ON Semiconductor

FINAL PRODUCT/PROCESS CHANGE NOTIFICATION
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24 Jul 2009

SUBJECT: ON Semiconductor Final Product/Process Change Notification #16308

TITLE: Intent to dual source MC33063 and MC34063 in EPI80 and ON50 process technology

PROPOSED FIRST SHIP DATE: 24 Oct 2009

AFFECTED CHANGE CATEGORY(S): Wafer Fab process

AFFECTED PRODUCT DIVISION(S): DC-DC Conversion (P2)

FOR ANY QUESTIONS CONCERNING THIS NOTIFICATION:
Contact your local ON Semiconductor Sales Office or <Tim.Kaske@onsemi.com> or <Paul.Mcdevitt@onsemi.com>

SAMPLES: Contact your local ON Semiconductor Sales Office or <Alois.Chumchal@onsemi.com> or<Zenjie.Caneda@onsemi.com>

ADDITIONAL RELIABILITY DATA: Available
Contact your local ON Semiconductor Sales Office or <tomas.vajter@onsemi.com>

NOTIFICATION TYPE:

Final Product/Process Change Notification (FPCN)

Final change notification sent to customers. FPCNs are issued at least 90 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 a final PCN to notify customers of the qualification of MC33063 and MC34063 product families in ON50 wafer fabrication process technology. ON50 is the latest bipolar technology using 6” wafers and is located in the same wafer fab facilities at ON Semiconductor Roznov, Czech Republic. The ON50 technology will be transitioned as primary die source in order to allow higher potential capacity for these lines of products.

Full electrical characterization and bench analyses have been completed to ensure that datasheet electrical specifications are met if not exceeded. The device functionalities are similar to the original EPI80 technology die source. The EPI80 technology will continue to be utilized as secondary die preference for the affected part numbers listed below.

Customer samples are available upon request.

Final Product/Process Change Notification # 16308

Customer applications vary widely in the usage of IC components. It is possible that an application may utilize non-specified properties of the device. The customer is advised to check specific applications for:

1. Power dissipation capability
2. Switching characteristics
3. Regulation performance

With qualification to ON50, the new die utilized smaller die geometries resulting to slight increase in its thermal characteristics. The $R\theta_{JA}$ thermal resistance for PDIP package is thereby changed from 100°C/W to 115°C/W. A design tool will be made available in www.onsemi.com to help customers evaluate the impact to their system if they are using PDIP package. Products in SOIC package remain unchanged.

RELIABILITY DATA SUMMARY:

Qualification was performed to the following requirements using MC33063:

HTOL (1 wafer lot), PC-TC (1 assembly lot for SOIC and 1 assembly lot for PDIP), PC-UHST (1 assembly lot for SOIC), Temperature characterization- ED (2 wafer lots for SOIC and 1 wafer lot for PDIP), full characterization test and one wafer lot for ESD and LU.

Reliability Test Results:

Test	Conditions	Duration	Sample Size	# of Lots	Results
HTOL	TA=115°C, TJ =142°C, VCC=40V	504H	80/lot	1	0/80
ELFR	TA=115°C, TJ =142°C, VCC=40V	48H.	800/lot	1	0/800
UHAST	TA=+130°C, RH=85% PSIG=18.8	96H	80/lot	1	0/80
TC	-65/+150°C, Air to Air	1000cyc	80/lot	2	0/160
ED	-25°C, 0°C,25°C 85°C, 125°C		n/a	3	Cpk>1.67
LU	Class I		12	1	Pass>+100mA Pass>-100mA
ESD	HBM		3 units/ V level	1	4KV
ESD	MM		3 units/ V level	1	400V

Final Product/Process Change Notification # 16308

Note:

1. These tests were performed with preconditioned parts, JEDEC MSL 1

2. Separate ON50 qualification was successfully completed on equivalent special part SCY99093 for both SOIC and PDIP packages. Reliability engineering contact is provided above for additional reliability data request.

ELECTRICAL CHARACTERISTIC SUMMARY:

No changes in electrical characteristics. All electrical performance meets the current datasheet specifications.

CHANGED PART IDENTIFICATION:

Parts with date code of WW41-2009 or greater may be sourced from either die technology line. Standard manufacturing traceability will apply.

Final Product/Process Change Notification # 16308

AFFECTED DEVICE LIST

MC33063ADG
MC33063ADR2GH
MC33063ADR2G
MC33063AVDG
MC33063AVDR2G
MC33063AP1G
MC33063AVPG
MC34063ADG
MC34063ADR2GH
MC34063ADR2G
MC34063BDG
MC34063BDR2G
MC34063AP1G