



## 90 dB High Isolation SPDT PIN Diode Switch 1 GHz to 2 GHz, 1 dB Insertion Loss with SMA

### TECHNICAL DATA SHEET

### PE71S5002

Pasternack model PE71S5002 is a general purpose 1.0 GHz to 2.0 GHz single pole, double throw high isolation, absorptive switch. This switch offers 90 dB typical port-to-port isolation, and a typical insertion loss of 1.0 dB at room temperature. It has a 75 ns typical switching speed, and independently TTL controlled.

#### Features

- SPDT PIN Diode Absorptive Switch
- 1 GHz to 2 GHz Frequency Range
- Insertion Loss: 1.0 db typical
- High Isolation: 90 dB typical
- VSWR: 1.3:1
- Fast Switching Speed: 75 nsec.
- Integrated TTL Driver
- Power Handling: +32 dBm
- Operating Temperature Range: -54 °C to 85°C

#### Applications

- Electronic Warfare
- Radar
- Test & Measurements
- Military & Space
- Military Communication Systems
- PIN diode switch

#### Electrical Specifications

Description	Typical at 25 °C	-54 to +85 °C	Units
Frequency Range	1 - 2	1 - 2	GHz
Insertion Loss	1	1.2	dB
Isolation	90	85	dB
VSWR	1.3:1	1.5:1	
Switching Speed	75	100	ns
DC Bias at 5 VDC	70	80	mA
DC Bias at -15 VDC	40	50	mA
Control Input	TTL	TTL	
Power Handling	+32	+30	dBm

#### TTL Logic Table

TTL LOGIC TABLE		
CTL	J1-J2	J1-J3
0	LOW LOSS	INSOLATED
1	INSOLATED	LOW LOSS

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [90 dB High Isolation SPDT PIN Diode Switch 1 GHz to 2 GHz, 1 dB Insertion Loss with SMA PE71S5002](#)



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**Absolute Maximum Rating**

Parameter	Rating	Units
Positive Voltage	+7	Volts
Negative Voltage	-14	Volts
RF input Power	+30	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**

**Size**

Length	1.2 in [30.48 mm]
Width/Dia.	0.9 in [22.86 mm]
Height	0.35 in [8.89 mm]

**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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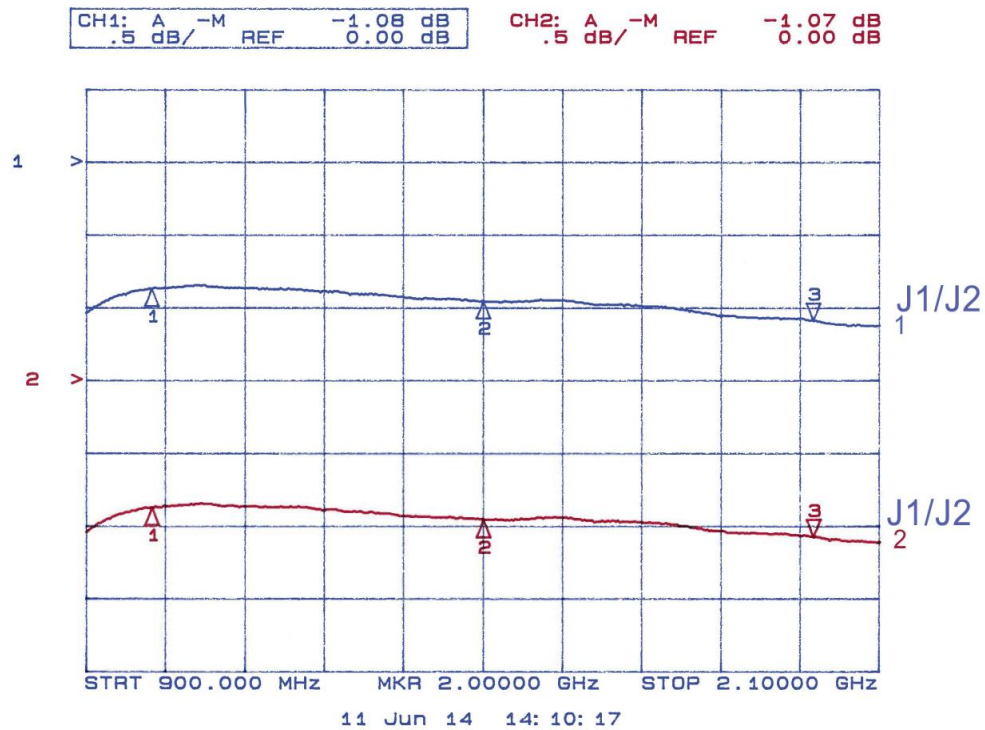


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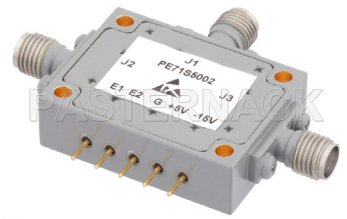
**Power Data**



**Insertion Loss**

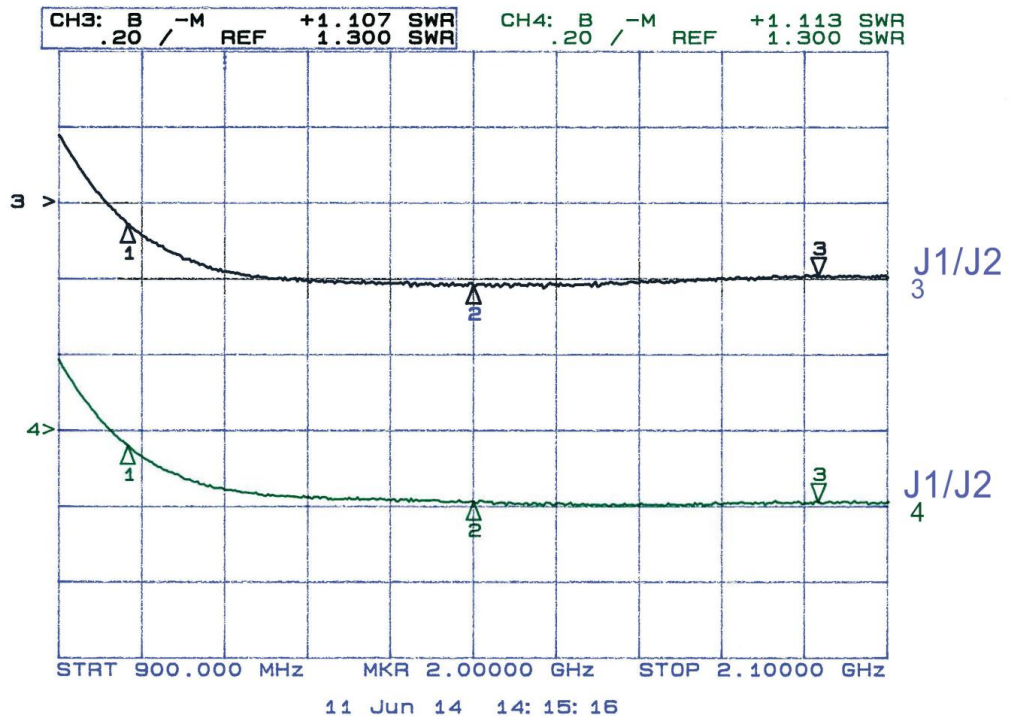
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VSWR

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90 dB High Isolation SPDT PIN Diode Switch 1 GHz to 2 GHz, 1 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.

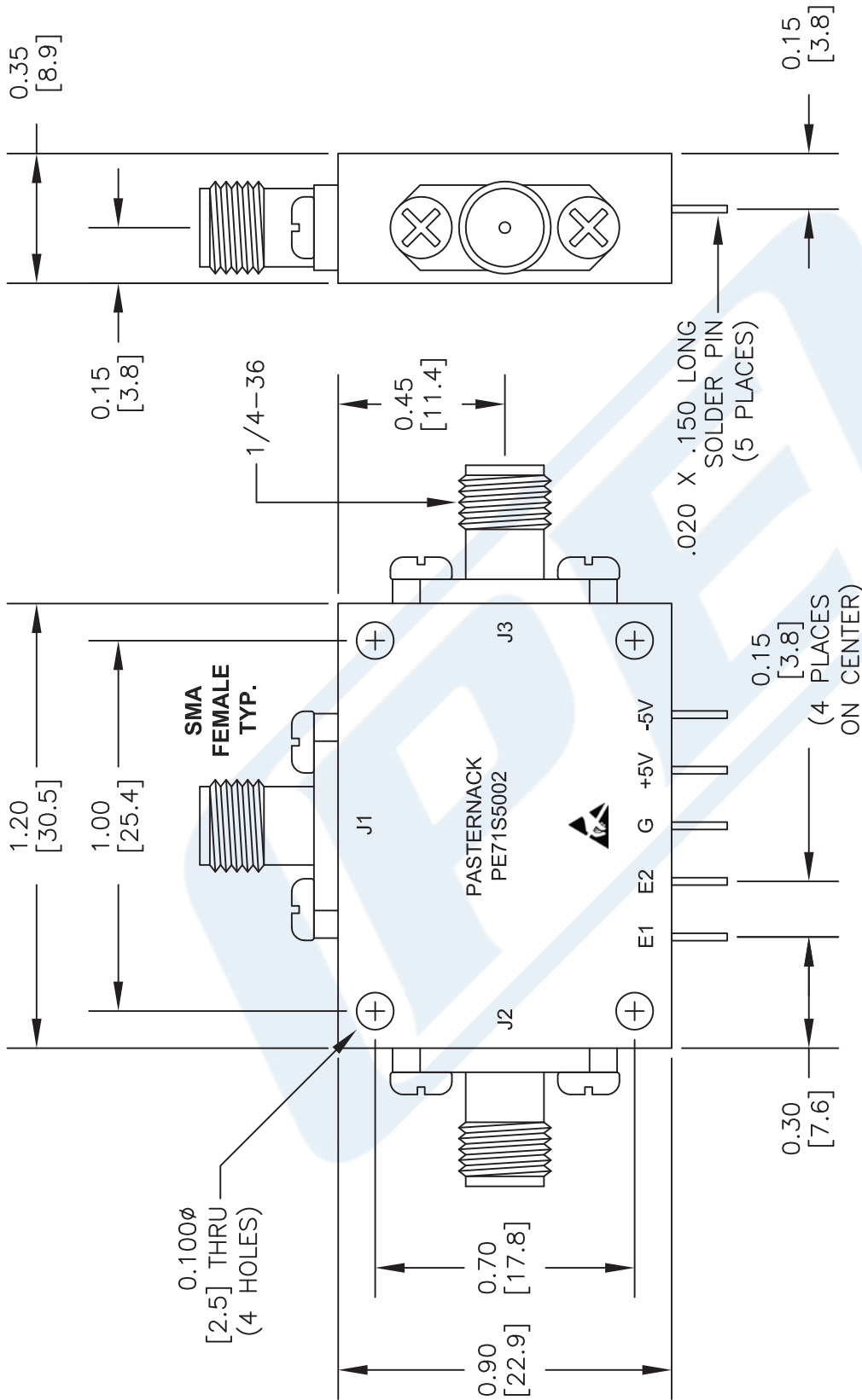
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The information contained in this document is accurate to the best of our knowledge and representative of the part described herein. It may be necessary to make modifications to the part and/or the documentation of the part, in order to implement improvements.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

# PE71S5002 CAD Drawing

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TTL LOGIC TABLE	
CTL	J1 - J3
0	LOW LOSS
1	INSULATED
	LOW LOSS

DWG TITLE

**PE71S5002**

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].

**PE PASTERNAK**  
 THE ENGINEER'S RF SOURCE  
 Pasternack Enterprises, Inc.  
 P.O. Box 16759 | Irvine | CA | 92623  
 Phone: (949) 261-1920 | Fax: (949) 261-7451  
 Website: www.pasternack.com | E-Mail: sales@pasternack.com

FSCM NO. 53919

CAD FILE 051214

SCALE N/A

SIZE A

2233