

## Absorptive, Broadband PIN Switch 10MHz-8GHz/SP16T/SMA Female

**Model: TLSP16T10M8GA**

The TLSP16T10M8GA is an absorptive PIN diode based switch with a TTL driver that operates between 10MHz and 8GHz. The SP16T switch offers 55 dB port-to-port isolation with a typical switching speed of 100 ns. The input and output connectors of the switch are SMA female.

### Features:

- Frequency range: 10MHz-8GHz
- Low Insertion Loss: 5.0 dB
- Power Handling : 25dBm
- High Isolation
- Switch Type: Absorptive

### 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   | 10MHz      |     | 8GHz |          |
| 插损 Insertion Loss      |            | 5   |      | dB       |
| 隔离 Isolation           |            | 55  |      | dB       |
| 切换速度 Switch Speed      |            | 100 |      | ns       |
| 输入驻波 Input VSWR        |            | 1.8 |      | :1       |
| 输出驻波 Output VSWR       |            | 1.8 |      | :1       |
| 耐功率 Power Handling     |            |     | 25   | dBm      |
| 控制电平 Control Logic TTL |            | +5  |      | V DC     |
| 直流电流 DC Supply Current |            | 40  |      | mA       |
| 开关类型 Switch type       | Absorptive |     |      |          |
| 阻抗 Impedance           | 50         |     |      | Ohms     |

### 绝对最大值 Absolute Maximum Ratings :

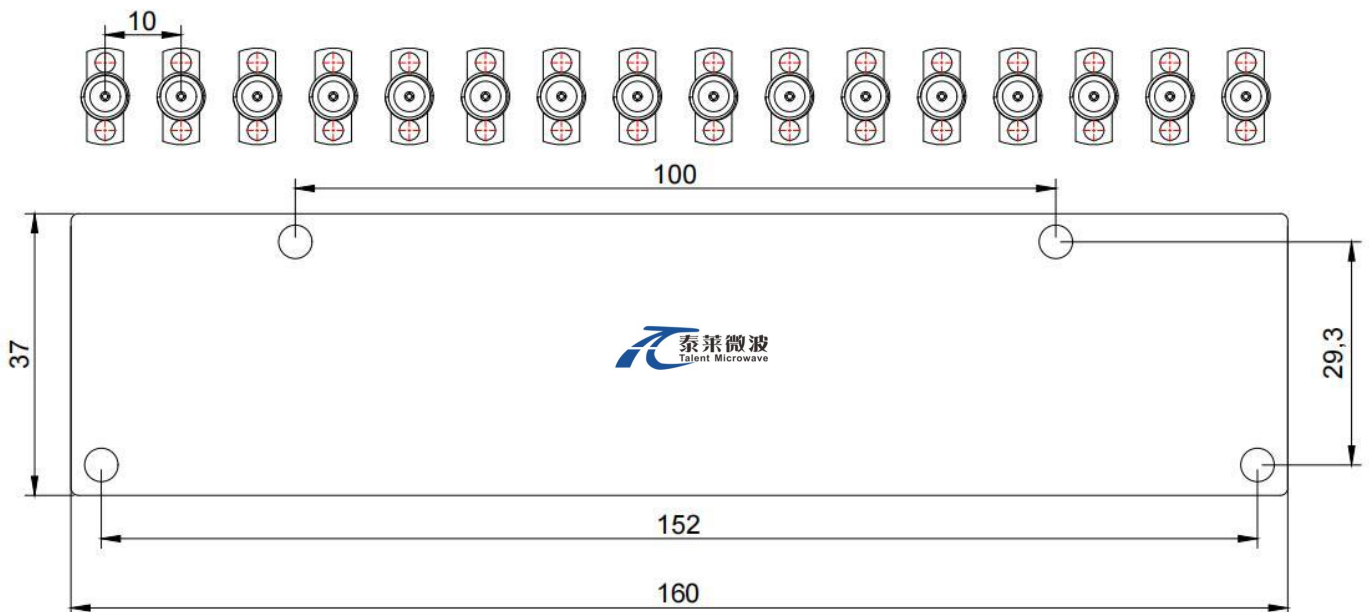
| 描述 Description               | 参数 Parameter         | 单位 Units |
|------------------------------|----------------------|----------|
| 供电偏置电压 Supply Bias Voltage   | +6                   | V        |
| 射频输入功率 RF Input Power        | 25                   | dBm      |
| ESD灵敏度 ESD sensitivity (HBm) | 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 | SMA Female/SMA Female |          |
| 直流控制接口 Control Bias Connector   | J30J-9ZKP             |          |
| 尺寸 Size                         | TBD                   | mm       |

### 外形图 Outline Drawing:

Unit:mm



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

## 引脚定义 Pin Definitions :

| 真值表 Truth Table   |    |    |    |                   |
|-------------------|----|----|----|-------------------|
| TTL Control Input |    |    |    | Signal Path State |
| C1                | C2 | C3 | C4 |                   |
| 0                 | 0  | 0  | 0  | J0-J1             |
| 0                 | 0  | 0  | 1  | J0-J2             |
| 0                 | 0  | 1  | 0  | J0-J3             |
| 0                 | 0  | 1  | 1  | J0-J4             |
| 0                 | 1  | 0  | 0  | J0-J5             |
| 0                 | 1  | 0  | 1  | J0-J6             |
| 0                 | 1  | 1  | 0  | J0-J7             |
| 0                 | 1  | 1  | 1  | J0-J8             |
| 1                 | 0  | 0  | 0  | J0-J9             |
| 1                 | 0  | 0  | 1  | J0-J10            |
| 1                 | 0  | 1  | 0  | J0-J11            |
| 1                 | 0  | 1  | 1  | J0-J12            |
| 1                 | 1  | 0  | 0  | J0-J13            |
| 1                 | 1  | 0  | 1  | J0-J14            |
| 1                 | 1  | 1  | 0  | J0-J15            |
| 1                 | 1  | 1  | 1  | J0-J16            |

| J30J-9ZKP |          |
|-----------|----------|
| 针 Pin     | 单位 Units |
| 1         | C1       |
| 2         | C2       |
| 3         | C3       |
| 4         | C4       |
| 5         | GND      |
| 6         | GND      |
| 7         | GND      |
| 8         | +5V      |
| 9         | +5V      |

## 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 |
|------------------|--|--------------|
| TLSP16T10M8GA    | Absorptive, Broadband PIN Switch<br>10MHz-8GHz, SP16T, SMA | Rev.1.0      |