



FINAL PRODUCT/PROCESS CHANGE NOTIFICATION
Generic Copy

21-AUG-2002

SUBJECT: ON Semiconductor Final Product/Process Change Notification #12517

TITLE: Redesign of Analog Microprocessor Reset Monitors Devices

EFFECTIVE DATE: 20-Oct-2002

AFFECTED CHANGE CATEGORY:

SUBCONTRACTOR FAB SITE
SUBCONTRACTOR TEST SITE
MARKING PROCESS
DESIGN CHANGE

AFFECTED PRODUCT DIVISION: Analog Products

ADDITIONAL RELIABILITY DATA: Available

Contact your local ON Semiconductor Sales Office or Joe Duffalo <FFBH9W @onsemi.com>

SAMPLES: Contact your local ON Semiconductor Sales Office or
Bett Lofts <FFBGFX@onsemi.com>

FOR ANY QUESTIONS CONCERNING THIS NOTIFICATION:

Contact Sales Office or Bett Lofts <FFBGFX@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 wishes to announce the redesign and manufacturing site change of the MAX809JTR, MAX809MTR, MAX809RTR, MAX809TTR, MAX810LTR, MAX810MTR, MAX810RTR, MAX810STR, MAX810TTR devices.

Parametric performance is unchanged with the exception of supply current and maximum transient duration, both of which are improved in the redesigned versions. There are no functional changes or specification changes other than the improvements in supply current and maximum transient duration. The redesigned devices will be fabricated at our ON Aizu-6 facility in Aizu, Japan and assembly and final test will be done at ON's Seremban, Malaysia facility.

Both the ON Aizu-6 and Seremban sites have been QS9000 certified. ON Semiconductor will provide modified datasheets, samples, and reliability reports for the redesigned devices upon request.

Please contact your ON Sales representative or the personnel listed on this notification if there is any additional information or technical support required to transition to the redesigned devices.

Production will be converted to the redesigned devices upon expiration of this notification.



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RELIABILITY DATA SUMMARY:

Description

The MAX809 and MAX810 are cost-effective system supervisor circuits designed to monitor VCC in digital systems and provide a reset signal to the host processor when necessary. No external components are required. The reset output is driven active within 20 msec of VCC falling through the reset voltage threshold. Reset is maintained active for a minimum of 140 msec after VCC rises above the reset threshold. The MAX810 has an active-high RESET output while the MAX809 has an active-low RESET output.

Die Related Testing

Lot	Device	Test Conditions	Read Point	Fail	SS
A0714A	MAX809SN320T1	HTOL Biased @ TJ=125DegC	1008	0	80
A0714B	MAX809SN320T1	HTOL Biased @ TJ=125DegC	1008	0	80
A0714C	MAX809SN320T1	HTOL Biased @ TJ=125DegC	1008	0	80

Package Related Testing

Lot	Device	Test Conditions	Read Point	Fail	SS
A0714A	MAX809SN320T1	HTB TA = 175DegC	504	0	80
A0714A	MAX809SN320T1	PC MSL 1 @ 220DegC	EP	0	240
A0714B	MAX809SN320T1	PC MSL 1 @ 220DegC	EP	0	240
A0714C	MAX809SN320T1	PC MSL 1 @ 220DegC	EP	0	240
A0714A	MAX809SN320T1	HAST-PC Biased@TA=130DegC;RH	96	0	80
A0714B	MAX809SN320T1	HAST-PC Biased@TA=130DegC;RH	96	0	80
A0714C	MAX809SN320T1	HAST-PC Biased@TA=130DegC;RH	96	0	80
A0714A	MAX809SN320T1	AC-PC TA =121DegC; RH =100%	96	0	80
A0714B	MAX809SN320T1	AC-PC TA =121DegC; RH =100%	96	0	80
A0714C	MAX809SN320T1	AC-PC TA =121DegC; RH =100%	96	0	80
A0714A	MAX809SN320T1	TC-PC TA=(-65DegC to +150DegC)	1000	0	80
A0714B	MAX809SN320T1	TC-PC TA=(-65DegC to +150DegC)	1000	0	80
A0714C	MAX809SN320T1	TC-PC TA=(-65DegC to +150DegC)	1000	0	80

Quality Indices

Device	Test	Results	Units
MAX809SN320T1	ESD-HBM	2000	V
MAX809SN320T1	ESD-MM	350	V
MAX809SN320T1	LU-	200	mA
MAX809SN320T1	LU+	200	mA

Summary

The device/devices qualified meets the most appropriate stress tests as outlined by ON Semiconductor's 12MSB17722C Reliability specification. The use of generic data for qualification is based on a matrix of specific requirements associated with the major characteristics of the device and manufacturing process.

The devices under test (DUT) were comprised of representative samples from the qualification family. Manufacturing variability and its impact on reliability was assessed. The DUT were fabricated and assembled in the same production site and the same process for which the device and qualification family was manufactured in production.

This product and its associated processes meet or exceed ON Semiconductor's Reliability requirements. The qualification data set in this report is applicable to other devices which are generically equivalent.



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ELECTRICAL CHARACTERISTIC SUMMARY:

Old device:

Supply Current	Typ(uA)	Max (uA)
MAX809JTR,MAX809/810MTR, MAX810LTR:	VCC < 5.5 V	24 60
MAX809/810RTR,MAX809/810TTR,MAX810STR:	VCC < 3.6 V	17 50

New Device:

Supply Current	Typical(uA)	Max (uA)
V CC = 3.3 V		
T A = -40DegC to +85DegC	0.5	1.2
T A = 85DegC to +105DegC		2.0
V CC = 5.5 V	Typical(uA)	Max (uA)
T A = -40DegC to +85DegC	0.8	1.8
T A = +85DegC to +105DegC		2.5

Old device:

V CC to Reset Delay V CC = V TH to (V TH - 100 mV): 20usec

New device:

V CC to Reset Delay V CC = V TH to (V TH - 100 mV): 10usec

CHANGED PART IDENTIFICATION:

Redesigned material can be distinguished by the marking scheme:

- MAX809JTR (OLD Device):J6
- MAX809JTR (Redesigned Device):SPR
- MAX809MTR (OLD Device):J2
- MAX809MTR (Redesigned Device):SPV
- MAX809RTR (OLD Device):J5
- MAX809RTR (Redesigned Device):SPS
- MAX809TTR (OLD Device):J3
- MAX809TTR (Redesigned Device):SPU
- MAX810LTR (OLD Device):K1
- MAX810LTR (Redesigned Device):SQB
- MAX810MTR (OLD Device):K2
- MAX810MTR (Redesigned Device):SQA
- MAX810RTR (OLD Device):K3
- MAX810RTR (Redesigned Device):SPX
- MAX810STR (OLD Device):K4
- MAX810STR (Redesigned Device):SPY
- MAX810TTR (OLD Device):K5
- MAX810TTR (Redesigned Device):SPZ

AFFECTED DEVICE LIST (WITHOUT SPECIALS):

PART

- | | |
|-----------|-----------|
| MAX809JTR | MAX810RTR |
| MAX809MTR | MAX810STR |
| MAX809RTR | MAX810TTR |
| MAX809TTR | |
| MAX810LTR | |
| MAX810MTR | |