

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

The FMSW6386 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 TTL controlled 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
Actuator Options	TTL Logic
TTL Control	on: 2.4 to 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		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	0.582 lbs [263.99 g]
Package Type	Connectorized
Operating Life	2,000,000 Cycles



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
- TTL Control
- -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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Connectors

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

Environmental Specifications

Temperature

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

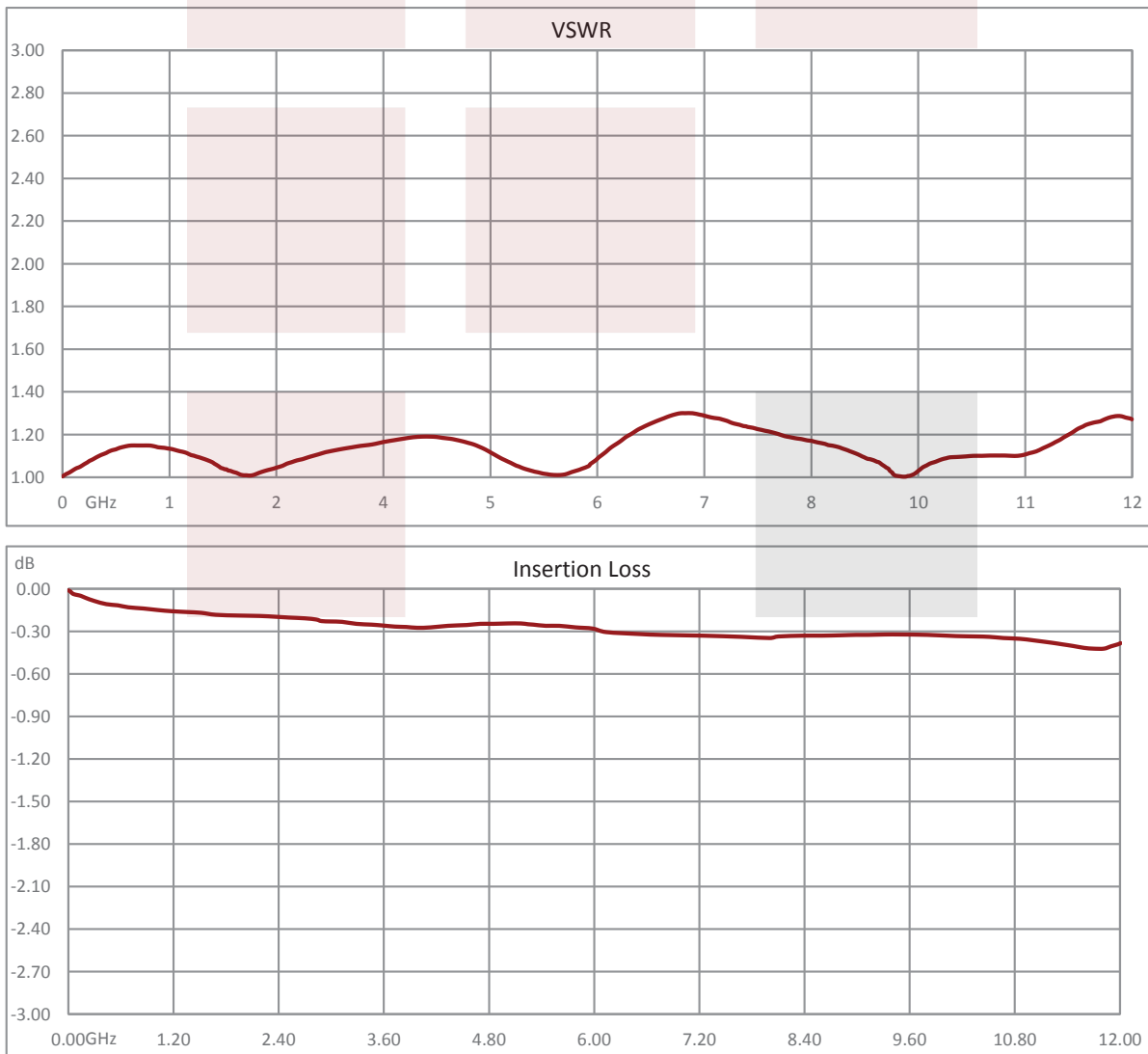
Shock MIL-STD-202 Method 213, Cond. D 500G Non Operating
 Vibration MIL-STD-202 Method 214, Cond. D 10G RMS Non Operating

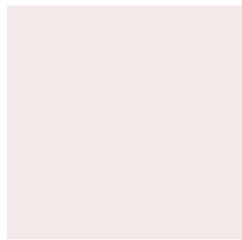
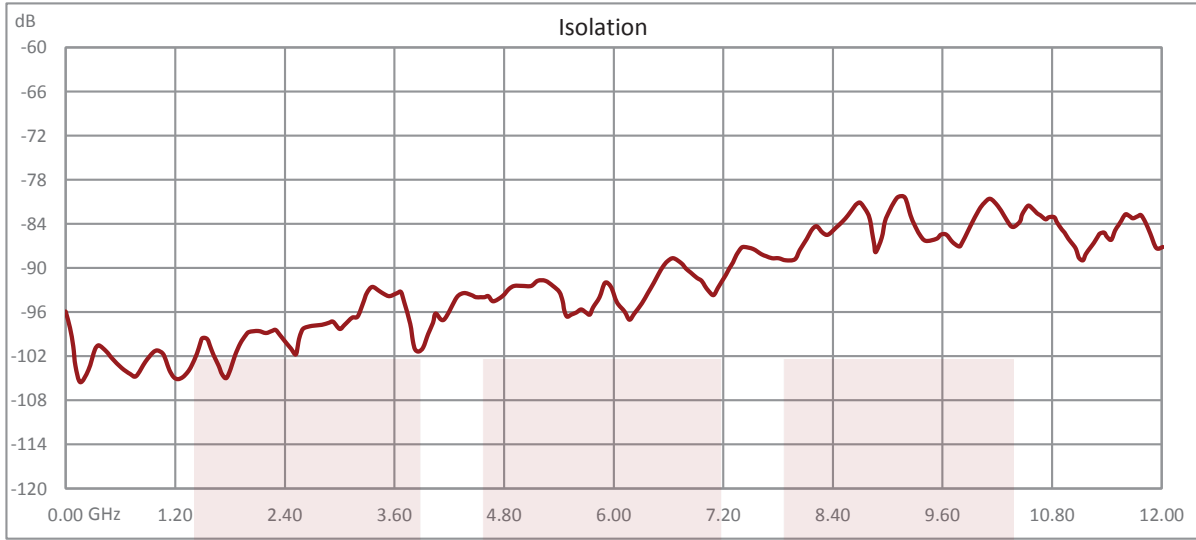
Compliance Certifications (see [product page](#) for current document)

Plotted and Other Data

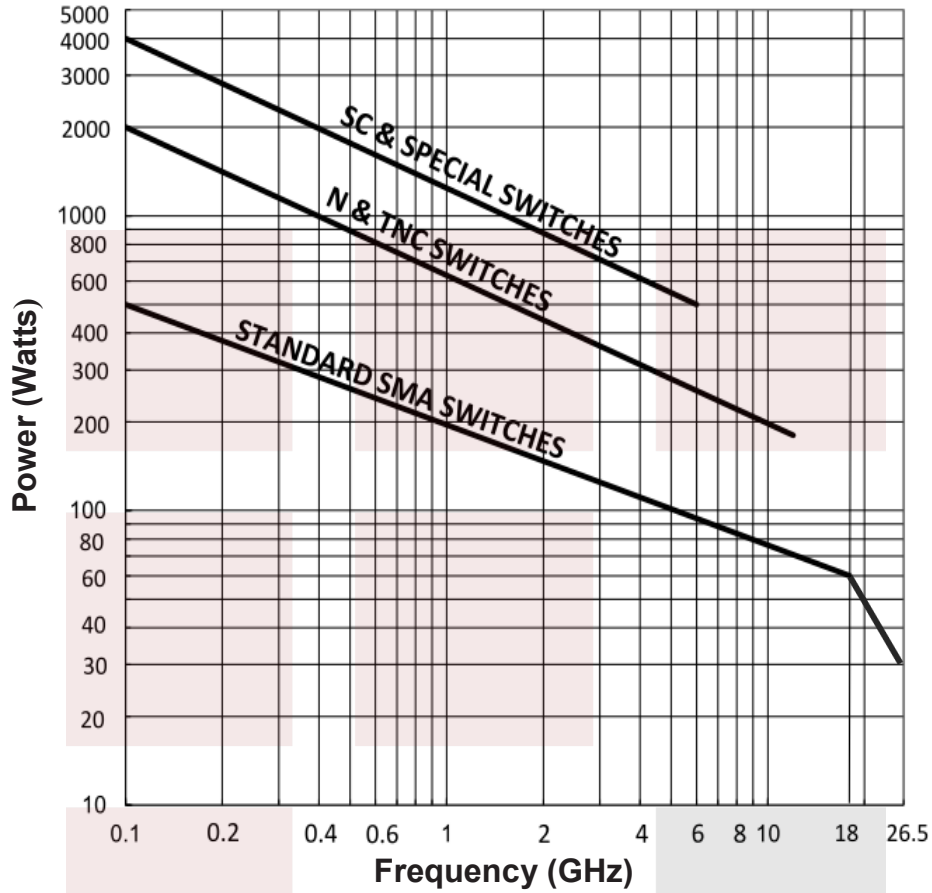
Notes:

Typical Performance Data





Power Handling vs. Frequency & Connector Type



Environmental and Test Conditions:

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

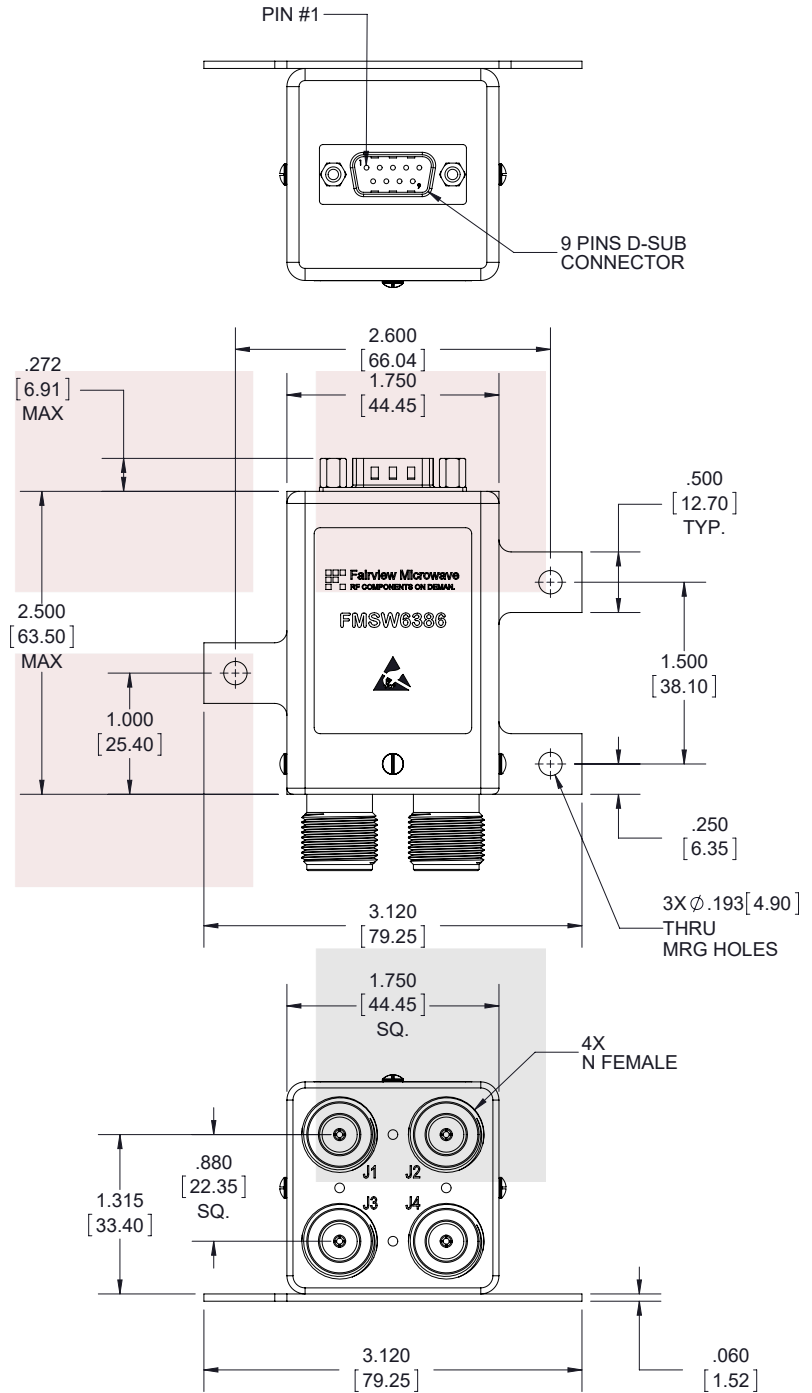
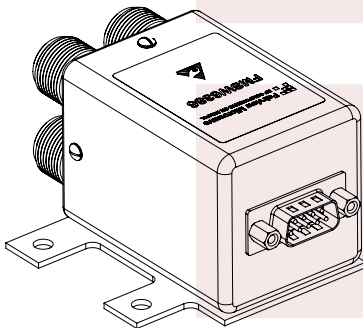
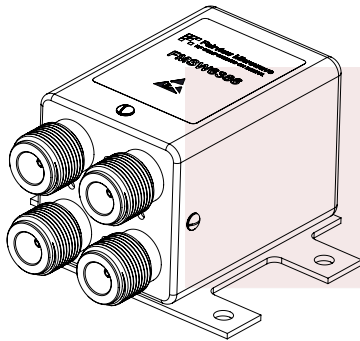
Transfer Failsafe DC to 12 GHz Electro-Mechanical Relay Switch, TTL, up to 430W, 28V, N from Fairview Microwave is in-stock and available to ship same-day. All of our RF/microwave products are available off-the-shelf from our ISO 9001:2008 certified facilities in Allen, Texas. Fairview Microwave is RF on-demand.

For additional information on this product, please click the following link: [Transfer Failsafe DC to 12 GHz Electro-Mechanical Relay Switch, TTL, up to 430W, 28V, N FMSW6386](#)

URL: <https://www.fairviewmicrowave.com/transfer-failsafe-12-ghz-electro-mechanical-relay-switch-ttl-200w-28v-n-fm-sw6386-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

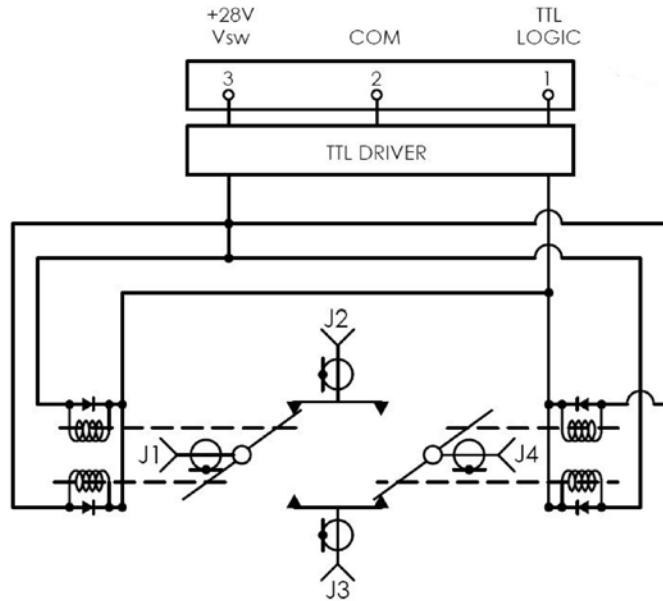
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NOTES:
 1. UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE NOMINAL.
 2. ALL SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE AT ANY TIME.
 3. DIMENSIONS ARE IN INCHES [mm].

TITLE
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 Relay Switch, TTL, up to 430W, 28V, N

DWG NO FMSW6386		CAGE CODE 3FKR5			
CAD FILE 090817	SHEET 1 OF 1	SCALE N/A	SIZE A	7361	



SCHEMATIC SHOWN IN FAILSAFE POSITION

VOLTAGE	LOGIC INPUT	RF PATH
DE-ENERGIZED	OFF	J1-J2, J3-J4
ENERGIZED	ON	J1-J3, J2-J4

STANDARD TOLERANCES

.X ±0.2
.XX ±0.01
.XXX ±0.005

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SHEET 2 OF 2

SCALE N/A

SIZE A

7361