

# 884024214/10 | CS24R BLK C5E 4/24 U/UTP CPK 1KFT

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ETL Verified Category 5e U/UTP Cable, non-plenum, black jacket, 4 pair count, 1000 ft (305 m) length, CommPak



## Product Classification

**Regional Availability** Asia | Australia/New Zealand | Latin America | North America

**Portfolio** CommScope®

**Product Type** Twisted pair cable

## General Specifications

**Product Number** CS24R

**ANSI/TIA Category** 5e

**Cable Component Type** Horizontal

**Cable Type** U/UTP (unshielded)

**Conductor Type, singles** Solid

**Conductors, quantity** 8

**Jacket Color** Black

**Note** All electrical transmission tests include swept frequency measurements

**Pairs, quantity** 4

**Transmission Standards** ANSI/TIA-568.2-D | CENELEC EN 50288-3-1 | ISO/IEC 11801 Class D

## Dimensions

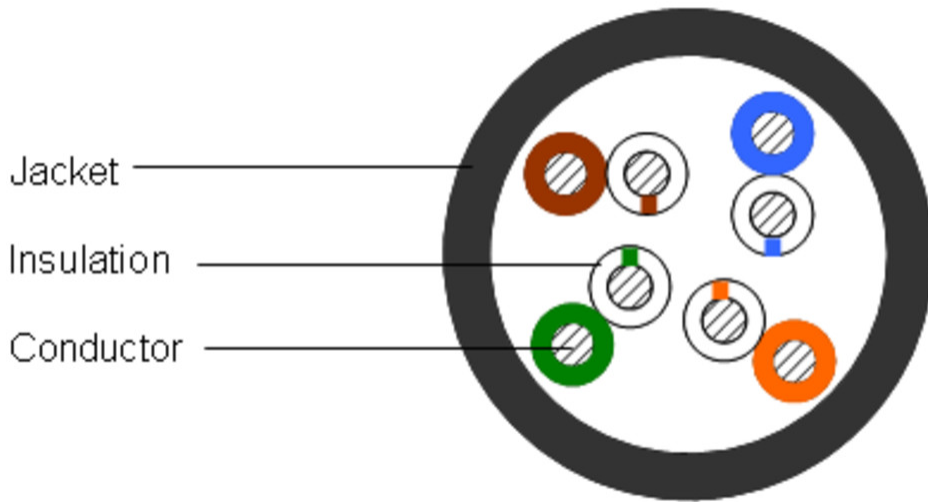
**Cable Length** 304.8 m | 1000 ft

**Diameter Over Jacket, nominal** 4.953 mm | 0.195 in

**Jacket Thickness** 0.508 mm | 0.02 in

**Conductor Gauge, singles** 24 AWG

## Cross Section Drawing



## Electrical Specifications

|  |   |
|--|---|
| <b>Characteristic Impedance</b>              | 100 ohm   |
| <b>dc Resistance Unbalance, maximum</b>      | 5 %   |
| <b>dc Resistance, maximum</b>                | 9.38 ohms/100 m   2.859 ohms/100 ft   |
| <b>Delay Skew, maximum</b>                   | 15 ns   |
| <b>Dielectric Strength, minimum</b>          | 1500 Vac   2500 Vdc   |
| <b>Mutual Capacitance at Frequency</b>       | 5.6 nF/100 m @ 1 kHz  |
| <b>Nominal Velocity of Propagation (NVP)</b> | 69 %  |
| <b>Operating Frequency, maximum</b>          | 200 MHz   |
| <b>Operating Voltage, maximum</b>            | 80 V  |
| <b>Remote Powering</b>                       | Fully complies with the recommendations set forth by IEEE 802.3bt (Type 4) for the safe delivery of power over LAN cable when installed according to ISO/IEC 14763-2, CENELEC EN 50174-1, CENELEC EN 50174-2 or TIA TSB-184-A |
| <b>Safety Voltage Rating</b>                 | 300 V   |

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## Electrical Cable Performance

|               |   |               |   |
|---------------|---|---------------|---|
| <b>CS</b>     | CommScope   | <b>NEXT</b>   | Near End Crosstalk (dB/100m)                              |
| <b>STD</b>    | Refers to the standard value listed under Transmission Standards in the Electrical Specifications above | <b>PSNEXT</b> | Power Sum Near End Crosstalk (db/100m)                    |
| <b>TYP</b>    | Typical Electrical Performance  | <b>ACRF</b>   | Attenuation to Crosstalk Ratio - Far End (dB/100m)        |
| <b>IL</b>     | Insertion Loss (dB/100m)  | <b>RL</b>     | Return Loss (dB)  |
| <b>ACR</b>    | Attenuation to Crosstalk Ratio (dB/100m)  | <b>ELTCTL</b> | Equal Level Transverse Conversion Transfer Loss (dB/100m) |
| <b>PSACR</b>  | Power Sum Attenuation to Crosstalk Ratio (dB/100m)  |               |   |
| <b>PSACRF</b> | Power Sum Attenuation to Crosstalk Ratio - Far End (dB/100m)  |               |   |
| <b>TCL</b>    | Transverse Conversion Loss (dB/100m)  |               |   |

| Freq. MHz | IL   |      |      | NEXT |      |      | ACR  |      |      | PSNEXT |      |      | PSACR |      |      | ACRF |      |      | PSACRF |      |      | RL   |      |      |
|-----------|------|------|------|------|------|------|------|------|------|--------|------|------|-------|------|------|------|------|------|--------|------|------|------|------|------|
|           | CS   | STD  | TYP  | CS   | STD  | TYP  | CS   | STD  | TYP  | CS     | STD  | TYP  | CS    | STD  | TYP  | CS   | STD  | TYP  | CS     | STD  | TYP  | CS   | STD  | TYP  |
| 1         | 2    | 2    | 2.1  | 65.3 | 65.3 | 81.5 | 63.3 | 63.3 | 79.4 | 62.3   | 62.3 | 79.2 | 60.3  | 60.3 | 77.1 | 63.8 | 63.8 | 76.4 | 60.8   | 60.8 | 74.7 | 20   | 20   | 33.5 |
| 4         | 4.1  | 4.1  | 3.9  | 56.3 | 56.3 | 72.9 | 52.2 | 52.2 | 69   | 53.3   | 53.3 | 70.5 | 49.2  | 49.2 | 66.6 | 51.8 | 51.8 | 64.8 | 48.8   | 48.8 | 63.1 | 23   | 23   | 33.5 |
| 8         | 5.8  | 5.8  | 5.5  | 51.8 | 51.8 | 68.3 | 46   | 46   | 62.7 | 48.8   | 48.8 | 65.9 | 43    | 43   | 60.4 | 45.7 | 45.7 | 58.9 | 42.7   | 42.7 | 57.2 | 24.5 | 24.5 | 36.6 |
| 10        | 6.5  | 6.5  | 6.2  | 50.3 | 50.3 | 66.7 | 43.8 | 43.8 | 60.6 | 47.3   | 47.3 | 64.2 | 40.8  | 40.8 | 58.1 | 43.8 | 43.8 | 57   | 40.8   | 40.8 | 55.3 | 25   | 25   | 36.7 |
| 16        | 8.2  | 8.2  | 7.8  | 47.2 | 47.2 | 63.6 | 39   | 39   | 55.8 | 44.2   | 44.2 | 61.2 | 36    | 36   | 53.4 | 39.7 | 39.7 | 52.9 | 36.7   | 36.7 | 51.1 | 25   | 25   | 38.5 |
| 20        | 9.3  | 9.3  | 8.7  | 45.8 | 45.8 | 62   | 36.5 | 36.5 | 53.2 | 42.8   | 42.8 | 59.5 | 33.5  | 33.5 | 50.8 | 37.8 | 37.8 | 51   | 34.8   | 34.8 | 49.2 | 25   | 25   | 38.8 |
| 25        | 10.4 | 10.4 | 9.8  | 44.3 | 44.3 | 60.3 | 33.9 | 33.9 | 50.5 | 41.3   | 41.3 | 57.9 | 30.9  | 30.9 | 48.2 | 35.8 | 35.8 | 48.9 | 32.8   | 32.8 | 47.2 | 24.3 | 24.3 | 39.4 |
| 31.25     | 11.7 | 11.7 | 11   | 42.9 | 42.9 | 58.9 | 31.2 | 31.2 | 47.9 | 39.9   | 39.9 | 56.6 | 28.2  | 28.2 | 45.7 | 33.9 | 33.9 | 47   | 30.9   | 30.9 | 45.2 | 23.6 | 23.6 | 39.8 |
| 62.5      | 17   | 17   | 15.6 | 38.4 | 38.4 | 54.2 | 21.4 | 21.4 | 38.6 | 35.4   | 35.4 | 51.9 | 18.4  | 18.4 | 36.2 | 27.9 | 27.9 | 40.8 | 24.9   | 24.9 | 39   | 21.5 | 21.5 | 34.7 |
| 100       | 22   | 22   | 20   | 35.3 | 35.3 | 50.9 | 13.3 | 13.3 | 30.9 | 32.3   | 32.3 | 48.6 | 10.3  | 10.3 | 28.6 | 23.8 | 23.8 | 36.9 | 20.8   | 20.8 | 35.1 | 20.1 | 20.1 | 30.9 |
| 155       | 28.1 |      | 25.1 | 32.4 |      | 47.8 | 4.4  |      | 22.7 | 29.4   |      | 45.3 | 1.4   |      | 20.2 | 20   |      | 33.1 | 17     |      | 31.3 | 18.8 |      | 28.3 |
| 200       | 32.4 |      | 28.8 | 30.8 |      | 45.6 | -1.6 |      | 16.8 | 27.8   |      | 43.3 | -4.6  |      | 14.5 | 17.8 |      | 30.7 | 14.8   |      | 28.8 | 18   |      | 27.6 |
| 250       |      |      | 32.4 |      |      | 43.7 |      |      | 11.3 |        |      | 41.4 |       |      | 9.1  |      |      | 28.7 |        |      | 26.8 |      |      | 26.9 |
| 300       |      |      | 35.7 |      |      | 42   |      |      | 6.3  |        |      | 39.7 |       |      | 4    |      |      | 27   |        |      | 25.1 |      |      | 26.5 |
| 350       |      |      | 38.9 |      |      | 40.5 |      |      | 1.6  |        |      | 38.3 |       |      | -0.6 |      |      | 25.2 |        |      | 23.3 |      |      | 25.6 |

## Material Specifications

|                            |             |
|----------------------------|-------------|
| <b>Conductor Material</b>  | Bare copper |
| <b>Insulation Material</b> | Polyolefin  |
| <b>Jacket Material</b>     | PVC         |

## Mechanical Specifications

|                                 |                  |
|---------------------------------|------------------|
| <b>Pulling Tension, maximum</b> | 11.34 kg   25 lb |
|---------------------------------|------------------|

## Environmental Specifications

|                                 |  |
|---------------------------------|--|
| <b>Installation temperature</b> | 0 °C to +60 °C (+32 °F to +140 °F)       |
| <b>Operating Temperature</b>    | -20 °C to +60 °C (-4 °F to +140 °F)      |
| <b>Environmental Space</b>      | Non-plenum                               |
| <b>Flame Test Method</b>        | CMR   NEC Article 800   UL 1666   UL 444 |

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## Packaging and Weights

**Cable weight** 27.977 kg/km | 18.8 lb/kft  
**Packaging Type** CommPak® box

## Regulatory Compliance/Certifications

| Agency        | Classification   |
|---------------|--|
| ISO 9001:2015 | Designed, manufactured and/or distributed under this quality management system |