ON Semiconductor
Formerly a Division of Motorola

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PRODUCT/PROCESS CHANGE NOTIFICATION
FOR ON Semiconductor

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NOTIFICATION #: 10046 PAGE: 1
ISSUING DIVISION: PHX-PPD

ACTUAL ISSUE DATE: 29-Sep-1999
ACTUAL EFFECT DATE: 28-Nov-1999

TITLE: QUALIFY ADDITIONAL ASSEMBLY/TEST SITE OF SMA GENERAL PURPOSE RECTIFIERS

E01 TITLE: SEEFULL CHINA ADDITION

AFFECTED CHANGE CATEGORIES
- Subcontractor Assembly Site
- Subcontractor Test Site

AFFECTED PRODUCT DIVISIONS
- MOS POWER PRODUCTS

ADDITIONAL RELIABILITY DATA: Available
REFERENCE: CAROLYN ANTILLON
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SAMPLES: Contact Below
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NOTIFICATION DATA
REFERENCE:CHRIS HOLLY USERID:RV1140
PHONE: 602-244-4961

DISCLAIMER

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 currently produces SMA General Purpose Rectifiers (primarily MRA4000-series) at a subcontractor. In order to provide additional capacity, ON Semiconductor is qualifying our subcontractor's other facility in Seefull, China, where a similar production line already exists. In order to expedite this additional capacity to service our customers, we will start shipping product from the new fab after 60 days from the PCN release date.

QUALIFICATION PLAN

See Rel Data

RELIABILITY DATA SUMMARY

Reliability Data Schedule for Qualification Lots processed at Seefull China:
500 hours will be available after November 15, 1999.
1000 hours will be available after December 6, 1999.

Samples will be available by request after November 1, 1999.

Preliminary Reliability Results - MRA4007T3
Assembly/Test Site: Seefull (Shanghai) China

TESTS	CONDITIONS	INTERVAL	SIZE	REJECTS
HTRB	150DegC, 800V	168 hours	3 x 22	0
H3TRB	85DegC, 85% RH	168 hours	3 x 22	0
IOL	0.8A	168 hours	3 x 22	0
Autoclave	121DegC, 15psi	96 hours	3 x 22	0
Temp Cycle	-55DegC to +150DegC	30 cycles	3 x 22	0
Res.to Solder Heat	260DegC plus or minus 15DegC	10 sec.	3 x 22	0

ELECTRICAL CHARACTERISTIC SUMMARY

Device - MRA4007T3

Assembly/Test Site: Seefull China
Test Temperature: 25DegC

Forward Voltage (volts) @ If=0.5A

	CONTROL GROUP (TAIWAN)	TEST GROUP (SEEFULL)		
		Lot 1	Lot 2	Lot 3
MAX LIMIT	0.950	0.950	0.950	0.950
MIN	0.892	0.892	0.892	0.892
MAX	0.907	0.912	0.916	0.919
AVERAGE	0.899	0.896	0.899	0.898
STD DEV	0.005	0.006	0.007	0.008
CPK	3.4	3.0	2.4	2.2

Forward Voltage (volts) @ If=1.0A

	CONTROL GROUP (TAIWAN)	TEST GROUP (SEEFULL)		
		Lot 1	Lot 2	Lot 3
MAX LIMIT	1.100	1.100	1.100	1.100
MIN	0.946	0.946	0.946	0.941
MAX	0.970	0.980	0.980	0.985
AVERAGE	0.957	0.953	0.957	0.956
STD DEV	0.008	0.010	0.010	0.012
CPK	6.0	4.9	4.8	4.0

Reverse Leakage (nanoamps) @ Vr=400V

	CONTROL GROUP (TAIWAN)	TEST GROUP (SEEFULL)		
		Lot 1	Lot 2	Lot 3
MAX LIMIT	10000	10000	10000	10000
MIN	052	71	62	88
MAX	231	267	162	399
AVERAGE	107	156	102	123
STD DEV	54	68	23	56
CPK	61.1	48.3	143.5	58.8

Reverse Leakage (nanoamps) @ Vr=1000V

	CONTROL GROUP (TAIWAN)	TEST GROUP (SEEFULL)		
		Lot 1	Lot 2	Lot 3
MAX LIMIT	10000	10000	10000	10000
MIN	145	188	148	246
MAX	541	632	541	495
AVERAGE	290	460	284	338
STD DEV	125	160	79	65
CPK	25.9	19.9	41.0	49.6

CHANGED PART IDENTIFICATION

Customers may receive SMA product manufactured from either Seefull or Taiwan starting with Date Code 9949 or later.

AFFECTED DEVICES

MRA4003T3
MRA4004T3
MRA4005T3
MRA4006T3
MRA4007T3
SR4486
SR4488T3