



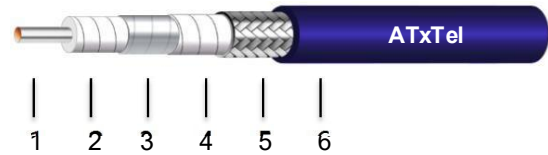
Product Selection Guide

Bulk RF Cable

T Series

Features

- Excellent amplitude stability
- Excellent mechanical phase stability
- Excellent temperature phase stability
- Ultra low loss
- Resistant to bending and jitter
- Excellent shielding performance
- Good power handling capability
- Low passive intermodulation (PIM)



Construction	Materials
1. Center Conductor	Silvered Copper
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	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)				
							18GHz	26.5GHz	40GHz	50GHz	67GHz
T220	2.40	67	50	81%	±0.1	±5°	287.1	354	444	502.9	593.2
T360	3.60	50	50	76%	±0.1	±5°	191.8	234.8	291.7	328.5	
T395	3.95	40	50	83%	±0.1	±5°	170.3	209.89	263.08		
T450	4.85	18	50	76%	±0.1	±5°	173.7				
T520	5.20	28	50	77%	±0.1	±5°	173.7	212.9			

Product Specifications

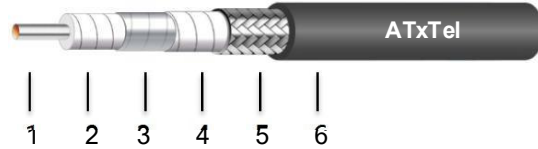


Model: T220

Low Loss Testing Cable

Amplitude Stable

Phase Stable



Construction	Materials	Outer Diameter (mm)
1. Center Conductor	Silvered Copper	0.50
2. Dielectric	Low Density PTFE	1.38
3. Inner Shield	Silvered Copper Tape Wrapping	1.54
4. Middle Layer	Low Density PTFE	1.82
5. Outer Shield	Braided Silvered Copper Wire	2.17
6. Jacket	Grey FEP	2.40

Electrical Specifications

Cable Impedance	50 Ω
Velocity	81%
Shielding Effectiveness	>90 dB
Voltage Withstanding	500 V DC
Operating Frequency	DC-67 GHz
Amplitude Stability vs Flexure	< ± 0.1 dB
Mechanical Phase Stability	< $\pm 5^\circ$

Mechanical & Environmental Specifications

Weight	16 g/m
Bend Radius, static	12 mm
Bend Radius, dynamic	24 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	179	0.35
1000	97	0.64
3000	55	1.12
6000	39	1.60
8500	32	1.93
12400	26	2.35
18000	22	2.87
26500	17	3.54
40000	14	4.44
50000	12	5.03
67000	10	5.93

Product Specifications

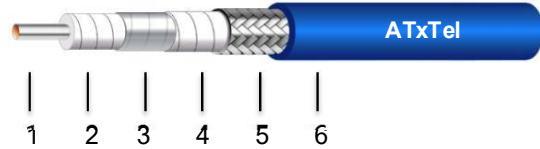


Model: T360

Low Loss Testing Cable

Amplitude Stable

Phase Stable



Construction	Materials	Outer Diameter (mm)
1. Center Conductor	Silvered Copper	0.72
2. Dielectric	Low Density PTFE	2.21
3. Inner Shield	Silvered Copper Tape Wrapping	2.38
4. Middle Layer	Low Density PTFE	2.68
5. Outer Shield	Braided Silvered Copper Wire	3.14
6. Jacket	Blue FEP	3.60

Electrical Specifications

Cable Impedance	50 Ω
Velocity	76%
Shielding Effectiveness	>90 dB
Voltage Withstanding	500 V DC
Operating Frequency	DC-50 GHz
Amplitude Stability vs Flexure	< ± 0.1 dB
Mechanical Phase Stability	< $\pm 5^\circ$

Mechanical & Environmental Specifications

Weight	30 g/m
Bend Radius, static	18 mm
Bend Radius, dynamic	36 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	928	0.24
1000	506	0.44
3000	290	0.76
6000	204	1.09
8500	170	1.30
12400	140	1.58
18000	116	1.92
26500	94	2.35
40000	76	2.92
50000	67	3.29

Product Specifications

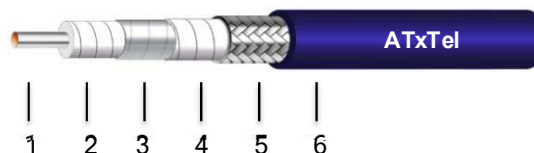


Model: T395

Low Loss Testing Cable

Amplitude Stable

Phase Stable



Construction	Materials	Outer Diameter (mm)
1. Center Conductor	Silvered Copper	0.83
2. Dielectric	Low Density PTFE	2.42
3. Inner Shield	Silvered Copper Tape Wrapping	2.55
4. Middle Layer	Low Density FEP	2.85
5. Outer Shield	Braided Silvered Copper Wire	3.42
6. Jacket	Purple PUR	3.95

Electrical Specifications

Cable Impedance	50 Ω
Velocity	80%
Shielding Effectiveness	>90 dB
Voltage Withstanding	1000 V DC
Operating Frequency	DC-40 GHz
Amplitude Stability vs Flexure	< ± 0.1 dB
Mechanical Phase Stability	< $\pm 3^\circ$

Mechanical & Environmental Specifications

Weight	37 g/m
Bend Radius, static	20 mm
Bend Radius, dynamic	40 mm
Temperature Range	-55 ~ +85 $^\circ\text{C}$

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

Frequency (MHz)	Power (W)	Attenuation (dB/m)
300	318	0.21
1000	173	0.38
3000	99	0.66
6000	69	0.95
8500	57	1.14
12400	47	1.40
18000	38	1.70
26500	31	2.10
40000	25	2.63

Product Specifications

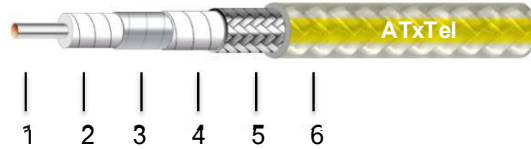


Model: T450

Low Loss Testing Cable

Amplitude Stable

Phase Stable



Construction	Materials	Outer Diameter (mm)
1. Center Conductor	Silvered Copper	0.91
2. Dielectric	Low Density PTFE	2.70
3. Inner Shield	Silvered Copper Tape Wrapping	2.85
4. Middle Layer	Low Density PTFE	3.15
5. Outer Shield	Braided Silvered Copper Wire	3.60
6. Jacket	Transparent FEP	4.95

Electrical Specifications

Cable Impedance	50 Ω
Velocity	76%
Shielding Effectiveness	>90 dB
Voltage Withstanding	500 V DC
Operating Frequency	DC-26.5 GHz
Amplitude Stability vs Flexure	< ± 0.1 dB
Mechanical Phase Stability	< $\pm 3^\circ$

Mechanical & Environmental Specifications

Weight	52 g/m
Bend Radius, static	30 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	880	0.22
1000	505	0.39
3000	289	0.69
6000	203	0.98
8500	169	1.18
12400	139	1.43
18000	115	1.74
26500	94	2.13

Product Specifications

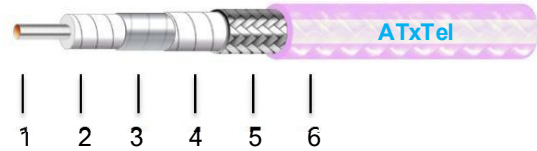


Model: T520

Low Loss Testing Cable

Amplitude Stable

Phase Stable



Construction	Materials	Outer Diameter (mm)
1. Center Conductor	Silvered Copper	1.30
2. Dielectric	Low Density PTFE	3.85
3. Inner Shield	Silvered Copper Tape Wrapping	4.02
4. Middle Layer	Low Density PTFE	4.30
5. Outer Shield	Braided Silvered Copper Wire	4.83
6. Jacket	Pink FEP	5.20

Electrical Specifications

Cable Impedance	50 Ω
Velocity	76%
Shielding Effectiveness	>90 dB
Voltage Withstanding	1000 V DC
Operating Frequency	DC-26.5 GHz
Amplitude Stability vs Flexure	< ± 0.1 dB
Mechanical Phase Stability	< $\pm 3^\circ$

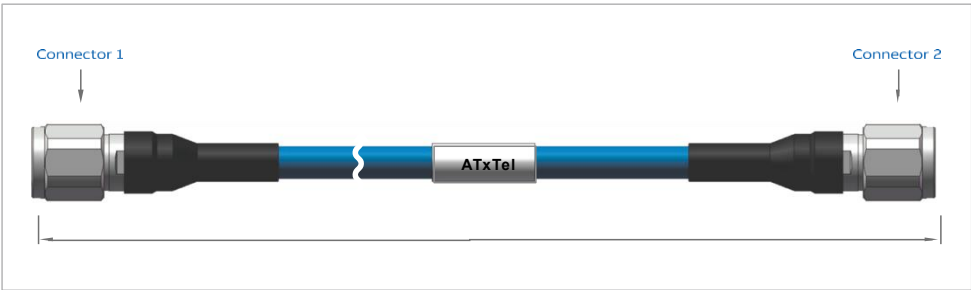
Mechanical & Environmental Specifications

Weight	68 g/m
Bend Radius, static	26 mm
Bend Radius, dynamic	52 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	1382	0.15
1000	749	0.28
3000	425	0.49
6000	296	0.70
8500	246	0.84
12400	201	1.03
18000	164	1.26
26500	132	1.55

Matching Cables	Matching Connectors											
	SSMP	SMP	SSMA	1.0	1.85	2.4	2.92	3.5	SMA	N	TNC	7/16
T220		●	●		●	●	●	●	●	●	●	
T360			●			●	●	●	●	●	●	
T395							●	●	●	●	●	
T450							●	●	●	●	●	
T520									●	●	●	



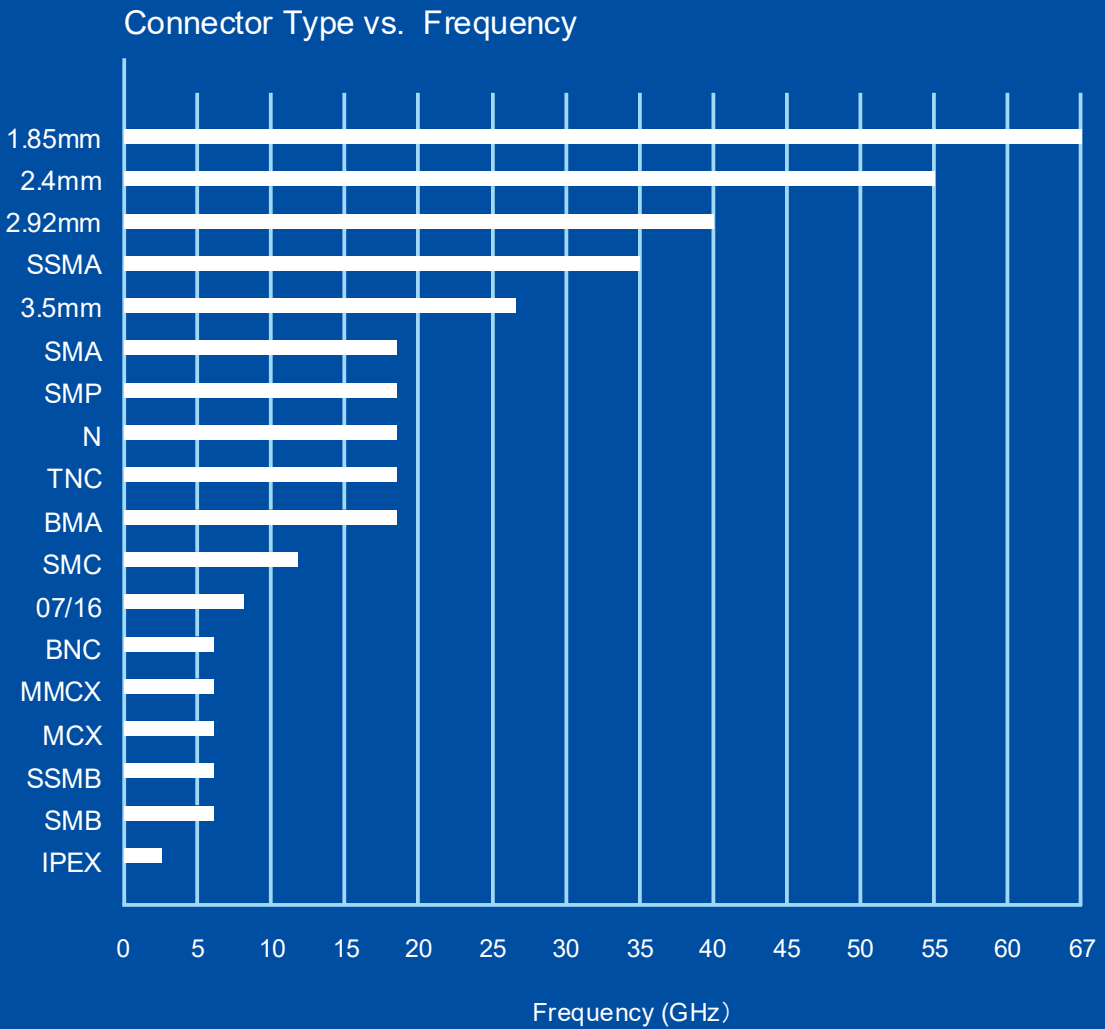
Part Number

ATX-LM-CBL- T220 - 29 M 29 M - 1 M - K J

Cable Model	Connector Model		Length	Blank-No Armor KJ- With Armor
T220	NM → N Male	NF → N Female	1M=1Meter	
T360	SM → SMA Male	SF → SMA Female		
T395	35M→ 3.5mm Male	SPM→ SMP Male		
T450	29M→ 2.92mm Male	BM → BNC Male		
T520	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		
	2SPM→ SSMP male			

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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