



SPDT PIN Diode Switch Operating from 50 MHz to 1.5 GHz Up to 4 Watts (+36 dBm) and SMA

PIN Diode Switches Technical Data Sheet

PE71S2048

Features

- SPDT Reflective Switch
- 50 MHz to 1500 MHz
- Insertion Loss 1.4 dB max
- Isolation 50 dB
- Power Input +36 dBm CW max
- Switching Time: 1.5 μ s
- Field replaceable SMA connectors
- Mil Spec Compliant

Applications

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

Description

The PE71S2048 is a Single Pole Double Throw (SPDT) PIN Diode Switch that operates over a wide frequency band from 50 to 1500 MHz. Electrical performance includes max insertion loss of 1.4 dB, min isolation of 50 dB, and max switching speed of 1.5 μ s. The design requires voltage controls of +5 Vdc, with an operational temperature range of -40°C to +85°C. External connectors include solder terminals and Field Replaceable SMA female connectors. Conforms to MIL-STD for Shock, Vibration, Altitude, and Humidity.

Electrical Specifications

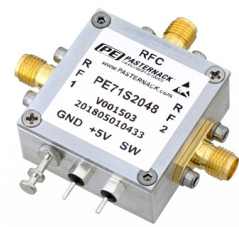
TTL Control

Off/Isolation: "0"

On/Low Loss: "1"

Description	Minimum	Typical	Maximum	Units
Frequency Range	0.05		1.5	GHz
Impedance		50		Ohms
VSWR		1.2:1	1.5:1	
Insertion Loss			1	dB
Isolation		60		dB
Switching Time		1.5	2	us
RF Input Power (CW)*			4	Watts
Current		1		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: [SPDT PIN Diode Switch Operating from 50 MHz to 1.5 GHz Up to 4 Watts \(+36 dBm\) and SMA PE71S2048](#)



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Absolute Maximum Ratings

Parameter	Absolute Maximum
Supply Voltage	+6V
RF Input Power	+37dBm
Operating Temperature	-40 °C to +85 °C
Storage Temperature	-55 °C to +125 °C

Truth table

Control Input V _{sw}	Signal Path State
High (+5V)	RFC to RF1
Low (0V)	RFC to RF2

SW Port Internal Pull-Down Resistor 100KΩ

ESD Sensitive Material



Mechanical Specifications

Size

Length

1.25 in [31.75 mm]

Width

1.25 in [31.75 mm]

Height

0.563 in [14.3 mm]

Weight

0.0999 lbs [45.31 g]

Design

Reflective, SPDT

RF Connector

SMA Female

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, Condition B

Shock

MIL-STD-202F, Method 213B, Condition B

Vibration

MIL-STD-202F, Method 204D, Condition B

Altitude

MIL-STD-202F, Method 105C, Condition B

Compliance Certifications (see [product page](#) for current document)

Plotted and Other Data

Notes:

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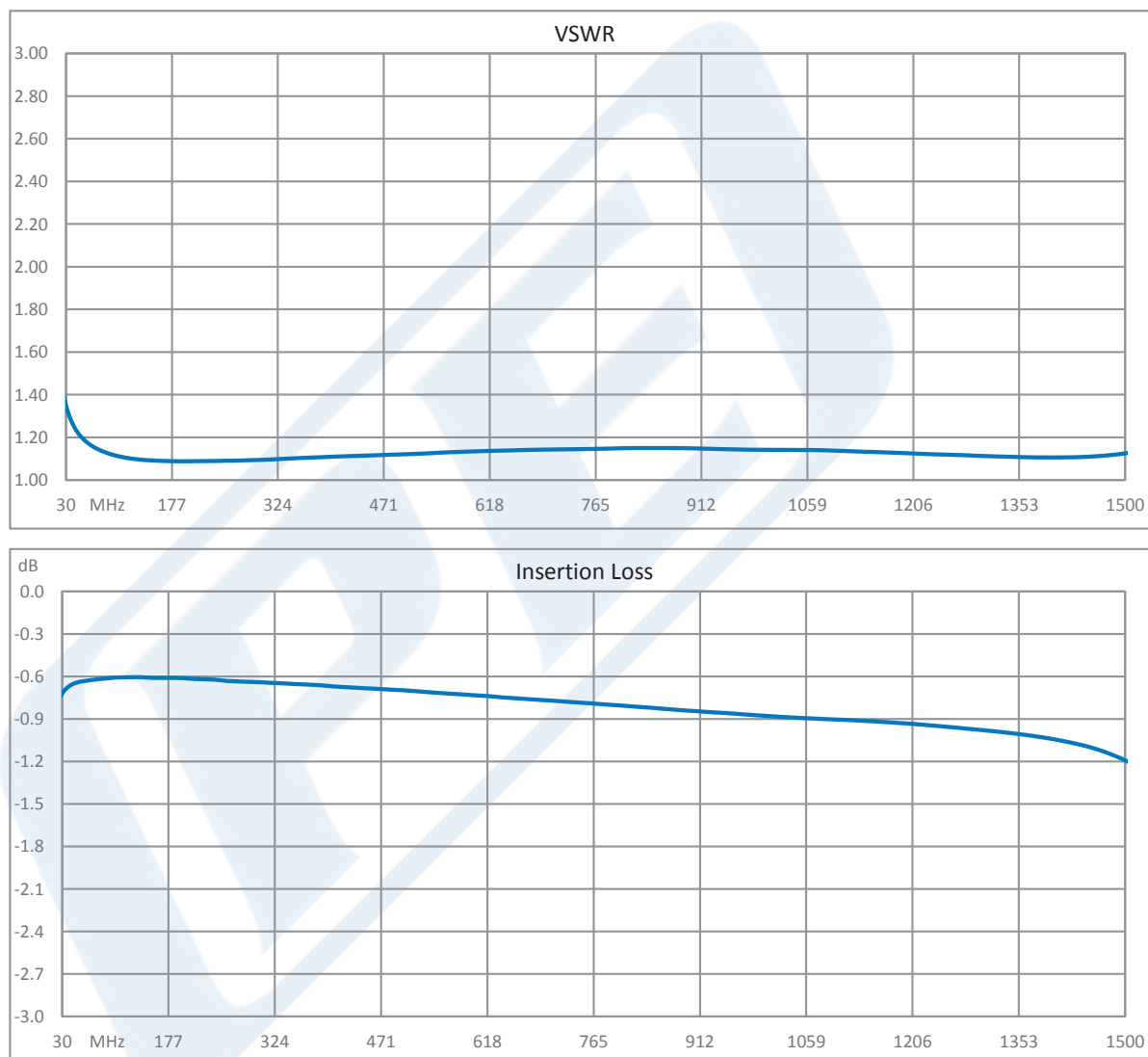


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Typical Performance Data



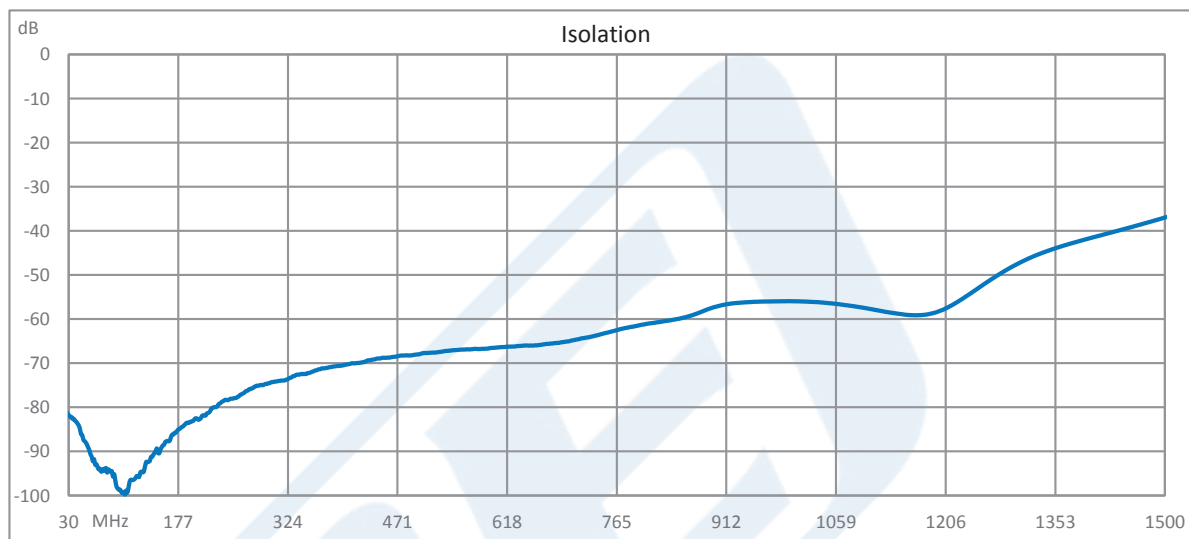
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SPDT PIN Diode Switch Operating from 50 MHz to 1.5 GHz Up to 4 Watts (+36 dBm) and SMA from Pasternack Enterprises has same day shipment for domestic and International orders. Our RF, microwave and millimeter wave products maintain a 99.4% availability and are part of the broadest selection in the industry.

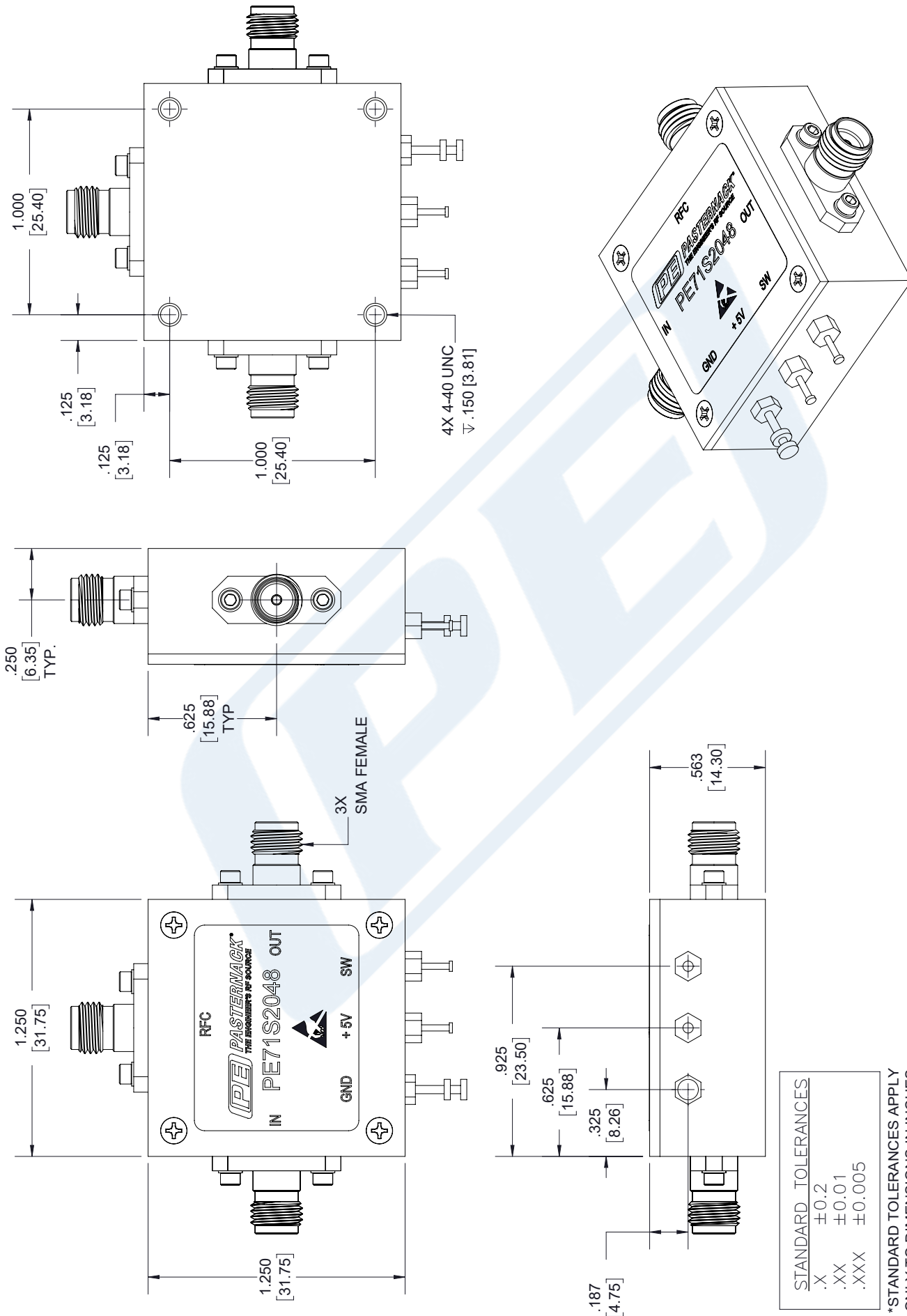
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The information contained in this document is accurate to the best of our knowledge and representative of the part described herein. It may be necessary to make modifications to the part and/or the documentation of the part, in order to implement improvements. 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.

PE71S2048 CAD Drawing

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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
PE71S2048

CAGE CODE 53919

7361

SIZE A

SCALE N/A

CAD FILE 06/29/18

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