Lab-Flex® 200 Cable Assemblies

Part Series: Lab-Flex®

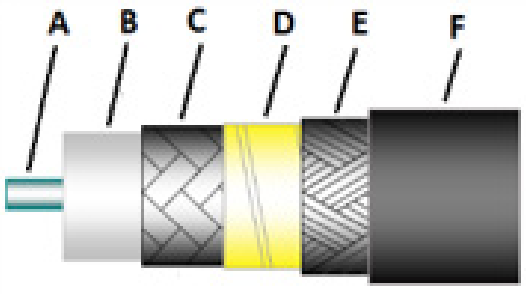
Lab-Flex® 200 is ideal for low loss replacement of .200 inch size solid dielectric cables. With 80% velocity tape- wrapped dielectric, Lab-Flex 200 cable has 40% lower loss than solid dielectrics of the same size.

1.0 Electrical Data

Frequency, Max	26 GHz		
Impedance, nominal	50		
Velocity of Propagation (%)	80		
Shielding Effectiveness, 18 GHz (dB/ft)	>-90dB		
Capacitance (pF/ft)	25.5		
Delay (ns/ft), (ns/meter)	1.27	4.17	
Attenuation k1 (db/100ft) @ 23 deg C 0.266 **Attenuation k2 (db/100ft) @ 23 deg C**	0.266 0.000209		Attenuation (Typical) at any Frequency =k1 x SqRt (FMHz) + k2 x (FMHz)

2.0 Mechanical/Environmental Data

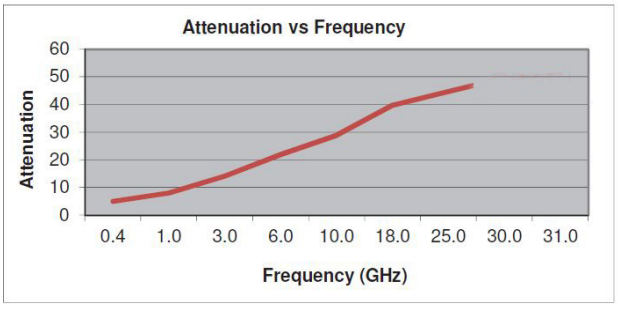
Weight (lbs/100ft), (Kg/100m)	4.80	7.22
Temperature Range (°C)	-55 to +200 C	
Minimum Bend Radius (inch), (mm)	1.00	25.40



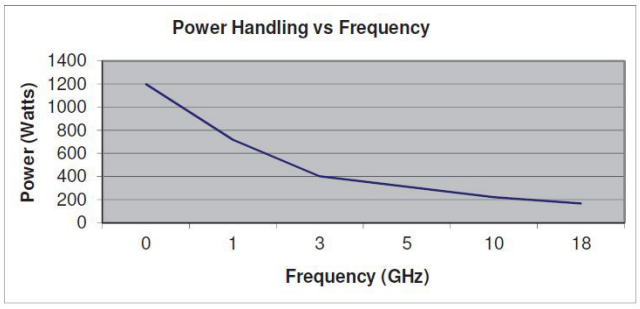
Lab-Flex® 200

3.0 Construction Data

Inner Conductor (inch)	**A**	-	Solid SC
Dielectric (inch)	**B**	-	Expanded PTFE
First Outer Shield (inch)	**C**	-	Flat Braid SC
Second Outer Shield (inch)	**D**	-	Metalized Tape wrap
Third Outer Shield (inch)	**E**	-	Round Braid SC
Jacket (inch O.D.)	**F**	0.200	FEP



dB per 100 feet)



*CW Power in watts at sea level and 23°C

Frequency GHz	0.4	5.0	10.0	18.0	26.5	
Typical loss dB/100ft	5.0	19.9	26.7	39.8	46.2	

Frequency GHz	0.4	1.0	3.0	5.0	10.0	18.0
Typical loss dB/100ft	1200.0	720.0	400.0	310.0	220.0	165.0

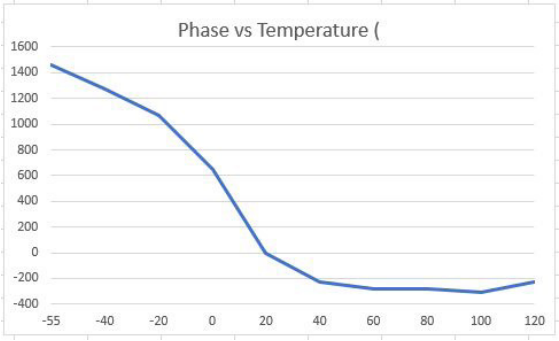
Phase verse Temperature

Phase vs. Temperature (PPM)

Temperature (°C)	200
-55	1460
-40	1270
-20	1070
0	650
20	0
40	-230
60	-280
80	-280
100	-305
120	-230

Typical Values

Phase vs Temperature (°C)



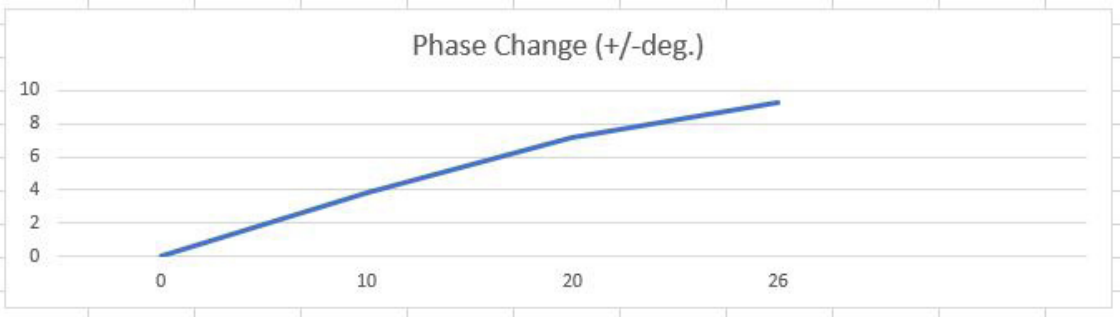
Phase verse Flexure

Phase vs. Flexure

Frequency (GHz)	190 (+/-deg)
0	0
10	4
20	7.5
26	11.4

Typical Values +25°C

Phase vs Flexure



Part Series: Lab-Flex® 200

Cable Code	Connector Code	Series	Gender	Type	C-Nut Style*	Body Material*	Body Finish*	Loss Per GHz	Frequency Max GHz
200	SMS	SMA	(Male) Plug	Straight	H	SS	P	0.01	18
200	NMS	Type N	(Male) Plug	Straight	HK	SS	P	0.01	18

*C-nut Style: H= Hex, K=Knurled, HK= Hex Nut & Knurled
*Body Materials: B=Brass, SS=Stainless Steel, Be= Beryllium Copper
*Body Finish: N= Nickel, S=Silver, G=Gold, P= Passivated, T= Tri-metal
Sex of connector is determined by center pin

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