SWD-4040H-42-BB

Advanced Rev 1.2

K-Band Waveguide Bi-Directional Coupler, 40 dB

Description:

Model SWD-4040H-42-BB is a K-Band, four-port waveguide bi-directional coupler that delivers a 40 dB nominal coupling level and 40 dB nominal directivity across the full waveguide band from 18 to 26.5 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-42 waveguides with UG-595/U-M 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

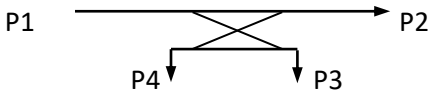
Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Frequency	18 GHz		26.5 GHz
Insertion Loss*		0.5 dB	
Coupling*		40 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.

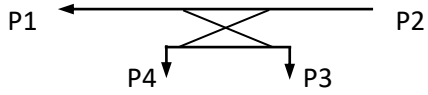
Insertion Loss = -10 $\log_{10}$ [(P2+P3)/P1]

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



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

Directivity = Isolation – Coupling Value



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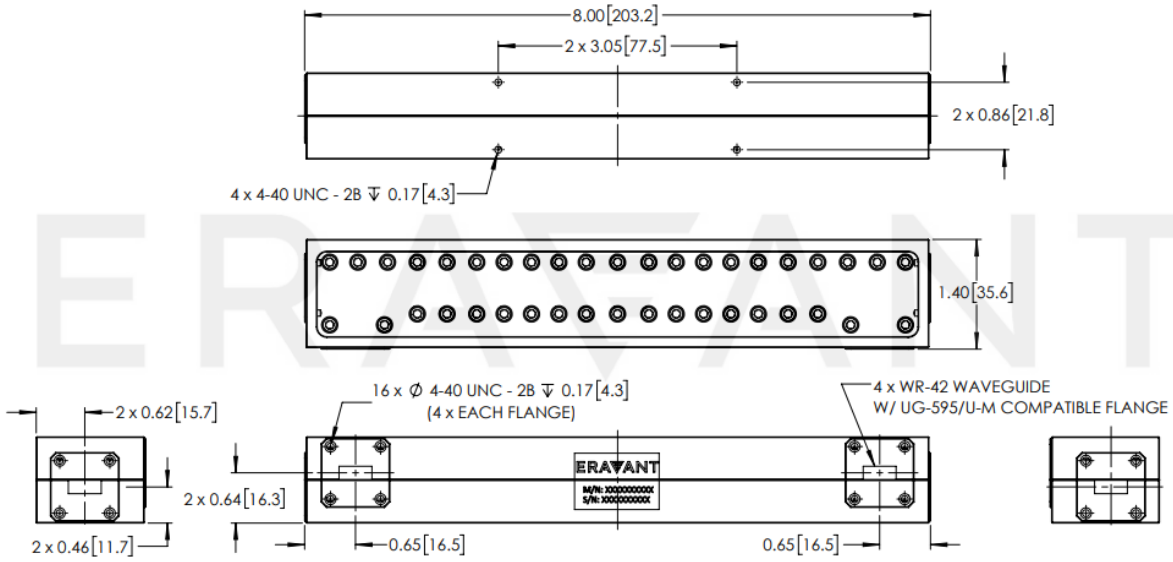
Mechanical Specifications:

Item	Specification
Waveguide Ports	WR-42 Waveguide with UG-595/U-M Compatible Flange
Material	Brass
Finish	Gold Plated
Weight	1.9 lbs.
Outline	WD-BB-K-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.

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