

SPDT Failsafe Electro-Mechanical Relay Switch DC to 26.5 GHz , TTL, 90W, 28V, 2M Lifecycles, Suppression Diodes, Indicators, SMA

The FMSW6422 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. Additional features include TTL logic control, suppression diodes which limit voltage spikes or reverse current, and Indicators to monitor the switch position. Impressive typical performance includes 0.35 dB insertion loss and isolation greater than 80 dB. This switch requires +28Vdc 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 all command control functions. 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
Actuator Options	TTL Logic
TTL Control	on: 2.4 to 5.5 Volts off: 0 to 0.8 Volts

Description	Min	Typ	Max	Units
Frequency Range	DC		26.5	GHz
Impedance		50		Ohms
Operating Voltage	26	28	30	Volts
Actuating Current @ 28 Volts At +20°C			90	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



Features:

- Single Pole Double Throw Electromechanical Relay Switch
- DC to 26.5 GHz Frequency Range
- Failsafe Actuator
- TTL Logic Control
- Suppression Diodes
- Indicators
- 2M Lifecycle Rating
- TTL Logic Control
- Suppression Diodes
- Indicators
- Insertion Loss 0.35 dB typ
- Isolation > 80 dB typ
- VSWR 1.4:1 typ
- +28 Volt DC Bias
- Terminal Solder Pins for Command Control Functions
- 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

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Connectors

RF Connector Type
Control Connector

SMA Female
Solder Terminals

Environmental Specifications

Temperature

Operating Range
Storage Range

-25 to +65 deg C
-55 to +100 deg C

Humidity
Shock
Vibration

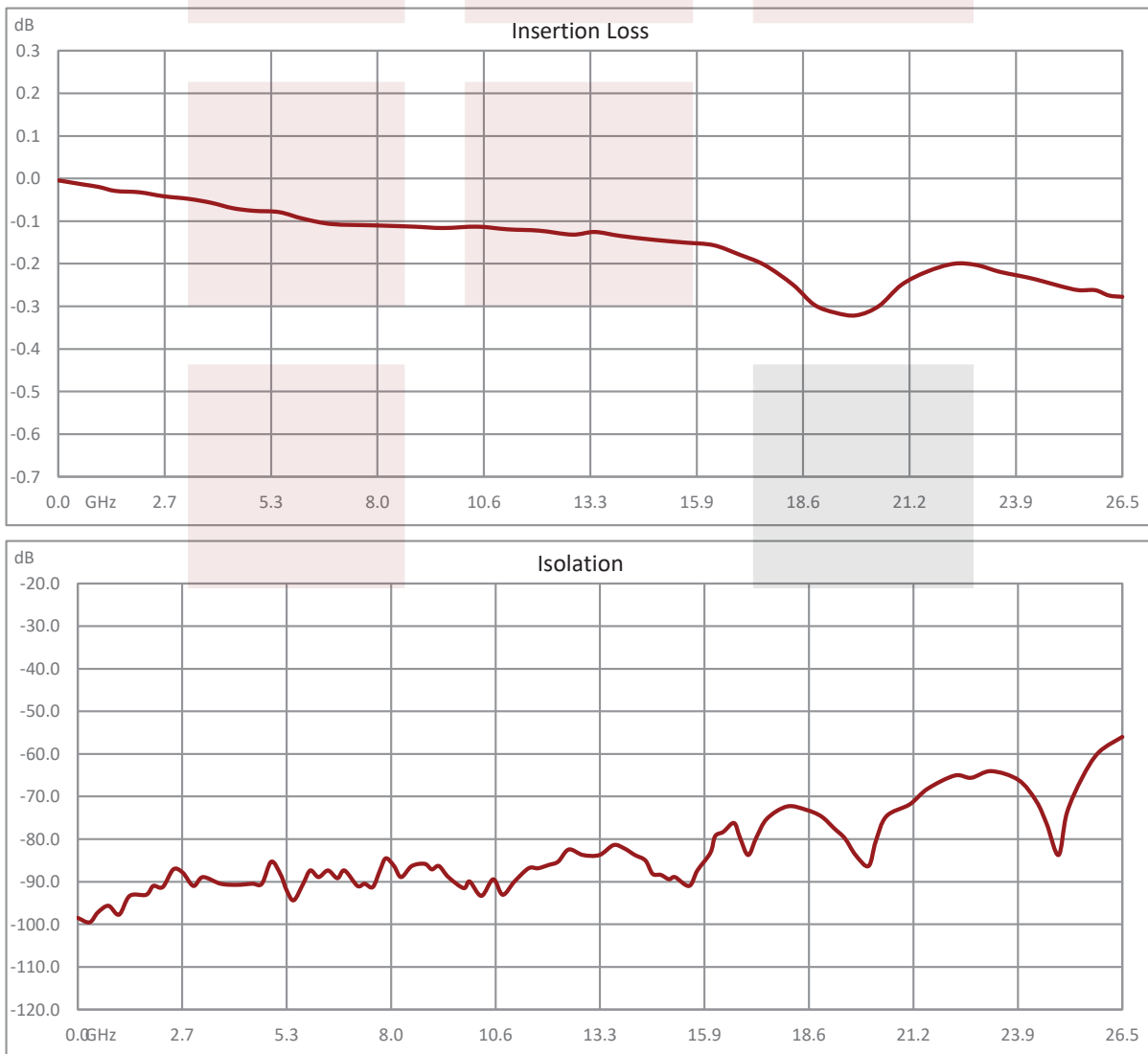
Moisture Resistance
MIL-STD-202 Method 213, Cond. D 500G Non Operating
MIL-STD-202 Method 204, Cond. D 10G RMS Non Operating

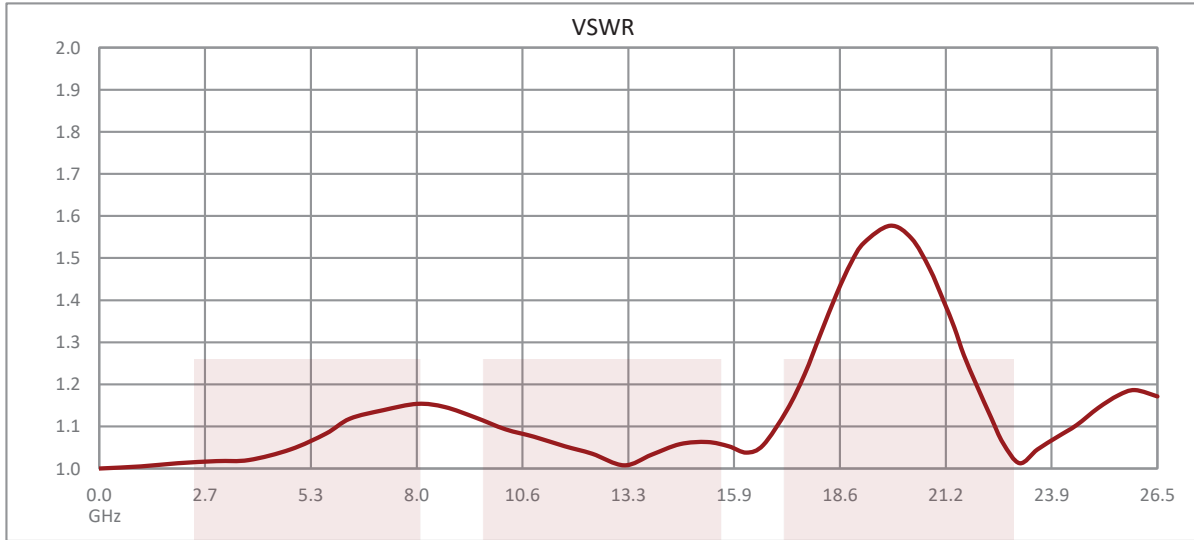
Compliance Certifications (see [product page](#) for current document)

Plotted and Other Data

Notes:

Typical Performance Data





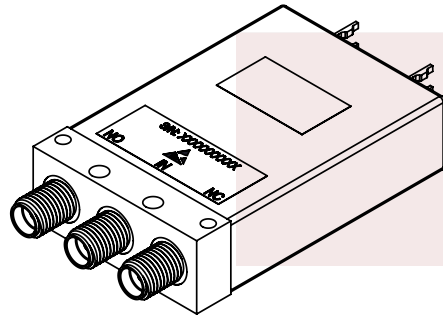
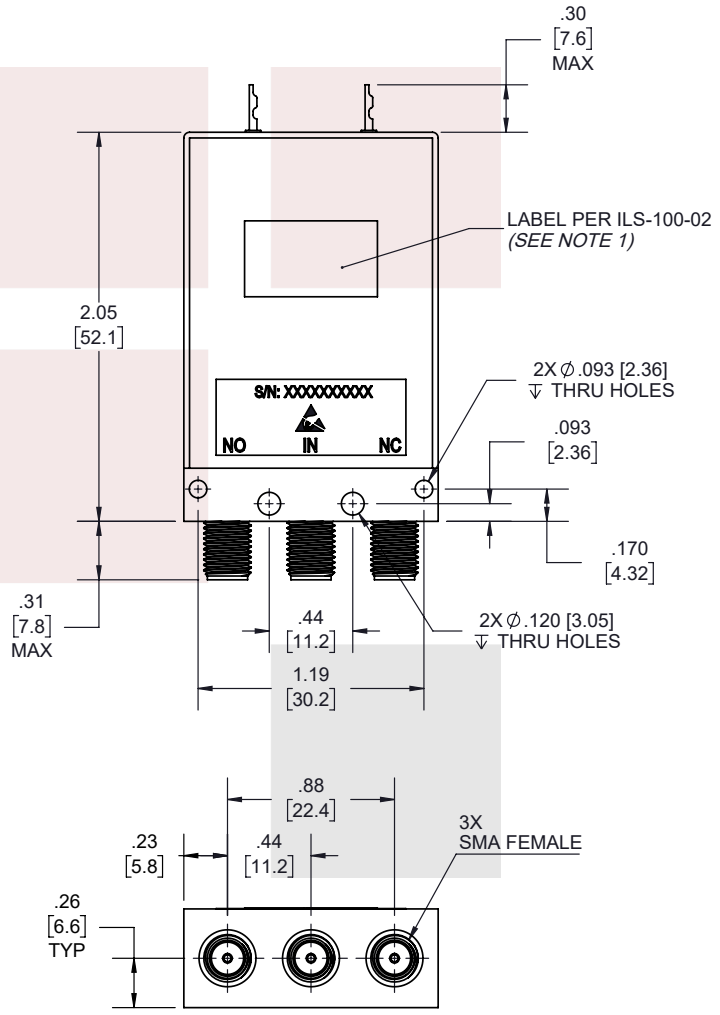
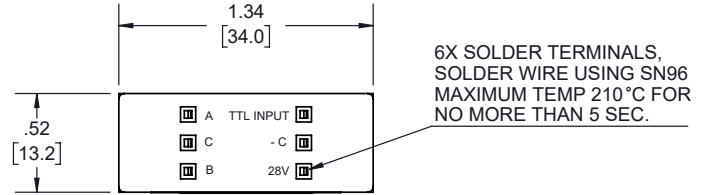
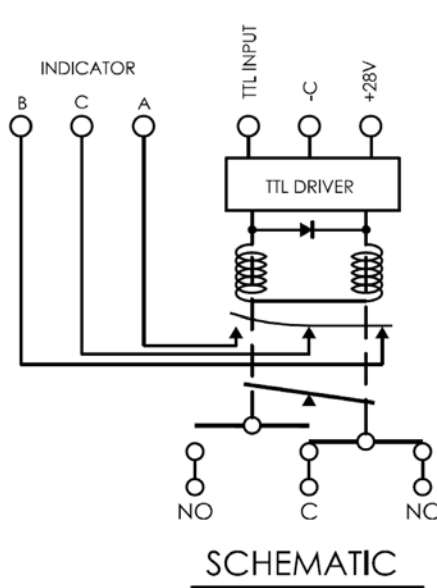
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For additional information on this product, please click the following link: [SPDT Failsafe Electro-Mechanical Relay Switch DC to 26.5 GHz , TTL, 90W, 28V, 2M Lifecycles, Suppression Diodes, Indicators, SMA FMSW6422](https://www.fairviewmicrowave.com/spdt-failsafe-26.5-ghz-electro-mechanical-relay-switch-90w-28v-sma-fm-sw6422)

URL: <https://www.fairviewmicrowave.com/spdt-failsafe-26.5-ghz-electro-mechanical-relay-switch-90w-28v-sma-fm-sw6422-p.aspx>

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REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
A	INITIAL RELEASE	9/30/2020	T.GALLA



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

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TITLE
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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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ALL DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.					SCALE N/A	
SIZE A	CAGE CODE 3FKR5	DRAWN BY K.DANG	ITEM NO. FMSW6422	REV A	SHEET 1 OF 1	

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