



SPDT PIN Switch with TTL Driver, 60 to 90 GHz

Description:

Model SKD-6039033530-1212-R1-M is a PIN diode MMIC based, single pole, double throw (SPDT) switch with a TTL driver that operates from 60 to 90 GHz. The SPDT switch requires a separate -5 V and +5 V biasing in addition to the TTL control. This model has an insertion loss of 3.5 dB typical and an isolation of 30 dB nominal at its center frequency. The SPDT switch features WR-12 waveguides and standard UG-387/U flanges at the input and outputs and a female SMA connector for TTL control. The model with 1 mm connectors is offered under model **SKD-5039030625-1F1F-R1-M**.



Features:

- Full E-Band Operation
- Low Insertion Loss
- High Isolation

Applications:

- 5G Systems
- Radar Systems
- Communication Systems
- Switching Network

Electrical Specifications:

Parameter	Minimum	Typical	Maximum
RF Frequency	60 GHz		90 GHz
Insertion Loss		3.5 dB	
Isolation	25 dB	30 dB	
Power Handling			+30 dBm
Control Signal		TTL	
Bias Voltage		$\pm 5 V_{DC}$	
Bias Current		10 mA	
Switching Speed		100 nS	
Specification Temperature		+25 °C	
Operating Temperature	0 °C		+50 °C

Mechanical Specifications:

Item	Specification
RF Ports	WR-12 Waveguide with UG-387/U Anti-Cocking Flange
Bias Ports	Feed Through Pins
TTL Control	SMA (F)
Case Material	Aluminum
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Finish	Gold Plated
Weight	0.8 Oz
Size	1.10" (L) X 1.00" (W) X 0.83" (H)
Outline	KD-REM-A-2

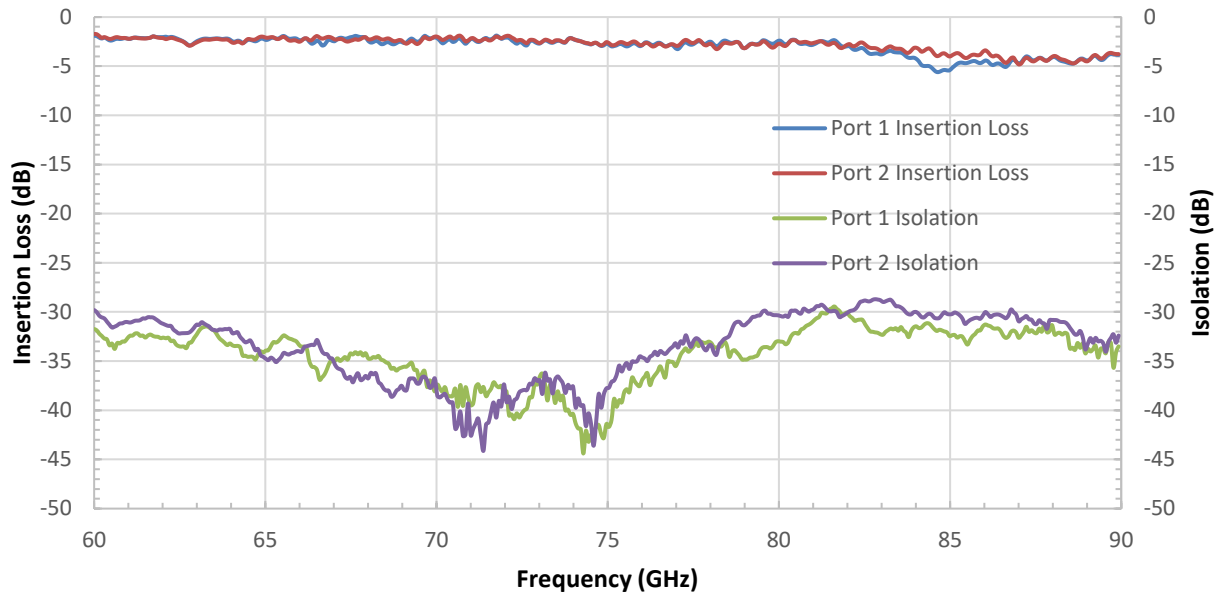




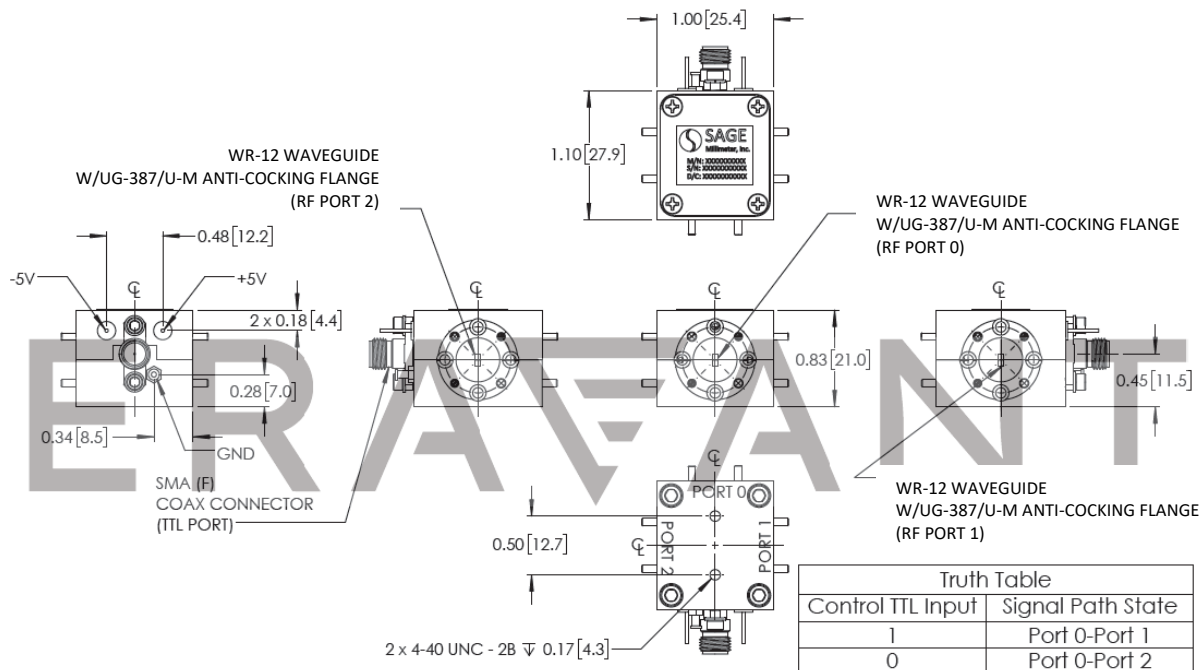
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Insertion Loss and Isolation vs. Frequency

Bias: $\pm 5 V_{DC}$



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



Note:



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- All data presented is collected from a sample lot. Actual data may vary unit to unit.
- 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 switch is a static sensitive device. Always follow ESD rules when working with the switch.
- 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.**

