

WR-137 Waveguide Circulator, 5.38 GHz to 8.17 GHz,
17 dB min Isolation, CPR137F Flange, Aluminum

Waveguide Circulators Technical Data Sheet

PE-W137CR001

Features

- WR-137 Waveguide Circulator
- C Band Frequency Range 5.38 to 8.17 GHz
- CPR137F Flange Configuration
- Maximum VSWR 1.35:1
- Minimum 17 dB isolation
- Maximum Power 150 W (CW)

Applications

- Radar Systems
- Military
- Wireless Radio Systems
- Telecom Infrastructure
- Communication Systems
- R&D Labs
- Microwave Radio Systems

Description

The PE-W137CR001 is a Waveguide Circulator offering 17 dB minimum isolation over the C band frequency range of 5.38 to 8.17 GHz. The design achieves high isolation with wide band performance and the WR-137 waveguide uses CPR137F compatible flanges on all ports and has a power rating of 150 watts (CW).

Pasternack offers a wide variety of circulators and waveguide circulators to fit your needs. These unique devices enable two signals to use one channel. The classic use of this three port device is for the line between an antenna and a transceiver, allowing the receive signal to come from the antenna (port 1) to the receiver (port 2) while the transmit signal goes from the transmitter (port 3) to the antenna (port 1). An isolator can be created by terminating one port into a matched load. These components can be used in antenna transmitting and receiving, radar, amplifier systems and anything that requires isolation from a signal reflection and the ability to send signals in opposite directions down a single channel. These circulators feature excellent insertion loss, high isolation and reliability.

Electrical Specifications

| Description | Minimum | Typical | Maximum | Units |
|--------------------|---------|---------|---------|--------|
| Frequency Range | 5.38 | | 8.17 | GHz |
| VSWR | | | 1.35:1 | |
| Insertion Loss | | | 0.4 | dB |
| Isolation | 17 | | | dB |
| Forward Power (CW) | | | 150 | Watts |
| Input Power (Peak) | | | 10 | kWatts |

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [WR-137 Waveguide Circulator, 5.38 GHz to 8.17 GHz, 17 dB min Isolation, CPR137F Flange, Aluminum PE-W137CR001](#)



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Mechanical Specifications

Size

| | |
|--------|--------------------|
| Length | 3.78 in [96.01 mm] |
| Width | 3.34 in [84.84 mm] |
| Height | 1.94 in [49.28 mm] |
| Weight | 0.5 lbs [226.8 g] |

| | |
|-----------------------------|--------------------|
| Waveguide Size | WR-137 |
| Flange Designation | None |
| Flange Type | CPR-137F |
| Flange Material and Plating | Aluminum, Chromate |

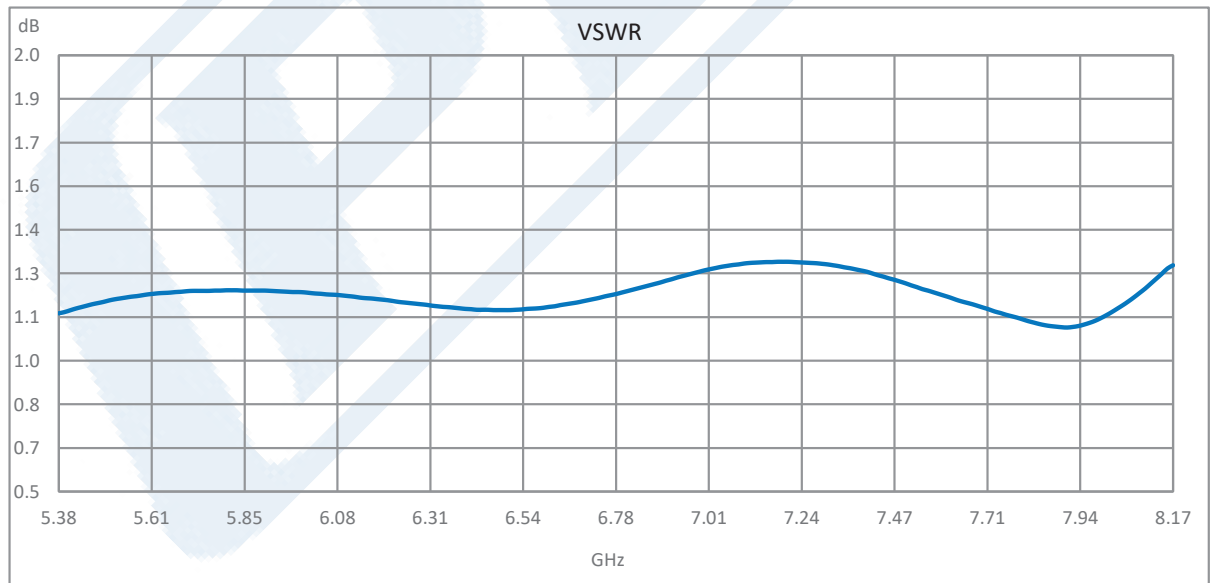
Environmental Specifications

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

Plotted and Other Data

Notes:

Typical Performance Data



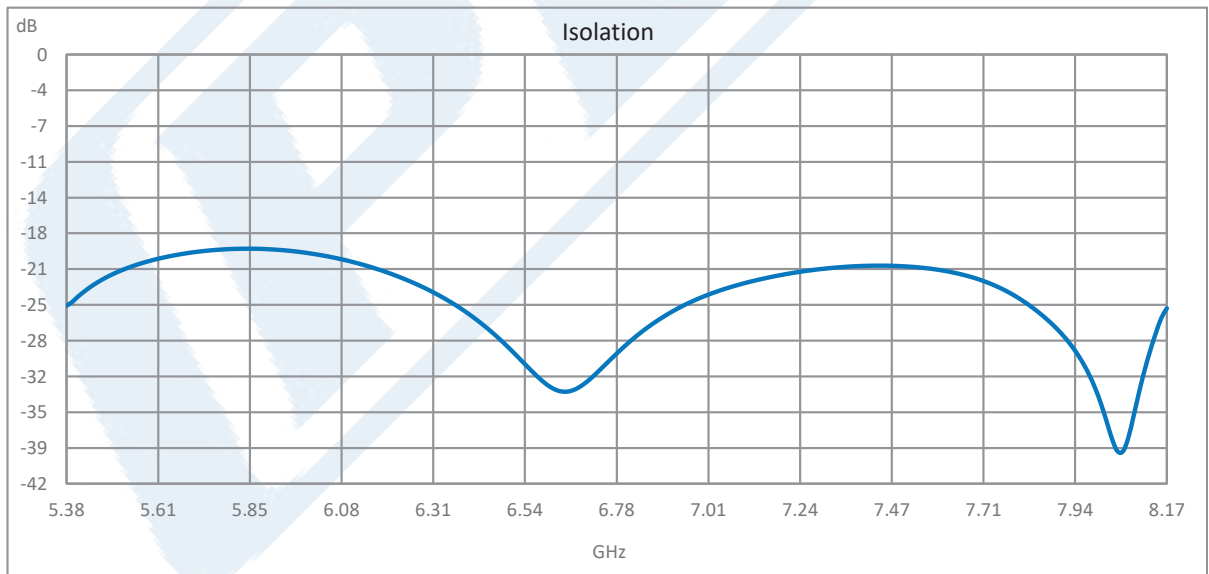
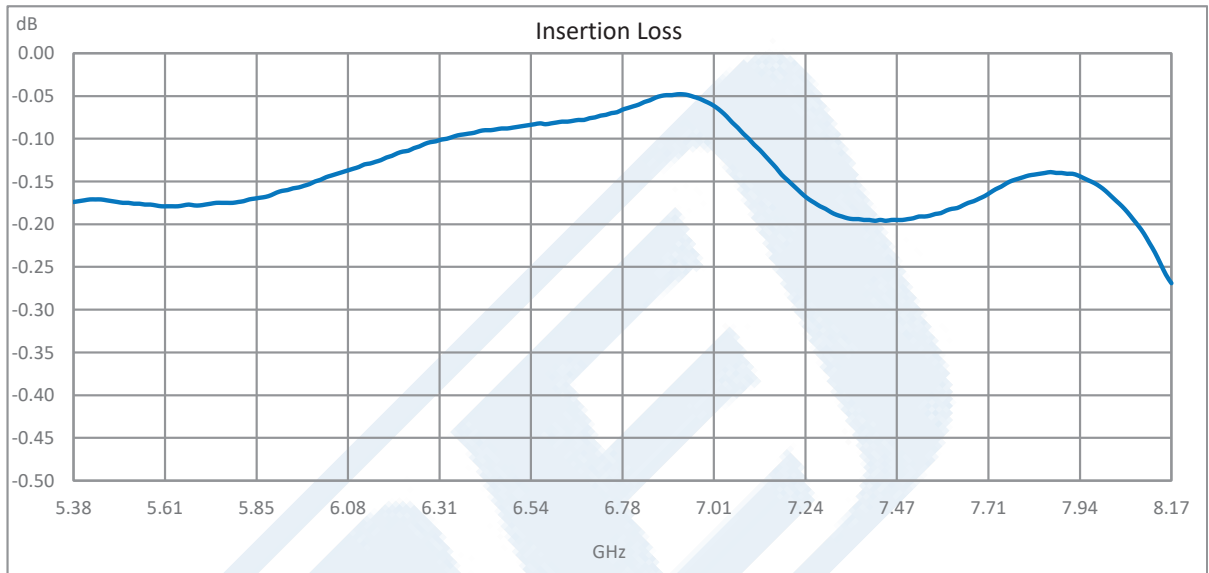
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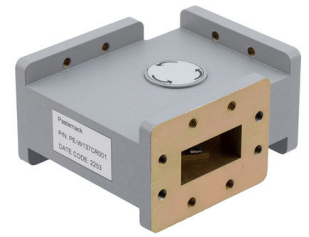
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WR-137 Waveguide Circulator, 5.38 GHz to 8.17 GHz, 17 dB min Isolation, CPR137F Flange, Aluminum from Pasternack Enterprises has same day shipment for domestic and International orders. Our RF, microwave and millimeter wave products maintain a 99.4% availability and are part of the broadest selection in the industry.

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [WR-137 Waveguide Circulator, 5.38 GHz to 8.17 GHz, 17 dB min Isolation, CPR137F Flange, Aluminum PE-W137CR001](https://www.pasternack.com/wr137-waveguide-circulator-5.38-8.17-ghz-17db-cpr-137f-flange-aluminum-pe-w137cr001-p.aspx)

URL: <https://www.pasternack.com/wr137-waveguide-circulator-5.38-8.17-ghz-17db-cpr-137f-flange-aluminum-pe-w137cr001-p.aspx>

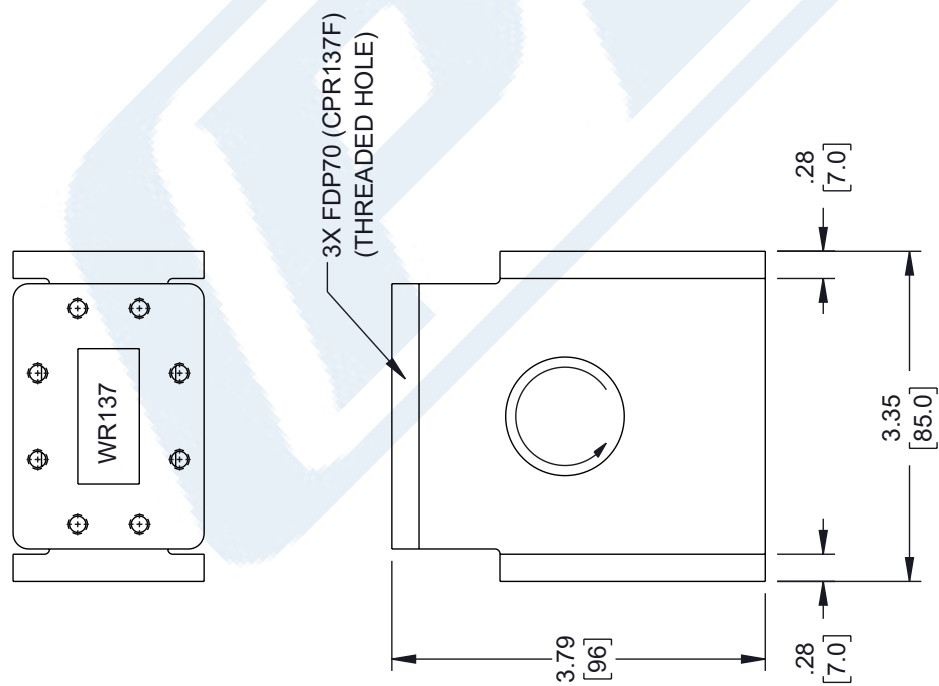
The information contained in this document is accurate to the best of our knowledge and representative of the part described herein. It may be necessary to make modifications to the part and/or the documentation of the part, in order to implement improvements. Pasternack reserves the right to make such 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.

PE-W137CR001 CAD Drawing

WR-137 Waveguide Circulator, 5.38 GHz to 8.17 GHz, 17 dB min Isolation, CPR137F Flange, Aluminum

| ZONE | | REVISION | | DESCRIPTION | | DATE | | CHANGED BY | | APPROVED | |
|------|---|----------|--|-----------------|--|------------|--|------------|--|----------|--|
| | A | | | INITIAL RELEASE | | 02/17/2023 | | DMAY | | SPONG | |

| ZONE | REV | DESCRIPTION | DATE | CHANGED BY | APPROVED |
|------|-----|-----------------|------------|------------|----------|
| | A | INITIAL RELEASE | 02/17/2023 | DMAY | SPONG |



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

TOLERANCES:

X = ±.2 [5] FRACTIONS
 .XX = ±.02 [.5] ±.1/32
 .XXX = ±.005 [.13] ANGLES ± 1°

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

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Website: www.Pasternack.com
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DESCRIPTION: WR-137 WAVEGUIDE CIRCULATOR, 5.38~8.17GHZ

SCALE: NONE SHEET: 1 OF 1

INTERPRET ALL DIMENSIONS AND TOLERANCES PER ASME Y14.5

ITEM NO.: PE-W137CR001

REVISION: A

DATE: 02/17/2023

CHANGED BY: DMAY

APPROVED: SPONG

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