

**WR-12 Waveguide PIN Diode SPDT Switch**  
**60 GHz to 90 GHz Frequency Range E**  
**Band Using a UG-387/U Flange**

FMSW9002 is a Single Pole Double Throw (SPDT) Reflective PIN Diode Switch designed to operate over the 60 GHz to 90 GHz Frequency Range. Electrical performance includes 4.5 dB typ insertion loss, 20 dB min isolation, and 300 nsec max switching speed. The design incorporates TTL-compatible driver circuitry for accurate logic control and dual voltage controls of +5 Vdc and -5 Vdc are required. The package interface uses solder terminals and SMA Female control connector and WR-12 Round Cover UG-387/U Flange.

**Electrical Specifications**

Design

SPDT, Reflective

**RF Characteristics** (TA = +25°C, Vdc1=5V/20mA, Vdc2=-5V/20mA)

Description	Min	Typ	Max	Units
Frequency Range	60		90	GHz
Insertion Loss		4.5	6	dB
Isolation	20			dB
Switching Time			300	ns
Voltage Supply 1		5		V
Voltage Supply 2		-5		V
Current @5 V		20		mA
Current @-5 V		20		mA

**Mechanical Specifications**

**Size**

Length	2.83 in [71.88 mm]
Width	1.2 in [30.48 mm]
Height	0.75 in [19.05 mm]
Weight	0.2044 lbs [92.71 g]

**Configuration**

Control Connector	SMA Female
Waveguide Size	WR-12
Flange Type	UG-387/U

**Environmental Specifications**

**Compliance Certifications** (visit [www.FairviewMicrowave.com](http://www.FairviewMicrowave.com) for current document)

REACH Compliant 12/17/2015

**Plotted and Other Data**

Notes:



**Features:**

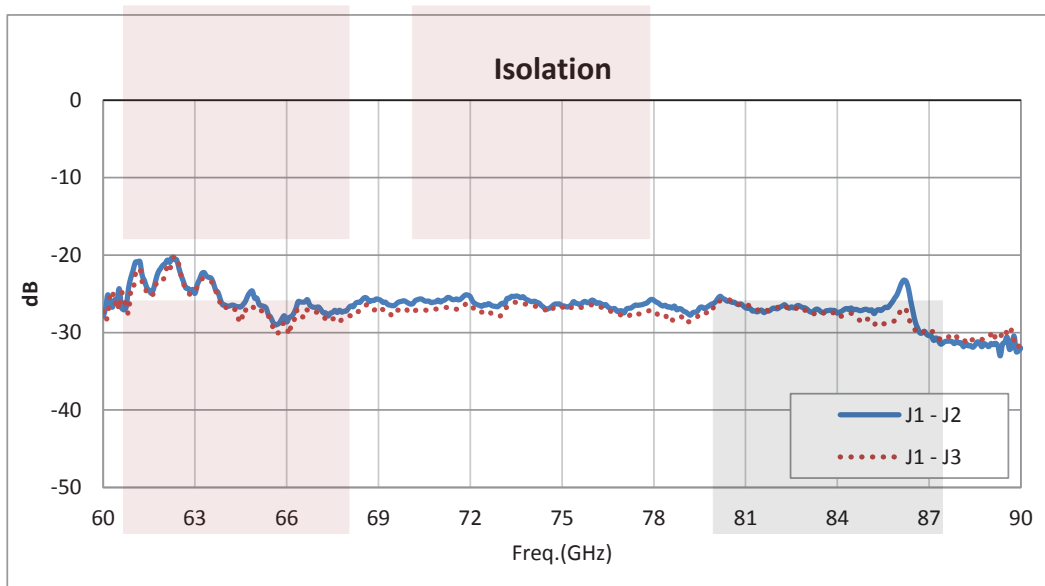
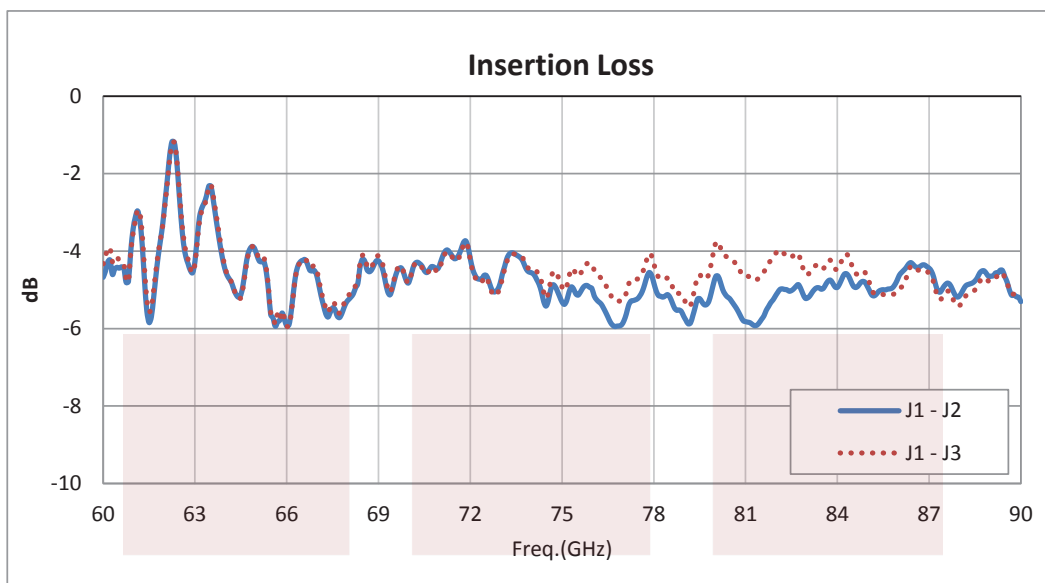
- SPDT Reflective Switch
- 60 GHz to 90 GHz
- E Band
- Insertion Loss 4.5 dB typ
- Isolation 20 dB min

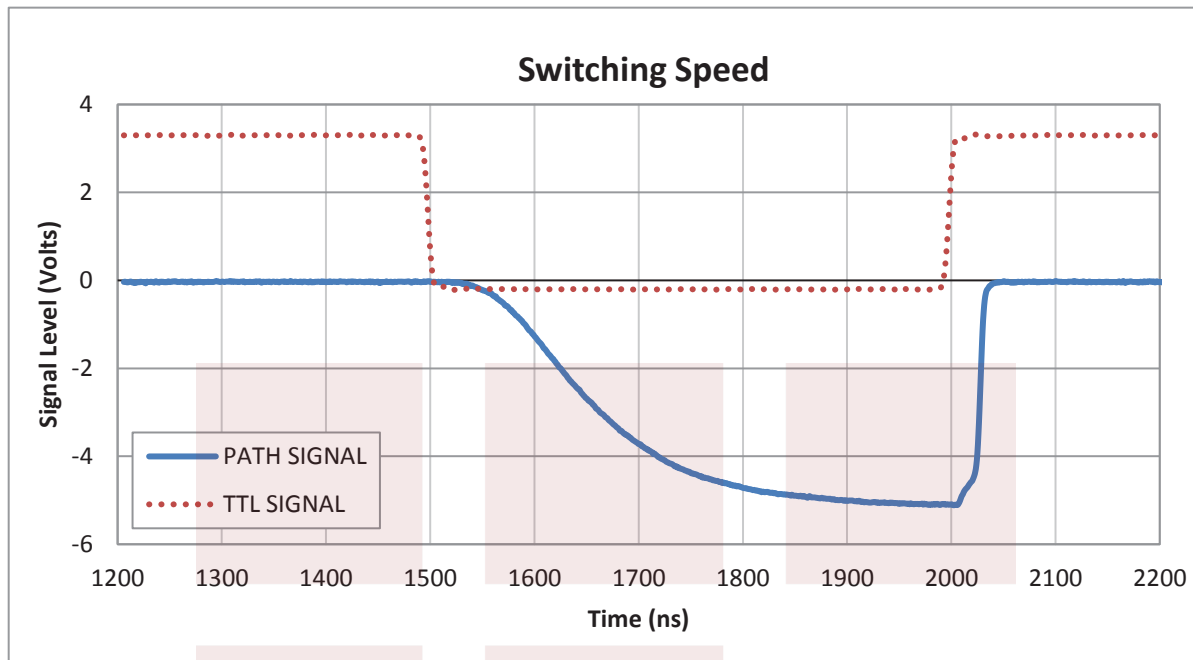
**Applications:**

- Test & Measurement
- Military Communication
- Commercial Communication
- Military Electronic Systems
- RF Test Stations

Fairview Microwave  
1130 Junction Dr. #100  
Allen, TX 75013  
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**



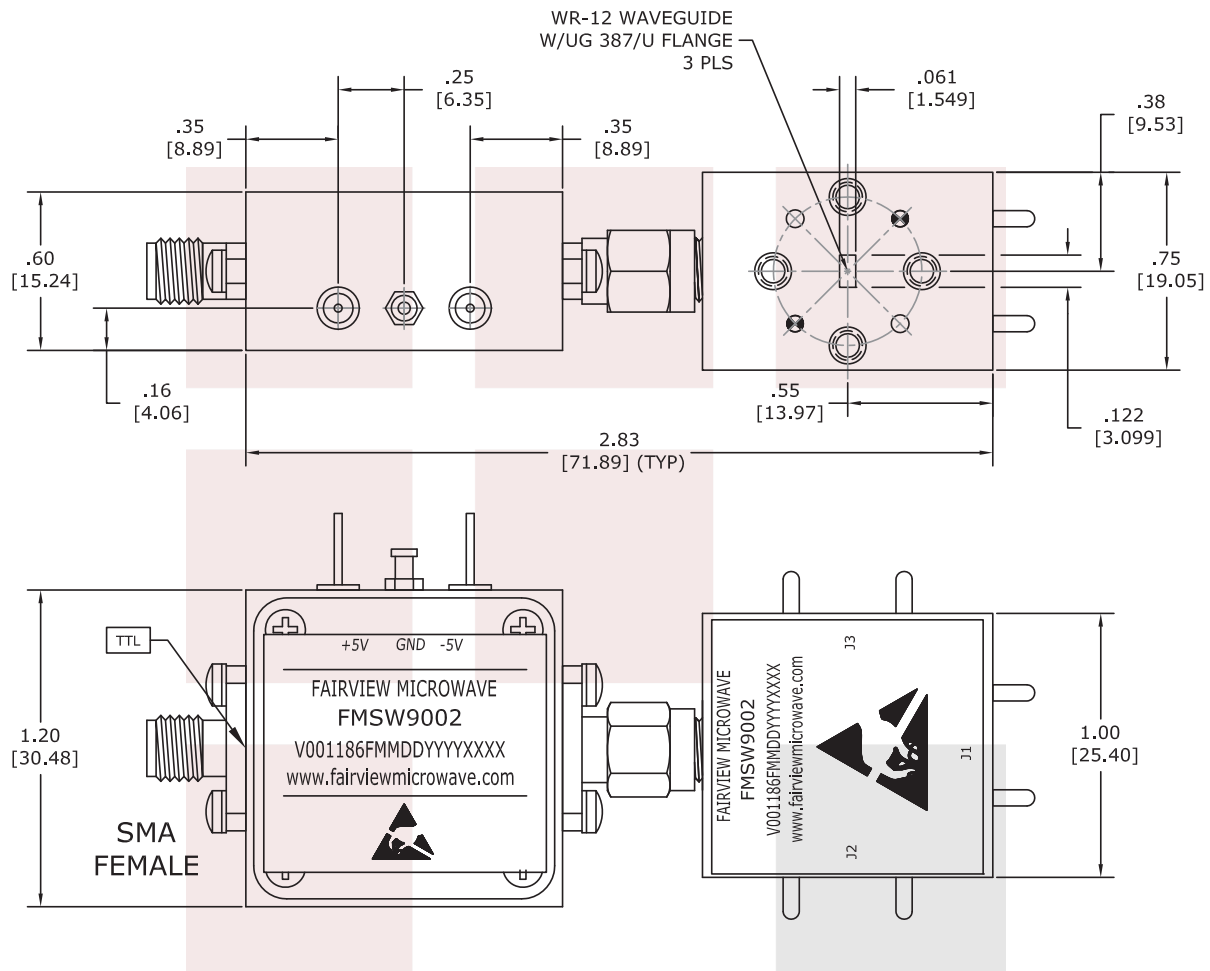


WR-12 Waveguide PIN Diode SPDT Switch 60 GHz to 90 GHz Frequency Range E Band Using a UG-387/U Flange from Fairview Microwave is in-stock and available to ship same-day. All of our RF/microwave products are available off-the-shelf from our ISO 9001:2008 certified facilities in Allen, Texas. Fairview Microwave is RF on-demand.

For additional information on this product, please click the following link: [WR-12 Waveguide PIN Diode SPDT Switch 60 GHz to 90 GHz Frequency Range E Band Using a UG-387/U Flange FMSW9002](https://www.fairviewmicrowave.com/wr-12-waveguide-pin-diode-spdt-switch-90-ghz-e-band-fmsw9002-p.aspx)

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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.



UNLESS OTHERWISE SPECIFIED:  
DIMENSIONS ARE IN: inches [mm]  
TOLERANCES ARE:  
DECIMALS ANGLES FRACTIONS  
.XX ±.01 ±1/2° ± 1/64  
[±.25] [± 127/320]  
.XXX ±.005  
[±.127]

\* 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 WR-12 Waveguide PIN Diode SPDT Switch 60 GHz to 90 GHz Frequency Range E Band Using a UG-387/U Flange		DWG NO FMSW9002		CAGE CODE 3FKR5	
CAD FILE	042516	SHEET	SCALE	N/A	SIZE A 2233