



PRODUCT/PROCESS CHANGE NOTIFICATION
Generic Copy

25-MAY-2001

SUBJECT: Product/Process Change Notification #11434

TITLE: Final Notification - Die Shrink For 45V Schottky Rectifiers

EFFECTIVE DATE: 23-Jul-2001

AFFECTED CHANGE CATEGORY: Die Shrink

AFFECTED PRODUCT DIVISION: Bipolar Discretes Products Div

ADDITIONAL RELIABILITY DATA: Available

Contact your local ON Semiconductor Sales Office or Ken Crozier <RJT440@onsemi.com >

SAMPLES: Contact Below

Contact your local ON Semiconductor Sales Office or Robert Cook <R13943@onsemi.com>

FOR ANY QUESTIONS CONCERNING THIS NOTIFICATION:

Contact Sales Office or Robert Cook <R13943@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:

ON Semiconductor has qualified a reduction in die size of our 45V Schottky Rectifiers in TO220, TO220FP, and D2PAK packages. The device electrical performance does not significantly change, and is well within our published datasheet specifications, and the reliability is not affected. This change will allow ON Semiconductor to meet the increasing demand for our Schottky Rectifier product.



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QUALIFICATION PLAN:

<u>Test</u>	<u>Conditions</u>
H3TRB	Tj= Max rated Tj, RH= 85%, 1000 hrs.
HTRB	Tj= Max rated Tj, 1000 hrs.
IOL	Ta=25 deg. C, delta Tj =>100 deg. C,
Temp Cycle	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
TO220/TO220FP/D2PAK	MBR2545CT (DR0947G)	Largest Die (120x120 mils) TO220 package

RELIABILITY DATA SUMMARY:

Reliability Tests and Results: MBR2545CT (DR0947G)

<u>Test Description</u>	<u>Lot 1</u>	<u>Lot 2</u>	<u>Lot 3</u>
H3TRB 1000 hrs.	0/80	0/80	0/80
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

Full Reliability report available on request.

PHYSICAL DIMENSIONS:

There will be no difference in the external physical dimensions.

Reliability Testing Conclusions:

All products meet or exceed ON Semiconductor Quality Standards

Reliability report, from GDL is available.

Tracking number: 816700.

ELECTRICAL CHARACTERISTIC SUMMARY:

MBR1545CT

Data at +25C

Control Lot Data Summary

	IR@45V	VF@7.5A	VF@15A
	Amps	Volts	Volts
avg	1.39E-05	5.52E-01	6.94E-01
stdev	2.18E-06	5.84E-03	1.05E-02

Lot A Data Summary (on MBR1545CTP)

	IR@45V	VF@7.5A	VF@15A
	Amps	Volts	Volts
avg	8.43E-06	5.58E-01	6.91E-01
stdev	3.69E-06	2.91E-03	5.39E-03

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Lot B Data Summary (on MBR1545CTP)
IR@45V VF@7.5A VF@15A
Amps Volts Volts
avg 3.70E-06 5.79E-01 7.19E-01
stdev 5.68E-07 3.93E-03 4.99E-03

Lot C Data Summary (on MBR1545CTP)
IR@45V VF@7.5A VF@15A
Amps Volts Volts
avg 5.36E-06 5.69E-01 7.02E-01
stdev 2.94E-07 2.03E-03 3.38E-03

MBR2045CT
Data at +25C

Control Lot Data Summary
IR@45V VF@10A VF@20A
Amps Volts Volts
avg 1.57E-05 5.65E-01 7.14E-01
stdev 3.48E-06 8.03E-03 1.23E-02

Lot A Data Summary (on MBR2045CTP)
IR@45V VF@10A VF@20A
Amps Volts Volts
avg 6.06E-06 6.09E-01 7.71E-01
stdev 7.10E-07 6.02E-03 7.12E-03

Lot B Data Summary (on MBR2045CTP)
IR@45V VF@10A VF@20A
Amps Volts Volts
avg 6.87E-06 5.84E-01 7.27E-01
stdev 1.54E-06 6.94E-03 5.35E-03

Lot C Data Summary (on MBR2045CTP)
IR@45V VF@10A VF@20A
Amps Volts Volts
avg 8.37E-06 5.89E-01 7.38E-01
stdev 8.94E-07 6.53E-03 9.95E-03

MBR2545CT
Data at +25C

Control Lot Data Summary
IR@45V VF@30A
Amps Volts
avg 1.74E-05 7.10E-01
stdev 9.66E-07 4.36E-03

Lot A Data Summary (on MBR2545CTP)
IR@45V VF@30A
Amps Volts
avg 1.06E-05 7.61E-01
stdev 8.92E-07 3.55E-03

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Lot B Data Summary (on MBR2545CTP)

	IR@45V	VF@30A
	Amps	Volts
avg	1.09E-05	7.79E-01
stdev	7.96E-07	3.40E-03

Lot C Data Summary (on MBR2545CTP)

	IR@45V	VF@30A
	Amps	Volts
avg	1.34E-05	7.78E-01
stdev	1.23E-06	3.07E-03

CHANGED PART IDENTIFICATION:

The first date code that the customer may receive is 0130.

ADDITIONAL INFORMATION:

Notification and Sample Contact(s) at ON Semiconductor:

	Americas	Asia-Pacific
Name	Bob Cook	Peter Tang
Email	R13943@onsemi.com	Peter.tang@onsemi.com
Phone	602-244-3599	65-3902110
Country	USA	Singapore

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

MBR1535CT
MBR1545CT
MBR2045CT
MBR2535CT
MBR2545CT
MBR3045ST
MBRB1545CT
MBRB1545CTT4
MBRB2545CT
MBRB2545CTT4
MBRF2545CT
SBRB1545CT
SBRB2545CT
SBRB2545CTT4