

**SMA SP8T PIN Diode Switch Absorptive From 100 MHz to 20 GHz Rated at +27 dBm**

FMSW2033 is a Single Pole Eight Throw (SP8T) Absorptive PIN Diode Switch that operates from 0.1 to 20 GHz. The output port is terminated in 50 ohms when switched in the isolation (off) state. Electrical performance includes 6 dB max insertion loss, 65 dB min isolation, and 100 nsec max switching speed. The design incorporates TTL-compatible driver circuitry for accurate logic control. Operational temperature range is -55°C to +85°C and dual voltage controls of +5 Vdc and -12 Vdc are required. The package interface uses solder terminals and SMA Female connectors.



**Electrical Specifications**

Description	Min	Typ	Max	Units
Frequency Range	0.1		20	GHz
Impedance		50		Ohms
VSWR			2:1	
Insertion Loss			6	dB
Isolation	65			dB
Switching Time			100	ns
Input Power (CW)			0.5	Watts
Positive Operating Voltage		5		Vdc
Negative Operating Voltage		-12		Vdc
Current @ 5 Vdc		320		mA
Current @ -12 Vdc		40		mA
Operating Temperature	-55		+85	deg C

**Features:**

- SP8T Absorptive Switch
- 100 MHz to 20 GHz
- Insertion Loss 6 dB max
- Isolation 65 dB min
- Switching speed 100 nsec max
- Max Operating Power +27 dBm

**Applications:**

- Communications Systems
- Electronic Simulators
- Bypass Switch
- Test Equipment
- Radar Systems
- EW Systems

**Mechanical Specifications**

Length	4 in [101.6 mm]
Width	0.96 in [24.38 mm]
Height	0.35 in [8.89 mm]
Weight	0.158 lbs [71.67 g]
Design	Absorptive, SP8T
RF Connector	SMA Female
RF Connector Specification	MIL-C-39012
Control Connector	Solder Pin

**Environmental Specifications**

**Temperature**

Operating Range	-55 to +85 deg C
Storage Range	-65 to +125 deg C

ESD Sensitivity	ESD Sensitive Material. Transport material in Approved ESD bags. Handle only in ESD Workstation.
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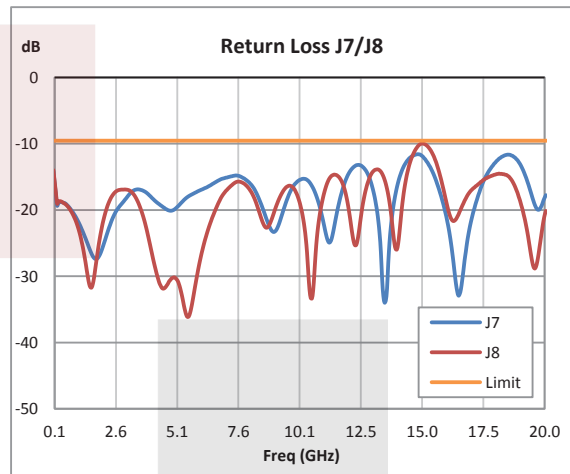
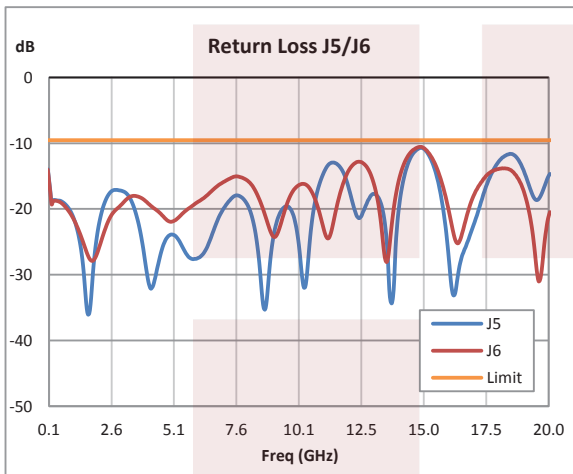
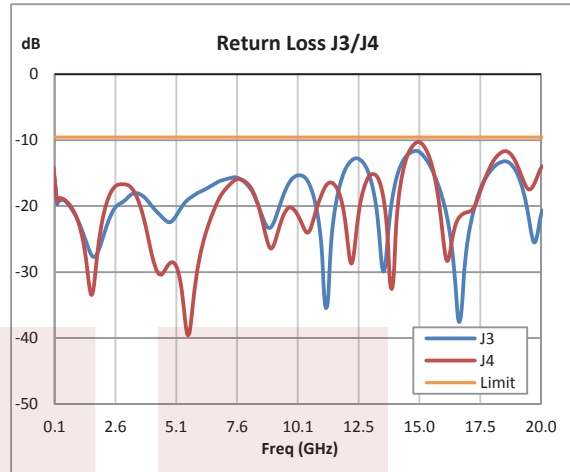
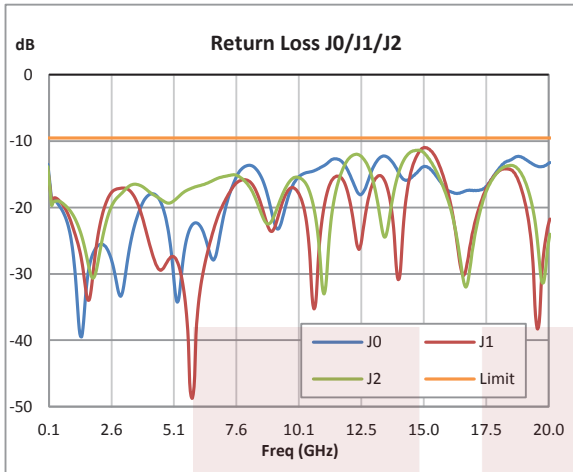
**Compliance Certifications** (visit [www.FairviewMicrowave.com](http://www.FairviewMicrowave.com) for current document)

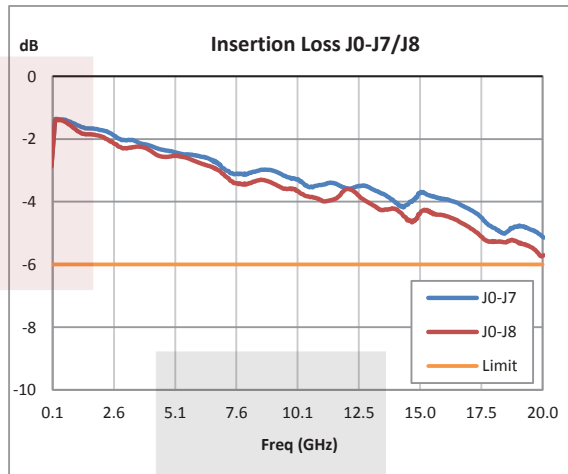
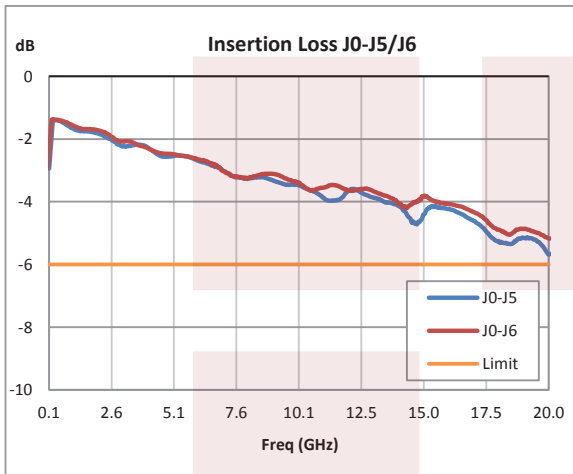
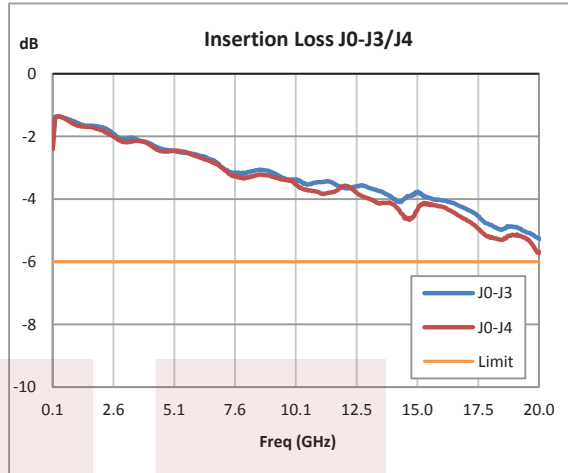
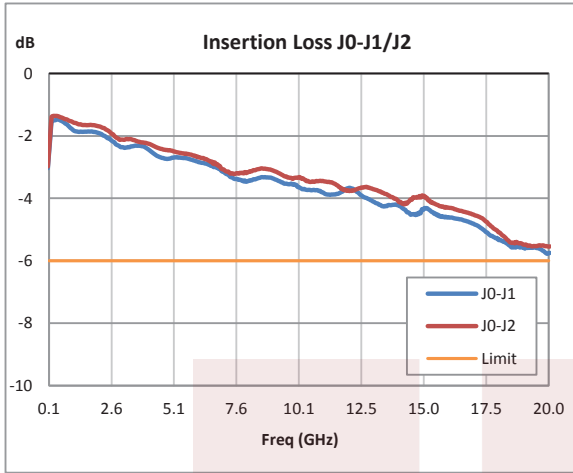
**Plotted and Other Data**

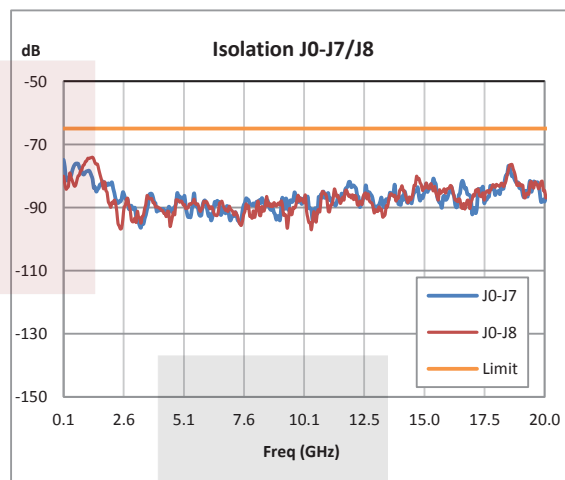
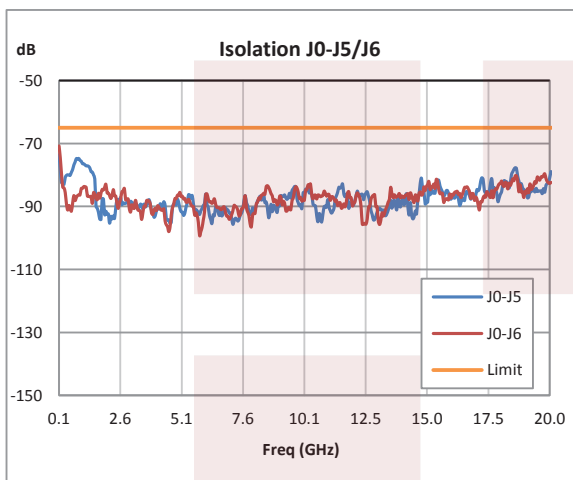
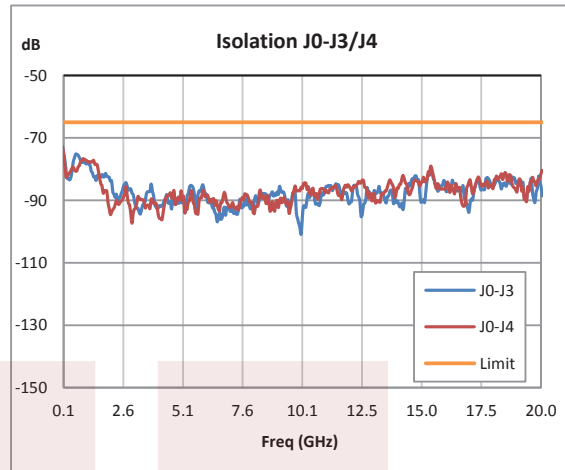
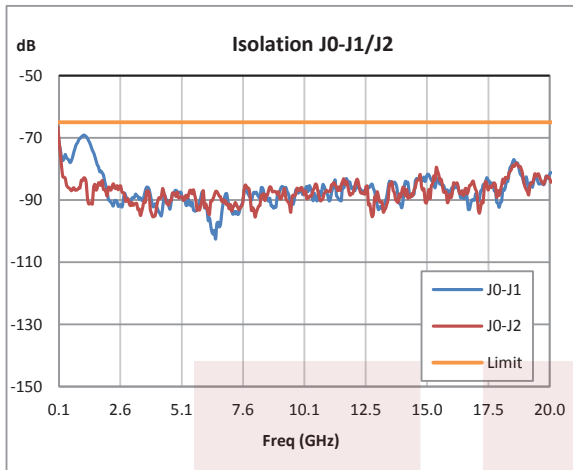
Notes:



**Typical Performance Data**





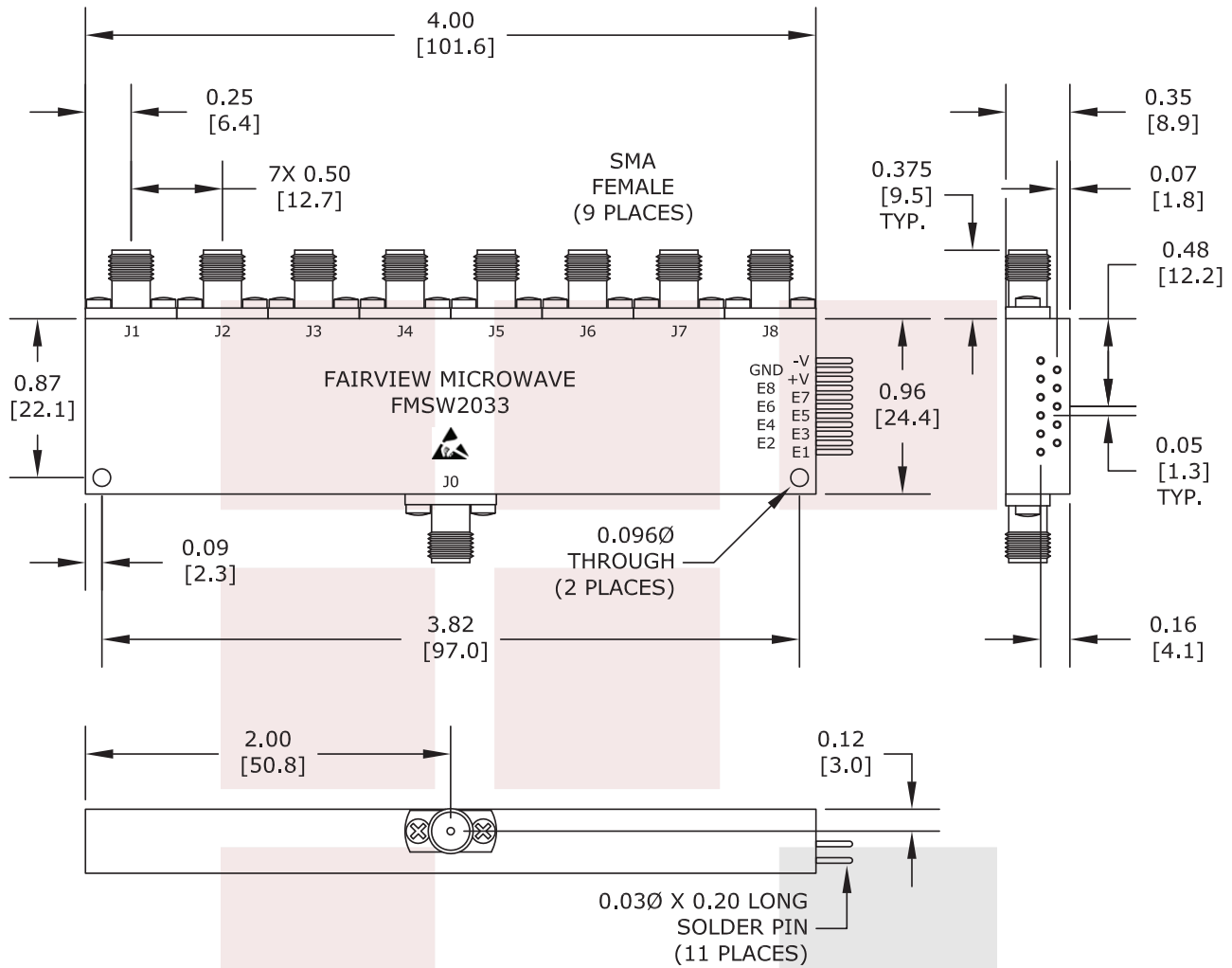


SMA SP8T PIN Diode Switch Absorptive From 100 MHz to 20 GHz Rated at +27 dBm from Fairview Microwave is in-stock and available to ship same-day. All of our RF/microwave products are available off-the-shelf from our ISO 9001:2008 certified facilities in Allen, Texas. Fairview Microwave is RF on-demand.

For additional information on this product, please click the following link: [SMA SP8T PIN Diode Switch Absorptive From 100 MHz to 20 GHz Rated at +27 dBm FMSW2033](https://www.fairviewmicrowave.com/sma-sp8t-pin-diode-switch-absorptive-20-ghz-27-dbm-fmsw2033-p.aspx)

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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.

E1	E2	E3	E4	E5	E6	E7	E8	Low Loss
0	1	1	1	1	1	1	1	J0-J1
1	0	1	1	1	1	1	1	J0-J2
1	1	0	1	1	1	1	1	J0-J3
1	1	1	0	1	1	1	1	J0-J4
1	1	1	1	0	1	1	1	J0-J5
1	1	1	1	1	0	1	1	J0-J6
1	1	1	1	1	1	0	1	J0-J7
1	1	1	1	1	1	1	0	J0-J8

NOTE: 1=Isolation  
0=Low Loss

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TITLE SMA SP8T PIN Diode Switch Absorptive From 100 MHz to 20 GHz Rated at +27 dBm	DWG NO FMSW2033	CAGE CODE 3FKR5	
CAD FILE 041816	SHEET	SCALE N/A	SIZE A 2233