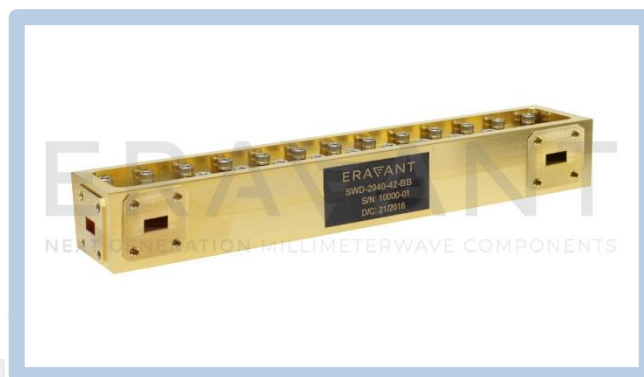


## WR-34 Waveguide Bi-Directional Coupler, 10 dB

### Description:

**Model SWD-1040H-34-BB** is a WR-34, four-port waveguide bi-directional coupler that delivers a 10 dB nominal coupling level and 40 dB nominal directivity across the full waveguide band from 22 to 33 GHz. The four-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 compatible flanges. Custom coupling levels are available under different model numbers.



### Features:

- Full Band Operation
- Low Insertion Loss
- High Directivity

### Applications:

- Test Labs
- Instrumentation
- Sub-assemblies

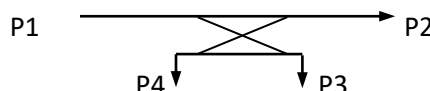
### Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Frequency	22 GHz		33 GHz
Insertion Loss*		0.5 dB	
Coupling*		10 dB	
Directivity*		40 dB	
Return Loss		25 dB	
Specification Temperature		+25 °C	
Operating Temperature	-40 °C		+85 °C

\*The definition of the insertion loss, coupling and directivity is show as following. The required termination on the waveguide port is 30 dB or better for accurate measurement.

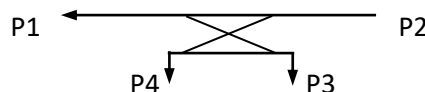
$$\text{Insertion Loss} = -10 \log_{10} [(P2+P3)/P1]$$

$$\text{Coupling Value} = -10 \log_{10} [P3/P1]$$



$$\text{Isolation} = -10 \log_{10} [P3/P2]$$

$$\text{Directivity} = \text{Isolation} - \text{Coupling Value}$$

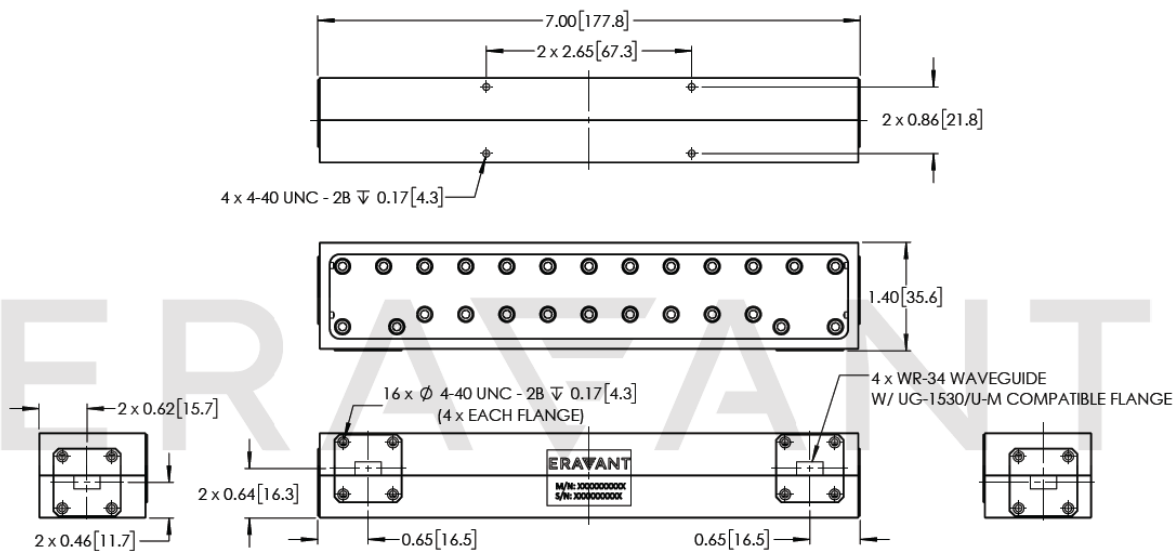


## WR-34 Waveguide Bi-Directional Coupler, 10 dB

### Mechanical Specifications:

Item	Specification
Waveguide Ports	WR-34 Waveguide with UG-1530/U Compatible Flange
Material	Brass
Finish	Gold Plated
Weight	1.7 lbs.
Outline	WD-BB-3-A

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



### Note:

- Eravant reserves the right to change the information presented without notice.

### Caution:

- Any foreign objects in the waveguide will degrade performance and/or damage the device.