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**PRODUCT/PROCESS CHANGE NOTIFICATION**  
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**14-MAR-2001**

**SUBJECT: Product/Process Change Notification # 10770**

**TITLE: Addition Of Tower Semiconductor as a qualified wafer fabrication site**

**EFFECTIVE DATE: 22-Jun-2001**

**AFFECTED CHANGE CATEGORY: Subcontractor Fab Site**

**AFFECTED PRODUCT DIVISION: Logic Products**

**ADDITIONAL RELIABILITY DATA:** Available  
Contact your local ON Semiconductor Sales Office.  
or Ken Fergus <RRST50@onsemi.com>

**SAMPLES:** Contact Below  
Contact your local ON Semiconductor Sales Office.  
or Fred Zlotnick <RFGT70@onsemi.com>

**FOR ANY QUESTIONS CONCERNING THIS NOTIFICATION:**  
Contact Sales Office or Dianne Von Borstel <RPDR20@onsemi.com>

**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 is pleased to announce the addition of Tower Semiconductor for wafer fabrication of VHC, LVX, LCX, product families. ON Semiconductor will implement this increase in capacity to support rapidly growing demand for these Logic products in an effort to assure our customers of ON Semi's continued commitment to assured supply, on time delivery and continuous quality improvement. Device types from the above product families will be manufactured on the Tower Semiconductor 0.5 micron CMOS two layer metal process. Tower Semiconductor, and Tower Semiconductor's Fab are located in Israel.



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**QUALIFICATION PLAN:**

**Tower Semiconductor 0.5 Micron CMOS Process Environmental Stress Results**

<u>Test</u>	<u>Lot #</u>	<u>Samples</u>	<u>500 hrs</u>	<u>1000 hrs</u>	<u>1500 hrs</u>
High Temp Storage T=150 C	NTS50F	124	0	0	0

<u>Test</u>	<u>Lot #</u>	<u>Samples</u>	<u>168 hrs</u>	<u>500 hrs</u>	<u>1000 hrs</u>	<u>2000 hrs</u>
High temp Op Life	N7L5020	77	0	0	0	0
Ta=125C	N7L5022	77	0	0	0	0
Vcc=5.5V	NTS50F	77	0	0	0	0@ 1500 hrs
	N7L5072	77	0	0	0	0@ 1500 hrs
	N9L5155	95	0	0	0	0

<u>Test</u>	<u>Lot #</u>	<u>Samples</u>	<u>500 cyc</u>	<u>1000 cyc</u>	<u>1500 cyc</u>
Temp Cycle	N7L5099	77	0	0	0
T=-65 to + 150C	NTS50F	77	0	0	0
Air to Air	N7L5151	77	0	0	-
	N9L5155	77	0	0	0*

<u>Test</u>	<u>Lot #</u>	<u>Samples</u>	<u>168 hrs</u>	<u>500 hrs</u>	<u>1000 hrs</u>
Temp Humidity Bias	NTS50F	77	0	0	0
T=85C	N7L5144	67	0	0	0
RH=85%	N7L5151	77	0	0	0

<u>Test</u>	<u>Lot #</u>	<u>Samples</u>	<u>168 hrs</u>
Autoclave	NTS50F	55	0
T=121C	N7L5144	65	0
P=15 psig	N7L5151	45	0

<u>Test</u>	<u>Lot #</u>	<u>Samples</u>	<u>Result</u>
ESD	Cell	5	Passed
HBM @ 2000V	Library		
Latch Up @ +/- 200 ma	N7L5151	3	Passed

\* one esd/eos failure

**RELIABILITY DATA SUMMARY:**

Additional ON Semi Reliability Data will be available upon request prior to the expiration of the PCN.



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**ELECTRICAL CHARACTERISTIC SUMMARY:**

Characterization data will be available upon request.

Datasheet Specifications will remain unchanged. Any changes to typical values will be reflected in revised versions of the datasheets at the time each particular device is made available for sampling. Characterization data and samples of Phase 1 devices will be available by March 1. Additional device types will become available as they are qualified for manufacturing. This will occur throughout 2001.

Electrical characterization will be performed on each device type to all datasheet parameters across temperature and voltage. ESD (HBM/MM/CDM) and Latch-up will also be characterized.

Please direct all questions or sample and data requests to your local ON Semiconductor sales office or to the contact person listed.

**CHANGED PART IDENTIFICATION:**

All affected devices with date codes after 10 April 2001 may contain die from Tower fab. To determine the date corresponding to the code on a particular part, please consult applications note AND8004/D available from your ON Semiconductor Sales Office, or from our website at [www.onsemi.com](http://www.onsemi.com).



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**AFFECTED DEVICE LIST:**

**PART**

MC74LCX00D  
MC74LCX00DR2  
MC74LCX00DT  
MC74LCX00DTR2  
MC74LCX00M  
MC74LCX00MEL  
MC74LCX02D  
MC74LCX02DR2  
MC74LCX02DT  
MC74LCX02DTR2  
MC74LCX02M  
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MC74LCX04D  
MC74LCX04DR2  
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