



WR-51 40 dB Waveguide Crossguide Coupler,  
Square Cover Flange, 15 GHz to 22 GHz

TECHNICAL DATA SHEET

PEWCP1045

The PEWCP1045 is a WR-51 crossguide waveguide coupler that operates in the frequency range of 15 to 22 GHz. This Waveguide component has a typical VSWR of 1.05:1. These designs are made of painted copper alloy and incorporate a cross wall configuration that result in a mid-band nominal coupling value of 20, 30, 40 or 50 dB. Common applications for this component would be where power measurements are required within a system for measuring/sampling power or frequency monitoring with minimal signal loss to the main transmission line. This WR-51 waveguide coupler uses standard square cover flanges. Pasternack offers a complete family of waveguide Crossguide and Top wall couplers that are in-stock and ship same day.

**Features**

- Crossguide Waveguide Coupler
- 40 dB Nominal Coupling Level
- 15 GHz to 22 GHz Frequency Range
- Body and Flanges made of Copper Alloy
- Low VSWR

**Applications**

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

**Electrical Specifications** (Values at 25°C, sea level)

Description	Minimum	Typical	Maximum	Units
Frequency Range	15		22	GHz
Directivity		30		dB
Insertion Loss		0.1		dB
Main Line VSWR		1.05:1		
Nominal Coupling Level		40		dB

**Mechanical Specifications**

<b>Size</b>	
Length	2.5 in [63.5 mm]
Width/Dia.	2.5 in [63.5 mm]
Weight	0.61 lbs [276.69 g]

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [WR-51 40 dB Waveguide Crossguide Coupler, Square Cover Flange, 15 GHz to 22 GHz PEWCP1045](#)



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**Configuration**

Design Crossguide  
Size WR-51

Description	Input Flange	Output Flange	Coupled Flange(s)
Flange Type	Square Cover	Square Cover	Square Cover
Material	Copper Alloy	Copper Alloy	Copper Alloy

**Compliance Certifications** (visit [www.Pasternack.com](http://www.Pasternack.com) for current document)

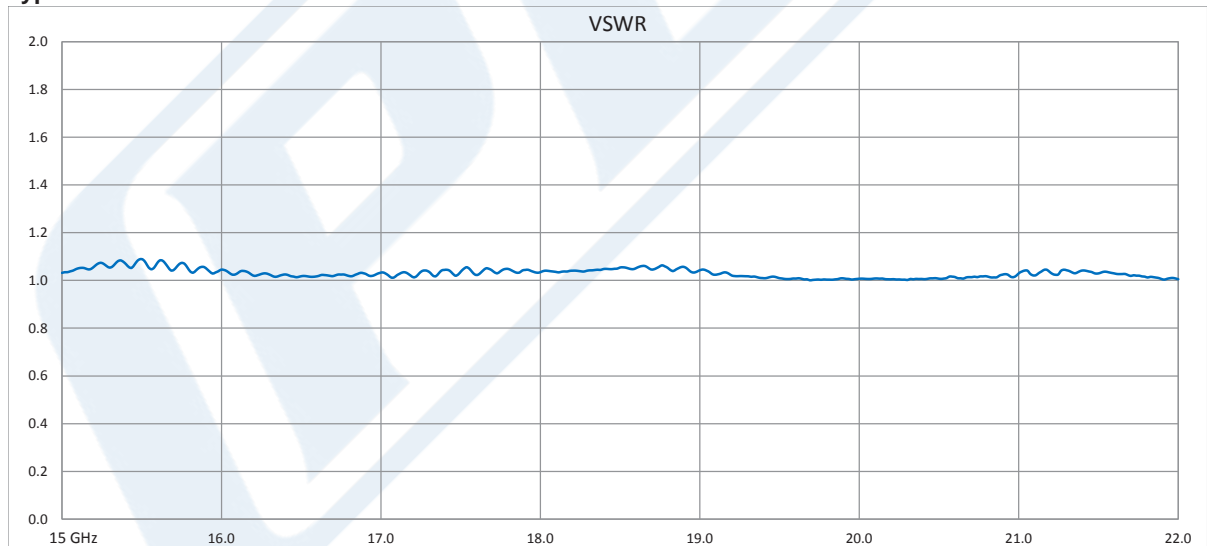
RoHS Compliant  
REACH Compliant 12/17/2015

**Plotted and Other Data**

Notes:

- Values at 25 °C, sea level

**Typical Performance Data**



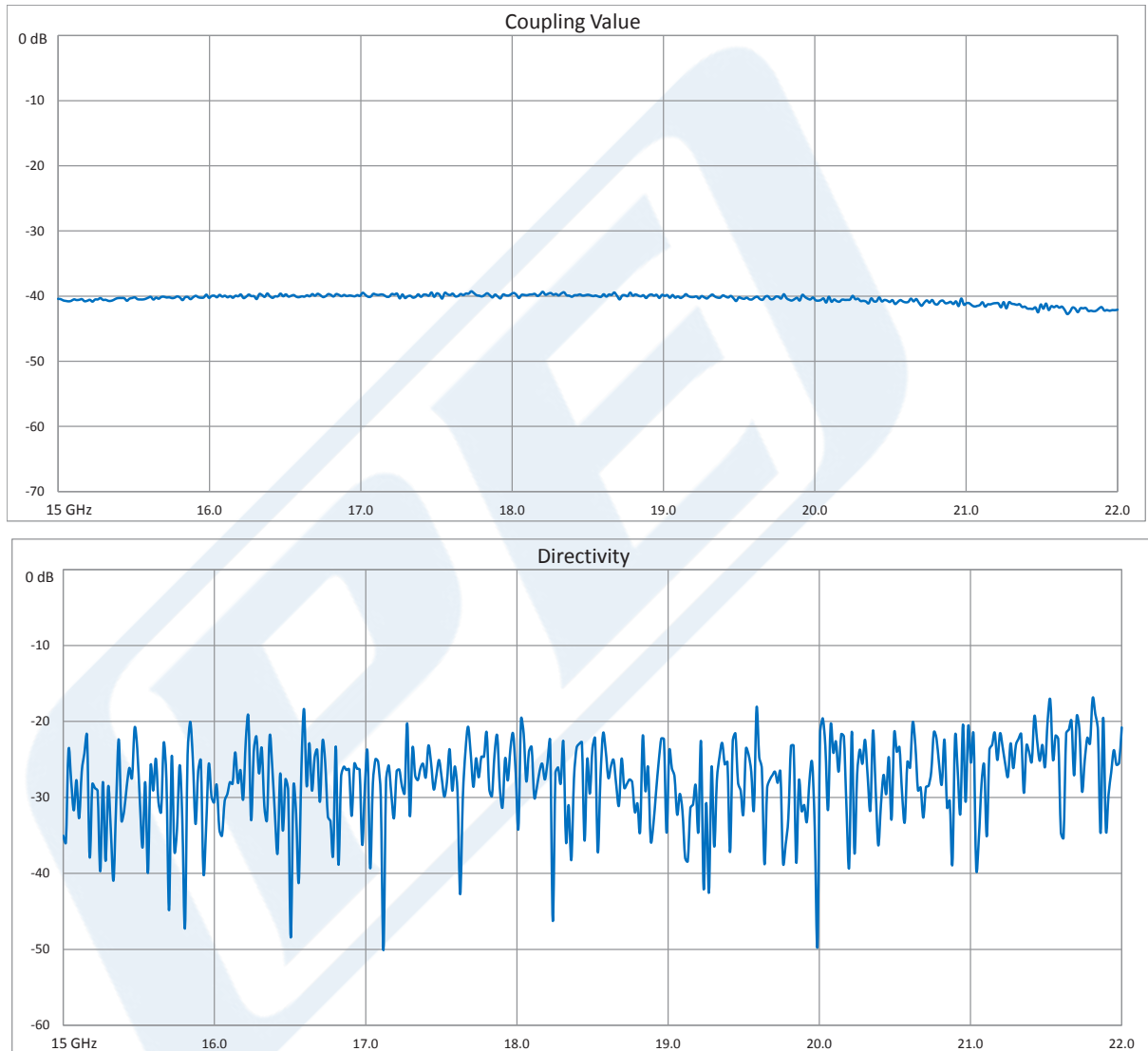
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WR-51 40 dB Waveguide Crossguide Coupler, Square Cover Flange, 15 GHz to 22 GHz from Pasternack Enterprises has same day shipment for domestic and International orders. Our RF, microwave and millimeter wave products maintain a 99% availability and are part of the broadest selection in the industry.

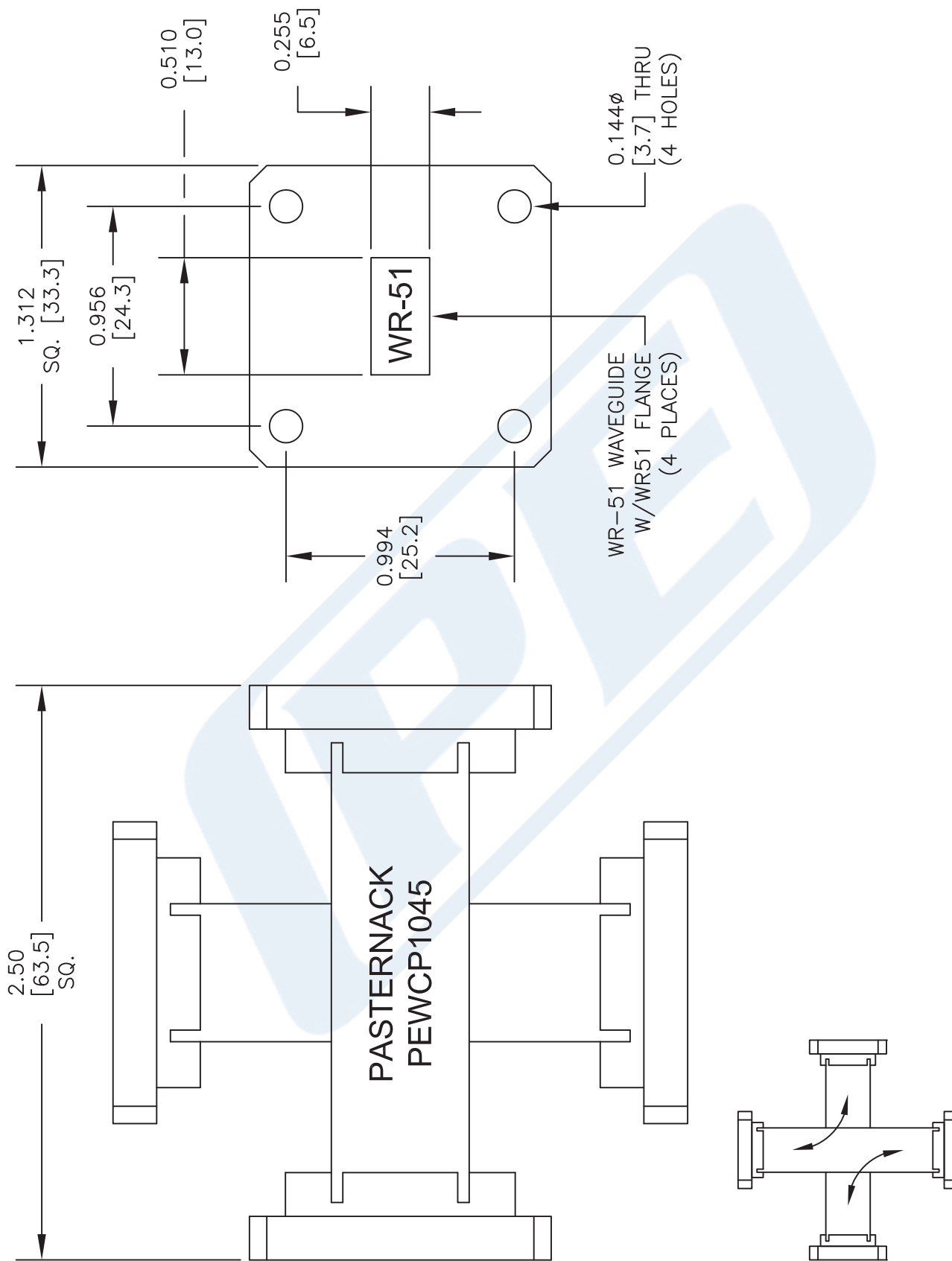
Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [WR-51 40 dB Waveguide Crossguide Coupler, Square Cover Flange, 15 GHz to 22 GHz PEWCP1045](http://www.pasternack.com/wr51-40db-waveguide-coupler-square-crossguide-pewcp1045-p.aspx)

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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. Pasternack reserves the right to make such changes as required. Unless otherwise stated, all specifications are nominal. Pasternack does not make any representation or warranty regarding the suitability of the part described herein for any particular purpose, and Pasternack does not assume any liability arising out of the use of any part or documentation.

# PEWCP1045 CAD Drawing

WR-51 40 dB Waveguide Crossguide Coupler, Square Cover Flange, 15 GHz to 22 GHz



DWG TITLE

**PEWCP1045**

- NOTES:
1. UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE NOMINAL.
  2. ALL SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE AT ANY TIME.
  3. DIMENSIONS ARE IN INCHES [mm].

FSCM NO. 53919

CAD FILE 042916

SCALE N/A

SIZE A

2233



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