

Transfer Failsafe DC to 12 GHz Electro-Mechanical Relay Switch, up to 430W, 28V, N

The FMSW6385 is a Transfer (DPDT) electromechanical relay switch that operates across a wide frequency range of DC to 12 GHz and can handle up to 430 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. Insertion loss is specified from 0.7 dB maximum and Isolation from 60 dB minimum. The Failsafe actuator has a +28 Vdc bias voltage, and operates over a temperature range of -25°C to +70°C. The rugged and compact package assembly supports N 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		12	GHz
Impedance		50		Ohms
Operating Voltage	26	28	30	Volts
Actuating Current @ 28 Volts		90		mA
VSWR		1.2:1	1.7:1	
Insertion Loss		0.2	0.7	dB
Insertion Loss Repeatability				
Isolation	60	80		dB
Input Power (CW)			200	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
Power In, Typ (CW)	430	300	230	200		Watts

Mechanical Specifications

Size

Weight	0.58 lbs [263.08 g]
Package Type	Connectorized
Operating Life	2,000,000 Cycles

Connectors

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



Features:

- Transfer (DPDT)
- DC to 12 GHz Frequency Range
- Isolation greater than 80 dB typical
- 2M Cycle Min Operating Life
- +28 Volt DC
- 430 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
- N 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

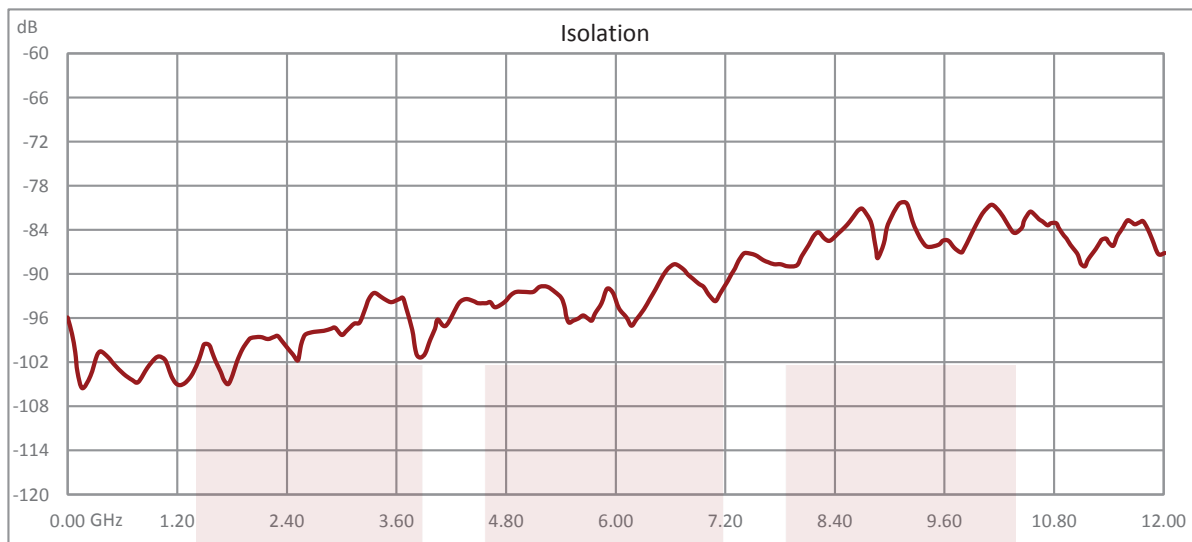
Compliance Certifications (see [product page](#) for current document)

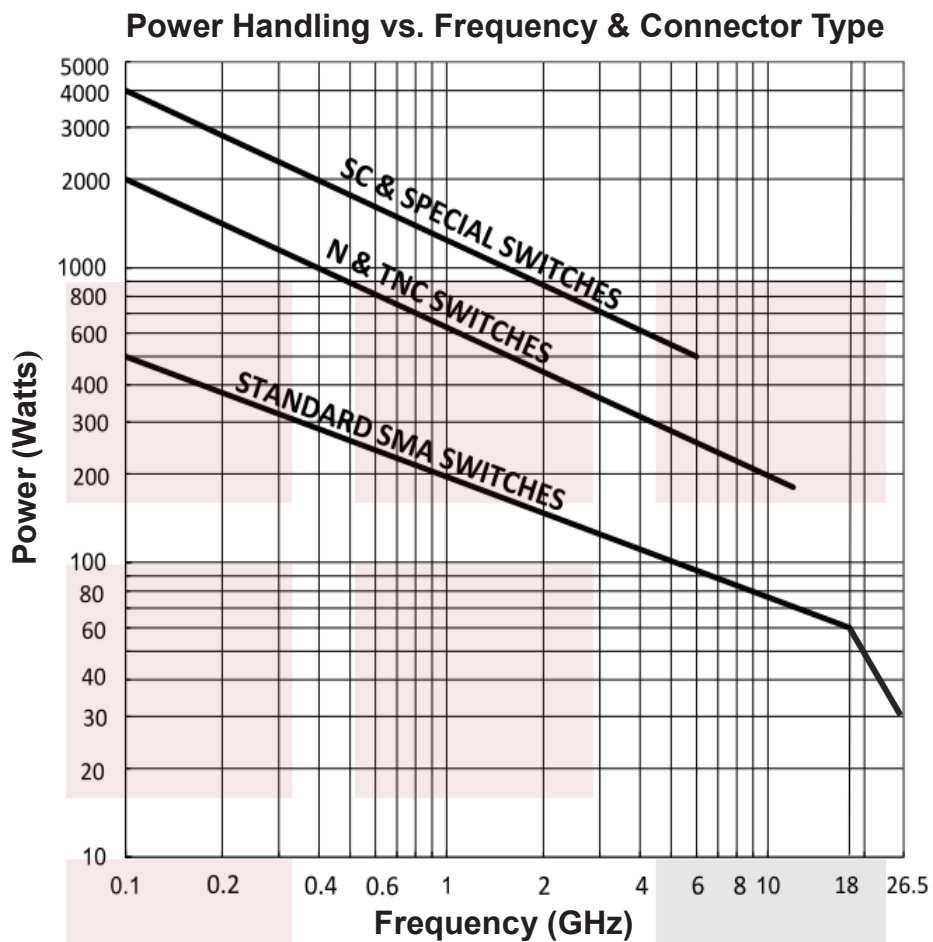
Plotted and Other Data

Notes:

Typical Performance Data





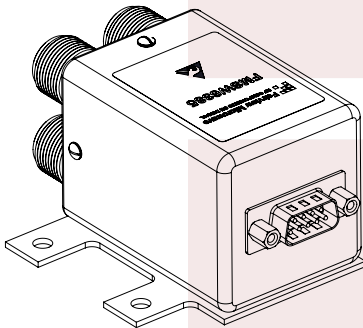
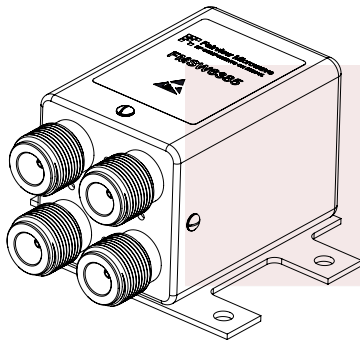


Environmental and Test Conditions:

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

URL: <https://www.fairviewmicrowave.com/transfer-failsafe-12-ghz-electro-mechanical-relay-switch-200w-28v-n-fm-sw6385-p.aspx>

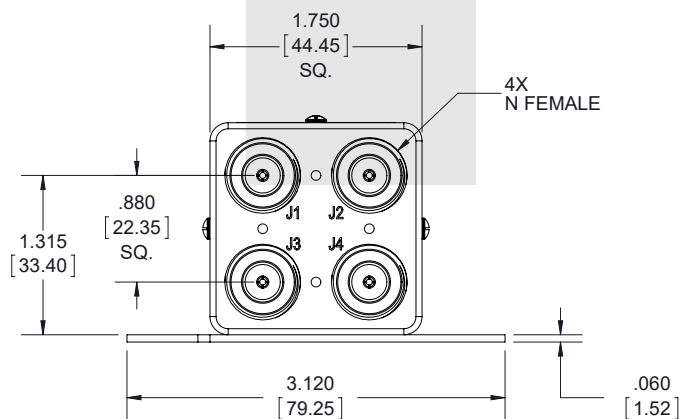
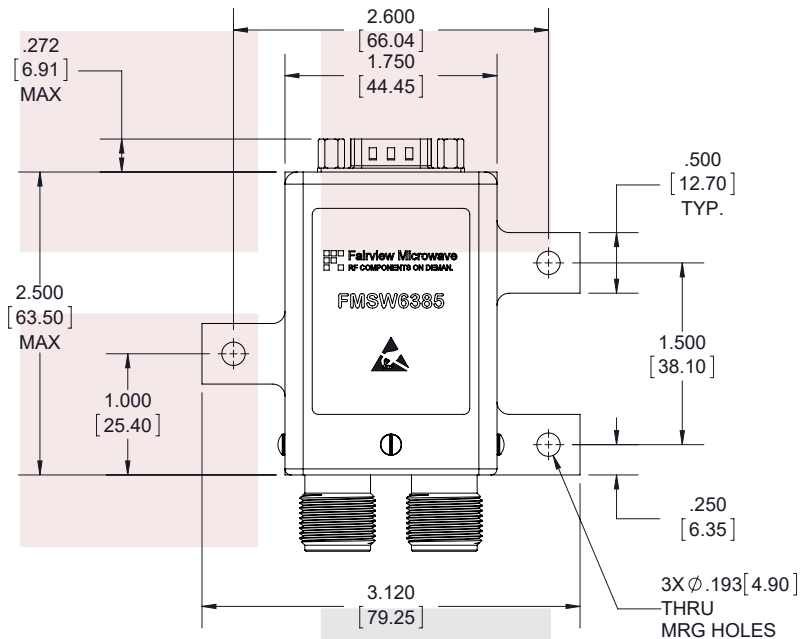
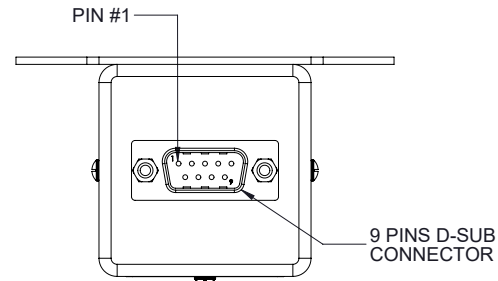
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STANDARD TOLERANCES

.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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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

FMSW6385

CAGE CODE

3FKR5

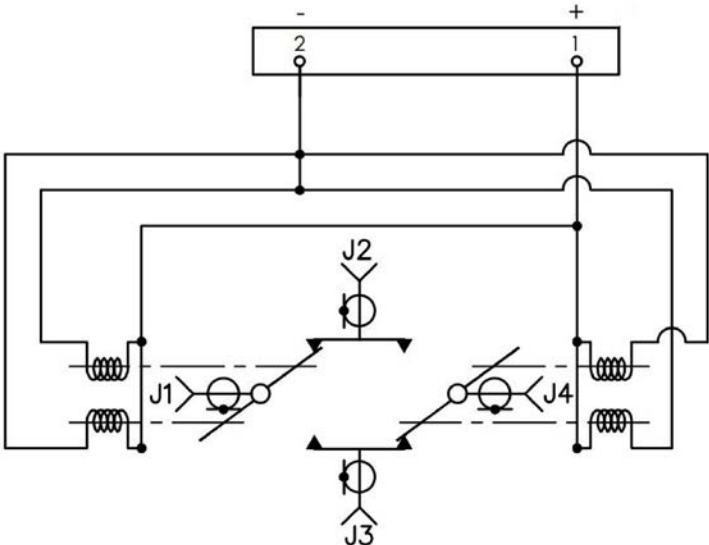
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SHEET 1 OF 1

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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.X ±0.2
.XX ±0.01
.XXX ±0.005

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SHEET 2 OF 2

SCALE N/A

SIZE A

7361