



Absorptive SP8T 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

PE71S6218

Features

- SP8T Absorptive Switch
- 0.5 GHz to 40.0 GHz
- High Speed Switching
- Insertion Loss 10 dB max
- Isolation 50 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 PE71S6218 is a Single Pole Eight Throw (SP8T) 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 10 dB max insertion loss, 50 dB min isolation, and 50 nsec max switching speed. The design incorporates TTL compatible driver circuitry for accurate logic control. Operational temperature range is -54°C to +95°C and dual voltage controls of +5V DC and -5V 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 2.92mm connectors.

Electrical Specifications

Description	Minimum	Typical	Maximum	Units
Frequency Range	0.5		40	GHz
Impedance		50		Ohms
VSWR			3:1	
Insertion Loss			10	dB
Isolation	50			dB
Switching Time			50	ns
RF Input Power (CW)*			0.1	Watts
Survival Power			1	Watt
Positive Operating Voltage		5		Vdc
Negative Operating Voltage		-5	70	Vdc
Current @ 5 Vdc		70		mA
Current @ -5Vdc		20		mA
Operating Temperature	-54		+95	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 SP8T PIN Diode Switch Operating From 500 MHz to 40 GHz Up to 0.1 Watts \(+20 dBm\) and Field Replaceable 2.92mm PE71S6218](#)



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Mechanical Specifications

Size

Length	4 in [101.6 mm]
Width	1.5 in [38.1 mm]
Height	0.4 in [10.16 mm]
Weight	0.249 lbs [112.94 g]
Finish	Blue Paint

Configuration

Design	Absorptive, SP8T
RF Connector	2.92mm Female
RF Connector Option	Field Replaceable
TTL Control Connector	Solder Pin

Environmental Specifications

Temperature

Operating Range	-54 to +95 deg C
Storage Range	-65 to +125 deg C

Humidity

Shock	MIL-STD-202F, METHOD 213B COND. B
Vibration	MIL-STD-202F, METHOD 204D COND. B
Altitude	MIL-STD-202F, METHOD 105C COND. B
Temperature Cycling	MIL-STD-202F, METHOD 107D COND. A

ESD Sensitivity

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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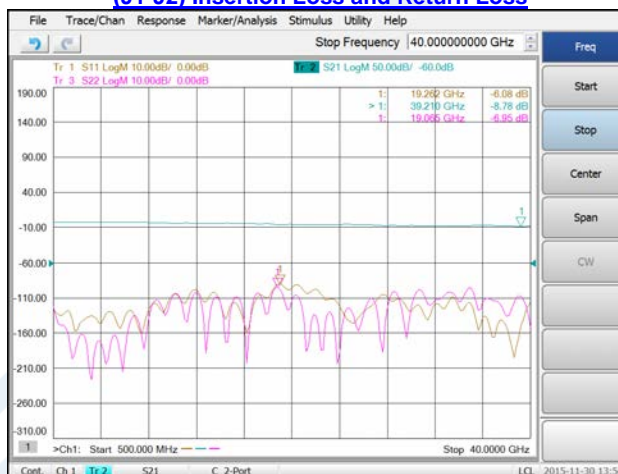
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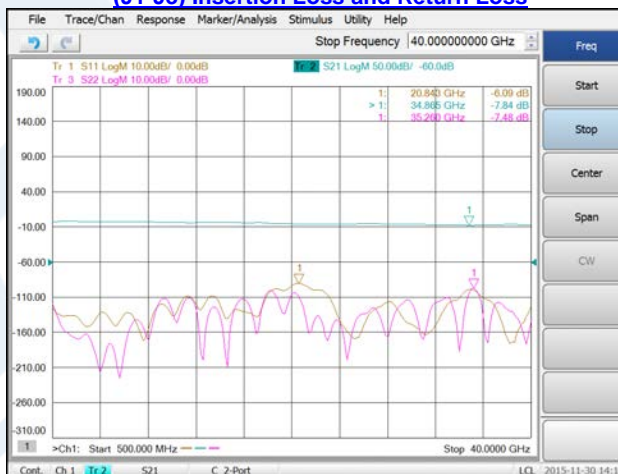
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Typical Performance Data

(J1-J2) Insertion Loss and Return Loss



(J1-J3) Insertion Loss and Return Loss



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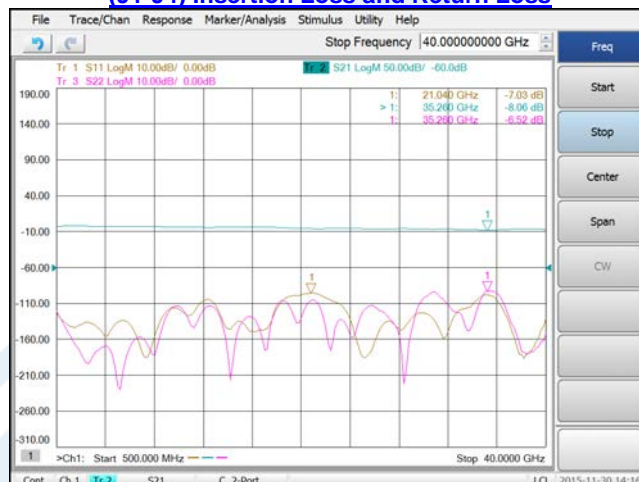


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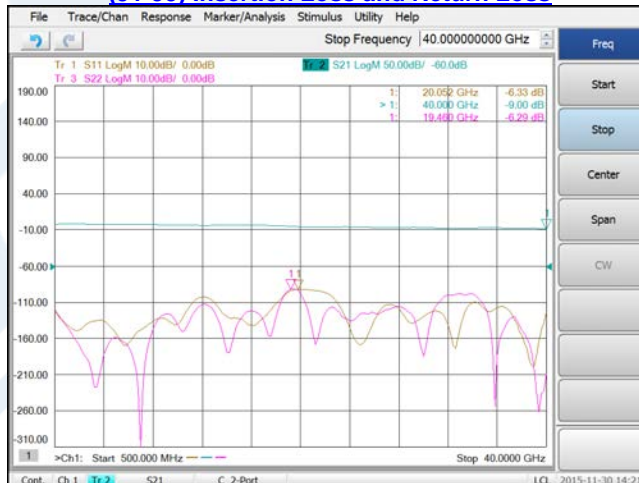
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(J1-J4) Insertion Loss and Return Loss



(J1-J5) Insertion Loss and Return Loss



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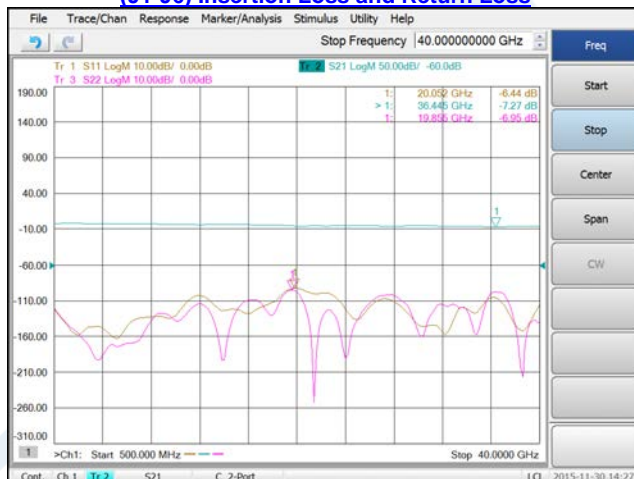


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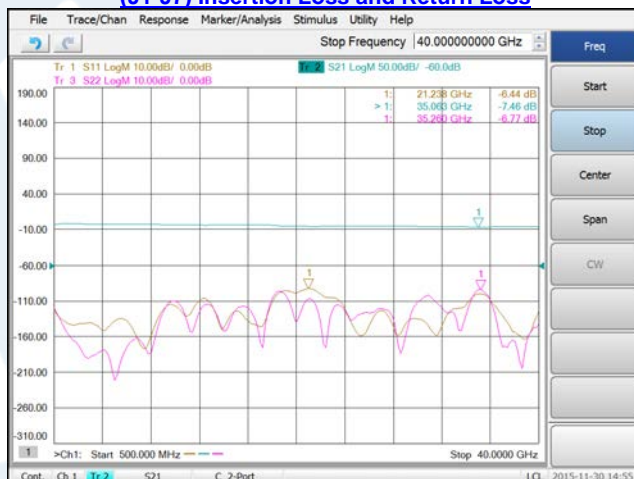
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(J1-J6) Insertion Loss and Return Loss



(J1-J7) Insertion Loss and Return Loss



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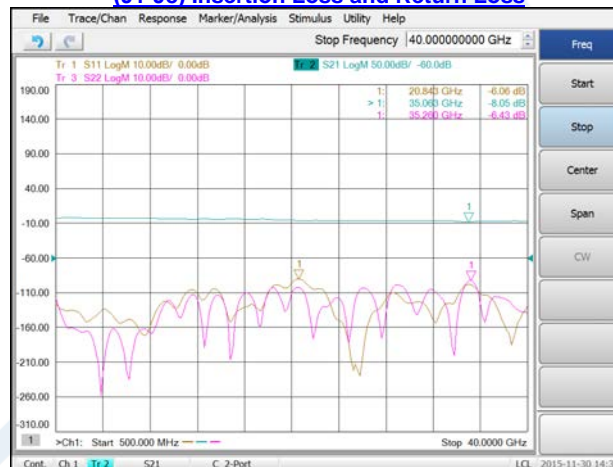


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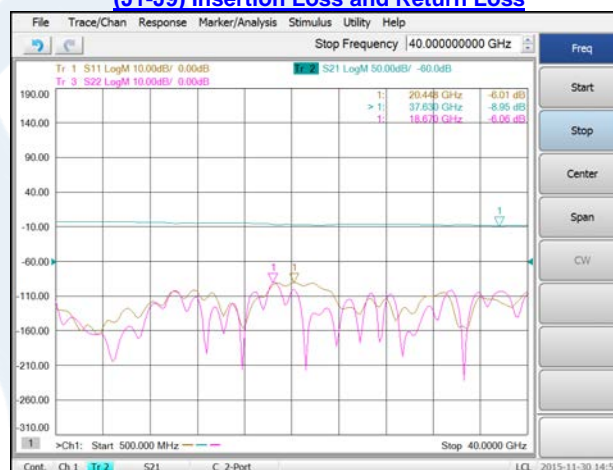
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(J1-J8) Insertion Loss and Return Loss



(J1-J9) Insertion Loss and Return Loss



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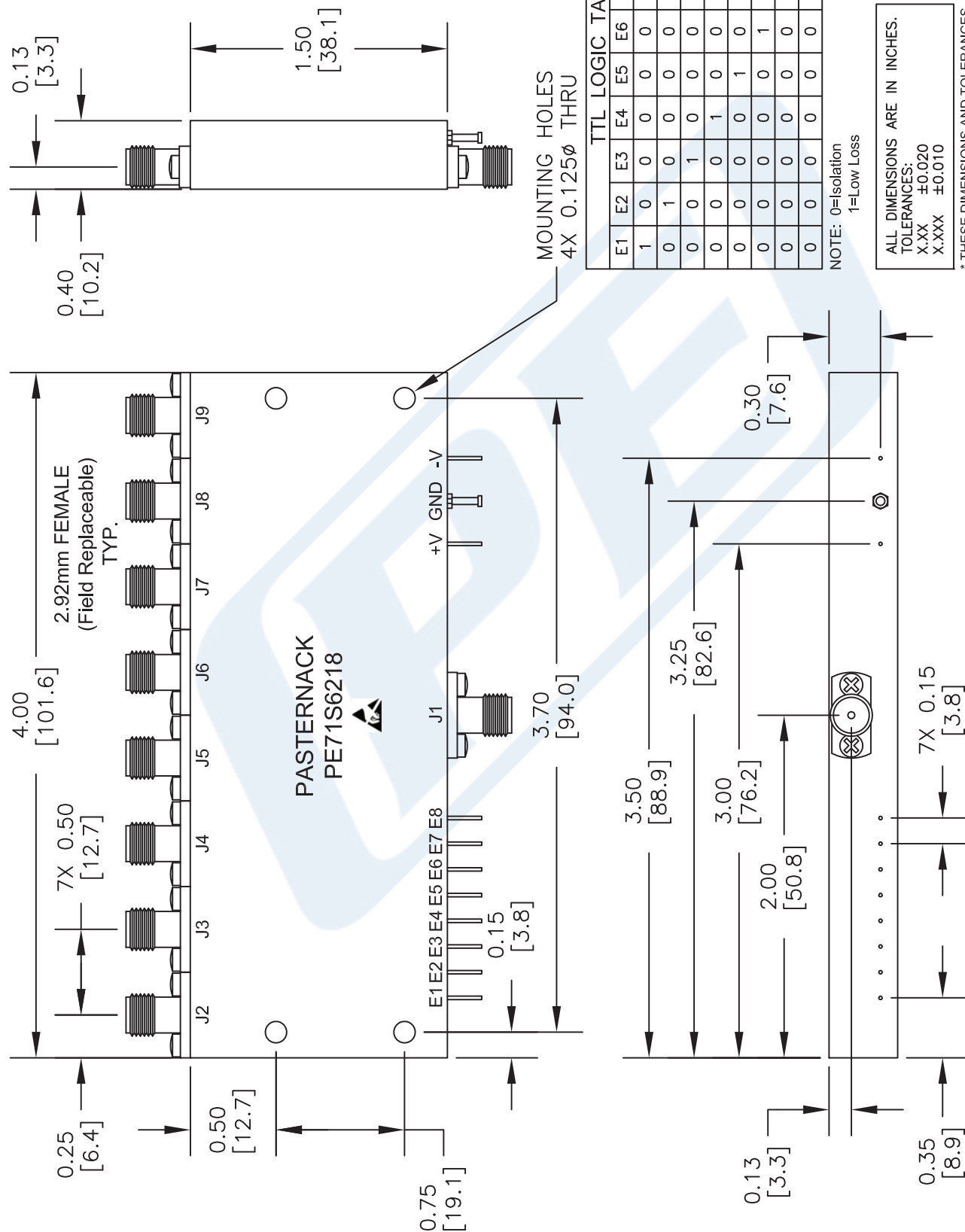
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The information contained in this document is accurate to the best of our knowledge and representative of the part described herein. It may be necessary to make modifications to the part and/or the documentation of the part, in order to implement improvements.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

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TTL LOGIC TABLE									
E1	E2	E3	E4	E5	E6	E7	E8	Low	Loss
1	0	0	0	0	0	0	0	J1-J2	
0	1	0	0	0	0	0	0	J1-J3	
0	0	1	0	0	0	0	0	J1-J4	
0	0	0	1	0	0	0	0	J1-J5	
0	0	0	0	1	0	0	0	J1-J6	
0	0	0	0	0	1	0	0	J1-J7	
0	0	0	0	0	0	1	0	J1-J8	
0	0	0	0	0	0	0	1	J1-J9	

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

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
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FSCM NO. 53919

CAD FILE 033116

SCALE	SIZE
N/A	A

2233

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