PCN Number: 0608

PCN Change Level: Major

May 9, 2006

Subject: Elimination of RTAX-S I_{CCA} Current Increase Due to Heavy Ion-Induced Upset

Dear Customer,

The purpose of this notice is to inform you that when exposed to heavy ion conditions, the FIFO controller in the RTAX-S device can experience an I_{CCA} current increase. This current increase has been observed at a maximum of 150 mA for a maximum test fluence of 5E6 heavy ions. Actual accumulation of heavy ions in space will be many orders of magnitude lower than what was used in the SEU testing. The cause for this current increase was due to the routing tie offs that had been modified to improve programming time in an early version of the software.

Designer v7.0 SP1, released in March 2006, and later versions of the software include a routing modification that eliminates the anomalous current increases. Designers targeting RTAX-S must use this version or later software versions to avoid the SEU-induced current increases. The above fix has been verified for SEU immunity. RTAX-S designers who are unable to update with the Designer software on their current project can avoid the SEU-induced current increases by instantiating all available SRAM blocks in the target RTAX-S device. Customers who use all the SRAM blocks in the RTAX-S device will not experience this current spike.

For further information, please contact the Actel Application Hotline at tech@actel.com.

Regards

Actel Corporation

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