

# Circuit Testers

## 132-SQB-BTP Squib Testers



### 132-SQB-BTP Series Squib Testers



#### DESCRIPTION

This multi-channel squib tester is based on the modular design of our 101-SQB series testers. These testers provide multiple-channel measurement with 6 resistance ranges and one diode test range. Failsafe current is 10 mA. Test ranges are as follows:

Range	Resolution	Accuracy
20 $\Omega$	1 m $\Omega$	10 m $\Omega$
200 $\Omega$	10 m $\Omega$	50 m $\Omega$
2 k $\Omega$	100 m $\Omega$	500 m $\Omega$
20 k $\Omega$	1 $\Omega$	10 $\Omega$
200 k $\Omega$	10 $\Omega$	1 k $\Omega$
2 M $\Omega$	100 $\Omega$	100 k $\Omega$
Diode	Forward bias voltage	

The model 132-SQB-BTP can be configured as either a 19" rack-mount or a benchtop case. This multi-channel tester uses standard 110VAC electrical power. Our safe power supply module is built with multiple layers of separation that ensure the highest standards of safety.

The test circuit is connected to a 32-point switching matrix. Tamper-proof failsafe modules are integrated into each UUT channel, providing additional safety. Figures 1 and 2 below illustrate this point.

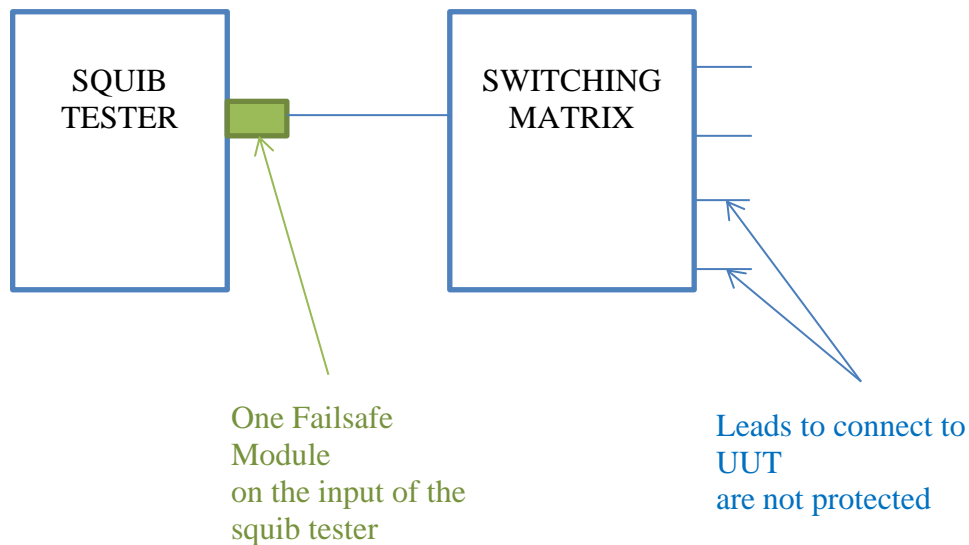


Figure 1: DO NOT rely solely on the failsafe module of the tester

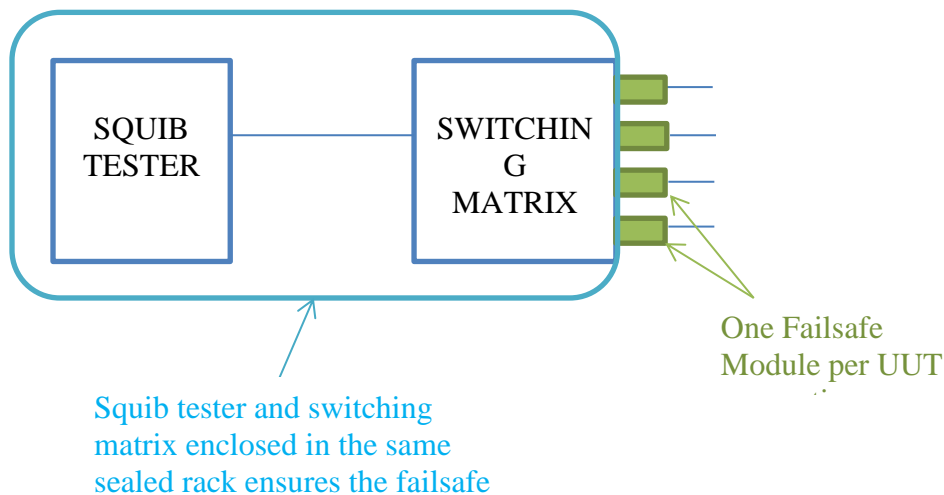


Figure 2: DO use a failsafe module for each connection to the UUT

The configuration in figure 1 above poses a risk in case of a failure such as a short in the switching matrix. For this reason, our switching matrix and squib tester are packaged together into a standard 19" rack-mount or benchtop unit. Leads to the UUT consist of 4-wire Kelvin configuration. Terminal options include flying leads, tip point, banana jack, or alligator clips. We can also assemble special connectors upon request.

The 132-SQB-BTP tester has one manual channel accessible on the front panel (test leads included). This allows easy manual measurement of any channel.

Our tester detects missing or broken wires in the 4-wire test leads to the UUT and shows a "broken wire" reading instead of a resistance or open circuit reading. This prevents false positive results.

Calibration of our testers is performed digitally. There is no requirement to open the tester or to trim internal or external potentiometers. This ensures greater calibration stability; there is no drift, and the calibration value is stable with temperature.

The tester can be controlled via our proprietary software or via a command set. Customers can write their own software to command the tester and to read data from the tester. All functions can be controlled via software.

Connection from controller to the tester is via a fiber optic cable. On the computer side the connection is a USB connector. The tester appears as a COM (serial) port on the computer, allowing the user to interface with the tester in any programming language. The tester will connect to a Windows computer or tablet.

Our software includes the following features:

- Full control and readout of the tester from a computer. All functions can be accessed remotely; all data can be read remotely.
- Scripting: an engineer can define a test sequence (name each circuit path to measure, define the test points to use for each circuit, select the appropriate range to use for each circuit, and define pass/fail limits). After making all necessary UUT connections, the test operator initiates the test sequence, which runs automatically.
- Measured results are recorded in a database and can be exported in csv format to an Excel file.
- Printed measurement reports can also be generated.

#### Model 132-SQB-BTP Multi-channel Rack-Mount Squib Tester

Standard configuration includes:

- (1) 32-test point igniter circuit tester with safe power supply module
- (1) Software for remote control and readout
- (1) USB to LC fiber optic converter
- (1) 6-foot long LC-LC fiber optic cable between the igniter circuit tester and the computer. Longer cables are available. Please contact us.
- (1) 6-foot long 4-wire cable for the manual channel, terminated with flying leads, pin tip probes, banana jacks, or alligator clips. We can also wire custom connectors upon request.

#### Option SE90317 Packaging for THAAD payload

The tester is customized to offer connection on the front of the 132-SQB-BTP tester. The four measurement connectors will be mounted on the lower front assembly of the 132-SQB-BTP. The panel visible to the operator will include the tester's display, an ON/OFF switch and UUT connectors.

#### Option SE90318 External Calibration Box and Automated Calibration Software

Includes: calibration box, automated calibration procedure in software. This is an external calibration box with certified precision resistors that connects to the tester at the end of the cable harness. This allows full calibration of the 7 ranges of the tester. The calibration box requires annual recertification of the precision resistors.

#### Option SE90320 External Verification Module

This external verification module connects to the tester and allows full verification of the system: squib meter, switching matrix, and cable harness. The verification procedure is performed automatically via included software.

#### Option SE90321 THAAD Harness

Includes a wire harness from the SQB tester to the THAAD UUT. The harness is a 'Y' configuration connecting two of the SQB tester connectors to a single connector on the UUT side. Cable will be 30' long. Longer cable length is available upon request.

Other options and accessories are available such as custom cables, connectors, lead terminations, custom software, etc. Please contact us for any additional information.