

Transfer Latching Electro-Mechanical Relay Switch DC to 12 GHz , TTL, 600W, 28V, 5M Lifecycles, Self Cutoff, Diodes, N

The FMSW6439 is a Single Pole Double Throw (SPDT) electromechanical relay switch that operates across a wide frequency range of DC to 12 GHz and can handle up to 600 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 0.4 dB insertion loss and isolation 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 N Type female connectors and solder terminal 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	Transfer
Actuator Type	Latching
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		12	GHz
Impedance		50		Ohms
Operating Voltage	26	28	30	Volts
Actuating Current @ 28 Volts At +20°C			150	mA
VSWR		1.4:1	1.7:1	
Insertion Loss		0.4	0.7	dB
Isolation	60	80		dB
Input Power (CW)			600	Watts
Switching Time			20	ms

Performance by Frequency

Description	F1	F2	F3	F4	F5	Units
Frequency Range	DC - 2	2 - 4	4 - 8	8 - 12		GHz
VSWR, Max	1.2:1	1.4:1	1.5:1	1.7:1		
Insertion Loss, Max	0.2	0.4	0.5	0.7		dB
Isolation, Min	80	80	70	60		dB

Mechanical Specifications

Size

Body Material and Plating	Aluminum
Package Type	Connectorized
Operating Life	5,000,000 Cycles



Features:

- Single Pole Double Throw Electromechanical Relay Switch
- DC to 12 GHz Frequency Range
- Failsafe Actuator
- 5M Lifecycle Rating
- Insertion Loss 0.4 dB typ
- Isolation > 80 dB typ
- VSWR 1.40: 1 typ
- +28 Volt DC Bias
- Terminal Pins for DC Control
- N Type Female Connectors
- -25°C to +65°C Operating Temperature
- Up to 600 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

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Connectors

RF Connector Type
Control Connector

N Female
Solder Terminals

Environmental Specifications

Temperature

Operating Range
Storage Range

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

Humidity
Shock
Vibration

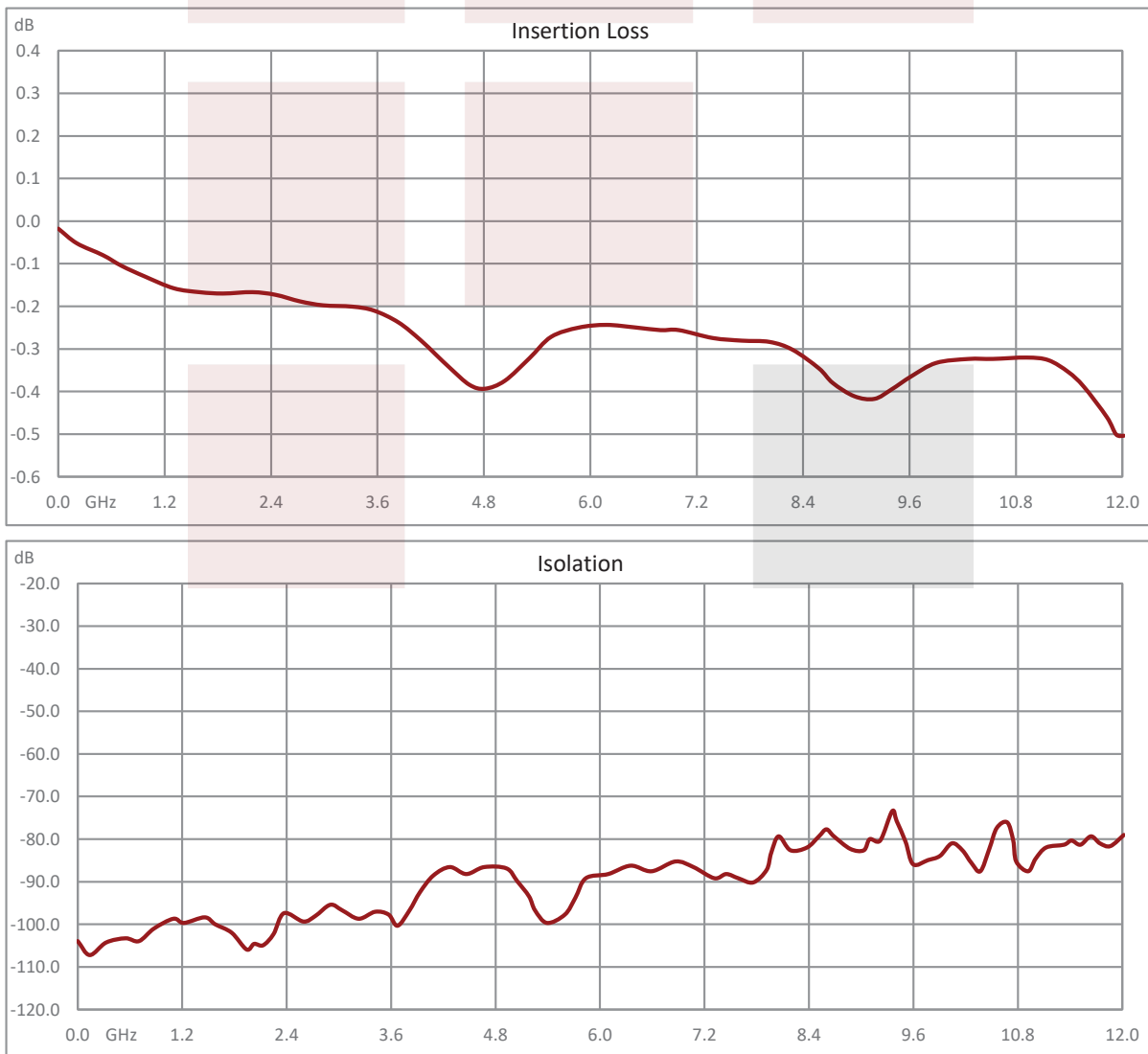
Moisture Resistance
MIL-STD-202 Method 213, Cond. D 500G Non Operating
MIL-STD-202 Method 214, Cond. D 10G RMS Non Operating

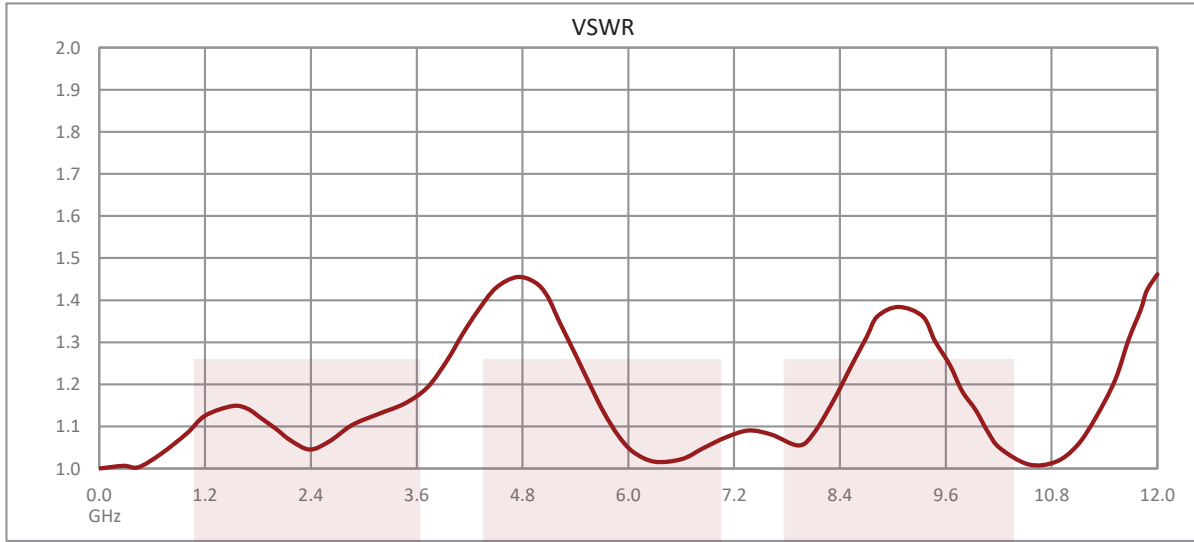
Compliance Certifications (see [product page](#) for current document)

Plotted and Other Data

Notes:

Typical Performance Data





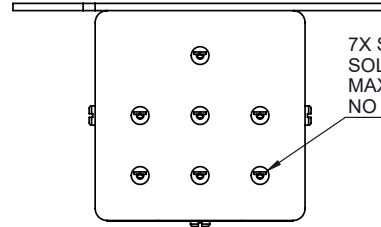
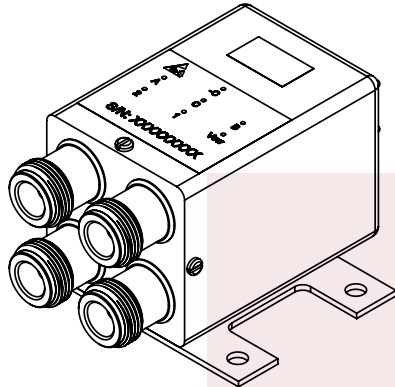
Transfer Latching Electro-Mechanical Relay Switch DC to 12 GHz , TTL, 600W, 28V, 5M Lifecycles, Self Cutoff, Diodes, N from Fairview Microwave is in-stock and available to ship same-day. All of our RF/microwave products are available off-the-shelf from our ISO 9001:2008 certified facilities in Lewisville, Texas. Fairview Microwave is RF on-demand.

For additional information on this product, please click the following link: [Transfer Latching Electro-Mechanical Relay Switch DC to 12 GHz , TTL, 600W, 28V, 5M Lifecycles, Self Cutoff, Diodes, N FMSW6439](https://www.fairviewmicrowave.com/transfer-failsafe-12-ghz-electro-mechanical-relay-switch-600w-28v-n-fm-sw6439-p.aspx)

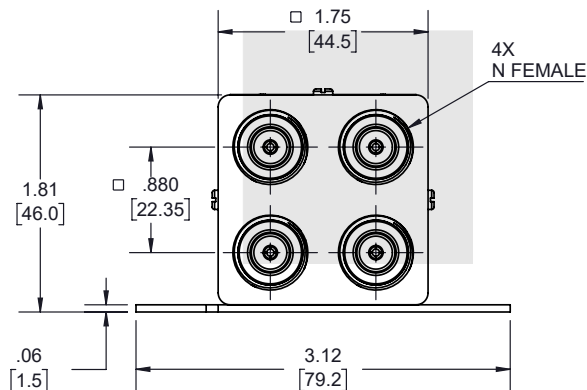
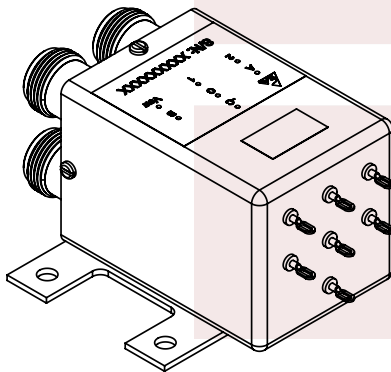
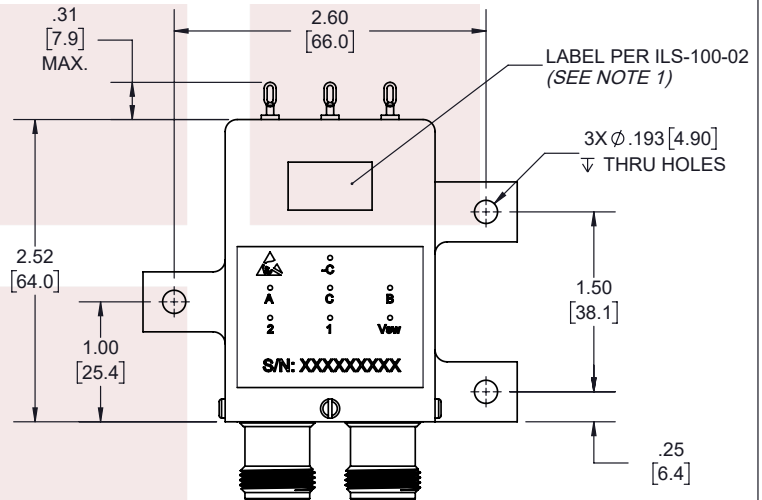
URL: <https://www.fairviewmicrowave.com/transfer-failsafe-12-ghz-electro-mechanical-relay-switch-600w-28v-n-fm-sw6439-p.aspx>

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REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
A	INITIAL RELEASE	10/13/2020	T.GALLA



7X SOLDER TERMINALS,
SOLDER WIRE USING SN96,
MAXIMUM TEMP 250 °C FOR
NO MORE THAN 5 SEC.



NOTES:

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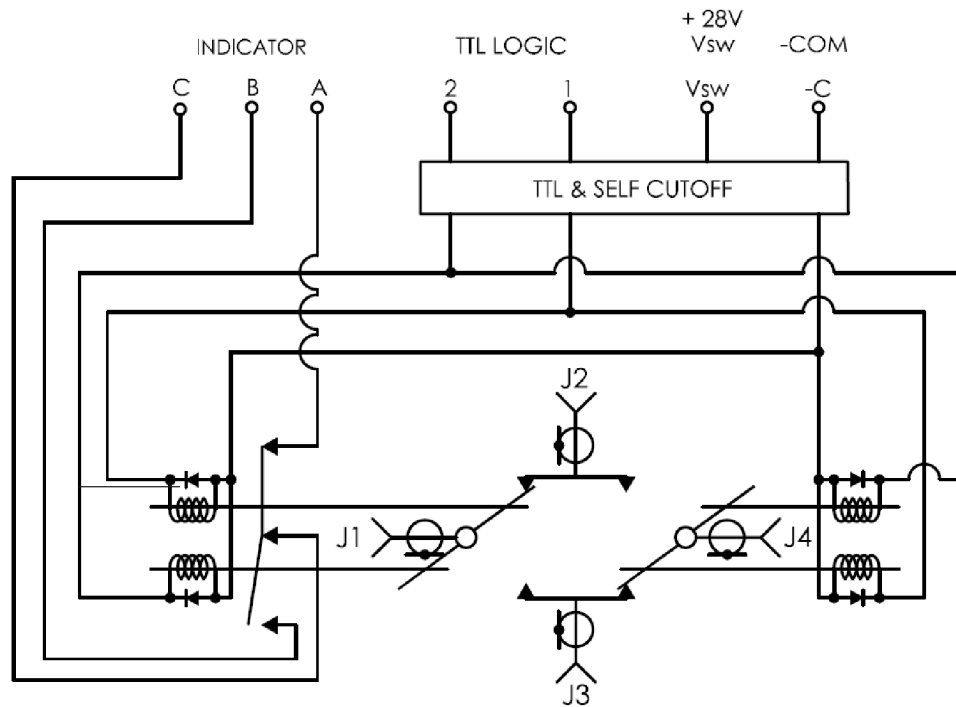
SHEET 1 OF 2

SCALE N/A

ALL DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.

SIZE	CAGE CODE	DRAWN BY	ITEM NO.	REV
A	3FKR5	K.DANG	FMSW6439	A

T-Rev.D



SCHEMATIC

OPERATIONAL LOGIC TABLE			
TERMINALS		RF PORTS	IND. PATH
1	2		
0	0	NO CHANGE	NO CHANGE
0	1	J1-J3, J2-J4	B-C
1	0	J1-J2, J3-J4	A-C
1	1	FORBIDDEN	FORBIDDEN

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SHEET 2 OF 2

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SCALE N/A

SIZE A	CAGE CODE 3FKR5	DRAWN BY K.DANG	ITEM NO. FMSW6439	REV A
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T-Rev.D