



Isolator with 18 dB Isolation from 2 GHz to 4 GHz, 10 Watts and SMA Female

Isolators Technical Data Sheet

PE83IR005

Features

- 2 to 4 GHz Frequency Range
- Max Forward Power 10 Watts CW
- Max Reverse Power 1 Watt CW
- Insertion Loss < 0.75 dB
- VSWR < 1.4:1
- Isolation > 18 dB
- SMA Female Connectors

Applications

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

Description

The PE83IR005 is a single junction isolator offering a forward power rating of 10 Watts CW and reverse power rating of 1 Watt CW over an operational frequency band of 2 to 4 GHz. This coaxial isolator uses SMA female connectors on all ports and has a minimum of 18 dB isolation.

Pasternack 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	2		4	GHz
Impedance		50		Ohms
Insertion Loss			0.75	dB
Isolation	18			dB
VSWR			1.4:1	
Forward Power, CW			10	Watts
Reverse Power, CW			1	Watt

Electrical Specification Notes:
Values at 25°C, sea level.

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [Isolator with 18 dB Isolation from 2 GHz to 4 GHz, 10 Watts and SMA Female PE83IR005](#)



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Mechanical Specifications

Size

Length	1.26 in [32 mm]
Width	1.34 in [34.04 mm]
Height	0.71 in [18.03 mm]
Weight	0.198 lbs [89.81 g]
Body Material and Plating	Aluminum

Configuration

Design	Single Junction
Direction	1 to 2
Package Style	Connectorized
Connector 1	SMA Female
Connector 2	SMA Female

Environmental Specifications

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

Plotted and Other Data

Notes:

Isolator with 18 dB Isolation from 2 GHz to 4 GHz, 10 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 18 dB Isolation from 2 GHz to 4 GHz, 10 Watts and SMA Female PE83IR005](#)

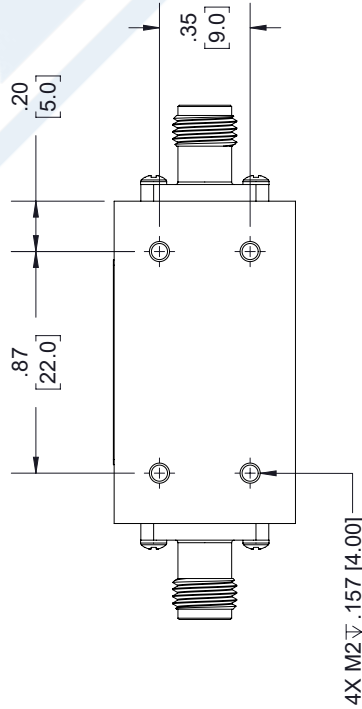
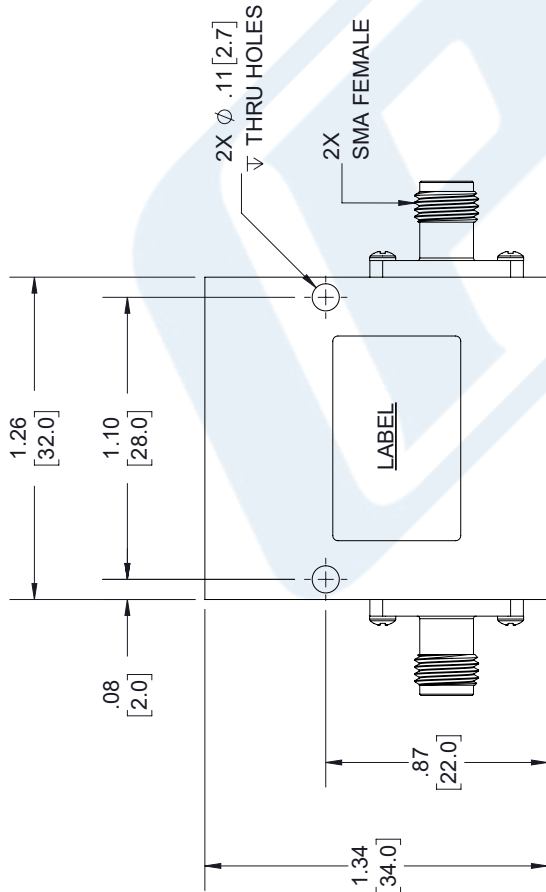
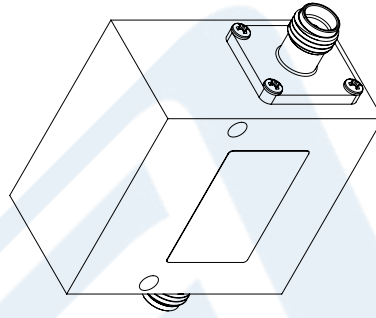
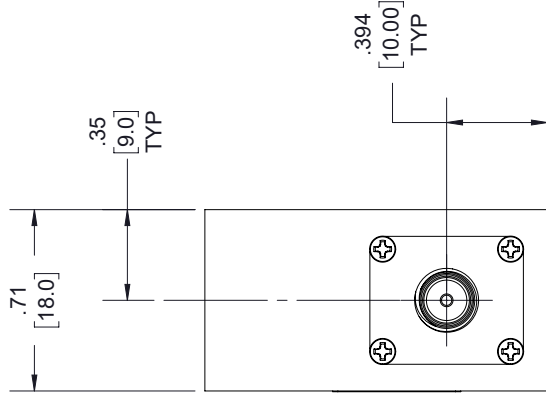
URL: <https://www.pasternack.com/isolator-18db-isolation-4-ghz-10-watts-sma-female-pe83ir005-p.aspx>

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.

PE83IR005 CAD Drawing

Isolator with 18 dB Isolation from 2 GHz to 4 GHz, 10 Watts and SMA Female

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
A	PCR PE83IR005 / SF12040	4/24/2020	S. PONG



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.

THIRD-ANGLE PROJECTION

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SHEET 1 OF 1

SCALE N/A

REV A

ITEM NO. PE83IR005

SIZE A

CAGE CODE 53919

DRAWN BY K. DANG

PE83IR005

REV A



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LABEL

1	PE83IR005	2
	D/C: YYWW	