

Transfer Failsafe DC to 18 GHz Electro-Mechanical Relay Switch, up to 90W, 24V, SMA

The FMSW6389 is a Transfer (DPDT) 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 design features a Failsafe actuator and is rated for 2M life cycles for high reliability operation. Impressive performance includes insertion loss less than 0.2 dB typical and isolation greater than 70 dB typical. The Failsafe actuator has a +24 Vdc bias voltage, and operates over a temperature range of -25°C to +70°C. The rugged and compact package assembly supports SMA Female connectors and a 9 Pin D-Sub Connector 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	22	24	26	Volts
Actuating Current @ 24 Volts		110		mA
VSWR		1.2:1	1.4:1	
Insertion Loss		0.2	0.5	dB
Insertion Loss Repeatability				
Isolation	60	70		dB
Input Power (CW)			60	Watts
Switching Time			20	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
Power In, Typ (CW)	90	75	60			Watts

Mechanical Specifications

Size

Weight	0.2365 lbs [107.27 g]
Package Type	Connectorized
Operating Life	2,000,000 Cycles

Connectors

RF Connector Type	SMA Female
Control Connector	9 Pin D-Sub



Features:

- Transfer (DPDT)
- DC to 18 GHz Frequency Range
- Isolation greater than 70 dB typical
- 2M Cycle Min Operating Life
- +24 Volt DC
- 90 Watt average Power
- Failsafe Actuator
- -25 to +70°C Operating Temperature
- Insertion Loss as low as 0.2 dB Max
- VSWR as low as 1.2:1 max
- SMA Female RF connectors
- 9 Pin D-Sub Connector for DC Control
- Hot Switching Capability - Consult Factory
- S-Parameter Data available upon request

Applications:

- High Performance Relay Switch
- Military Communications
- Communications Systems
- Test & Measurement

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Environmental Specifications

Temperature

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

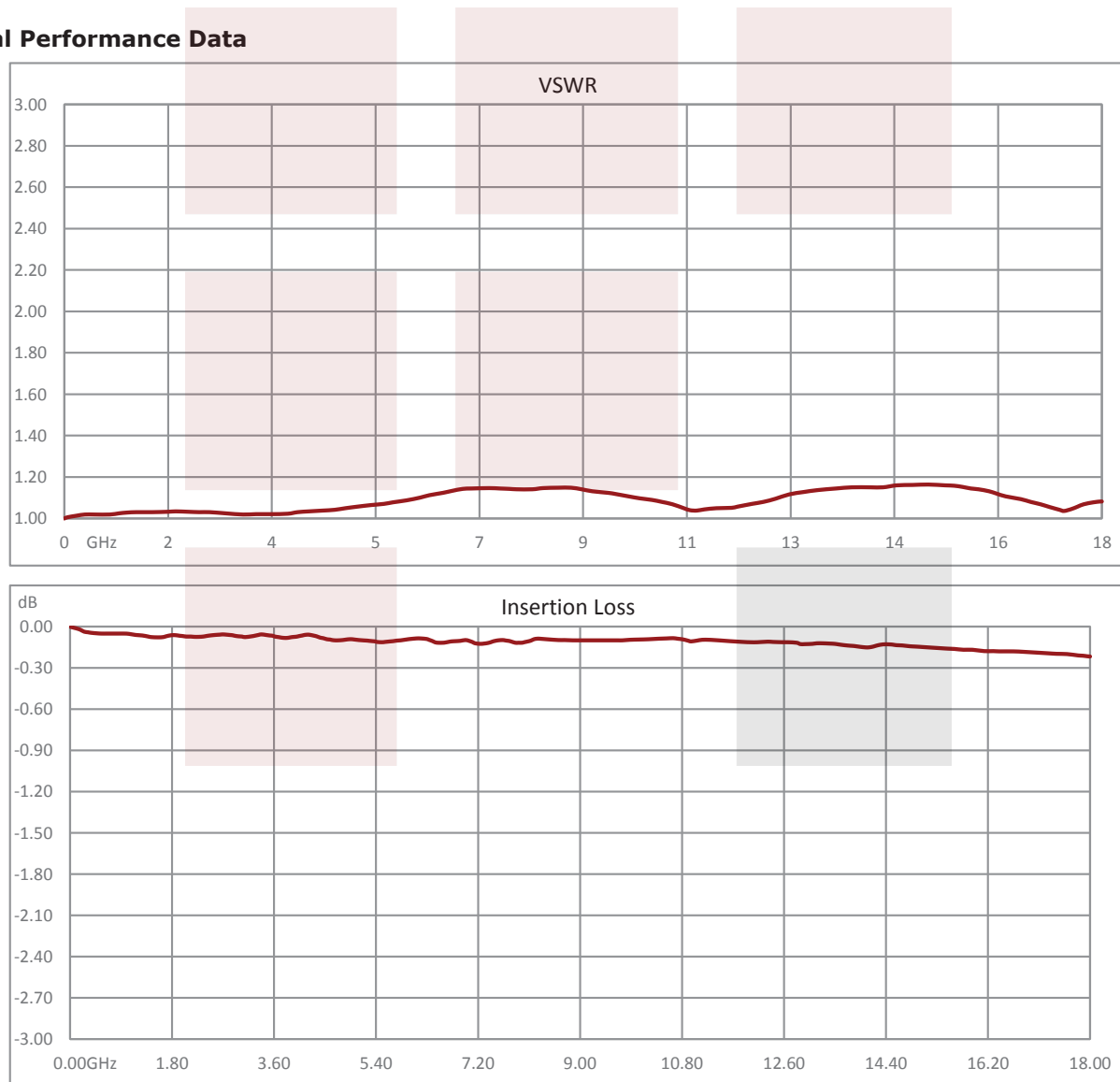
Shock MIL-STD-202 Method 213, Cond. D 500G Non Operating
Vibration MIL-STD-202 Method 214, Cond. D 10G RMS Non Operating

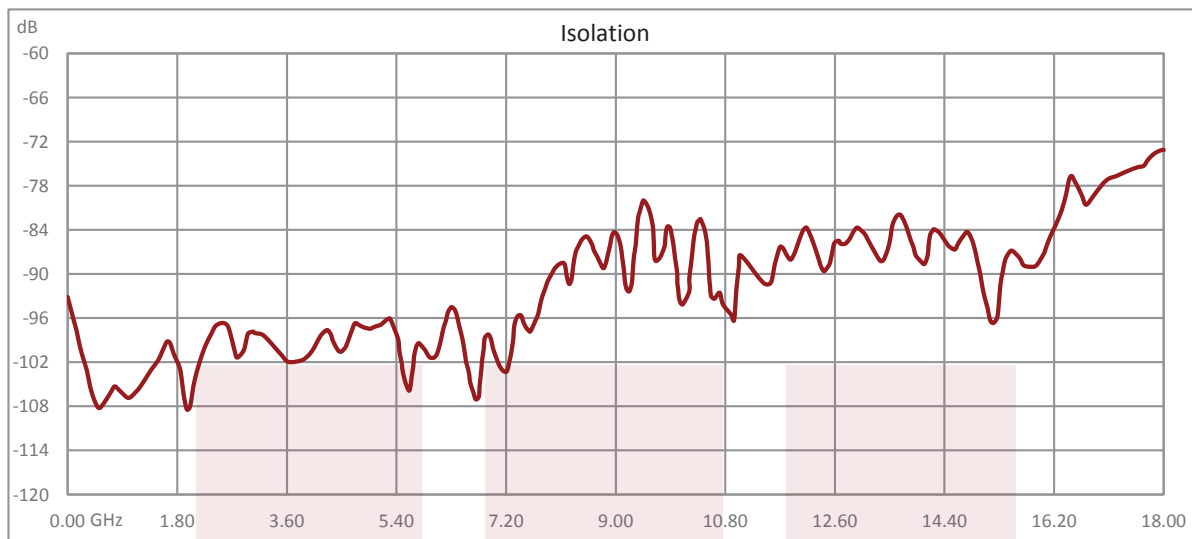
Compliance Certifications (see [product page](#) for current document)

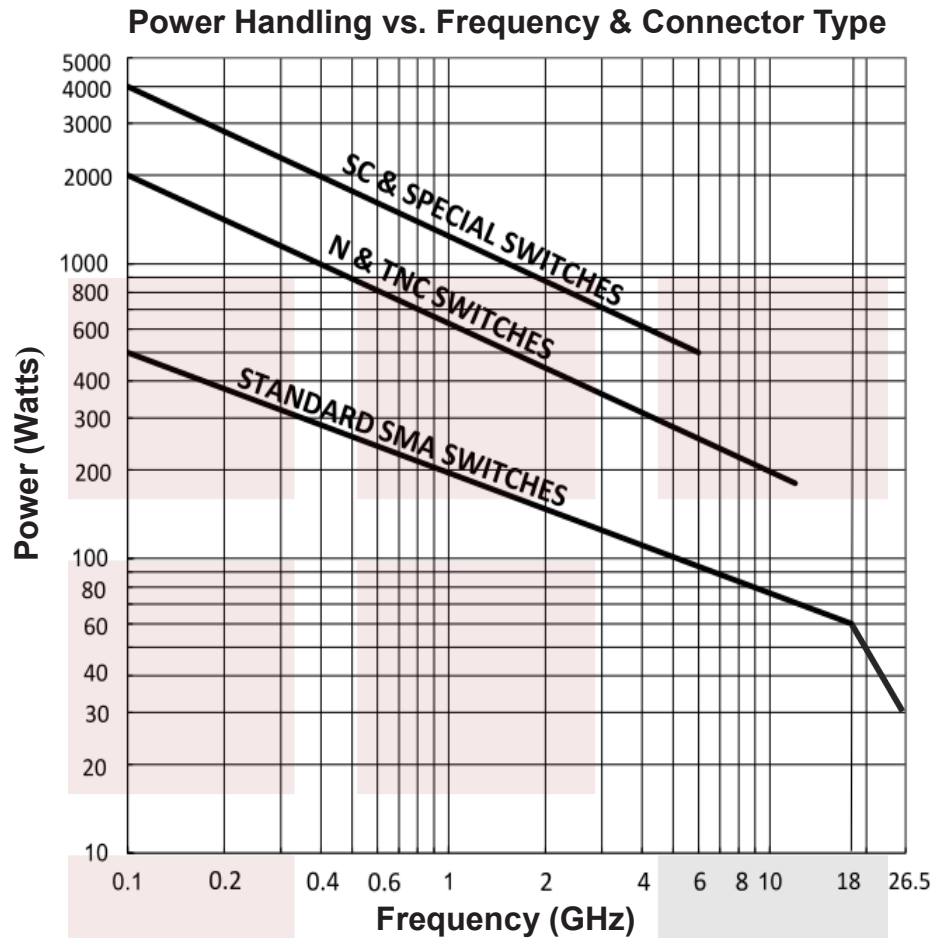
Plotted and Other Data

Notes:

Typical Performance Data







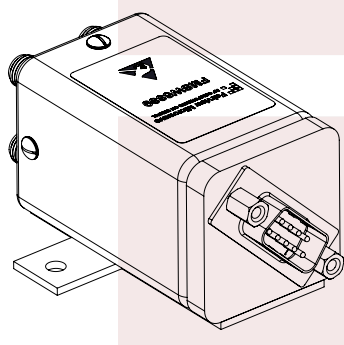
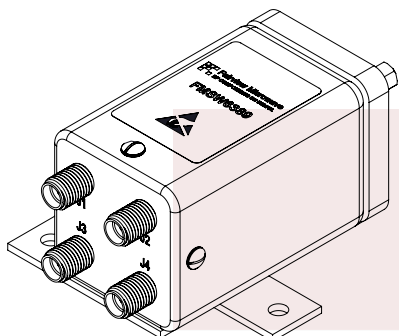
Environmental and Test Conditions:

- Ambient temperature of 25°C or less
- Altitude: Sea Level
- Load VSWR: 1.20:1 max.
- Cold Switching

For additional information on this product, please click the following link: [Transfer Failsafe DC to 18 GHz Electro-Mechanical Relay Switch, up to 90W, 24V, SMA FMSW6389](#)

URL: <https://www.fairviewmicrowave.com/transfer-failsafe-18-ghz-electro-mechanical-relay-switch-60w-24v-sma-fm-sw6389-p.aspx>

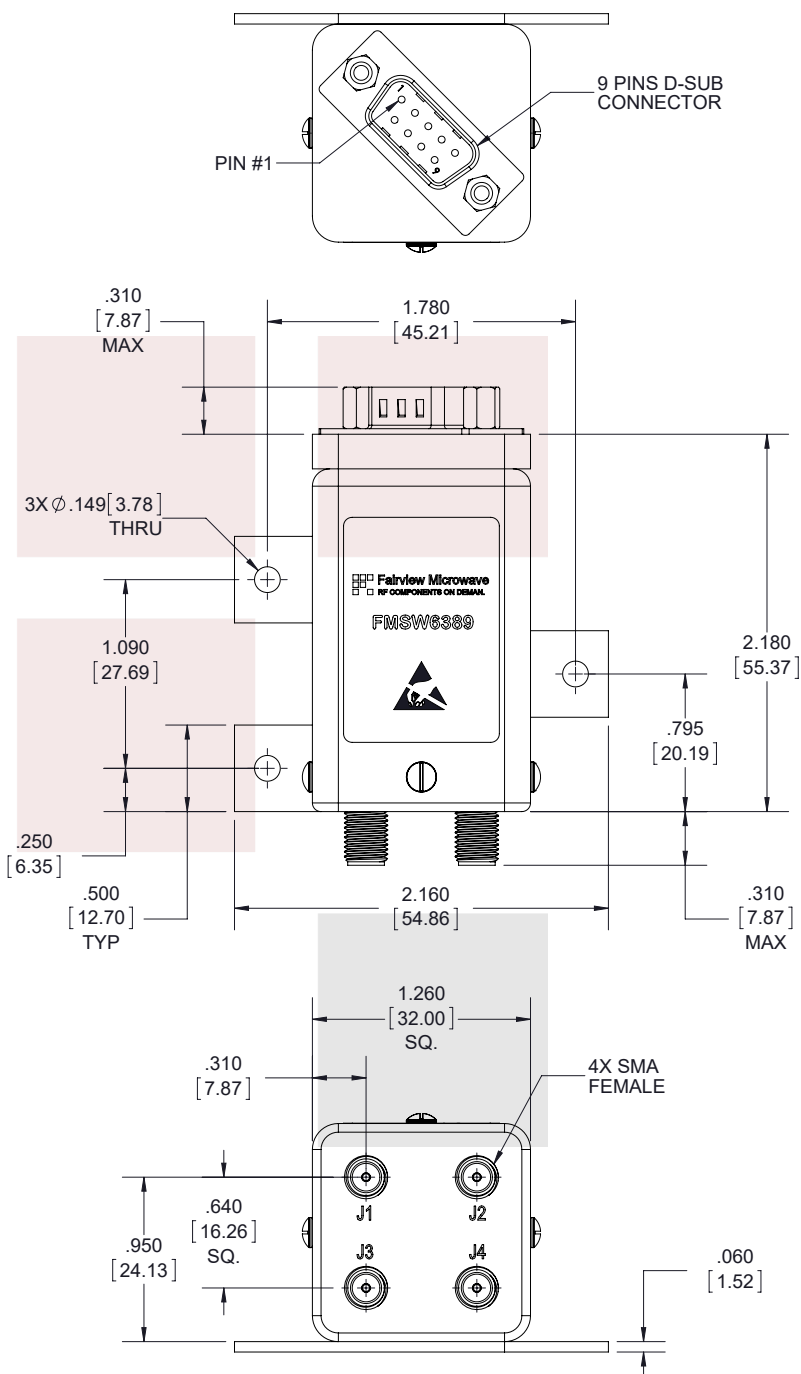
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STANDARD TOLERANCES

.X ±0.2
.XX ±0.01
.XXX ±0.005

*STANDARD TOLERANCES APPLY
ONLY TO DIMENSIONS IN INCHES



FAIRVIEW MICROWAVE INC.

ALLEN, TX 75013 WWW.FAIRVIEWMICROWAVE.COM

TITLE

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Relay Switch, up to 90W, 24V, SMA

NOTES:

1. UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE NOMINAL.
2. ALL SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE AT ANY TIME.
3. DIMENSIONS ARE IN INCHES [mm].

DWG NO

FMSW6389

CAGE CODE

3FKR5

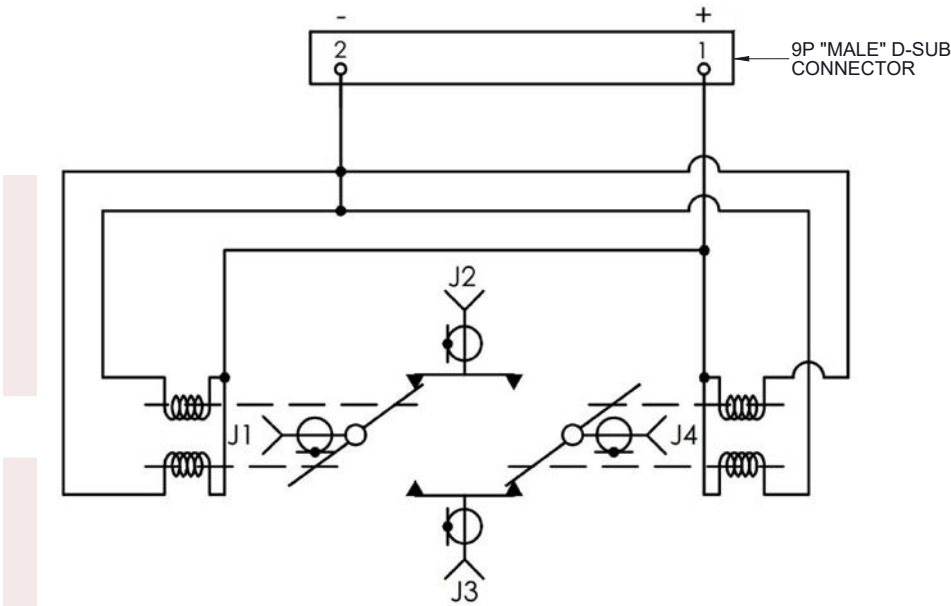
CAD FILE 090817

SHEET 1 OF 1

SCALE N/A

SIZE A

7361



SCHEMATIC SHOWN IN FAILSAFE POSITION

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

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SHEET

2 OF 2

SCALE

N/A

SIZE

A

7361