



Absorptive SP4T 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

PE71S6217

Features

- SP4T Absorptive Switch
- 0.5 GHz to 40.0 GHz
- High Speed Switching
- Insertion Loss 8.0 dB max
- Isolation 60 dB min
- Power Input 20 dBm CW max
- Field Replaceable Connectors

Applications

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

Description

The PE71S6217 is a Single Pole Four Throw (SP4T) 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 8.0 dB max 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
VSWR			2.5:1	
Insertion Loss			8	dB
Isolation	60			dB
Rise Time			15	ns
Fall Time			15	ns
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		250		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 SP4T PIN Diode Switch Operating From 500 MHz to 40 GHz Up to 0.1 Watts \(+20 dBm\) and Field Replaceable 2.92mm PE71S6217](#)



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Mechanical Specifications

Size

Length	2.75 in [69.85 mm]
Width	1.5 in [38.1 mm]
Height	0.4 in [10.16 mm]
Weight	0.1 lbs [45.36 g]
Finish	Blue Paint

Configuration

Design	Absorptive, SP4T
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

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 for current document)

Not RoHS Compliant

REACH Compliant

12/17/2015

Plotted and Other Data

Notes:

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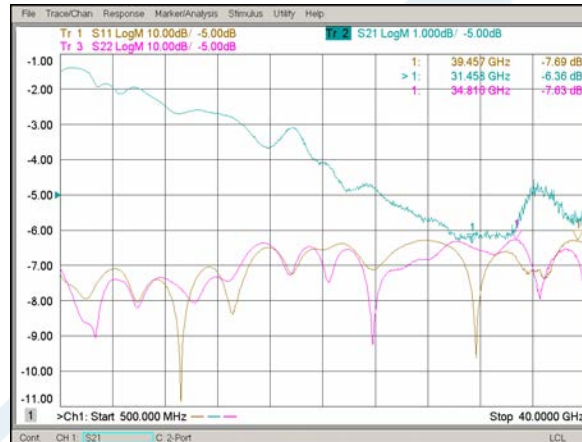
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Typical Performance Data

(J1 – J2) Insertion Loss and Return Loss



(J1 – J3) Insertion Loss and Return Loss



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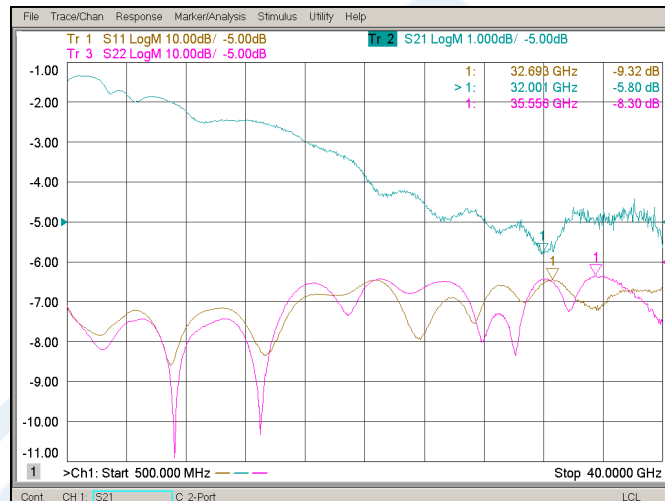


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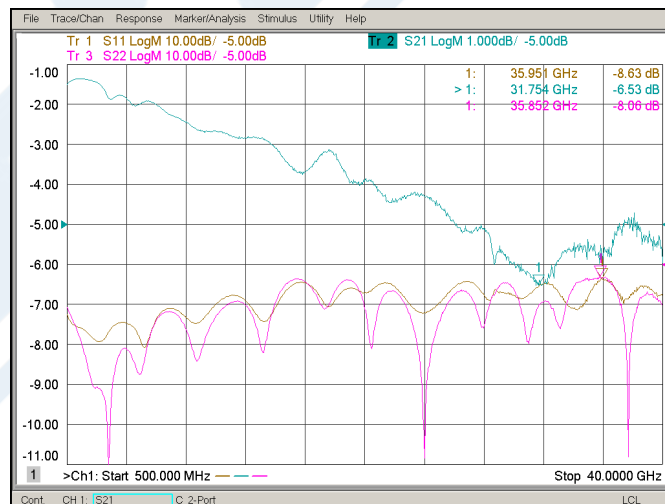
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(J1 – J4) Insertion Loss and Return Loss



(J1 – J5) Insertion Loss and Return Loss



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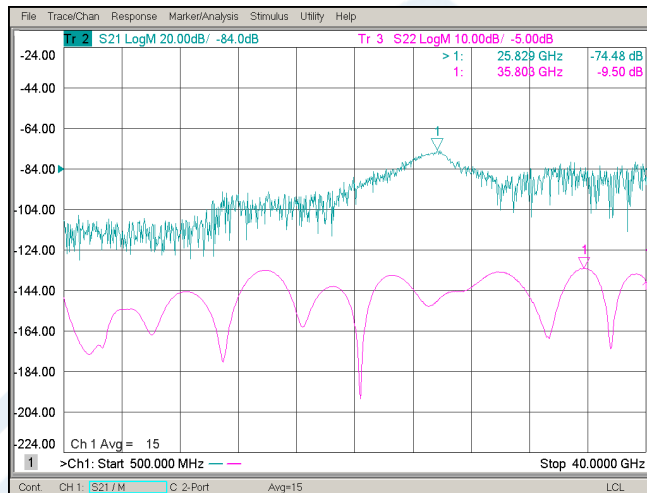


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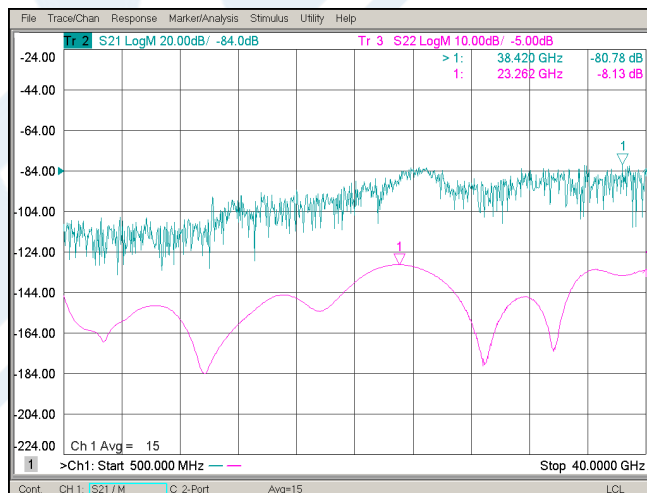
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(J1 – J2) Isolation and Termination Return Loss



(J1 – J3) Isolation and Termination Return Loss



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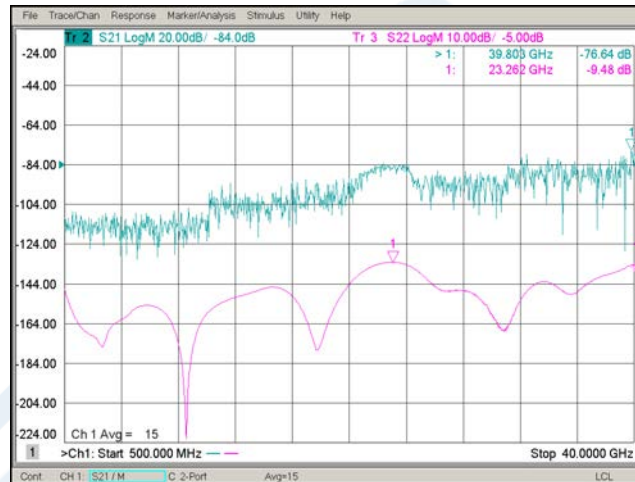


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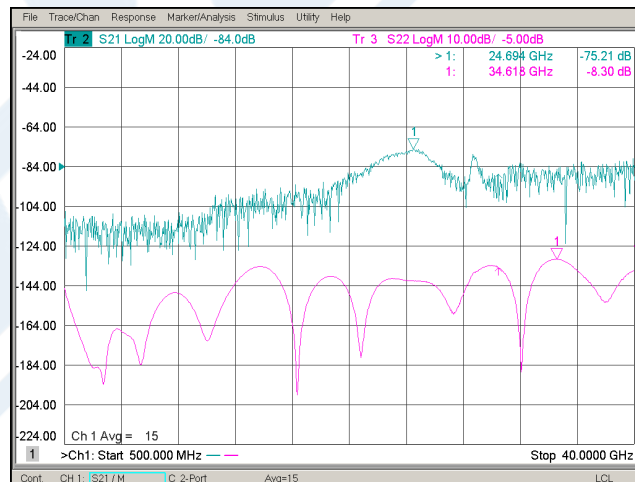
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(J1 – J4) Isolation and Termination Return Loss



(J1 – J5) Isolation and Termination Return Loss



Absorptive SP4T 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.

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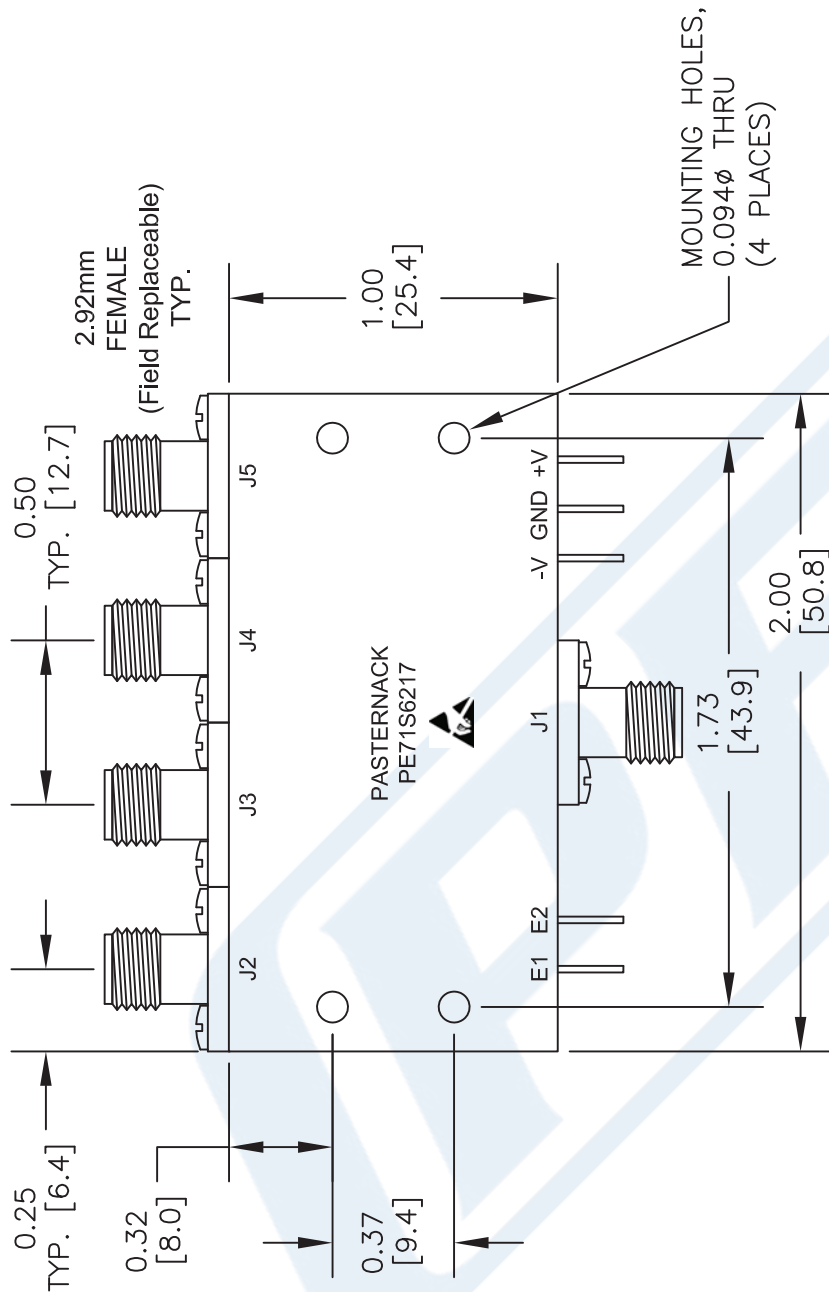
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The information contained in this document is accurate to the best of our knowledge and representative of the part described herein. It may be necessary to make modifications to the part and/or the documentation of the part, in order to implement improvements.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

PE71S6217 CAD Drawing

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Top View

2 BIT DECODER LOGIC TABLE		
E1	E2	FUNCTION
0	0	J1-J2 LOW LOSS
0	1	J1-J3 LOW LOSS
1	0	J1-J4 LOW LOSS
1	1	J1-J5 LOW LOSS

ALL DIMENSIONS ARE IN INCHES.
TOLERANCES:
X.XX ±0.020
X.XXX ±0.010

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



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DWG TITLE

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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].

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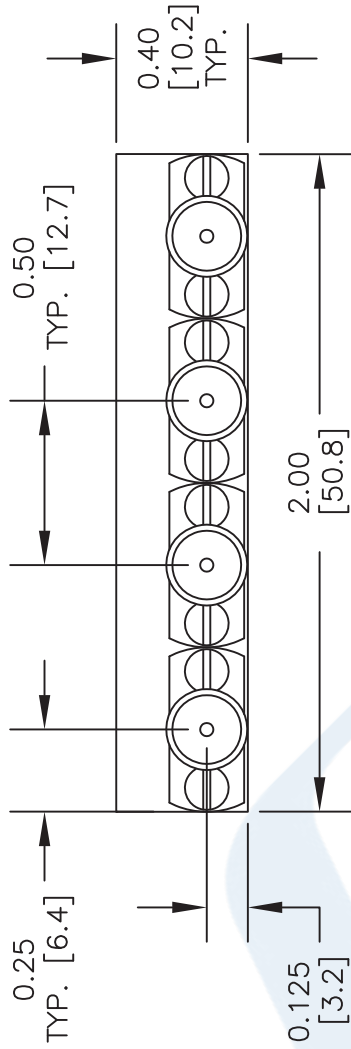
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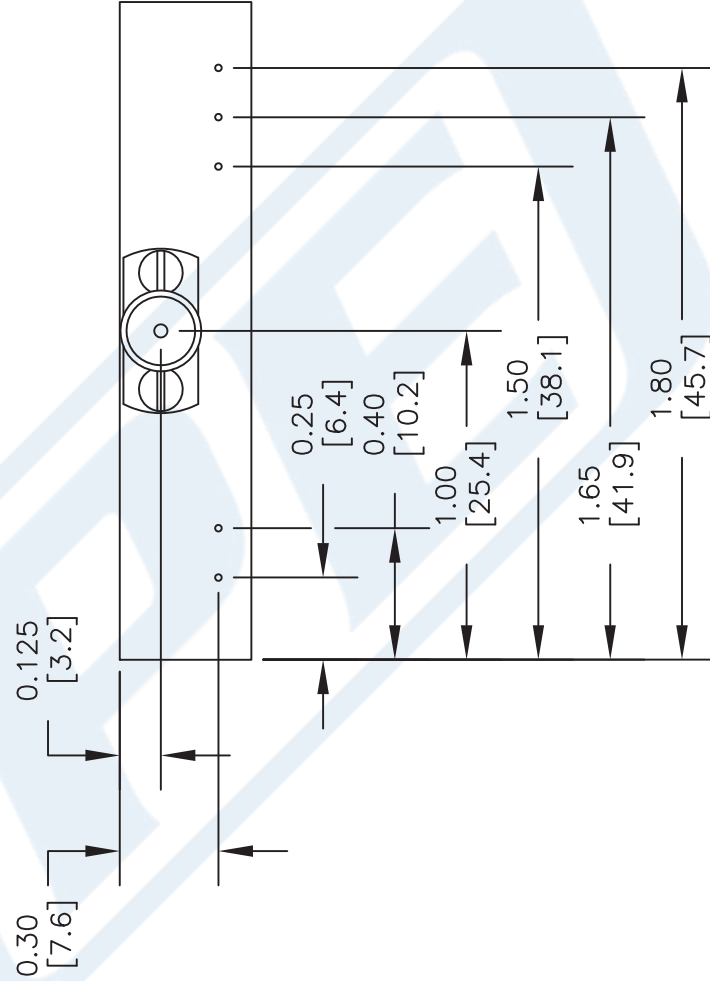
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PE71S6217 CAD Drawing

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Back View



Front View

2 BIT DECODER LOGIC TABLE		
E1	E2	FUNCTION
0	0	J1-J2 LOW LOSS
0	1	J1-J3 LOW LOSS
1	0	J1-J4 LOW LOSS
1	1	J1-J5 LOW LOSS

ALL DIMENSIONS ARE IN INCHES.
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X.XX ±0.020
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