

CAT6A 

Cat6A Unshielded Plenum

SKU: TS-PBC/6A-GY

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 |
| Conductor Insulation Dia. (±0.01mm) | | 1.08 |
| Twisted Pair Dia. (±0.02mm) | | 2.16 |
| Spline | | PE |
| Jacket | | CMP-PVC |
| Average Thickness | | 0.55 |
| Min. Point Thickness | | 0.50 |
| Overall Diameter (±0.1mm) | | 6.20 |
| 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

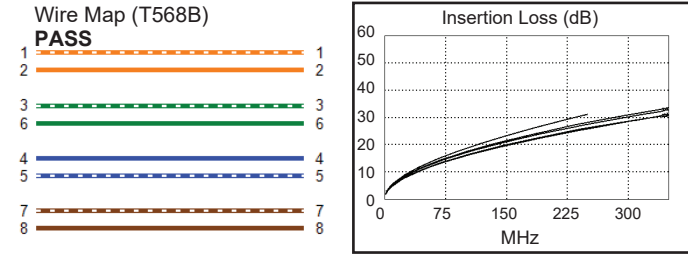
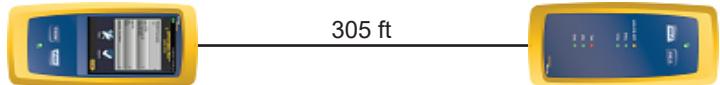
Test Limit: TIA Cat 6 Perm. Link
Limits Version: V7.6
Date / Time: 10/10/2021 12:53:35 PM
Operator: CHENGXIAOLAN
Headroom 3.9 dB (NEXT 3,6-4,5)
Cable Type: Cat 6A U/UTP
NVP: 68.2%

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

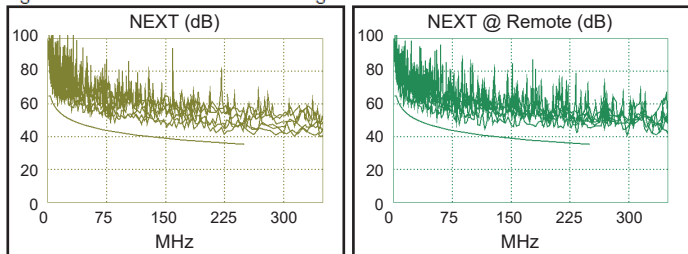
Remote: Versiv
S/N: 2035009
Software Version: V6.6 Build 2
Calibration Date: 12/23/2020
Adapter: DSX-8000R (DSX-PLA804)
S/N: 20485133

| | | |
|-----------------------------|------------|-------|
| 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 |

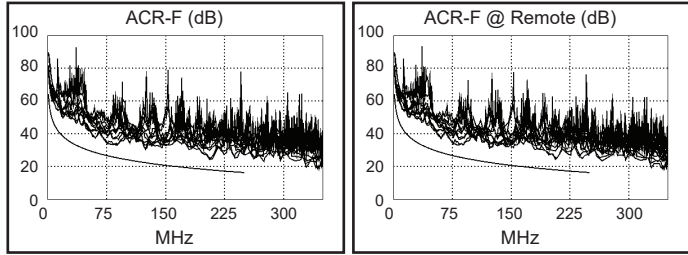


Worst Case Margin Worst Case Value

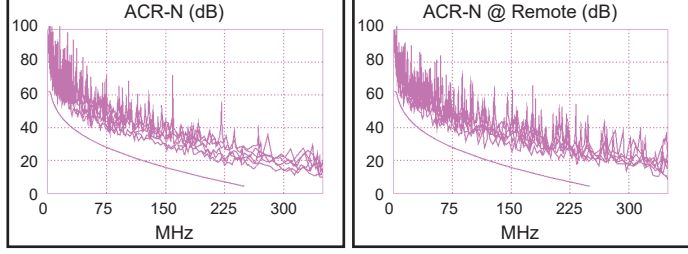
| PASS | MAIN | SR | MAIN | SR |
|---------------------|---------|---------|---------|---------|
| Worst Pair | 3,6-4,5 | 3,6-4,5 | 1,2-4,5 | 3,6-4,5 |
| NEXT (dB) | 4.8 | 3.9 | 5.2 | 6.9 |
| Freq. (MHz) | 12.6 | 91.5 | 233.5 | 233.5 |
| Limit (dB) | 56.2 | 42.5 | 35.8 | 35.8 |
| Worst Pair | 1,2 | 3,6 | 1,2 | 3,6 |
| PS NEXT (dB) | 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 |



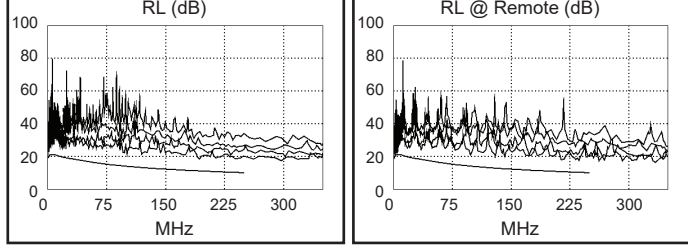
| PASS | MAIN | SR | MAIN | SR |
|----------------------|---------|---------|---------|---------|
| Worst Pair | 4,5-3,6 | 4,5-3,6 | 4,5-3,6 | 4,5-3,6 |
| ACR-F (dB) | 6.4 | 6.5 | 6.4 | 6.5 |
| Freq. (MHz) | 206.5 | 206.5 | 206.5 | 206.5 |
| Limit (dB) | 17.9 | 17.9 | 17.9 | 17.9 |
| Worst Pair | 3,6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