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

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 µs
- 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 µs. 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

<table>
<thead>
<tr>
<th>Description</th>
<th>Minimum</th>
<th>Typical</th>
<th>Maximum</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency Range</td>
<td>0.05</td>
<td>1.5</td>
<td>GHz</td>
<td></td>
</tr>
<tr>
<td>Impedance</td>
<td>50</td>
<td></td>
<td>Ohms</td>
<td></td>
</tr>
<tr>
<td>VSWR</td>
<td>1.2:1</td>
<td>1.5:1</td>
<td></td>
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<tr>
<td>Insertion Loss</td>
<td>1</td>
<td></td>
<td>dB</td>
<td></td>
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<tr>
<td>Isolation</td>
<td>60</td>
<td></td>
<td>dB</td>
<td></td>
</tr>
<tr>
<td>Switching Time</td>
<td>150</td>
<td>200</td>
<td>ns</td>
<td></td>
</tr>
<tr>
<td>Input Power (CW)</td>
<td>4</td>
<td></td>
<td>Watts</td>
<td></td>
</tr>
<tr>
<td>Current</td>
<td>1</td>
<td></td>
<td>mA</td>
<td></td>
</tr>
<tr>
<td>Operating Temperature</td>
<td>-40</td>
<td>+85</td>
<td>deg C</td>
<td></td>
</tr>
</tbody>
</table>

Mechanical Specifications

Size
- Design: Reflective, SPDT
- RF Connector: SMA Female
- TTL Control Connector: Solder Pin

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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PE71S2048 REV 1.0
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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:

Typical Performance Data

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PE71S2048

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