



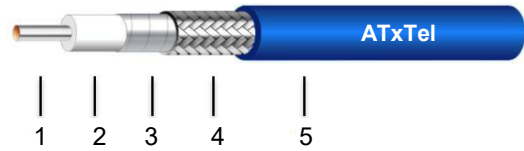
Product Selection Guide

Bulk RF Cable

E Series

Features

- Mechanical phase stability
- Temperature phase stability
- Amplitude stability
- Excellent shielding performance
- Good power handling capability
- Low VSWR



Construction	Materials
1. Center Conductor	Silvered Copper
2. Dielectric	Low Density PTFE
3. Inner Shield	Silvered Copper Tape Wrapping
4. Outer Shield	Braided Silvered Copper Wire
5. Jacket	Blue FPA

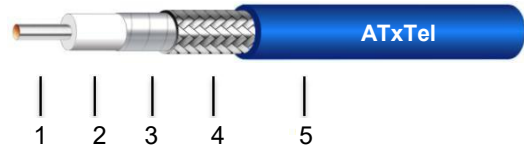
Model	Outer Diameter (mm)	Frequency (GHz)	Impedance (Ohms)	Velocity	Shielding Effectiveness (dB)	Withstand Voltage (V, DC)	Attenuation(dB/100m, Typical Value @25°C & VSWR=1.0)			
							6GHz	12.4GHz	18GHz	26.5GHz
E160	1.60	18	50	70%	90	300	334	483.2	584.7	
E280	2.65	26.5	50	70%	90	500	183.7	279	348.2	440.8
E400	4.00	26.5	50	70%	90	1500	107.5	169.4	216.1	280.6
E700	7.00	18	50	70%	90	3000	77	125.5	163.3	

Product Specifications



Model: E160

Base Internal Cable



Construction	Materials	Outer Diameter (mm)
1. Center Conductor	Silvered Copper	0.30
2. Dielectric	Low Density PTFE	0.95
3. Inner Shield	Silvered Copper Tape Wrapping	1.07
4. Outer Shield	Braided Silvered Copper Wire	1.25
5. Jacket	Blue PFA	1.45

Electrical Specifications

Cable Impedance	50 Ω
Velocity	70%
Shielding Effectiveness	>90 dB
Voltage Withstanding	300 V DC
Operating Frequency	DC-18 GHz

Mechanical & Environmental Specifications

Weight	6 g/m
Bend Radius, static	6 mm
Bend Radius, dynamic	15 mm
Temperature Range	-55 ~ +125 $^{\circ}\text{C}$

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

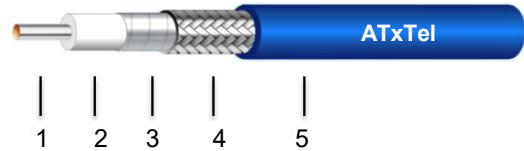
Frequency (MHz)	Power (W)	Attenuation (dB/m)
300	150	0.74
1000	82	1.35
3000	47	2.35
6000	33	3.34
8500	28	3.99
12400	23	4.83
18000	19	5.85

Product Specifications



Model: E280

Base Internal Cable



Construction	Materials	Outer Diameter (mm)
1. Center Conductor	Silvered Copper	0.53
2. Dielectric	Low Density PTFE	1.63
3. Inner Shield	Silvered Copper Tape Wrapping	1.83
4. Outer Shield	Braided Silvered Copper Wire	2.18
5. Jacket	Blue PFA	2.65

Electrical Specifications

Cable Impedance	50 Ω
Velocity	70%
Shielding Effectiveness	>90 dB
Voltage Withstanding	500 V DC
Operating Frequency	DC-26.5 GHz

Mechanical & Environmental Specifications

Weight	20 g/m
Bend Radius, static	13 mm
Bend Radius, dynamic	26 mm
Temperature Range	-55 ~ +125 $^{\circ}\text{C}$

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

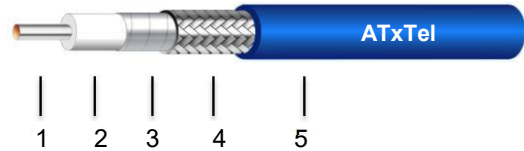
Frequency (MHz)	Power (W)	Attenuation (dB/m)
300	187	0.33
1000	119	0.63
3000	66	1.14
6000	44	1.68
8500	36	2.05
12400	29	2.56
18000	23	3.21
26500	18	4.07

Product Specifications



Model: E400

Base Internal Cable



Construction	Materials	Outer Diameter (mm)
1. Center Conductor	Silvered Copper	0.94
2. Dielectric	Low Density PTFE	3.00
3. Inner Shield	Silvered Copper Tape Wrapping	3.20
4. Outer Shield	Braided Silvered Copper Wire	3.55
5. Jacket	Blue PFA	4.00

Electrical Specifications

Cable Impedance	50 Ω
Velocity	70%
Shielding Effectiveness	>90 dB
Voltage Withstanding	1500 V DC
Operating Frequency	DC-26.5 GHz

Mechanical & Environmental Specifications

Weight	41 g/m
Bend Radius, static	20 mm
Bend Radius, dynamic	40 mm
Temperature Range	-55 ~ +125 $^{\circ}\text{C}$

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

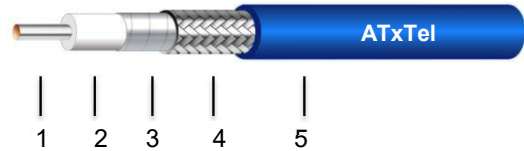
Frequency (MHz)	Power (W)	Attenuation (dB/m)
300	512	0.20
1000	291	0.37
3000	158	0.69
6000	105	1.04
8500	85	1.28
12400	68	1.62
18000	53	2.05
26500	41	2.65

Product Specifications



Model: E700

Base Internal Cable



Construction	Materials	Outer Diameter (mm)
1. Center Conductor	Silvered Copper	1.63
2. Dielectric	Low Density PTFE	5.30
3. Inner Shield	Silvered Copper Tape Wrapping	5.55
4. Outer Shield	Braided Silvered Copper Wire	6.17
5. Jacket	Blue PFA	7.00

Electrical Specifications

Cable Impedance	50 Ω
Velocity	70%
Shielding Effectiveness	>90 dB
Voltage Withstanding	3000 V DC
Operating Frequency	DC-18 GHz

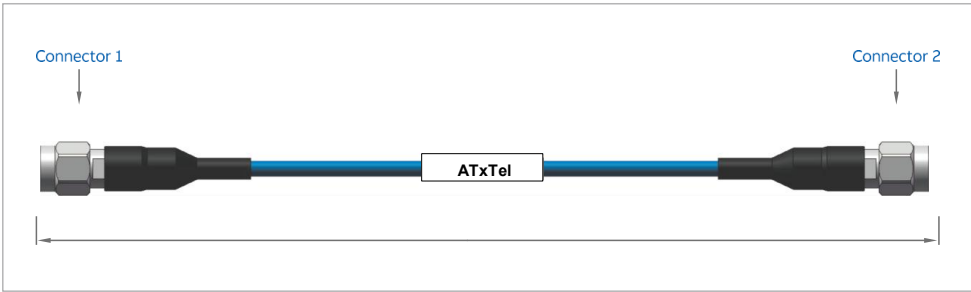
Mechanical & Environmental Specifications

Weight	118 g/m
Bend Radius, static	35 mm
Bend Radius, dynamic	70 mm
Temperature Range	-55 ~ +125 $^{\circ}\text{C}$

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

Frequency (MHz)	Power (W)	Attenuation (dB/m)
300	1100	0.13
1000	561	0.26
3000	291	0.50
6000	187	0.77
8500	149	0.97
12400	115	1.26
18000	88	1.63

Matching Cables	Matching Connectors											
	SSMP	SMP	SSMA	1.0	1.85	2.4	2.92	3.5	SMA	N	TNC	7/16
E160	●	●	●	●	●	●	●	●	●			
E280	●	●	●		●	●	●	●	●	●	●	
E400			●				●	●	●	●	●	
E700									●	●	●	●



Part Number

ATX-LM-CBL- E160 - 29 M 29 M - 1 M - K J

Cable Model

E160
E280
E400
E700

Connector Model

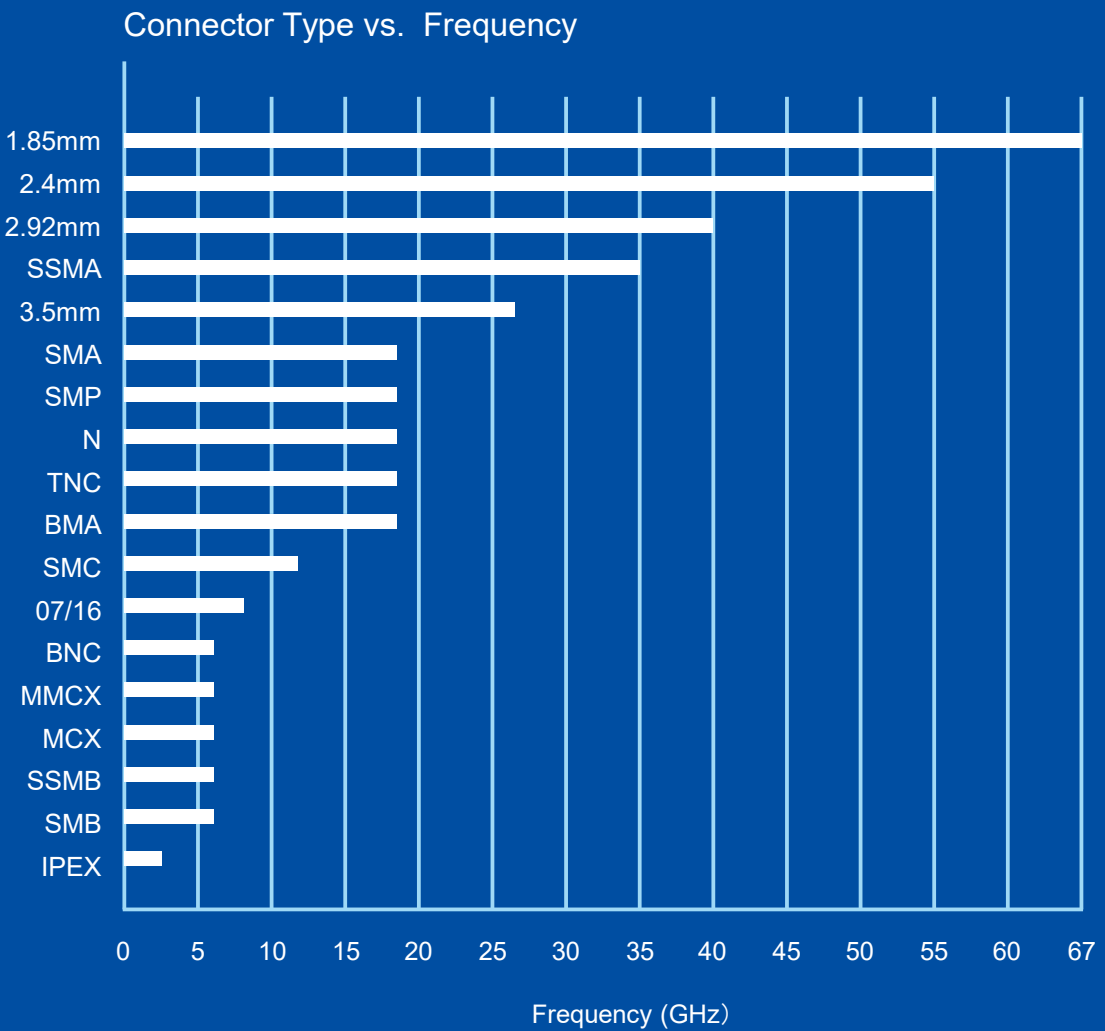
NM → N Male	NF → N Female
SM → SMA Male	SF → SMA Female
35M → 3.5mm Male	SPM → SMP Male
29M → 2.92mm Male	BM → BNC Male
24M → 2.4mm Male	TM → TNC Male
18M → 1.85mm Male	DM → 7/16 Male
10M → 1.0mm male	SPRAF → SMP Female Right Angle
25M → SSMA male	SRAM → SMA Male Right Angle
25PM → SSMP male	

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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—	—



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