

75 dB High Isolation SP4T PIN Diode Switch 6 GHz to 12 GHz, 2.5 dB Insertion Loss with SMA

TECHNICAL DATA SHEET

PE71S5004

Pasternack model PE71S5004 is a general purpose 6.0 GHz to 12.0 GHz single pole, four throw high isolation reflective switch. This switch offers 75 dB typical port-to-port isolation, and a typical insertion loss of 2.5 dB at room temperature. It has an excellent 40 ns typical switching speed, and independently TTL controlled.

Features

- SP4T GaAs PIN Diode Reflective Switch
- 6 GHz to 12 GHz Frequency Range
- Insertion Loss: 2.5 db typical
- High Isolation: 75 dB typical
- VSWR: 1.5:1
- Fast Switching Speed: 40 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

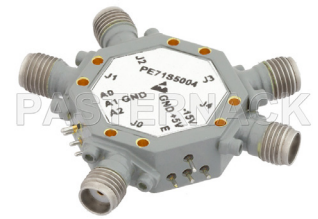
| Description | Typical at 25 °C | -54 to +85 °C | Units |
|--------------------|------------------|---------------|-------|
| Frequency Range | 6 - 12 | 6 - 12 | GHz |
| Insertion Loss | 2.5 | 3 | dB |
| Isolation | 75 | 70 | dB |
| VSWR | 1.5:1 | 2:1 | |
| Switching Speed | 40 | 50 | ns |
| DC Bias 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: [75 dB High Isolation SP4T PIN Diode Switch 6 GHz to 12 GHz, 2.5 dB Insertion Loss with SMA PE71S5004](#)





75 dB High Isolation SP4T PIN Diode Switch 6 GHz to 12 GHz, 2.5 dB Insertion Loss with SMA

TECHNICAL DATA SHEET

PE71S5004

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 for current document)

Not RoHS Compliant

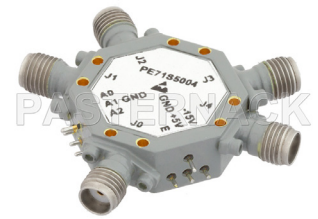
Plotted and Other Data

Notes:

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

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [75 dB High Isolation SP4T PIN Diode Switch 6 GHz to 12 GHz, 2.5 dB Insertion Loss with SMA PE71S5004](#)



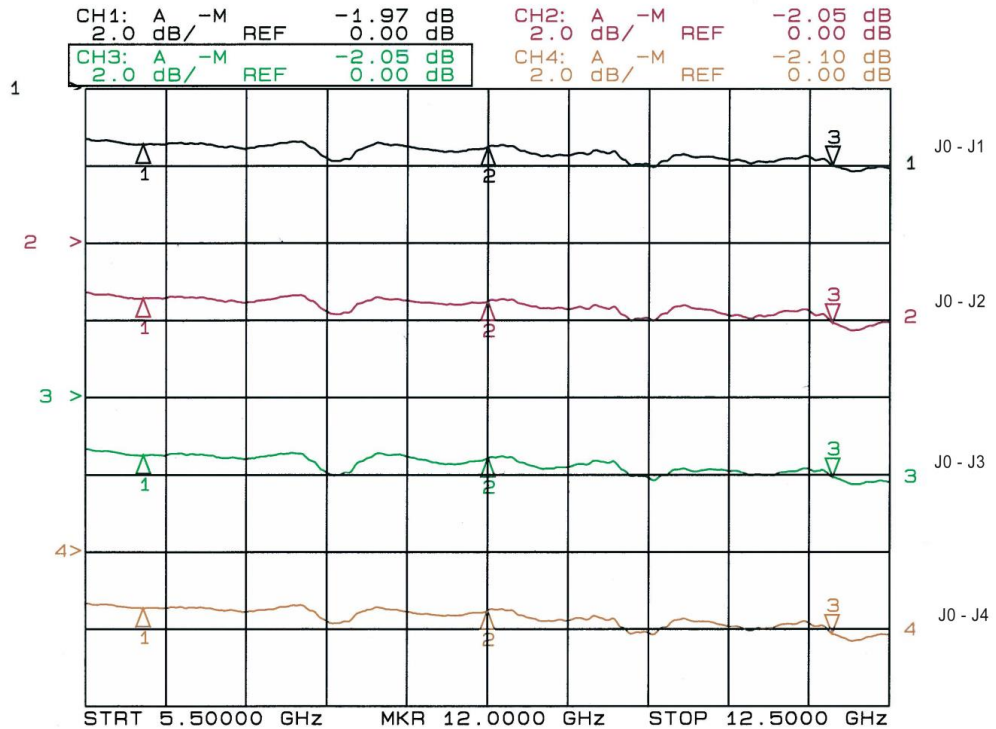


75 dB High Isolation SP4T PIN Diode Switch 6 GHz to 12 GHz, 2.5 dB Insertion Loss with SMA

TECHNICAL DATA SHEET

PE71S5004

Power Data



Insertion Loss

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [75 dB High Isolation SP4T PIN Diode Switch 6 GHz to 12 GHz, 2.5 dB Insertion Loss with SMA PE71S5004](#)

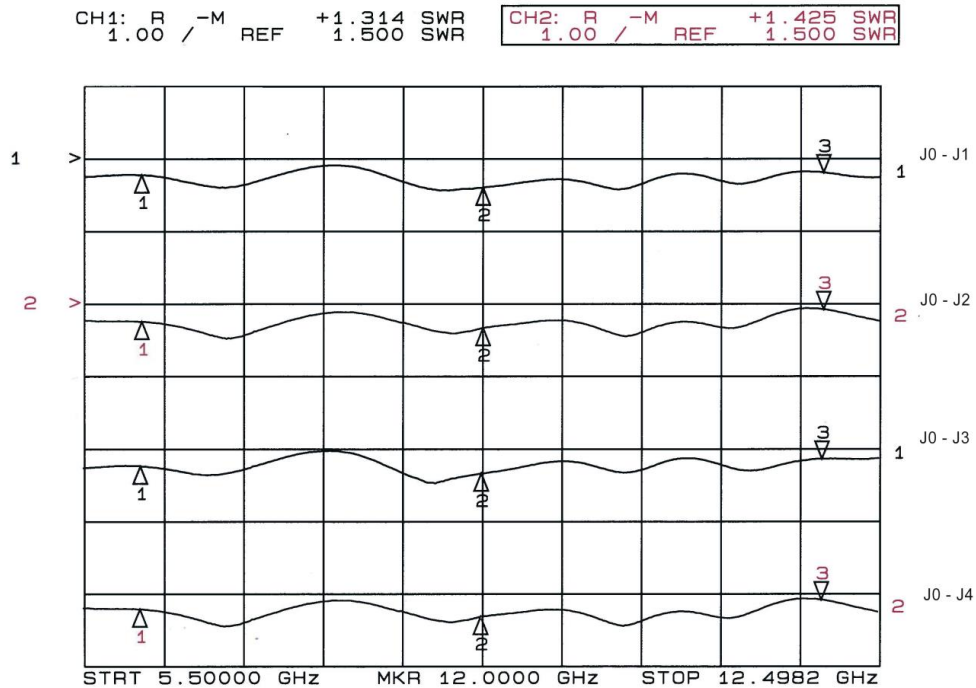




75 dB High Isolation SP4T PIN Diode Switch 6 GHz to 12 GHz, 2.5 dB Insertion Loss with SMA

TECHNICAL DATA SHEET

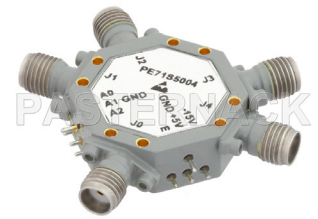
PE71S5004



Insertion Loss

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [75 dB High Isolation SP4T PIN Diode Switch 6 GHz to 12 GHz, 2.5 dB Insertion Loss with SMA PE71S5004](#)

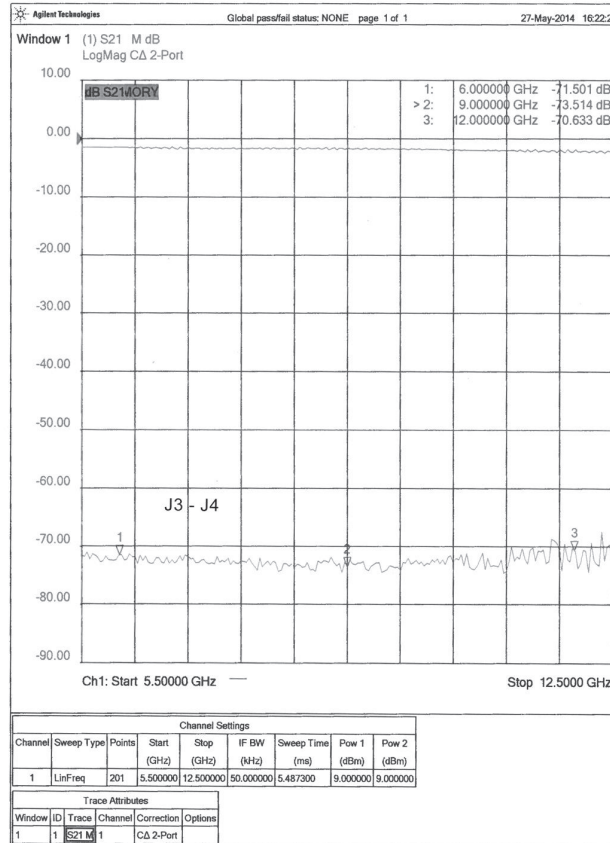




75 dB High Isolation SP4T PIN Diode Switch 6 GHz to 12 GHz, 2.5 dB Insertion Loss with SMA

TECHNICAL DATA SHEET

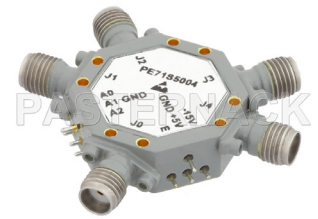
PE71S5004



Isolation J3 to J4

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [75 dB High Isolation SP4T PIN Diode Switch 6 GHz to 12 GHz, 2.5 dB Insertion Loss with SMA PE71S5004](#)





75 dB High Isolation SP4T PIN Diode Switch 6 GHz
to 12 GHz, 2.5 dB Insertion Loss with SMA

TECHNICAL DATA SHEET

PE71S5004

75 dB High Isolation SP4T PIN Diode Switch 6 GHz to 12 GHz, 2.5 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.

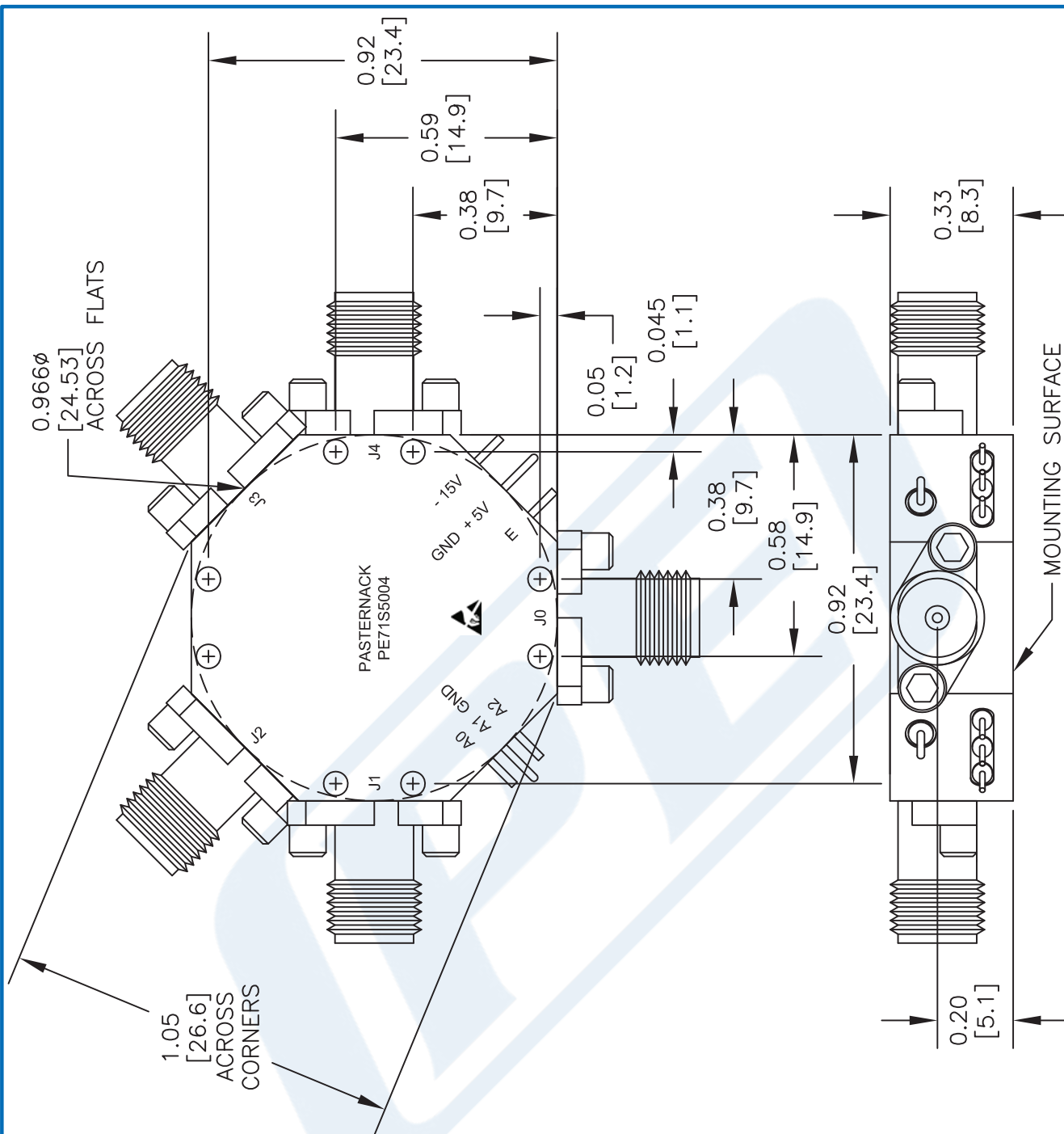
Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [75 dB High Isolation SP4T PIN Diode Switch 6 GHz to 12 GHz, 2.5 dB Insertion Loss with SMA PE71S5004](http://www.pasternack.com/sp4t-high-isolation-pin-diode-switch-6-12-ghz-sma-pe71s5004-p.aspx)

URL: <http://www.pasternack.com/sp4t-high-isolation-pin-diode-switch-6-12-ghz-sma-pe71s5004-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.

PE71S5004 CAD Drawing

75 dB High Isolation SP4T PIN Diode Switch 6 GHz to 12 GHz, 2.5 dB Insertion Loss with SMA



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
PE71S5004

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

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 |