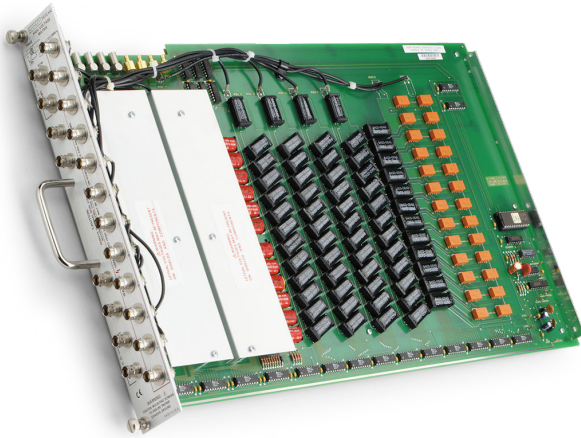


7702-HV

8x12 High Voltage Semiconductor Matrix Cards



The Model 7072-HV switches low-level, high-voltage, and high-impedance signals for semiconductor parametric tests on wafers and devices. This unique design provides two signal paths capable of switching 1300 V with less than 1 pA of offset current. The two C-V paths may be used for measurement of capacitance voltage characteristics from DC to 1 MHz or for switching low currents with a common ground. Four additional high quality signal paths with less than 20 pA offset current provide for signal switching to 200 V.

Connections are 3-lug triax with the outer shell connected to chassis for safety and noise shielding. The center conductor is fully surrounded by the inner conducting shield to provide fully guarded measurements with higher isolation and improved measurement speed and accuracy.

Key Features

- Two 1300 V, sub-picoamp current paths
- Six 200 V, 20 pA paths
- For use with 2410 SourceMeter SMU Instruments, Series 2600B SourceMeter SMU Instruments, and the 4200A-SCS Parameter Analyzer
- 3-lug triaxial connections
- Compatible with Models 707A, 707B, 708A, and 708B

7072-HV Applications

The Model 7072-HV is typically used with the 2410 SourceMeter SMU Instrument, Series 2600B SourceMeter SMU Instruments, and the 4200A-SCS Parameter Analyzer to address a wide variety of semiconductor device and material characterization needs.

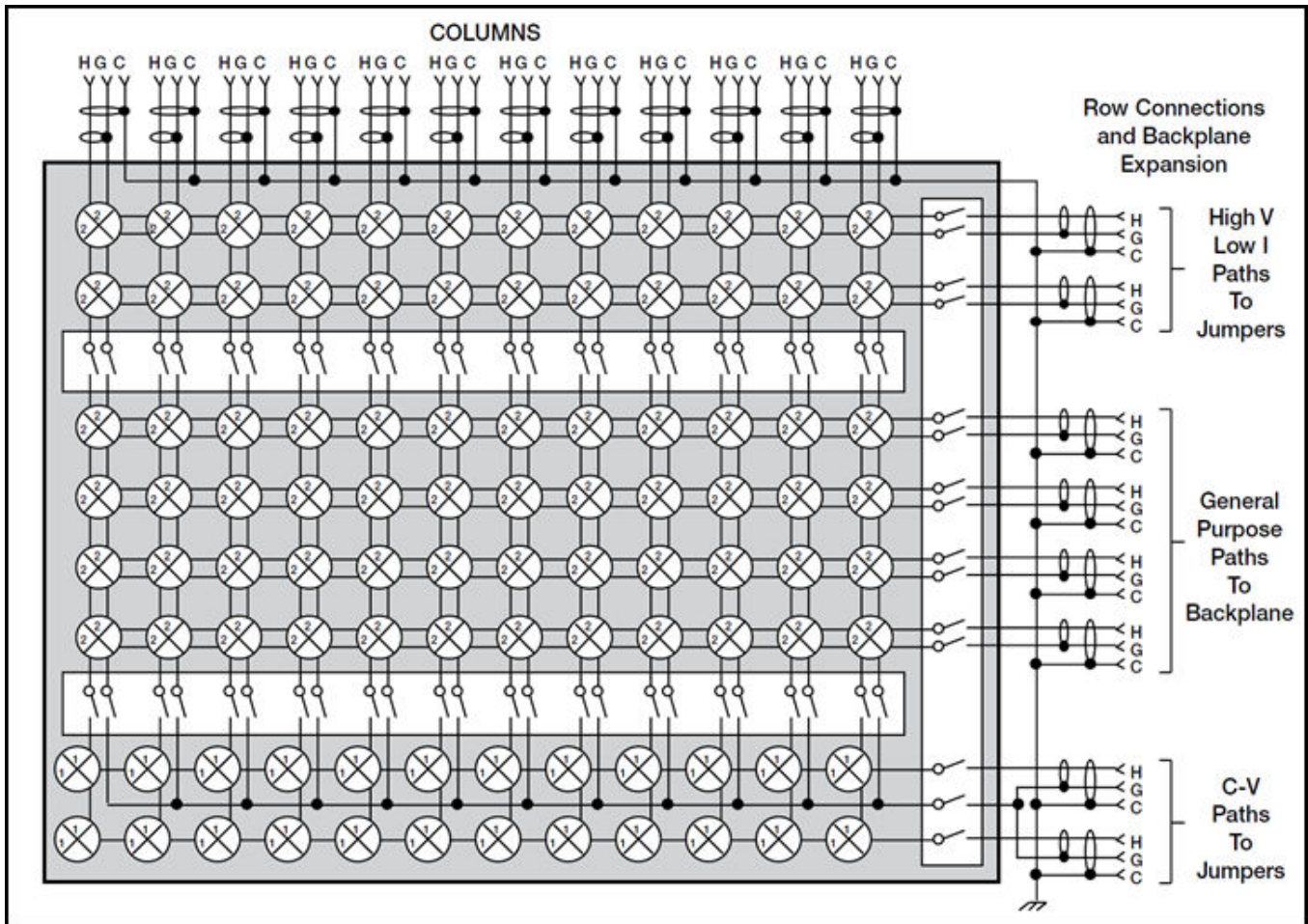
The high voltage signals encountered in breakdown measurements or oxide integrity testing can be easily switched with this matrix card. Signals connected to the High V, Low I paths are automatically isolated from the rest of the card.

For applications requiring connections to a large number of devices or test points, the 7072-HV matrix can be expanded with additional cards. The high voltage and C-V rows can be extended to other cards with coaxial jumpers. The other four high-quality signal paths connect directly to the 707A, 708A, 707B, or 708B backplane for expansion.

Specifications

Specifications are subject to change without notice.

Matrix Configuration	8 rows by 12 columns.	EMC	Conforms to European Union EMC Directive.
Connector Type	Three-lug triaxial (Signal, Guard, Chassis).	Safety	Conforms to European Union Directive 73/23/ EEC (meets EN61010-1/IEC 1010).
Contact Life	Cold Switching: 10 ⁷ closures. At Maximum Signal Level: 10 ⁵ closures.	Environment	For indoor, non-residential use only. Offset Current and Path Isolation Specifications: 23°C, <60% relative humidity. Operating: 0°C to 50°C, up to 35°C at 70% relative humidity. Storage: -25° to +65°C.
Path Resistance (Per Conductor)	<1 Ω initial, <3.5 Ω at end of contact life.	Warranty	1 year.
Relay Settling Time	<15 ms.		
Insertion Loss	1 MHz, 50 Ω source, 50 Ω load: 0.1 dB typical.		



7702-HV 8x12 High Voltage Semiconductor Matrix Cards

		Low Current (Rows A to B)	General Purpose (Rows C to F)	C-V (Rows G to H)
Crosspoint Configuration		2-pole Form A	2-pole Form A	1-pole Form A, Common Guard
Offset Current		<1 pA	<20 pA	<20 pA
Path Isolation:	Resistance	>10 ¹³ Ω	>10 ¹² Ω	>10 ¹² Ω
	Capacitance (nominal)	0.4 pF	1 pF	0.6 pF
Crosstalk:	1 MHz, 50 Ω load (typical)	<−60 dB	<−40 dB	<−50 dB
	3 dB Bandwidth (typical), 50 Ω Load	4 MHz	8 MHz	5 MHz
Maximum Signal Level				
Maximum between any 2 pins or chassis		1300 V	200 V	200 V
Maximum between signal and guard		200 V	200 V	200 V
1 A carry/0.5A switched, 10 VA peak (resistive load)				
Contact Potential (Signal to Guard)		<50 μV	<20 μV	<40 μV

Ordering Information

7072-HV	8×12 High Voltage Semiconductor Matrix Card
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Available Accessories

237-TRX-T	3-Lug Triax Tee Adapter
237-TRX-TBC	3-Lug High Voltage Female Triax Bulkhead Connector
7078-TRX-3	3-Lug Triax Cable, 0.9 m (3 ft)
7078-TRX-10	3-Lug Triax Cable, 3 m (10 ft)
7078-TRX-BNC	3-Lug Triax to BNC Adapter

For use at 200 V or less

7078-TBC	3-Lug Female Triax Bulkhead Connector with Cap
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Services Available

7072-HV-3Y-EW	1-year factory warranty extended to 3 years from date of shipment
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Contact Information:

Australia 1 800 709 465
Austria* 00800 2255 4835
Balkans, Israel, South Africa and other ISE Countries +41 52 675 3777
Belgium* 00800 2255 4835
Brazil +55 (11) 3530-8901
Canada 1 800 833 9200
Central East Europe / Baltics +41 52 675 3777
Central Europe / Greece +41 52 675 3777
Denmark +45 80 88 1401
Finland +41 52 675 3777
France* 00800 2255 4835
Germany* 00800 2255 4835
Hong Kong 400 820 5835
India 000 800 650 1835
Indonesia 007 803 601 5249
Italy 00800 2255 4835
Japan 81(3) 6714 3086
Luxembourg +41 52 675 3777
Malaysia 1 800 22 55835
Mexico, Central/South America and Caribbean 52 (55) 88 69 35 25
Middle East, Asia, and North Africa +41 52 675 3777
The Netherlands* 00800 2255 4835
New Zealand 0800 800 238
Norway 800 16098
People's Republic of China 400 820 5835
Philippines 1 800 1601 0077
Poland +41 52 675 3777
Portugal 80 08 12370
Republic of Korea +82 2 565 1455
Russia / CIS +7 (495) 6647564
Singapore 800 6011 473
South Africa +41 52 675 3777
Spain* 00800 2255 4835



CalPlus GmbH
Zentrale Berlin
Heerstraße 32 • 14052 Berlin
Tel.: 030 214982-0 • Fax: 030 214982-50
office@calplus.de • www.calplus.de

CalPlus GmbH
Niederlassung ScopeShop
Normannenweg 30 • 20537 Hamburg
Tel.: 040 3039595-0 • Fax: 040 3039595-50
scopeshop@calplus.de • www.calplus.de

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