



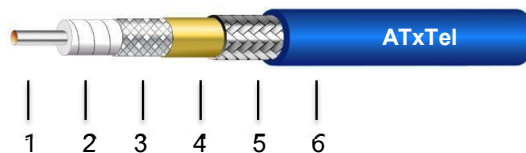
Product Selection Guide

Bulk RF Cable

B Series

Features

- Good bending performance
- Mechanical phase stability
- Amplitude stability
- Excellent shielding performance
- Good power handling capability
- Low passive intermodulation (PIM)
- Light weight
- Excellent durability



Construction	Materials
1. Center Conductor	Silvered Copper
2. Dielectric	Low Density PTFE
3. Inner Shield	Braided Silvered Copper Tape
4. Middle Layer	High Temperature Aluminum Foil
5. Outer Shield	Braided Silvered Copper Wire
6. Jacket	Blue FEP

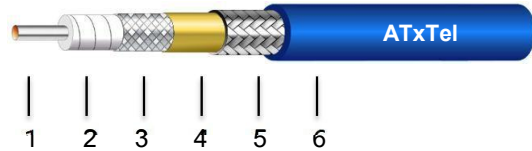
Model	Outer Diameter (mm)	Frequency (GHz)	Impedance (Ohms)	Velocity	Shielding (dB)	Withstand Voltage (V, DC)	Attenuation(dB/100m, Typical Value @25°C & VSWR=1.0)			
							6GHz	8.5GHz	12.4GHz	18GHz
B460	4.60	18	50	76%	90	1000	88.78	106.48	129.9	158.35
B520	5.20	18	50	76%	90	1000	69.87	83.96	102.67	125.51
B635	6.35	18	50	76%	90	2000	56.43	67.97	83.35	102.23
B800	7.62	18	50	78%	90	2000	45.1	54.5	67.1	82.6
B1000	9.30	10	50	76%	90	2500	38.2	46.2		
B1200	12.00	8	50	76%	90	3000	33.9			
B1500	14.70	6	50	76%	90	4000	27.1			

Product Specifications



Model: B460

Low Loss Testing Cable



Construction	Materials	Outer Diameter (mm)
1. Center Conductor	Silvered Copper	1.02
2. Dielectric	Low Density PTFE	3.07
3. Inner Shield	Braided Silvered Copper Tape	3.27
4. Middle Layer	High Temperature Aluminum Foil	3.43
5. Outer Shield	Braided Silvered Copper Wire	3.94
6. Jacket	Blue FEP	4.60

Electrical Specifications

Cable Impedance	50 Ω
Velocity	76%
Shielding Effectiveness	>90 dB
Voltage Withstanding	1000 V DC
Operating Frequency	DC-18 GHz

Mechanical & Environmental Specifications

Weight	53 g/m
Bend Radius, static	23 mm
Bend Radius, dynamic	46 mm
Temperature Range	-55 ~ +200 $^{\circ}\text{C}$

Attenuation (Typical Value @ 25 $^{\circ}\text{C}$ & Sea Level)

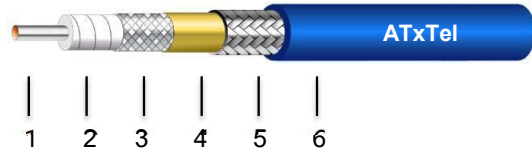
Frequency (MHz)	Power (W)	Attenuation (dB/m)
300	1047	0.19
1000	569	0.35
3000	324	0.62
6000	227	0.89
8500	189	1.06
12400	155	1.30
18000	127	1.58

Product Specifications



Model: B520

Low Loss Testing Cable



Construction	Materials	Outer Diameter (mm)
1. Center Conductor	Silvered Copper	1.29
2. Dielectric	Low Density PTFE	3.91
3. Inner Shield	Braided Silvered Copper Tape	4.15
4. Middle Layer	High Temperature Aluminum Foil	4.28
5. Outer Shield	Braided Silvered Copper Wire	4.85
6. Jacket	Blue FEP	5.20

Electrical Specifications

Cable Impedance	50 Ω
Velocity	76%
Shielding Effectiveness	>90 dB
Voltage Withstanding	1000 V DC
Operating Frequency	DC-18 GHz

Mechanical & Environmental Specifications

Weight	67 g/m
Bend Radius, static	26 mm
Bend Radius, dynamic	52 mm
Temperature Range	-55 ~ +200 °C

Attenuation (Typical Value @ 25°C & Sea Level)

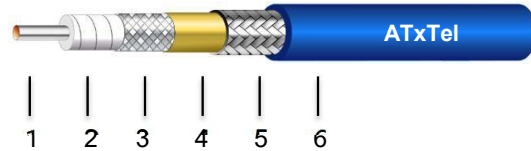
Frequency (MHz)	Power (W)	Attenuation (dB/m)
300	1383	0.15
1000	750	0.28
3000	426	0.49
6000	297	0.70
8500	247	0.84
12400	202	1.03
18000	165	1.26

Product Specifications



Model: B635

Low Loss Testing Cable



Construction	Materials	Outer Diameter (mm)
1. Center Conductor	Silvered Copper	1.57
2. Dielectric	Low Density PTFE	4.72
3. Inner Shield	Braided Silvered Copper Tape	4.96
4. Middle Layer	High Temperature Aluminum Foil	5.10
5. Outer Shield	Braided Silvered Copper Wire	5.66
6. Jacket	Blue FEP	6.35

Electrical Specifications

Cable Impedance	50 Ω
Velocity	76%
Shielding Effectiveness	>90 dB
Voltage Withstanding	2000 V DC
Operating Frequency	DC-18 GHz

Mechanical & Environmental Specifications

Weight	93 g/m
Bend Radius, static	31 mm
Bend Radius, dynamic	63 mm
Temperature Range	-55 ~ +200 °C

Attenuation (Typical Value @ 25°C & Sea Level)

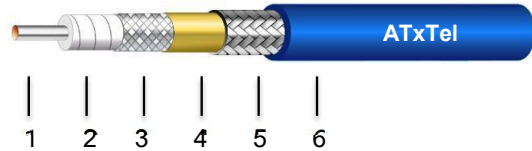
Frequency (MHz)	Power (W)	Attenuation (dB/m)
300	1885	0.12
1000	1020	0.22
3000	578	0.39
6000	401	0.56
8500	333	0.68
12400	271	0.83
18000	221	1.02

Product Specifications



Model: B800

Low Loss Testing Cable



Construction	Materials	Outer Diameter (mm)
1. Center Conductor	Silvered Copper	2.06
2. Dielectric	Low Density PTFE	5.89
3. Inner Shield	Braided Silvered Copper Tape	6.05
4. Middle Layer	High Temperature Aluminum Foil	6.17
5. Outer Shield	Braided Silvered Copper Wire	6.81
6. Jacket	Blue FEP	7.62

Electrical Specifications

Cable Impedance	50 Ω
Velocity	78%
Shielding Effectiveness	>90 dB
Voltage Withstanding	2000 V DC
Operating Frequency	DC-18 GHz

Mechanical & Environmental Specifications

Weight	130 g/m
Bend Radius, static	38 mm
Bend Radius, dynamic	76 mm
Temperature Range	-55 ~ +200 °C

Attenuation (Typical Value @ 25°C & Sea Level)

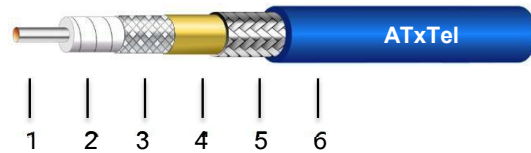
Frequency (MHz)	Power (W)	Attenuation (dB/m)
300	2919	0.10
1000	1530	0.18
3000	887	0.31
6000	613	0.45
8500	507	0.55
12400	412	0.67
18000	335	0.83

Product Specifications



Model: B1000

Low Loss Testing Cable



Construction	Materials	Outer Diameter (mm)
1. Center Conductor	Silvered Copper	2.44
2. Dielectric	Low Density PTFE	7.24
3. Inner Shield	Braided Silvered Copper Tape	7.48
4. Middle Layer	High Temperature Aluminum Foil	7.61
5. Outer Shield	Braided Silvered Copper Wire	8.19
6. Jacket	Blue FEP	9.30

Electrical Specifications

Cable Impedance	50 Ω
Velocity	76%
Shielding Effectiveness	>90 dB
Voltage Withstanding	2500 V DC
Operating Frequency	DC-10 GHz

Mechanical & Environmental Specifications

Weight	200 g/m
Bend Radius, static	51 mm
Bend Radius, dynamic	100 mm
Temperature Range	-55 ~ +200 °C

Attenuation (Typical Value @ 25°C & Sea Level)

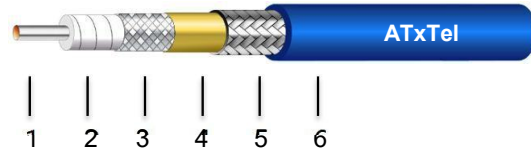
Frequency (MHz)	Power (W)	Attenuation (dB/m)
300	3421	0.08
1000	1839	0.15
3000	1031	0.26
6000	709	0.38
8500	585	0.46

Product Specifications



Model: B1200

Low Loss Testing Cable



Construction	Materials	Outer Diameter (mm)
1. Center Conductor	Silvered Copper	3.50
2. Dielectric	Low Density PTFE	9.90
3. Inner Shield	Braided Silvered Copper Tape	10.17
4. Middle Layer	High Temperature Aluminum Foil	10.30
5. Outer Shield	Braided Silvered Copper Wire	11.02
6. Jacket	Blue FEP	12.00

Electrical Specifications

Cable Impedance	50 Ω
Velocity	76%
Shielding Effectiveness	>90 dB
Voltage Withstanding	3000 V DC
Operating Frequency	DC-8 GHz

Mechanical & Environmental Specifications

Weight	310 g/m
Bend Radius, static	60 mm
Bend Radius, dynamic	120 mm
Temperature Range	-55 ~ +200 °C

Attenuation (Typical Value @ 25°C & Sea Level)

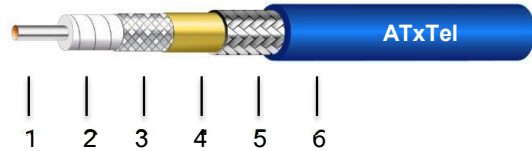
Frequency (MHz)	Power (W)	Attenuation (dB/m)
300	4830	0.07
1000	2590	0.13
3000	1446	0.23
6000	991	0.34

Product Specifications



Model: B1500

Low Loss Testing Cable



Construction	Materials	Outer Diameter (mm)
1. Center Conductor	Silvered Copper	4.40
2. Dielectric	Low Density PTFE	12.50
3. Inner Shield	Braided Silvered Copper Tape	12.82
4. Middle Layer	High Temperature Aluminum Foil	12.95
5. Outer Shield	Braided Silvered Copper Wire	13.67
6. Jacket	Blue FEP	14.70

Electrical Specifications

Cable Impedance	50 Ω
Velocity	76%
Shielding Effectiveness	>90 dB
Voltage Withstanding	4000 V DC
Operating Frequency	DC-6 GHz

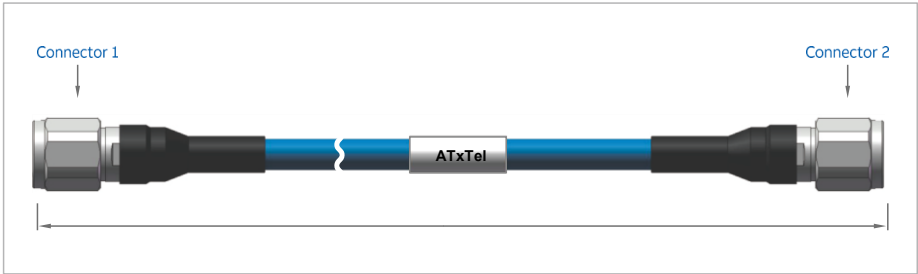
Mechanical & Environmental Specifications

Weight	432 g/m
Bend Radius, static	76 mm
Bend Radius, dynamic	150 mm
Temperature Range	-55 ~ +200 °C

Attenuation (Typical Value @ 25°C & Sea Level)

Frequency (MHz)	Power (W)	Attenuation (dB/m)
300	7650	0.05
1000	4080	0.10
3000	2260	0.18
6000	1537	0.27

Matching Cables	Matching Connectors											
	SSMP	SMP	SSMA	1.0	1.85	2.4	2.92	3.5	SMA	N	TNC	7/16
B460								●	●	●	●	
B520									●	●	●	
B635									●	●	●	
B800									●	●	●	
B1000									●	●	●	
B1200									●	●	●	
B1500									●	●	●	



Part Number

ATX-LM-CBL- B460 - 29 M 29 M - 1 M - K J

Cable Model

B460
B520
B635
B800
B1000
B1200
B1500

Connector Model

NM → N Male	NF → N Female
SM → SMA Male	SF → SMA Female
3SM → 3.5mm Male	SPM → SMP Male
29M → 2.92mm Male	BM → BNC Male
24M → 2.4mm Male	TM → TNC Male
18M → 1.85mm Male	DM → 7/16 Male
10M → 1.0mm male	SPRAF → SMP Female Right Angle
2SM → SSMA male	SRAM → SMA Male Right Angle
2SPM → SSMP male	

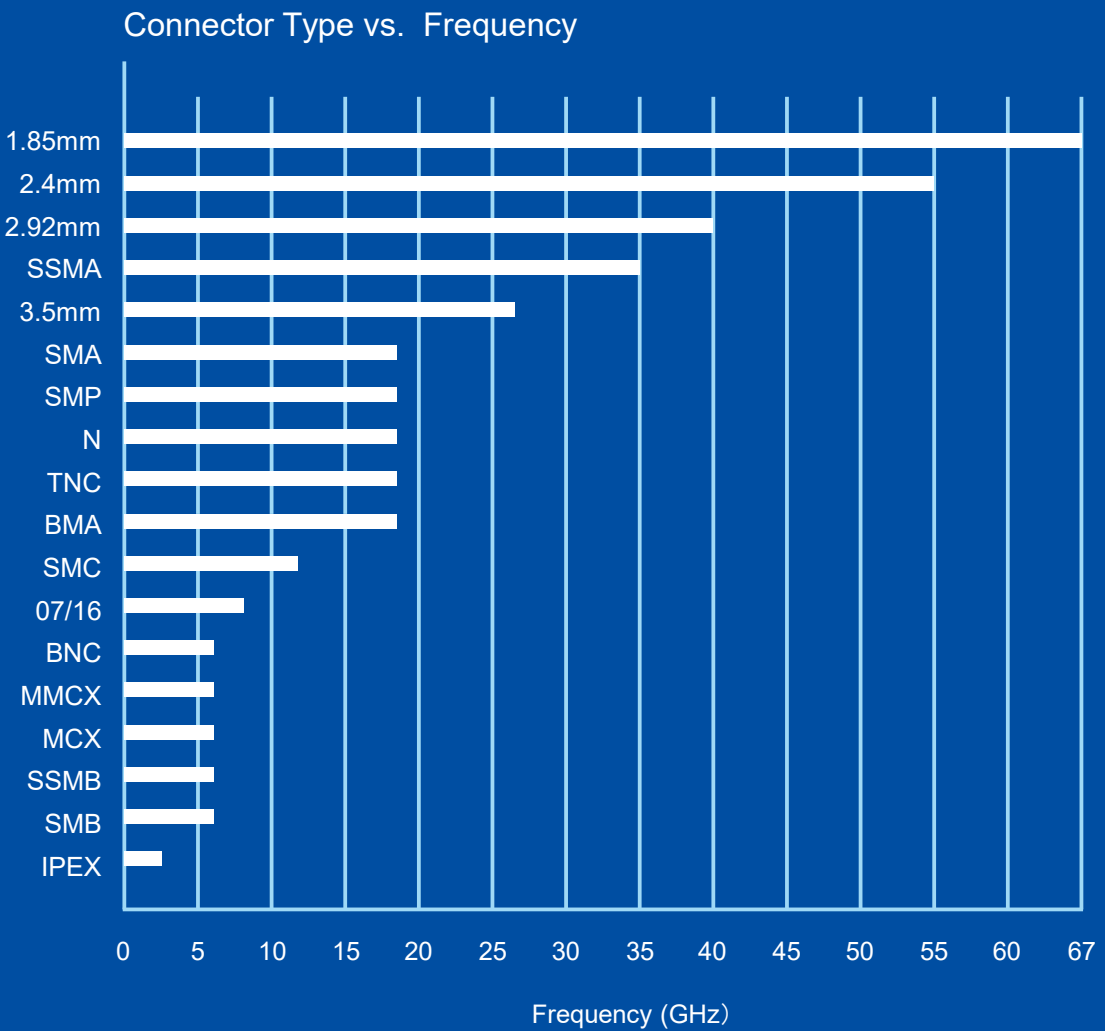
Length

1M=1Meter

Blank - No Armor
KJ - With Armor

Note: Different connector types and cable assembly lengths are available. In the continuous effort to improve our products, ATxTel reserves the right to make changes without notice.

Reference



Frequently used information

Insulation Material Characteristics

Material	Dielectric constant	Capacitance	Temperature(°C)
PTFE	2.07	95.9	-75 to +250
Polyethylene	2.3	101.1	-65 to +80
Foam Polyethylene	1.29-1.64	75.72 - 85.38	-65 to +100
Polyvinylchloride	3.0-8.0	115.47 - 188.56	-50 to +105
Polyamide	3.5-4.6	124.72 - 254.73	-60 to +120
Silicone Rubber	2.1-3.5	99.61 - 124.72	-70 to +250
Ethylene Propylene	2.24	99.8	-40 to +105
FEP	2.1	96.6	-70 to +200
Low Density PTFE	1.38-1.73	78.3 - 87.7	-75 to +250
Foam FEP	1.45	80.3	-75 to +200
Polyimide	3.0-3.5	115.5 - 124.7	-75 to +300
PFA	2.1	96.6	-75 to +260
ETFE	2.6	107.5	-75 to +150
ECTFE	2.5	105.4	-65 to +150
PVDF	7.8	186.2	-75 to +125
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Cable outer jacket material working temperature

Material Name	Working temperature (°C)
PTFE	-75 to +250
FEP	-70 to +200
Silicone Rubber	-70 to +200
ETFE	-65 to +150
Nylon	-40 to +105
PUR	-55 to +85
PVC	-50 to +85
PE	-65 to +80
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