

## SMA PIN Diode Switch SPDT From 1 GHz to 18 GHz Rated at +20 dBm

FMSW6241 is a Single Pole Double Throw (SPDT) 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 3.5 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			3.5	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		V
Negative Operating Voltage		-15		V
Current @ 5 V		100		mA
Current @ -15 V		100		mA
Operating Temperature	-40		+85	deg C

### Mechanical Specifications

Length	1 in [25.4 mm]
Width	1 in [25.4 mm]
Height	0.4 in [10.16 mm]
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
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Shock	MIL-STD-202F, Method 213B, Condition B
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### Features:

- SPDT Absorptive Switch
- 1.0 GHz to 18.0 GHz
- High Speed Switching
- Insertion Loss 3.5 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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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

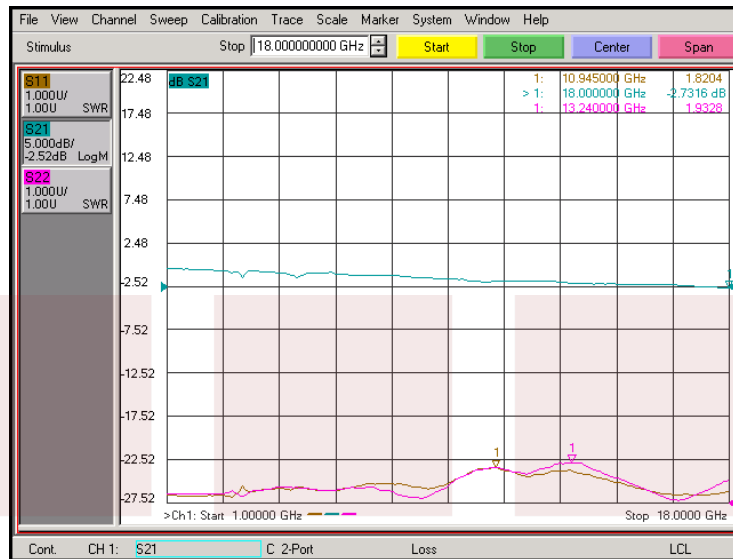
12/17/2015

**Plotted and Other Data**

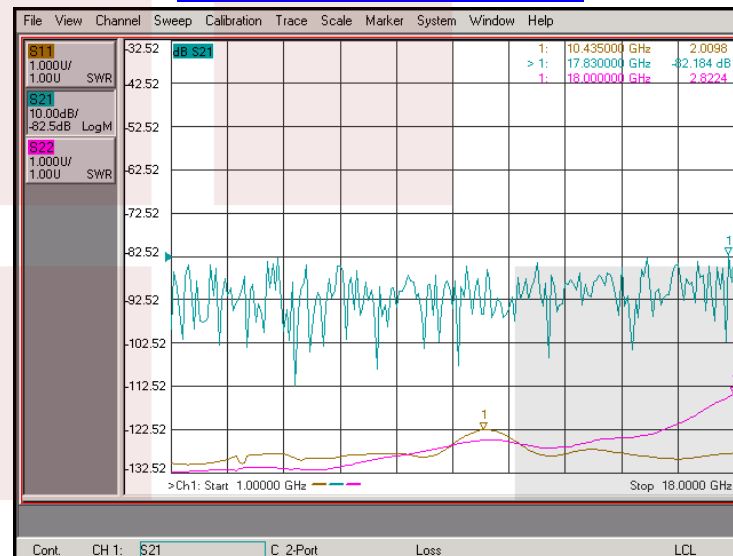
Notes:


## Typical Performance Data

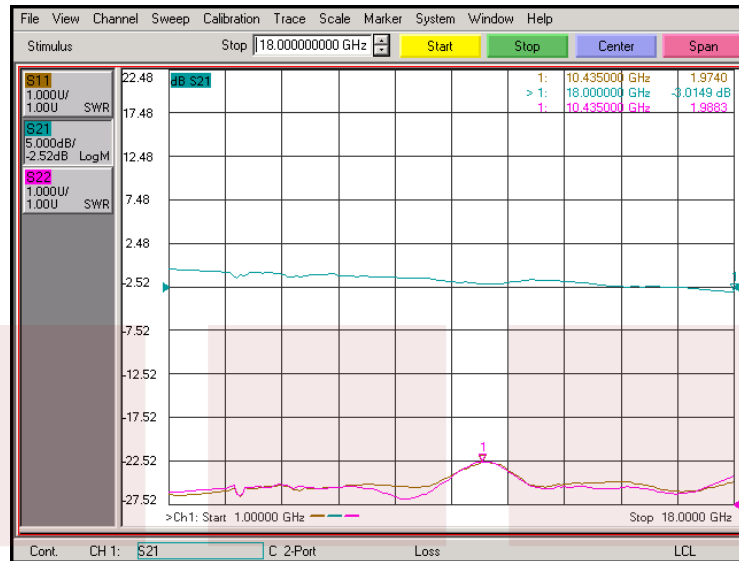
(J1 – J2) Insertion Loss and Return Loss



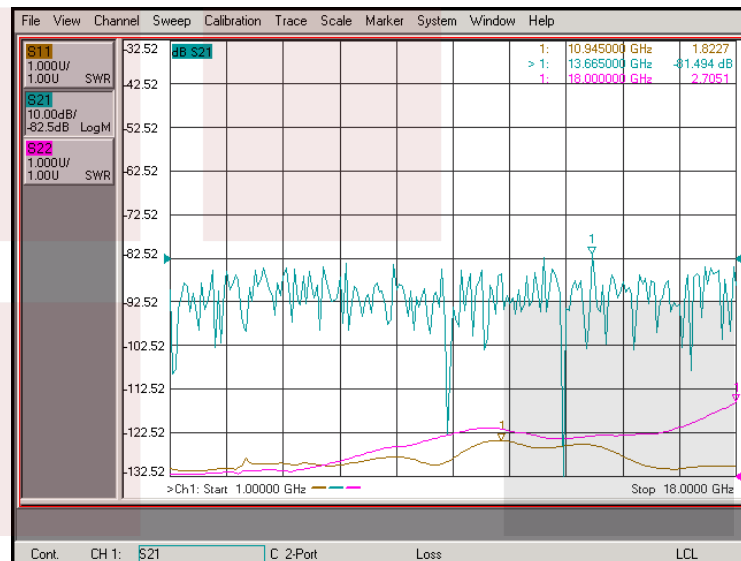
(J1 – J2) Isolation and Termination Return Loss



(J1 – J3) Insertion Loss and Return Loss



(J1 – J3) Isolation and Termination Return Loss

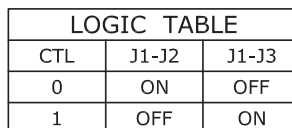


SMA PIN Diode Switch SPDT From 1 GHz to 18 GHz Rated at +20 dBm from Fairview Microwave is in-stock and available to ship same-day. All of our RF/microwave products are available off-the-shelf from our ISO 9001:2008 certified facilities in Allen, Texas. Fairview Microwave is RF on-demand.

For additional information on this product, please click the following link: [SMA PIN Diode Switch SPDT From 1 GHz to 18 GHz Rated at +20 dBm FMSW6241](http://www.fairviewmicrowave.com/sma-pin-diode-switch-spdt-1-18-ghz-rated-20-dbm-fmsw6241-p.asp)

URL: <http://www.fairviewmicrowave.com/sma-pin-diode-switch-spdt-1-18-ghz-rated-20-dbm-fmsw6241-p.asp>

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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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