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**FINAL PRODUCT/PROCESS CHANGE NOTIFICATION**  
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**29-NOV-2004**

**SUBJECT: ON Semiconductor Final Product/Process Change Notification #13826**

**TITLE: Addition of Tower Semiconductor Fab for Minigate, LCX, LVX, Analog Switch and VHC Logic Products**

**EFFECTIVE DATE: 29-Jan-2005**

**AFFECTED CHANGE CATEGORY: Subcontractor Fab Site**

**AFFECTED PRODUCT DIVISION: Logic Products**

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

**SAMPLES:** Contact your local ON Semiconductor Sales Representative or Ilana Flyer <RVFK50@onsemi.com>

**FOR ANY QUESTIONS CONCERNING THIS NOTIFICATION:**  
Contact Sales Representative or Lyle Stewart <RJJ930@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:**

ON Semiconductor is pleased to announce continued expansion of wafer capacity for MiniGate, LCX, LVX, Analog Switch and VHC Logic products utilizing Tower Semiconductor.

ON Semiconductor is implementing this increase in capacity to support rapidly growing demand for these Logic products in an effort to assure our customers of ON Semiconductor's continued commitment to assured supply, on time delivery and continuous quality improvement.

The products will be redesigned using Tower Semiconductor's 0.6um design rules for their double layer metal, single polysilicon gate standard CMOS process. No performance changes are expected for these products. All product performance will meet the current datasheet specifications.

Tower Semiconductor is a high volume Silicon supplier for flash memory, image sensors, mixed signal and standard CMOS products. They are located in Migdal Haemek, Israel, and are an ISO9001/QS9000 certified facility.



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**RELIABILITY DATA SUMMARY:**

Tower 0.6 micron CMOS MiniGate(TM) reliability summary:

SC88A package, 1 lot ea. of 74VHC1GT00, 74VHC1G00, 74VHC1GT08:

Test	Conditions	Results (#fail/total SS)
High Temp Op Life	TA=150C for 504hrs	0/77, 0/77, 0/77
High Temp Bake	150C for 504 hrs	0/77, 0/77, 0/77
RSH	260C, 10 seconds	0/30, 0/30, 0/30
PC-Temp Cycle	-65/+150C for 500 cyc	0/77, 0/77, 0/77
PC-Autoclave	121C/100%RH/15psig for 96hrs	0/77, 0/77, 0/77
PC-HAST	131C/80%RH for 96 hrs	0/77, 0/77, 0/77
PC	168hrs 85C/85%, 3 IR at 260C	0/231, 0/231, 0/231

Tower 0.6 micron CMOS Multigate reliability summary:

Two lots of the MC74VHC00D, 2 lots of the MC74VHCT00D, 77 pcs/lot per test:

Test	Conditions	Results (#fail/total SS)
High Temp Bake	TA=150C, 1008 hrs	0/308
MSL1 precondition	3 IR at 260C	0/924
TC+MSL1	-65/+150C, 1000 cyc	0/308
HAST+MSL1	TA=+130C,RH=85%,PSIG=18.8,bias,192hrs	0/308
Autoclave+MSL1	TA=121C,RH=100%,PSIG=15,192hrs	0/308

**ELECTRICAL CHARACTERISTIC SUMMARY:**

All product performance meets current datasheet specifications. Data is available upon request.

**CHANGED PART IDENTIFICATION:**

Devices Shipped After WW04 may be manufactured in Tower.

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

**PART**

- MC74LCX14D
- MC74LCX14DR2
- MC74LCX14DR2G
- MC74LCX14DT
- MC74LCX14DTR2
- MC74LVX4245DT
- MC74LVX4245DTR2
- MC74LVXC3245DT
- MC74LVXC3245DTR2
- NLAS44599MN
- NLAS44599MNR2
- NLAS44599MNR2G
- NLVLVX4245DTR2