

Field Replaceable SMA SP4T PIN Diode Switch Absorptive From 8 GHz to 12 GHz Rated at +20 dBm

FMSW6253 is a Single Pole Four Throw (SP4T) Absorptive PIN Diode Switch that operates from 8 GHz to 12 GHz. The output port is terminated in 50 ohms when switched in the isolation (off) state. Outstanding performance includes 2.6 dB max insertion loss, 70 dBmin 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 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	8		12	GHz
Impedance		50		Ohms
Insertion Loss			2.6	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	-40		+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	0.0764 lbs [34.65 g]
Finish	Blue Paint

Configuration

Design	Absorptive, SP4T
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
Altitude	MIL-STD-202F, Method 105C, Condition B



Features:

- SP4T Absorptive Switch
- 8.0 GHz to 12.0 GHz
- Insertion Loss 2.6 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

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

Temperature Cycling
ESD Sensitivity

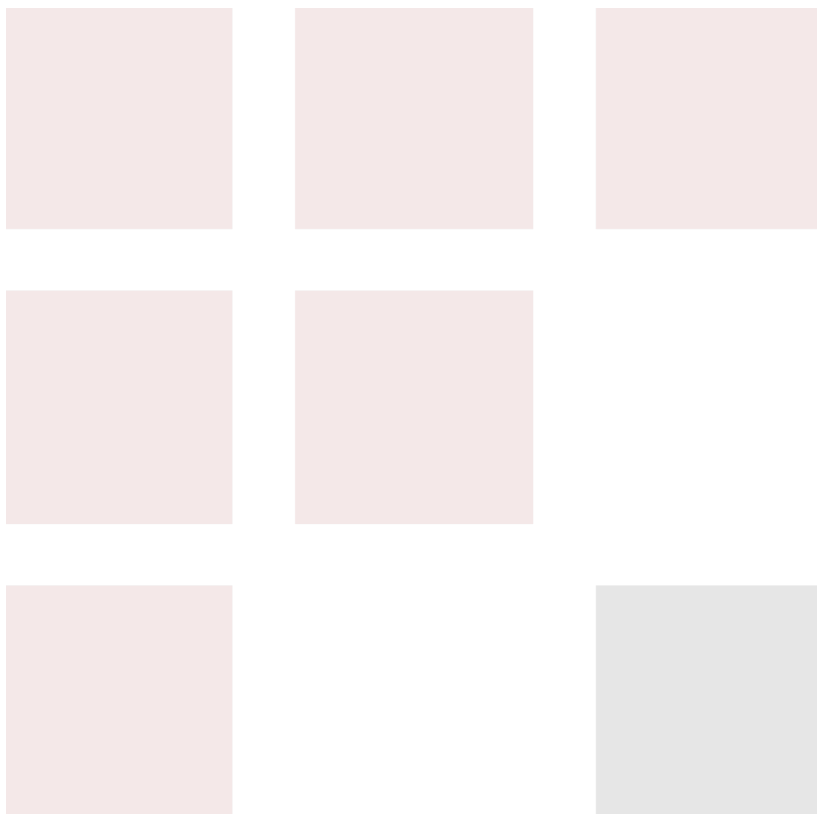
MIL-STD-202F, Method 107D, Condition A
ESD Sensitive Material, Transport material in Approved ESD bags. Handle only
in ESD Workstation.



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

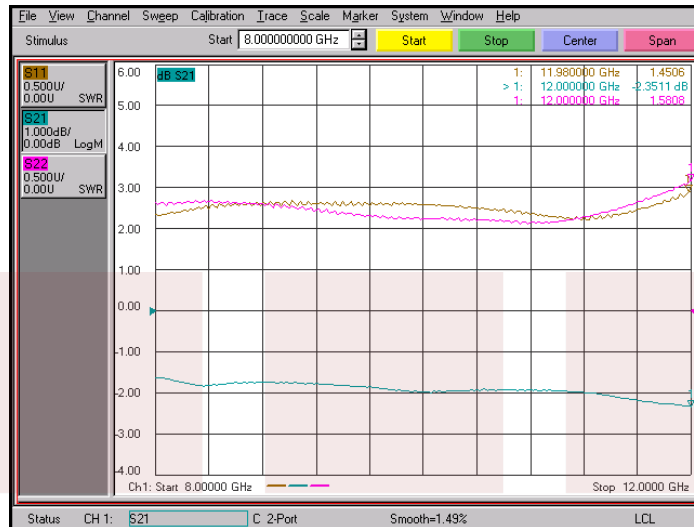
Plotted and Other Data

Notes:

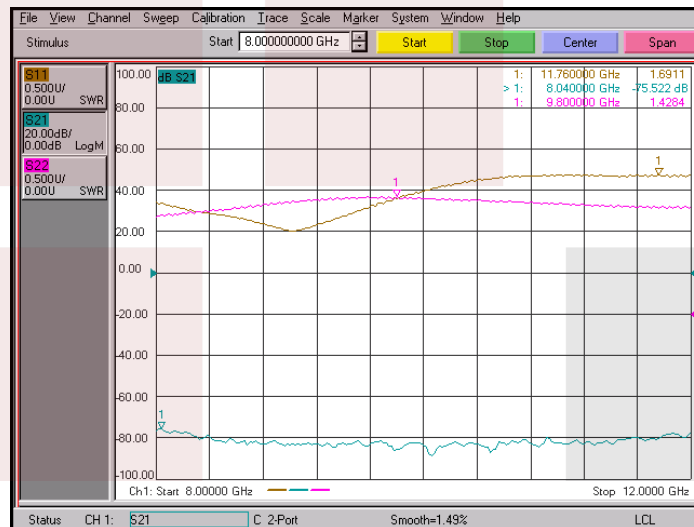


Typical Performance Data

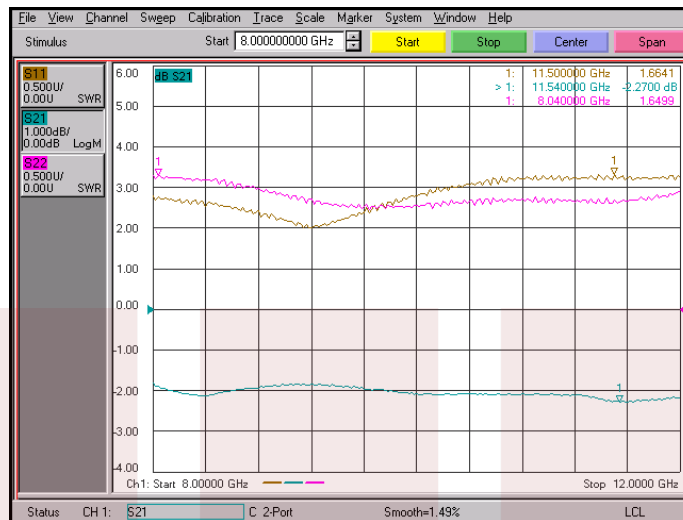
(J1 – J2) Insertion Loss and Return Loss



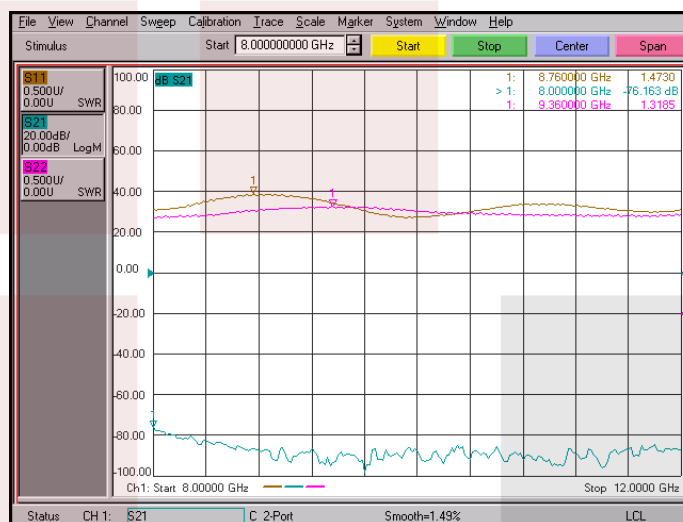
(J1 – J2) Isolation and Termination Return Loss



(J1 – J4) Insertion Loss and Return Loss



(J1 – J4) Isolation and Termination Return Loss

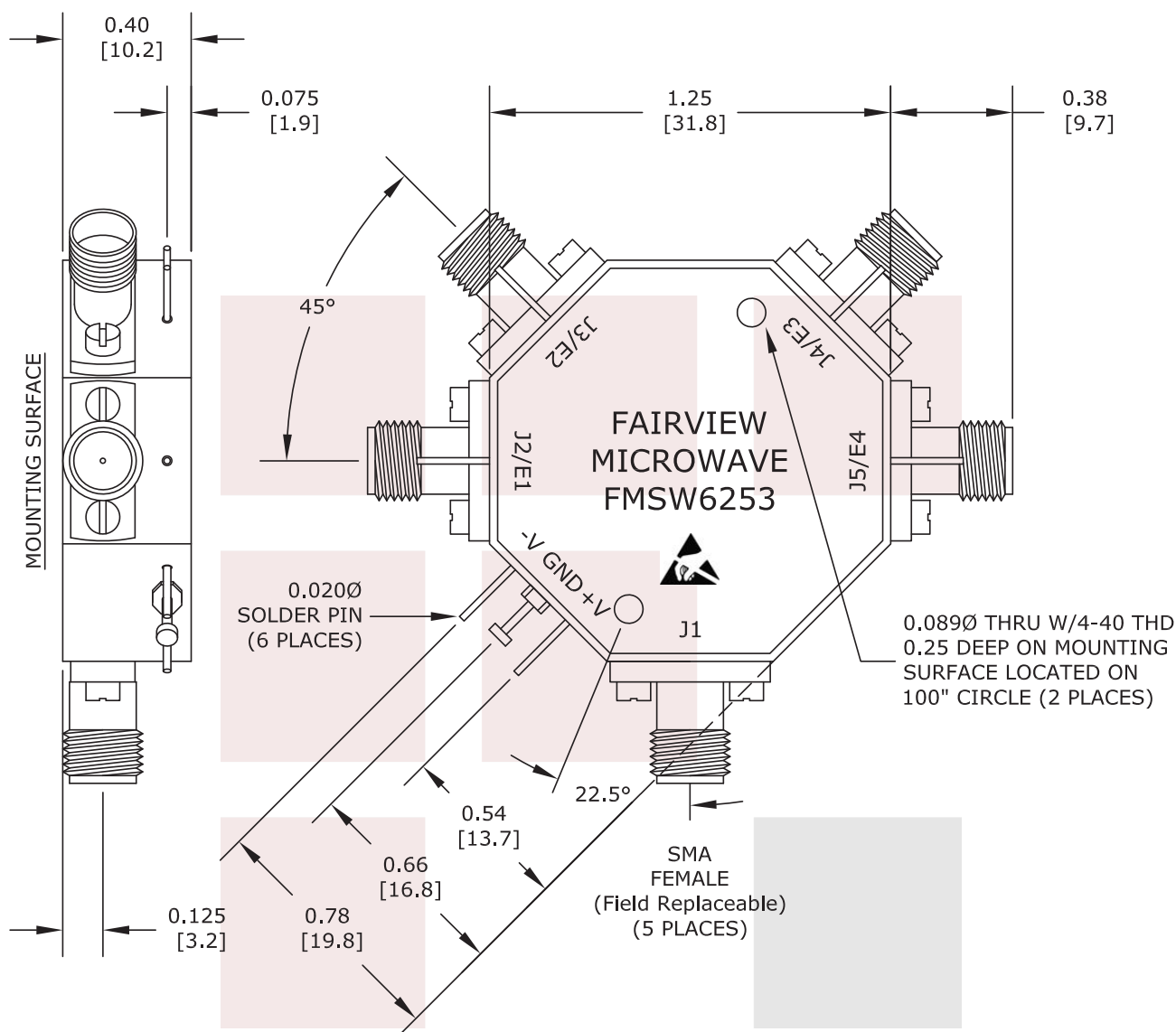


Field Replaceable SMA SP4T PIN Diode Switch Absorptive From 8 GHz to 12 GHz Rated at +20 dBm from Fairview Microwave is in-stock and available to ship same-day. All of our RF/microwave products are available off-the-shelf from our ISO 9001:2008 certified facilities in Allen, Texas. Fairview Microwave is RF on-demand.

For additional information on this product, please click the following link: [Field Replaceable SMA SP4T PIN Diode Switch Absorptive From 8 GHz to 12 GHz Rated at +20 dBm FMSW6253](#)

URL: <http://www.fairviewmicrowave.com/sma-sp4t-pin-diode-switch-absorptive-12-ghz-20-dbm-fmsw6253-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.



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

TITLE
Field Replaceable SMA SP4T PIN Diode Switch
Absorptive From 8 GHz to 12 GHz Rated at +20 dBm

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].

DWG NO		CAGE CODE			
FMSW6253		3FKR5			
CAD FILE	041516	SHEET	SCALE	N/A	SIZE A 2233