

**CAT 6** 

# Cat6 Plenum UTP Pure Copper

**SKU: TS-PBC/6-RD**

23AWG • 4 Twisted Pairs • CMP • U/UTP  
550MHz • Solid Bare Copper



### Packaging Available

1000ft Pull Box

### Jacket Colors



## Key Features

- Bandwidth tested up to 550 MHz
- 23 AWG
- Easily Identified Color Striped Pairs
- Sequential Footage Markings Every 2ft

## Print Legend

CAT6 550MHZ CMP PLENUM UTP 4-PAIR  
23AWG EIA/TIA-568-C.2-1  
0002FT-1000FT

## Technical Data

**Operating Temp. Range** 75°C/167°F

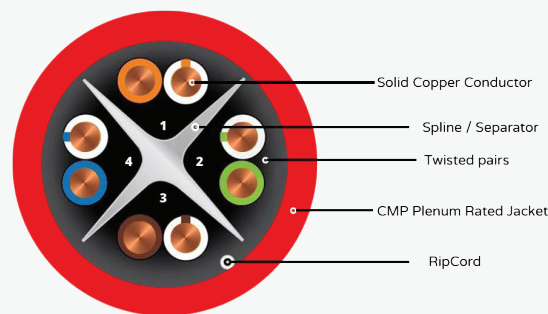
**Max. Operating Voltage** 300v

**Bend Radius** 2in/5mm

| Insulation                                 | HDPE        |
|--|-------------|
| Average Thickness                          | 0.220       |
| Min Point Thickness                        | 0.200       |
| <b>Conductor Insulation Dia. (±0.01mm)</b> | <b>0.95</b> |
| Twisted Pair Dia. (±0.02mm)                | 2.02        |
| Spline                                     | PE          |

| Jacket                           | CMP-PVC     |
|----------------------------------|-------------|
| Average Thickness                | 0.50        |
| Min. Point Thickness             | 0.45        |
| <b>Overall Diameter (±0.1mm)</b> | <b>6.00</b> |
| Ripcord                          | Yes         |

| Conductor                | Solid Bare Copper |
|--------------------------|-------------------|
| Size                     | 23AWG             |
| Conductor Dia. (±0.05mm) | 0.57              |



### 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: 225-C UTP4 CAT6 UTP CAT6 BC-TS**

Test Limit: TIA Cat 6 Perm. Link

Limits Version: V7.5

Date / Time: 07/09/2021 01:14:46 PM

Operator: LIXIAOHONG

Headroom 3.5 dB (NEXT 1,2-3,6)

Cable Type: Cat 6 U/UTP

NVP: 69.0%

Main: Versiv

S/N: 2034142

Software Version: V6.5 Build 5

Calibration Date: 12/23/2020

Adapter: DSX-8000 (DSX-PLA804)

S/N: 20475125

**Test Summary: PASS**

Remote: Versiv

S/N: 2035009

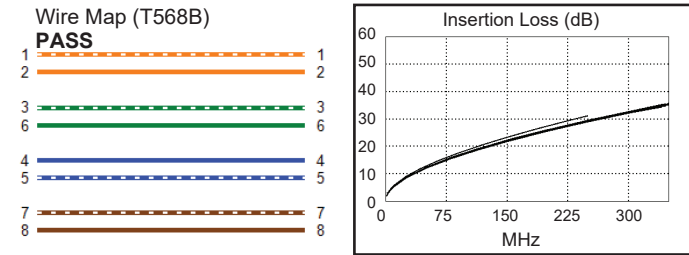
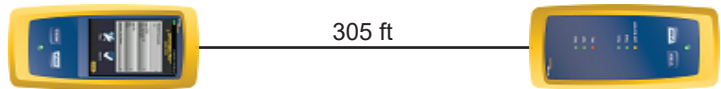
Software Version: V6.5 Build 5

Calibration Date: 12/23/2020

Adapter: DSX-8000R (DSX-PLA804)

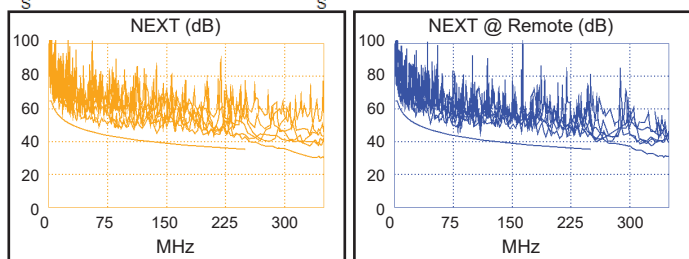
S/N: 20485133

|                             |            |       |
|-----------------------------|------------|-------|
| Length (ft), Limit 295      | [Pair 3,6] | 305   |
| Prop. Delay (ns), Limit 498 | [Pair 7,8] | 464   |
| Delay Skew (ns), Limit 44   | [Pair 7,8] | 15    |
| Resistance (ohms)           | [Pair 7,8] | 15.53 |
|                             |            |       |
| Insertion Loss Margin (dB)  | [Pair 7,8] | 1.6   |
| Frequency (MHz)             | [Pair 7,8] | 250.0 |
| Limit (dB)                  | [Pair 7,8] | 31.1  |

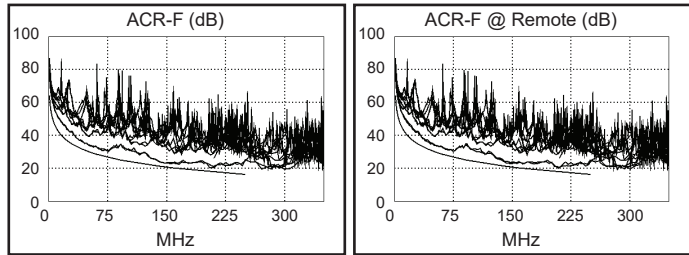


Worst Case Margin Worst Case Value

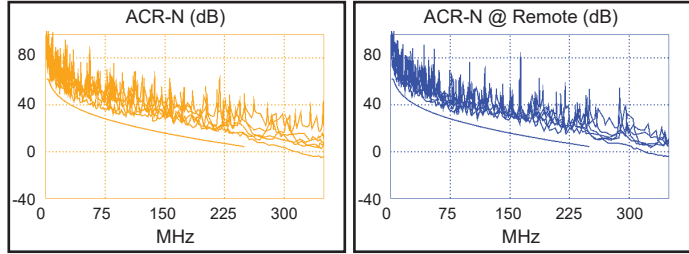
| PASS                | MAIN    | SR      | MAIN    | SR      |
|---------------------|---------|---------|---------|---------|
| Worst Pair          | 3,6-4,5 | 1,2-3,6 | 3,6-4,5 | 1,2-4,5 |
| <b>NEXT (dB)</b>    | 3.9     | 3.5     | 6.0     | 5.5     |
| Freq. (MHz)         | 35.5    | 80.8    | 246.0   | 210.5   |
| Limit (dB)          | 49.1    | 43.3    | 35.5    | 36.6    |
| Worst Pair          | 3,6     | 3,6     | 3,6     | 1,2     |
| <b>PS NEXT (dB)</b> | 5.2     | 4.4     | 6.2     | 6.0     |
| Freq. (MHz)         | 5.5     | 83.8    | 236.0   | 220.5   |
| Limit (dB)          | 59.6    | 40.6    | 33.1    | 33.6    |



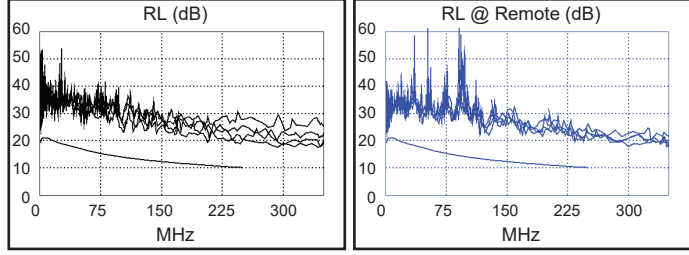
| PASS                 | MAIN    | SR      | MAIN    | SR      |
|----------------------|---------|---------|---------|---------|
| Worst Pair           | 3,6-1,2 | 3,6-1,2 | 3,6-1,2 | 3,6-1,2 |
| <b>ACR-F (dB)</b>    | 2.0     | 1.8     | 2.0     | 1.9     |
| Freq. (MHz)          | 209.5   | 151.0   | 209.5   | 208.5   |
| Limit (dB)           | 17.8    | 20.6    | 17.8    | 17.8    |
| Worst Pair           | 1,2     | 1,2     | 1,2     | 1,2     |
| <b>PS ACR-F (dB)</b> | 4.3     | 4.3     | 4.3     | 4.3     |
| Freq. (MHz)          | 209.0   | 208.5   | 209.0   | 208.5   |
| Limit (dB)           | 14.8    | 14.8    | 14.8    | 14.8    |



| N/A                  | MAIN    | SR      | MAIN    | SR      |
|----------------------|---------|---------|---------|---------|
| Worst Pair           | 3,6-4,5 | 1,2-3,6 | 3,6-4,5 | 1,2-3,6 |
| <b>ACR-N (dB)</b>    | 4.5     | 4.5     | 7.9     | 10.1    |
| Freq. (MHz)          | 35.5    | 80.8    | 246.0   | 247.0   |
| Limit (dB)           | 38.4    | 26.8    | 4.6     | 4.5     |
| Worst Pair           | 3,6     | 3,6     | 3,6     | 1,2     |
| <b>PS ACR-N (dB)</b> | 5.5     | 5.5     | 9.4     | 10.2    |
| Freq. (MHz)          | 5.5     | 83.8    | 250.0   | 247.5   |
| Limit (dB)           | 55.5    | 23.7    | 1.6     | 1.9     |



| PASS           | MAIN | SR   | MAIN  | SR    |
|----------------|------|------|-------|-------|
| Worst Pair     | 3,6  | 3,6  | 4,5   | 3,6   |
| <b>RL (dB)</b> | 6.6  | 4.3  | 8.7   | 8.8   |
| Freq. (MHz)    | 3.8  | 3.8  | 247.5 | 234.5 |
| Limit (dB)     | 21.0 | 21.0 | 10.1  | 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<br>Min (dB) | Attenuation<br>Max (dB/100m) | Next<br>(Min dB) |
|---------------|-------------------------|------------------------------|------------------|
| 1             | 20.0                    | 2.0                          | 65.3             |
| 4             | 23.0                    | 4.1                          | 56.3             |
| 8             | 24.5                    | 5.8                          | 51.8             |
| 16            | 26.0                    | 8.2                          | 47.3             |
| 20            | 26.5                    | 9.3                          | 45.8             |
| 62.5          | 25.0                    | 17.0                         | 38.4             |
| 100           | 25.0                    | 22.0                         | 35.3             |
| 200           | 18.0                    | 32.4                         | 30.8             |
| 250           | 17.3                    | 36.9                         | 29.3             |
| 300           | 16.8                    | 41.0                         | 28.2             |
| 400           | 15.9                    | 48.5                         | 26.3             |
| 550           | 14.9                    | 58.8                         | 24.2             |

| Frequency MHz | PSNEXT<br>Min (dB) | ELFEXT<br>Min (dB/100m) | PSELFEXT<br>Min (dB/100m) | Delay<br>Max (ns/100m) |
|---------------|--------------------|-------------------------|---------------------------|------------------------|
| 1             | 62.3               | 63.8                    | 60.8                      | 570.0                  |
| 4             | 53.3               | 51.7                    | 48.7                      | 552.0                  |
| 8             | 48.8               | 45.7                    | 42.7                      | 546.7                  |
| 16            | 44.3               | 39.7                    | 36.7                      | 543.0                  |
| 20            | 42.8               | 37.7                    | 34.7                      | 542.0                  |
| 62.5          | 35.4               | 27.8                    | 24.8                      | 538.6                  |
| 100           | 32.3               | 23.8                    | 20.8                      | 537.6                  |
| 200           | 27.8               | 17.7                    | 14.7                      | 536.5                  |
| 250           | 26.3               | 15.8                    | 12.8                      | 536.3                  |
| 300           | 25.2               | 14.2                    | 11.2                      | 536.1                  |
| 400           | 23.3               | 11.7                    | 8.7                       | 535.8                  |
| 550           | 21.2               | 8.9                     | 5.9                       | 535.5                  |

**1.0-100.0MHz Impedance (ohms)** 100 ± 15

**1.0-100.0MHz Delay Skew (ns/100m)** ≤45

**Pair-to-Ground Capacitance** ≤3300

**Unbalance (pF/100m)**

**Max. Conductor DC Resistance** 72.2

**20oC (ohms/km)**

**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        |

**Returns?** No problem.  
**Guarantee?** Of course

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