SK4-1832735060-KFKF-A3

Rev. 1.0

K Band SP4T PIN Switch with TTL Driver, Absorptive

Description:

Model SK4-1832735060-KFKF-A3 is a K band absorptive PIN diode based, single pole, four throw (SP4T) switch with a TTL driver that operates between 18 and 26.5 GHz. This model offers a typical insertion loss of 5 dB and 60 dB port-to-port isolation with a typical switching speed of 100 nanoseconds. The switch has female K connectors for all RF ports and solder pins for DC bias and TTL control.

Features:

- Full Band Operation
- High Isolation
- Compact Size
- Fast Control Speed

Applications:

- 5G Systems
- Radar Systems
- Communication Systems
- Automatic Test Equipment
- Switching Network

Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Frequency	18 GHz		26.5 GHz
Insertion Loss		5.0 dB	
Return Loss		10 dB	
Isolation		60 dB	
Operational RF Input Power			+20 dBm
Damage RF Input Power			+27 dBm
Bias Voltage		±5 V_{DC}	
Bias Current		100/50 mA	
Control		TTL	
Switching Speed		100 ns	
Specification Temperature		+25 °C	
Operation Temperature	0 °C		+50 °C

Mechanical Specifications:

Item	Specification
Input Port	K(F)
Output Port	K(F)
Bias	Solder Pins
Logic Input	Solder Pins
Case Material	Brass
Finish	Gold Plated
Weight	1.8 Oz
Outline	K4-AC-Z1

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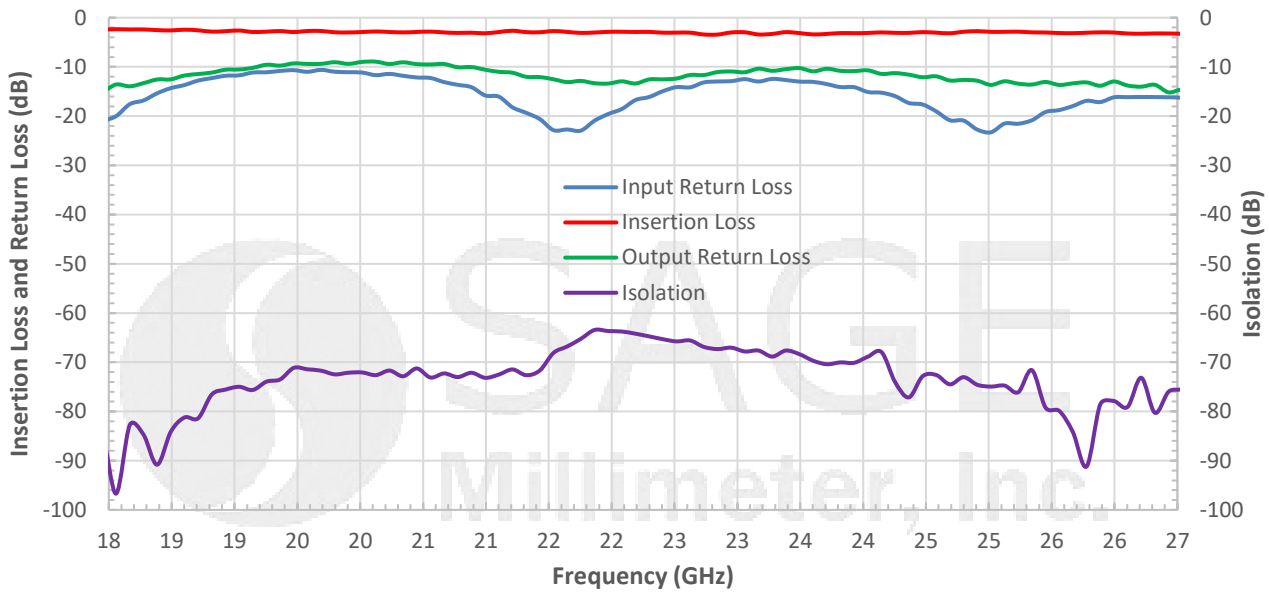
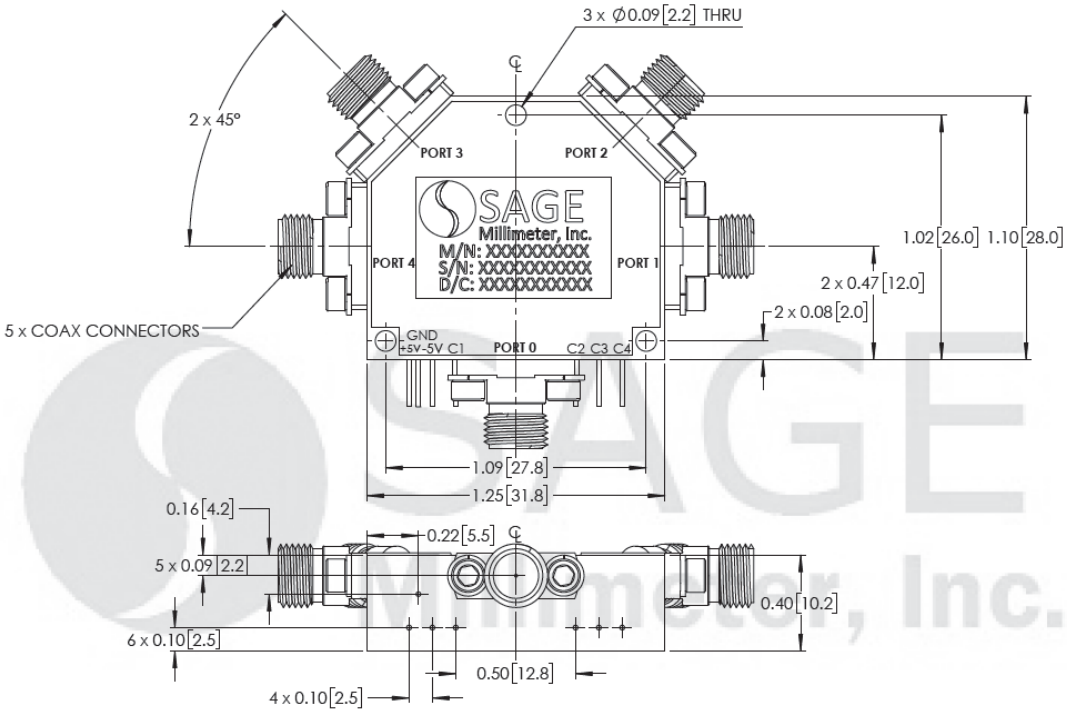
Typical Performance vs. Frequency



Note: The insertion loss, isolation and return loss between of other ports are similar to the above plots.

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



Truth Table				
Control TTL Input				Signal Path State
C4	C3	C2	C1	
1	1	1	0	Port 0-Port 1
1	1	0	1	Port 0-Port 2
1	0	1	1	Port 0-Port 3
0	1	1	1	Port 0-Port 4

TTL Voltages Range	
TTL Low	0 to 0.8Vdc
TTL High	2.0 to +5Vdc

Driver Bias Range	
Positive Bias	+4.5 to +5.5V/10
* Negative Bias	0 to -5.0V/50m
*Note: The higher the negative, the faster the s	

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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 of the switch will damage the device.
- The switch is a static sensitive device. Always follow ESD rules when working with the switches.
- Proper torque, 8.0 ± 0.15 inch-pounds (0.92 ± 0.05 Nm), should be applied. **SAGE Millimeter torque wrench, model SCH-08008-S1, is highly recommended.**