



High Power Circulator with 20 dB Isolation from 1.7 GHz to 2.2 GHz, 100 Watts and N Female

## Circulators Technical Data Sheet

PE83CR1003

### Features

- Forward/Reverse Power 100 Watts
- Frequency Range of 1.7 to 2.2 GHz
- Female N Connectors
- Low VSWR

### Applications

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

### Description

The PE83CR1003 is a high power circulator offering a forward and reverse power rating of 100 Watts over an operational frequency band of 1.7 to 2.2 GHz. This coaxial part uses N female connectors on all ports and has a minimum of 20 dB of isolation.

Pasternack offers a wide variety of 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/coax 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	1.7		2.2	GHz
Impedance		50		Ohms
Insertion Loss			0.4	dB
Isolation	20			dB
VSWR			1.25:1	
Forward Power, CW			100	Watts
Reverse Power, CW			100	Watts

Electrical Specification Notes:  
Values at 25°C, sea level.

### Mechanical Specifications

<b>Size</b>	
Length	2.5 in [63.5 mm]
Width	1.02 in [25.91 mm]
Height	2.5 in [63.5 mm]
Weight	0.9705 lbs [440.21 g]

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [High Power Circulator with 20 dB Isolation from 1.7 GHz to 2.2 GHz, 100 Watts and N Female PE83CR1003](#)



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**Configuration**

Design	Single Junction
Connector 1	N Female
Connector 2	N Female
Connector 3	N Female

**Environmental Specifications**

**Temperature**

Operating Range	0 to +50 deg C
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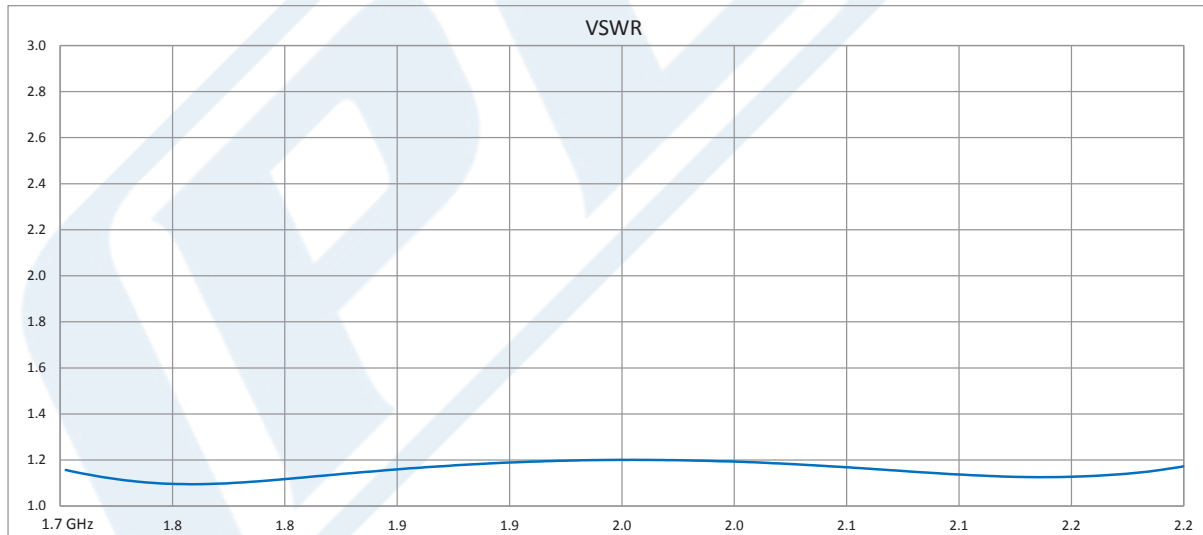
**Compliance Certifications** (see [product page](#) for current document)

**Plotted and Other Data**

Notes:

- Values at 25°C, sea level.

**Typical Performance Data**



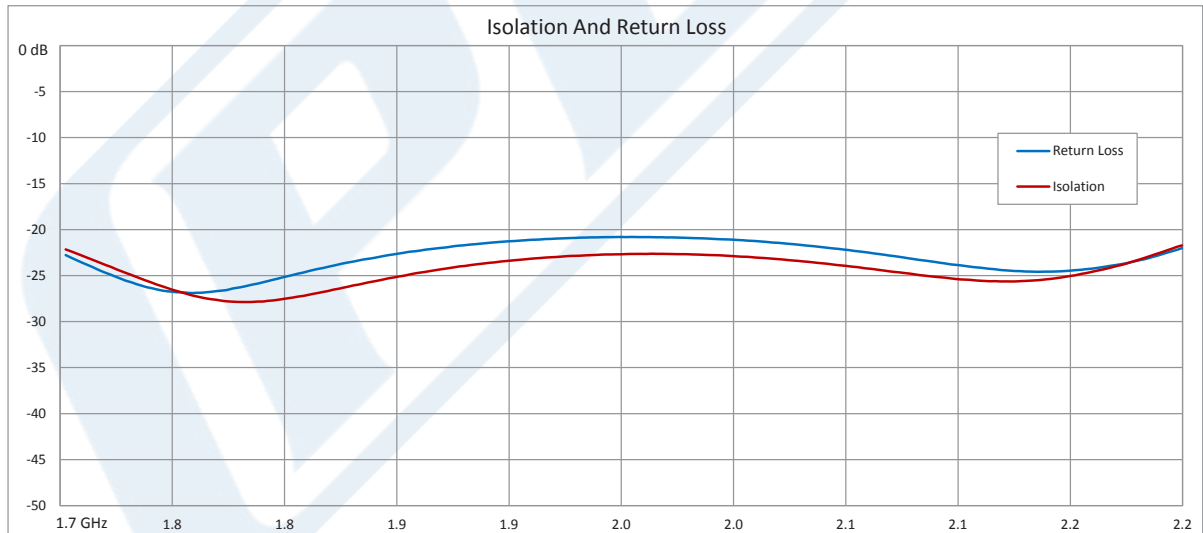
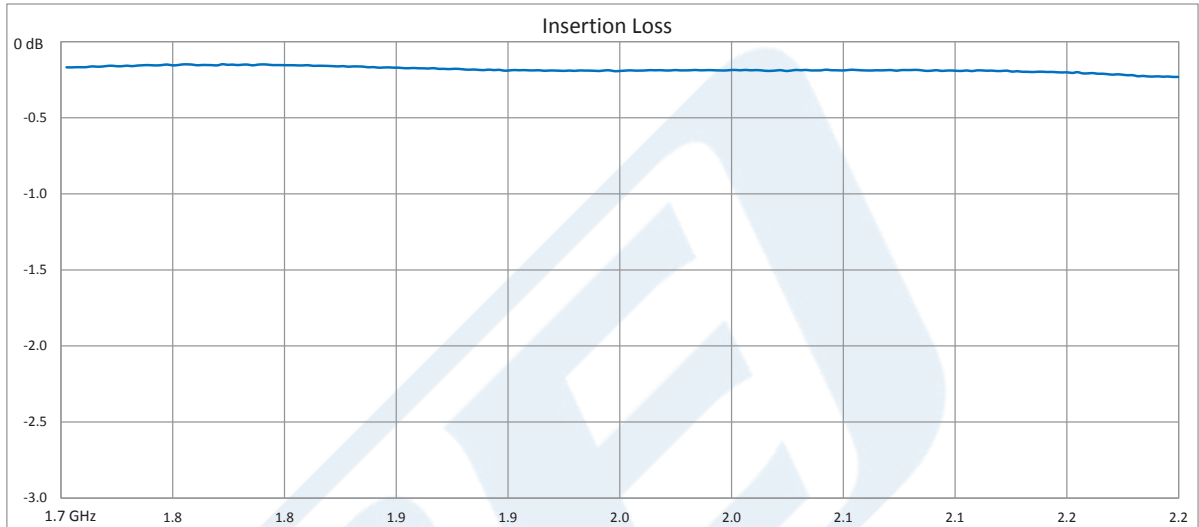
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High Power Circulator with 20 dB Isolation from 1.7 GHz to 2.2 GHz, 100 Watts and N Female from Pasternack Enterprises has same day shipment for domestic and International orders. Our RF, microwave and millimeter wave products maintain a 99.4% availability and are part of the broadest selection in the industry.

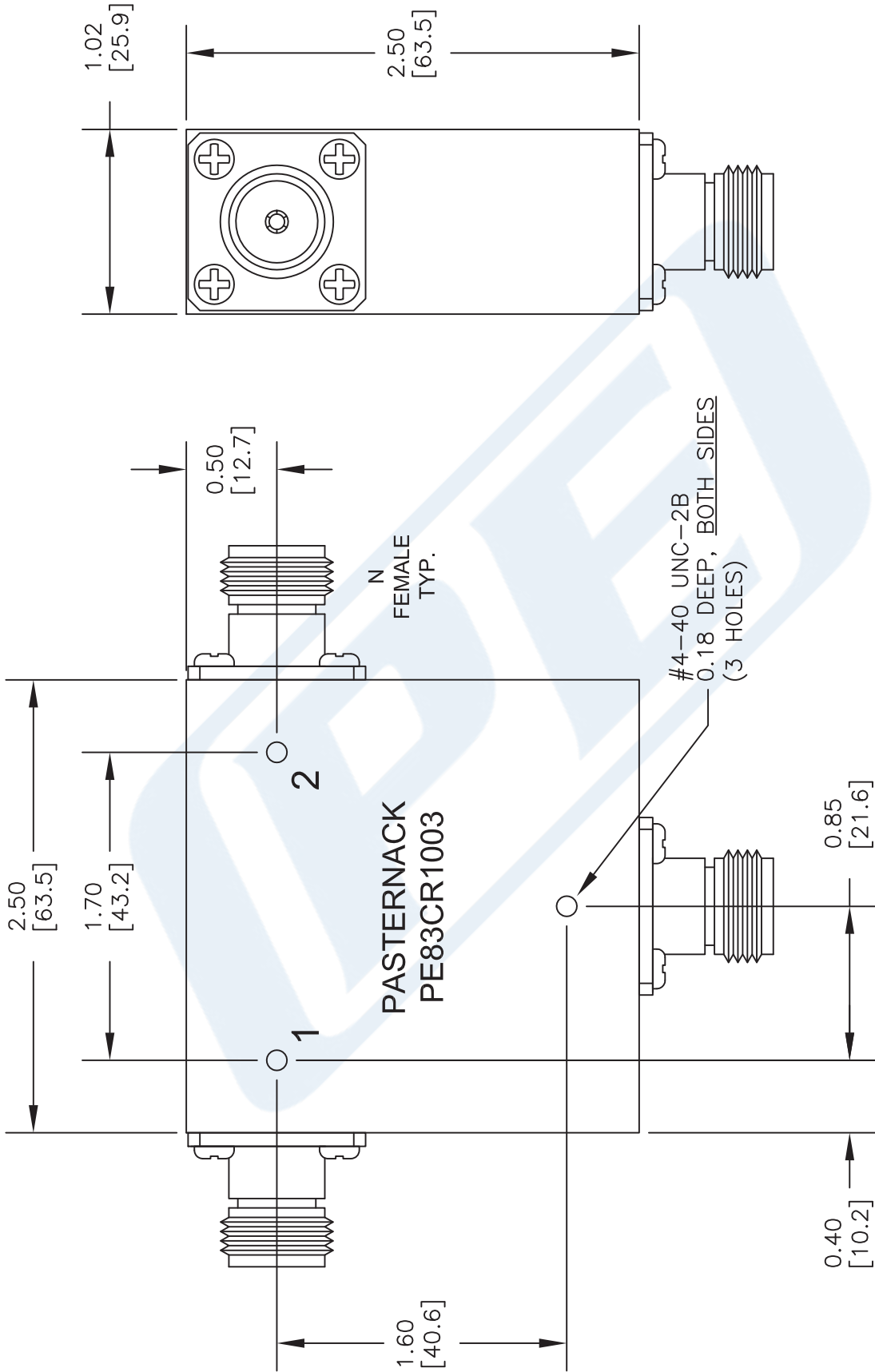
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The information contained in this document is accurate to the best of our knowledge and representative of the part described herein. It may be necessary to make modifications to the part and/or the documentation of the part, in order to implement improvements.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

# PE83CR1003 CAD Drawing

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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].

DWG TITLE  
**PE83CR1003**

FSCM NO. 53919

CAD FILE 020116

SCALE N/A

SIZE A

2233

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