



50 Ohm SMA SP3T PIN Diode Switch Operating  
From 500 MHz to 18 GHz Up To +20 dBm

TECHNICAL DATA SHEET

PE7166

**Broadband SP3T (Single Pole Three Throw) PIN Diode Absorptive Switch with SMA connectors and Operating Power of 100mW (20 dBm)**

Pasternack line of Broadband Switches offers a couple of frequency ranges, which are 0.5 to 18 GHz and 0.5 to 40 GHz. They are available in various configurations from SPST (Single Pole Single Throw), single-pole-double-throw (SP2T), single-pole-three-throw (SP3T), single-pole-four-throw (SP4T) and single-pole-eight-throw (SP8T). Pasternack's Broadband Switches are PIN Diode Absorptive Switch designs capable of handling power levels to 100mW (20 dBm) at a switching speed of 100 ns (nanoseconds). This line of Absorptive PIN Diode Switches are designed with TTL logic controls.

- Designs with Operating Frequencies from 0.5 GHz up to 18 GHz or 40 GHz
- Available configurations are SPST, SP2T, SP3T, SP4T and SP8T
- SMA or 2.92mm connector
- Switching Speed of 100ns Maximum
- Power ratings of 20dBm
- TTL Control Logic diagram can be found on attached drawing

**Configuration**

RF Connector	SMA Female
Control Connector	Solder Pin
Design	Absorptive, SP3T

**Electrical Specifications**

Frequency Range, GHz	0.5 to 18
Impedance, Ohms	50
Maximum Input Power, dBm	+20
Maximum Input VSWR	2:1
Maximum Output VSWR	2:1
Maximum Insertion Loss, dB	3.8
Minimum Isolation, dB	55
Maximum Speed, ns	100
Power Supply 1, Volts	5
Power Supply 2, Volts	-15

**Mechanical Specifications**

**Temperature**

Operating Range, deg C	-40 to +85
Storage Range, deg C	-55 to +125

**Size**

Length, in [mm]	1.2 [30.48]
Width, in [mm]	1.2 [30.48]
Height, in [mm]	0.5 [12.7]
Housing Material and Plating	Aluminum, Paint

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [50 Ohm SMA SP3T PIN Diode Switch Operating From 500 MHz to 18 GHz Up To +20 dBm PE7166](#)

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.



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**Compliance Certifications** (visit [www.Pasternack.com](http://www.Pasternack.com) for current document)  
RoHS Compliant Yes

**Plotted and Other Data**  
Notes:

Values at 25 °C, sea level

50 Ohm SMA SP3T PIN Diode Switch Operating From 500 MHz to 18 GHz Up To +20 dBm from Pasternack Enterprises has same day shipment for domestic and International orders. Our RF, microwave and fiber optic products maintain a 99% availability and are part of the broadest selection in the industry.

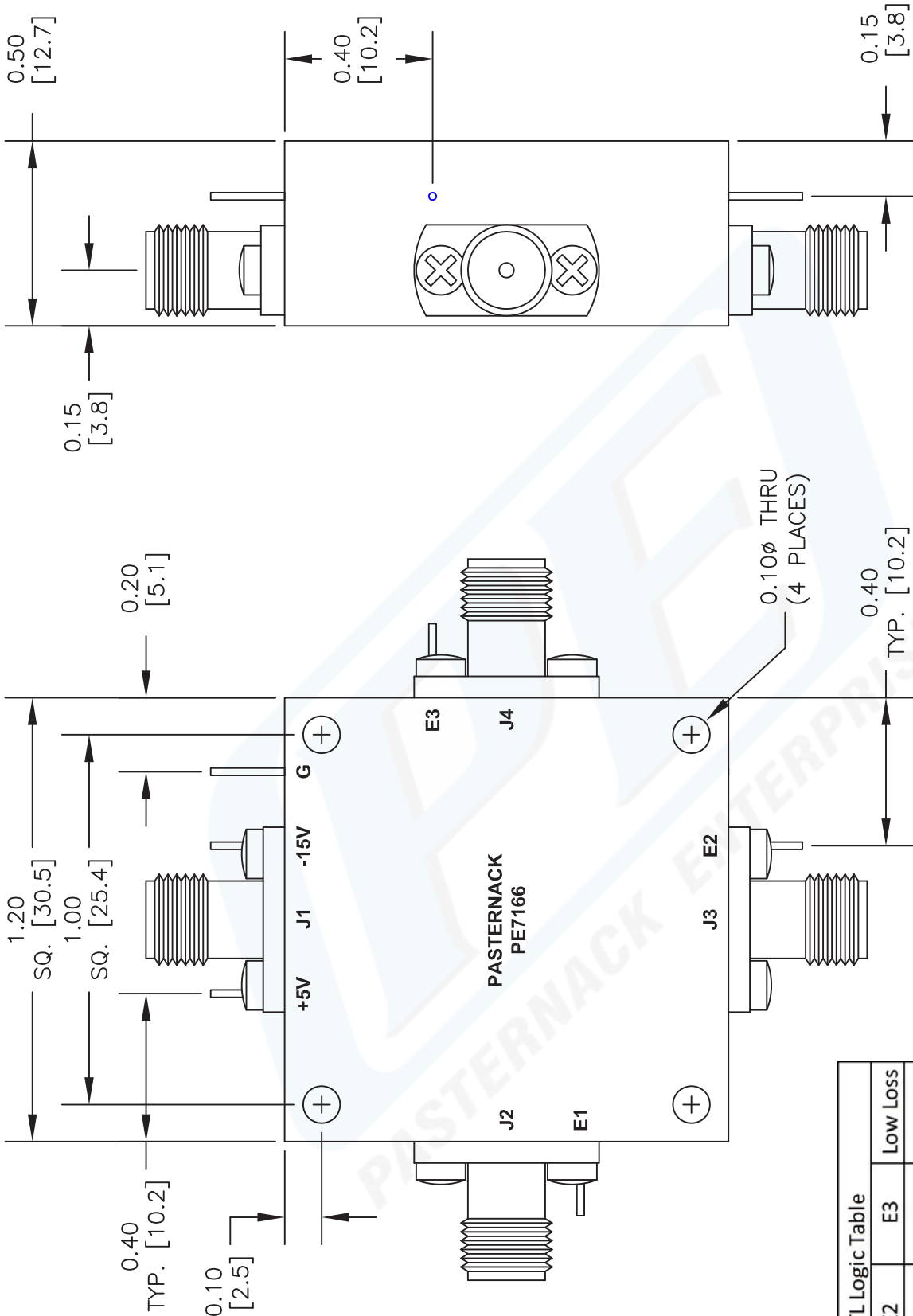
Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [50 Ohm SMA SP3T PIN Diode Switch Operating From 500 MHz to 18 GHz Up To +20 dBm PE7166](http://www.pasternack.com/50-ohm-sma-sp3t-pin-diode-switch-500-mhz-to-18-ghz-pe7166-p.aspx)

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# PE7166 CAD Drawing

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Note: 0 = Low Loss  
1 = Isolation

TTL Logic Table

	E1	E2	E3	Low Loss
E1	0	1	1	J1-J2
E2	1	0	1	J1-J3
E3	1	1	0	J1-J4

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  
**PE7166**

FSCM NO. 53919

CAD FILE 040213-A

SCALE N/A

SIZE A

2233

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