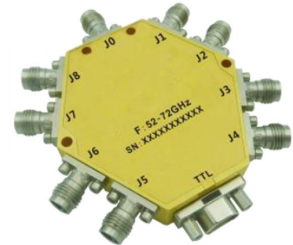




Reflective Coaxial SP8T Switch 52-72GHz

Features

- Wide Band Operation 52-72GHz
- TTL compatible driver included
- Fast Switching Speed
- Low Insertion Loss and High Isolation



Typical Applications

- Wireless Infrastructure
- 5G communication
- Test and measurement Instrument

RF Microwave & VSAT
Fiber Optics

| Parameter | Min. | Typ. | Max. | Min. | Typ. | Max. | Units |
|--|--------------------------------|-------|-------|------|-------|------|---------|
| Frequency Range | 52 - 69 | | 69-72 | | | | GHz |
| Insertion Loss | | 11 | 12.5 | | 12 | 13 | dB |
| Insertion Loss Temperature Coefficient | | 0.003 | | | 0.003 | | dB/ ° C |
| Isolation | 30 | 35 | | 30 | 35 | | dB |
| Input VSWR | | 2.8 | 3.0 | | 2.5 | 3.0 | : 1 |
| Output VSWR | | 2.8 | 3.0 | | 2.5 | 3.0 | : 1 |
| RF Input power (CW) | | | 23 | | | 23 | dBm |
| DC Power Dissipation | | 1.5 | | | 1.5 | | W |
| 0.1dB Compression Point (P0.1dB) | | 23 | | | 23 | | dBm |
| IIP3 | | 45 | | | 45 | | dBm |
| Switching Speed | | 100 | | | 100 | | ns |
| Weight | 2.47 | | | | | | ounces |
| Impedance | 50 | | | | | | Ω |
| Bias Current (+5V / -5V) | 300/40 | | | | | | mA |
| Input / Output Connectors | 1.85mm-Female | | | | | | |
| Interface and Control Connector | MICRO-D9 (Female) | | | | | | |
| Finish | Gold Plated | | | | | | |
| Material | Aluminum | | | | | | |
| Sealing | Hermetically Sealed (Optional) | | | | | | |



Absolute Maximum Ratings

| | |
|-----------------|-----------------------|
| Biasing Voltage | +5V ± 10% / -5V ± 10% |
|-----------------|-----------------------|

Environmental Specifications

| | |
|-------------------------|---|
| Operational Temperature | -40°C~+85°C |
| Storage Temperature | -50°C~+105°C |
| Altitude | 30,000 ft. (Epoxy Sealed Controlled environment) |
| | 60,000 ft. 1.0psi min (Hermetically Sealed Uncontrolled environment) (Optional) |
| Vibration | 25g RMS (15 degrees 2KHz) endurance, 1 hour per axis |
| Humidity | 100% RH at 35°C, 95%RH at 40°C |
| Shock | 20G for 11msec half sine wave, 3 axis both directions |

Ordering Information

| Part No. | Description |
|-----------------|--------------------------------|
| DBSR0852007200A | SP8T 52-72GHz PIN Diode Switch |

Outline Drawing:

All Dimensions in mm (inches)

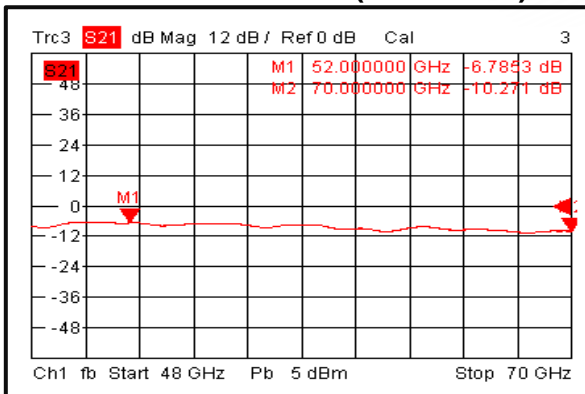
MICRO-D9(Female)

| TTL Control Voltage THRESHOLD | | | | | Low(0)=0~0.8V |
|-------------------------------|----|----|----|----|-------------------|
| Control Input TTL | | | | | High(1)=2.8~5V |
| C5 | C4 | C3 | C2 | C1 | Signal Path State |
| 0 | 0 | 0 | 0 | 0 | J0-J1 |
| 0 | 0 | 0 | 0 | 1 | J0-J2 |
| 0 | 1 | 0 | 1 | 0 | J0-J3 |
| 0 | 1 | 0 | 1 | 1 | J0-J4 |
| 1 | 0 | 1 | 0 | 0 | J0-J5 |
| 1 | 0 | 1 | 0 | 1 | J0-J6 |
| 1 | 1 | 1 | 1 | 0 | J0-J7 |
| 1 | 1 | 1 | 1 | 1 | J0-J8 |

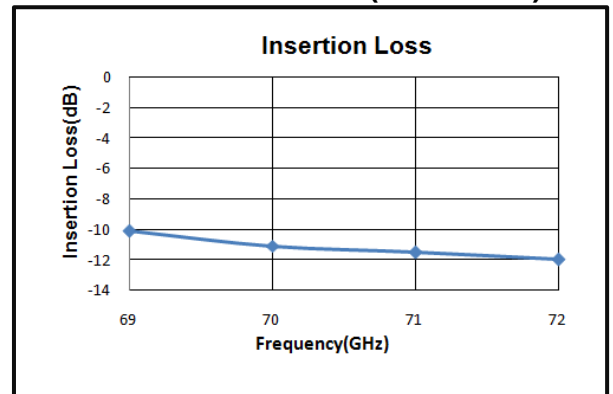
Control pin customization available upon request



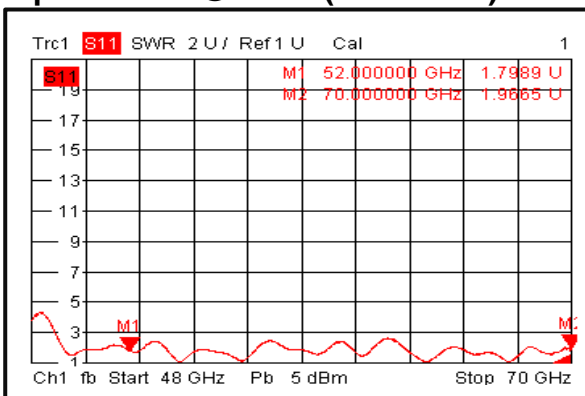
Insertion Loss @+25°C (50~69GHz)



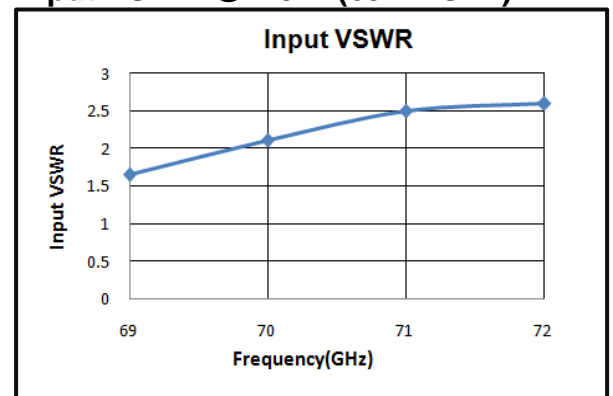
Insertion Loss @+25°C (69~72GHz)



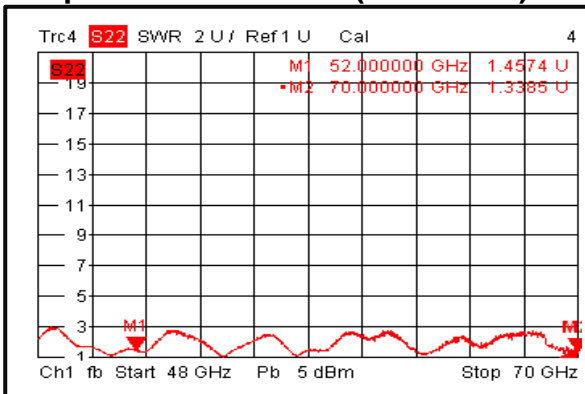
Input VSWR @+25°C (50~69GHz)



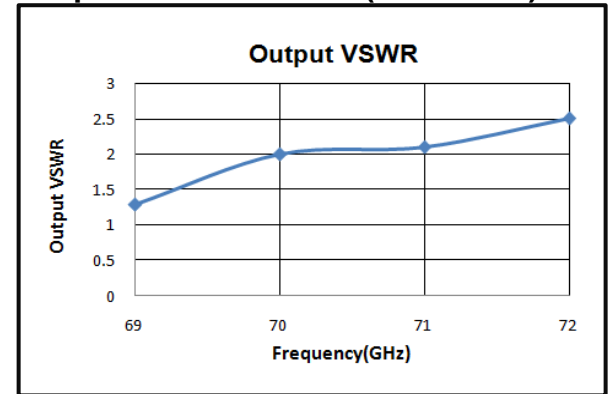
Input VSWR @+25°C (69~72GHz)



Output VSWR @+25°C (50~69GHz)

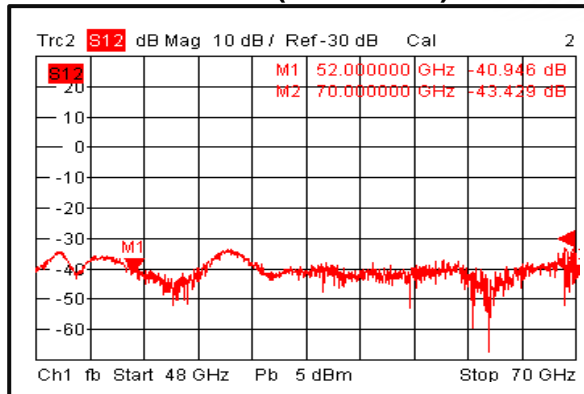


Output VSWR @+25°C (69~72GHz)

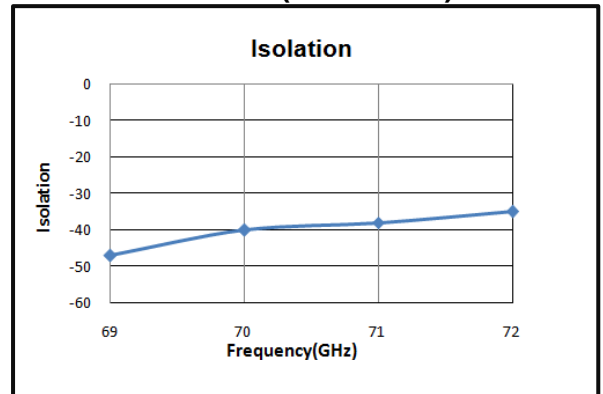




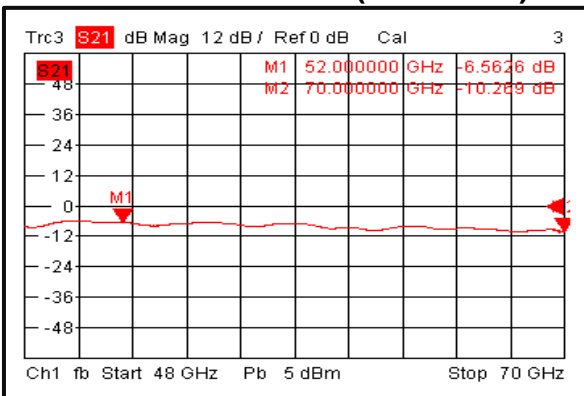
Isolation @+25°C (50~69GHz)



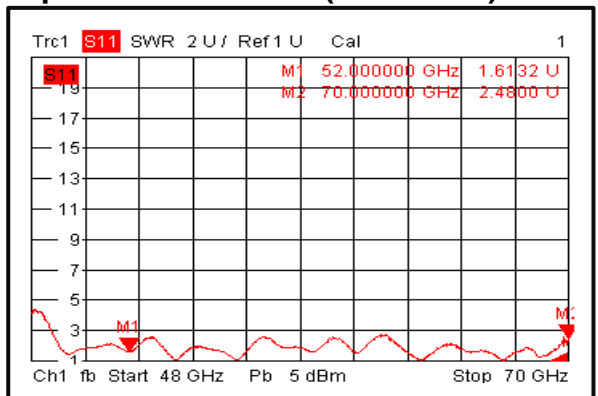
Isolation @+25°C (69~72GHz)



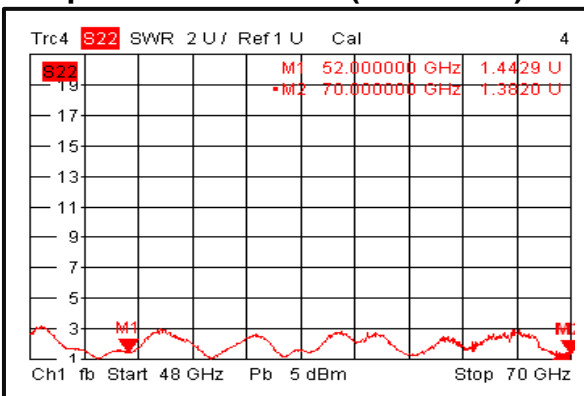
Insertion Loss @-40°C (50~69GHz)



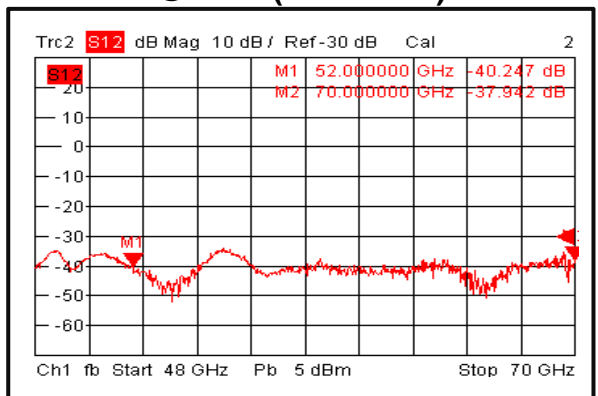
Input VSWR @-40°C (50~69GHz)



Output VSWR @-40°C (50~69GHz)

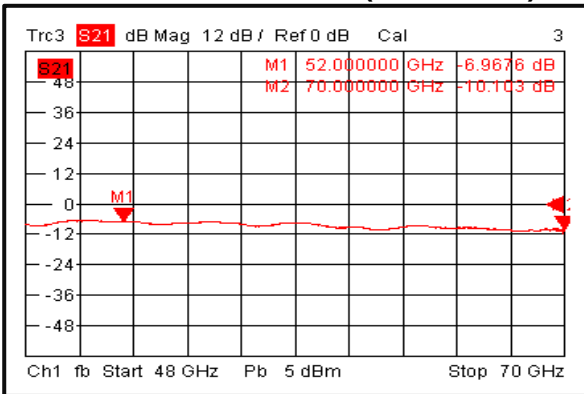


Isolation @-40°C (50~69GHz)

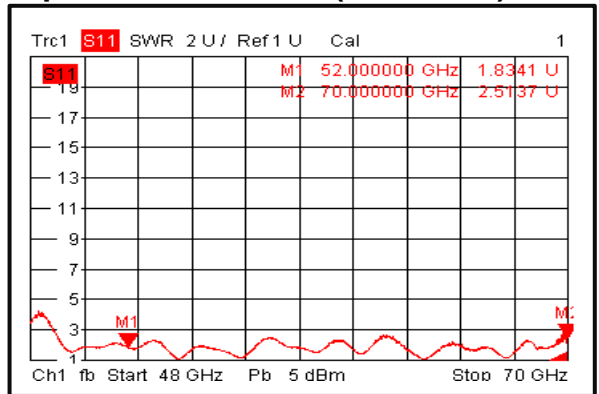




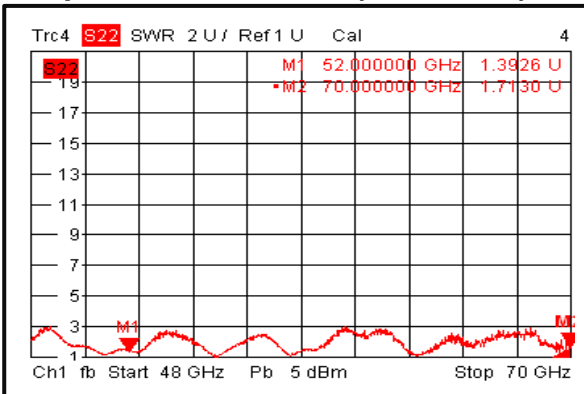
Insertion Loss @+85°C (50~69GHz)



Input VSWR @+85°C (50~69GHz)



Output VSWR @+85°C (50~69GHz)



Isolation @+85°C (50~69GHz)

