

**SPDT Failsafe Electro-Mechanical Relay
Switch From DC to 12.4 GHz, 160 Watts
with Indicators, TTL, Diodes, N**

The FMSW6160 is an SPDT Electromechanical Relay Switch that operates over a wide frequency band from DC to 12.4 GHz and has a rating of 160 Watts input power (CW). Rated for 1M life cycles for high reliability operation, this design uses a Failsafe Actuator with a break before make configuration, TTL logic driver, position indicators and suppression diodes. The switch exhibits exceptional electrical performance specified from 0.2 dB max for insertion loss and 80 dB min for isolation, and guaranteed over -55°C to +85°C. The assembly requires an operating voltage of +12Vdc. External connectors include solder terminals and N female connectors.



Electrical Specifications

Switch Type	SPDT, Reflective
Actuator Type	Failsafe
Switching Sequence	Break Before Make
Actuator Options	Indicators, TTL Logic, Diodes
TTL Control	on: 2.4 to 5 Volts off: 0 to 0.8 Volts

Features:

- Single Pole Double Throw Relay Switch
- DC to 12.4 GHz Frequency Range
- 1M Cycle Operating Life Min
- Failsafe Actuator
- TTL Logic Driver, Position Indicators, Suppression Diodes
- Insertion Loss 0.6 dB max
- Isolation 60 dB min
- 160 Watts Avg Power Max
- Switching Sequence Break Before Make

Description	Min	Typ	Max	Units
Frequency Range	DC		12.4	GHz
Impedance		50		Ohms
Operating Voltage		12		Volts
Actuating Current @ 12 Volts		270		mA
VSWR			1.6:1	
Insertion Loss			0.6	dB
Isolation	60			dB
Input Power (CW) (at 12.4 GHz)			160	Watts

Applications:

- Test & Measurement
- Communications System
- Instrumentation

Performance by Frequency

Description	F1	F2	F3	F4	F5	Units
Frequency Range	DC - 2	2 - 4	4 - 12.4			GHz
VSWR, Max	1.15:1	1.2:1	1.6:1			
Insertion Loss, Max	0.2	0.25	0.6			dB
Isolation, Min	80	80	60			dB

Mechanical Specifications

Size	
Length	2.2 in [55.88 mm]
Width/Diameter	2.46 in [62.48 mm]
Height	0.9 in [22.86 mm]
Weight	0.53 lbs [240.4 g]
Body Material and Plating	Aluminum
Package Type	Connectorized Module
Operating Life	1,000,000 Cycles
Switching Time	50 ms Max

Fairview Microwave
1130 Junction Dr. #100
Allen, TX 75013
Tel: 1-800-715-4396 / (972) 649-6678
Fax: (972) 649-6689
www.fairviewmicrowave.com
sales@fairviewmicrowave.com

Connectors

RF Connector Type	N Female
RF Connector Contact Material & Plating	Beryllium Copper, Gold
RF Connector Body Material & Plating	Passivated Stainless Steel
Control Connector	Solder Pin

Environmental Specifications

Temperature

Operating Range	-55 to +85 deg C
ESD Sensitivity	ESD Sensitive Material. Transport material in Approved ESD bags. Handle in approved ESD Workstation.



Environmental Specification Notes:
 Designed to Meet MIL-DTL-3928

Compliance Certifications (visit www.FairviewMicrowave.com for current document)

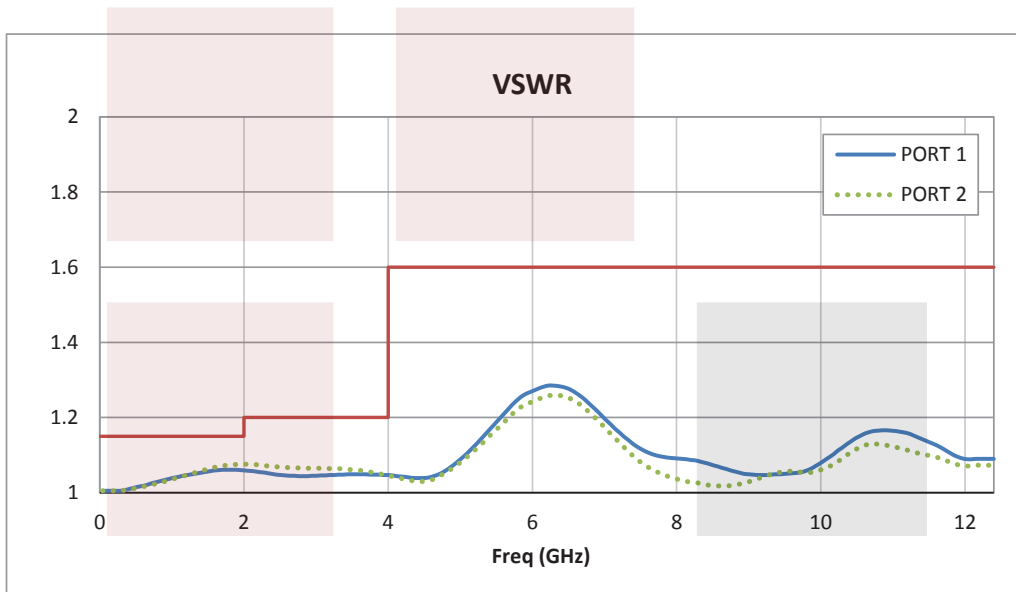
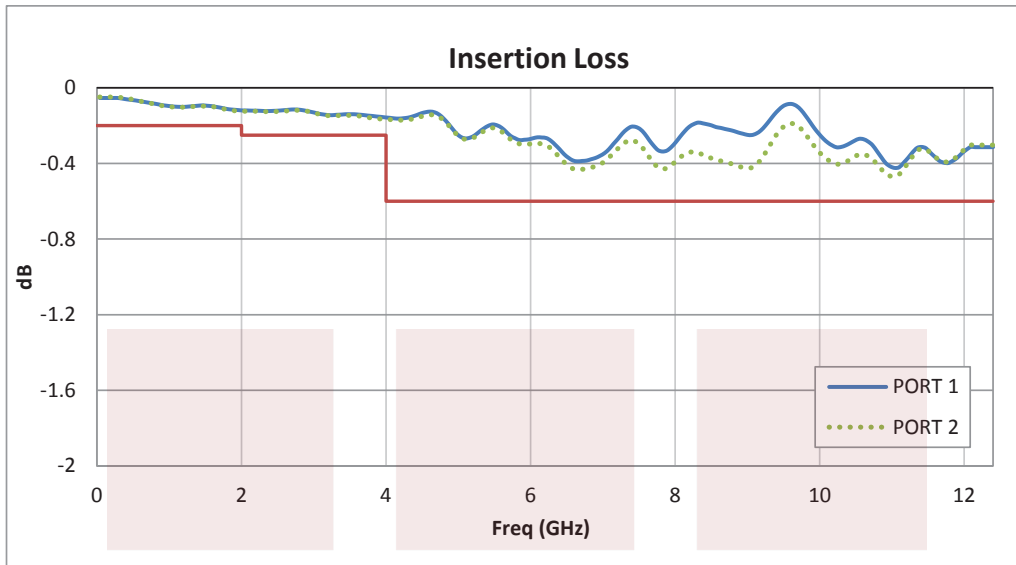
Not RoHS Compliant

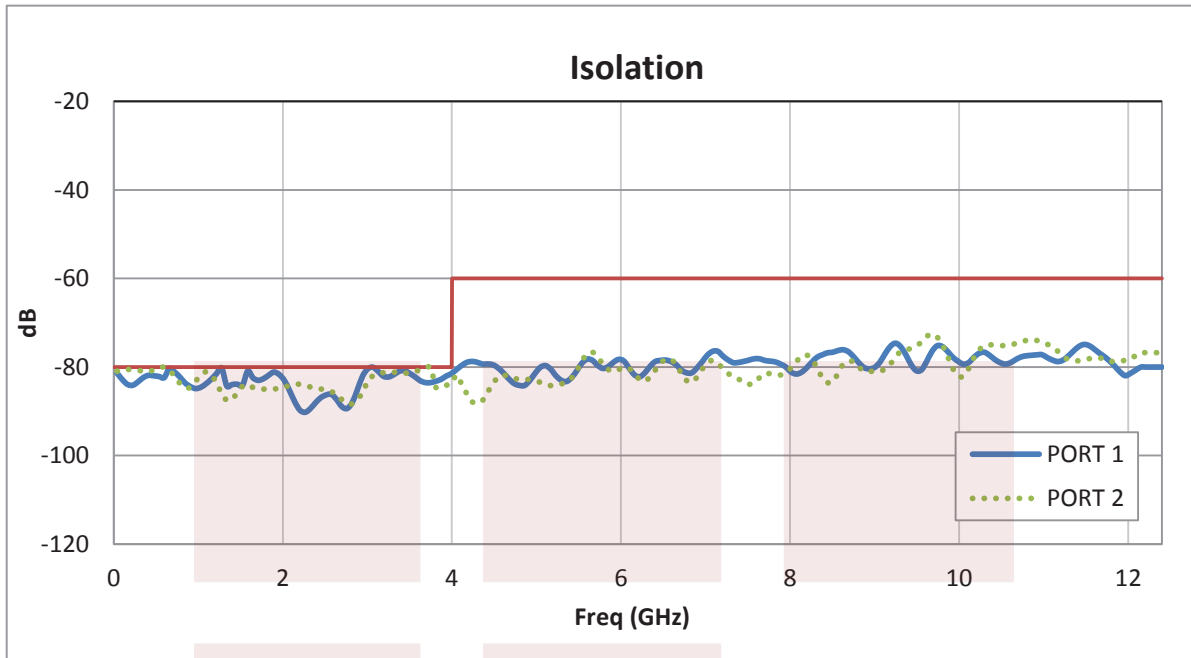
Plotted and Other Data

Notes:



Typical Performance Data



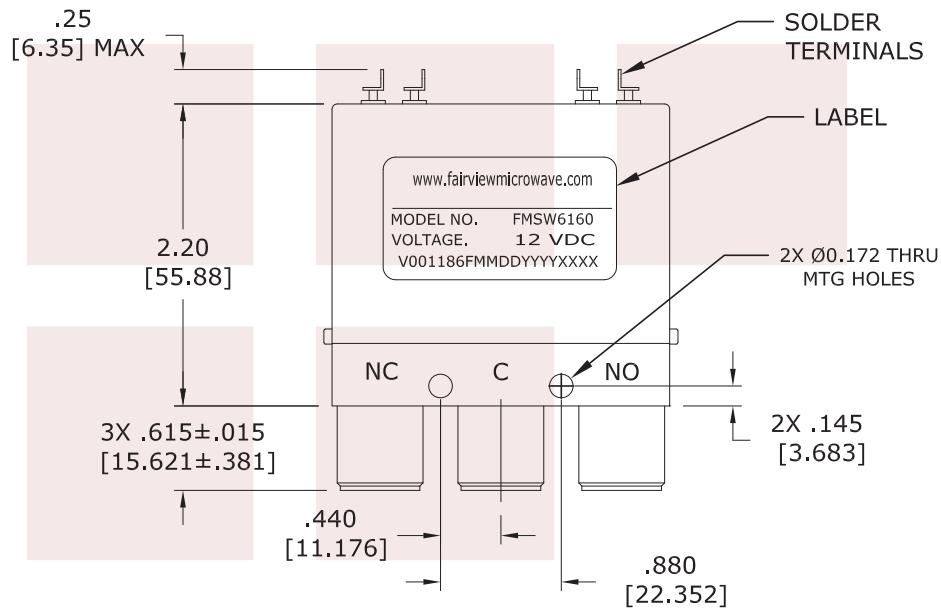
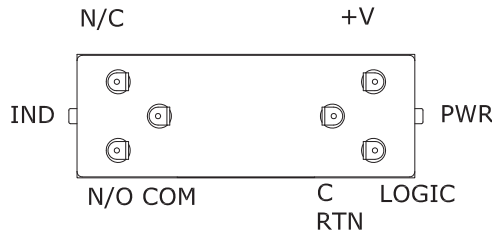


SPDT Failsafe Electro-Mechanical Relay Switch From DC to 12.4 GHz, 160 Watts with Indicators, TTL, Diodes, N from Fairview Microwave is in-stock and available to ship same-day. All of our RF/microwave products are available off-the-shelf from our ISO 9001:2008 certified facilities in Allen, Texas. Fairview Microwave is RF on-demand.

For additional information on this product, please click the following link: [SPDT Failsafe Electro-Mechanical Relay Switch From DC to 12.4 GHz, 160 Watts with Indicators, TTL, Diodes, N FMSW6160](http://www.fairviewmicrowave.com/spdt-failsafe-electro-mechanical-relay-switch-indicators-ttl-fmsw6160-p.aspx)

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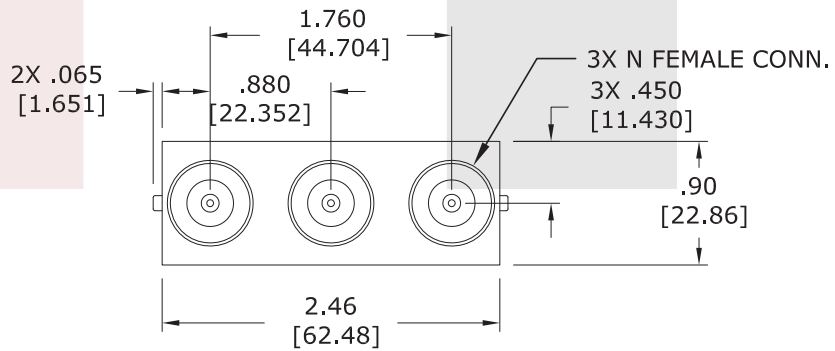
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UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. TOLERANCES ARE:

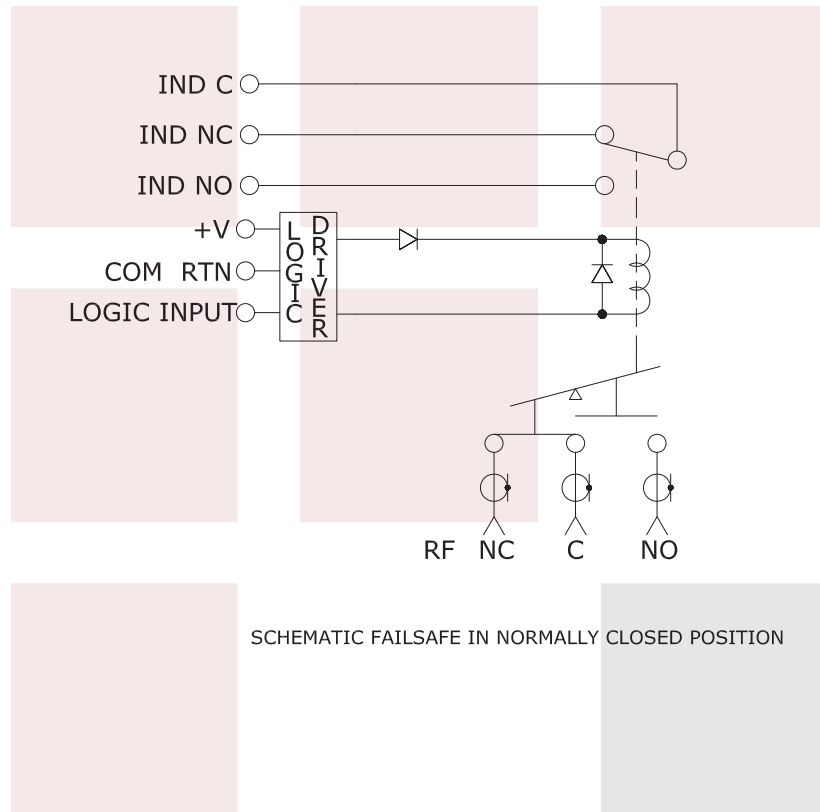
DECIMALS	ANGLES
.XX ± .03 (0.76)	±1°
.XXX ± .010 (0.254)	FRACTIONS ±1/16

HOLE DIAMETER	TOLERANCE
.0135 TO .125 (0.343 TO 3.175)	+.004 TO -.001 (+0.102 TO -0.025)
.126 TO .250 (3.200 TO 6.350)	+.005 TO -.001 (+0.127 TO -0.025)
.251 TO .500 (6.375 TO 12.700)	+.006 TO -.001 (+0.152 TO -0.025)
.501 TO .750 (12.725 TO 19.050)	+.008 TO -.001 (+0.203 TO -0.025)
.751 TO 1.000 (19.075 TO 25.400)	+.010 TO -.001 (+0.254 TO -0.025)
1.001 TO 2.000 (25.425 TO 50.800)	+.012 TO -.001 (+0.305 TO -0.025)



* THESE DIMENSIONS AND TOLERANCES SUPERSEDE NOTE #1 ON TITLE BLOCK.

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TITLE SPDT Failsafe Electro-Mechanical Relay Switch From DC to 12.4 GHz, 160 Watts with Indicators, TTL, Diodes, N		DWG NO FMSW6160		CAGE CODE 3FKR5	
CAD FILE	051515	SHEET	SCALE	N/A	SIZE A 2233



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