



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

Isolators Technical Data Sheet

PE831R1027

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 PE831R1027 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 PE831R1027](#)



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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

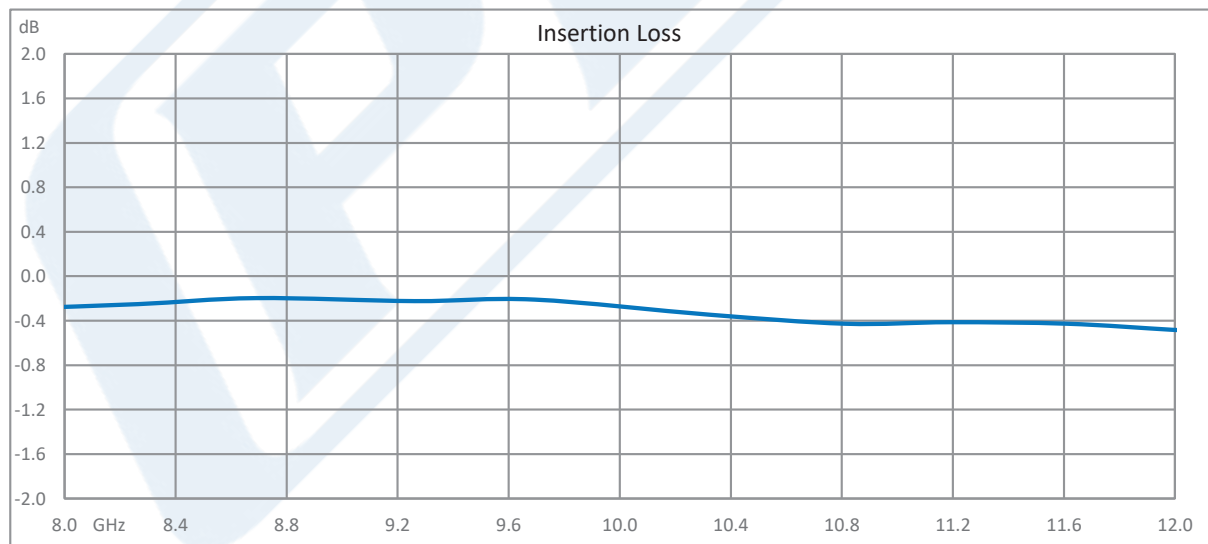
Humidity	100% RH at 35°C, 95%RH at 40°C
Shock	20G for 11msec half sine wave, 3 axis both directions
Vibration	25gRMS (15 degrees 2KHz) endurance, 1 hour per axis
Altitude	30,000 ft. (Epoxy Sealed Controlled environment)

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

Plotted and Other Data

Notes:

Typical Performance Data



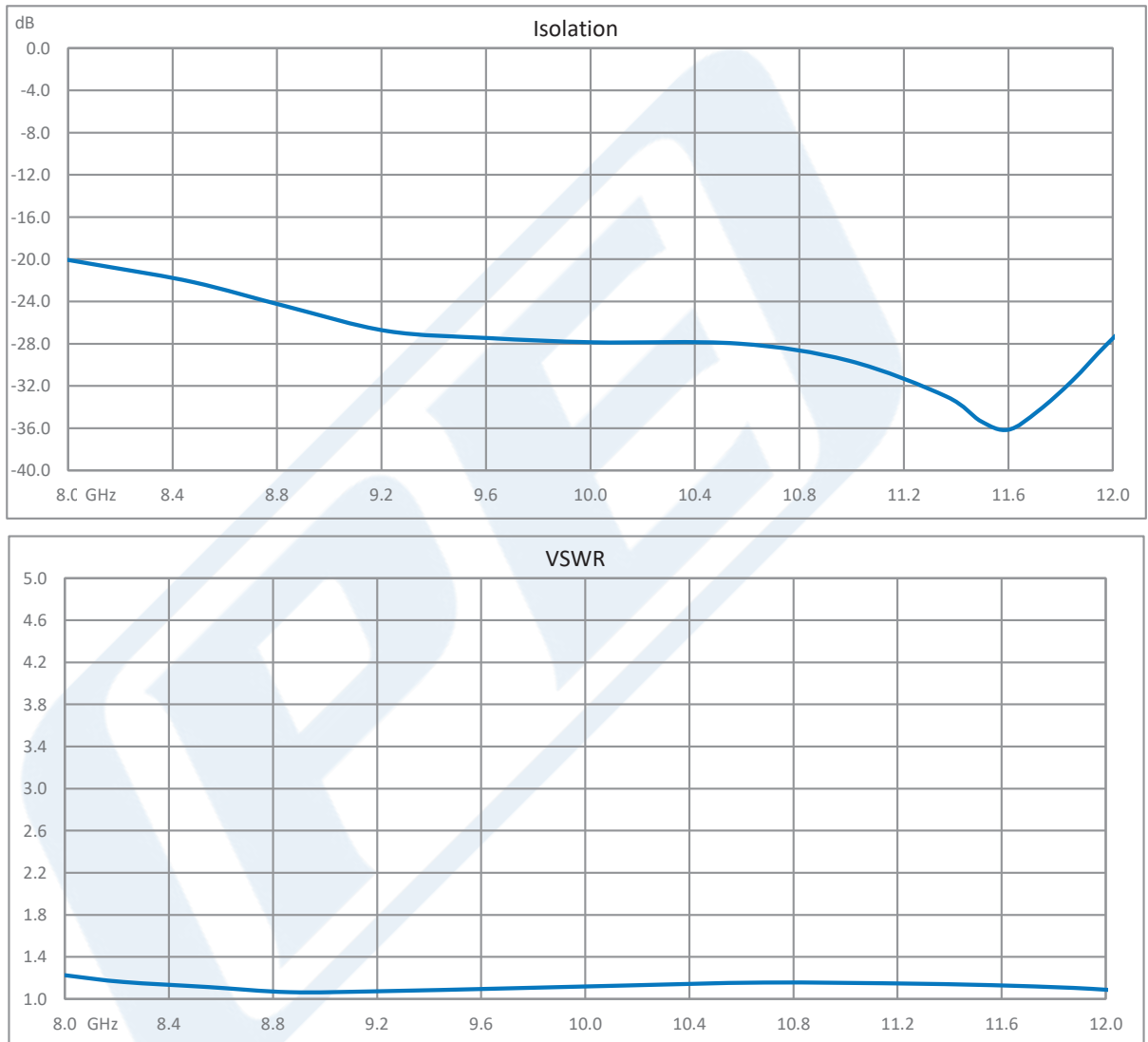
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Isolator with 20 dB Isolation from 8 GHz to 12 GHz, 10 Watts and SMA Male from Pasternack Enterprises has same day shipment for domestic and International orders. Our RF, microwave and millimeter wave products maintain a 99.4% availability and are 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)

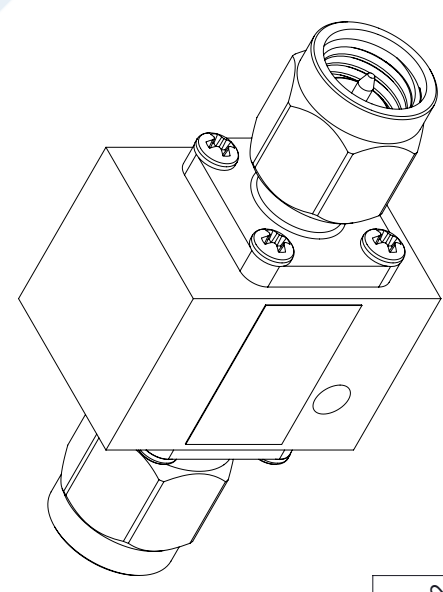
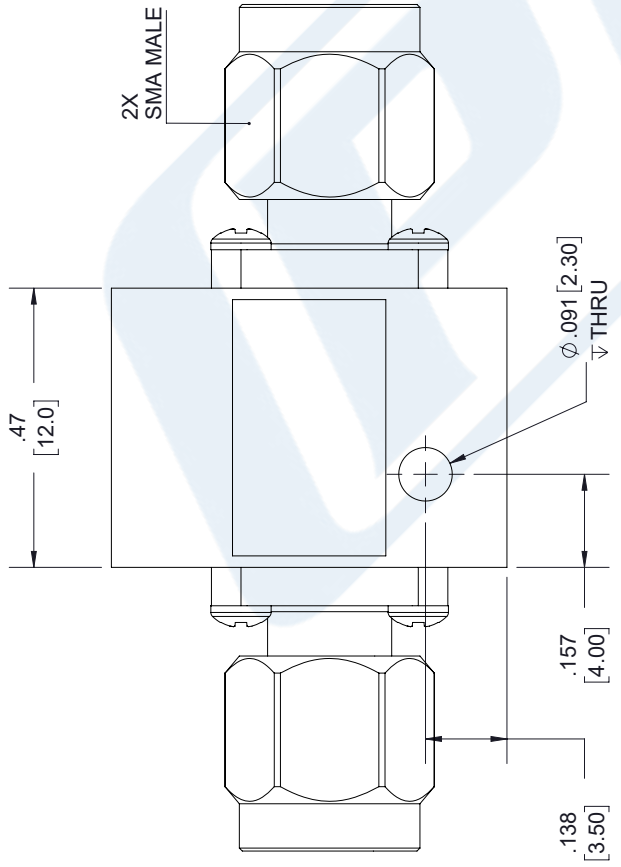
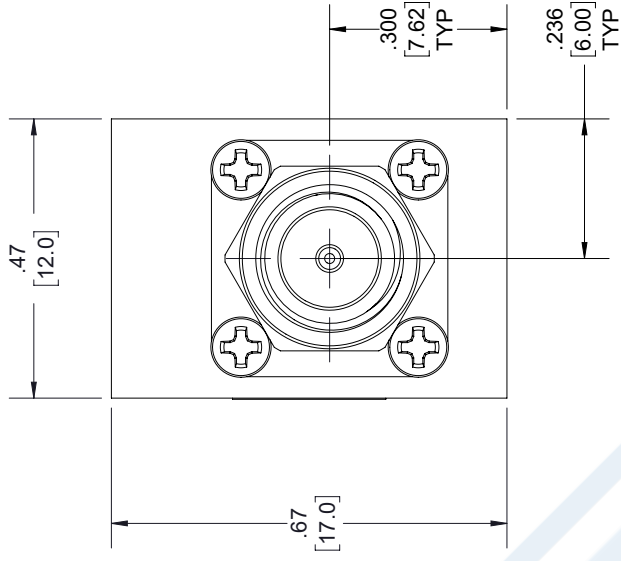
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PE83IR1027 CAD Drawing

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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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

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 ≤ ∞		= +9% / L / -0

ALL DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.

SIZE CAGE CODE DRAWN BY ITEM NO

A	53919	K.DANG	PE83IR1027
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