ON Semiconductor

INITIAL PRODUCT/PROCESS CHANGE NOTIFICATION
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08-May-2006

SUBJECT: ON Semiconductor Initial Product/Process Change Notification #15528

TITLE: Additional SO8 Capacity for Integrated Power Devices

EFFECTIVE DATE: 15-Sep-2006

AFFECTED CHANGE CATEGORY: ON Semiconductor Assembly

AFFECTED PRODUCT DIVISION: Integrated Power Devices

FOR ANY QUESTIONS CONCERNING THIS NOTIFICATION:
Contact Sales Office or Tom Huettl <S21431@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:

ON Semiconductor is pleased to announce the addition of backend manufacturing capacity for their SO8 MOSFET product lines. This will be accomplished by qualifying these devices at an internal manufacturing site in Carmona, Philippines. The Carmona facility currently runs the SO8 package for other ON Semi product lines. In addition to this internal manufacturing site, ON Semiconductor will continue to manufacture SO8 products at their external subcontractors: Advanced Interconnect Technologies in Indonesia and Amkor Technology Philippines Inc. in the Philippines.

Initial Product/Process Change Notification #15528

QUALIFICATION PLAN:

1) High Temperature Gate Bias
   Temp=150'C, Vgs=20V, Sample Size= 40pcs, Duration=1008Hrs
2) High Temperature Reverse Bias
   Temp=150'C, Vgs=24V, Sample Size=240pcs, Duration=1008Hrs
3) Preconditioning
   IR @ 260'C, HAST, IOL, Temp Cycle, Autoclave
4) Highly Accelerated Stress Test
   Temp=130'C, Relative Humidity=85%, Pressure=18.8psi, Vds= 24V, Duration=96Hrs
5) Intermittent Operatin Life
   TA=25'C, Delta Temp=100'C, Dwell Time=2min On/Off, Duration= 15000 Cycles
6) Temperature Cycling
   Temperature Extremes= -65'C/+150'C, Dwell Time=10 min, Duration=1000 Cycles
7) Autoclave Test
   Temp=121'C, Rel Humidity=100%, Pressure=15psi, Duration= 96Hrs
8) Scanning Acoustical Topography
9) Resistance to Solder Heat
10) Solderability
11) Destructive Physical Analysis
12) Bond Pull Strength
13) Die Shear
14) Bond Shear

AFFECTED DEVICE LIST:

NTMD6N03R2G
NTMD6N03R2
NTMD4N03R2G
NTMD4N03R2
NTMD6N02R2G
MMDF3N04HDR2G
NTMD6N02R2
MMDF3N02HDR2
MMDF1N05ER2G
MMDF2N02ER2
MMDF2N02ER2G
MMDF1N05ER2
MMDF3N02HDR2G
MMDF3N04HDR2
NTMD3N08LR2
SMVDF3N06VLR2
MMDF7N02ZR2
MMDF3N06VLR2
MMDF6N02HDR2
MMDF3N03HDR2
MMDF6N03HDR2
NTMD3N08LR2G
NTMD2C02R2G
MMDF2C03HDR2G

Initial Product/Process Change Notification #15528

NTMD2C02R2
MMDF2C03HDR2
NTMD2C02R2SG
NTMC1300R2
MMDF2C02ER2
MMDF2C02HDR2
NTMS3P03R2G
NTMS10P02R2
MMSF3P02HDR2
NTMS5P02R2G
NTMS5P02R2
NTMS10P02R2G
MMSF3P02HDR2G
MMSF7P03HDR2G
NTMS5P02R2SG
MMSF3P02HDR2SG
MMSF7P03HDR2
NTMS3P03R2
NTMS4112PR2
NTMS4P01R2
MMSF5P02HDR2
NTMS4705NR2G
NTMS4706NR2G
NTMS7N03R2G
STMS3300R2
NTMS7N03R2
NTMS4704NR2
NTMS4700NR2G
NTMS4N01R2
NTMS4704NR2G
NTMS4705NR2
NTMS4706NR2
NTMS4N01R2G
MMSF1310R2
STMS3300R2G
NTMS4404NR2
NTMS4700NR2
NTMSD3P102R2SG
NTMSD3P303R2G
NTMSD3P303R2
NTMSD2P102LR2
NTMSD2P102LR2G
NTMSD2P102R2
NTMSD2P102R2SG
NTMSD3P102R2
NTMSD3P102R2G
MMDFS2P102R2
MMDFS3P303R2
NTMSD6N303R2SG
NTMSD6N303R2

Initial Product/Process Change Notification #15528

NTMSD6N303R2G
MMDFS6N303R2
NTMD2P01R2G
NTMD3P03R2G
MMDF2P02HDR2
MMDF2P02ER2
MMDF2P02ER2G
MMDF2P02HDR2G
NTMD2P01R2
NTMD3P03R2
MMDF4P03HDR2
MMDF2P03HDR2