

C10-1200WG

WR-12 High Directivity Waveguide Coupler, 10dB, 60-90GHz

DEVICE OVERVIEW

General Description

The C10-1200WG is a WR12 10dB waveguide coupler featuring high directivity over a 60-90GHz operational bandwidth. These waveguide components are built with high precision and then gold plated for high corrosion resistance. They have very low loss and excellent VSWR. Manufactured to rigid specifications, these transmission line components provide minimum detrimental effects on overall system VSWR.



[Download s-parameters here](#)

Features

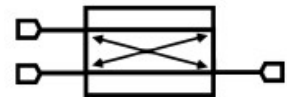
- 10dB Coupling
- High Directivity
- WR-12 Waveguide
- UG-387/U Input and Output Flanges

Applications

- mmWave Applications
- High Power Applications

Functional Block

Diagram



Part Ordering Options

Part Number	Description	Package	Green Status	Product Lifecycle	Export Classification
C10-1200WG	WR-12 High Directivity Waveguide Coupler, 10dB, 60-90GHz	WR-12	RoHS	Released	EAR99

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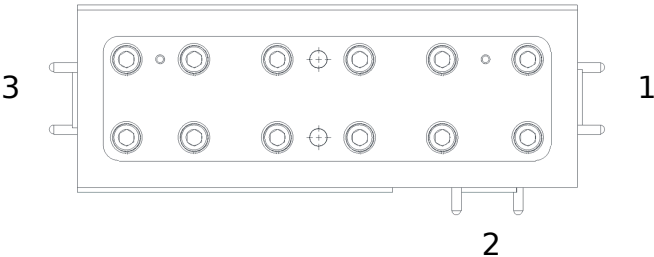
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Revision History

Revision Code	Revision Date	Comment
-	2024-03-15	Datasheet Initial Release

Port Configuration and Functions

Port Diagram



Port Functions

Port	Function	Connector Type	Description	Equivalent Circuit for Package
Port 1	Input	-	-	-
Port 2	Coupled	-	-10dB coupled output port	-
Port 3	Output	-	-	-

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Specifications

Absolute Maximum Ratings

The Absolute Maximum Ratings indicate limits beyond which damage may occur to the device. If these limits are exceeded, the device may be inoperable or have a reduced lifetime.

Parameter	Maximum Rating	Unit
Maximum Operating Temperature	85	°C
Maximum Storage Temperature	125	°C
Minimum Operating Temperature	-40	°C
Minimum Storage Temperature	-55	°C

Package Information

Parameter	Details	Rating
ESD	This device is not sensitive to ESD.	N/A
Dimensions	-	85.85 x 30.48 x 21.96 mm

Electrical Specifications

Min and Max limits are guaranteed at Ta = 25°C

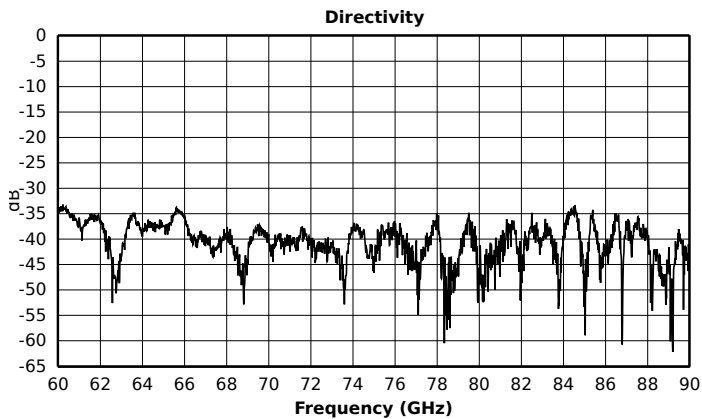
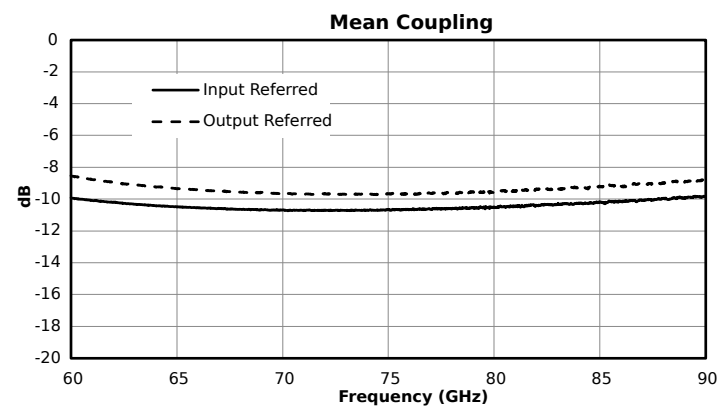
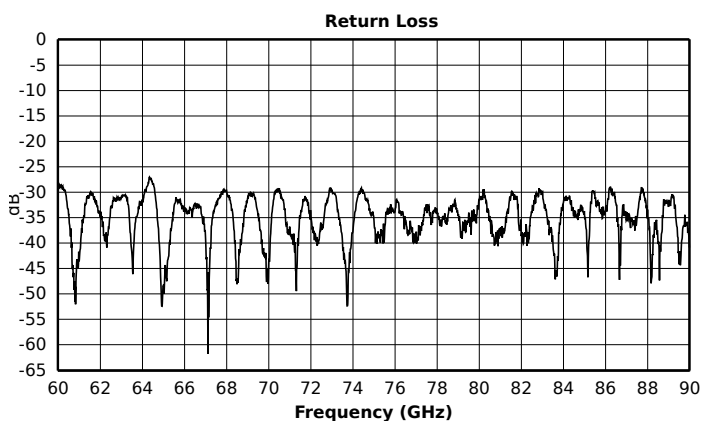
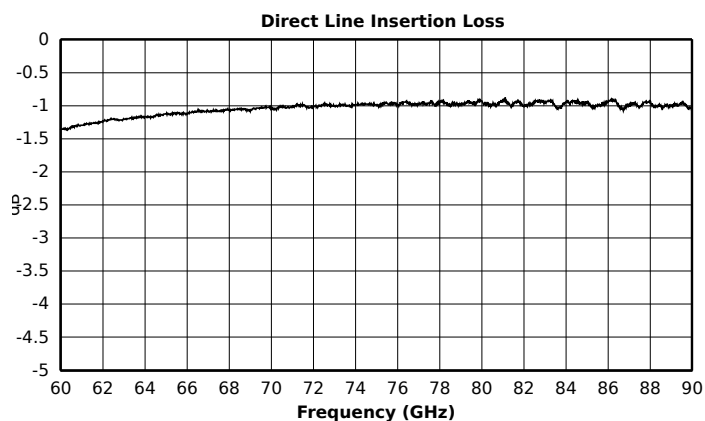
Parameter	Test Conditions	Minimum Frequency (GHz)	Maximum Frequency (GHz)	Min	Typ	Max	Unit
Direct Line Insertion Loss	-	60	90	-	1.1	-	dB
Amplitude Flatness ¹	-	60	90	-	1	-	dB
Directivity	-	60	90	30	40	-	dB
Return Loss	-	60	90	20	35	-	dB
Mean Coupling (Input Referred)	-	60	90	-	10.5	-	dB
Mean Coupling (Output Referred)	-	60	90	-	9	-	dB

^[1] Deviation from Average Coupling

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Typical Performance Plots



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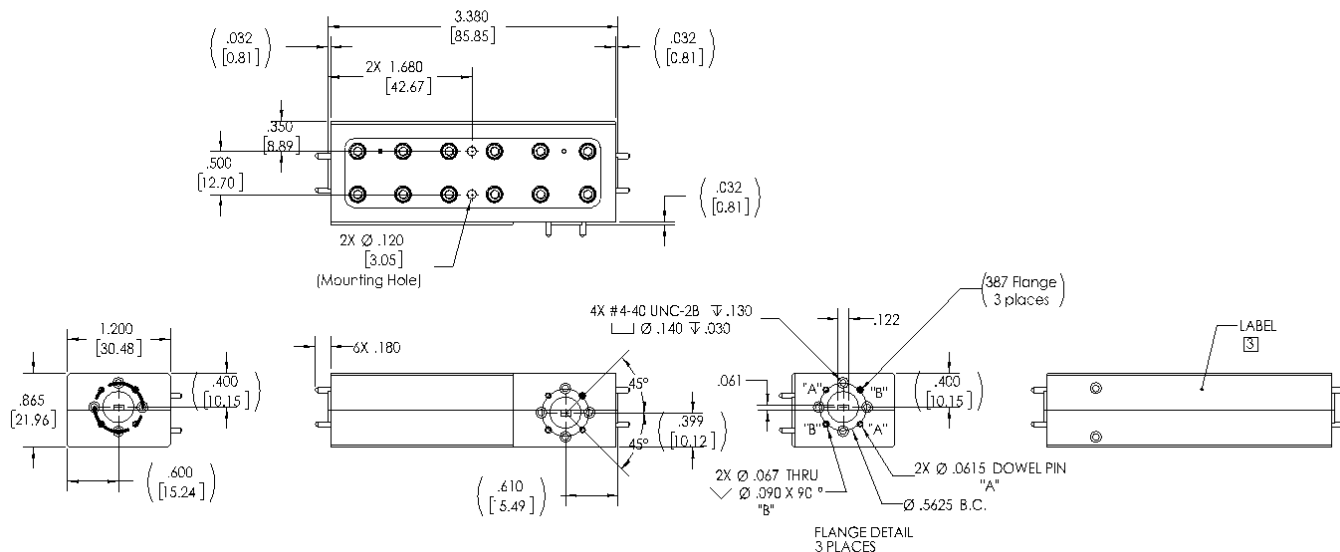
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Mechanical Data

Outline Drawing

Download : [Outline 3D Drawing](#) | [Outline 3D STP](#)

DRAWING	DESCRIPTION	SHIM
C10-1200WG-OUT	Outline, WR-12 Coupler, 10dB	421-117601-10 (10cB)
C20-1200WG-OUT	Outline, WR-12 Coupler, 20dB	421-117701-20 (20cB)
C30-1200WG-OUT	Outline, WR-12 Coupler, 30dB	421-117801-30 (30cB)
C40-1200WG-OUT	Outline, WR-12 Coupler, 40dB	421-117901-40 (40cB)



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