



## Features

- DC to 67 GHz Frequency Range
- 1.85mm Female RF Interface
- High Reliability
- Low Insertion Loss
- High Isolation
- Customization Supported

## Applications

Test & Measurement

Space Systems

Radar

Instrumentation

Military Communications

Communication Systems

## Description

The SP6T loaded coaxial switch is a signal switching device designed to selectively route a single input signal to any one of six different paths. It operates over the frequency range of DC~67 GHz, with insertion loss less than 1.2 dB, VSWR less than 1.8, and isolation greater than 60 dB. The product is equipped with 1.85 female RF interfaces.

## Technical Specifications

| Parameters      |             | Min. | Typ. | Max. | Units |
|-----------------|-------------|------|------|------|-------|
| Frequency Range |             | DC   |      | 67   | GHz   |
| Insertion Loss  | DC~18 GHz   |      |      | 0.4  | dB    |
|                 | 18~26.5 GHz |      |      | 0.5  |       |
|                 | 26.5~40 GHz |      |      | 0.6  |       |
|                 | 40~50 GHz   |      |      | 0.8  |       |
|                 | 50~67 GHz   |      |      | 1.2  |       |
| VSWR Output     | DC~18 GHz   |      |      | 1.3  |       |
|                 | 18~26.5 GHz |      |      | 1.4  |       |
|                 | 26.5~40 GHz |      |      | 1.5  |       |
|                 | 40~50 GHz   |      |      | 1.7  |       |
|                 | 50~67 GHz   |      |      | 1.8  |       |
| Isolation       | DC~18 GHz   | 80   |      |      | dB    |
|                 | 18~26.5 GHz | 75   |      |      |       |
|                 | 26.5~40 GHz | 60   |      |      |       |
|                 | 40~50 GHz   | 60   |      |      |       |
|                 | 50~67 GHz   | 55   |      |      |       |



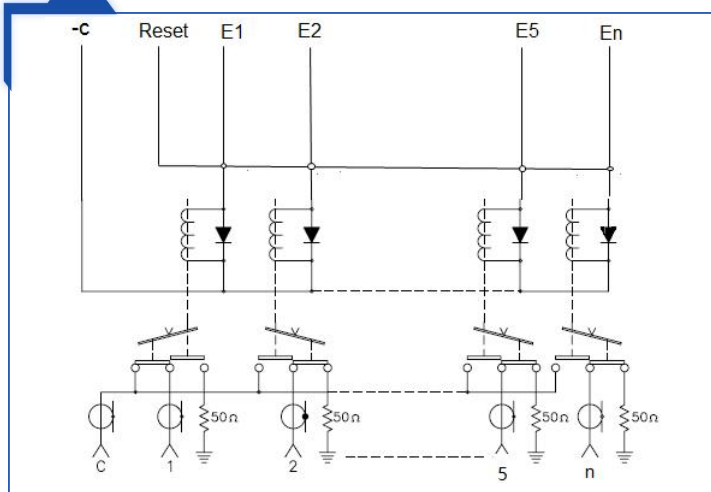
|                             |     |     |    |
|-----------------------------|-----|-----|----|
| Operating Temperature Range | -55 | +85 | °C |
| Weight                      |     | 0.5 | Kg |

**Notes:**  
Values at 25°C, sea level.

| Item                    | Specification           |
|-------------------------|-------------------------|
| Drive Type              | High-level pulse signal |
| Latching Method         | Normally open           |
| Rated Voltage           | 28 V                    |
| Operating Current       | ≤ 130 mA                |
| Switching Time          | ≤ 30 ms                 |
| Low-Frequency Connector | dB-9ZJ                  |
| Lifetime                | 2,000,000 operations    |
| Ingress Protection      | IP63                    |



## Control Circuit

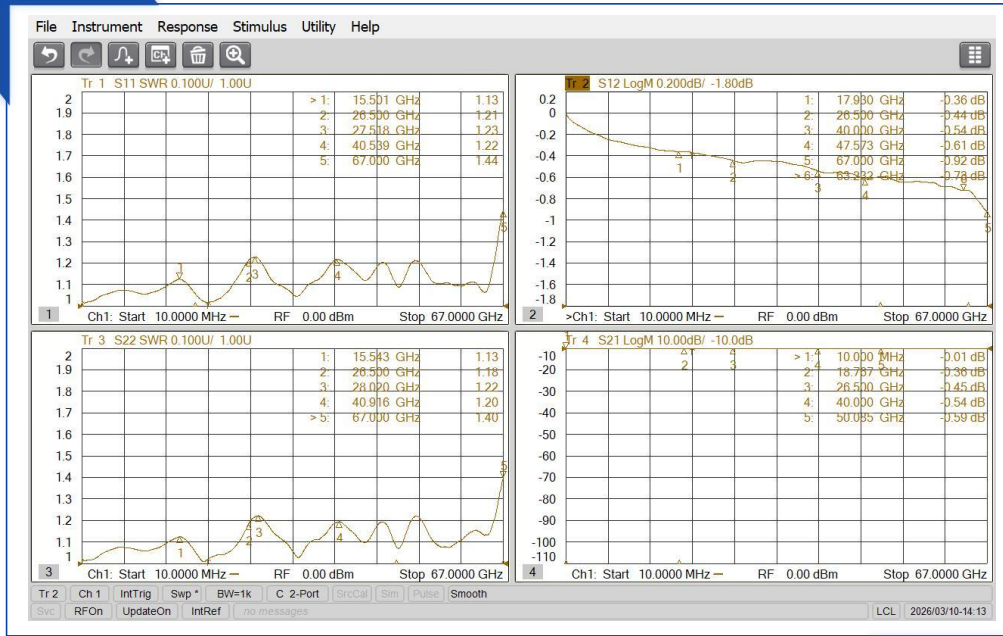


## Node Definition

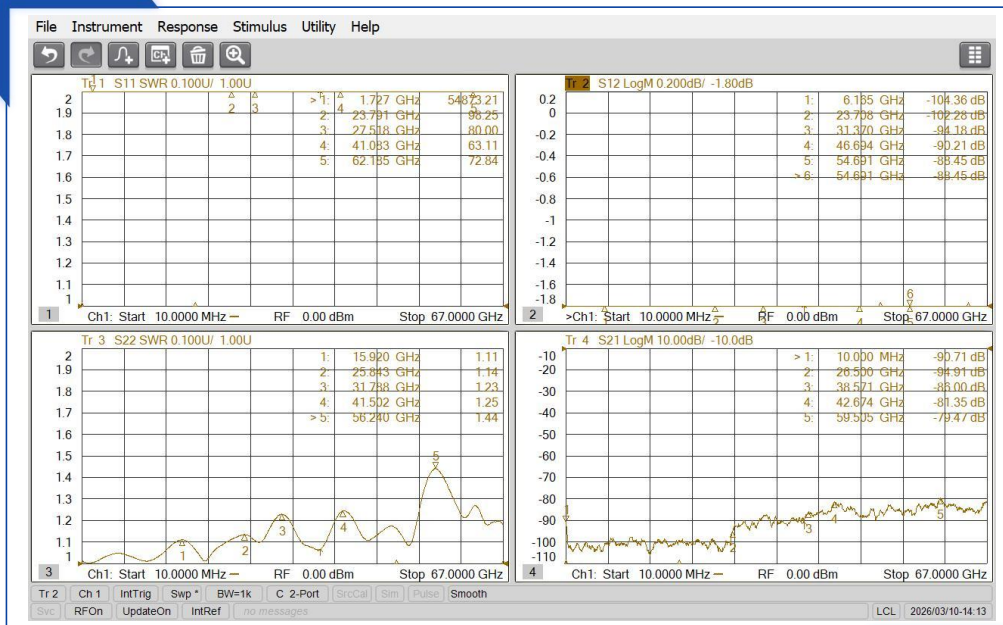
| Interface No. | Node No. | Node Definition                    | Remarks                               |
|---------------|----------|------------------------------------|---------------------------------------|
| P8            | -C       | Ground                             | Common ground                         |
| P1            | Reset    | Unified reset control +28 V signal | All channels reset to terminated load |
| P2            | E1       | State 1: +28 V control signal      | RF Channel 1-C closed                 |
| P3            | E2       | State 2: +28 V control signal      | RF Channel 2-C closed                 |
| P4            | E3       | State 3: +28 V control signal      | RF Channel 3-C closed                 |
| P5            | E4       | State 4: +28 V control signal      | RF Channel 4-C closed                 |
| P6            | E5       | State 5: +28 V control signal      | RF Channel 5-C closed                 |
| P7            | E6       | State 6: +28 V control signal      | RF Channel 6-C closed                 |



## Typical Performances

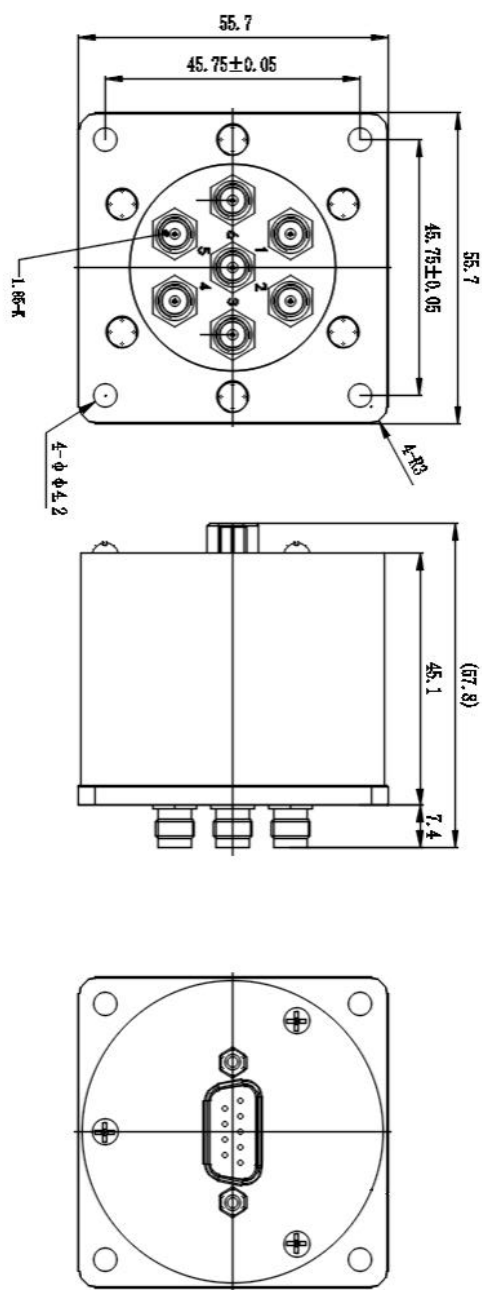


## Test Curves of Insertion Loss and VSWR



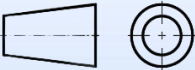
## Performance Test Curve

Outline Drawing:



NOTES:

- 1.UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE NOMINAL.
- 2.ALL SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE.
- 3.DIMENSIONS ARE IN mm.

|                                                                                                                                                     |                            |           |                                                                                       |
|-----------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|-----------|---------------------------------------------------------------------------------------|
| <div> 西安星航通信科技有限公司<br/>XI'AN SATNAVCOM TECHNOLOGY CO., LTD.</div> | PART NAME                  |           |                                                                                       |
|                                                                                                                                                     | SP6T Loaded Coaxial Switch |           |                                                                                       |
|                                                                                                                                                     | J-838530410                | REV       | DATE                                                                                  |
| Tel: +86 135 1916 6509                                                                                                                              |                            | V1.0      | 2026.4.9                                                                              |
| Website: www.mwglobe.com                                                                                                                            |                            | SCALE 1:1 |  |
| E-Mail: sales@mwglobe.com                                                                                                                           |                            |           |                                                                                       |