

COAXIAL CABLE ENGINEERING GUIDE:

PERFORMANCE, SPECIFICATIONS, AND TRADEOFFS

A Practical Guide for Engineers

Selecting the right coaxial cable is essential for achieving optimal RF system performance, long-term reliability, and cost efficiency. Each cable type presents a distinct combination of electrical, mechanical, and handling characteristics, requiring engineers to navigate key trade-offs.

This guide focuses on **50-ohm coaxial cables with diameters of 1/4 inch and larger**, and introduces the principal coaxial cable constructions used in RF systems, categorized by outer conductor type:

- **Braided cables** – Highly flexible and easy to install, but limited in shielding effectiveness and higher in signal loss.
- **LMR®-Cables** – Combine foil and braid shielding for improved attenuation and RF shielding over standard braid designs, while maintaining good flexibility.
- **Semi-Rigid and Rigid Line Cables** – Deliver excellent electrical performance and shielding, but require fixed routing and offer no post-installation flexibility.
- **Corrugated copper cables** – Provide a strong balance of low attenuation, high shielding, and practical flexibility—well suited for a wide range of demanding RF applications.

The following pages present detailed technical specifications comparing coaxial cable types from RFS Technologies and other manufacturers. These include electrical, mechanical, and environmental parameters, fire ratings, connector options, and available jacket types—supporting well-informed engineering decisions.

COAXIAL CABLE ENGINEERING GUIDE

PERFORMANCE, SPECIFICATIONS, AND TRADEOFFS

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RFS Technologies products

Cable Type	LMR®	Semi-Rigid	Corrugated			Braided	LMR®	Corrugated		Braided	LMR®	Corrugated		LMR®	Corrugated	
Model Number (Nominal Size)	LMR® 240	CL-50250	SCF14 (1/4")	LCF14 (1/4")	SCF38 (3/8")	RG213/214	LMR® 400	LCF38 (3/8")	SCF12 (1/2")	RG-217	LMR® 600	ICA12 (1/2")	LCF12 (1/2")	LMR® 900	Dragonskin 2HB (1/2")	ICA58 (5/8")
Outer Conductor / Shielding	Tape/Braid	Copper Tube	Corrugated Copper	Corrugated Copper	Corrugated Copper	Braid	Tape/Braid	Corrugated Copper	Corru- gated Copper	Braid	Tape/Braid	Corrugated Copper	Corrugated Copper	Tape/Braid	Corrugated Copper	Corrugated Copper
Dielectric	Foam PE	PTFE	Foam PE	Foam PE	Foam PE	Foam PE	Foam PE	Foam PE	Foam PE	Foam PE	Foam PE	Air w/ PE Spacer	Foam PE	Foam PE	Ceramic Fiber	Air w/ PE Spacer
Diameter over Jacket, in	0.24	0.25	0.307	0.394	0.402	0.405/0.425	0.405	0.441	0.539	0.545	0.59	0.627	0.622	0.87	0.71	0.827
Maximum Frequency, GHz	8	20	20.4	15.8	13.4	11/11	8	13.5	10.6	3	8	6	8.8	6	1	6
Impedance, Ohm	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50
Velocity, %	83	69.5	81	83	81	66%	84	88	77	66	85	88	87	87	85	90

Attenuation (at 68°F/20°C) @ MHz, dB/100ft

30	1.35	1.02	0.96	0.69	0.70	1.04	0.68	0.57	0.55	0.73	0.43	0.36	0.36	0.29	0.39	0.27
100	2.48	1.91	1.77	1.28	1.29	1.96	1.26	1.04	1.01	1.40	0.79	0.67	0.66	0.53	0.74	0.50
450	5.34	4.34	3.88	2.78	2.81	4.45	2.74	2.27	2.22	3.26	1.74	1.48	1.44	1.17	1.73	1.10
900	7.63	6.45	5.62	4.01	4.06	6.62	3.94	3.27	3.22	4.94	2.53	2.16	2.07	1.70	2.62	1.61
2200	12.19	11.04	9.17	6.49	6.61	11.36	6.37	5.28	5.28	8.73	4.16	3.59	3.38	2.78		2.66
2400	12.77	11.65	9.62	6.81	6.94	11.99	6.68	5.54	5.55	9.25	4.37	3.78	3.54	2.92		2.80
2700	13.60	12.54	10.28	7.27	7.42	12.91	7.13	5.91	5.93	10.00	4.67	4.05	3.78	3.12		3.00
3500	15.62	14.79	11.92	8.40	8.59	15.24	8.23	6.82	6.88		5.43	4.73	4.38	3.62		3.49
6000	20.92	21.07	16.29	11.39	11.72	21.74	11.14	9.25	9.44		7.49	6.58	5.97	4.97		4.83
8000	24.51	25.61	19.34	13.45	13.89	26.45	13.15	10.92	11.23		8.93		7.08			
10000		29.90	22.13	15.34	15.88	30.90		12.44	12.88							
12000		34.01	24.76	17.10	17.75			13.86								
18000		45.62	31.93													

RFS Technologies products

Cable Type	Corrugated	LMR®	Corrugated		LMR®	Corrugated	
Model Number (Nominal Size)	LCF78 (7/8")	LMR® 1200	HCA78 (7/8")	UCF114 (1-1/4")	LMR® 1700	LCF158 (1-5/8")	HCA158 (1-5/8")
Outer Conductor / Shielding	Corrugated Copper	Multi-layer Tape/Braid	Corrugated Copper	Corrugated Copper	Multi-layer Tape/Braid	Corrugated Copper	Corrugated Copper
Dielectric	Foam PE	Foam PE	Air w/ PE Spacer	Foam PE	Foam PE	Foam PE	Air w/ PE Spacer
Diameter over Jacket, in	1.094	1.2	1.103	1.54	1.67	1.976	1.984
Maximum Frequency, GHz	5	5.2	3	3.6	2.5	2.75	3
Impedance, Ohm	50	50	50	50	50	50	50
Velocity, %	88	88	93	89	89	90	95

Attenuation (at 68°F/20°C) @ MHz, dB/100ft

30	0.19	0.21	0.19	0.15	0.15	0.12	0.10
100	0.34	0.39	0.36	0.26	0.28	0.22	0.19
450	0.75	0.86	0.79	0.56	0.63	0.48	0.42
900	1.09	1.27	1.13	0.80	0.94	0.71	0.60
2200	1.77	2.10	1.84	1.29	1.59	1.18	0.98
2400	1.86	2.21	1.94	1.36	1.68	1.25	1.03
2700	1.99	2.37	2.07	1.45		1.34	1.10
3500	2.31	2.77	2.39	1.68			

Cable Type	Corrugated	Rigid	Corrugated			
Model Number (Nominal Size)	HCA300 (3")	Rigid Line (3")	HCA400 (4")	HCA495 (5")	HCA550 (5.5")	HCA618 (6")
Outer Conductor / Shielding	Corrugated Copper	Tubular Copper	Corrugated Copper	Corrugated Copper	Corrugated Copper	Corrugated Copper
Dielectric	Air w/ PE Spacer	Air w/PE or PTFE Spacer	Air w/ PE Spacer	Air w/ PE Spacer	Air w/ PE Spacer	Air w/ PE Spacer
Diameter over Jacket, in	2.992	3-1/8	3.56	4.53	5.79	6.65
Maximum Frequency, GHz	1.63	1.6	1.66	1	0.86	0.86
Impedance, Ohm	50	50	50	50	50	50
Velocity, %	96	99.8	97	97	96	97

Attenuation (at 68°F/20°C) @ MHz, dB/100ft

30	0.07	0.05	0.06	0.05	0.04	0.03
50	0.09	0.07	0.08	0.06	0.06	0.05
88	0.12	0.09	0.10	0.08	0.07	0.06
108	0.13	0.10	0.11	0.09	0.09	0.07
150	0.16	0.11	0.13	0.10	0.10	0.08
200	0.18	0.13	0.14	0.11	0.11	0.09
300	0.23	0.16	0.16	0.13	0.13	0.11
450	0.29	0.20	0.23	0.18	0.17	0.14
500	0.31	0.21	0.24	0.19	0.18	0.15
700	0.37	0.25	0.29	0.22	0.22	0.18
800	0.40	0.26	0.31	0.24	0.23	0.19
900	0.43	0.28	0.34	0.26		
1000	0.45	0.29	0.36	0.27		

RFS Technologies products

Cable Type	LMR®	Semi-Rigid	Corrugated			Braided	LMR®	Corrugated		Braided	LMR®	Corrugated		LMR®	Corrugated	
Model Number (Nominal Size)	LMR® 240	CL-50250	SCF14 (1/4")	LCF14 (1/4")	SCF38 (3/8")	RG213/214	LMR® 400	LCF38 (3/8")	SCF12 (1/2")	RG-217	LMR® 600	ICA12 (1/2")	LCF12 (1/2")	LMR® 900	Dragonskin 2HB (1/2")	ICA58 (5/8")
Outer Conductor / Shielding	Multi-layer Tape/Braid	Copper Tube	Corrugated Copper	Corrugated Copper	Corrugated Copper	Braid	Multi-layer Tape/Braid	Corrugated Copper	Corrugated Copper	Braid	Multi-layer Tape/Braid	Corrugated Copper	Corrugated Copper	Multi-layer Tape/Braid	Corrugated Copper	Corrugated Copper
Dielectric	Foam PE	PTFE	Foam PE	Foam PE	Foam PE	Foam PE	Foam PE	Foam PE	Foam PE	Foam PE	Foam PE	Air w/ PE Spacer	Foam PE	Foam PE	Ceramic Fiber	Air w/ PE Spacer
Diameter over Jacket, in	0.24	0.25	0.307	0.394	0.402	0.405/0.425	0.405	0.441	0.539	0.545	0.59	0.627	0.622	0.87	0.71	0.827
Maximum Frequency, GHz	8	20	20.4	15.8	13.4	11/11	8	13.5	10.6	3	8	6	8.8	6	1	6
Peak Power Rating, KW	5.6	500	5.5	10.9	11.9	16	16	15.4	24	40	40	40	38	62	40	55.6
RF Peak Voltage, V	1500	5000	740	1050	1090	5000	2500	1240	1550	5200	4000	2000	1950	5000	2000	2360

Power Rating (at 104°F/40°C) @ MHz, KW

30	1.49	4.65	2.10	3.20	3.46	1.81	3.30	3.90	4.80	5.54	5.50	6.13	7.27	8.90	5.60	8.55
100	0.81	2.47	1.13	1.73	1.87	0.96	1.83	2.12	2.59	2.91	2.93	3.29	3.94	4.83	2.95	4.59
450	0.38	1.09	0.52	0.80	0.86	0.42	0.83	0.97	1.18	1.25	1.30	1.49	1.80	2.20	1.27	2.07
900	0.26	0.73	0.36	0.55	0.59	0.28	0.58	0.68	0.82	0.82	0.93	1.02	1.25	1.50	0.84	1.42
2200	0.16	0.42	0.22	0.34	0.36	0.17	0.36	0.42	0.50	0.47	0.56	0.62	0.77	0.93		0.86
2400	0.16	0.40	0.21	0.33	0.35	0.16	0.35	0.40	0.47	0.44	0.53	0.59	0.73	0.88		0.82
2700	0.15	0.37	0.20	0.31	0.32	0.15	0.32	0.37	0.44	0.41	0.49	0.55	0.68	0.83		0.77
3500	0.13	0.31	0.17	0.26	0.28		0.28	0.32	0.38		0.43	0.47	0.59	0.71		0.65
6000	0.10	0.22	0.12	0.19	0.21		0.21	0.24	0.28		0.31	0.34	0.43	0.52		0.47
8000	0.08	0.18	0.10	0.17	0.17		0.18	0.20	0.23		0.26		0.37			
10000		0.15	0.09	0.14	0.15			0.18	0.20							
12000		0.13	0.08		0.14			0.16								
18000		0.10	0.06													

RFS Technologies products

Cable Type	Corrugated	LMR®	Corrugated		LMR®	Corrugated	
Model Number (Nominal Size)	LCF78 (7/8")	LMR® 1200	HCA78 (7/8")	UCF114 (1-1/4")	LMR® 1700	LCF158 (1-5/8")	HCA158 (1-5/8")
Outer Conductor / Shielding	Corrugated Copper	Multi-layer Tape/Braid	Corrugated Copper	Corrugated Copper	Multi-layer Tape/Braid	Corrugated Copper	Corrugated Copper
Dielectric	Foam PE	Foam PE	Air w/ PE Spacer	Foam PE	Foam PE	Foam PE	Air w/ PE Spacer
Diameter over Jacket, in	1.094	1.2	1.103	1.54	1.67	1.976	1.984
Maximum Frequency, GHz	5	5.2	3	3.6	2.5	2.75	3
Peak Power Rating, KW	85	90	73	178	150	310	270
RF Peak Voltage, V	2920	6000	2700	4200	7500	5600	5200

Power Rating (at 104°F/40°C) @ MHz, KW

30	16.26	12.60	15.65	21.51	24.30	29.50	33.55
100	8.80	6.83	8.49	12.41	12.75	16.09	17.71
450	4.03	3.10	3.92	5.76	5.50	7.38	8.14
900	2.78	2.10	2.74	4.03	3.70	4.99	5.81
2200	1.71	1.27	1.73	2.50	2.25	3.00	3.76
2400	1.63	1.20	1.65	2.37	2.13	2.83	3.60
2700	1.52	1.12	1.55	2.22		2.64	3.41
3500	1.31	0.96	1.36	1.92			

Cable Type	Corrugated	Rigid	Corrugated			
Model Number (Nominal Size)	HCA300 (3")	Rigid Line (3")	HCA400 (4")	HCA495 (5")	HCA550 (5.5")	HCA618 (6")
Outer Conductor / Shielding	Corrugated Copper	Tubular Copper	Corrugated Copper	Corrugated Copper	Corrugated Copper	Corrugated Copper
Dielectric	Air w/ PE Spacer	Air w/PE or PTFE Spacer	Air w/ PE Spacer	Air w/ PE Spacer	Air w/ PE Spacer	Air w/ PE Spacer
Diameter over Jacket, in	2.992	3-1/8	3.56	4.53	5.79	6.65
Maximum Frequency, GHz	1.63	1.6	1.66	1	0.86	0.86
Peak Power Rating, KW	640	440	940	1560	2250	2890
RF Peak Voltage, V	8000	4695	9700	12500	15000	17000

Power Rating (at 104°F/40°C) @ MHz, KW

30	74.9	95.1	100.0	153.0	239.0	318.0
50	57.4	72.2	77.4	118.0	184.0	243.0
88	42.8	55.8	57.9	88.3	138.0	183.0
108	38.4	50.4	52.0	79.7	124.0	165.0
150	32.2	39.7	44.0	67.3	105.0	139.0
200	27.7	36.6	38.0	58.1	91.1	120.0
300	19.0	29.7	30.9	47.1	74.0	97.0
450	16.8	24.1	25.1	38.3	60.3	78.8
500	13.9	23.4	23.8	36.3	57.2	74.7
700	12.1	19.9	20.2	30.5	48.5	63.0
800	11.4	18.2	18.9	28.5	45.4	58.9
900	9.0	17.1	17.8	26.9		
1000	8.4	16.2	17.0	25.5		

RFS Technologies products

Cable Type	LMR®	Semi-Rigid	Corrugated			Braided	LMR®	Corrugated		Braided	LMR®	Corrugated		LMR®	Corrugated	
Model Number (Nominal Size)	LMR® 240	CL-50250	SCF14 (1/4")	LCF14 (1/4")	SCF38 (3/8")	RG213/214	LMR® 400	LCF38 (3/8")	SCF12 (1/2")	RG-217	LMR® 600	ICA12 (1/2")	LCF12 (1/2")	LMR® 900	Dragonskin 2HB (1/2")	ICA58 (5/8")
Outer Conductor / Shielding	Multi-layer Tape/Braid	Copper Tube	Corrugated Copper	Corrugated Copper	Corrugated Copper	Braid	Multi-layer Tape/Braid	Corrugated Copper	Corrugated Copper	Braid	Multi-layer Tape/Braid	Corrugated Copper	Corrugated Copper	Multi-layer Tape/Braid	Corrugated Copper	Corrugated Copper
Dielectric	Foam PE	PTFE	Foam PE	Foam PE	Foam PE	Foam PE	Foam PE	Foam PE	Foam PE	Foam PE	Foam PE	Air w/ PE Spacer	Foam PE	Foam PE	Ceramic Fiber	Air w/ PE Spacer
Diameter over Jacket, in	0.24	0.25	0.307	0.394	0.402	0.405/0.425	0.405	0.441	0.539	0.545	0.59	0.627	0.622	0.87	0.71	0.827
Maximum Frequency, GHz	8	20	20.4	15.8	13.4	11/11	8	13.5	10.6	3	8	6	8.8	6	1	6
Cable Weight, Nominal, Lbs/ft (kg/m)	0.034 (0.05)	0.105 (0.156)	0.04 (0.06)	0.06 (0.095)	0.06 (0.1)	0.111 (0.165)	0.068 (0.1)	0.087 (0.13)	0.09 (0.135)	0.23 (0.345)	0.131 (0.2)	0.165 (0.246)	0.125 (0.18)	0.266 (0.4)	0.34 (0.51)	0.25 (0.44)
Minimum Bending Radius, Repeated Bends, in (mm)	2.5 (63.5)	0.375 (9.5)	0.984 (25)	3.346 (85)	0.984 (25)	2 (50.8)	4.0 (101.6)	3.74 (95)	1.3 (32)	5.5 (139.7)	6 (152.4)	5 (127)	4.9 (125)	9 (228.6)	10 (254)	3 (75)
Bending Moment, Lb-ft (Nm)	0.25 (0.34)	N/A	0.5 (0.7)	1.4 (1.9)	0.5 (0.7)	2.5 (3.4)	0.5 (0.68)	1.4 (1.9)	1.84 (2.5)	5 (7)	2.75 (3.73)	3 (4.1)	6.5 (4.79)	9 (12.2)	6.4 (8.7)	5.5 (7.4)
Tensile Strength, lb (N)	80 (356)	N/A	135 (600)	200 (890)	135 (600)	200 (900)	160 (712)	119 (530)	146 (650)	500 (2200)	350 (1558)	250 (112)	236 (1050)	750 (3339)	200 (890)	259 (1150)
Crush Strength, lb/in (kg/mm)	20 (0.36)	N/A	100 (1.8)	80 (1.4)	N/A	150 (2.6)	40 (0.71)	110 (2.0)	110 (2.0)	70 (1.2)	60 (1.07)	50 (0.9)	110 (2.0)	100 (1.79)	175 (3.1)	120 (2.14)

RFS Technologies products

Cable Type	Corrugated	LMR®	Corrugated		LMR®	Corrugated	
Model Number (Nominal Size)	LCF78 (7/8")	LMR® 1200	HCA78 (7/8")	UCF114 (1-1/4")	LMR® 1700	LCF158 (1-5/8")	HCA158 (1-5/8")
Outer Conductor / Shielding	Corrugated Copper	Multi-layer Tape/Braid	Corrugated Copper	Corrugated Copper	Multi-layer Tape/Braid	Corrugated Copper	Corrugated Copper
Dielectric	Foam PE	Foam PE	Air w/ PE Spacer	Foam PE	Foam PE	Foam PE	Air w/ PE Spacer
Diameter over Jacket, in	1.094	1.2	1.103	1.54	1.67	1.976	1.984
Maximum Frequency, GHz	5	5.2	3	3.6	2.5	2.75	3
Cable Weight, Nominal, Lbs/ft (kg/m)	0.23 (0.35)	0.448 (0.67)	0.46 (0.68)	0.53 (0.79)	0.67 (1)	0.72 (1.07)	0.89 (1.3)
Minimum Bending Radius, Repeated Bends, in (mm)	10 (254)	12 (304.8)	10 (254)	10 (254)	24 (609.6)	20 (500)	22 (550)
Bending Moment, Lb-ft (Nm)	10 (13)	15 (20.34)	20 (27)	25.6 (36)	25 (33.9)	31 (42)	31 (42)
Tensile Strength, lb (N)	324 (1440)	1300 (5788)	360 (1600)	650 (2900)	2000 (8895)	562 (2500)	337 (1500)
Crush Strength, lb/in (kg/mm)	80 (1.4)	250 (4.47)	250 (4.5)	138 (2.5)	300 (5.36)	150 (2.7)	175 (3.1)

Cable Type	Corrugated	Rigid	Corrugated			
Model Number (Nominal Size)	HCA300 (3")	Rigid Line (3")	HCA400 (4")	HCA495 (5")	HCA550 (5.5")	HCA618 (6")
Outer Conductor / Shielding	Corrugated Copper	Tubular Copper	Corrugated Copper	Corrugated Copper	Corrugated Copper	Corrugated Copper
Dielectric	Air w/ PE Spacer	Air w/PE or PTFE Spacer	Air w/ PE Spacer	Air w/ PE Spacer	Air w/ PE Spacer	Air w/ PE Spacer
Diameter over Jacket, in	2.992	3-1/8	3.56	4.53	5.79	6.65
Maximum Frequency, GHz	1.63	1.6	1.66	1	0.86	0.86
Cable Weight, Nominal, Lbs/ft (kg/m)	1.41 (2.1)	2.76 (4.1)	2.1 (3.1)	3 (4.5)	5 (7.5)	6.7 (10)
Minimum Bending Radius, Repeated Bends, in (mm)	30 (760)	Not bendable	35 (890)	47 (1200)	59 (1500)	59 (1500)
Bending Moment, Lb-ft (Nm)	107 (145)	Not bendable	159 (215)	247 (335)	428 (580)	738 (1000)
Tensile Strength, lb (N)	405 (1800)	N/A	405 (1800)	674 (3000)	900 (4000)	1349 (6000)
Crush Strength, lb/in (kg/mm)	175 (3.1)	N/A	250 (4.46)	N/A	N/A	N/A

RFS Technologies products

Cable Type	LMR®	Semi-Rigid	Corrugated			Braided	LMR®	Corrugated		Braided	LMR®	Corrugated		LMR®	Corrugated	
Model Number (Nominal Size)	LMR® 240	CL-50250	SCF14 (1/4")	LCF14 (1/4")	SCF38 (3/8")	RG213/214	LMR® 400	LCF38 (3/8")	SCF12 (1/2")	RG-217	LMR® 600	ICA12 (1/2")	LCF12 (1/2")	LMR® 900	Dragonskin 2HB (1/2")	ICA58 (5/8")
Outer Conductor / Shielding	Multi-layer Tape/Braid	Copper Tube	Corrugated Copper	Corrugated Copper	Corrugated Copper	Braid	Multi-layer Tape/Braid	Corrugated Copper	Corrugated Copper	Braid	Multi-layer Tape/Braid	Corrugated Copper	Corrugated Copper	Multi-layer Tape/Braid	Corrugated Copper	Corrugated Copper
Dielectric	Foam PE	PTFE	Foam PE	Foam PE	Foam PE	Foam PE	Foam PE	Foam PE	Foam PE	Foam PE	Foam PE	Air w/ PE Spacer	Foam PE	Foam PE	Ceramic Fiber	Air w/ PE Spacer
Diameter over Jacket, in	0.24	0.25	0.307	0.394	0.402	0.405/0.425	0.405	0.441	0.539	0.545	0.59	0.627	0.622	0.87	0.71	0.827
Maximum Frequency, GHz	8	20	20.4	15.8	13.4	11/11	8	13.5	10.6	3	8	6	8.8	6	1	6
Installation Temperature, °F (°C)	-40 to +185 (-40 to +85)	-40 to +257 (-40 to +125)	-40 to +140 (-40 to +60)	-40 to +140 (-40 to +60)	-40 to +140 (-40 to +60)	-40 to +185 (-40 to +85)	-40 to +185 (-40 to +85)	-40 to +140 (-40 to +60)	-40 to +140 (-40 to +60)	-40 to +185 (-40 to +85)	-40 to +185 (-40 to +85)	-4 to +140 (-20 to +60)	-40 to +140 (-40 to +60)	-40 to +185 (-40 to +85)	-4 to +140 (-20 to +60)	-4 to +140 (-20 to +60)
Storage Temperature, °F (°C)	-94 to +185 (-70 to +85)	-94 to 500 (-70 to +260)	-94 to +185 (-70 to +85)	-94 to +185 (-70 to +85)	-94 to +185 (-70 to +85)	-94 to +185 (-70 to +85)	-94 to +185 (-70 to +85)	-94 to +185 (-70 to +85)	-94 to +185 (-70 to +85)	-94 to +185 (-70 to +85)	-94 to +185 (-70 to +85)	-40 to +185 (-40 to +85)	-94 to +185 (-70 to +85)	-94 to +185 (-70 to +85)	-40 to 167 (-40 to +75)	-40 to +185 (-40 to +85)
Operation Temperature, °F (°C)	-40 to +185 (-40 to +85)	-85 to +482 (-65 to +250)	-58 to +185 (-50 to +85)	-58 to +185 (-50 to +85)	-58 to +185 (-50 to +85)	-40 to +185 (-40 to +85)	-40 to +185 (-40 to +85)	-58 to +185 (-50 to +85)	-58 to +185 (-50 to +85)	-40 to +185 (-40 to +85)	-40 to +185 (-40 to +85)	-40 to +185 (-40 to +85)	-58 to +185 (-50 to +85)	-40 to +185 (-40 to +85)	-40 to +1850 (-40 to +1010)	-40 to +185 (-40 to +85)
Pressurization Needed for Outdoor Appliations	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No

RFS Technologies products

Cable Type	Corrugated	LMR®	Corrugated		LMR®	Corrugated	
Model Number (Nominal Size)	LCF78 (7/8")	LMR® 1200	HCA78 (7/8")	UCF114 (1-1/4")	LMR® 1700	LCF158 (1-5/8")	HCA158 (1-5/8")
Outer Conductor / Shielding	Corrugated Copper	Multi-layer Tape/Braid	Corrugated Copper	Corrugated Copper	Multi-layer Tape/Braid	Corrugated Copper	Corrugated Copper
Dielectric	Foam PE	Foam PE	Air w/ PE Spacer	Foam PE	Foam PE	Foam PE	Air w/ PE Spacer
Diameter over Jacket, in	1.094	1.2	1.103	1.54	1.67	1.976	1.984
Maximum Frequency, GHz	5	5.2	3	3.6	2.5	2.75	3
Installation Temperature, °F (°C)	-40 to +140 (-40 to +60)	-40 to +185 (-40 to +85)	-40 to +140 (-40 to +60)	-40 to +140 (-40 to +60)	-40 to +185 (-40 to +85)	-40 to +140 (-40 to +60)	-40 to +140 (-40 to +60)
Storage Temperature, °F (°C)	-94 to +185 (-70 to +85)	-94 to +185 (-70 to +85)	-94 to +185 (-70 to +85)	-94 to +185 (-70 to +85)	-94 to +185 (-70 to +85)	-94 to +185 (-70 to +85)	-94 to +185 (-70 to +85)
Operation Temperature, °F (°C)	-58 to +185 (-50 to +85)	-40 to +185 (-40 to +85)	-58 to +185 (-50 to +85)	-58 to +185 (-50 to +85)	-40 to +185 (-40 to +85)	-58 to +185 (-50 to +85)	-58 to +185 (-50 to +85)
Pressurization Needed for Outdoor Appliations	No	No	Yes	No	No	No	Yes

Cable Type	Corrugated	Rigid	Corrugated			
Model Number (Nominal Size)	HCA300 (3")	Rigid Line (3")	HCA400 (4")	HCA495 (5")	HCA550 (5.5")	HCA618 (6")
Outer Conductor / Shielding	Corrugated Copper	Tubular Copper	Corrugated Copper	Corrugated Copper	Corrugated Copper	Corrugated Copper
Dielectric	Air w/ PE Spacer	Air	Air w/ PE Spacer	Air w/ PE Spacer	Air w/ PE Spacer	Air w/ PE Spacer
Diameter over Jacket, in	2.992	3-1/8	3.56	4.53	5.79	6.65
Maximum Frequency, GHz	1.63	1.6	1.66	1	0.86	0.86
Installation Temperature, °F (°C)	-40 to +140 (-40 to +60)	-0 to +100 (-18 to +38)	-40 to +140 (-40 to +60)	-40 to +140 (-40 to +60)	-40 to +140 (-40 to +60)	-40 to +140 (-40 to +60)
Storage Temperature, °F (°C)	-94 to +185 (-70 to +85)	-4 to +122 (-20 to +50)	-94 to +185 (-70 to +85)	-94 to +185 (-70 to +85)	-94 to +185 (-70 to +85)	-94 to +185 (-70 to +85)
Operation Temperature, °F (°C)	-58 to +185 (-50 to +85)	-40 to +158 (-40 to +70)	-58 to +185 (-50 to +85)	-58 to +185 (-50 to +85)	-58 to +185 (-50 to +85)	-58 to +185 (-50 to +85)
Pressurization Needed for Outdoor Appliations	Yes	Yes	Yes	Yes	Yes	Yes

Model Number (Nominal Size)	SCF14 (1/4")	LCF14 (1/4")	SCF38 (3/8")	LCF38 (3/8")	SCF12 (1/2")	ICA12 (1/2")	LCF12 (1/2")	2HB (1/2")	ICA58 (5/8")	LCF78 (7/8")	HCA78 (7/8")	UCF114 (1-1/4")	LCF158 (1-5/8")	HCA158 (1-5/8")	HCA300 (3")	HCA400 (4")	HCA495 (5")	HCA550 (5.5")	HCA618 (6")
Diameter over Jacket, in	0.307	0.394	0.402	0.441	0.539	0.627	0.622	0.71	0.827	1.094	1.103	1.54	1.976	1.984	2.992	3.56	4.53	5.79	6.65
Maximum Frequency, GHz	20.4	15.8	13.4	13.5	10.6	6	8.8	1	6	5	3	3.6	2.75	3	1.63	1.66	1	0.86	0.86
TNC	√																		
BNC	√																		
SMA																			
N Male	√	√	√	√	√	√	√	√	√	√	√	√	√						
N Male Compression					√		√												
N Female	√	√	√	√	√	√	√	√	√	√	√	√	√						
N Female Compression							√			√									
4.3-10 Male	√	√	√	√	√	√	√	√	√	√	√	√	√						
4.3-10 Male Compression	√						√			√	√								
4.3-10 Female					√	√	√	√	√	√		√	√						
4.3-10 Female Compression							√			√									
7/16 Male	√				√	√	√	√	√	√	√	√	√	√					
7/16 Male Compression	√				√		√			√									
7/16 Female					√	√	√	√	√	√	√	√	√	√					
7/16 Female Compression							√			√									
7/8 EIA							√			√	√	√	√	√					
1-5/8 EIA										√	√	√	√	√					
3-1/8 EIA															√	√	√		
4-1/2 EIA																	√	√	
6-1/8 EIA																		√	√

Fire Rating

Model Number (Nominal Size)	SCF14 (1/4")	LCF14 (1/4")	SCF38 (3/8")	LCF38 (3/8")	SCF12 (1/2")	ICA12 (1/2")	LCF12 (1/2")	2HB (1/2")	ICA58 (5/8")	LCF78 (7/8")	HCA78 (7/8")	UCF114 (1-1/4")	LCF158 (1-5/8")	HCA158 (1-5/8")	HCA300 (3")	HCA400 (4")	HCA495 (5")	HCA550 (5.5")	HCA618 (6")
Diameter over Jacket, in	0.307	0.394	0.402	0.441	0.539	0.627	0.622	0.71	0.827	1.094	1.103	1.54	1.976	1.984	2.992	3.56	4.53	5.79	6.65
Maximum Frequency, GHz	20.4	15.8	13.4	13.5	10.6	6	8.8	1	6	5	3	3.6	2.75	3	1.63	1.66	1	0.86	0.86
CMP/Plenum Rating Option	JPL/JPLR/ JPLB/JPLW					JPL/JPLR/ JPLB/JPLW/ JPLL/JPLLR/ JPLLB/ JPLLW Those JPLL* are aluminum version of the ICA12			JPL/JPLR/ JPLB/JPLW		JPL/JPLB/ JPLW			JPL/JPLB	JPLB	JPLB			
CMR/Raiser Rating Option																			
LS0H Low Smoke Zero Halogen Option	JFN	JFN	JFN	JFN	JFN		JFN			JFNA	JFN/JMF	JFNA	JFNA	JFN/JMF	JFN/JMF	JFN/JMF	JFN	JFN	JFN
Outdoor Rated	J	J	J	J	J		J			JA	J/JM	JA	JA	J/JM	J/JM	J/JM	J	J	J
2 Hour Burn Rated / UL2196								JPLR											

* J/JFN and others are cable model number suffix, e.g, SCF14-50J

Jacket Color Options

Model Number (Nominal Size)	SCF14 (1/4")	LCF14 (1/4")	SCF38 (3/8")	LCF38 (3/8")	SCF12 (1/2")	ICA12 (1/2")	LCF12 (1/2")	2HB (1/2")	ICA58 (5/8")	LCF78 (7/8")	HCA78 (7/8")	UCF114 (1-1/4")	LCF158 (1-5/8")	HCA158 (1-5/8")	HCA300 (3")	HCA400 (4")	HCA495 (5")	HCA550 (5.5")	HCA618 (6")
Diameter over Jacket, in	0.307	0.394	0.402	0.441	0.539	0.627	0.622	0.71	0.827	1.094	1.103	1.54	1.976	1.984	2.992	3.56	4.53	5.79	6.65
Maximum Frequency, GHz	20.4	15.8	13.4	13.5	10.6	6	8.8	1	6	5	3	3.6	2.75	3	1.63	1.66	1	0.86	0.86
Black Color	J/JFN	J/JFN	J/JFN	J/JFN	J/JFN	JPLB/JPLLB	J/JFN		JPLB	JA/JFNA	J/JM/JFN/ JMF/JPLB	JA/JFNA	JA/JFNA	J/JM/JFN/ JMF/JPLB	J/JM/JFN/ JMF/JPLB	J/JM/JFN/ JMF/JPLB	J/JFN	J/JFN	J/JFN
Blue Color						JPL/JPLL			JPL		JPL			JPL					
White Color						JPLW/JPLLW			JPLW		JPLW								
Red Color						JPLR/JPLLR		JPLR	JPLR										

* Other colors on demand ; * J/JFN and others are cable model number suffix, e.g, SCF14-50J

Codes	Jacket Type	Color	Cable Type / Notes
J, JA, JM	Standard PE Jacket	Black	
JFN, JFNA, JMF	Flame Retardant LS0H Jacket	Black	
JPL	Plenum Rated	Blue	Copper cable
JPLL	Plenum Rated	Blue	Aluminum cable
JPLB	Plenum Rated	Black	Copper cable
JPLLB	Plenum Rated	Black	Aluminum cable
JPLR	Plenum Rated	Red	Copper cable
JPLLR	Plenum Rated	Red	Aluminum cable
JPLW	Plenum Rated	White	Copper cable
JPLLW	Plenum Rated	White	Aluminum cable
JB	Self-Healing Jacket	Black	



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