

**Field Replaceable SMA SP4T PIN Diode Switch
 From 10 MHz to 1,000 MHz Rated at +20 dBm**

FMSW6277 is a Single Pole Single Four (SP4T) Reflective PIN Diode Switch that operates from 0.01 GHz to 1 GHz. Performance includes 1.2 dB typ insertion loss, 60 dB min isolation, and 200 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 VDC and -15 VDC 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 | 10 | | 1,000 | MHz |
| Impedance | | 50 | | Ohms |
| Insertion Loss | | 1.2 | | dB |
| Isolation | 60 | | | dB |
| Switching Time | | | 200 | ns |
| Input Power (CW) | | | 0.1 | Watts |
| Survival Power | | | 1 | Watts |
| Positive Operating Voltage | | 5 | | Vdc |
| Negative Operating Voltage | | -15 | | Vdc |
| Current @ 5 Vdc | | 200 | | mA |
| Current @ -15 Vdc | | 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] |
| 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 |
| Altitude | MIL-STD-202F, Method 105C, Condition B |

Features:

- SP4T Reflective Switch
- 0.01 GHz to 1.0 GHz
- Insertion Loss 1.2 dB typ
- Isolation 60 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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Temperature Cycling
ESD Sensitivity

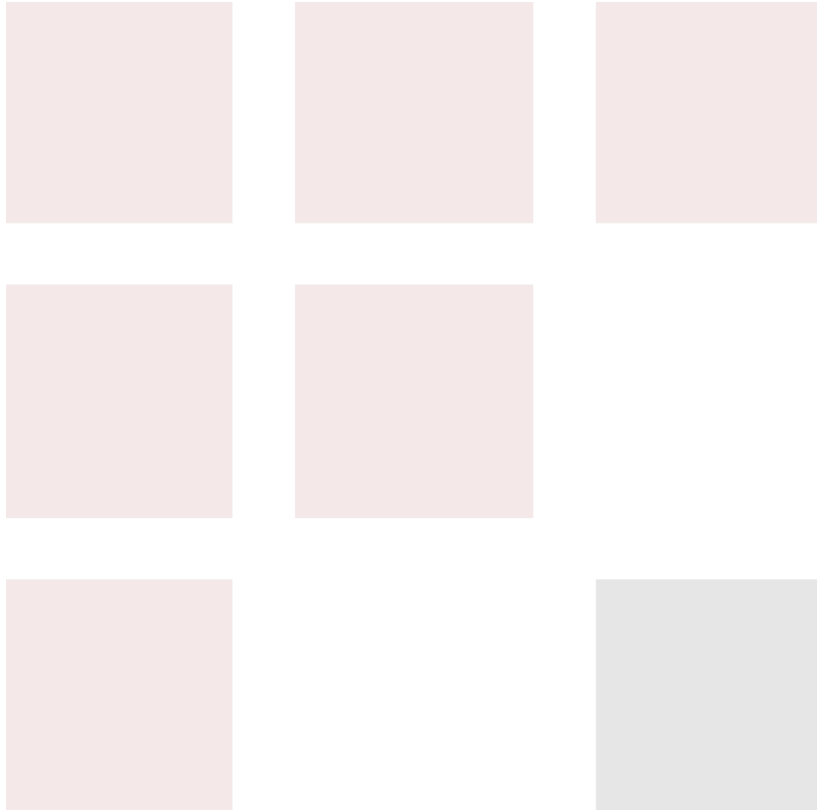
MIL-STD-202F, Method 107D, Condition A
ESD Sensitive Material, Transport material in Approved ESD bags. Handle only
in ESD Workstation.



Compliance Certifications (visit www.FairviewMicrowave.com for current document)
REACH Compliant 12/17/2015

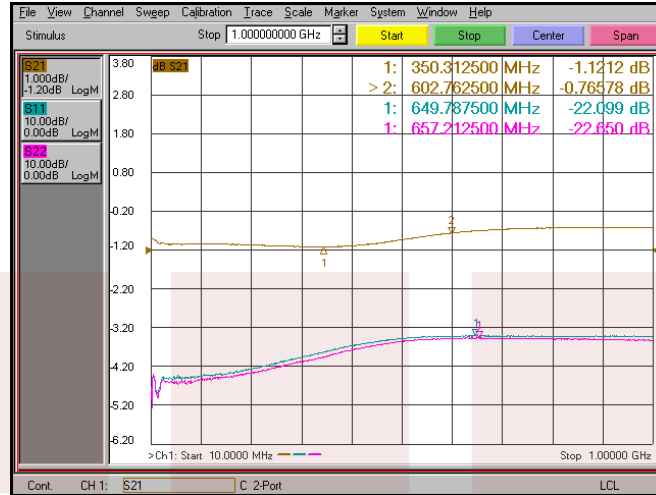
Plotted and Other Data

Notes:

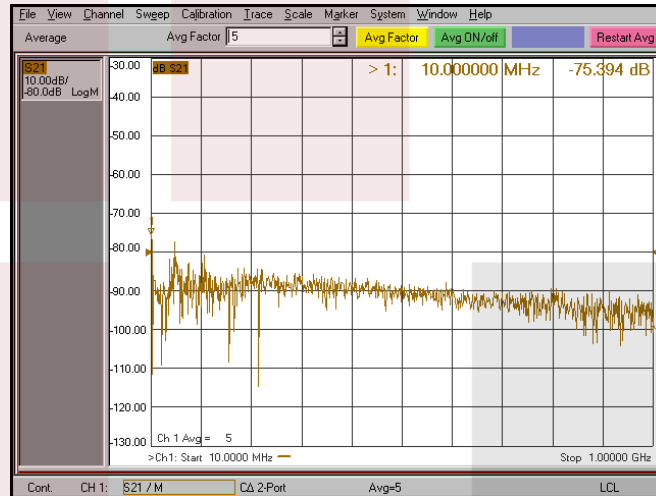


Typical Performance Data

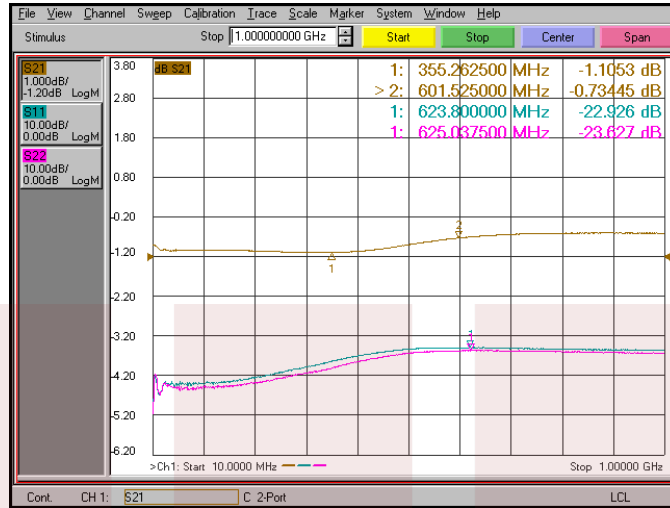
(J1 – J2) Insertion Loss and Return Loss



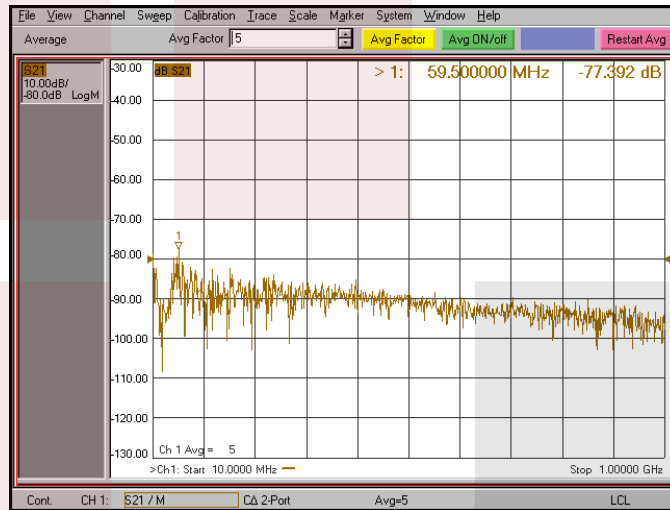
(J1 – J2) Isolation



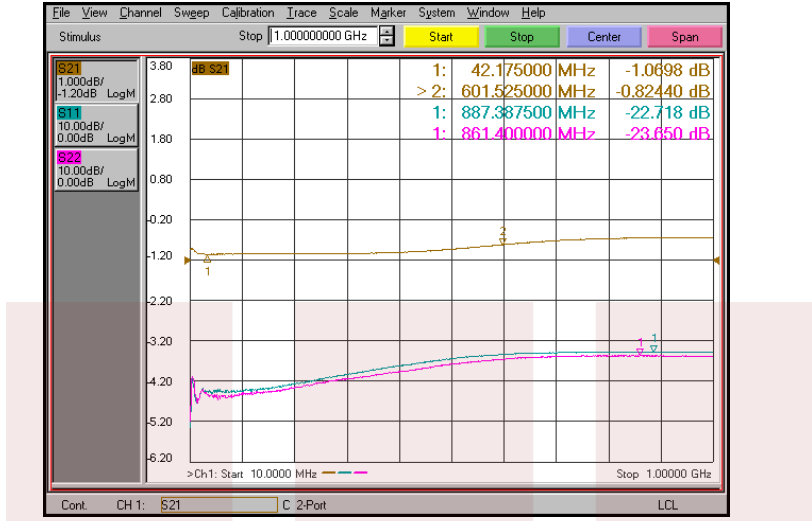
(J1 – J3) Insertion Loss and Return Loss



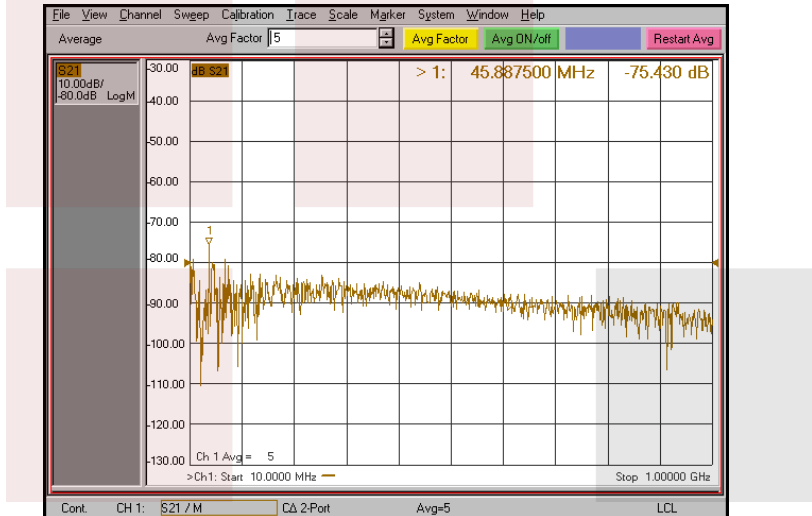
(J1 – J3) Isolation



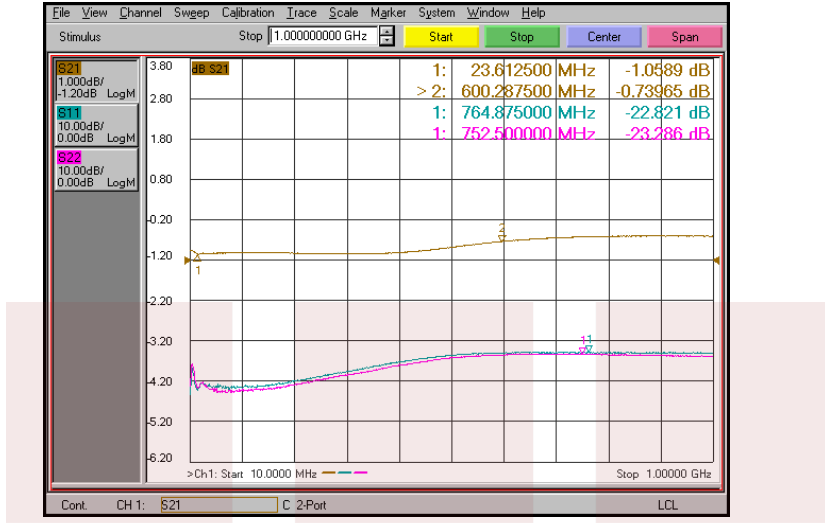
(J1 – J4) Insertion Loss and Return Loss



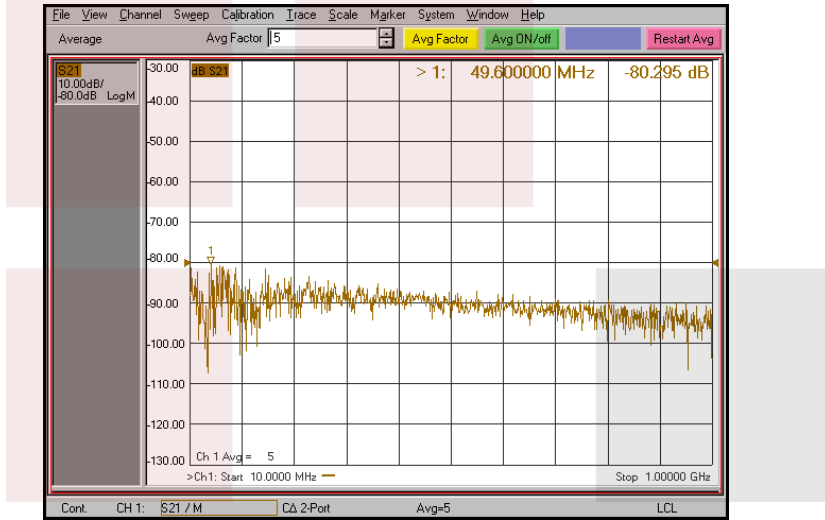
(J1 – J4) Isolation



(J1 – J5) Insertion Loss and Return Loss



(J1 – J5) Isolation

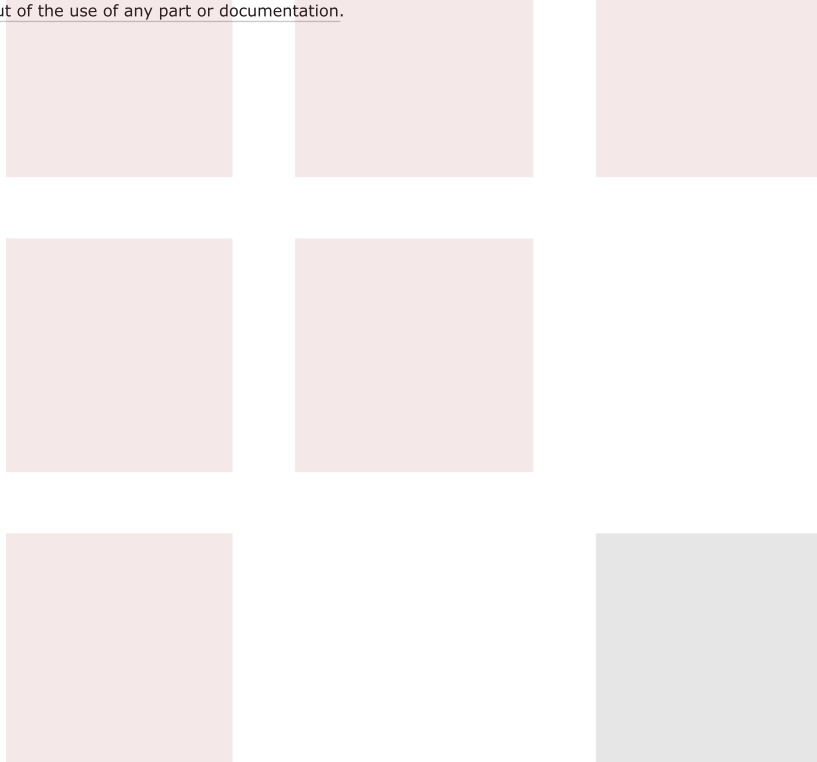


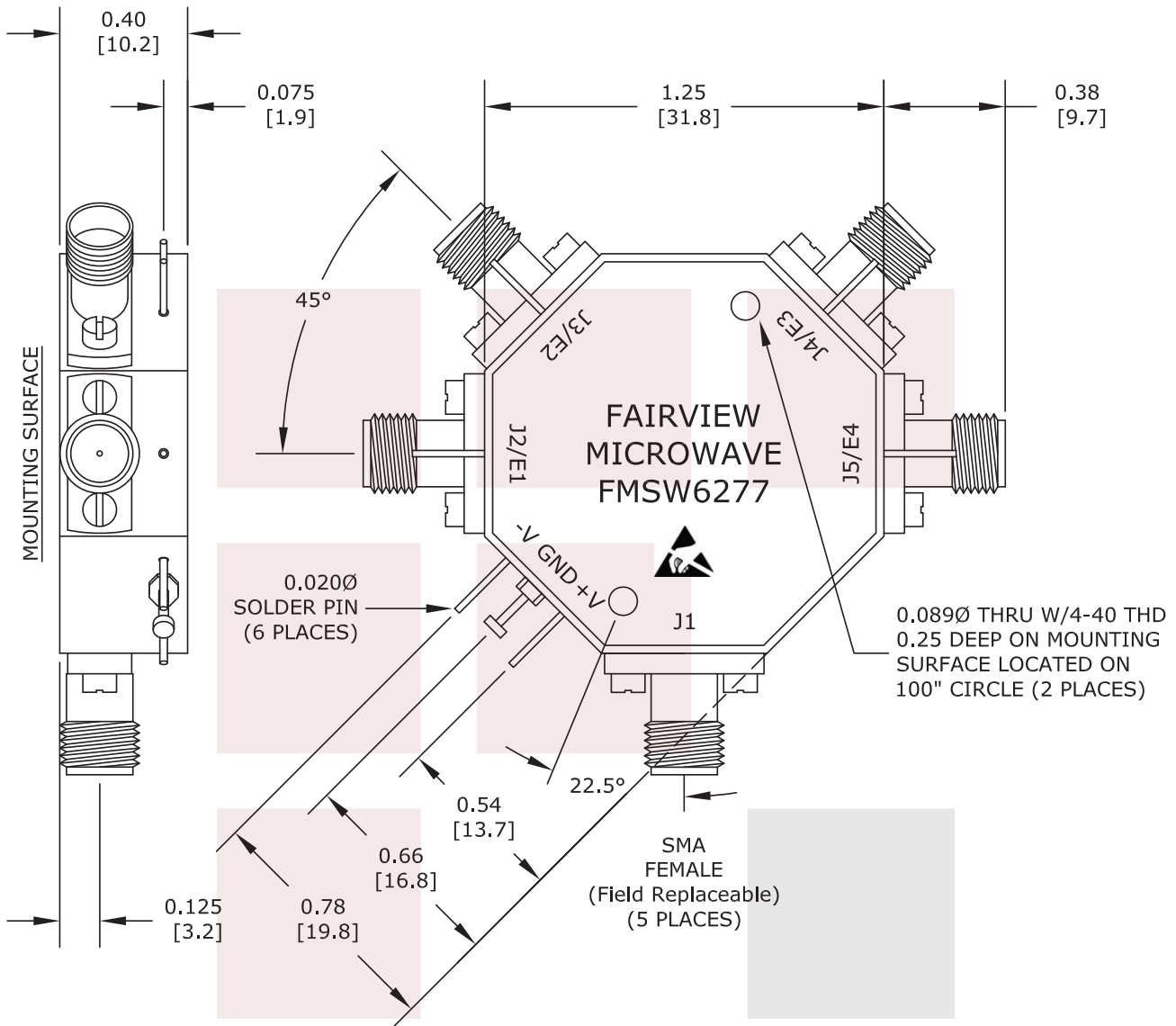
Field Replaceable SMA SP4T PIN Diode Switch From 10 MHz to 1,000 MHz Rated at +20 dBm from Fairview Microwave is in-stock and available to ship same-day. All of our RF/microwave products are available off-the-shelf from our ISO 9001:2008 certified facilities in Allen, Texas. Fairview Microwave is RF on-demand.

For additional information on this product, please click the following link: [Field Replaceable SMA SP4T PIN Diode Switch From 10 MHz to 1,000 MHz Rated at +20 dBm FMSW6277](#)

URL: <http://www.fairviewmicrowave.com/sma-sp4t-pin-diode-switch-1000-mhz-20-dbm-fmsw6277-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

| | | | | |
|--|--------|---|-----------|--------------------|
| FAIRVIEW MICROWAVE INC. ALLEN, TX 75013 WWW.FAIRVIEWMICROWAVE.COM | | 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]. | | |
| TITLE Field Replaceable SMA SP4T PIN Diode Switch From 10 MHz to 1,000 MHz Rated at +20 dBm | | DWG NO FMSW6277 | | CAGE CODE 3FKR5 |
| CAD FILE | 040116 | SHEET | SCALE N/A | SIZE A 2233 |