

TITAN accessories

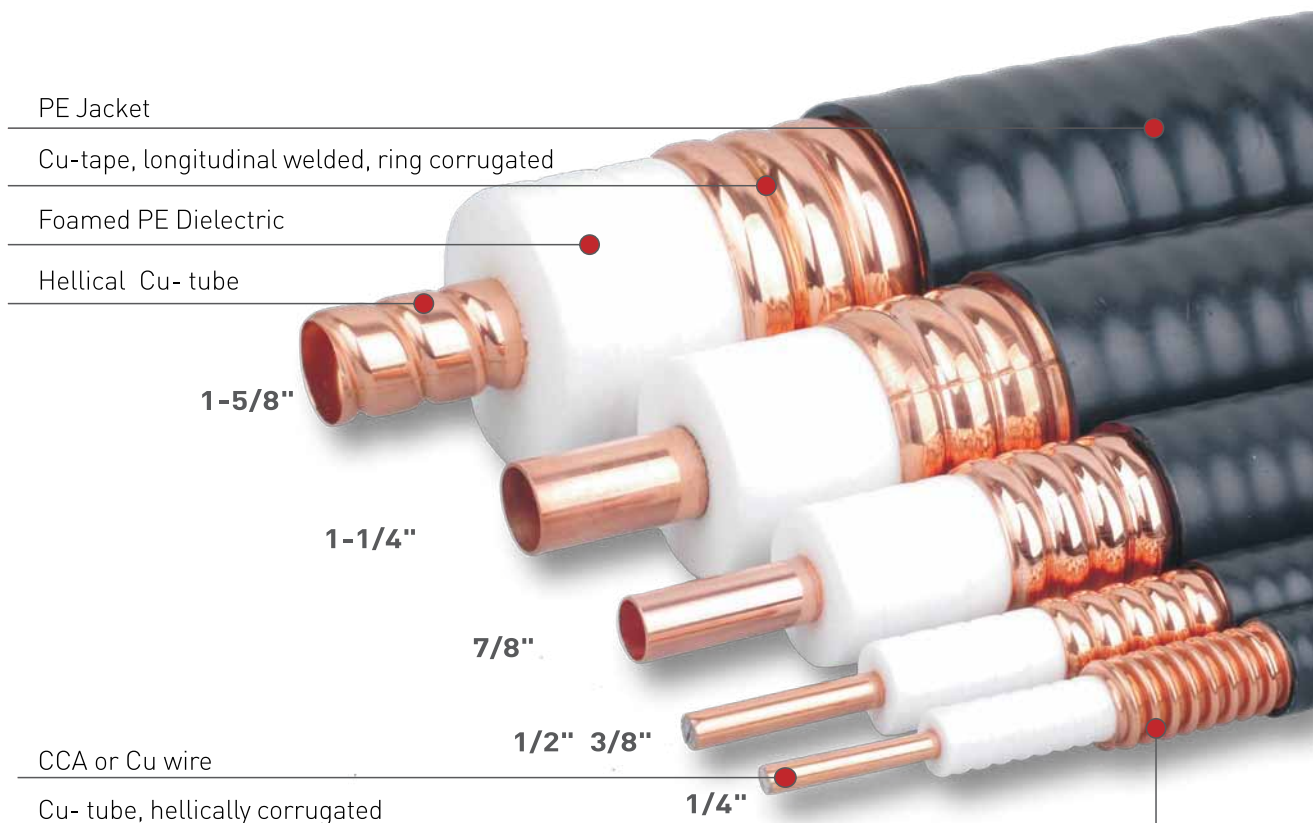
CATALOG
2012

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COPPER RF CABLE

50 OHMS CORRUGATED COPPER TUBE COAXIAL CABLE

CABLE CONSTRUCTION



SPECIFICATIONS

		1-5/8"	1-1/4"	7/8"	1/2"	3/8"	7/8"S	1/2"S	1/4"S
Physical Dimensions									
Inner Conductor (Dia.mm)		17.30	13.10	9.05	4.80	3.15	9.42	3.60	1.91
Outer Conductor (Dia.mm)		46.50	35.80	24.90	13.80	9.53	24.90	12.20	6.40
Jacket (mm)	Thickness	1.75	1.80	1.30	1.00	0.85	1.05	0.70	0.60
	Diameter	50.00	39.40	27.50	15.80	11.20	27.50	13.20 13.50	7.40
Weight (kg/km)		1310	980	530	240	135	430	210	80
Mechanical Characteristics									
Minimum Bending Radius (mm)	Single Bending	300	200	120	70	50	80	25	20
	10 Repeated Bendings	510	380	250	125	95	125	30	25
	Mobile Application	----	----	500	350	300	400	200	200
Max. Pulling Strength (N)		3630	5900	1470	1130	800	1020	800	680

NOTE: Fire-Retardency PE outer sheath can be available per customer's requirement.

1/4" SUPERFLEXIBLE COAXIAL CABLE

Description		TYPE No.
Standard cable		SF14-50
Fire retardant cable		SF14-50FR
Construction		
Inner Conductor	Material	Copper clad aluminum wire
	Diameter, mm	1.90±0.02
Insulation	Material	Physically foamed PE
	Diameter, mm	4.70±0.20
Outer conductor	Material	Helically corrugated copper
	Diameter, mm	6.40±0.20
Jacket	Material	PE or fire retardant PE
	Diameter, mm	7.40±0.20
Mechanical properties		
Bending radius (mm)	Single	20
	Repeated	25
	Moving	--
Pulling strength, N		680
Crush resistance, kg/mm		1.8
Bending moment, N.m		0.8
Recommended temperature, °C	Store	-70~+85
	Installation	-40~+60
	Operation	-55~+85
Electrical properties		
Impedance, Ω		50±1
Inductance, μH/m		0.20
Capacitance, PF/m		79.4
Propagation velocity, %		84
DC breakdown voltage, kV		1.6
Insulation resistance, MΩ•km		>5x10 ³
Peak power, kW		6.4
Screening attenuation, dB		»120
Cut-off frequency, GHz		20.4

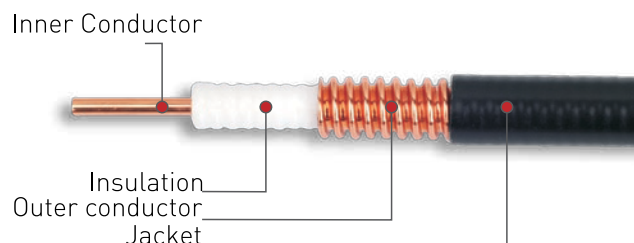


Figure 1: SF14-50 1/4" Superflexible coaxial cable

Attenuation and average power		
Frequency MHz	Nom. attenuation @20°C, dB/100m	Power rate @20°C, kW
10	1.83	3.97
100	5.89	1.23
200	8.41	0.865
450	12.80	0.567
800	17.40	0.419
900	18.40	0.395
1000	19.60	0.372
1500	24.30	0.299
1800	26.90	0.271
2000	28.50	0.256
2300	30.70	0.237
3000	35.60	0.204
● Maximum attenuation value shall be 105% of the nominal attenuation value		
VSWR		
806~960MHz	≤1.15	
1700~2200MHz	≤1.15	
5~3000MHz	≤1.25	

Note: ● For fire retardant jacket, recommended temperatures are:

Store temperature: -30~+80°C

Installation temperature: -25~+60°C

Operation temperature: -30~+80°C

- This cable is RoHS compliant. As a statement of RoHS compliant, you can find the label below on our product package.



1/4" COAXIAL CABLE

Description		TYPE No.
Standard cable		F14-50
Fire retardant cable		F14-50FR
Construction		
Inner Conductor	Material	Copper clad aluminum wire
	Diameter, mm	2.60±0.025
Insulation	Material	Physically foamed PE
	Diameter, mm	6.35±0.20
Outer conductor	Material	Ring corrugated copper
	Diameter, mm	7.75±0.20
Jacket	Material	PE or fire retardant PE
	Diameter, mm	8.80±0.20
Mechanical properties		
Bending radius (mm)	Single	30
	Repeated	76
	Moving	-
Pulling strength, N		910
Crush resistance, kg/mm		1.4
Recommended temperature, °C	Store	-70~+85
	Installation	-40~+60
	Operation	-55~+85
Electrical properties		
Impedance, Ω		50±1
Inductance, μH/m		0.19
Capacitance, PF/m		76.8
Propagation velocity, %		86
DC breakdown voltage, kV		2.2
Insulation resistance, MΩ•km		>5×10 ³
Peak power, kW		12.1
Screening attenuation, dB		»120
Cut-off frequency, GHz		15.8

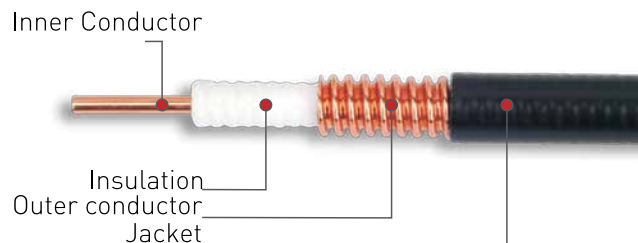


Figure 2: F14-50 1/4" Coaxial cable

Attenuation and average power		
Frequency MHz	Nom. attenuation @20°C, dB/100m	Power rate @20°C, kW
10	1.25	5.79
100	4.05	1.79
200	5.80	1.25
450	8.88	0.818
800	12.10	0.601
900	12.80	0.566
1000	13.60	0.533
1500	17.00	0.426
1800	18.90	0.385
2000	20.00	0.363
2300	21.60	0.336
3000	25.20	0.269
● Maximum attenuation value shall be 105% of the nominal attenuation value		
VSWR		
806~960MHz	≤1.15	
1700~2200MHz	≤1.15	
5~3000MHz	≤1.25	

Note: ● For fire retardant jacket, recommended temperatures are:

Store temperature: -30~+80°C

Installation temperature: -25~+60°C

Operation temperature: -30~+80°C

- This cable is RoHS compliant. As a statement of RoHS compliant, you can find the label below on our product package.



3/8" SUPERFLEXIBLE COAXIAL CABLE

Description		TYPE No.
Standard cable		SF38-50
Fire retardant cable		SF38-50FR
Construction		
Inner Conductor	Material	Copper clad aluminum wire
	Diameter, mm	2.80±0.03
Insulation	Material	Physically foamed PE
	Diameter, mm	7.00±0.20
Outer conductor	Material	Ring corrugated copper
	Diameter, mm	9.52±0.20
Jacket	Material	PE or fire retardant PE
	Diameter, mm	10.80±0.20
Mechanical properties		
Bending radius (mm)	Single	25
	Repeated	50
	Moving	-
Pulling strength, N		950
Crush resistance, kg/mm		1.8
Recommended temperature, °C	Store	-70~+85
	Installation	-40~+60
	Operation	-55~+85
Electrical properties		
Impedance, Ω		50±1
Inductance, μH/m		0.20
Capacitance, PF/m		79.7
Propagation velocity, %		83
DC breakdown voltage, kV		2.3
Insulation resistance, MΩ•km		>5×10 ³
Peak power, kW		13.2
Screening attenuation, dB		»120
Cut-off frequency, GHz		13.4

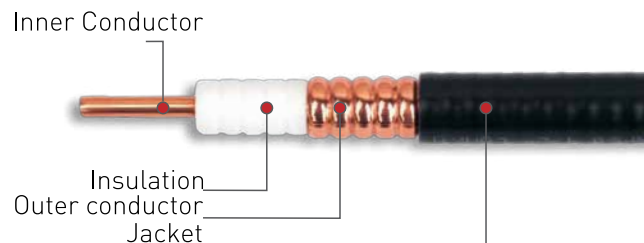


Figure 3: SF38-50 3/8" Superflexible coaxial cable

Attenuation and average power		
Frequency MHz	Nom. attenuation @20°C, dB/100m	Power rate @20°C, kW
10	1.22	6.92
100	3.94	2.14
200	5.65	1.49
450	8.66	0.975
800	11.80	0.715
900	12.50	0.673
1000	13.30	0.634
1500	16.70	0.507
1800	18.50	0.457
2000	19.60	0.431
2300	21.20	0.398
3000	24.70	0.342
● Maximum attenuation value shall be 105% of the nominal attenuation value		
VSWR		
806~960MHz		≤1.15
1700~2200MHz		≤1.15
5~3000MHz		≤1.25

Note: ● For fire retardant jacket, recommended temperatures are:

Store temperature: -30~+80°C

Installation temperature: -25~+60°C

Operation temperature: -30~+80°C

- This cable is RoHS compliant. As a statement of RoHS compliant, you can find the label below on our product package.



3/8" COAXIAL CABLE

Description		TYPE No.
Standard cable		F38-50
Fire retardant cable		F38-50FR
Construction		
Inner Conductor	Material	Copper clad aluminum wire
	Diameter, mm	3.15±0.03
Insulation	Material	Physically foamed PE
	Diameter, mm	8.20±0.20
Outer conductor	Material	Ring corrugated copper
	Diameter, mm	9.53±0.20
Jacket	Material	PE or fire retardant PE
	Diameter, mm	11.20±0.20
Mechanical properties		
Bending radius (mm)	Single	50
	Repeated	95
	Moving	300
Pulling strength, N		800
Crush resistance, kg/mm		2.0
Recommended temperature, °C	Store	-70~+85
	Installation	-40~+60
	Operation	-55~+85
Electrical properties		
Impedance, Ω		50±1
Inductance, μH/m		0.190
Capacitance, PF/m		75
Propagation velocity, %		88
DC breakdown voltage, kV		2.5
Insulation resistance, MΩ•km		>5×10 ³
Peak power, kW		15.6
Screening attenuation, dB		»120
Cut-off frequency, GHz		13.5

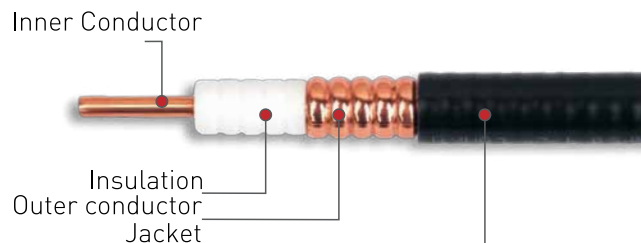


Figure 4: SF38-50 3/8" Coaxial cable

Attenuation and average power		
Frequency MHz	Nom. attenuation @20°C, dB/100m	Power rate @20°C, kW
10	1.06	7.23
100	3.42	2.24
200	4.90	1.56
450	7.51	1.02
800	10.20	0.748
900	10.90	0.702
1000	11.60	0.663
1500	14.40	0.530
1800	16.00	0.479
2000	17.00	0.451
2500	19.30	0.400
3000	21.40	0.358
● Maximum attenuation value shall be 105% of the nominal attenuation value		
VSWR		
806~960MHz		≤1.15
1700~2200MHz		≤1.15
5~3000MHz		≤1.25

Note: ● For fire retardant jacket, recommended temperatures are:

Store temperature: -30~+80°C

Installation temperature: -25~+60°C

Operation temperature: -30~+80°C

- This cable is RoHS compliant. As a statement of RoHS compliant, you can find the label below on our product package.



1/2" SUPERFLEXIBLE COAXIAL CABLE

Description		TYPE No.
Standard cable		SF12-50
Fire retardant cable		SF12-50FR
Construction		
Inner Conductor	Material	Copper clad aluminum wire
	Diameter, mm	3.60±0.04
Insulation	Material	Physically foamed PE
	Diameter, mm	8.80±0.20
Outer conductor	Material	Ring corrugated copper
	Diameter, mm	12.20±0.20
Jacket	Material	PE or fire retardant PE
	Diameter, mm	13.60±0.20
Mechanical properties		
Bending radius (mm)	Single	25
	Repeated	30
	Moving	200
Pulling strength, N		800
Crush resistance, kg/mm		1.9
Recommended temperature, °C	Store	-70~+85
	Installation	-40~+60
	Operation	-55~+85
Electrical properties		
Impedance, Ω		50±1
Inductance, μH/m		0.205
Capacitance, PF/m		82
Propagation velocity, %		81
DC breakdown voltage, kV		2.5
Insulation resistance, MΩ•km		>5×10 ³
Peak power, kW		15.6
Screening attenuation, dB		»120
Cut-off frequency, GHz		10.2

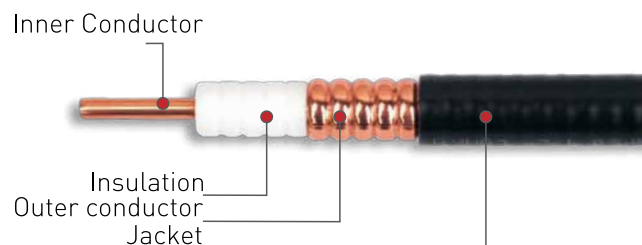


Figure 5: SF12-50 1/2" Superflexible coaxial cable

Attenuation and average power		
Frequency MHz	Nom. attenuation @20°C, dB/100m	Power rate @20°C, kW
10	1.04	10.1
100	3.41	3.08
200	4.91	2.14
450	7.59	1.38
800	10.4	1.01
900	11.2	0.943
1000	11.8	0.889
1500	14.9	0.705
1800	16.6	0.634
2000	17.6	0.597
2300	19.1	0.549
3000	22.4	0.469
● Maximum attenuation value shall be 105% of the nominal attenuation value		
VSWR		
806~960MHz		≤1.15
1700~2200MHz		≤1.15
5~3000MHz		≤1.25

Note: ● For fire retardant jacket, recommended temperatures are:

Store temperature: -30~+80°C

Installation temperature: -25~+60°C

Operation temperature: -30~+80°C

- This cable is RoHS compliant. As a statement of RoHS compliant, you can find the label below on our product package.



1/2" COAXIAL CABLE

Description		TYPE No.
Standard cable		F12-50
Fire retardant cable		F12-50FR
Construction		
Inner Conductor	Material	Copper clad aluminum wire
	Diameter, mm	4.80±0.05
Insulation	Material	Physically foamed PE
	Diameter, mm	12.20±0.30
Outer conductor	Material	Ring corrugated copper
	Diameter, mm	13.80±0.20
Jacket	Material	PE or fire retardant PE
	Diameter, mm	15.80±0.20
Mechanical properties		
Bending radius (mm)	Single	70
	Repeated	125
	Moving	350
Pulling strength, N		1130
Crush resistance, kg/mm		2.0
Recommended temperature, °C	Store	-70~+85
	Installation	-40~+60
	Operation	-55~+85
Electrical properties		
Impedance, Ω		50±1
Inductance, μH/m		0.19
Capacitance, PF/m		75.8
Propagation velocity, %		88
DC breakdown voltage, kV		4.0
Insulation resistance, MΩ•km		>5×10 ³
Peak power, kW		40
Screening attenuation, dB		»120
Cut-off frequency, GHz		8.8

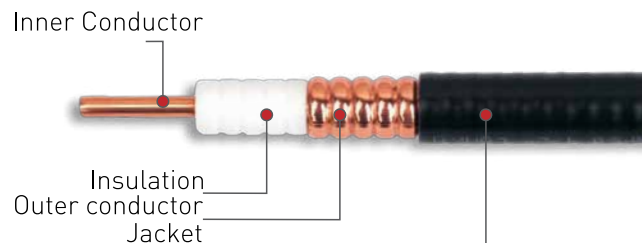


Figure 6: F12-50 1/2" Coaxial cable

Attenuation and average power		
Frequency MHz	Nom. attenuation @20°C, dB/100m	Power rate @20°C, kW
10	0.67	11.30
100	2.17	3.49
200	3.10	2.44
450	4.75	1.59
800	6.46	1.17
900	6.85	1.10
1000	7.28	1.04
1500	9.09	0.833
1800	10.10	0.753
2000	10.70	0.710
2300	11.50	0.627
3000	13.40	0.565
● Maximum attenuation value shall be 105% of the nominal attenuation value		
VSWR		
806~960MHz		≤1.15
1700~2200MHz		≤1.15
5~3000MHz		≤1.25

Note: ● For fire retardant jacket, recommended temperatures are:

Store temperature: -30~+80°C

Installation temperature: -25~+60°C

Operation temperature: -30~+80°C

- This cable is RoHS compliant. As a statement of RoHS compliant, you can find the label below on our product package.



7/8" SUPERFLEXIBLE COAXIAL CABLE

Description		TYPE No.
Standard cable		SF78-50
Fire retardant cable		SF78-50FR
Construction		
Inner Conductor	Material	Copper clad aluminum wire
	Diameter, mm	9.42±0.10
Insulation	Material	Physically foamed PE
	Diameter, mm	22.50±0.40
Outer conductor	Material	Ring corrugated copper
	Diameter, mm	24.90±0.25
Jacket	Material	PE or fire retardant PE
	Diameter, mm	27.30±0.20
Mechanical properties		
Bending radius (mm)	Single	90
	Repeated	125
	Moving	—
Pulling strength, N		1020
Crush resistance, kg/mm		1.4
Recommended temperature, °C	Store	-70~+85
	Installation	-40~+60
	Operation	-55~+85
Electrical properties		
Impedance, Ω		50±1
Inductance, μH/m		0.197
Capacitance, PF/m		74.2
Propagation velocity, %		83
DC breakdown voltage, kV		6.0
Insulation resistance, MΩ•km		>5×10 ³
Peak power, kW		90
Screening attenuation, dB		»120
Cut-off frequency, GHz		4.9

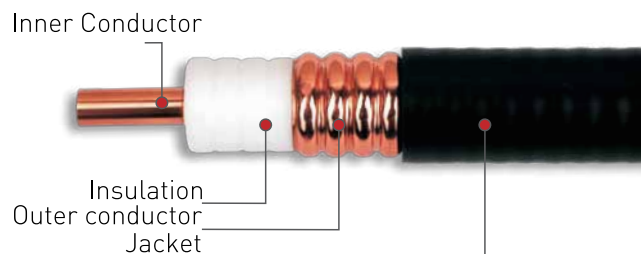


Figure 7: SF78-50 7/8" Superflexible coaxial cable

Attenuation and average power		
Frequency MHz	Nom. attenuation @20°C, dB/100m	Power rate @20°C, kW
10	0.402	21.50
100	1.30	6.62
200	1.87	4.61
450	2.88	2.99
800	3.94	2.19
900	4.20	2.06
1000	4.46	1.94
1500	5.60	1.54
1800	6.21	1.39
2000	6.59	1.31
2300	7.15	1.21
3000	8.35	1.04
● Maximum attenuation value shall be 105% of the nominal attenuation value		
VSWR		
806~960MHz		≤1.15
1700~2200MHz		≤1.15
5~3000MHz		≤1.25

Note: ● For fire retardant jacket, recommended temperatures are:

Store temperature: -30~+80°C

Installation temperature: -25~+60°C

Operation temperature: -30~+80°C

- This cable is RoHS compliant. As a statement of RoHS compliant, you can find the label below on our product package.



7/8" COAXIAL CABLE

Description		TYPE No.
Standard cable		F78-50
Fire retardant cable		F78-50FR
Construction		
Inner Conductor	Material	Smooth copper tube
	Diameter, mm	8.90±0.10
Insulation	Material	Physically foamed PE
	Diameter, mm	22.50±0.40
Outer conductor	Material	Ring corrugated copper
	Diameter, mm	24.90±0.30
Jacket	Material	PE or fire retardant PE
	Diameter, mm	27.30±0.20
Mechanical properties		
Bending radius (mm)	Single	120
	Repeated	250
	Moving	500
Pulling strength, N		1470
Crush resistance, kg/mm		1.4
Recommended temperature, °C	Store	-70~+85
	Installation	-40~+60
	Operation	-55~+85
Electrical properties		
Impedance, Ω		50±1
Inductance, μH/m		0.187
Capacitance, PF/m		75
Propagation velocity, %		88
DC breakdown voltage, kV		6.0
Insulation resistance, MΩ•km		>5×10 ³
Peak power, kW		91
Screening attenuation, dB		»120
Cut-off frequency, GHz		5.0

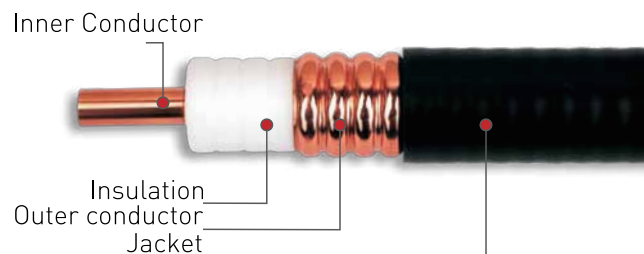


Figure 8: F78-50 7/8" Coaxial cable

Attenuation and average power		
Frequency MHz	Nom. attenuation @20°C, dB/100m	Power rate @20°C, kW
10	0.366	24.6
100	1.19	7.56
450	2.65	3.41
800	3.63	2.48
900	3.88	2.33
1000	4.12	2.19
1500	5.18	1.74
1800	5.75	1.57
2000	6.11	1.48
2500	6.95	1.30
3000	7.76	1.16
● Maximum attenuation value shall be 105% of the nominal attenuation value		
VSWR		
806~960MHz		≤1.13
1700~2200MHz		≤1.13
5~3000MHz		≤1.25

Note: ● For fire retardant jacket, recommended temperatures are:

Store temperature: -30~+80°C

Installation temperature: -25~+60°C

Operation temperature: -30~+80°C

- This cable is RoHS compliant. As a statement of RoHS compliant, you can find the label below on our product package.



7/8" LOW LOSS COAXIAL CABLE

Description		TYPE No.
Standard cable		FL78-50
Fire retardant cable		FL78-50FR
Construction		
Inner Conductor	Material	Smooth copper tube
	Diameter, mm	9.30±0.10
Insulation	Material	Physically foamed PE
	Diameter, mm	23.00±0.40
Outer conductor	Material	Ring corrugated copper
	Diameter, mm	25.40±0.30
Jacket	Material	PE or fire retardant PE
	Diameter, mm	27.80±0.30
Mechanical properties		
Bending radius (mm)	Single	120
	Repeated	250
	Moving	—
Pulling strength, N		1440
Crush resistance, kg/mm		1.4
Recommended temperature, °C	Store	-70~+85
	Installation	-40~+60
	Operation	-55~+85
Electrical properties		
Impedance, Ω		50±1
Capacitance, PF/m		75
Propagation velocity, %		89
DC breakdown voltage, kV		8.0
Peak power, kW		85
Screening attenuation, dB		»120
Intermodulation performance, dBc		≤-155
Life time, years		15

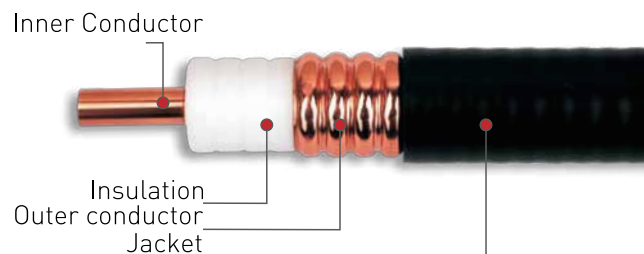


Figure 8: FL78-50 7/8" Low Loss Coaxial cable

Attenuation and average power		
Frequency MHz	Nom. attenuation @20°C, dB/100m	Power rate @20°C, kW
50	0.801	13.1
100	1.15	9.12
300	2.04	5.12
450	2.54	4.12
800	3.47	3.01
824	3.53	2.96
960	3.84	2.72
1000	3.93	2.66
1500	4.94	2.12
1800	5.48	1.91
2200	6.15	1.70
2400	6.47	1.61
3000	7.38	1.42
● Maximum attenuation value shall be 105% of the nominal attenuation value		
VSWR		
806~960MHz		≤1.15
1700~2200MHz		≤1.15
2500~2700 MHz		≤1.15

Note: ● For fire retardant jacket, recommended temperatures are:

Store temperature: -30~+80°C

Installation temperature: -25~+60°C

Operation temperature: -30~+80°C

- This cable is RoHS compliant. As a statement of RoHS compliant, you can find the label below on our product package.



1 1/4" COAXIAL CABLE

Description		TYPE No.
Standard cable		F114-50
Fire retardant cable		F114-50FR
Construction		
Inner Conductor	Material	Smooth copper tube
	Diameter, mm	13.00±0.10
Insulation	Material	Physically foamed PE
	Diameter, mm	32.80±0.40
Outer conductor	Material	Ring corrugated copper
	Diameter, mm	35.80±0.30
Jacket	Material	PE or fire retardant PE
	Diameter, mm	38.80±0.30
Mechanical properties		
Bending radius (mm)	Single	200
	Repeated	380
	Moving	—
Pulling strength, N		5900
Crush resistance, kg/mm		2.2
Recommended temperature, °C	Store	-70~+85
	Installation	-40~+60
	Operation	-55~+85
Electrical properties		
Impedance, Ω		50±1
Inductance, μH/m		0.184
Capacitance, PF/m		75
Propagation velocity, %		88
DC breakdown voltage, kV		9.0
Insulation resistance, MΩ•km		>5×10 ³
Peak power, kW		205
Screening attenuation, dB		»120
Cut-off frequency, GHz		3.3

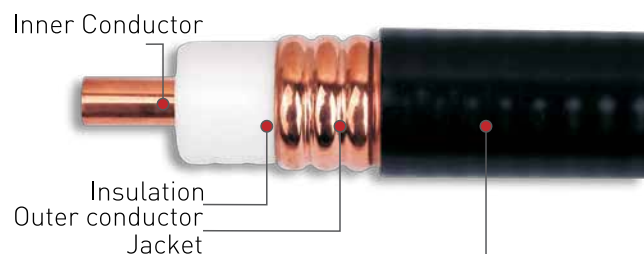


Figure 9: F114-50 1-1/4" Coaxial cable

Attenuation and average power		
Frequency MHz	Nom. attenuation @20°C, dB/100m	Power rate @20°C, kW
10	0.253	38.6
100	0.832	11.7
200	1.20	8.12
450	1.87	5.22
800	2.59	3.78
900	2.77	3.53
1000	2.94	3.32
1500	3.73	2.62
1800	4.16	2.35
2000	4.43	2.21
2300	4.82	2.03
3000	5.68	1.72
● Maximum attenuation value shall be 105% of the nominal attenuation value		
VSWR		
806~960MHz		≤1.15
1700~2200MHz		≤1.15
5~3000MHz		≤1.25

Note: ● For fire retardant jacket, recommended temperatures are:

Store temperature: -30~+80°C

Installation temperature: -25~+60°C

Operation temperature: -30~+80°C

- This cable is RoHS compliant. As a statement of RoHS compliant, you can find the label below on our product package.



1 5/8" COAXIAL CABLE

Description		TYPE No.
Standard cable		F158-50
Fire retardant cable		F158-50FR
Construction		
Inner Conductor	Material	Helically corrugated copper
	Diameter, mm	17.30±0.10
Insulation	Material	Physically foamed PE
	Diameter, mm	43.50±0.60
Outer conductor	Material	Ring corrugated copper
	Diameter, mm	46.50±0.30
Jacket	Material	PE or fire retardant PE
	Diameter, mm	49.50±0.40
Mechanical properties		
Bending radius (mm)	Single	300
	Repeated	510
	Moving	—
Pulling strength, N		3630
Crush resistance, kg/mm		2.1
Recommended temperature, °C	Store	-70~+85
	Installation	-40~+60
	Operation	-55~+85
Electrical properties		
Impedance, Ω		50±1
Inductance, μH/m		0.190
Capacitance, PF/m		76
Propagation velocity, %		88
DC breakdown voltage, kV		11
Insulation resistance, MΩ•km		>5×10 ³
Peak power, kW		315
Screening attenuation, dB		»120
Cut-off frequency, GHz		2.5

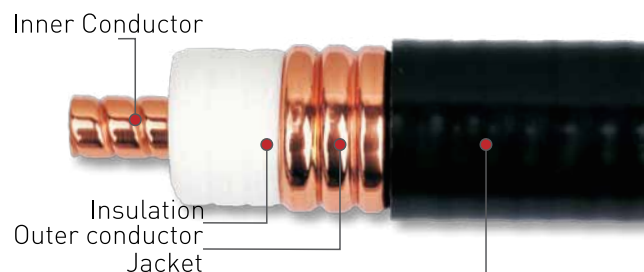


Figure 10: F158-50 1-5/8" Coaxial cable

Attenuation and average power		
Frequency MHz	Nom. attenuation @20°C, dB/100m	Power rate @20°C, kW
10	0.202	54.3
100	0.671	16.4
150	0.834	13.2
200	0.976	11.3
300	1.22	9.01
450	1.53	7.18
800	2.13	5.15
900	2.29	4.81
1000	2.43	4.52
1500	3.11	3.54
1800	3.47	3.17
2000	3.71	2.96
2500	4.27	2.58
● Maximum attenuation value shall be 105% of the nominal attenuation value		
VSWR		
806~960MHz		≤1.15
1700~2200MHz		≤1.15
5~3000MHz		≤1.25

Note: ● For fire retardant jacket, recommended temperatures are:

Store temperature: -30~+80°C

Installation temperature: -25~+60°C

Operation temperature: -30~+80°C

- This cable is RoHS compliant. As a statement of RoHS compliant, you can find the label below on our product package.

