



Absorptive SP3T PIN Diode Switch Operating From 10 MHz to 1,000 MHz Up to 0.1 Watts (+20 dBm) and Field Replaceable SMA

PIN Diode Switches Technical Data Sheet

PE71S6242

Features

- SP3T Absorptive Switch
- 0.01 GHz to 1.0 GHz
- Insertion Loss 1.4 dB max
- Isolation 60 dB min
- Input Power 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 PE71S6242 is a Single Pole Triple Throw (SP3T) Absorptive PIN Diode Switch that operates from 0.01 GHz to 1 GHz. The output port is terminated in 50 ohms when switched in the isolation (off) state. Performance includes 1.4 dB max insertion loss, 60 dB min isolation, and 200 nsec 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 DC and -15 DC 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 SMA connectors.

Electrical Specifications

Description	Minimum	Typical	Maximum	Units
Frequency Range	10		1,000	MHz
Impedance		50		Ohms
Insertion Loss			1.4	dB
Isolation	60			dB
Switching Time			200	ns
Input Power (CW)			0.1	Watts
Survival Power			1	Watts
Positive Operating Voltage		5		Vdc
Negative Operating Voltage		-15		Vdc
Current @ 5 Vdc		150		mA
Current @ -15 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 10 MHz to 1,000 MHz Up to 0.1 Watts \(+20 dBm\) and Field Replaceable SMA PE71S6242](#)



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Mechanical Specifications

Size

Length	1.5 in [38.1 mm]
Width	1.5 in [38.1 mm]
Height	0.4 in [10.16 mm]
Weight	0.094 lbs [42.64 g]
Finish	Blue Paint

Configuration

Design	Absorptive, SP3T
RF Connector	SMA 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, Condition B
MIL-STD-202F, Method 213B, Condition B
MIL-STD-202F, Method 204D, Condition B
MIL-STD-202F, Method 105C, Condition B
MIL-STD-202F, Method 107D, Condition A
ESD Sensitive Material, Transport material in Approved ESD bags. Handle only in ESD Workstation.



Compliance Certifications (see [product page](#) for current document)

Plotted and Other Data

Notes:

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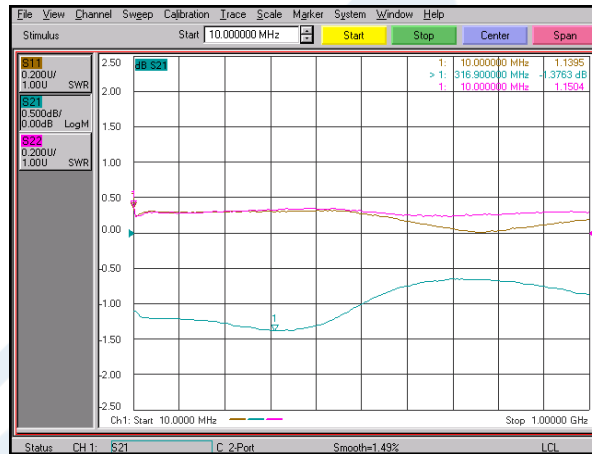
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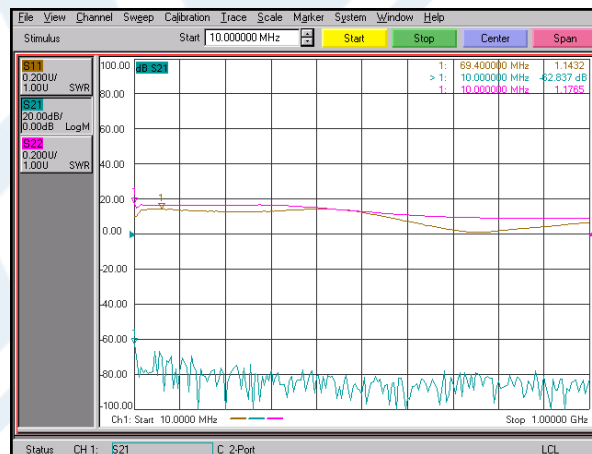
PE71S6242

Typical Performance Data

(J1 – J2) Insertion Loss and Return Loss



(J1 – J2) Isolation and Termination Return Loss



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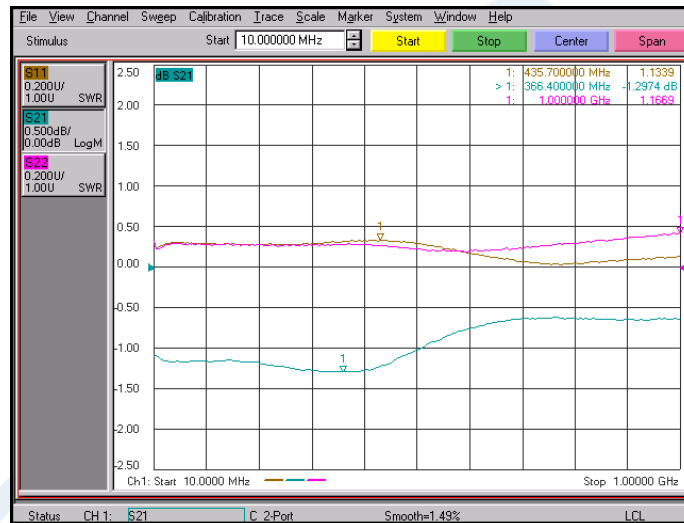


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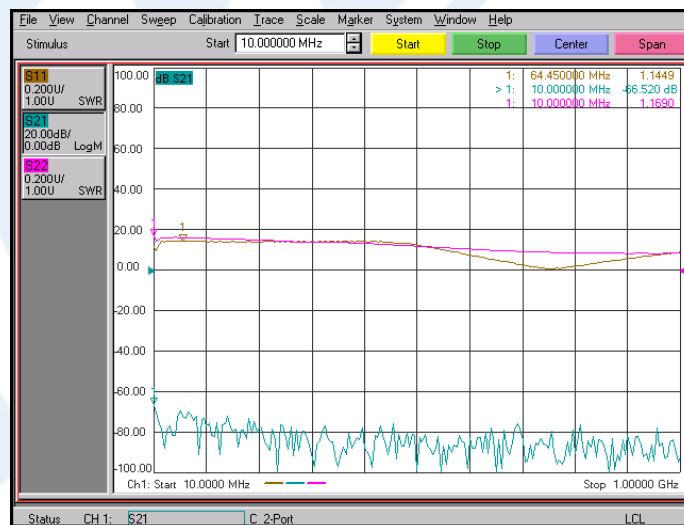
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(J1 – J3) Insertion Loss and Return Loss



(J1 – J3) Isolation and Termination Return Loss



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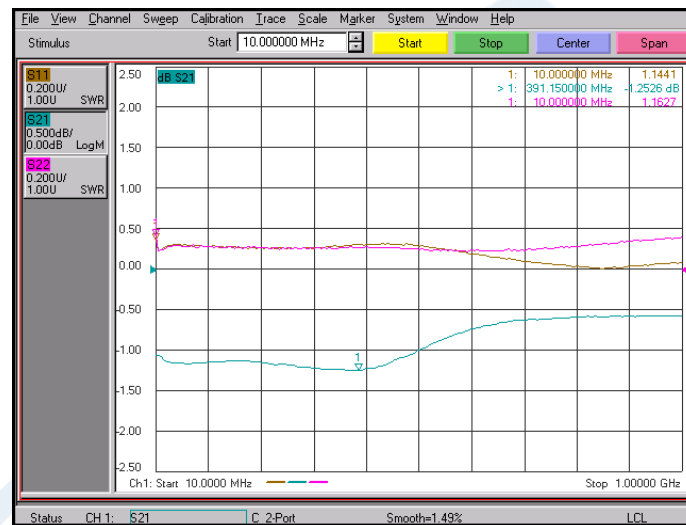


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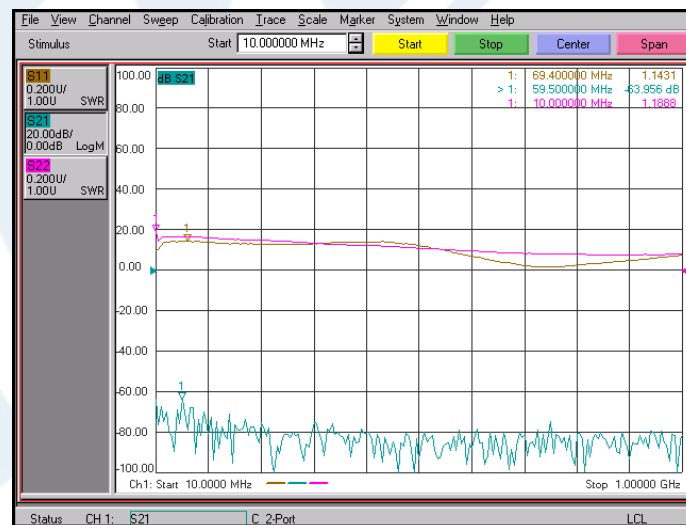
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(J1 – J4) Insertion Loss and Return Loss



(J1 – J4) Isolation and Termination Return Loss



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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 10 MHz to 1,000 MHz Up to 0.1 Watts \(+20 dBm\) and Field Replaceable SMA PE71S6242](#)



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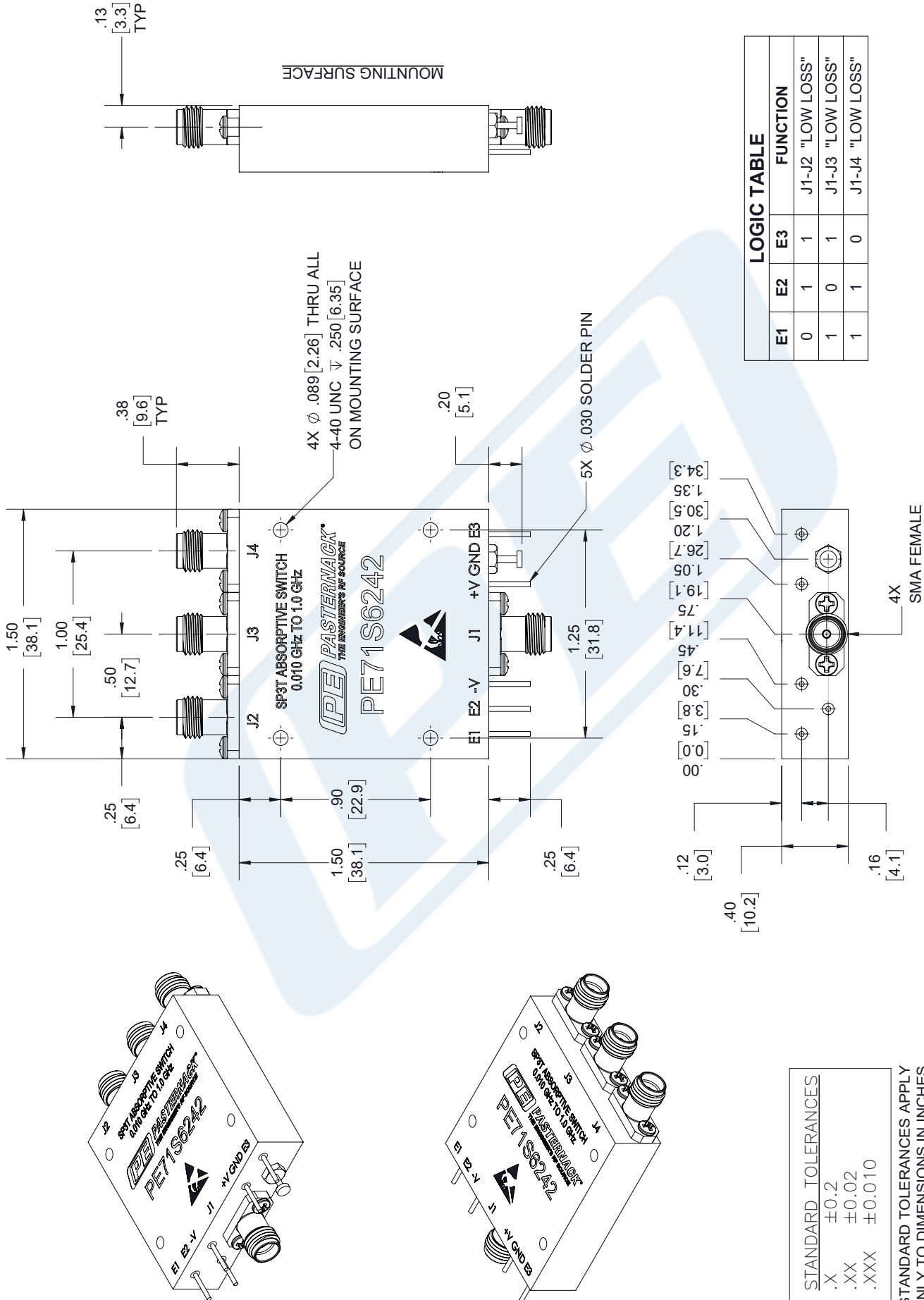
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The information contained in this document is accurate to the best of our knowledge and representative of the part described herein. It may be necessary to make modifications to the part and/or the documentation of the part, in order to implement improvements.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

PE71S6242 CAD Drawing

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DWG TITLE

PE71S6242

CAGE CODE 53919

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].

CAD FILE 04/02/2018

SCALE N/A

SIZE A

7361