

## 1.85mm SPDT PIN Diode Switch Absorptive from 100 MHz to 67 GHz Rated at +27 dBm

The FMSW2050 is a Single Pole Double Throw (SPDT) Absorptive PIN Diode Switch that operates over a wide frequency band from 0.1 to 67 GHz. J1 and J2 ports are terminated in 50 ohms when switched in the isolation (off) state. Electrical performance includes max. insertion loss of 10.5 dB, min. return loss of 7 dB, min. isolation of 40 dB, and max. switching speed of 150 nsec. TTL-compatible driver circuitry is included for accurate logic control. The design requires dual voltage controls of +5 Vdc and -5 Vdc, with an operational temperature range of -30°C to +60°C. External connectors include solder terminals, 1.85mm female connectors and an SMA female connector.



### Electrical Specifications

Description	Min	Typ	Max	Units
Frequency Range	0.1		67	GHz
Impedance		50		Ohms
Insertion Loss			10.5	dB
Isolation	40			dB
Switching Time			100	ns
Input Power (CW)			0.5	Watts
Positive Operating Voltage		5		Vdc
Negative Operating Voltage		-5		Vdc
Current @ 5 Vdc		20		mA
Current @ -5 Vdc		20		mA
Operating Temperature	-30		+60	deg C

Electrical Specification Notes:  
 Specified switching time includes TTL driver delay.

### Mechanical Specifications

Length	1.2 in [30.48 mm]
Width	1 in [25.4 mm]
Height	0.5 in [12.7 mm]
Design	Absorptive, SPDT
RF Connector	1.85mm Female
Control Connector	SMA Female

### Environmental Specifications

#### Temperature

Operating Range	-30 to +60 deg C
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:

### Features:

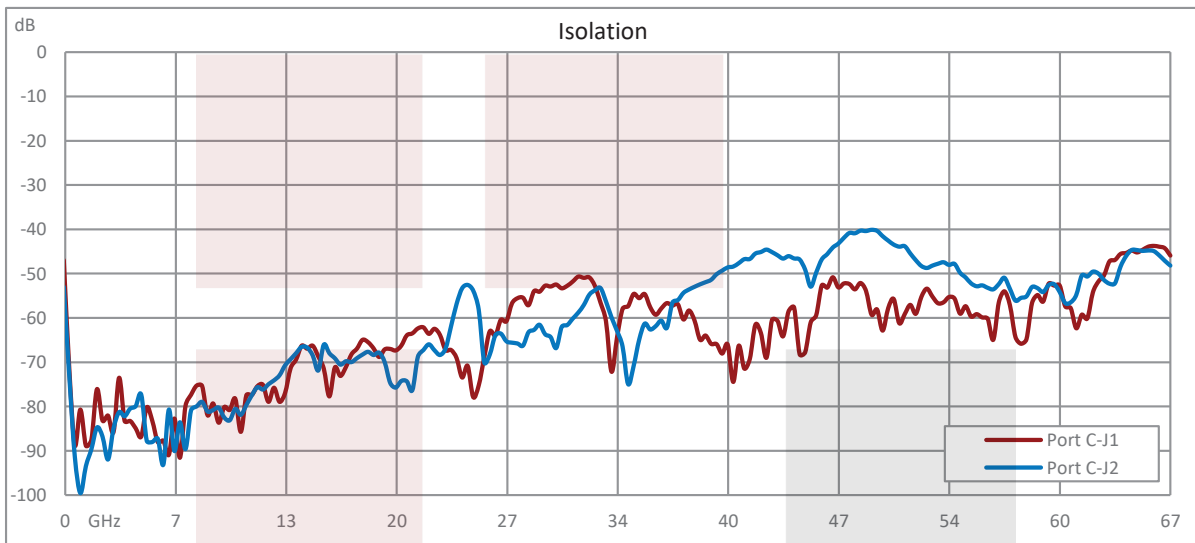
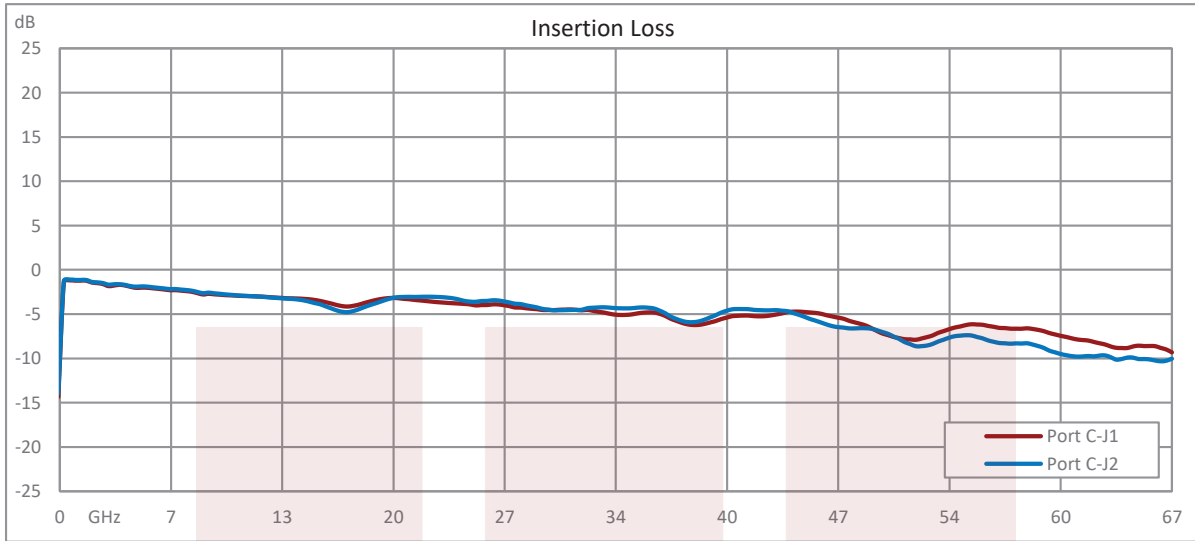
- SPDT Absorptive Switch
- 0.1 GHz to 67 GHz
- Insertion Loss 10.5 dB max
- Isolation 40 dB min
- Power Input +27 dBm CW max

### Applications:

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

Fairview Microwave  
 301 Leora Ln., Suite 100  
 Lewisville, TX 75056  
 Tel: 1-800-715-4396 / (972) 649-6678  
 Fax: (972) 649-6689  
[www.fairviewmicrowave.com](http://www.fairviewmicrowave.com)  
[sales@fairviewmicrowave.com](mailto:sales@fairviewmicrowave.com)

**Typical Performance Data**





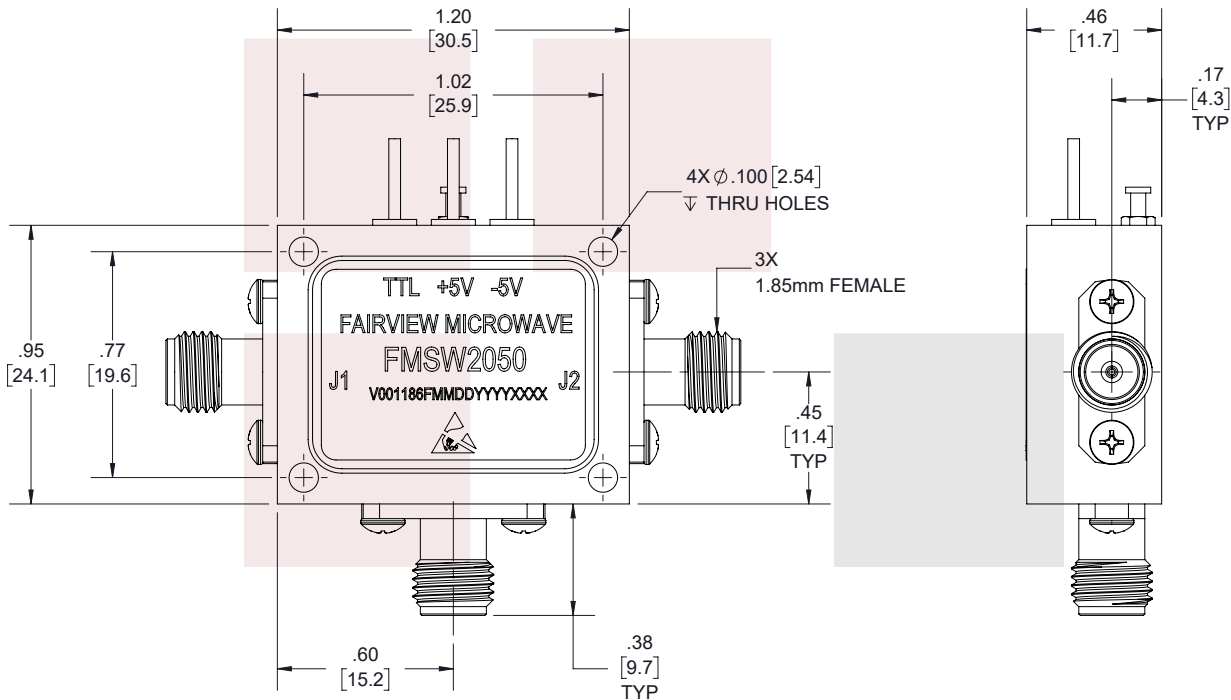
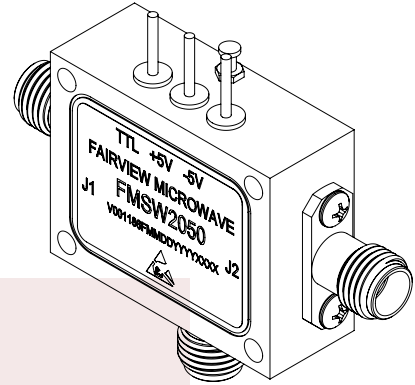
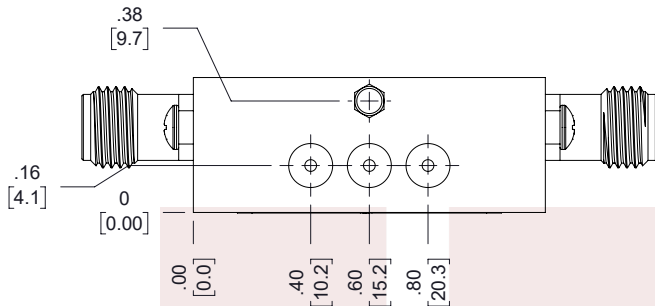
1.85mm SPDT PIN Diode Switch Absorptive from 100 MHz to 67 GHz Rated at +27 dBm from Fairview Microwave is in-stock and available to ship same-day. All of our RF/microwave products are available off-the-shelf from our ISO 9001:2008 certified facilities in Lewisville, Texas. Fairview Microwave is RF on-demand.

For additional information on this product, please click the following link: [1.85mm SPDT PIN Diode Switch Absorptive from 100 MHz to 67 GHz Rated at +27 dBm FMSW2050](https://www.fairviewmicrowave.com/1.85mm-spdt-pin-diode-switch-absorptive-67-ghz-27-dbm-fmsw2050-p.aspx)

URL: <https://www.fairviewmicrowave.com/1.85mm-spdt-pin-diode-switch-absorptive-67-ghz-27-dbm-fmsw2050-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.

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
A	INITIAL RELEASE	11/04/19	T.GALLA



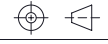
THESE COMMODITIES, TECHNOLOGY OR SOFTWARE WERE EXPORTED FROM THE UNITED STATES IN ACCORDANCE WITH THE EXPORT ADMINISTRATION REGULATIONS. DIVERSION CONTRARY TO U.S. LAW PROHIBITED.

TITLE  
1.85mm SPDT PIN Diode Switch Absorptive from 100 MHz to 67 GHz Rated at +27 dBm

UNLESS OTHERWISE SPECIFIED LEADING DIMENSIONS ARE INCHES  
DIMENSIONS IN [ ] ARE MILLIMETERS

TOLERANCES:		CABLE LENGTH (L) TOLERANCES:	
.X = ±.2 [5.08]	FRACTIONS ± 1/32	L ≤ 12 [305] = +1 [25] / -0	
.XX = ±.02 [.51]	ANGLES ± 1°	12 [305] < L ≤ 60 [1524] = +2 [51] / -0	
.XXX = ±.005 [.13]		60 [1524] < L ≤ 120 [3048] = +4 [102] / -0	
		120 [3048] < L ≤ 300 [7620] = +6 [152] / -0	
		300 [7620] < L = +5%L / -0	

THIRD-ANGLE PROJECTION



THE INFORMATION AND DESIGN IN THIS DOCUMENT IS THE PROPERTY OF FAIRVIEW MICROWAVE CORPORATION. ALL RIGHTS RESERVED.

SHEET 1 OF 1

ALL DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.

SCALE N/A

SIZE A	CAGE CODE 3FKR5	DRAWN BY KDANG	PART NUMBER FMSW2050	REV A
--------	-----------------	----------------	----------------------	-------

T-Rev.D