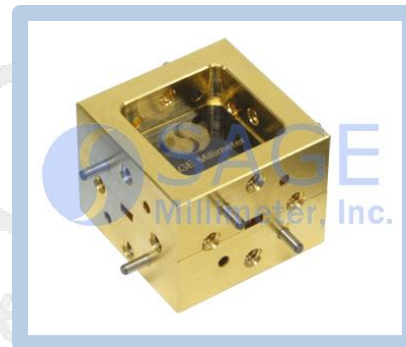


## Waveguide Crossguide Coupler, E Band, 20 dB

### Description:

**Model SWX-71386320-12-4B** is a four-port, split block crossguide coupler that is offered for power sampling where directivity is of concern. Compared to a multi-hole directional coupler, crossguide couplers offer lower insertion loss and a smaller form factor and insertion length. This model operates between 71 to 86 GHz with a 20 dB typical coupling level, 0.7 dB nominal insertion loss, and 15 dB typical directivity. The input, output, and coupled ports are all WR-12 waveguides with UG-387/U flanges.



### Features:

- Low Insertion Loss
- Moderate Directivity
- Three Port Configuration

### Applications:

- Test Labs
- Test Instrumentation
- Sub-assemblies

### Electrical Specifications:

| Parameter                 | Minimum | Typical | Maximum |
|---------------------------|---------|---------|---------|
| Frequency Range           | 71 GHz  |         | 86 GHz  |
| Coupling Level            |         | 20.0 dB |         |
| Insertion Loss            |         | 0.7 dB  |         |
| Directivity               |         | 15.0 dB |         |
| Input/Output VSWR         |         | 1.2:1   |         |
| Specification Temperature |         | +25°C   |         |
| Operating Temperature     | -40°C   |         | +85°C   |

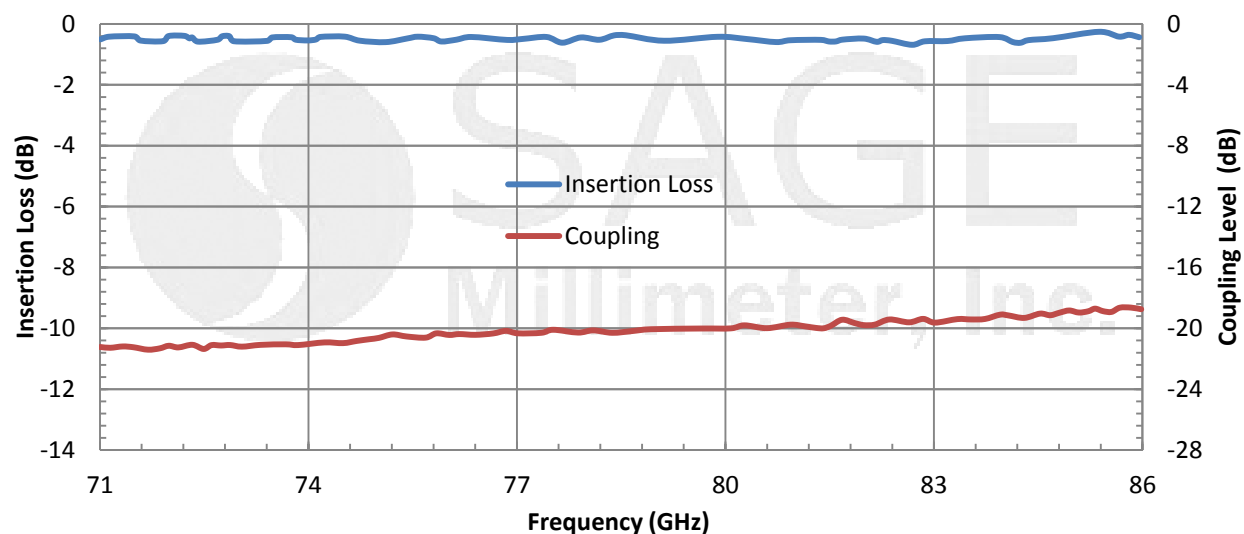
### Mechanical Specifications:

| Item     | Specifications                        |
|----------|---------------------------------------|
| Input    | WR-12 waveguide with UG-387/U flanges |
| Output   | WR-12 waveguide with UG-387/U flanges |
| Coupled  | WR-12 waveguide with UG-387/U flanges |
| Size     | 1.00" (L) x 1.00" (W) x 0.82" (H)     |
| Material | Aluminum                              |
| Finish   | Gold Plated                           |
| Weight   | 0.8 Oz                                |
| Outline  | WX-BE-4                               |

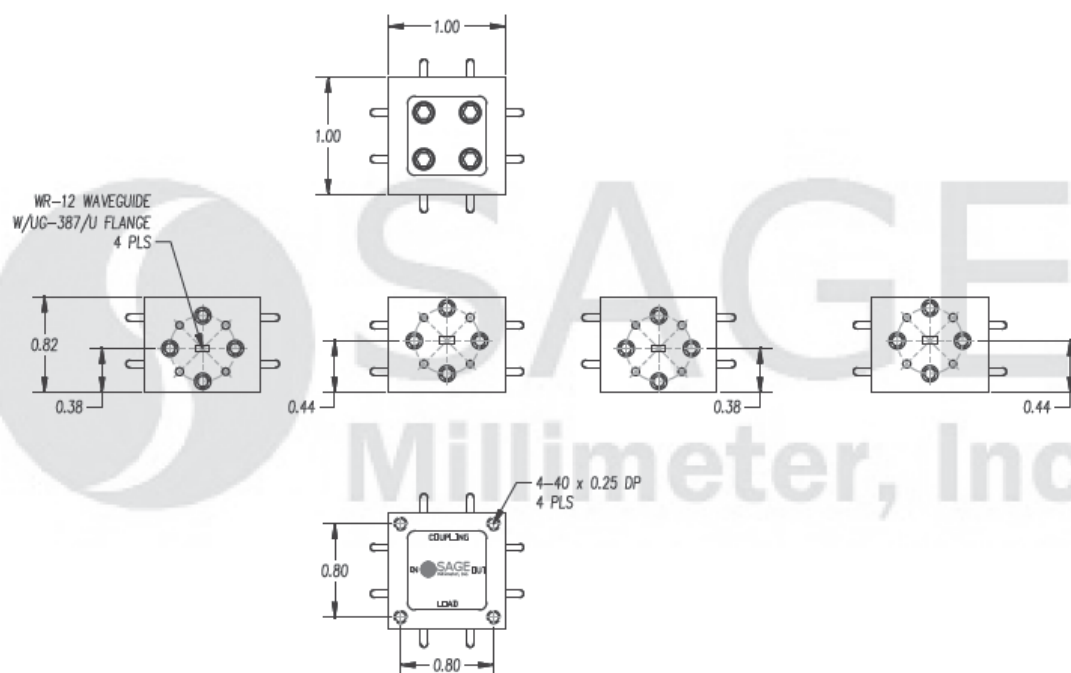


## Waveguide Crossguide Coupler, E Band, 20 dB

### Typical Insertion Loss and Coupling vs. Frequency



### Mechanical Outline: (Unless otherwise specified, all dimensions are in inches)



#### Note:

- All data was presented using a limited sample lot. Actual data may vary unit to unit.
- 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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