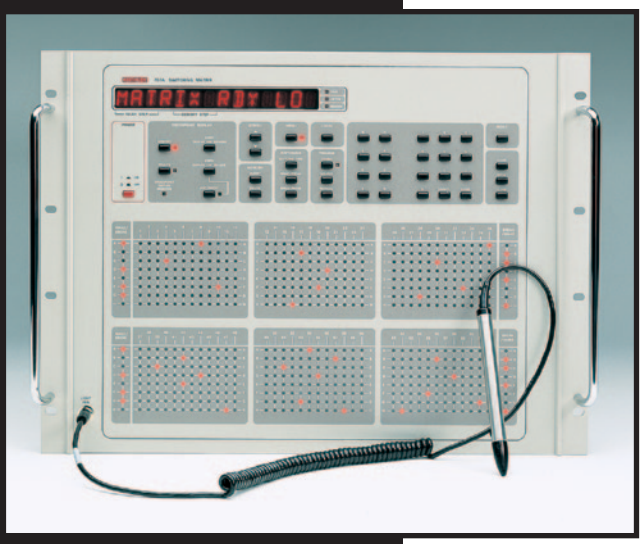
707A

Switching Matrix Mainframe

Six-Slot with Fixed Rack Kit



- **Integrates seamlessly with the Model 4200-SCS for semiconductor I-V and C-V characterization**
- **Controls up to 576 channels of 2-pole switching (expandable to 2880)**
- **Supports a broad range of switch cards**
- **Interactive one-touch programming**
- **Program and store up to 100 switch configurations in non-volatile memory**
- **8 channels of digital input and output**

Ordering Information

707A **6-Slot Switching Matrix**

Extended warranty, service, and calibration contracts are available.

Accessories Supplied
Relay test connector
Fixed rack mount hardware

ACCESSORIES AVAILABLE

7078-PEN	Programming Light Pen (includes holder)
7007-1	Double Shielded Premium GPIB Cable, 1m (3.3 ft)
7007-2	Double Shielded Premium GPIB Cable, 2m (6.6 ft)
7051-2	BNC-to-BNC Cable, 0.6m (2 ft)
7051-5	BNC-to-BNC Cable, 1.5m (5 ft)
7078-DIN	8-pin DIN Cable (Master/Slave), 1.8m (6 ft)
7079	Slide Rack Mount Kit
KPCI-488LPA	IEEE-488 Interface/Controller for the PCI Bus
KUSB-488A	IEEE-488 USB-to-GPIB Interface Adapter

The six-slot Model 707A Switching Matrix builds upon the strengths of the original Model 707 to offer even greater capabilities for custom-designed, high-performance switching. The large matrix format and flexibility of the 707A enable you to custom-design your test system for peak performance. The Model 707A is engineered to reduce test system costs by saving valuable time during system integration and test development.

The Model 707A is compatible with all existing switch cards for the Model 707 and 708 switch mainframes. This card line offers both general-purpose and application-specific cards for use in semiconductor and telecommunications testing.

Analog Backplanes

Three separate analog backplanes automatically make row connections between cards of a given family. Separating the analog backplanes permits designing each to maintain the performance characteristics within a card family when multiple card types are mixed within a mainframe.

Within a mainframe, matrix cards are connected along the rows via the analog backplanes. This reduces the need for complex harnesses and external wiring while saving time in design and system integration.

Quick Connect/Disconnect

Cabling and interconnect to instrumentation and DUT pins are also simplified through the use of standard connector types, which can be easily connected and disconnected for system assembly and maintenance. Cable accessories are available in either finished assembly or kit form.

OVERVIEW

CAPACITY: 6 plug-in cards per mainframe.

EXPANSION CAPACITY: Daisy-chain expansion of up to 4 Slave units with one Master unit.

ANALOG BACKPLANES: Backplanes provide automatic row expansion between similar relay cards within one mainframe.

DISPLAY: 14-segment alphanumeric LED display, plus individual status LEDs.

TRIGGER SOURCES: External Trigger (TTL compatible, programmable edge, 600ns minimum pulse width); IEEE-488 bus (TALK, GET, "X"); manual.

STATUS OUTPUT: Matrix Ready (TTL compatible, programmable high- or low-true): goes false when relays are switched, true at end of Programmed Settling Time.

MAKE-BEFORE-BREAK, BREAK-BEFORE-MAKE: Programmable by row.

LIGHT PEN OPTION: Controls crosspoints, memories, make-before-break, and break-before-make. One light pen controls Master and all Slaves.

CARD SIZE: 52mm high × 347mm wide × 523mm long (2 in × 13.6 in × 20.6 in).

DIGITAL I/O (TTL compatible):
Data: 8 inputs, 8 outputs.
Control: Input Latch, Output Strobe, Matrix Ready.

EXECUTION SPEED

MAXIMUM TRIGGER RATE: 200 setups per second (stepping through previously stored setups with make-before-break and break-before-make disabled).

TRIGGER RESPONSE TIME: External Trigger: <1ms.
IEEE-488 GET: <1ms.

RESPONSE TO IEEE-488 COMMAND (to close a single relay, excluding relay settling time):
Stand Alone: <15ms.
Master and Four Slaves: <55ms.

DOWNLOAD TIME (one setup to 707A):
Stand Alone: 50ms typical.

GENERAL

REAR PANEL CONNECTORS:
Two BNC: External Trigger, Matrix Ready.
One DB-25: Digital I/O.
Two 8-pin DIN: Master/Slave In, Master/Slave Out.
One 6-pin screw terminal plug: Relay Test.

ENVIRONMENTAL: Operating: 0° to 50°C. **Storage:** –25° to 65°C.

POWER: 90–125V AC or 180–250V AC (internally/externally selected), 50–60Hz, 140VA maximum.

RELAY DRIVE: 5.0A minimum per card (slot).

EMC: Conforms with European Union Directive 89/336/EEC EN 55011, EN 50082-1, EN 61000-3-3, FCC part 15 class B.

SAFETY: Conforms with European Union Directive 73/23/EEC EN 61010-1.

DIMENSIONS: 356mm high × 432mm wide × 574mm deep (14 in × 17 in × 22.6 in)

1.888.KEITHLEY (U.S. only)
www.keithley.com