

**SP4T Normally Open Electro-Mechanical Relay  
 Switch From DC to 18 GHz, 35 Watts, SMA**

The SR18-SMA4 is a SP4T Electromechanical Relay Switch that operates over a wide frequency band from DC to 18 GHz with up to 85 Watts of input power (CW) handling capability. Rated for 1M Life Cycles, this design uses a Normally Open Actuator. The switch exhibits exceptional electrical performance specified from 0.2 dB max for insertion loss and from 80 dB min for isolation, and is guaranteed over -40 deg C to +85 deg C. The assembly requires an operating DC voltage of +20 Vdc and is certified as RoHS and REACH compliant. External connectors include solder terminals and SMA female connectors.



**Electrical Specifications**

Switch Type SP4T, Reflective  
 Actuator Type Normally Open  
 Pickup Voltage 20 Volts  
 Dropout Voltage 2 Volts

**Features:**

- SP4T Switch
- DC to 18GHz Operating Range
- 1M Cycles min
- Normally Open Switch

**Applications:**

- Test & Measurement
- Instrumentation

| Description                  | Min | Typ | Max   | Units |
|------------------------------|-----|-----|-------|-------|
| Frequency Range              | DC  |     | 18    | GHz   |
| Impedance                    |     | 50  |       | Ohms  |
| Operating Voltage            | 22  | 28  | 30    | Volts |
| Actuating Current @ 28 Volts |     |     | 115   | mA    |
| VSWR                         |     |     | 1.5:1 |       |
| Insertion Loss               |     |     | 0.5   | dB    |
| Isolation                    | 60  |     |       | dB    |
| Input Power (CW)             |     |     | 35    | Watts |

**Performance by Frequency**

| Description         | F1      | F2     | F3        | F4         | F5 | Units |
|---------------------|---------|--------|-----------|------------|----|-------|
| Frequency Range     | DC to 4 | 4 to 8 | 8 to 12.4 | 12.4 to 18 |    | GHz   |
| VSWR, Max           | 1.2:1   | 1.3:1  | 1.4:1     | 1.5:1      |    |       |
| Insertion Loss, Max | 0.2     | 0.3    | 0.4       | 0.5        |    | dB    |
| Isolation, Min      | 80      | 70     | 60        | 60         |    | dB    |
| Power In, Typ (CW)  | 85      | 55     | 45        | 35         |    | Watts |

**Mechanical Specifications**

**Size**  
 Length 1.75 in [44.45 mm]  
 Width/Diameter 1.75 in [44.45 mm]  
 Height 2.37 in [60.2 mm]  
 Weight 0.28 lbs [127.01 g]  
 Body Material and Plating Aluminum, Black Anodized  
 Package Type Connectorized Module

Operating Life 1,000,000 Cycles  
 Switching Time 15 ms Max

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**Connectors**

RF Connector Type SMA Female  
 RF Connector Contact Material & Plating Beryllium Copper, Gold  
 RF Connector Body Material and Plating Passivated Stainless Steel  
 Control Connector Solder Terminals

**Mechanical Specification Notes:**

RF Connector mating requirements per MIL-C-39012

**Environmental Specifications**

**Temperature**

Operating Range -40 to +85 deg C  
 Storage Range -55 to +100 deg C

**Compliance Certifications** (visit [www.FairviewMicrowave.com](http://www.FairviewMicrowave.com) for current document)

RoHS Compliant  
 REACH Compliant 12/17/2014

**Plotted and Other Data**

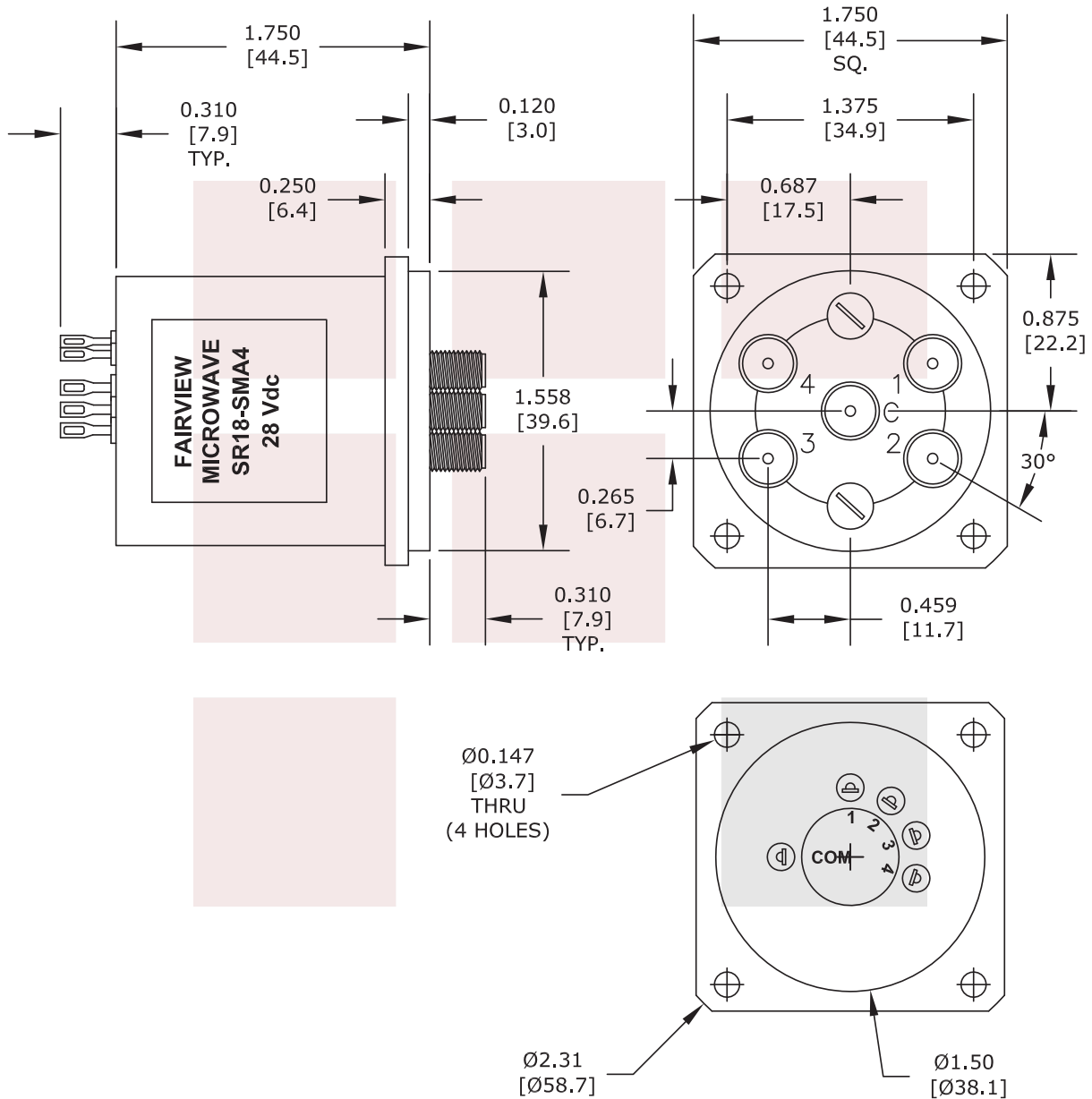
Notes:

SP4T Normally Open Electro-Mechanical Relay Switch From DC to 18 GHz, 35 Watts, 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 Allen, Texas. Fairview Microwave is RF on-demand.

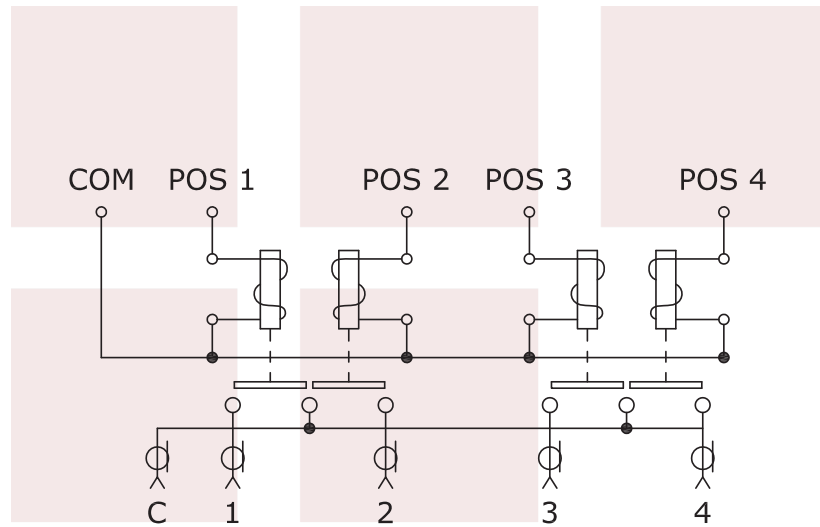
For additional information on this product, please click the following link: [SP4T Normally Open Electro-Mechanical Relay Switch From DC to 18 GHz, 35 Watts, SMA SR18-SMA4](#)

URL: <http://www.fairviewmicrowave.com/sp4t-normally-open-electro-mechanical-relay-switch-sr18-sma4-p.aspx>

The information contained in this document is accurate to the best of our knowledge and representative of the part described herein. It may be necessary to make modifications to the part and/or the documentation of the part, in order to implement improvements. Fairview Microwave reserves the right to make such changes as required. Unless otherwise stated, all specifications are nominal. Fairview Microwave does not make any representation or warranty regarding the suitability of the part described herein for any particular purpose, and Fairview Microwave does not assume any liability arising out of the use of any part or documentation.



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|---|--------|---|-------|--------------------|------------|
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| TITLE<br>SP4T Normally Open Electro-Mechanical Relay Switch<br>From DC to 18 GHz, 35 Watts, SMA |        | DWG NO<br>SR18-SMA4   |       | CAGE CODE<br>3FKR5 |            |
| CAD FILE  | 121415 | SHEET   | SCALE | N/A                | SIZE A 150 |



SCHEMATIC SHOWN WITH  
 ALL PORTS OPEN

|   |  |   |       |                           |            |
|---|--|---|-------|---------------------------|------------|
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