

Isolator with 20 dB Isolation from 6 to 18 GHz, 10 Watts and SMA Female



PE83IR1054

Features

- 6 to 18 GHz Frequency Range
- Max Forward Power 10 Watt CW
- Max Reverse Power 1 Watt CW
- Insertion Loss 3.5 dB
- VSWR < 1.6:1
- Isolation > 20 dB
- SMA Female Connectors

Applications

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

Description

The PE83IR1054 is a single junction isolator offering a forward power rating of 10 Watt and reverse power rating of 1 Watt CW over an operational frequency band of 6 to 18 GHz. This coaxial isolator uses SMA female connectors on all ports and has a minimum of 20 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	Min	Typ	Max	Units
Frequency Range	6		18	GHz
Impedance		50		Ohms
Insertion Loss		3	3.5	dB
Isolation	20	21		dB
VSWR		1.5:1	1.6:1	
Forward Power, CW			10	Watts
Forward Power, Peak			50	Watts
Reverse Power, CW			1	Watt

Electrical Specification Notes:

Due to the magnetic components in the Isolators, please keep it at least 0.2 inches away from magnetic materials during installation or placement.

Mechanical Specifications

Size

Length	1.18 in [29.97 mm]
Width	2.2 in [55.88 mm]
Height	0.63 in [16 mm]
Weight	0.13 lbs [58.97 g]
Body Material and Plating	Aluminum Alloy

Isolator with 20 dB Isolation from 6 to 18 GHz, 10 Watts and SMA Female



PE83IR1054

Configuration

Design	Single Junction
Direction	Clockwise
Package Style	Connectorized
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 11msc half sin wave, 3 axis both directions
Vibration	25g rms (15 degree 2KHz) endurance, 1 hour per axis
Altitude	30,000 ft. (Epoxy Seal Controlled environment)

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

Plotted and Other Data

Notes:

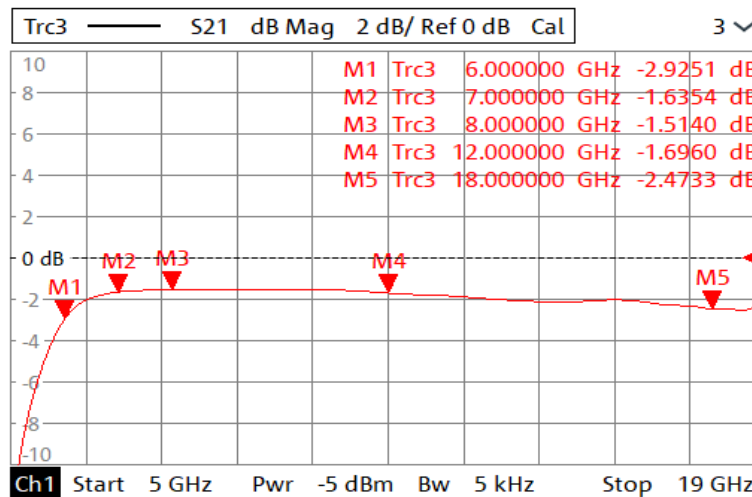
Isolator with 20 dB Isolation from 6 to 18 GHz, 10 Watts and SMA Female



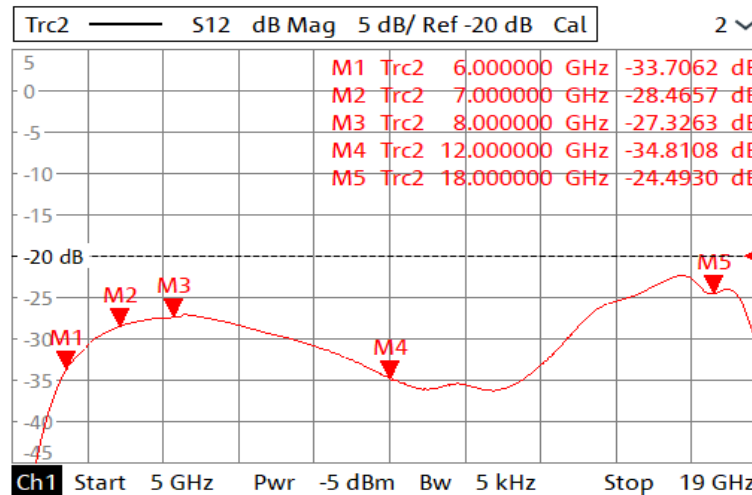
PE83IR1054

Typical Performance Data

Insertion Loss



Isolation

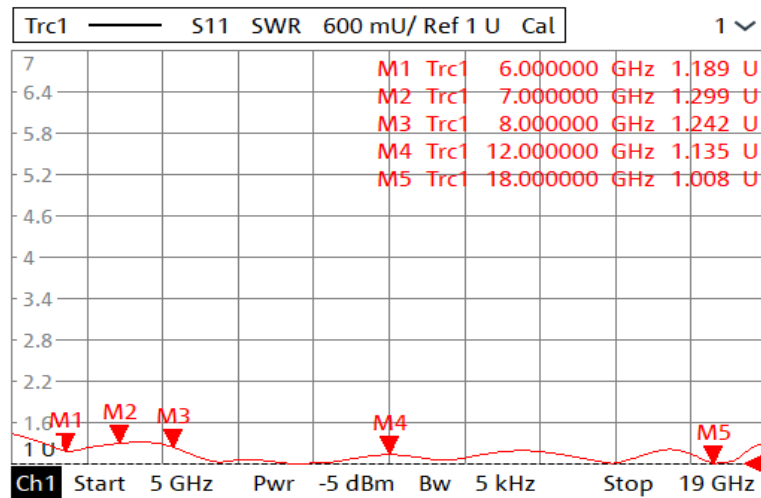


Isolator with 20 dB Isolation from 6 to 18 GHz, 10 Watts and SMA Female

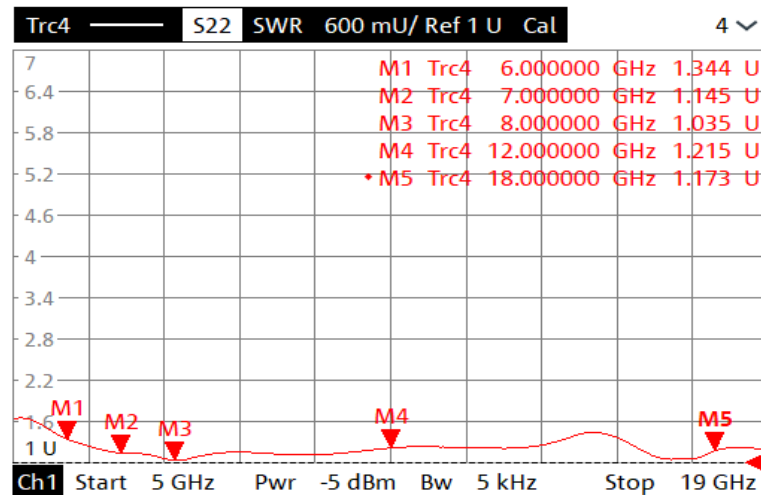


PE83IR1054

VSWR 1



VSWR 2



Isolator with 20 dB Isolation from 6 to 18 GHz, 10 Watts and SMA Female

PE83IR1054



Isolator with 20 dB Isolation from 6 to 18 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 20 dB Isolation from 6 to 18 GHz, 10 Watts and SMA Female PE83IR1054](https://www.pasternack.com/isolator-20db-isolation-18-ghz-10-watts-sma-female-pe83ir1054-p.aspx)

URL: <https://www.pasternack.com/isolator-20db-isolation-18-ghz-10-watts-sma-female-pe83ir1054-p.aspx>

The information contained within 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 Enterprises reserves the right to make such changes as required. Unless otherwise stated, all specifications are nominal. Pasternack Enterprises does not make any representation or warranty regarding the suitability of the part described herein for any particular purpose, and Pasternack Enterprises does not assume liability arising out of the use of any part or document.

PE83IR1054 CAD Drawing
Isolator with 20 dB Isolation from 6 to 18 GHz, 10 Watts and SMA Female

