ON Semiconductor

INITIAL PRODUCT/PROCESS CHANGE NOTIFICATION
Generic Copy

16-DEC-2003

SUBJECT: ON Semiconductor Initial Product/Process Change Notification #13259

TITLE: ON Semiconductor Initial Product/Process Change Notification for 85% BICMOS Devices

EFFECTIVE DATE: 16-Apr-2004

AFFECTED CHANGE CATEGORY: Subcontractor Fab Site

AFFECTED PRODUCT DIVISION: ECL Products

ADDITIONAL RELIABILITY DATA: Data will be included in the Final PCN

FOR ANY QUESTIONS CONCERNING THIS NOTIFICATION:
Contact Sales Representative or Clarence Rebello<R13617@onsemi.com>

NOTIFICATION TYPE:

Initial Product/Process Change Notification (IPCN)

First change notification sent to customers. IPCNs are issued at least 120 days prior to implementation of the change. An IPCN is advance notification about an upcoming change and contains general information regarding the change details and devices affected. It also contains the preliminary reliability qualification plan.

The completed qualification and characterization data will be included in the Final Product/Process Change Notification (FPCN).

This IPCN notification will be followed by a Final Product/Process Change Notification (FPCN) at least 60 days prior to implementation of the change.

DESCRIPTION AND PURPOSE:
ON Semiconductor will be transferring products from the MOS 16, Motorola Fab in Edinburgh, Scotland to the MOS 9 Motorola Fab in Glasgow, Scotland. The Mos 9 facility is an ISO9001 certified facility and currently manufactures the 85% BICMOS product family. The MOS 9 85% BiCMOS technology is identical to the MOS16 85% BiCMOS technology. Equipment and resources have been physically moved from Mos 16 to the MOS 9 location.
This process will be identified as MOS 9 85% BiCMOS technologies and will provide for improved process consistency and enhanced manufacturing controls.

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QUALIFICATION PLAN:
(All Testing to be performed on a sample size of 3 lots with 80 pieces/lot.)

Test	Conditions	Exceptions
High Temp Op Life(HTOL)	Tj =150 degC for 504 hours	
High Temp Bake(HTB)	150 degC for 1008 hours/175 degC for 504 hours	
Preconditioning for MSL-1(PC)	IR at 260 degC, TC, HAST, AC	
PC-HAST	130 degC/85% RH/18.8 PSIG for 96 Hrs	
PC-Autoclave(AC)	121 degC/100% RH/15 PSIG for 96 hours	
PC-Temp Cycling(TC)	-65 degC to +150 degC; for 500 cycles	
Bond Pull Strength(BPS)	Per Factory Testing with CpK>= 1.33	
Bond Shear Test (BS)	Per Factory Testing with CpK>= 1.33	
ESD per JEDEC Standard	Human Body Model(HBM) Machine Model(MM) Charge Device Model(CDM)	
Parameter Verification	Electrical Characterization/distribution summary of Critical Parameters	

Qualification Vehicle Justification

Technology	Qualification Device	Reason Chosen
85% BiCMOS	MC100EPT23D	Typical array, 8ld SOIC

AFFECTED DEVICE LIST (WITHOUT SPECIALS):

PART
MC100EPT21D
MC100EPT21DR2
MC100EPT21DT
MC100EPT21DTR2
MC100EPT23D
MC100EPT23DR2
MC100EPT23DT
MC100EPT23DTR2
MC100EPT26D
MC100EPT26DR2
MC100EPT26DT
MC100EPT26DTR2
MC100LVELT23D
MC100LVELT23DR2
MC100LVELT23DT
MC100LVELT23DTR2
NB100ELT23LD
NB100ELT23LDR2
NB100ELT23LDT
NB100ELT23LDTR2