



SP3T PIN Diode Switch Operating From 500 MHz to 40 GHz
 Up to 0.1 Watts (+20 dBm) and Field Replaceable 2.92mm

PIN Diode Switches Technical Data Sheet

PE71S6227

Features

- SP3T Reflective Switch
- 0.5 GHz to 40.0 GHz
- Insertion Loss 5.5 dB typ
- Isolation 55 dB min
- Power Input 20 dBm CW max
- Switching Speed 50 nsec max

Applications

- Test & Measurement
- Military Communication
- Commercial Communication

Description

The PE71S6227 is a Single Pole Three Throw (SP3T) Reflective PIN Diode Switch that operates from 0.5 to 40 GHz. Performance includes 5.5 dB typ insertion loss, 55 dB min Isolation, and 50 nsec max switching speed. The design incorporates TTL-compatible driver circuitry for accurate logic control. Operational temperature range is -40°C to +85°C and dual voltage controls of +5 VDC and -5 VDC are required. The rugged package design is compact, features field replaceable female 2.92mm connectors, and is designed to meet MIL-STD 202F environmental test conditions which include humidity, shock, vibration, altitude, and temperature cycle.

Electrical Specifications

| Description | Minimum | Typical | Maximum | Units |
|----------------------------|---------|---------|---------|-------|
| Frequency Range | 0.5 | | 40 | GHz |
| Impedance | | 50 | | Ohms |
| Insertion Loss | | 5.5 | | dB |
| Isolation | 55 | | | dB |
| Switching Time | | | 50 | ns |
| Input Power (CW) | | | 0.1 | Watts |
| Input Power (Peak) @ 1 us | | | 30 | Watts |
| Survival Power | | | 1 | Watts |
| Positive Operating Voltage | | 5 | | Vdc |
| Negative Operating Voltage | | -5 | | Vdc |
| Current @ 5 Vdc | | 200 | | mA |
| Current @ -5 Vdc | | 100 | | 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: [SP3T PIN Diode Switch Operating From 500 MHz to 40 GHz Up to 0.1 Watts \(+20 dBm\) and Field Replaceable 2.92mm PE71S6227](#)



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Mechanical Specifications

Size

| | |
|--------|--------------------|
| Length | 1 in [25.4 mm] |
| Width | 1 in [25.4 mm] |
| Height | 0.5 in [12.7 mm] |
| Weight | 0.07 lbs [31.75 g] |
| Finish | Blue Paint |

Configuration

| | |
|-----------------------|-------------------|
| Design | Reflective, SP3T |
| RF Connector | 2.92mm Female |
| RF Connector Option | Field Replaceable |
| TTL Control Connector | Solder Pin |

Environmental Specifications

Temperature

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

Humidity

Shock

Vibration

Altitude

Temperature Cycling

ESD Sensitivity

MIL-STD-202F, Method 103B, Condition B
MIL-STD-202F, Method 213B, Condition B
MIL-STD-202F, Method 204D, Condition B
MIL-STD-202F, Method 105C, Condition B
MIL-STD-202F, Method 107D, Condition A
ESD Sensitive Material, Transport material in Approved ESD bags. Handle only in ESD Workstation.



Compliance Certifications (visit www.Pasternack.com for current document)

Not RoHS Compliant

REACH Compliant

12/17/2015

Plotted and Other Data

Notes:

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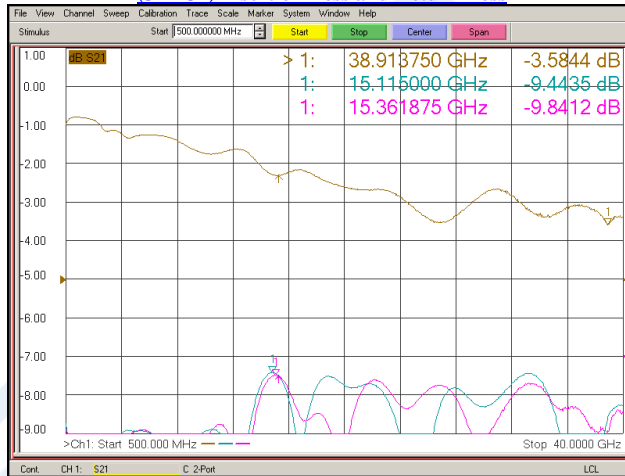
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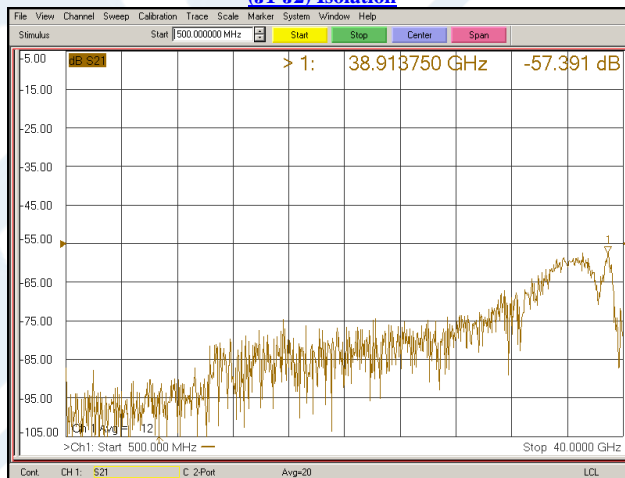
PE71S6227

Typical Performance Data

(J1-J2) Insertion Loss and Return Loss



(J1-J2) Isolation

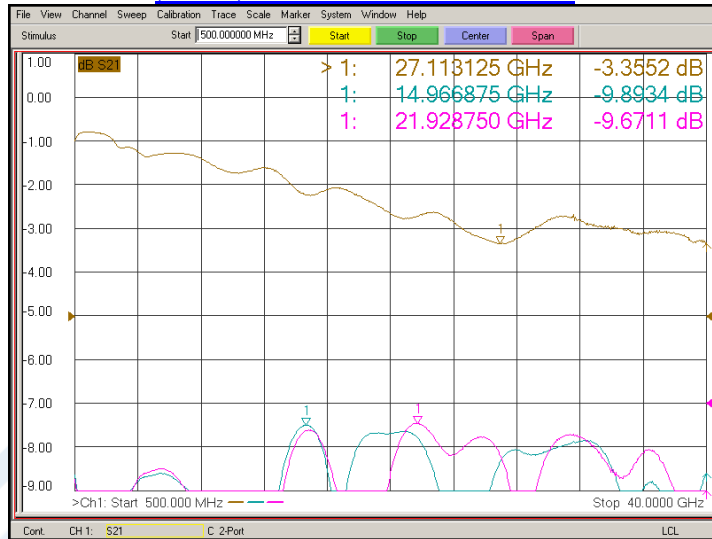


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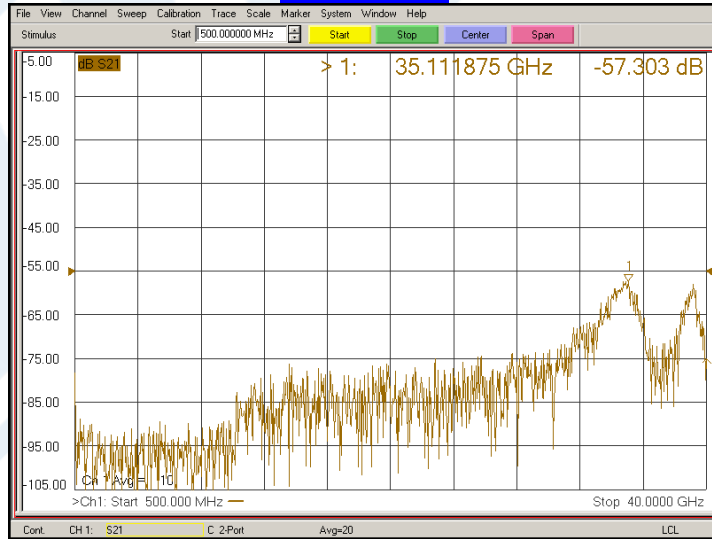


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(J1-J3) Insertion Loss and Return Loss



(J1-J3) Isolation

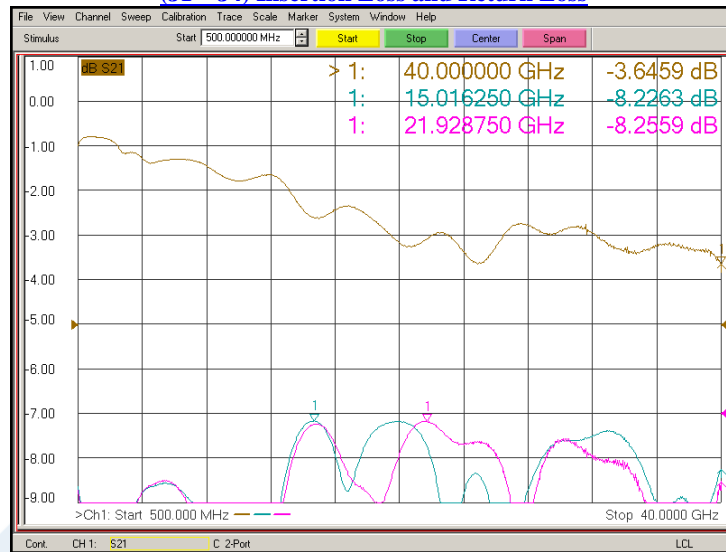


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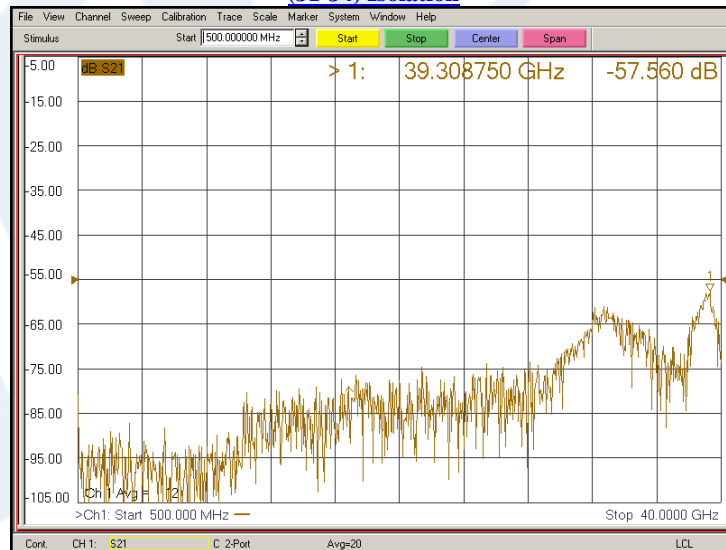


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(J1 – J4) Insertion Loss and Return Loss



(J1-J4) Isolation



SP3T PIN Diode Switch Operating From 500 MHz to 40 GHz Up to 0.1 Watts (+20 dBm) and Field Replaceable 2.92mm from Pasternack Enterprises has same day shipment for domestic and International orders. Our RF, microwave and millimeter wave 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: [SP3T PIN Diode Switch Operating From 500 MHz to 40 GHz Up to 0.1 Watts \(+20 dBm\) and Field Replaceable 2.92mm PE71S6227](#)



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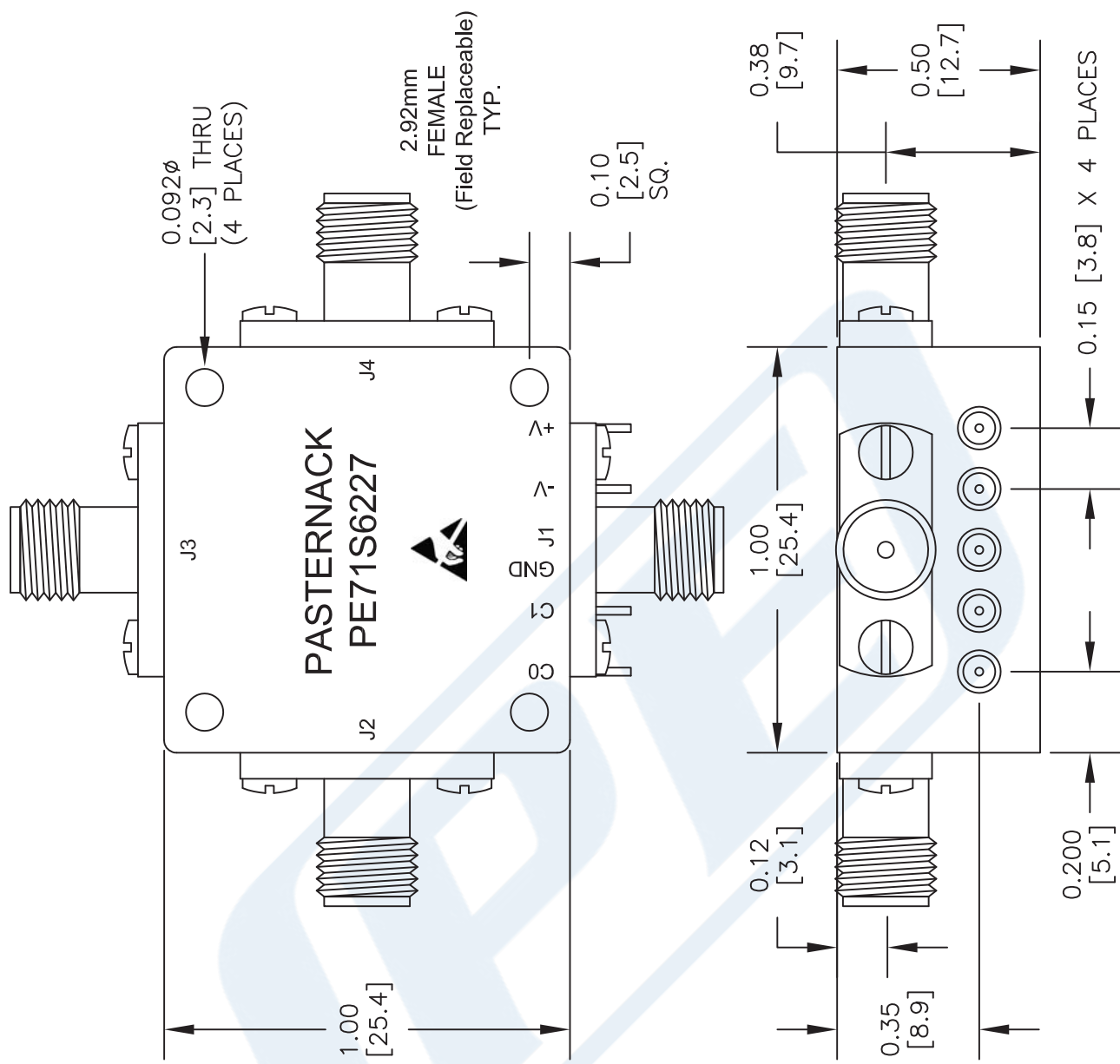
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PE71S6227 CAD Drawing

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LOGIC TABLE

| CTL 1 | CTL 0 | J1-J2 | J1-J3 | J1-J4 |
|-------|-------|-------|-------|-------|
| 0 | 0 | ON | OFF | OFF |
| 0 | 1 | OFF | ON | OFF |
| 1 | 0 | OFF | OFF | ON |
| 1 | 1 | OFF | OFF | OFF |

ALL DIMENSIONS ARE IN INCHES.
 TOLERANCES:
 X.XX ±0.020
 X.XXX ±0.010

* THESE DIMENSIONS AND TOLERANCES SUPERSEDE NOTE #1 ON TITLE BLOCK.

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
PE71S6227

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CAD FILE 041916 SCALE N/A SIZE A 2233

FSCM NO. 53919