



D-Band Waveguide Bi-Directional Coupler, 10 dB

Description:

Model SWD-1040H-06-BB is a D band, 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 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*		10 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.



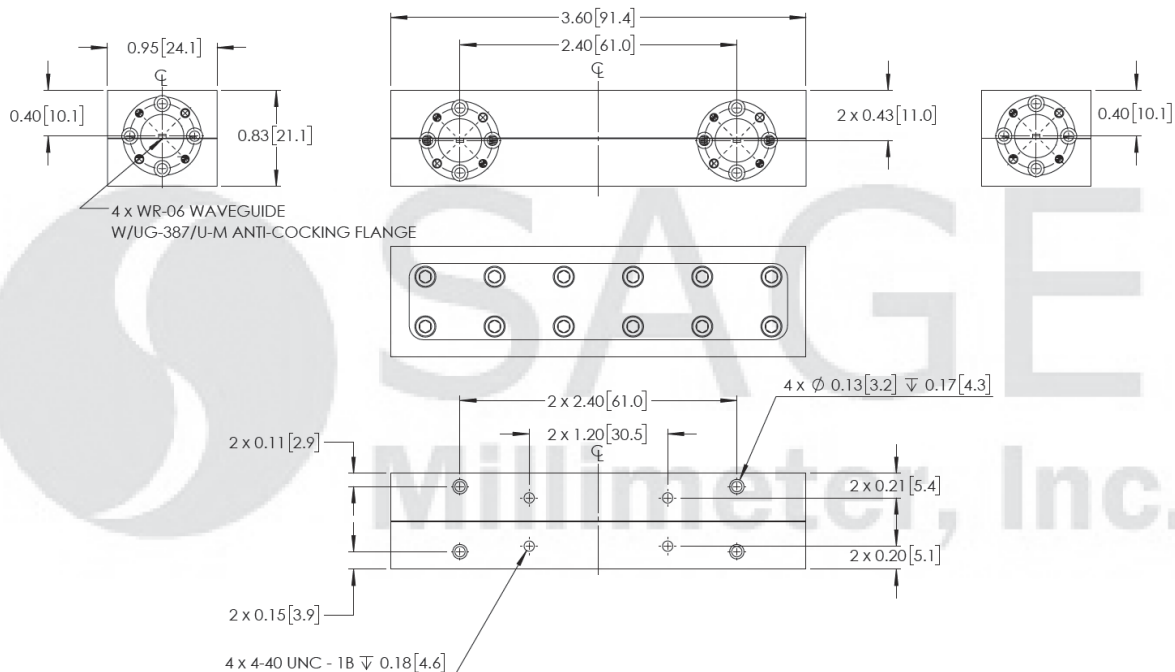


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Mechanical Specifications:

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.

