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**FINAL PRODUCT/PROCESS CHANGE NOTIFICATION**  
Generic Copy

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27-JUN-2003

**SUBJECT: ON Semiconductor Final Product/Process Change Notification #12971**

**TITLE: Final Notification for IPCN# 11369-Additional Wafer Capacity for the LEVEL92 Product Family**

**EFFECTIVE DATE: 27-Aug-2003**

**AFFECTED CHANGE CATEGORY: Subcontractor Fab Site**

**AFFECTED PRODUCT DIVISION: Broadband Products Div**

**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

**FOR ANY QUESTIONS CONCERNING THIS NOTIFICATION:**

Contact Sales Office or Tim Gurnett [R13617@onsemi.com](mailto: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:**

This is the Final PCN to notify customers that the changes described in Initial PCN# 11369, located at [www.onsemi.com](http://www.onsemi.com), have been completed for the 100LEVEL92 product family.

ON Semiconductor is pleased to announce the Qualification and Process Certification of the SONY wafer fabrication facility located in San Antonio, Texas to manufacture additional MOSAIC3 Bipolar technology products. Sony has been a qualified manufacturing site for MOSAIC3 products since December 2002. MOSAIC3 products were previously fabricated in the Motorola Bipolar Manufacturing Center (BMC) in Mesa, Arizona.

This Final PCN is for the 100LEVEL92 product family only.

The effective date of this change will be 60 days from the issuance of this PCN.

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

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



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**RELIABILITY DATA SUMMARY:**

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

<b>Test</b>	<b>Conditions</b>	<b>Results</b>
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	IR at 235C, TC, HAST, AC(SOIC8)	0/720
MSL-1(PC)	IR at 220C, TC, HAST, AC(PLCC28)	0/918
PC-HAST	130C/85% RH/18.8 PSIG for 96 Hrs	0/520
PC-Autoclave (AC)	121C/100% RH/15 PSIG for 96 hours	0/560
PC-Temp Cycling (TC)	-65C to +150C; for 500 cycles	0/558
Bond Pull Strength (BPS)	Per Factory Testing with CpK>= 1.33	PASS
Bond Shear Test (BS)	Per Factory Testing with CpK>= 1.33	PASS
ESD per JEDEC Standard	Human Body Model(HBM)	MEETS OR
	Machine Model (MM)	EXCEEDS
	Charge Device Model(CDM)	CRITERIA
Destructive	Analysis done after PC-Temp Cycling	PASS
Physical Analysis(DPA)		
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**

<b>Technology</b>	<b>Qualification Device</b>	<b>Reason Chosen</b>
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:**

Characterization data available upon request.

**CHANGED PART IDENTIFICATION:**

All product marked after WW25, 2003 will contain SONY die. Customers may continue to receive products manufactured with die from either Sony or BMC FAB depending on inventory levels. Customers are encouraged to contact ON Semiconductor to order samples.

**AFFECTED DEVICE LIST:**

**PART**

MC100LVEL92DW  
MC100LVEL92DWR2