SK8-0524036550-KFKF-AD1

Rev. 1.0

SP8T PIN Switch with TTL Driver, Absorptive, 0.5 to 40 GHz

Description:

Model SK8-0524036550-KFKF-AD1 is an absorptive PIN diode based, single pole, eight throw switch with a TTL driver that operates between 0.5 and 40 GHz. The switch requires a separate -5 V and +5 V biasing in addition to the TTL control. This model offers a small form factor, typical 6.5 dB insertion loss, and 50 dB minimum isolation with a switching speed up to 50 nanoseconds. The switch has female K connectors for all RF ports and solder pins for bias port and TTL control.

Features:

- Low Insertion Loss
- High Isolation
- Absorptive
- TTL Controlled

Applications:

- Radar Systems
- Communication Systems
- Automatic Test Equipment
- Switching Network

Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Frequency	0.5 GHz		40 GHz
Insertion Loss		6.5 dB	8.5 dB
Isolation	50 dB		
Return Loss		7 dB	6 dB
Input RF Power		+20 dBm	+23 dBm
Bias Voltage	-5 V_{DC}		+5 V_{DC}
Bias Current	30 mA		100 mA
Control		TTL	
Switching Speed		50 ns	
Switch Type		Absorptive	
Specification Temperature		+25 °C	
Operating Temperature	0 °C		+50 °C

Mechanical Specifications:

Item	Specification
RF Ports	K(F)
Bias Port	Solder Pins
Control Port	Solder Pins
Case Material	Aluminum
Finish	Gold Plated
Weight	3.52 Oz
Outline	K8-AC-D1

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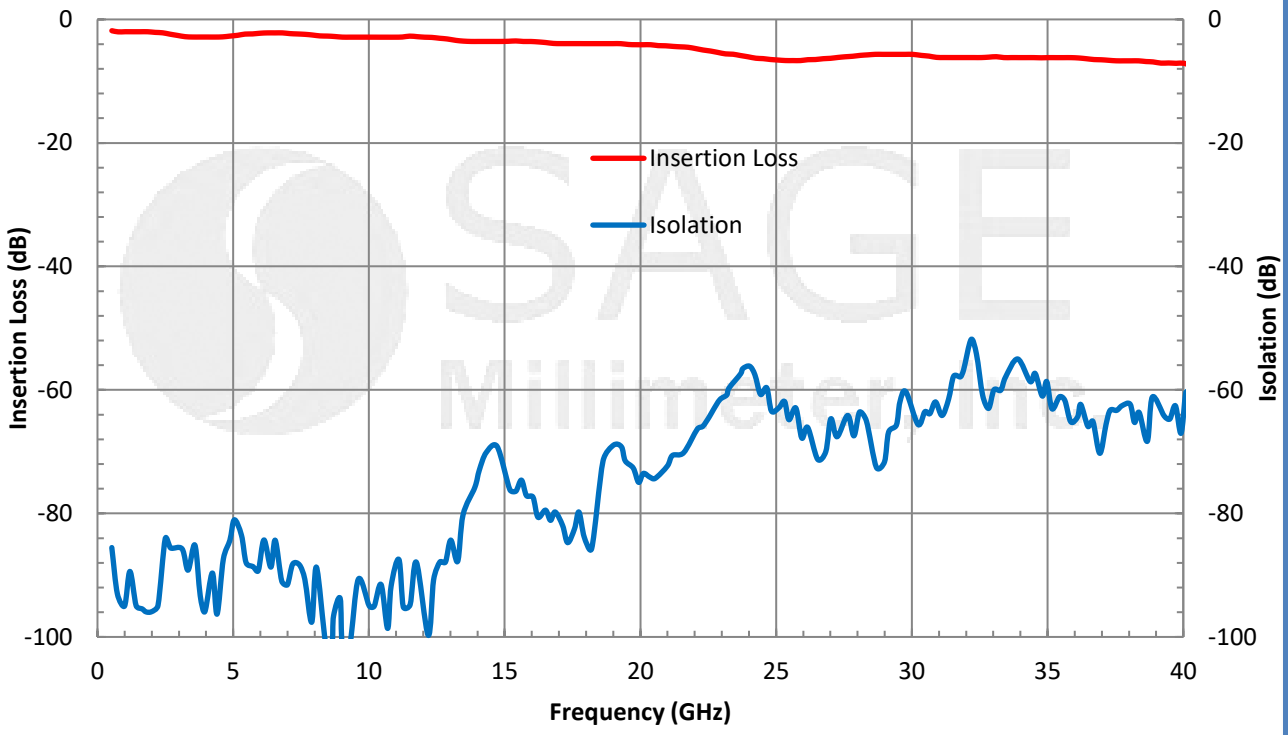
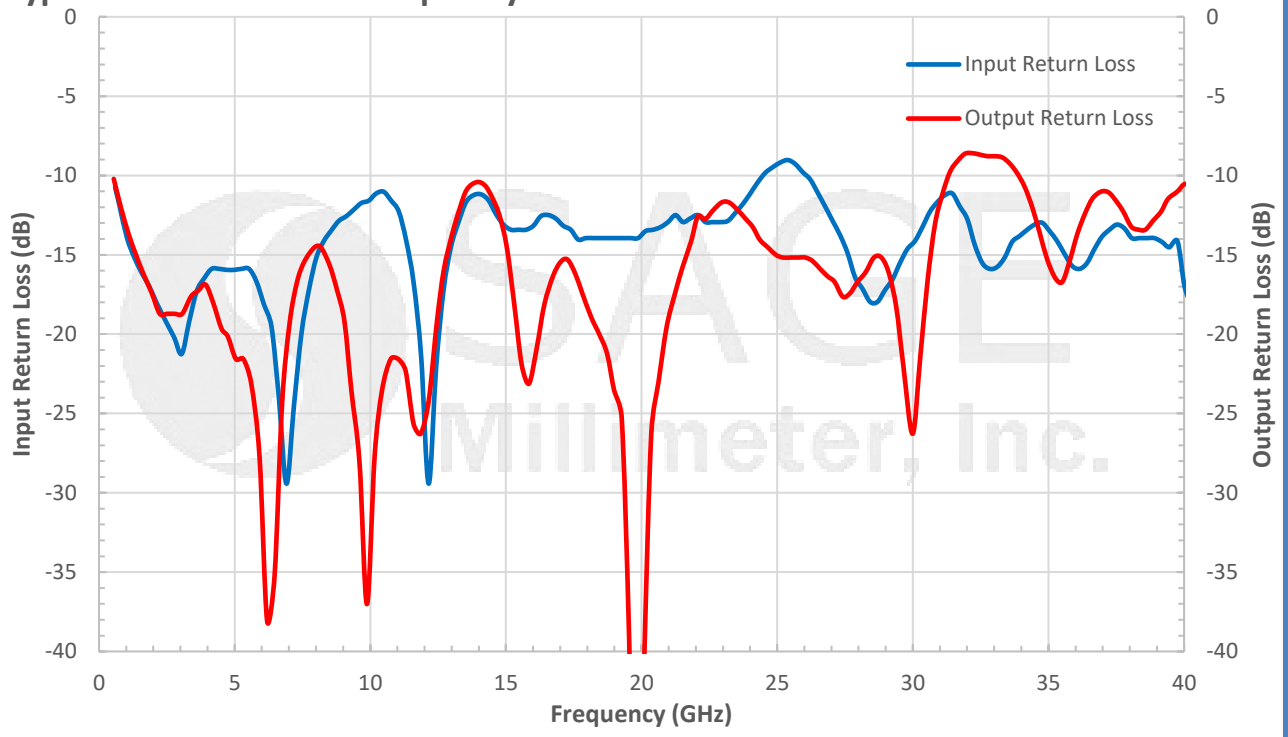
Typical Insertion Loss and Isolation vs. Frequency



Typical Return Loss vs. Frequency



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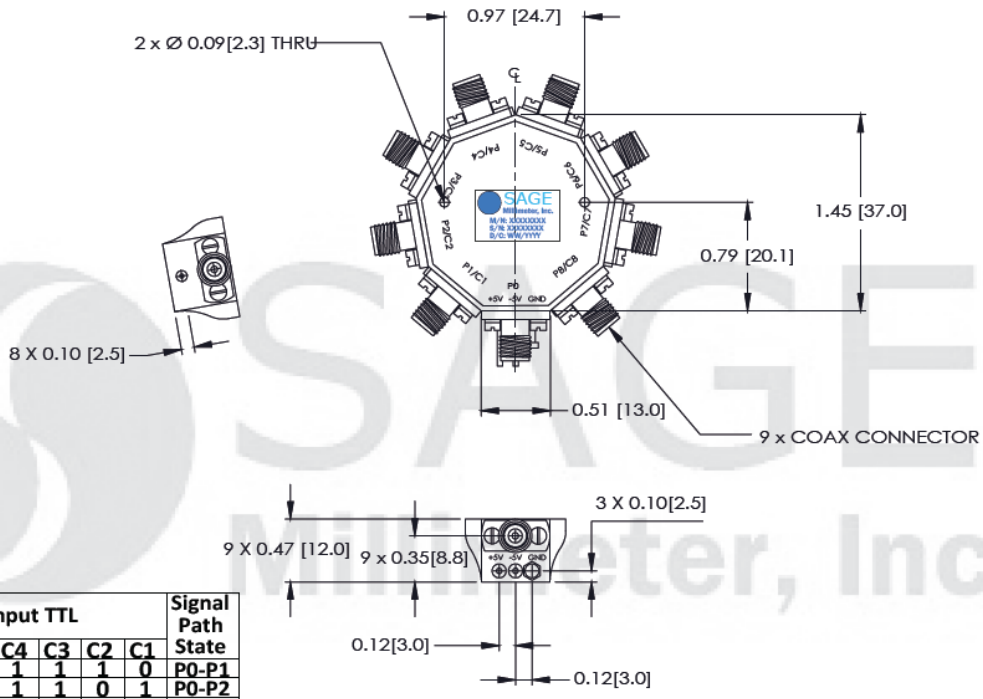
Mechanical Outline: (Unless otherwise specified, all dimensions are in inches [millimeters])



Control Input TTL								Signal Path State
C8	C7	C6	C5	C4	C3	C2	C1	
1	1	1	1	1	1	1	0	P0-P1
1	1	1	1	1	1	0	1	P0-P2
1	1	1	1	1	0	1	1	P0-P3
1	1	1	1	0	1	1	1	P0-P4
1	1	1	0	1	1	1	1	P0-P5
1	1	0	1	1	1	1	1	P0-P6
1	0	1	1	1	1	1	1	P0-P7
0	1	1	1	1	1	1	1	P0-P8
Control Pin Customization available upon request								

Driver Bias Range	
Positive Bias	+4.5 to +5.5V/100mA
* Negative Bias	0 to -5.0V/50mA
*Note: The higher the negative, the faster the switching	

Note:

- All data presented is collected from a sample lot. Actual data may vary unit to unit slightly.
- All testing was performed under +25˚C case temperature.
- Other mechanical configurations are available under different model numbers.
- SAGE Millimeter, Inc. reserves the right to change the information presented without notice.

Caution:

- Exceeding absolute maximum ratings shown will damage the device.
- The device is static sensitive. Always follow ESD rules when working with the device.
- Reversing polarity will destroy the device.
- Proper torque, 8.0 ± 0.15 inch-pounds (0.90 ± 0.02 Nm), should be applied. **SAGE Millimeter torque wrench, model SCH-08008-S1, is highly recommended.**