

KEYSIGHT TECHNOLOGIES (AGILENT HP)

8765B

The Keysight (Agilent HP) 8765B is an unterminated single pole double throw (SPDT) coaxial switch designed for microwave instrumentation and automated test equipment (ATE) systems, offering excellent RF performance across a DC to 20 GHz frequency range.

SPECIFICATIONS

Physical

Power Supply	4.5 to 32 VDC actuator voltage (option dependent)
Operating Temperature	-55 to +85 °C °C
Dimensions (W×H×D)	36.6 mm × 52.3 mm × 13.0 mm mm
Weight	0.055 kg kg

RF Performance

Frequency Range	DC to 20 GHz
Isolation Formula	110 dB - 2.25 dB/GHz
Insertion Loss Formula	< 0.2 dB + 0.025 dB/GHz
VSWR (DC to 4 GHz)	< 1.15
VSWR (4 to 12.4 GHz)	< 1.25
VSWR (12.4 to 18 GHz)	< 1.4
VSWR (18 to 20 GHz)	< 1.45
RF Power Rating	2 W average, 100 W peak
Isolation (DC to 4 GHz)	90 dB
Isolation (4 to 12.4 GHz)	75 dB
Isolation (12.4 to 18 GHz)	65 dB
Isolation (18 to 20 GHz)	60 dB
Insertion Loss (DC to 4 GHz)	0.20 dB
Insertion Loss (4 to 12.4 GHz)	0.35 dB
Insertion Loss (12.4 to 18 GHz)	0.45 dB
Insertion Loss (18 to 20 GHz)	0.50 dB

Switching & Actuation

Switch Configuration	SPDT (Single Pole Double Throw)
Switch Termination	Unterminated
Switching Action	Break-before-make
Actuator Mechanism	Electromechanical

Physical & Mechanical Specifications

RF Connector Type	SMA
RF Connector Gender	Female

Electrical Control & Drive

Option 005/305 Nominal Voltage	5 VDC
Option 015/315 Nominal Voltage	15 VDC
Option 010/310 Nominal Voltage	10 VDC

Compliance & Quality Standards

Option 890	Includes printout of test results
------------	-----------------------------------

RF Characteristics

Impedance	50 Ω
Switching Time	15 ms (maximum)
RF Repeatability	0.03 dB maximum over 1,000,000 switchings

Actuator Characteristics

Coil Resistance (Option 005/305)	36 Ω
Coil Resistance (Option 010/310)	140 Ω
Coil Resistance (Option 015/315)	320 Ω
Coil Resistance (Option 024/324)	820 Ω
Coil Current (Option 005/305)	140 mA
Coil Current (Option 010/310)	70 mA
Coil Current (Option 015/315)	Option 015 is 47 mA, Option 315 is 52 mA
Coil Current (Option 024/324)	Option 024 is 29 mA, Option 324 is 32 mA

Electrical

Option 024/324 Nominal Voltage	24 V
--------------------------------	------

Reliability

Actuator Life	5,000,000 cycles
---------------	------------------

Environmental

Storage Temperature	-55 to +100 °C
Humidity	95% RH at 40 °C for 5 days

TECHNOLOGY

Electromechanical Coaxial Switch

APPLICATIONS

Microwave Instrumentation & ATE Systems

