

**Field Replaceable SMA SP3T PIN Diode Switch  
 Absorptive From 1 GHz to 18 GHz Rated at +20 dBm**

FMSW6248 is a Single Pole Triple Throw (SP3T) Absorptive PIN Diode Switch that operates from 1 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, 65 dB typ 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	1		18	GHz
Impedance		50		Ohms
VSWR			2:1	
Insertion Loss			3.75	dB
Isolation		65		dB
Rise Time			65	ns
Switching Time			100	ns
Input Power (CW)			0.1	Watts
Survival Power			1	Watts
Positive Operating Voltage		5		Vdc
Negative Operating Voltage		-15		Vdc
Current @ 5 Vdc		150		mA
Current @ -15 Vdc		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]
Weight	0.095 lbs [43.09 g]
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

**Features:**

- SP3T Absorptive Switch
- 1.0 GHz to 18.0 GHz
- Insertion Loss 3.75 dB max
- Isolation 65 dB typ
- 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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Shock  
Vibration  
Altitude  
Temperature Cycling  
ESD Sensitivity

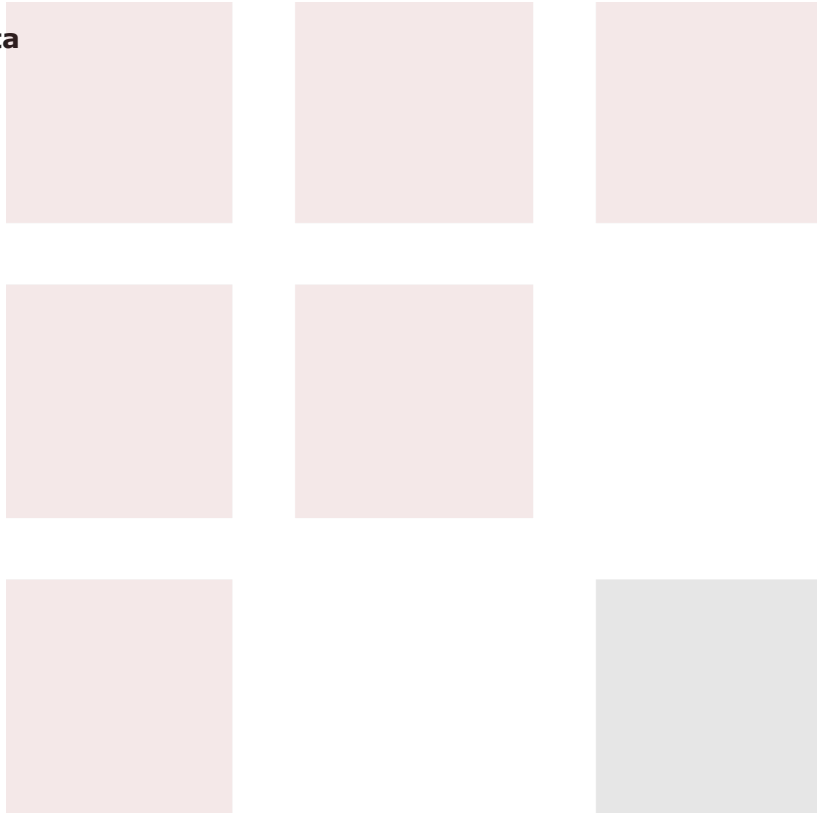
MIL-STD-202F, Method 213B, Condition B  
MIL-STD-202F, Method 204D, Condition B  
MIL-STD-202F, Method 105C, Condition B  
MIL-STD-202F, Method 107D, Condition A  
ESD Sensitive Material, Transport material in Approved ESD bags. Handle only in ESD Workstation.



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

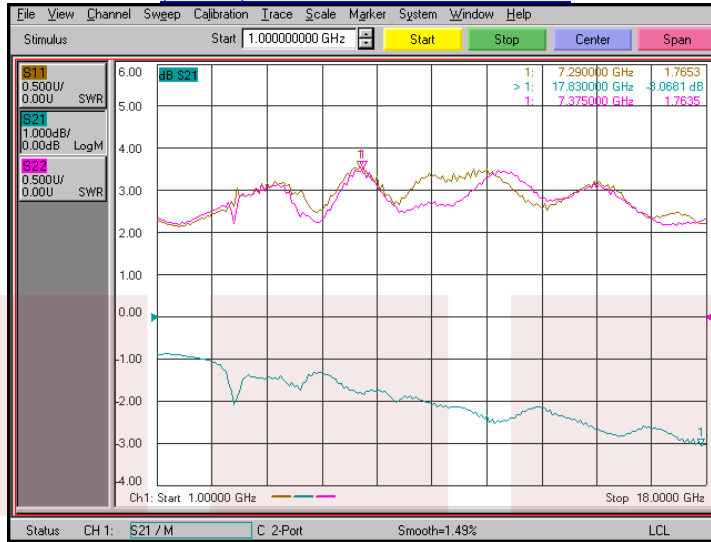
**Plotted and Other Data**

Notes:

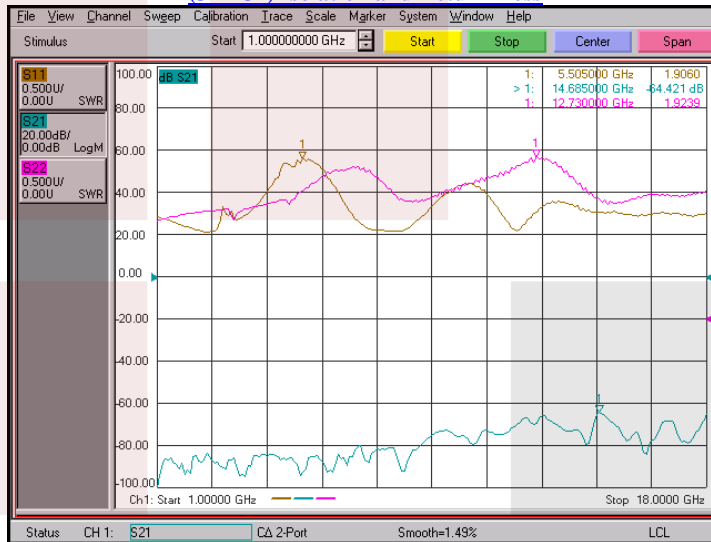


**Typical Performance Data**

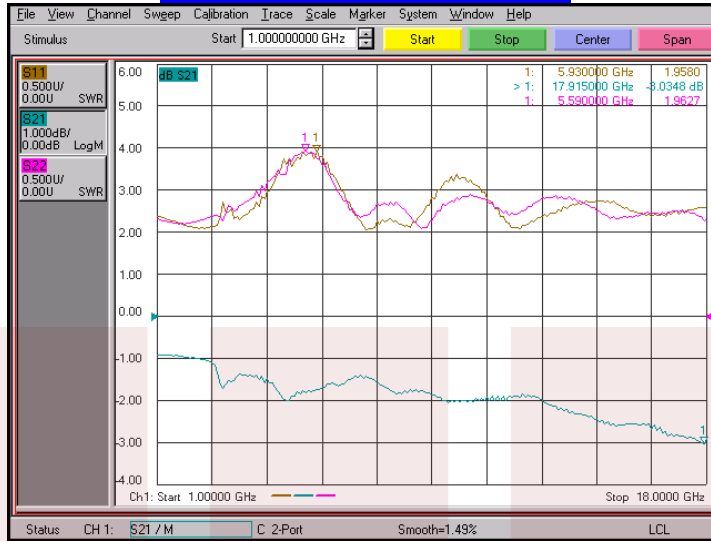
**(J1 – J2) Insertion Loss and Return Loss**



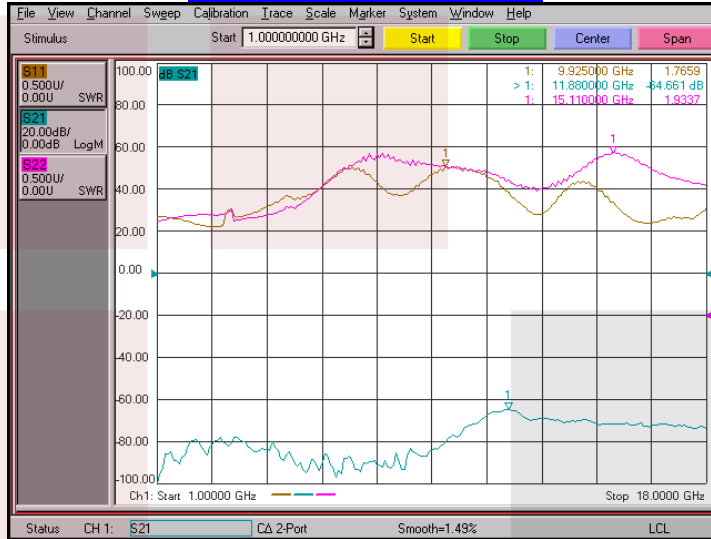
**(J1 – J2) Isolation and Return Loss**



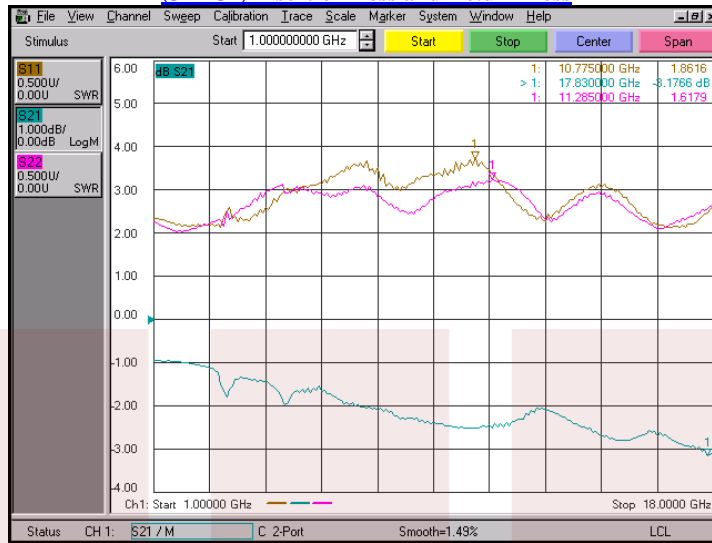
**(J1 – J3) Insertion Loss and Return Loss**



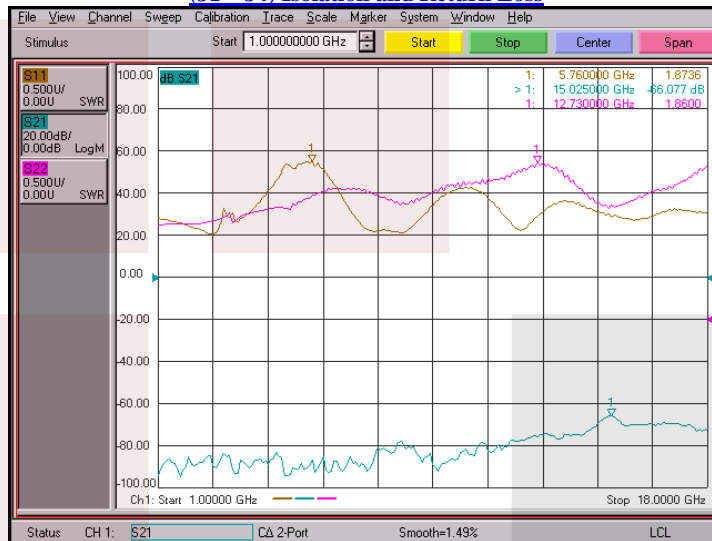
**(J1 – J3) Isolation and Return Loss**



**(J1 – J4) Insertion Loss and Return Loss**



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

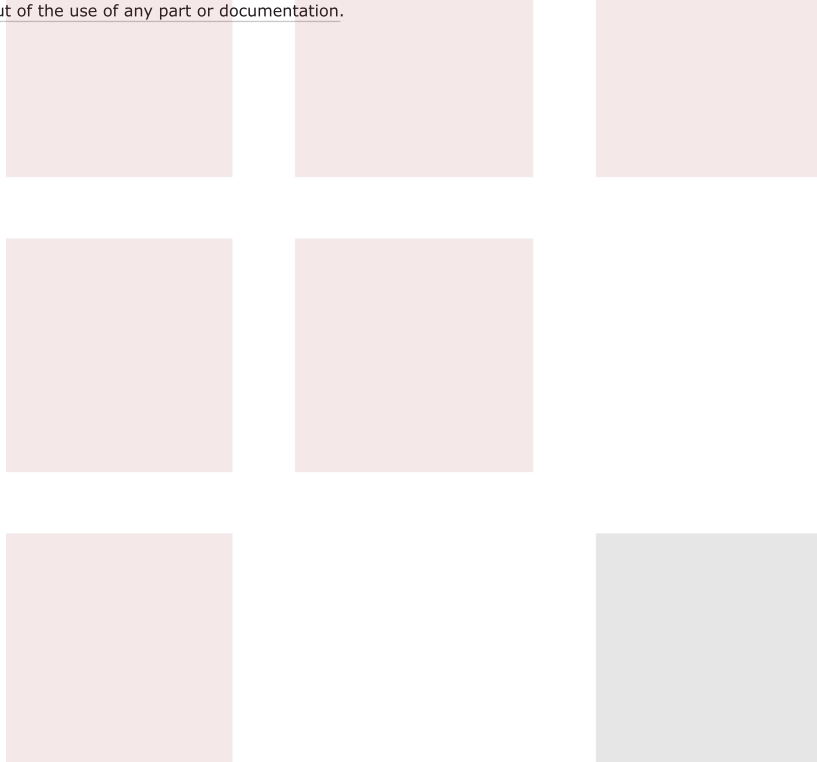


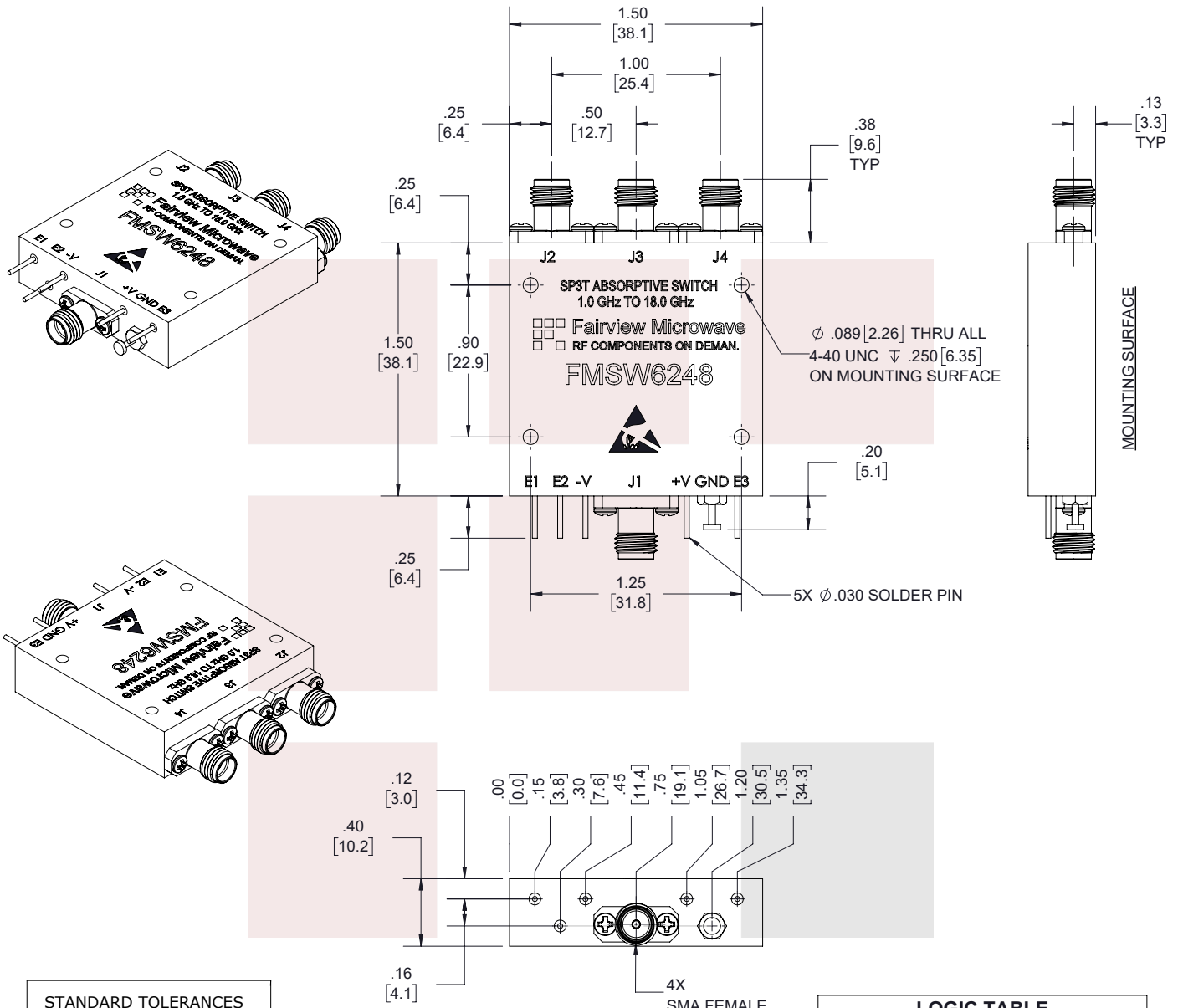
Field Replaceable SMA SP3T PIN Diode Switch Absorptive From 1 GHz to 18 GHz Rated at +20 dBm from Fairview Microwave is in-stock and available to ship same-day. All of our RF/microwave products are available off-the-shelf from our ISO 9001:2008 certified facilities in Allen, Texas. Fairview Microwave is RF on-demand.

For additional information on this product, please click the following link: [Field Replaceable SMA SP3T PIN Diode Switch Absorptive From 1 GHz to 18 GHz Rated at +20 dBm FMSW6248](#)

URL: <https://www.fairviewmicrowave.com/sma-sp3t-pin-diode-switch-absorptive-18-ghz-20-dbm-fmsw6248-p.aspx>

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**STANDARD TOLERANCES**

.X	±0.2
.XX	±0.02
.XXX	±0.010

\*STANDARD TOLERANCES APPLY ONLY TO DIMENSIONS IN INCHES

**LOGIC TABLE**

E1	E2	E3	FUNCTION
0	1	1	J1-J2 "LOW LOSS"
1	0	1	J1-J3 "LOW LOSS"
1	1	0	J1-J4 "LOW LOSS"

<p><b>Fairview Microwave</b> RF COMPONENTS ON DEMAND. <i>Done!</i></p>		<p>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].</p>	
<p>TITLE</p> <p>Field Replaceable SMA SP3T PIN Diode Switch Absorptive From 1 GHz to 18 GHz Rated at +20 dBm</p>		<p>DWG NO</p> <p>FMSW6248</p> <p>CAGE CODE</p> <p>3FKR5</p>	
<p>CAD FILE 04/02/18</p>		<p>SHEET 1 OF 1</p> <p>SCALE N/A</p> <p>SIZE A</p> <p>7361</p>	