

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



Product Specification

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, Suitable for Telecommunications usage</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 Condition	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
C6-000XX	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
Max Voltage	80V

## 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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