

# SIMPLIFY YOUR DEVICE CHARACTERIZATION APPLICATIONS WITH THE RIGHT TEST FIXTURES



Series 2600A System SourceMeter® Instruments ■ Model 4200-SCS Semiconductor Characterization System

## MODEL LR:8028 COMPONENT TEST FIXTURE — *optimized for device testing at up to 200V/1A*

The **Model LR:8028 Component Test Fixture** provides a convenient way to connect the instrumentation in your ACS Basic Edition test configuration to standard packaged semiconductor devices. It's designed for use with Source-Measure Units (SMUs) capable of delivering up to 200V and 1A. In addition to the Series 2600A System SourceMeter® instruments and the Model 4200-SCS, this fixture can be used with a variety of other instruments, including voltage and current sources, DMMs, LCR meters, oscilloscopes, analyzers, C-V meters, and electrometers. The Model LR:8028 uses standard triax cables to connect directly to SMUs with triax connectors (Models 2635A and 2636A System SourceMeter instruments or the Model 4200-SCS), and the Model 2600-FIX-TRX cable adapter to connect to Models 2601A, 2602A, 2611A, or 2612A. Together, the cables, adapter, and fixture make connections easy by ensuring SMU Lo terminals are all connected together at the fixture.

### The Model LR:8028 incorporates a variety of useful features:

- 12 triax connectors for connecting SMUs or other instrumentation requiring triaxial connections
- Two BNC connectors and five binding posts for additional instrument connections
- Interlock connector for safe operation. The lid interlock, which is used with instruments with compatible interlock connectors (such as the 4200-SCS), provides a measure of safety when working with potentially hazardous voltages. The interlock circuit signals the instrumentation to stop applying power to the test fixture when the lid is open.
- One 28-pin ZIF (zero insertion force) DIP socket
- Color-coded mini jumpers for easy device connections
- Clearly marked connecting points that minimize the possibility of errors when making test connections
- Hinged lid with light-tight, conductive gasket

### Typical Applications:

- Diode tests:  $V_F$  vs.  $I_F$ ,  $ILK_G$  vs.  $V_R$ , and zener breakdown voltage.
- Diode leakage current test.
- Zener diode test.
- Transistor tests: Such as current gain, common emitter characteristics, and open-lead leakage tests.

### Supplied Accessories:

- Instruction manual
- Interlock cable for connecting a single Series 2600A SMU to the fixture interlock
- 40 standard color-coded Teflon® mini jumpers (20 red and 20 black)

### Accessories Available:

- **Model 236-ILC3:** Interlock Cable, 3m (10 ft.)  
*NOTE: The safety interlock cable must be used in order for a Model 4200-SCS unit to recognize that the test fixture lid is open.*
- **Model 7078-TRX-3:** Triax Cable (3-lug), 0.9m (3 ft.)
- **Model 7078-TRX-10:** Triax Cable (3-lug), 3m (10 ft.)
- **Model 2600-FIX-TRX:** Grounded Phoenix-to-Triax Cable Adapter
- **Model 4801:** Low Noise Coax Cable, 1.2m (4 ft.)



## MODELS 8101-4TRX AND 8101-PIV COMPONENT TEST FIXTURES — *optimized for low voltage device testing*

The **Model 8101-4TRX fixture** is designed for testing devices with up to four leads at levels up to 42V and 1A. The **Model 8101-PIV fixture** is additionally equipped with an insulated component terminal clip for holding two-leaded devices for testing at the same signal levels as well as an additional socket with SMA connectors for Pulse and C-V testing at typical bandwidth of up to 30 MHz. Both economical fixtures are designed for basic device testing in applications such as quality assurance, failure analysis or incoming inspection labs, research environments, etc.

Like the Model LR:8028, these fixtures use standard triax cables to connect to SMUs with triax connectors (Models 2635A and 2636A SourceMeter instruments or the Model 4200-SCS), and the Model 2600-FIX-TRX cable adapter to connect to Models 2601A/2602A and 2611A/2612A SMUs. Together, the cables, adapter, and fixture make connections easy by ensuring SMU Lo terminals are all connected together at the fixture.

### Basic Specifications

### Model 8101-4TRX

#### Model LR:8028

**Device Socket Configuration:** 28 pin DIP (0.100 in. pin spacing, 0.300 to 0.600 in. wide, zero insertion force)

**Connector Type:** Three-lug triaxial (12), isolated BNC (2), 5-way binding posts (5), safety interlock (1)

**Maximum Signal Voltage:** 210V peak

**Maximum Signal Current:** 1A peak

**Offset Current:**  $\leq 100\text{pA}$

**Isolation From Chassis:** (triax center signal, BNC signal, 5-way binding posts)  $> 1\text{G}\Omega$

For triax connections, 1pA offset and  $1\text{T}\Omega$  isolation are typical.

#### Device Socket Configuration:

4-pin gold plated, Teflon transistor socket.

**Connector Type:** 4 independent Triax connectors, center pin to device socket, no connect to guard (center shield).

**Maximum Signal Voltage:** 42V peak, signal or guard to any signal or chassis.

**Maximum Signal Current:** 1.05A peak.

**Maximum Signal Power:** 1W, maximum power dissipation in test fixture.

**Offset Current:** 1pA maximum. (0-50°C, non-condensing at 60% R.H. up to 35°C)

**Path Isolation Resistance:**  $> 1\text{T}\Omega$  typical. (18-28°C, non-condensing at 60% R.H.)

**Path Resistance:**  $< 1\Omega$ .



#### Model 8101-PIV

The Model 8101-PIV fixture has the same specifications as the Model 8101-4TRX but offers two other ways to connect devices in addition to a transistor socket. The first is a separate transistor socket wired to SMA inputs that is ideal for pulse and C-V testing. The fixture also includes an insulated component terminal clip for holding devices with two leads, such as diodes and resistors.

Specifications are subject to change without notice.

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Item shipped may vary from model pictured here.

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