

Transfer Failsafe Electro-Mechanical Relay Switch DC to 18 GHz , 90W, 28V, 2M Lifecycles, SMA

The FMSW6433 is a Transfer 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 50 Ohm design features a Failsafe Actuator and is rated for 2 million lifecycles. Impressive typical performance includes 0.2 dB insertion loss and isolation greater than 70 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 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: Failsafe
Switching Sequence: Break before Make

Description	Min	Typ	Max	Units
Frequency Range	DC		18	GHz
Impedance		50		Ohms
Operating Voltage	26	28	30	Volts
Actuating Current @ 28 Volts At +20°C			400	mA
VSWR		1.2:1	1.4:1	
Insertion Loss		0.3	0.5	dB
Isolation	60	70		dB
Input Power (CW)			90	Watts
Switching Time			15	ms

Performance by Frequency

Description	F1	F2	F3	F4	F5	Units
Frequency Range	DC - 6	6 - 12	12 - 18			GHz
VSWR, Max	1.2:1	1.3:1	1.4:1			
Insertion Loss, Max	0.2	0.3	0.5			dB
Isolation, Min	70	60	60			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:

- Transfer Electromechanical Relay Switch
- DC to 18 GHz Frequency Range
- Failsafe Actuator
- 2M Lifecycle Rating
- Insertion Loss 0.2 dB typ
- Isolation > 70 dB typ
- VSWR 1.2:1 typ
- +28 Volt DC Bias
- Solder Terminal Pins for 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

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Environmental Specifications

Temperature

Operating Range -25 to +70 deg C
Storage Range -55 to +100 deg C

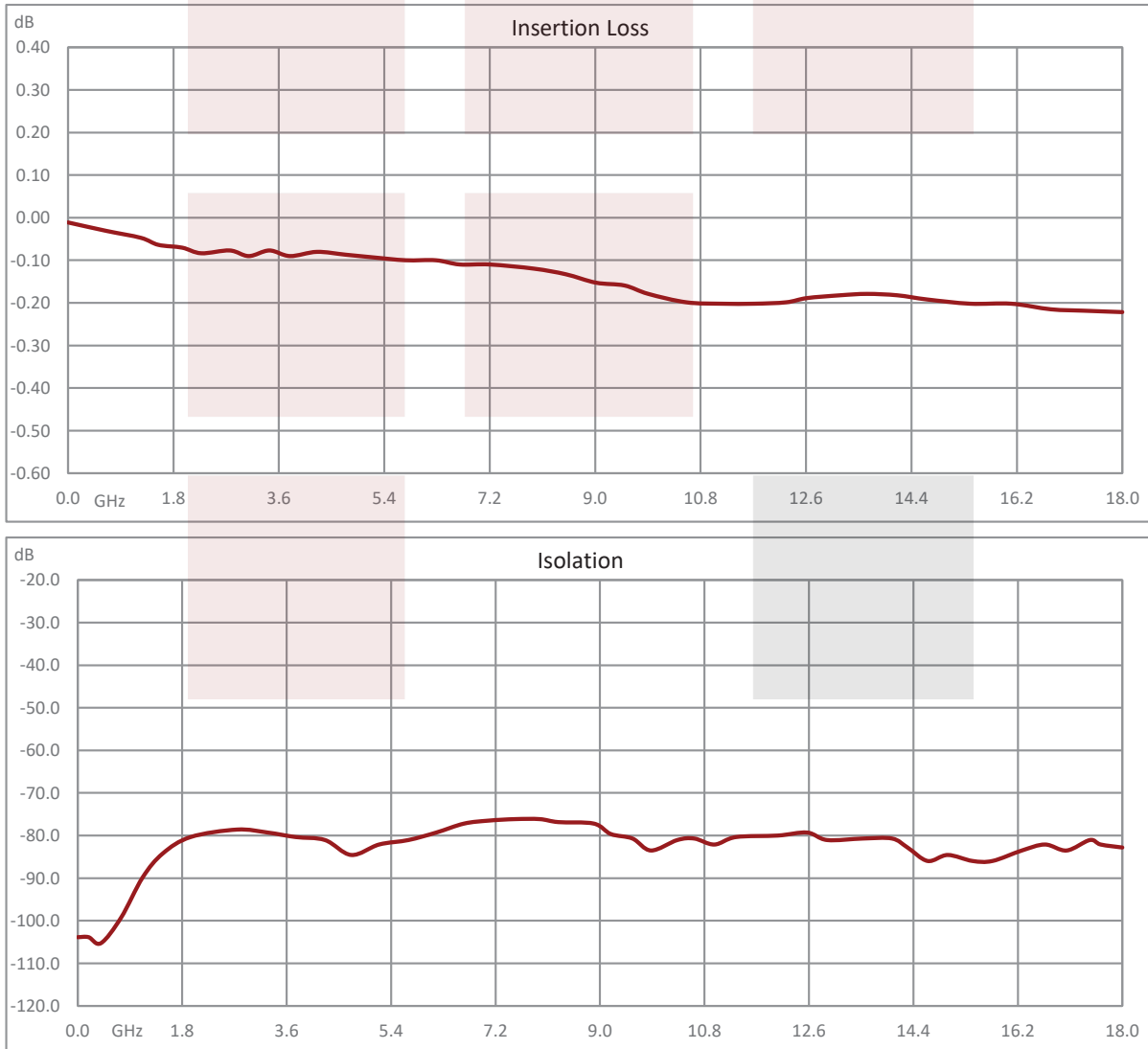
Humidity Moisture Resistance
Shock MIL-STD-202 Method 213, Cond. D 500G Non Operating
Vibration MIL-STD-202 Method 204, Cond. D 10G RMS Non Operating

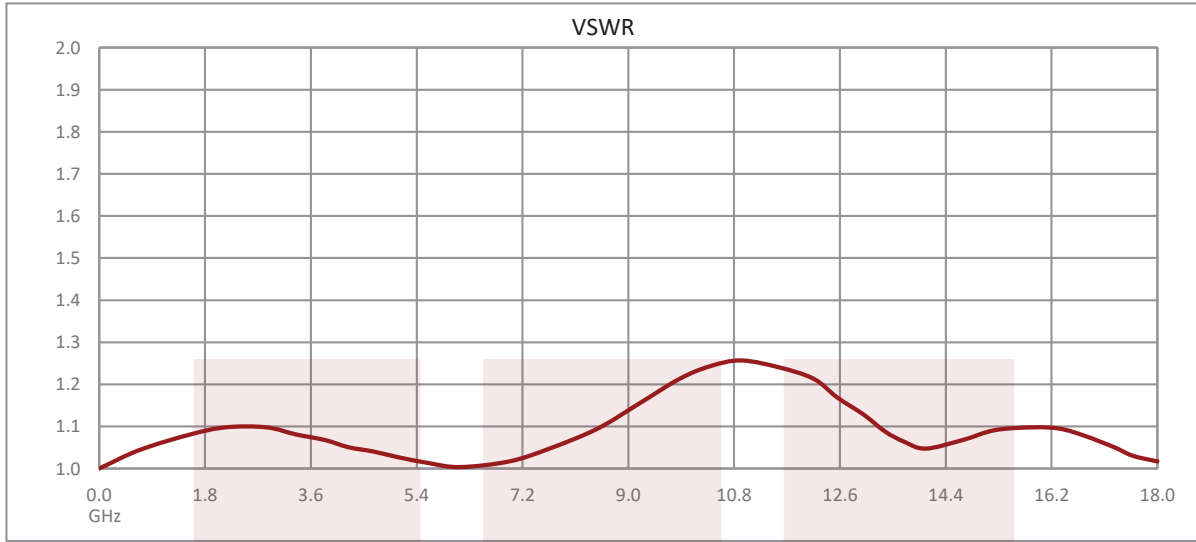
Compliance Certifications (see [product page](#) for current document)

Plotted and Other Data

Notes:

Typical Performance Data





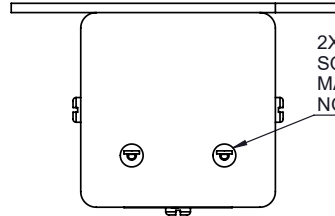
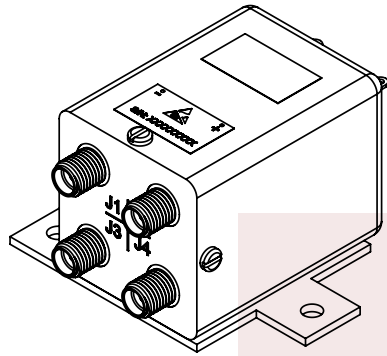
Transfer Failsafe Electro-Mechanical Relay Switch DC to 18 GHz , 90W, 28V, 2M Lifecycles, SMA from Fairview Microwave is in-stock and available to ship same-day. All of our RF/microwave products are available off-the-shelf from our ISO 9001:2008 certified facilities in Lewisville, Texas. Fairview Microwave is RF on-demand.

For additional information on this product, please click the following link: [Transfer Failsafe Electro-Mechanical Relay Switch DC to 18 GHz , 90W, 28V, 2M Lifecycles, SMA FMSW6433](https://www.fairviewmicrowave.com/transfer-failsafe-26.5-ghz-electro-mechanical-relay-switch-90w-28v-sma-fm-sw6433-p.aspx)

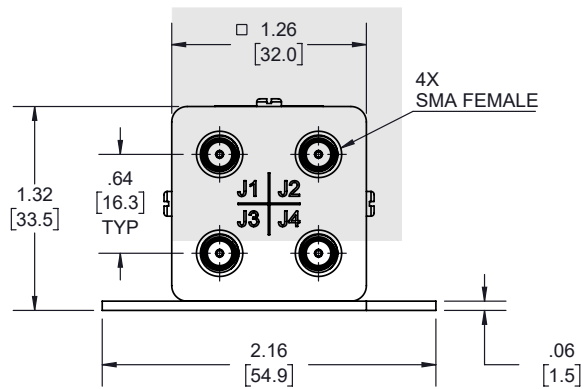
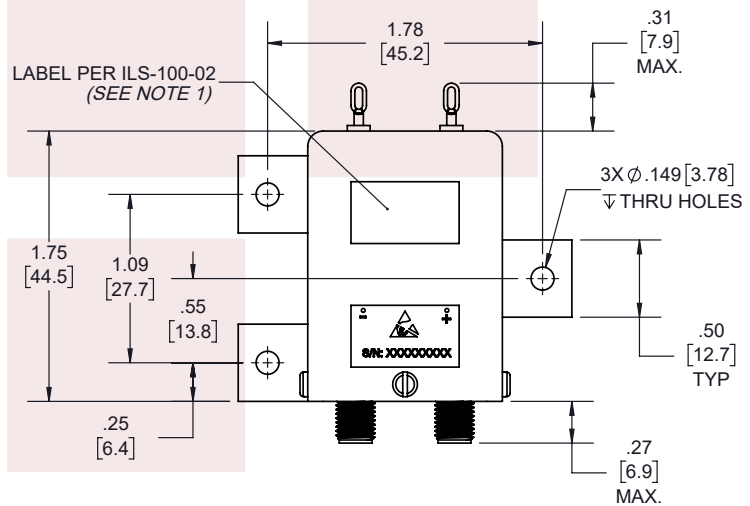
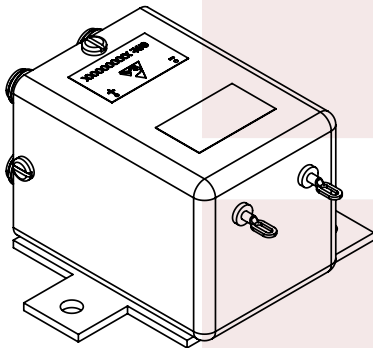
URL: <https://www.fairviewmicrowave.com/transfer-failsafe-26.5-ghz-electro-mechanical-relay-switch-90w-28v-sma-fm-sw6433-p.aspx>

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



2X 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 = ± 0.2 [5.1]	ANGLES ± 1°	12 [305] < L ≤ 60 [1524] = +2 [51] / -0
.XXX = ± 0.005 [0.13]		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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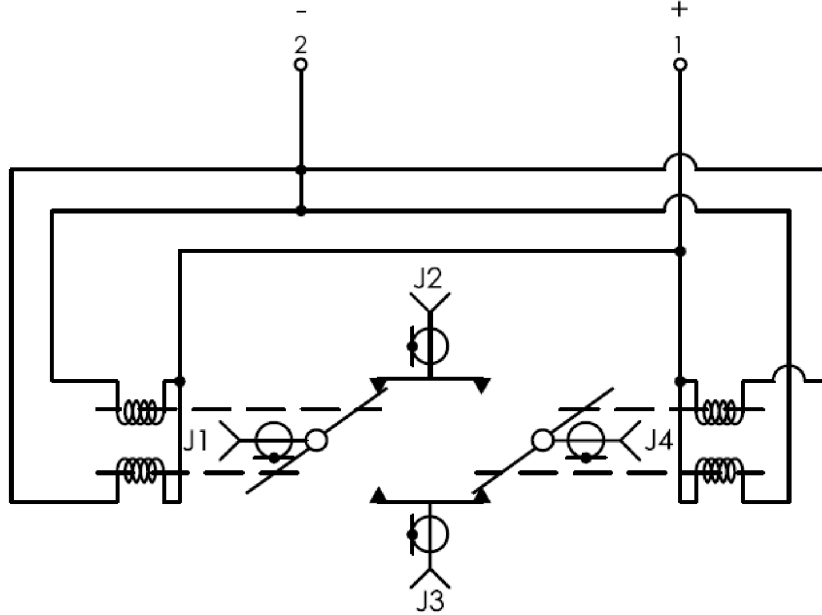
SHEET 1 OF 2

ALL DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.

SCALE N/A

SIZE A	CAGE CODE 3FKR5	DRAWN BY K.DANG	ITEM NO. FMSW6433	REV A
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T-Rev.D



SCHEMATIC

VOLTAGE	RF PATH
DE-ENERGIZED	J1-J2, J3-J4
ENERGIZED	J1-J3, J2-J4

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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. FMSW6433	REV A
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T-Rev.D