

SPDT Failsafe Electro-Mechanical Relay Switch DC to 26.5 GHz , 90W, 12V, SMA

The FMSW6420 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 50 Ohm design features a Failsafe Actuator and is rated for 2 million lifecycles. Impressive typical performance includes 0.35 dB insertion loss and isolation greater than 80 dB. This switch requires +12Vdc bias voltage and operates over a temperature range of -25°C to +65°C. The rugged and compact package assembly supports SMA female connectors and terminal solder pins 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	12	30	Volts
Actuating Current @ 12 Volts At +20°C			200	mA
VSWR		1.4:1	1.7:1	
Insertion Loss		0.35	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 Electromechanical Relay Switch
- DC to 26.5 GHz Frequency Range
- Failsafe Actuator
- 2M Lifecycle Rating
- Insertion Loss 0.35 dB typ
- Isolation > 80 dB typ
- VSWR as low as 1.4:1 typ
- Terminal Solder Pins for DC Bias
- +12 Volt DC Control
- SMA Female Connectors
- -25°C to +65°C Operating Temperature
- Up to 90 Watt Average Power Handling
- 50 Ohm Design
- Hot Switching Capability - Consult Factory
- S-Parameter Data available upon request
- Rugged Design meets Mil-STD-202 Test Conditions

Applications:

- Aerospace & Defense
- Test & Measurement
- Microwave Radio Systems
- Military & Commercial Communication Systems
- Research & Development
- SATCOM
- Wireless Communications
- Enterprise
- IoT

Fairview Microwave
301 Leora Ln., Suite 100
Lewisville, TX 75056
Tel: 1-800-715-4396 / (972) 649-6678
Fax: (972) 649-6689
www.fairviewmicrowave.com
sales@fairviewmicrowave.com

Environmental Specifications

Temperature

Operating Range -25 to +65 deg C
Storage Range -55 to +100 deg C

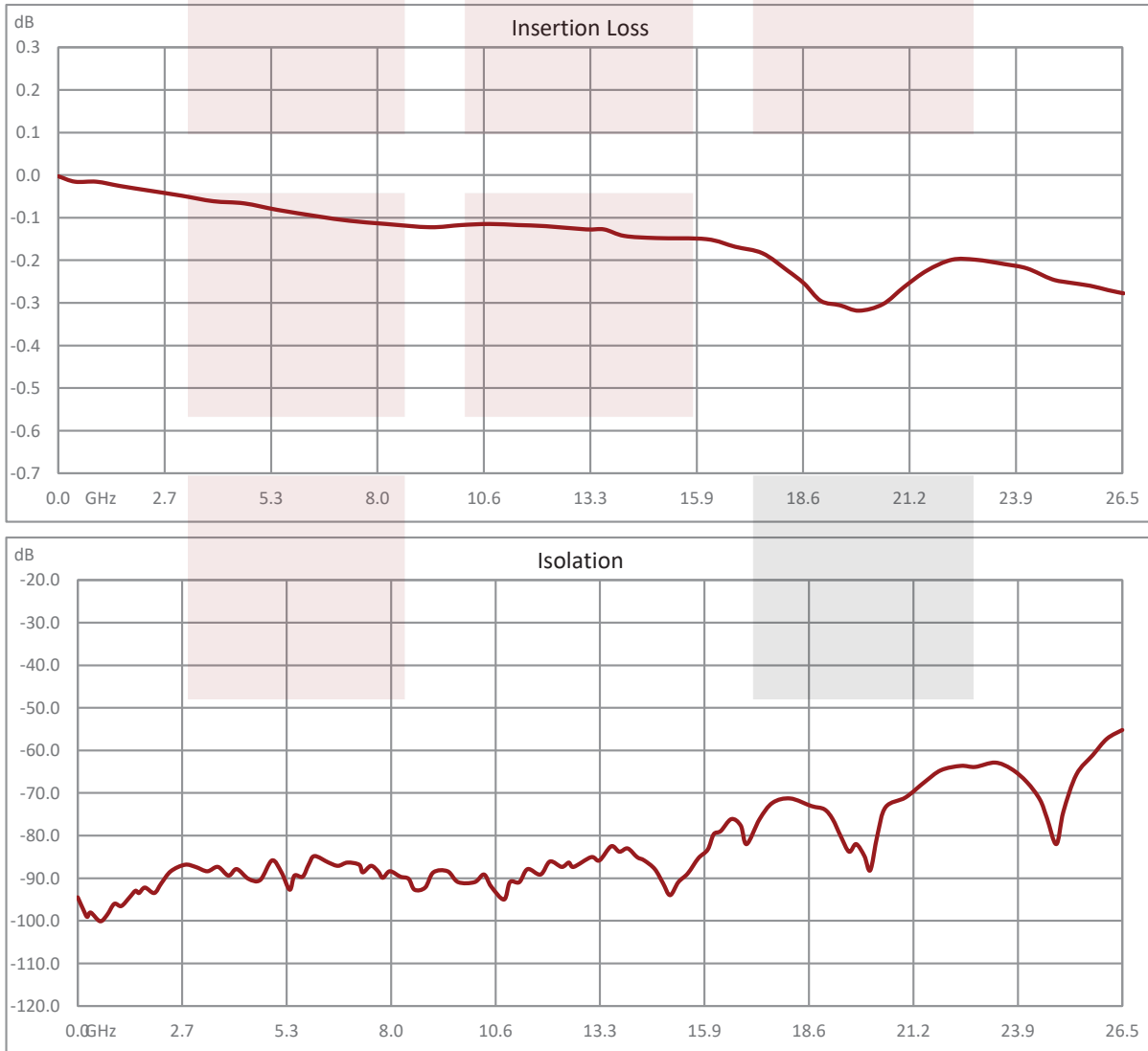
Humidity Moisture Resistance
Shock MIL-STD-202 Method 213, Cond. D 500G Non Operating
Vibration MIL-STD-202 Method 204, Cond. D 10G RMS Non Operating

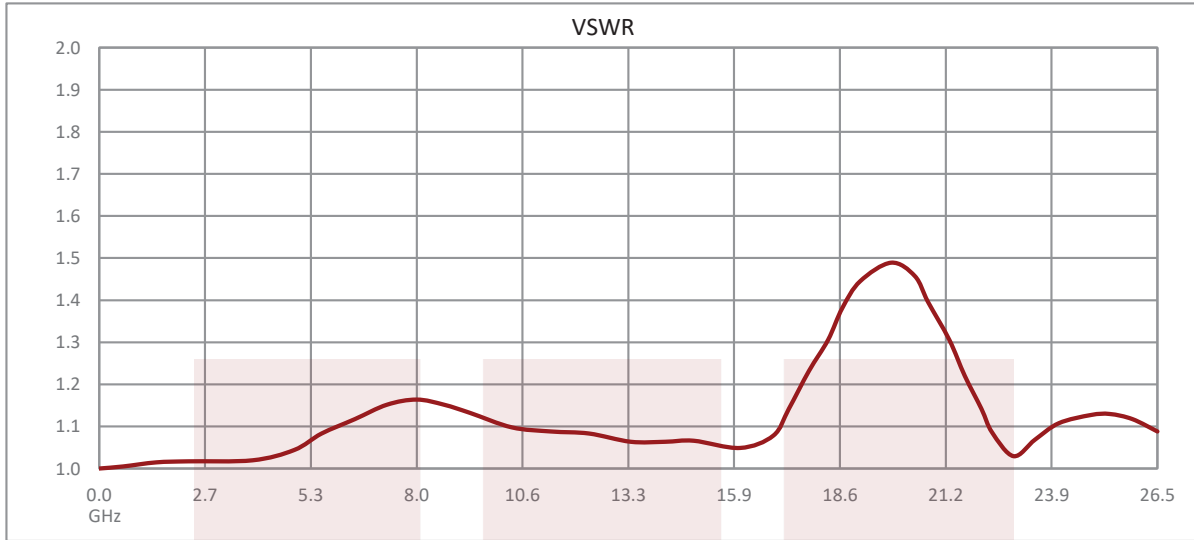
Compliance Certifications (see [product page](#) for current document)

Plotted and Other Data

Notes:

Typical Performance Data





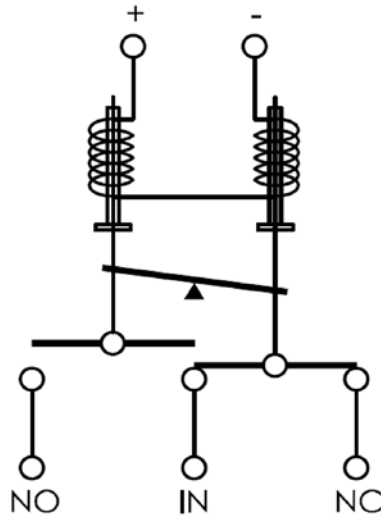
SPDT Failsafe Electro-Mechanical Relay Switch DC to 26.5 GHz , 90W, 12V, SMA from Fairview Microwave is in-stock and available to ship same-day. All of our RF/microwave products are available off-the-shelf from our ISO 9001:2008 certified facilities in Lewisville, Texas. Fairview Microwave is RF on-demand.

For additional information on this product, please click the following link: [SPDT Failsafe Electro-Mechanical Relay Switch DC to 26.5 GHz , 90W, 12V, SMA FMSW6420](https://www.fairviewmicrowave.com/spdt-failsafe-26.5-ghz-electro-mechanical-relay-switch-90w-12v-sma-fm-sw6420-p.aspx)

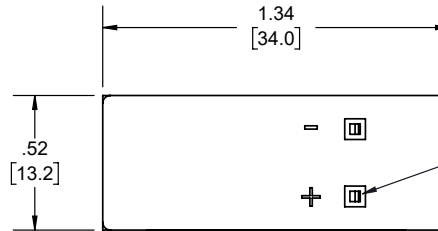
URL: <https://www.fairviewmicrowave.com/spdt-failsafe-26.5-ghz-electro-mechanical-relay-switch-90w-12v-sma-fm-sw6420-p.aspx>

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	8/14/2020	T.GALLA

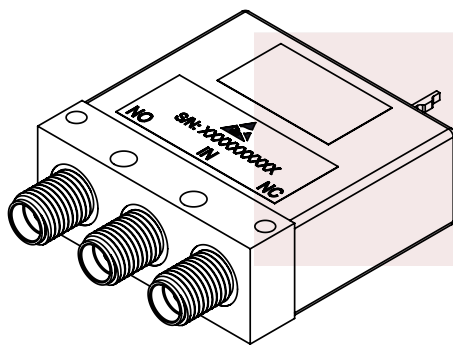
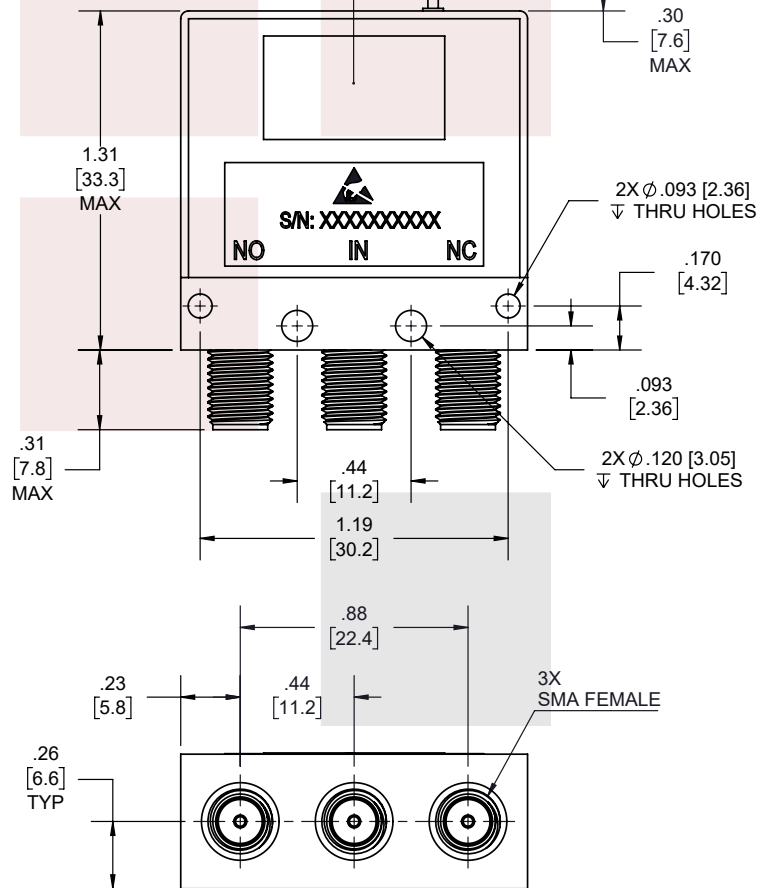


SCHMATIC (FAILSAFE POSITION)



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

LABEL PER ILS-100-02
(SEE NOTE 1)



NOTES:

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

THESE COMMODITIES, TECHNOLOGY OR SOFTWARE WERE EXPORTED FROM THE UNITED STATES IN ACCORDANCE WITH THE EXPORT ADMINISTRATION REGULATIONS. DIVERSION CONTRARY TO U.S. LAW PROHIBITED.

TITLE
SPDT Failsafe Electro-Mechanical Relay Switch DC to
26.5 GHz , 90W, 12V, 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



THE INFORMATION AND
DESIGN IN THIS DOCUMENT
IS THE PROPERTY OF
FAIRVIEW MICROWAVE CORPORATION.
ALL RIGHTS RESERVED.

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. FMSW6420	REV A
-----------	--------------------	--------------------	----------------------	----------

T-Rev.D