SWD-3040H-06-BB

Advanced

D-Band Waveguide Bi-Directional Coupler, 30 dB

Description:

Model SWD-3040H-06-BB is a D band, four-port waveguide bi-directional coupler that delivers a 30 dB nominal coupling level and 40 dB nominal directivity across the full waveguide band from 110 to 170 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-06 waveguides with UG-387/U-M anti-cocking flanges. Custom coupling levels are available under different model numbers.

Features:

- Full Band Operation
- Low Insertion Loss
- High Directivity

Applications:

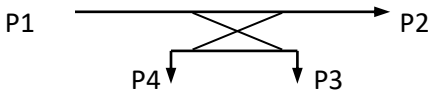
- Test Labs
- Instrumentation
- Sub-assemblies

Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Frequency	110 GHz		170 GHz
Insertion Loss*		3 dB	
Coupling*		30 dB	
Directivity*		40 dB	
Return Loss		20 dB	
Specification Temperature		+25 ˚C	
Operating Temperature	-40 ˚C		+85 ˚C

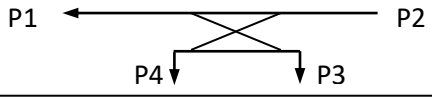
* The definition of the insertion loss, coupling and directivity is show as following.

Insertion Loss = -10 $\log_{10}$ [(P2+P3)/P1] when P4 is terminated.
Coupling Value = -10 $\log_{10}$ [P3/P1] when P4 is terminated.
or -10 $\log_{10}$ [P4/P2] when P3 is terminated.



Directivity = -10 $\log_{10}$ [P3/P2] when P4 is terminated.

Directivity = -10 $\log_{10}$ [P4/P1] when P3 is terminated.



www.sagemillimeter.com | 3043 Kashiwa Street, Torrance, CA 90505
Phone: 424-757-0168 | Fax: 424-757-0188 | Email: sales@sagemillimeter.com

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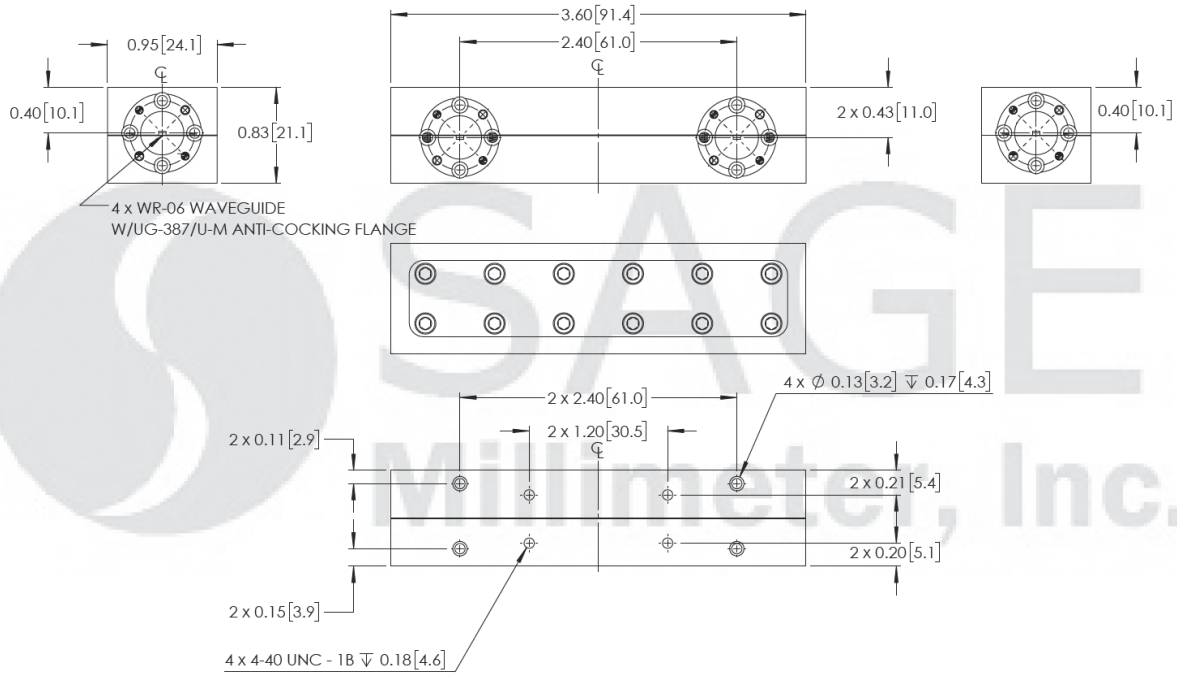
Mechanical Specifications:

Item	Specification
Through Ports	WR-06 Waveguide with UG-387/U-M Anti-Cocking Flange
Coupled Port	WR-06 Waveguide with UG-387/U-M Anti-Cocking Flange
Material	Brass
Finish	Gold Plated
Weight	7.7 Oz
Outline	WD-BB-D-A

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



Note:

- SAGE Millimeter, Inc. 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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