



# SPDT PIN Diode Switch Operating From 20 MHz to 2.5 GHz Up to 25 Watts (+44 dBm) and SMA

## PIN Diode Switches Technical Data Sheet

PE71S2042

### Features

- SPDT PIN Diode Switch
- 20 to 2500 MHz Bandwidth
- Insertion loss: 1.5 dB max
- Isolation: 35 dB min
- 50 Ohms
- Switching Speed: 10 microseconds
- DC voltage: +15 Vdc
- SMA female connectors
- TTL Control Logic

### Applications

- Electronic Warfare
- Test & Measurement
- Military and Wireless Communications Systems
- Military & Space Radar

### Description

The PE71S2042 is a single pole double throw (SPDT) PIN diode switch that operates over the frequency range of 20 MHz to 2500 MHz. The 50 ohm design supports TTL control logic and is rated up to 25 watt average RF input power. Typical performance includes 1 dB insertion loss and greater than 35 dB isolation. Switching speed is 40 microseconds with 1.4:1 typical VSWR and an operating voltage of +15 Vdc with 80 mA nominal current. The rugged package design supports SMA Female RF input/output connectors. The Switch design is highly reliable with an operational temperature of 0°C to +70°C.

### Electrical Specifications

TTL Control

Off/Isolation: "0" 0 to V  
 On/Low Loss: "1"

Description	Minimum	Typical	Maximum	Units
Frequency Range	0.02		2.5	GHz
Impedance		50		Ohms
VSWR			1.4:1	
Switching Time			10	µs
Input Power (CW)			25	Watts
Input Power (Peak) @ 1 µsec Pulse			200	Watts
Positive Operating Voltage		15		Vdc
Current @ 15 Vdc		80		mA
Operating Temperature	0		+70	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 20 MHz to 2.5 GHz Up to 25 Watts \(+44 dBm\) and SMA PE71S2042](#)





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**Performance by Frequency**

Description	F1	F2	F3	F4	F5	Units
Frequency Range	0.02 to 1	1 to 2	2 to 2.5			GHz
Insertion Loss, Max	0.7	1	1.5			dB
Insertion Loss, Typ	0.3	0.5	1			dB
Isolation, Min	45	35	35			dB
Isolation, Typ	50	40	40			dB

**Mechanical Specifications**

**Size**

Design  
RF Connector

Reflective, SPDT  
SMA Female

**Environmental Specifications**

**Temperature**

Operating Range  
Storage Range

0 to +70 deg C  
-55 to +90 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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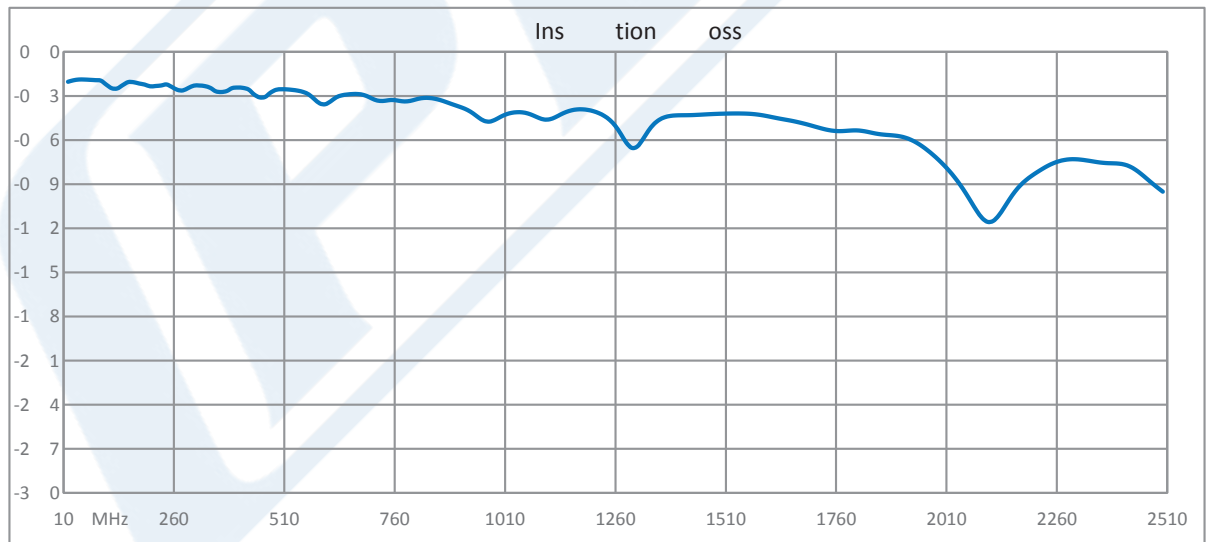
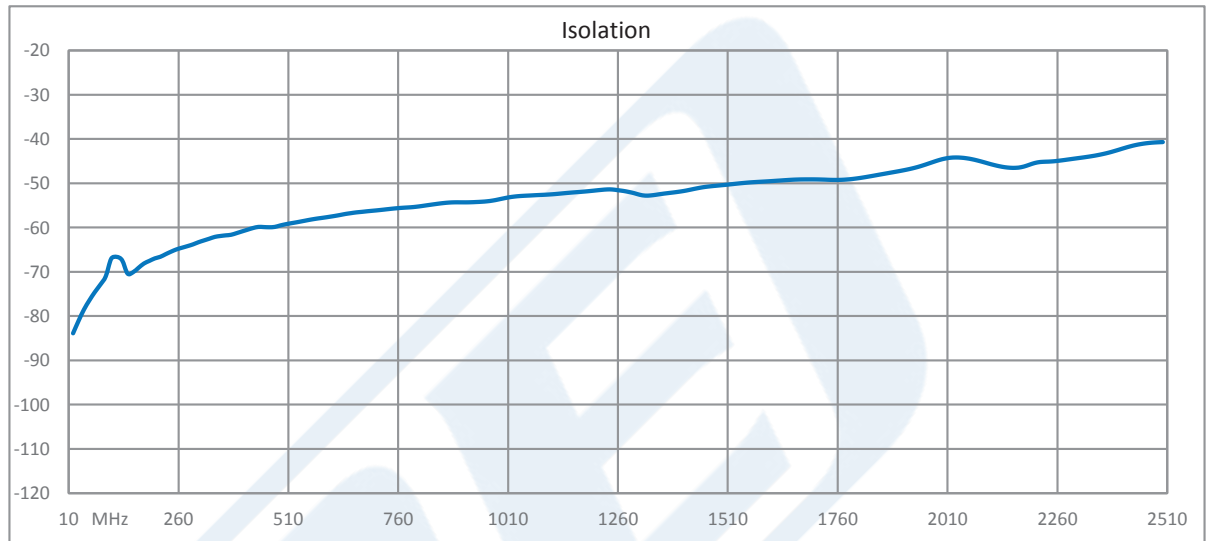


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Typical Performance Data



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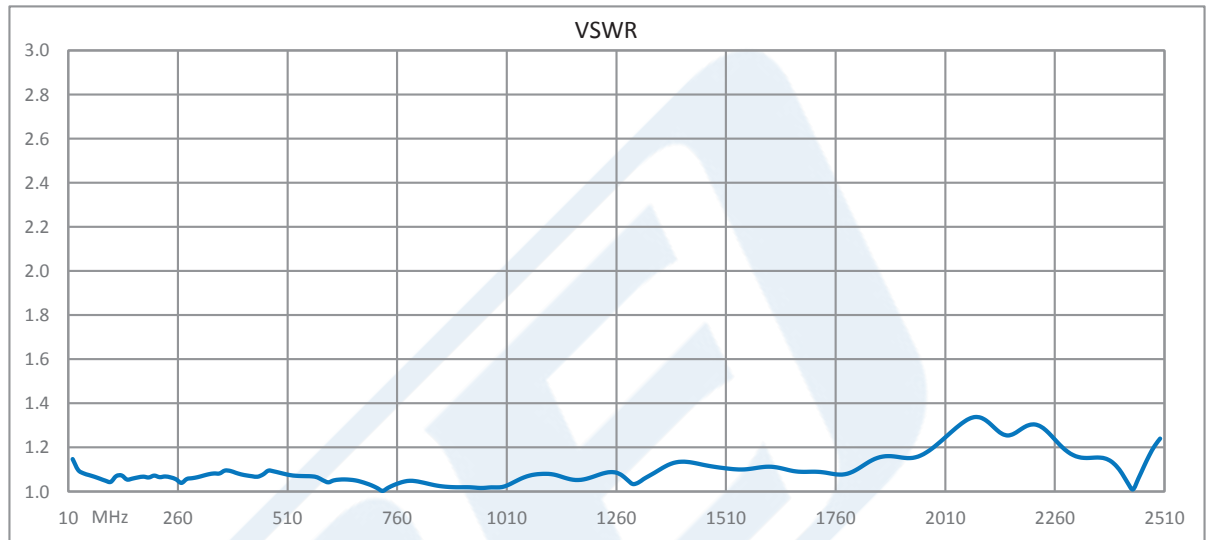




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SPDT PIN Diode Switch Operating From 20 MHz to 2.5 GHz Up to 25 Watts (+44 dBm) and SMA from Pasternack Enterprises has same day shipment for domestic and International orders. Our RF, microwave and millimeter wave products maintain a 99.4% availability and are part of the broadest selection in the industry.

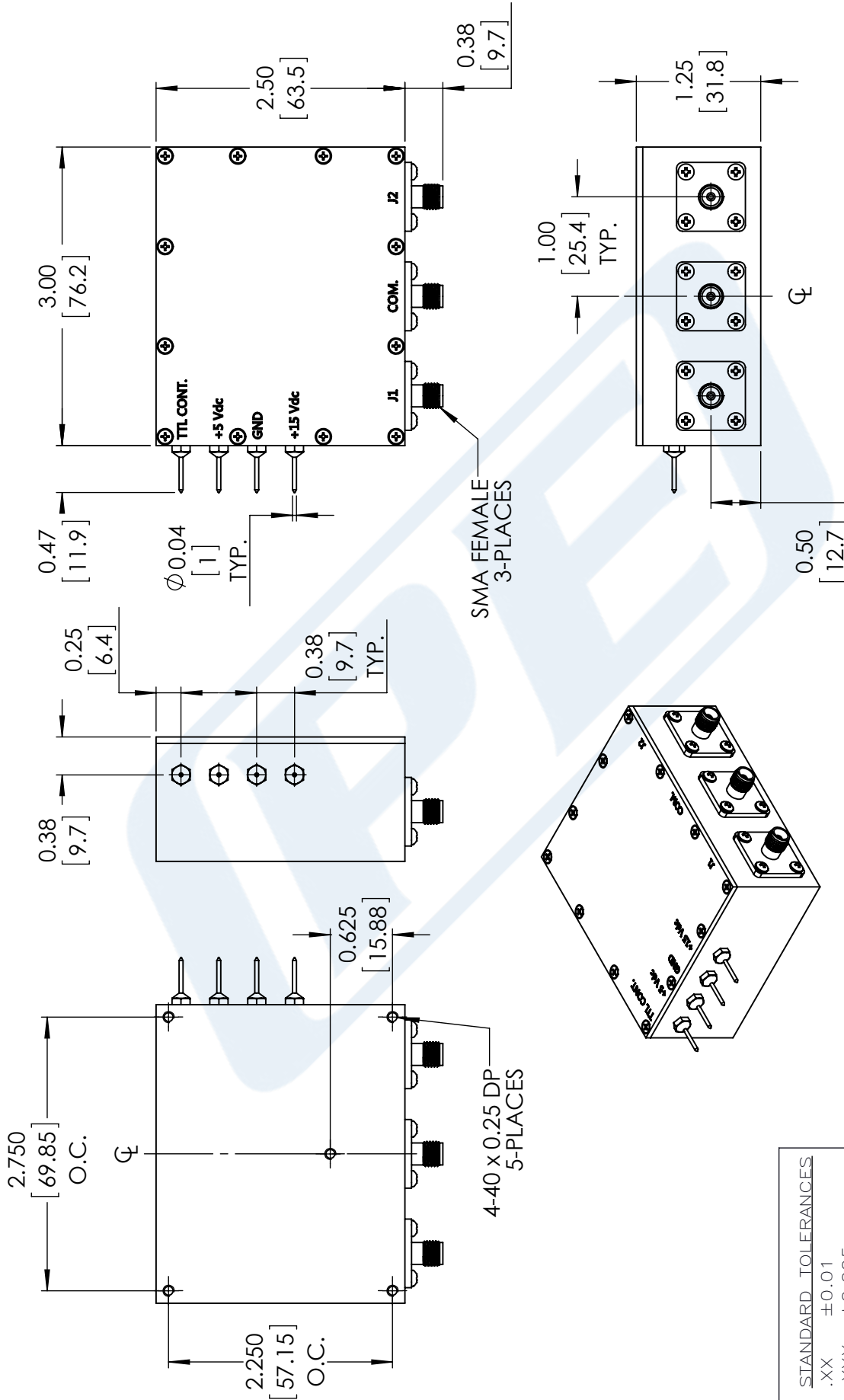
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The information contained in this document is accurate to the best of our knowledge and representative of the part described herein. It may be necessary to make modifications to the part and/or the documentation of the part, in order to implement improvements.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

# PE71S2042 CAD Drawing

SPDT PIN Diode Switch Operating From 20 MHz to 2.5 GHz Up to 25 Watts (+44 dBm) and SMA



TTL LOW = COMMON TO J1  
TTL HIGH = COMMON TO J2

STANDARD TOLERANCES  
.XX ±0.01  
.XXX ±0.005

\*STANDARD TOLERANCES APPLY ONLY TO DIMENSIONS IN INCHES

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  
**PE71S2042**

CAGE CODE 53919

CAD FILE 040817 SCALE N/A SIZE A CN\_0992

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