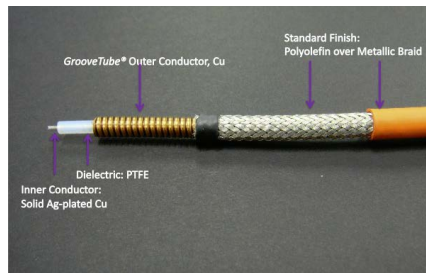




The Standard for Bench-top Testing

You can rely on MegaPhase's RF Orange when needing a cost effective solution for your production or general purpose test applications including ATE/ATS and BERT/scalar/spectrum and oscilloscope spectrums. This cable is constructed with MegaPhase's industry leading GrooveTube® technology and offers excellent phase and amplitude stability. This workhorse cable has been used in large antenna labs and other test facilities where long term electrical performance must be achieved at a economical cost. Low loss operation up to 50 GHz employing a large variety of standard connectors is available. MegaPhase also offers a rugged factory formed right angle configuration which eliminates the loss and VSWR impacts associated with right angle connectors. Available in lengths up to 100 feet (80 m).



(cut-away view)

Electrical Data

Maximum Frequency:	50 GHz
Impedance:	50 Ω nominal
Propagation Velocity:	69% nominal
Time Delay:	1.47 ns/ft (4.82 ns/m)
Shielding Effectiveness:	-110 dB minimum (cable only)
Dielectric Withstanding Voltage:	10 kV at 60 Hz
Capacitance:	29 pF/ft (95.1 pF/m)

Mechanical Data

Finished Outer Diameter:	0.285 in (0.724 cm)
Static Bend Radius:	1.5 in (3.81 cm)
Weight with Standard Jacket/Armor:	0.05 lbs/ft (0.067 kg/m)
Crush Resistance:	250 lbs/linear in (44.6 kg/linear cm)
Operating Temp. Range:	-67 to 275° F (-55 to 135° C) Above 185° F (85° C) use "T" designation

Cable Construction

Inner Conductor:	Solid Ag-plated Cu
Dielectric:	PTFE
Outer Conductor:	GrooveTube® Cu
Standard Finish:	Polyolefin over Metallic Braid

(a wide variety of other protective finishes and armors available)

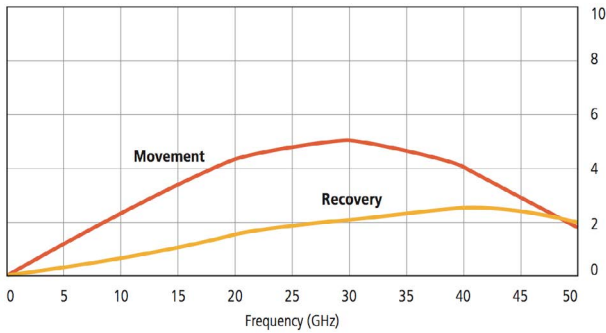
Available Connectors

1.85mm, 2.4mm, 2.92mm, 3.5mm, 7mm, 7-16 DIN, BNC, SMA, TNC, Type N, ZMA, ZN

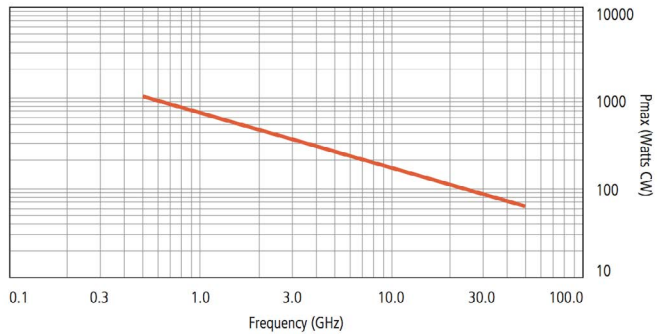
(maximum frequency dependent on cable; other connectors available)

RF Orange™ (cont'd)

Phase Change vs. Flexure

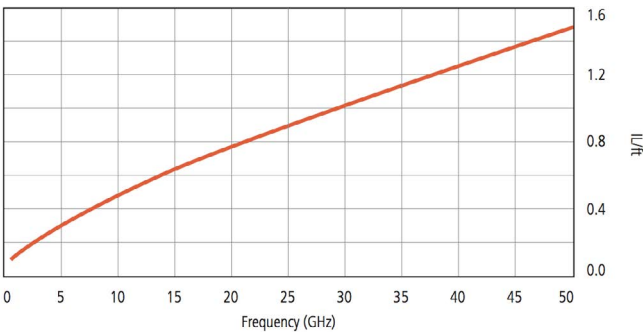


Cable CW Power Handling

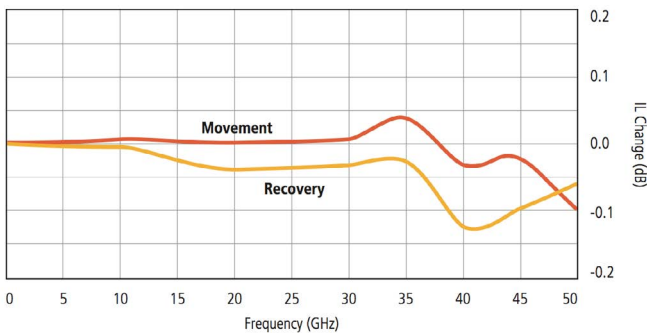


Note: Data at ambient temperature and sea level. Power handling of a cable assembly is also connector dependent and includes variables such as altitude, temperature and system VSWR. See website for connector power handling standards, including altitude, temperature and VSWR derating.

Insertion Loss



Insertion Loss vs. Flexure



Specifications

Frequency		Part No.	Attenuation		Conn. Loss dB	VSWR
GHz	Band		db/ft	dB/m		
0.3	UHF	TM4	0.062	0.203	0.006	1.10
0.5			0.082	0.268	0.009	
0.8			0.106	0.348	0.012	
1.0	L		0.120	0.394	0.014	1.15
2.0			0.178	0.585	0.024	
2.4	S		0.199	0.652	0.027	1.20
3.0			0.227	0.744	0.032	
4.0	C		0.270	0.885	0.040	1.25
6.0			0.347	1.138	0.055	
8.0	X	0.417	1.367	0.070	1.30	
10.0		0.482	1.580	0.084		
12.4	Ku	TM18	0.555	1.822	0.101	1.35
15.0			0.631	2.070	0.118	
18.0			0.715	2.345	0.139	
20.0	K	TM26	0.769	2.522	0.152	1.40
22.0			0.821	2.695	0.165	
24.0			0.873	2.865	0.178	
26.5	Ka	TM34	0.937	3.073	0.194	1.45
28.0			0.974	3.196	0.204	
30.0			1.024	3.358	0.217	
32.0	Ka	TM40	1.072	3.518	0.230	1.50
34.0			1.121	3.676	0.243	
36.0	Q	TM50	1.168	3.833	0.256	1.45
40.0			1.262	4.141	0.281	
45.0	V	TM50	1.377	4.518	0.313	1.50
50.0			1.490	4.888	0.344	

Note: Typical Insertion Loss dB = (Attenuation)(Length) + 2(Conn. Loss) Attenuation at any frequency = (0.10506 x $\sqrt{\text{freq GHz}}$) + (0.01494 x freq GHz)