



FINAL PRODUCT/PROCESS CHANGE NOTIFICATION
Generic Copy

02-OCT-2002

SUBJECT: ON Semiconductor Final Product/Process Change Notification #12581

TITLE: Final Notification for IPCN#11369 - Wafer Capacity Addition for MOSAIC 3 Technology - Group 1, Phase 1

EFFECTIVE DATE: 01-Dec-2002

AFFECTED CHANGE CATEGORY: Subcontractor Fab Site & Wafer Process

AFFECTED PRODUCT DIVISION: Broadband Products

ADDITIONAL RELIABILITY DATA: Available

Contact your local ON Semiconductor Sales Office or Keith Stapley <RXNN90@onsemi.com>

SAMPLES: Contact your local ON Semiconductor Sales Office or Nellie Hernandez <RGX650@onsemi.com>

FOR ANY QUESTIONS CONCERNING THIS NOTIFICATION:

Contact Sales Office or Tim Gurnett <R13617@onsemi.com>

DISCLAIMER:

Final Product/Process Change Notification (FPCN) - Final Notification completing the notification process. Distributed at least 60 days from the effective date 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. During the next several quarters, additional devices will be released, after completion of qualification. The effective date of this change will be 60 days from the issuance of this PCN for the devices listed. A Final PCN update notification will be announced for each group of parts as samples and electrical characterization data become available.

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 LVEL14 device, a typographical error in the VBB spec limits was corrected. There were no changes to the actual design or function of the part.



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**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
Destructive Physical Analysis(DPA)	Human Body Model(HBM) Machine Model (MM) Charge Device Model(CDM) Analysis done after PC-Temp Cycling	MEETS OR EXCEEDS CRITERIA 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 WW41, 2002 (example: xxx0241) may contain SONY die. 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.

AFFECTED DEVICE LIST(WITHOUT SPECIALS):

PART

MC100EL14DW, MC100EL14DWR2, MC100EL30DW, MC100EL30DWR2,
MC100LVEL14DW, MC100LVEL14DWR2, MC100LVEL30DW, MC100LVEL30DWR2,
MCW100LVEL14