



Isolator with 19 dB Isolation from 4 GHz to 8 GHz, 30 Watts and SMA Female

## Isolators Technical Data Sheet

PE83IR1040

### Features

- Forward Power 30 watts
- Wide-Band Operating of 4 to 8 GHz
- Female SMA Connectors
- Low VSWR of 1.35:1 Max
- Low Insertion Loss of 0.5 dB Max
- Good Isolation Performance of 19 dB Minimum

### Applications

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

### Description

The PE83IR1040 is an RF isolator offering a forward power rating of 30 watts over an operational frequency band of 4 to 8 GHz. This coaxial part uses SMA female connectors on all ports and has a minimum of 19 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   | 4       |         | 8       | GHz   |
| Impedance         |         | 50      |         | Ohms  |
| Insertion Loss    |         |         | 0.5     | dB    |
| Isolation         | 19      |         |         | dB    |
| VSWR              |         |         | 1.35:1  |       |
| Forward Power, CW |         |         | 30      | Watts |

### Mechanical Specifications

| Size                      |                     |
|---------------------------|---------------------|
| Length                    | 0.59 in [14.99 mm]  |
| Width                     | 0.71 in [18.03 mm]  |
| Height                    | 0.91 in [23.11 mm]  |
| Weight                    | 0.066 lbs [29.94 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 19 dB Isolation from 4 GHz to 8 GHz, 30 Watts and SMA Female PE83IR1040](#)



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PE831R1040

**Configuration**

|             |            |
|-------------|------------|
| Direction   | Clockwise  |
| Connector 1 | SMA Female |
| Connector 2 | SMA Female |

**Environmental Specifications**

**Temperature**

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

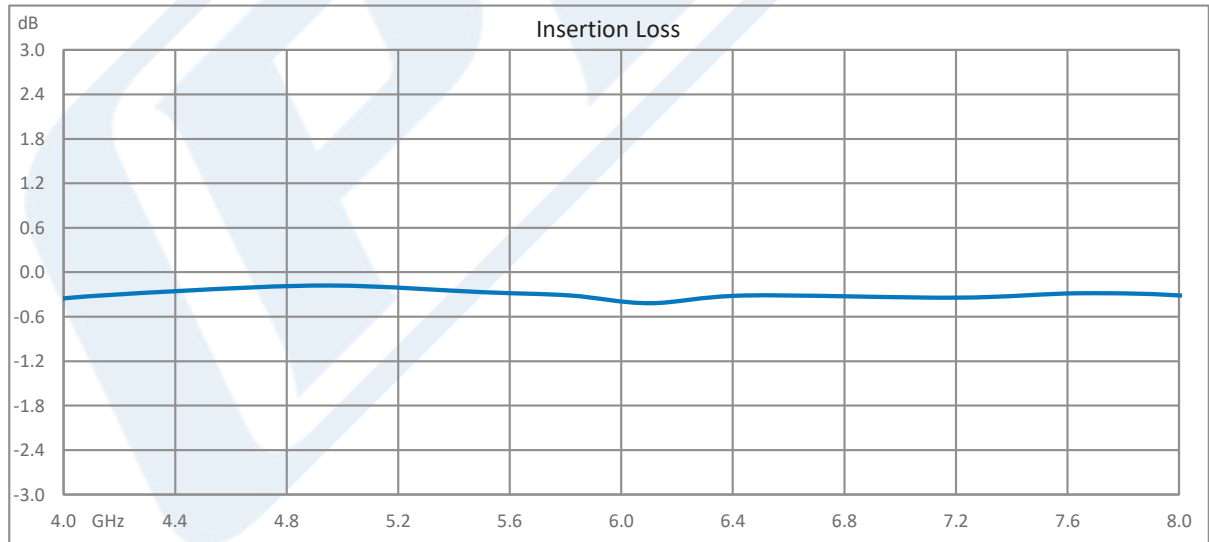
|           |   |
|-----------|---|
| Humidity  | 100% RH at 35°C, 95%RH at 40°C                        |
| Shock     | 20G for 11msec half sine wave, 3 axis both directions |
| Vibration | 25gRMS (15 degrees 2KHz) endurance, 1 hour per axis   |
| Altitude  | 30,000 ft. (Epoxy Sealed Controlled environment)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

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

**Plotted and Other Data**

Notes:

**Typical Performance Data**



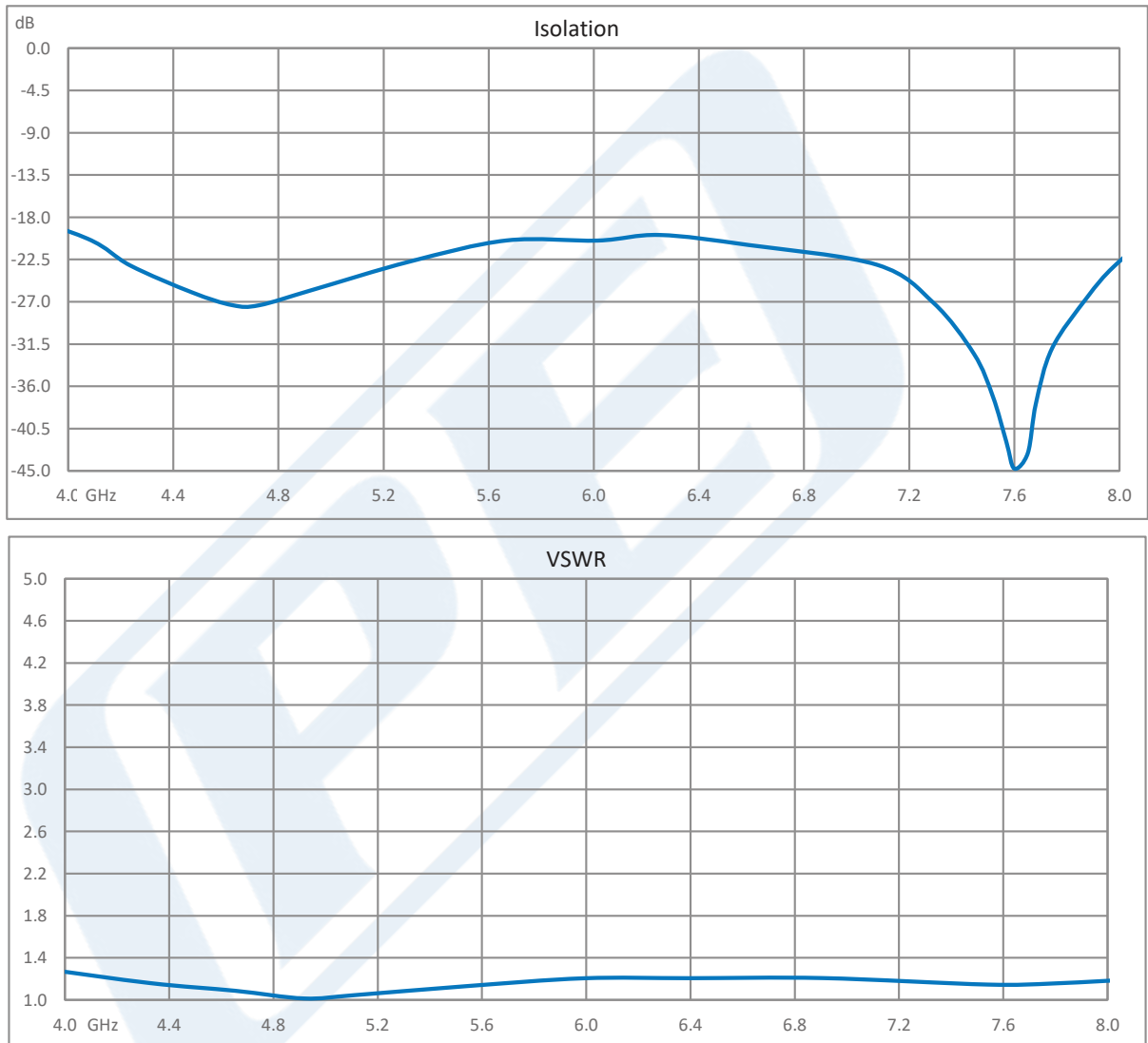
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Isolator with 19 dB Isolation from 4 GHz to 8 GHz, 30 Watts and SMA Female from Pasternack Enterprises has same day shipment for domestic and International orders. Our RF, microwave and millimeter wave products maintain a 99.4% availability and are part of the broadest selection in the industry.

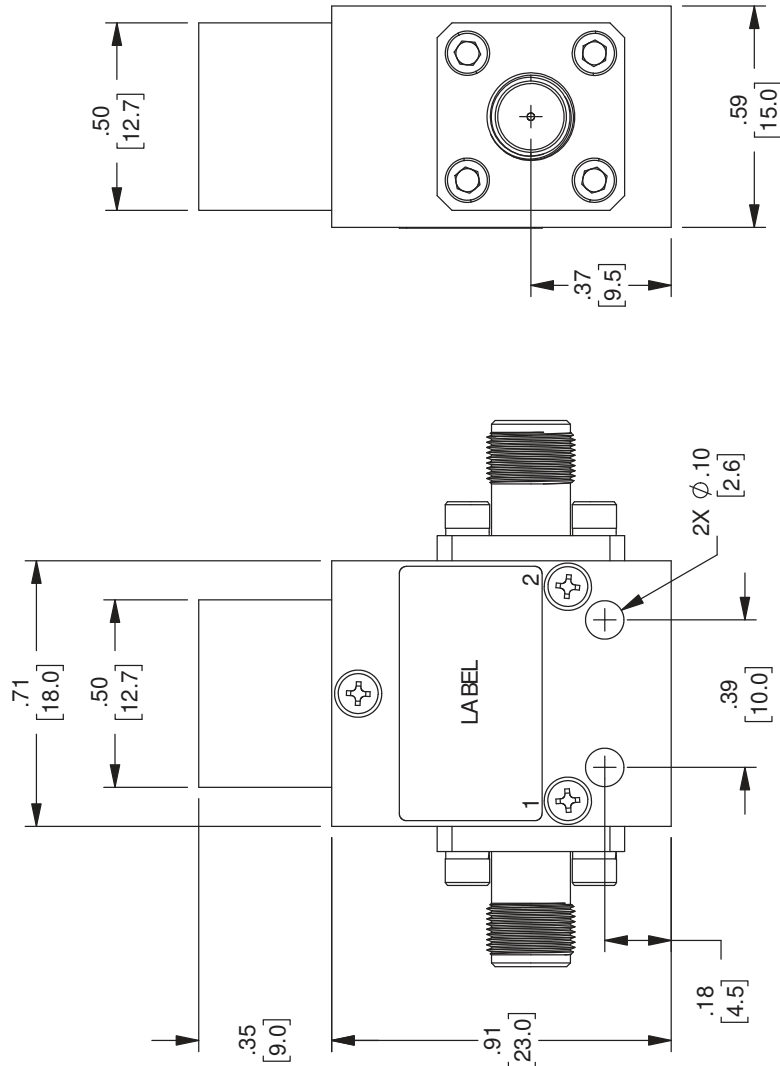
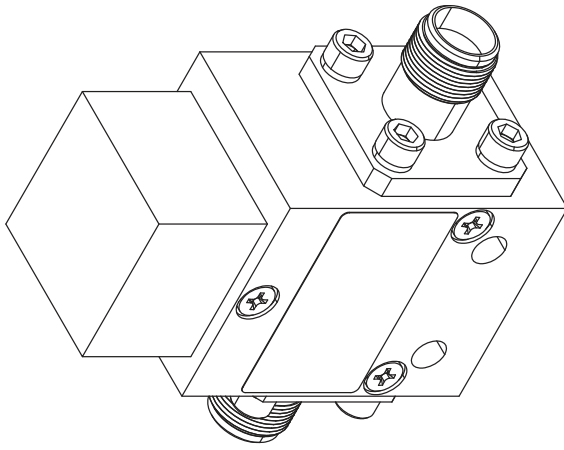
Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [Isolator with 19 dB Isolation from 4 GHz to 8 GHz, 30 Watts and SMA Female PE83IR1040](https://www.pasternack.com/isolator-19db-isolation-8-ghz-30-watts-sma-female-pe83ir1040-p.aspx)

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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.

# PE83IR1040 CAD Drawing

Isolator with 19 dB Isolation from 4 GHz to 8 GHz, 30 Watts and SMA Female



LABEL:  
**PASTERNAK**  
**PE83IR1040**  
**D/C: XXXX**

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

TOLERANCES:  
 X = +.2 [5.08]      FRACTIONS  
 XX = +.02 [.51]      +.132  
 XXX = ±.005 [.13]      ANGLES ± 1°

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.

**PE PASTERNAK**  
 an INFINITI® brand

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SHEET 1 OF 1

SCALE N/A

|      |           |            |            |
|------|-----------|------------|------------|
| SIZE | CAGE CODE | DRAWN BY   | ITEM NO.   |
| A    | 53919     | DFRISIELLO | PE83IR1040 |
|      |           | REV        | A          |

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