

Cat6A Plenum Solid Copper Cable

SKU: 52N-PLC6A-BC

23AWG • 4 Twisted Pairs • CMP • U/UTP
750MHz • Solid Copper Conductor



Packaging Available

1000ft Pull Box



Jacket Colors



Key Features



Bandwidth tested up to
750 MHz



RoHS compliant



Suitable for 1 and 10-Gigabit
Ethernet



Exceeds ANSI/TIA 568.2-D,
CSA, and ISO/IEC 11801
specifications



Easily Identified Color
Striped Pairs



Supports PoE, PoE+,
and PoE++ up to 60W
and 300V DC



Sequential Footage
Markings Every 2ft

Print Legend

CAT6A 750MHz CMP PLENUM UTP 4-PAIR
23AWG EIA/TIA-568-C.2-1
0002FT-1000FT

Technical Data

Operating Temp. Range 75°C/167°F

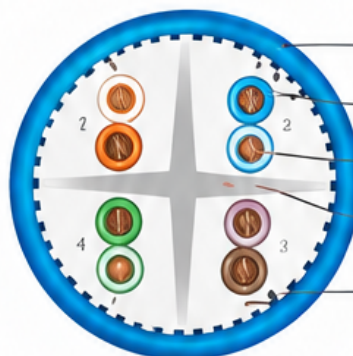
Max. Operating Voltage 300V

Bend Radius 2in/5mm

Insulation	HDPE
Average Thickness	0.250
Min Point Thickness	0.230
Conductor Insulation Dia. (±0.01mm)	1.08
Twisted Pair Dia. (±0.02mm)	2.16
Spline	PE

Jacket	CMP - PVC	
Average Thickness	0.55	0.45
Min. Point Thickness	0.50	Yes
Overall Diameter (±0.1mm)	6.20	
Ripcord	Yes	

Conductor	Solid Bare Copper
Size	23AWG
Conductor Dia. (±0.005mm)	0.57
Conductor Material	Solid Bare Copper



Jacket

Insulation

Conductor

Separator/Spline

Rip Cord

Color of Pairs

Pair 1	Blue - White/Blue
Pair 2	Orange - White/Orange
Pair 3	Green - White/Green
Pair 4	Brown - White/Brown



961 Highams CT.
Woodbridge, VA 22191 USA



(757) 799-1359



www.52networks.com



Cable ID: 52N-PLC6A-BC

Test Limit: TIA Cat 6 Perm. Link

Limits Version: V7.6 Date / Time: 10/10/2021

12:53:35 PM Operator: CHENGXIAOLAN

Headroom 3.9 dB (NEXT 3,6-4,5) Cable Type:

Cat 6A U/UTP NVP: 68.2%

Main: Versiv

S/N: 2034142

Software Version: V6.6 Build 2

Calibration Date: 12/23/2020

Adapter: DSX-8000 (DSX-PLA804)

S/N: 20475125

Remote: Versiv

S/N: 2035009

Software Version: V6.6 Build 2

Calibration Date: 12/23/2020

Adapter: DSX-8000R (DSX-PLA804)

S/N: 20485133

Test Summary: PASS

Length (ft), Limit 295	[Pair 4,5]	315
Prop. Delay (ns), Limit 498	[Pair 7,8]	487
Delay Skew (ns), Limit 44	[Pair 7,8]	18
ResiStance (ohms)	[Pair 7,8]	14.24
Insertion Loss Margin (dB)	[Pair 7,8]	3.1
Frequency (MHz)	[Pair 7,8]	250.0
Limit (dB)	[Pair 7,8]	31.1

Worst Case Margin

Worst Case Value

PASS	MAIN	SR	MAIN	SR
Worst Pair	3,6-4,5	3,6-4,5	1,2-4,5	3,6-4,5
NEXT (dB)	4.8	3.9	5.2	6.9
Freq. (MHz)	12.6	91.5	233.5	233.5
Limit (dB)	56.2	42.5	35.8	35.8
Worst Pair	6.2	5.6	7.2	3.6
PS NEXT (dB)	225.0	91.5	6.3	7.4
Freq. (MHz)	33.5	39.9	233.5	234.0
Limit (dB)			33.2	33.2

PASS	MAIN	SR	MAIN	SR
Worst Pair	4,5-3,6	4,5-3,6	4,5-3,6	4,5-3,6
ACR-F (dB)	6.4	6.5	6.4	6.5
Freq. (MHz)	206.5	206.5	206.5	206.5
Limit (dB)	17.9	17.9	17.9	17.9
Worst Pair	3,6	3,6	3,6	3,6
PS ACR-F (dB)	8.4	8.5	8.4	8.5
Freq. (MHz)	206.5	206.5	206.5	206.5
Limit (dB)	14.9	14.9	14.9	14.9

N/A	MAIN	SR	MAIN	SR
Worst Pair	3,6-4,5	3,6-4,5	1,2-4,5	3,6-4,5
ACR-N (dB)	5.5	4.7	10.2	11.9
Freq. (MHz)	12.6	12.8	233.5	233.5
Limit (dB)	50.0	49.9	5.9	5.9
Worst Pair	3,6	3,6	1,2	3,6
PS ACR-N (dB)	7.4	6.9	9.8	12.3
Freq. (MHz)	12.6	12.8	233.5	234.0
Limit (dB)	47.6	47.5	3.3	3.2

PASS	MAIN	SR	MAIN	SR
Worst Pair	4,5	4,5	4,5	4,5
RL (dB)	6.6	3.9	7.9	7.0
Freq. (MHz)	21.0	21.0	238.0	233.5
Limit (dB)	21.0	21.0	10.2	10.3

Compliant Network Standards:

10BASE-T

1000BASE-T

ATM-25

100VG-AnyLan

TR-16 Passive

100BASE-TX

2.5GBASE-T

ATM-51

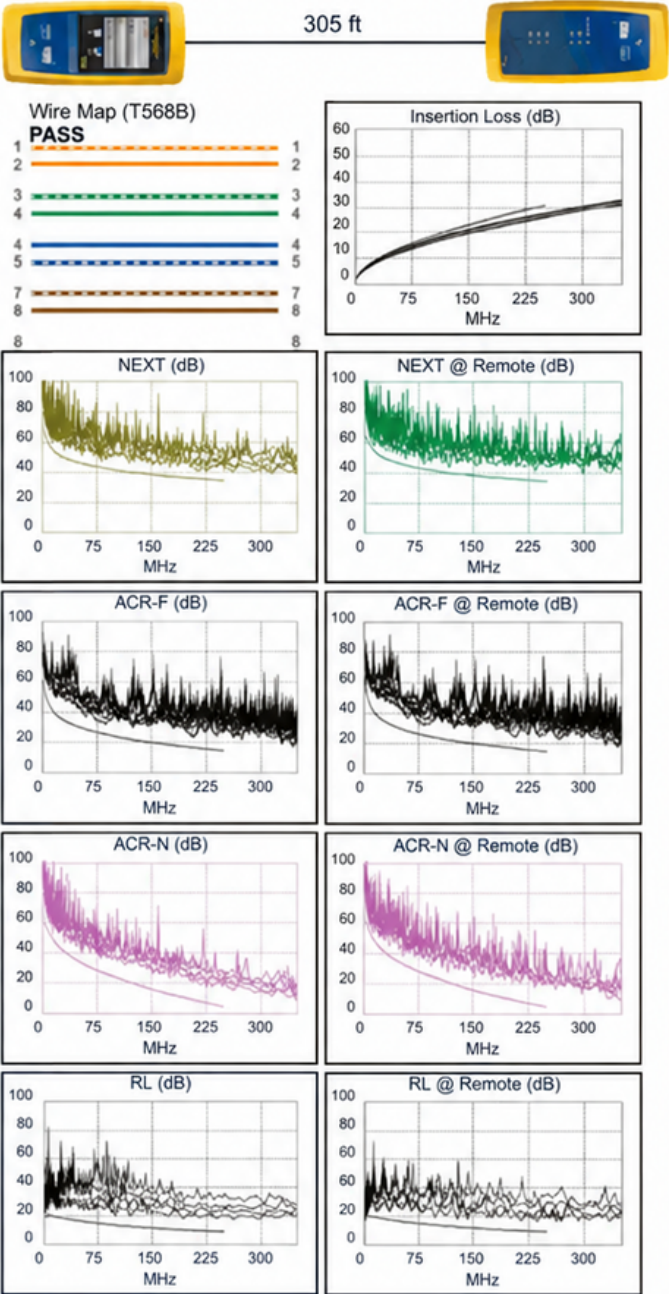
TR-4

100BASE-T4

5GBASE-T

ATM-155

TR-16 Active



Electrical Characteristics

Frequency MHz	Return Loss Min (dB)	Attenuation Max (dB/100m)	Next Min (dB)
1 4 8	20.0	2.1	74.3
16	23.0	3.8	65.3
20	24.5	5.3	60.8
63.5	25.0	7.5	56.2
100	25.0	8.4	54.8
200	21.5	15.0	47.4
250	20.1	19.1	44.3
300	18.0	27.6	39.8
500	17.3	31.1	38.3
750	16.8	34.3	37.1
	15.2	45.3	33.8
	14.0	62.3	31.1

Frequency MHz	PSNEXT Min (dB)	ELFEXT Min (dB/100m)	PSELFEXT Min (dB/100m)	Delay Max (ns/100m)
1 4 8	72.3	67.8	64.8	570.0
16	63.3	55.8	52.8	552.0
20	58.8	49.7	46.7	546.7
62.5	54.2	43.7	40.7	543.0
100	52.8	41.8	38.8	542.0
200	45.4	31.9	28.9	538.6
250	42.3	27.8	24.8	537.6
300	37.8	21.8	18.8	536.5
500	36.3	19.8	16.8	536.3
750	35.1	18.3	15.3	536.1
	31.8	13.8	10.8	535.6
	29.1	10.3	7.3	535.3

Compliant Network Standards:

10BASE-T
1000BASE-T
ATM-25
100VG-AnyLan
TR-16 Passive

1000BASE-T
2.5GBASE-T
ATM-51
TR-4

100BASE-T4
5GBASE-T
ATM-155
TR-16 Active

1.0–100.0MHz Impedance(ohms)	100 ± 15
1.0–100.0MHz Delay Skew(ns/100m)	≤=45
Pair-to-Ground Capacitance Unbalance (pF/100m)	≤=3300
Max. Conductor DC Resistance 20oC (ohms/km)	72.2
Resistance Unbalance(%)	≤=5

Mechanical Characteristics

Test Object	Jacket
Test Material	PVC
Before Tensile Strength (Mpa)	≥=13.8
Aging Elongation (%)	≥=150
Aging Condition (°Cxhrs)	100x168
After Tensile Strength (Mpa)	≥=85% of unaged
Aging Elongation (%)	≥=50% of unaged
Cold Bend (-20+2°Cx4hrs)	No Crack

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