

SP6T, IP64 Rated Electromechanical Relay Latching Self Cut-Off Switch, +COM, DC to 26.5 GHz, Diodes, 90W, 28VDC, SMA

The FMSW6534 is a Ruggedized SP6T electromechanical relay switch that operates across a broadband frequency range from DC to 26.5 GHz and can handle up to 90W of average power in a break before make condition. The 50 Ohm design is IP64 compliant with a Level 1 moisture seal and specifically designed to operate reliably in harsh usage environments and conditions, such as over extreme temperatures and wet or dusty environments. Intrusion protection offers full protection against dust and other particulates. Moisture protection enables resistance to splashes in all directions. The switch has a Latching Self Cut-Off Actuator that magnetically latches in place after the control voltage is removed. DC Current is required to change positions. For power sensitive applications, this is the best actuator option. Additional features include positive common (+COM) configuration, and suppression diodes which limit voltage spikes or reverse current. Impressive typical performance includes 0.3 dB insertion loss and isolation greater than 70 dB. This switch requires +28Vdc bias voltage, operates over a temperature range of -54°C to +85°C, and is rated for 5 million lifecycles. 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.



Features:

- SP4T Electromechanical Relay Switch
- IP64 Level 1 Rated
- DC to 26.5 GHz Frequency Range
- Latching Self Cut-Off Actuator
- 5M Lifecycle Rating
- +COM
- Suppression Diodes
- Insertion Loss 0.3 dB typ
- Isolation > 70 dB typ
- VSWR as low as 1.25:1 max
- SMA Female Connectors
- +28 Volt DC Bias
- 15 Pin D-Sub Connector for DC Control
- -54°C to +85°C Operating Temperature
- Up to 90 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

Electrical Specifications (TA = +25°C, DC Voltage = 28 Vdc)

Switch Type	SP6T
Actuator Type	Latching
Actuator Options	Diodes, Self Cut Off, + COM

Description	Min	Typ	Max	Units
Frequency Range	DC		26.5	GHz
Impedance		50		Ohms
Operating Voltage	26	28	30	Volts
Actuating Current @ 28 Volts			110	mA
Actuating Reset Current			660	mA
VSWR		1.3:1	1.8:1	
Insertion Loss		0.3	0.8	dB
Isolation	50	90		dB
Switching Time		20		ms

Performance by Frequency

Description	F1	F2	F3	F4	F5	Units
Frequency Range	DC - 6	6 - 12	12 - 18	18 - 26.5		GHz
VSWR, Max	1.25:1	1.4:1	1.5:1	1.8:1		
Insertion Loss, Max	0.2	0.4	0.5	0.8		dB
Isolation, Min	70	60	60	50		dB

Applications:

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

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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	0.196 lbs [88.9 g]

Connectors

RF Connector Type	SMA Female
Control Connector	D-Subminiature

Environmental Specifications

Temperature

Operating Range	-54 to +85 deg C
Storage Range	-55 to +100 deg C

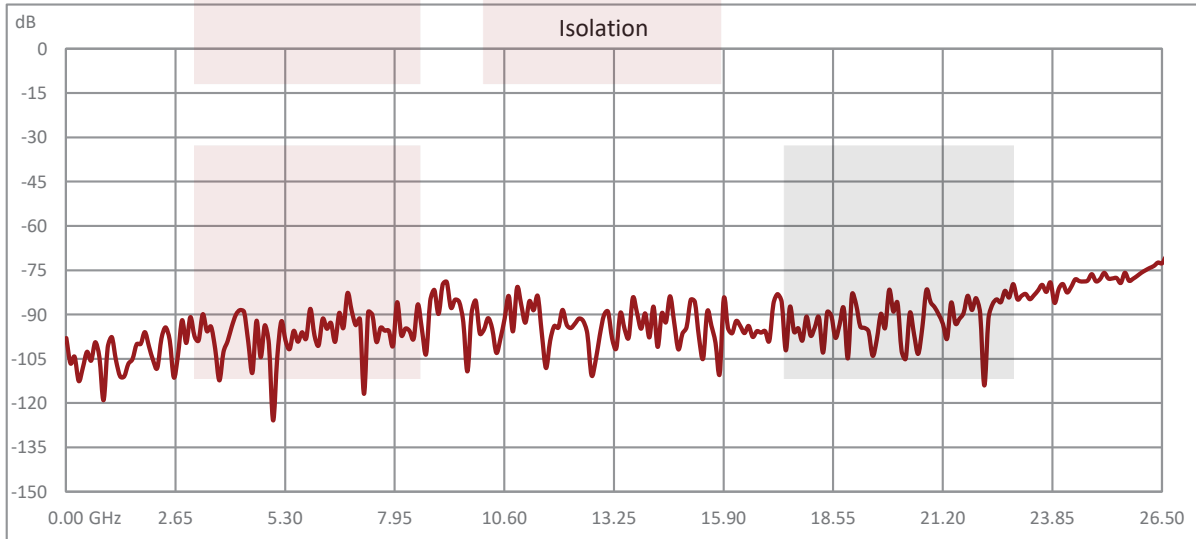
Ingress Protection (IP) Rating	IP64
Shock	MIL-STD-202 Method 213, Condition D, 500 G (non oper)
Vibration	MIL-STD-202 Method 204, Condition D, 10G RMS (non oper)

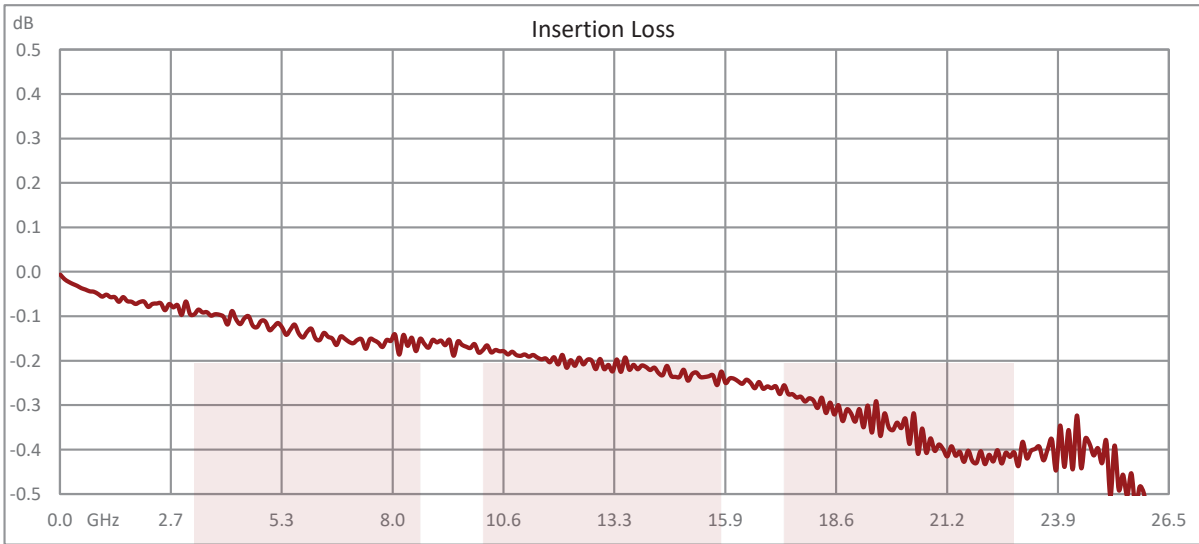
Compliance Certifications (see [product page](#) for current document)

Plotted and Other Data

Notes:

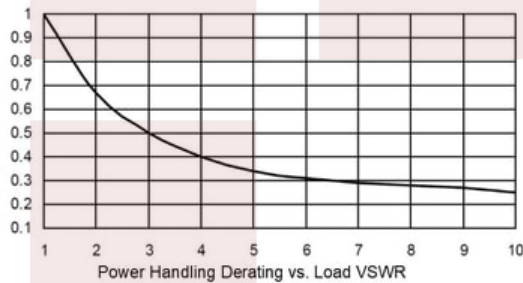
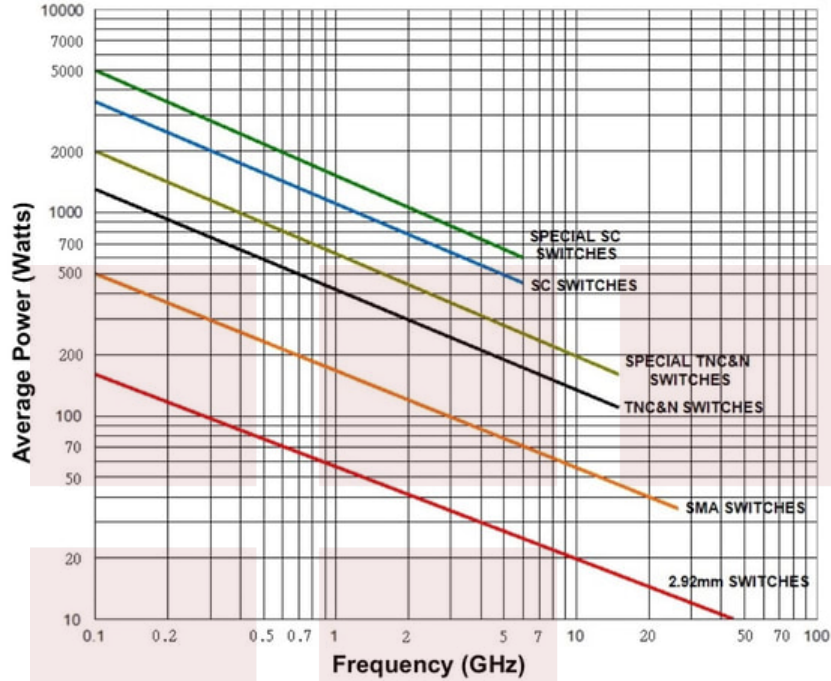
Typical Performance Data





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, IP64 Rated Electromechanical Relay Latching Self Cut-Off Switch, +COM, DC to 26.5 GHz, Diodes, 90W, 28VDC, 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, IP64 Rated Electromechanical Relay Latching Self Cut-Off Switch, +COM, DC to 26.5 GHz, Diodes, 90W, 28VDC, SMA FMSW6534](#)

URL: <https://www.fairviewmicrowave.com/sp6t-latching-26.5-ghz-electro-mechanical-relay-switch-diodes-com-sma-fm-sw6534-p.aspx>

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