

W-Band Reflective FET Switch

75-110 GHz/SP4T/ WR-10

Model: TMSP4T-075110-10

The TMSP4T-075110-10 is a W-Band switch with a TTL driver that operates between 75 and 110 GHz. The SP4T switch offers 55 dB port-to-port isolation with a typical switching speed of 100 nanoseconds. The input and output connectors of the switch are WR-10.

Features:

- Frequency range: 75-110GHz
- Low Insertion Loss: 6dB
- Power Handling : 36 dBm
- High Isolation
- Switch Type: Reflective

Applications:

- Communication Systems
- Automatic Test Equipment
- Switching Network

电气特性 Electrical Characteristics:

| 参数 Parameter | Min | Typ | Max | 单位 Units |
|--------------------------|-----|------------------|-----|----------|
| 频率范围 Frequency range | | 75-110 | | GHz |
| 插损 Insertion Loss | | 6 | | dB |
| 隔离 Isolation | | 55 | | dB |
| 切换速度 Switch Speed | | 100 | | ns |
| 输入驻波 Input VSWR | | 1.4 | | :1 |
| 输出驻波 Output VSWR | | 1.6 | | :1 |
| 功率压缩 P1dB Output P1dB | | 20 | | dBm |
| 直流电压 DC Voltage | | -5 | | V DC |
| 控制电压 Control Voltage TTL | | "0"=Low;"1"=High | | V |
| 直流电流 DC Supply Current | | -200 | | mA |
| 开关类型 Switch type | | Reflective | | |

绝对最大值 Absolute Maximum Ratings :

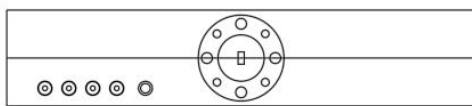
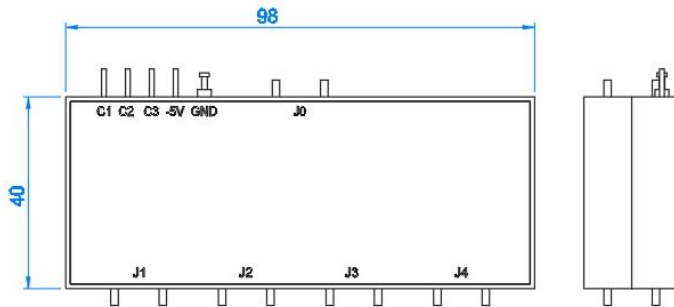
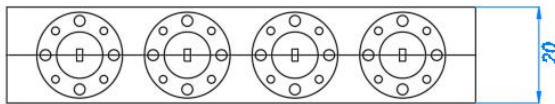
| 描述 Description | 参数 Parameter | 单位 Units |
|------------------------------|----------------------|----------|
| 供电偏置电压 Supply Bias Voltage | -5 (+5%) | V |
| 射频输入功率 RF Input Power | 36 | dBm |
| ESD灵敏度 ESD sensitivity (HBM) | Class 0, passed 150V | |

机械特性 Mechanical Specifications:

| 描述 Description | 参数 Parameter | 单位 Units |
|---------------------------------|----------------|----------|
| 输入/输出接口 Input /Output Connector | WR-10/UG-387/U | |
| 直流控制接口 Control Bias | Solder Pin | |
| 尺寸 Size | 98*40*20 | mm |

外形图 Outline Drawing:

Unit:mm



真值表 Truth Table

| TTL Control Input | | | Signal Path State |
|-------------------|------|------|-------------------|
| Bit1 | Bit2 | Bit3 | |
| 0 | 0 | 0 | J0-J1 |
| 0 | 1 | 0 | J0-J2 |
| 1 | 0 | 0 | J0-J3 |
| 1 | 0 | 1 | J0-J4 |

TTL Control Voltages &VDD

| Stage | Bias Condition |
|----------|-----------------------|
| VDD | -5V ($\pm 5\%$) |
| Low (0) | 0 to 0.8Vdc |
| High (1) | +5.0Vdc ($\pm 5\%$) |



ESD Protection: Strictly adhere to ESD precautions to prevent electrostatic damage.

温度环境 Environmental Conditions:

| 参数 Parameter | Min | Typ | Max | 单位 Units |
|------------------------------------|---|-----|------|----------|
| 操作温度 Operating Temperature | -45 | | +85 | °C |
| 存储温度 Non-operating Temperature | -55 | | +125 | °C |
| 相对湿度 Relative humidity | | 95 | | % |
| 海拔 Altitude | 10,000 | | | feet |
| 震动 Shock / Vibration(MIL-STD-810F) | 25g rms (15 degree 2KHz) endurance, 1 hour per axis | | | |
| 冲击 Shock(non operating) | 20G for 11msc half sin wave,3 axis both directions | | | |

订货信息 Ordering Information:

| 标准型号 Base Number | 描述 Description | 版本号 Revision |
|------------------|---|--------------|
| TMSP4T-075110-10 | W-Band Reflective FET Switch 75-110 GHz,SP4T,WR-10 | Rev.1.1 |