TL Bend Series

High Performance Flexible Phase Stable Coax Cable

04

INTRODUCTION

TL bend series are featured with excellent bending property, high strength of retention and outstanding phase stability. It is designed for point–to–point interconnection between RF modules within a system. The series has excellent fire and corrosion resistance. This series cable assembly can be bent from the root of connectors, which makes the cable has impressive tensile force and mechanical durability.

Typical Application

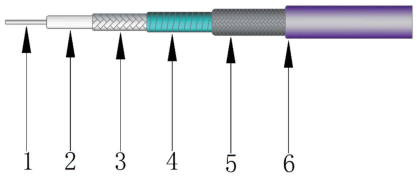
·Cabinet internal jumper
·Interconnection between boards
·Point to point interconnection Between RF Modules

Features

·Operating frequency up to 50GHz
·Stainless steel soldering–free connectors
·Triple shielding structure, good insulation
·High tensile strength
·Excellent bending phase and amplitude stability

Replacement Table

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

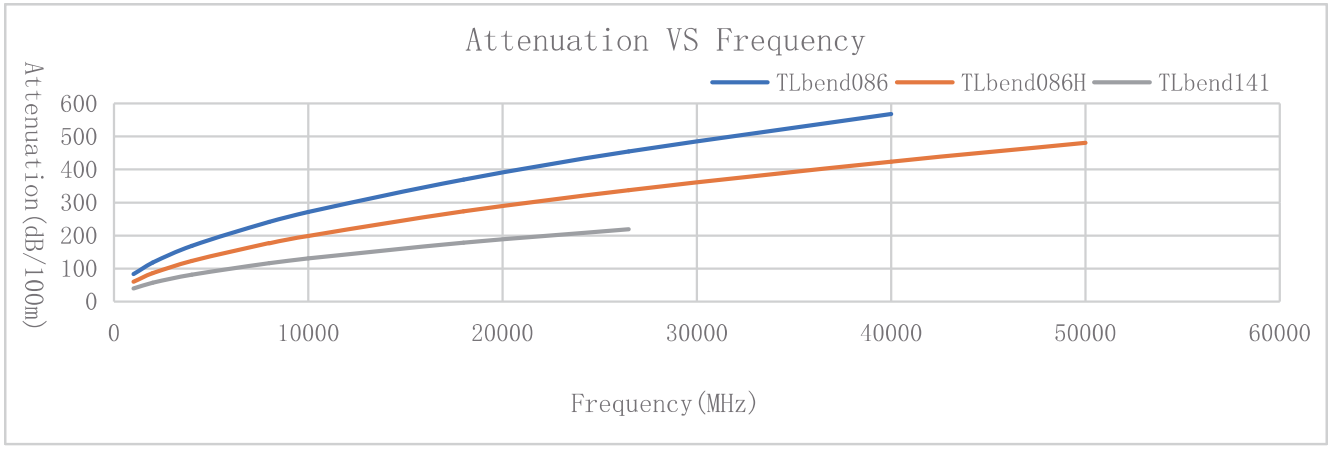


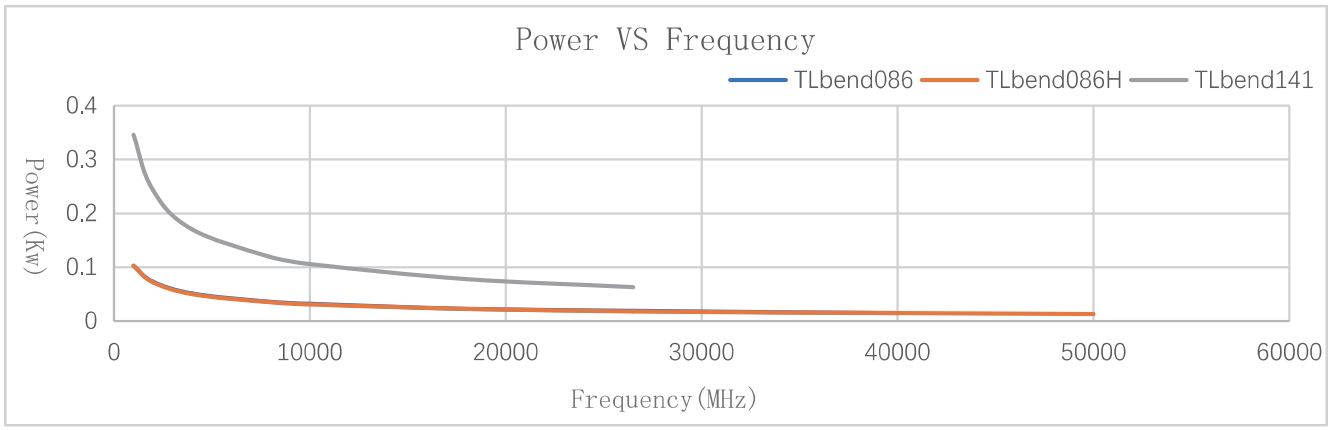
1–Center Conductor——SPC(Silver Plated Copper)
2–Dielectric——PTFE
3–Outer Conductor ——SPC(Silver Plated Copper) tape
4–Interlayer——Aluminum foil
5–Outer Shield——Stainless steel wire
6–FEP Jachkt——FEP

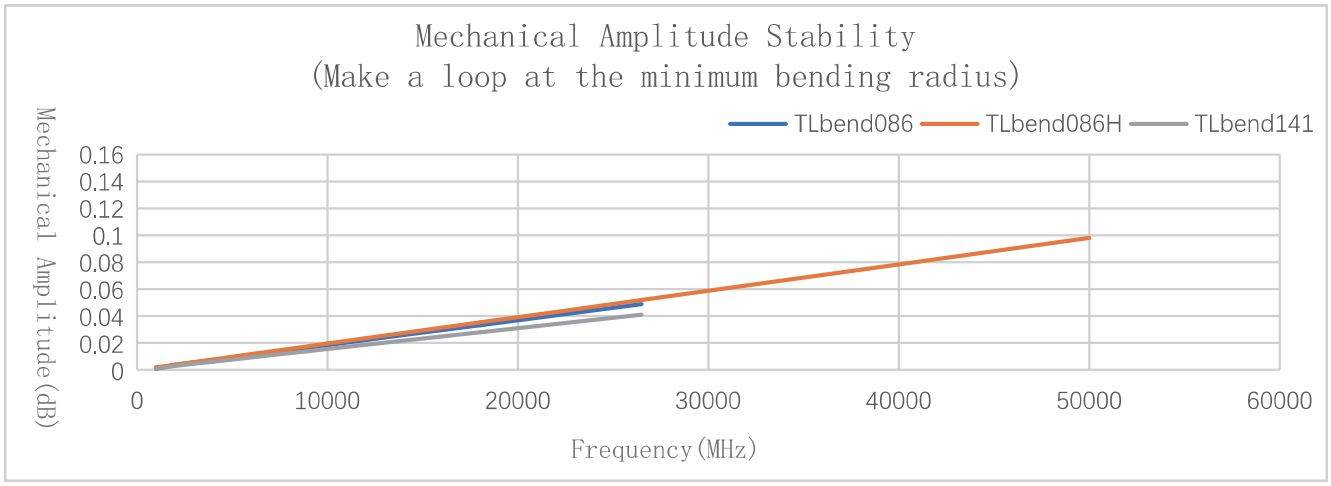
Cable Specification

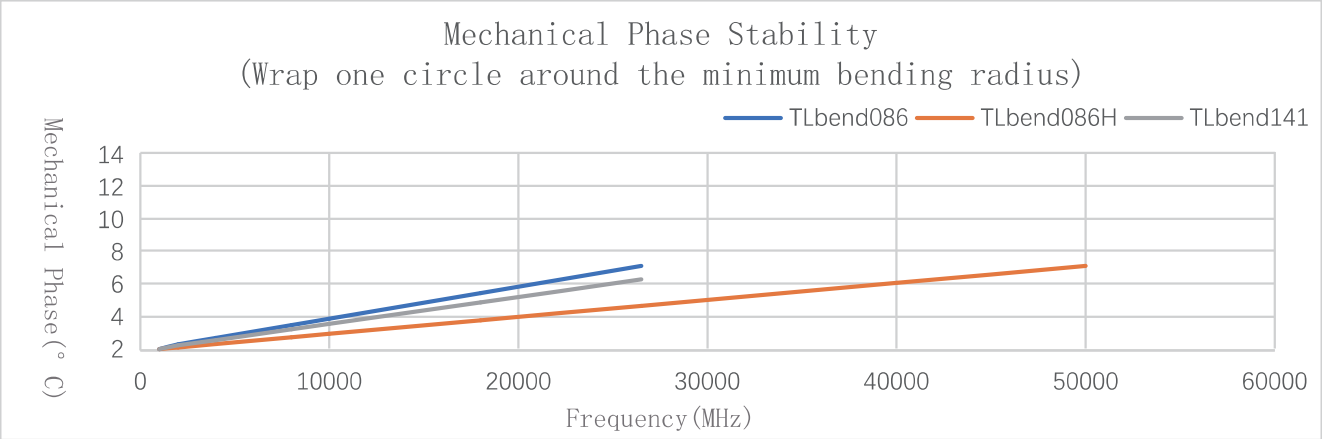
Model	TLbend086		TLbend086H		TLbend141	
Mechanical Specifications						
Center Conductor (mm)	0.51		0.56		0.72	
Dielectric (mm)	1.65		1,70		2.10	
Inner Shield (mm)	1.81		1.85		2.30	
Interlayer (mm)	1.91		1.98		2.50	
Outer Shield (mm)	2.14		2.24		2.95	
Jachkt (mm)	2.50		2.64		3.60	
Electrical Specifications						
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)	500		500		600	
Operating Frequency(GHz)	40		50		26.5	
Static Bending Radius（mm)	10.0		10.6		18	
Dynamic Bending Radius（mm)	25.0		26.0		36	
Operating Temperature（℃)	-55~125		-55~165		-55~165	
Weight（g/m)	18		17		31	
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	82.9	0.103	60.1	0.103	39.80	0.346
2000	118.0	0.073	85.8	0.072	56.67	0.243
4000	168.4	0.051	122.8	0.050	80.90	0.170
8000	241.2	0.036	176.8	0.035	115.94	0.119
10000	271.1	0.032	199.0	0.031	130.31	0.106
18000	369.7	0.023	272.9	0.023	177.80	0.077
26500	454.6	0.019	337.2	0.018	218.77	0.063
40000	568.2	0.015	424.0	0.015	273.61	0.050
50000			480.9	0.013	309.34	0.045
K1	2.5808091		1.8600000		1.23807	
K2	0.0013000		0.0013000		0.0006499	

Test Data

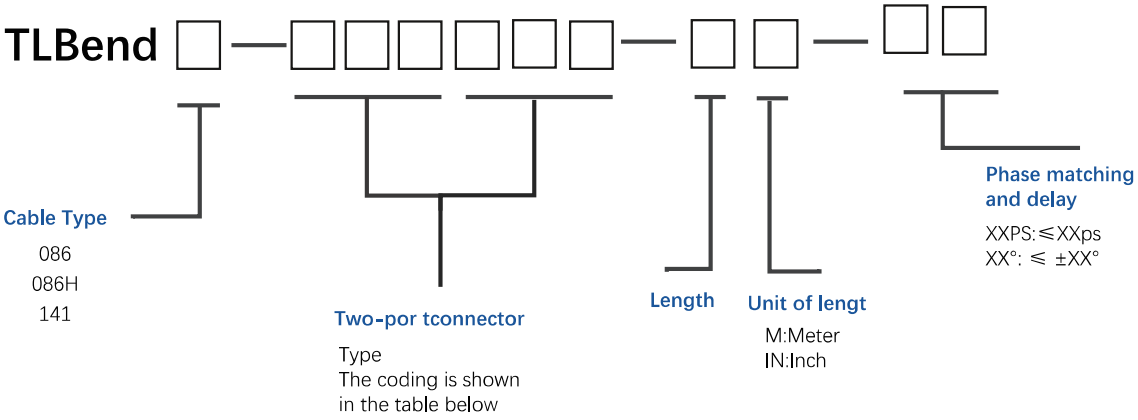

Attenuation VS Frequency
TLbend086
TLbend086H
TLbend141
Attenuation (dB/100m)
600
500
400
300
200
100
0
0
10000
20000
30000
40000
50000
60000
Frequency (MHz)


Power VS Frequency
TLbend086
TLbend086H
TLbend141
Power (Kw)
0.4
0.3
0.2
0.1
0
0
10000
20000
30000
40000
50000
60000
Frequency (MHz)


Mechanical Amplitude Stability
(Make a loop at the minimum bending radius)
TLbend086
TLbend086H
TLbend141
Mechanical Amplitude (dB)
0.16
0.14
0.12
0.1
0.08
0.06
0.04
0.02
0
0
10000
20000
30000
40000
50000
60000
Frequency (MHz)



Assembly Selection Intormation



Optional Connectors

Connector Code	Connector Type	Operating Frequency	TLbend086	TLbend086H	TLbend141	VSWR（Max）
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		●	●	1.25
SMAWM	SMA Male Right Angle	DC-18GHz		●	●	1.25
SMAF	SMA Female	DC-27GHz	●	●	●	1.25