



UPDATE NOTIFICATION
Generic Copy

23-AUG-2001

SUBJECT: ON Semiconductor Update Notification #11694

TITLE: Update to 10570: Non Active Area Die Shrink for Schottky Rectifiers

EFFECTIVE DATE: 24-Aug-2001

AFFECTED CHANGE CATEGORY: Die Shrink

AFFECTED PRODUCT DIVISION(S): Bipolar Discretes Products Div

ADDITIONAL RELIABILITY DATA: Available

Contact your local ON Semiconductor Sales Office or Terry Franks <RDMM60@onsemi.com>

SAMPLES: Contact Below

Contact your local ON Semiconductor Sales Office or Kevin Keller <RD9130@onsemi.com>

FOR ANY QUESTIONS CONCERNING THIS NOTIFICATION:

Contact Sales Office or Mark Wasilewski <RYGF20@onsemi.com>

DISCLAIMER:

Initial Product/Process Change Notification (IPCN) -First Notification distributed to customers.
Distributed at least 120 days from the effective date of the change.

Final Product/Process Change Notification (FPCN) -Final Notification completing the notification process. Distributed at least 60 days from the effective date 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:

This notice is an addendum to PCN 10570 issued on January 2, 2001, Non Active Area Die Shrink for Schottky Rectifiers. For all Schottky rectifiers in the 1 amp axial, 3 amp axial, SMA, SMB, SMC and Powermite packages, PCN 10570 is withdrawn for these products. This change has not been implemented for these products.



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QUALIFICATION PLAN:

Test	Conditions	Exceptions
H3TRB	Tj= Max rated Tj, RH= 85%, 1000 hrs.	
ESD	HBM	
HTRB	Tj=Max rated Tj, 1000 hrs.	
IOL	Ta=25 deg. C, delta Tj =>100 deg. C,	
Temp Cyc	Air to Air, -65 to 150 deg. C 1000 cycles	
Autoclave	Ta=121 deg. C, RH= 100%, PSIg= 15, 96 hrs.	
Parametric Verification	Tri Temp	

Qualification Vehicle Justification

Family / Package	Qualification Device	Reason Chosen
D2PAK/TO220	MBRB20100CT (DR0943G)	Highest Voltage (100V)
DPAK	MBRD660CT (DR0944G)	Highest Voltage (60V)
Powermite	MBRM140T3 (DR0954G)	Highest Voltage (40V)
SMC	MBRS360T3 (DR0965GS)	Highest Voltage (60V)
1A Surmetic(axial)	MBR1100 (DR0966G)	Highest Voltage (100V)
3A Surmetic(axial)	MBR3100 (DR0968G)	Highest Voltage (100V)
SMB/SMA	MBRS1100T3 (DR0966GS)	Highest Voltage (100V)
TO218 / TO247	MBR3045PT (DR0947G)	Highest Voltage (45V)
SOD123	MBR0540T3 (DR0972G)	Highest Voltage (40V)

RELIABILITY DATA SUMMARY:

Reliability Tests and Results:

D2PAK/TO220 MBRB20100CT (DR0943G)

Test Description	Lot 1	Lot 2	Lot 3
H3TRB 1000 hrs.	0/80	0/80	0/80
ESD HBM	*	*	*
HTRB 1000 hrs.	0/80	0/80	0/80
IOL 10000 cycles	0/80	0/80	0/80
Temp Cycle 1000 cycles	0/80	0/80	0/80
Autoclave 96 hrs.	0/80	0/80	0/80

*-ESD data to become available 2/1/01

Full Reliability report available on 2/1/01.

Remaining Qualifications in process and expected completion dates:

Family / Package	Qualification Device	Expected Completion
DPAK	MBRD660CT (DR0944G)	3/27/01
Powermite	MBRM140T3 (DR0954G)	3/27/01
SMC	MBRS360T3 (DR0965GS)	3/27/01
1A Surmetic (axial)	MBR1100 (DR0966G)	4/10/01
3A Surmetic (axial)	MBR3100 (DR0968G)	4/10/01
SMB/SMA	MBRS1100T3 (DR0966GS)	4/10/01
TO218 / TO247	MBR3045PT (DR0947G)	4/10/01
SOD123	MBR0540T3 (DR0972G)	6/01/01

Full reliability reports and parametric data will be available upon request after the Expected Completion dates listed above.

PHYSICAL DIMENSIONS: There will be no difference in the external physical dimensions.

Reliability Testing Conclusions: All product will meet or exceed ON Semiconductor Quality Standards



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ELECTRICAL CHARACTERISTIC SUMMARY:
 D2PAK/TO220 MBRB20100CT (DR0943G)

Ir @ 100V (upper spec limit: 100uA)

	Lot 1	Lot 2	Lot 3	Control
Minimum	0.89	0.84	0.85	1.00
Maximum	25.00	30.00	61.00	58.00
Average	2.41	1.86	2.58	3.28
Std Dev.	3.58	4.01	7.82	9.08
CPK	3.58	3.60	3.57	3.55

Vf @ 10A (upper spec limit: 850mV)

	Lot 1	Lot 2	Lot 3	Control
Minimum	749	752	750	746
Maximum	759	759	759	754
Average	755	755	755	750
Std Dev.	2.11	1.60	1.36	1.75
CPK	15.01	19.79	23.28	19.05

Vf @ 20A (upper spec limit: 950mV)

	Lot 1	Lot 2	Lot 3	Control
Minimum	840	843	845	837
Maximum	850	849	851	841
Average	845	846	848	839
Std Dev.	2.45	1.34	1.20	1.17
CPK	14.29	25.87	28.33	31.62

ADDITIONAL INFORMATION

Sample Availability and Earliest Shipments

Family/Package	Samples Available after	Shipment Starting after
D2PAK/TO220	3/12/01	4/21/01
DPAK	3/12/01	4/21/01
Powermite	3/12/01	4/21/01
SMC	3/12/01	4/21/01
1A Surmetic (axial)	3/12/01	4/21/01
3A Surmetic (axial)	3/12/01	4/21/01
SMB/SMA	3/12/01	4/21/01
TO218 / TO247	3/12/01	4/21/01
SOD123	3/12/01	4/21/01

CHANGED PART IDENTIFICATION:

Changed part ID will be by date code which will be various for each device.

**AFFECTED DEVICE LIST (WITHOUT SPECIALS)****PART**

1N5817
1N5817RL
1N5818
1N5818RL
1N5819
1N5819RL
1N5820
1N5820RL
1N5821
1N5821RL
1N5822
1N5822RL
80SQ045N
80SQ045NRL
ENGRSAMPABB
MBR1100
MBR1100RL
MBR130P
MBR130PRL
MBR140PRL
MBR150
MBR150RL
MBR160
MBR160RL
MBR3100
MBR3100RL
MBR340
MBR340P
MBR340PRL
MBR340RL
MBR350
MBR350RL
MBR360
MBR360RL
MBR835
MBR835RL
MBR840
MBR840RL
MBR845
MBR845RL
MBRA120ET3
MBRA120LT3
MBRA130LT3
MBRA140T3
MBRA160T3
MBRA210LT3
MBRM110ET3
MBRM110LT3
MBRM120ET3
MBRM120LT3
MBRM130LT3
MBRM140T3
MBRS1100T3
MBRS120-1T3
MBRS120T3
MBRS130LT3



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MBRS130T3
MBRS140-1T3
MBRS140LT3
MBRS140T3
MBRS1540HT3
MBRS1540T3
MBRS190T3
MBRS2040LT3
MBRS230LT3
MBRS240LT3
MBRS260T3
MBRS3100T3
MBRS320T3
MBRS330T3
MBRS340T3
MBRS360T3
MRBS3100T3
SBR5652T3
SBR81100T3
SBR8120T3
SBR8130LT3
SBR8130T3
SBR8140T3
SBR8340T3
SS16
SS26