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FINAL PRODUCT/PROCESS CHANGE NOTIFICATION Generic Copy

31-May-2006

SUBJECT: ON Semiconductor Final Product/Process Change Notification #15553

TITLE: Final notification of intent to dual source MC1413 and MC33063 at ONCR and ONPY1 in Slovakia

EFFECTIVE DATE: 24-Jul-2006

AFFECTED CHANGE CATEGORY(S): ON Semiconductor Fab Site

AFFECTED PRODUCT DIVISION(S): Analog Power Management

ADDITIONAL RELIABILITY DATA: Available

Contact your local ON Semiconductor Sales Office or Matt Kas <fft7yg@onsemi.com>

SAMPLES: Contact your local ON Semiconductor Sales Office

FOR ANY QUESTIONS CONCERNING THIS NOTIFICATION:

Contact your local ON Semiconductor Sales Office or Shannon Riggs<r13350@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 Initial PCN 15130 (available at www.onsemi.com) to notify customers of the qualification of the MC1413 and MC33063 product families at the ON Semiconductor wafer fab in Piestany, Slovakia (ONPY1). The existing design database currently in use at ONCR has been transferred to ONPY1 with no change to the functional circuit design. New mask sets have been generated which will incorporate required process control and alignment patterns. Full electrical characterization and bench analysis has been performed on all devices to ensure no change to device functionality, nor data sheet electrical specifications. The ONPY1 fab will be used to provide additional capacity for these products. This is a dual qualification where these devices will continue to also be processed at the ON Semiconductor wafer fab (ONCR) located in Roznov, Czech Republic.

As this is the final PCN, customers will have 60 days before devices from this new location may be shipped. Samples are available upon request.

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RELIABILITY DATA SUMMARY:

MC1413 & MC33063 devices were process qualified based on similarity to the LM224 & LM239 devices which run on the same processes and were qualified previously as shown below. Each device series had temperature characterization, ESD (HBM, MM, CDM) and latch up evaluation performed on three assembly lots. In addition, probe and final test yield analysis was completed to ensure performance was well matched to the source fabrication facility.

Three assembly lots of LM224D and two assembly lots of LM239N, along with the associated control lots were built and qualified to the plan below. No failures were observed on any of the lots.

3x lots LM224D Test Conditions EndPoint Autoclave 121C,100%RH,15psig 96 hours Temp Cycle 150C/-65C 500 cycles HAST 130C,85%RH,18psig 96 hours HTSL 175C 504 hours HTOL Ta = 145C 504 hours PC MSL1 260C Test 3x reflow

2x lots LM239N Test Conditions EndPoint Autoclave 121C,100%RH,15psig 96 hours Temp Cycle 150/-65C 1000 cycles HAST 130C,85%RH,18psig 96 hours HTOL Ta = 125C 1008 hours

MC1413 Additional Data Autoclave Ta=121C,RH=100%, PSIG=15 0/77 High Temp OPLife Ta=125C for 168 hrs 0/77 Temp Cycle -65to+150C for 100 cycles 0/77 Assy Precond MSL1@235 pre AC&TC 0/77

ELECTRICAL CHARACTERISTIC SUMMARY:

Electrical performance has not changed. Reports and samples are available upon request MC33063 /MC1413 Read Pt Results<BR Test Description Conditions LU Latch UP Class I, 25C Pass AEC-Q100-004 ESD Electro-static Discharge Human Body Model 2000 v Pass AEC-Q100-002 ESD Electro-static Discharge Machine Model (MM) 200 v Pass

CHANGED PART IDENTIFICATION:

AEC-Q100-103

Parts with a date code of ww28 or greater may be sourced from either site. Standard manufacturing traceability will apply.

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AFFECTED DEVICE LIST:

PART

MC33063AD MC33063ADG MC33063ADR2 MC33063ADR2G MC33063AP1 MC33063AP1G MC33063AVD MC33063AVDG MC33063AVDR2 MC33063AVDR2G MC33063AVP MC33063AVPG MC34063AD MC34063ADG MC34063ADR2 MC34063ADR2G MC34063AM MC34063AMEL MC34063AMELG MC34063AMG MC34063AP1 MC34063AP1G MC34063BD MC34063BDG MC34063BDR2 MC34063BDR2G SC79183DR2 MC1413BD MC1413BDG MC1413BDR2 MC1413BDR2G MC1413BP MC1413BPG MC1413D MC1413DG MC1413DR2 MC1413DR2G MC1413P MC1413PG