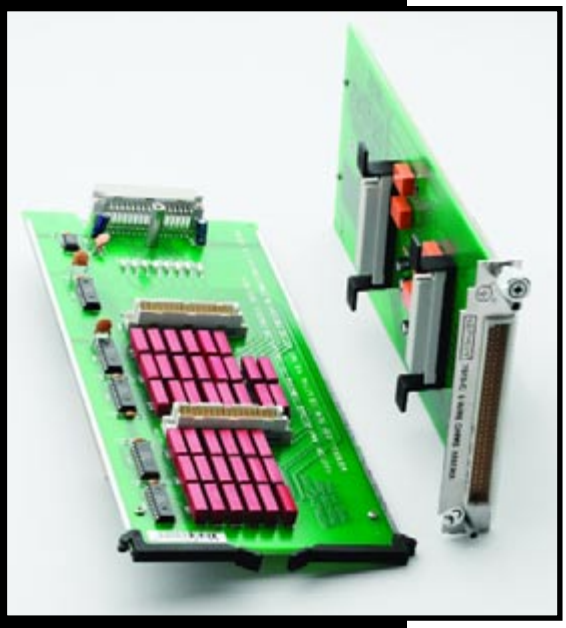
7019-C

6-Wire Ohms Matrix Card

For use with 2400 Series SourceMeter® Instruments



- **For high speed production test of resistor networks**
- **Supports Series 2400's 6-wire Ω measurements**
- **Dual 3x6 matrix configuration**
- **100,000,000 closure life**
- **<0.5Ω 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.

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: 5×10^4 closures.

CHANNEL RESISTANCE: <0.5Ω initial, 1Ω at end of contact life.

CONTACT POTENTIAL: <25μV per single contact or pair.

ACTUATION TIME: 500μs.

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

OFFSET CURRENT: <100pA.

INSERTION LOSS (50Ω Source, 50Ω Load): <0.35dB below 1MHz, <3dB below 2MHz.

CROSSTALK (1MHz, 50Ω Load): –40dB.

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-2	6-Pin Extender Cable, 2m
7019C-MTCI-2	6-Pin Extender and Instrument Cable, 2m

Use with 7001 and 7002 Switch Mainframes

SWITCHING & CONTROL

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