

## WRD-650 Double Ridge Waveguide 30 dB Broadwall Coupler, SMA Female Coupled Port, 6.5 GHz to 18 GHz, Brass

### Waveguide Couplers Technical Data Sheet

### PEWRD650CP01-30

The PEWRD650CP01-30 is a WRD-650 Directional Broadwall double ridge waveguide coupler with SMA female coupled port that operates in the frequency range of 6.5 to 18 GHz. This Waveguide component has a maximum VSWR of 1.5:1. These designs are made of painted copper alloy and incorporate a broad wall configuration that result in a mid-band nominal coupling value of 10, 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. Pasternack offers a complete family of waveguide Crossguide and Broadwall couplers that are in-stock and ship same day.

#### Features

- Three Port Broadwall Waveguide Coupler
- 30±2 dB Nominal Coupling Level
- Integrated SMA Female Connector coupled port
- 6.5 GHz to 18 GHz Frequency Range
- Main Line VSWR < 1.25:1
- Max Power 400W (CW)

#### Applications

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

#### Electrical Specifications

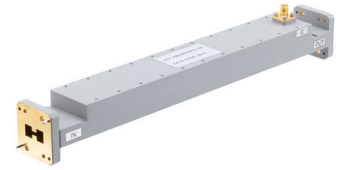
Description	Minimum	Typical	Maximum	Units
Frequency Range	6.5		18	GHz
Impedance		50		Ohms
<b>Coupler</b>				
Nominal Coupling Level		30		dB
Directivity	25			dB
Insertion Loss			0.3	dB
Main Line VSWR			1.25:1	
Secondary Line VSWR			1.5:1	
Coupling Flatness			±2	dB
Input Power (CW)			400	Watts
Input Power, Peak			3	kWatts

#### Mechanical Specifications

##### Size

Length	10.63 in [270 mm]
Width	1.38 in [35.05 mm]
Height	1.38 in [35.05 mm]
Weight	2.49 lbs [1.13 kg]

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [WRD-650 Double Ridge Waveguide 30 dB Broadwall Coupler, SMA Female Coupled Port, 6.5 GHz to 18 GHz, Brass PEWRD650CP01-30](#)



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### Interface

Waveguide Size	WRD-650
Flange Type	Cover
RF Connector Type	SMA Female
Coupler Body Material and Plating	Brass, Gray

### Environmental Specifications

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

### Plotted and Other Data

Notes:

WRD-650 Double Ridge Waveguide 30 dB Broadwall Coupler, SMA Female Coupled Port, 6.5 GHz to 18 GHz, Brass from Pasternack Enterprises has same day shipment for domestic and International orders. Our RF, microwave and millimeter wave products maintain a 99.4% availability and are part of the broadest selection in the industry.

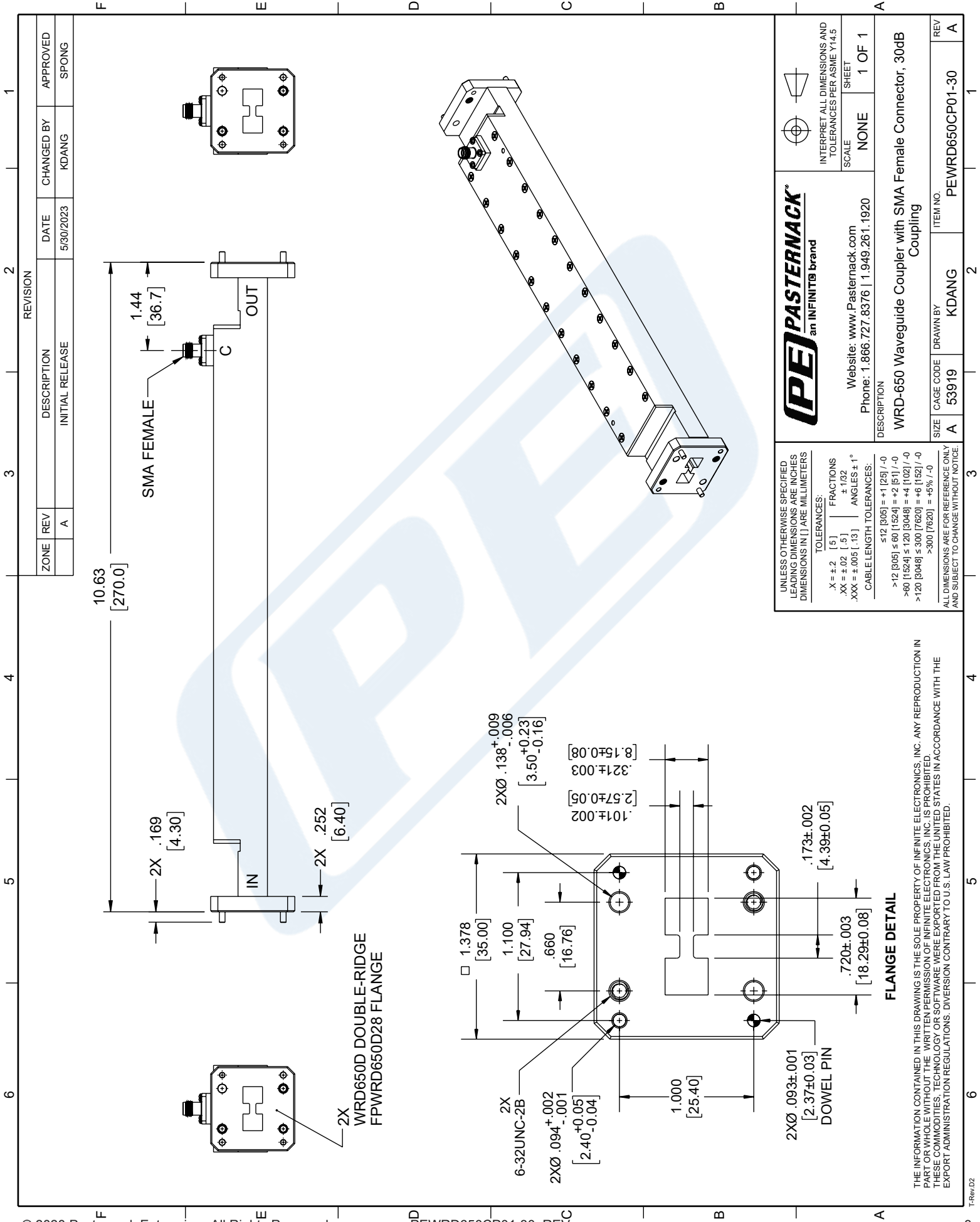
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URL: <https://www.pasternack.com/wrd650-waveguide-30db-broadwall-coupler-18ghz-pewrd650cp01-30-p.aspx>

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. 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.

# PEWRD650CP01-30 CAD Drawing

WRD-650 Double Ridge Waveguide 30 dB Broadwall Coupler,  
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ZONE	REV	DESCRIPTION	DATE	CHANGED BY	APPROVED
	A	INITIAL RELEASE	5/30/2023	KDANG	SPONG

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INTERPRET ALL DIMENSIONS AND TOLERANCES PER ASME Y14.5  
SCALE: NONE SHEET: 1 OF 1

DESCRIPTION:  
WRD-650 Waveguide Coupler with SMA Female Connector, 30dB Coupling

SIZE	A	CAGE CODE	53919	DRAWN BY	KDANG	ITEM NO.	PEWRD650CP01-30	REV	A
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UNLESS OTHERWISE SPECIFIED LEADING DIMENSIONS ARE INCHES DIMENSIONS IN [ ] ARE MILLIMETERS

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

ALL DIMENSIONS ARE FOR REFERENCE ONLY AND SUBJECT TO CHANGE WITHOUT NOTICE.