

# Category 6E 600MHz UTP Riser (CMR) Cable

| Cable Detail  |  |                   |
|---|--|-------------------|
|   |  |                   |
| Description   |  |                   |
| 23 AWG Cat 6E CMR, High-Performance Data Cable  |  |                   |
| Applicable Standards  |  |                   |
| <ul style="list-style-type: none"> <li>• UTP CAT6, 23 AWG 4 Pair w/ HDPE Insulation &amp; Flame-Retardant PVC Jacket</li> <li>• UL Listed Type CMR</li> <li>• C(UL) listed CMG FT4</li> <li>• TIA/EIA-568-C.2, UL 1666 CMR RATED</li> <li>• IEC 61156 AND ANSI/TIA-568-C.2</li> <li>• RoHS Compliant</li> <li>• ATM 155 Mbps</li> <li>• Ethernet 10BASE-T, 100BASE-TX, 100BASE-VG, 100BASE-T4</li> <li>• 1000 Mbps 1000BASE-T Gigabit Ethernet™ (IEEE 802.3)</li> <li>• 16 Mbps Token Ring™ (IEEE 802.5)</li> </ul> |  |                   |
|   |  |                   |
| Physical Characteristics  |  |                   |
| Conductor Material  | Solid Annealed Bare Copper   |                   |
| Number of Conductor Pairs   | 4  |                   |
| Size  | 23 AWG   |                   |
| Stranding   | Solid  |                   |
| Insulation Material   | Polyethylene   |                   |
| Overall Diameter  | 0.040 in. ± 0.0002 in  |                   |
| Average Thickness   | 0.0088 in  |                   |
| Jacket Material   | Flame Retardant PVC  |                   |
| Average Wall Thickness  | 0.023 in.  |                   |
| Nominal Outer Diameter  | 0.244 in. ± 0.008 in.  |                   |
| Nominal Weight  | 30 lbs.  |                   |
| Shield Material   | Unshielded   |                   |
| Ripcord   | Yes  |                   |
| Mechanical Characteristics  |  |                   |
| Temperature Rating  | Installation   | 0°C to + 60°C     |
|   | Operating  | -20°C to + 75°C   |
| Tensile Strength  | Before   | ≥ 13.8 Mpa        |
| Elongation  | Aging  | ≥ 100%            |
|   | Aging Condition  | 100°C x 168 hours |
|   |  | After             |
|   | Aging  | ≥ 50% of unaged   |
| Insulation Colors   |  |                   |
| Pair 1  | White / Blue   | Blue              |
| Pair 2  | White / Orange   | Orange            |
| Pair 3  | White / Green  | Green             |
| Pair 4  | White / Brown  | Brown             |
| Part Numbers  | Jacket Color   | Package           |
| <b>6E04URXX3</b>  | Black, Blue, Green, Grey, Red, White, Yellow, Pink, Purple, Orange | 1000FT / RIB      |

## Electrical Characteristics

|  |                     |
|--|---------------------|
| Max. Conductor DC Resistance @ 20°C            | 9.38 Ω / 100 Meters |
| Maximum DC Resistance Unbalanced @ 20°C        | 5%                  |
| Max. Pair-to-Pair Ground Capacitance Unbalance | 330 pF / 100 Meters |
| Characteristic Impedance (1 ~ 350 MHz)         | 100 ± 15 Ω          |
| Mutual Capacitance                             | 5.6 nF / 100 Meters |
| Max. Delay Skew                                | 40 nS / 100 Meters  |
| NVP Nominal Velocity Propagation               | 0.7                 |

## Electrical Performance

| Frequency (MHz) | Attenuation (dB/100m) Max. | Return loss (dB) Min. | NEXT (dB) Min. | PS-NEXT (dB) Min. |
|-----------------|----------------------------|-----------------------|----------------|-------------------|
| 1               | 2.0                        | 20.0                  | 77.3           | 75.3              |
| 4               | 3.8                        | 23.6                  | 68.3           | 66.3              |
| 8               | 5.3                        | 25.4                  | 63.8           | 61.8              |
| 10              | 5.9                        | 26.0                  | 62.3           | 30.3              |
| 16              | 7.4                        | 26.0                  | 59.3           | 57.3              |
| 20              | 8.3                        | 26.0                  | 57.8           | 55.8              |
| 25              | 9.3                        | 25.5                  | 56.3           | 54.3              |
| 31.25           | 10.4                       | 25.0                  | 54.9           | 52.9              |
| 62.5            | 14.9                       | 23.5                  | 50.4           | 48.4              |
| 100             | 19.0                       | 22.5                  | 47.3           | 45.3              |
| 155             | 23.9                       | 21.6                  | 45.8           | 43.5              |
| 200             | 27.4                       | 21.0                  | 42.8           | 40.8              |
| 250             | 30.8                       | 20.5                  | 41.3           | 39.3              |
| 300             | 34.0                       | 20.1                  | 40.2           | 38.2              |
| 350             | 37.0                       | 19.8                  | 39.2           | 37.2              |
| 400             | 39.7                       | 19.5                  | 38.3           | 36.3              |
| 450             | 42.1                       | 19.2                  | 37.5           | 35.5              |
| 500             | 44.9                       | 19.0                  | 36.8           | 34.8              |
| 550             | 47.3                       | 18.8                  | 36.2           | 34.2              |
| 600             | 50.7                       | 15.7                  | 44.2           | 42.2              |
| Frequency (MHz) | ELFEXT (dB/100m) Min.      | PS-ELFEXT (dB) Min.   | ACR (dB) Min.  | PS-ACR (dB) Min.  |
| 1               | 70.8                       | 67.8                  | 75.0           | 73.0              |
| 4               | 58.7                       | 55.7                  | 64.0           | 62.0              |
| 8               | 52.7                       | 49.7                  | 57.7           | 55.7              |
| 10              | 50.8                       | 47.8                  | 55.6           | 53.6              |
| 16              | 46.7                       | 43.7                  | 50.7           | 48.7              |
| 20              | 44.7                       | 41.7                  | 48.2           | 16.2              |
| 25              | 42.8                       | 39.8                  | 45.6           | 13.6              |
| 31.25           | 40.9                       | 37.9                  | 42.8           | 40.8              |
| 62.5            | 34.8                       | 31.8                  | 32.9           | 30.9              |
| 100             | 30.8                       | 27.8                  | 24.9           | 22.9              |
| 155             | 27.0                       | 23.6                  | 21.0           | 21.5              |
| 200             | 24.7                       | 21.7                  | 18.4           | 16.4              |
| 250             | 22.8                       | 19.8                  | 13.5           | 11.5              |
| 300             | 21.2                       | 18.2                  | 9.6            | 5.0               |
| 350             | 19.9                       | 16.9                  | 5.2            | 3.2               |
| 400             | 18.7                       | 15.7                  | 1.5            | -                 |
| 450             | 17.7                       | 14.7                  | -              | -                 |
| 500             | 16.8                       | 13.8                  | -              | -                 |
| 550             | 15.9                       | 12.9                  | -              | -                 |
| 600             | N/A                        | N/A                   | N/A            | N/A               |

\* Values above 250MHz are information only.

## Cable Marking

EXXXXXX 23AWG 4 PR UTP CMR C(UL)US 75C FT4 C(ETL)US FT4  
TESTED TO 600 MHz CATEGORY 6E ANSI/TIA-568C.2 ETL VERIFIED TO  
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