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**PRODUCT/PROCESS CHANGE NOTIFICATION**  
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**09-OCT-2001**

**SUBJECT: ON Semiconductor Product/Process Change Notification #11940**

**TITLE: Final Notification - Qualification of Alternate Assembly/Test Sites**

**EFFECTIVE DATE: 08-Dec-2001**

**AFFECTED CHANGE CATEGORY:**

**Subcontractor Assembly/Test Site**

**ON Semiconductor Assembly/Test Site**

**AFFECTED PRODUCT DIVISION: Bipolar Discretes & MOS Power Products Div**

**ADDITIONAL RELIABILITY DATA:** Available

Contact your local ON Semiconductor Sales Office or Mark Wasilewski <RYGF20@onsemi.com>

**SAMPLES:** Contact your local ON Semiconductor Sales Office or  
Barbara Matteson <RM2230@onsemi.com>

**FOR ANY QUESTIONS CONCERNING THIS NOTIFICATION:**

Contact Sales Office or Barbara Matteson <RM2230@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:**

As part of our Manufacturing Restructuring Program, ON Semiconductor is qualifying the following alternate assembly/test sites for our D2Pak, TO220 Clip and Waffle Pack Chip Sale Power Products currently produced in our Guadalajara, Mexico facility:

Package	D2PAK
Technologies	Bipolar Power, Rectifier, IGBT, TMOS
Alternate Assembly/Test Site	ON Semiconductor SBN1 (Seremban, Malaysia)
Package	TO220 Clip
Technologies	Thyristor
Alternate Assembly/Test Site	ON Semiconductor SBN1 (Seremban, Malaysia)
Package	Chip Sales-Waffle Pack
Technologies	Bipolar Power, Zeners, IGBT
Alternate Assembly/Test Site	PSi Technologies (Manilla, Philippines)


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All physical, as well as electrical characteristics will not change and the reliability will continue to meet ON Semiconductor's high quality standards. This alternate site qualification will allow ON Semiconductor to continue to meet the high demand for our Power Product families.

**Sample Availability :**

In order to expedite the product sampling process, ON Semiconductor requests that our customers place their sample request orders to Barbara Matteson (contact information below by November 1, 2001. This will allow ON Semiconductor to produce and deliver the samples in a timely manner (usually 2-3 weeks after receiving the order), thus ensuring that our valued customers have adequate time to evaluate this change in their applications.

Sample contact at ON Semiconductor:

Name: Barbara Matteson  
Email: b.matteson@onsemi.com  
Phone: 602-244-6678  
Country: USA

**QUALIFICATION PLAN:**
**Qualification Vehicle Justification**

<b>Package</b>	<b>New Site</b>	<b>Tech</b>	<b>Qual Vehicles</b>	<b>Justification</b>
D2PAK	SBN1	Bipolar	SJB1002T4	Highest Voltage
		Rectifier	MBRB4030T4	Largest Die
		IGBT	MGB20N40CL	Gen1
		IGBT	MGB15N40CL	Gen2
		TMOS	MTP75N05HD	Largest Die
Thyristor	SBN1	Thyristor	MAC15A10	Highest Voltage, Largest Die
TO220 Clip		Thyristor	MAC228A10	Highest Voltage, Sensitive Gate

**RELIABILITY DATA SUMMARY:**

Reliability Tests and Results:

	HTRB		HTGB		H3TRB		IOL		TC		PTH	
	O HRS	500HRS	O HRS	500HRS	O HRS	500HRS	OCYC	7.5K CYC	O HRS	500CYC	O HRS	96HRS
SJB1002T4 PLM1591G (BIPOLAR D2PAK)												
CONTROL	0/80	0/80	NA	NA	0/80	0/80	0/80	0/80	0/80	0/80	0/80	0/80
TEST1	0/80	0/80	NA	NA	0/80	0/80	0/80	0/80	0/80	0/80	0/80	0/80
MBRB4030T4 RLD926 (RECTIFIER D2PAK)												
CONTROL	0/80	0/80	NA	NA	0/80	0/80	0/80	0/80	0/80	0/80	0/80	0/80
TEST1	0/80	0/80	NA	NA	0/80	0/80	0/80	0/80	0/80	0/80	0/80	0/80
MGB20N40CL PFM3794 (IGBT D2PAK)												
CONTROL	0/80	0/80	0/80	0/80	0/80	0/80	0/80	0/80	0/80	0/80	0/80	0/80
TEST1	0/80	0/80	0/80	0/80	0/80	0/80	0/80	0/80	0/80	0/80	0/80	0/80
MGB15N40CLT4 PFM3990 (IGBT D2PAK)												
CONTROL	0/80	0/80	0/80	0/80	0/80	0/80	0/80	0/80	0/80	0/80	0/80	0/80
test 1	0/80	0/80	0/80	0/80	0/80	0/80	0/80	0/80	0/80	0/80	0/80	0/80
test 2	0/80	0/80	0/80	0/80	0/80	0/80	0/80	0/80	0/80	0/80	0/80	0/80
MTB75N05HD PFM9504 (D2PAK)												
CONTROL	0/80	0/80	0/80	0/80	0/80	0/80	0/80	0/80	0/80	0/80	0/80	0/80
test 1	0/80	0/80	0/80	0/80	0/80	0/80	0/80	0/80	0/80	0/80	0/80	0/80
test 2	0/80	0/80	0/80	0/80	0/80	0/80	0/80	0/80	0/80	0/80	0/80	0/80
test 3	0/80	0/80	0/80	0/80	0/80	0/80	0/80	0/80	0/80	0/80	0/80	0/80



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TO220	HTRB	HTFB	H3TRB	IOL	TC	PTH
CLIP	OHRS 500HRS	OHRS 500HRS	OHRS 500HRS	OCYC 7.5K CYC	OHRS 500CYC	OHRS 96HRS
MAC228A10 TL977						
CONTROL	0/80 0/80	0/80 0/80	0/80 0/80	NA NA	0/80 0/80	0/80 0/80
TEST1	0/80 0/80	0/80 0/80	0/80 0/80	NA NA	0/80 0/80	0/80 0/80
MAC15A10 TL981						
CONTROL	0/80 0/80	0/80 0/80	0/80 0/80	NA NA	0/80 0/80	0/80 0/80
TEST1	0/80 0/80	0/80 0/80	0/80 0/80	NA NA	0/80 0/80	0/80 0/80
TEST2	0/80 0/80	0/80 0/80	0/80 0/80	NA NA	0/80 0/80	0/80 0/80

**ELECTRICAL CHARACTERISTIC SUMMARY:**

No Change. Characterization data for specific device(s) can be obtained from your ON Semiconductor representative.

**CHANGED PART IDENTIFICATION:**

D2Pak	GDL	SBN
Mold Logo	Mexico	MSIA
Marking Date Code	YXX	RYXX

TO220 Clip	GDL	SBN
Mold Logo	Mexico	MSIA
Marking Date Code	YXX	YXX

Chip Sale-Waffle Pack - Label will indicate the parts were manufactured in the Philippines.

**RELATED NOTIFICATIONS:**

#11678 INITIAL NOTIFICATION - QUALIFICATION OF ALTERNATE ASSEMBLY/TEST SITES FOR POWER PRODUCTS

#11734 FINAL NOTIFICATION - QUALIFICATION OF ASSEMBLY AND TEST SITE FOR TO220FP (CASE 221D-02) PRODUCTS.

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

**PART**

1C5355BWP, 1C5368BWP, 1C5822WP, 2C3773WP, 2C6398WP, 2N6344, 2N6344A, 2N6348A, 2N6349, 2N6349A, 2N6394, 2N6395, 2N6397, 2N6397T, 2N6399, 2N6400, 2N6401, 2N6402, 2N6403, 2N6404, 2N6405, 2N6504, 2N6505, 2N6507, 2N6507T, 2N6508, 2N6508T, 2N6509, 2N6509T, C122B1, C122F1, C122F1T, MAC15-008, MAC15-010, MAC15A10, MAC15A6, MAC15A8, MAC210A10, MAC210A8, MAC212A10, MAC212A8, MAC218A8, MAC228A10, MAC228A4, MAC228A6, MAC228A8, MAC3030-008, MBRB1045, MBRB1045T4, MBRB1545CT, MBRB1545CTT4, MBRB20100CT, MBRB20100CTT4, MBRB20200CT, MBRB20200CTT4, MBRB2060CT, MBRB2060CTT4, MBRB2515L, MBRB2515LT4, MBRB2535CTL, MBRB2535CTLT4, MBRB2545CT, MBRB2545CTT4, MBRB3030CT, MBRB3030CTL, MBRB3030CTLT4, MBRB3030CTT4, MBRB4030, MBRB4030T4, MBRC1045WP, MBRC1645WP, MBRC20100CTWP, MBRC20200CTWP, MBRC2535CTLWP, MBRC835L, MBRC835LWP, MBRC929, MCR218-002, MCR218-004, MCR218-006, MCR218-6T, MCR310-010, MCR68-002, MCR69-002, MCR69-003, MCR72-003, MCR72-006, MCR72-008, MCR72-6T, MCR72-8T, MCRC16MWP, MGB15N35CLT4, MGB15N40CLT4, MGB19N35CLT4, MGB20N35CLT4, MGB20N40CL, MGB20N40CLT4, MGC12N120WP, MJC11015WP, MJC11016WP, MJC11021WP, MJC122WP, MJC15003WP, MJC15004WP, MJC15015WP, MJC2955WP, MJEC15030WP, MJEC15031WP, MJEC340WP, MJEC350WP, MJEC44H11WP, MRC2535WP, MSFC1N02LWP, MTB10N40E, MTB10N40ET4, MTB10N60E7, MTB10N60E7T4, MTB1306, MTB1306P, MTB1306PT4, MTB1306T4, MTB20N20E, MTB20N20ET4, MTB23P06V, MTB23P06VT4,

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MTB24N06HDL, MTB24N06HDL1, MTB24N06HDLT4, MTB29N15E, MTB29N15ET4, MTB2N40E, MTB2P50E, MTB2P50ET4, MTB30N06VL, MTB30N06VLT4, MTB30P06V, MTB30P06VT4, MTB33N10E, MTB33N10ET4, MTB36N06V, MTB36N06VT4, MTB40N10E, MTB40N10ET4, MTB4N50ET4, MTB50N06V, MTB50N06VL, MTB50N06VLT4, MTB50N06VT4, MTB50P03HDL, MTB50P03HDLT4, MTB52N06V, MTB52N06VL, MTB52N06VLT4, MTB52N06VT4, MTB55N06Z, MTB55N06ZT4, MTB60N05HDL, MTB60N05HDLT4, MTB60N06HD, MTB60N06HDT4, MTB6N60ET4, MTB75N03HDL, MTB75N03HDLT4, MTB75N05HD, MTB75N05HDT4, MTB75N06HD, MTB75N06HDT4, MTB8N50E, MTB8N50ET4, MTC100N10EWP, MTC14N50EWP, MTC2N7002WP, MTC75N05HDWP, MTCJ10N10EWP, MTCJ7N20WP, MURB1620CT, MURB1620CTT4, MURB1660CT, MURB1660CTT4, MURC120WP, MURC1510WP, MURC1520WP, MURC1560WP, MURC160WP, MURC3020DWP, MURC3040WP, MURC820WP, MURC860WP, MURHB840CT, MURHB840CTT4, MURHB860CT, MURHB860CTT4, MURHC860CTWP, MZC12A5WP, MZC16A5WP, MZC3.3A5WP, MZC5.6A5WP, MZC5355B, MZC5355BWP, MZC5361B, MZC5361BWP, MZC5368B, MZC5368BWP, NGB15N41CLT4, NSR2369AWP, NTB10N40, NTB10N40T4, NTB10N60, NTB10N60T4, NTB12N50, NTB12N50T4, NTB13N10, NTB13N10T4, NTB15N40, NTB15N40T4, NTB18N06, NTB18N06L, NTB18N06LT4, NTB18N06T4, NTB22N06, NTB22N06L, NTB22N06LT4, NTB22N06T4, NTB27N06L, NTB27N06LT4, NTB30N06, NTB30N06L, NTB30N06LT4, NTB30N06T4, NTB30N20, NTB30N20T4, NTB35N15, NTB35N15T4, NTB45N06, NTB45N06L, NTB45N06LT4, NTB45N06T4, NTB52N10, NTB52N10T4, NTB60N06, NTB60N06L, NTB60N06LT4, NTB60N06T4, NTB6N60, NTB6N60T4, NTB75N03-006, NTB75N03-06T4, NTB75N03L09, NTB75N03L09T4, NTB75N06, NTB75N06L, NTB75N06LT4, NTB75N06T4, NTB8N50, NTB8N50T4, NTC3055L104, NTC3055L104WP, SAC847-008, SBRB1545CT, SBRB20100CT, SBRB20100CTT4, SBRB20200CT, SBRB20200CTT4, SBRB2060CT, SBRB2060CTT4, SBRB2515L, SBRB2515LT4, SBRB2535CTL, SBRB2535CTLT4, SBRB2545CT, SBRB2545CTT4, SBRB3030CT, SBRB3030CTL, SBRB3030CTLT4, SBRB3030CTT4, SBRB4030, SBRB4030T4, SC141D, SC146D, SGB20N36CLT4, SJB42C, SJB42CT4, SJEC13003WP, STB10N40E, STB10N40ET4, STB1306, STB1306T4, STB15N06V, STB15N06VT4, STB20N20E, STB20N20ET4, STB23P06V, STB23P06VT4, STB24N06HDL, STB24N06HDL1, STB24N06HDLT4, STB29N15E, STB29N15ET4, STB2N60E, STB2N60ET4, STB2P50E, STB2P50ET4, STB30N06EL, STB30N06ELT4, STB30N06VL, STB30N06VLT4, STB30P06V, STB30P06VT4, STB33N10E, STB33N10ET4, STB36N06V, STB36N06VT4, STB3N60E, STB3N60ET4, STB40N10E, STB40N10ET4, STB4N40E, STB4N40ET4, STB4N50E, STB4N50ET4, STB50N06E, STB50N06EL, STB50N06ELT4, STB50N06ET4, STB50N06V, STB50N06VL, STB50N06VLT4, STB50N06VT4, STB50P03HDL, STB50P03HDLT4, STB52N06V, STB52N06VL, STB52N06VLT4, STB52N06VT4, STB55N06Z, STB55N06ZT4, STB60N05HDL, STB60N05HDLT4, STB60N06HD, STB60N06HDT4, STB6N60E, STB6N60ET4, STB75N03HDL, STB75N03HDLT4, STB75N05HD, STB75N05HDT4, STB75N06HD, STB75N06HDT4, STB8N50E, STB8N50ET4, STB9N25E, STB9N25ET4, STC600WP, SURB1620CT, SURB1620CTT4, SURB1660CT, SURB1660CTT4, SURC235WP, SURHB840CT, SURHB840CTT4, SURHB860CT, SURHB860CTT4, T2500D, T2800D, TBRAC1645PF, TEAC3055WP, TIPC122WP, TIPC127WP, TPA0233, TURC160PF, XTB10N60, XTB10N60T4