

**Model: TLDA-0.1G18G-63-7**
**Digital Attenuator**
**0.1-18 GHz, 7-Bit, 0.5 dB LSB, 63 dB Range**
**Feature:**

- Ultra Wide Band: 0.1-18GHz
- 7-Bit, 0.5 dB LSB, 63 dB Range
- Low Insertion Loss
- High Attenuator Accuracy

**电气特性 Electrical:**

| 参数Parameter            | Min.   | Typ. | Max. | 单位Units |
|------------------------|--------|------|------|---------|
| 频率范围 Frequency range   | 0.1-18 |      |      | GHz     |
| 插损 Insertion Loss      |        | 4.5  |      | dB      |
| 衰减范围 Attenuation Range | 63     |      |      | dB      |
| 控制位数 Control Bit TTL   | 7      |      |      | Bit     |
| 衰减步进 Attenuation Step  | 0.5    |      |      | dB      |
| 切换速度 Switch Speed      | 50     |      |      | ns      |
| 输入驻波 Input VSWR        |        | 2.2  |      | :1      |
| 输出驻波 output VSWR       |        | 2.2  |      | :1      |
| 最大输入功率 Input Max Power | 24     |      |      | dBm     |
| 直流电压 DC Voltage        | +5     |      |      | V DC    |
| 直流电流 DC Supply Current |        | 20   |      | mA      |
| 阻抗 Impedance           | 50     |      |      | Ohms    |

**机械特性 Mechanical :**

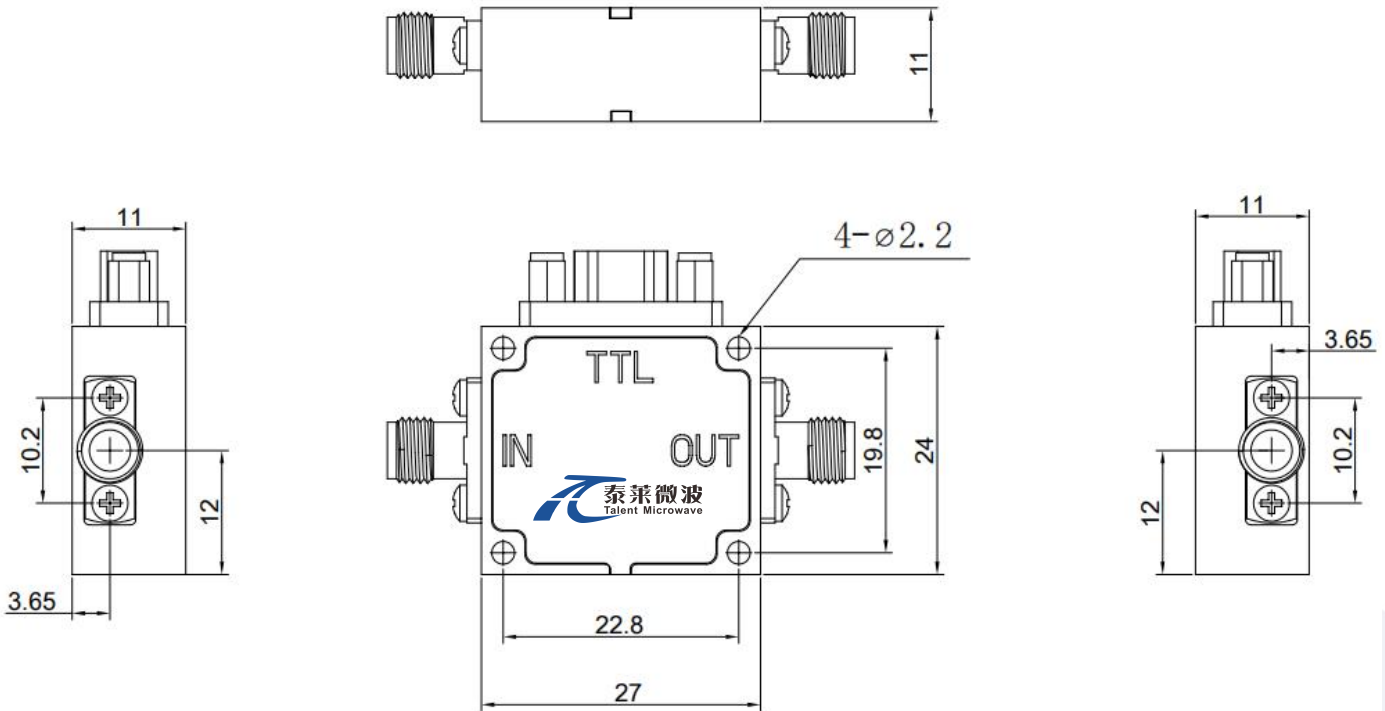
| 参数Parameter                      | 指标 Value   | 单位Units |
|----------------------------------|------------|---------|
| 输入输出接口 Input /Output Connector   | SMA Female |         |
| DC和控制接口 DC and control interface | J30J-9ZKP  |         |
| 尺寸 Size                          | 27*24*11   | mm      |
| 重量 Weight                        | /          | g       |

**绝对最大值 Absolute Maximum Ratings:**

| 参数Parameter                  | 指标 Value             |
|------------------------------|----------------------|
| 供电偏置电压 Supply Bias Voltage   | +5V (±5%)            |
| 输入功率 RF Input Power          | 24 dBm               |
| ESD灵敏度 ESD sensitivity (HBm) | Class 0, passed 150V |

外形尺寸Outline Drawing:

Unit: mm(Inches)



真值表Truth Table

| TTL Control Input |    |    |    |    |    |    | Signal Path State |
|-------------------|----|----|----|----|----|----|-------------------|
| V1                | V2 | V3 | V4 | V5 | V6 | V7 |                   |
| 0                 | 0  | 0  | 0  | 0  | 0  | 0  | 0dB               |
| 1                 | 0  | 0  | 0  | 0  | 0  | 0  | 0.5dB             |
| 0                 | 1  | 0  | 0  | 0  | 0  | 0  | 1dB               |
| 0                 | 0  | 1  | 0  | 0  | 0  | 0  | 2dB               |
| 0                 | 0  | 0  | 1  | 0  | 0  | 0  | 4dB               |
| 0                 | 0  | 0  | 0  | 1  | 0  | 0  | 8dB               |
| 0                 | 0  | 0  | 0  | 0  | 1  | 0  | 16dB              |
| 1                 | 1  | 1  | 1  | 1  | 1  | 0  | 31.5dB            |
| 1                 | 1  | 1  | 1  | 1  | 1  | 1  | 63dB              |

注：控制为0/+5V控制，+5V为1

| J30J-9ZKP |            |
|-----------|------------|
| 引脚Pin#    | 功能Function |
| 1         | V1         |
| 2         | V2         |
| 3         | V3         |
| 4         | V4         |
| 5         | V5         |
| 6         | V6         |
| 7         | V7         |
| 8         | +5V        |
| 9         | GND        |

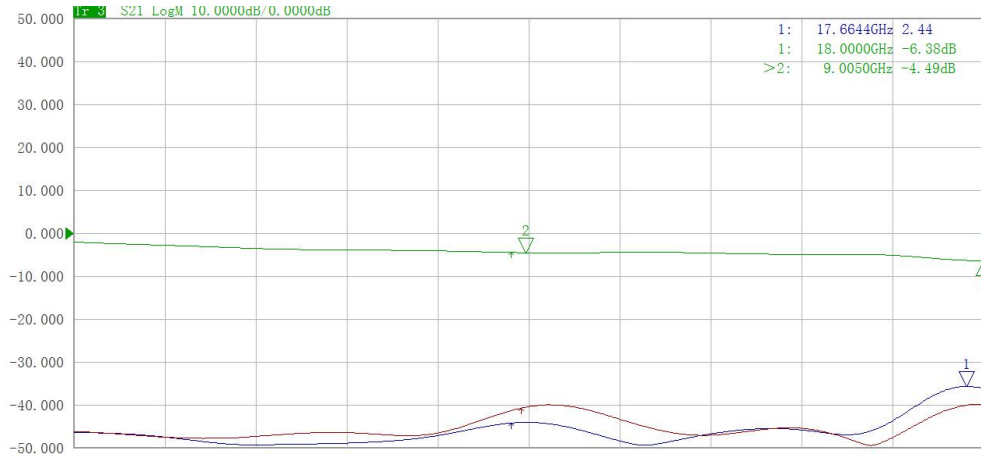
### 温度环境 Environmental Conditions:

| 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                        | 50,000  |      |      | 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  |      |      |         |

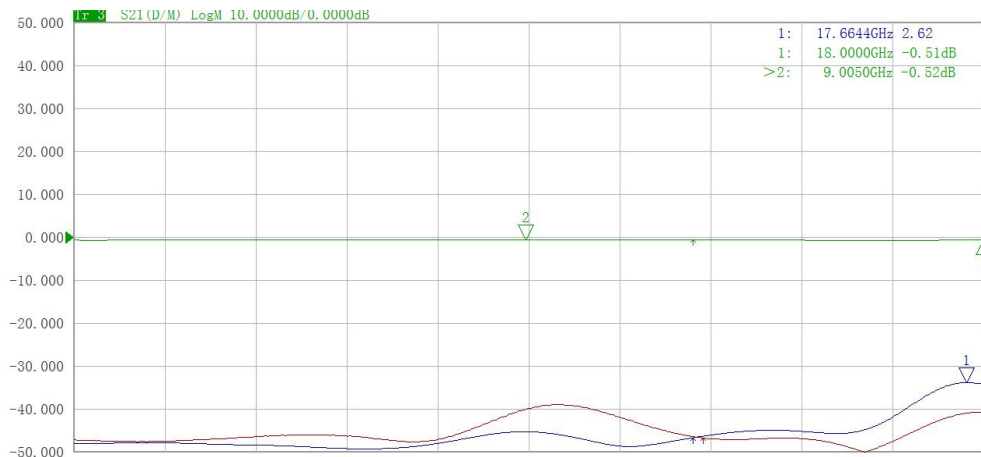
### 订货信息 Ordering Information:

| 标准型号 Part Number | 描述 Description                          | 版本号Revision |
|------------------|---|-------------|
| TLDP-6G18G-360-6 | 6-Bit Digital Phase Shifter,6-18GHz,SMA | Rev.1.1     |

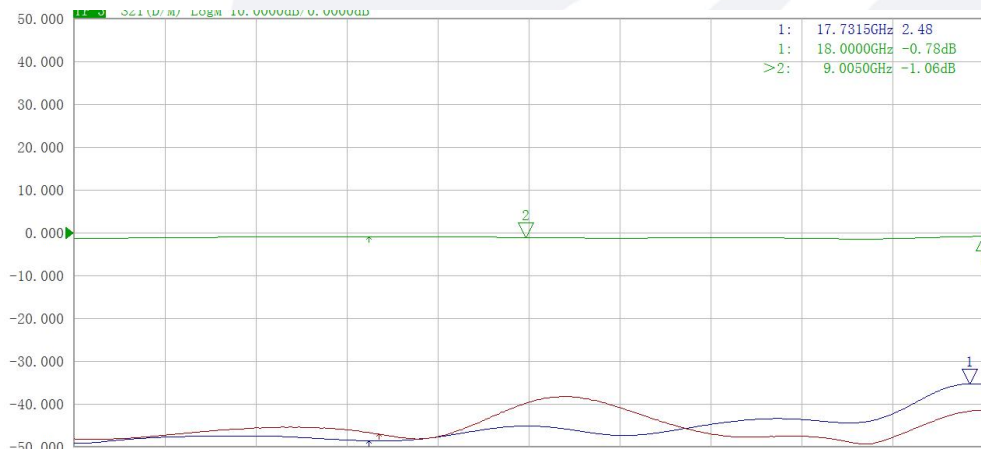
典型曲线 Typical Performance Data:



0dB衰减态

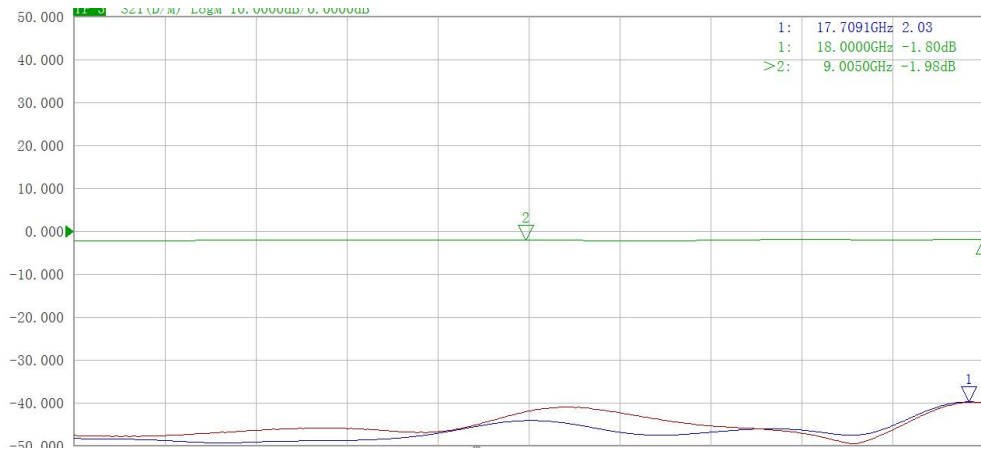


0.5dB衰减态

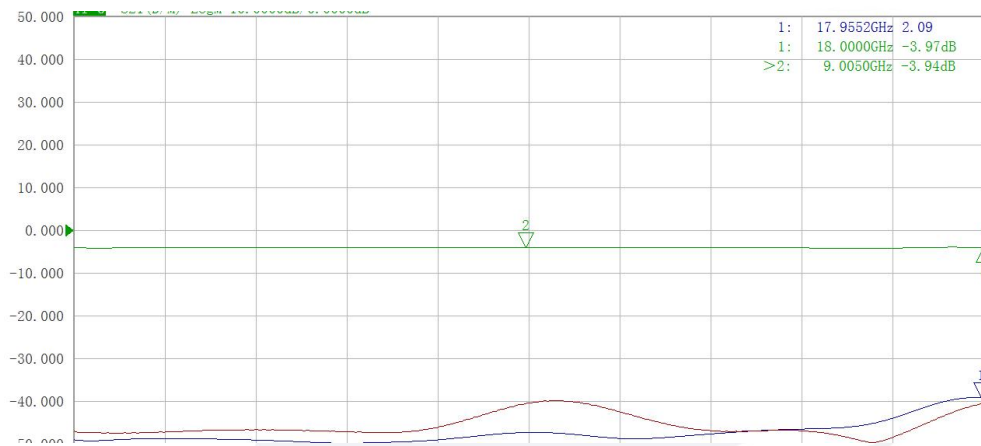


1dB衰减态

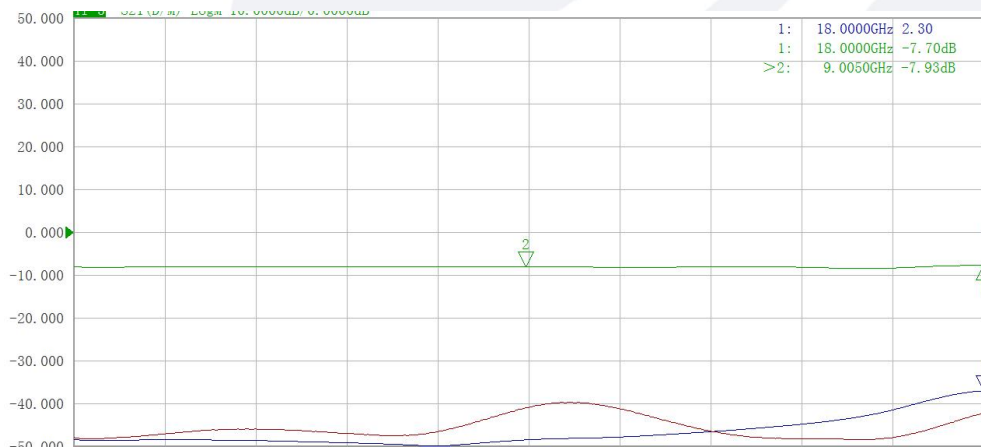
典型曲线 Typical Performance Data:



2dB衰减态

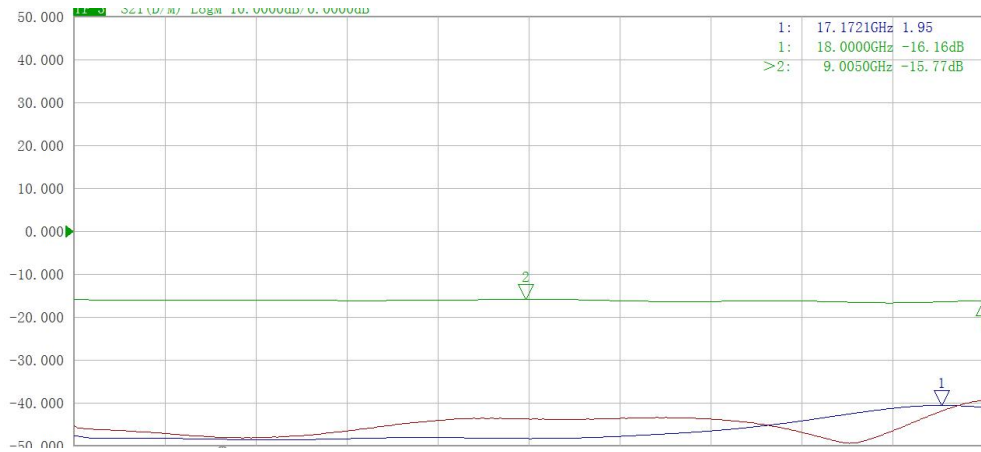


4dB衰减态

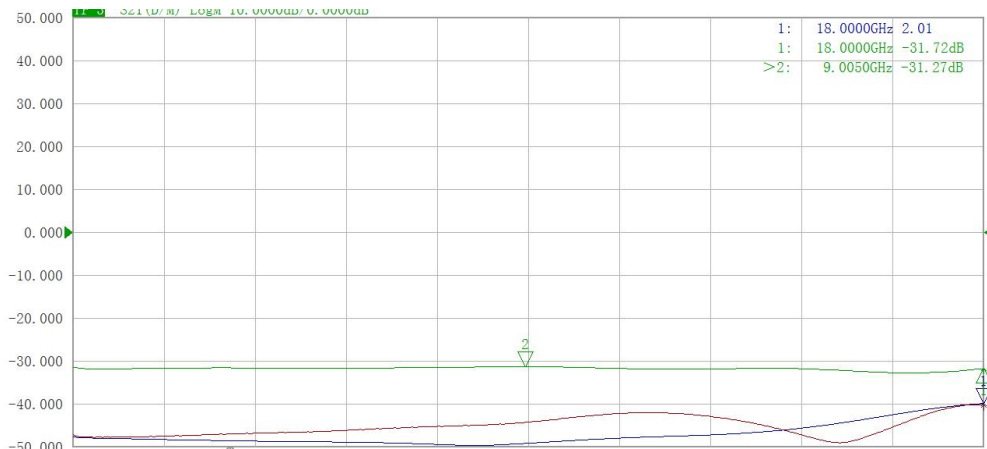


8dB衰减态

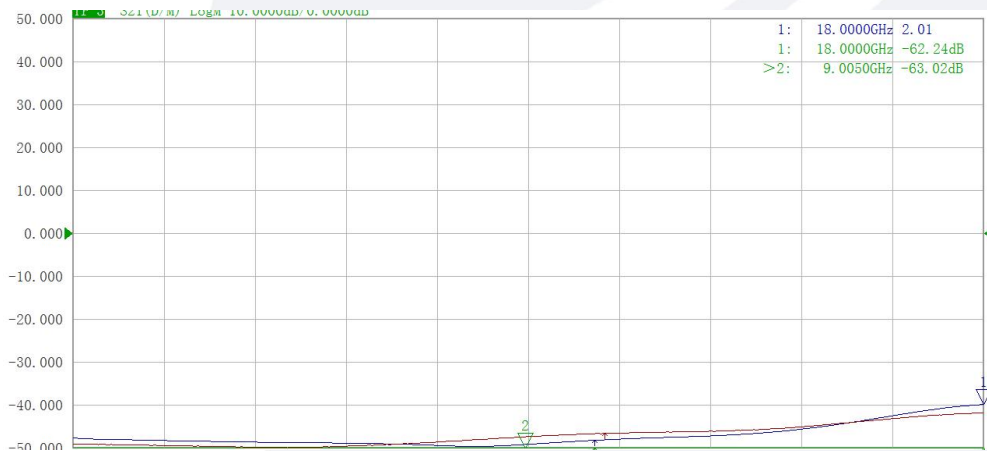
典型曲线 Typical Performance Data:



16dB衰减态



31.5dB衰减态



63dB衰减态