



SPDT PIN Diode Switch Operating From 100 MHz to 500 MHz Up to 250 Watts (+54 dBm) and SMA

## PIN Diode Switches Technical Data Sheet

PE71S2038

### Features

- SPDT High Power PIN Diode Switch
- 250 watt (CW)
- 100 to 500 MHz Bandwidth
- Insertion loss: 0.5 dB max
- Isolation: 55 dB min
- 50 Ohms
- Switching Speed: 40 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 PE71S2038 is a single pole double throw (SPDT) PIN diode switch that operates over the frequency range of 100 MHz to 500 MHz. The 50 ohm design supports TTL control logic and is rated up to 250 watt average RF input power. Typical performance includes 0.5 dB insertion loss and greater than 55 dB isolation. Switching speed is 40 microseconds with 1.25:1 typical VSWR and an operating voltage of +15 Vdc with 250 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 -20°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	100		500	MHz
Impedance		50		Ohms
VSWR			1.25:1	
Insertion Loss			0.5	dB
Isolation	55			dB
Switching Time			40	µs
Input Power (CW)			250	Watts
Input Power (Peak) @ 1 µsec Pules Width			500	Watts
Positive Operating Voltage		15		Vdc
Current @ 15 Vdc		250		mA
Operating Temperature	-20		+70	deg C

### Mechanical Specifications

#### Size

Design  
 RF Connector

Reflective, SPDT  
 SMA Female

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 100 MHz to 500 MHz Up to 250 Watts \(+54 dBm\) and SMA PE71S2038](#)



SPDT PIN Diode Switch Operating From 100 MHz to 500 MHz Up to 250 Watts (+54 dBm) and SMA

PIN Diode Switches Technical Data Sheet

PE71S2038

**Environmental Specifications**

**Temperature**

Operating Range

-20 to +70 deg C

Storage Range

-55 to +85 deg C

ESD Sensitivity

ESD Sensitive Material. Transport material in Approved ESD bags. Handle only in ESD Workstation.

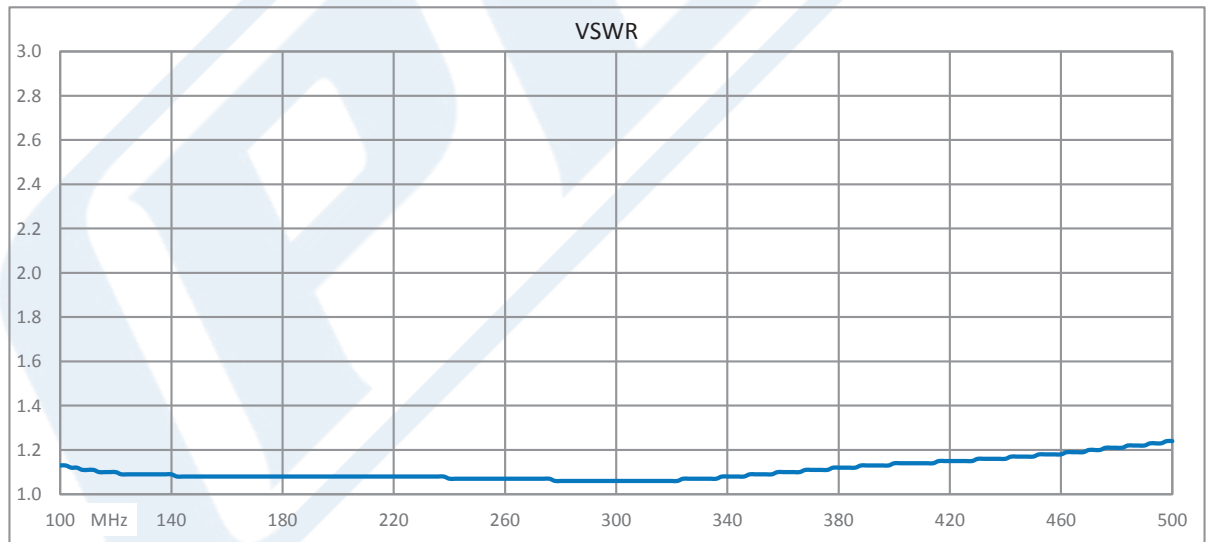


**Compliance Certifications** (see [product page](#) for current document)

**Plotted and Other Data**

Notes:

**Typical Performance Data**



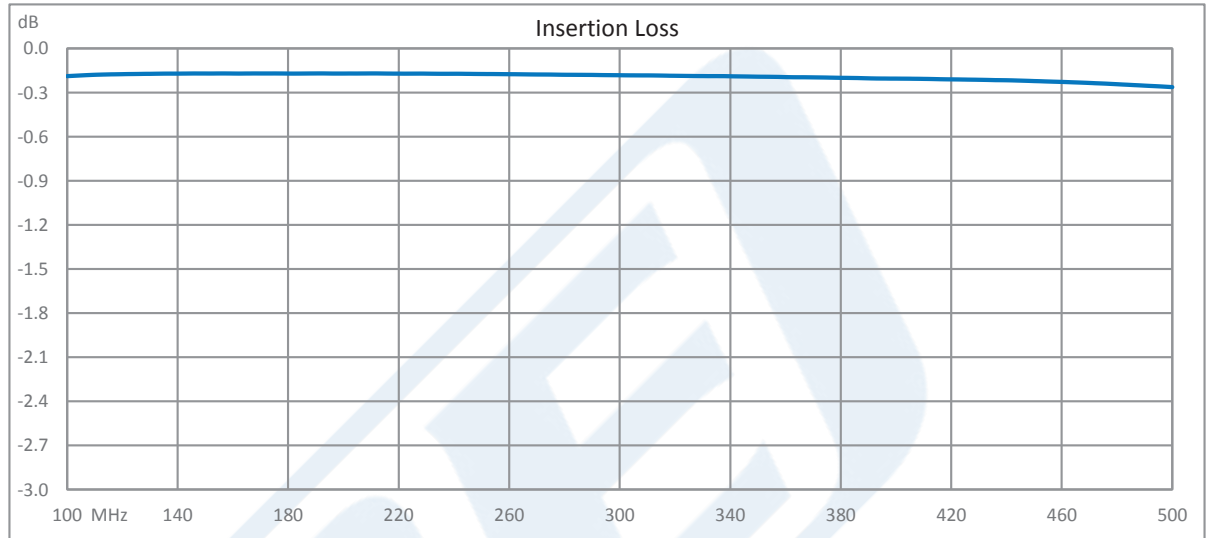
Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [SPDT PIN Diode Switch Operating From 100 MHz to 500 MHz Up to 250 Watts \(+54 dBm\) and SMA PE71S2038](#)



SPDT PIN Diode Switch Operating From 100 MHz to 500 MHz Up to 250 Watts (+54 dBm) and SMA

PIN Diode Switches Technical Data Sheet

PE71S2038



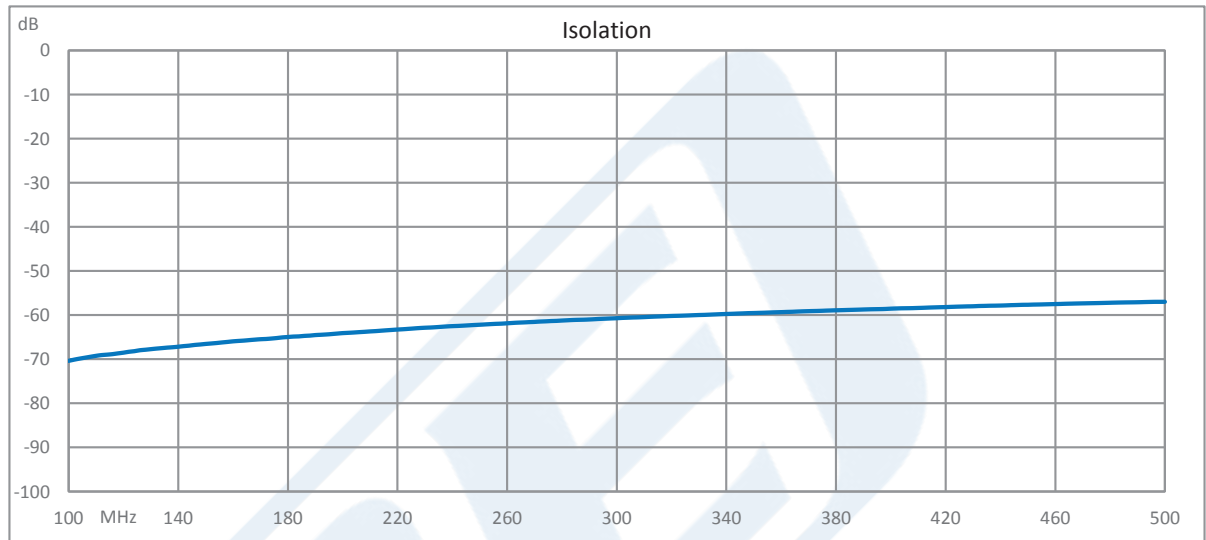
Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [SPDT PIN Diode Switch Operating From 100 MHz to 500 MHz Up to 250 Watts \(+54 dBm\) and SMA PE71S2038](#)



SPDT PIN Diode Switch Operating From 100 MHz to 500 MHz Up to 250 Watts (+54 dBm) and SMA

## PIN Diode Switches Technical Data Sheet

PE71S2038



SPDT PIN Diode Switch Operating From 100 MHz to 500 MHz Up to 250 Watts (+54 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.

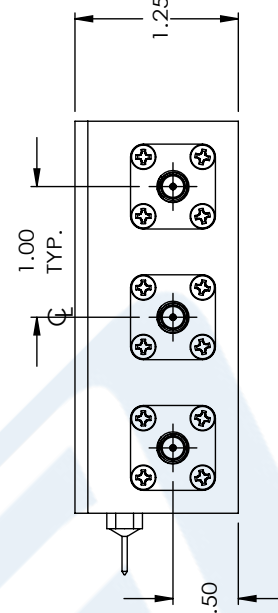
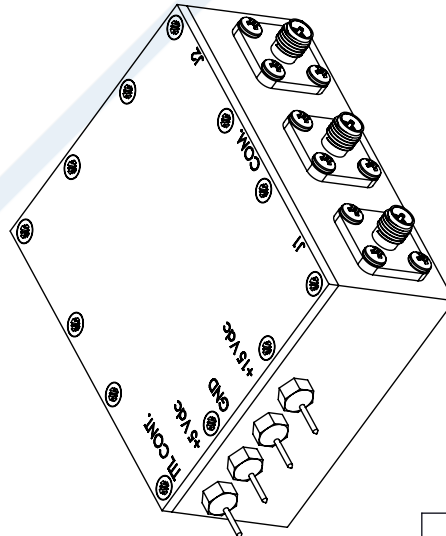
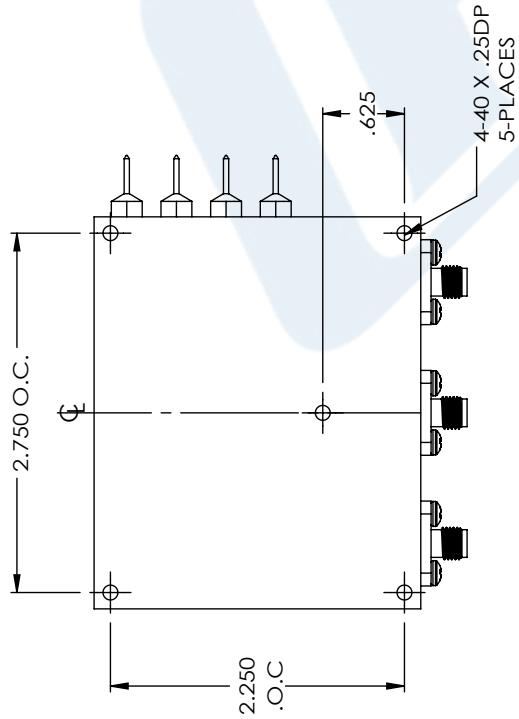
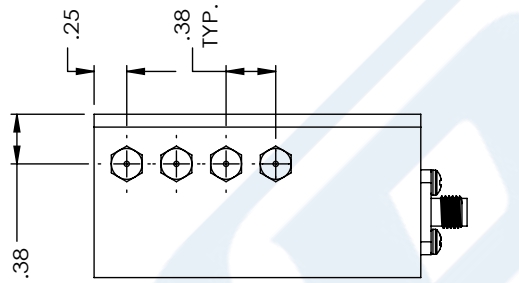
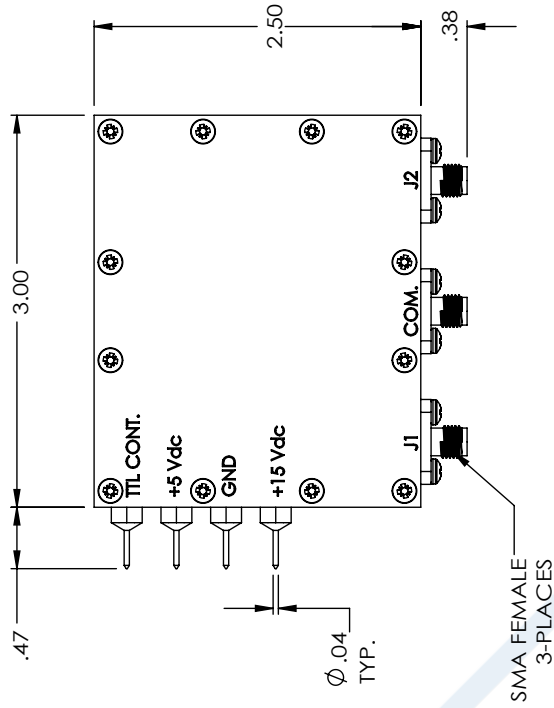
Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [SPDT PIN Diode Switch Operating From 100 MHz to 500 MHz Up to 250 Watts \(+54 dBm\) and SMA PE71S2038](https://www.pasternack.com/spdt-pin-diode-switch-500-mhz-250-watts-sma-pe71s2038-p.aspx)

URL: <https://www.pasternack.com/spdt-pin-diode-switch-500-mhz-250-watts-sma-pe71s2038-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.

# PE71S2038 CAD Drawing

SPDT PIN Diode Switch Operating From 100 MHz to 500 MHz Up to 250 Watts (+54 dBm) and SMA



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

STANDARD TOLERANCES	
.XX	±0.010
.XXX	±0.005

\*STANDARD TOLERANCES APPLY ONLY TO DIMENSIONS IN INCHES



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](http://www.pasternack.com) | E-Mail: [sales@pasternack.com](mailto:sales@pasternack.com)

DWG TITLE

**PE71S2038**

- 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 052917

SCALE N/A

SIZE A

1408