

## 20 dB WR-28 Waveguide Broadwall Coupler with UG-599/U Square Cover Flange and H-Plane Coupled Port from 26.5 GHz to 40 GHz in Brass Copper

The SMW28HC001-20 is a millimeter-wave directional waveguide coupler that operates in the frequency range of 26.5 to 40 GHz (Ka Band). This Ka band component offers a nominal coupling level of 20 dB, mean coupling accuracy of +/- 1.0, coupling flatness of 1 dB, and has a maximum VSWR level of 1.05:1. The design is made of gold brass copper and incorporates a multi-hole configuration that results in typical directivity of 40 dB. Common applications for this millimeter wave component involve test setups where power reflection measurements are required that might involve power sampling and frequency monitoring with minimal signal loss to the main transmission path. This E plane coupler uses integrated WR-28 waveguide ports with UG 599/U flanges. Fairview offers a complete family of waveguide millimeter wave directional couplers that are in-stock for same day shipment.

### Electrical Specifications

Description	Min	Typ	Max	Units
Frequency Range	26.5		40	GHz
<b>Coupler</b>				
Nominal Coupling Level		20		dB
Coupling Accuracy			±1	dB
Directivity		40		dB
Insertion Loss			0.7	dB
Main Line VSWR			1.05:1	
Secondary Line VSWR			1.05:1	
Coupling Flatness			±1	dB

### Mechanical Specifications

<b>Size</b>	
Length	10 in [254 mm]
Width	0.75 in [19.05 mm]
Height	1.775 in [45.09 mm]
Weight	0.295 lbs [133.81 g]
<b>Interface</b>	
Waveguide Size	WR-28
Flange Type	Square Cover
Flange Designation	UG-599/U
Flange Material and Plating	Brass Copper, Gold
Coupler Body Material and Plating	Brass Copper, Gold

### Environmental Specifications

**Compliance Certifications** (see [product page](#) for current document)

### Plotted and Other Data

Notes:



### Features:

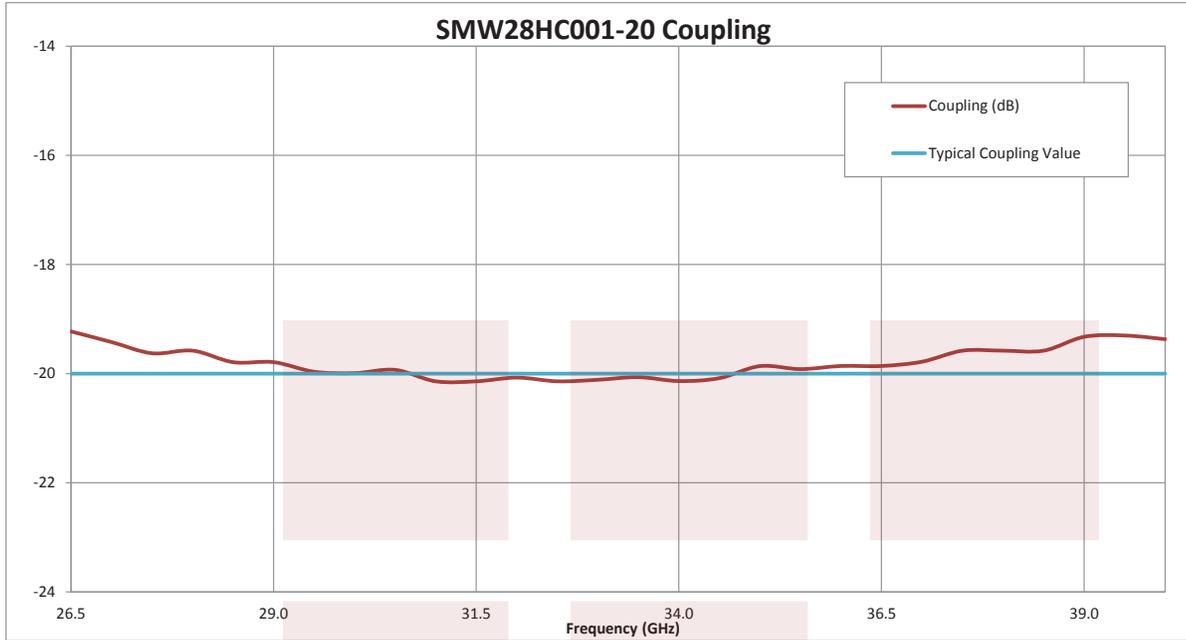
- 20 dB Nominal Coupling Level
- H-Plane Waveguide Coupler
- 26.5 GHz to 40 GHz Frequency Range
- Body and Flanges made of Brass Copper
- Gold Waveguide
- 1.05:1 VSWR

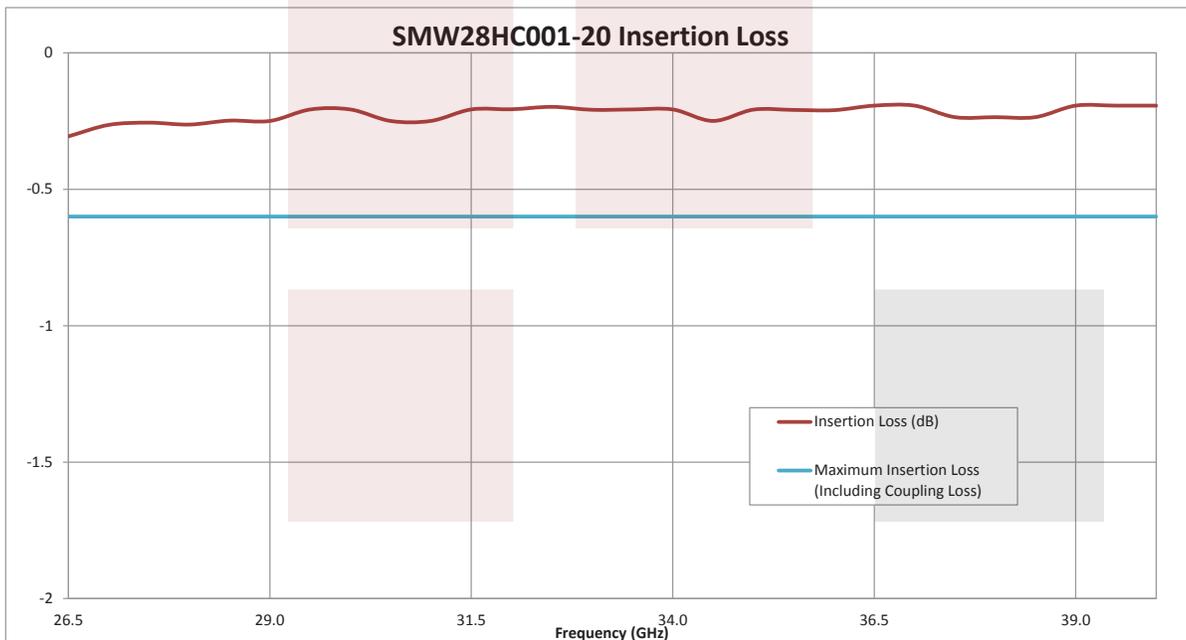
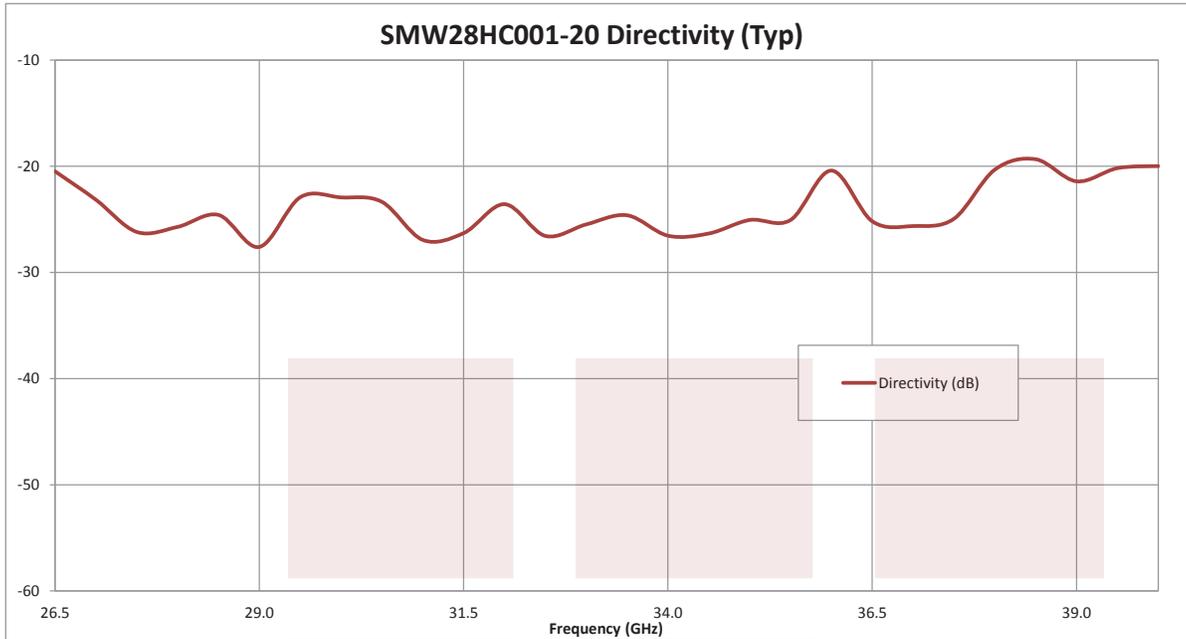
### Applications:

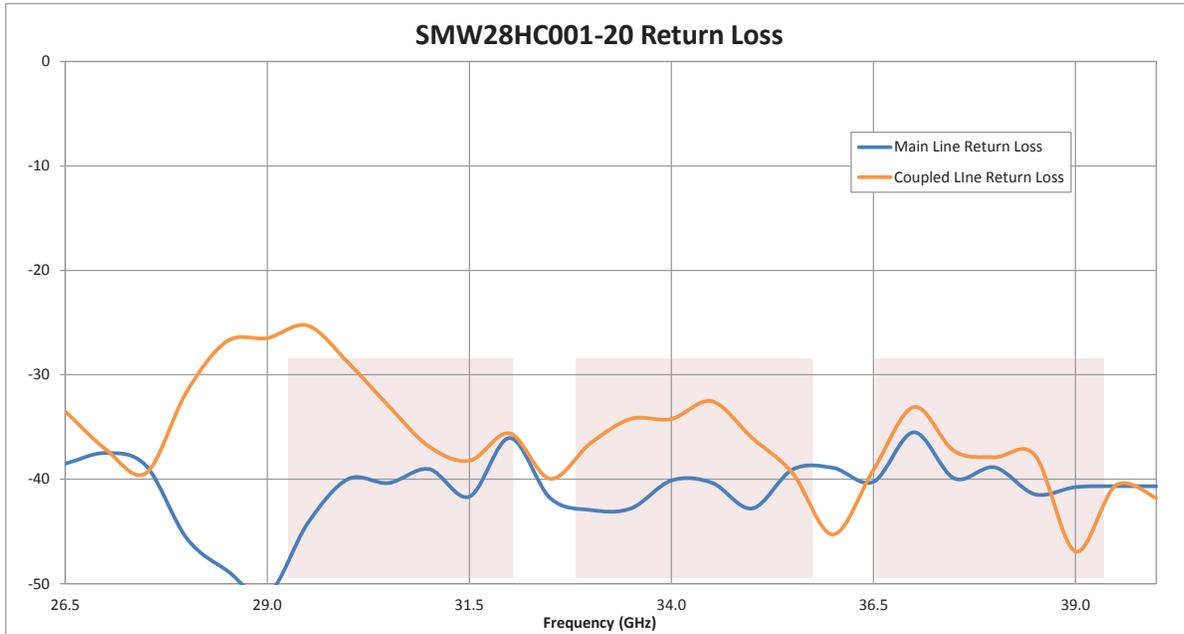
- Test Benches
- Radar
- Satellite
- Microwave Radio
- Attenuation Measurements
- Power Measurements
- Source Leveling

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**Typical Performance Data**







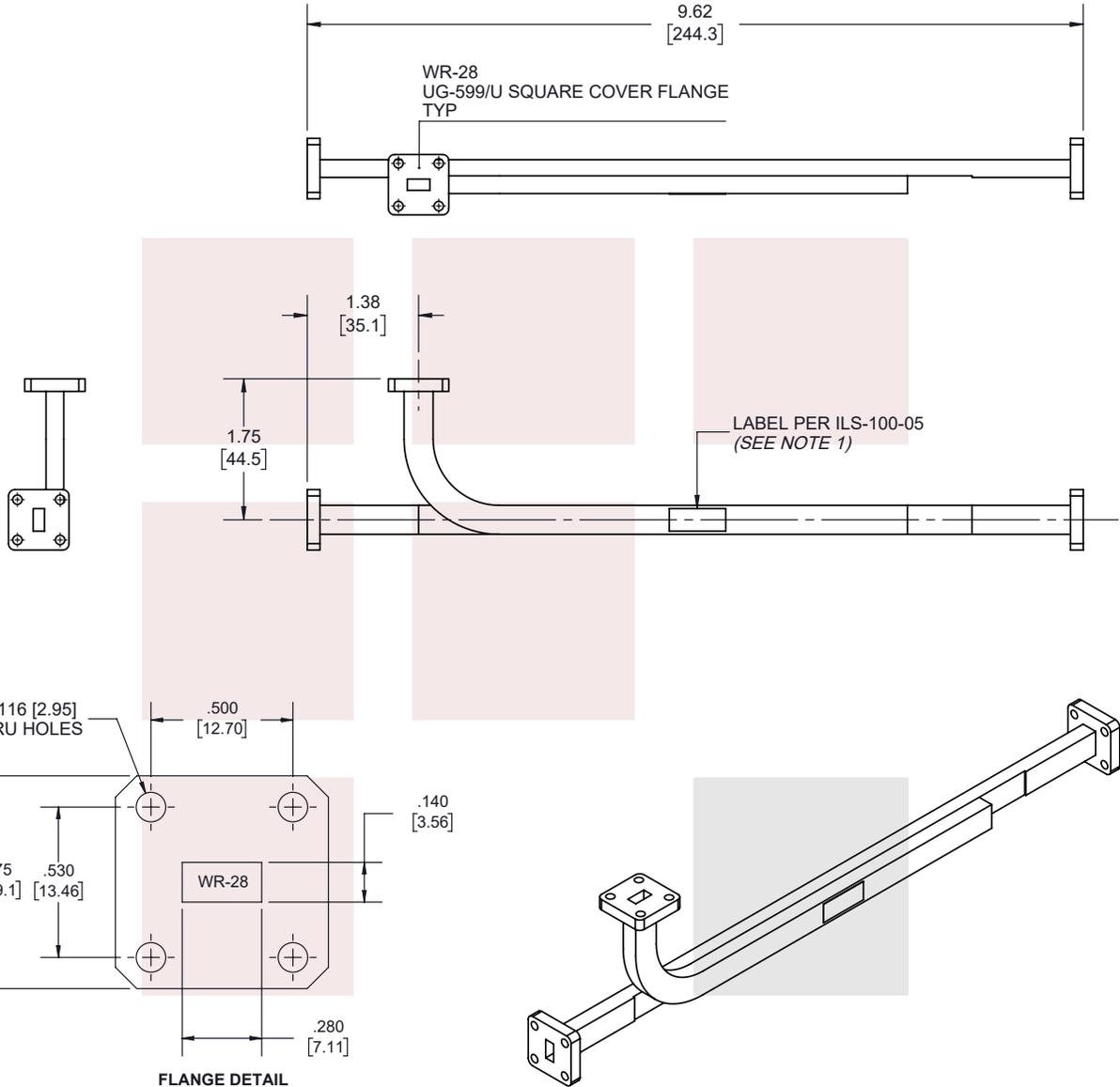
20 dB WR-28 Waveguide Broadwall Coupler with UG-599/U Square Cover Flange and H-Plane Coupled Port from 26.5 GHz to 40 GHz in Brass Copper from Fairview Microwave is in-stock and available to ship same-day. All of our RF/microwave products are available off-the-shelf from our ISO 9001:2008 certified facilities in Lewisville, Texas. Fairview Microwave is RF on-demand.

For additional information on this product, please click the following link: [20 dB WR-28 Waveguide Broadwall Coupler with UG-599/U Square Cover Flange and H-Plane Coupled Port from 26.5 GHz to 40 GHz in Brass Copper SMW28HC001-20](https://www.fairviewmicrowave.com/wr-28-directional-waveguide-coupler-20db-ug-599-h-bend-smw28hc001-20-p.aspx)

URL: <https://www.fairviewmicrowave.com/wr-28-directional-waveguide-coupler-20db-ug-599-h-bend-smw28hc001-20-p.aspx>

The information contained in this document is accurate to the best of our knowledge and representative of the part described herein. It may be necessary to make modifications to the part and/or the documentation of the part, in order to implement improvements. Fairview Microwave reserves the right to make such changes as required. Unless otherwise stated, all specifications are nominal. Fairview Microwave does not make any representation or warranty regarding the suitability of the part described herein for any particular purpose, and Fairview Microwave does not assume any liability arising out of the use of any part or documentation.

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
A	PCR PE-W28CP002-10	2/10/2021	S.PONG



**NOTES:**

- LABEL PER ILS-100-05. FOR INTERNAL USE ONLY. LABEL LOCATION FOR REFERENCE ONLY.

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**TITLE**  
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UNLESS OTHERWISE SPECIFIED LEADING DIMENSIONS ARE INCHES  
DIMENSIONS IN [ ] ARE MILLIMETERS

TOLERANCES: CABLE LENGTH (L) TOLERANCES:

.X = ±.2 [5.08]	FRACTIONS	L ≤ 12 [305] = +1 [25] / -0
.XX = ±.02 [.51]	± 1/32	12 [305] < L ≤ 60 [1524] = +2 [51] / -0
.XXX = ±.005 [.13]	ANGLES ± 1°	60 [1524] < L ≤ 120 [3048] = +4 [102] / -0
		120 [3048] < L ≤ 300 [7620] = +6 [152] / -0
		300 [7620] < L = +5%L / -0

THIRD-ANGLE PROJECTION



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SHEET 1 OF 1

SCALE N/A

ALL DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.

SIZE A	CAGE CODE 3FKR5	DRAWN BY K.DANG	ITEM NO. SMW28HC001-20	REV A
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