

SP6T Electromechanical Relay Latching Switch, +COM, DC to 18 GHz, 90W, 12VDC, SMA

The FMSW6575 is a Single Pole Six Throw (SP6T) electromechanical relay switch that operates across a broadband frequency range from DC to 18 GHz and can handle 90W of average power in a break before make condition. The 50 Ohm design supports a positive common (+COM) biasing configuration and features a Latching Actuator with a 5 million lifecycle rating. The Latching Actuator magnetically latches in place after the control voltage is removed. For power sensitive applications, this is the best actuator option. Impressive typical performance includes 0.2 dB insertion loss and isolation greater than 80 dB. This switch requires 12 Vdc bias voltage and operates over a temperature range of -25°C to +65°C. The rugged and compact package assembly supports SMA female connectors and a 15 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 (TA = +25°C, DC Voltage = 12 Vdc)

Switch Type SP6T
Actuator Type Latching

Description	Min	Typ	Max	Units
Frequency Range	DC		18	GHz
Operating Voltage	11	12	13	Volts
Actuating Current @ 12 Volts		280		mA
Actuating Reset Current		1.68		A
VSWR		1.2:1	1.4:1	
Insertion Loss		0.2	0.5	dB
Isolation		90		dB
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	1.25:1	1.4:1	1.5:1			
Insertion Loss, Max	0.2	0.4	0.5			dB
Isolation, Min	80	80	80			dB

Mechanical Specifications

Size
Length 1.75 in [44.45 mm]
Width/Diameter 1.75 in [44.45 mm]
Height 1.75 in [44.45 mm]
Weight 0.188 lbs [85.28 g]

Connectors

RF Connector Type SMA Female
Control Connector D-Subminiature



Features:

- Single Pole Six Throw (SP6T) Electromechanical Relay Switch
- DC to 18 GHz Frequency Range
- Latching Actuator
- Positive Common (+COM) Configuration
- 5M Lifecycle Rating
- Insertion Loss 0.2 dB typ
- Isolation > 80 dB typ
- VSWR as low as 1.25:1 max
- 15 PIN D-SUB Connector for DC Control
- 12 Volt DC Bias
- SMA Female Connectors
- -25°C to +65°C Operating Temperature
- 5 Watt Average Power Handling
- 50 Ohm Design
- Hot Switching Capability - Consult Factory
- S-Parameter Data available upon request
- Rugged Design meets Mil-STD-202 Test Conditions
- Actuating Set / Reset Feature

Applications:

- Aerospace & Defense
- Test & Measurement
- Microwave Radio Systems
- Military & Commercial Communication Systems
- Research & Development
- SATCOM
- Wireless Communications
- Enterprise
- IoT

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Environmental Specifications

Temperature

Operating Range

-25 to +65 deg C

Storage Range

-55 to +100 deg C

Shock

MIL-STD-202 Method 213, Condition D, 500G (non oper)

Vibration

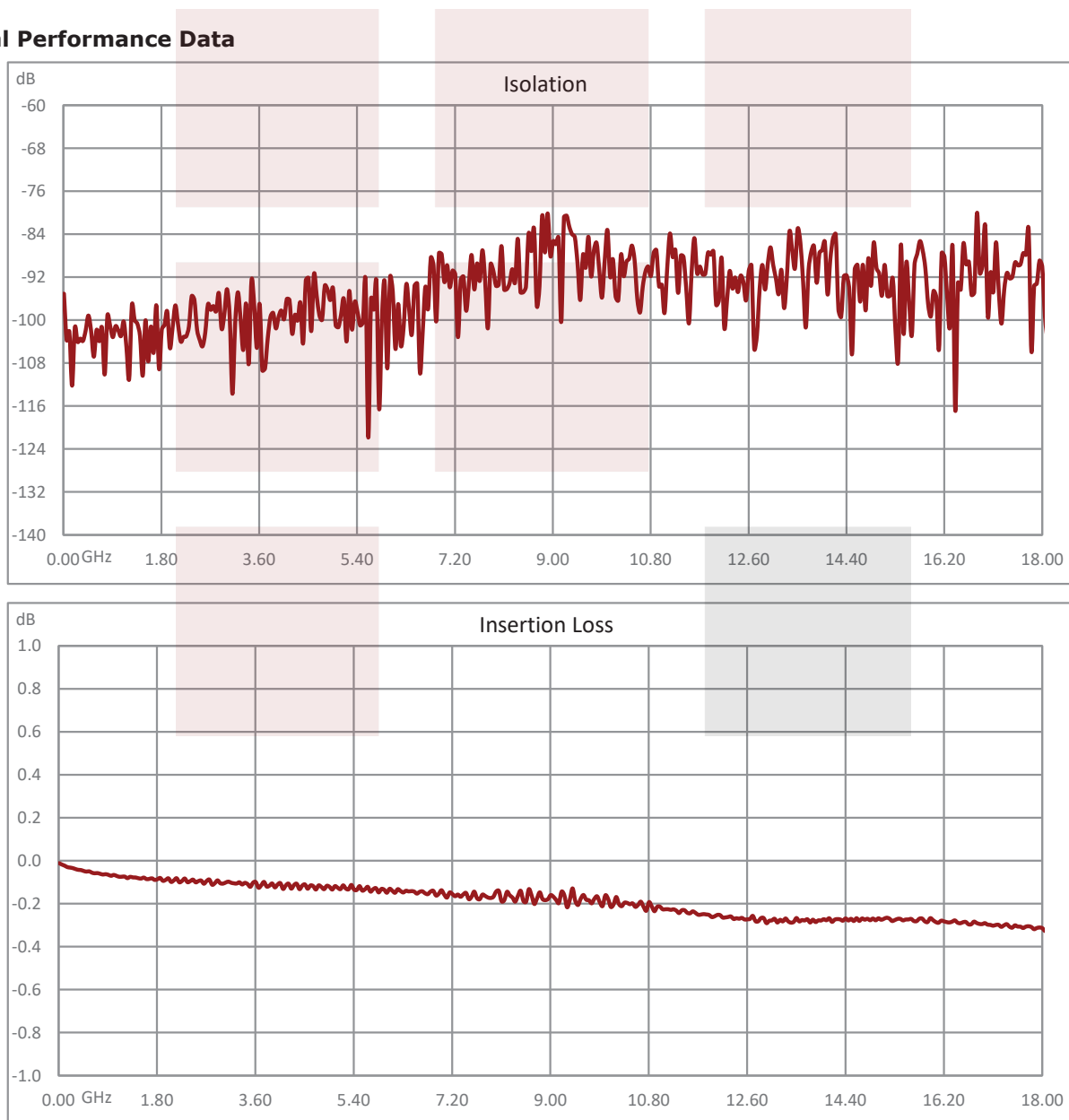
MIL-STD-202 Method 204, Condition D, 10G RMS (non oper)

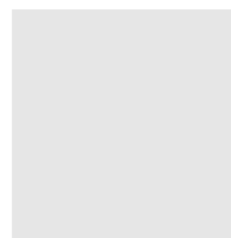
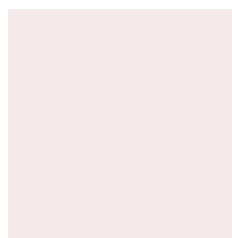
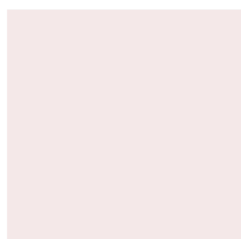
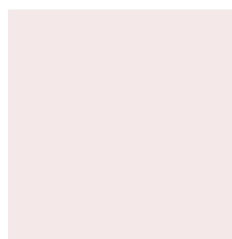
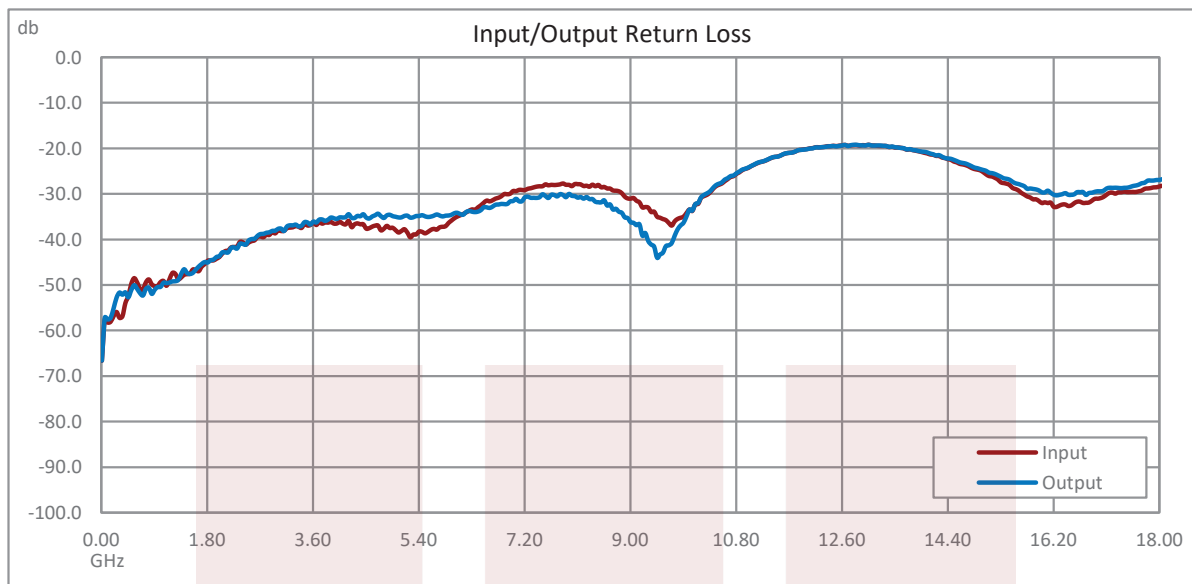
Compliance Certifications (see [product page](#) for current document)

Plotted and Other Data

Notes:

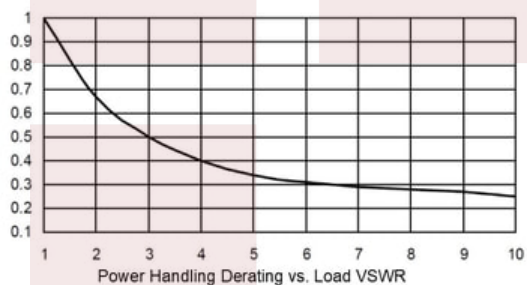
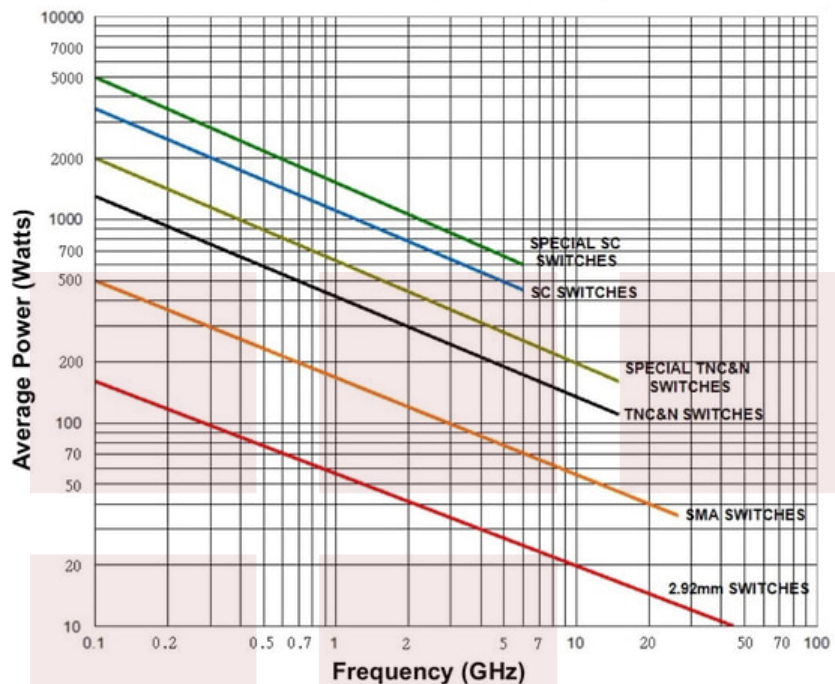
Typical Performance Data





Power Handling vs. Frequency

Power Handling vs. Frequency



Power handling chart and derating curves based on the following conditions:

- Ambient temperature: 40°C or less
- Altitude: Sea level
- Load VSWR: 1.20:1 Maximum
- Relative Humidity: 40-50%
- Cold switching: RF signal off

Note: specifications subject to change without notice

SP6T Electromechanical Relay Latching Switch, +COM, DC to 18 GHz, 90W, 12VDC, SMA 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 Lewisville, Texas. Fairview Microwave is RF on-demand.

For additional information on this product, please click the following link: [SP6T Electromechanical Relay Latching Switch, +COM, DC to 18 GHz, 90W, 12VDC, SMA FMSW6575](#)

URL: <https://www.fairviewmicrowave.com/sp6t-latching-18-ghz-electro-mechanical-relay-switch-12v-sma-fmsw6575-p.aspx>

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