



Absorptive SP4T PIN Diode Switch Operating From 1 GHz to 2 GHz Up to +20 dBm and Field Replaceable SMA

## PIN Diode Switches Technical Data Sheet

PE71S6250

### Features

- SP4T Absorptive Switch
- 1.0 GHz to 2.0 GHz
- Insertion Loss 1.2 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 PE71S6250 is a Single Pole Four Throw (SP4T) Absorptive PIN Diode Switch that operates from 1 GHz to 2 GHz. The output port is terminated in 50 ohms when switched in the isolation (off) state. Outstanding performance includes 1.2 dB max insertion loss, 60 dB min isolation, and 100 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	1		2	GHz
Impedance		50		Ohms
Insertion Loss			1.2	dB
Isolation	60			dB
Switching Time			100	ns
Input Power (CW)			0.1	Watts
Survival Power			1	Watts
Positive Operating Voltage		5		V
Negative Operating Voltage		-15		V
Current @ 5 V		200		mA
Current @ -15 V		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 1 GHz to 2 GHz Up to +20 dBm and Field Replaceable SMA PE71S6250](#)



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### Mechanical Specifications

#### Size

Length	1.25 in [31.75 mm]
Width	1.25 in [31.75 mm]
Height	0.4 in [10.16 mm]
Weight	0.07 lbs [31.75 g]
Finish	Blue Paint

#### Configuration

Design	Absorptive, SP4T
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 (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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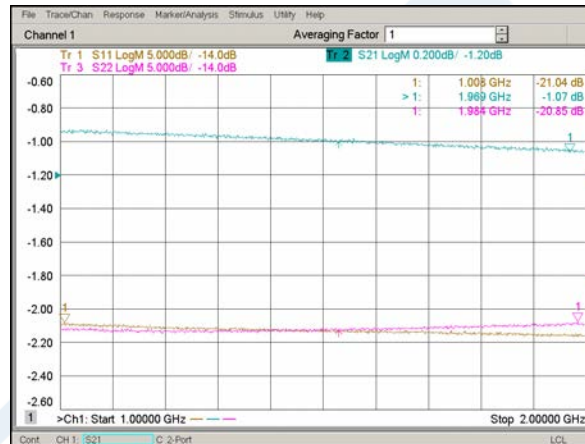
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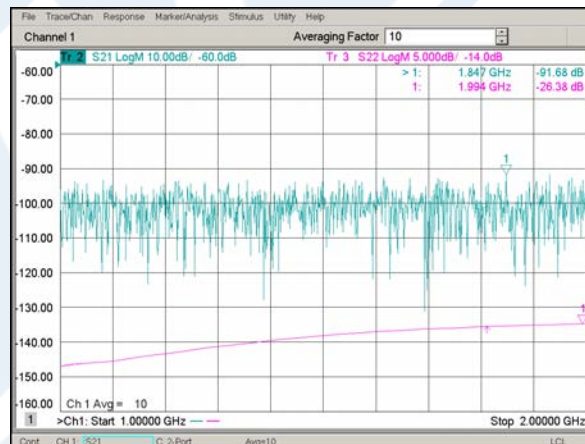
PE71S6250

### Typical Performance Data

#### (J1 – J2) Insertion Loss and Return Loss



#### (J1 – J2) Isolation and Termination Return Loss



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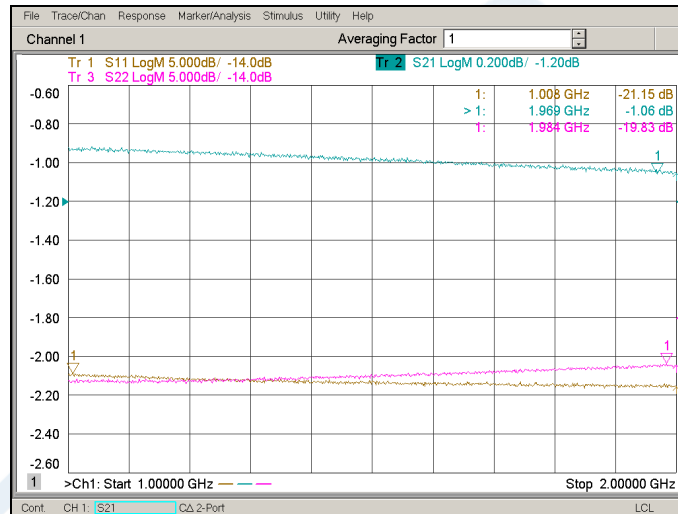


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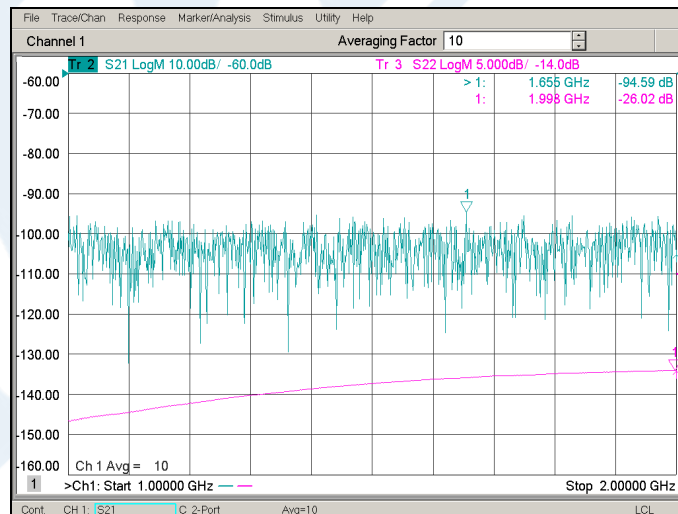
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### (J1 – J3) Insertion Loss and Return Loss



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



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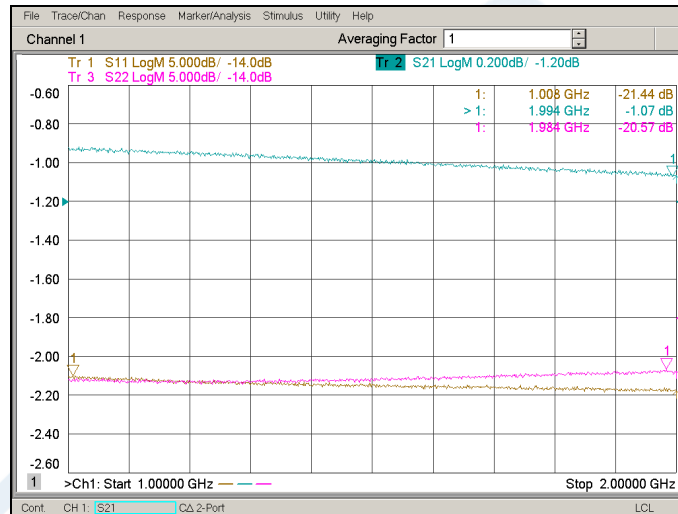


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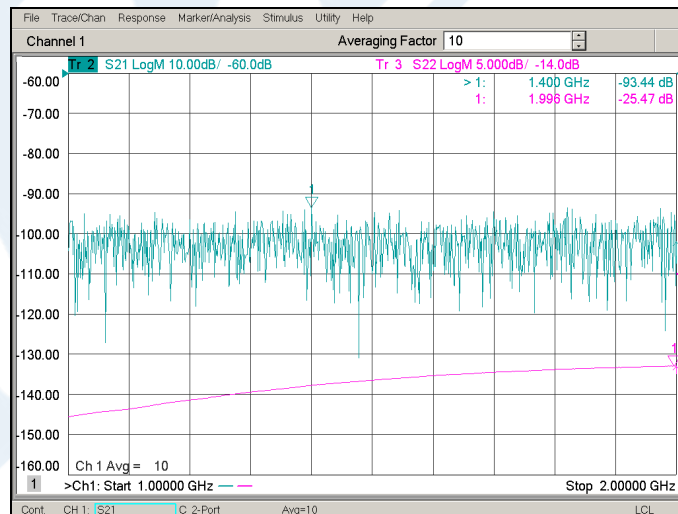
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### (J1 – J4) Insertion Loss and Return Loss



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



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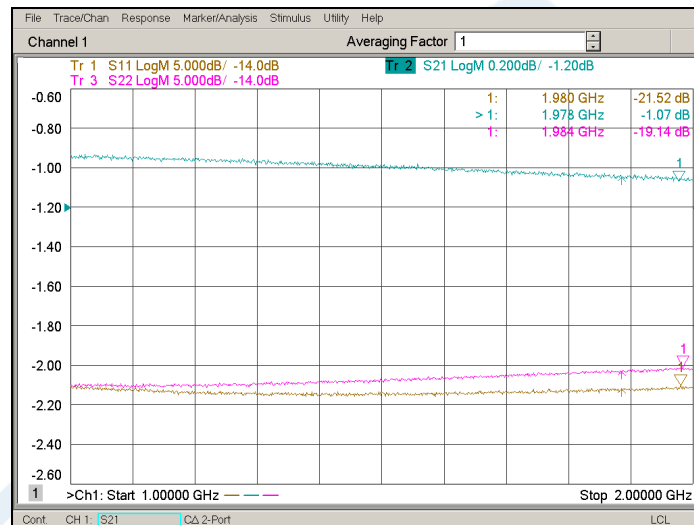


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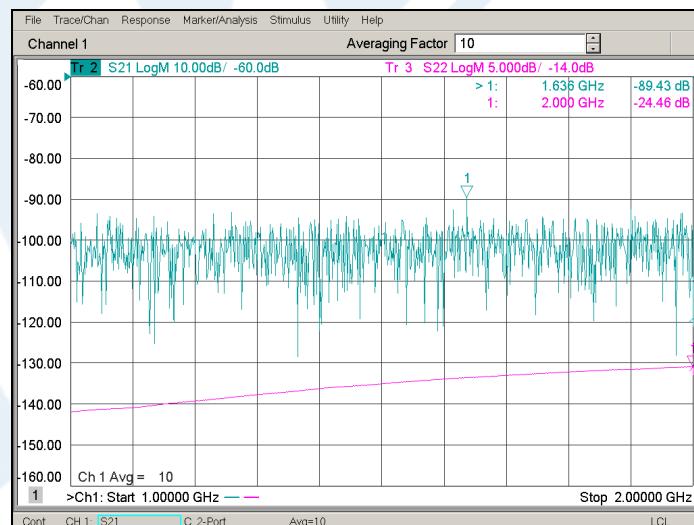
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### (J1 – J5) Insertion Loss and Return Loss



### (J1 – J5) Isolation and Termination Return Loss



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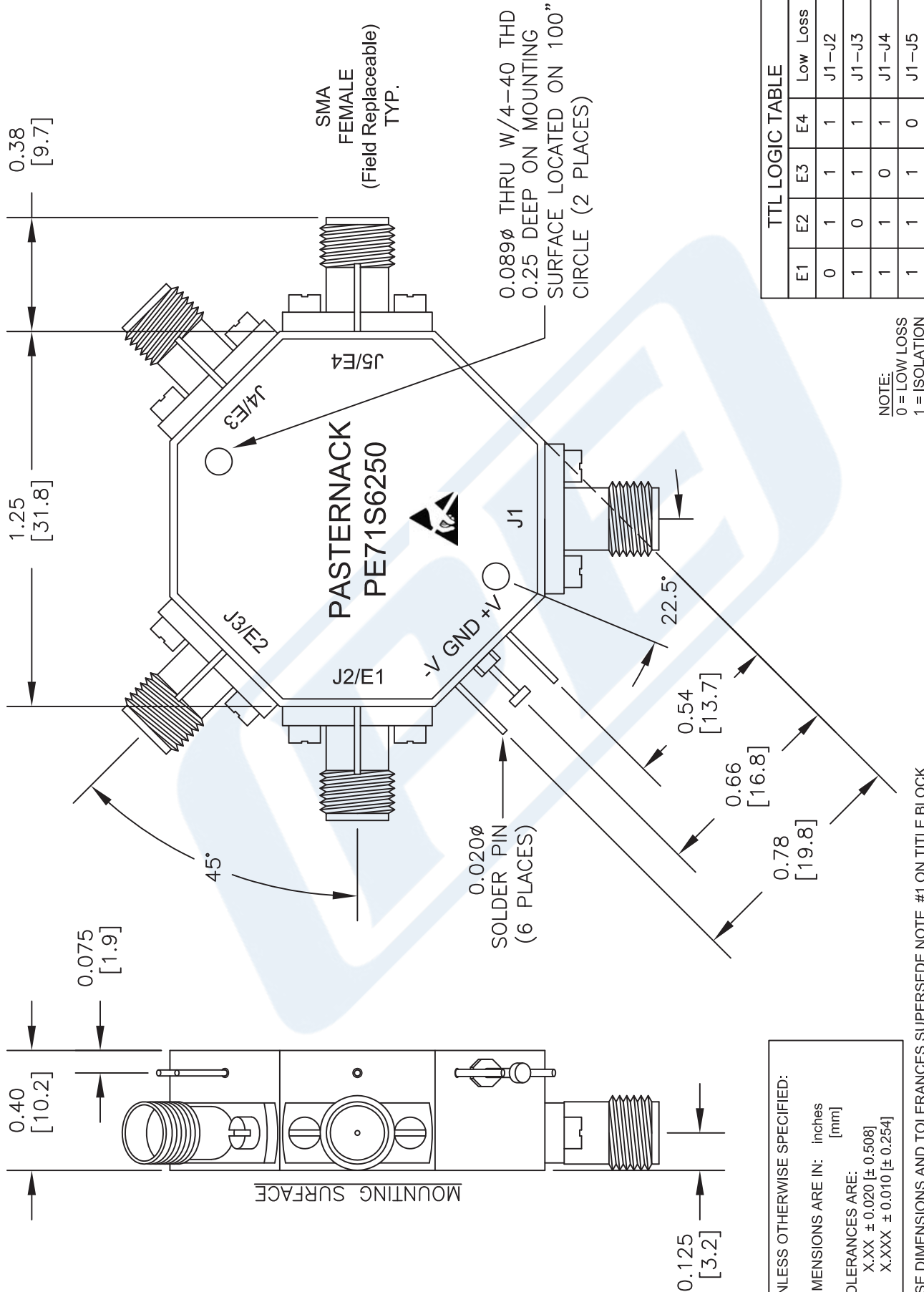
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The information contained in this document is accurate to the best of our knowledge and representative of the part described herein. It may be necessary to make modifications to the part and/or the documentation of the part, in order to implement improvements.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

# PE71S6250 CAD Drawing

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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].

**DWG TITLE**  
**PE71S6250**

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**FSCM NO. 53919**

**SCALE N/A**

**SIZE A**

**CAD FILE 041116**

**2233**