泰莱微波
Talent Microwave

Suzhou Talent Microwave,Inc
sales@talentmw.com
www.talentmw.com

# W-Band Reflective FET Switch

## 75-110 GHz/SPDT/ WR-10

## Model: TMSPDT-075110-10

TheTMSPDT-075110-10 is a W-Band switch with a TTL driver that operates between 75 and 110 GHz. The SPDT switch offers 35 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: 4dB
- Power Handling : 20 dBm
- High Isolation
- Switch Type: Reflective

### Applications:

- Communication Systems
- Automatic Test Equipment
- Switching Network

### Electrical Characteristics:

| Parameter | Min | Typ | Max | Units |
|---|---|---|---|---|
| Frequency range | | 75-110 | | GHz |
| Insertion Loss | | 4 | | dB |
| Isolation | | 33 | | dB |
| Switch Speed | | 100 | | ns |
| Input VSWR | | 1.6 | | :1 |
| Output VSWR | | 2.0 | | :1 |
| P1dB Output P1dB | | 20 | | dBm |
| DC Voltage | | 5 | | V DC |
| Control Voltage TTL | | “0”=Low;“1”=High | | V |
| DC Supply Current | | 100 | | mA |
| Switch type | | Reflective | | |

### Absolute Maximum Ratings :

| Description | Parameter | Units |
|---|---|---|
| Supply Bias Voltage | -4（+5%） | V |
| RF Input Power | 20 | dBm |
| ESD sensitivity (HBm) | Class 0, passed 150V | |

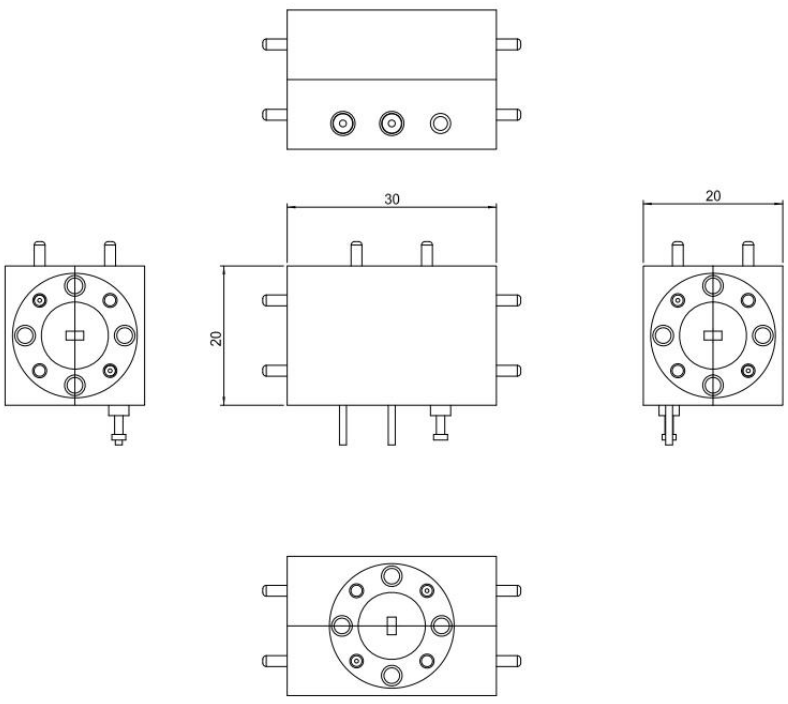
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## Mechanical Specifications:

| Description | Parameter | Units |
|---|---|---|
| Input /Output Connector | WR-10/UG-387/U | |
| Control Bias | Solder Pin | |
| Size | 30*20*20 | mm |

## Outline Drawing:

Unit:mm




| Truth Table | |
|---|---|
| TTL Control Input | Signal Path State |
| 0 | J0-J1 |
| 1 | J0-J2 |

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

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

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## Environmental Conditions:

| Parameter | Min | Typ | Max | Units |
|---|---|---|---|---|
| Operating Temperature | -45 | | +85 | ℃ |
| Non-operating Temperature | -55 | | +125 | ℃ |
| Relative humidity | | 95 | | % |
| Altitude | 10,000 | | | feet |
| Shock / Vibration(MIL-STD-810F) | 25g rms (15 degree 2KHz) endurance, 1 hour per axis | | | |
| Shock(non operating) | 20G for 11msc half sin wave,3 axis both directions | | | |

## Ordering Information:

| Base Number | Description | Revision |
|---|---|---|
| TMSPDT-075110-10 | W-Band Reflective FET Switch<br>75-110 GHz,SPDT,WR-10 | Rev.1.1 |