



Absorptive SPDT 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

PE71S6215

### Features

- SPDT Absorptive Switch
- 0.5 GHz to 40.0 GHz
- High Speed Switching
- Insertion Loss 6.0 dB max
- Isolation 80 dB typ
- 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 PE71S6215 is a Single Pole Double Throw (SPDT) 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 6 dB max insertion loss, 80 dB typ isolation and 15 ns 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 VDC and -5 VDC 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			2.5:1	
Insertion Loss			6	dB
Isolation	60			dB
Rise Time			15	ns
Fall Time			15	ns
Switching Time			50	ns
Input Power (CW)			0.1	Watts
Survival Power			1	Watts
Positive Operating Voltage		5		Vdc
Negative Operating Voltage		-5		Vdc
Current @ 5 Vdc		120		mA
Current @ -5 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 SPDT PIN Diode Switch Operating From 500 MHz to 40 GHz Up to 0.1 Watts \(+20 dBm\) and Field Replaceable 2.92mm PE71S6215](#)



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### Mechanical Specifications

#### Size

Length	1 in [25.4 mm]
Width	1 in [25.4 mm]
Height	0.5 in [12.7 mm]
Weight	0.062 lbs [28.12 g]
Design	Absorptive, SPDT
RF Connector	2.92mm 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 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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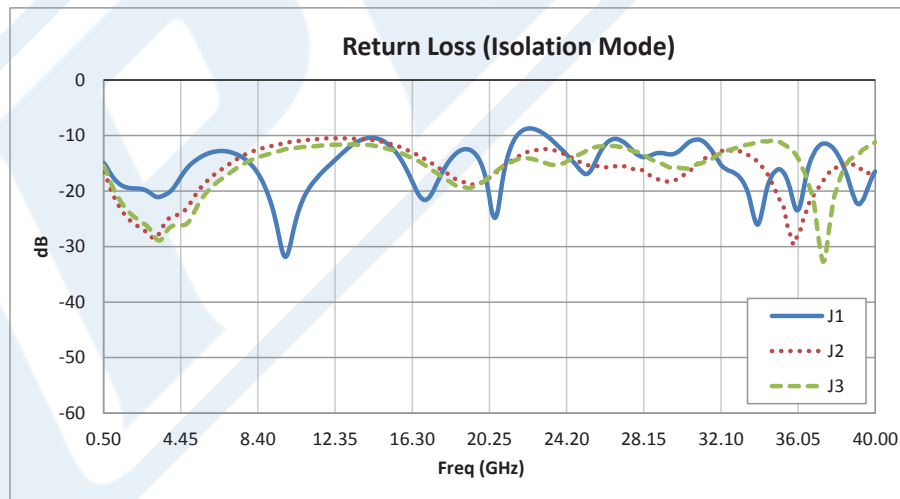
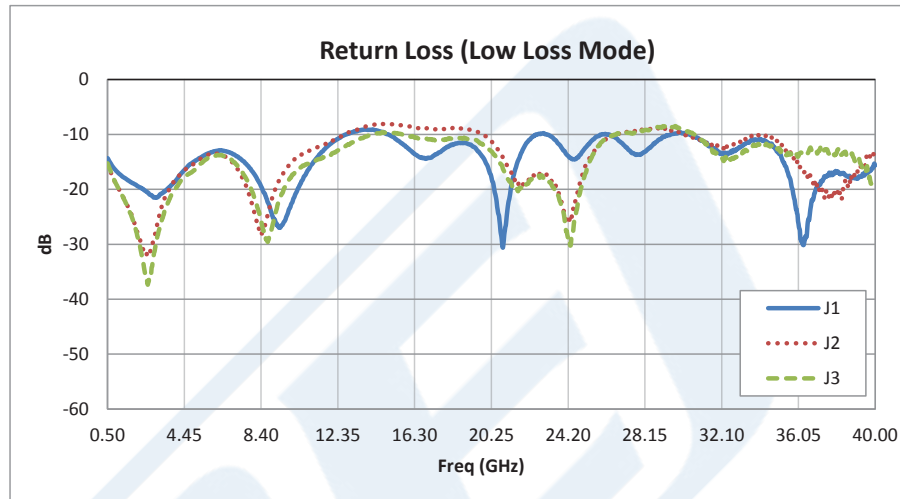


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Typical Performance Data



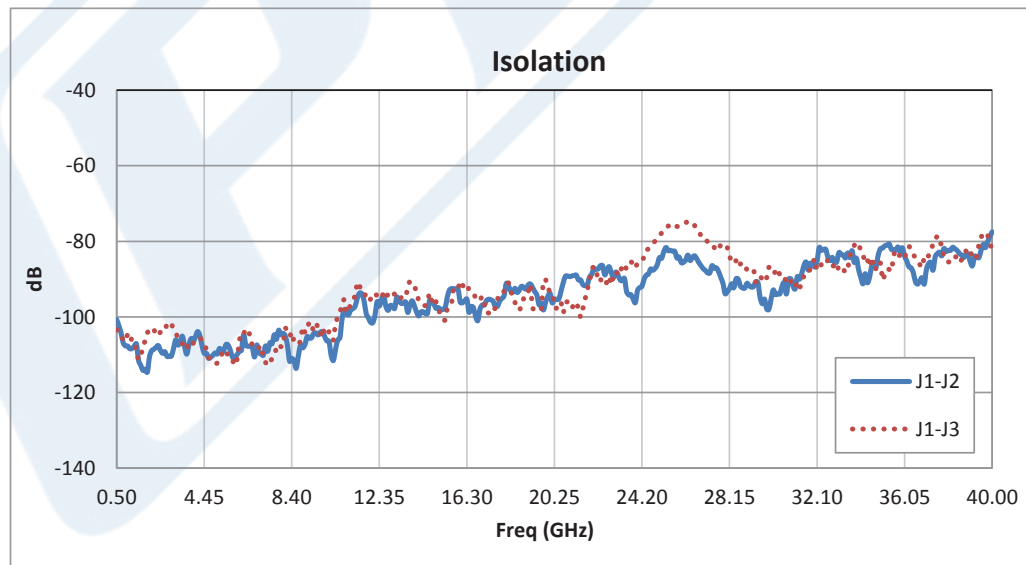
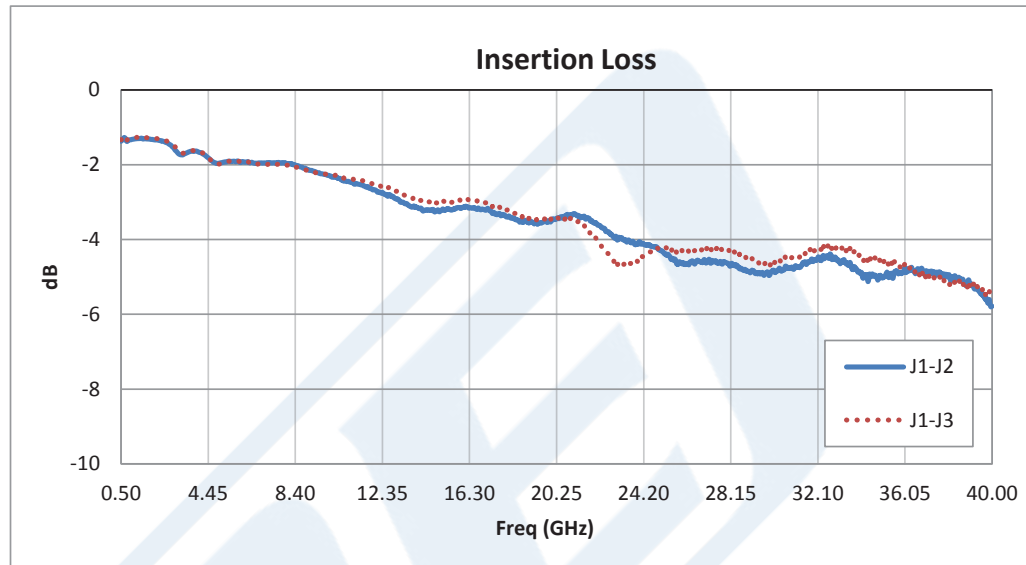
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Absorptive SPDT PIN Diode Switch Operating From 500 MHz to 40 GHz Up to 0.1 Watts (+20 dBm) and Field Replaceable 2.92mm from Pasternack Enterprises has same day shipment for domestic and International orders. Our RF, microwave and millimeter wave products maintain a 99% 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 SPDT PIN Diode Switch Operating From 500 MHz to 40 GHz Up to 0.1 Watts \(+20 dBm\) and Field Replaceable 2.92mm PE71S6215](#)



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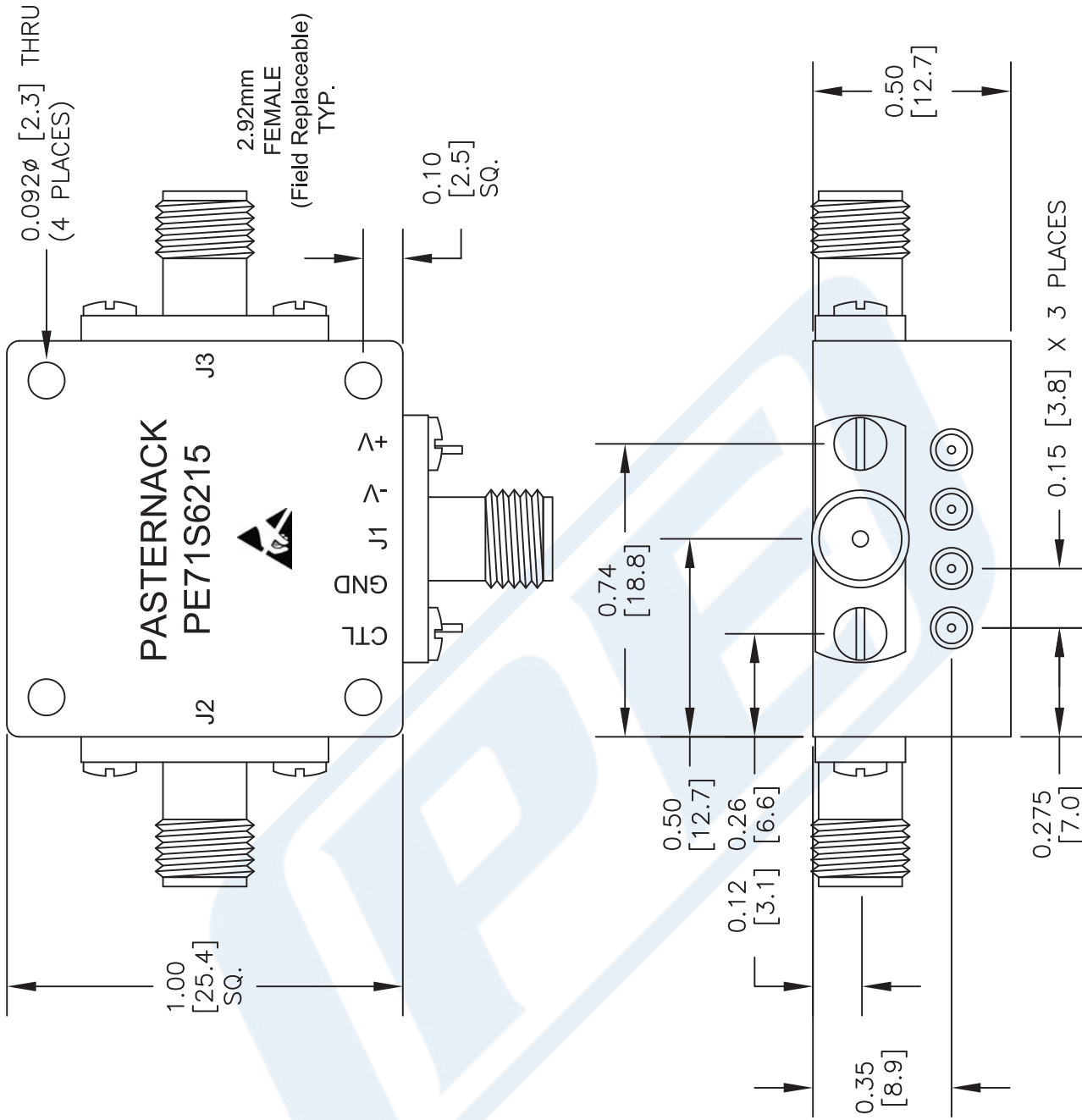
Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [Absorptive SPDT PIN Diode Switch Operating From 500 MHz to 40 GHz Up to 0.1 Watts \(+20 dBm\) and Field Replaceable 2.92mm PE71S6215](https://www.pasternack.com/absorptive-spdt-pin-diode-switch-40-ghz-20-dbm-2.92mm-pe71s6215-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.

# PE71S6215 CAD Drawing

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LOGIC TABLE		
CTL	J1-J2	J1-J3
0	ON	OFF
1	OFF	ON

ALL DIMENSIONS ARE IN INCHES.  
TOLERANCES:  
X.XX ±0.010  
X.XXX ±0.005

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

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  
**PE71S6215**

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CAGE CODE 53919

CAD FILE 121616

SCALE N/A

SIZE A

2233