



## High Power Circulator With 20 dB Isolation From 2 GHz to 4 GHz, 50 Watts And SMA Female

### Circulators Technical Data Sheet

PE83CR1004

#### Features

- Forward/Reverse Power 50 watts
- Frequency Range of 2 to 4 GHz
- Female SMA Connectors
- Low VSWR

#### Applications

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

#### Description

The PE83CR1004 is a high power circulator offering a forward and reverse power rating of 50 watts over an operational frequency band of 2 to 4 GHz. This coaxial part uses SMA 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	2		4	GHz
Impedance		50		Ohms
Insertion Loss			0.6	dB
Isolation	20			dB
VSWR			1.3:1	
Forward Power, CW			50	Watts
Forward Power, Peak			100	Watts
Reverse Power, CW			50	Watts

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

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 2 GHz to 4 GHz, 50 Watts And SMA Female PE83CR1004](#)



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**Mechanical Specifications**

**Size**

Length	1.6 in [40.64 mm]
Width	0.6 in [15.24 mm]
Height	1.6 in [40.64 mm]
Weight	0.19 lbs [86.18 g]

**Configuration**

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

**Environmental Specifications**

**Temperature**

Operating Range	0 to +50 deg C
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**Compliance Certifications** (visit [www.Pasternack.com](http://www.Pasternack.com) for current document)

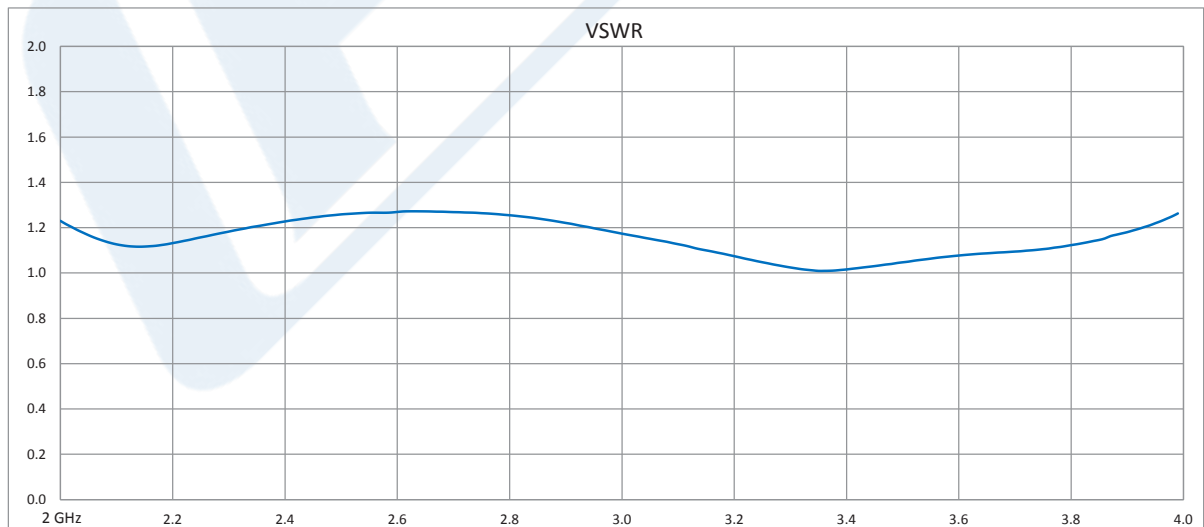
RoHS Compliant	
REACH Compliant	12/17/2015

**Plotted and Other Data**

Notes:

- Values at 25°C, sea level.

**Typical Performance Data**



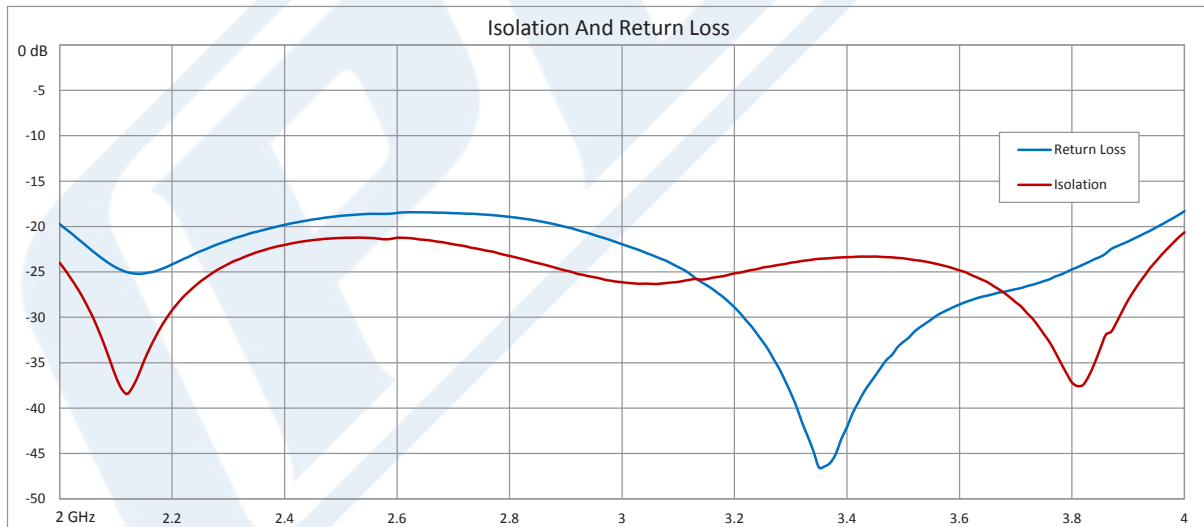
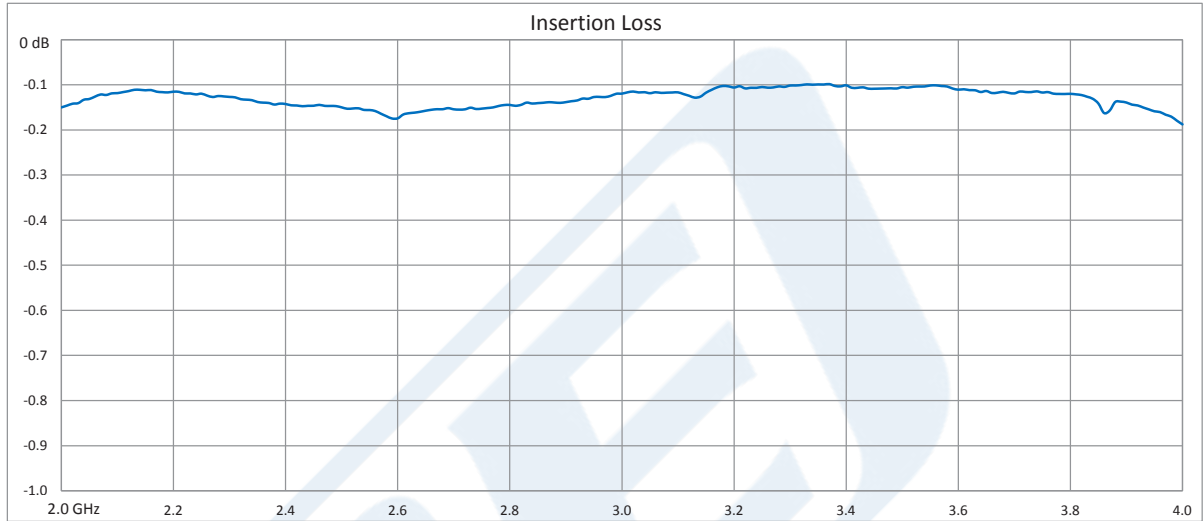
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High Power Circulator With 20 dB Isolation From 2 GHz to 4 GHz, 50 Watts And SMA Female from Pasternack Enterprises has same day shipment for domestic and International orders. Our RF, microwave and millimeter wave products maintain a 99% availability and are part of the broadest selection in the industry.

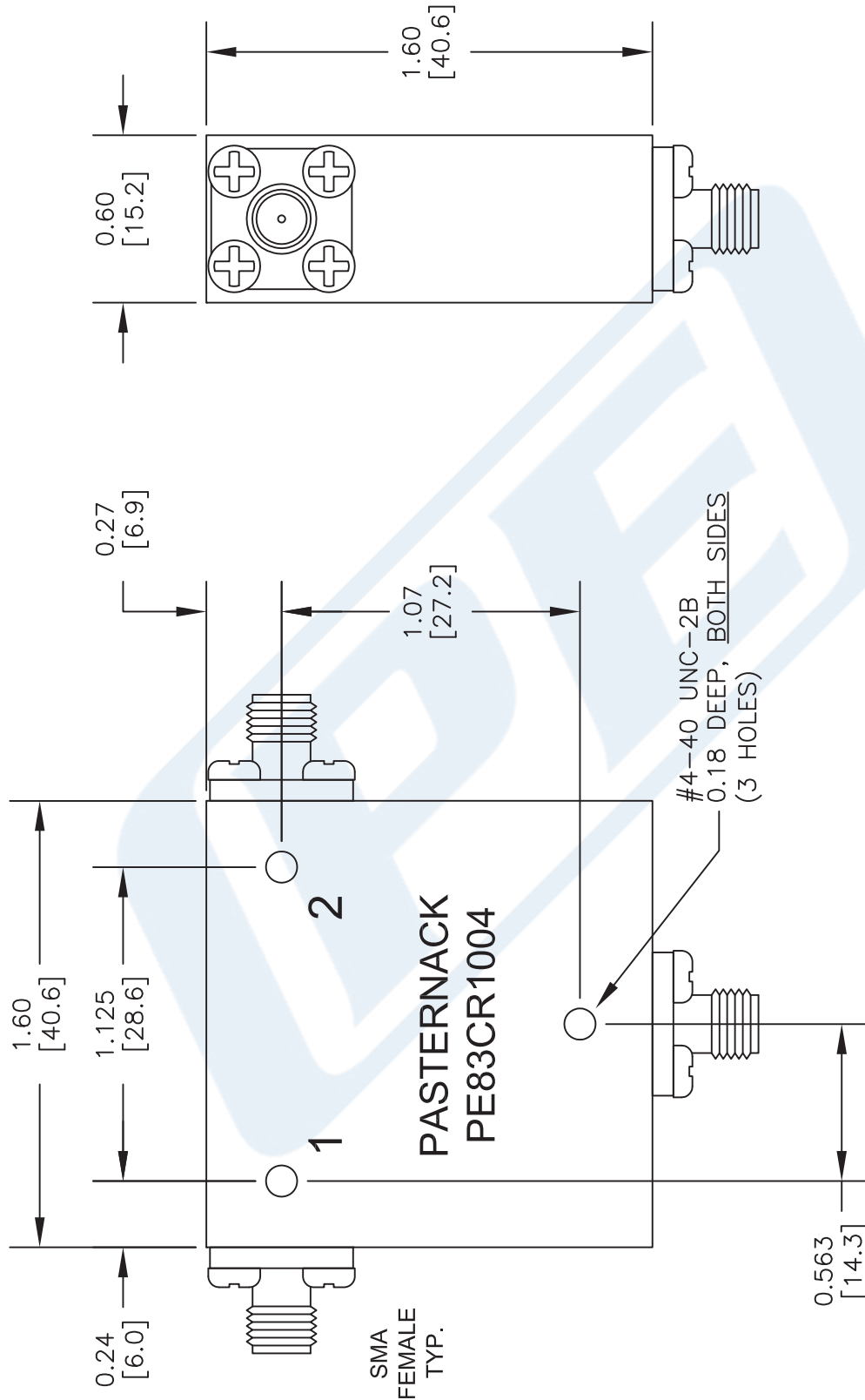
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The information contained in this document is accurate to the best of our knowledge and representative of the part described herein. It may be necessary to make modifications to the part and/or the documentation of the part, in order to implement improvements.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

# PE83CR1004 CAD Drawing

High Power Circulator With 20 dB Isolation From 2 GHz to 4 GHz, 50 Watts And SMA Female



DWG TITLE

**PE83CR1004**

FSCM NO. 53919

CAD FILE 012216

SCALE N/A

SIZE A

2233

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].

**PE PASTERNAK**  
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