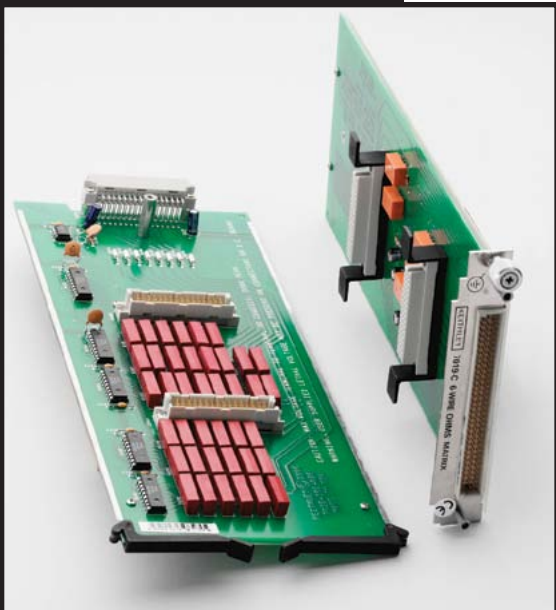


# 7019-C

## 6-Wire Ohms Matrix Card

For use with Series 2400 SourceMeter® Instruments



- For high speed production test of resistor networks
- Supports Series 2400's 6-wire  $\Omega$  measurements
- Dual 3×6 matrix configuration
- 100,000,000 closure life
- <math>0.5\Omega</math> contact resistance
- 200V, 1A rated

### Ordering Information

**7019-C** Dual 3×6 Matrix with 96-pin Mass Terminated Connector Board

The Model 7019-C 6-Wire Ohms Matrix Card is specifically designed for automated production testing of resistor network devices in conjunction with the six-wire ohms function of Keithley's Series 2400 SourceMeter instruments and Model 7001 or 7002 Switch Mainframes. When these instruments are combined with the 7019-C in a production test system, the "per element" test time is typically less than 10ms, with maximum speeds typically less than 4ms.

### Flexible Matrix Configuration

The Model 7019-C is configured as two independent 3×6 matrices. One is designed for switching the Series 2400 instrument's Force+, Force-, and Guard signals, while the other switches its Sense+, Sense-, and Guard Sense terminals. This configuration makes it possible to connect any of the SourceMeter instrument's force, sense, or guard outputs to any pin of the DUT for wide testing flexibility. Each of the card's 36 crosspoints is a single-pole switch. Closing the appropriate crosspoint switch allows any of the three rows in one matrix to be connected to any of the six columns in the same matrix. In addition to these matrices, two utility rows are available to handle other switching tasks, such as temperature monitoring.

### More Information

For more information on 6-wire ohms measurements and using the Model 7019-C in testing resistor networks, refer to the section on SourceMeter instruments and to Application Note #1818 at [www.keithley.com](http://www.keithley.com).

**MATRIX CONFIGURATION:** Dual 3 rows by 6 columns, plus two utility pathways with two 2-channel multiplexer rows. Jumpers can be removed to isolate any row from the backplane.

**CONTACT CONFIGURATION:** 1 pole Form A.

**CONNECTOR TYPE:** 96-pin male DIN connector.

**MAXIMUM VOLTAGE:** Any input to any other input or chassis: 200V peak.

**MAXIMUM CURRENT:** 1A carry/0.5A switched.

**MAXIMUM POWER:** 10VA.

**CONTACT LIFE: 1V, 10mA:**  $10^8$  closures.

**20V, 0.5A:**  $5 \times 10^4$  closures.

**CHANNEL RESISTANCE:**  $<0.5\Omega$  initial,  $1\Omega$  at end of contact life.

**CONTACT POTENTIAL:**  $<25\mu\text{V}$  per single contact or pair.

**ACTUATION TIME:** 500 $\mu\text{s}$ .

**ISOLATION: Path:**  $>10^9\Omega$ ,  $<50\text{pF}$ . **Differential:**  $>10^9\Omega$ ,  $<400\text{pF}$ . **Common Mode:**  $>10^9\Omega$ ,  $<400\text{pF}$ .

**OFFSET CURRENT:**  $<100\text{pA}$ .

**INSERTION LOSS (50 $\Omega$  Source, 50 $\Omega$  Load):**  $<0.35\text{dB}$  below 1MHz,  $<3\text{dB}$  below 2MHz.

**CROSSTALK (1MHz, 50 $\Omega$  Load):**  $-40\text{dB}$ .

**RELAY DRIVE CURRENT:** 15mA per channel.

### ACCESSORIES AVAILABLE

7011-KIT-R	96-pin Female Connector Kit
7011-MTR	96-pin Male Connector Kit
7019C-MTC-1	6-pin Extender Cable, 2m
7019C-MTCL-2	6-pin Extender and Instrument Cable, 2m

### SERVICES AVAILABLE

7019-C-3Y-EW	1-year factory warranty extended to 3 years from date of shipment
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Use with 7001 and 7002 switch mainframes

SWITCHING AND CONTROL

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[www.keithley.com](http://www.keithley.com)

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