



FINAL PRODUCT/PROCESS CHANGE NOTIFICATION
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30-MAR-2004

SUBJECT: ON Semiconductor Final Product/Process Change Notification #13389

TITLE: Schottky Die Shrink

EFFECTIVE DATE: 30-May-2004

AFFECTED CHANGE CATEGORY: Die Shrink

AFFECTED PRODUCT DIVISION: Discretes Products

ADDITIONAL RELIABILITY DATA: Available

Contact your local ON Semiconductor Sales Representative or Laura Rivers <S20636@onsemi.com>

SAMPLES: Contact your local ON Semiconductor Sales Representative or Dianne Von Borstel <RPDR20@onsemi.com>

FOR ANY QUESTIONS CONCERNING THIS NOTIFICATION:

Contact Sales Representative or Roberto Guerrero <FFM87M@onsemi.com>

NOTIFICATION TYPE:

Final Product/Process Change Notification (FPCN)

Final change notification sent to customers. FPCNs are issued at least 60 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:

This is the second FPCN for IPCN 12687 available at www.onsemi.com. ON Semiconductor has qualified a reduction in die size for the listed Schottky Rectifier devices. The new die design will continue to be manufactured using the same design rules and process as the previous design. The new design will continue to meet the current data sheet specifications.

RELIABILITY DATA SUMMARY:

Reliability Test Results: Package = TO-220, Device = MBR20100CT

Test	Conditions	Interval	Sample Size (Lots x Units)	Rejects
HTRB	150 deg C, 80% rated Voltage	504 and 1008 hrs	3x80	0
IOL	Delta Tj of 100 deg C max	4286 and 8572 cyc	3x80	0
TC	Ta=-65C to +150 deg C	500 and 1000 cyc	3x80	0



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ELECTRICAL CHARACTERISTIC SUMMARY:

Electrical characterization has been completed on the designated qualification devices. These devices are representative of the entire family and will qualify the process. Datasheet specifications and electrical performance of the devices will remain unchanged.

Characterization summary results:

Device MBR20100CT		DC Results			
Lot	Temp	Stat	Ir@100V	Vf@10A	Vf@20A
CONTROL	25C	AVG	5.48E-07	0.742	0.820
		STDEV	1.21E-07	0.009	0.009
		MIN	2.88E-07	0.733	0.812
		MAX	8.46E-07	0.764	0.843
		CPK	274.53	4.24	4.96
ENG 1	25C	AVG	9.20E-07	0.739	0.834
		STDEV	8.64E-07	0.002	0.003
		MIN	6.14E-07	0.735	0.829
		MAX	6.20E-06	0.742	0.845
		CPK	38.23	17.23	12.87
ENG2	25C	AVG	7.75E-07	0.731	0.821
		STDEV	1.78E-07	0.004	0.004
		MIN	4.51E-07	0.724	0.815
		MAX	1.39E-06	0.741	0.830
		CPK	185.53	9.64	12.27
ENG3	25C	AVG	1.30E-06	0.735	0.833
		STDEV	5.54E-07	0.015	0.016
		MIN	8.20E-07	0.728	0.826
		MAX	3.00E-06	0.829	0.926
		CPK	59.35	2.51	2.49
Device MBRB20100CT		DC Results			
Lot	Temp	Stat	Ir@100V	Vf@10A	Vf@20A
CONTROL	25C	AVG	6.02E-07	0.754	0.845
		STDEV	5.51E-08	0.002	0.002
		MIN	5.01E-07	0.749	0.841
		MAX	7.15E-07	0.759	0.851
		CPK	601.67	13.42	15.02
ENG 1	25C	AVG	7.53E-07	0.727	0.821
		STDEV	1.40E-07	0.003	0.003
		MIN	6.50E-07	0.719	0.816
		MAX	1.23E-06	0.731	0.828
		CPK	236.01	15.33	13.70
ENG2	25C	AVG	6.89E-07	0.730	0.823
		STDEV	1.44E-07	0.002	0.002
		MIN	5.67E-07	0.727	0.819
		MAX	1.36E-06	0.735	0.830
		CPK	229.14	22.14	17.86



ENG3	25C	AVG	1.33E-06	0.725	0.820
		STDEV	7.58E-07	0.002	0.003
		MIN	9.87E-07	0.721	0.816
		MAX	5.03E-06	0.730	0.825
		CPK	43.41	16.89	16.27

Additional data on UIS, IFSM and ESD available on request.

CHANGED PART IDENTIFICATION:

There will be no changes to device marking, case outline and package functionality. Products with date code 0422 (June 4, 2004) and forward, may carry the change.

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

MBR16100CT
MBR20100CT
MBR2080CT
MBR2090CT
MBR2090CTLFAJ
MBRB20100CT
MBRB20100CTT4
MBRF20100CT
MBRF2060CT