



SPDT PIN Switch with TTL Driver, 60 to 90 GHz, Reflective

Description:

Model SKD-6039033025-1212-R1 is a reflective PIN diode based, single pole, double throw (SPDT) switch with a TTL driver that operates from 60 to 90 GHz. This model has an insertion loss of 3.0 dB typical and an isolation of 25 dB nominal at its center frequency. The SPDT switch features WR-12 waveguides with UG-387/U anti-cocking flanges at the RF input and output and a female SMA connector for TTL control on the driver. The switch can be modified for various operational frequencies under different model numbers.



Features:

- Low Insertion Loss
- High Isolation

Applications:

- Radar Systems
- Communication Systems
- Sensors

Electrical Specifications:

| Parameter | Minimum | Typical | Maximum |
|---------------------------|---------|----------------|---------|
| Frequency | 60 GHz | | 90 GHz |
| Insertion Loss | | 3.0 dB | |
| Isolation | | 25 dB | |
| Power Handling | | +20 dBm | +23 dBm |
| Bias Voltage | | $\pm 5 V_{DC}$ | |
| Bias Current | | 10 mA | |
| Control Signal | | TTL | |
| Switching Speed | | 100 ns | |
| Specification Temperature | | +25 °C | |
| Operating Temperature | -25 °C | | +65 °C |

Mechanical Specifications:

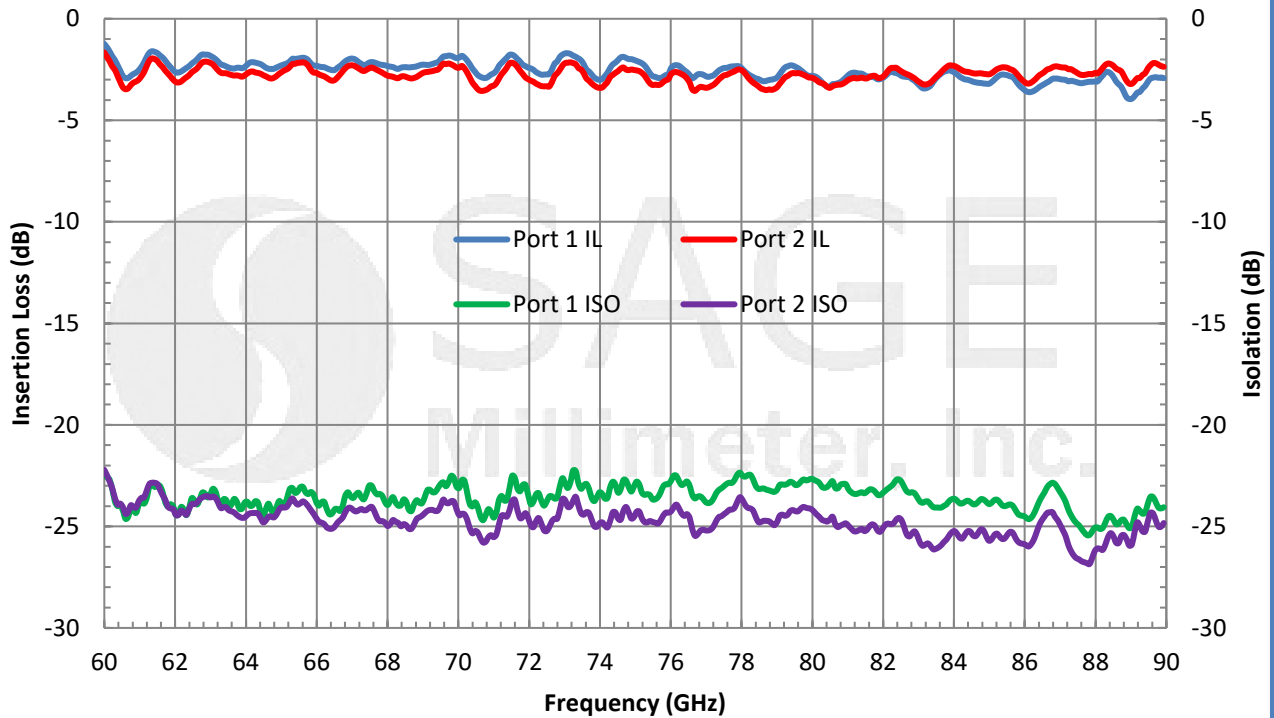
| Item | Specification |
|------------------|---|
| Input Port | WR-12 Waveguide with UG-387/U Anti-Cocking Flange |
| Output Ports | WR-12 Waveguide with UG-387/U Anti-Cocking Flange |
| Bias Ports | Feed Through Pins |
| TTL Control Port | SMA (F) |
| Case Material | Aluminum |
| Weight | 1.6 Oz |
| Finish | Gold Plated |
| Outline | KD-RE-A |



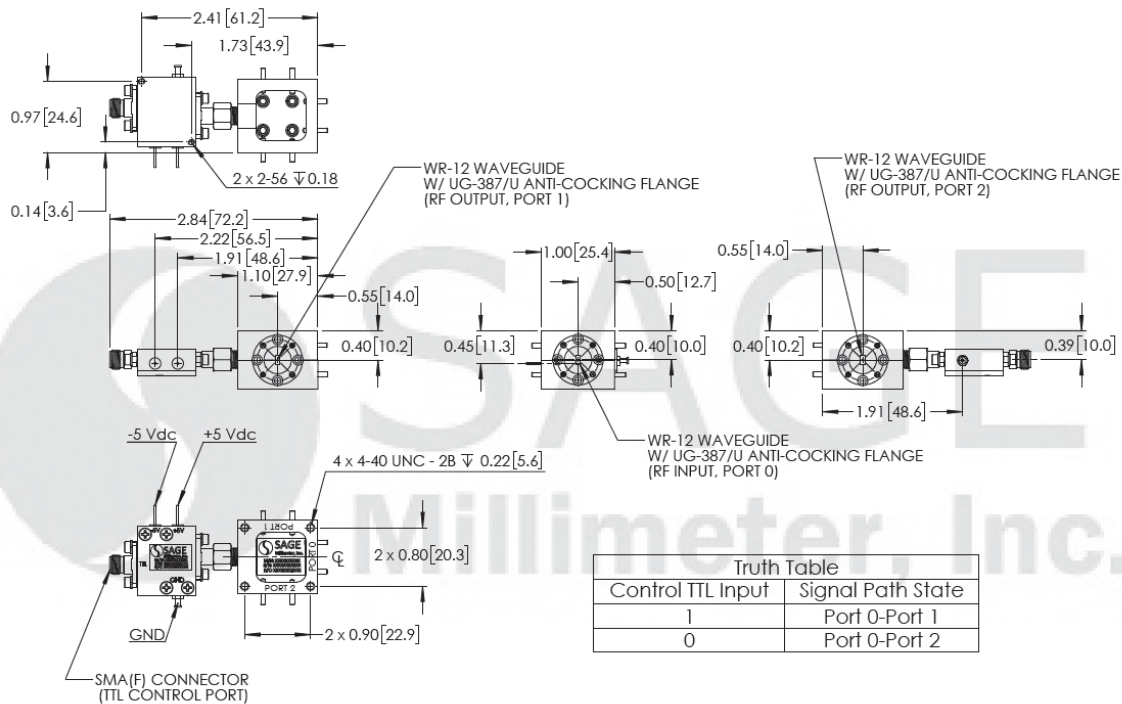


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Typical Insertion Loss and Isolation vs Frequency



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





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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.
- SAGE Millimeter, Inc. reserves the right to change the information presented without notice.
- Other mechanical configurations are available under different model number.

Caution:

- Exceeding absolute maximum ratings shown will damage the device.
- The device is static sensitive. Always follow ESD rules when working with the device.
- Any foreign objects in the waveguide will cause performance degradation and possible device damage.
- The case temperature of the device shall never exceed +50°C. Use proper heatsink or fan if necessary.
- 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.**

