



Isolator with 10 dB Isolation from 6 GHz to 18 GHz,  
10 Watts and SMA Male to SMA Female

## Isolators Technical Data Sheet

PE83IR1030

### Features

- Forward Power 10 watts
- Wide-Band Operating of 6 to 18 GHz
- Female and Male SMA Connectors
- Low VSWR of 1.60:1 Max
- Low Insertion Loss of 1.5 dB Max
- Good Isolation Performance of 10 dB Minimum

### Applications

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

### Description

The PE83IR1030 is an RF isolator offering a forward power rating of 10 watts over an operational frequency band of 6 to 18 GHz. This coaxial part uses SMA male input and SMA female output and has a minimum of 10 dB of isolation.

Pasternack Enterprises offers a wide variety of isolators to fit your needs. These are two-port devices that transmit microwave or radio frequency power in one direction only and block the signal in the opposite direction. They can be thought of as a diode for RF energy. Isolators are used to isolate equipment from the effects of conditions outside of the equipment. For instance they are used to prevent a microwave source being detuned by a mismatched load. Pasternack's isolators feature excellent insertion loss, high isolation and reliability.

### Electrical Specifications

Description	Minimum	Typical	Maximum	Units
Frequency Range	6		18	GHz
Impedance		50		Ohms
Insertion Loss			1.5	dB
Isolation	10			dB
VSWR			1.6:1	
Forward Power, CW			10	Watts

### Mechanical Specifications

Size	
Length	0.78 in [19.81 mm]
Width	0.49 in [12.45 mm]
Height	0.35 in [8.89 mm]
Weight	0.021 lbs [9.53 g]
Body Material and Plating	Aluminum, Nickel

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [Isolator with 10 dB Isolation from 6 GHz to 18 GHz, 10 Watts and SMA Male to SMA Female PE83IR1030](#)



Isolator with 10 dB Isolation from 6 GHz to 18 GHz,  
10 Watts and SMA Male to SMA Female

Isolators Technical Data Sheet

PE831R1030

**Configuration**

Direction	Clockwise
Connector 1	SMA Male
Connector 2	SMA Female

**Environmental Specifications**

**Temperature**

Operating Range	-20 to +70 deg C
Storage Range	-40 to +85 deg C

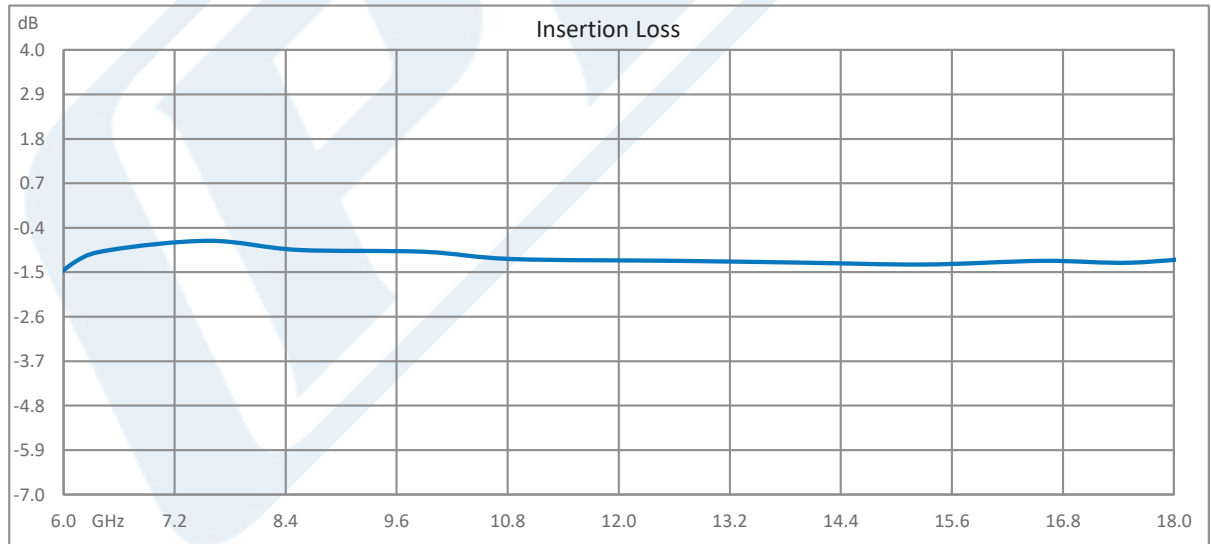
Humidity	100% RH at 35°C, 95%RH at 40°C
Shock	20G for 11msec half sine wave, 3 axis both directions
Vibration	25gRMS (15 degrees 2KHz) endurance, 1 hour per axis
Altitude	30,000 ft. (Epoxy Sealed Controlled environment)

**Compliance Certifications** (see [product page](#) for current document)

**Plotted and Other Data**

Notes:

**Typical Performance Data**



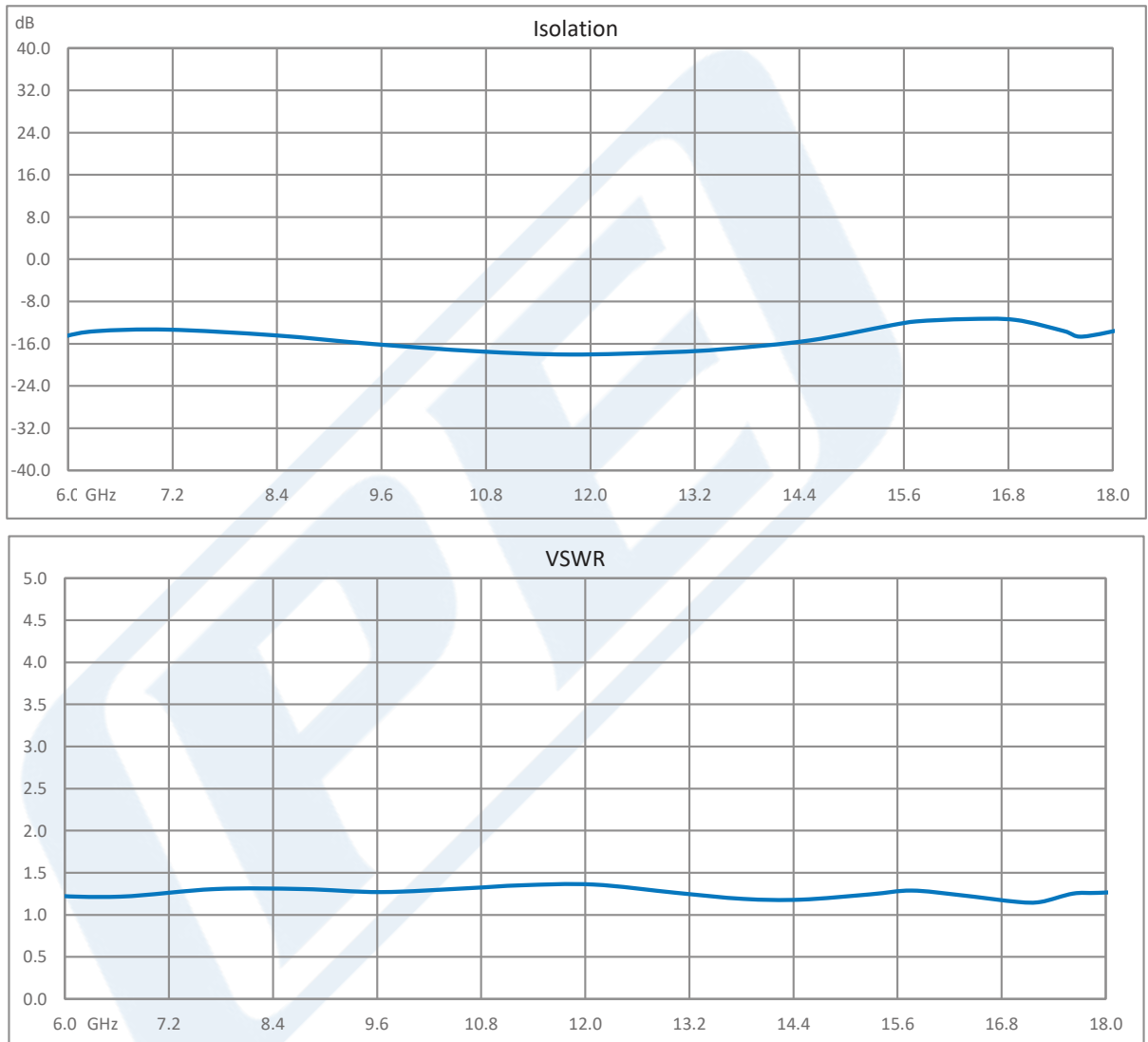
Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [Isolator with 10 dB Isolation from 6 GHz to 18 GHz, 10 Watts and SMA Male to SMA Female PE831R1030](#)



Isolator with 10 dB Isolation from 6 GHz to 18 GHz,  
10 Watts and SMA Male to SMA Female

Isolators Technical Data Sheet

PE83IR1030



Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [Isolator with 10 dB Isolation from 6 GHz to 18 GHz, 10 Watts and SMA Male to SMA Female PE83IR1030](#)



Isolator with 10 dB Isolation from 6 GHz to 18 GHz,  
10 Watts and SMA Male to SMA Female

## Isolators Technical Data Sheet

PE83IR1030

Isolator with 10 dB Isolation from 6 GHz to 18 GHz, 10 Watts and SMA Male to 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.

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [Isolator with 10 dB Isolation from 6 GHz to 18 GHz, 10 Watts and SMA Male to SMA Female PE83IR1030](https://www.pasternack.com/isolator-10db-isolation-18-ghz-10-watts-sma-male-pe83ir1030-p.aspx)

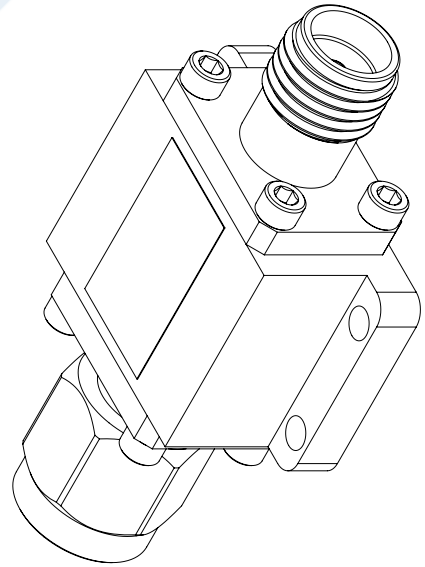
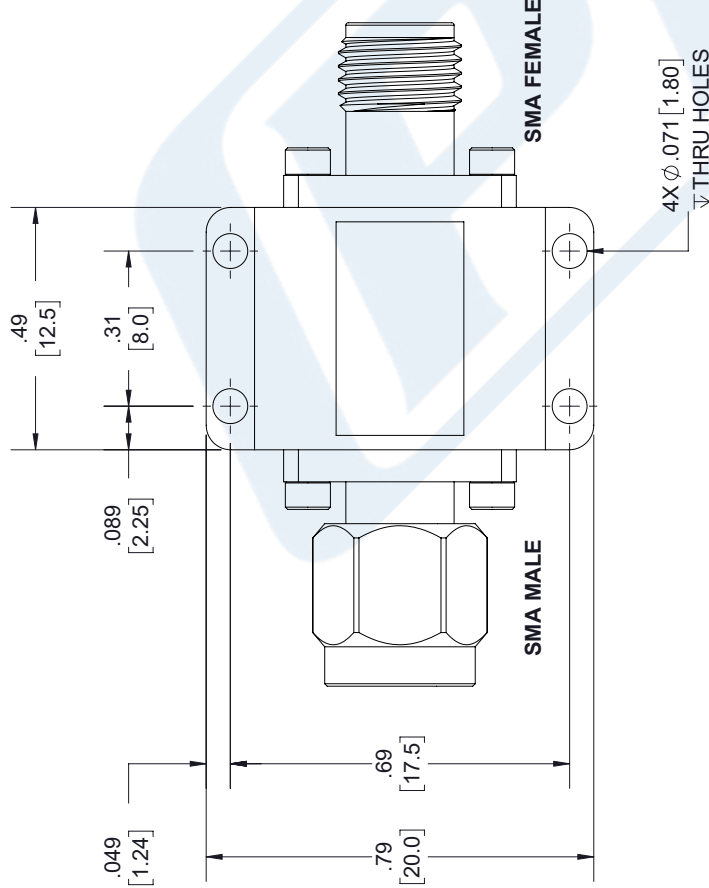
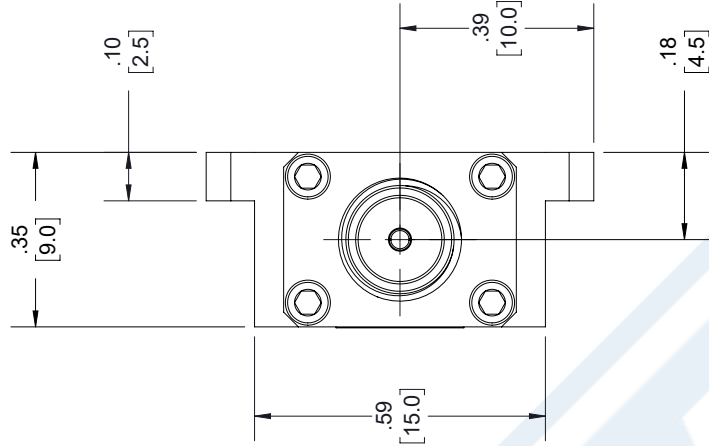
URL: <https://www.pasternack.com/isolator-10db-isolation-18-ghz-10-watts-sma-male-pe83ir1030-p.aspx>

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.

# PE83IR1030 CAD Drawing

Isolator with 10 dB Isolation from 6 GHz to 18 GHz,  
10 Watts and SMA Male to SMA Female

REV.	DESCRIPTION	DATE	APPROVED
A	INITIAL RELEASE	3/13/2020	S.PONG



LABEL

<b>PASTERNAK</b>	
PE83IR1030	
1	2
D/C: WWYY	

UNLESS OTHERWISE SPECIFIED  
LEADING DIMENSIONS ARE INCHES  
DIMENSIONS IN [ ] ARE MILLIMETERS

TOLERANCES:  
 .X = ±.2 [5.08]    FRACTIONS ± 1/32  
 .XX = ±.02 [ .51]    ANGLES ± 1°  
 .XXX = ±.005 [ .13]    CABLE LENGTH (L) TOLERANCES:  
   L ≤ 12 [305] = +1 [25] / -0  
   12 [305] < L ≤ 60 [1524] = +2 [51] / -0  
   60 [1524] < L ≤ 120 [3048] = +4 [102] / -0  
   120 [3048] < L ≤ 300 [7620] = +6 [152] / -0  
   300 [7620] < L = +5% / -0

ALL DIMENSIONS SHOWN  
ARE FOR REFERENCE ONLY.

THIRD-ANGLE PROJECTION

THE INFORMATION AND DESIGN IN THIS DOCUMENT IS THE PROPERTY OF PASTERNAK CORPORATION. ALL RIGHTS RESERVED.

SHEET 1 OF 1

SCALE N/A

**PE PASTERNAK**  
an INFINITO brand

Pasternack Enterprises, Inc.  
P. O. Box 16759, Irvine, CA 92623.  
Phone: 1.949.261.1920 | 1.866.727.8376  
Fax: 1.949.261.7451  
Website: www.pasternack.com  
E-mail: sales@pasternack.com

ITEM NO. PE83IR1030

SIZE A    CAGE CODE 53919    DRAWN BY K.DANG

THESE COMMODITIES, TECHNOLOGY OR SOFTWARE WERE EXPORTED FROM THE UNITED STATES IN ACCORDANCE WITH THE EXPORT ADMINISTRATION REGULATIONS. DIVERSION CONTRARY TO U.S. LAW PROHIBITED.