

SPDT Latching Electro-Mechanical Relay Switch From DC to 12.4 GHz, 50 Watts with Self Cut Off, Diodes, N

The FMSW6154 is an SPDT Electromechanical Relay Switch that operates over a wide frequency band from DC to 12.4 GHz and has a rating of 50 Watts input power (CW). Rated for 1M life cycles for high reliability operation, this design uses a Latching Actuator with a break before make configuration, self cut off circuitry 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	Latching
Switching Sequence	Break Before Make
Actuator Options	Self Cut Off, Diodes

Description	Min	Typ	Max	Units
Frequency Range	DC		12.4	GHz
Impedance		50		Ohms
Operating Voltage		12		Volts
Actuating Current @ 12 Volts		200		mA
VSWR			1.6:1	
Insertion Loss			0.6	dB
Isolation	60			dB
Input Power (CW) (at 12.4 GHz)			50	Watts

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	20 ms Max

Features:

- Single Pole Double Throw Relay Switch
- DC to 12.4 GHz Frequency Range
- 1M Cycle Operating Life Min
- Latching Actuator
- Self Cut Off, Suppression Diodes
- Insertion Loss 0.6 dB max
- Isolation 60 dB min
- 50 Watts Avg Power Max
- Switching Sequence Break Before Make

Applications:

- Test & Measurement
- Communications System
- Instrumentation

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)

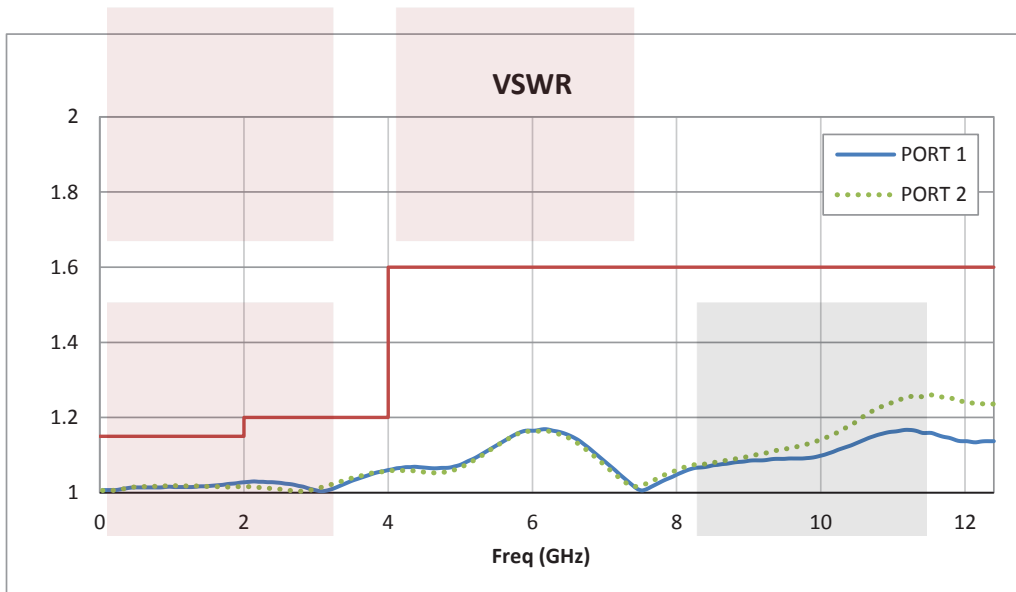
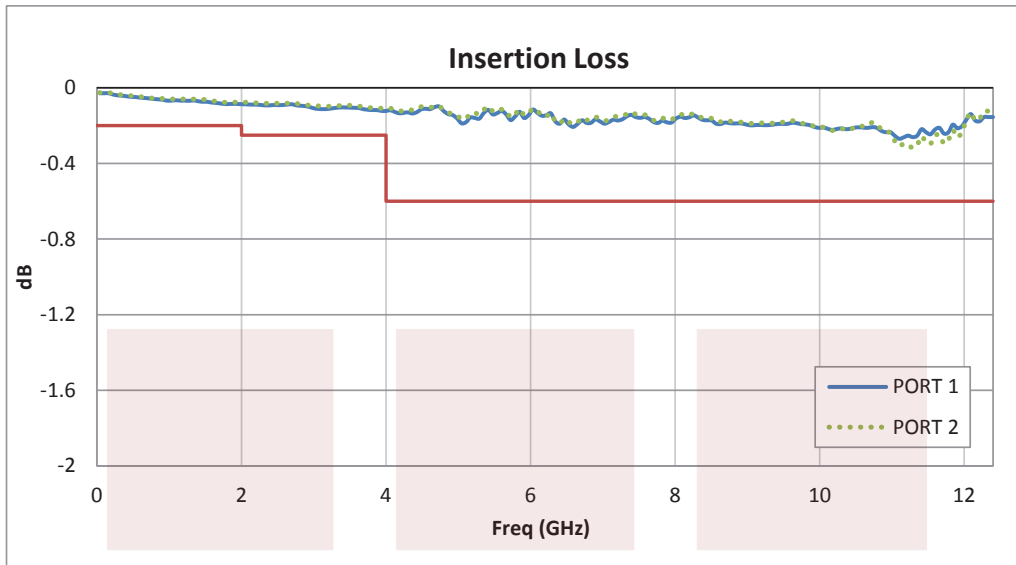
Not RoHS Compliant

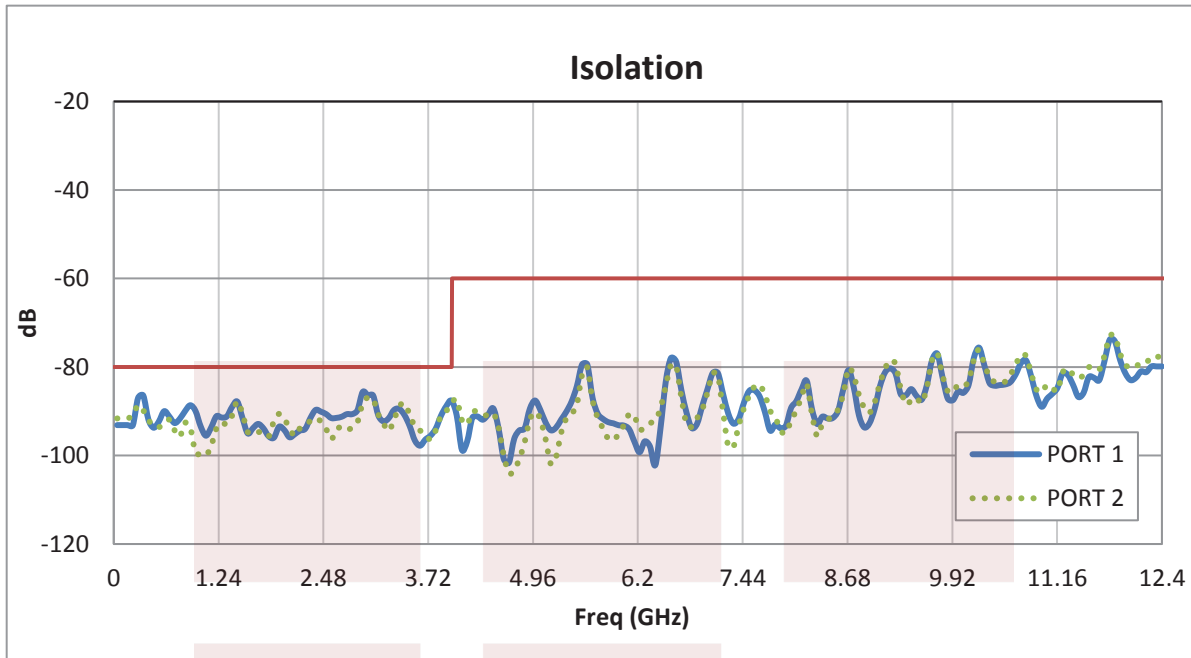
Plotted and Other Data

Notes:



Typical Performance Data



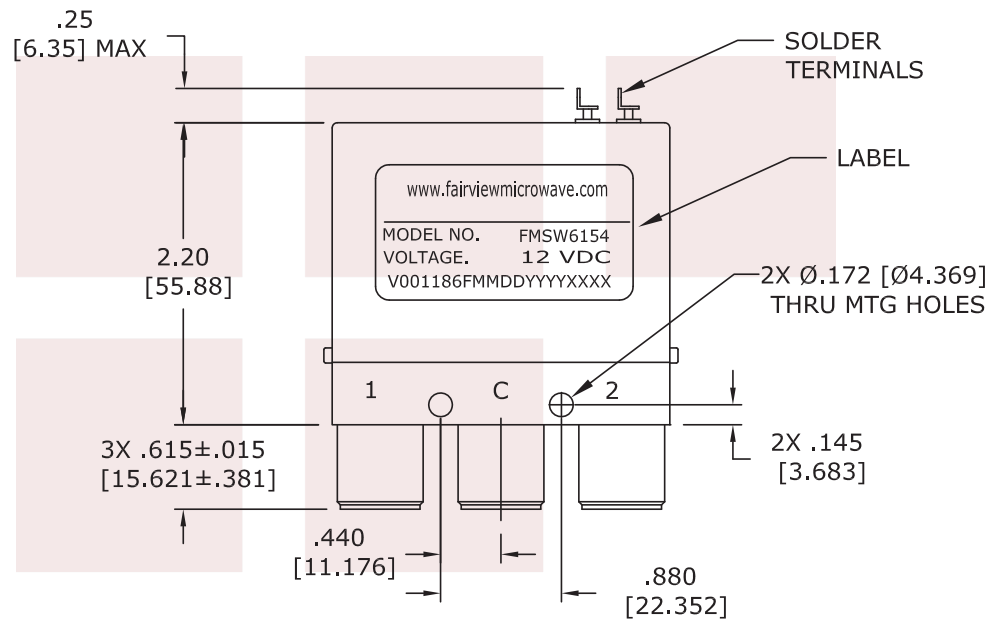
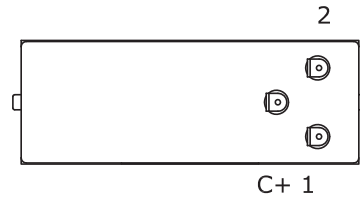


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For additional information on this product, please click the following link: [SPDT Latching Electro-Mechanical Relay Switch From DC to 12.4 GHz, 50 Watts with Self Cut Off, Diodes, N FMSW6154](#)

URL: <http://www.fairviewmicrowave.com/spdt-latching-electro-mechanical-relay-switch-self-cut-off-fmsw6154-p.aspx>

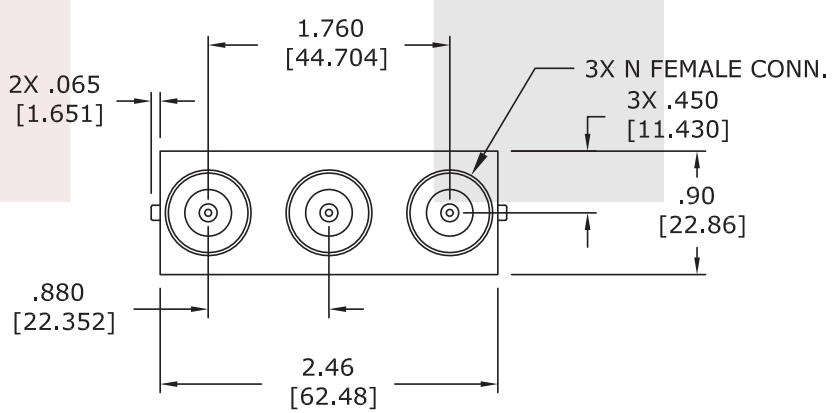
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UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. TOLERANCES ARE:

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)

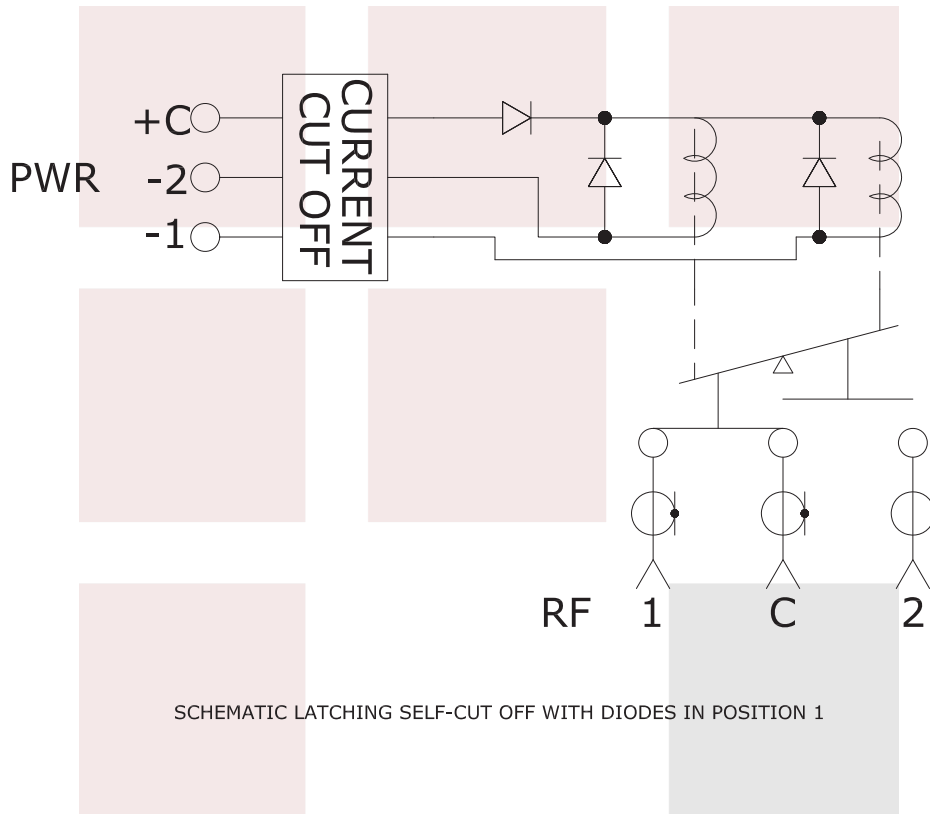


* THESE DIMENSIONS AND TOLERANCES SUPERSEDE NOTE #1 ON TITLE BLOCK.

FAIRVIEW MICROWAVE INC.
ALLEN, TX 75013 WWW.FAIRVIEWMICROWAVE.COM

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	DWG NO	CAGE CODE
SPDT Latching Electro-Mechanical Relay Switch From DC to 12.4 GHz, 50 Watts with Self Cut Off, Diodes, N	FMSW6154	3FKR5
CAD FILE	SHEET	SCALE N/A
051515		SIZE A
		2233



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CAD FILE	051515	SHEET	SCALE	N/A	SIZE A 2233