INITIAL PRODUCT/PROCESS CHANGE NOTIFICATION #16514

Generic Copy

Issue Date: 01-Sep-2010

TITLE: Pre Plated Frame Qualification for DFN12L 3.0 X 1.3 X 0.85 mm.

PROPOSED FIRST SHIP DATE: 01-Jan-2011

AFFECTED CHANGE CATEGORY(S): Leadframe material

FOR ANY QUESTIONS CONCERNING THIS NOTIFICATION:
Contact your local ON Semiconductor Sales Office or Eben Lim < eben.lim@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 90 days prior to implementation of the change.

DESCRIPTION AND PURPOSE:

ON Semiconductor is notifying customers of its qualification of Pre Plated leadframe for package DFN 12Lead 3*1.35*0.85MM PBF. The purpose of qualification is to enhance the robustness of plating process. Pre-plated Leadframe provides a predictable and well characterized plating and thickness response.
Lead finish change from JEDEC category e3 – 100% matte Sn to category e4- Precious metals (Gold-Silver Alloy).

Full reliability and electrical characterization will be performed prior publishing the Final Product Change Notice to customers. There will be no change to the devices data sheet or functionalities.
Product samples may be requested after the Final PCN is issued in the mid-September 2010.

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QUALIFICATION PLAN:

Estimated Date for Qualification Completion: 09/23/2010
Samples should be available after completion of Qualification.

Qualification Vehicles chosen for this qualification:
NUF6401MNT1G
NUF6400MNTBG

Reliability Test to be performed

NUF6401MNT1G

Test:	Conditions:	Interval:	Quantity
HTRB	TA=150C, 80% Rated Voltage	1008 hrs	160
TC+PC	Ta= -65 C to 150 C,	1000 cyc	160
Precondition	MSL1@ 260C , 3 X IR at 260 C		500
Autoclave+PC	Ta=121C RH=100% ~15 psig	96 hrs	160
HAST+PC	Temp = 130C, RH=85%, 80% of rated Voltage	96 hrs	160
SAT + PC	pre & post PC		20
SD	Solderability		30
RSH	Ta=260C, 10 sec		60

NUF6400MNTBG

Test:	Conditions:	Interval:	Quantity
HTRB	TA=150C, 80% Rated Voltage	1008 hrs	240
TC+PC	Ta= -65 C to 150 C,	1000 cyc	240
Precondition	MSL1@ 260C , 3 X IR at 260 C		750
Autoclave+PC	Ta=121C RH=100% ~15 psig	96 hrs	240
HAST+PC	Temp = 130C, RH=85%, 80% of rated Voltage	96 hrs	240
SAT + PC	pre & post PC		30
SD	Solderability		45
RSH	Ta=260C, 10 sec		90

Electrical Characterization Plan:

Datasheet specifications and product electrical performance will remain unchanged
Characterization of each qual vehicle device will be performed to the following requirements:
1) ESD performance (HBM, MM)
2) Three temperature characterization on 30 units from each qualification lots

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List of affected General Parts:

PART

NUF6107MNTBG
NUF6401MNT1G
NUF6410MNT1G
NUF6406MNT1G
NUF6400MNTBG
NUF6402MNT1G