
- MJC11021WP
- MJC11022WP
- MJC15003WP
- MJC15004WP
- MJE4343G
- MJH11017G
- MJH11019G
- MJH11020G
- MJH11021G
- MJH11022G
- MJL21193G
- MJL21194G
- MJL21195G
- MJL21196G
- MJL3281AG
- MJW21193G
- MJW21194G
- MJW21195G
- MJW21196G
- MJW3281AG
- NJL3281DG
- NJW21193G
- NJW21194G
- NJW3281G

TVS Array:

- LC03-6R2G
- NUP4106DR2G
- NUP4201DR2G
- SL05T1G
- SL15T1G
- SL24T1G
- SRDA05-4R2G
- SL12T1G
- SRDA3.3-4DR2G

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List of affected Customer Specific Parts

Ultrafast Rectifier

SUR456ERLG

Bipolar Power Epi Base Technology:

TEC0179PF
SJ6425-1G
SJB1001T4G
SJB1002T4
SJB1002T4G
SJD1001T4
SJD1001T4G
SJD1008LFKBT4G
SJD1015-1G
SJD1015T4
SJD1015T4G
SJD1018RLG
SJD1023T4
SJD1023T4G
SJD1029T4
SJD1029T4G
SJD31CT4G
SJD42CT4G
SJE9122G

Bipolar Power Base Technology:

SJ6521AG
SJ6522AG
SJ7147G
SJ8274G
SJ9622G
SJW3281G