

SP6T Latching DC to 18 GHz Electro-Mechanical Relay Switch, up to 90W, 28V, SMA

The FMSW6372 is a Single Pole Six Throw (SP6T) electromechanical relay switch that operates across a wide frequency range of DC to 18 GHz and can handle up to 90 Watts of CW input power in a break before make condition. The design features a Latching actuator and is rated for 5M life cycles for high reliability operation. Impressive performance includes insertion loss less than 0.15 dB typical and isolation greater than 80 dB typical. The Latching actuator has a +28 Vdc bias voltage, and operates over a temperature range of -25°C to +70°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

| | |
|--------------------|-------------------|
| Switch Type | SP6T |
| Actuator Type | Latching |
| Switching Sequence | Break before Make |

| Description | Min | Typ | Max | Units |
|------------------------------|-----|-------|-------|-------|
| Frequency Range | DC | | 18 | GHz |
| Impedance | | 50 | | Ohms |
| Operating Voltage | 26 | 28 | 30 | Volts |
| Actuating Current @ 28 Volts | | 90 | | mA |
| VSWR | | 1.2:1 | 1.4:1 | |
| Insertion Loss | | 0.15 | 0.4 | dB |
| Insertion Loss Repeatability | | | | |
| Isolation | 80 | 80 | | dB |
| Input Power (CW) | | | 60 | Watts |
| 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 | 1.2:1 | 1.3:1 | 1.4:1 | | | |
| Insertion Loss, Max | 0.15 | 0.25 | 0.4 | | | dB |
| Isolation, Min | 80 | 80 | 80 | | | dB |
| Power In, Typ (CW) | 90 | 75 | 60 | | | Watts |

Mechanical Specifications

Size

| | |
|----------------|---------------------|
| Weight | 0.405 lbs [183.7 g] |
| Package Type | Connectorized |
| Operating Life | 5,000,000 Cycles |

Connectors

| | |
|-------------------|--------------|
| RF Connector Type | SMA Female |
| Control Connector | 15 Pin D-Sub |



Features:

- Single Pole Six Throw
- DC to 18 GHz Frequency Range
- Isolation greater than 80 dB typical
- 5M Cycle Min Operating Life
- +28 Volt DC
- 90 Watt average Power
- Latching Actuator
- -25 to +70°C Operating Temperature
- Insertion Loss as low as 0.15 dB Max
- VSWR as low as 1.2:1 max
- SMA Female RF connectors
- 15 Pin D-Sub Connector for DC Control
- Hot Switching Capability - Consult Factory
- S-Parameter Data available upon request

Applications:

- High Performance Relay Switch
- Military Communications
- Communications Systems
- Test & Measurement

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Environmental Specifications

Temperature

Operating Range -25 to +70 deg C
 Storage Range -55 to +100 deg C

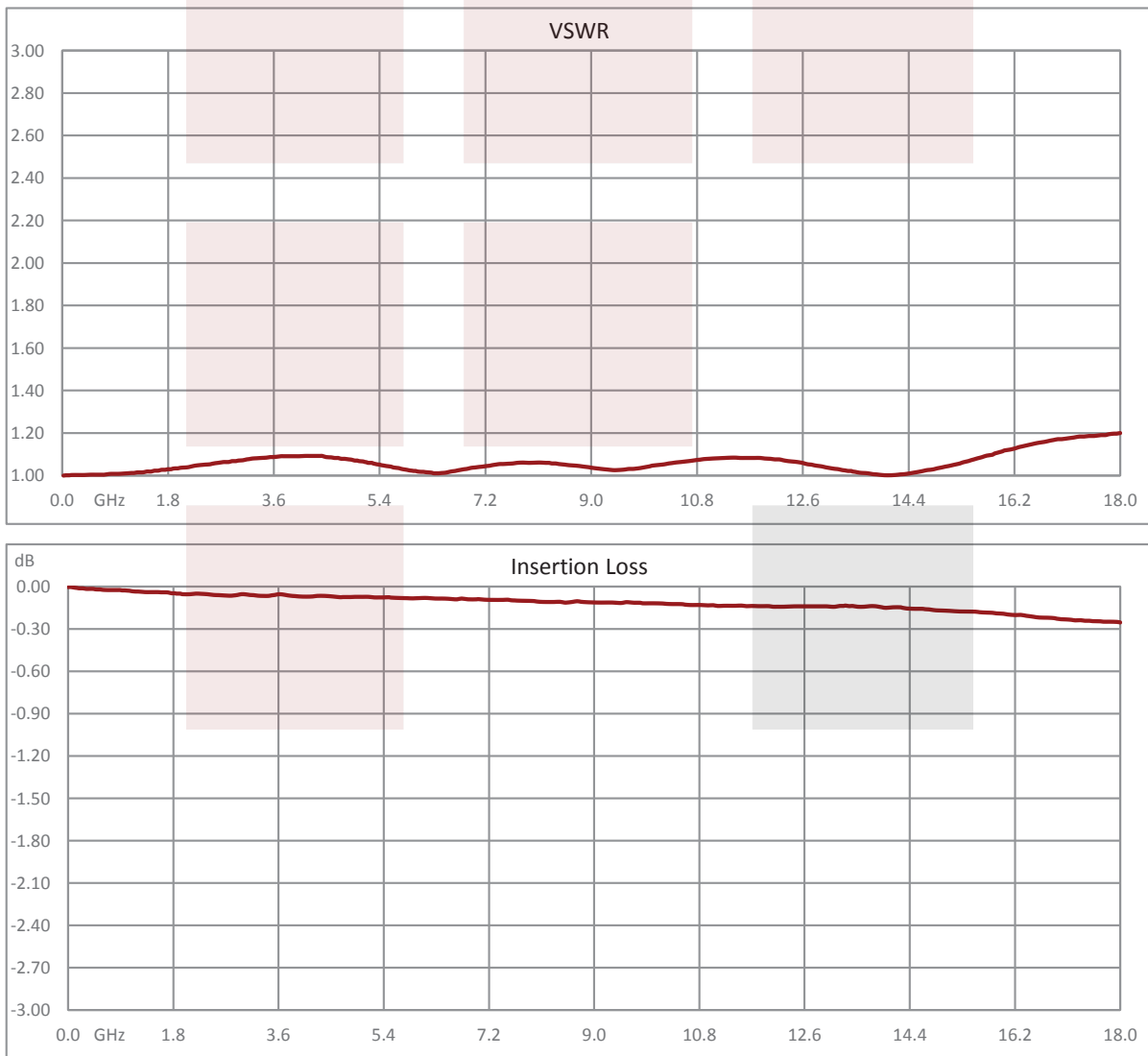
Shock MIL-STD-202 Method 213, Cond. D 500G Non Operating
 Vibration MIL-STD-202 Method 214, Cond. D 10G RMS Non Operating

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

Plotted and Other Data

Notes:

Typical Performance Data



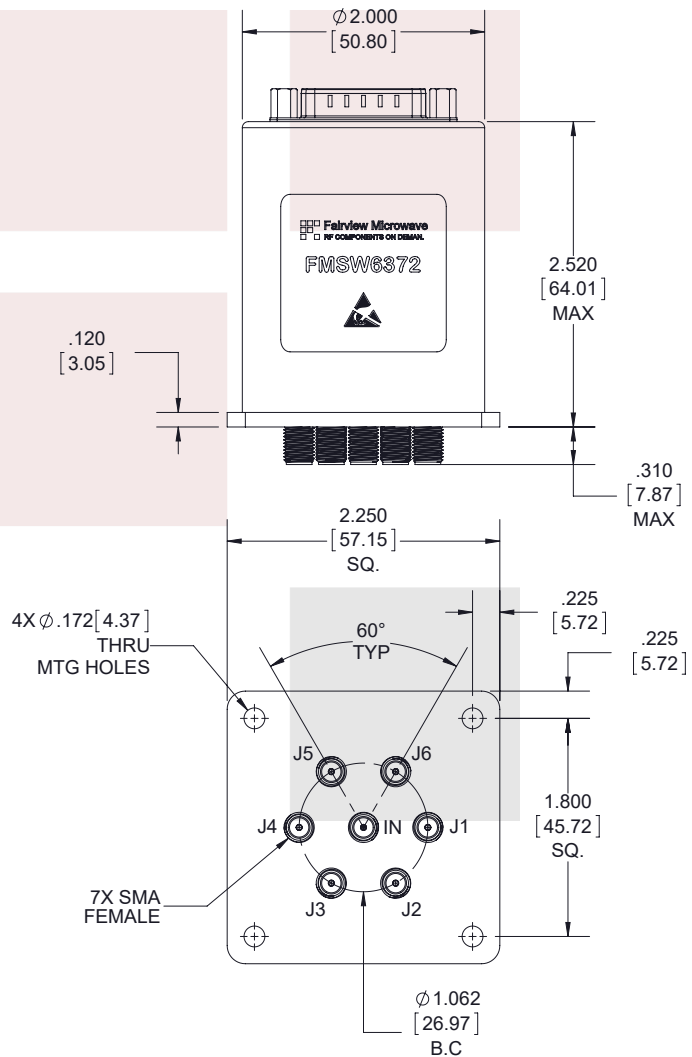
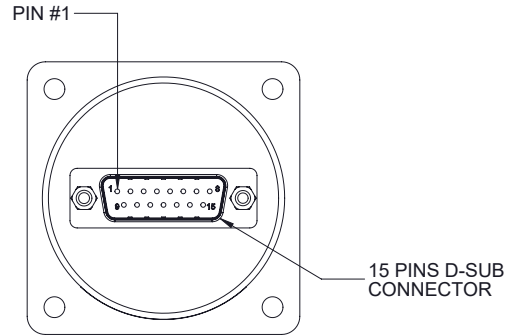
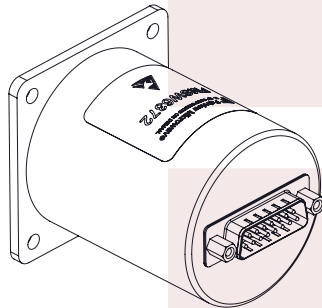
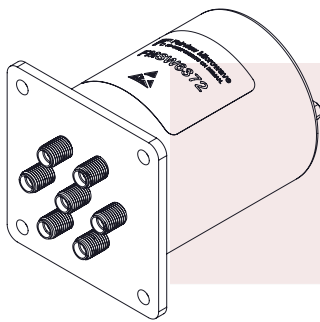


SP6T Latching DC to 18 GHz Electro-Mechanical Relay Switch, up to 90W, 28V, SMA from Fairview Microwave is in-stock and available to ship same-day. All of our RF/microwave products are available off-the-shelf from our ISO 9001:2008 certified facilities in Allen, Texas. Fairview Microwave is RF on-demand.

For additional information on this product, please click the following link: [SP6T Latching DC to 18 GHz Electro-Mechanical Relay Switch, up to 90W, 28V, SMA FMSW6372](#)

URL: <https://www.fairviewmicrowave.com/sp6t-latching-18-ghz-electro-mechanical-relay-switch-60w-28v-sma-fm-sw6372-p.aspx>

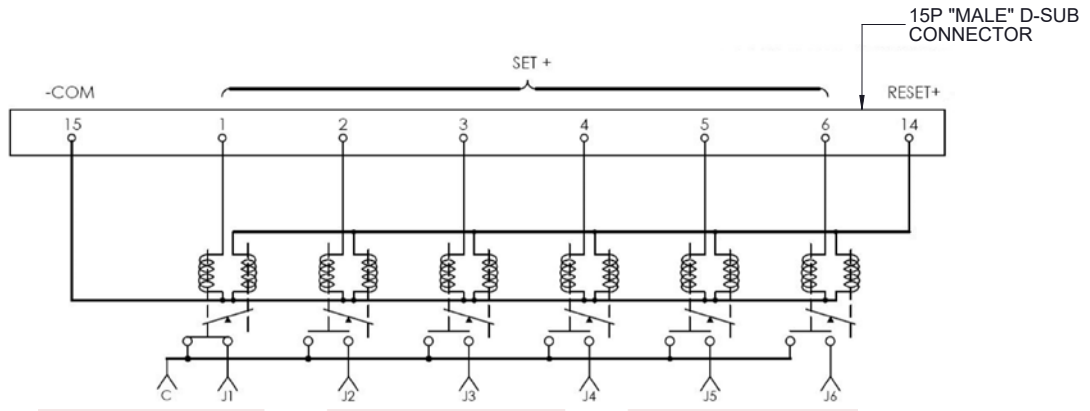
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| STANDARD TOLERANCES | |
|---------------------|--------|
| .X | ±0.2 |
| .XX | ±0.01 |
| .XXX | ±0.005 |

*STANDARD TOLERANCES APPLY ONLY TO DIMENSIONS IN INCHES

| | | | | | | | | |
|--|--------|---|--------|---------------------------|-----|------|---|------|
| 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 SP6T Latching DC to 18 GHz Electro-Mechanical Relay Switch, up to 90W, 28V, SMA | | DWG NO FMSW6372 | | CAGE CODE 3FKR5 | | | | |
| CAD FILE | 091117 | SHEET | 1 OF 2 | SCALE | N/A | SIZE | A | 7361 |



SCHEMATIC SHOWN IN LATCHING POSITION

(COIL 1 SHOWN LAST ENERGIZED)

| TERMINALS D-SUB PIN ASSIGNMENT | RF PATH | | | | | |
|--------------------------------------|---------|-----|-----|-----|-----|-----|
| | J1 | J2 | J3 | J4 | J5 | J6 |
| 1 (SET+) | ON | OFF | OFF | OFF | OFF | OFF |
| 2 (SET+) | OFF | ON | OFF | OFF | OFF | OFF |
| 3 (SET+) | OFF | OFF | ON | OFF | OFF | OFF |
| 4 (SET+) | OFF | OFF | OFF | ON | OFF | OFF |
| 5 (SET+) | OFF | OFF | OFF | OFF | ON | OFF |
| 6 (SET+) | OFF | OFF | OFF | OFF | OFF | ON |
| 14 (RESET+) | ALL OFF | | | | | |

PIN 15. -COM

STANDARD TOLERANCES

- .X ±0.2
- .XX ±0.01
- .XXX ±0.005

*STANDARD TOLERANCES APPLY ONLY TO DIMENSIONS IN INCHES

| | | | | | |
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| CAD FILE | 091117 | SHEET | 2 OF 2 | SCALE | N/A |
| | | SIZE | A | | 7361 |