ON Semiconductor

FINAL PRODUCT/PROCESS CHANGE NOTIFICATION
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06-NOV-2003

SUBJECT: ON Semiconductor Final Product/Process Change Notification #13185

TITLE: Final Notification for Transfer of MOSAIC 1 & 1.5 Devices to ONCR/Tesla Fab

EFFECTIVE DATE: 06-Jan-2004

AFFECTED CHANGE CATEGORY: ON Semiconductor Fab Site

AFFECTED PRODUCT DIVISION: Logic Products Div

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
or Won Kang <FFP6RB@onsemi.com>

FOR ANY QUESTIONS CONCERNING THIS NOTIFICATION:
Contact Sales Representative or Won Kang <FFP6RB@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# 12671, located at www.onsemi.com, have been completed for the MC10H102, MC10H113, MC10H125, MC10H141, and MC10H164 product families.

ON Semiconductor is pleased to announce the Qualification and Process Certification of MOSAIC 1.0/1.5 process in our internal factory ON Semiconductor Czech Republic (ONCR; Formerly Tesla), located in Roznov, Czech Republic, to manufacture MOSAIC 1.0/1.5 Bipolar Technology products. The ONCR Fab is an ISO9001 certified facility and currently manufactures the Analog product family. MOSAIC 1.0/1.5 products were previously fabricated in the Motorola Bipolar Manufacturing Center (BMC) in Mesa, Arizona.

This is the Final PCN only for the MC10H102, MC10H113, MC10H125, MC10H141, and MC10H164 product families. Additional notifications will be issued separately for subsequent products when they have completed all qualification testing.

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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.

RELIABILITY DATA SUMMARY:
Below is a summary of the reliability results. A more detailed reliability report is available upon request.

Test	Conditions	Results
High Temp Op Life (HTOL)	Tj =150DegC for 2016 hours Tj =150DegC for 1008 hours Tj =150DegC for 504 hours	0/79 0/239 0/80
High Temp Bake (HTB)	175DegC for 504 hours	0/320
Preconditioning for MSL-1 (PC)	IR at 260DegC, TC, HAST, AC IR at 220DegC, TC, HAST, AC	0/480 0/320
PC-HAST	130DegC/85% RH/18.8 PSIG for 96 hours	0/237
PC-Autoclave (AC)	121DegC/100% RH/15 PSIG for 96 hours	0/240
PC-Temp Cycling (TC)	-65DegC to +150DegC; for 500 cycles	0/400
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) Machine Model (MM) Charge Device Model(CDM)	MEETS CRITERIA
Destructive Physical Analysis (DPA)	Analysis done after PC-Temp Cycling	PASS
Construction Analysis (CA)	Compare to BMC results	MEETS OR EXCEEDS CRITERIA

Qualification Vehicle Justification

Technology	Qualification Device	Reason Chosen
MOSAIC1/1.5	MC10H605FN	Large Die, Highest Voltage, Schottky Diodes
	MC10H141FN	Complexity
	MC10H125P	Translator Function

Reliability Test Conclusions:
Reliability test data is consistent with passing ON Semiconductor requirements.

ELECTRICAL CHARACTERISTIC SUMMARY: Charaterization data available upon request.

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CHANGED PART IDENTIFICATION:
Product after work week 44 will be from the ONCR fab.

AFFECTED DEVICE LIST (WITHOUT SPECIALS):

PART

MC10H102FN
MC10H102FNR2
MC10H102L
MC10H102M
MC10H102MEL
MC10H102P
MC10H113FN
MC10H113FNR2
MC10H113L
MC10H113M
MC10H113MEL
MC10H113P
MC10H125FN
MC10H125FNR2
MC10H125L
MC10H125M
MC10H125MEL
MC10H125P
MC10H141FN
MC10H141FNR2
MC10H141L
MC10H141P
MC10H164FN
MC10H164FNR2
MC10H164L
MC10H164M
MC10H164MEL
MC10H164P