

## U-Band Reflective FET Switch

### 40-60 GHz/SPST/ WR-19

**Model: TMS PST-040060-19**

The TMS PST-040060-19 is a U-Band switch with a Negative logic level that operates between 40 and 60 GHz. The SPST 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-19.

#### Features:

- Frequency range: 40-60GHz
- Low Insertion Loss: 1.2dB
- Power Handling : 25 dBm
- High Isolation
- Switch Type: Reflective

#### Applications:

- Communication Systems
- Automatic Test Equipment
- Switching Network

#### Electrical Characteristics:

| Parameter         | Min | Typ        | Max | Units |
|-------------------|-----|------------|-----|-------|
| Frequency range   |     | 40-60      |     | GHz   |
| Insertion Loss    |     | 1.2        |     | dB    |
| Isolation         |     | 35         |     | dB    |
| Switch Speed      |     | 100        |     | ns    |
| Input VSWR        |     | 1.5        |     | :1    |
| Output VSWR       |     | 1.5        |     | :1    |
| P1dB Output P1dB  |     | 20         |     | dBm   |
| Control Voltage   |     | -5V/0V     |     | V     |
| DC Supply Current |     | -100       |     | mA    |
| Switch type       |     | Reflective |     |       |

#### Absolute Maximum Ratings :

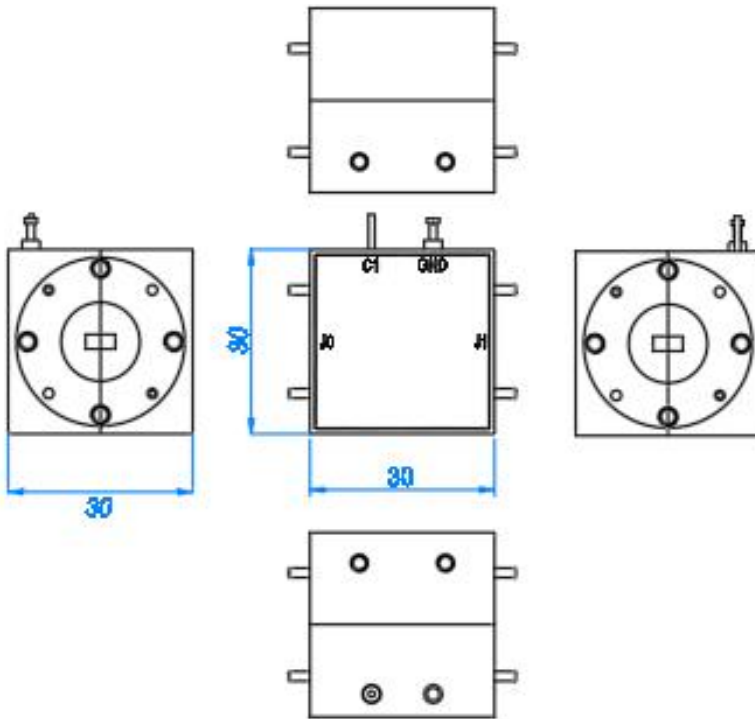
| Description           | Parameter            | Units |
|-----------------------|----------------------|-------|
| Control Voltage       | -5 (+5%)             | V     |
| RF Input Power        | 25                   | dBm   |
| ESD sensitivity (HBm) | Class 0, passed 150V |       |

### Mechanical Specifications:

| Description             | Parameter      | Units |
|-------------------------|----------------|-------|
| Input /Output Connector | WR-19/UG-383/U |       |
| Control Bias            | Solder Pin     |       |
| Size                    | 30*30*30       | mm    |

### Outline Drawing:

Unit:mm



| Truth Table           |                   |
|-----------------------|-------------------|
| Control Input<br>Bit1 | Signal Path State |
| -5V                   | ON                |
| 0                     | OFF               |



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

### Environmental Conditions:

| Parameter                       | Min   | Typ | Max  | Units |
|---------------------------------|---|-----|------|-------|
| Operating Temperature           | -45   |     | +85  | °C    |
| Non-operating Temperature       | -55   |     | +125 | °C    |
| 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 |
|------------------|--|----------|
| TMSPST-040060-19 | U-Band Reflective FET Switch<br>40-60 GHz,SPST,WR-19 | Rev.1.1  |