

**SMA PIN Diode Switch SPDT From 8 GHz to 12 GHz Rated at +20 dBm**

FMSW6239 is a Single Pole Double Throw (SPDT) 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 typical performance includes < 2.2 dB insertion loss, > 70 dB isolation, and < 100 nsec 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.



**Features:**

- SPDT Absorptive Switch
- 8.0 GHz to 12.0 GHz
- Insertion Loss 2.2 dB max
- Isolation 70 dB min
- Power Input 20 dBm CW max
- Field Replaceable Connectors

**Electrical Specifications**

Description	Min	Typ	Max	Units
Frequency Range	8		12	GHz
Impedance		50		Ohms
Insertion Loss			2.2	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		100		mA
Current @ -15 V		100		mA
Operating Temperature	-40		+85	deg C

**Applications:**

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

**Mechanical Specifications**

Length	1 in [25.4 mm]
Width	1 in [25.4 mm]
Height	0.4 in [10.16 mm]
Weight	0.0658 lbs [29.85 g]
Finish	Blue

**Configuration**

Design	SPDT, Absorptive
RF Connector	SMA Female
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

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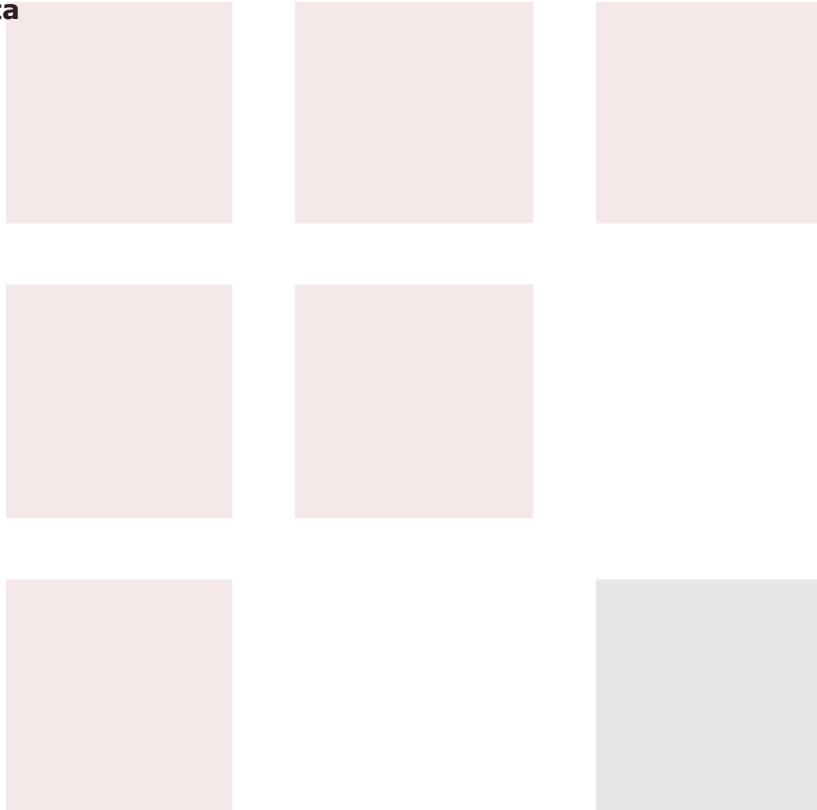
Altitude  
Temperature Cycling  
ESD Sensitivity

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.



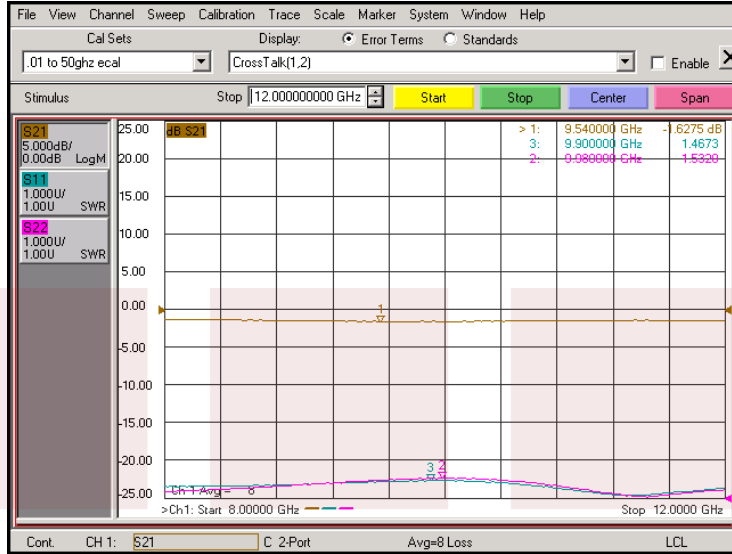
**Compliance Certifications** (visit [www.FairviewMicrowave.com](http://www.FairviewMicrowave.com) for current document)  
REACH Compliant 12/17/2015

**Plotted and Other Data**  
Notes:

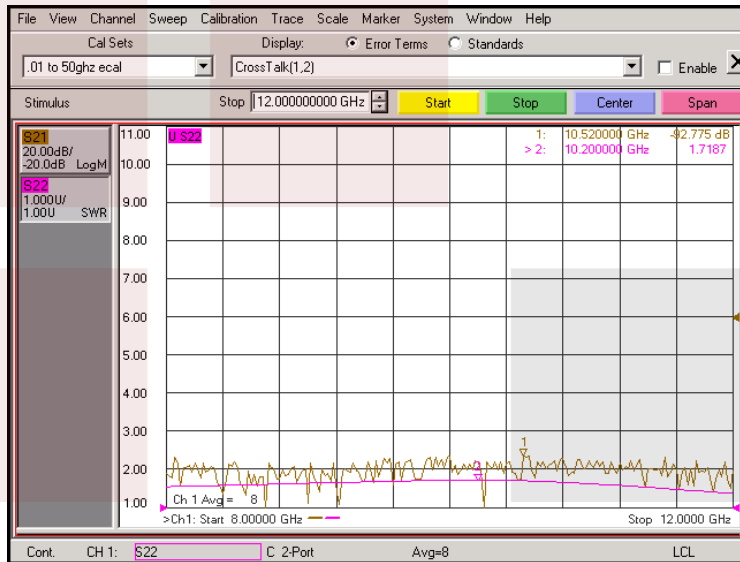


Typical Performance Data

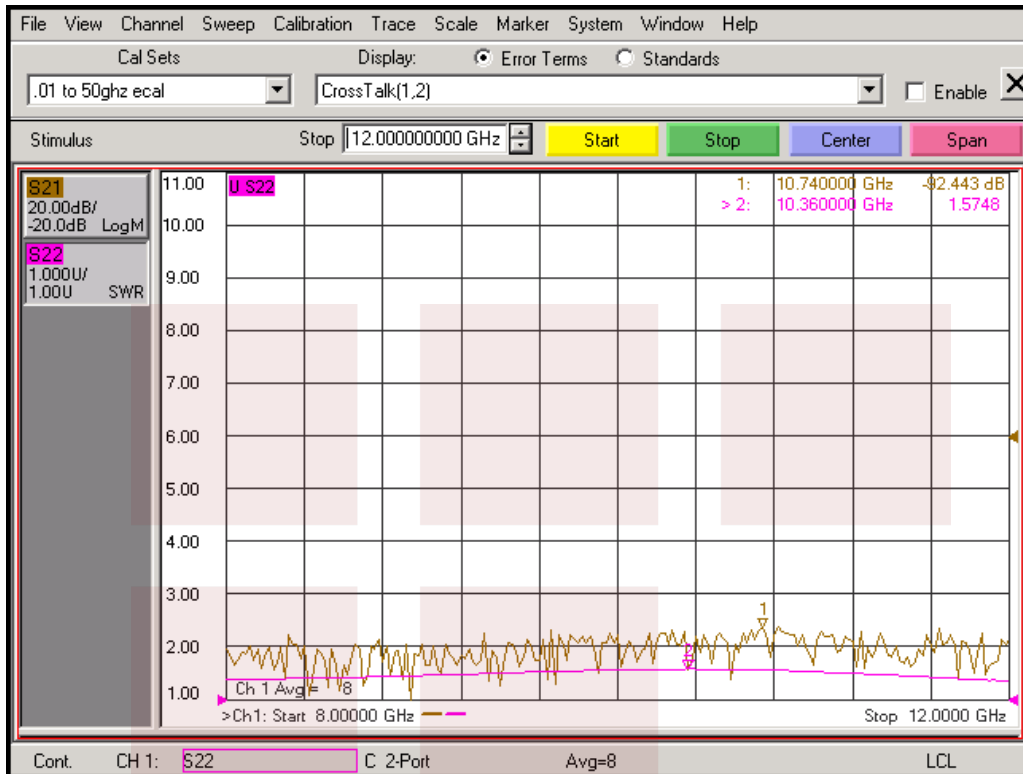
(J1 – J2) Insertion Loss and Return Loss



(J1 – J3) Insertion Loss and Return Loss



(J1 – J3) Isolation and Termination Return Loss

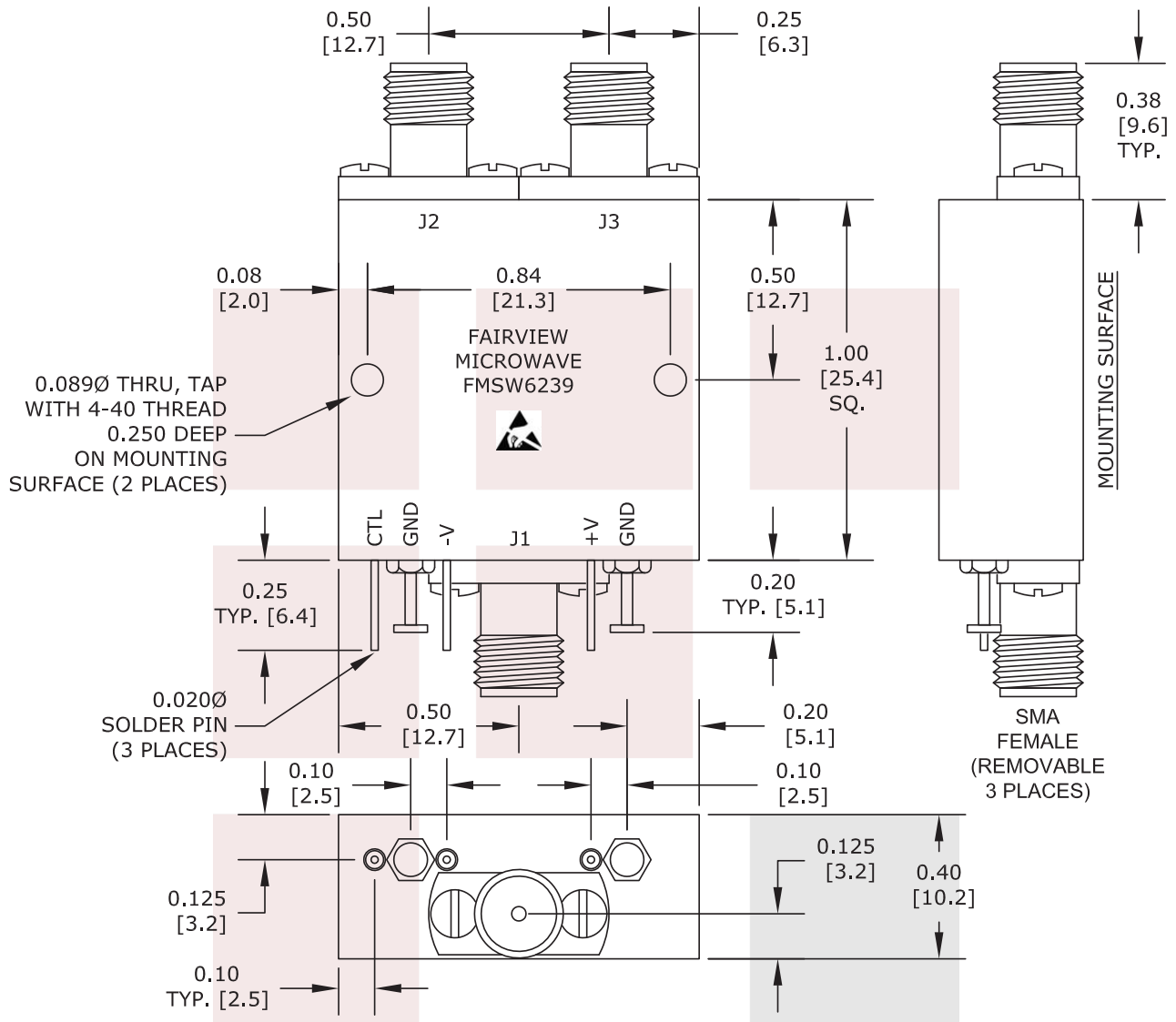


SMA PIN Diode Switch SPDT From 8 GHz to 12 GHz Rated at +20 dBm from Fairview Microwave is in-stock and available to ship same-day. All of our RF/microwave products are available off-the-shelf from our ISO 9001:2008 certified facilities in Allen, Texas. Fairview Microwave is RF on-demand.

For additional information on this product, please click the following link: [SMA PIN Diode Switch SPDT From 8 GHz to 12 GHz Rated at +20 dBm FMSW6239](http://www.fairviewmicrowave.com/sma-pin-diode-switch-spdt-8-12-ghz-rated-20-dbm-fmsw6239-p.aspx)

URL: <http://www.fairviewmicrowave.com/sma-pin-diode-switch-spdt-8-12-ghz-rated-20-dbm-fmsw6239-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.



LOGIC TABLE		
CTL	J1-J2	J1-J3
0	ON	OFF
1	OFF	ON

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

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

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TITLE SMA PIN Diode Switch SPDT From 8 GHz to 12 GHz Rated at +20 dBm		DWG NO FMSW6239		CAGE CODE 3FKR5	
CAD FILE 030816 SHEET		SCALE N/A		SIZE A	2233