

# APPLICATION BRIEF

## 2020

## CUSTOM CAPACITANCE TEST SYSTEM

### Brief Description:

Emerging Technologies, LLC. was called upon to develop a custom test system to verify capacitance values of the DUT on a per model basis. .

The system is custom designed to allow for operator selection of DUT model to be tested. Based on the selected model, the system automatically selects the correct test specifications from the customer configured test specification file. Four wire measurement strategy, using Kelvin probes, to make multiple measurements via the test system multiplexer and LCR measurement hardware. Results are stored in a comma separated file (.csv) for later review. A label is printed after testing to identify passing parts.

This system was developed from scratch around the Emerging Technologies standard fixture hardware. Custom machining, fabrication, and assembly were employed. Modular components were used where possible to allow flexibility for future modifications.

### Customer Benefit:

The customer is able to automatically test DUT by model, identify DUT test results with DUT label, and track test results for quality.



### 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:

- ✓ Configurable Test Specification File.
- ✓ Test Results Storage.
- ✓ Kelvin Probes
- ✓ Carry Handles for Convenient Transport.
- ✓ Operator Friendly Design.