

High Power Field Replaceable 2.92mm
SP8T PIN Diode Switch Absorptive From
500 MHz to 40 GHz Rated at +20 dBm



FMSW6218

Features

- SP8T Absorptive Switch
- 0.5 GHz to 40.0 GHz
- Insertion Loss 10 dB max
- Isolation 50 dB min
- Power Input 20 dBm CW max
- Switching Speed 50 nsec typ
- Field Replaceable Connectors

Applications

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

Description

FMSW6218 is a Single Pole Eight Throw (SP8T) 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 10 dB max insertion loss, 50 dB min isolation, and 50 nsec max switching speed. The design incorporates TTL compatible driver circuitry for accurate logic control. Operational temperature range is -54°C to +95°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 SMA connectors.

Electrical Specifications

Description	Min	Typ	Max	Units
Frequency Range	0.5		40	GHz
Impedance		50		Ohms
VSWR			3:1	
Insertion Loss			10	dB
Isolation	50			dB
Switching Time		50		ns
Input Power (CW)			0.1	dBm
Survival Power			1	Watt
Positive Operating Voltage		5		Vdc
Negative Operating Voltage		-5		Vdc
Current @ 5 Vdc		70		mA
Current @ -5Vdc		20		mA
Operating Temperature	-54		+95	deg C

Performance by Frequency

Description	F1	F2	F3	F4	F5	Units
Frequency Range	0.5 to 40					GHz

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Mechanical Specifications

Size

Length	4 in [101.6 mm]
Width	1.5 in [38.1 mm]
Height	0.4 in [10.16 mm]
Weight	0.266 lbs [120.66 g]
Finish	Blue Paint

Configuration

Design	Absorptive, SP8T
RF Input/Output Connector	2.92mm Female
RF Input/Output Connector Option	Field Replaceable
TTL Control Connector	Solder Pin

Environmental Specifications

Temperature

Operating Range	-54 to +95 deg C
Storage Range	-65 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
Altitude	MIL-STD-202F, METHOD 105C COND. B
Temperature Cycling	MIL-STD-202F, METHOD 107D COND. A
ESD Sensitivity	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:

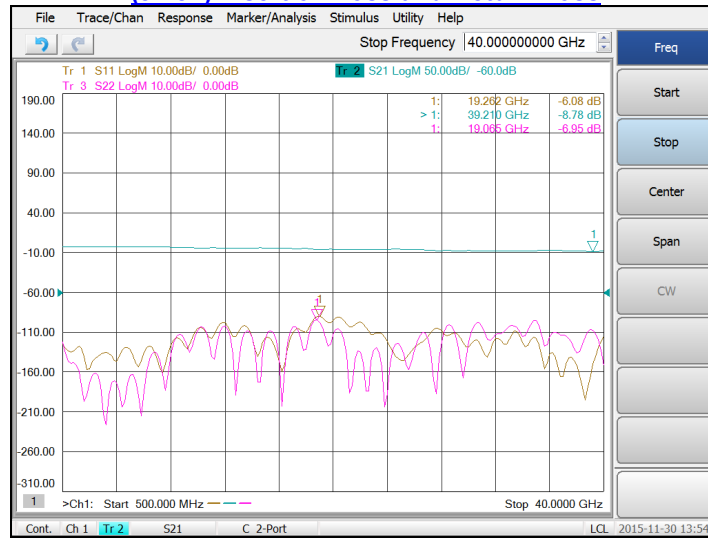
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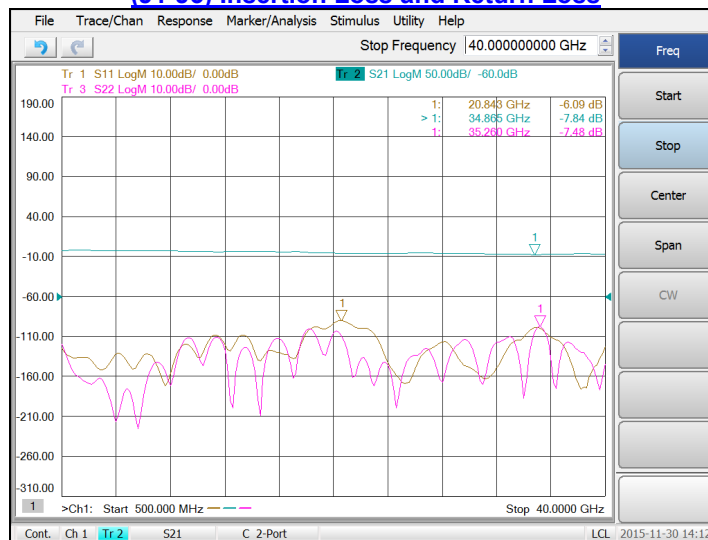
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Typical Performance Data

(J1-J2) Insertion Loss and Return Loss



(J1-J3) Insertion Loss and Return Loss

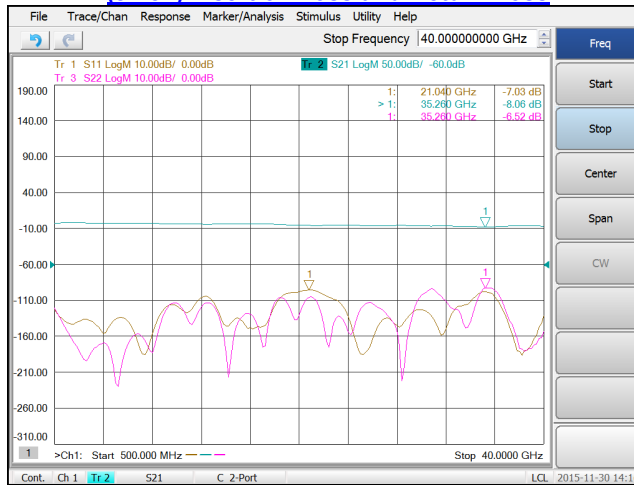


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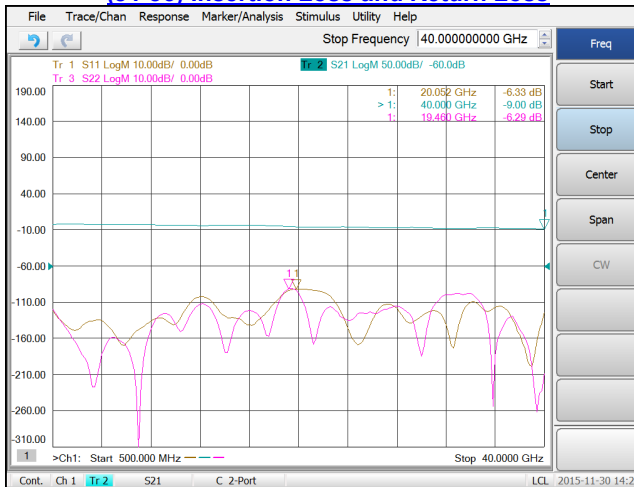


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(J1-J4) Insertion Loss and Return Loss



(J1-J5) Insertion Loss and Return Loss

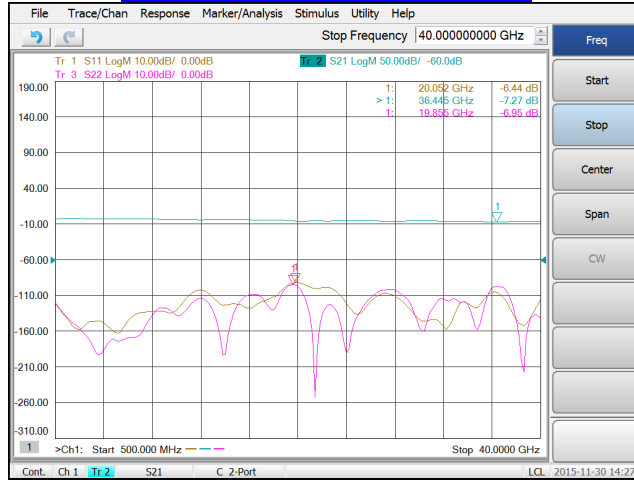


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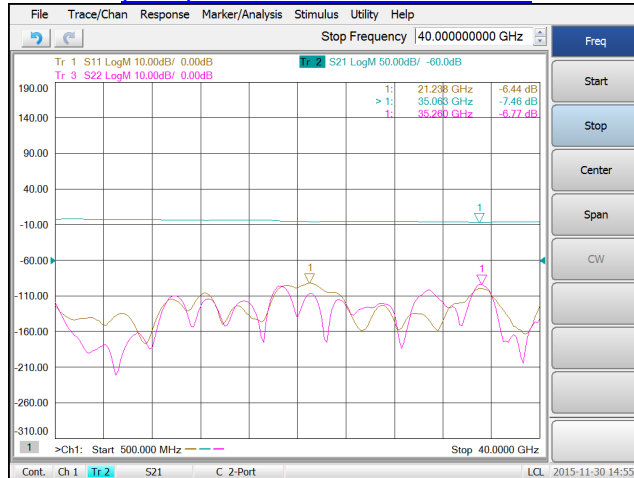


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(J1-J6) Insertion Loss and Return Loss



(J1-J7) Insertion Loss and Return Loss

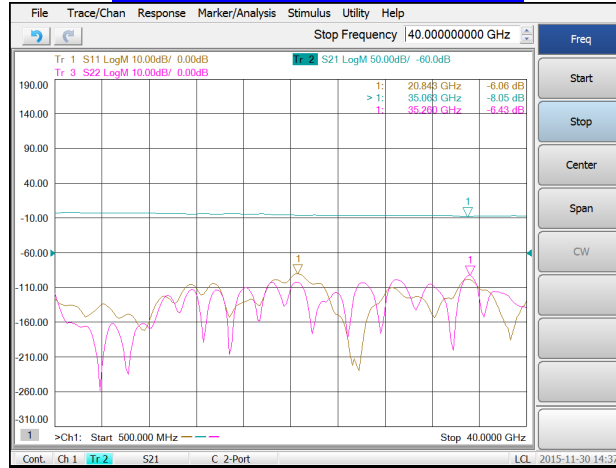


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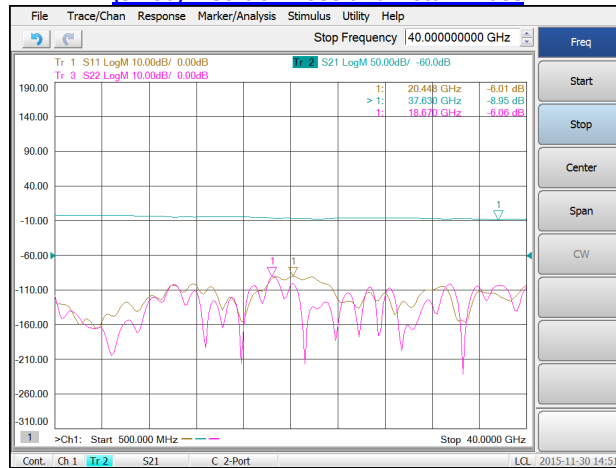


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(J1-J8) Insertion Loss and Return Loss



(J1-J9) Insertion Loss and Return Loss



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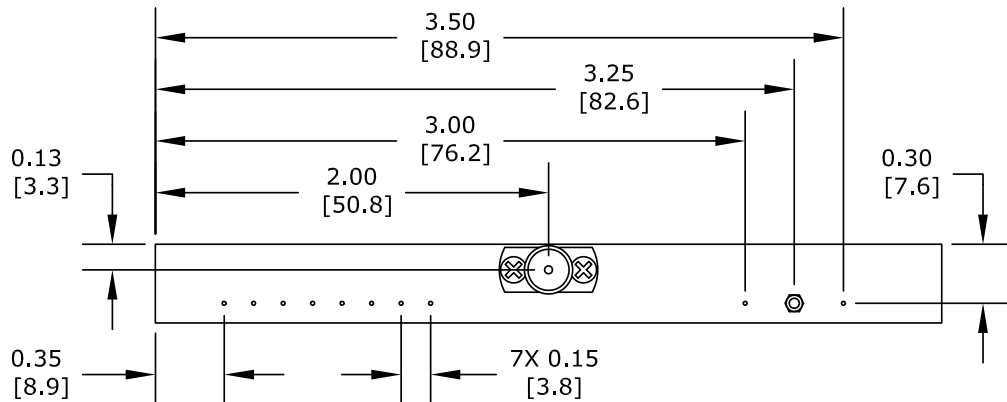
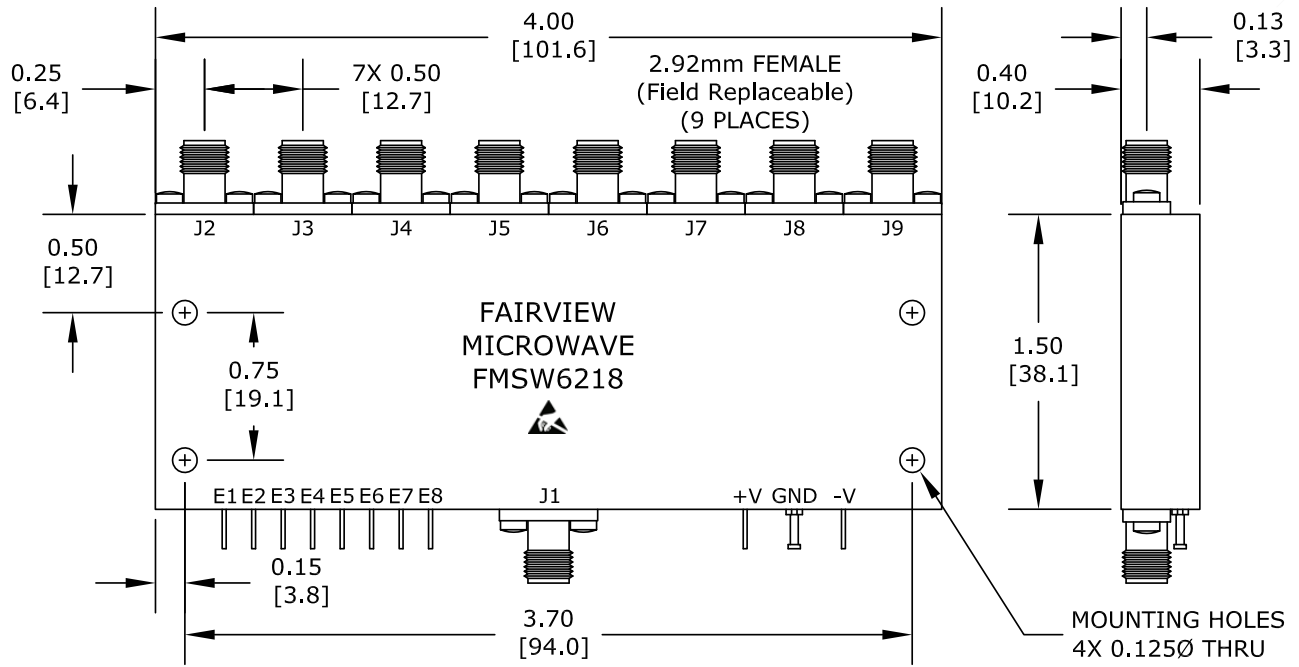
For additional information on this product, please click the following link: [High Power Field Replaceable 2.92mm SP8T PIN Diode Switch Absorptive From 500 MHz to 40 GHz Rated at +20 dBm FMSW6218](https://www.fairviewmicrowave.com/2.92mm-sp8t-pin-diode-switch-500-mhz-40-ghz-20-dbm-fmsw6218-p.aspx)

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FMSW6218 CAD Drawing

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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
1	0	0	0	0	0	0	0	J1-J2
0	1	0	0	0	0	0	0	J1-J3
0	0	1	0	0	0	0	0	J1-J4
0	0	0	1	0	0	0	0	J1-J5
0	0	0	0	1	0	0	0	J1-J6
0	0	0	0	0	1	0	0	J1-J7
0	0	0	0	0	0	1	0	J1-J8
0	0	0	0	0	0	0	1	J1-J9

NOTE: 0=Isolation
 1=Low Loss

FAIRVIEW MICROWAVE INC.		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].	
ALLEN, TX 75013 WWW.FAIRVIEWMICROWAVE.COM			
TITLE	DWG NO	CAGE CODE	
	FMSW6218	3FKR5	
	CAD FILE 033116	SHEET	SCALE N/A SIZE A 2233