



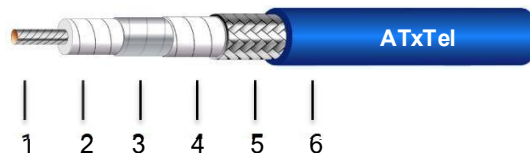
Product Selection Guide

Bulk RF Cable

C Series

Features

- Mechanical phase stability
- Temperature phase stability
- Amplitude stability
- Ultra-low loss
- Excellent shielding performance
- Good power handling capability
- Low passive intermodulation (PIM)
- Resistant to bending and jitter
- Low VSWR



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

Model	Outer Diameter (mm)	Frequency (GHz)	Impedance (Ohms)	Velocity	Amplitude Stability (dB)	Phase Stability	Attenuation(dB/100m, Typical Value @25°C & VSWR=1.0)			
							6GHz	12.4GHz	26.5GHz	40GHz
C400	4.20	40	50	81%	±0.1	±5°	98.1	142.7	212.3	264.1
C500	5.05	26.5	50	82%	±0.1	±5°	69.6	103.5	158.8	

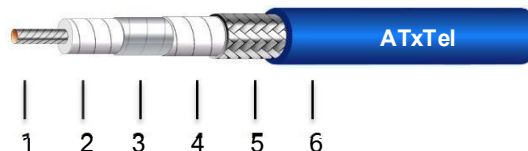
Product Specifications



Model: C400

Amplitude Stable

Phase Stable



Construction

1. Center Conductor
2. Dielectric
3. Inner Shield
4. Middle Layer
5. Outer Shield
6. Jacket

Materials

Stranded Silvered Copper Wire
Low Density PTFE
Silvered Copper Tape Wrapping
Low Density PTFE
Braided Silvered Copper Wire
Blue FEP

Outer Diameter (mm)

1.02
2.80
2.95
3.20
3.62
4.20

Electrical Specifications

Cable Impedance 50 Ω
Velocity 81%
Shielding Effectiveness >90 dB
Voltage Withstanding 500 V DC
Operating Frequency DC-40 GHz
Amplitude Stability vs Flexure < ± 0.1 dB
Mechanical Phase Stability < $\pm 5^\circ$

Mechanical & Environmental Specifications

Weight 40 g/m
Bend Radius, static 21 mm
Bend Radius, dynamic 42 mm
Temperature Range -55 ~ +165 $^\circ\text{C}$

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

Frequency (MHz)	Power (W)	Attenuation (dB/m)
300	1040	0.22
1000	567	0.39
3000	325	0.69
6000	228	0.98
8500	190	1.17
12400	157	1.43
18000	129	1.73
26500	105	2.12
33000	94	2.38
40000	85	2.64

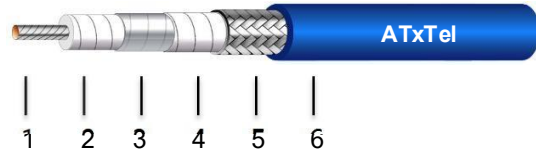
Product Specifications



Model: C500

Amplitude Stable

Phase Stable



Construction

1. Center Conductor
2. Dielectric
3. Inner Shield
4. Middle Layer
5. Outer Shield
6. Jacket

Materials

Stranded Silvered Copper Wire
Low Density PTFE
Silvered Copper Tape Wrapping
Low Density PTFE
Braided Silvered Copper Wire
Blue FEP

Outer Diameter (mm)

1.44
3.85
4.05
4.30
4.65
5.10

Electrical Specifications

Cable Impedance 50 Ω
Velocity 82%
Shielding Effectiveness >90 dB
Voltage Withstanding 2000 V DC
Operating Frequency DC-26.5 GHz
Amplitude Stability vs Flexure < ± 0.1 dB
Mechanical Phase Stability < $\pm 5^\circ$

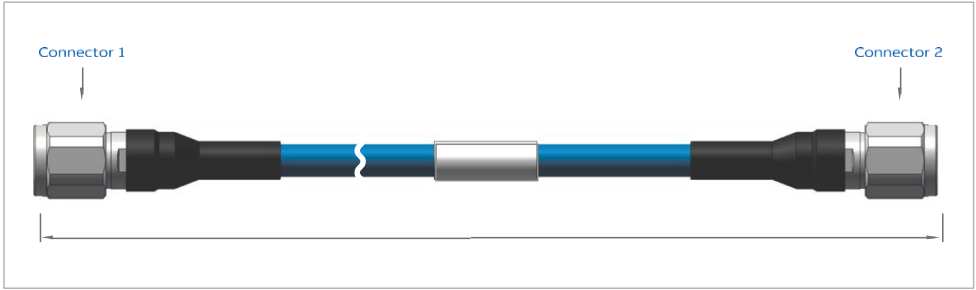
Mechanical & Environmental Specifications

Weight 55 g/m
Bend Radius, static 25 mm
Bend Radius, dynamic 50 mm
Temperature Range -55 ~ +165 $^\circ\text{C}$

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

Frequency (MHz)	Power (W)	Attenuation (dB/m)
300	1522	0.15
1000	821	0.27
3000	463	0.48
6000	320	0.70
8500	265	0.84
12400	215	1.04
18000	175	1.27
26500	140	1.59

Matching Cables	Matching Connectors											
	SSMP	SMP	SSMA	1.0	1.85	2.4	2.92	3.5	SMA	N	TNC	7/16
C400								●	●	●	●	
C500									●	●	●	



Part Number

ATX-LM-CBL- C400 - 29 M 29 M - 1 M - KJ

Cable Model

C400
C500

Connector Model

NM → N Male	INF → 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	

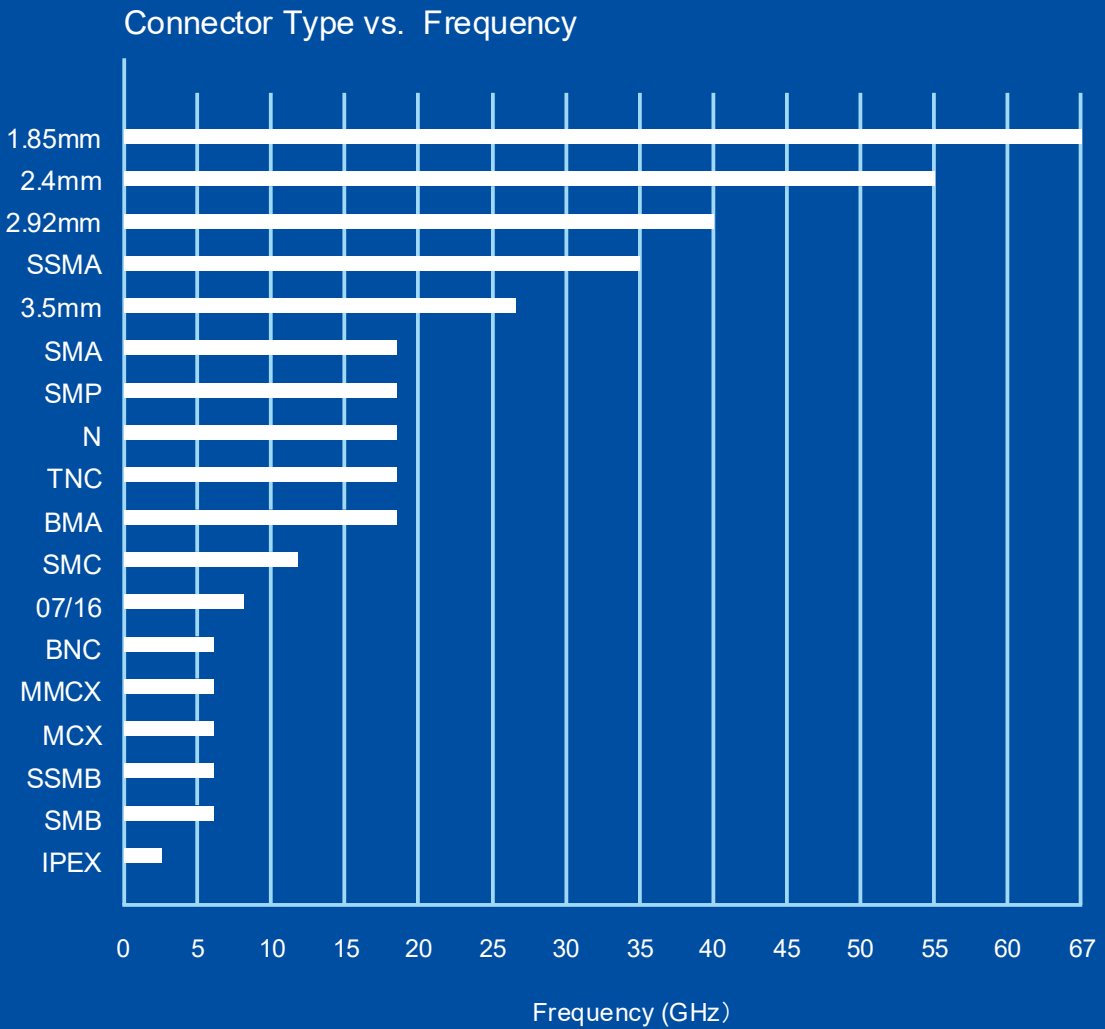
Length

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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sales@ATxTel.com

ATxTel LLC

421 Broadway, STE# 86
San Diego CA 92101
USA