AT110 Series (1.0 Male-ST to 1.0 Male-ST)

Armored Precision Test Cable, 50ohms, DC-110GHz

MiCable
www.micable.cn

AT110-1Y-1Y-L

Maximum Ratings

Operating Temperature	23°C± 5°C
Storage Temperature	-55°C to +85°C

Permanent damage may occur if any of these limits are exceeded

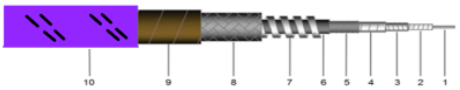
Cable Diameter		5.0mm
Velocity of Propagation		78%
Shielding Effectiveness		>100dB
Power Handling at 40°C	1 GHz	49.3W
	12 GHz	13.6W
	18 GHz	11W
	26.5 GHz	8.9W
	40 GHz	7.1W
	50 GHz	6.2W
	67 GHz	5.3W
	110 GHz	3.4W
Min. Bending Radius		30mm

Outline Drawing

Outline Dimensions (mm)

	A	B	C	D	E	F	T
L		7.0	6.0	7.0	6.0	5.0	+1%/-0

Cable Cross Section



Cable Construction	
Inner Conductor	SPC, Solid
Dielectric	Foamed PTFE
Inner Braid	Silver-Plated Copper Strip
Outer Braid	Silver-Plated Copper Braid
Jacket	FEP
Crush Member	Stainless Steel Spiral Spring
Braided Strength Member	Stainless Steel Braid
Outer Binder	PTFE Fim Tape with Silicone Adhesive
Outer Jacket	PTFE Braid

Connectors
● Nut, Stainless steel, Passivated
● Body, Stainless steel, Passivated
● Center contacts, Berillium Copper, Gold plated
● Dielectric, PEI

Product Guarantee*

MIcable will repair or replace your cable assembly if it fails within six months after shipment. This guarantee excludes product damage from misuse or abuse

Features

- Ultra-wideband operation: DC to 110 GHz
- Ideal VSWR and measurement accuracy
- Excellent amplitude and phase stability vs flexure and shaking
- Reinforced connector, multilayer armor structure to protect cable against compression, tension, torsion and abrasion
- High shielding effectiveness: >100dB
- Excellent phase stability over temperature: 500ppm@-55°C~+85°C
- Low loss: cable insertion loss <15dB/m@110GHz
- Low VSWR: < 1.30:1@110GHz
- Very stable performance during flexing
  - Amplitude Stability: <±0.2dB@110GHz
  - Phase Stability vs. Flexure: <±8°@110GHz
  (When wrapped 360° around a 50mm radius mandrel)

Applications

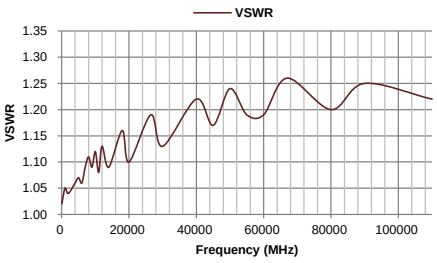
- Lab and production line test
- 5G Massive MIMO and antenna OTA test
- 5G switch and attenuator matrices systems
- Phase array test systems
- RF/Microwave test systems

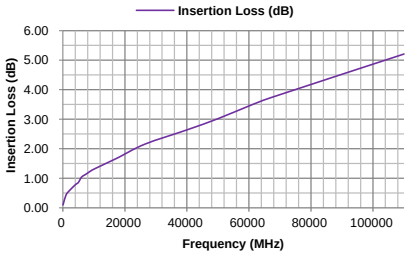
Electrical Specifications at 25°C

Freq. (GHz)	Length (M)	Insertion Loss (dB@GHz)								VSWR (@GHz)							
		DC - 40		40-50		50-67		67-110		DC - 40		40-50		50-67		67-110	
		Typ.	Max.	Typ.	Max.	Typ.	Max.	Typ.	Max.	Typ.	Max.	Typ.	Max.	Typ.	Max.	Typ.	Max.
DC-110	0.3	2.7	2.9	3.1	3.3	3.7	3.9	5.2	5.5								
	0.5	4.2	4.4	4.8	5.0	5.7	6.0	8.1	8.5	1.22	1.25	1.22	1.25	1.26	1.30	1.26	1.30
	1	8.0	8.2	9.1	9.4	10.8	11.1	15.6	16.0								

Typical Performance Data (AT110-1Y-1Y-0.3M)

Frequency(MHz)	VSWR	Insertion Loss (dB)
50	1.02	0.10
1000	1.05	0.43
2000	1.04	0.57
4000	1.06	0.78
5000	1.07	0.86
6000	1.06	1.04
7000	1.09	1.11
8000	1.11	1.18
9000	1.09	1.25
10000	1.12	1.31
12000	1.13	1.41
12000	1.13	1.41
18000	1.16	1.71
18000	1.16	1.71
26500	1.19	2.16
40000	1.22	2.64
50000	1.20	3.02
60000	1.22	3.45
67000	1.26	3.73
110000	1.23	5.21





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