

## SPDT, IP64 Rated Electromechanical Relay Failsafe Switch, DC to 26.5 GHz, 90W, 28VDC, SMA

The FMSW6527 is a Ruggedized Single Pole Double Throw (SP2T) electromechanical relay switch that operates across a frequency range from DC to 26.5 GHz and can handle up to 90 Watts of average power in a break before make condition. The 50 Ohm design is IP64 compliant with a Level 1 moisture seal and specially 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 Failsafe actuator and is rated for 2 million lifecycles. Impressive typical performance includes 0.3 dB insertion loss and isolation greater than 70 dB. The switch requires + 28 Vdc bias voltage and operates over a wide temperature range of -54°C to +85°C. The rugged and compact package assembly supports female SMA connectors and 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 (TA = +25°C, DC Voltage = 28 Vdc)

Switch Type  
Actuator Type

SPDT  
Failsafe

| Description                  | Min | Typ   | Max   | Units |
|------------------------------|-----|-------|-------|-------|
| Frequency Range              | DC  |       | 26.5  | GHz   |
| Impedance                    |     | 50    |       | Ohms  |
| Operating Voltage            | 26  | 28    | 30    | Volts |
| Actuating Current @ 28 Volts |     |       | 200   | mA    |
| VSWR                         |     | 1.2:1 | 1.7:1 |       |
| Insertion Loss               |     | 0.3   | 0.6   | dB    |
| Isolation                    | 50  | 80    |       | 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           | 1.2:1  | 1.3:1  | 1.4:1   | 1.7:1     |    |       |
| Insertion Loss, Max | 0.2    | 0.4    | 0.5     | 0.6       |    | dB    |
| Isolation, Min      | 70     | 60     | 60      | 50        |    | dB    |

### Mechanical Specifications

#### Size

|                |                     |
|----------------|---------------------|
| Length         | 2.05 in [52.07 mm]  |
| Width/Diameter | 1.5 in [38.1 mm]    |
| Height         | 0.52 in [13.21 mm]  |
| Weight         | 0.082 lbs [37.19 g] |



### Features:

- Single Pole Double Throw (SP2T) Ruggedized Electromechanical Relay Switch
- IP64 Level 1 Rated
- DC to 18 GHz Frequency Range
- Failsafe Actuator
- 2M Lifecycle Rating
- Insertion Loss 0.3 dB typ
- Isolation > 70 dB typ
- VSWR as low as 1.2:1 max
- 9 Pin D-SUB Connector for DC Control
- +28 Volt DC Bias
- SMA Female Connectors
- -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

### Applications:

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

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### Connectors

RF Connector Type  
Control Connector

SMA Female  
D-Subminiature

### Environmental Specifications

#### Temperature

Operating Range  
Storage Range

-54 to +85 deg C  
-55 to +100 deg C

Ingress Protection (IP) Rating  
Shock  
Vibration

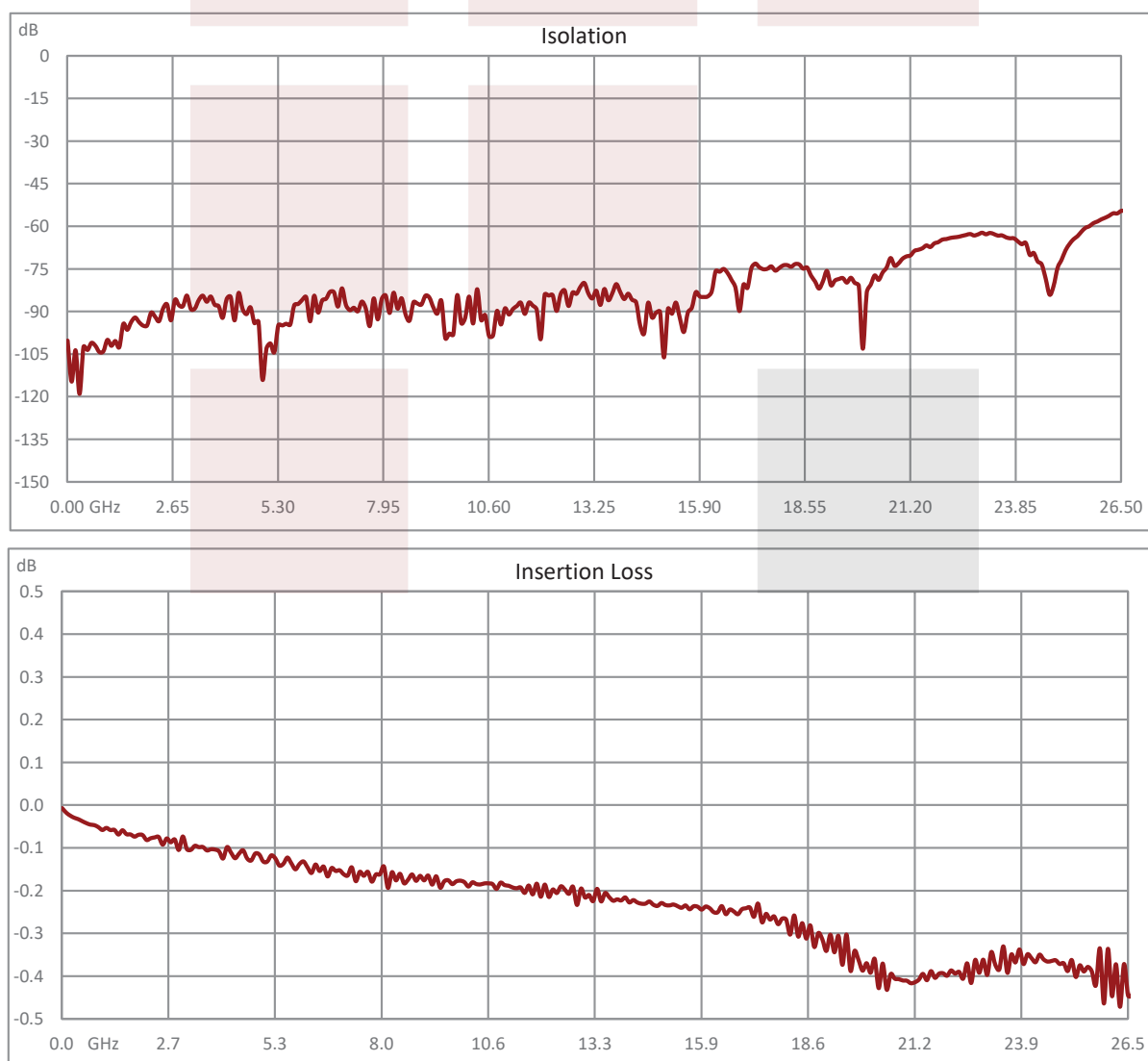
IP64  
MIL-STD-202 Method 213, Condition D, 500 G (non oper)  
MIL-STD-202 Method 204, Condition D, 10G RMS (non oper)

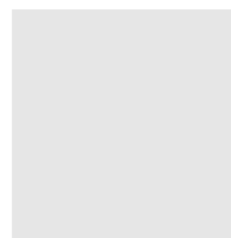
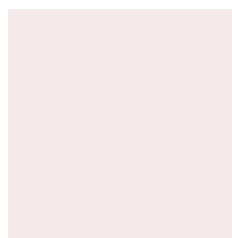
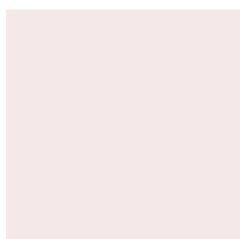
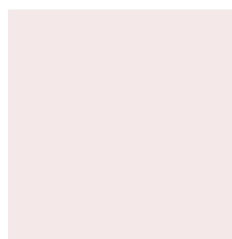
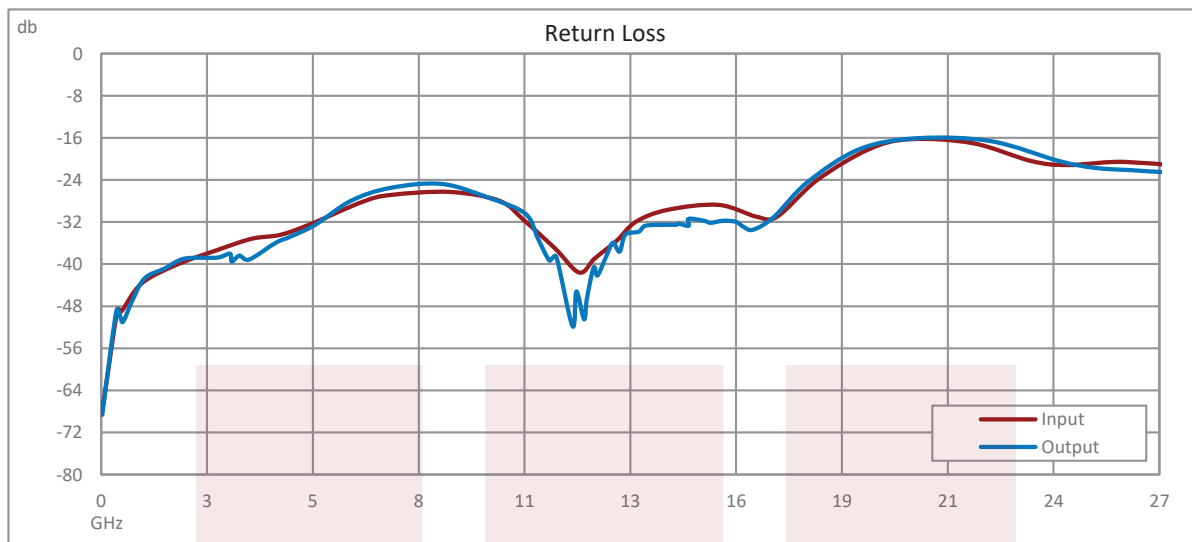
### Compliance Certifications (see [product page](#) for current document)

### Plotted and Other Data

Notes:

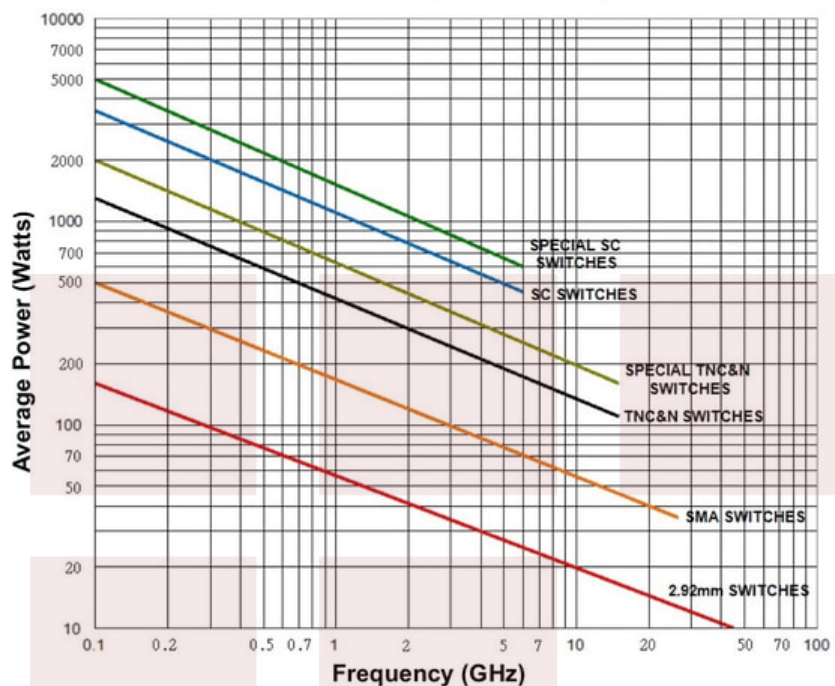
### Typical Performance Data





**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

SPDT, IP64 Rated Electromechanical Relay Failsafe Switch, DC to 26.5 GHz, 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: [SPDT, IP64 Rated Electromechanical Relay Failsafe Switch, DC to 26.5 GHz, 90W, 28VDC, SMA FMSW6527](#)

URL: <https://www.fairviewmicrowave.com/spdt-failsafe-26.5-ghz-electro-mechanical-relay-switch-sma-fmsw6527-p.aspx>

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