



Absorptive SP5T PIN Diode Switch Operating From 100 MHz to 20 GHz Up to 0.5 Watts (+27 dBm) and SMA

## PIN Diode Switches Technical Data Sheet

PE71S2045

### Features

- SP5T Absorptive Switch
- 100 MHz to 20 GHz
- Insertion Loss 3.9 dB max
- Isolation 65 dB min
- Switching speed 75 nsec max
- Max Operating Power +27 dBm

### Applications

- Communications Systems
- Electronic Simulators
- Bypass Switch
- Test Equipment
- Radar Systems
- EW Systems

### Description

The PE71S2045 is a Single Pole Five Throw (SP5T) Absorptive PIN Diode Switch that operates from 0.1 to 20 GHz. The output port is terminated in 50 ohms when switched in the isolation (off) state. Electrical performance includes 3.9 dB max insertion loss, 65 dB min isolation, and 75 nsec max switching speed. The design incorporates TTL-compatible driver circuitry for accurate logic control. Operational temperature range is -55°C to +85°C and dual voltage controls of +5 Vdc and -12 Vdc are required. The package interface uses solder terminals and SMA Female connectors.

### Electrical Specifications

Description	Minimum	Typical	Maximum	Units
Frequency Range	0.1		20	GHz
Impedance		50		Ohms
VSWR			2:1	
Insertion Loss			3.9	dB
Isolation	65			dB
Switching Time			75	ns
Input Power (CW)			0.5	Watts
Positive Operating Voltage		5		Vdc
Negative Operating Voltage		-12		Vdc
Current @ 5 Vdc		200		mA
Current @ -12 Vdc		40		mA
Operating Temperature	-55		+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 SP5T PIN Diode Switch Operating From 100 MHz to 20 GHz Up to 0.5 Watts \(+27 dBm\) and SMA PE71S2045](#)



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### Mechanical Specifications

#### Size

Length	1.34 in [34.04 mm]
Width	1.34 in [34.04 mm]
Height	0.45 in [11.43 mm]

Design	Absorptive, SP5T
RF Connector	SMA Female
RF Connector Specification	MIL-C-39012
TTL Control Connector	Solder Pin

### Environmental Specifications

#### Temperature

Operating Range	-55 to +85 deg C
Storage Range	-65 to +125 deg C

#### 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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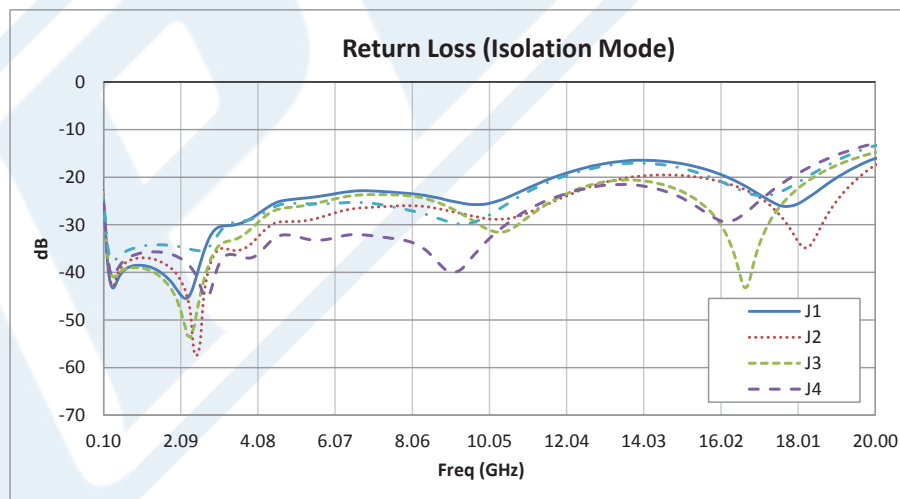
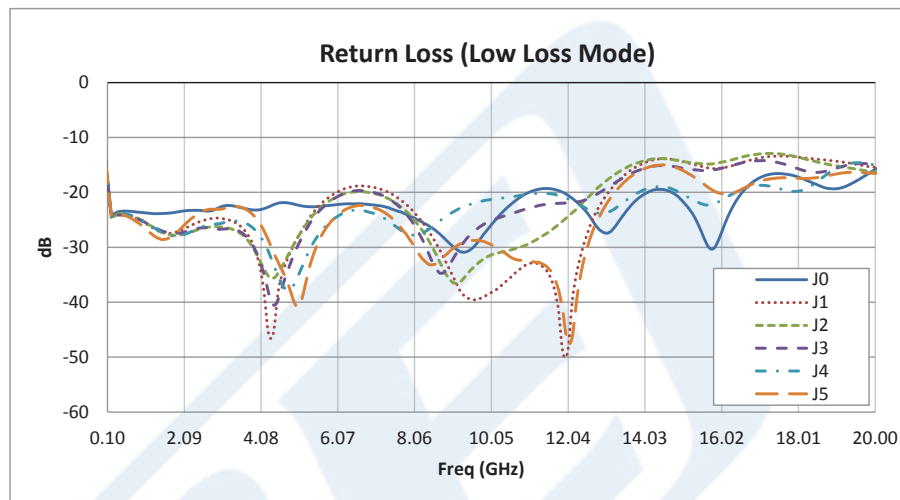


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Typical Performance Data



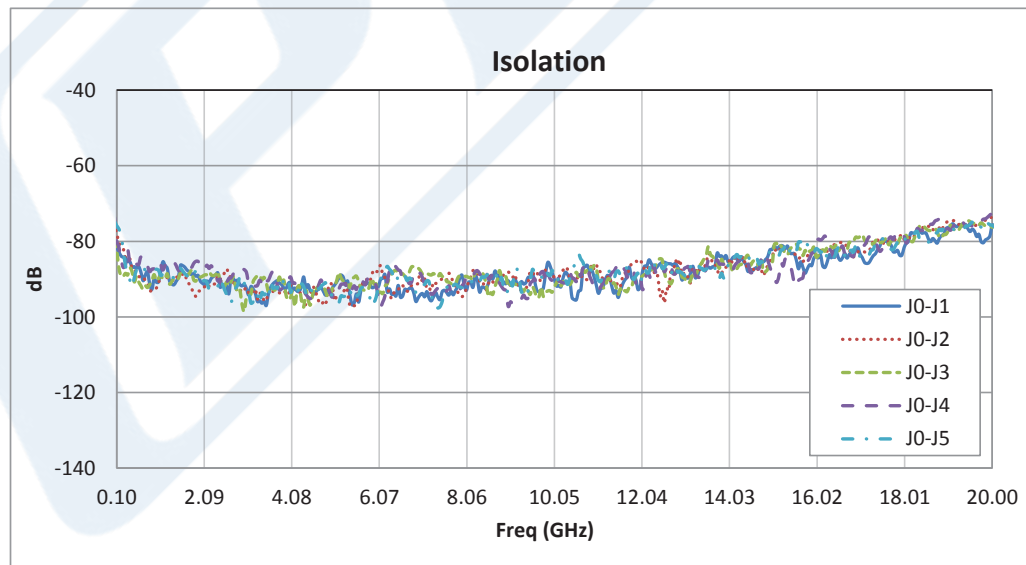
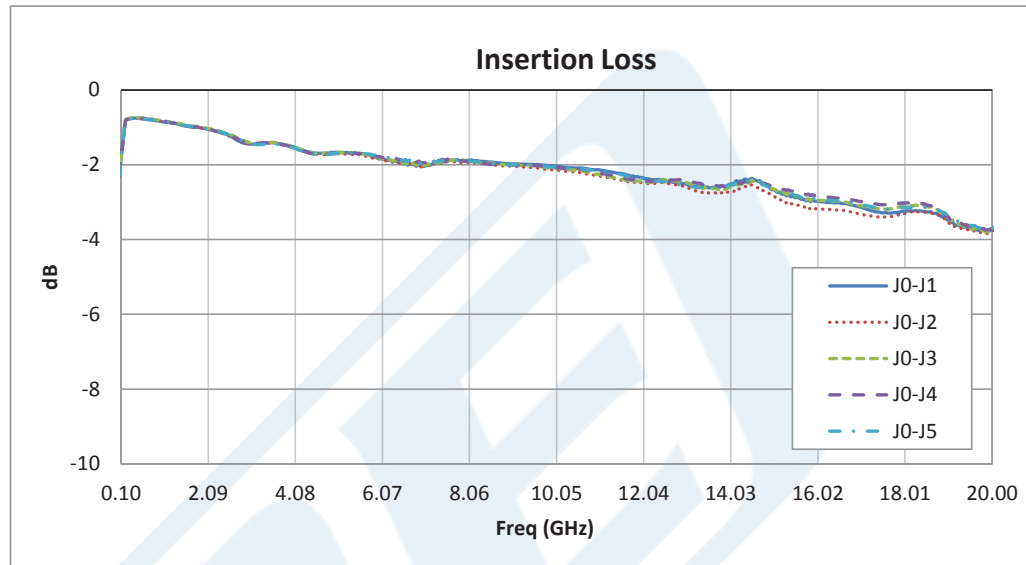
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URL: <https://www.pasternack.com/absorptive-sp5t-pin-diode-switch-20-ghz-27-dbm-sma-pe71s2045-p.aspx>

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.

# PE71S2045 CAD Drawing

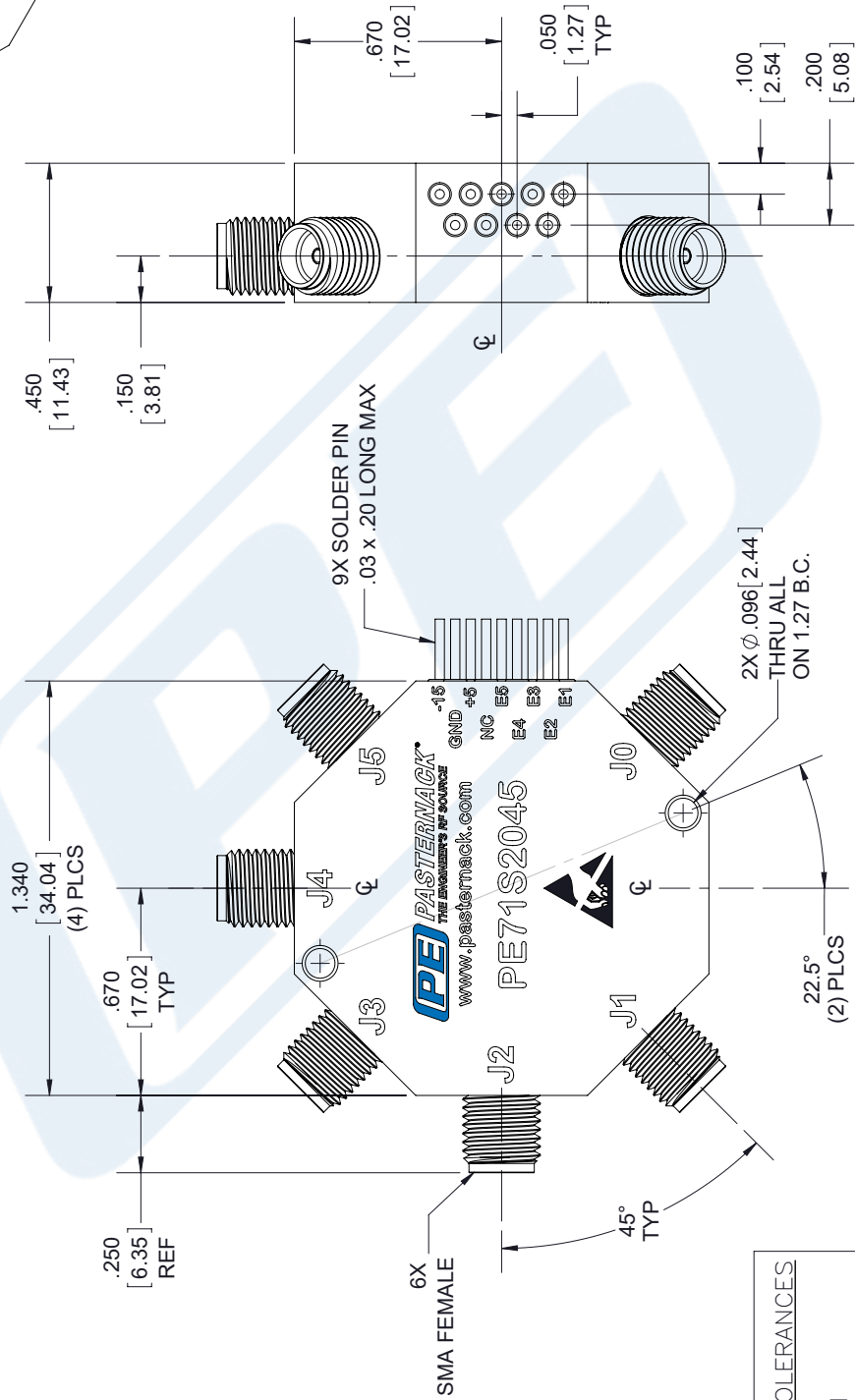
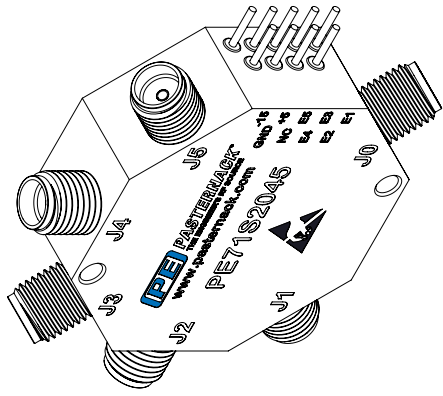
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## TTL LOGIC TABLE

E1	E2	E3	E4	E5	Low Loss
0	1	1	1	1	J0 - J1
1	0	1	1	1	J0 - J2
1	1	0	1	1	J0 - J3
1	1	1	0	1	J0 - J4
1	1	1	1	0	J0 - J5

**NOTE:**

- 0 = LOW LOSS
- 1 = ISOLATION



STANDARD TOLERANCES	
.X	±0.2
.XX	±0.01
.XXX	±0.005

\*STANDARD TOLERANCES APPLY ONLY TO DIMENSIONS IN INCHES



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DWG TITLE

PE71S2045

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].

CAGE CODE 53919

CAD FILE 090617

SCALE N/A

SIZE A

7361