



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	6 dB	7 dB	
Input RF Power		+20 dBm	+23 dBm
Bias Voltage (Positive)	+4.5 V _{DC}	+5.0 V _{DC}	+5.5 V _{DC}
Bias Current (Positive)		300 mA	350 mA
Bias Voltage (Negative)	-5.5 V _{DC}	-5.0 V _{DC}	-4.5 V _{DC}
Bias Current (Negative)		20 mA	30 mA
Control		TTL	
Switching Speed		50 ns	
Switch Type		Absorptive	
Specification Temperature		+25 °C	
Operating Temperature	-40 °C		+85 °C

Mechanical Specifications:

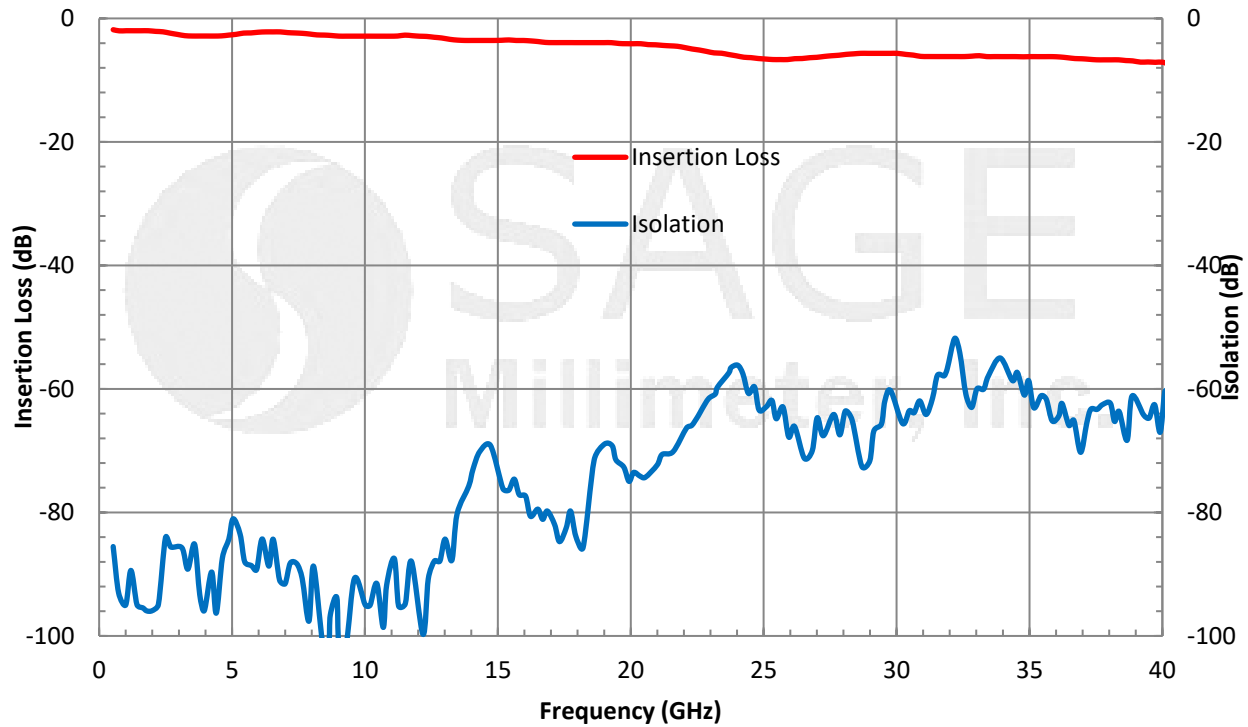
Item	Specification
RF Ports	K(F)
Bias Port	Solder Pins
Control Port	Solder Pins
Case Material	Aluminum
Finish	Gold Plated
Weight	3.52 Oz
Outline	K8-AC-Z2



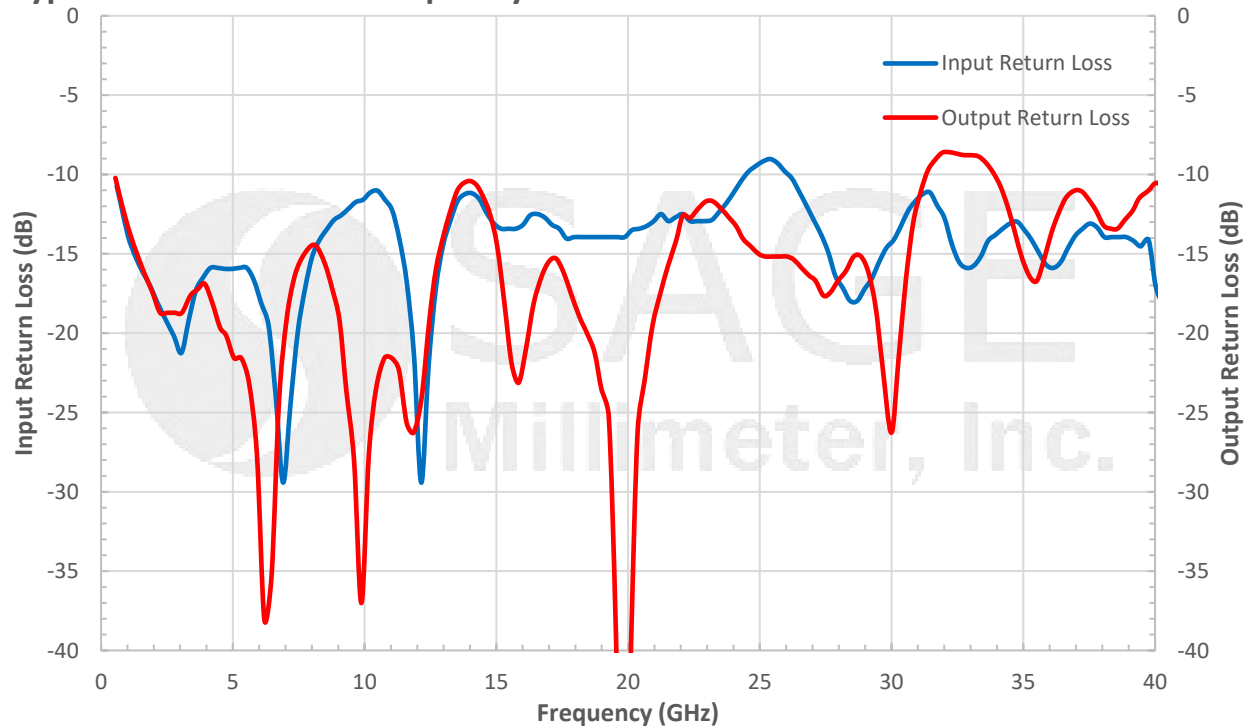


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Typical Insertion Loss and Isolation vs. Frequency



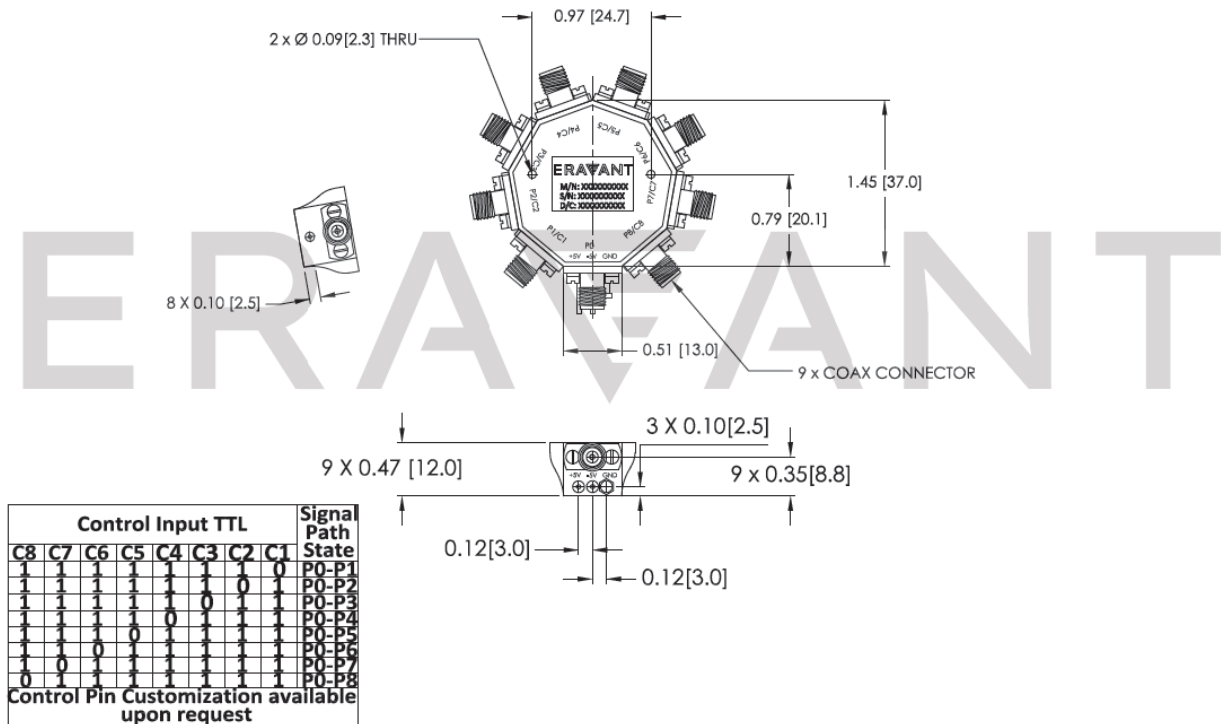
Typical Return Loss vs. Frequency





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



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.
- TTL is commonly defined 0 to +0.8 Volt as “TTL Low” and +3.3 to +5.0 Volts as “TTL High”.
- Other mechanical configurations are available under different model numbers.
- Eravant reserves the right to change the information presented without notice.

Caution:

- Exceeding absolute maximum ratings shown will damage the device.
- The control signal per the true table is needed all time to keep the switch under normal working condition. No control signal applied any time could cause excessive negative current, which may damage the switch.
- 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. **Eravant torque wrench, model SCH-08008-S1, is highly recommended.**

