

KEITHLEY

3732

The Keithley 3732 is an ultra-high-density reed matrix card designed for the Keithley 3706 and 3706A system switch/multimeters, offering 448 single-pole crosspoints. It can be configured dynamically in multiple matrix topologies, including quad 4x28, dual 4x56, single 4x112, dual 8x28, or single 8x56. Its ultra-fast reed relays provide actuation times under 0.6 ms, making it ideal for high-speed automated test applications where throughput is critical.

SPECIFICATIONS

General

Interfaces	Two 78-pin male D-sub connectors
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Physical

Power Supply	Powered via mainframe backplane
Operating Temperature	0°C to 50°C °C
Dimensions (W×H×D)	33 mm x 211 mm x 322 mm mm

Topology and Configuration

Switch Type	Reed Relay
Number of Crosspoints	448
Supported Topologies	Quad 4x28 (1-pole), Dual 4x56 (1-pole), Single 4x112 (1-pole), Dual 8x28 (1-pole), Single 8x56 (1-pole)
Number of Poles	1-pole
Compatible Mainframes	Keithley 3706, 3706A

DC Electrical Specifications

Maximum Switching Voltage	200 V DC or peak AC
Maximum Switching Current	0.5 A
Maximum Carry Current	1.2 A
Maximum Switching Power	10 W / 10 VA
Initial Path Resistance	< 1.5 Ω
Contact Potential (Thermal EMF)	< 50 μV
Isolation Resistance (Path-to-Path)	> 10 ⁹ Ω
Isolation Resistance (Path-to-Chassis)	> 10 ⁹ Ω

AC and RF Electrical Specifications

Bandwidth (-3 dB)	30 MHz (typical, 50 Ω system)
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Timing and Switching Dynamics

Actuate Time (Relay Close)	< 0.6 ms
Release Time (Relay Open)	< 0.6 ms

Relay Life and Reliability

Mechanical Lifetime (No-Load)	10^9 operations
Electrical Lifetime (Rated-Load)	10^5 operations (at 200V, 0.5A, 10W)
Electrical Lifetime (Light-Load)	10^8 operations (at 10V, 10mA)

Power and Environmental Specifications

Storage Temperature Range	-40°C to 70°C
Operating Humidity Range	Up to 80% R.H. at 35°C (non-condensing)

Connectivity

Connector Type	Two 78-pin male D-sub connectors
Backplane Connection	Internal connection to 3706/3706A analog backplane via backplane relays

Performance

Maximum Common Mode Voltage	300 V DC or peak AC (any terminal to chassis)
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TECHNOLOGY

Reed Relay Matrix

APPLICATIONS

Automated switch systems, high-speed multi-channel testing, and automated test equipment (ATE)

Generated by SpecAtlasHub (specatlashub.com). Specifications are compiled from available sources and are subject to change — verify critical values against the manufacturer before purchase.