SAN-08I08I-S1

WR-08 Inline Rotary Joint, 90 to 140 GHz, Rectangular Waveguide

SAN-08I08I-S1 is an F-Band, inline rotary joint that covers the frequency range of 90 to 140 GHz. This high-power rotary joint allows for mechanical rotation while providing consistently low insertion loss. The rotary joint incorporates a high precision bearing and propriety mechanical design to ensure smooth mechanical rotation as well as low amplitude and phase variation. Due to the contactless mechanical design, the rotary joint has high power handling capacity. The panel mount design of the joint also allows for easy equipment integration. The rotary joint is equipped with two WR-08 rectangular waveguides with UG-387/U-M anti-cocking flanges.

Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Frequency Range	90 GHz		140 GHz
Insertion Loss		2.3 dB	
Insertion Loss Variation Over Rotation		±0.2 dB	
Return Loss		15 dB	
Return Loss Variation Over Rotation		±2.5 dB	
Phase Variation Over Rotation		±3°	
Power Handling		100 W (CW)	250 W (CW)
Specification Temperature		+25°C	
Operating Temperature	-40°C		+85°C

Mechanical Specifications:

Item	Specification
Waveguide Size	WR-08 Rectangular Waveguide with UG-387/U-M Anti-Cocking Flange
Material	Aluminum 6061-T6, Stainless Steel
Finish	Gold Plated
Rotating Speed	60 rpm
Degree of Protection	IP40
Weight	6.8 oz
Outline	AN-R08I-R08I-A

ECCN

EAR99

FEATURES

- Full Band Operation
- Low Insertion Loss
- High Return Loss
- High Power Handling
- Low Amplitude and Phase Variation During Rotation
- In-line Port Configuration
- No Contact Mechanism

APPLICATIONS

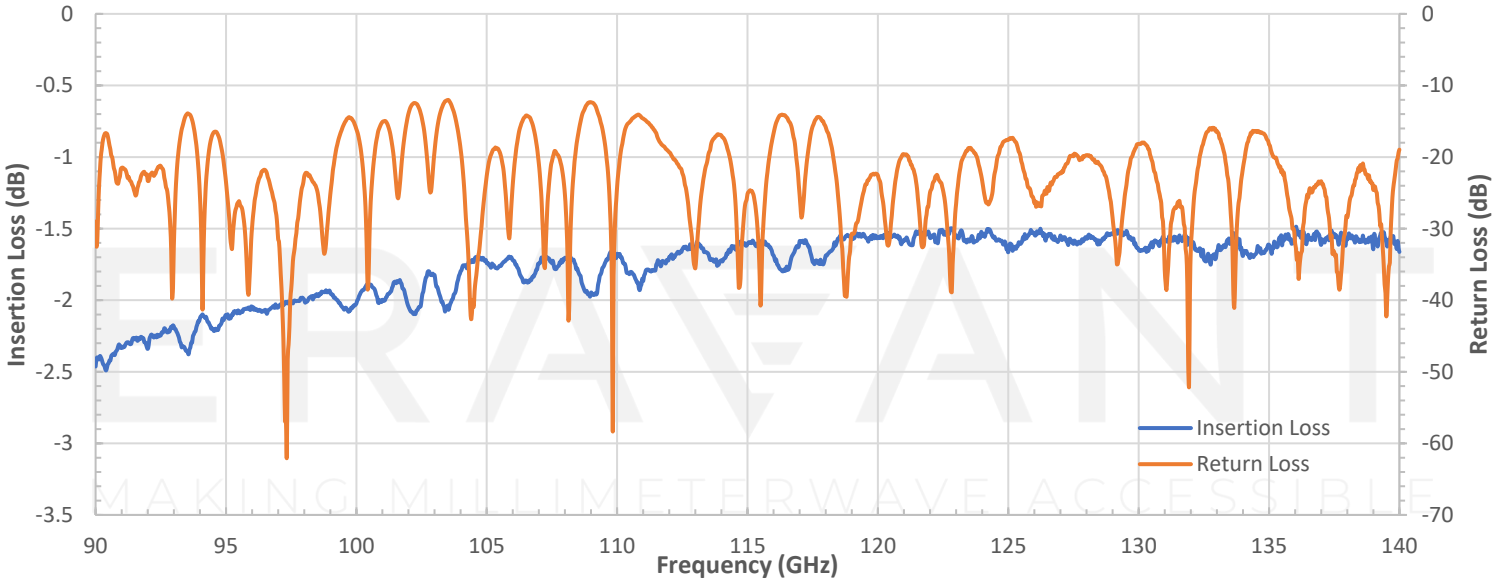
- Radar System
- Test Equipment
- Sub-assemblies
- Antenna Range
- Communication System

SUPPLEMENTAL DETAILS

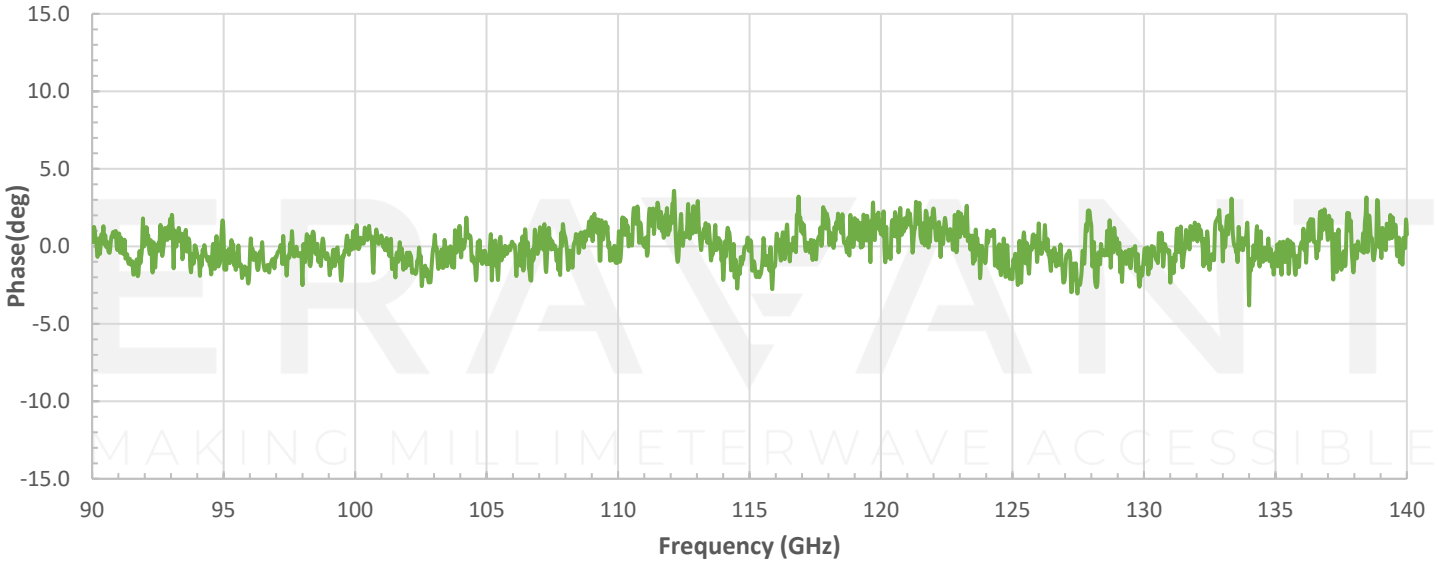
Components Included in Each Kit:

Item	Eravant Number	Quantity
Rotary Joint	SAN-08I08I-S1	1 Piece
Waveguide Screws, 3/32 Hex Head	SWH-332-SS-10	(10 Pieces)
Waveguide Screwdriver, 3/32 Hex Head	SWH-332-DS	1 Piece
Black Test Equipment Case	-	1 Piece

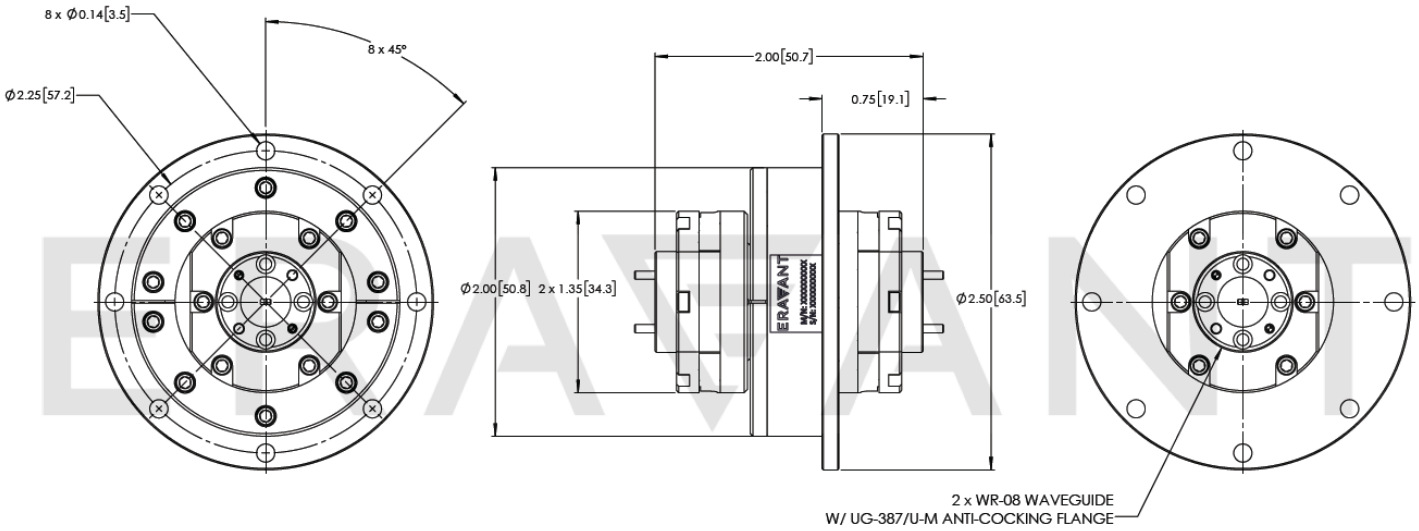
Measured Insertion Loss & Return Loss vs Frequency



Typical Measured Phase Variance vs Frequency



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



NOTE:

- Other mechanical configurations with other frequency bands are available under different model numbers.
- Eravant reserves the right to change the information presented without notice.

CAUTION:

- Any foreign objects in the waveguide will cause performance degradation and possible device damage.