

W-Band Waveguide Directional Coupler, 12 dB

SWD-1040H-10-SB-2-WP is a W band, three-port waveguide directional coupler that delivers a 12 dB nominal coupling level and 30 dB minimum directivity across the full waveguide band from 75 to 110 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-10 waveguides with UG-387/U-M anti-cocking flanges. Custom coupling levels are available under different model numbers.



Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Frequency	75 GHz		110 GHz
Insertion Loss*		2 dB	
Coupling Level*		12 dB	
Directivity*	30 dB	40 dB	
Main Line Return Loss		27 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 = $-10 \log_{10} [P3/P2]$	

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FEATURES

- Full Band Operation
- Low Insertion Loss
- High Directivity

APPLICATIONS

- Test Labs
- Instrumentations
- Sub-assemblies

SUPPLEMENTAL DETAILS

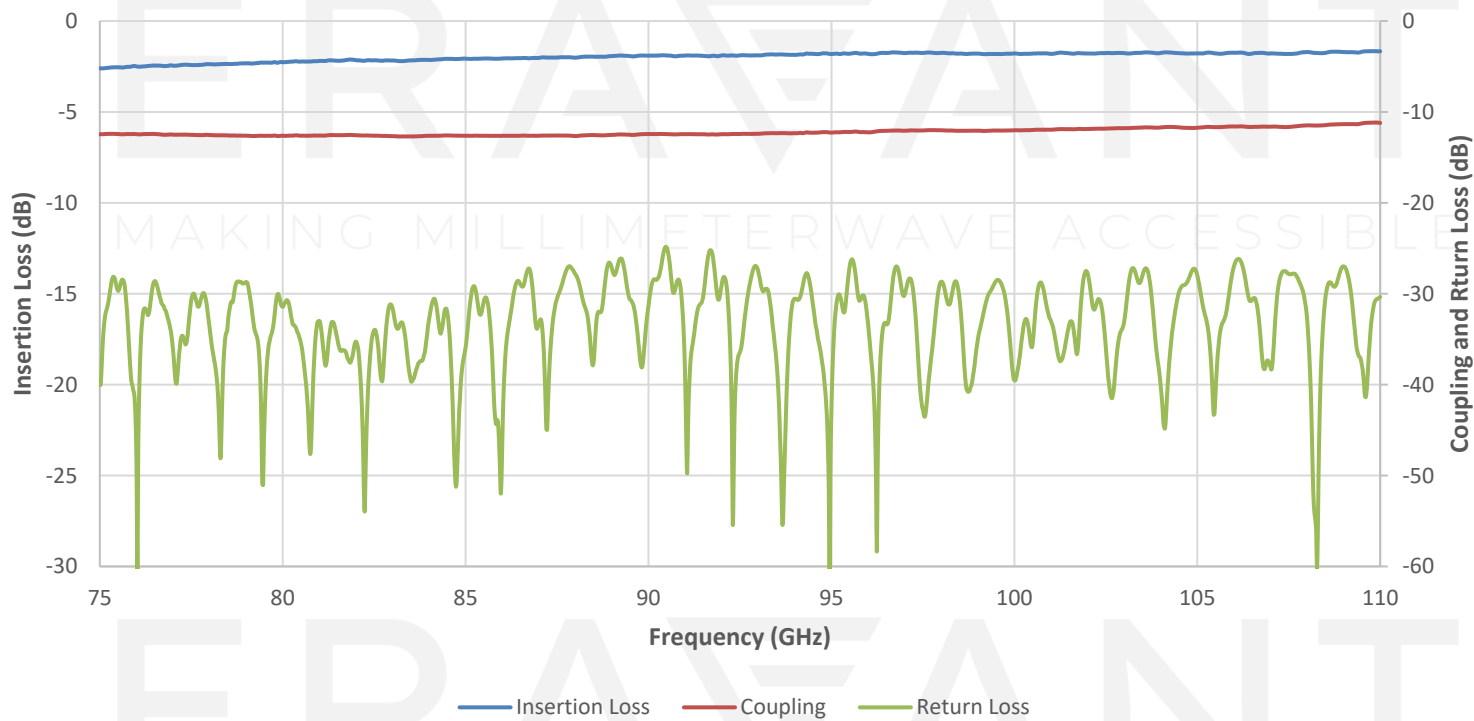


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Mechanical Specifications:

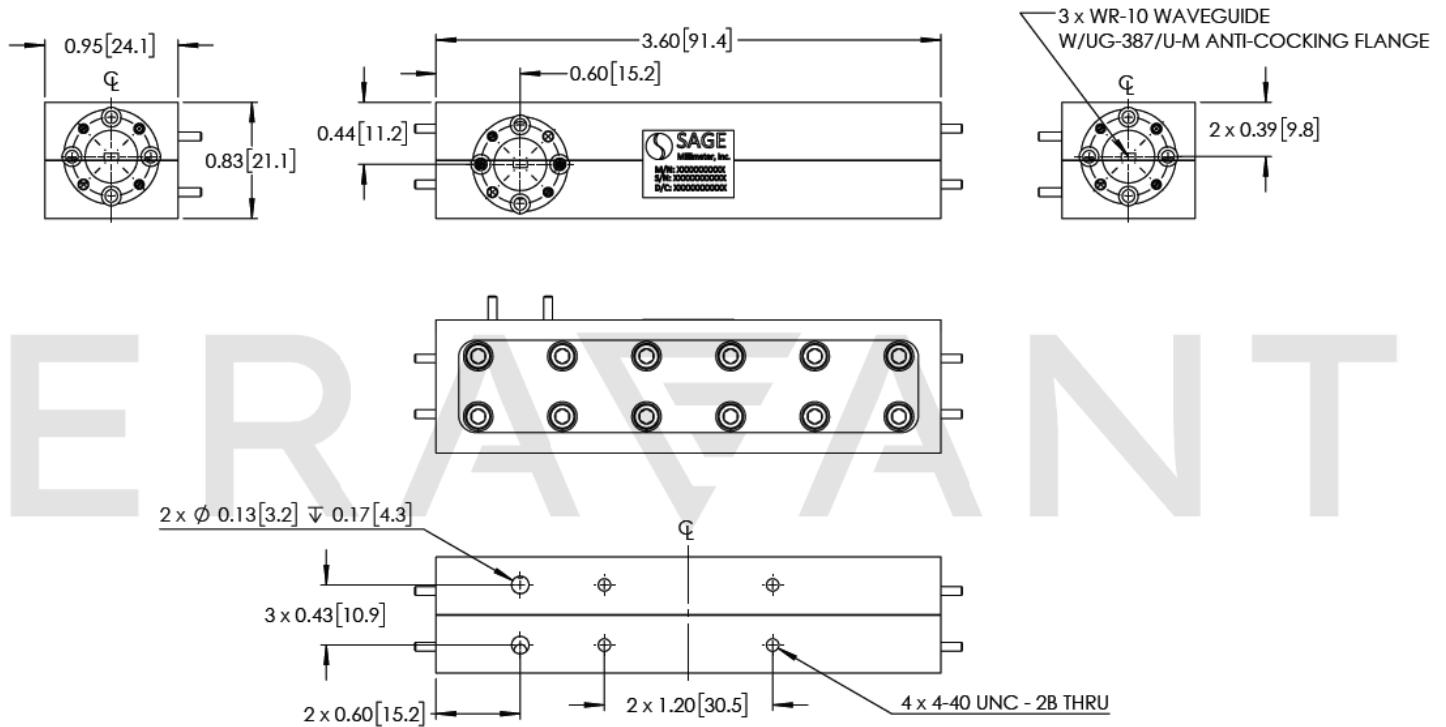
Item	Specification
Through Ports	WR-10 Waveguide with UG-387/U-M Anti-Cocking Flange
Coupled Port	WR-10 Waveguide with UG-387/U-M Anti-Cocking Flange
Size	3.60" (L) X 0.95" (W) x 0.83" (H)
Material	Brass
Finish	Gold Plated
Weight	7.7 Oz
Outline	WD-SB-W-A

Typical Performance vs Frequency



SWD-1040H-10-SB-2-WP

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



NOTE:

- All data was presented using a limited sample lot. Actual data may vary unit to unit.
- The insertion loss shown includes the loss due to coupling.
- 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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