

WR-34 Waveguide Directional Coupler, 20 dB

SWD-2040H-34-SB is a WR-34, three-port waveguide directional coupler that delivers a 20 dB nominal coupling level and 40 dB typical directivity across the full waveguide band from 22 to 33 GHz. The three-port coupler uses a traditional multi-hole and split block design to achieve a flat coupling level, high directivity, and low insertion loss. The interfaces of the coupler are WR-34 waveguides with UG-1530/U flanges. Custom coupling levels are available under different model numbers.



Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Frequency Range	22 GHz		33 GHz
Insertion Loss*		0.5 dB	
Coupling*		20 dB	
Directivity*		40 dB	
Return Loss		25 dB	
Specification Temperature		+25°C	
Operating Temperature	-40°C		+85°C

*Performance may be reduced at band edges.

*The actual directivity and return loss are higher than shown due to the limitations of the network analyzer's dynamic range.

*The required termination on the waveguide port is 30 dB or better for accurate measurement.

*The definition of the insertion loss, coupling and directivity is shown as following.

Insertion Loss = $-10 \log_{10} [(P2+P3)/P1]$ Coupling Value = $-10 \log_{10} [P3/P1]$	
Isolation = $-10 \log_{10} [P3/P2]$ Directivity = Isolation – Coupling Value	

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FEATURES

- Full Band Coverage
- Low Insertion Loss
- High Directivity

APPLICATIONS

- Test Lab
- Instrumentations
- System Integration

SUPPLEMENTAL DETAILS



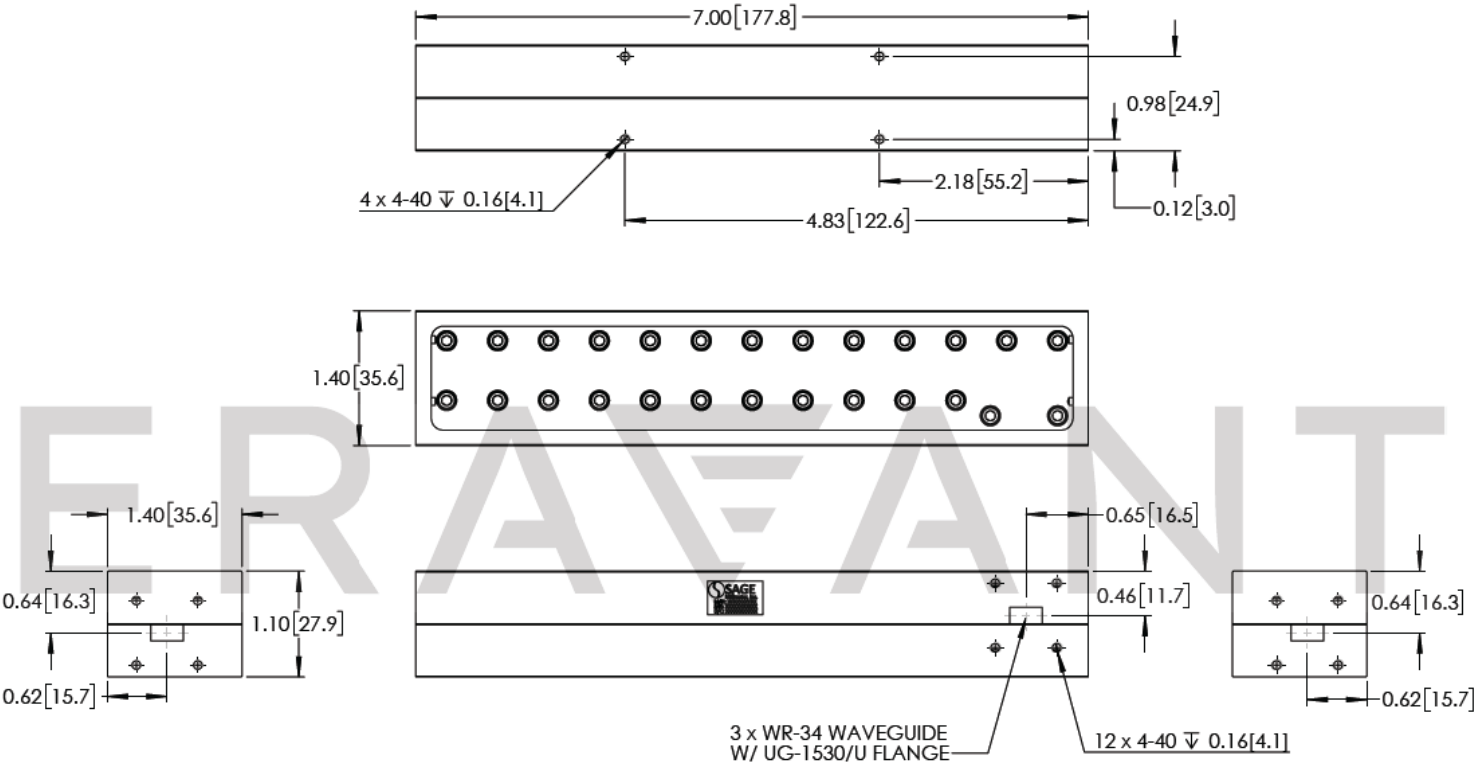
SWD-2040H-34-SB

Mechanical Specifications:

Item	Specification
RF Ports	WR-34 Waveguide with UG-1530/U Flange
Material	Brass
Finish	Gold Plated
Weight	2.0 lbs.
Outline	WD-SB-3

Mechanical Outline:

Unless otherwise specified, all dimensions are in inches [millimeters]



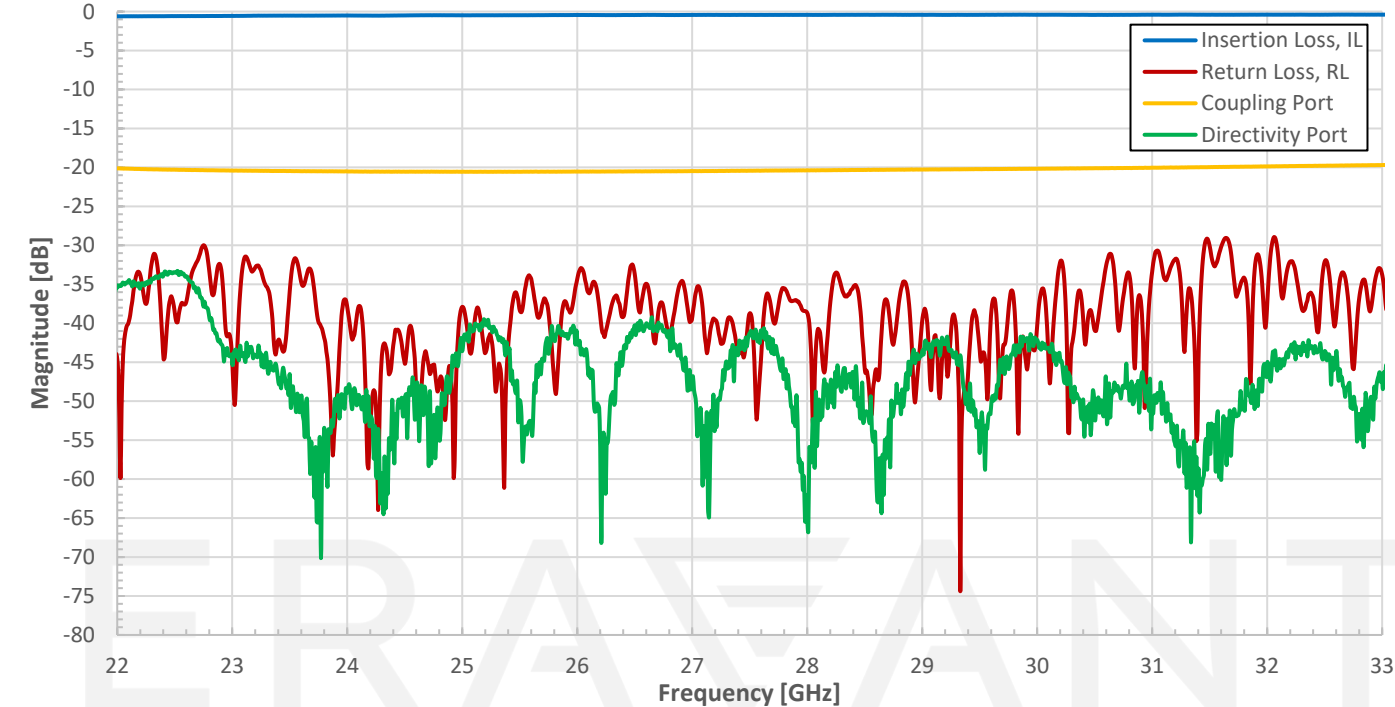
NOTE:

- On condition that test data is provided it is collected from a sample lot. Actual data may vary slightly from unit to unit. All testing is performed under +25 °C room temperature.
- On condition that simulated test data is provided, actual measured data may slightly vary.
- Eravant reserves the right to change the information presented without notice.

CAUTION:

- If a waveguide is present, any foreign objects in the waveguide will cause performance degradation and may damage or destroy the unit.

Typical Performance Vs Frequency



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