



Isolator with 20 dB Isolation from 8 GHz to 12 GHz, 10 Watts and SMA Male

## Isolators Technical Data Sheet

PE83IR1027

### Features

- Forward Power 10 watts
- Wide-Band Operating of 8 to 12 GHz
- Male SMA Connectors
- Low VSWR of 1.35:1 Max
- Low Insertion Loss of 0.5 dB Max
- Good Isolation Performance of 20 dB Minimum

### Applications

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

### Description

The PE83IR1027 is an RF isolator offering a forward power rating of 10 watts over an operational frequency band of 8 to 12 GHz. This coaxial part uses SMA male connectors on all ports and has a minimum of 20 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	8		12	GHz
Impedance		50		Ohms
Insertion Loss			0.5	dB
Isolation	20			dB
VSWR			1.35:1	
Forward Power, CW			10	Watts

### Mechanical Specifications

Size	
Length	0.47 in [11.94 mm]
Width	0.47 in [11.94 mm]
Height	0.67 in [17.02 mm]
Weight	0.044 lbs [19.96 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 20 dB Isolation from 8 GHz to 12 GHz, 10 Watts and SMA Male PE83IR1027](#)



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PE831R1027

**Configuration**

Direction	Clockwise
Connector 1	SMA Male
Connector 2	SMA Male

**Environmental Specifications**

**Temperature**

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

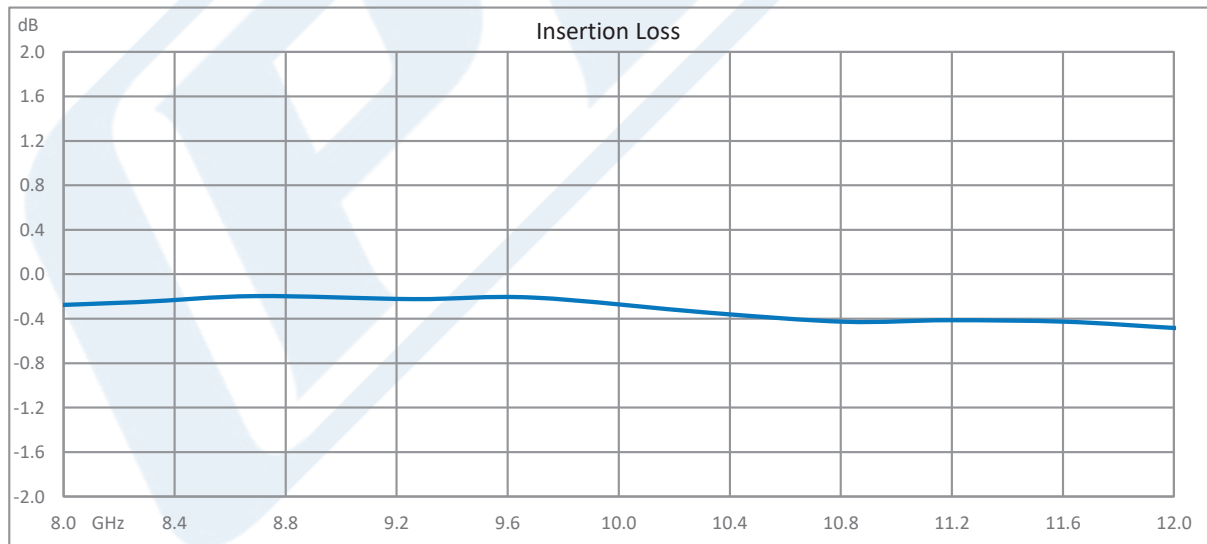
Humidity	100% RH at 35°C, 95%RH at 40°C
Shock	20G for 11msec half sine wave, 3 axis both directions
Vibration	25gRMS (15 degrees 2KHz) endurance, 1 hour per axis
Altitude	30,000 ft. (Epoxy Sealed Controlled environment)

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

**Plotted and Other Data**

Notes:

**Typical Performance Data**



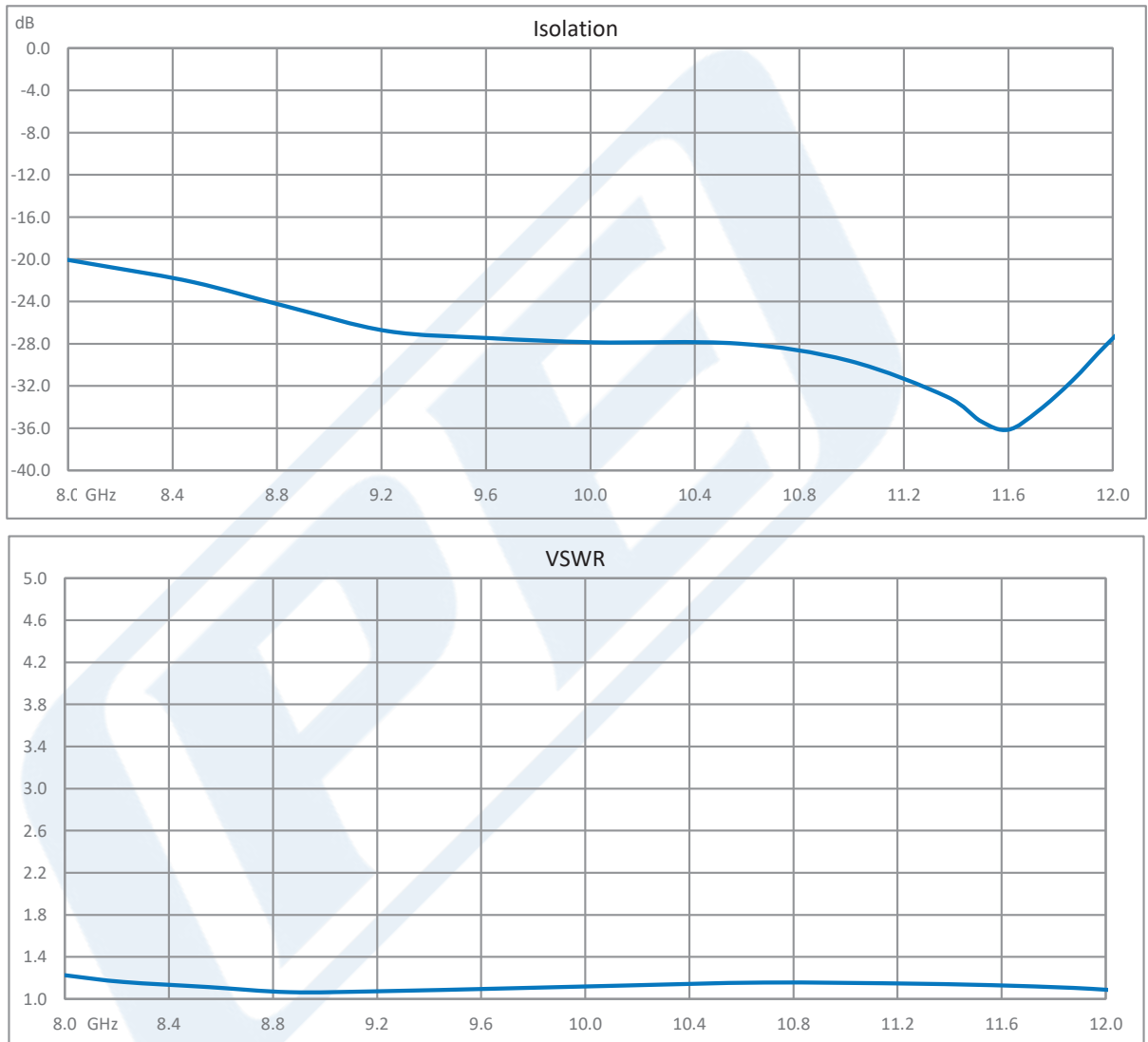
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Isolator with 20 dB Isolation from 8 GHz to 12 GHz, 10 Watts and SMA Male from Pasternack Enterprises has same day shipment for domestic and International orders. Our RF, microwave and millimeter wave products maintain a 99.4% availability and are 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 20 dB Isolation from 8 GHz to 12 GHz, 10 Watts and SMA Male PE83IR1027](https://www.pasternack.com/isolator-20db-isolation-12-ghz-10-watts-sma-male-pe83ir1027-p.aspx)

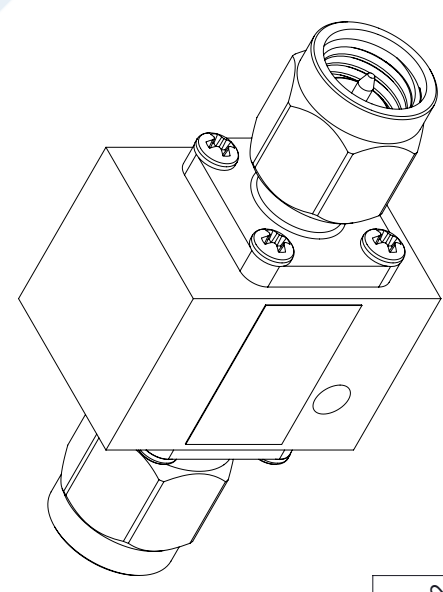
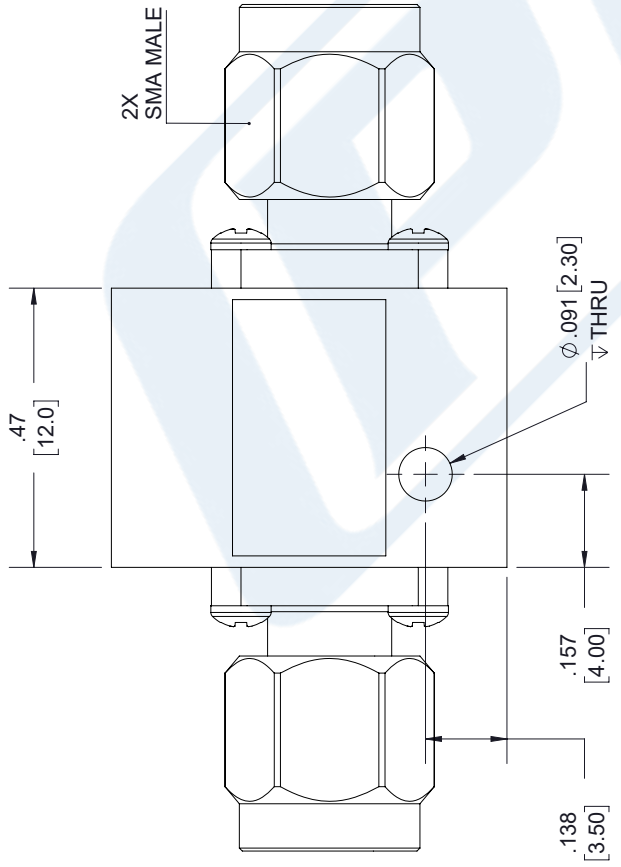
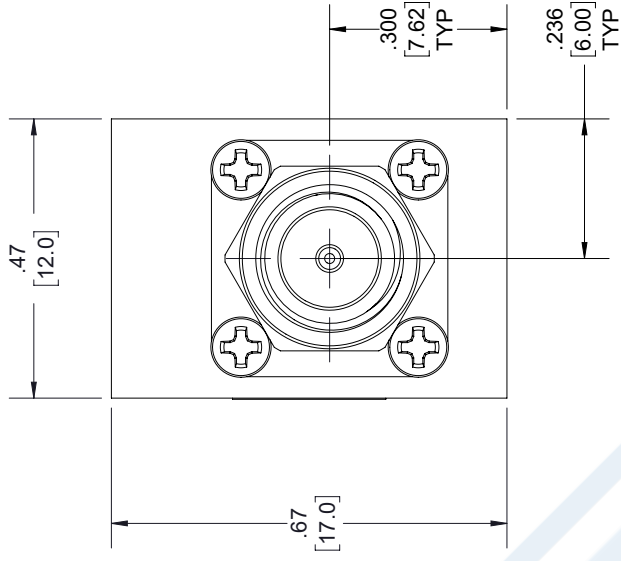
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The information contained in this document is accurate to the best of our knowledge and representative of the part described herein. It may be necessary to make modifications to the part and/or the documentation of the part, in order to implement improvements. 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.

# PE83IR1027 CAD Drawing

Isolator with 20 dB Isolation from 8 GHz to 12 GHz, 10 Watts and SMA Male

REV.	DESCRIPTION	DATE	APPROVED
A	INITIAL RELEASE	3/12/2020	S.PONG



LABEL	
1	PASTERNAK PE83IR1027 D/C: WWYY 2

THIRD-ANGLE PROJECTION

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SHEET 1 OF 1

SCALE N/A

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

TOLERANCES:

.X = ± .2	[5.08]	FRACTIONS
.XX = ± .02	[.51]	± 1/32
.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% / L / -0

ALL DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.

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SIZE	CAGE CODE	DRAWN BY	ITEM NO	REV
A	53919	K.DANG	PE83IR1027	A

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