

SWD-2030H-08-SB-WP

F-Band Waveguide Directional Coupler, 20 dB

SWD-2030H-08-SB-WP is an F band, three-port waveguide directional coupler that delivers a 20 dB nominal coupling level and 25 dB minimum directivity across the full waveguide band from 90 to 140 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-08 waveguides with UG-387/U-M flanges. Custom coupling levels are available under different model numbers.



Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Frequency Range	90 GHz		140 GHz
Insertion Loss*		2.5 dB	
Return Loss		12 dB	
Coupling*		20 dB	
Directivity*	25 dB	30 dB	
VSWR		1.2:1	
Specification Temperature		+25°C	
Operating Temperature	-40°C		+85°C

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

ECCN

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FEATURES

- Full Band Operation
- Low Insertion Loss
- High Directivity

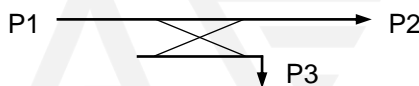
APPLICATIONS

- Test Lab
- Instrumentation
- Sub-assemblies

SUPPLEMENTAL DETAILS

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

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



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

$$\text{Directivity} = \text{Isolation} - \text{Coupling Value}$$

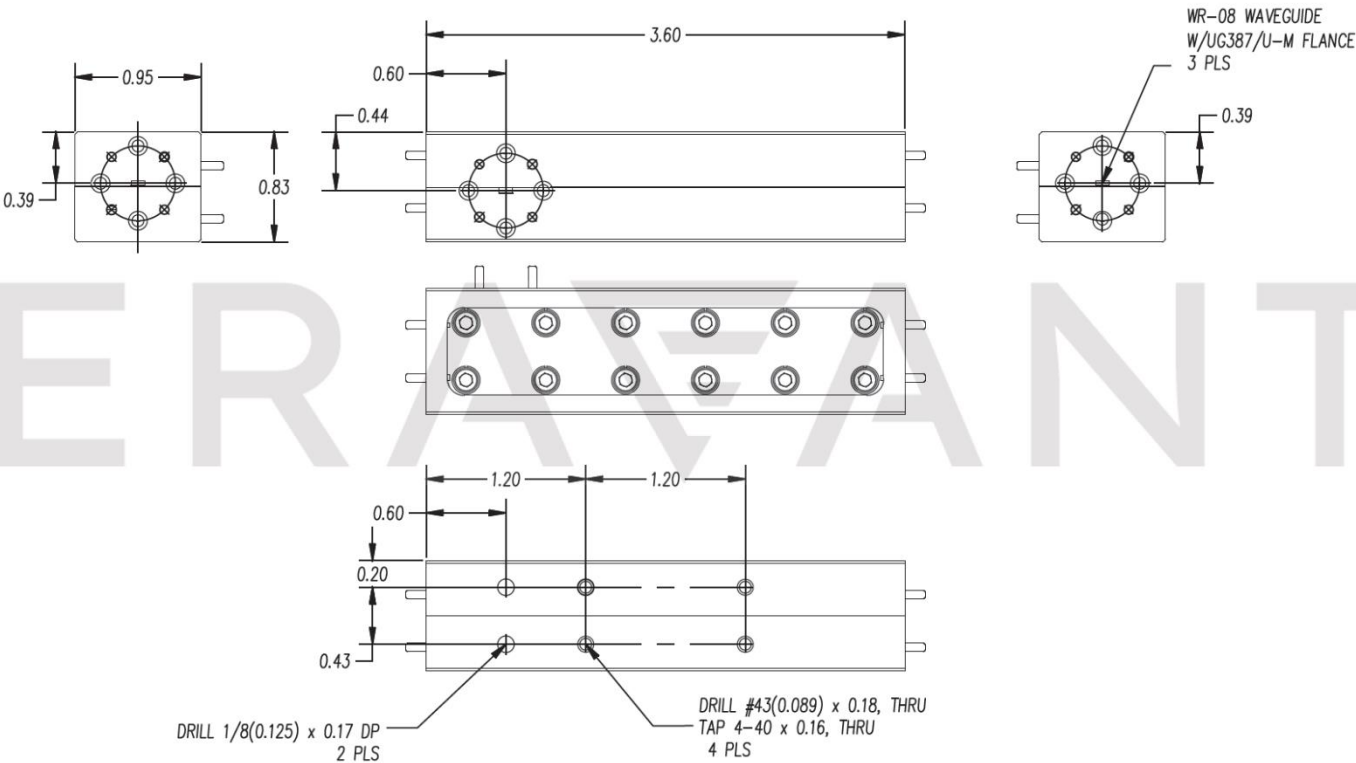


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Mechanical Specifications:

Item	Specification
Through Ports	WR-08 Waveguide with UG-387/U-M Flange
Coupled Ports	WR-08 Waveguide with UG-387/U-M Flange
Size	3.60" (L) X 0.95" (W) x 0.83" (H)
Material	Brass
Finish	Gold Plated
Outline	WD-SB-F

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.
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- 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.