



# High Power Circulator With 20 dB Isolation From 135 MHz to 175 MHz, 150 Watts And N Female

## Circulators Technical Data Sheet

PE8427

### Features

- High Power Single Junction Circulator
- 135 to 175 MHz Frequency Range
- Max Forward Power 150W (CW)
- Max Reverse Power 100W (CW)
- Insertion Loss < 0.5 dB
- VSWR < 1.3:1
- Isolation > 20 dB
- N 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 PE8427 is a high power single junction circulator that offers a forward power rating of 150 Watts (CW) and reverse power rating of 100 Watts (CW) over an operational frequency band of 135 to 175 MHz. Electrical performance includes 1.3:1 max VSWR, 20 dB min isolation, and 0.5 dB max insertion loss. The package interface uses N female connectors, and is also REACH and RoHS compliant.

### Electrical Specifications

Description	Minimum	Typical	Maximum	Units
Frequency Range	135		175	MHz
Impedance		50		Ohms
Insertion Loss			0.5	dB
Isolation	20			dB
VSWR			1.3:1	
Forward Power, CW			150	Watts
Reverse Power, CW			100	Watts

#### Electrical Specification Notes:

Values at 25°C, sea level.

Minimum isolation of 16.5 dB from -10°C to -30°C, and 17 dB from +60°C to +70°C.

Maximum insertion loss of 0.7 dB from -10°C to -30°C.

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 135 MHz to 175 MHz, 150 Watts And N Female PE8427](#)



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### Mechanical Specifications

#### Size

Length	3 in [76.2 mm]
Width	3 in [76.2 mm]
Height	1.2 in [30.48 mm]
Weight	1.344 lbs [609.63 g]

#### Configuration

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

### Environmental Specifications

#### Temperature

Operating Range	-30 to +70 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:

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 135 MHz to 175 MHz, 150 Watts And N Female PE8427](#)

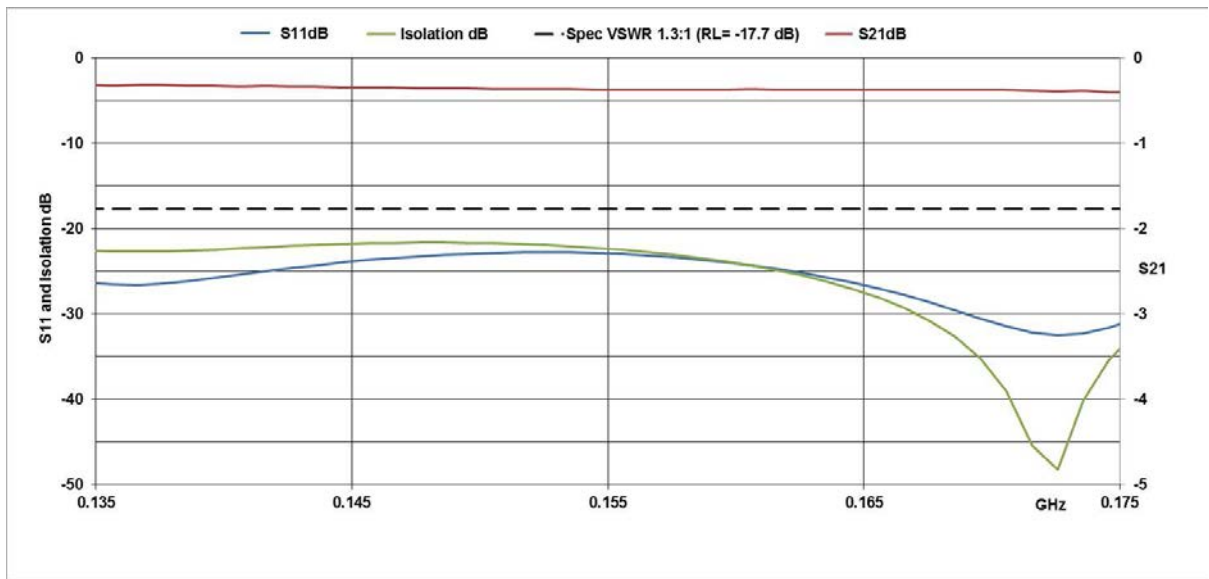


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Typical Performance Data



High Power Circulator With 20 dB Isolation From 135 MHz to 175 MHz, 150 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% availability and are part of the broadest selection in the industry.

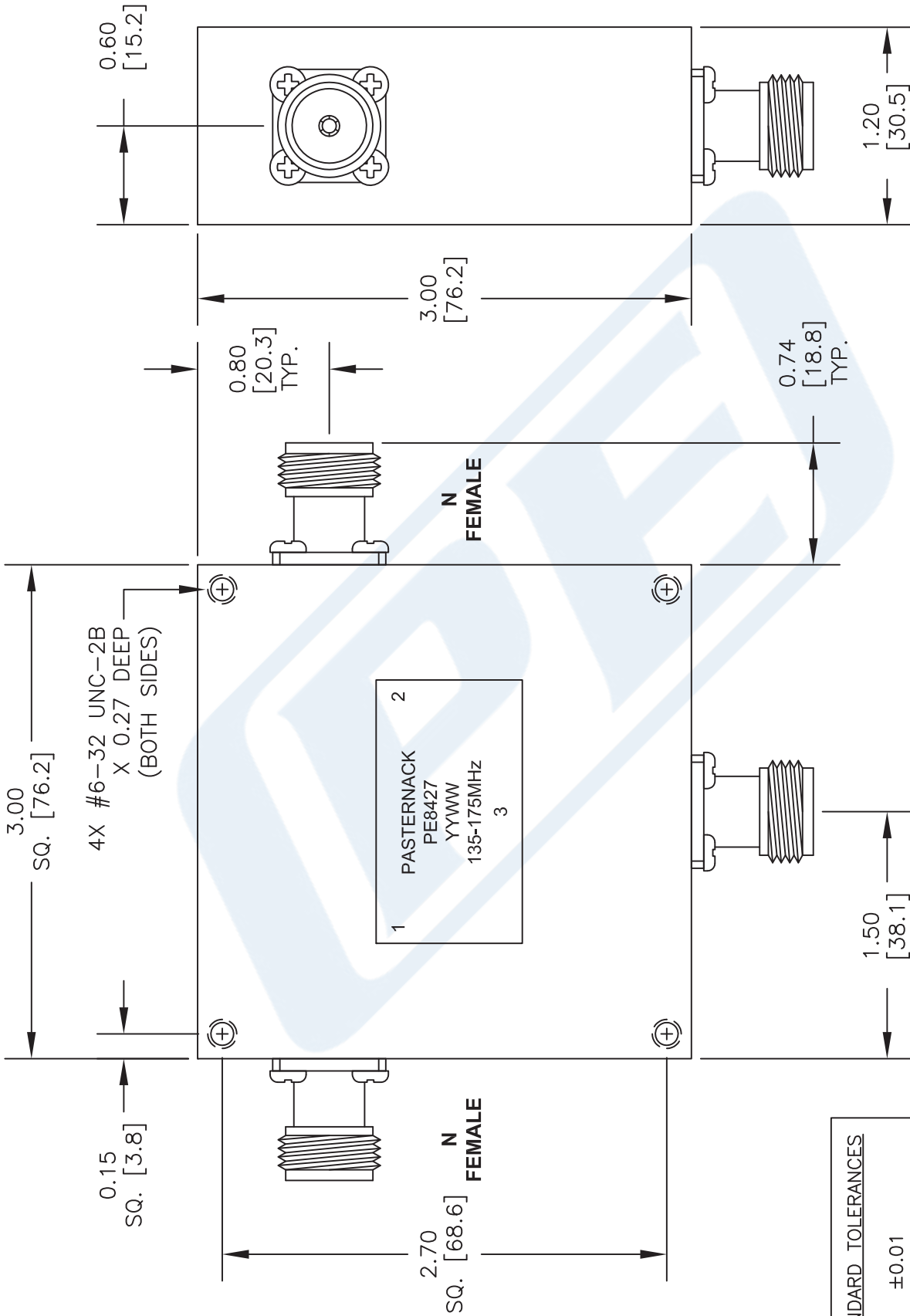
Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [High Power Circulator With 20 dB Isolation From 135 MHz to 175 MHz, 150 Watts And N Female PE8427](http://www.pasternack.com/50-ohm-n-circulator-135-175-mhz-150-watts-20-db-pe8427-p.aspx)

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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.

# PE8427 CAD Drawing

High Power Circulator With 20 dB Isolation From 135 MHz  
to 175 MHz, 150 Watts And N Female



STANDARD TOLERANCES	
.XX	±0.01
.XXX	±0.005

\*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  
**PE8427**

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FSCM NO. 53919

CAD FILE 040116 SCALE N/A SIZE A 3045