

SWD-1025H-05-SB-C-1.6

G-Band Waveguide Directional Coupler, 10 dB

SWD-1025H-05-SB-C-1.6 is a compact G-band, three-port waveguide directional coupler that delivers a 10 dB nominal coupling level and 25 dB typical directivity across the full waveguide band from 140 to 220 GHz. The three-port coupler uses a traditional multi-hole and split block design to achieve a flat coupling level, and low insertion loss. The interfaces of the coupler are WR-05 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 Range	140 GHz		220 GHz
Insertion Loss*		2 dB	
Coupling*		10 dB	
Directivity*		25 dB	
Return Loss		18 dB	
Specification Temperature		+25°C	
Operating Temperature	-40°C		+85°C

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

*Performance may be reduced at band edges.

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

Mechanical Specifications:

Item	Specification
Waveguide Ports	WR-05 Waveguide with UG-387/U-M Anti-Cocking Flange
Material	Brass
Finish	Gold Plated
Weight	4.5 Oz
Outline	WD-SB-G-A-C-1.6

ECCN

EAR99

FEATURES

- Full Band Operation
- Low Insertion Loss
- High Directivity
- Flat Coupling Level Across the Band

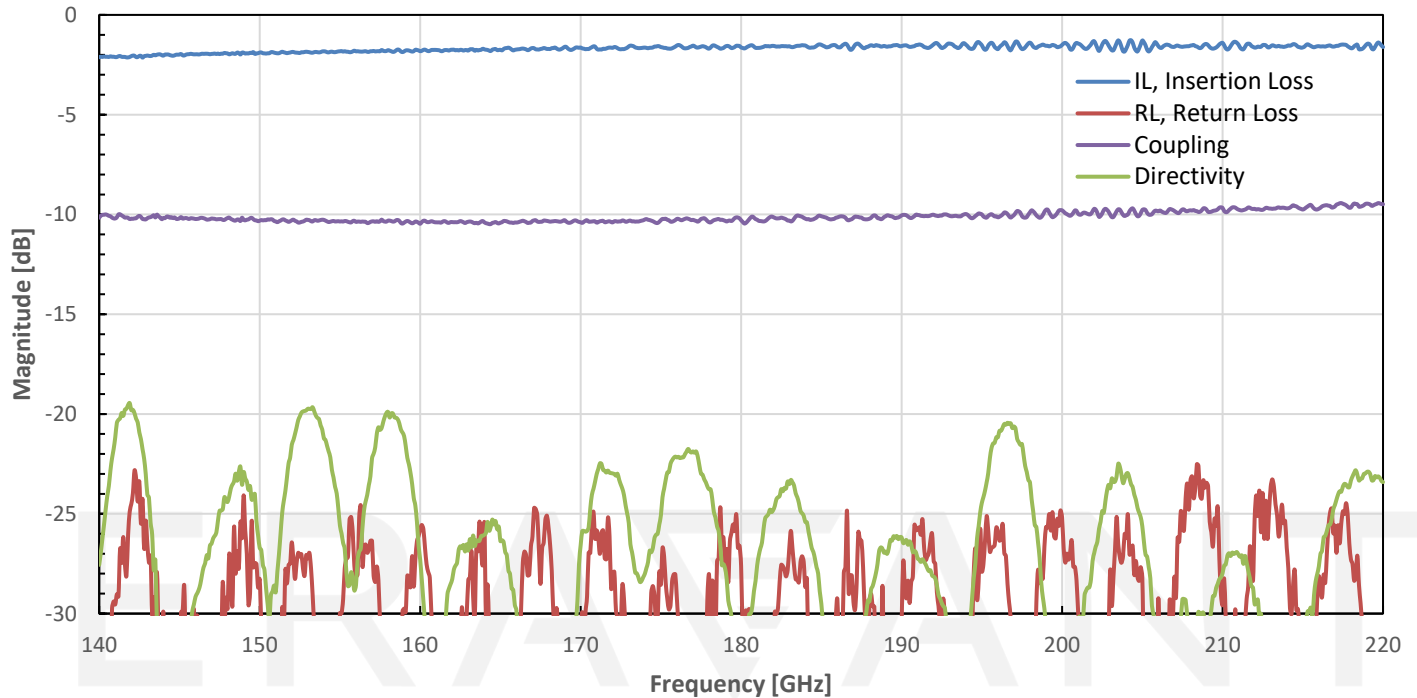
APPLICATIONS

- Test Labs
- Instrumentations
- Sub-assemblies

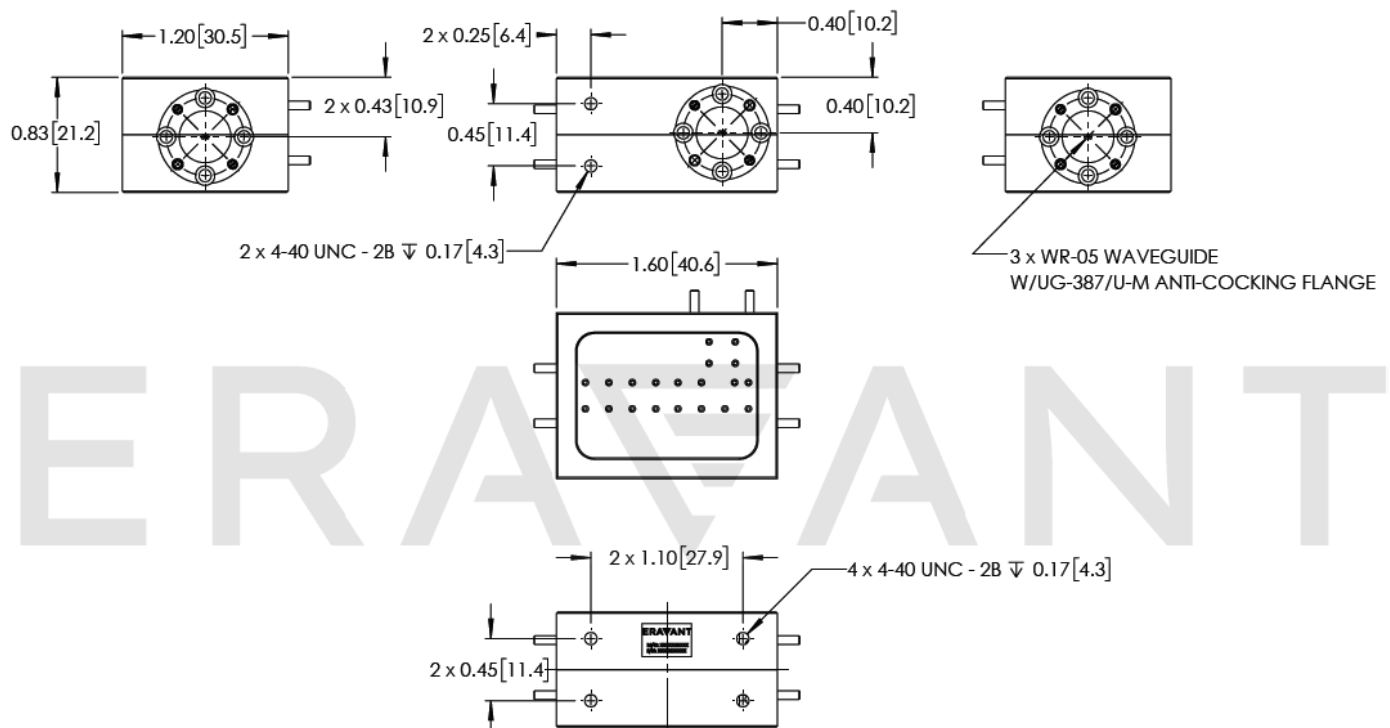
SUPPLEMENTAL DETAILS



Typical Performance vs. Frequency



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



NOTE:

- On condition that test data is provided it is collected from a sample lot. Actual data may vary slightly from unit to unit. All testing is performed under +25 °C room temperature.
- Eravant reserves the right to change the information presented without notice.

CAUTION:

- If a waveguide is present, any foreign objects in the waveguide will cause performance degradation and may damage or destroy the unit.

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