



FINAL PRODUCT/PROCESS CHANGE NOTIFICATION
Generic Copy

03-APR-2003

SUBJECT: ON Semiconductor Final Product/Process Change Notification #12800

TITLE: Final Notification for IPCN#11369 - Wafer Capacity Addition for MOSAIC 3 Technology - Group 4

EFFECTIVE DATE: 03-Jun-2003

AFFECTED CHANGE CATEGORY: Subcontractor Fab Site

AFFECTED PRODUCT DIVISION: Broadband Products

ADDITIONAL RELIABILITY DATA: Available
Contact your local ON Semiconductor Sales Representative
or Keith Stapley <RXNN90@onsemi.com>

SAMPLES: Contact your local ON Semiconductor Sales Representative

FOR ANY QUESTIONS CONCERNING THIS NOTIFICATION:
Contact Sales Representative or Tim Gurnett <R13617@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 the Qualification and Process Certification of the SONY wafer fabrication facility located in San Antonio, Texas to manufacture MOSAIC3 Bipolar technology products. MOSAIC3 products were previously fabricated in the Motorola Bipolar Manufacturing Center (BMC) in Mesa, Arizona.

This is the Final PCN for the listed devices.

Device parameters will continue to meet all Data Book specifications, and reliability will continue to meet or exceed ON Semiconductor standards.

In the course of reviewing the electrical data for the Group 4 released parts, test methodology improvements indicate prior limits for Reset to Q propagation delays on the MC100LVEL32 were imprecisely set. A more accurate set of Minimum and Maximum limits will be corrected on the next revision of the datasheet to reflect these changes.

(-40 C = 440 to 640 Ps, +25 C = 450 to 650 Ps and +85 C = 480 to 680 Ps)

There were no changes to the actual design or function of the parts.



Final Product/Process Change Notification #12800

**RELIABILITY DATA SUMMARY:
RELIABILITY WILL CONTINUE TO MEET OR EXCEED ON SEMICONDUCTOR
STANDARDS.**

Test	Conditions	Results
High Temp Op Life (HTOL)	Tj =150C for 504 hours	0/570
High Temp Bake (HTB)	150C for 1008 hours	0/560
	175C for 504 hours	0/560
Preconditioning for MSL-1(PC)	IR at 235C, TC, HAST, AC(SOIC8)	0/720
PC-HAST	IR at 220C, TC, HAST, AC(PLCC28)	0/918
PC-Autoclave (AC)	130C/85% RH/18.8 PSIG for 96 Hrs	0/520
PC-Temp Cycling (TC)	121C/100% RH/15 PSIG for 96 hours	0/560
Bond Pull Strength (BPS)	-65C to +150C; for 500 cycles	0/558
Bond Shear Test (BS)	Per Factory Testing with CpK>= 1.33	PASS
ESD per JEDEC Standard	Per Factory Testing with CpK>= 1.33	PASS
	Human Body Model(HBM)	MEETS OR
	Machine Model (MM)	EXCEEDS
	Charge Device Model(CDM)	CRITERIA
Destructive Physical Analysis(DPA)	Analysis done after PC-Temp Cycling	COMPLETE, NO RELIABILITY ISSUES
Intrinsic Reliability (IR)	Compare to BMC results for Stress migration, Electromigration & Hot Carrier Injection	MEETS OR EXCEEDS CRITERIA
Critical Parameter Shifts Analysis (CPA)	Datalog units and examine VOH and VOL before and after test on all HTOL and Temp cycled units	MEETS OR EXCEEDS CRITERIA
Skew Analysis (SA)	Examine 5 units from each group For tskew before and after HTOL and Temp Cycle tests	MEETS OR EXCEEDS CRITERIA
Construction Analysis (CA)	Compare to BMC results	MEETS OR EXCEEDS CRITERIA
Parameter Verification	Electrical Characterization/distribution summary of Critical Parameters	AVAIL

Qualification Vehicle Justification

Technology	Qualification Device	Reason Chosen
MOSAIC3	MC10EL16D	Smallest array, high volume, 8ld SOIC
	MC100E195FN	Medium array, AC test critical, 28ld PLCC
	MC10E016FN	Complex medium array, highest current, 28ld PLCC

ELECTRICAL CHARACTERISTIC SUMMARY:
DEVICE PARAMETERS WILL CONTINUE TO MEET ALL DATA SHEET SPECIFICATIONS.
Characterization data available upon request.

CHANGED PART IDENTIFICATION:

Product marked after WW17, 2003 may contain SONY die, but is dependent on the inventory usage of the current BMC material. Customers are encouraged to contact ON Semiconductor to order samples. After the PCN expiration date, customers may receive products manufactured with die from either the Sony or BMC FAB. All MC100LVEL32 product marked after WW14, 2003 (example: xx0314) will contain SONY die.



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AFFECTED DEVICE LIST(WITHOUT SPECIALS):

MC100E310FN
MC100E310FNR2
MC100EL29DW
MC100EL29DWR2
MC100EL38DW
MC100EL38DWR2
MC100LVE310FN
MC100LVE310FNR2
MC100LVEL29DW
MC100LVEL29DWR2
MC100LVEL32D
MC100LVEL32DR2
MC100LVEL32DT
MC100LVEL32DTR2
MC100LVEL38DW
MC100LVEL38DWR2
MCW100LVEL29