



DURALINE

Durable Test Cable Assembly



Reliability is top-ranked character when comes to choose RF test cable assemblies. Cable assemblies must be durable enough to withstand continuous movement, flexing, and exposure to environmental conditions while maintaining reliable electrical performance. Duraline test cable is born for that.

Its robust structure ensures long life when repeatedly flexed, and offers the better shielding effectiveness and more stability. Meanwhile, Focusimple utilizes the industry's most advanced design for the connectors of this test cable. The precise type N connector combines Be-Cu center conductor with gold plating, stainless steel shell and high-strength PEI dielectric, which is 100 times of stronger than the PTFE dielectric. That is how Focusimple makes Duraline the wise choice of long-term reliable applications.

Typical Applications

- Mass production test
- OEM port test line
- RF test platform
- Lab and R&D test
- Environmental test chamber
- Field test

Advantages

- Good bending phase stability
- Long-term work life
- Tri-shielding construction
- Cost-effective
- High-strength PEI as connector dielectric
- Off-the-shelf product, short delivery





DURALINE Cable Specifications

Duraline			
Physical & Mechanical Specification			
Dimension	mm	Inch	
Center Conductor	0.94	0.037	
Dielectric	2.98	0.117	
Outer Conductor	3.30	0.130	
Interlayer	3.44	0.135	
Outer Shield	3.95	0.156	
Jacket	4.85	0.191	
Minimum Bend Radius	25	0.017 lbs/ft	
Connector Retentivity	>175lbs		
Cycle Times	>5000		
Temperature Range	T: -55°C/125°C (-67°F/257°F)		
Electrical Specification			
Impedance	50 Ohms		
Velocity of Propagation	70%		
Shielding Effectiveness	> 90 dB		
Capacitance	29.4 pF/Ft	94.6 pF/m	
Inductance	0.22 uH/m	0.066 uH/Ft	
Mechanical Phase	±5°@26.5GHz		
Mechanical Amplitude	±0.1dB@26.5GHz		
Attenuation & Power Handling	Attenuation (+25°C Ambient) & Power Handling (+40°C Ambient; Sea Level; cable only)		
Frequency (GHz)	dB/100 m	dB/100 Ft	kW
1	40.03	12.20	0.522
2	58.92	17.96	0.355
3	74.33	22.66	0.281
6	112.03	34.16	0.187
8	133.58	40.73	0.156
12	172.27	52.52	0.121
18	223.99	68.29	0.093
26.5	290.12	88.45	0.072
Attenuation at Frequency	dB/100 m=K1 × sqrt(FMHz)+K2 × FMHz		
K1	1.1414400		
K2	0.0039360		



- 1 Center Conductor Silver-Plated Copper Clad Steel
- 2 Dielectric Solid PTFE
- 3 Outer Conductor SPC Ribbon Braiding
- 4 Interlayer Aluminum Foil
- 5 Outer Shield SPC Braid
- 6 Jacket Blue FEP
- 7 Armor (optional)



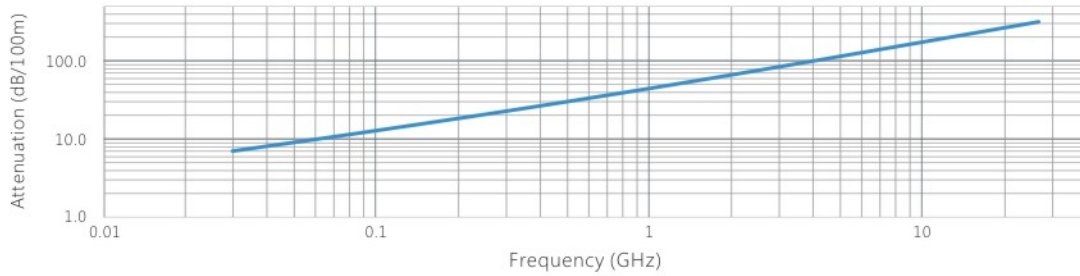
Connector Structure

- Center Pin: Beryllium Copper With Gold Plating
- Dielectric: Solid PTFE
- Solder Cup: Split Optimized Solder Cup
- Outer Conductor: Stainless Steel Passivated
- Nut: Stainless Steel Passivated

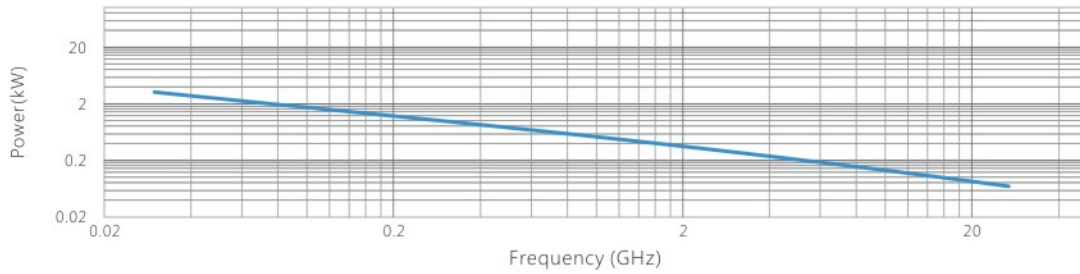


DURALINE Test Data

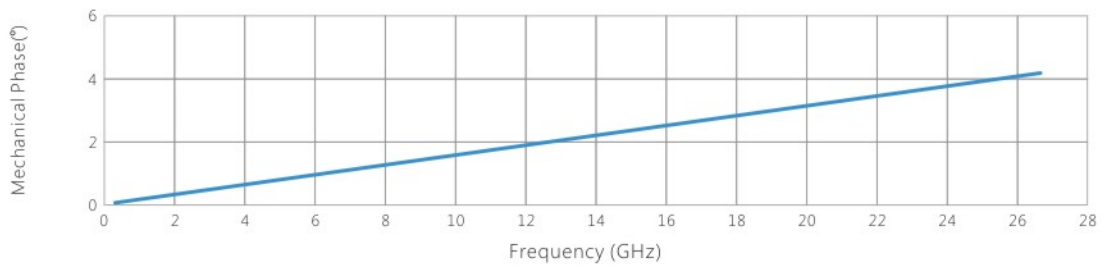
Frequency & Attenuation



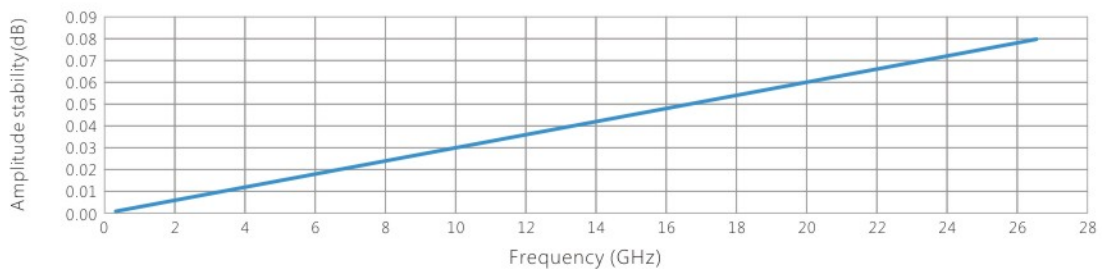
Frequency & Power



Typical Value Of Mechanical Phase Stability Rotate for one cycle along the minimum repeated bending diameter



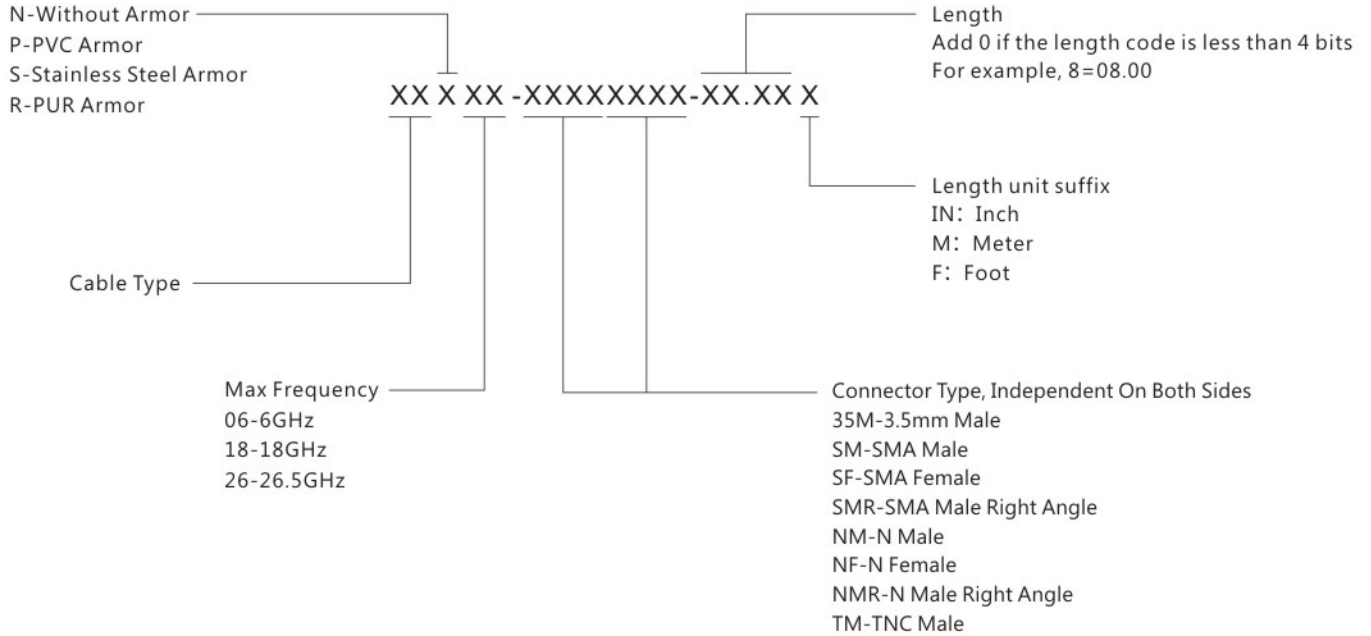
Typical Value Of Mechanical Amplitude Stability Rotate for one cycle along the minimum repeated bending diameter





DURALINE Connector and Assembly

Assembly Selection Information



Optional Connectors

Connector Type	Connection Type	Connector Code	Duraline	Operating Frequency(GHz)	Typical VSWR	Max VSWR
3.5mm	Male	35M	ES-DL-35M-A	26.5	1.25	1.3
SMA	Male	SM	TS-DL-SM-A	26.5	1.25	1.3
	Male RA	SMR	TS-DL-SM-RA-A	18	1.3	1.35
	Female	SF	TS-DL-SF-A	18	1.25	1.3
N	Male	NM	TS-DL-NM-A	18	1.25	1.3
	Male RA	NMR	TS-DL-NM-RA-A	18	1.3	1.35
	Female	NF	TS-DL-NF-A	18	1.3	1.35
TNC	Male	TM	TS-DL-TM-B	11	1.3	1.35

Please contact Focusimple if you have other connector requests

Contact us

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IOS

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