

**Field Replaceable SMA SP4T PIN Diode Switch**  
**From 4 GHz to 8 GHz Rated at +20 dBm**

FMSW6280 is a Single Pole Four Throw (SP4T) Reflective PIN Diode Switch that operates from 4 GHz to 8 GHz. Outstanding performance includes 1.8 dB typ insertion loss, 70 dB min isolation, and 100 nsec max switching speed. The design incorporates TTL compatible driver circuitry for accurate logic control. Operational temperature range is -55°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**

| Description                | Min | Typ | Max | Units |
|----------------------------|-----|-----|-----|-------|
| Frequency Range            | 4   |     | 8   | GHz   |
| Impedance                  |     | 50  |     | Ohms  |
| Insertion Loss             |     | 1.8 |     | dB    |
| Isolation                  | 70  |     |     | dB    |
| Switching Time             |     |     | 100 | ns    |
| Input Power (CW)           |     |     | 0.1 | Watts |
| Survival Power             |     |     | 1   | Watts |
| Positive Operating Voltage |     | 5   |     | V     |
| Negative Operating Voltage |     | -15 |     | V     |
| Current @ 5 V              |     | 200 |     | mA    |
| Current @ -15 V            |     | 75  |     | mA    |
| Operating Temperature      | -55 |     | +85 | deg C |

**Mechanical Specifications**

|        |                      |
|--------|----------------------|
| Length | 1.25 in [31.75 mm]   |
| Width  | 1.25 in [31.75 mm]   |
| Height | 0.4 in [10.16 mm]    |
| Weight | 0.0874 lbs [39.64 g] |
| Finish | Blue Paint           |

**Configuration**

|                     |                   |
|---------------------|-------------------|
| Design              | Reflective, SP4T  |
| RF Connector        | SMA Female        |
| RF Connector Option | Field Replaceable |
| Control Connector   | Solder Pin        |

**Environmental Specifications**

**Temperature**

|                 |                   |
|-----------------|-------------------|
| Operating Range | -55 to +85 deg C  |
| Storage Range   | -65 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 |

**Features:**

- SP4T Reflective Switch
- 4.0 GHz to 8.0 GHz
- Insertion Loss 1.8 dB typ
- Isolation 70 dB min
- Power Input 20 dBm CW max
- Field Replaceable Connectors

**Applications:**

- Test & Measurement
- Military Communication
- Commercial Communication
- Wireless Communications
- SATCOM
- Military Electronic Systems
- RF Test Stations

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Altitude  
Temperature Cycling  
ESD Sensitivity

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.



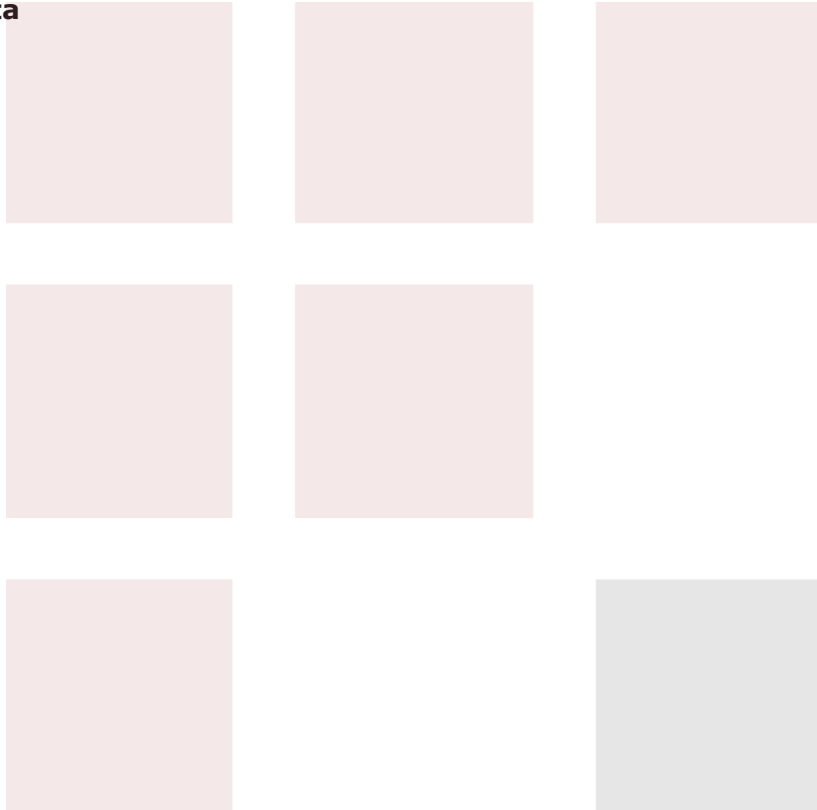
**Compliance Certifications** (visit [www.FairviewMicrowave.com](http://www.FairviewMicrowave.com) for current document)

REACH Compliant

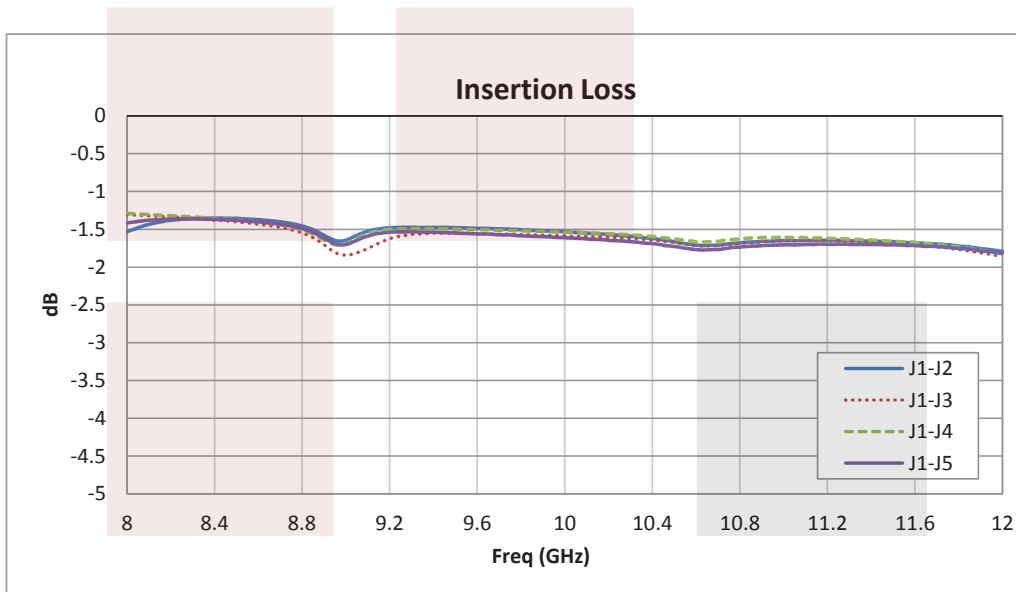
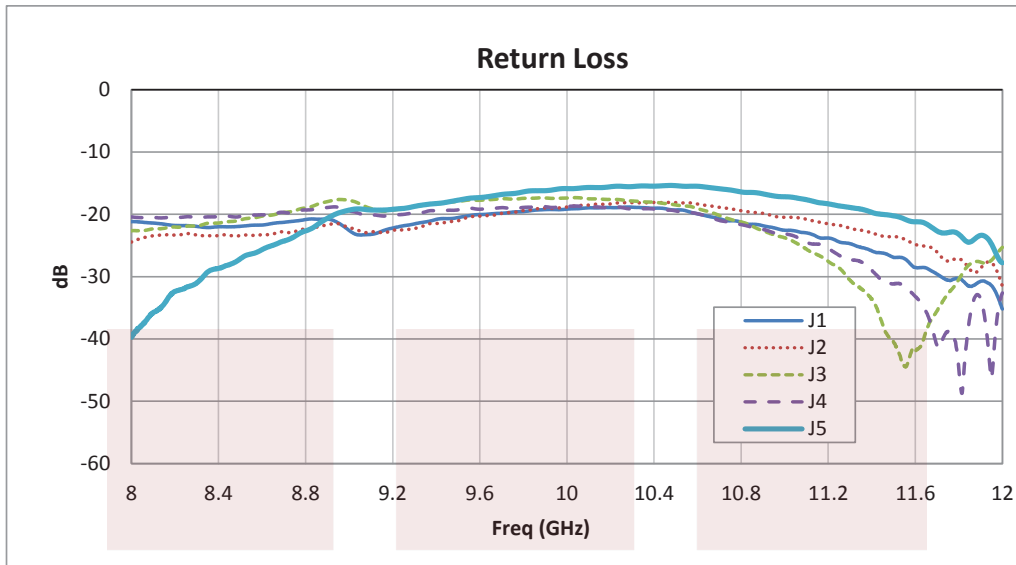
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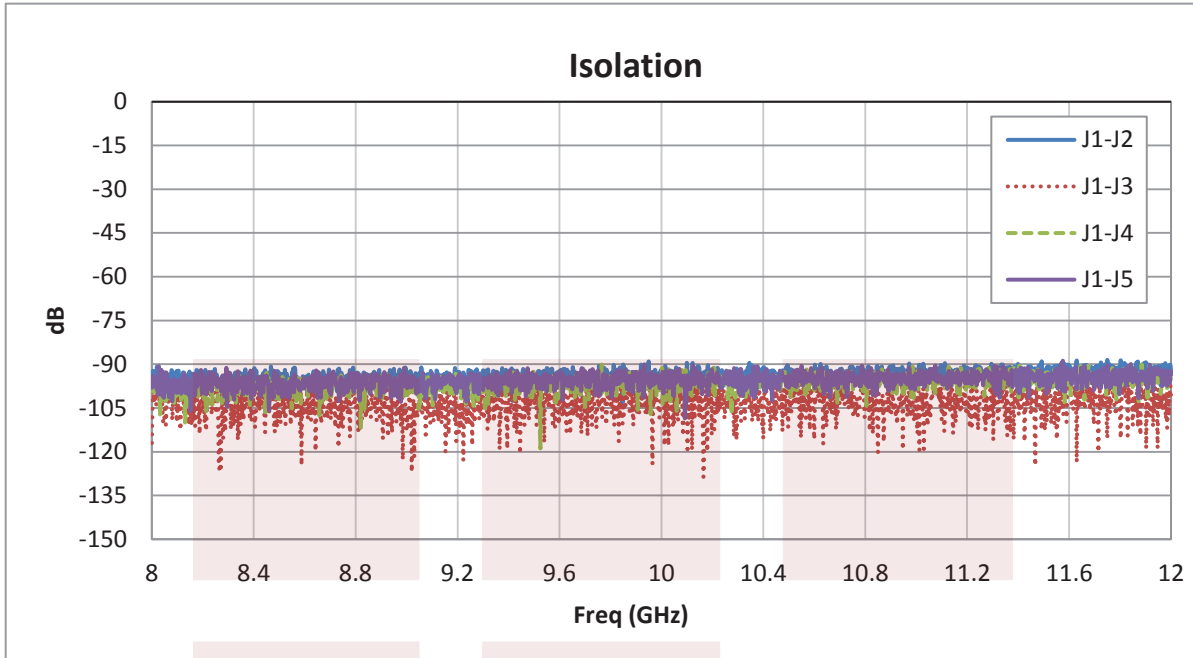
**Plotted and Other Data**

Notes:



**Typical Performance Data**



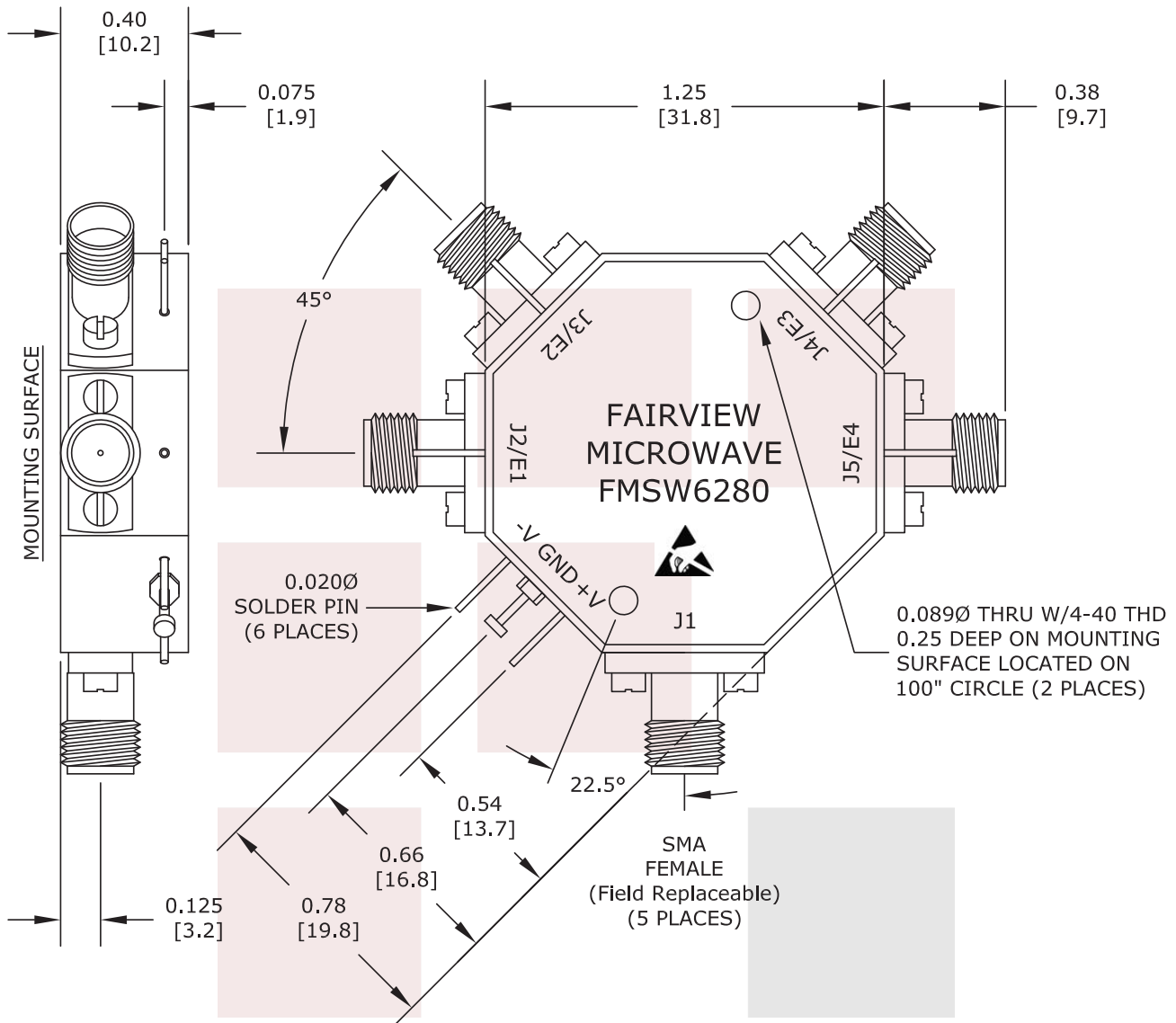


Field Replaceable SMA SP4T PIN Diode Switch From 4 GHz to 8 GHz Rated at +20 dBm from Fairview Microwave is in-stock and available to ship same-day. All of our RF/microwave products are available off-the-shelf from our ISO 9001:2008 certified facilities in Allen, Texas. Fairview Microwave is RF on-demand.

For additional information on this product, please click the following link: [Field Replaceable SMA SP4T PIN Diode Switch From 4 GHz to 8 GHz Rated at +20 dBm FMSW6280](http://www.fairviewmicrowave.com/sma-sp4t-pin-diode-switch-4-8-ghz-20-dbm-fmsw6280-p.aspx)

URL: <http://www.fairviewmicrowave.com/sma-sp4t-pin-diode-switch-4-8-ghz-20-dbm-fmsw6280-p.aspx>

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UNLESS OTHERWISE SPECIFIED:  
DIMENSIONS ARE IN: inches [mm]  
TOLERANCES ARE:  
X.XX ± 0.020 [± 0.508]  
X.XXX ± 0.010 [± 0.254]

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

| TTL LOGIC TABLE |    |    |    |          |
|-----------------|----|----|----|----------|
| E1              | E2 | E3 | E4 | Low Loss |
| 0               | 1  | 1  | 1  | J1-J2    |
| 1               | 0  | 1  | 1  | J1-J3    |
| 1               | 1  | 0  | 1  | J1-J4    |
| 1               | 1  | 1  | 0  | J1-J5    |

NOTE:  
0 = LOW LOSS  
1 = ISOLATION

|   |                    |   |           |      |
|---|--------------------|---|-----------|------|
| <b>FAIRVIEW MICROWAVE INC.</b><br>ALLEN, TX 75013 WWW.FAIRVIEWMICROWAVE.COM               |                    | NOTES:<br>1. UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE NOMINAL.<br>2. ALL SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE AT ANY TIME.<br>3. DIMENSIONS ARE IN INCHES [mm]. |           |      |
| TITLE<br>Field Replaceable SMA SP4T PIN Diode Switch From 4 GHz to 8 GHz Rated at +20 dBm | DWG NO<br>FMSW6280 | CAGE CODE<br>3FKR5  |           |      |
| CAD FILE<br>040116  | SHEET              | SCALE<br>N/A  | SIZE<br>A | 2233 |