ON Semiconductor

INITIAL PRODUCT/PROCESS CHANGE NOTIFICATION
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11 Jan 2007

SUBJECT: ON Semiconductor Initial Product/Process Change Notification #15713

TITLE: Initial PCN for Qualification of NCP500 DFN6 2*2.2MM with rectangular heat sink in SBN and UTAC

PROPOSED FIRST SHIP DATE: May 21, 2007

AFFECTED CHANGE CATEGORY: Assembly Process

AFFECTED PRODUCT DIVISION: Analog Power Management

FOR ANY QUESTIONS CONCERNING THIS NOTIFICATION:
Contact your Local ON Semiconductor Sales Office or Bett Lofts <bett.lofts@onsemi.com>

NOTIFICATION TYPE:

Initial Product/Process Change Notification (IPCN)

First change notification sent to customers. IPCNs are issued at least 120 days prior to implementation of the change. An IPCN is advance notification about an upcoming change and contains general information regarding the change details and devices affected. It also contains the preliminary reliability qualification plan.

The completed qualification and characterization data will be included in the Final Product/Process Change Notification (FPCN).

This IPCN notification will be followed by a Final Product/Process Change Notification (FPCN) at least 60 days prior to implementation of the change.

DESCRIPTION AND PURPOSE:

This is the initial PCN announcing the qualification of NCP500 DFN6 2*2.2mm package with rectangular heat sink from circular heat sink (existing design). NCP500 DFN6 2*2.2 package is a currently released package in our ON Semiconductor facility located in Seremban, Malaysia and a sub-contractor assembly UTAC, Thailand. Once qualified, all production will convert to the rectangular heat sink.

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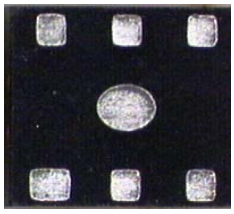
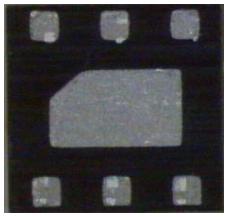


Current Heat Sink Design for DFN6L 2.0x2.2mm



Proposed Rectangular Heat Sink Design for DFN6L 2.0x2.2mm

There will be no changes in the wafer/die source; therefore, device functionality will be identical to that of the existing production material. However a new case outline is going to be introduced for the new rectangular heatsink. Device parameters will continue to meet all Data Book specifications and reliability will continue to meet or exceed ON Semiconductor standards.

Final product change notifications will be released with the completion of reliability testing.

QUALIFICATION PLAN:

Test	Description	Conditions	Read Pt
HTS	High Temp Storage	Ta=150C for 1008Hrs	Pass Room Temp & High Temp
HAST	HAST	TA= +130C, RH = 85%, Bias	96 hrs Pass RT & HT
TC-PC	Temperature Cycle	-65C to +150C	500cyl Pass RT & HT
AC-PC	Autoclave	121°C/100% RH/15	96hrs Pass RT
SAT	Scanning Acoustic Tomography	Compare for Delamination before and after PC	
RSH	Resistance to Solder Heat	260 C Immersion	
SD	Solderability	TA= 245 C	
DFA	Destructive Physical Analysis	AFTER TC & HAST	

AFFECTED DEVICE LIST:

PART

NCP500SQL18T1
NCP500SQL18T1G
NCP500SQL25T1
NCP500SQL25T1G
NCP500SQL27T1
NCP500SQL27T1G
NCP500SQL28T1
NCP500SQL28T1G
NCP500SQL30T1
NCP500SQL30T1G
NCP500SQL33T1
NCP500SQL33T1G
NCP500SQL50T1
NCP500SQL50T1G