


Bend-to-the-end Electrical Stability Test of MB260L Cable

1. Test Purpose

To evaluate the electrical stability of MB260L cable assembly when bent from the connector end in multiple times.

2. DUT Product Information

Product Name	Tight Bend Triple-shielding Flexible Cable MB260L	
P/N	MB260L-292M292M-0.4M	
Specification	Frequency Range: DC-40 GHz	
	Length: 0.4 Meter	
	VSWR: 1.4 max	
Qty	1 PC	

3. Test Instrument and Tool

No.	Instrument	Model
1	Vernier Calliper	AIRAJ 200MM
2	Vector Network Analyzer	AV3672E(10MHz-67GHz)

4. Test Description

MB260L is designed as a flexible cable which can be bent from the connector end with tight bend radius, ideal for space-constraint applications. In this test, MB260L is bent from the connector end 10 cycles with 5 mm bend radius. Before and after the bending test, VSWR and attenuation is measured and recorded. The DUT exhibits minimal degradation in insertion loss, VSWR after the test.

5. Test Procedures

5.1 Initial test

Connect the two ports of cable under test with VNA, the cable is held in its original relaxed position and is measured in the VSWR , attenuation(shown in Pic 1).

5.2 10 cycles of bend-to-the-end test

Disconnect the MB260L cable under test → bend the cable from connector end (shown in Pic 2) → straighten MB260L → repeat this action of bending and straightening 10 cycles → measuring the VSWR, attenuation.

5.3 Returning to original position test

Disconnect the MB260L cable under test, the cable was then returned to its original position. Measuring and recording the VSWR , attenuation (shown in Pic 3).



Pic 1



Pic 2



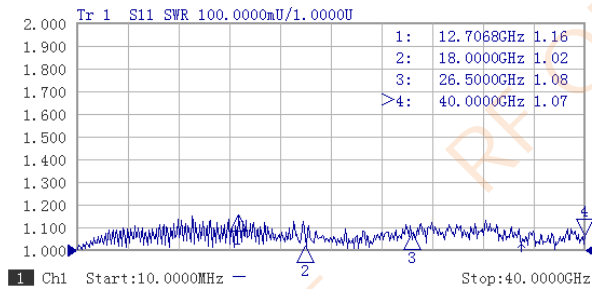
Pic 3

6. Test Results

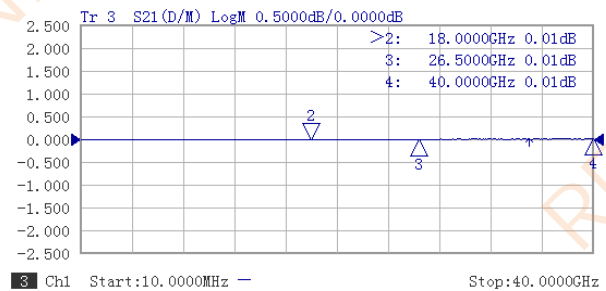
6.1 VSWR: VSWR measurements are saved and recorded in below plots. As shown in the plots, VSWR from 10MHz to 40GHz exhibits little change and still within specification after 10 cycles of bend-to-the-end test.

6.2 Insertion Loss: loss measurements are saved and recorded in below plots. As shown in the plots, insertion loss from 10MHz to 40GHz exhibits negligible variation after 10 cycles of bend-to-the-end test.

Initial test

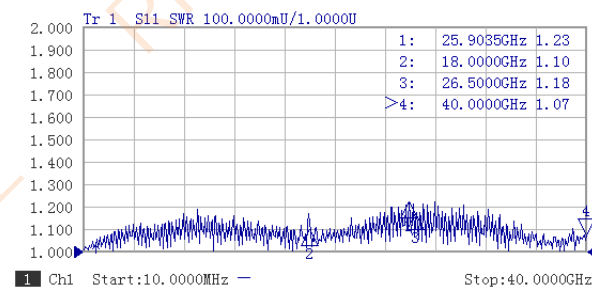


VSWR

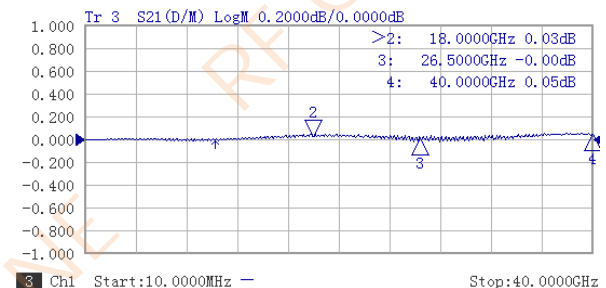


Normalized Insertion Loss

10 cycles of bend-to-the-end test

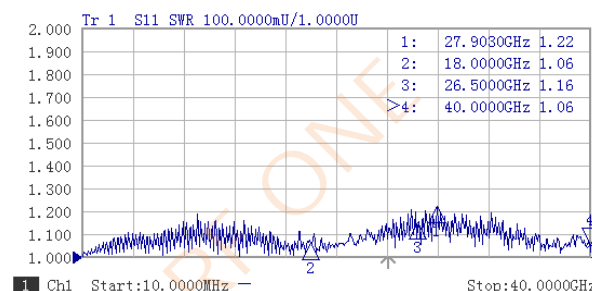


VSWR

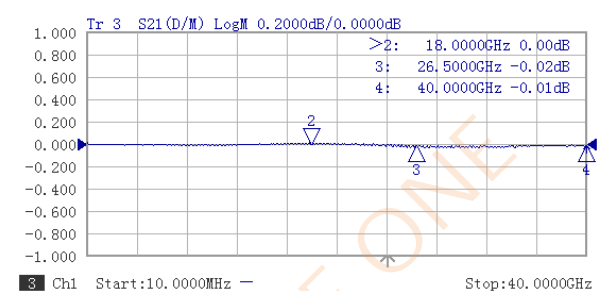


Insertion Loss variation

Returning to original position test



VSWR



Insertion Loss variation

7. Conclusion

MB260L can be repeatedly (10 times) bent from connector end with little degradation in VSWR and insertion loss.



About Tight-Bend Low Profile Flexible Cable **MB260L**



As alternatives to Minibend-L cables, MB260L from RF ONE excels in 5mm tight bend radius and bendability from connector-end, with additional features in superior mechanical phase stability, high pull force and low loss. MB260L operates to 50 GHz, available in SMP, 2.4mm, 2.92mm and SMA connectors.

For more information, please check <https://www.rfone.cn/uploadfiles/pdf/MB260L.pdf>