

KEYSIGHT TECHNOLOGIES (AGILENT HP)

34905A

The Keysight (Agilent) 34905A is a Dual 4-Channel RF Multiplexer module designed for the 34970A and 34972A Data Acquisition/Switch Units. It provides broadband switching capabilities for high-frequency and pulsed signals in 50 Ohm systems, featuring a usable bandwidth of up to 2 GHz. Built with two independent, unterminated 1x4 multiplexers, it features common low shielding and switched center conductors to route test signals cleanly. It includes ten 1.2-meter BNC-to-SMB adapter cables to interface directly with standard BNC connections.

SPECIFICATIONS

Physical

Power Supply	Powered via mainframe backplane
Operating Temperature	0°C to 55°C °C

RF Input/Output Channels

Number of Channels	8 (arranged as two independent 1x4 multiplexers)
Multiplexer Configuration	Dual 1x4
Characteristic Impedance	50 Ω
Connector Type	SMB (on module)
Isolator/Shielding Type	Common Low (switched center conductor, common shield)
Termination Option	Unterminated

RF Performance Specifications

Frequency Range	DC to 2 GHz
Insertion Loss (100 MHz)	< 0.20 dB
Insertion Loss (500 MHz)	< 0.25 dB
Insertion Loss (1 GHz)	< 0.50 dB
Insertion Loss (2 GHz)	< 1.00 dB
VSWR (100 MHz)	< 1.15
VSWR (500 MHz)	< 1.25
VSWR (1 GHz)	< 1.35
VSWR (2 GHz)	< 1.45
Isolation (100 MHz)	> 60 dB
Isolation (500 MHz)	> 50 dB
Isolation (1 GHz)	> 45 dB
Isolation (2 GHz)	> 35 dB
Crosstalk (100 MHz)	< -60 dB
Crosstalk (500 MHz)	< -50 dB
Crosstalk (1 GHz)	< -45 dB
Crosstalk (2 GHz)	< -35 dB
Propagation Delay	< 3.0 ns
Rise Time	< 300 ps
Phase Matching Between Channels	< 100 ps (between channels of the same bank)

DC & Signal Carrying Capacity

Maximum Switching Voltage	42 V (DC or AC peak)
Maximum Switching Current	0.7 A
Maximum Carry Current	0.7 A
Maximum Switching Power (DC)	10 W

Relay Specifications

Relay Type	Miniature coaxial reed
Mechanical Life Cycles	100,000,000 cycles

Mainframe Integration & Control

Compatible Mainframes	Keysight / Agilent 34970A, 34972A
Module Slot Occupancy	1 slot
Built-in Relay Cycle Counter	Yes

Physical Characteristics

Included Accessories	10 BNC-to-SMB 50 Ω adapter cables (1.2m)
Cable Options	Option 001 deletes BNC-to-SMB adapter cables

Environmental & Safety

Operating Temperature Range	0°C to 55°C
Storage Temperature Range	-40°C to 70°C
Operating Humidity Range (Non-condensing)	Up to 80% R.H. at 40°C

TECHNOLOGY

RF Switching / Multiplexing

APPLICATIONS

Automated Test Equipment (ATE), RF and Microwave Routing

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