

Transfer Failsafe Electro-Mechanical Relay Switch DC to 40 GHz , Up To 10W, 12V, 2M Lifecycles, 2.92mm

The FMSW6432 is a Transfer electromechanical relay switch that operates across a wide frequency range of DC to 40 GHz and can handle up to 10 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 80 dB isolation. 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 2.92mm 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
Actuator Type
Switching Sequence

Transfer Failsafe
Break before Make

Description	Min	Typ	Max	Units
Frequency Range	DC		40	GHz
Impedance		50		Ohms
Operating Voltage	11	12	13	Volts
Actuating Current @ 12 Volts At +20°C			800	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 - 33	33 - 40	GHz
VSWR, Max	1.15:1	1.2:1	1.25:1	2:1	2.5:1	
Insertion Loss, Max	0.15	0.25	0.35	1	1.35	dB
Isolation, Min	70	70	65	50	50	dB

Mechanical Specifications

Size

Body Material and Plating
Package Type

Aluminum
Connectorized

Operating Life

2,000,000 Cycles

Connectors

RF Connector Type
Control Connector

2.92mm Female
Solder Terminals

Features:

- Transfer Electromechanical Relay Switch
- DC to 40 GHz Frequency Range
- Failsafe Actuator
- 2M Lifecycle Rating
- Insertion Loss 0.35 dB typ
- Isolation 80 dB typ
- VSWR 1.4:1 typ
- +12 Volt DC Bias
- Solder Terminal Pins for DC Control
- 2.92mm Female Connectors
- -25°C to +65°C Operating Temperature
- Up to 10 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 +65 deg C
Storage Range -55 to +100 deg C

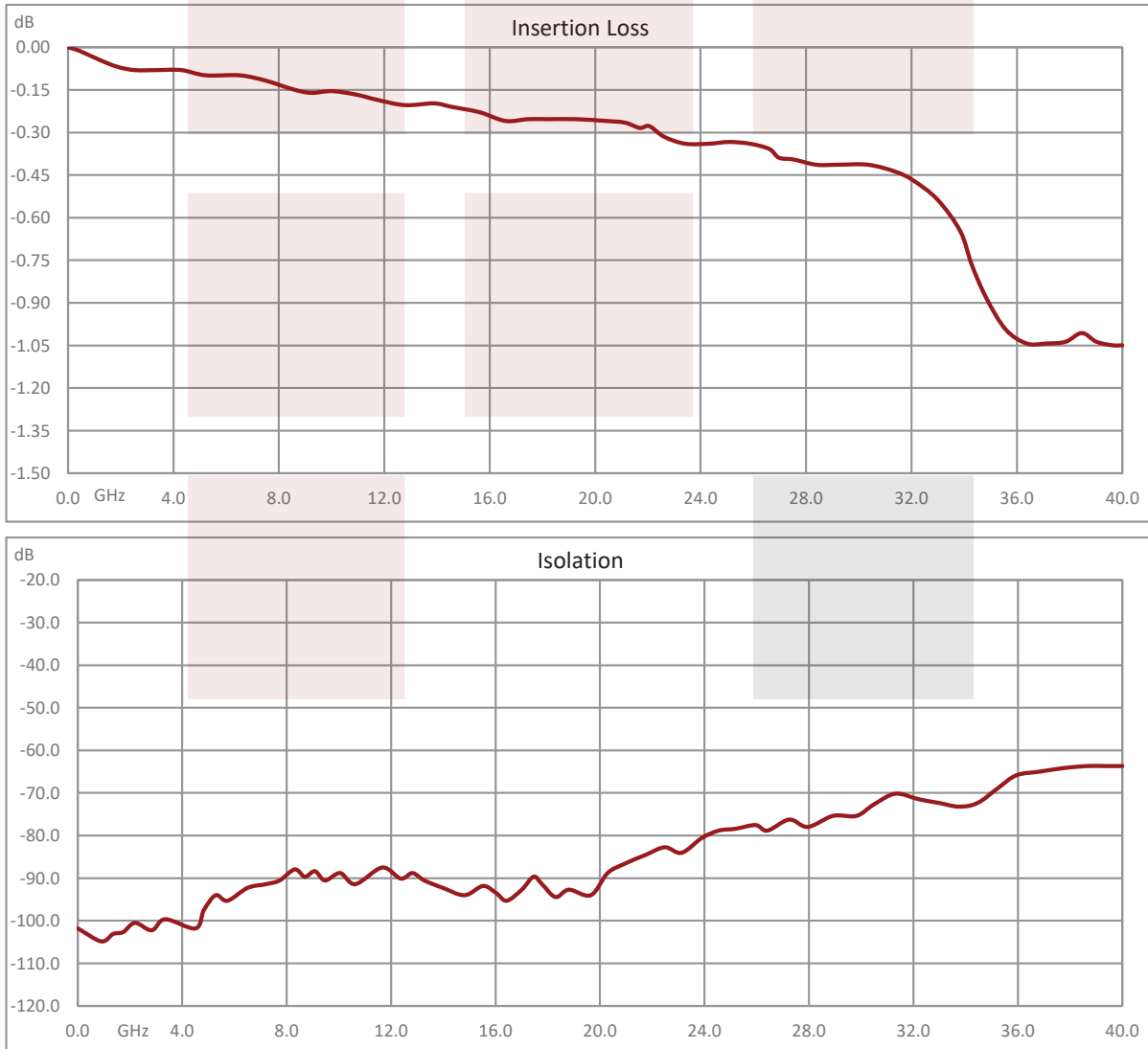
Humidity Moisture Resistance
Shock MIL-STD-202 Method 213, Cond. D 500G Non Operating
Vibration MIL-STD-202 Method 204, Cond. D 10G RMS Non Operating

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

Plotted and Other Data

Notes:

Typical Performance Data





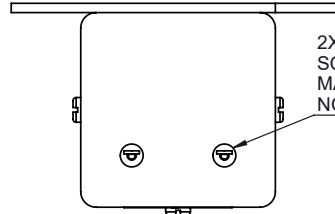
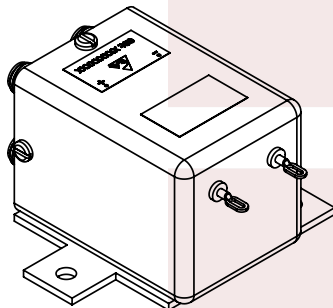
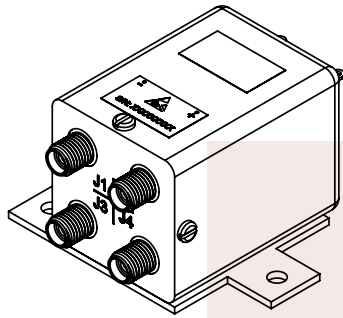
Transfer Failsafe Electro-Mechanical Relay Switch DC to 40 GHz , Up To 10W, 12V, 2M Lifecycles, 2.92mm from Fairview Microwave is in-stock and available to ship same-day. All of our RF/microwave products are available off-the-shelf from our ISO 9001:2008 certified facilities in Lewisville, Texas. Fairview Microwave is RF on-demand.

For additional information on this product, please click the following link: [Transfer Failsafe Electro-Mechanical Relay Switch DC to 40 GHz , Up To 10W, 12V, 2M Lifecycles, 2.92mm FMSW6432](https://www.fairviewmicrowave.com/transfer-failsafe-40-ghz-electro-mechanical-relay-switch-90w-12v-2.92mm-fmsw6432-p.aspx)

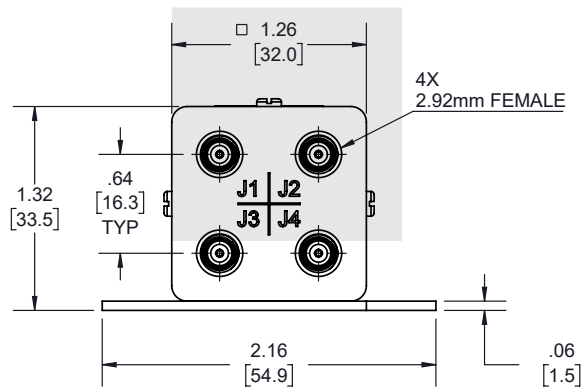
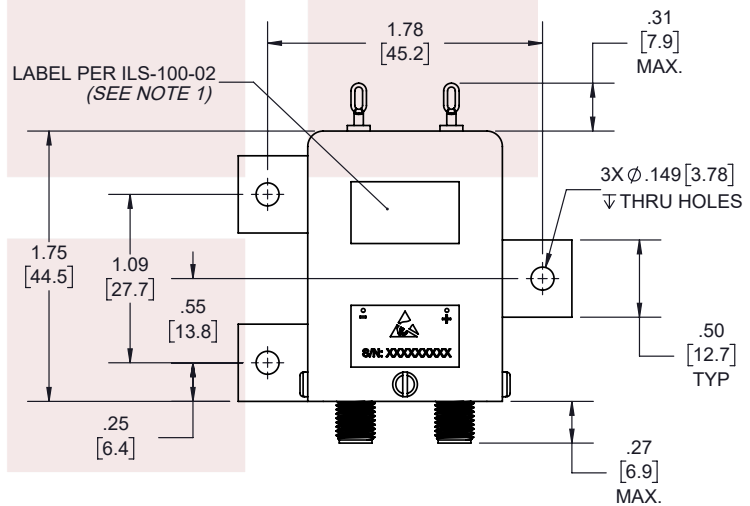
URL: <https://www.fairviewmicrowave.com/transfer-failsafe-40-ghz-electro-mechanical-relay-switch-90w-12v-2.92mm-fmsw6432-p.aspx>

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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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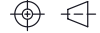
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Transfer Failsafe Electro-Mechanical Relay Switch DC to 40 GHz , Up To 10W, 12V, 2M Lifecycles, 2.92mm

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 = ± 0.02 [51]	± 1/32	12 [305] < L ≤ 60 [1524] = +2 [51] / -0
.XXX = ± 0.005 [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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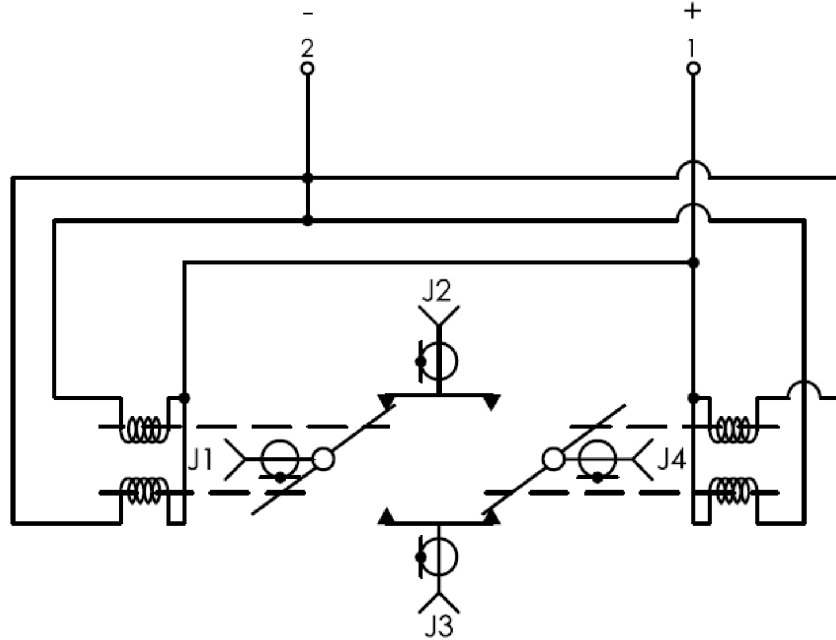
SHEET 1 OF 2

ALL DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.

SCALE N/A

SIZE A	CAGE CODE 3FKR5	DRAWN BY K.DANG	ITEM NO. FMSW6432	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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NOTES:
1. Transfer this label to the component here only. DC LABEL LOCATION FOR REFERENCE ONLY.

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	
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SIZE A	CAGE CODE 3FKR5	DRAWN BY K.DANG	ITEM NO. FMSW6432	REV A	SHEET 2 OF 2	

T-Rev.D