



## Circulator With 18 dB Isolation From 7 GHz to 12.4 GHz, 10 Watts And SMA Female

### Circulators Technical Data Sheet

PE8403

#### Features

- Single Junction Circulator
- 7 to 12.4 GHz Frequency Range
- Max Forward and Reverse Power 10W (CW)
- Insertion Loss 0.4 dB Typ
- VSWR 1.25:1 Typ
- Isolation 20 dB Typ
- SMA Female Connectors

#### Applications

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

#### Description

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.

The PE8403 is a single junction circulator that offers a power rating of 10 Watts (CW) in the forward and reverse direction over an operational frequency band of 7 to 12.4 GHz. Electrical performance includes 1.25:1 typ VSWR, 20 dB typ isolation, and 0.4 dB typ insertion loss. The package interface uses SMA female connectors, and is also REACH and RoHS compliant.

#### Electrical Specifications

Description	Minimum	Typical	Maximum	Units
Frequency Range	7		12.4	GHz
Impedance		50		Ohms
Insertion Loss		0.4	0.5	dB
Isolation	18	20		dB
VSWR		1.25:1	1.3:1	
Forward Power, CW			10	Watts
Reverse Power, CW			10	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 18 dB Isolation From 7 GHz to 12.4 GHz, 10 Watts And SMA Female PE8403](#)



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#### Mechanical Specifications

##### Size

Length	0.5 in [12.7 mm]
Width	0.57 in [14.48 mm]
Height	0.39 in [9.91 mm]
Weight	0.034 lbs [15.42 g]

##### 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 +65 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:

Circulator With 18 dB Isolation From 7 GHz to 12.4 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% availability and are part of the broadest selection in the industry.

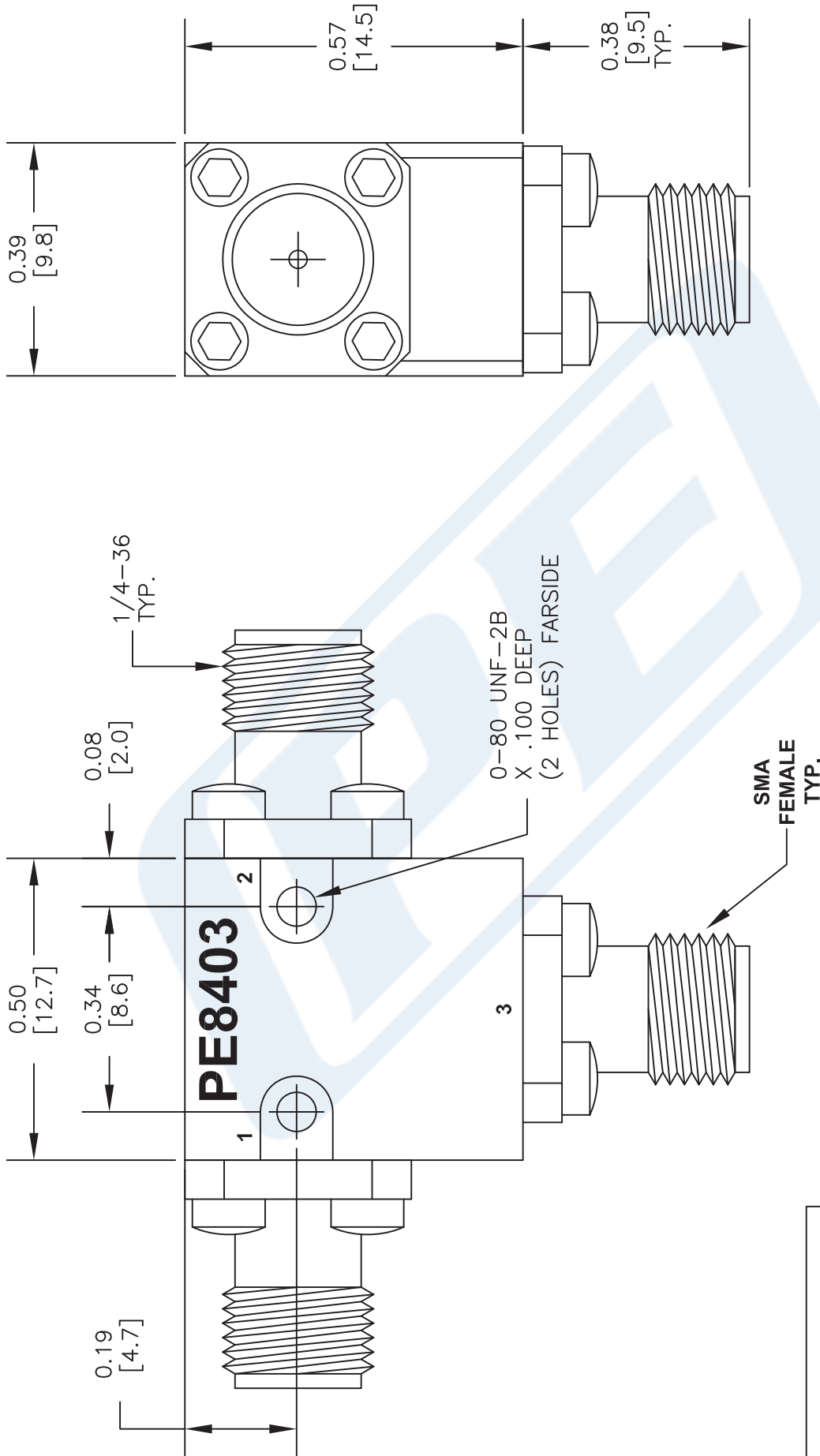
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URL: <http://www.pasternack.com/50-ohm-sma-circulator-7000-mhz-12400-mhz-10-watts-20-db-pe8403-p.aspx>

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.

# PE8403 CAD Drawing

Circulator With 18 dB Isolation From 7 GHz to 12.4 GHz, 10 Watts And SMA Female



**STANDARD TOLERANCES**  
 DECIMAL ±0.03  
 .XX ±0.010  
 .XXX ±0.010

\*STANDARD TOLERANCES APPLY ONLY TO DIMENSIONS IN INCHES

**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  
**PE8403**

FSCM NO. 53919

CAD FILE 050516

SCALE N/A

SIZE A

3045

**PE PASTERNAK®**  
 THE ENGINEER'S RF SOURCE

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