



ELECTRONIC COMMUNICATIONS

Inventing *the Future* of Wire and Cable



RFC Coax

High-Performance Low-Loss Coaxial Cables 50 Ohm

Champlain Cable's **RFC Coax** is a low-cost, high-performance wireless broadband communications cable. This coaxial cable has excellent flexibility for demanding installations where cable routing is challenging. **RFC Coax** is designed for Land Mobile Radio, Paging, Mobile In-Building and Fixed-Wire broadband two-way communications, and anywhere a flexible low-loss coaxial cable is required.

RFC Coax is the coaxial cable of choice where there are tight bend radius requirements and is well suited for short distance antenna feeds and jumper assemblies.

Champlain Cable **RFC Coax** has comparable electrical performance of more rigid corrugated copper products, yet offers greater flexibility and simplified connectorization for easier installation. **RFC Coax** uses superior shielding and dielectric foaming technologies to achieve low-loss electrical performance. These cables are designed to fit standard RG connectors using standard connectorization tools and techniques.

Benefits and Features

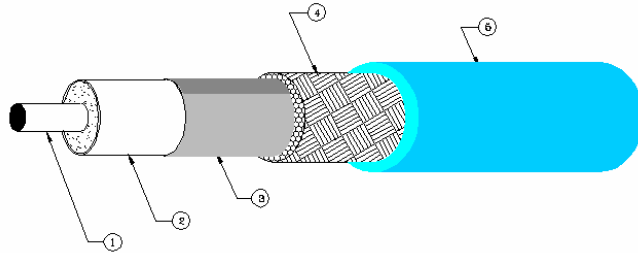
Uses Standard RG Connectors
Cost Effective Low-Loss Construction
Easy Connectorization
Flexibility for Easy Installation
-40 to 80°C Temperature Range

Applications

RF Communications
LMDS
MMDS
Paging
In-Building and Fixed Wireless Networks

Cable Construction

1. Conductor
2. Cellular HPDE Dielectric
3. Sealed Aluminum/Polyester Tape
4. Tinned Copper Braid
5. HDPE jacket



RFC Physical Properties

Part Number	Copper Conductor AWG	Nom. Dia Conductor		Dielectric Diameter		Foil Shield Diameter		Outer Shield Diameter		Overall Diameter		Temp. Range	Bend Radius		Weight Lbs/kft
		In.	mm.	In.	mm.	In.	mm.	In.	mm.	In.	mm.				
RFC 100	25 1/25	.018	.46	.060	1.52	.064	1.63	.082	2.08	.104	2.64	-40° - 80°C	1.04	26.4	15
RFC 195	19 1/19	.037	.94	.113	2.87	.118	3.00	.141	3.58	.195	4.95	-40° - 80°C	1.95	49.5	22
RFC 200	17 1/17	.044	1.12	.116	2.95	.121	3.07	.144	3.66	.195	4.95	-40° - 80°C	1.95	49.5	22
RFC 240	1.4 mm	.055	1.40	.150	3.81	.155	4.00	.178	4.56	.240	6.10	-40° - 80°C	2.40	61.0	33
RFC 300	13 1/13	.070	1.78	.190	4.83	.196	4.98	.225	5.72	.300	7.62	-40° - 80°C	3.00	76.2	55
RFC 400	10 1/10	.102	2.79	.285	7.24	.291	7.24	.320	8.13	.405	10.29	-40° - 80°C	1.05	102.9	55

www.champcable.com



Champlain Cable Corporation
175 Hercules Drive
Colchester, Vermont 05446

P 800.451.5162
F 802.654.4224
sales@champcable.com



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RFC Electrical Properties

Part Number	Impedance (Ω)	Velocity of Propagation (% , nominal)	Capacitance (pF/ft, nominal)	Shield Effectiveness (dB, min)
RFC 100	50 ±2	66	31	90
RFC 195	50 ±2	80	25	90
RFC 200	50 ±2	83	25	90
RFC 240	50 ±2	84	24	90
RFC 300	50 ±2	85	24	90
RFC 400	50 ±2	85	24	90

		Frequency (MHz)													
		Part Number	k ₁	k ₂	30	50	150	220	450	900	1500	1800	2000	2500	5800
Attenuation (dB/100ft, calculated*)	RFC 100	0.71	0.0017	4	5	9	11	16	23	30	33	35	40	64	
	RFC 195	0.36	0.0005	2	3	4	5	8	11	15	16	17	19	30	
	RFC 200	0.32	0.0003	2	2	4	5	7	10	13	14	15	17	26	
	RFC 240	0.24	0.0003	1	2	3	4	5	7	10	11	11	13	20	
	RFC 300	0.19	0.0003	1	1	2	3	4	6	8	9	9	10	16	
	RFC 400	0.12	0.0003	1	1	2	2	3	4	5	6	6	7	11	

*Attenuation calculated using the following formula: Attenuation ≈ [k₁ * sqrt(Frequency)] + [k₂ * Frequency]

We can customize an **RFC** solution to fit your needs and budget. Let our Design Engineers create and design a cable to meet your specific requirements. We can optimize materials, diameter, shield, capacitance, impedance, and attenuation to meet your application needs and minimize costs!

We have years of proven quality, reliability, and performance. Champlain Cable has produced millions of feet of coaxial cable for the world leaders in the Telecommunications industry.

We cannot anticipate all conditions under which this information and our products or the products of other manufacturers in combination with our products may be used. We accept no responsibility for results obtained by the application of this information or the safety and suitability of our products alone or in combination with other products. Users are advised to make their own tests to determine the safety and suitability of each such product combination for their own purpose. Unless otherwise agreed in writing, we sell the products without warranty, and buyers and users assume all responsibility and liability for loss and damage arising from the handling and use of our products whether used alone or in combination with other products.

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