

SPDT Electromechanical Relay Failsafe Switch, DC to 18 GHz, up to 90W, 12V, SMA

The FMSW6347 is a Single Pole Double Throw (SPDT) electromechanical relay switch that operates across a wide frequency range of DC to 18 GHz and can handle up to 90 Watts of CW input power in a break before make condition. The design features a Failsafe actuator and is rated for 2M life cycles for high reliability operation. Impressive performance includes insertion loss less than 0.15 dB typical and isolation greater than 85 dB typical. This switch requires a +12V bias voltage, and operates over a temperature range of -25°C to +70°C. The rugged and compact package assembly supports SMA Female connectors and a DB-9 Connector for DC Control. And for highly reliable operation, the model is guaranteed to meet MIL-STD-202 environmental test conditions for shock and random vibration.

Electrical Specifications

Switch Type	SPDT
Actuator Type	Failsafe
Switching Sequence	Break before Make

Description	Min	Typ	Max	Units
Frequency Range	DC		18	GHz
Impedance		50		Ohms
Operating Voltage	11	12	13	Volts
Actuating Set Current @ 12 Volts		200		mA
VSWR		1.2:1	1.4:1	
Insertion Loss		0.15	0.35	dB
Isolation	65	85		dB
Input Power (CW)			60	Watts
Switching Time			20	ms

Performance by Frequency

Description	F1	F2	F3	F4	F5	Units
Frequency Range	DC to 6	6 to 12	12 to 18			GHz
VSWR, Max	1.2:1	1.3:1	1.4:1			
Insertion Loss, Max	0.15	0.25	0.35			dB
Isolation, Min	85	75	65			dB
Power In, Typ (CW)	90	75	60			Watts

Mechanical Specifications

Size

Package Type	Connectorized
Operating Life	2,000,000 Cycles

Connectors

RF Connector Type	SMA Female
Control Connector	DB-9



Features:

- Single Pole Double Throw
- DC to 18 GHz Frequency Range
- Isolation greater than 85 dB typical
- 2M Cycle Min Operating Life
- +12 Volt DC
- 90 Watt average Power
- Failsafe Actuator
- -25 to +70°C Operating Temperature
- Insertion Loss as low as 0.15 dB Max
- VSWR as low as 1.2:1 max
- SMA Female RF connectors
- DB-9 Connector for DC Control
- Hot Switching Capability upon request
- S-Parameter Data available upon request

Applications:

- High Performance Relay Switch
- Military Communications
- Communications Systems
- Test & Measurement

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Environmental Specifications

Temperature

Operating Range -25 to +70 deg C
Storage Range -55 to +100 deg C

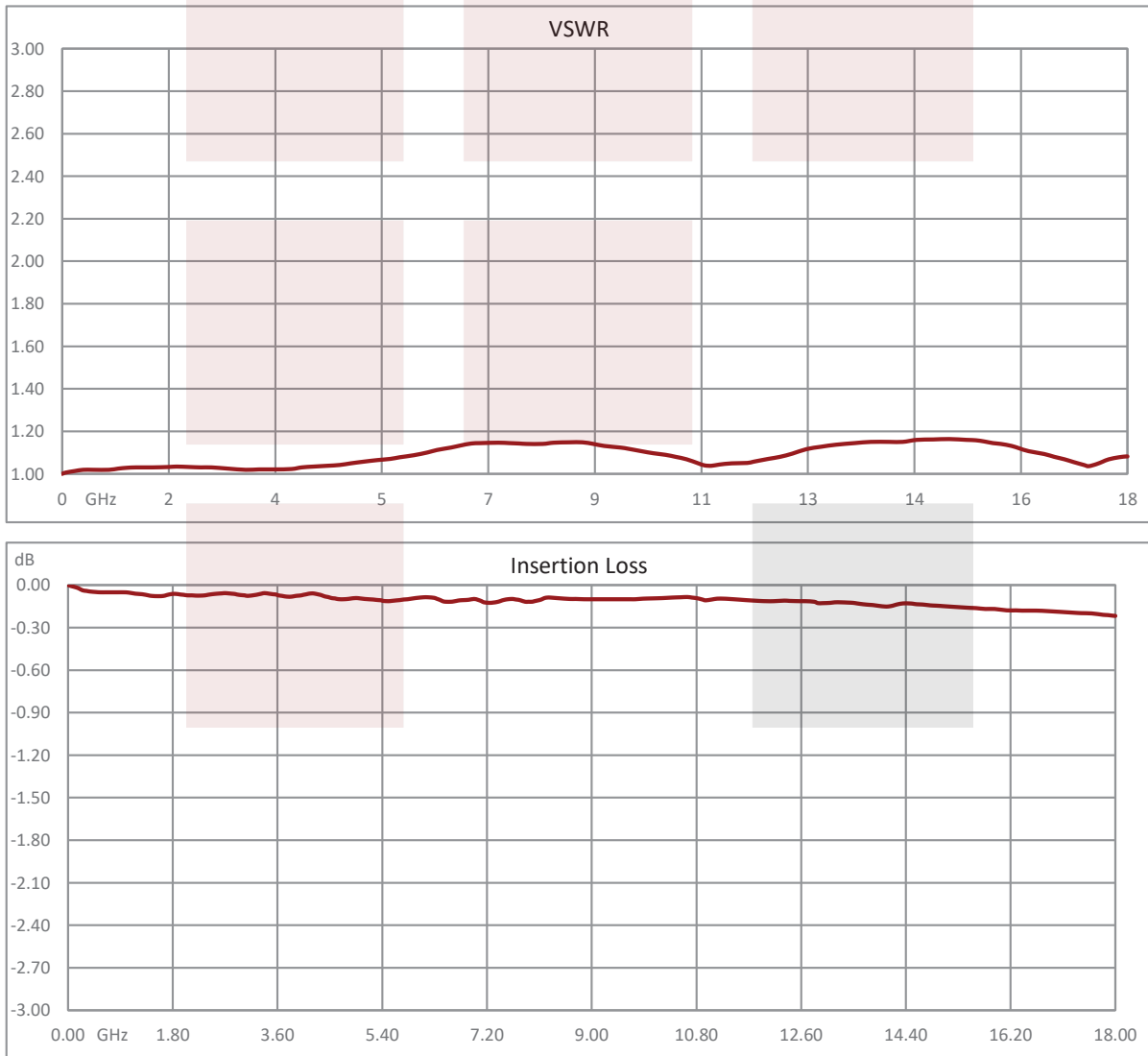
Shock MIL-STD-202 Method 213, Cond. D 500G Non Operating
Vibration MIL-STD-202 Method 214, Cond. D 10G RMS Non Operating

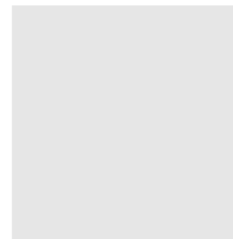
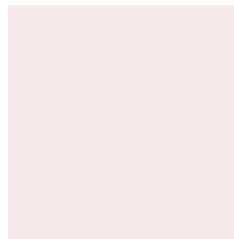
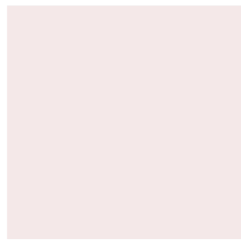
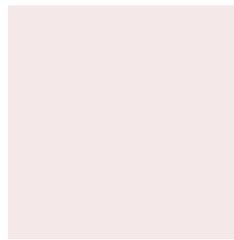
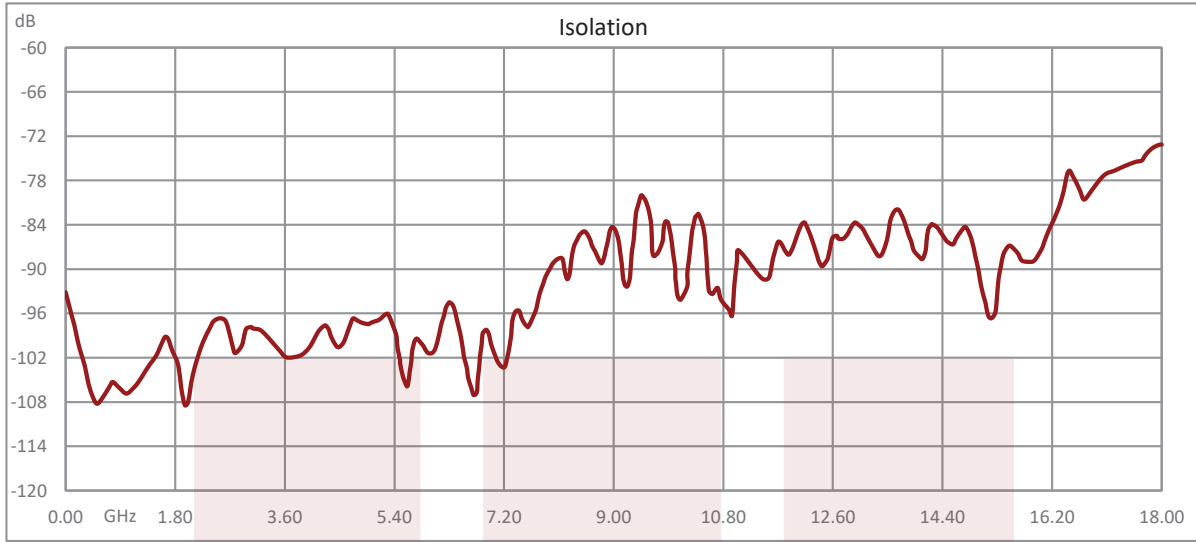
Compliance Certifications (see [product page](#) for current document)

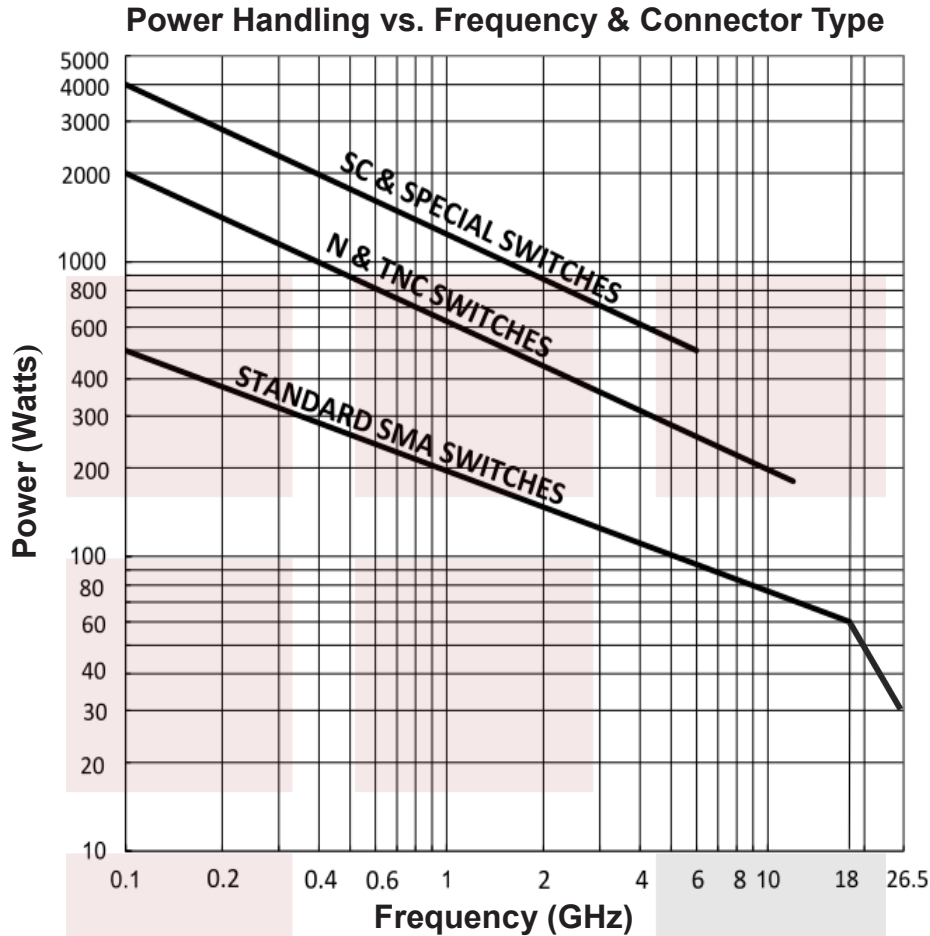
Plotted and Other Data

Notes:

Typical Performance Data







Environmental and Test Conditions:

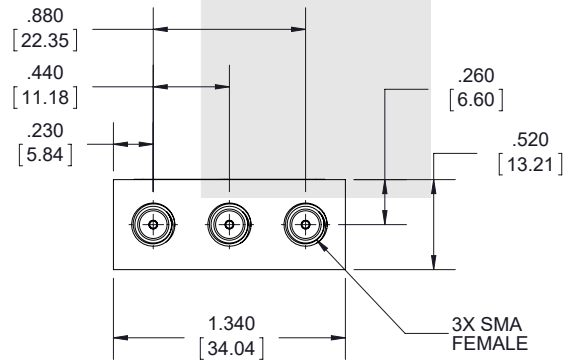
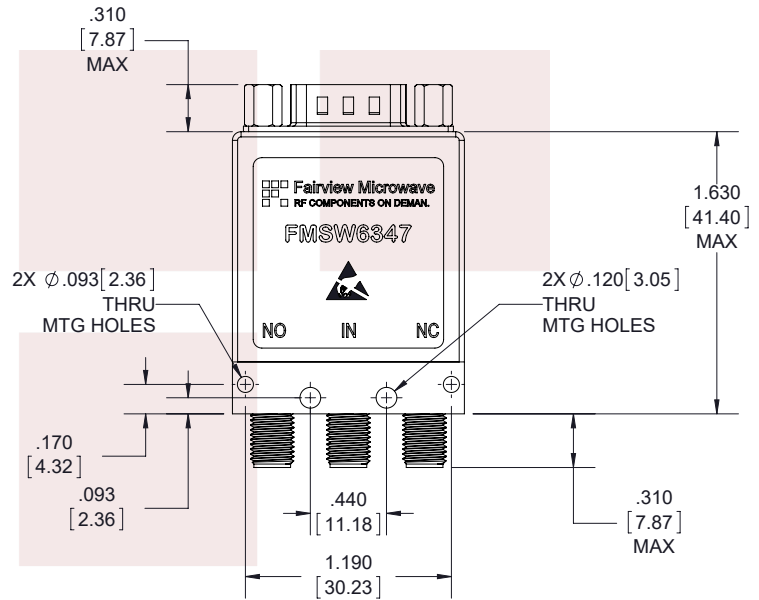
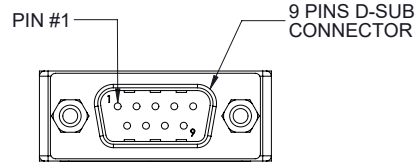
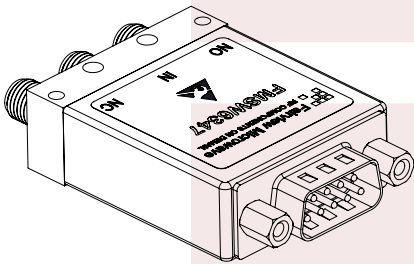
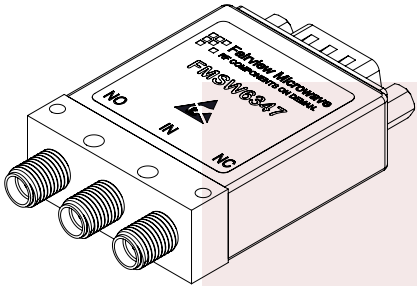
- Ambient temperature of 25°C or less
- Altitude: Sea Level
- Load VSWR: 1.20:1 max.
- Cold Switching

SPDT Electromechanical Relay Failsafe Switch, DC to 18 GHz, up to 90W, 12V, 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: [SPDT Electromechanical Relay Failsafe Switch, DC to 18 GHz, up to 90W, 12V, SMA FMSW6347](#)

URL: <https://www.pasternack.com/spdt-electromechanical-relay-failsafe-switch-18-ghz-60w-12v-sma-fmsw6347-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.



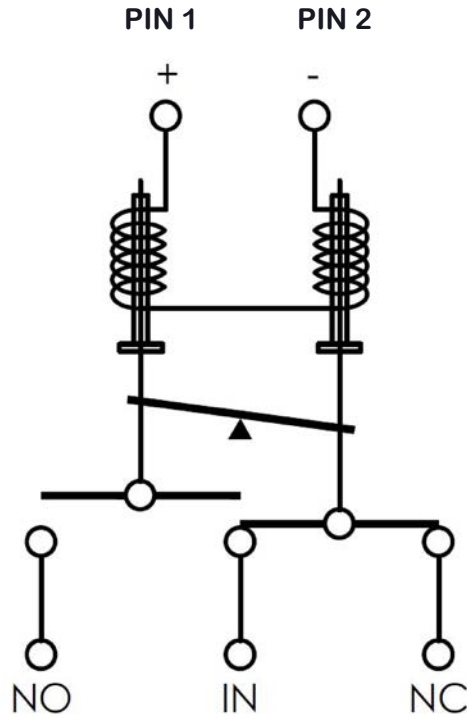
STANDARD TOLERANCES

- .X ±0.2
- .XX ±0.01
- .XXX ±0.005

*STANDARD TOLERANCES APPLY ONLY TO DIMENSIONS IN INCHES

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<p>TITLE SPDT Electromechanical Relay Failsafe Switch, DC to 18 GHz, up to 90W, 12V, SMA</p>		<p>DWG NO FMSW6347</p>		<p>CAGE CODE 3FKR5</p>	
<p>CAD FILE 090617</p>		<p>SHEET 1 OF 2</p>		<p>SCALE N/A</p>	
				<p>SIZE A 7361</p>	

9 Pin D-Sub Connector



SCHEMATIC SHOWN IN FAILSAFE POSITION

STANDARD TOLERANCES

.X ±0.2
.XX ±0.01
.XXX ±0.005

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