

## Field Replaceable 2.92mm SP3T PIN Diode Switch Absorptive From 500 MHz to 40 GHz Rated at +20 dBm

The FMSW6216 is a Single Pole Three Throw (SP3T) 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 6 dB typ insertion loss, 60 dB min isolation and 50 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 VDC and -5 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 2.92mm connectors.

### Electrical Specifications

TTL Control Logic

Off/Isolation: "1"  
On/Low Loss: "0"

Description	Min	Typ	Max	Units
Frequency Range	0.5		40	GHz
Impedance		50		Ohms
Insertion Loss		6		dB
Isolation	55	64		dB
Switching Time			50	ns
Input Power (CW)			0.1	Watts
Survival Power			1	Watt
Positive Operating Voltage		5		Vdc
Negative Operating Voltage	6	-5	200	Vdc
Current @ 5 Vdc		200		mA
Current @ -5Vdc		100		mA
Operating Temperature	-40		+85	deg C

### Mechanical Specifications

Length	1 in [25.4 mm]
Width	1 in [25.4 mm]
Height	0.5 in [12.7 mm]
Weight	0.07 lbs [31.75 g]
Design	Absorptive, SP3T
RF Connector	2.92mm 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 COND. B
Shock	MIL-STD-202F, METHOD 213B COND. B
Vibration	MIL-STD-202F, METHOD 204D COND. B



### Features:

- SP3T Absorptive Switch
- 0.5 GHz to 40.0 GHz
- Insertion Loss 6.0 dB typ
- Isolation 60 dB min
- Power Input 20 dBm CW typ
- Field Replaceable Connectors

### Applications:

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

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Altitude  
Temperature Cycling  
ESD Sensitivity

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.

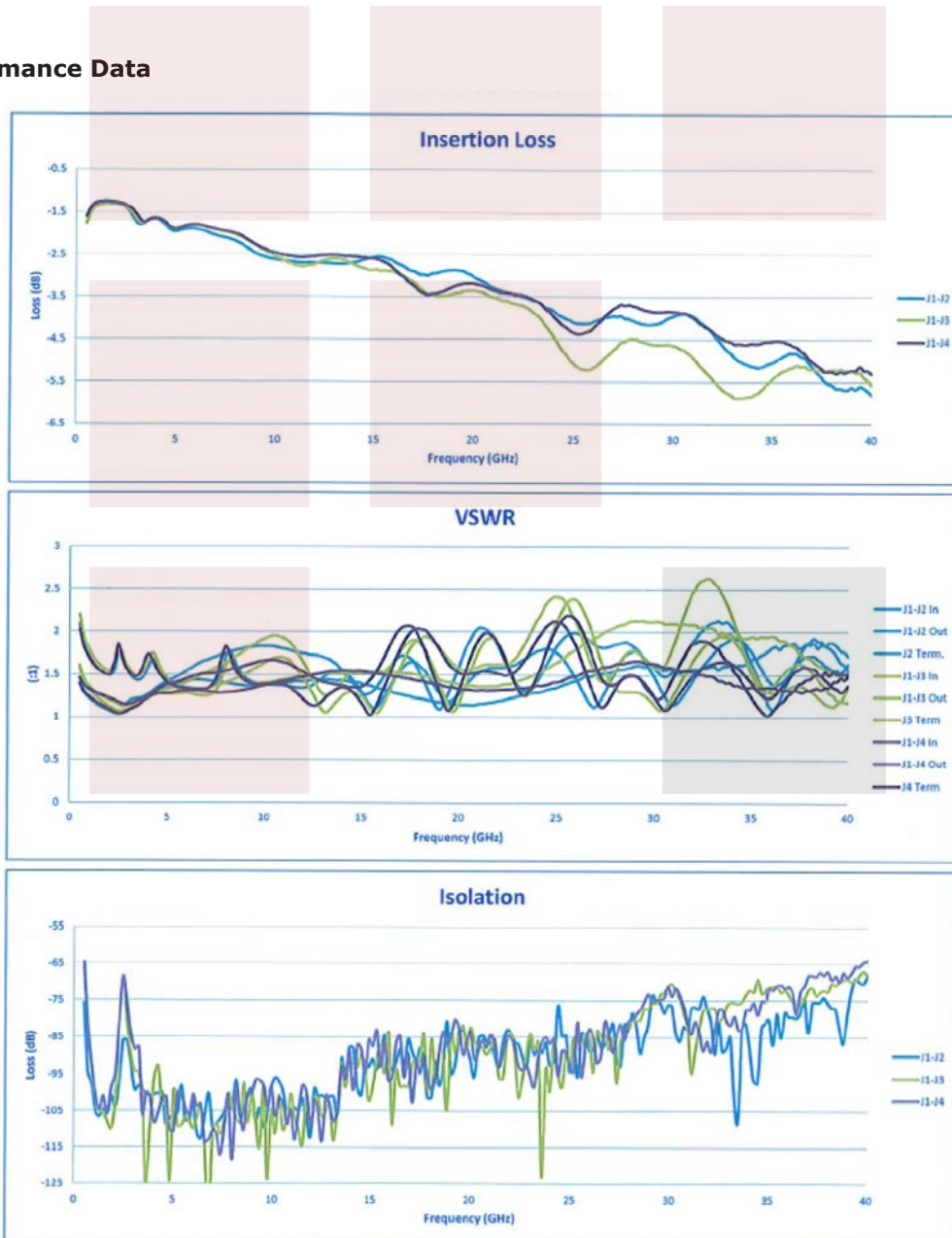


**Compliance Certifications** (see [product page](#) for current document)

**Plotted and Other Data**

Notes:

**Typical Performance Data**



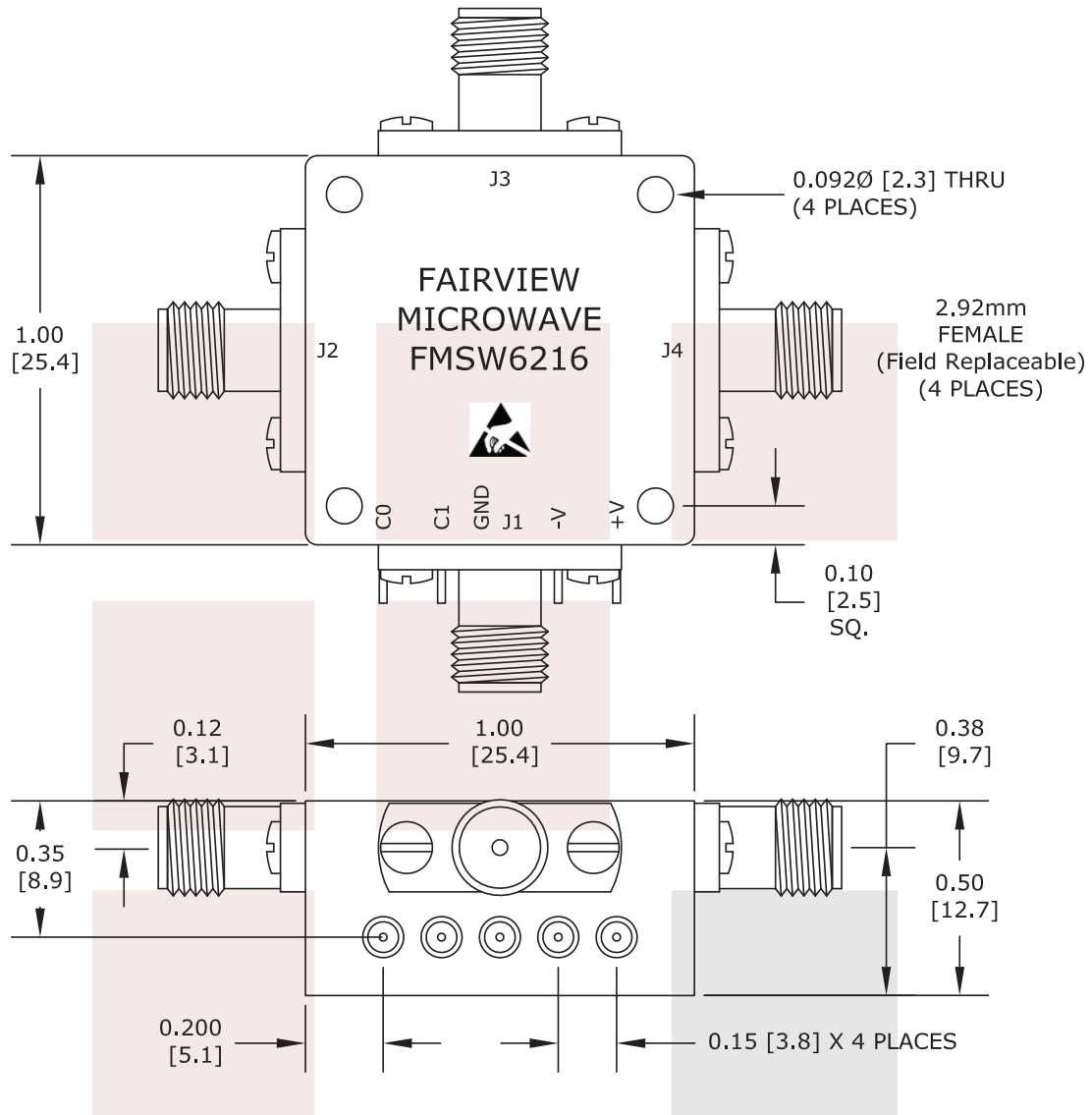
Field Replaceable 2.92mm SP3T PIN Diode Switch Absorptive From 500 MHz to 40 GHz Rated at +20 dBm from Fairview Microwave is in-stock and available to ship same-day. All of our RF/microwave products are available off-the-shelf from our ISO 9001:2008 certified facilities in Lewisville, Texas. Fairview Microwave is RF on-demand.

For additional information on this product, please click the following link: [Field Replaceable 2.92mm SP3T PIN Diode Switch Absorptive From 500 MHz to 40 GHz Rated at +20 dBm FMSW6216](#)

URL: <https://www.fairviewmicrowave.com/2.92mm-sp3t-pin-diode-switch-absorptive-40-ghz-20-dbm-fmsw6216-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 ±0.010  
X.XXX ±0.005

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

LOGIC TABLE				
CTL 1	CTL 0	J1-J2	J1-J3	J1-J4
0	0	ON	OFF	OFF
0	1	OFF	ON	OFF
1	0	OFF	OFF	ON
1	1	OFF	OFF	OFF

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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  
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Absorptive From 500 MHz to 40 GHz Rated at +20 dBm

DWG NO	FMSW6216		CAGE CODE	3FKR5	
CAD FILE	041916	SHEET	SCALE	N/A	SIZE A 2233