



FINAL PRODUCT/PROCESS CHANGE NOTIFICATION

18 Sep 2007

SUBJECT: ON Semiconductor Final Product/Process Change Notification # FPCN16040

TITLE: Qualification of AIT for assembly of large body size QFN packages

PROPOSED FIRST SHIP DATE: 18 Dec 2007

AFFECTED CHANGE CATEGORY(S): Subcontractor Assembly Site

AFFECTED PRODUCT DIVISION(S): Analog Power Management (PQ)

FOR ANY QUESTIONS CONCERNING THIS NOTIFICATION:

Contact your local ON Semiconductor Sales Office or Rob Swanson <Rob.Swanson@onsemi.com>

SAMPLES: Contact your local ON Semiconductor Sales Office

ADDITIONAL RELIABILITY DATA: Available

Contact your local ON Semiconductor Sales Office or Mark Wasilewski <Mark.Wasilewski@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 the Final Product Change Notice to advise customers of the qualification of AIT (Advanced Interconnect Technologies located in Batam, Indonesia) to assemble large body size QFN packages. This is additional capacity to supplement the current assembly site at UTAC (United Test and Assembly Center located in Bangkok, Thailand).

AIT had already been Qualified to assemble 52 pin QFN 8x8mm body sized packages on January 2006, and that reliability data is available now.

Additional reliability data and samples will be available for the smaller package size QFNs.


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RELIABILITY DATA SUMMARY:
Reliability Test Results for the 52 pin QFN 8x8mm body size package:

Test	Name	Conditions	Read Point	Fails / Samples
HTSL	High Temperature Storage Life	150°C	1008 hours	0 / 240 units
PC	Moisture Pre-Conditioning	3 IR @ 260°C	Post MSL PC	0 / 15 units
TC	Temperature Cycling	-65°C to +150°C	500 cycles	0 / 240 units
AC	Autoclave	Ta = 121°C RH = 100%, PSIG = 15	96 hours	0 / 240 units
HAST	Highly Accelerated Stress Testing	Ta = +130°C RH = 85%, PSIG = 18.8	96 hours	0 / 240 units
SD	Solderability	Ta = 245°C	Post SD	0 / 15 units
SAT	Scanning Acoustic Tomography	Compare Pre & Post PC for delamination	After 3 times IR reflow	0 / 15 units

Qualification Testing for smaller sized QFN packages:

Test	Name	Conditions	Read Point	Sample size
HTSL	High Temperature Storage Life	150°C	1008 hours	240 units / 2 lots
HTOL	High Temperature Operating Life	125°C	1000 hours	240 units / 2 lots
PC	Moisture Pre-Conditioning	MSL1 or 3 @ 260°C	Post MSL PC	40 units / 8 lots
TC	Temperature Cycling	-65°C to +150°C	500 cycles	480 units / 4 lots
AC	Autoclave	Ta = 121°C RH = 100%, PSIG = 15	96 hours	480 units / 4 lots
HAST	Highly Accelerated Stress Testing	Ta = +130°C RH = 85%, PSIG = 18.8	96 hours	320 units / 3 lots
SAT	Scanning Acoustic Tomography	Compare Pre & Post PC for delamination	After 3 times IR reflow	40 units / 8 lots

ELECTRICAL CHARACTERISTIC SUMMARY:

Additional electrical characterization data available upon request

CHANGED PART IDENTIFICATION:

The date code on the topside laser mark for AIT assembled units will start with 0748, meaning assembled during Work Week 48 of the year 2007.



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AFFECTED DEVICE LIST

NCP5215MNR2G
NCP5371MNR2G
NCP5381AMNR2G
NCP5382MNR2G
NCP5385MNR2G
NCP5387MNR2G
NCP5388MNR2G
NCP5389MNR2G
NCP5391MNR2G