

WR-34 Waveguide Directional Coupler, 40 dB

SWD-4030H-34-SW is a WR-34, three-port waveguide directional coupler that delivers a 40 dB nominal coupling level and 30 dB typical directivity across the full waveguide band from 22 to 33 GHz. The three-port coupler uses a traditional multi-hole and waveguide 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*		0.7 dB	
Coupling*		40 dB	
Directivity*		30 dB	
Return Loss		20 dB	
Specification Temperature		+25°C	
Operating Temperature	-40°C		+85°C

*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
- Sub-assemblies

SUPPLEMENTAL DETAILS



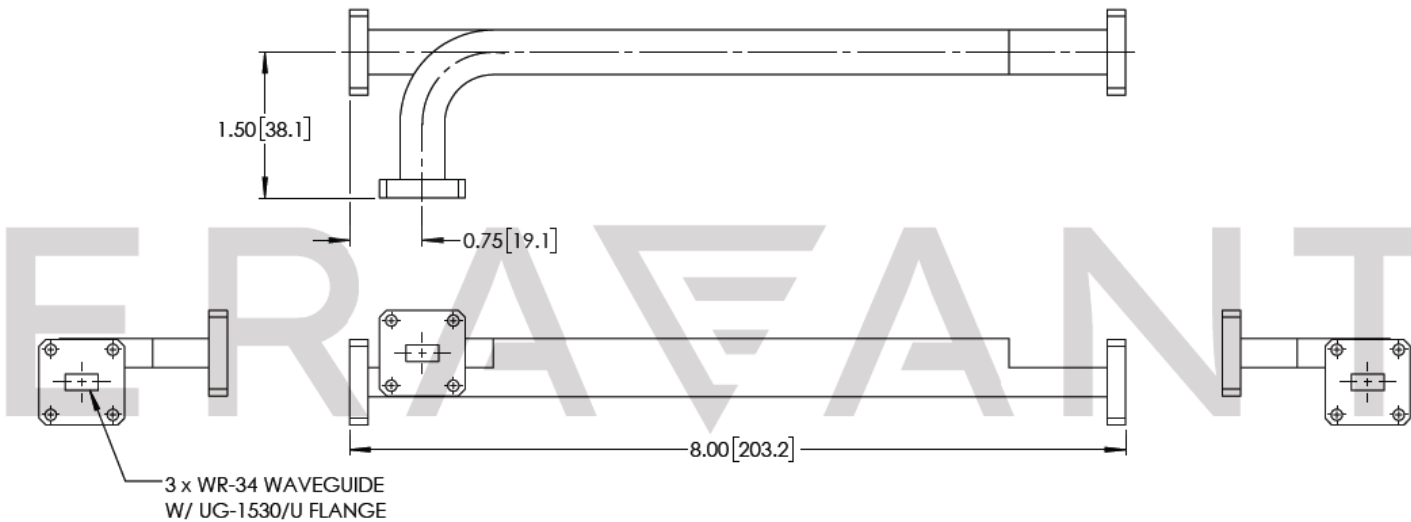
SWD-4030H-34-SW

Mechanical Specifications:

Item	Specification
Through Port	WR-34 Waveguide with UG-1530/U Flange
Coupled Port	WR-34 Waveguide with UG-1530/U Flange
Coupling Plane	H-Plane
Waveguide Material	Copper
Flange Material	Brass
Finish	Black Painted Body, Gold Plated Waveguide Faces
Outline	WD-SWH-3-L1

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.