

## Reflective, Broadband PIN Switch

### 8-18 GHz/SPDT/ SMA Female

**Model: TLSPDT8G18GR-300W**

The TLSPDT8G18GR-300W is a reflective type switch with a TTL driver that operates between 8 and 18 GHz. The SPDT switch offers 40 dB port-to-port isolation with a typical switching speed of 150 nanoseconds. The input and output connectors of the switch are SMA female.

#### Features:

- Ultra Wide Band: 8-18 GHz
- Low Insertion Loss: 1.6 dB
- Peak Power : 300 W
- 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             | 8-18       |      |     | GHz      |
| 插损 Insertion Loss                |            | 1.6  | 2   | dB       |
| 隔离 Isolation                     | 35         | 40   |     | dB       |
| 切换速度 Switch Speed                |            | 150  | 200 | ns       |
| 输入驻波 Input VSWR                  |            | 1.8  | 2   | :1       |
| 输出驻波 Output VSWR                 |            | 1.8  | 2   | :1       |
| 电压驻波 Load VSWR                   |            |      | 2.5 | :1       |
| 峰值耐功 Peak Power                  |            |      | 300 | W        |
| 占空比 Duty Cycle                   |            |      | 12  | %        |
| 脉宽 Pulse Width                   |            |      | 10  | us       |
| 直流电压 DC Voltage                  |            | ±5   |     | V DC     |
| 直流电流 DC Supply Current(Vcc=+5V)  |            |      | 350 | mA       |
| 直流电流 DC Supply Current(Vee=-28V) |            |      | 150 | mA       |
| 控制电压 Control Voltage             |            | 0/+5 |     | V        |
| 开关类型 Switch type                 | Reflective |      |     |          |
| 阻抗 Impedance                     | 50         |      |     | Ohms     |

### 绝对最大值 Absolute Maximum Ratings :

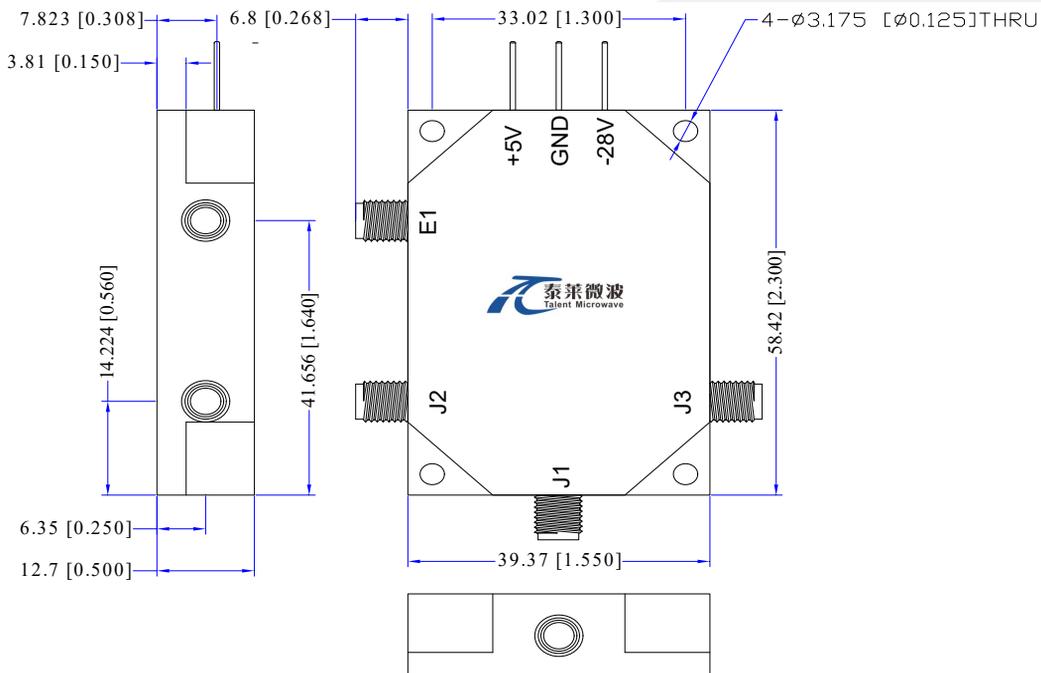
| 描述 Description               | 参数 Parameter         | 单位 Units |
|------------------------------|----------------------|----------|
| 供电偏置电压 Supply Bias Voltage   | +5/-28 (+5%)         | V        |
| 射频输入功率 RF Input Power        | 300                  | W        |
| ESD灵敏度 ESD sensitivity (Hbm) | 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 | SMA Female/SMA Female |          |
| 直流控制接口 Control Bias             | Solder Pin            |          |
| 尺寸 Size                         | 39.37*58.42*12.7      | mm       |

### 外形图 Outline Drawing:

Unit:mm



| 真值表 Truth Table   |                   |
|-------------------|-------------------|
| TTL Control Input | Signal Path State |
| E1                |                   |
| 0                 | J1-J2             |
| 1                 | J1-J3             |

| TTL Control Voltages &VDD |                |
|---------------------------|----------------|
| Stage                     | Bias Condition |
| VDD                       | +5V (±5%)      |
| VEE                       | -28V (±5%)     |
| Low (0)                   | 0 to 0.8Vdc    |
| High (1)                  | 4.5 to +5.0Vdc |

## 温度环境 Environmental Conditions:

| 参数 Parameter                       | Min   | Typ | Max | 单位 Units |
|------------------------------------|---|-----|-----|----------|
| 操作温度 Operating Temperature         | -10   |     | +65 | °C       |
| 存储温度 Non-operating Temperature     | -45   |     | +85 | °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 |
|-------------------|---|--------------|
| TLSPDT8G18GR-300W | Reflective,Broadband PIN Switch<br>8-18 GHz,SPDT,SMA Female | Rev.1.1      |