

KEYSIGHT TECHNOLOGIES (AGILENT HP)

8762A

The Keysight (Agilent HP) 8762A is a terminated single-pole double-throw (SPDT) coaxial switch designed for high-isolation RF routing from DC to 4 GHz. It features SMA female RF connectors, 50-ohm internal termination on the unused port, and a long operational life of 1 million cycles.

SPECIFICATIONS

Physical

Power Supply	5 Vdc (Option 011) / 15 Vdc (Option 015) / 24 Vdc (Option 024)
Operating Temperature	-20 to +75 °C °C
Dimensions (W×H×D)	52.3 mm × 52.3 mm × 12.0 mm mm
Weight	0.245 kg kg

RF Performance

Frequency Range	DC to 4 GHz
Nominal Impedance	50 Ω
Unused Port Termination	50 Ω (internally terminated)
Isolation	> 100 dB to 4 GHz
Insertion Loss (DC to 2 GHz)	< 0.2 dB
Insertion Loss (2 to 4 GHz)	< 0.25 dB
SWR (DC to 2 GHz)	< 1.1
SWR (2 to 4 GHz)	< 1.2
Maximum RF Input Power (Average)	24 W (through path) / 1 W (internal termination)
Maximum RF Input Power (Peak)	150 W (through path) / 100 W (internal termination)
Internal Port Termination Average Power Rating	1 W
Internal Port Termination Peak Power Rating	100 W (10 μs pulse width, 1% duty cycle)

Switching Characteristics

Switch Configuration	SPDT (Single-Pole Double-Throw)
Actuator Mechanism	Electromechanical
Actuation Type	Latching (magnetic latching with automatic solenoid power cutoff)
Switching Speed	30 ms (maximum)
Switching Life Cycle Rating	1,000,000 cycles (minimum)
Insertion Loss Repeatability	0.03 dB (maximum after 1,000,000 cycles)

Electrical Control

Nominal Actuator Voltage Options	5 Vdc (Opt 011) / 15 Vdc (Opt 015) / 24 Vdc (Opt 024)
Actuator Current (Option 011)	315 mA (nominal at 5 Vdc)
Actuator Current (Option 015)	170 mA (nominal at 15 Vdc)
Actuator Current (Option 024)	115 mA (nominal at 24 Vdc)
Control Connection	Solder terminals

Physical & Mechanical

RF Connector Type	SMA
RF Connector Gender	Female

Environmental & Reliability

Storage Temperature Range	-55 to +85 °C
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Electrical (Actuator)

Actuator Voltage Range (Option 011)	4.5 to 7 VDC (5 VDC nominal)
Actuator Voltage Range (Option 015)	12 to 20 VDC (15 VDC nominal)
Actuator Voltage Range (Option 024)	20 to 30 VDC (24 VDC nominal)
Actuator Drive Current Interruption	Automatic
Indicator Contacts Maximum Voltage (Option 002)	30 VDC
Indicator Contacts Maximum Current (Option 002)	0.5 A

Environmental

Vibration (Operating)	0.05 inches (10 to 55 Hz), 10 g peak
Shock (Operating)	100 G (6 ms)
Relative Humidity (Operating)	95% RH at 40 °C
Maximum Operating Altitude	4,600 m
Maximum Non-Operating Altitude	15,300 m

Actuator Specifications

Coil Impedance (Option 011)	16 Ω (nominal)
Coil Impedance (Option 015)	120 Ω (nominal)
Coil Impedance (Option 024)	250 Ω (nominal)

TECHNOLOGY

Electromechanical

APPLICATIONS

RF and Microwave Signal Routing

