

**2.92mm PIN Diode Switch SP4T From 500 MHz to 40 GHz Rated at +20 dBm**

FMSW6217 is a Single Pole Four Throw (SP4T) Absorptive PIN Diode Switch that operates from 0.5 GHz to 40 GHz. The output port is terminated in 50 ohms when switched in the isolation (off) state. Outstanding performance includes 8.0 dB max insertion loss, 60 dB min isolation and 15 ns 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 -5 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 2.92mm connectors.



**Electrical Specifications**

Description	Min	Typ	Max	Units
Frequency Range	0.5		40	GHz
Impedance		50		Ohms
VSWR			2.5:1	
Insertion Loss			8	dB
Isolation	60			dB
Rise Time			15	ns
Fall Time			15	ns
Input Power (CW)			0.1	Watts
Positive Operating Voltage		5		V
Negative Operating Voltage		-5		V
Current @ 5 V		250		mA
Current @ -5 V		100		mA
Operating Temperature	-40		+85	deg C

**Mechanical Specifications**

Length	2.75 in [69.85 mm]
Width	1.5 in [38.1 mm]
Height	0.4 in [10.16 mm]
Weight	0.1 lbs [45.36 g]
Finish	Blue

**Configuration**

Design	SP4T, Absorptive
RF Connector	2.92mm 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 COND. B

**Shock**

MIL-STD-202F, METHOD 213B COND. B

**Features:**

- SP4T Absorptive Switch
- 0.5 GHz to 40.0 GHz
- High Speed Switching
- Insertion Loss 8.0 dB max
- 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

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

Vibration  
Altitude  
Temperature Cycling  
ESD Sensitivity

MIL-STD-202F, METHOD 204D COND. B  
MIL-STD-202F, METHOD 105C COND. B  
MIL-STD-202F, METHOD 107D COND. A  
ESD Sensitive Material, Transport material in Approved ESD bags. Handle only in ESD Workstation.



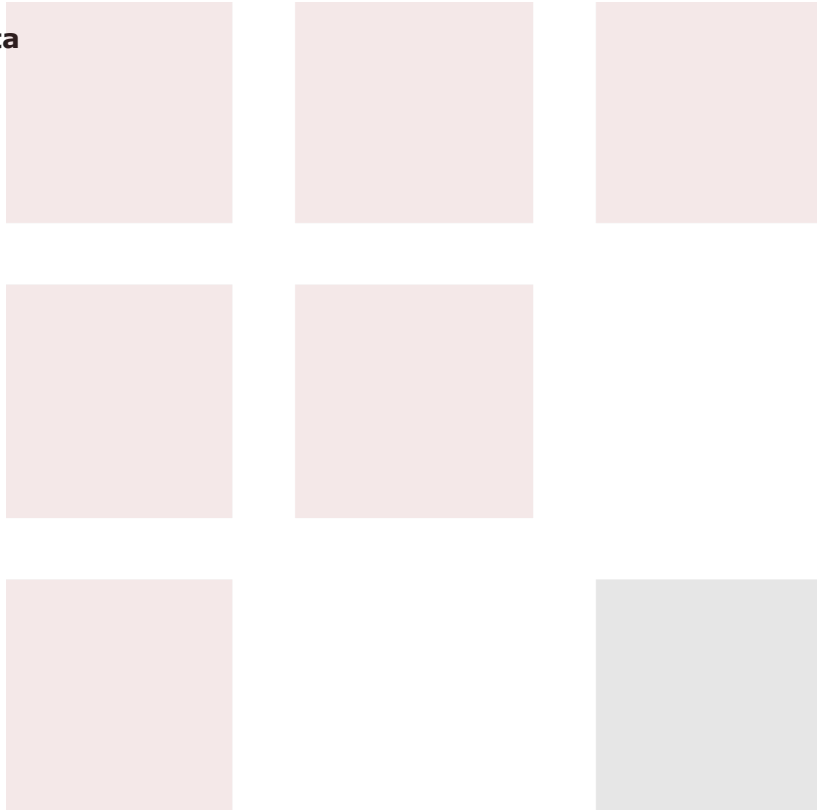
**Compliance Certifications** (visit [www.FairviewMicrowave.com](http://www.FairviewMicrowave.com) for current document)

REACH Compliant

12/17/2015

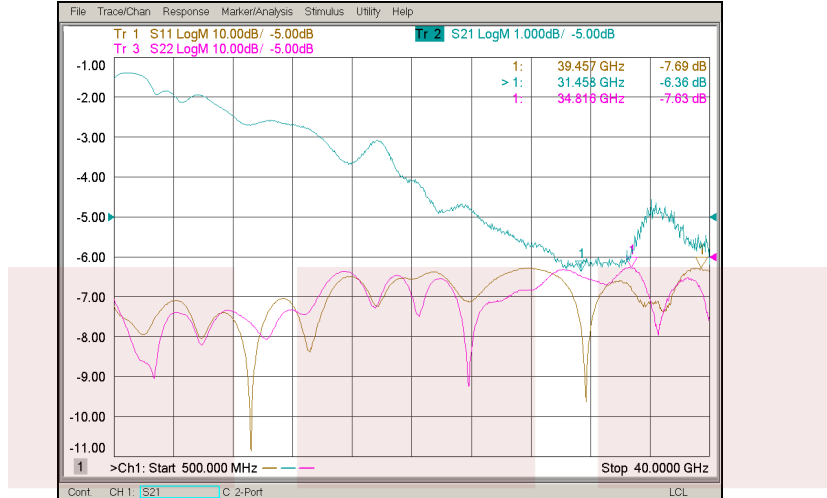
**Plotted and Other Data**

Notes:

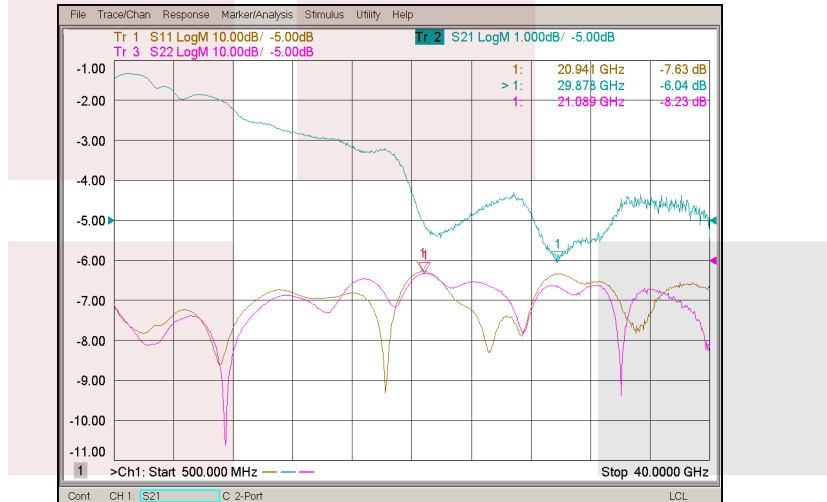


**Typical Performance Data**

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



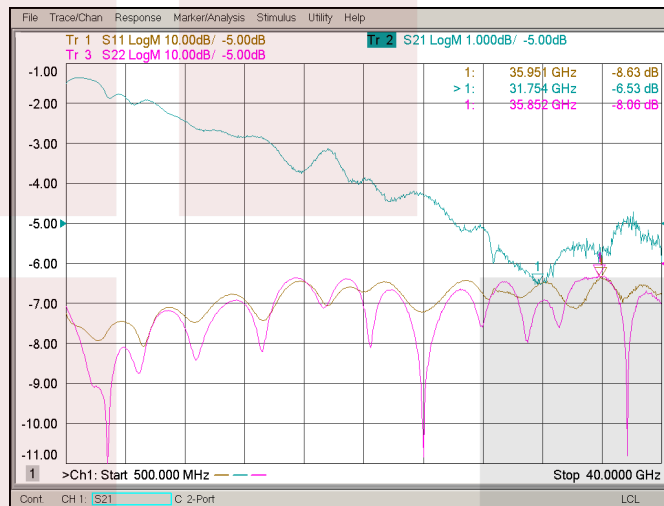
**(J1 – J3) Insertion Loss and Return Loss**



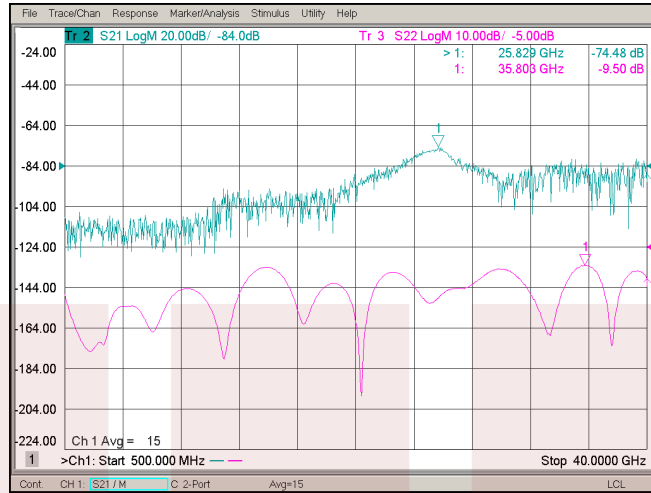
(J1 – J4) Insertion Loss and Return Loss



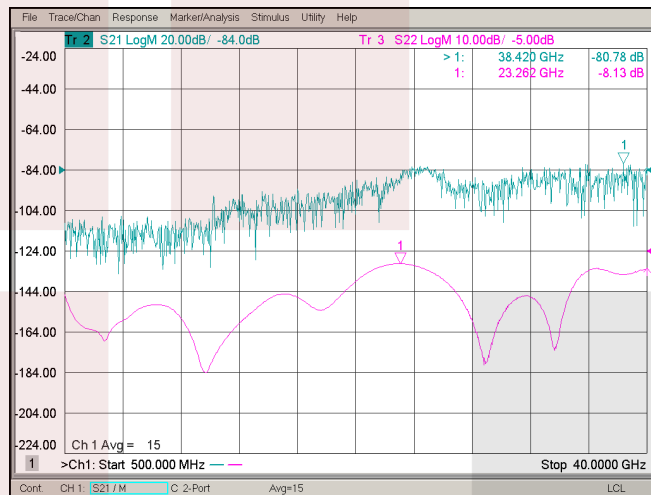
(J1 – J5) Insertion Loss and Return Loss



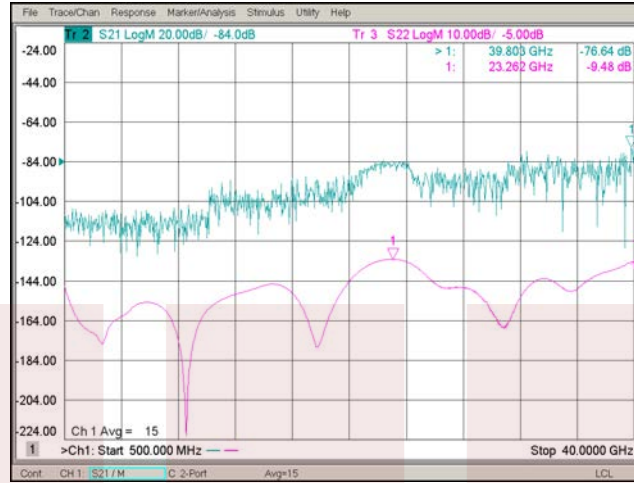
**(J1 – J2) Isolation and Termination Return Loss**



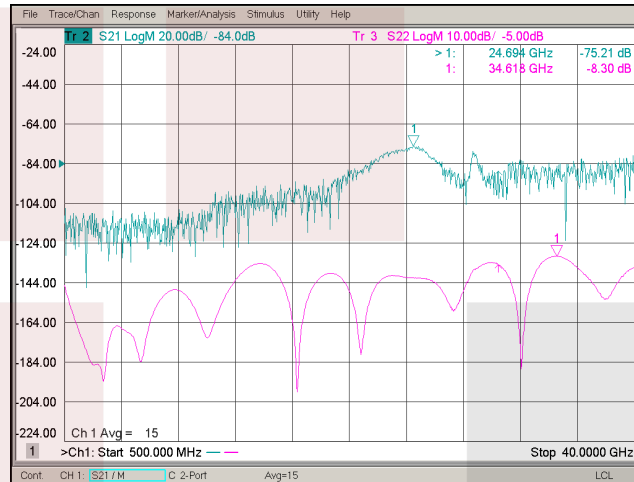
**(J1 – J3) Isolation and Termination Return Loss**



**(J1 – J4) Isolation and Termination Return Loss**



**(J1 – J5) Isolation and Termination Return Loss**



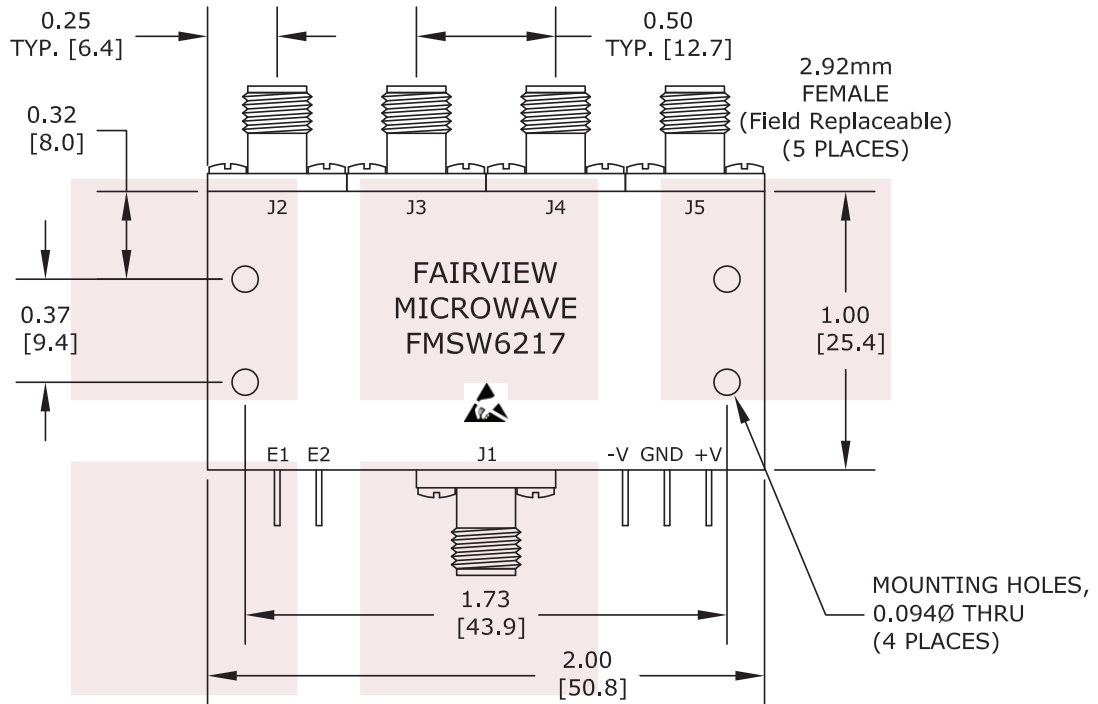
2.92mm PIN Diode Switch SP4T From 500 MHz to 40 GHz Rated at +20 dBm from Fairview Microwave is in-stock and available to ship same-day. All of our RF/microwave products are available off-the-shelf from our ISO 9001:2008 certified facilities in Allen, Texas. Fairview Microwave is RF on-demand.

For additional information on this product, please click the following link: [2.92mm PIN Diode Switch SP4T From 500 MHz to 40 GHz Rated at +20 dBm FMSW6217](#)

URL: <http://www.fairviewmicrowave.com/2.92mm-pin-diode-switch-sp4t-500-mhz-40-ghz-rated-20-dbm-fmsw6217-p.aspx>

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**Front View**

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

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

2 BIT DECODER LOGIC TABLE		
E1	E2	FUNCTION
0	0	J1-J2 LOW LOSS
0	1	J1-J3 LOW LOSS
1	0	J1-J4 LOW LOSS
1	1	J1-J5 LOW LOSS

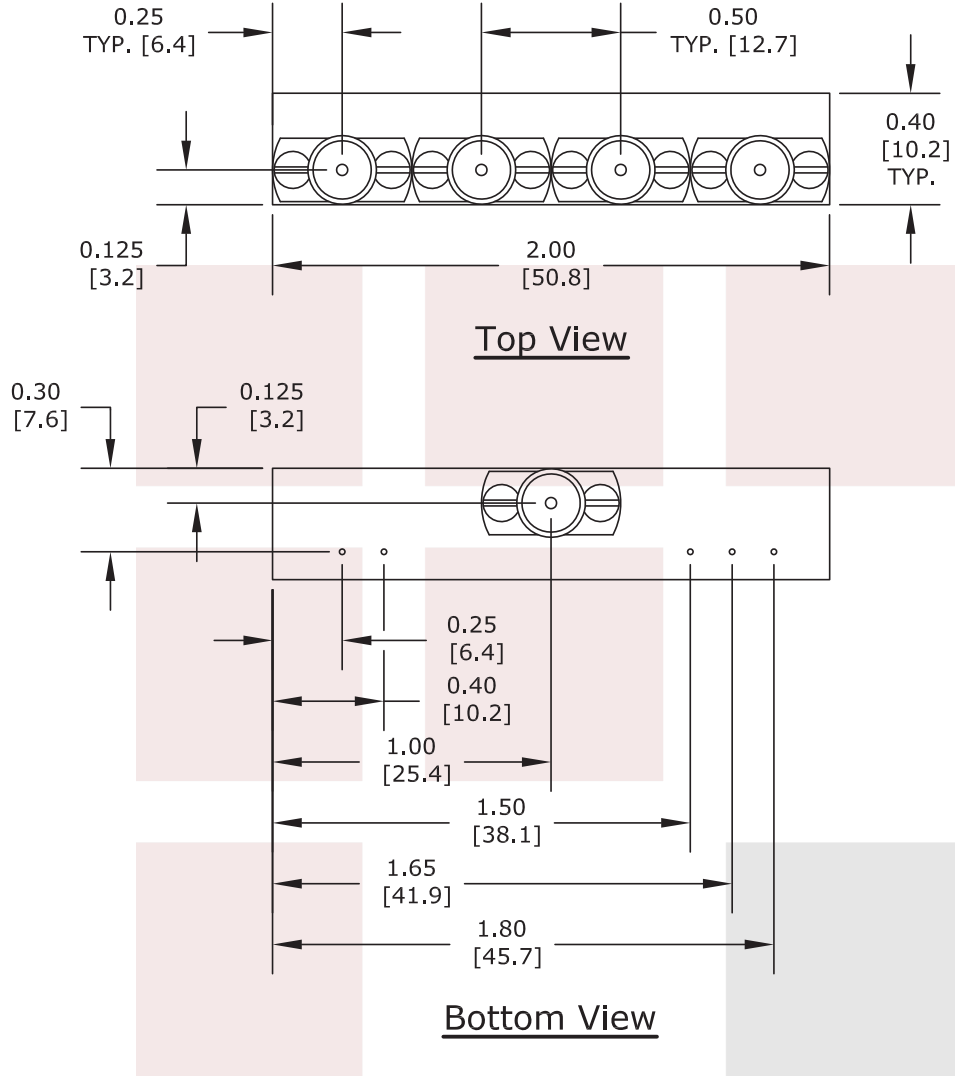
**FAIRVIEW MICROWAVE INC.**

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	DWG NO		CAGE CODE	
2.92mm PIN Diode Switch SP4T From 500 MHz to 40 GHz Rated at +20 dBm	FMSW6217		3FKR5	
CAD FILE	033016	SHEET	SCALE	N/A
			SIZE	A
				2233





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