



## Absorptive SP6T 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

PE71S2046

#### Features

- SP6T Absorptive Switch
- 100 MHz to 20 GHz
- Insertion Loss 4.2 dB max
- Isolation 65 dB min
- Switching speed 75 nsec max
- Max Operating Power +27 dBm

#### Applications

- Test & Measurement
- Military Communication
- Commercial Communication
- Wireless Communications
- SATCOM
- Military Electronic Systems
- RF Test Stations

#### Description

The PE71S2046 is a Single Pole Six Throw (SP6T) 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 4.2 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			4.2	dB
Isolation	65			dB
Switching Time			75	ns
Input Power (CW)			0.5	Watts
Positive Operating Voltage	4.7	5	5.3	V
Negative Operating Voltage	-12	-15	-20	Vdc
Current @ 5 Vdc			240	mA
Current @ -15Vdc			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 SP6T PIN Diode Switch Operating From 100 MHz to 20 GHz Up to 0.5 Watts \(+27 dBm\) and SMA PE71S2046](#)



Absorptive SP6T 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

PE71S2046

### Mechanical Specifications

#### Size

Length	1.34 in [34.04 mm]
Width	1.34 in [34.04 mm]
Height	0.45 in [11.43 mm]
Weight	0.093 lbs [42.18 g]
Design	Absorptive, SP6T
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:

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [Absorptive SP6T PIN Diode Switch Operating From 100 MHz to 20 GHz Up to 0.5 Watts \(+27 dBm\) and SMA PE71S2046](#)

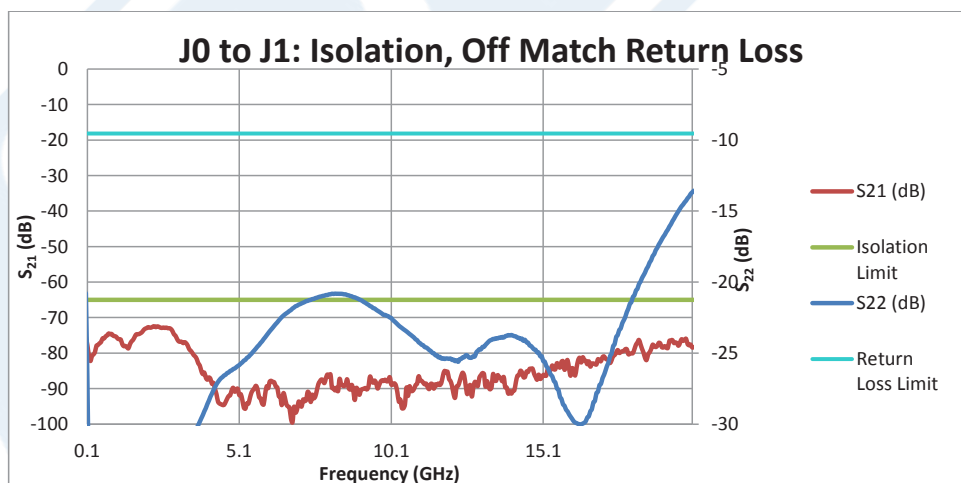
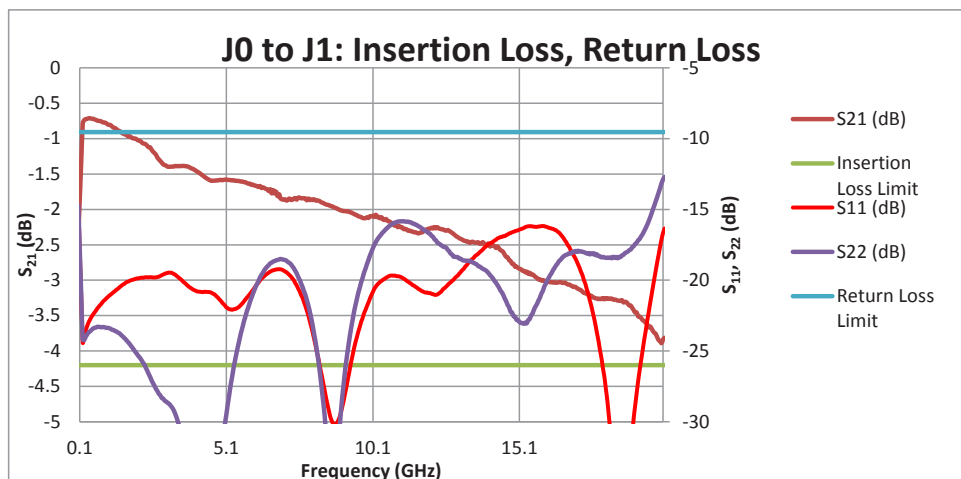


Absorptive SP6T PIN Diode Switch Operating From  
100 MHz to 20 GHz Up to 0.5 Watts (+27 dBm) and SMA

## PIN Diode Switches Technical Data Sheet

PE71S2046

### Typical Performance Data



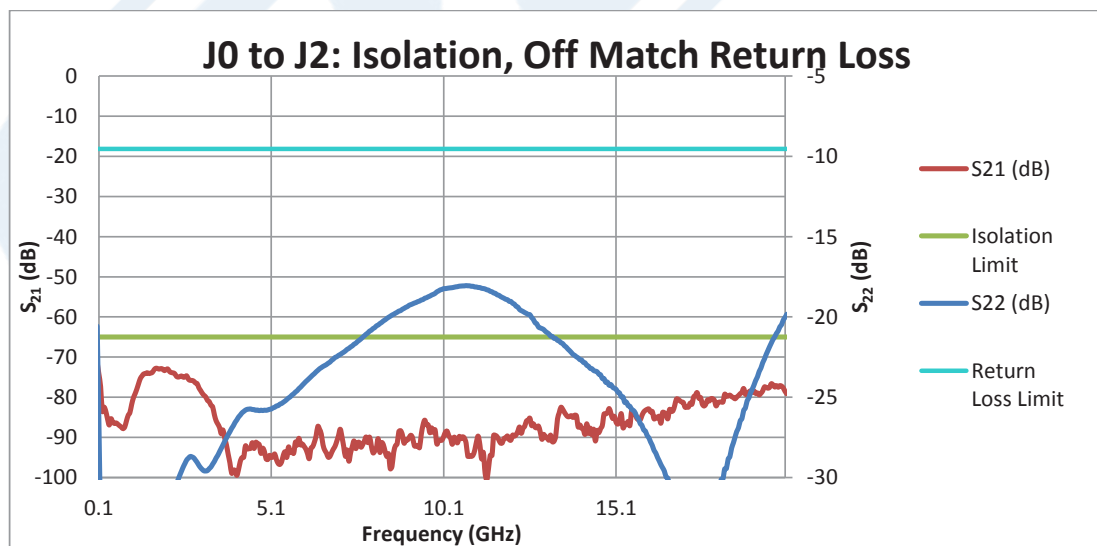
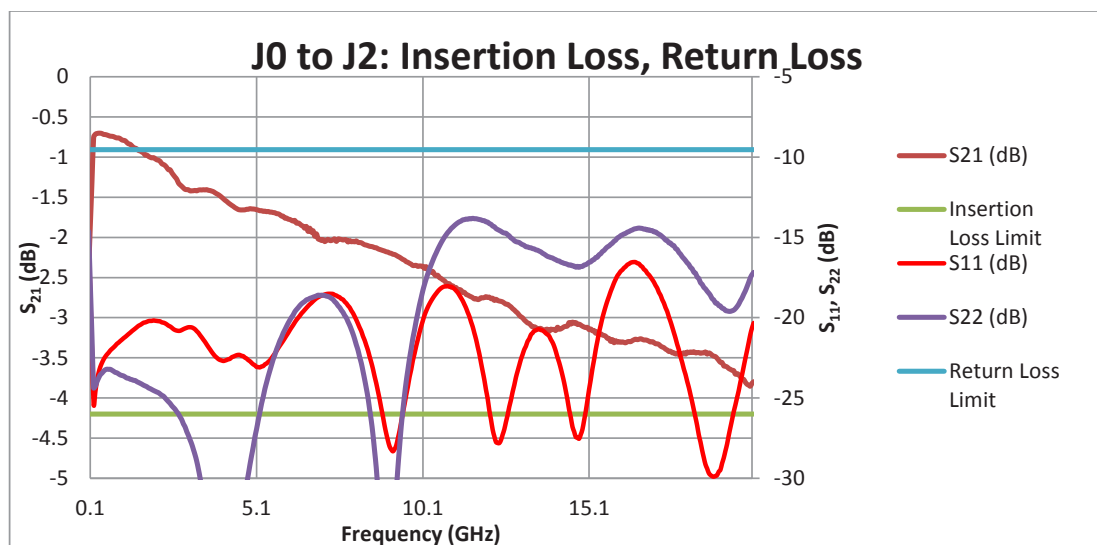
Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [Absorptive SP6T PIN Diode Switch Operating From 100 MHz to 20 GHz Up to 0.5 Watts \(+27 dBm\) and SMA PE71S2046](#)



Absorptive SP6T 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

PE71S2046



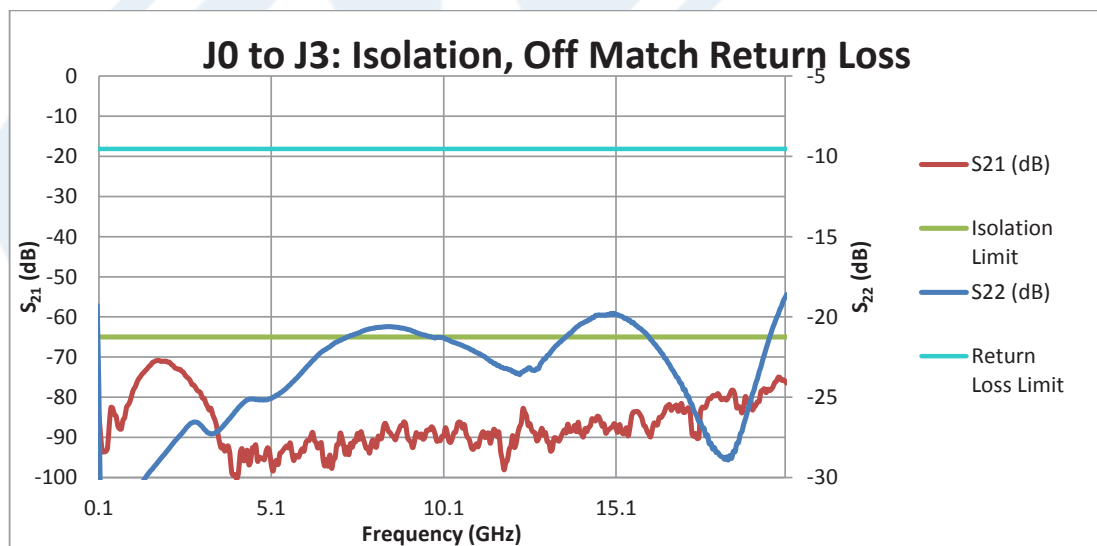
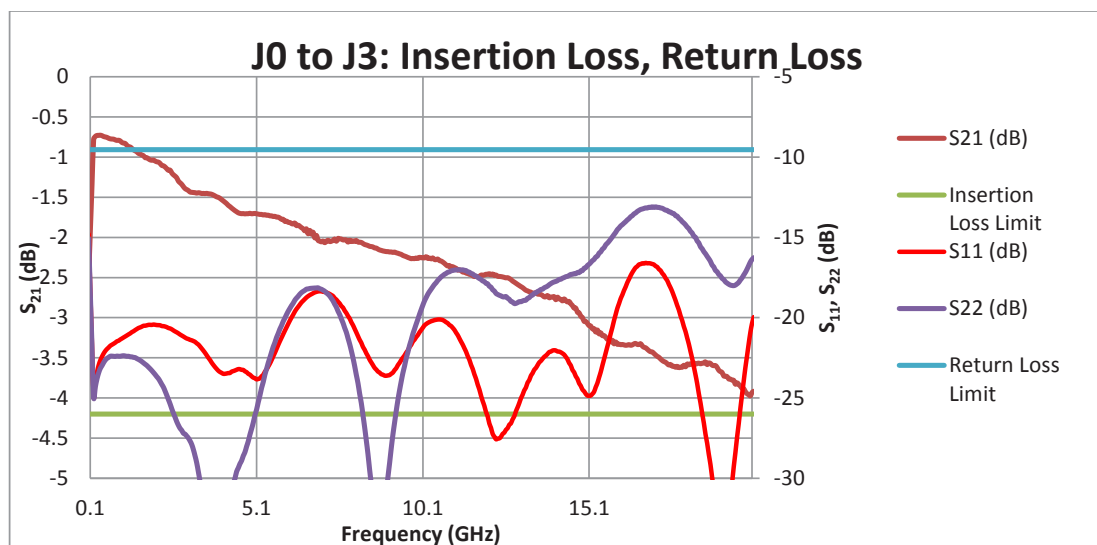
Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [Absorptive SP6T PIN Diode Switch Operating From 100 MHz to 20 GHz Up to 0.5 Watts \(+27 dBm\) and SMA PE71S2046](#)



Absorptive SP6T 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

PE71S2046



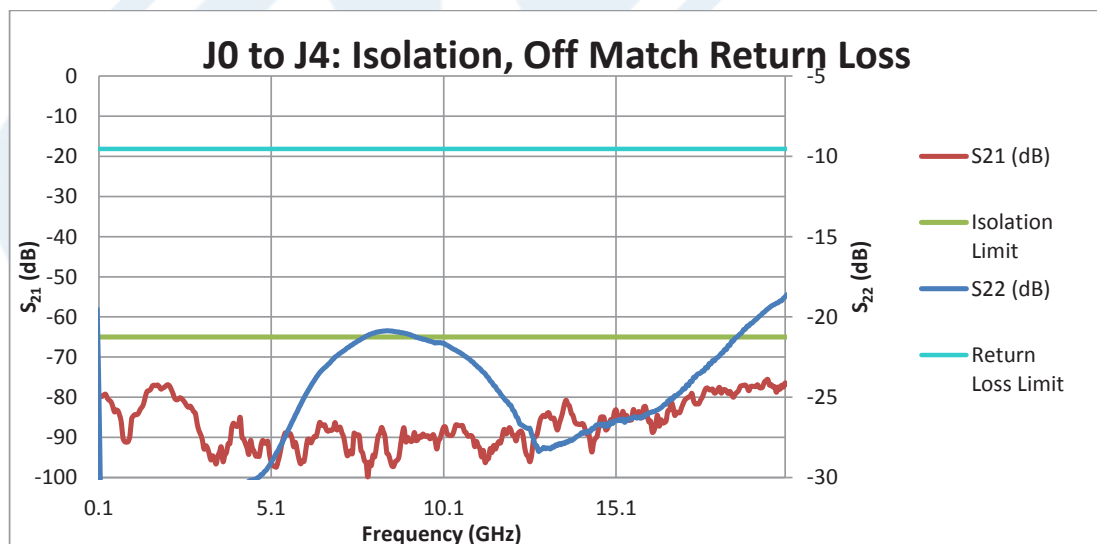
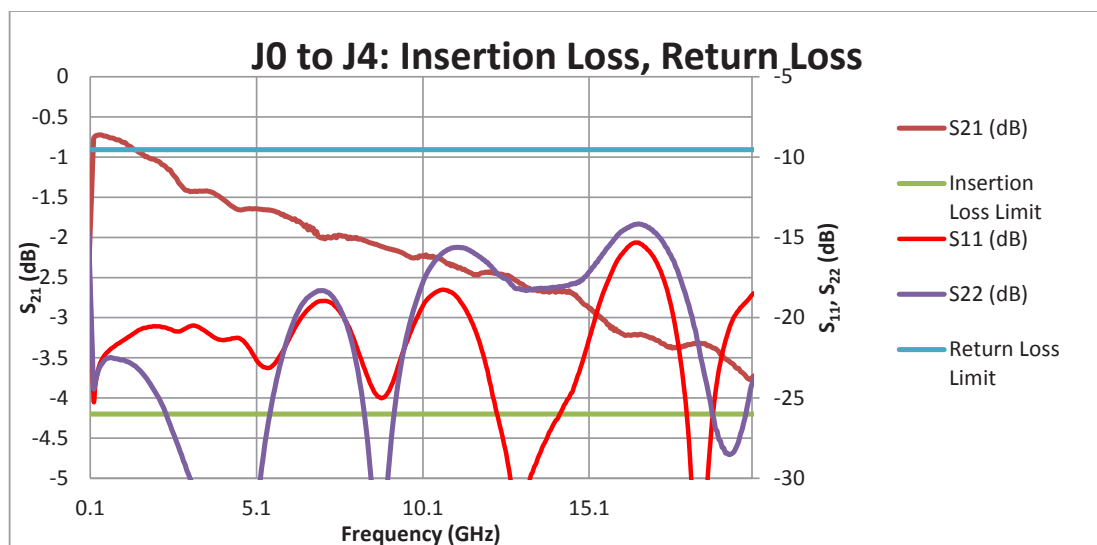
Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [Absorptive SP6T PIN Diode Switch Operating From 100 MHz to 20 GHz Up to 0.5 Watts \(+27 dBm\) and SMA PE71S2046](#)



Absorptive SP6T 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

PE71S2046



Absorptive SP6T PIN Diode Switch Operating From 100 MHz to 20 GHz Up to 0.5 Watts (+27 dBm) and SMA 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 SP6T PIN Diode Switch Operating From 100 MHz to 20 GHz Up to 0.5 Watts \(+27 dBm\) and SMA PE71S2046](#)



Absorptive SP6T 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

PE71S2046

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [Absorptive SP6T PIN Diode Switch Operating From 100 MHz to 20 GHz Up to 0.5 Watts \(+27 dBm\) and SMA PE71S2046](https://www.pasternack.com/absorptive-sp6t-pin-diode-switch-20-ghz-27-dbm-sma-pe71s2046-p.aspx)

URL: <https://www.pasternack.com/absorptive-sp6t-pin-diode-switch-20-ghz-27-dbm-sma-pe71s2046-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.



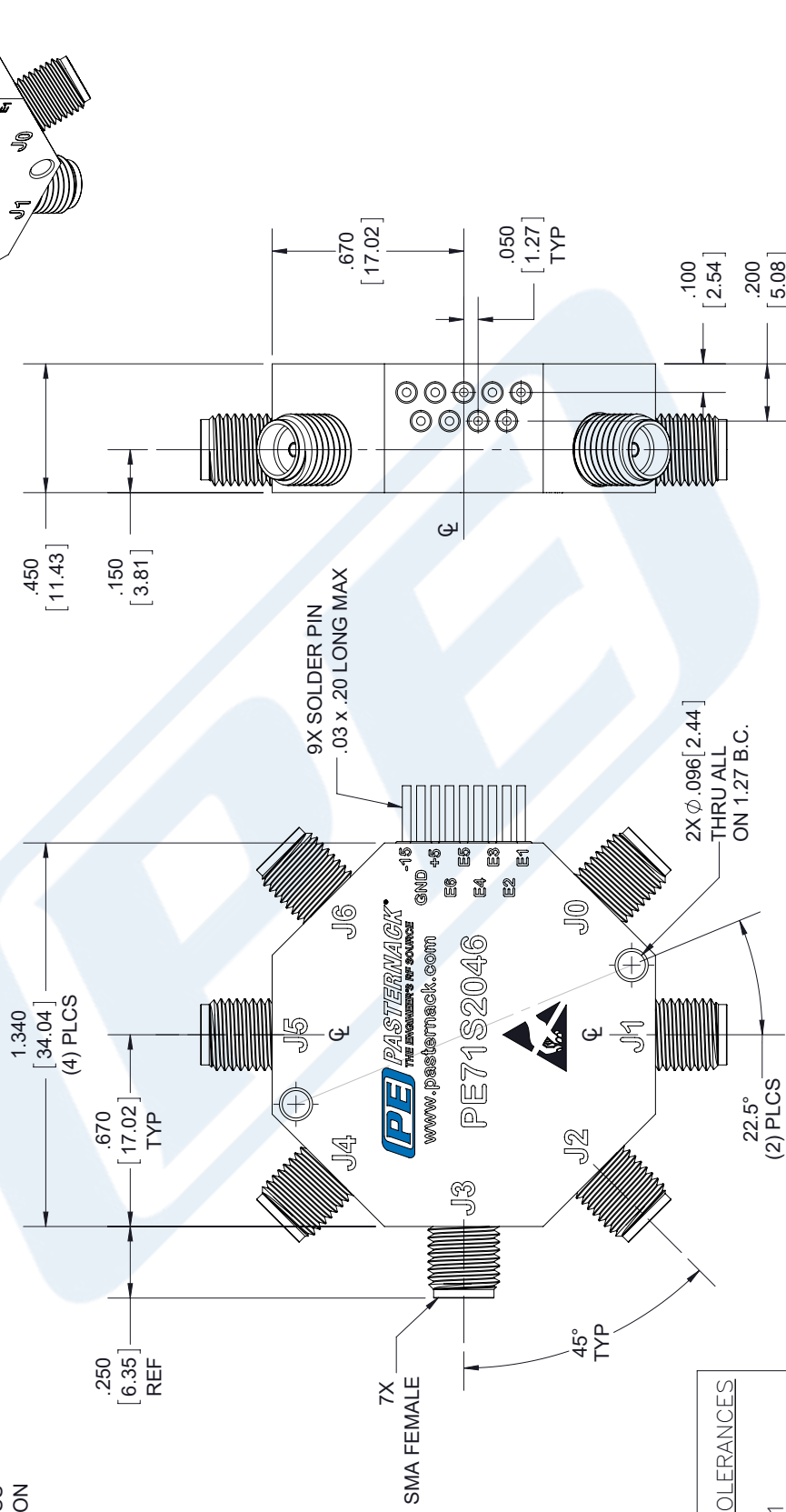
# PE71S2046 CAD Drawing

Absorptive SP6T PIN Diode Switch Operating From 100 MHz to 20 GHz Up to 0.5 Watts (+27 dBm) and SMA

TTL LOGIC TABLE						
E1	E2	E3	E4	E5	E6	Low Loss
0	1	1	1	1	1	J0 - J1
1	0	1	1	1	1	J0 - J2
1	1	0	1	1	1	J0 - J3
1	1	1	0	1	1	J0 - J4
1	1	1	1	0	1	J0 - J5
1	1	1	1	1	0	J0 - J6

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

**PASTERNAK**  
THE ENGINEER'S RF SOURCE

Pasternack Enterprises, Inc.  
P.O. Box 16759 | Irvine | CA | 92623

Phone: (949) 261-1920 | Fax: (949) 261-7451  
Website: www.pasternack.com | E-Mail: sales@pasternack.com

DWG TITLE

PE71S2046

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