

## PFR-014 Title: 28V Supply came up ON during flight testing

Assembly : PCB/ FGE SN005		SubAssembly :	
Component : R	144		
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<b>Failure Occurred</b> $1000000000000000000000000000000000000$	<b>I During (Check one</b> √) □ Qualification test	) S/C Integration	□ Launch operations
Environment wh	en failure occurred:		
√ Ambient	$\Box$ Vibration	□ Shock	
□ Thermal	□ Vacuum	□ Thermal-Vacuum	$\Box$ EMI/EMC
Problem Description			

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

During PCB functional test on 02/04/05 in the 6.2 Circuit Breakers off section, the voltage monitor for the IDPU 28V supply, VMON\_P28V\_HK, was addressed in the multiplexer. While the circuit breakers were off, a 0V read back was expected. The analog housekeeping read back 2.02V. This meant that the supply on the PCB came up **ON** in its nominal range. All supplies on the PCB are designed to come up off.

## **Analyses Performed to Determine Cause**

(How do we know how the failure happened? Was it a bad part, bad handling, what?) The "load simulator" was probed on the test fixture and confirmed that the 28V supply was on. Upon visual inspection of the PCB board IDPU 28V supply circuitry, it was clear that Jackson and Tull, the company that assembled most of the PCB, did not install R144. R144, part number M55342H06B2E10R, is an INSTALL item in the bill of materials. It was concluded to be an assembly oversight.

## **Corrective Action/ Resolution**

*(How do we fix the unit? And how do we make sure it doesn't happen again?)* R144, part number M55342H06B2E10R, was installed. The PCB functional test was redone. In the 6.2 circuit breakers off section, the IDPU 28V supply upon mux addressing displayed zero voltage. The PCB load simulator was probed and it confirmed the zero read back displayed on the PCB GSE. All PCB supplies came up off as expected.

Acceptance:

MAM: Ron Jackson\_\_\_\_\_; MSE: Ellen Taylor\_\_\_\_\_

PM: Peter Harvey\_\_\_\_\_; Cognizant Engineer\_\_\_\_\_

Date of Closure \_\_\_\_ February 7, 2005 \_\_\_\_

Any pertinent drawings or pictures can be included on this page