

## 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

#### 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.

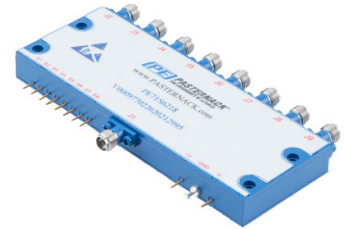
#### Electrical Specifications

Description	Min	Typ	Max	Units
Frequency Range	0.5		40	GHz
Impedance		50		Ohms
VSWR			3:1	
Insertion Loss			10	dB
Isolation	50			dB
Switching Time		50		ns
Input Power (CW)			0.1	dBm
Survival Power			1	Watt
Positive Operating Voltage		5		Vdc
Negative Operating Voltage		-5	70	Vdc
Current @ 5 Vdc		70		mA
Current @ -5Vdc		20	20	mA
Operating Temperature	-54		+95	deg C

#### Performance by Frequency

Description	F1	F2	F3	F4	F5	Units
Frequency Range	0.5 to 40					GHz

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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 Input/Output Connector	2.92mm Female
RF Input/Output Connector Option	Field Replaceable
TTL Control Connector	Solder Pin

### Environmental Specifications

#### Temperature

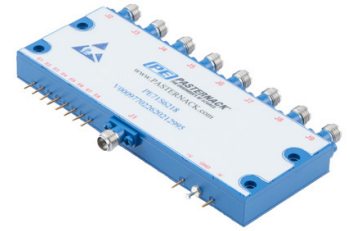
Operating Range	-54 to +95 deg C
Storage Range	-65 to +125 deg C
Humidity	MIL-STD-202F, METHOD 103B COND. B
Shock	MIL-STD-202F, METHOD 213B COND. B
Vibration	MIL-STD-202F, METHOD 204D COND. B
Altitude	MIL-STD-202F, METHOD 105C COND. B
Temperature Cycling	MIL-STD-202F, METHOD 107D COND. A
ESD Sensitivity	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:

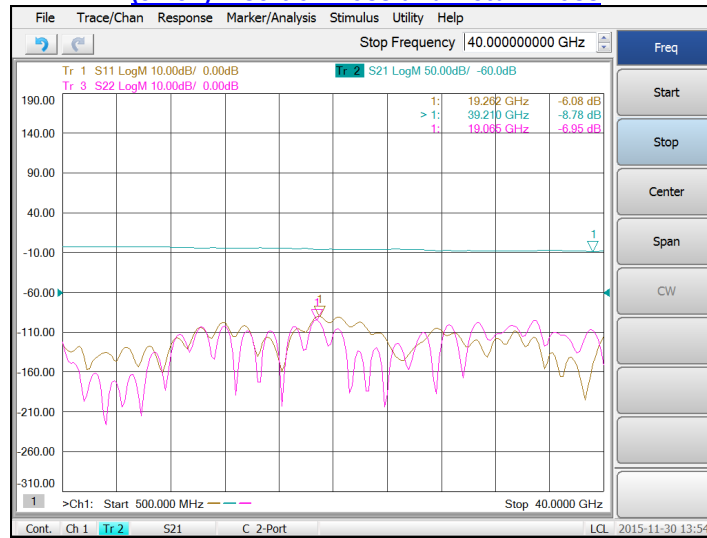
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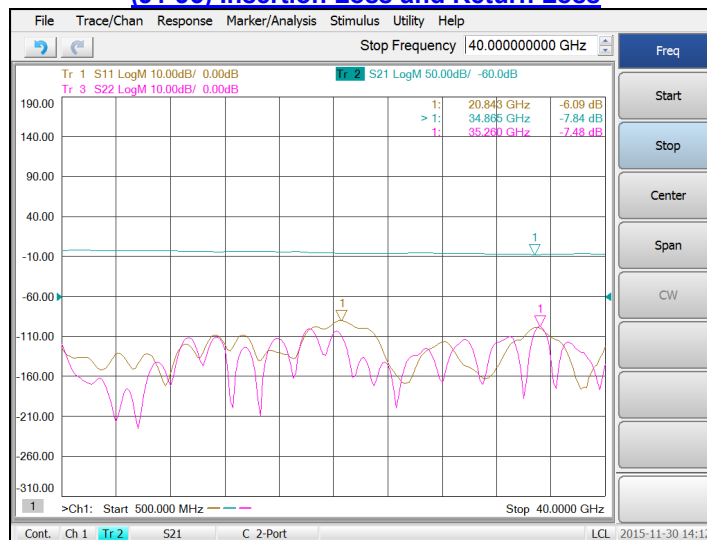
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### Typical Performance Data

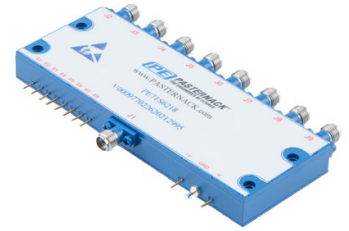
#### (J1-J2) Insertion Loss and Return Loss



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

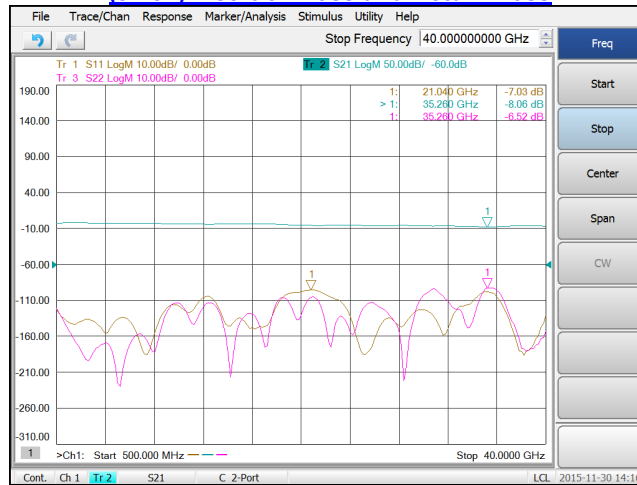


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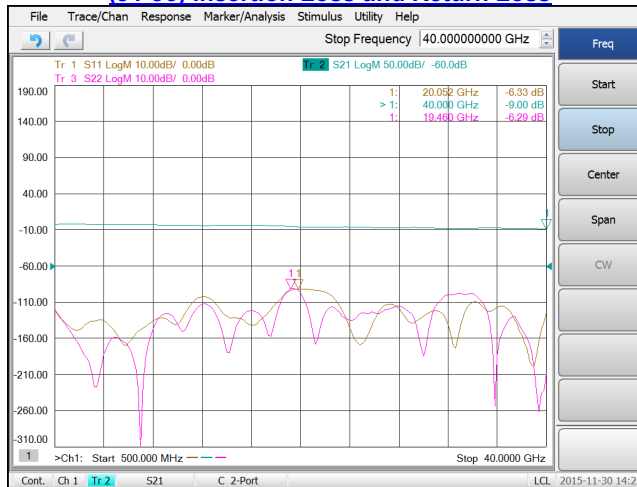


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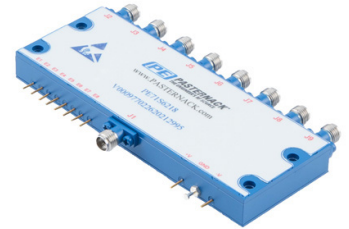
**(J1-J4) Insertion Loss and Return Loss**



**(J1-J5) Insertion Loss and Return Loss**

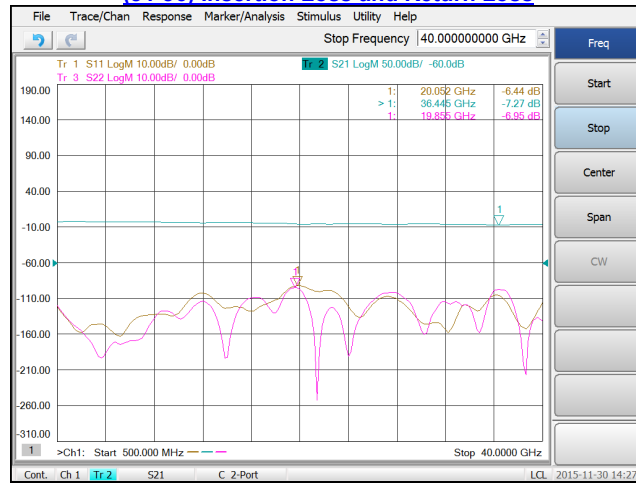


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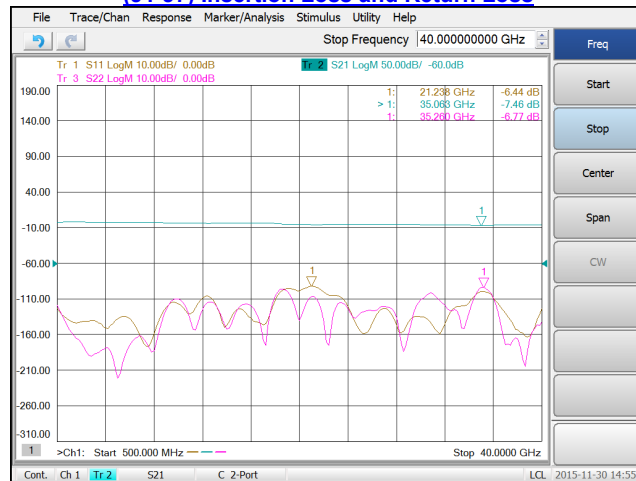


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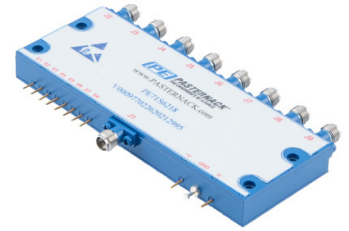
**(J1-J6) Insertion Loss and Return Loss**



**(J1-J7) Insertion Loss and Return Loss**

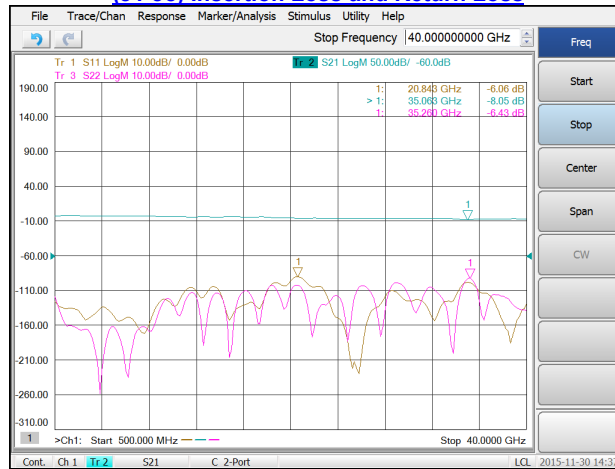


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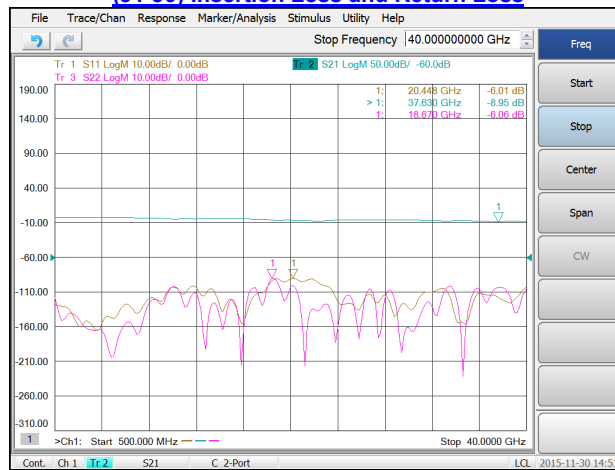


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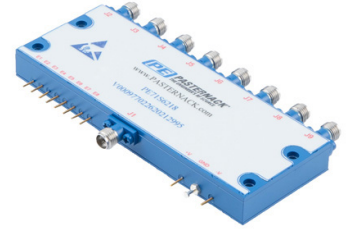
**(J1-J8) Insertion Loss and Return Loss**



**(J1-J9) Insertion Loss and Return Loss**



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Absorptive SP8T 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 99.4% availability and are part of the broadest selection in the industry.

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](https://www.pasternack.com/absorptive-sp8t-pin-diode-switch-40-ghz-20-dbm-2.92mm-pe71s6218-p.aspx)

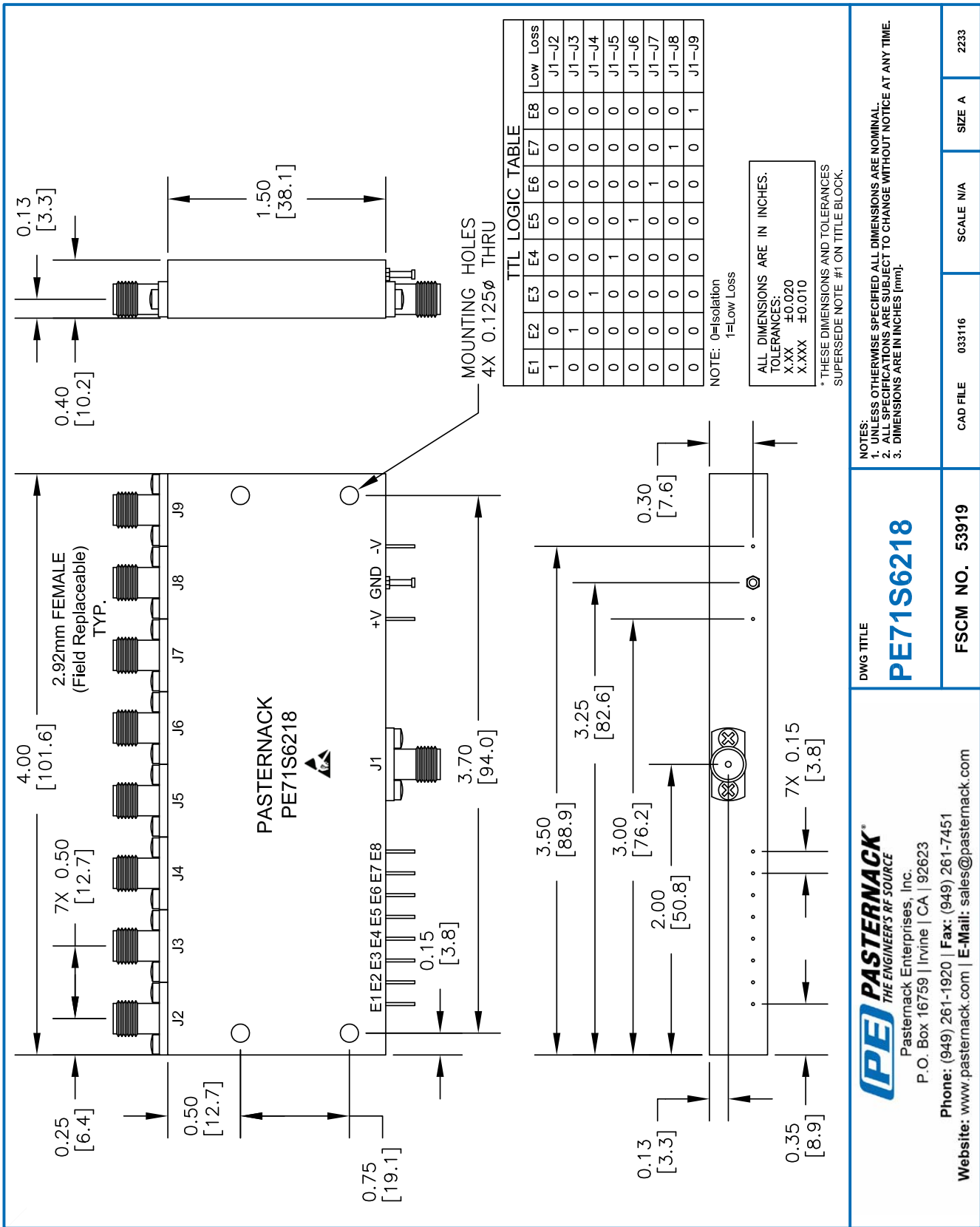
URL: <https://www.pasternack.com/absorptive-sp8t-pin-diode-switch-40-ghz-20-dbm-2.92mm-pe71s6218-p.aspx>

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# PE71S6218 CAD Drawing

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DWG TITLE  
**PE71S6218**

FSCM NO. 53919

CAD FILE 033116

SCALE N/A

SIZE A

2233

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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