



PFR-087 Title: FM6 PCB Actel Installed on ETC Board

Assembly : IDPU	SubAssembly : ETC	
Component : ETC Actel	Units Affected:	Units fixed:
Originator: Michael Ludlam	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>
Organization: UCB	Date: 29/JUL/05	
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Failure Occurred During (Check one ✓)

☒ Functional test ☐ Qualification test ☐ S/C Integration ☐ Launch operations ☐ Other (Flight Assy)

Environment when failure occurred:

☒ Ambient ☐ Vibration ☐ Shock ☐ Acoustic
☐ Thermal ☐ Vacuum ☐ Thermal-Vacuum ☐ EMI/EMC

Problem Description

(In this section it is important to document the specific symptoms which exhibited the problem. In the event we see it happen again, we would like to know as much as possible.)

On power up the ETC FM6 board was found not to be working. On closer inspection it was discovered that the wrong Actel had been installed on the board.

With the PCB installed in the ETC's pads, there are 3 pins which are outputs on the PCB which are also driven by the DCB:

Pin #	PCB Signal	DCB Signal
179	sig83	etcacntrl
168	sig81	spinclk
166	sig79	etc_cmd

These three signals are driven low by the PCB.

Analyses Performed to Determine Cause

(How do we know how the failure happened? Was it a bad part, bad handling, what?)

The assembly instructions called out the wrong part serial number to be installed on the board.

Corrective Action/ Resolution

(How do we fix the unit? And how do we make sure it doesn't happen again?)

PCB Actel should be removed, and replaced by a ETC Actel. An analysis of the overstressed experienced by the DCB Actel was requested from Actel. It was stated that after being stressed for 30 minutes it would have lost approximately 9 hours of it's lifetime. It is acceptable to use this part in the flight spare.

Engineer should double check that correct part is written up in the assembly instructions and confirm with technician installing the part.

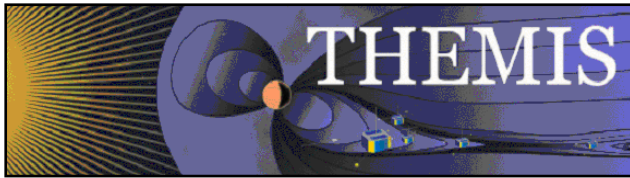
Update 5/OCT/05 – PCB Actel removed from board and ETC Actel installed. Board was tested and passed the ETC functional test. PFR is now closed.

Acceptance:

MAM: Ron Jackson _____; MSE: Ellen Taylor _____

PM: Peter Harvey _____; Cognizant Engineer _____

Date of Closure _____



Problem/Failure Report
THM_PFR_087
