

**Field Replaceable SMA SP3T PIN Diode Switch  
 Absorptive From 12 GHz to 18 GHz Rated at +20 dBm**

FMSW6247 is a Single Pole Triple Throw (SP3T) Absorptive PIN Diode Switch that operates from 12 GHz to 18 GHz. The output port is terminated in 50 ohms when switched in the isolation (off) state. Outstanding performance includes 3.75 dB max insertion loss, 70 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 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	12		18	GHz
Impedance		50		Ohms
VSWR			2:1	
Insertion Loss			3.75	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		150		mA
Current @ -15 V		100		mA
Operating Temperature	-40		+85	deg C

**Mechanical Specifications**

Length	1.5 in [38.1 mm]
Width	1.5 in [38.1 mm]
Height	0.4 in [10.16 mm]
Finish	Blue Paint

**Configuration**

Design	Absorptive, SP3T
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
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Shock	MIL-STD-202F, Method 213B, Condition B
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**Features:**

- SP3T Absorptive Switch
- 12.0 GHz to 18.0 GHz
- Insertion Loss 3.75 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

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Vibration  
Altitude  
Temperature Cycling  
ESD Sensitivity

MIL-STD-202F, Method 204D, Condition B  
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.



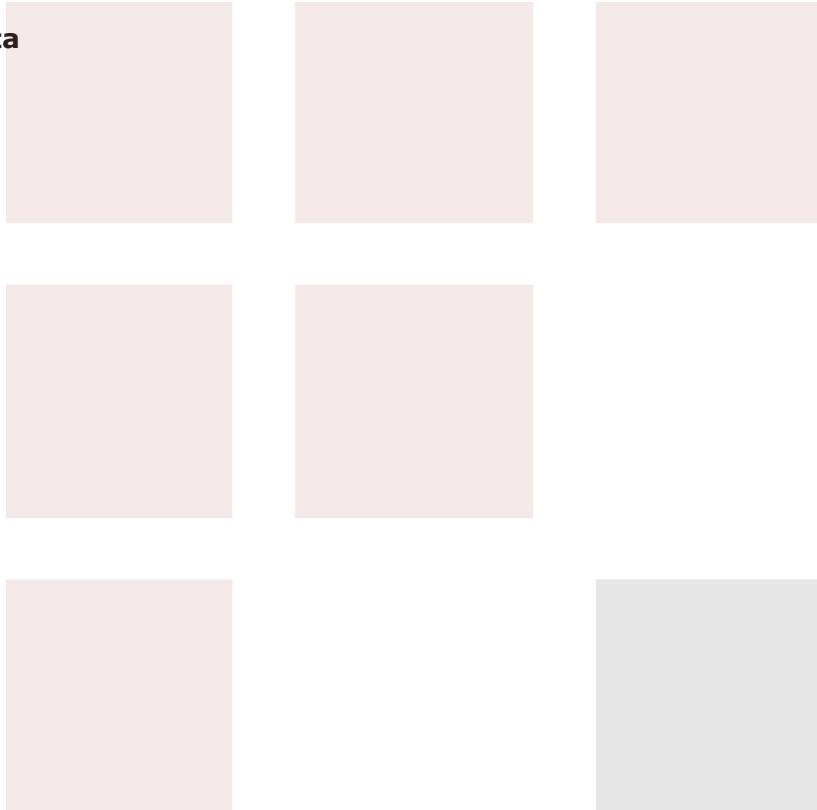
**Compliance Certifications** (visit [www.FairviewMicrowave.com](http://www.FairviewMicrowave.com) for current document)

REACH Compliant

12/17/2015

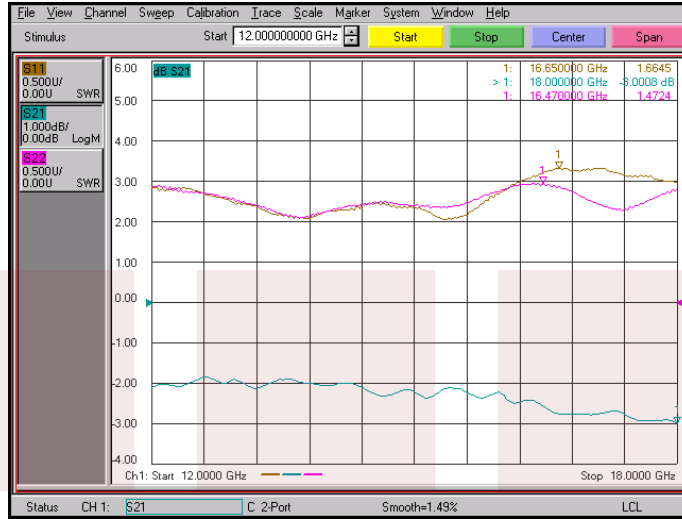
**Plotted and Other Data**

Notes:

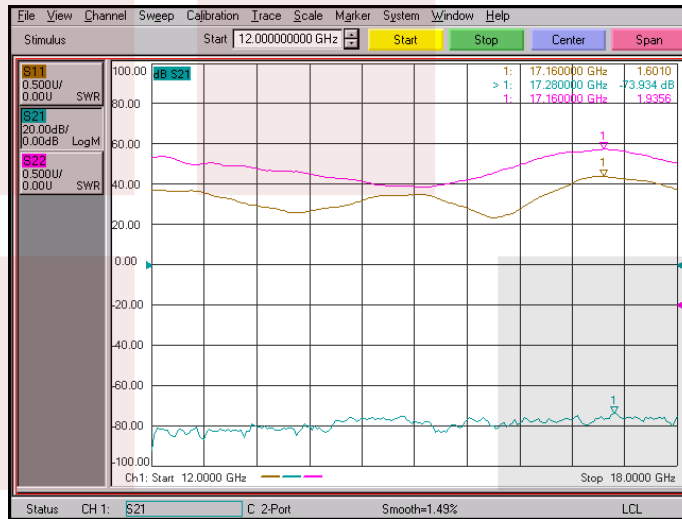


**Typical Performance Data**

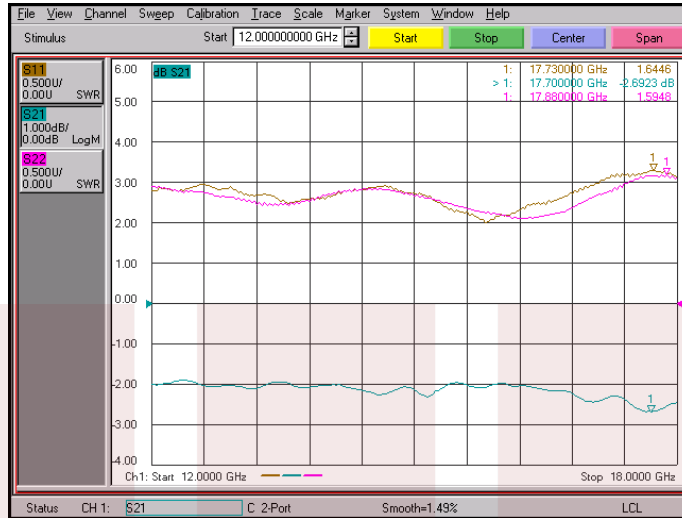
**(J1 – J2) Insertion Loss and Return Loss**



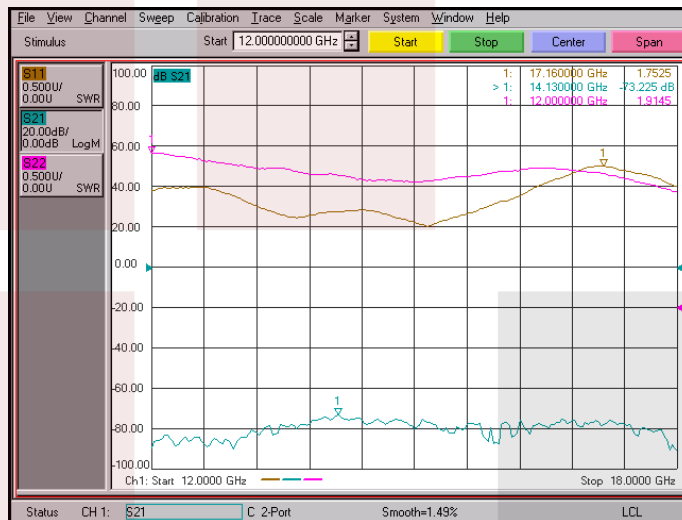
**(J1 – J2) Isolation and Return Loss**



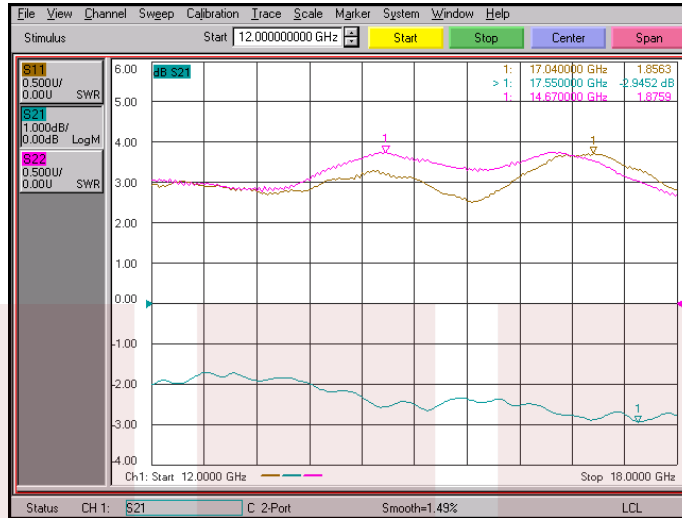
(J1 – J3) Insertion Loss and Return Loss



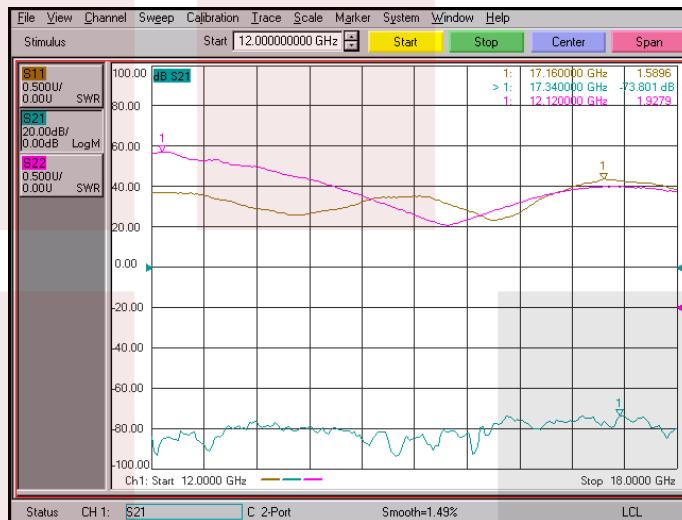
(J1 – J3) Isolation and Return Loss



(J1 – J4) Insertion Loss and Return Loss



(J1 – J4) Isolation and Return Loss

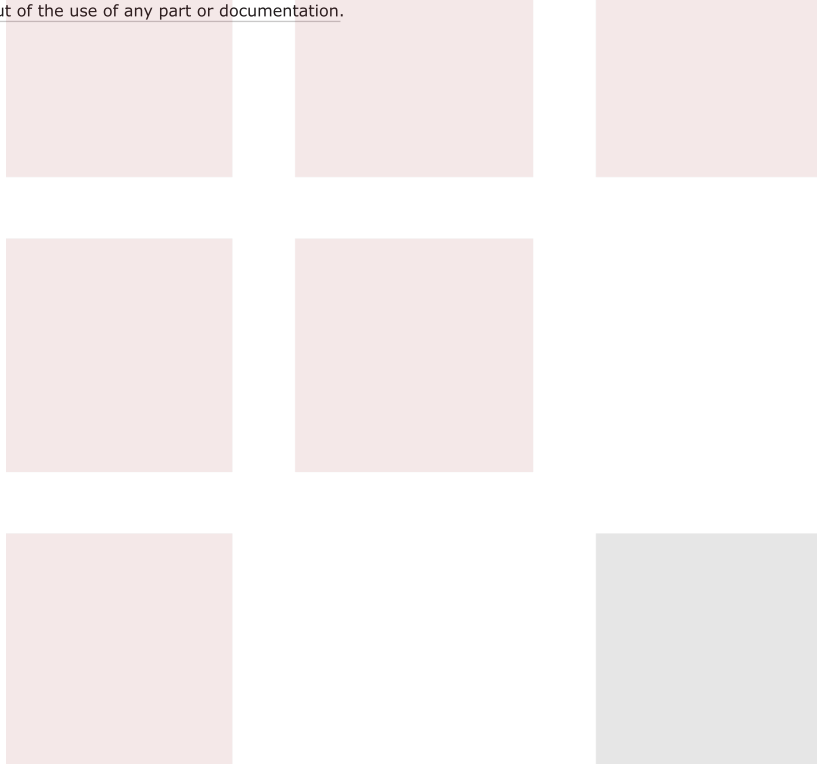


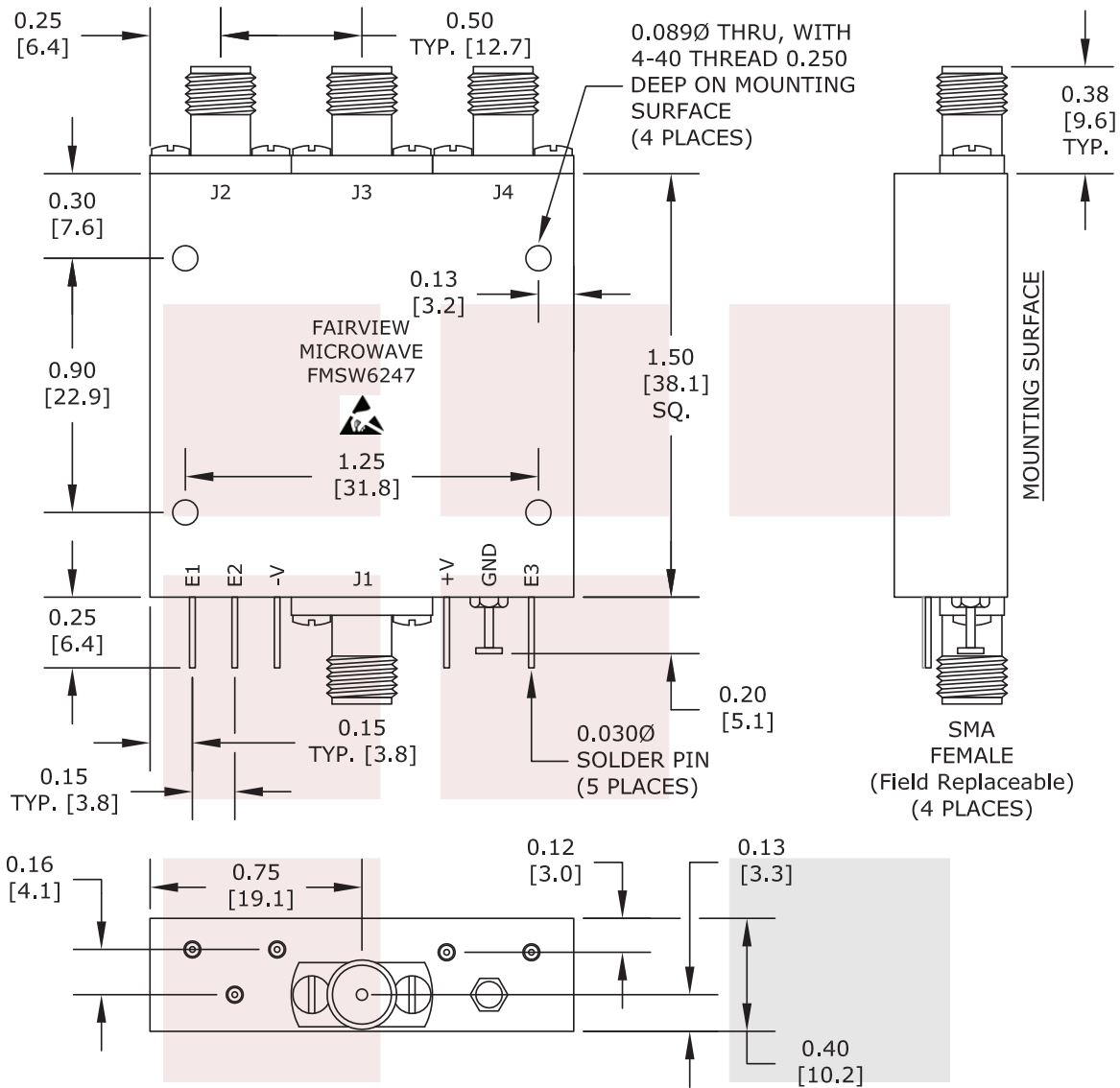
Field Replaceable SMA SP3T PIN Diode Switch Absorptive From 12 GHz to 18 GHz Rated at +20 dBm from Fairview Microwave is in-stock and available to ship same-day. All of our RF/microwave products are available off-the-shelf from our ISO 9001:2008 certified facilities in Allen, Texas. Fairview Microwave is RF on-demand.

For additional information on this product, please click the following link: [Field Replaceable SMA SP3T PIN Diode Switch Absorptive From 12 GHz to 18 GHz Rated at +20 dBm FMSW6247](#)

URL: <http://www.fairviewmicrowave.com/sma-sp3t-pin-diode-switch-absorptive-18-ghz-20-dbm-fmsw6247-p.aspx>

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3 BIT TTL LOGIC TABLE			
E1	E2	E3	FUNCTION
0	1	1	J1-J2 LOW LOSS
1	0	0	J1-J3 LOW LOSS
1	1	0	J1-J4 LOW LOSS

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 Field Replaceable SMA SP3T PIN Diode Switch Absorptive From 12 GHz to 18 GHz Rated at +20 dBm		DWG NO FMSW6247		CAGE CODE 3FKR5	
CAD FILE	041516	SHEET	SCALE	N/A	SIZE A 2233