



Absorptive SP4T PIN Diode Switch Operating From 8 GHz to 12 GHz Up to +20 dBm and Field Replaceable SMA

PIN Diode Switches Technical Data Sheet

PE71S6253

Features

- SP4T Absorptive Switch
- 8.0 GHz to 12.0 GHz
- Insertion Loss 2.6 dB max
- Isolation 70 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 PE71S6253 is a Single Pole Four Throw (SP4T) Absorptive PIN Diode Switch that operates from 8 GHz to 12 GHz. The output port is terminated in 50 ohms when switched in the isolation (off) state. Outstanding performance includes 2.6 dB max insertion loss, 70 dBmin 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	8		12	GHz
Impedance		50		Ohms
Insertion Loss			2.6	dB
Isolation	70			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
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 8 GHz to 12 GHz Up to +20 dBm and Field Replaceable SMA PE71S6253](#)



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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	MIL-STD-202F, Method 103B, Condition B
Shock	MIL-STD-202F, Method 213B, Condition B
Vibration	MIL-STD-202F, Method 204D, Condition B
Altitude	MIL-STD-202F, Method 105C, Condition B
Temperature Cycling	MIL-STD-202F, Method 107D, Condition A
ESD Sensitivity	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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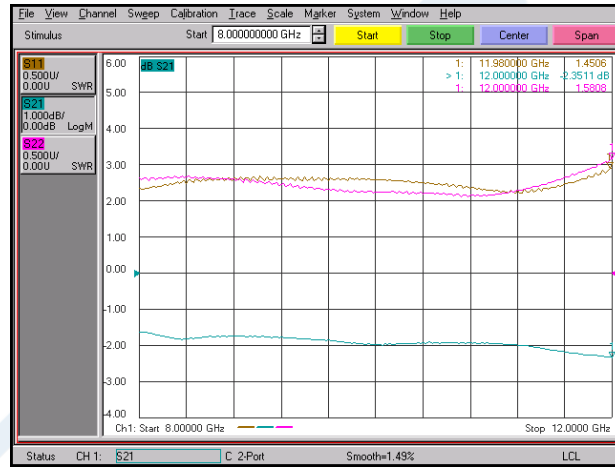
Absorptive SP4T PIN Diode Switch Operating From 8 GHz to 12 GHz Up to +20 dBm and Field Replaceable SMA

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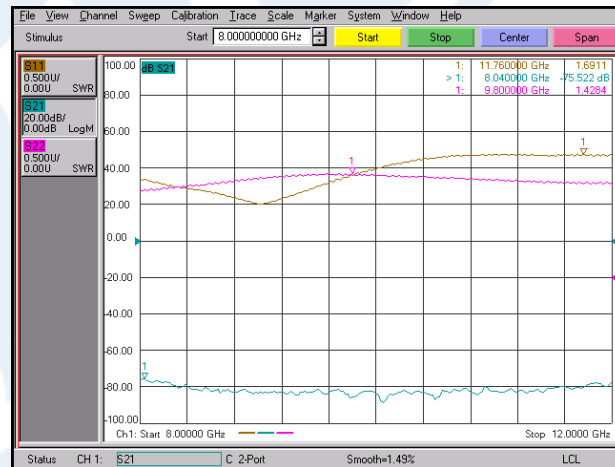
PE71S6253

Typical Performance Data

(J1 – J2) Insertion Loss and Return Loss



(J1 – J2) Isolation and Termination Return Loss



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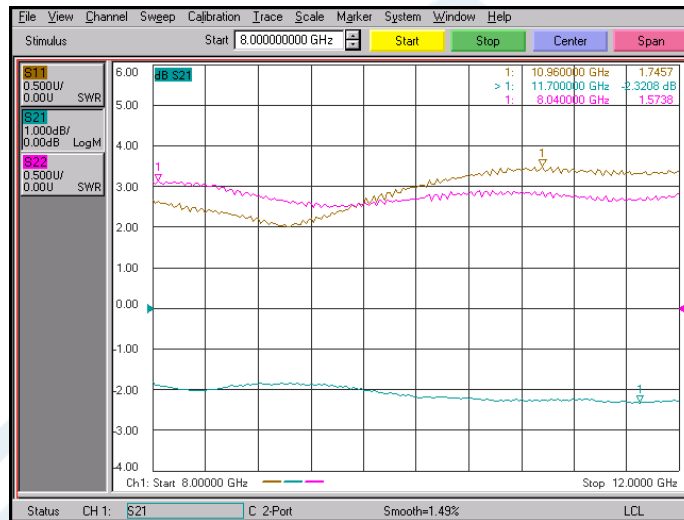


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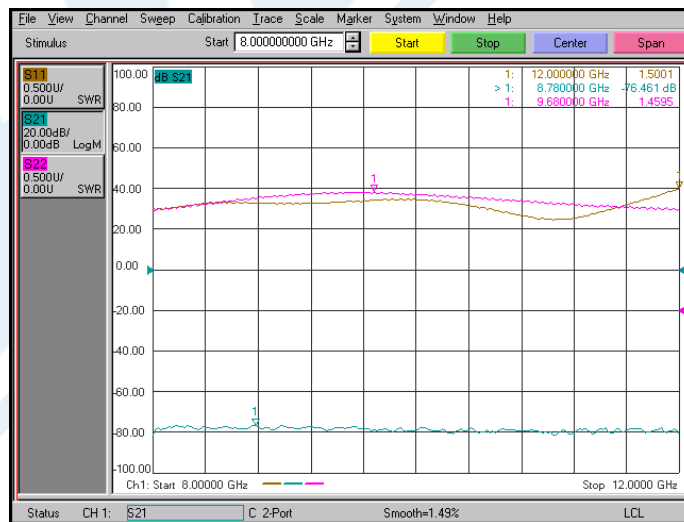
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(J1 – J3) Insertion Loss and Return Loss



(J1 – J3) Isolation and Termination Return Loss



Absorptive SP4T PIN Diode Switch Operating From 8 GHz to 12 GHz Up to +20 dBm and Field Replaceable 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.

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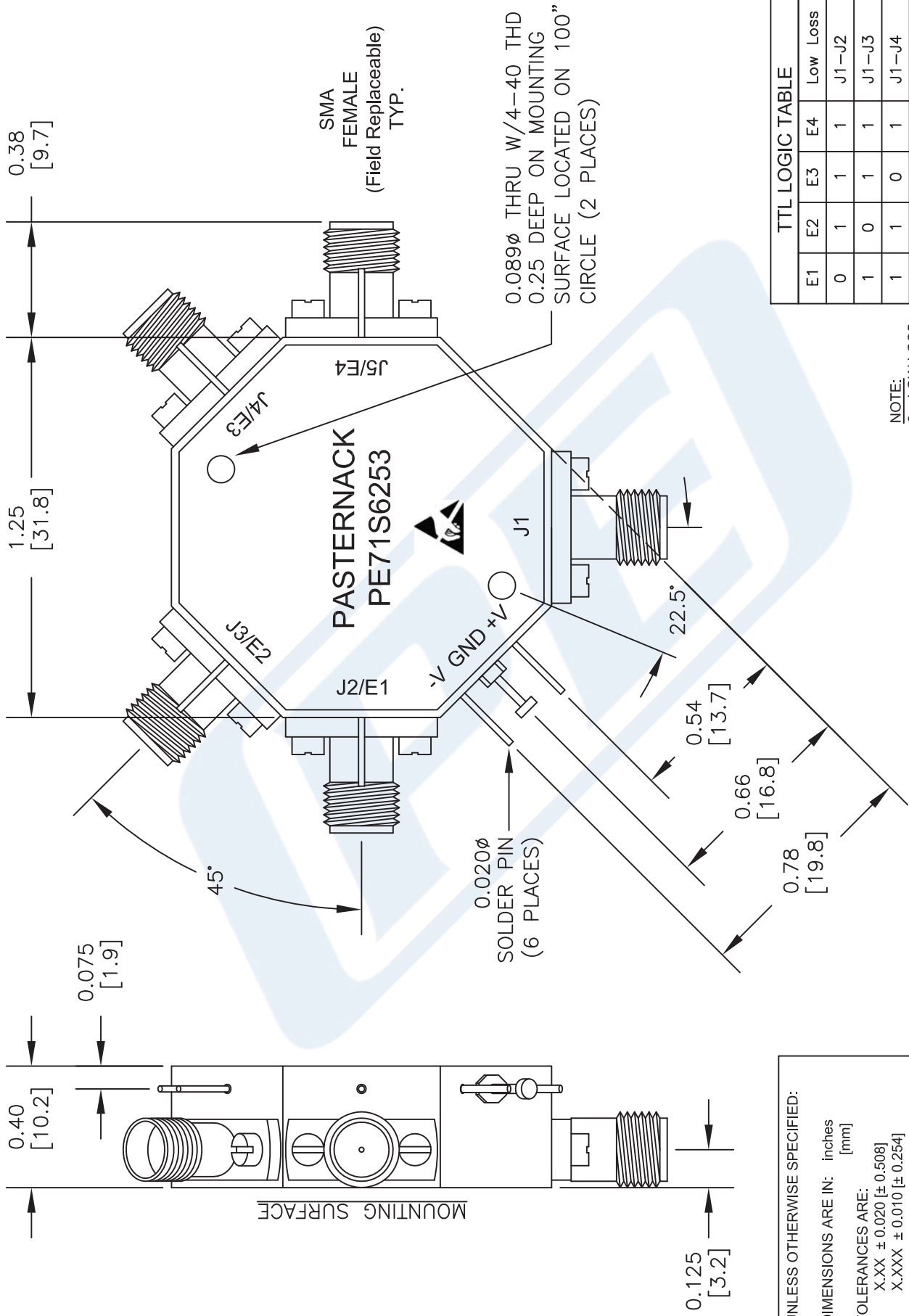
Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [Absorptive SP4T PIN Diode Switch Operating From 8 GHz to 12 GHz Up to +20 dBm and Field Replaceable SMA PE71S6253](http://www.pasternack.com/absorptive-sp4t-pin-diode-switch-12-ghz-20-dbm-sma-pe71s6253-p.aspx)

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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.

PE71S6253 CAD Drawing

Absorptive SP4T PIN Diode Switch Operating From 8 GHz to 12 GHz Up to +20 dBm and Field Replaceable SMA



UNLESS OTHERWISE SPECIFIED:
 DIMENSIONS ARE IN: inches [mm]
 TOLERANCES ARE:
 X.XX ± 0.020 [± 0.508]
 X.XXX ± 0.010 [± 0.254]

TTL LOGIC TABLE

E1	E2	E3	E4	Low Loss
0	1	1	1	J1-J2
1	0	1	1	J1-J3
1	1	0	1	J1-J4
1	1	1	0	J1-J5

NOTE:
 0 = LOW LOSS
 1 = ISOLATION

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
PE71S6253

FSCM NO. 53919

CAD FILE 041516

SCALE N/A

SIZE A

2233

PE PASTERNAK
 THE ENGINEER'S RF SOURCE

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