SWD-2030E-28-SW5

Advanced

Ka-Band Waveguide Directional Coupler, 20 dB

Description:

Model SWD-2030E-28-SW5 is a Ka band, three-port waveguide directional coupler that delivers a 20 dB nominal coupling level and 30 dB typical directivity across the full waveguide band from 26.5 to 40 GHz. The three-port coupler uses E-plane coupling and features a traditional multi-hole and waveguide design to achieve a flat coupling level, high directivity, and low insertion loss. The interfaces of the coupler are WR-28 waveguides with UG-599/U compatible flanges. Custom coupling levels are available under different model numbers.

Features:

- Full Band Operation
- Low Insertion Loss
- Light Weight

Applications:

- Test Labs
- Instrumentation
- Sub-assemblies

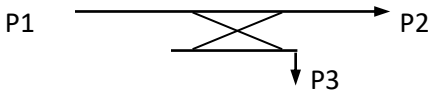
Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Frequency	26.5 GHz		40 GHz
Insertion Loss*		0.7 dB	
Coupling*		20 dB	
Directivity*		30 dB	
Return Loss		20 dB	
Power Handling			200 W
Pressure Handling			30 psi
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.

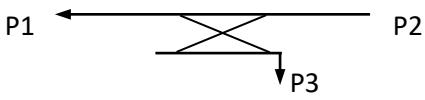
Insertion Loss = $-10 \log_{10} [(P2+P3)/P1]$

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



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

Directivity = Isolation – Coupling Value



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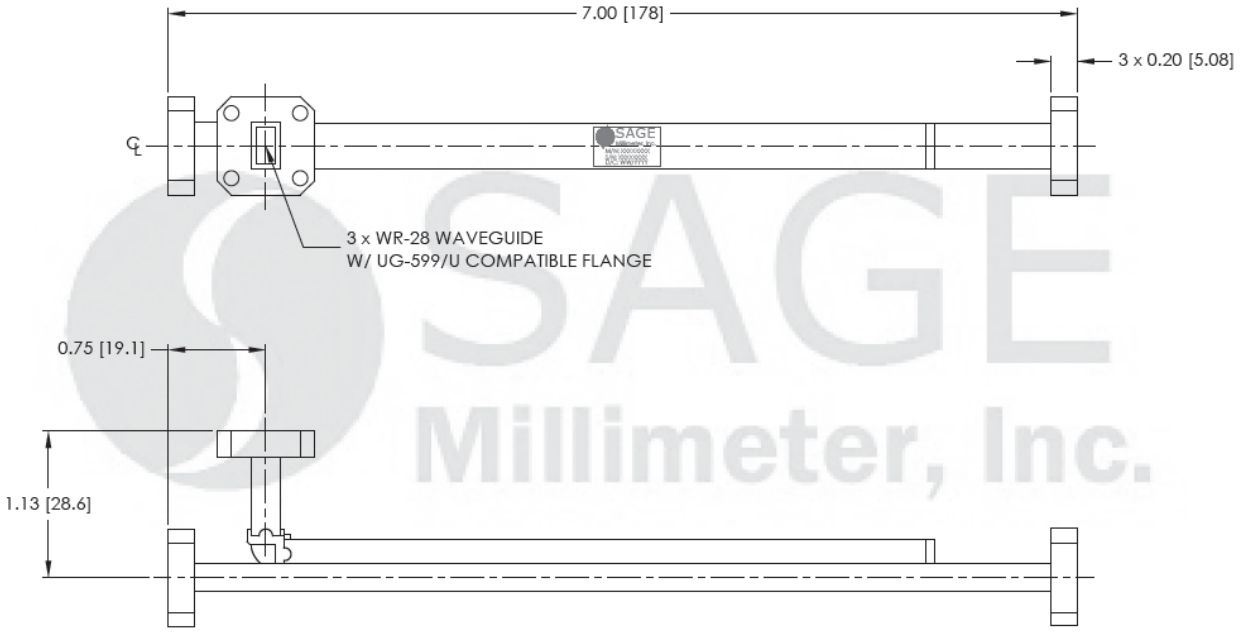
Q-Band Waveguide Directional Coupler, 30 dB

Mechanical Specifications:

Item	Specification
Through Ports	WR-28 Waveguide with UG-599/U Compatible Flange
Coupled Port	WR-28 Waveguide with UG-599/U Compatible Flange
Coupling Plane	E-Plane
Waveguide Material	Copper
Flange Material	Brass
Finish	Black Painted Body; Gold Plated Waveguide Faces
Weight	1.6 Oz
Size	7.00” (L) x 1.13” (H)
Outline	WD-SWE-A-L1

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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