

## SP4T Latching Electro-Mechanical Relay Switch From DC to 22 GHz, 20 Watts with Indicators, TTL, Self Cut Off, Diodes, SMA

The FMSW6307 is an SP4T Terminated Electromechanical Relay Switch that operates over a wide frequency band from DC to 22 GHz and has a rating of 20 Watts input power (CW). Rated for 1M life cycles for high reliability operation, this design uses a Latching Actuator with a break before make configuration, self cut off circuitry, internal terminations, TTL logic driver, position indicators and suppression diodes. The switch exhibits exceptional electrical performance specified from 0.3 dB max for insertion loss and 75 dB min for isolation, and guaranteed over -25°C to +65°C. The assembly requires an operating voltage of +12Vdc and is certified as RoHS compliant. External connectors include solder terminals and SMA female connectors.

### Electrical Specifications

Switch Type	SP4T, Absorptive
Actuator Type	Latching
Switching Sequence	Break Before Make
Actuator Options	Indicators, TTL Logic, Self Cut Off, Diodes

Description	Min	Typ	Max	Units
Frequency Range	DC		22	GHz
Impedance		50		Ohms
Operating Voltage		12		Volts
Actuating Current @ 12 Volts		300		mA
VSWR			1.6:1	
Insertion Loss			0.6	dB
Isolation	60			dB
Input Power (CW) (at 22 GHz)			20	Watts

### Performance by Frequency

Description	F1	F2	F3	F4	F5	Units
Frequency Range	DC - 4	4 - 8	8 - 12	12 - 18	18 - 22	GHz
VSWR, Max	1.2:1	1.3:1	1.4:1	1.5:1	1.6:1	
Insertion Loss, Max	0.3	0.35	0.4	0.5	0.6	dB
Isolation, Min	75	70	65	60	60	dB

### Mechanical Specifications

<b>Size</b>	
Length	2.13 in [54.1 mm]
Width/Diameter	2.13 in [54.1 mm]
Height	2.58 in [65.53 mm]
Weight	0.625 lbs [283.5 g]
Body Material and Plating	Aluminum
Package Type	Connectorized Module
Operating Life	1,000,000 Cycles
Switching Time	20 ms Max



### Features:

- Single Pole Four Throw Terminated Relay Switch
- DC to 22 GHz Frequency Range
- 1M Cycle Operating Life Min
- Latching Actuator
- Self Cut Off, TTL Logic Driver, Position Indicators, Suppression Diodes
- Insertion Loss 0.6 dB max
- Isolation 60 dB min
- 20 Watts Avg Power Max
- Switching Sequence Break Before Make

### Applications:

- Test & Measurement
- Communications System
- Instrumentation

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**Connectors**

RF Connector Type	SMA Female
RF Connector Contact Material & Plating	Beryllium Copper, Gold
RF Connector Body Material & Plating	Passivated Stainless Steel
Control Connector	Solder Pins

**Environmental Specifications**

**Temperature**

Operating Range	-25 to +65 deg C
ESD Sensitivity	ESD Sensitive Material. Transport material in Approved ESD bags. Handle in approved ESD Workstation.



Environmental Specification Notes:  
 Designed to meet MIL-DTL-3928

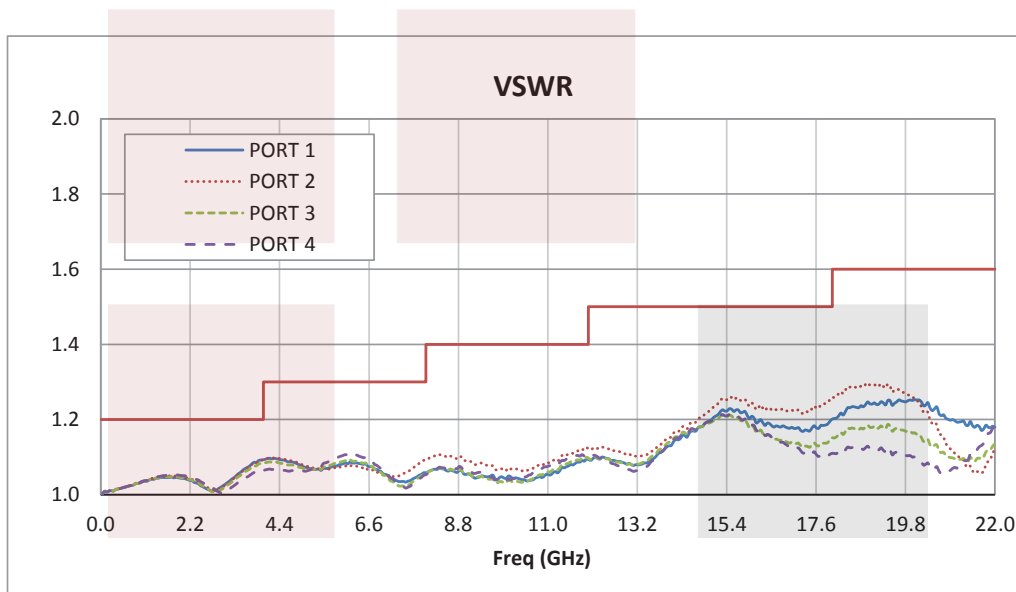
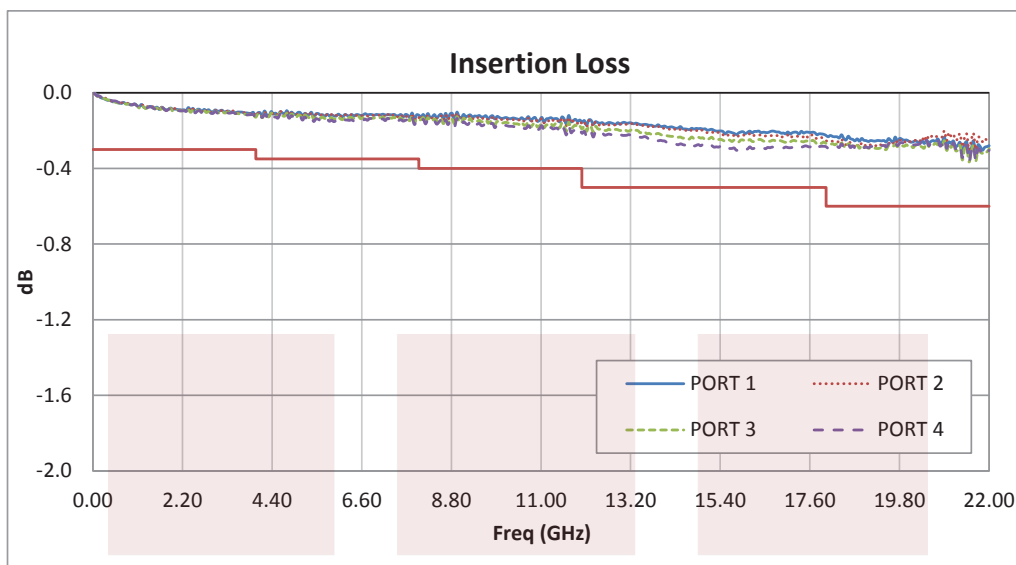
**Compliance Certifications** (visit [www.FairviewMicrowave.com](http://www.FairviewMicrowave.com) for current document)

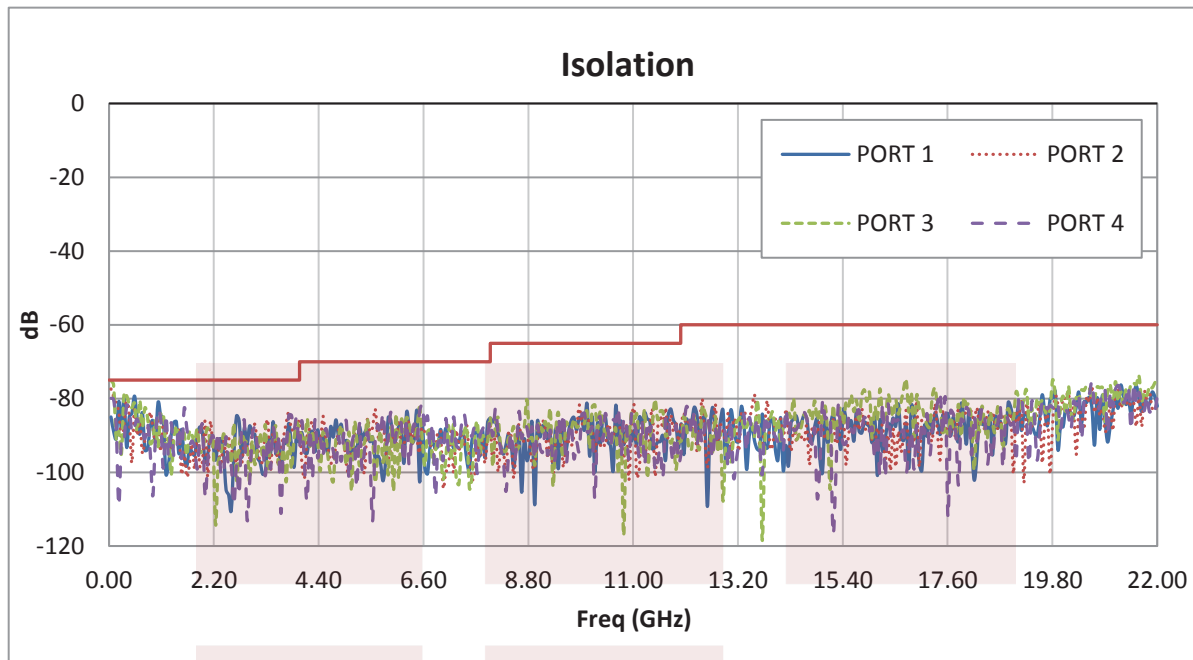
RoHS Compliant

**Plotted and Other Data**

Notes:

**Typical Performance Data**



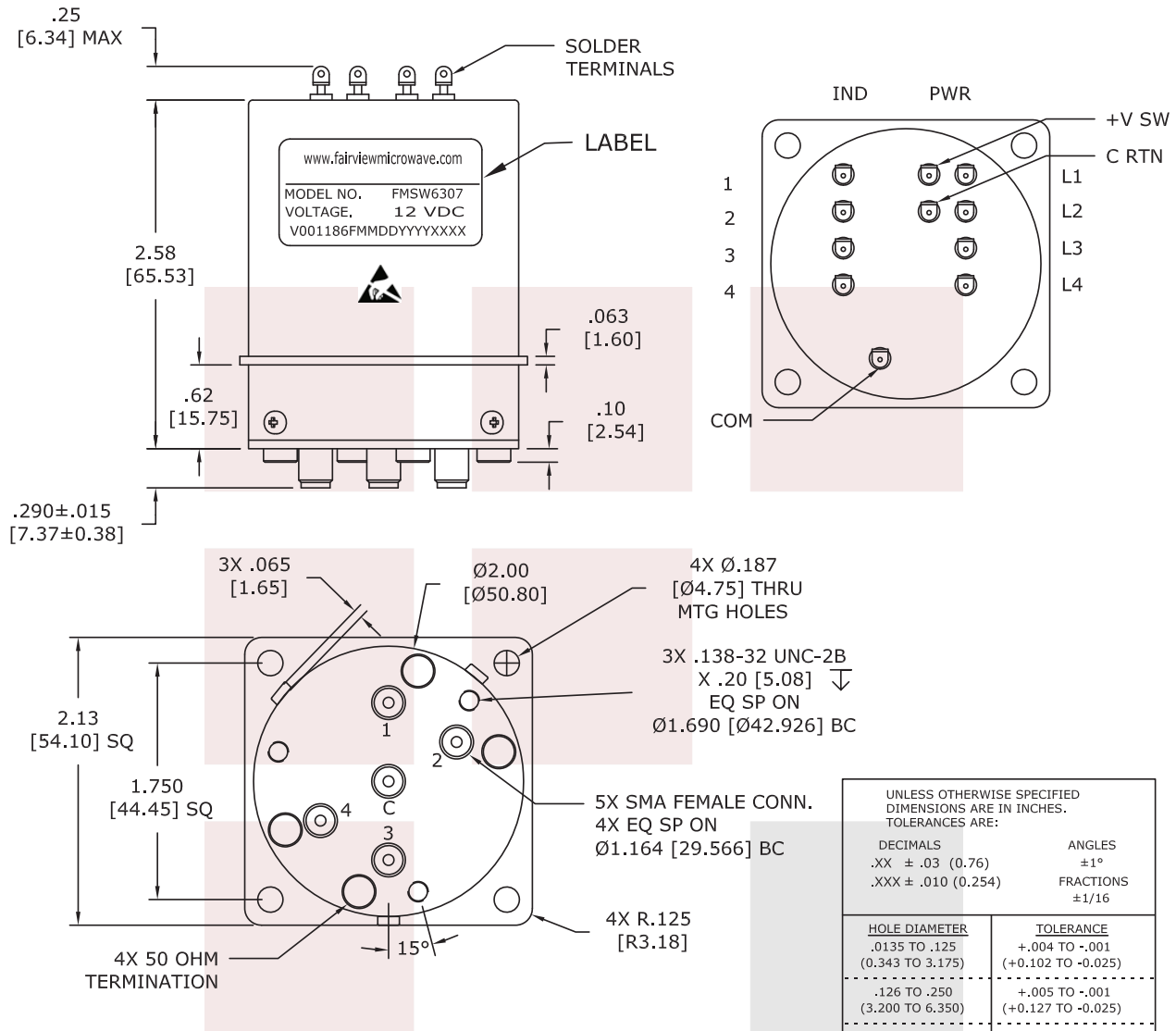


SP4T Latching Electro-Mechanical Relay Switch From DC to 22 GHz, 20 Watts with Indicators, TTL, Self Cut Off, Diodes, SMA from Fairview Microwave is in-stock and available to ship same-day. All of our RF/microwave products are available off-the-shelf from our ISO 9001:2008 certified facilities in Allen, Texas. Fairview Microwave is RF on-demand.

For additional information on this product, please click the following link: [SP4T Latching Electro-Mechanical Relay Switch From DC to 22 GHz, 20 Watts with Indicators, TTL, Self Cut Off, Diodes, SMA FMSW6307](http://www.fairviewmicrowave.com/sp4t-latching-electro-mechanical-relay-switch-indicators-ttl-self-cut-off-fm-sw6307-p.aspx)

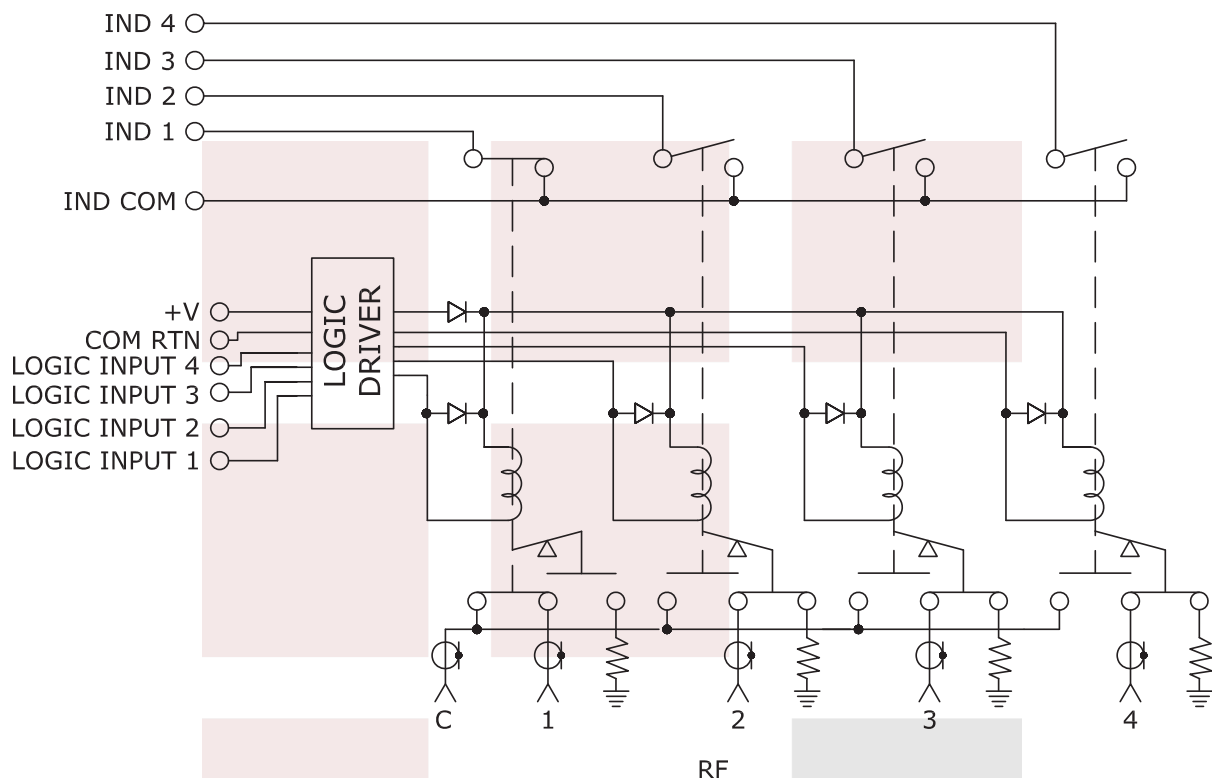
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\* THESE DIMENSIONS AND TOLERANCES SUPERSEDE NOTE #1 ON TITLE BLOCK.

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CAD FILE 090815		SHEET		SCALE N/A		SIZE A		2233	



SCHEMATIC LATCHING SELF CUT-OFF SHOWN IN POSITION 1

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