ON Semiconductor

FINAL PRODUCT/PROCESS CHANGE NOTIFICATION

18 Dec 2007

SUBJECT: ON Semiconductor Final Product/Process Change Notification #16080

TITLE: FPCN SOIC WB EXPANSION FOR OSPI

PROPOSED FIRST SHIP DATE: 18 Mar 2008

AFFECTED CHANGE CATEGORY(S): On Semi Assembly and Test

AFFECTED PRODUCT DIVISION(S): Standard Product Group

FOR ANY QUESTIONS CONCERNING THIS NOTIFICATION:
Contact your local ON Semiconductor Sales Office or Won Kang <won.kang @onsemi.com>

SAMPLES: Contact your local ON Semiconductor Sales Office

ADDITIONAL RELIABILITY DATA: Available
Contact your local ON Semiconductor Sales Office or Matt Kas <matt.kas @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 one of multiple Final Process Change Notices to IPCN 15621 available at www.onsemi.com to notify customers of the capacity expansion of the ON Semiconductor assembly/test location at Carmona, Philippines (OSPI) for 16/20/24/28 lead Wide body SOIC packages. The devices listed on this FPCN have historically been assembled/tested at the ASE assembly/test facility located in Chung Li, Taiwan. At the expiration of this Final PCN, these devices may be processed at either location. This is not a transfer but a capacity expansion. Devices will be qualified in phases with only those devices listed below affected by this FPCN.

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RELIABILITY DATA SUMMARY:

Qualification Vehicles:
A = 16 Lead Wide = CS49053DWR16G 3.00 x 3.30 mm Die Size 3 Lots
B = 20 Lead Wide = CS4121EDWF20 3.05 x 2.75 mm Die Size 3 Lots
C = 24 Lead Wide = CS61133DWF24 4.22 x 3.55 mm Die Size 3 Lots
D = 28 Lead Wide = CS68140DWF28 5.45 x 4.08 mm Die Size 3 Lots

Reliability Test Results:

Test Conditions Results
Group A Group B Group C Group D
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Preconditioning 3 pass@ 260C 0/693 0/693 0/693 0/693
Precod. Temp Cycle -65 to +150 500 Cyc 0/231 0/231 0/231 0/231
Precond. HAST Ta=130; RH 85% 96 Hrs 0/231 0/231 0/231 0/231
PSIG = 18.8
Precond. Autoclave Ta=121C; RH= 96 Hrs 0/231 0/231 0/231 0/231
100% ; PSIG=15
High Temp Bake Ta = 150C 1008 Hrs 0/231 0/231 0/231 0/231
HTOL Ta = 125C 1008 Hrs 0/231 0/231 0/231 0/231
Solder Heat 260C Immersion 0/90 0/90 0/90 0/90
Scanning Acoustic Check for Delamination 0/15 0/15 0/15 0/15
Tomography
Solderability Ta = 245 C SnAgCu 0/45 0/45 0/45 0/45
Bond Pull After 500 Temp Cycle 0/15 0/15 0/15 0/15
5 Units; 30 Bonds
All groups pass minimum of MSL 3 at 260 C

ELECTRICAL CHARACTERISTIC SUMMARY:

All qualification lots pass qualified at test after correlation exercise of test equipment and comparison of control and qualification lots.

CHANGED PART IDENTIFICATION:

All devices processed at the new OSPI location will have the location code “P” as part of the device traceability code.

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AFFECTED DEVICE LIST

MC74VHCT244ADWRG
MC74LVX240DWR2
MC74LVX244DWR2
MC74LVX245DWR2
MC74LVX373DWR2
MC74LVX374DWR2
MC74LVX573DWR2
MC74LVX574DWR2
MC74VHC240DWR2
MC74VHC244DWR2
MC74VHC245DW
MC74VHC245DWR2
MC74VHC373DWR2
MC74VHC374DWR2
MC74VHC540DWR2
MC74VHC541DWR2
MC74VHC573DWR2
MC74VHC574DW
MC74VHC574DWR2
MC74VHCT240ADWR2
MC74VHCT244ADWR2
MC74VHCT245ADW
MC74VHCT245ADWR2
MC74VHCT373ADWR2
MC74VHCT374ADWR2
MC74VHCT541ADW
MC74VHCT541ADWR2
MC74VHCT573ADW
MC74VHCT573ADWR2
MC74VHCT574ADWR2