

Field Replaceable SMA SPST PIN Diode Switch From 500 MHz to 18 GHz Rated at +20 dBm

FMSW6220 is a Single Pole Single Throw (SPST) Reflective PIN Diode Switch that operates from 0.5 to 18 GHz. Performance includes 3.0 dB typ insertion loss, 55 dB min Isolation, and 100 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 VDC and -15 VDC are required. The rugged package design is compact, features field replaceable female SMA connectors, and is designed to meet MIL-STD 202F environmental test conditions which include humidity, shock, vibration, altitude, and temperature cycle.

Electrical Specifications

Description	Min	Typ	Max	Units
Frequency Range	0.5		18	GHz
Impedance		50		Ohms
VSWR			2:1	
Insertion Loss		3		dB
Isolation	55			dB
Switching Time			100	ns
Input Power (CW)			0.1	Watts
Positive Operating Voltage		5		Vdc
Negative Operating Voltage		-15		Vdc
Current @ 5 Vdc		50		mA
Current @ -15 Vdc		50		mA
Operating Temperature	-40		+85	deg C

Mechanical Specifications

Length	1.2 in [30.48 mm]
Width	0.9 in [22.86 mm]
Height	0.35 in [8.89 mm]
Weight	0.0508 lbs [23.04 g]
Finish	Blue Paint

Configuration

Design	Reflective, SPST
RF Connector	SMA Female
RF Connector Option	Field Replaceable
Control Connector	Solder Pin

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



Features:

- SPST Reflective Switch
- 0.5 GHz to 18 GHz
- Insertion Loss 3 dB typ
- Isolation 55 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

Fairview Microwave
1130 Junction Dr. #100
Allen, TX 75013
Tel: 1-800-715-4396 / (972) 649-6678
Fax: (972) 649-6689
www.fairviewmicrowave.com
sales@fairviewmicrowave.com

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.



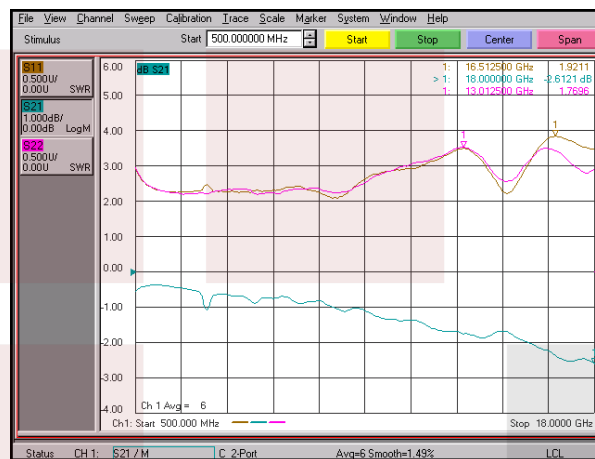
Compliance Certifications (visit www.FairviewMicrowave.com for current document)
REACH Compliant 12/17/2015

Plotted and Other Data

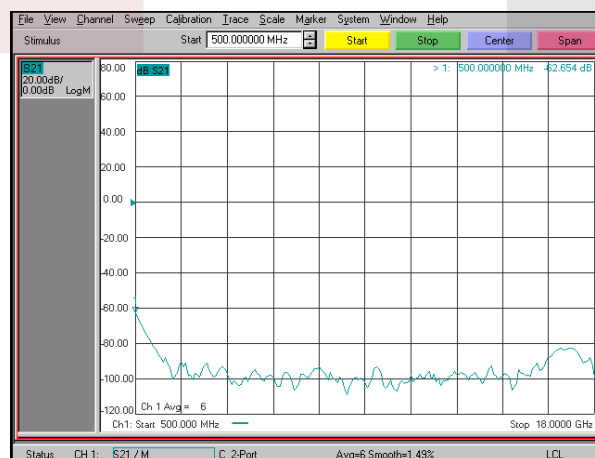
Notes:

Typical Performance Data

(J1 – J2) Insertion Loss and Return Loss



(J1 – J2) Isolation and Return Loss



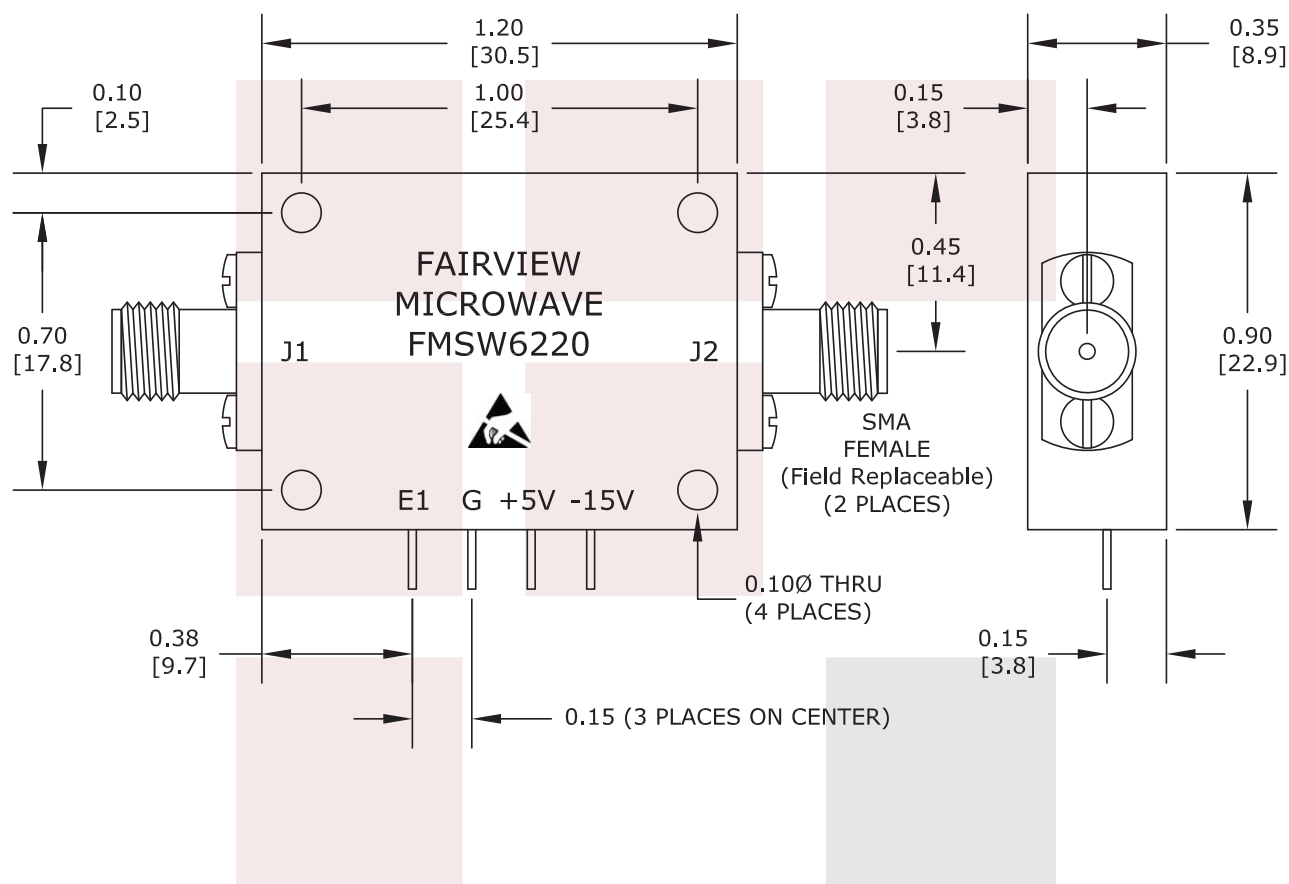
Field Replaceable SMA SPST PIN Diode Switch From 500 MHz to 18 GHz Rated at +20 dBm from Fairview Microwave is in-stock and available to ship same-day. All of our RF/microwave products are available off-the-shelf from our ISO 9001:2008 certified facilities in Allen, Texas. Fairview Microwave is RF on-demand.

For additional information on this product, please click the following link: [Field Replaceable SMA SPST PIN Diode Switch From 500 MHz to 18 GHz Rated at +20 dBm FMSW6220](#)

URL: <https://www.fairviewmicrowave.com/sma-spst-pin-diode-switch-18-ghz-20-dbm-fmsw6220-p.aspx>

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.





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

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

1 BIT TTL LOGIC TABLE	
E2	FUNCTION
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 SPST PIN Diode Switch From
500 MHz to 18 GHz Rated at +20 dBm

DWG NO

FMSW6220

CAGE CODE

3FKR5

CAD FILE

041916

SHEET

SCALE

N/A

SIZE

A

2233