

WR-42 Directional Waveguide Coupler 20 dB With UG595/U Flange and E-Plane Coupled Port From 18 GHz to 26.5 GHz K Band

The SMW42EC001-20 is a millimeter-wave directional waveguide coupler that operates in the frequency range of 18 to 26.5 GHz (K Band). This K band component offers a nominal coupling level of 20 dB, mean coupling accuracy of +/- .8, coupling flatness of 1 dB, and has a maximum VSWR level of 1.2:1. The design is made of gold plated brass copper and incorporates a multi-hole configuration that results in typical directivity of 30 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-42 waveguide ports with UG 595/U flanges. Fairview offers a complete family of waveguide millimeter wave directional couplers that are in-stock for same day shipment.



Features:

- 20 dB Nominal Coupling Level
- E-Plane Waveguide Coupler
- 18 GHz to 26.5 GHz Frequency Range
- Body and Flanges made of Brass Copper
- Gold Plated Waveguide
- 1.2:1 VSWR

Electrical Specifications*

Description	Min	Typ	Max	Units
Frequency Range	18		26.5	GHz
Directivity		30		dB
Insertion Loss			0.6	dB
Input VSWR			1.2:1	
Secondary Line VSWR			1.2:1	
Nominal Coupling Level		20		dB
Mean Coupling Accuracy			±0.8	dB
Coupling Flatness			±1	dB

* Values at 25°C, sea level

Mechanical Specifications

Size

Length 11 in [279.4 mm]
Width/Dia. 0.88 in [22.35 mm]
Height 1.94 in [49.28 mm]

Waveguide

Size WR-42
Material Brass Copper
Plating Gold
Color Gold

Flange 1

Interface UG595/U
Material Brass Copper
Plating Gold
Color Gold

Flange 2

Interface UG595/U
Material Brass Copper
Plating Gold
Color Gold

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Flange 3

Interface	UG595/U
Material	Brass Copper
Plating	Gold
Color	Gold

Compliance Certifications (visit www.FairviewMicrowave.com for current document)

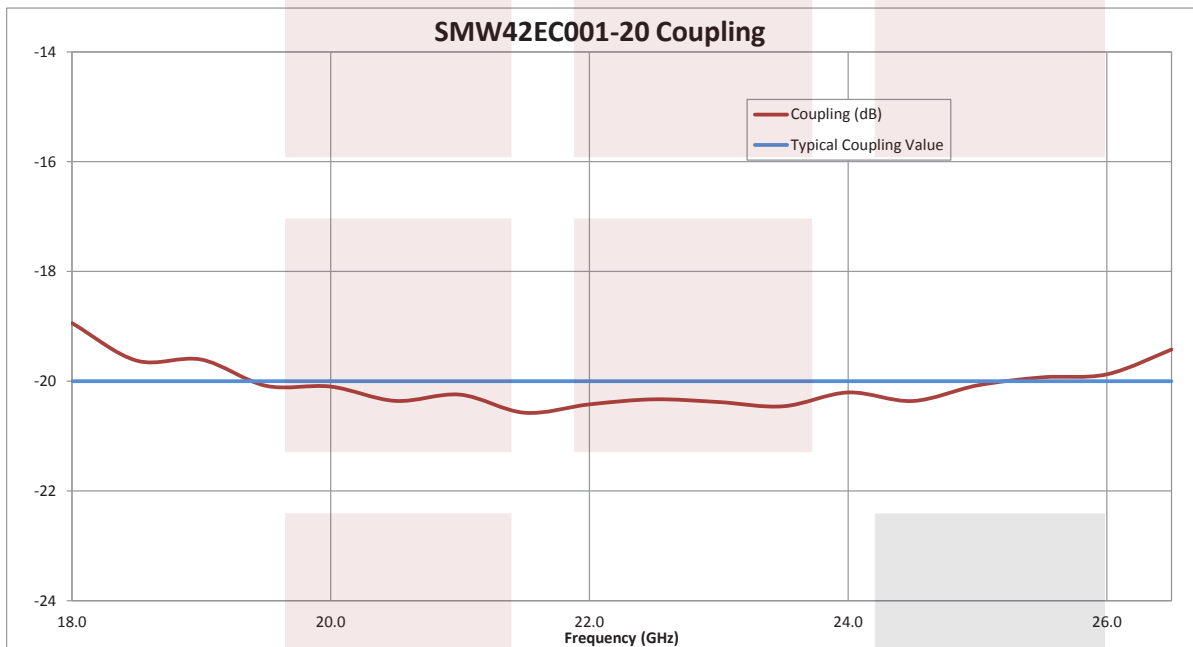
RoHS Compliant	Yes
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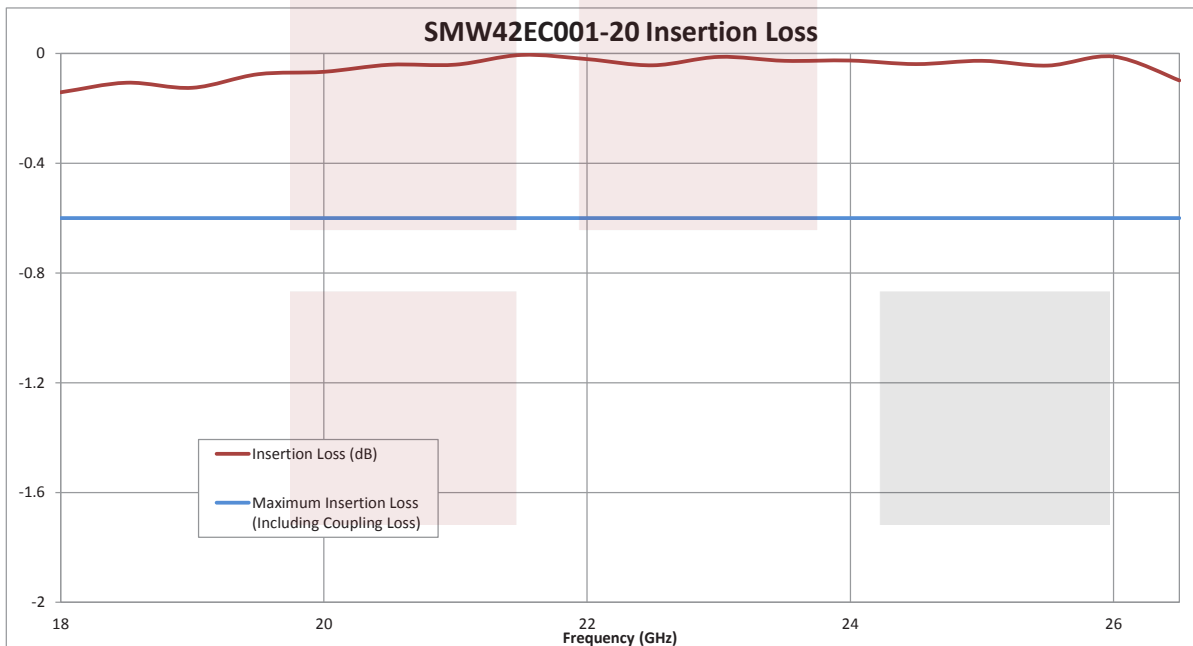
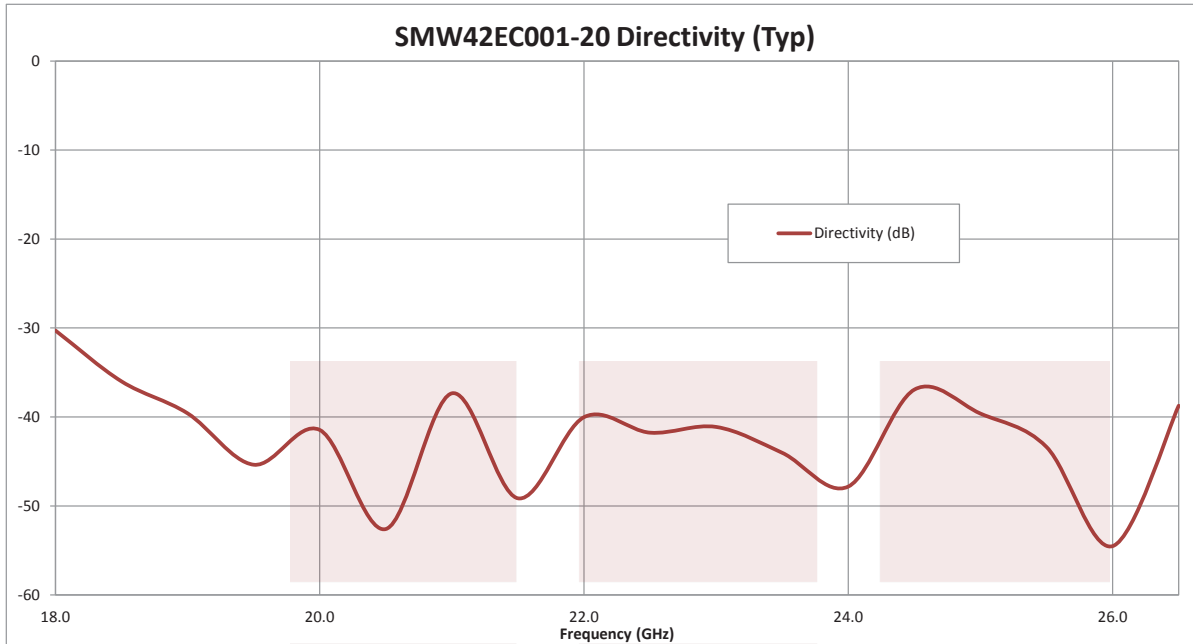
Plotted and Other Data

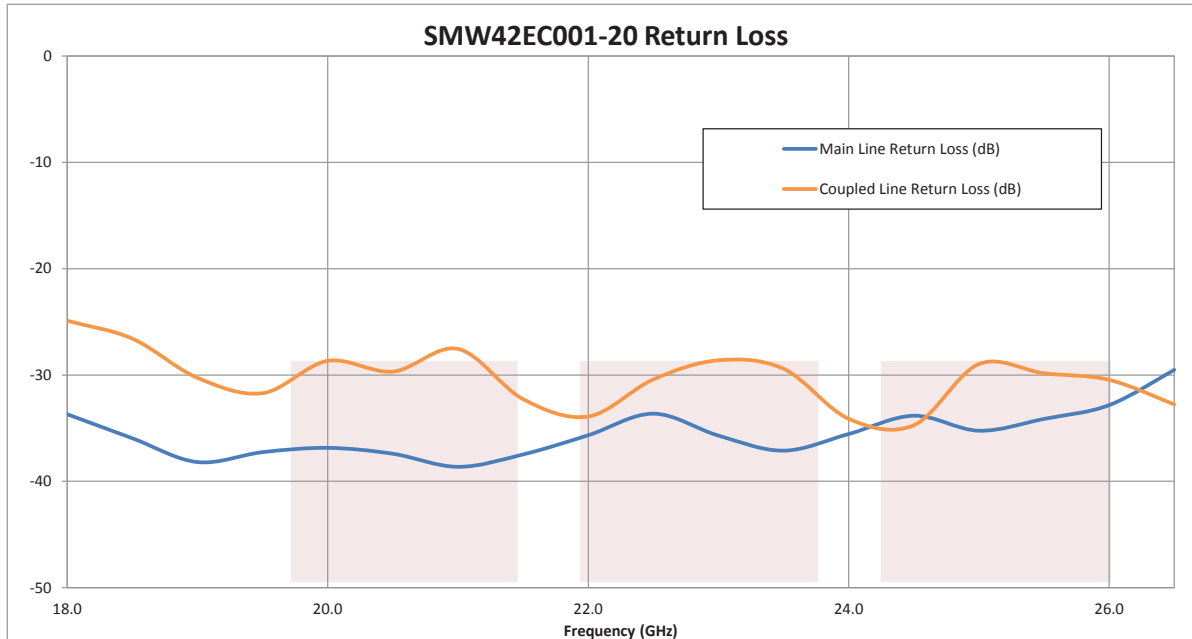
Notes:

- Values at 25 °C, sea level

Typical Performance Data





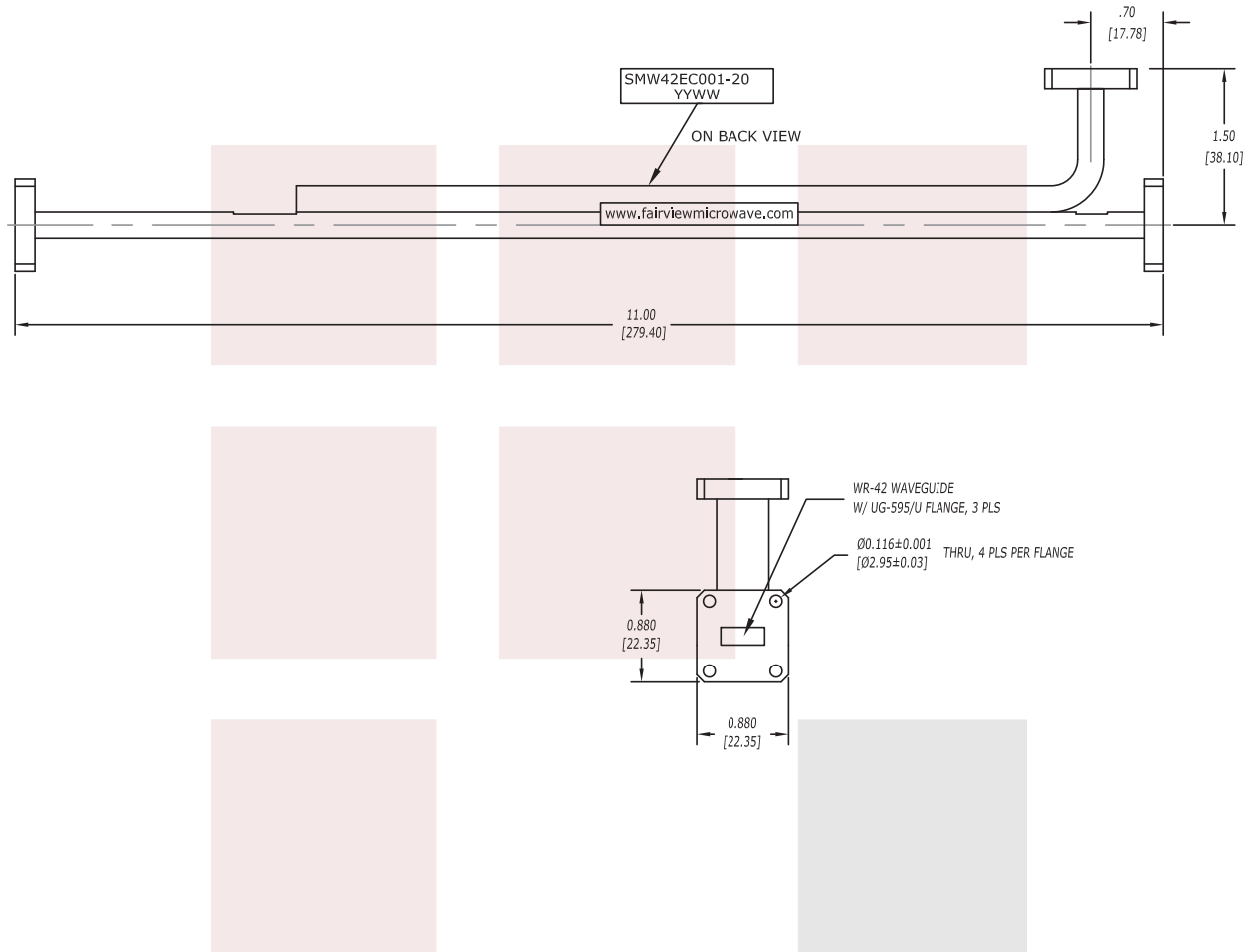


WR-42 Directional Waveguide Coupler 20 dB With UG595/U Flange and E-Plane Coupled Port From 18 GHz to 26.5 GHz K Band from Fairview Microwave is in-stock and available to ship same-day. All of our RF/microwave products are available off-the-shelf from our ISO 9001:2008 certified facilities in Allen, Texas. Fairview Microwave is RF on-demand.

For additional information on this product, please click the following link: [WR-42 Directional Waveguide Coupler 20 dB With UG595/U Flange and E-Plane Coupled Port From 18 GHz to 26.5 GHz K Band SMW42EC001-20](#)

URL: <http://www.fairviewmicrowave.com/wr-42-directional-waveguide-coupler-20db-ug595-e-bend-smw42ec001-20-p.aspx>

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UNLESS OTHERWISE SPECIFIED:
 DIMENSIONS ARE IN: inches
 TOLERANCES ARE: [mm]
 .XX ± .02 [±.51]
 .XX ± .005 [±.13]

* THESE DIMENSIONS AND TOLERANCES
 SUPERSEDE NOTE #1 ON TITLE BLOCK.

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TITLE WR-42 Directional Waveguide Coupler 20 dB With UG595/U Flange and E-Plane Coupled Port From 18 GHz to 26.5 GHz K Band	DWG NO SMW42EC001-20	CAGE CODE 3FKR5			
CAD FILE 041715	SHEET	SCALE N/A	SIZE A	2233	