



Circulator with 13 dB Isolation from 8 GHz to 18 GHz, 10 Watts and SMA Female

## Circulators Technical Data Sheet

PE83CR002

### Features

- Single Junction Circulator
- 8 to 18 GHz Frequency Range
- Max Power 10W (CW)
- Max Reverse Power 2W (CW)
- Insertion Loss < 1.5 dB
- VSWR < 1.55:1
- Isolation > 13 dB
- SMA Female Connectors

### Applications

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

### Description

Pasternack carries a broad selection of circulators to fit your needs. These unique devices allow two different direction signals to share the same channel. The classic use of this three port device is for routing signals between an antenna and a transceiver, allowing the receive signal to enter from the antenna (port 1) and exit to the receiver (port 2) while the transmit signal enters from the transmitter (port 3) and exits to the antenna (port 1). The circulator can also be used as an isolator by placing a matched load into one of the ports. These components can be used in antenna transmitting and receiving, radar, amplifier systems and any application 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.

The PE83CR002 is a single junction circulator that operates from 8 to 18 GHz and can handle up to 10 Watts (CW) in the forward direction and 2 Watts (CW) in the reverse direction. The coaxial part uses SMA female connectors on all ports and has electrical specifications of 1.55:1 max VSWR, 13 dB min isolation and 1.5 dB max insertion loss. The package is RoHS compliant.

### Electrical Specifications

Description	Minimum	Typical	Maximum	Units
Frequency Range	8		18	GHz
Impedance		50		Ohms
Insertion Loss			1.5	dB
Isolation	13			dB
VSWR			1.55:1	
Forward Power, CW			10	Watts
Reverse Power, CW			2	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: [Circulator with 13 dB Isolation from 8 GHz to 18 GHz, 10 Watts and SMA Female PE83CR002](#)



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### Mechanical Specifications

#### Size

Length	0.5 in [12.7 mm]
Width	0.5 in [12.7 mm]
Height	0.63 in [16 mm]

Body Material and Plating	Aluminum
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#### Configuration

Design	Single Junction
Package Style	Connectorized
Connector 1	SMA Female
Connector 2	SMA Female
Connector 3	SMA Female

### Environmental Specifications

#### Temperature

Operating Range	-20 to +60 deg C
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**Compliance Certifications** (see [product page](#) for current document)

### Plotted and Other Data

Notes:

Circulator with 13 dB Isolation from 8 GHz to 18 GHz, 10 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 99.4% availability and are part of the broadest selection in the industry.

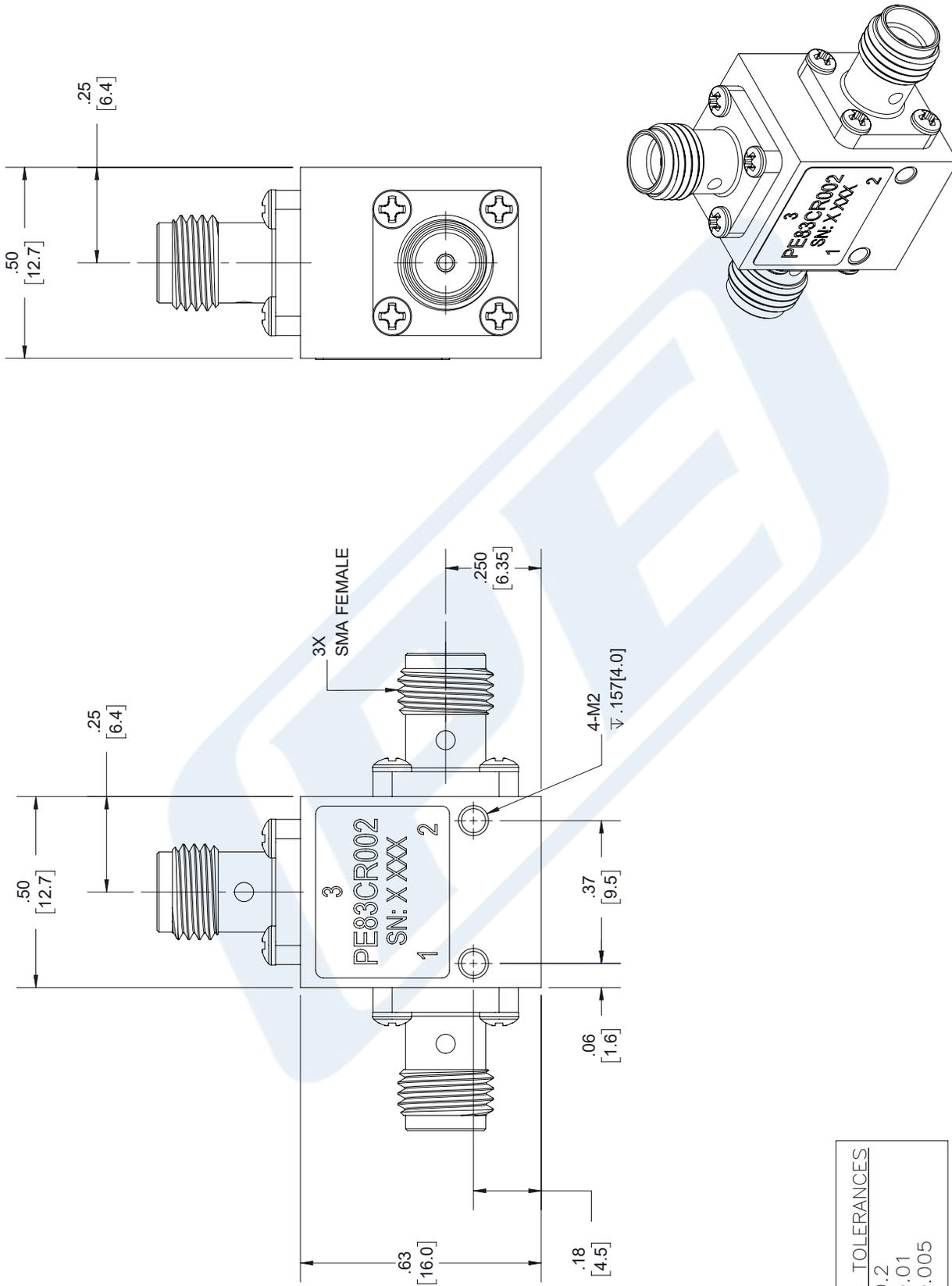
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URL: <https://www.pasternack.com/circulator-13db-isolation-18-ghz-10-watts-sma-female-pe83cr002-p.aspx>

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.

# PE83CR002 CAD Drawing

Circulator with 13 dB Isolation from 8 GHz to 18 GHz, 10 Watts and SMA Female



STANDARD TOLERANCES	
.X	±0.2
.XX	±0.01
.XXX	±0.005

\*STANDARD TOLERANCES APPLY ONLY TO DIMENSIONS IN INCHES

**PE PASTERNAK®**  
 THE ENGINEER'S RF SOURCE  
 Pasternack Enterprises, Inc.  
 P.O. Box 16759 | Irvine | CA | 92623  
**Phone:** (949) 261-1920 | **Fax:** (949) 261-7451  
**Website:** www.pasternack.com | **E-Mail:** sales@pasternack.com

DWG TITLE	PE83CR002
CAGE CODE	53919

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].			
CAD FILE	07/23/18	SCALE	N/A
SIZE	A	7361	