

**Field Replaceable SMA SP4T PIN Diode Switch**  
**From 1 GHz to 18 GHz Rated at +20 dBm**

FMSW6283 is a Single Pole Four Throw (SP4T) Reflective PIN Diode Switch that operates from 1 GHz to 18 GHz. Performance includes 3.0 dB max 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 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	1		18	GHz
Impedance		50		Ohms
VSWR			2:1	
Insertion Loss			3	dB
Isolation	70			dB
Switching Time			100	ns
Input Power (CW)			0.1	Watts
Survival Power			1	Watts
Positive Operating Voltage		5		Vdc
Negative Operating Voltage		-15		Vdc
Operating Temperature	-55		+85	deg C

**Features:**

- SP4T Reflective Switch
- 1 GHz to 18 GHz
- Insertion Loss 3.0 dB max
- 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

**Mechanical Specifications**

Length	1.25 in [31.75 mm]
Width	1.25 in [31.75 mm]
Height	0.4 in [10.16 mm]
Weight	0.07 lbs [31.75 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
Altitude	MIL-STD-202F, Method 105C, Condition B

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Temperature Cycling  
ESD Sensitivity

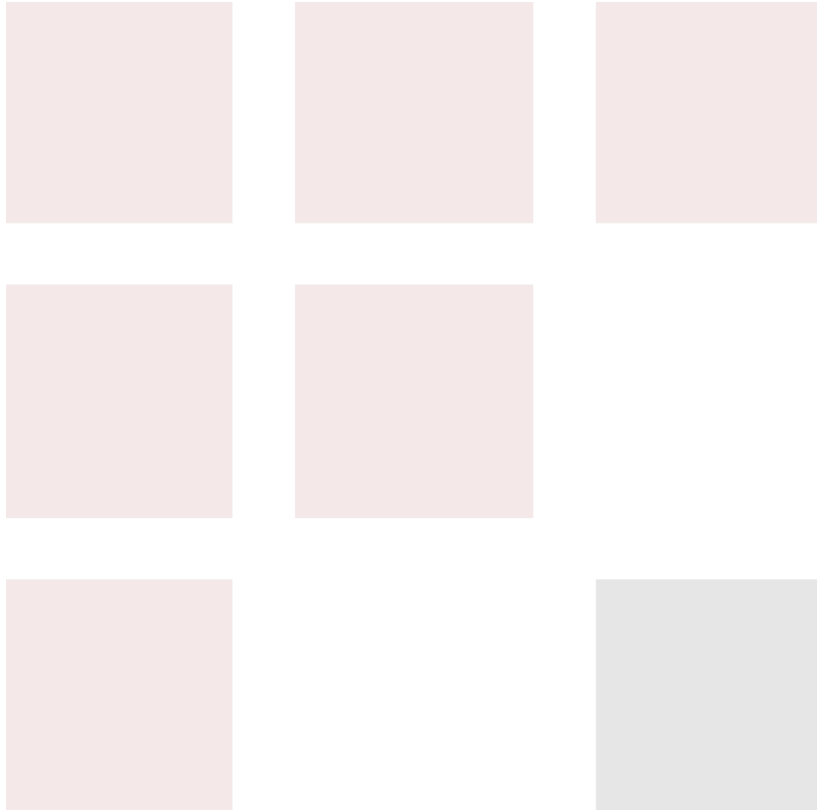
MIL-STD-202F, Method 107D, Condition A  
ESD Sensitive Material, Transport material in Approved ESD bags. Handle only  
in ESD Workstation.



**Compliance Certifications** (visit [www.FairviewMicrowave.com](http://www.FairviewMicrowave.com) for current document)  
REACH Compliant 12/17/2015

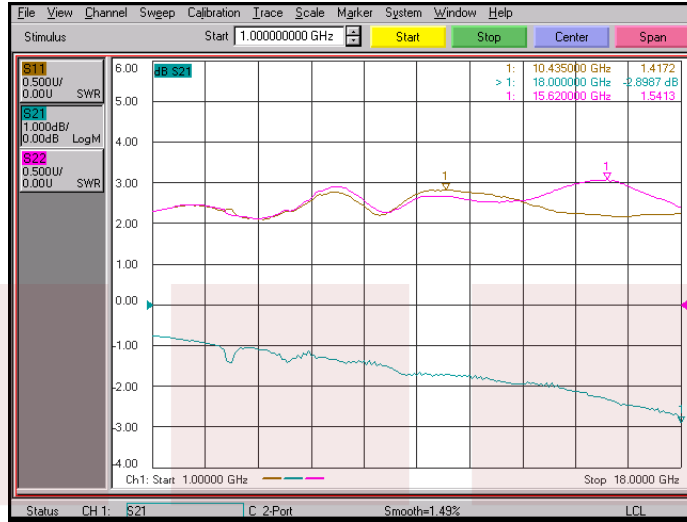
**Plotted and Other Data**

Notes:



**Typical Performance Data**

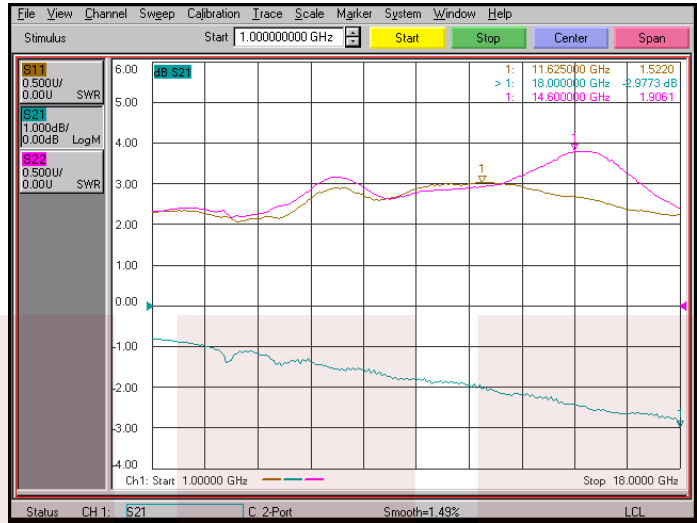
**(J1 – J2) Insertion Loss and Return Loss**



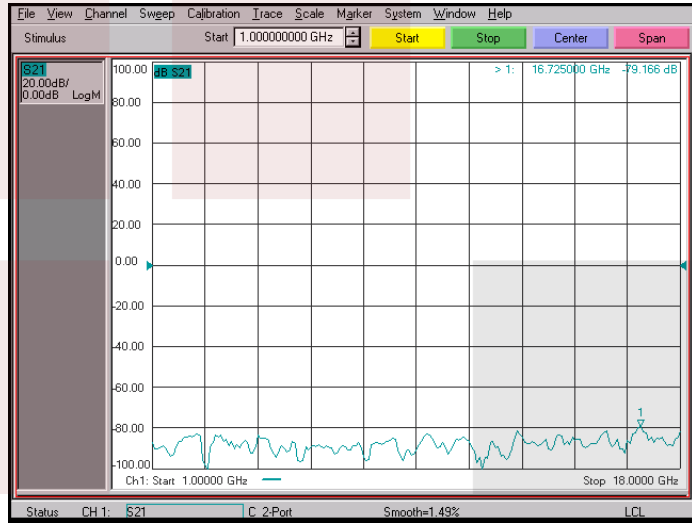
**(J1 – J2) Isolation**



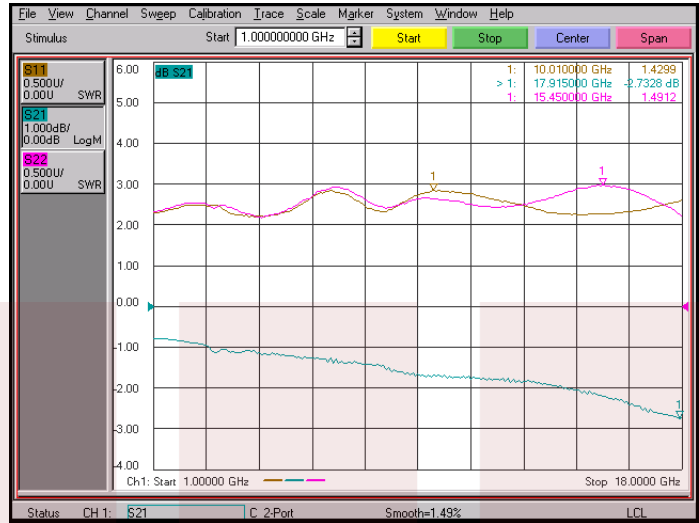
**(J1 – J3) Insertion Loss and Return Loss**



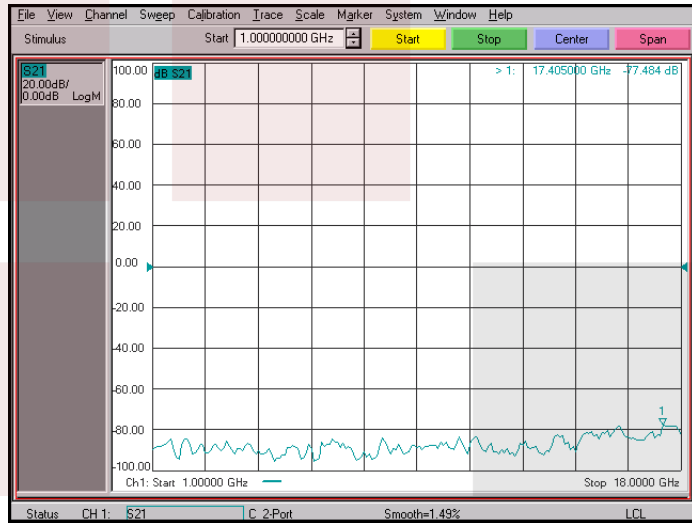
**(J1 – J3) Isolation**



(J1 – J4) Insertion Loss and Return Loss



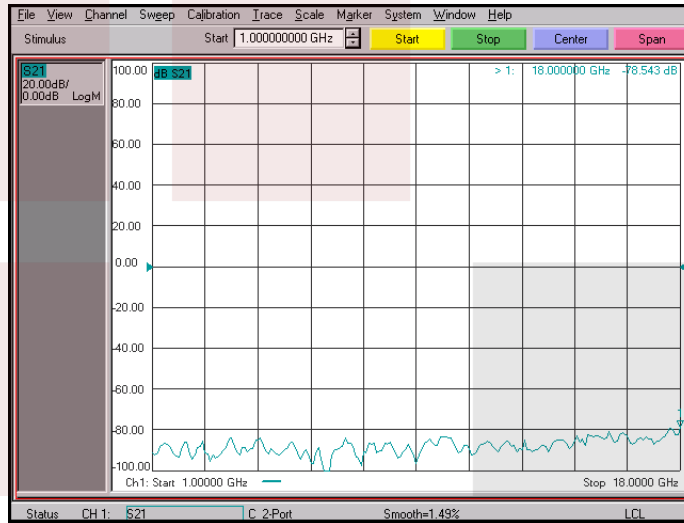
(J1 – J4) Isolation



(J1 – J5) Insertion Loss and Return Loss



(J1 – J5) Isolation

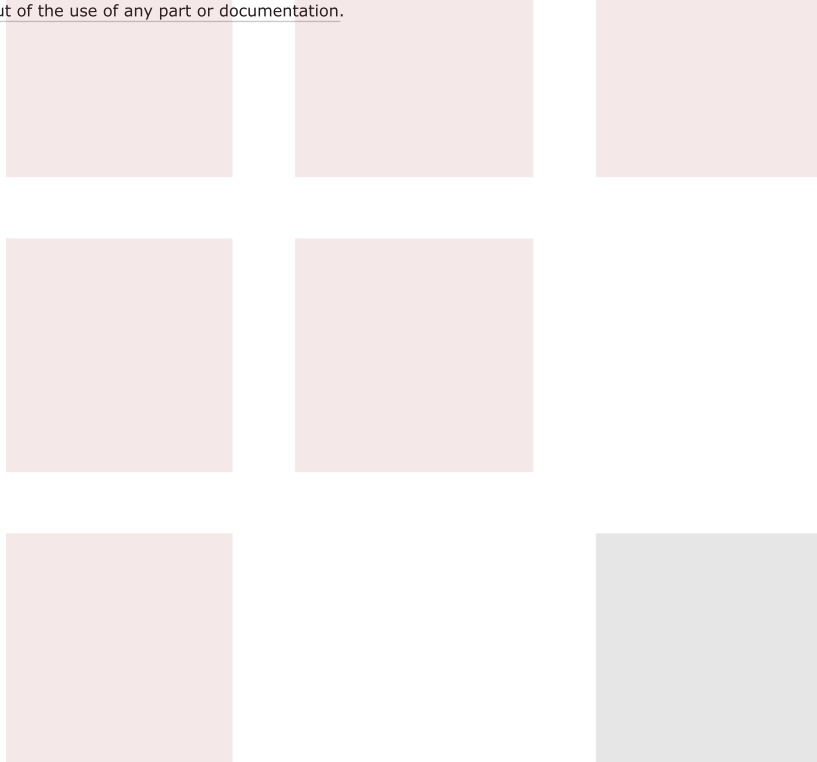


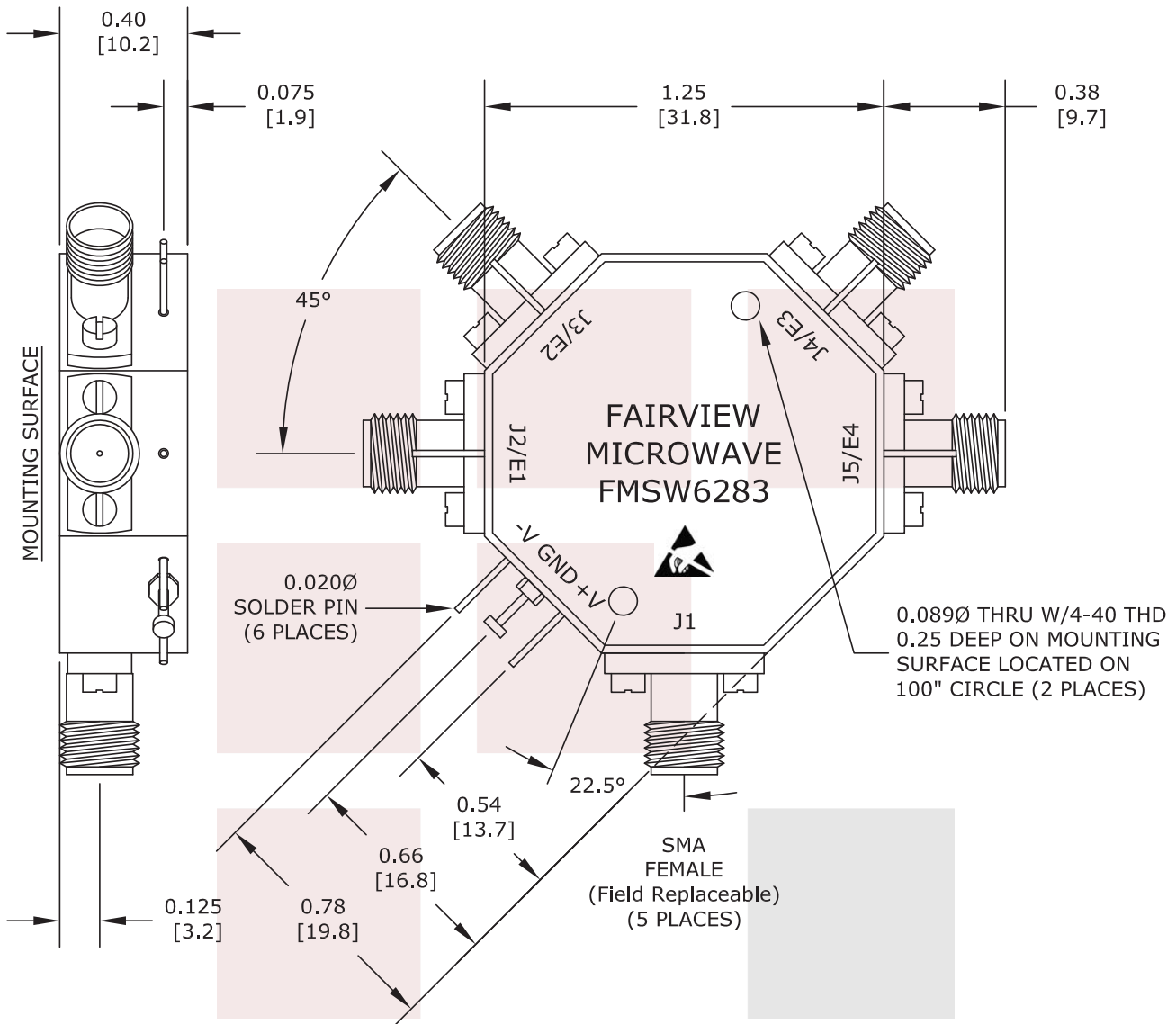
Field Replaceable SMA SP4T PIN Diode Switch From 1 GHz to 18 GHz Rated at +20 dBm from Fairview Microwave is in-stock and available to ship same-day. All of our RF/microwave products are available off-the-shelf from our ISO 9001:2008 certified facilities in Allen, Texas. Fairview Microwave is RF on-demand.

For additional information on this product, please click the following link: [Field Replaceable SMA SP4T PIN Diode Switch From 1 GHz to 18 GHz Rated at +20 dBm FMSW6283](#)

URL: <http://www.fairviewmicrowave.com/sma-sp4t-pin-diode-switch-18-ghz-20-dbm-fmsw6283-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> 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 1 GHz to 18 GHz Rated at +20 dBm	DWG NO FMSW6283	CAGE CODE 3FKR5		
CAD FILE 040116	SHEET	SCALE N/A	SIZE A	2233