



# Cat6A Unshielded Plenum

**SKU:** TS-PBC/6A-BK

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

## Packaging Available

- 1000ft Reel

## Jacket Colors



## Key Features

- Bandwidth tested up to 750 MHz
- Suitable for 1 and 10-Gigabit Ethernet
- Easily Identified Color Striped Pairs
- Sequential Footage Markings Every 2ft
- In compliance with ANSI/TIA 568.2-D
- RoHS-3 compliant
- Supports PoE, PoE+, and PoE++ (IEEE 802.3af/at/bt) up to 60W & 300V DC

## 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
<b>Conductor Insulation Dia. (±0.01mm)</b>		<b>1.08</b>
Twisted Pair Dia. (±0.02mm)		2.16
Spline		PE
Jacket		CMP-PVC
Average Thickness		0.55
Min. Point Thickness		0.50
<b>Overall Diameter (±0.1mm)</b>		<b>6.20</b>
Ripcord		Yes
Conductor		Solid Bare Copper
Size		23AWG
Conductor Dia. (±0.05mm)		0.58



## Color of Pairs

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



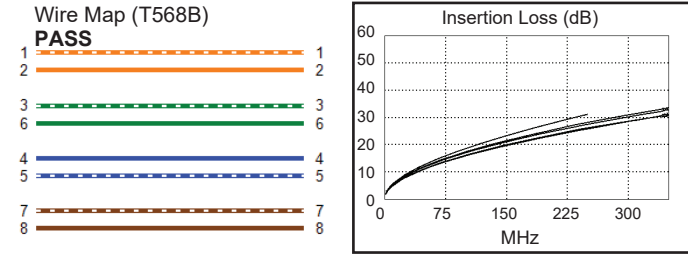
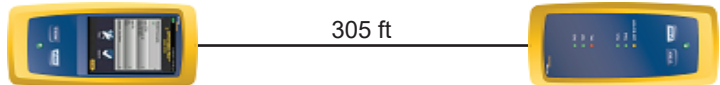
**Cable ID: 417 UTP4 CAT6A BC-TS**

**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

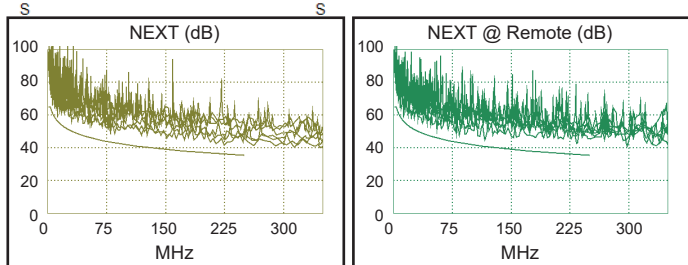
**Test Summary: PASS**  
Remote: Versiv  
S/N: 2035009  
Software Version: V6.6 Build 2  
Calibration Date: 12/23/2020  
Adapter: DSX-8000R (DSX-PLA804)  
S/N: 20485133

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

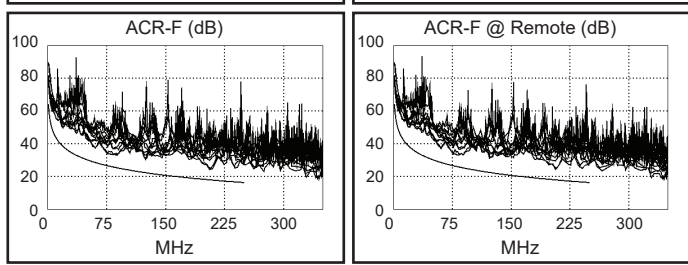


Worst Case Margin Worst Case Value

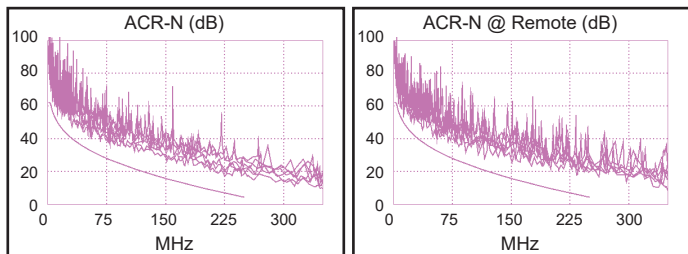
PASS	MAIN	SR	MAIN	SR
Worst Pair	3,6-4,5	3,6-4,5	1,2-4,5	3,6-4,5
<b>NEXT (dB)</b>	4.8	3.9	5.2	6.9
Freq. (MHz)	12.6	91.5	233.5	233.5
Limit (dB)	56.2	42.5	35.8	35.8
Worst Pair	1,2	3,6	1,2	3,6
<b>PS NEXT (dB)</b>	6.2	5.5	6.3	7.4
Freq. (MHz)	225.0	91.5	233.5	234.0
Limit (dB)	33.5	39.9	33.2	33.2



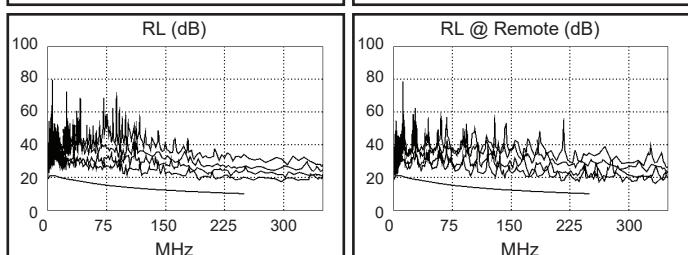
PASS	MAIN	SR	MAIN	SR
Worst Pair	4,5-3,6	4,5-3,6	4,5-3,6	4,5-3,6
<b>ACR-F (dB)</b>	6.4	6.5	6.4	6.5
Freq. (MHz)	206.5	206.5	206.5	206.5
Limit (dB)	17.9	17.9	17.9	17.9
Worst Pair	3,6	3,6	3,6	3,6
<b>PS ACR-F (dB)</b>	8.4	8.5	8.4	8.5
Freq. (MHz)	206.5	206.5	206.5	206.5
Limit (dB)	14.9	14.9	14.9	14.9



N/A	MAIN	SR	MAIN	SR
Worst Pair	3,6-4,5	3,6-4,5	1,2-4,5	3,6-4,5
<b>ACR-N (dB)</b>	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
<b>PS ACR-N (dB)</b>	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
<b>RL (dB)</b>	6.6	3.9	7.9	7.0
Freq. (MHz)	4.6	4.6	238.0	233.5
Limit (dB)	21.0	21.0	10.2	10.3



Compliant Network Standards:  
 10BASE-T      100BASE-TX      100BASE-T4  
 1000BASE-T    2.5GBASE-T      5GBASE-T  
 ATM-25        ATM-51            ATM-155  
 100VG-AnyLan    TR-4              TR-16 Active  
 TR-16 Passive

# Electrical Characteristics

Frequency MHz	Return Loss Min (dB)	Attenuation Max (dB/100m)	Next (Min dB)
1	20.0	2.1	74.3
4	23.0	3.8	65.3
8	24.5	5.3	60.8
16	25.0	7.5	56.2
20	25.0	8.4	54.8
62.5	21.5	15.0	47.4
100	20.1	19.1	44.3
200	18.0	27.6	39.8
250	17.3	31.1	38.3
300	16.8	34.3	37.1
500	15.2	45.3	33.8
750	14.0	62.3	31.1

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

**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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**Guarantee?** Of course

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