

APPLICATION BRIEF

2020

MULTI-CHANNEL POWER SUPPLY TEST SYSTEM

Brief Description:

Emerging Technologies, LLC. was called upon to provide a custom 24 load channel power supply test system. HiPot, Functional, and Environmental Stress Tests were required of the system.

The system was designed incorporating multiple test fixtures, modular load banks and metering circuits, and a multi-threaded test application to accommodate the flexibility required for the overall application.

A multi-page DUT configuration strategy is employed to allow for operator entry and storage of the many test specifications required for test of all varieties of DUT. Additionally, results are stored in a comma separated value file for later recall and analysis.

The system was designed and constructed specifically to obtain multiple high speed analog measurements with minimal distortion during dynamic testing in the environmental chamber.

Final qualification process included cycles of around the clock testing of each combination of DUT along with failure mode verification.

Customer Benefit:

The customer is able to perform automated multiple DUT testing using a diverse set of hardware and software via one easy to use operator interface.



ET Responsibilities:

- Functional Specification Generation
- ✓ Design / Engineering
- ✓ Fabrication
- ✓ Programming – Software
- Programming – Firmware
- Circuit & PCB Design
- ✓ On-Site Commissioning
- ✓ Post Commissioning Support
- Other

Technologies:

- Embedded Computers
- Microcontrollers
- ✓ Visual Software
- ✓ Control Software
- ✓ Data Acquisition
- ✓ Computer Based Control
- ✓ Communications – RS232
- System Integration
- Other

Special Features:

- ✓ Multi-channel load support.
- ✓ Remote Control Environmental Chamber Testing.
- ✓ Remote Control HiPot Testing.
- ✓ Modular DUT spring probe test fixtures