

Project Summary:

Accelerated Testing of Backplane Board

A major computer manufacturer asked DfR Solutions to perform temperature-humidity bias testing on several cut sections of a backplane board to examine leakage current around mounting holes. Once elevated leakage current was found, two of the coupons were subjected to SQUID microscopy that revealed that the shorting path was in the area of the large diameter connector PTHs. Cross sectioning of these areas showed evidence of hole-wall separation, insufficient plating thickness, and resin recession.

Keywords: superconducting quantum interference device microscopy, temperature-humidity bias, THB, excessive current, shorting, resistor, low leakage currents, magnetic field image, Fast Fourier Transform, FFT, current maps, desmearing process