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**FINAL PRODUCT/PROCESS CHANGE NOTIFICATION**  
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**02-JUL-2004**

**SUBJECT: ON Semiconductor Final Product/Process Change Notification #13515**

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

**EFFECTIVE DATE: 31-AUG-2004**

**AFFECTED CHANGE CATEGORY:**  
**Subcontractor Fab Site**

**AFFECTED PRODUCT DIVISION: Discrete Products**

**ADDITIONAL RELIABILITY DATA:** Available  
Contact your local ON Semiconductor Sales Office or KEN FERGUS, RRST50@onsemi.com>

**SAMPLES:** Contact your local ON Semiconductor Sales Office or DIANNE VON BORSTEL, RPDR20@onsemi.com>

**FOR ANY QUESTIONS CONCERNING THIS NOTIFICATION:**  
Contact Sales Office or LYLE STEWART, RJJ930@onsemi.com>

**DISCLAIMER:**  
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. This is the Final Product Change Notice to IPCN 13157.

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.

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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.

**RELIABILITY DATA SUMMARY**

Tower 0.6 micron CMOS MiniGate reliability summary:  
SC88A package, 1 lot ea. of 74VHC1GT00, 74VHC1G00, 74VHC1GT08:

Test	Conditions	Results (fail/total SS)
High Temp Op Life	TA=150C for 504 hrs	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 96hrs	0/77, 0/77, 0/77
PC-HAST	131C/80 RH 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 preconditioning	3 IR at 260C	0/924
TC+MSL1	-65/+150C, 1000 cyc	0/308
HAST+MSL1	TA= +130C, RH = 85, PSIG= 18.8, bias, 192 hrs	0/308
Autoclave+MSL1	TA = 121 C, RH = 100%, PSIG = 15, 192 hrs	0/308

**ELECTRICAL CHARACTERISTIC SUMMARY**

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

**CHANGED PART IDENTIFICATION**

Devices shipped after WW35.



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

**PART**

MC74HC1G04DFT1  
MC74HC1G04DFT1G  
MC74HC1G04DFT2  
MC74HC1G04DFT2G  
MC74HC1G04DTT1  
MC74HC1GU04DFT1  
MC74HC1GU04DFT1G  
MC74HC1GU04DFT2  
MC74HC1GU04DFT2G  
MC74HC1GU04DTT1  
MC74HC1GU04DTT1G  
MC74LCX00D  
MC74LCX00DR2  
MC74LCX00DT  
MC74LCX00DTR2  
MC74LCX02D  
MC74LCX02DR2  
MC74LCX02DT  
MC74LCX02DTR2  
MC74LCX06D  
MC74LCX06DR2  
MC74LCX06DT  
MC74LCX06DTR2  
MC74LCX08D  
MC74LCX08DG  
MC74LCX08DR2  
MC74LCX08DR2G  
MC74LCX08DT  
MC74LCX08DTR2  
MC74LCX32DR2  
MC74LCX32DR2G  
MC74LCX32DT  
MC74LCX32DTR2  
MC74LVX00DR2  
MC74LVX00DTR2  
MC74LVX125D  
MC74LVX125DT  
MC74LVX132DR2  
MC74LVX132DT  
MC74LVX132DTR2  
MC74VHC00DR2  
MC74VHC00DT  
MC74VHC00DTR2  
MC74VHC125D  
MC74VHC125DR2  
MC74VHC125DTR2  
MC74VHC126DR2  
MC74VHC126DTR2  
MC74VHC132DTR2  
MC74VHC1G01DFT1  
MC74VHC1G01DFT1G  
MC74VHC1G01DFT2  
MC74VHC1G01DFT2G



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MC74VHC1G01DTT1  
MC74VHC1G66DFT1  
MC74VHC1G66DFT1G  
MC74VHC1G66DFT2  
MC74VHC1G66DFT2G  
MC74VHC1G66DTT1  
MC74VHC1GT66DF1G  
MC74VHC1GT66DF2G  
MC74VHC1GT66DFT1  
MC74VHC1GT66DFT2  
MC74VHC1GT66DTT1  
MC74VHCT00ADR2  
MC74VHCT00ADR2G  
MC74VHCT00ADTR2  
MC74VHCT125ADR2  
MC74VHCT125ADTR2  
MC74VHCT126ADR2  
NL17SZ04XV5T2  
NL17SZ07XV5T2  
NL37WZ07US  
NL37WZ07USG  
NL37WZ16US  
NL37WZ16USG  
NL7SZ18DFT2  
NLAS4501DFT2  
NLAS4501DFT2G  
NLAS4501DTT1  
NLAST4501DFT2  
NLAST4501DFT2G  
NLAST4501DTT1  
NLVHC1G04DFT2  
NLW17S04