

# TLbend Series High-Strength Phase-Stable Flexible RF Cable

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## TLBEND SERIES: HIGH-STRENGTH PHASE-STABLE FLEXIBLE RF CABLE

This cable delivers exceptional bend performance, high cable retention strength, and outstanding phase stability, specifically engineered for internal point-to-point interconnects between RF modules within high-density systems. Superior Flexibility, Bendable directly from the connector root. Mechanical Durability, Reinforced strain relief design for vibration-prone environments. Phase Stability. Environmental Resistance, Flame-retardant FEP jacket (UL94 V-0 rated).

### Typical Applications

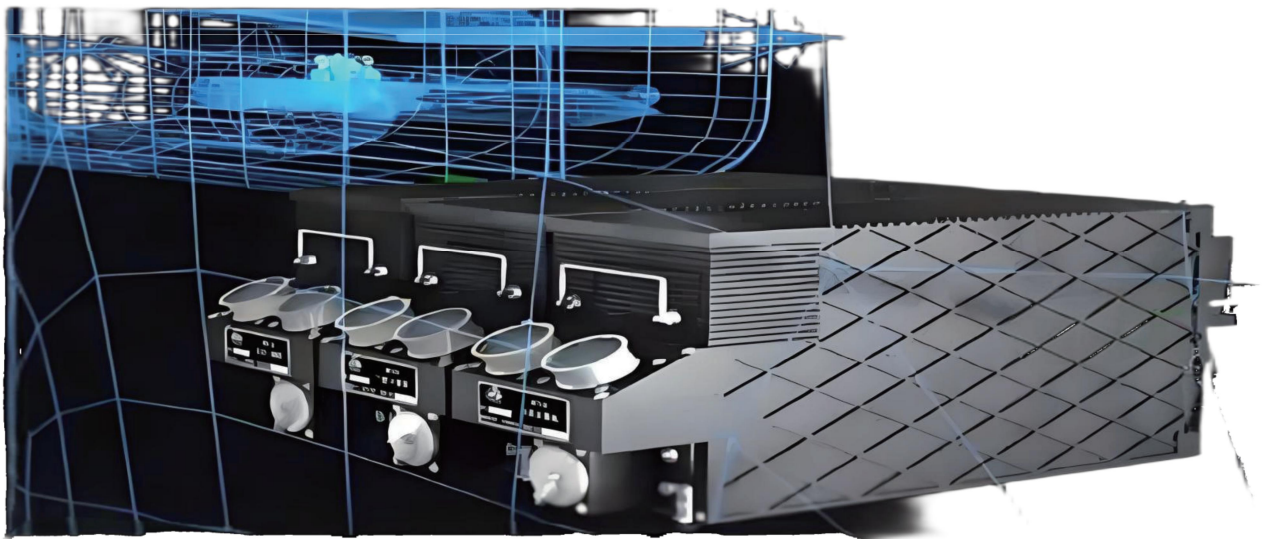
- Radar Systems
- Avionics
- Military Platforms
- 5G Infrastructure: Dense antenna array feeder cables

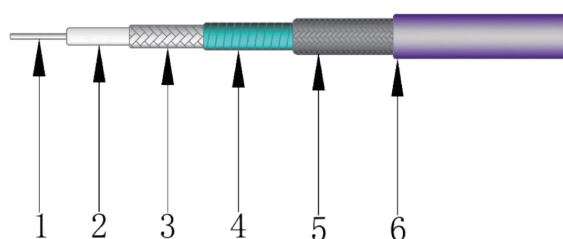
### Product Features

- Operating frequency up to 50GHz
- Superior Flexibility
- Mechanical Durability
- Phase Stability
- Environmental Resistance

## Equivalent Cable Replacement Table

| Talent Model | Replacement Model | Replacement Brand |
|--------------|-------------------|-------------------|
| TLbend086    | 32081             | ASTROLAB          |
| TLbend086H   | 32022             | ASTROLAB          |
| TLbend141    | 32024             | ASTROLAB          |



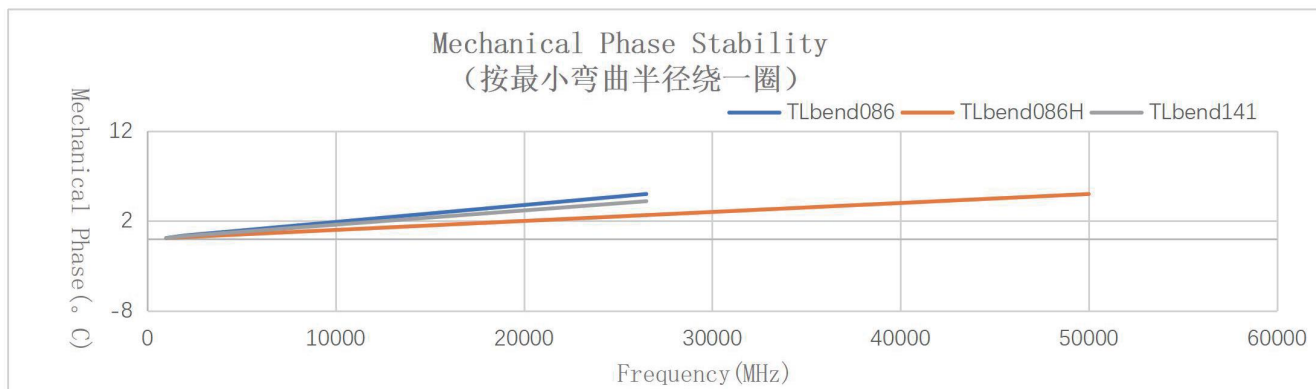
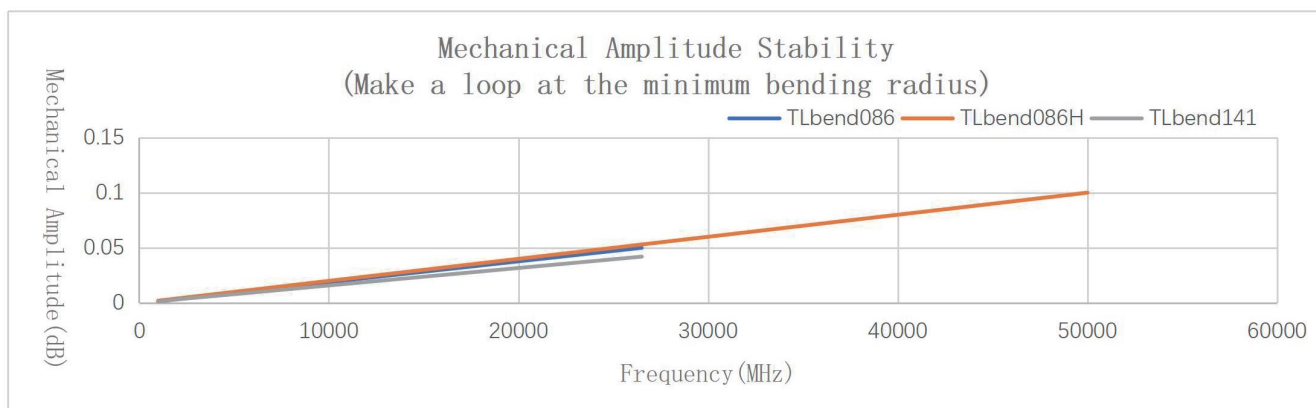
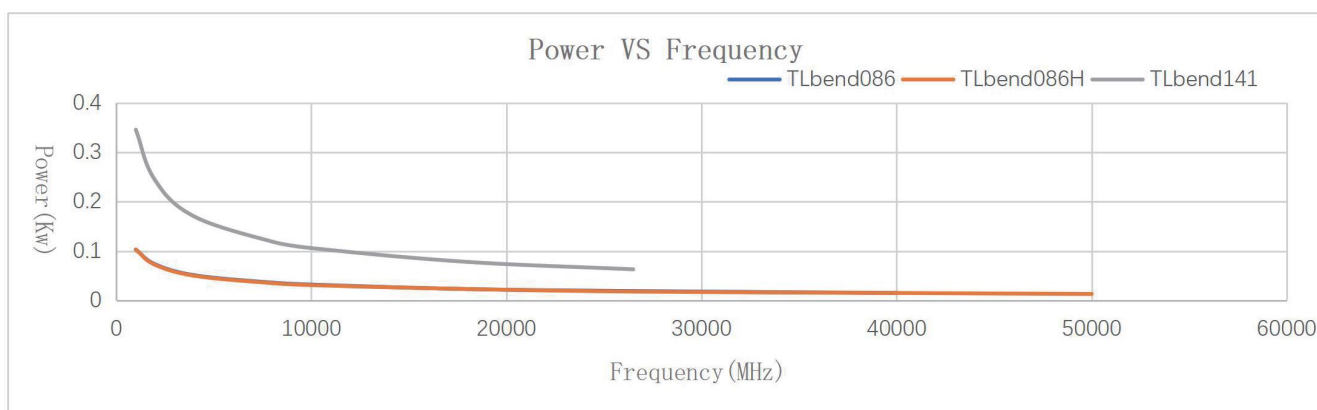
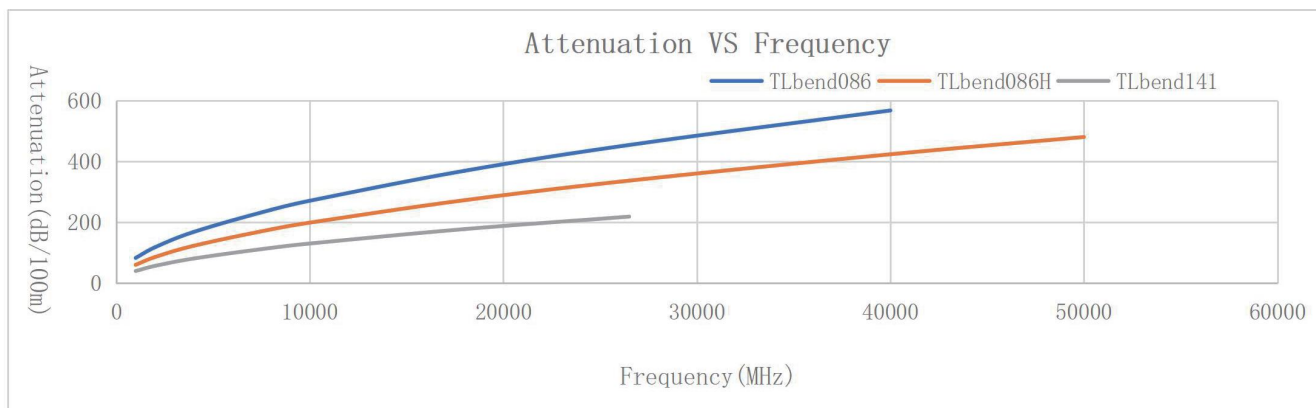


- 1-Center Conductor——SPC
- 2-Dielectric——PTFE
- 3-Outer Conductor ——SPC tape
- 4-Interlayer——Aluminum foil
- 5-Outer Shield——Stainless steel wire
- 6-FEP Jacket——FEP

## ► Cable Specification

| Model                                                                      | TLbend086 |       | TLbend086H |       | TLbend141 |       |
|----------------------------------------------------------------------------|-----------|-------|------------|-------|-----------|-------|
| Mechanical Specifications                                                  |           |       |            |       |           |       |
| Center Conductor                                                           | 0.51      |       | 0.56       |       | 0.72      |       |
| Dielectric                                                                 | 1.65      |       | 1.70       |       | 2.10      |       |
| Inner Shield                                                               | 1.83      |       | 1.86       |       | 2.30      |       |
| Interlayer                                                                 | 1.93      |       | 1.96       |       | 2.65      |       |
| Outer Shield                                                               | 2.16      |       | 2.19       |       | 3.11      |       |
| Jachkt                                                                     | 2.50      |       | 2.64       |       | 3.60      |       |
| Electrical Specifications                                                  |           |       |            |       |           |       |
| Impedance(Ω)                                                               | 50        |       | 50         |       | 50        |       |
| Velocity of Propagation(%)                                                 | 70        |       | 76         |       | 76        |       |
| Shielding Effectiveness (dB)                                               | < -90     |       | < -90      |       | < -90     |       |
| Time Delay (ns/m)                                                          | 4.76      |       | 4.38       |       | 4.38      |       |
| Voltage Withstand(V,DC)                                                    | 800       |       | 450        |       | 600       |       |
| Operating Frequency(GHz)                                                   | 40        |       | 50         |       | 26.5      |       |
| Static Bending Radius (mm)                                                 | 13        |       | 13         |       | 18        |       |
| Dynamic Bending Radius (mm)                                                | 25        |       | 25         |       | 36        |       |
| Operating Temperature (°C)                                                 | -55~150   |       | -55~165    |       | -55~165   |       |
| Weight (g/m)                                                               | 18        |       | 17         |       | 35        |       |
| Attenuation(+25°C Ambient)&Power Handling(+40°C Ambient;SeaLevel;VSWR 1:1) |           |       |            |       |           |       |
| Frequency (MHz)                                                            | dB/100m   | KW    | dB/100m    | KW    | dB/100m   | KW    |
| 1000                                                                       | 82.91     | 0.103 | 60.12      | 0.103 | 43.79     | 0.409 |
| 2000                                                                       | 118.02    | 0.073 | 85.78      | 0.072 | 62.18     | 0.288 |
| 4000                                                                       | 168.42    | 0.051 | 122.84     | 0.050 | 88.45     | 0.202 |
| 8000                                                                       | 241.23    | 0.036 | 176.76     | 0.035 | 126.12    | 0.142 |
| 10000                                                                      | 271.08    | 0.032 | 199.00     | 0.031 | 141.47    | 0.127 |
| 18000                                                                      | 369.65    | 0.023 | 272.95     | 0.023 | 191.82    | 0.093 |
| 26500                                                                      | 454.58    | 0.019 | 337.24     | 0.018 | 234.80    | 0.076 |
| 40000                                                                      | 568.16    | 0.015 | 424.00     | 0.015 | 291.75    | 0.061 |
| 50000                                                                      |           |       | 480.91     | 0.013 | 328.51    | 0.055 |
| K1                                                                         | 2.5808091 |       | 1.8600000  |       | 1.3707349 |       |
| K2                                                                         | 0.0013000 |       | 0.0013000  |       | 0.00044   |       |

► Test Data





| Connector Code | Connector Type       | Operating Frequency | TLbend086 | TLbend086H | TLbend141 | VSWR |
|----------------|----------------------|---------------------|-----------|------------|-----------|------|
| 2.4M           | 2.4mm Male           | DC-50GHz            |           | ●          |           | 1.30 |
| 2.4F           | 2.4mm Female         | DC-50GHz            |           | ●          |           | 1.30 |
| 2.92M          | 2.92mm Male          | DC-40GHz            | ●         |            |           | 1.30 |
| 2.92F          | 2.92mm Female        | DC-40GHz            | ●         |            |           | 1.30 |
| SMAM           | SMA Male             | DC-27GHz            |           | ●          | ●         | 1.30 |
| SMAWM          | SMA Male Right Angle | DC-18GHz            |           | ●          | ●         | 1.30 |
| SMAF           | SMA Female           | DC-27GHz            | ●         | ●          | ●         | 1.30 |