



Isolator with 14 dB Isolation from 35 GHz to 42.5 GHz, 10 Watts and 2.4mm Female

## Isolators Technical Data Sheet

PE83IR1038

### Features

- Forward Power 10 watts
- Wide-Band Operating of 35 to 42.5 GHz
- Female 2.4mm Connectors
- Low VSWR of 1.60:1 Max
- Low Insertion Loss of 1.6 dB Max
- Good Isolation Performance of 14 dB Minimum

### Applications

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

### Description

The PE83IR1038 is an RF isolator offering a forward power rating of 10 watts over an operational frequency band of 35 to 42.5 GHz. This coaxial part uses 2.4mm female connectors on all ports and has a minimum of 14 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	35		42.5	GHz
Impedance		50		Ohms
Insertion Loss			1.6	dB
Isolation	14			dB
VSWR			1.6:1	
Forward Power, CW			10	Watts

### Mechanical Specifications

Size	
Length	1.02 in [25.91 mm]
Width	0.51 in [12.95 mm]
Height	0.65 in [16.51 mm]
Weight	0.066 lbs [29.94 g]
Body Material and Plating	Copper, 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 14 dB Isolation from 35 GHz to 42.5 GHz, 10 Watts and 2.4mm Female PE83IR1038](#)



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**Configuration**

Direction	Clockwise
Connector 1	2.4mm Female
Connector 2	2.4mm Female

**Environmental Specifications**

**Temperature**

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

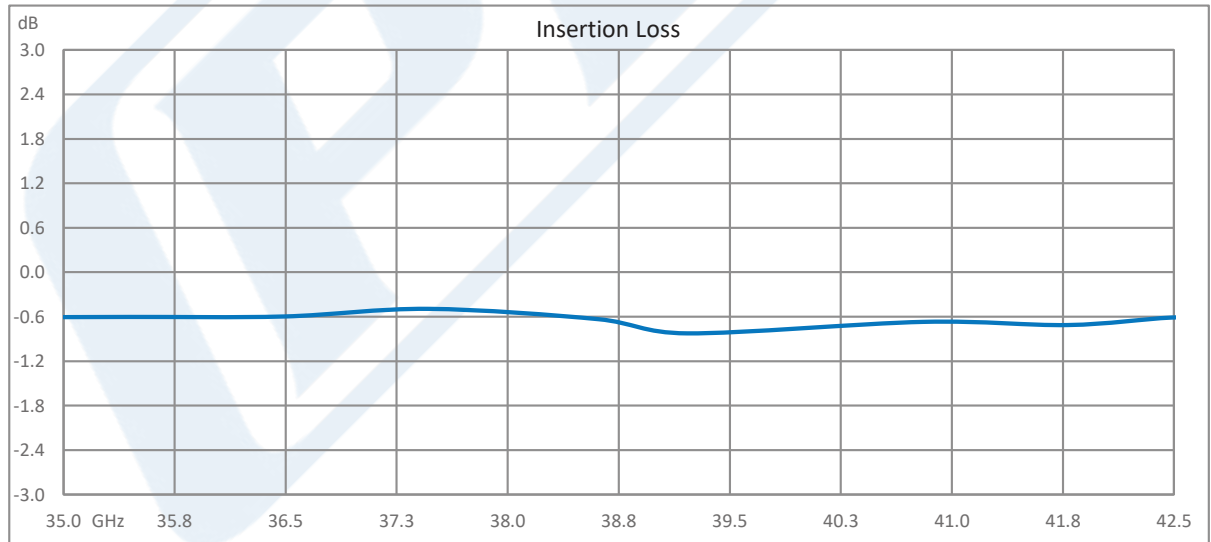
Humidity	100% RH at 35°C, 95%RH at 40°C
Shock	20G for 11msec half sine wave, 3 axis both directions
Vibration	25gRMS (15 degrees 2KHz) endurance, 1 hour per axis
Altitude	30,000 ft. (Epoxy Sealed Controlled environment)

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

**Plotted and Other Data**

Notes:

**Typical Performance Data**



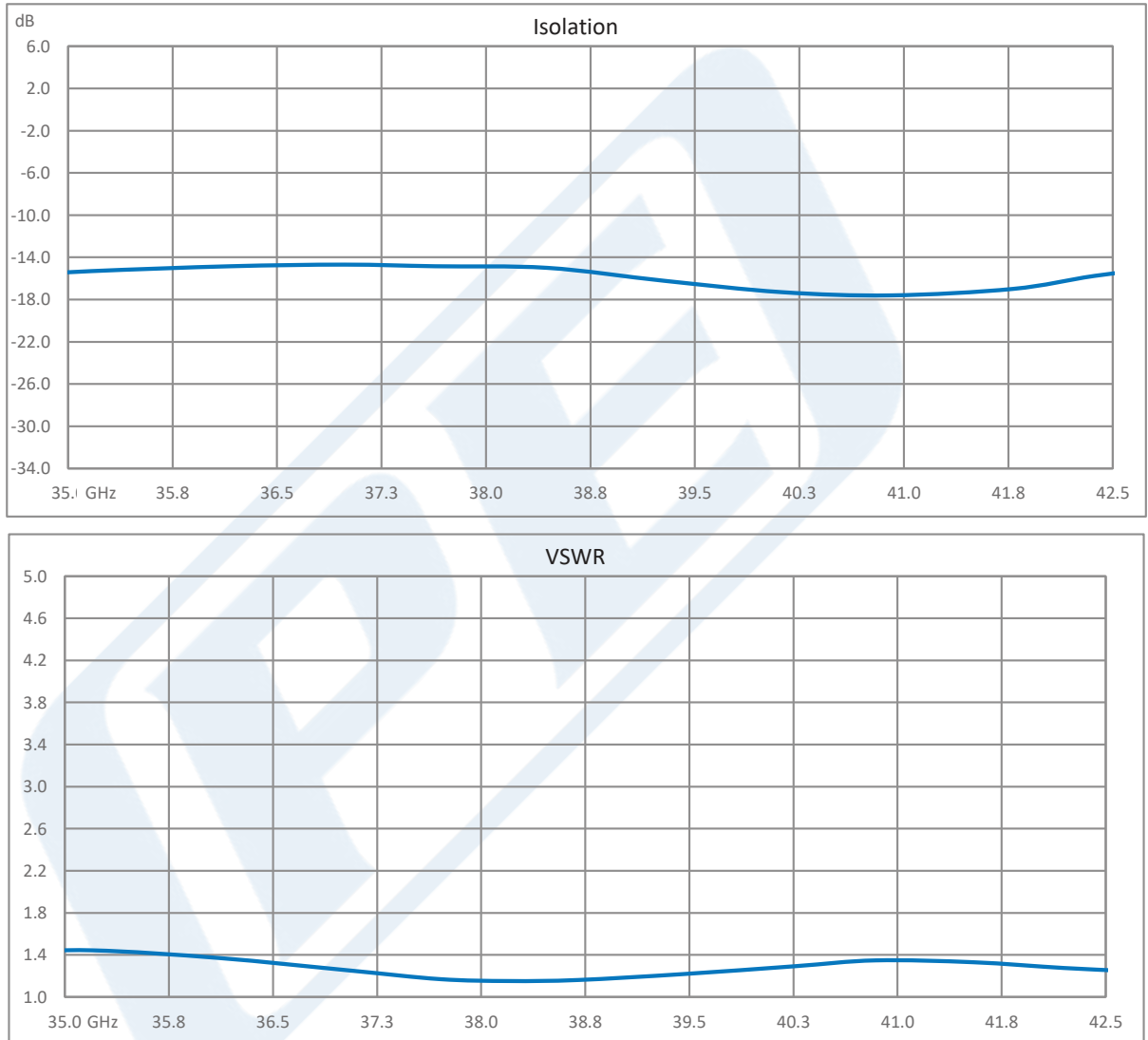
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Isolator with 14 dB Isolation from 35 GHz to 42.5 GHz, 10 Watts and 2.4mm Female from Pasternack Enterprises has same day shipment for domestic and International orders. Our RF, microwave and millimeter wave products maintain a 99.4% availability and are part of the broadest selection in the industry.

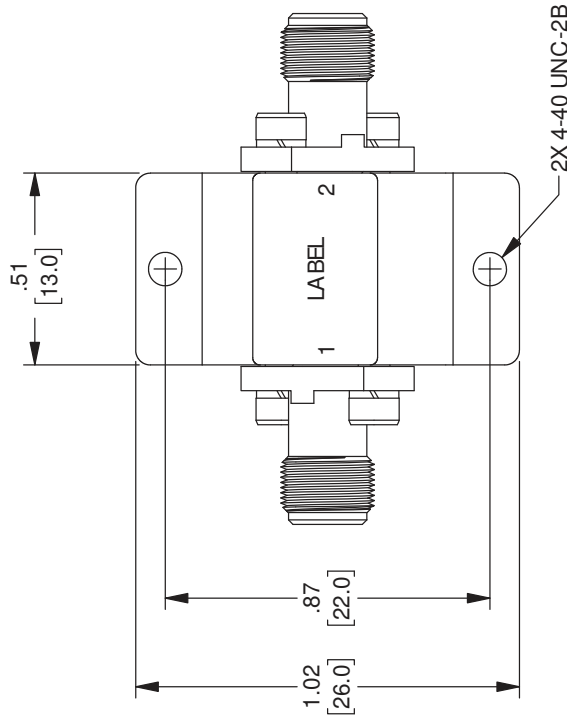
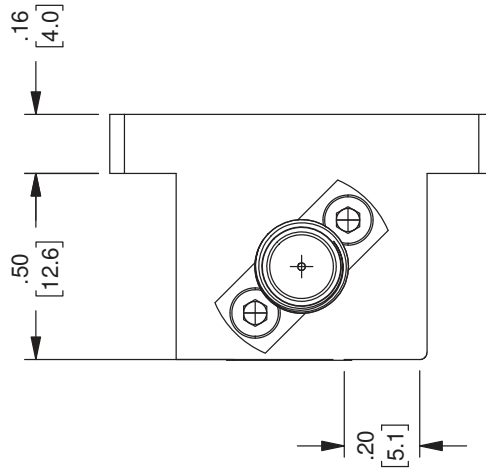
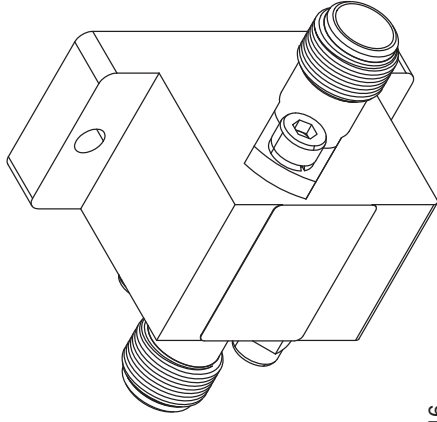
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# PE83IR1038 CAD Drawing

Isolator with 14 dB Isolation from 35 GHz to 42.5 GHz, 10 Watts and 2.4mm Female



LABEL:

PA  
PASTERNAK  
PE83IR1038  
D/C XXXX

UNLESS OTHERWISE SPECIFIED  
LEADING DIMENSIONS ARE 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.



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THIRD-ANGLE PROJECTION



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SHEET 1 OF 1

SCALE N/A

SIZE	CAGE CODE	DRAWN BY	ITEM NO.
A	53919	DFRISIELLO	PE83IR1038
REV			A

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