



Absorptive SP3T PIN Diode Switch Operating From 500 MHz to 40 GHz Up to 0.1 Watts (+20 dBm) and Field Replaceable 2.92mm

## PIN Diode Switches Technical Data Sheet

PE71S6216

### Features

- SP3T Absorptive Switch
- 0.5 GHz to 40.0 GHz
- Insertion Loss 6.0 dB typ
- Isolation 60 dB min
- Power Input 20 dBm CW typ
- Field Replaceable Connectors

### Applications

- Test & Measurement
- Military Communication
- Commercial Communication
- Wireless Communications
- SATCOM
- Military Electronic Systems
- RF Test Stations

### Description

The PE71S6216 is a Single Pole Three Throw (SP3T) Absorptive PIN Diode Switch that operates from 0.5 GHz to 40 GHz. The output port is terminated in 50 ohms when switched in the isolation (off) state. Outstanding performance includes 6 dB typ insertion loss, 60 dB min isolation and 50 ns max switching speed. The design incorporates TTL compatible driver circuitry for accurate logic control. Operational temperature range is -40°C to +85°C and dual voltage controls of +5 VDC and -5 VDC are required. The rugged package is designed to meet a series of MIL-STD-202F environmental conditions including humidity, shock, vibration, and temperature cycle. Package interfaces include solder terminals and female 2.92mm connectors.

### Electrical Specifications

Description	Minimum	Typical	Maximum	Units
Frequency Range	0.5		40	GHz
Impedance		50		Ohms
Insertion Loss		6		dB
Isolation	60			dB
Switching Time			50	ns
Input Power (CW)			0.1	Watts
Survival Power			1	Watts
Positive Operating Voltage		5		Vdc
Negative Operating Voltage		-5		Vdc
Current @ 5 Vdc		200		mA
Current @ -5 Vdc		100		mA
Operating Temperature	-40		+85	deg C

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [Absorptive SP3T PIN Diode Switch Operating From 500 MHz to 40 GHz Up to 0.1 Watts \(+20 dBm\) and Field Replaceable 2.92mm PE71S6216](#)



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### Mechanical Specifications

#### Size

Length	1 in [25.4 mm]
Width	1 in [25.4 mm]
Height	0.5 in [12.7 mm]
Design	Absorptive, SP3T
RF Connector	2.92mm Female
RF Connector Option	Field Replaceable
TTL Control Connector	Solder Pin

### Environmental Specifications

#### Temperature

Operating Range	-40 to +85 deg C
Storage Range	-55 to +125 deg C

Humidity

Shock

Vibration

Altitude

Temperature Cycling

ESD Sensitivity

MIL-STD-202F, METHOD 103B COND. B  
MIL-STD-202F, METHOD 213B COND. B  
MIL-STD-202F, METHOD 204D COND. B  
MIL-STD-202F, METHOD 105C COND. B  
MIL-STD-202F, METHOD 107D COND. A  
ESD Sensitive Material, Transport material in Approved  
ESD bags. Handle only in ESD Workstation.



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

Not RoHS Compliant

REACH Compliant

12/17/2015

### Plotted and Other Data

Notes:

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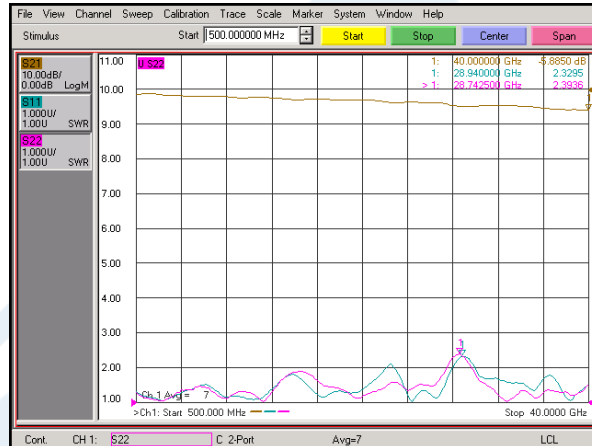
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PIN Diode Switches Technical Data Sheet

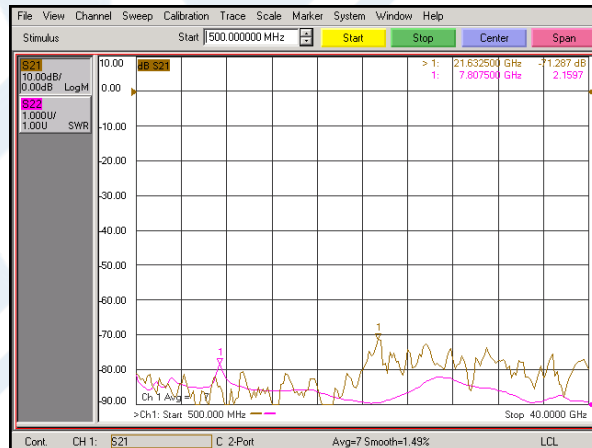
PE71S6216

Typical Performance Data

(J1 – J2) Insertion Loss and Return Loss



(J1 – J2) Isolation and Termination Return Loss



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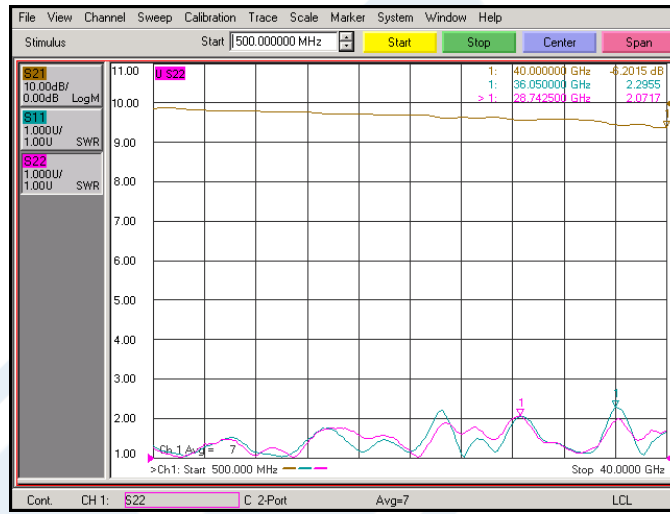


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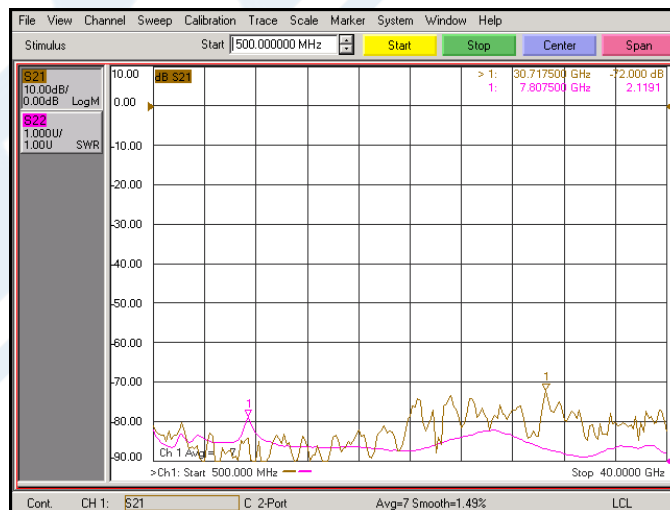
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**(J1 – J3) Insertion Loss and Return Loss**



**(J1 – J3) Isolation and Termination Return Loss**



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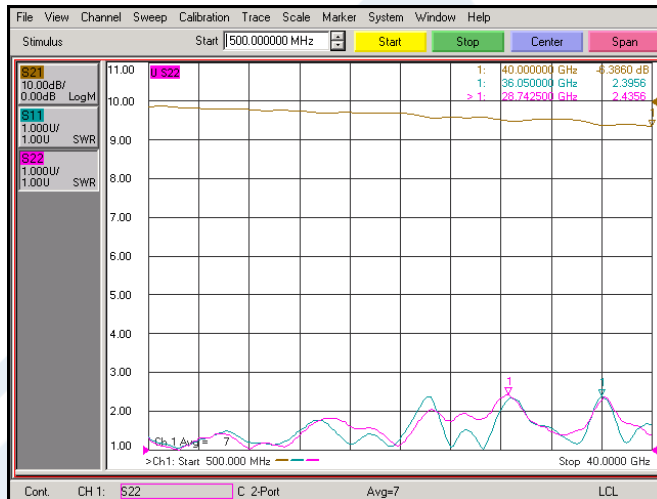


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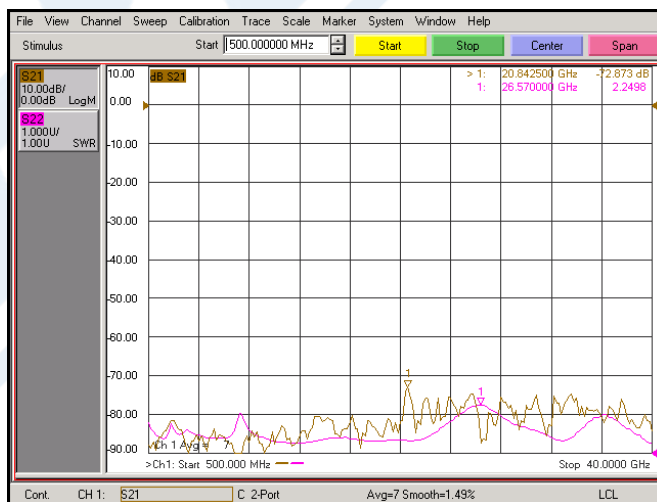
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**(J1 – J4) Insertion Loss and Return Loss**



**(J1 – J4) Isolation and Termination Return Loss**



Absorptive SP3T PIN Diode Switch Operating From 500 MHz to 40 GHz Up to 0.1 Watts (+20 dBm) and Field Replaceable 2.92mm 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: [Absorptive SP3T PIN Diode Switch Operating From 500 MHz to 40 GHz Up to 0.1 Watts \(+20 dBm\) and Field Replaceable 2.92mm PE71S6216](#)





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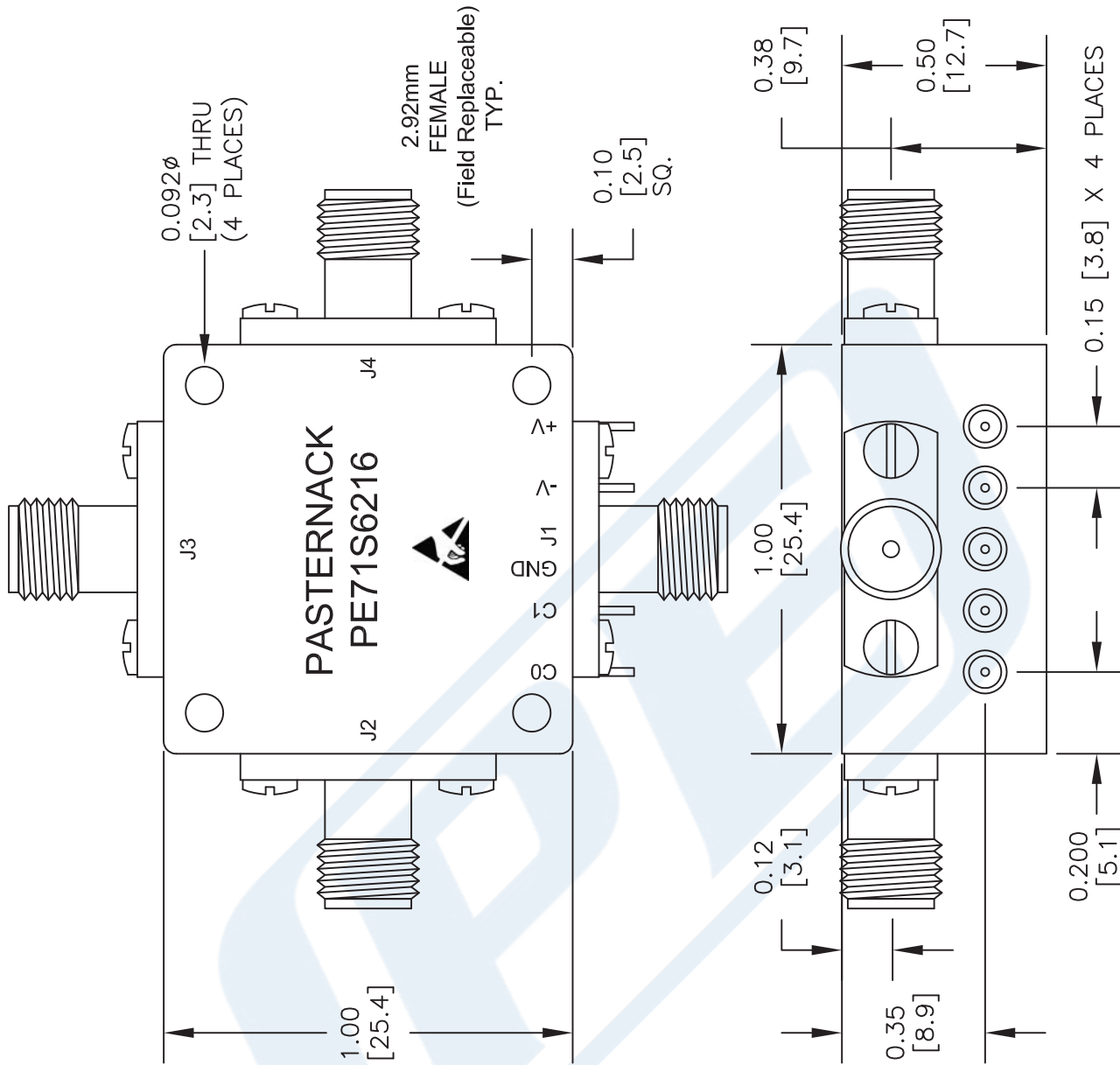
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The information contained in this document is accurate to the best of our knowledge and representative of the part described herein. It may be necessary to make modifications to the part and/or the documentation of the part, in order to implement improvements.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

# PE71S6216 CAD Drawing

Absorptive SP3T PIN Diode Switch Operating From 500 MHz to 40 GHz  
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CTL 1	CTL 0	J1-J2	J1-J3	J1-J4
0	0	ON	OFF	OFF
0	1	OFF	ON	OFF
1	0	OFF	OFF	ON
1	1	OFF	OFF	OFF

ALL DIMENSIONS ARE IN INCHES.  
TOLERANCES:  
X.XX ±0.010  
X.XXX ±0.005

\* THESE DIMENSIONS AND TOLERANCES  
SUPERSEDE NOTE #1 ON TITLE BLOCK.

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  
**PE71S6216**

FSCM NO. 53919

CAD FILE 041916

SCALE N/A

SIZE A

2233

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