FMSW6237 is a Single Pole Double Throw (SPDT) Absorptive PIN Diode Switch that operates from 0.01 GHz to 1 GHz. The output port is terminated in 50 ohms when switched in the isolation (off) state. Outstanding performance includes 1.3 dB max insertion loss, 80 dB typ isolation, and 200 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 DC and -15 DC are required. The rugged package is designed to meet a series of MIL-STD-202F environmental conditions including humidity, shock, vibration, and temperature cycle. Package interfaces include solder terminals and female SMA connectors.

### Electrical Specifications

<table>
<thead>
<tr>
<th>Description</th>
<th>Min</th>
<th>Typ</th>
<th>Max</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency Range</td>
<td>10</td>
<td>1,000</td>
<td></td>
<td>MHz</td>
</tr>
<tr>
<td>Impedance</td>
<td>50</td>
<td></td>
<td></td>
<td>Ohms</td>
</tr>
<tr>
<td>Insertion Loss</td>
<td></td>
<td>1.3</td>
<td>1.3</td>
<td>dB</td>
</tr>
<tr>
<td>Isolation</td>
<td></td>
<td>80</td>
<td>80</td>
<td>dB</td>
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<tr>
<td>Switching Time</td>
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<td>200</td>
<td>200</td>
<td>ns</td>
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<tr>
<td>Input Power (CW)</td>
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<td>0.1</td>
<td>Watts</td>
</tr>
<tr>
<td>Survival Power</td>
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<td>1</td>
<td>Watts</td>
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<tr>
<td>Positive Operating Voltage</td>
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<td></td>
<td>V</td>
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<tr>
<td>Negative Operating Voltage</td>
<td>-15</td>
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<td></td>
<td>V</td>
</tr>
<tr>
<td>Current @ 5 V</td>
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<td></td>
<td></td>
<td>mA</td>
</tr>
<tr>
<td>Current @ -15 V</td>
<td>100</td>
<td></td>
<td></td>
<td>mA</td>
</tr>
<tr>
<td>Operating Temperature</td>
<td>-40</td>
<td></td>
<td>+85</td>
<td>deg C</td>
</tr>
</tbody>
</table>

### Mechanical Specifications

- Length: 1 in [25.4 mm]
- Width: 1 in [25.4 mm]
- Height: 0.4 in [10.16 mm]
- Finish: Blue
- Configuration: SPDT, Absorptive
- RF Connector: SMA Female
- Control Connector: Solder Pin

### Environmental Specifications

- Temperature
  - Operating Range: -40 to +85 deg C
  - Storage Range: -55 to +125 deg C
- Vibration: MIL-STD-202F, Method 204D, Condition B
Temperature Cycling
ESD Sensitivity

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.FairviewMicrowave.com for current document)
REACH Compliant 12/17/2015

Plotted and Other Data
Notes:
Typical Performance Data

Return Loss (Low Loss Mode)

Return Loss (Isolation Mode)
SMA PIN Diode Switch SPDT From 10 MHz to 1,000 MHz Rated at +20 dBm from Fairview Microwave is in-stock and available to ship same-day. All of our RF/microwave products are available off-the-shelf from our ISO 9001:2008 certified facilities in Allen, Texas. Fairview Microwave is RF on-demand.

For additional information on this product, please click the following link: SMA PIN Diode Switch SPDT From 10 MHz to 1,000 MHz Rated at +20 dBm FMSW6237


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. Fairview Microwave reserves the right to make such changes as required. Unless otherwise stated, all specifications are nominal. Fairview Microwave does not make any representation or warranty regarding the suitability of the part described herein for any particular purpose, and Fairview Microwave does not assume any liability, arising out of the use of any part or documentation.
SMA PIN Diode Switch SPDT From 10 MHz to 1,000 MHz Rated at +20 dBm

LOGIC TABLE

<table>
<thead>
<tr>
<th>CTL</th>
<th>J1-J2</th>
<th>J1-J3</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>ON</td>
<td>OFF</td>
</tr>
<tr>
<td>1</td>
<td>OFF</td>
<td>ON</td>
</tr>
</tbody>
</table>

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].

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

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