

SP8T NO DC to 18 GHz Electro-Mechanical Relay Switch, up to 90W, 12V, SMA

The FMSW6384 is a Single Pole Eight Throw (SP8T) 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 Normally Open 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 80 dB typical. The Normally Open actuator has a +12 Vdc 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 15 Pin D-Sub 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	SP8T
Actuator Type	Normally Open
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 Current @ 12 Volts		200		mA
VSWR		1.25:1	1.6:1	
Insertion Loss		0.25	0.5	dB
Insertion Loss Repeatability				
Isolation	75	80		dB
Input Power (CW)			60	Watts
Switching Time			20	ms

Performance by Frequency

Description	F1	F2	F3	F4	F5	Units
Frequency Range	DC - 6	6 - 12	12 - 18			GHz
VSWR, Max	1.25:1	1.35:1	1.6:1			
Insertion Loss, Max	0.25	0.35	0.5			dB
Isolation, Min	80	75	75			dB
Power In, Typ (CW)	90	75	60			Watts

Mechanical Specifications

Size	
Weight	0.557 lbs [252.65 g]
Package Type	Connectorized
Operating Life	2,000,000 Cycles
Connectors	
RF Connector Type	SMA Female
Control Connector	15 Pin D-Sub



Features:

- Single Pole Eight Throw
- DC to 18 GHz Frequency Range
- Isolation greater than 80 dB typical
- 2M Cycle Min Operating Life
- +12 Volt DC
- 90 Watt average Power
- Normally Open Actuator
- -25 to +70°C Operating Temperature
- Insertion Loss as low as 0.2 dB Max
- VSWR as low as 1.25:1 max
- SMA Female RF connectors
- 15 Pin D-Sub Connector for DC Control
- Hot Switching Capability - Consult Factory
- 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

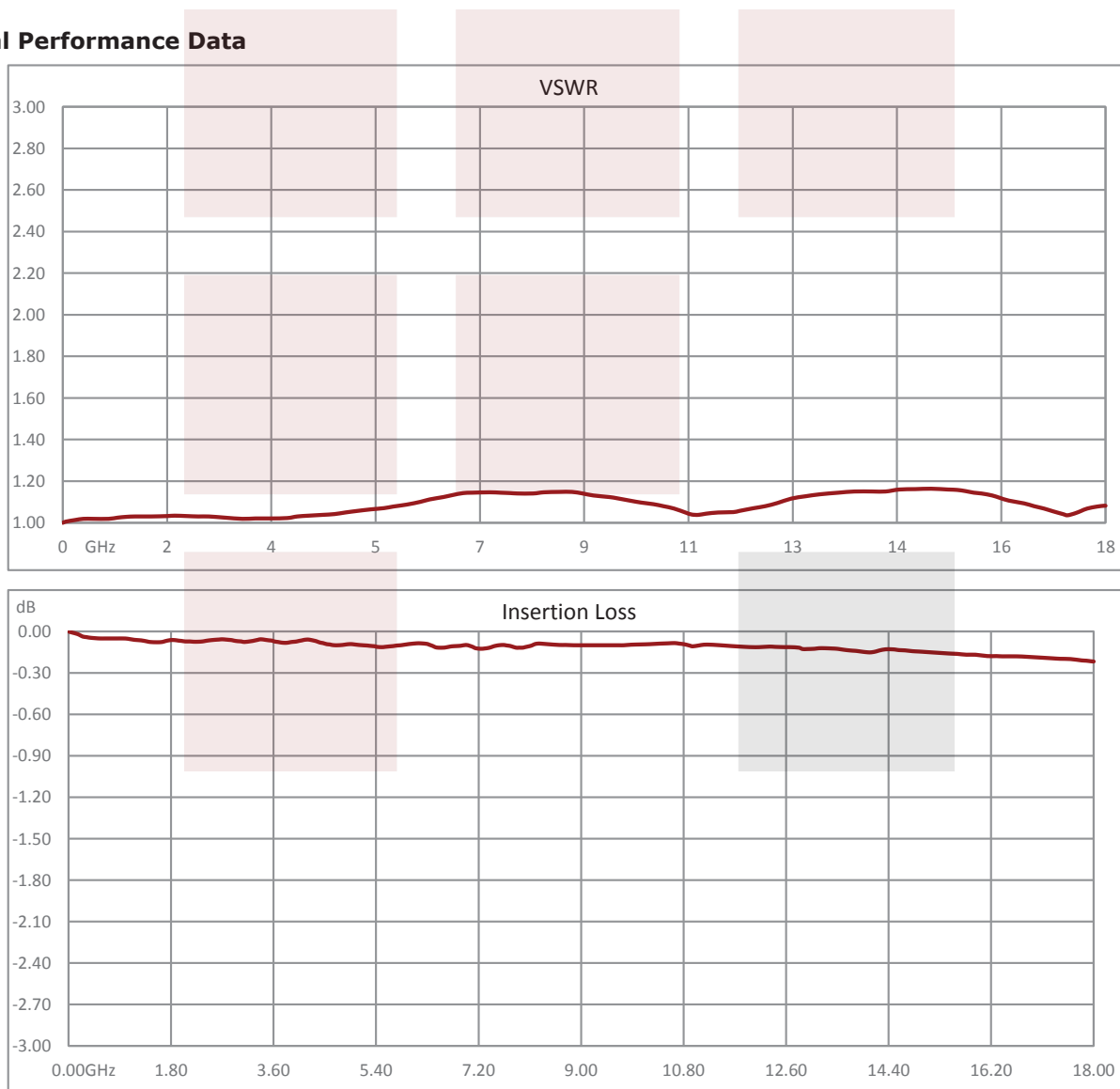
MIL-STD-202 Method 214, Cond. D 10G RMS Non Operating

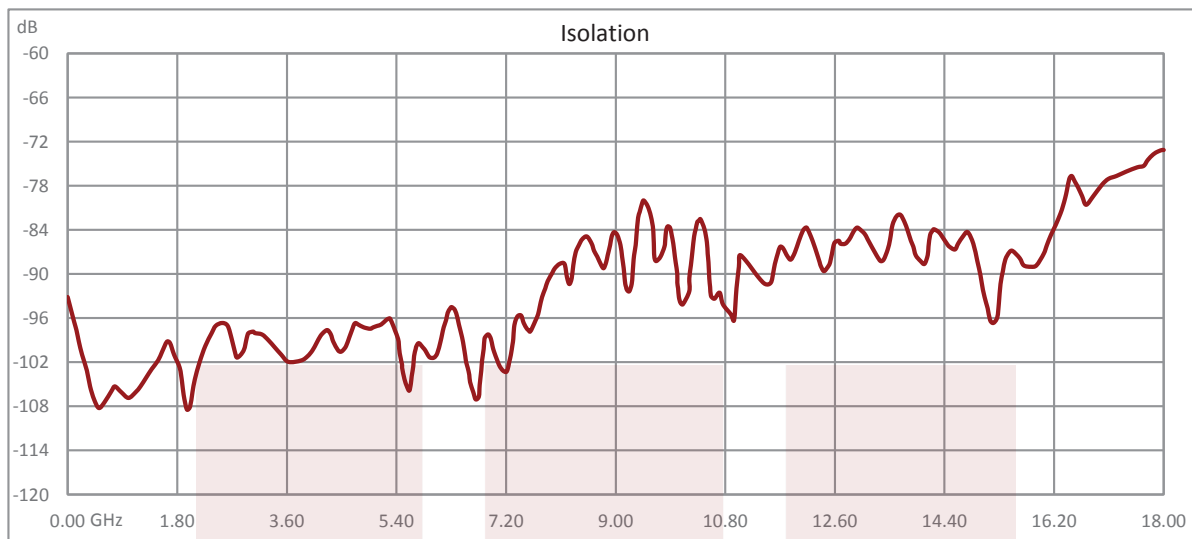
Compliance Certifications (see [product page](#) for current document)

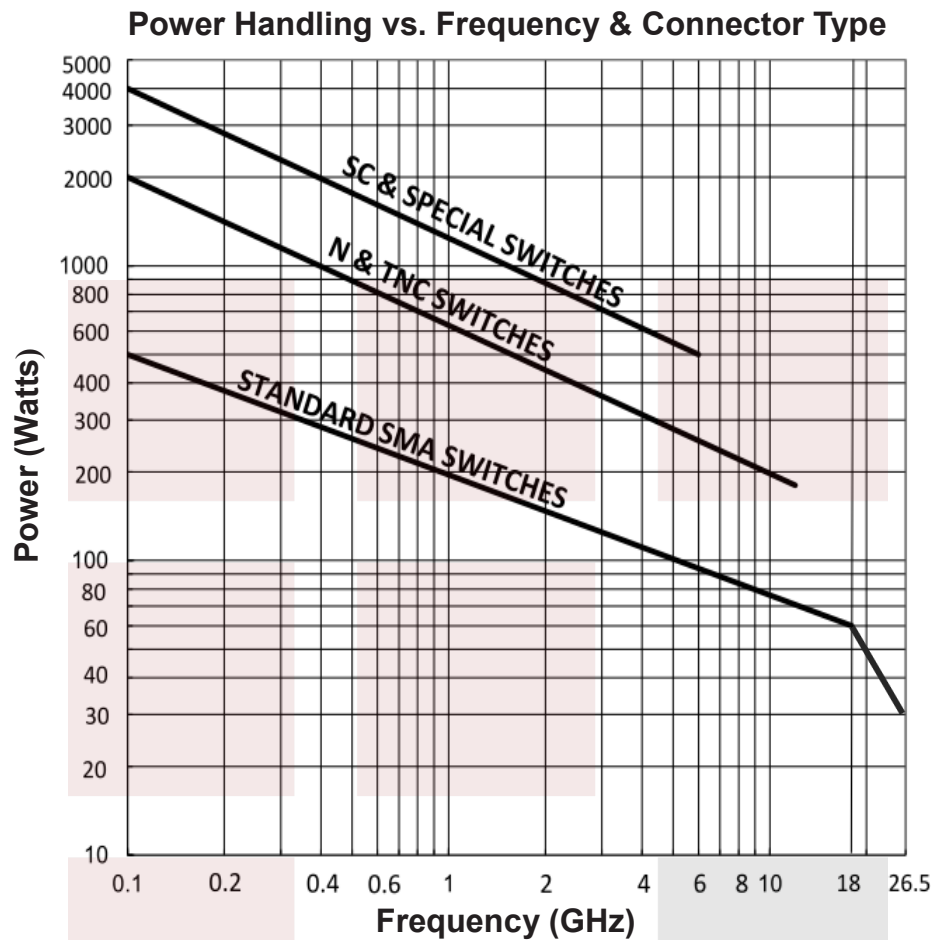
Plotted and Other Data

Notes:

Typical Performance Data







Environmental and Test Conditions:

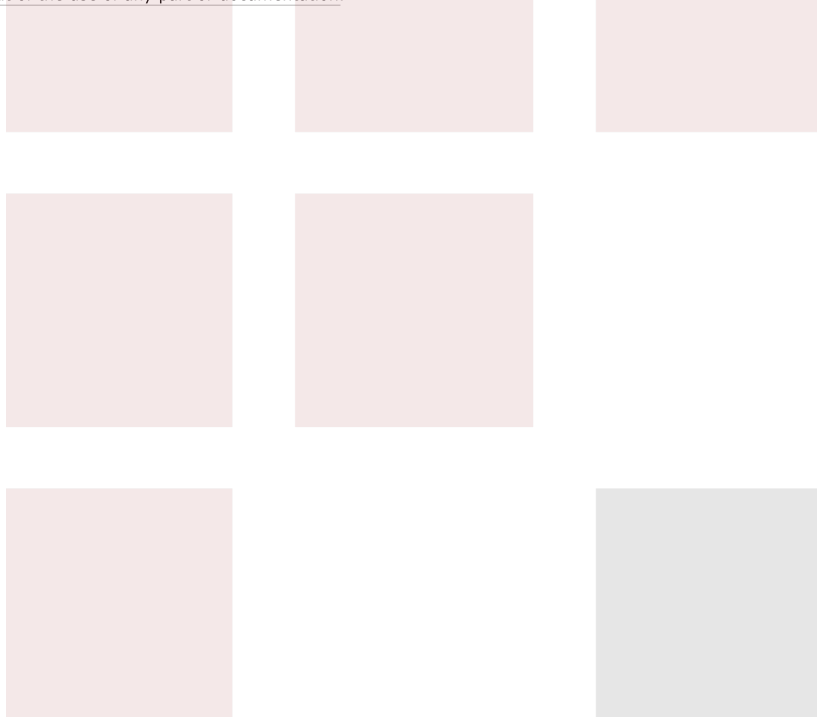
- Ambient temperature of 25°C or less
- Altitude: Sea Level
- Load VSWR: 1.20:1 max.
- Cold Switching

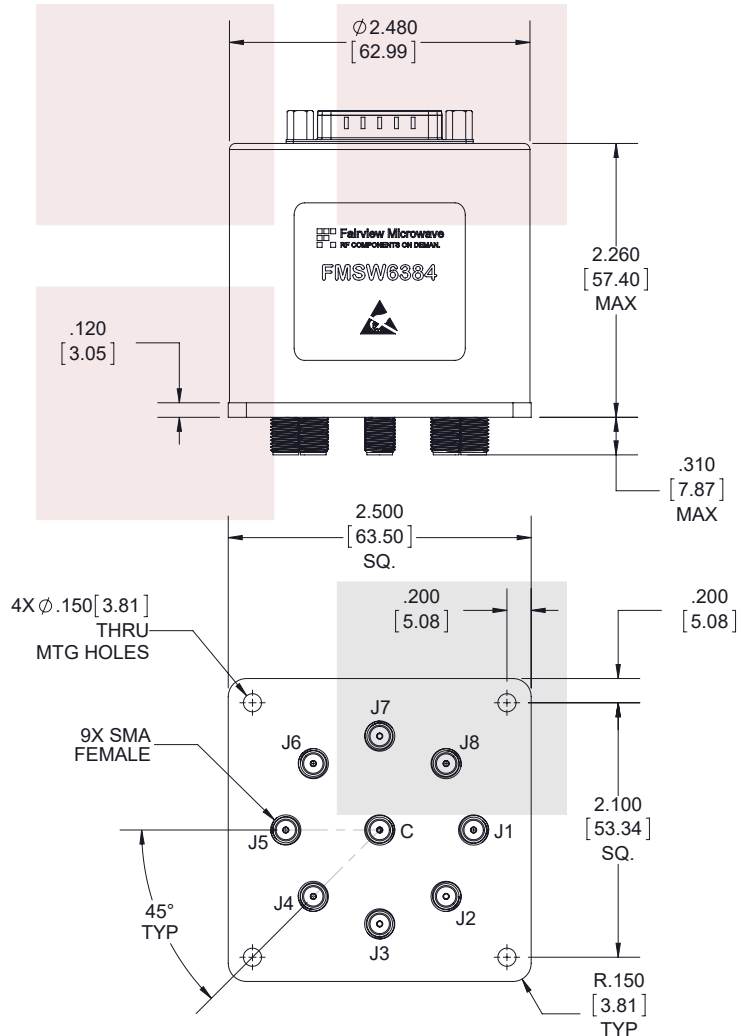
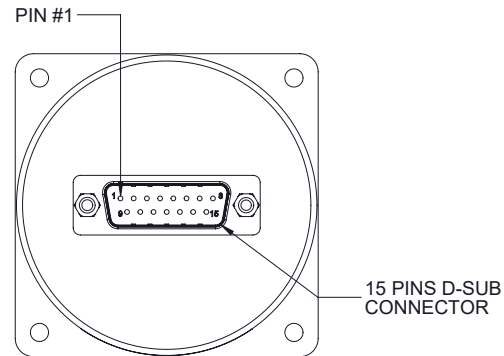
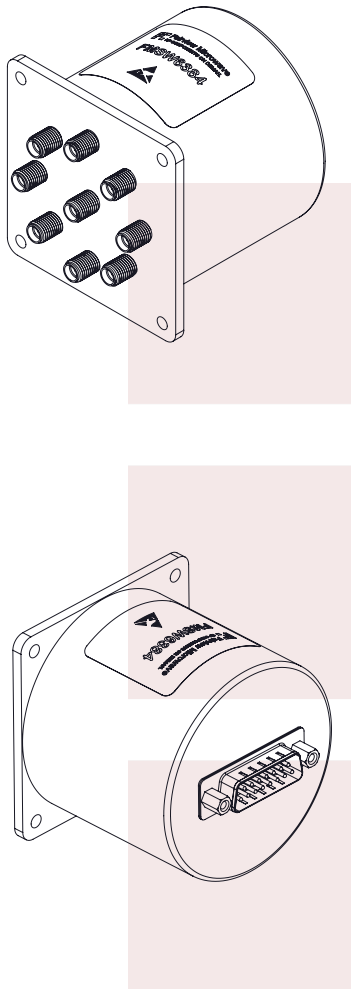
SP8T NO DC to 18 GHz Electro-Mechanical Relay Switch, up to 90W, 12V, SMA from Fairview Microwave is in-stock and available to ship same-day. All of our RF/microwave products are available off-the-shelf from our ISO 9001:2008 certified facilities in Allen, Texas. Fairview Microwave is RF on-demand.

For additional information on this product, please click the following link: [SP8T NO DC to 18 GHz Electro-Mechanical Relay Switch, up to 90W, 12V, SMA FMSW6384](#)

URL: <https://www.fairviewmicrowave.com/sp8t-normally-open-18-ghz-electro-mechanical-relay-switch-60w-12v-sma-fmsw6384-p.aspx>

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STANDARD TOLERANCES

.X ±0.2
.XX ±0.01
.XXX ±0.005

*STANDARD TOLERANCES APPLY
ONLY TO DIMENSIONS IN INCHES

FAIRVIEW MICROWAVE INC.

ALLEN, TX 75013 WWW.FAIRVIEWMICROWAVE.COM

TITLE

SP8T NO DC to 18 GHz Electro-Mechanical Relay
Switch, up to 90W, 12V, SMA

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].

DWG NO

FMSW6384

CAGE CODE

3FKR5

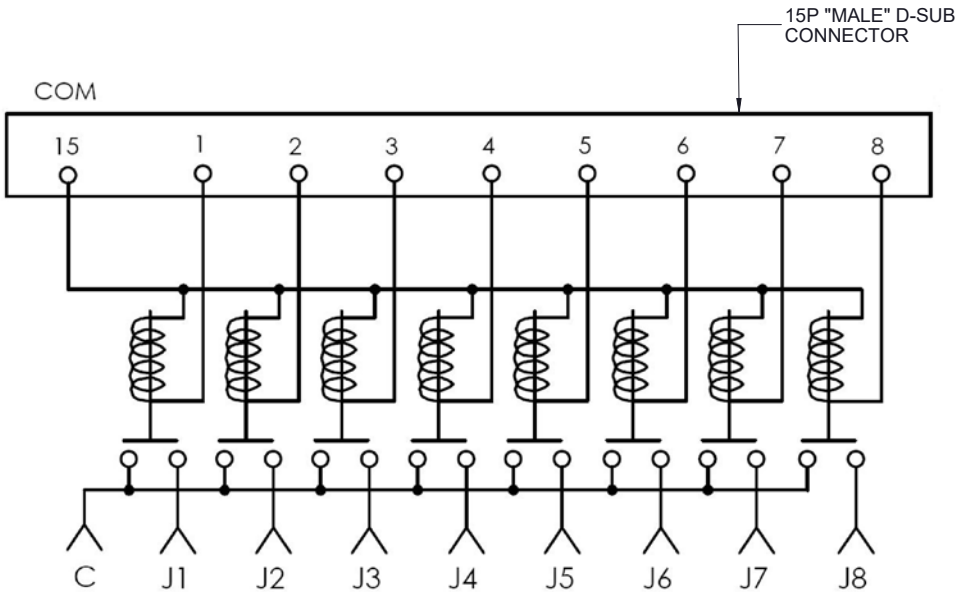
CAD FILE 091117

SHEET 1 OF 2

SCALE N/A

SIZE A

7361



SCHEMATIC SHOWN IN NORMALLY OPEN POSITION

TERMINALS D-SUB PIN ASSIGNMENT	RF PATH								
	J1	J2	J3	J4	J5	J6	J7	J8	
1	ON	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
2	OFF	ON	OFF	OFF	OFF	OFF	OFF	OFF	OFF
3	OFF	OFF	ON	OFF	OFF	OFF	OFF	OFF	OFF
4	OFF	OFF	OFF	ON	OFF	OFF	OFF	OFF	OFF
5	OFF	OFF	OFF	OFF	ON	OFF	OFF	OFF	OFF
6	OFF	OFF	OFF	OFF	OFF	ON	OFF	OFF	OFF
7	OFF	OFF	OFF	OFF	OFF	OFF	ON	OFF	OFF
8	OFF	OFF	OFF	OFF	OFF	OFF	OFF	ON	OFF

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.X ±0.2
.XX ±0.01
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SHEET

2 OF 2

SCALE

N/A

SIZE

A 7361