

## CAT6a

# Cat6a Shielded Plenum

SKU TS-SPBC/6A-BL

23AWG • 4 Twisted Pairs • CMP • F/UTP  
750MHz • Solid 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 TP 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 Diameter Min.** 4in/10mm

| Insulation                                 | FEP             |
|--------------------------------------------|-----------------|
| Average Thickness                          | 0.24            |
| Min Point Thickness                        | 8               |
| <b>Conductor Insulation Dia. (±0.01mm)</b> | 0.228           |
| Twisted Pair Dia. (±0.02mm)                | <b>1.08</b>     |
| Spline                                     | 2.16            |
| PE-Tape                                    | PE              |
|                                            | Yes             |
| Jacket                                     | CMP-PVC         |
| Average Thickness                          | 0.55 0.50       |
| Min. Point Thickness                       | <b>7.40</b> Yes |
| <b>Overall Diameter (±0.1mm)</b>           |                 |
| Ripcord                                    |                 |
| Shield                                     | F/UTP           |
| Drain Wire (Solid Tinned Copper)           | 0.40            |
| AL Foil Shield                             | Yes             |



| Conductor                | Solid Bare Copper    |
|--------------------------|----------------------|
| Size                     | 23AWG                |
| Conductor Dia. (±0.05mm) | 0.585                |
| Color of Pairs           |                      |
| Pair 1                   | Blue- White/Blue     |
| Pair 2                   | Orange- White/Orange |
| Pair 3                   | Green- White/Green   |
| Pair 4                   | Brown- White/Brown   |

## RoHS

Issue Date: October '11

Revision: 4

www.tscables.com - (301) 825-9890

### Electrical Characteristics

| Frequency MHz | Return Loss<br>Min (dB) | Attenuation<br>Max (dB/100m) | Next<br>(Min dB) |
|---------------|-------------------------|------------------------------|------------------|
| 14.8          | 20.0                    | 2.1                          | 74.3             |
| 16            | 23.0                    | 3.8                          | 65.3             |
| 20            | 24.5                    | 5.3                          | 60.8             |
| 62.5          | 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<br>Min (dB) | ELFEXT<br>Min (dB/100m) | PSSELFEXT<br>Min (dB/100m) | Delay<br>Max (ns/100m) |
|---------------|--------------------|-------------------------|----------------------------|------------------------|
| 14.8          | 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.                   |
| 100           | 52.8               | 41.8                    | 38.8                       | 0                      |
| 200           | 45.4               | 31.9                    | 28.9                       | 542.0                  |
| 250           | 42.3               | 27.8                    | 24.8                       | 538.                   |
| 300           | 37.8               | 21.8                    | 18.8                       | 6                      |
| 500           | 36.3               | 19.8                    | 16.8                       | 537.6                  |
| 750           | 35.1               | 18.3                    | 15.3                       | 536.                   |
|               | 31.8               | 13.8                    | 10.8                       | 5                      |
|               | 29.1               | 10.3                    | 7.3                        | 536.3                  |
|               |                    |                         |                            | 536.1                  |
|               |                    |                         |                            | 535.                   |
|               |                    |                         |                            | 6                      |
|               |                    |                         |                            | 535.3                  |

1.0-500.0MHz Impedance(ohms) 100 ± 15

1.0-500.0MHz Delay Skew(ns/100m) <=45

Pair-to-Ground Capacitance  
Unbalance (pF/100m) <=3300

Max. Conductor DC Resistance  
20oC (ohms/km) 68

Resistance Unbalance (%) <=5

### Mechanical Characteristics

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

We Ship direct from our  
high service warehouse.  
**Returns?** No problem.  
**Guarantee?** Of course

The information provided herein is, to the best of our knowledge, true and accurate. Since conditions of use are beyond our control, all information presented is without guarantee or responsibility on our part. We disclaim all liability in connection with the use of information contained herein or otherwise.

## RoHS

Revision: 4

Issue Date: October '11

www.tscables.com - (301) 825-9890