泰莱微波 Talent Microwave

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# Coax Directional Coupler

## 1-18GHz/30dB Coupling/N Female

## Model: TC-10180-30N

TC-10180-30N is a coaxial directional coupler that delivers a 30 dB nominal coupling level and 10 dB minimum directivity across the full frequency range from 1 to 18 GHz. It is a three-port passive device that can couple a portion of the power from the main transmission line to the auxiliary line in a directional manner.

### Features:

- Output Frequency: 1-18GHz
- Coupling: 30dB Typ
- Stackable mechanical design
- Low Insertion Loss
- Moderate Directivity
- 50 Ohm Matched Input / Output

### Applications:

- Test Labs
- Instrumentations
- Sub-assemblies

### 电气特性 Electrical Characteristics:

| 参数 Parameter | Min | Typ | Max | 单位 Units |
|---|---|---|---|---|
| 工作频率 Frequency Range | 1 | | 18 | GHz |
| 插入损耗 Insertion Loss (不含耦合插损 Excl Coupling) | | 0.7 | 1.0 | dB |
| 耦合插损 Nominal Coupling Loss | | 0.04 | | dB |
| 耦合度 Coupling | | 30±1.8 | | dB |
| 方向性 Directivity | 10 | 13 | | dB |
| 耐功率 Power Handling | | | 30 | W |
| 驻波 VSWR | | | 1.6 | :1 |
| 阻抗 Impedance | | 50 | | Ohms |

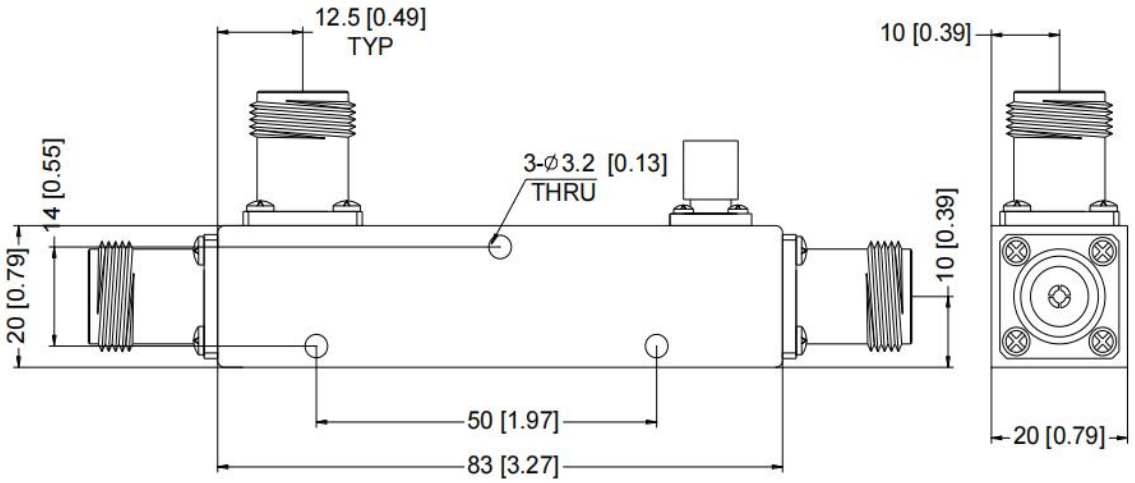
### 机械特性 Mechanical Specifications:

| 参数 Parameter | 指标 Value | 单位 Units |
|---|---|---|
| 输入/输出接口 Input/Output Connector | N Female/N Female | |
| 尺寸 Size | 83*20*20 | mm |

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## 外形图 Outline Drawing:

Unit:mm; Tolerance:±0.1mm




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

## 温度环境 Environmental Conditions:

| 参数 Parameter | Min | Typ | Max | 单位 Units |
|---|---|---|---|---|
| 温度范围 Temperature Range | -45 | | +85 | ℃ |
| 相对湿度 Relative humidity | 100% RH at 35c, 95%RH at 40℃ | | | % |
| 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 Base Number | 描述 Description | 版本号 Revision |
|---|---|---|
| TC-10180-30N | Coaxial Directional Coupler<br>1-18GHz, Coulping:30dB, N Female | Rev.1.0 |