

APPLICATION BRIEF

2020

MULTI DUT SUB ASSEMBLY TEST FIXTURE

Brief Description:

Emerging Technologies, LLC. was called upon to develop a custom test fixture, based on the Emerging Technologies standard fixture platform, to test a PCB or cased-up DUT on a single fixture.

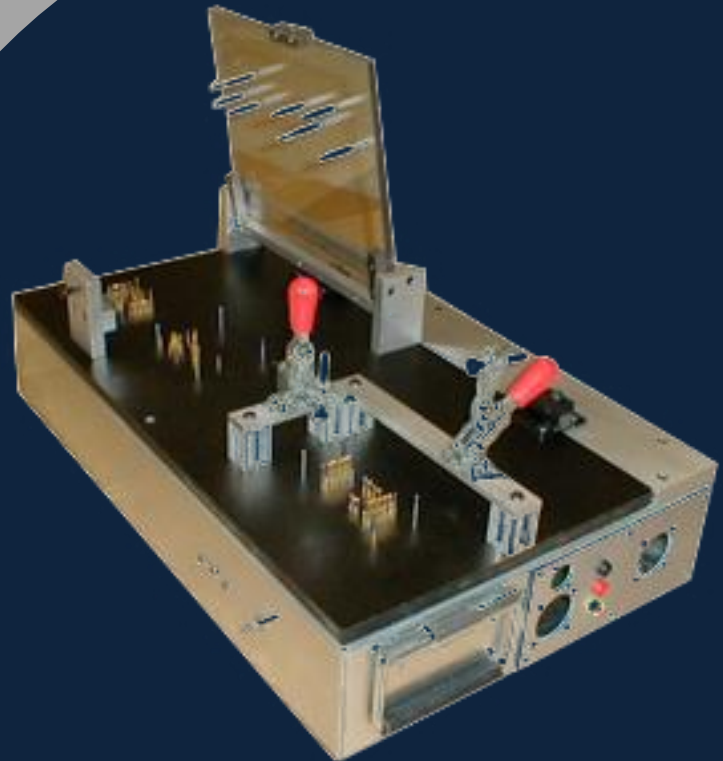
The fixture is custom designed to allow for operator selection of DUT model to be tested. This fixture is designed to allow for DUT interface for the PCB of the product in the gated side for the fixture or for cased-up DUT interface on the non-gated side of the fixture. This allows for testing of the base PCB prior to assembly and allows for testing after assembly. Additionally, product re-work and field returns can be tested.

This system was developed around the Emerging Technologies standard fixture hardware. Using customer provided Gerber files and a list of defined interface probe points, Emerging Technologies extracted coordinates for CNC machining of the probe plate. Custom clamping was required for the cased-up side of the fixture.

Custom machining, fabrication, and assembly were employed. Modular components were used where possible to allow flexibility for future modifications. To keep cost to a minimum, the system used manually actuated clamping of the DUT.

Customer Benefit:

The customer is able to functionally test base PCBs and cased-up product on the same test fixture, using the Emerging Technologies, LLC. designed test system.



ET Responsibilities:

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

Technologies:

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

Special Features:

- ✓ PCB and Cased-up Testing on a Single Fixture.
- ✓ Spring Probe Coordinate Extraction and Machining.
- ✓ Carry Handles for Convenient Transport.
- ✓ Standard Side-mount Connector Bulkhead
- ✓ Operator Friendly Design.