

## SPDT Failsafe DC to 26.5 GHz Electro-Mechanical Relay Switch, 90W, 28V, SMA

The FMSW6419 is a Single Pole Double Throw (SPDT) electromechanical relay switch that operates across a wide frequency range of DC to 26.5 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 80 dB typical. This switch requires a +28Vdc control voltage and operates over a temperature range of -25°C to +65°C. The rugged and compact package assembly supports SMA Female connectors and solder terminals 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		26.5	GHz
Impedance		50		Ohms
Operating Voltage	26	28	30	Volts
Actuating Set Current @ 28 Volts		90		mA
VSWR		1.2:1	1.7:1	
Insertion Loss		0.15	0.6	dB
Isolation	50	80		dB
Input Power (CW)			90	Watts
Switching Time			20	ms

### Performance by Frequency

Description	F1	F2	F3	F4	F5	Units
Frequency Range	DC - 6	6 - 12	12 - 18	18 - 26.5		GHz
VSWR, Max	1.2:1	1.3:1	1.4:1	1.7:1		
Insertion Loss, Max	0.15	0.25	0.35	0.6		dB
Isolation, Min	80	70	60	50		dB

### Mechanical Specifications

#### Size

Body Material and Plating	Aluminum
Package Type	Connectorized
Operating Life	2,000,000 Cycles

#### Connectors

RF Connector Type	SMA Female
Control Connector	Solder Terminals



### Features:

- Single Pole Double Throw
- DC to 26.5 GHz Frequency Range
- Isolation greater than 80 dB typical
- 2M Cycle Min Operating Life
- +28 Volt DC
- 90 Watt average Power
- Failsafe Actuator
- -25°C to +65°C Operating Temperature
- Insertion Loss as low as 0.15 dB Max
- VSWR as low as 1.2:1 max
- SMA Female RF connectors
- Solder Terminals 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 +65 deg C  
Storage Range -55 to +100 deg C

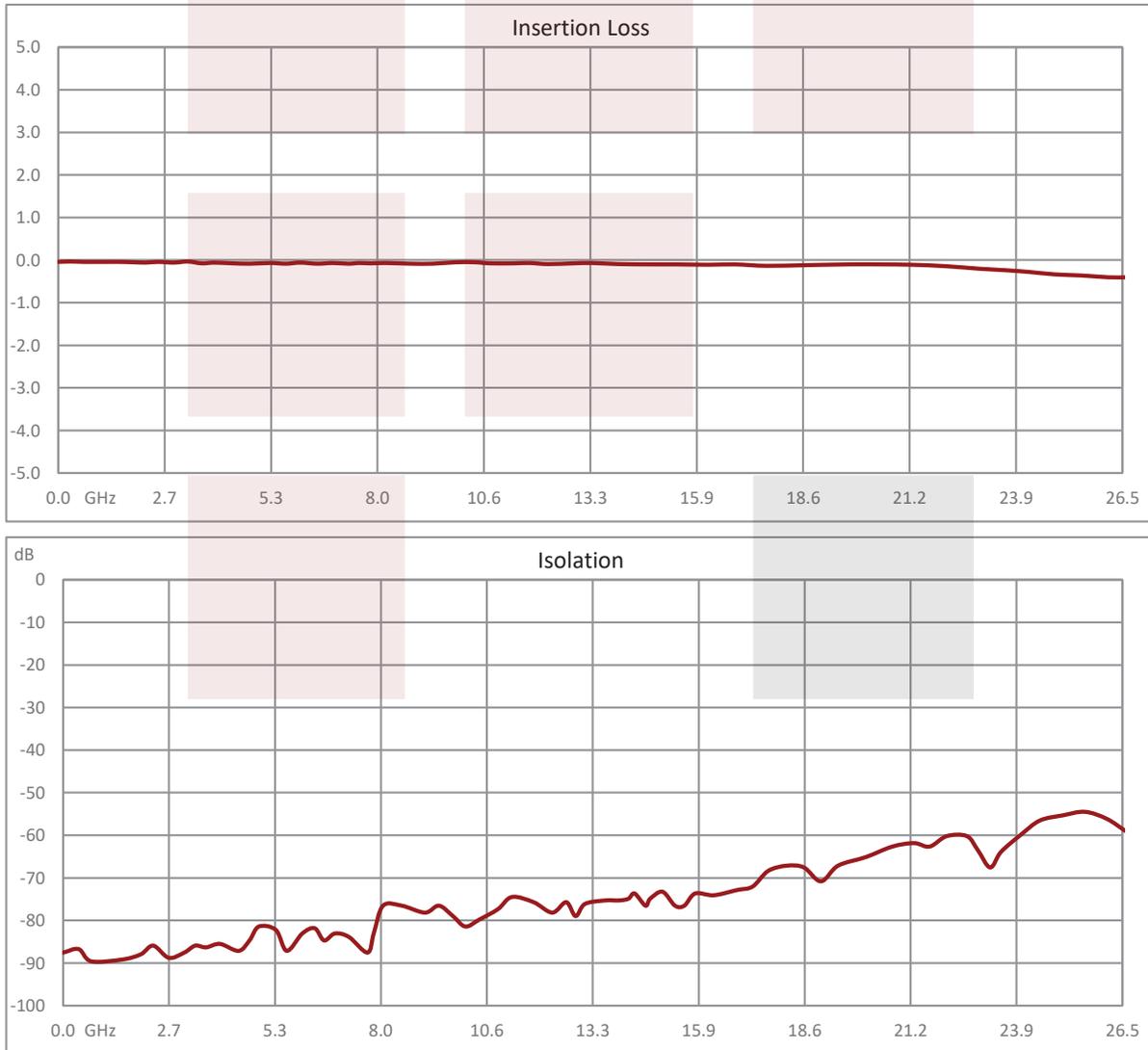
Humidity Moisture Resistance  
Shock MIL-STD-202 Method 213, Cond. D 500G Non Operating  
Vibration MIL-STD-202 Method 214, Cond. D 10G RMS Non Operating

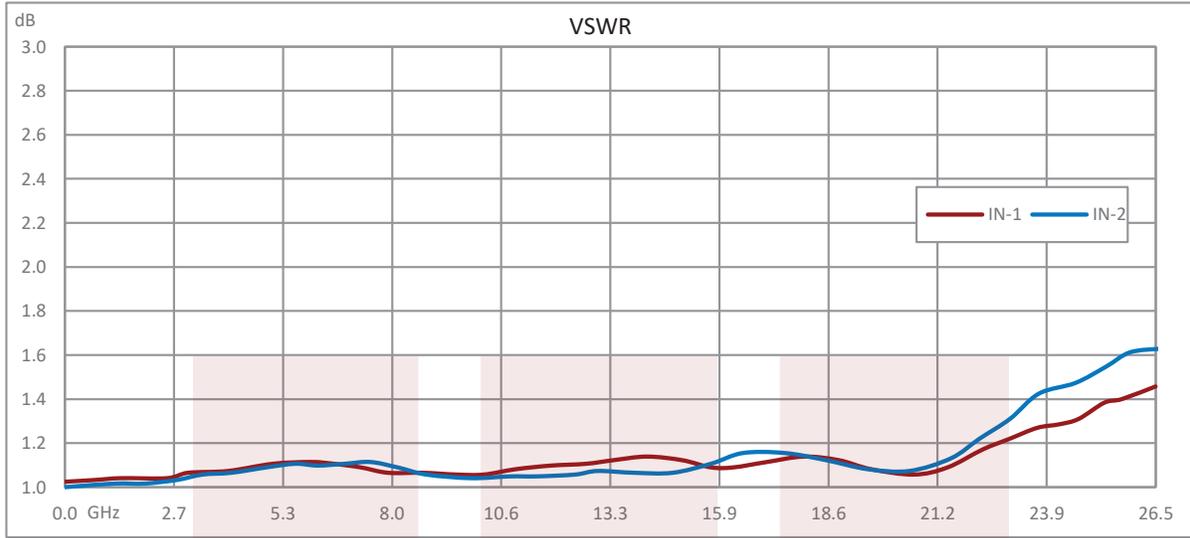
**Compliance Certifications** (see [product page](#) for current document)

**Plotted and Other Data**

Notes:

**Typical Performance Data**





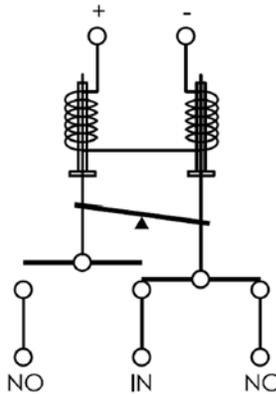
SPDT Failsafe DC to 26.5 GHz Electro-Mechanical Relay Switch, 90W, 28V, SMA from Fairview Microwave is in-stock and available to ship same-day. All of our RF/microwave products are available off-the-shelf from our ISO 9001:2008 certified facilities in Lewisville, Texas. Fairview Microwave is RF on-demand.

For additional information on this product, please click the following link: [SPDT Failsafe DC to 26.5 GHz Electro-Mechanical Relay Switch, 90W, 28V, SMA FMSW6419](https://www.fairviewmicrowave.com/spdt-failsafe-dc-to-26.5-ghz-electro-mechanical-relay-switch-90w-28v-sma-fmsw6419)

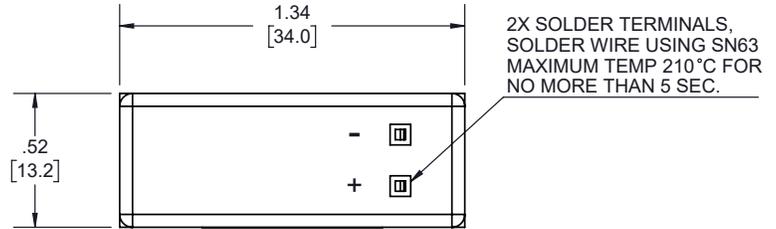
URL: <https://www.fairviewmicrowave.com/spdt-failsafe-26.5-ghz-electro-mechanical-relay-switch-90w-28v-sma-fmsw6419-p.aspx>

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.

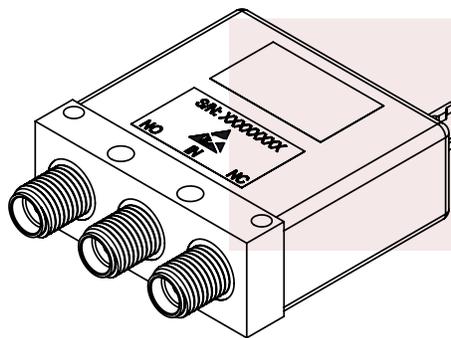
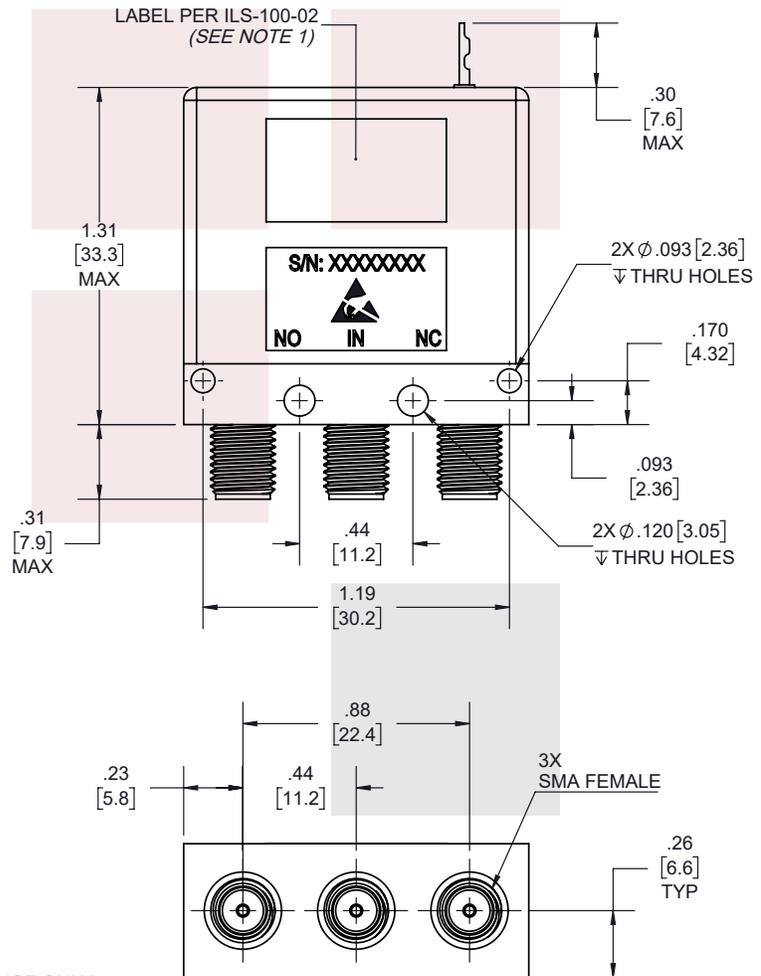
REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
A	INITIAL RELEASE	9/16/2020	T.GALLA



**SCHEMATIC  
FAILSAFE POSITION**



2X SOLDER TERMINALS,  
SOLDER WIRE USING SN63  
MAXIMUM TEMP 210°C FOR  
NO MORE THAN 5 SEC.



- NOTES:  
1. LABEL PER ILS-100-02. FOR INTERNAL REFERENCE ONLY.  
LABEL LOCATION FOR REFERENCE ONLY.

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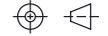
TITLE  
SPDT Failsafe DC to 26.5 GHz Electro-Mechanical  
Relay Switch, 90W, 28V, SMA

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

TOLERANCES: CABLE LENGTH (L) TOLERANCES:

.X = ±.2 [5.08]	FRACTIONS	L ≤ 12 [305] = +1 [25] / -0
.XX = ±.02 [.51]	± 1/32	12 [305] < L ≤ 60 [1524] = +2 [51] / -0
.XXX = ±.005 [.13]	ANGLES ± 1°	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



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SHEET 1 OF 1

SCALE N/A

ALL DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.

SIZE A	CAGE CODE 3FKR5	DRAWN BY K.DANG	ITEM NO. FMSW6419	REV A
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T-Rev.D