

# intel® Technical Advisory

TA-0673-3

5200 NE Elam Young Parkway  
Hillsboro, OR 97124

November 20, 2003

## Intel® Server Chassis SC5200 Base Redundant Power Supply Module Diode Issue

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### Products Affected

| Intel Server Chassis SC5200 | MM#    | Description  |
|-----------------------------|--------|--|
| KHD3RP450                   | 853634 | Chassis Base Redundant 450 Watt Power Supply (BRP)   |
| KHD3RP450NA                 | 852134 | Chassis Base Redundant 450 Watt BRP (North American) |
| FHD3BRPS450W                | 851831 | Spare Power Module 450W Base Redundant Power Supply  |

### Description

Intel Server Chassis SC5200 450-watt base redundant power (BRP) supply modules (Intel part number C20013-XXX) have the potential to fail during sustained, powered-on operation due to a diode failure in the power supply module. If a diode failure occurs, systems operating in a non-redundant power supply configuration (only one power supply module installed in the power supply cage) may experience an immediate system power down. Systems operating in a redundant power supply configuration will continue normal operation, and the power supply module failure will be indicated by the power supply and system front panel status LEDs, and Intel® Server Management software.

Intel has recorded a higher than expected failure rate of the Intel Server Chassis SC5200 BRP supply modules. Approximately 1.7% of the power supply modules shipped in 2003 have reported failures.

### Root Cause

Failure of the diode may occur due to inherent defects in the base material (substrate) used to fabricate the diode. The failure is not related to the design of the power supply module.

### Corrective Action / Resolution

A diode screening process has been implemented to prevent this issue from occurring in the future.

Intel has determined that Intel Server Chassis SC5200 BRP supply modules built between December 15, 2002 and August 15, 2003, bearing power supply module serial numbers: DLD**0251**XXXXXX through DLD**0333**XXXXXX are vulnerable to this issue. The decode mechanism for the serial number is: First and Second Digit=Year, Third and Fourth Digits=Work Week, X=Don't Care.

Power supply modules are **not** vulnerable to the diode issue if the power supply modules were built **before** December 15, 2002 (Serial # DLD**0250**XXXXXX or prior) **OR after** August 15, 2003 (Serial # DLD**0334**XXXXXX or later). These power supplies were built with diodes not affected by this issue.

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## Affected PS Module Serial Number Range

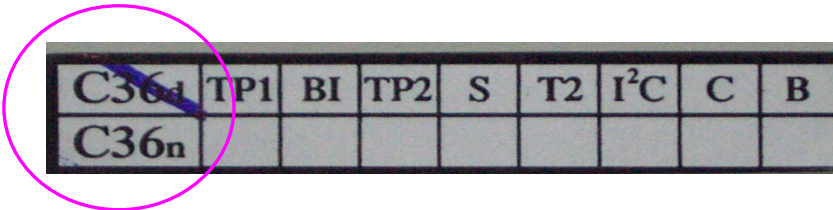
Between DLD0251XXXXXX and DLD0333XXXXXX

## Not Affected PS Module Serial Number Range

Prior to and including DLD0250XXXXXX  
Later then and including DLD0334XXXXXX

The power supply vendor is reworking some power supplies within the potentially affected power supply module serial number range with diodes not affected by this issue. Reworked power supplies are not vulnerable to this issue. Reworked power supplies will be marked with a blue slash (line) on the power supply module manufacturer's label. An example of the blue slash is shown in the following Figure A photograph.

Figure A – Manufacturing Label With Blue Slash (Line) Indicates A Reworked Power Supply



If customers identify power supply modules with serial numbers in the potentially affected serial number range, Intel recommends performing a replacement of the power supply modules during the system's next preventative maintenance schedule. Customers may replace a power supply module in a non-redundant system configuration without requirement for a system power-down by using a second spare power supply module to keep the system powered on while the other module is replaced. This requires that the customer have two AC power supply cords connected to the system. Customers who have potentially affected power supply modules may request replacement of their power supply modules. To obtain replacement power supply modules, contact Intel using your normal warranty process. Please indicate that you are calling regarding TA 673-3 and have the part number and the serial numbers for the systems needing the replacement part.

Please contact your Intel Sales Representative if you require more specific information about this issue.  
Enterprise Platforms & Services Division  
Intel Corporation