

## SPST Reflective Switch with TTL Driver, 90 to 140 GHz

### Description:

**Model SKS-9031443030-0808-R1-M** is a F-Band, single pole single throw reflective switch. The switch exhibits 3 dB typical insertion loss and 30 dB nominal isolation across the frequency range of 90 to 140 GHz. The control voltage of the standard model is TTL. The RF input and output ports are WR-08 waveguides with UG-387/U-M anti-cocking flanges, and a female SMA coaxial connector provides the control signal.



### Features:

- Full Waveguide Frequency Operation
- High Isolation

### Applications:

- THz Systems
- Testing Equipment

### Electrical Specifications:

| Parameter                 | Minimum | Typical                          | Maximum                  |
|---------------------------|---------|----------------------------------|--------------------------|
| Frequency                 | 90 GHz  |                                  | 140 GHz                  |
| Insertion Loss            |         | 3 dB                             |                          |
| Isolation                 |         | 30 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                   |

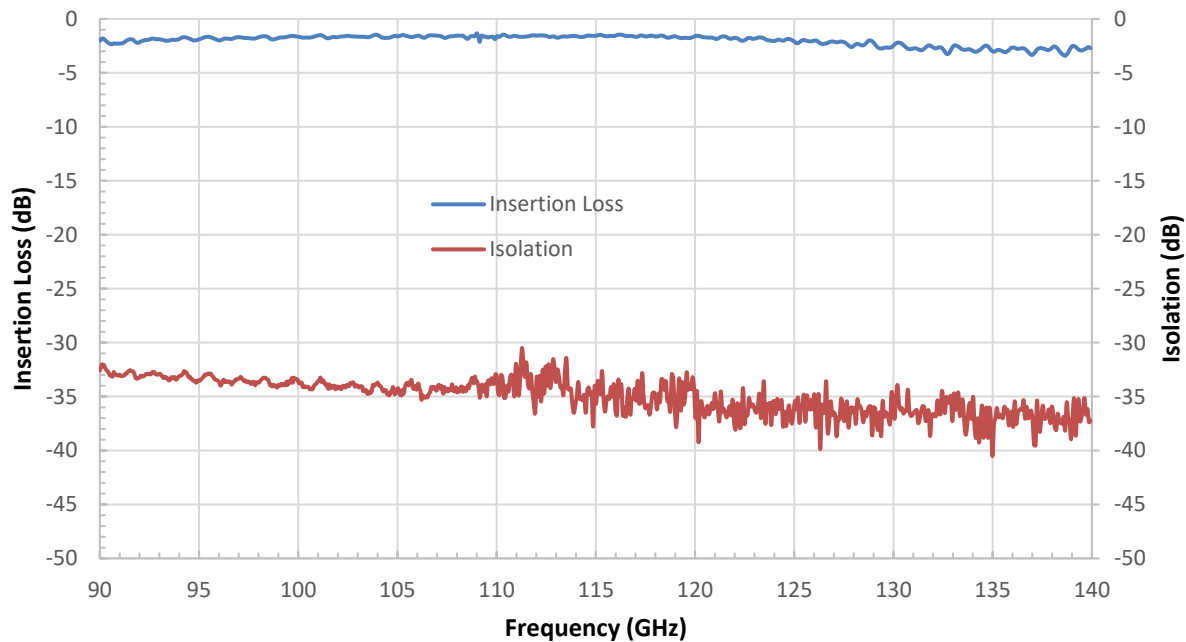
### Mechanical Specifications:

| Item          | Specification                                       |
|---------------|---|
| RF Ports      | WR-08 Waveguide with UG-387/U-M Anti-Cocking Flange |
| TTL           | SMA (F)   |
| Bias          | Solder Pin  |
| Case Material | Aluminum  |
| Finish        | Gold Plated   |
| Weight        | 0.8 Oz  |
| Size          | 1.00" (L) X 1.00" (W) X 0.75" (H)                   |
| Outline       | KS-RF-A   |

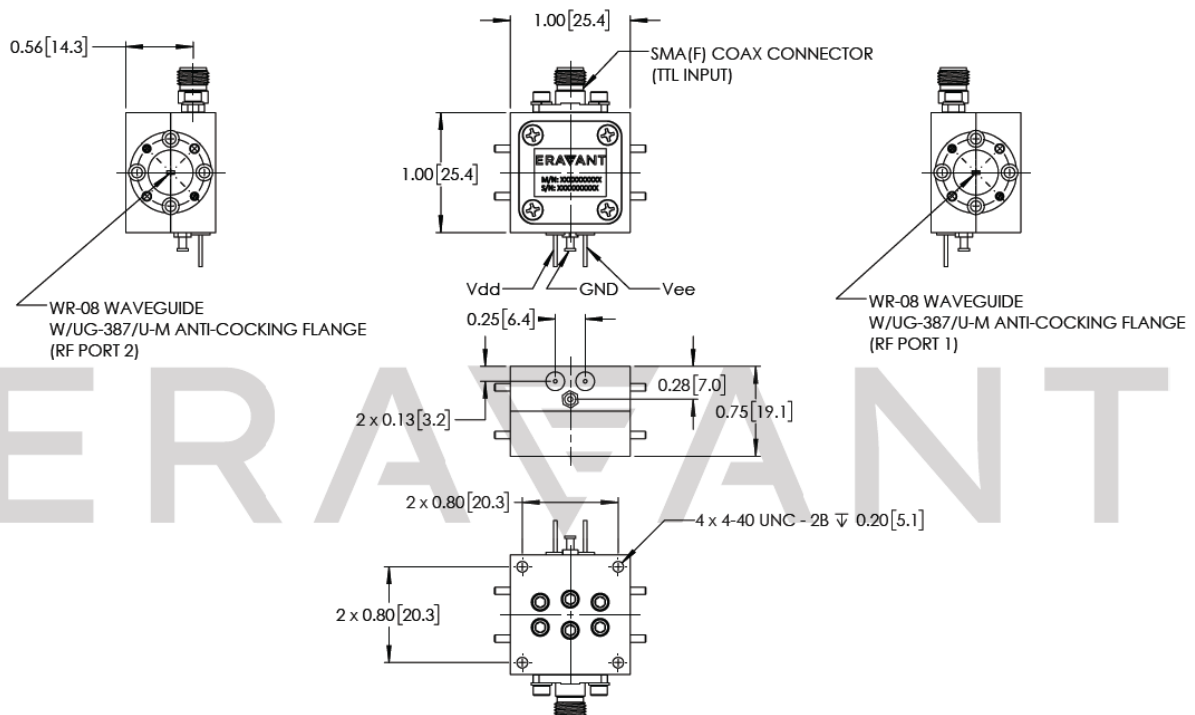


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### Insertion Loss and Isolation vs. Frequency



**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.
- 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 attenuator is a static sensitive device. Always follow ESD rules when working with the attenuator.
- 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.**

