



Circulator With 18 dB Isolation From 1.7 GHz to 2.2 GHz, 10 Watts And SMA Female

Circulators Technical Data Sheet

PE8414

Features

- Single Junction Circulator
- 1.7 to 2.2 GHz Frequency Range
- Max Forward and Reverse Power 10W (CW)
- Insertion Loss < 0.4 dB
- VSWR < 1.25:1
- Isolation > 18 dB
- 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 PE8414 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 1.7 to 2.2 GHz. Electrical performance includes 1.25:1 max VSWR, 18 dB min isolation, and 0.4 dB max 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	1.7		2.2	GHz
Impedance		50		Ohms
Insertion Loss			0.4	dB
Isolation	18			dB
VSWR			1.25:1	
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 1.7 GHz to 2.2 GHz, 10 Watts And SMA Female PE8414](#)



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Mechanical Specifications

Size

Length	2.5 in [63.5 mm]
Width	2.5 in [63.5 mm]
Height	1.02 in [25.91 mm]
Weight	0.76 lbs [344.73 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 for current document)

RoHS Compliant	
REACH Compliant	12/17/2015

Plotted and Other Data

Notes:

Circulator With 18 dB Isolation From 1.7 GHz to 2.2 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.

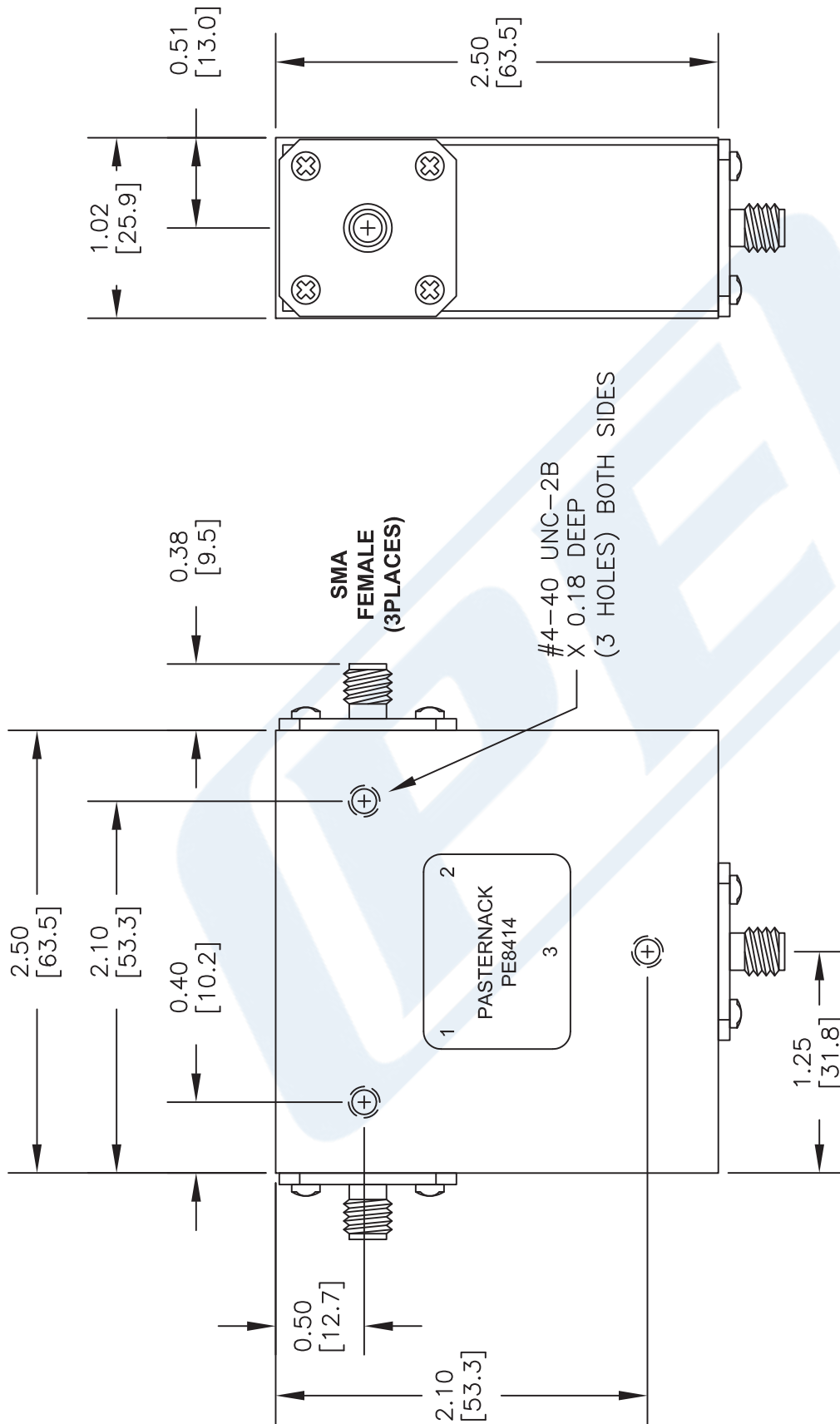
Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [Circulator With 18 dB Isolation From 1.7 GHz to 2.2 GHz, 10 Watts And SMA Female PE8414](http://www.pasternack.com/50-ohm-sma-circulator-1.7-2.2-ghz-10-watts-18-db-pe8414-p.aspx)

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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.

PE8414 CAD Drawing

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STANDARD TOLERANCES

.XX ±0.1
.XXX ±0.05

*STANDARD TOLERANCES APPLY ONLY TO DIMENSIONS IN INCHES

PE PASTERNAK
THE ENGINEER'S RF SOURCE

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DWG TITLE

PE8414

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].

FSCM NO. 53919

CAD FILE 041216

SCALE N/A

SIZE A

3045