

## SPST Reflective Switch with TTL Drive, 140 to 220 GHz

### Description:

**Model SKS-1442243035-0505-R1-M** is a single pole, single throw (SPST) reflective switch with a TTL driver that covers 140 to 220 GHz. This model offers an insertion loss of 3 dB with a typical isolation of 35 dB. The SPST switch has a WR-05 waveguide with UG-387/U-M anti-cocking flanges at the RF input and output and a female SMA connector for TTL control. The SPST switch can be modified for various operational frequencies under different model numbers.



### Features:

- High Isolation
- Fast Control Speed

### Applications:

- THz Systems
- Testing Equipment

### Electrical Specifications:

Parameter	Minimum	Typical	Maximum
RF Frequency	140 GHz		220 GHz
Insertion Loss		3 dB	
Isolation		35 dB	
Power Handling			+5 dBm
Control Signal		TTL	
Switching Speed		100 ns	
Positive Bias (Vdd)			+1 V <sub>DC</sub> /3 mA
Negative Bias (Vee)		-2 V <sub>DC</sub> / $\leq 0$ mA	
Specification Temperature		+25 °C	
Operating Temperature	0 °C		+50 °C

### Mechanical Specifications:

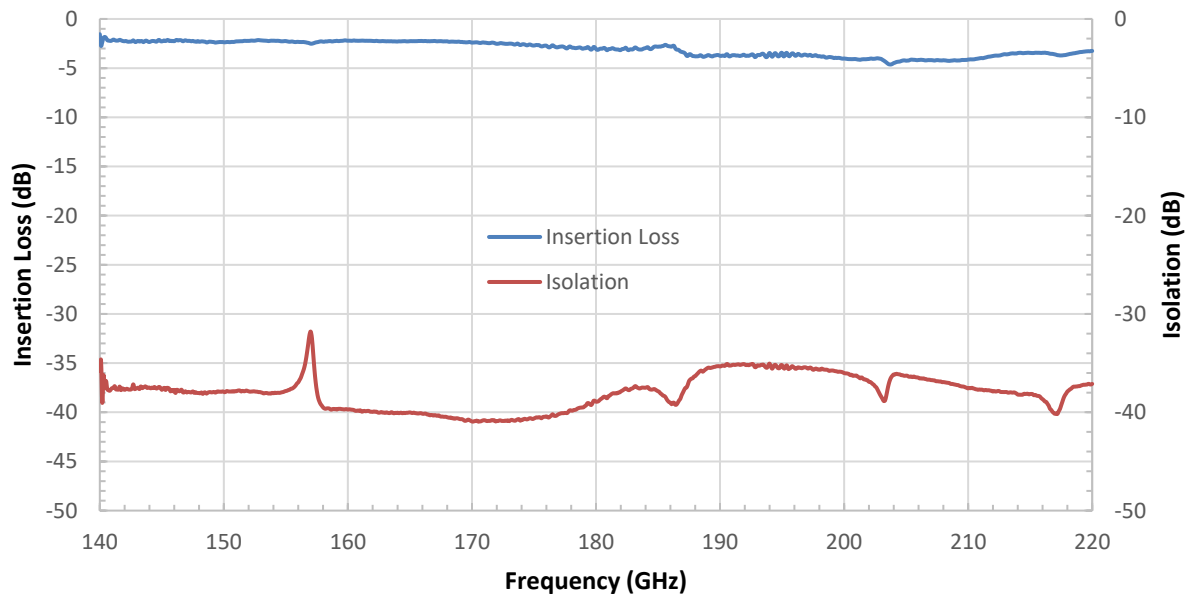
Item	Specification
RF Ports	WR-05 Waveguide with UG-387/U-M Anti-Cocking Flange
Bias Ports	Feed Through Pins
TTL Control Port	SMA (F)
Case Material	Aluminum
Finish	Gold Plated
Weight	0.8 Oz
Size	1.00" (L) X 1.00" (W) X 0.75" (H)
Outline	KS-RG-A



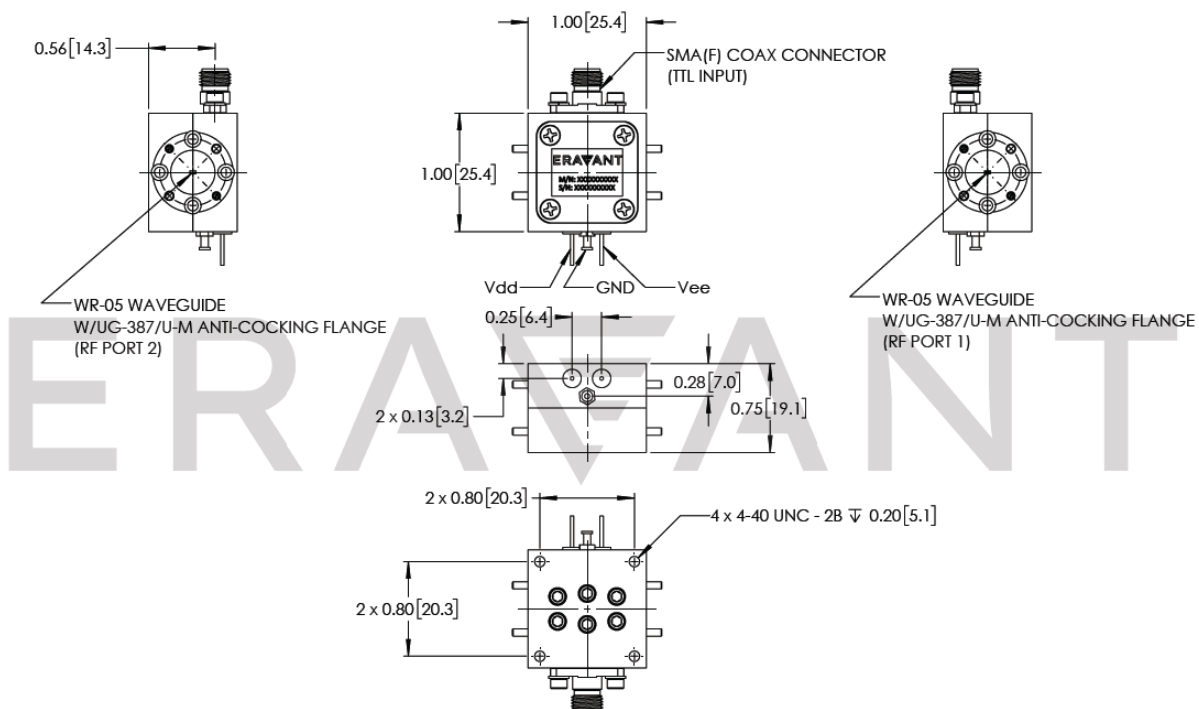
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### Insertion Loss and Isolation vs. Frequency

Bias:  $+1 V_{DC}/3 \text{ mA}$  and  $-2 V_{DC}/<0 \text{ mA}$



**Mechanical Outline:** (Unless otherwise specified, all dimensions are in inches)





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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.
- Eravant 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.
- Any foreign objects in the waveguide will cause performance degradation and possible device damage.
- Proper torque,  $8.0 \pm 0.15$  inch-pounds ( $0.90 \pm 0.02$  Nm), should be applied. **Eravant torque wrench, model SCH-08008-S1, is highly recommended.**

