

## Field Replaceable 2.92mm SPST PIN Diode Switch From 500 MHz to 40 GHz Rated at +20 dBm

FMSW6225 is a Single Pole Single Throw (SPST) Reflective PIN Diode Switch that operates from 0.5 to 40 GHz. Performance includes 5.0 dB typ insertion loss, 55 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 VDC and -5 VDC are required. The rugged package design is compact, features field replaceable female 2.92mm connectors, and is designed to meet MIL-STD 202F environmental test conditions which include humidity, shock, vibration, altitude, and temperature cycle.

### Electrical Specifications

TTL Control Logic

Off/Isolation: 1  
On/Low Loss: 0

Description	Min	Typ	Max	Units
Frequency Range	0.5		40	GHz
Impedance		50		Ohms
VSWR			2.5:1	
Insertion Loss		5		dB
Isolation	55			dB
Switching Time			100	ns
Input Power (CW)			0.1	Watts
Survival Power			1	Watts
Positive Operating Voltage		5		Vdc
Negative Operating Voltage		-5		Vdc
Operating Temperature	-40		+85	deg C

### Mechanical Specifications

Length	1 in [25.4 mm]
Width	1 in [25.4 mm]
Height	0.5 in [12.7 mm]
Weight	0.059 lbs [26.76 g]
Finish	Blue Paint

### Configuration

Design	Reflective, SPST
RF Connector	2.92mm 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
Shock	MIL-STD-202F, Method 213B, Condition B
Vibration	MIL-STD-202F, Method 204D, Condition B



### Features:

- SPST Reflective Switch
- 0.5 GHz to 40.0 GHz
- Insertion Loss 5.0 dB typ
- Isolation 55 dB min
- Power Input 20 dBm CW max
- Switching Speed 100 nsec max

### Applications:

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

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Altitude  
Temperature Cycling  
ESD Sensitivity

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.



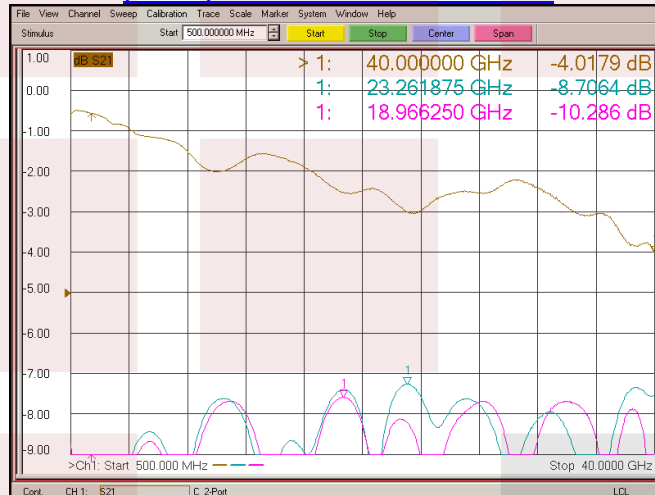
**Compliance Certifications** (visit [www.FairviewMicrowave.com](http://www.FairviewMicrowave.com) for current document)  
REACH Compliant 12/17/2015

## Plotted and Other Data

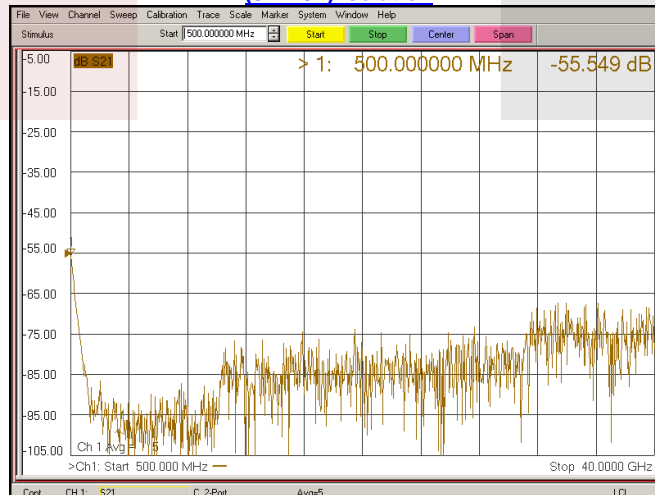
Notes:

## Typical Performance Data

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



**(J1 – J2) Isolation**



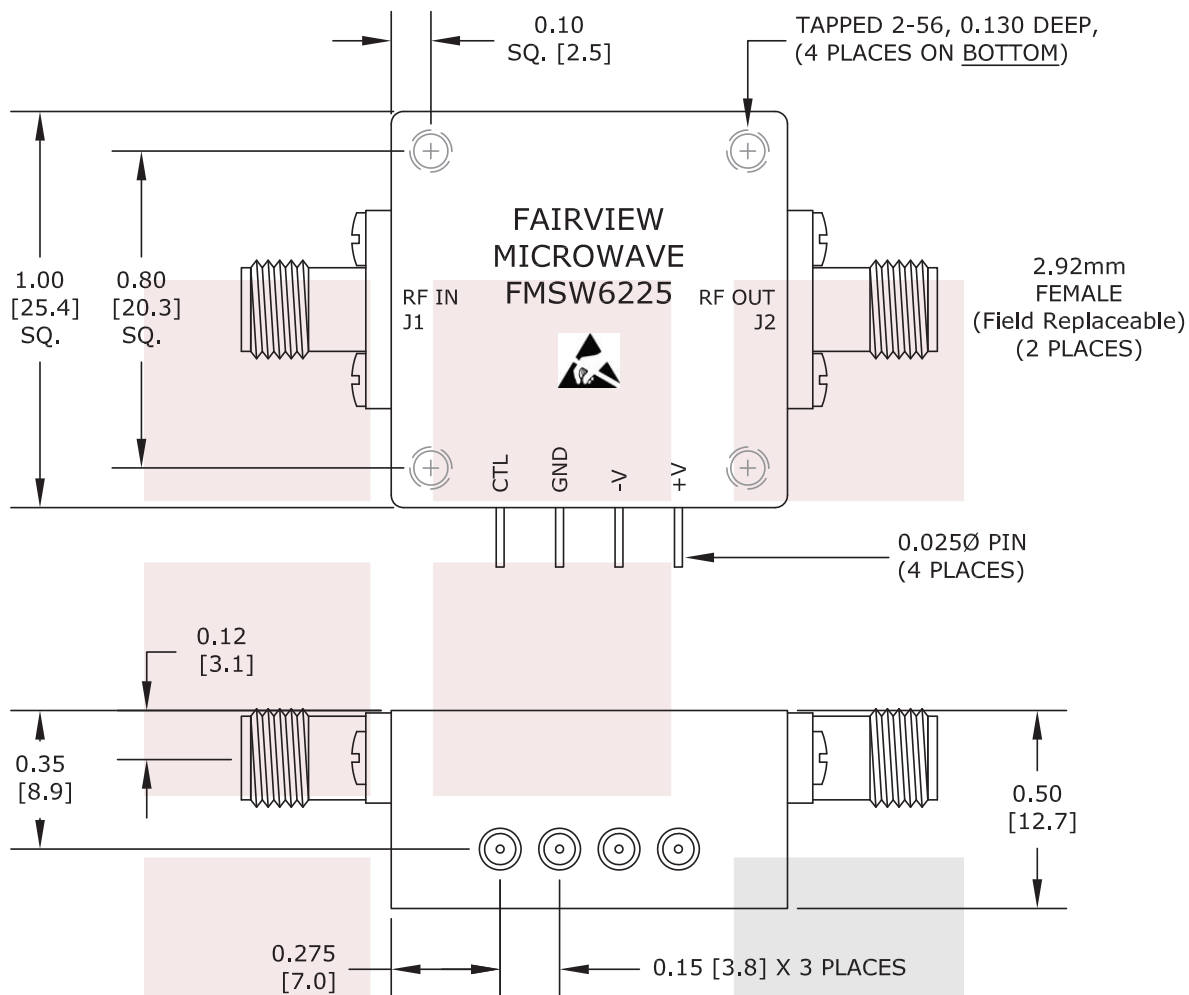
Field Replaceable 2.92mm SPST PIN Diode Switch From 500 MHz to 40 GHz Rated at +20 dBm from Fairview Microwave is in-stock and available to ship same-day. All of our RF/microwave products are available off-the-shelf from our ISO 9001:2008 certified facilities in Allen, Texas. Fairview Microwave is RF on-demand.

For additional information on this product, please click the following link: [Field Replaceable 2.92mm SPST PIN Diode Switch From 500 MHz to 40 GHz Rated at +20 dBm FMSW6225](#)

URL: <https://www.fairviewmicrowave.com/2.92mm-spst-pin-diode-switch-40-ghz-20-dbm-fmsw6225-p.aspx>

The information contained in this document is accurate to the best of our knowledge and representative of the part described herein. It may be necessary to make modifications to the part and/or the documentation of the part, in order to implement improvements. Fairview Microwave reserves the right to make such changes as required. Unless otherwise stated, all specifications are nominal. Fairview Microwave does not make any representation or warranty regarding the suitability of the part described herein for any particular purpose, and Fairview Microwave does not assume any liability arising out of the use of any part or documentation.





LOGIC TABLE	
CTL (TTL)	STATE
0 VDC LOW	ON
+5 VDC HIGH	OFF

ALL DIMENSIONS ARE IN INCHES.  
TOLERANCES:  
X.XX ±0.020  
X.XXX ±0.010

\* THESE DIMENSIONS AND TOLERANCES  
SUPERSEDE NOTE #1 ON TITLE BLOCK.

<b>FAIRVIEW MICROWAVE INC.</b> ALLEN, TX 75013 WWW.FAIRVIEWMICROWAVE.COM		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].			
TITLE Field Replaceable 2.92mm SPST PIN Diode Switch From 500 MHz to 40 GHz Rated at +20 dBm		DWG NO <b>FMSW6225</b>		CAGE CODE <b>3FKR5</b>	
CAD FILE	062316	SHEET	SCALE	N/A	SIZE A 2233