

80 dB High Isolation SP4T PIN Diode Switch 2 GHz to 6 GHz, 1.8 dB Insertion Loss with SMA

**TECHNICAL DATA SHEET**

**PE71S5003**

Pasternack model PE71S5003 is a general purpose 2.0 GHz to 6.0 GHz single pole, four throw high isolation reflective switch. This switch offers 80 dB typical port-to-port isolation, and a typical insertion loss of 1.0 dB at room temperature. It has an excellent 35 ns typical switching speed, and independently TTL controlled.

**Features**

- SP4T PIN Diode Reflective Switch
- 2 GHz to 6 GHz Frequency Range
- Insertion Loss: 1.8 db typical
- High Isolation: 80 dB typical
- VSWR: 1.5:1
- Fast Switching Speed: 35 nsec.
- Integrated TTL Driver
- Power Handling: +27 dBm
- Operating Temperature Range: -54 °C to 85°C

**Applications**

- Electronic Warfare
  - Radar
  - Test & Measurements
  - Military & Space
  - Military Communication Systems
  - GaAs MMIC-based
- PIN Diode Switch

**Electrical Specifications**

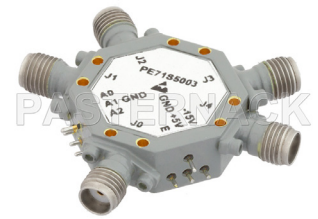
Description	Typical at 25 °C	-54 to +85 °C	Units
Frequency Range	2 - 6	2 - 6	GHz
Insertion Loss	1.8	2.2	dB
Isolation	80	70	dB
VSWR	1.5:1	2:1	
Switching Speed	35	50	ns
DC Bias at 5 VDC	70	80	mA
DC Bias at -15 VDC	40	50	mA
Control Input	TTL	TTL	
Power Handling	+27	+27	dBm

**TTL Logic Table**

TRUTH TABLE				
A0	A1	A2	E	POSITION
1	0	0	1	J0-J1
0	1	0	1	J0-J2
0	0	1	1	J0-J3
1	0	1	1	J0-J4
X	X	X	0	DISABLED

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [80 dB High Isolation SP4T PIN Diode Switch 2 GHz to 6 GHz, 1.8 dB Insertion Loss with SMA PE71S5003](#)





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**Absolute Maximum Rating**

Parameter	Rating	Units
Positive Voltage	+7	Volts
Negative Voltage	-14	Volts
RF input Power	+24	dBm
Operating Temperature	-54 to +85	°C
Storage Temperature	-55 to +100	°C



ESD Sensitive Material,  
Transport material in  
Approved ESD bags.  
Handle only in approved  
ESD Workstation.

**Mechanical Specifications**

**Environmental Specifications By Design**

**Temperature**

Operating Range

-54 to +85 deg C

Humidity

Mil-STD-810 507.4

Shock

Mil-STD-810 method 504, 516.5

Vibration

Mil-STD-810 514.6

Temperature Cycle

Mil-STD-810 501.5, 502.5

**Compliance Certifications** (visit [www.Pasternack.com](http://www.Pasternack.com) for current document)

Not RoHS Compliant

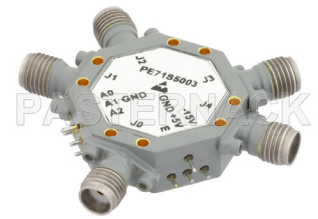
**Plotted and Other Data**

Notes:

- Values at +25 °C, sea level
- ESD Sensitive Material, Transport material in Approved ESD bags. Handle only in approved ESD Workstation.

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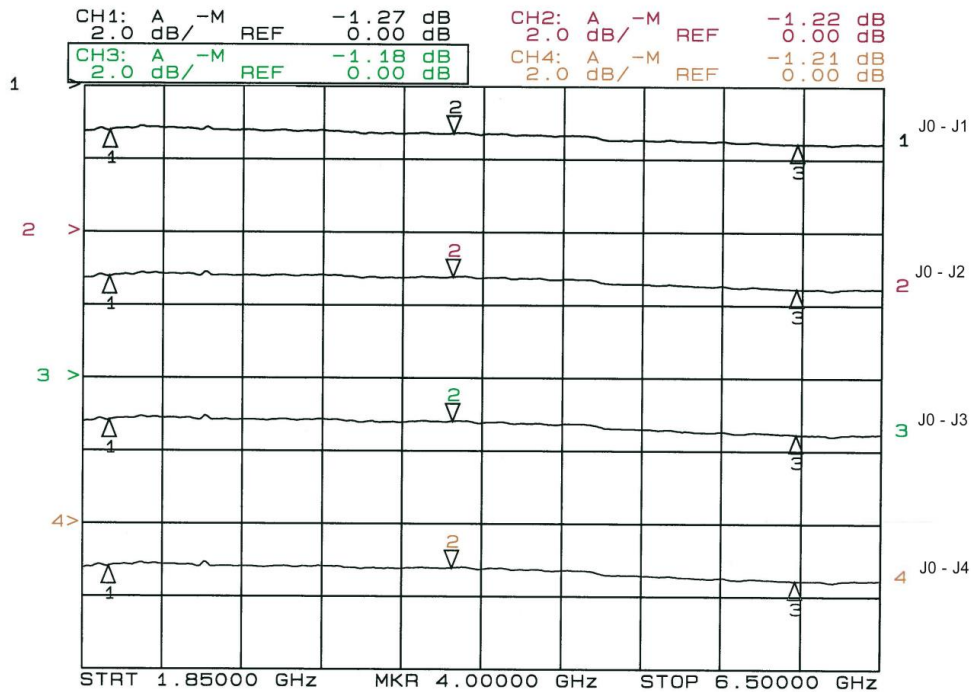


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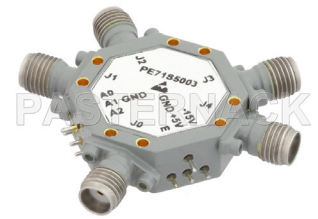
**Power Data**



**Insertion Loss**

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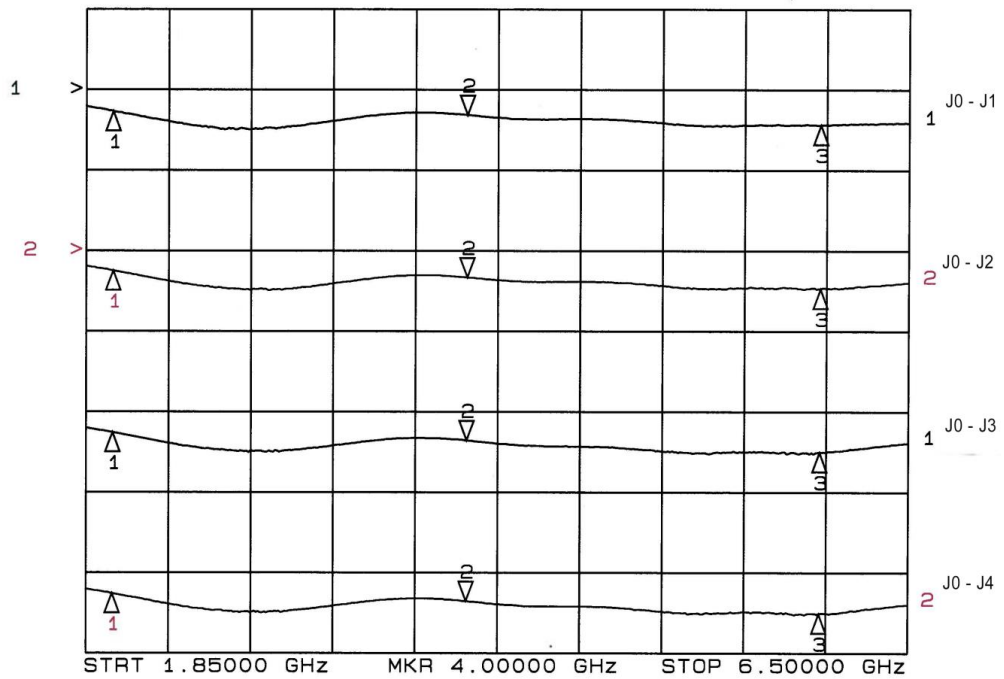


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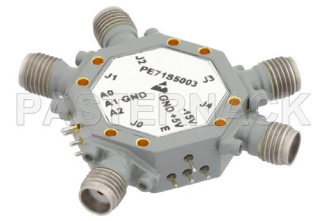
CH1: R / -M REF +1.188 SWR 1.500 SWR  
 CH2: R / -M REF +1.169 SWR 1.500 SWR



VSWR

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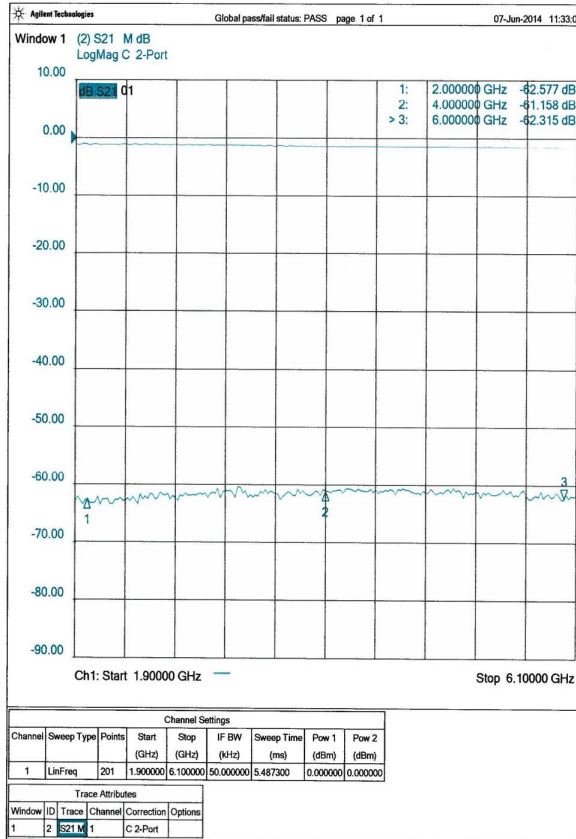




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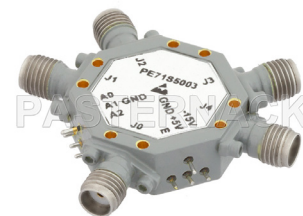


J3 - J2

Isolation J3 to J2

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80 dB High Isolation SP4T PIN Diode Switch 2 GHz to 6 GHz, 1.8 dB Insertion Loss with SMA from Pasternack Enterprises has same day shipment for domestic and International orders. Our RF, microwave and millimeter wave products maintain a 99% availability and are part of the broadest selection in the industry.

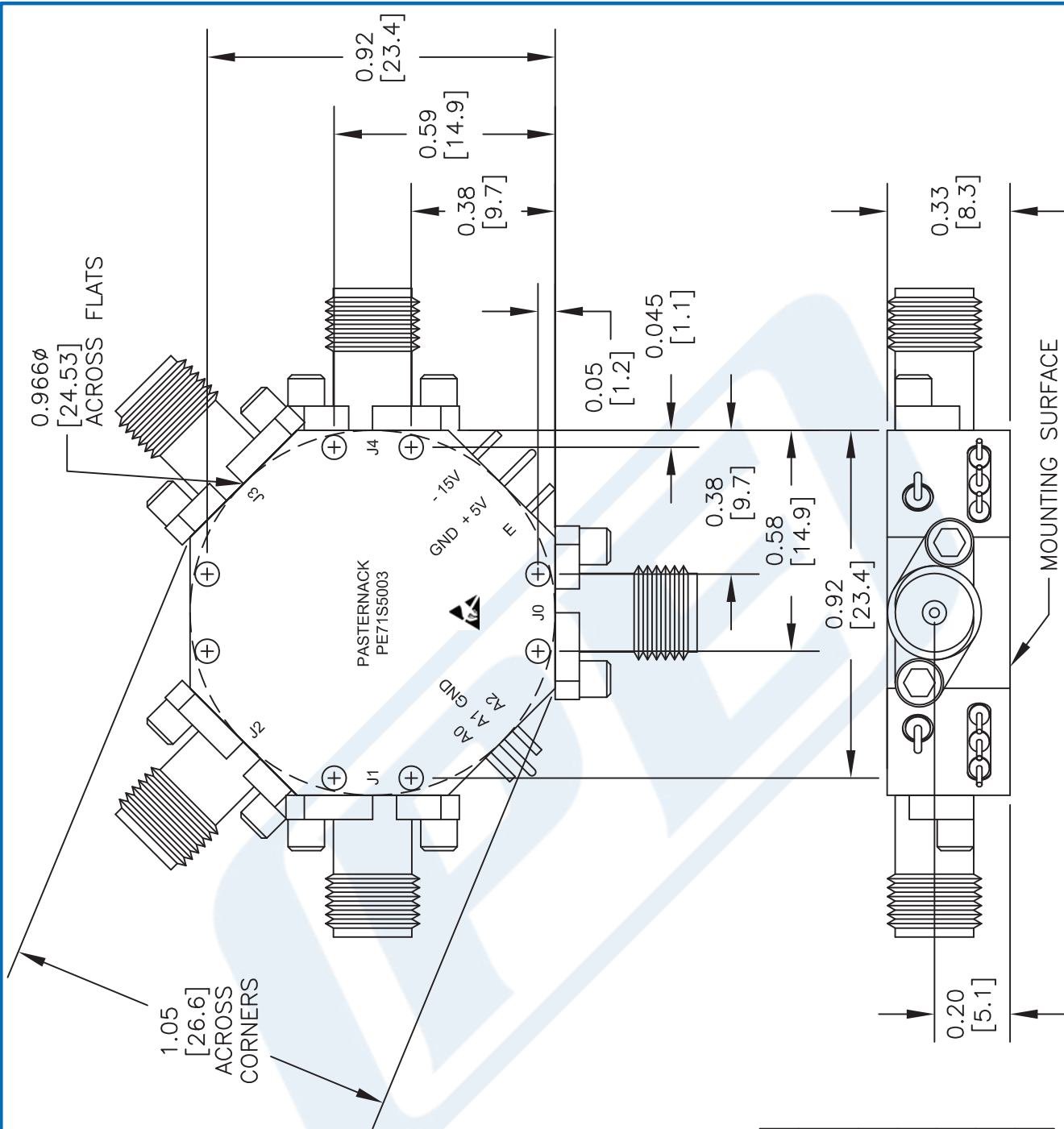
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The information contained in this document is accurate to the best of our knowledge and representative of the part described herein. It may be necessary to make modifications to the part and/or the documentation of the part, in order to implement improvements.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

# PE71S5003 CAD Drawing

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- NOTES:
1. UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE NOMINAL.
  2. ALL SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE AT ANY TIME.
  3. DIMENSIONS ARE IN INCHES [mm].

DWG TITLE  
**PE71S5003**

**PE PASTERNAK**  
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CAD FILE 080414 SCALE N/A SIZE A 2233

FSCM NO. 53919

TRUTH TABLE

A0	A1	A2	E	POSITION
1	0	0	1	J0-J1
0	1	0	1	J0-J2
0	0	1	1	J0-J3
1	0	1	1	J0-J4
X	X	X	0	DISABLED