



Part Number: 4813

CAT6"E" Horizontal, 4pr, UTP, LS-PVC Jkt, CMP

Product Description

CAT6 Enhanced (600MHz), 4 Nonbonded-Pairs, U/UTP, Plenum-CMP, Premise Horizontal cable, 23 AWG solid bare copper conductors, dual FRPO/FEP insulation, patented X-spline, ripcord, Flamarrest® jacket

Technical Specifications

Product Overview

Environmental Space:	Plenum
Suitable Applications:	Premise Horizontal Cable, Gigabit Ethernet, 100BaseTX, 100BaseVG ANYLAN, 155ATM, 622ATM, NTSC/PAL Component or Composite Video, AES/EBU Digital Audio, AES51, RS-422, Noisy Environments

Physical Characteristics (Overall)

Conductor

AWG	Stranding	Material	No. of Pairs
23	Solid	BC - Bare Copper	4

Conductor Count:	8
Total Number of Pairs:	4
Conductor Size:	23 AWG

Insulation

Material
FRPO/FEP - Flame Retardant Polyolefin/Fluorinated Ethylene Propylene

Bonded-Pair:	N/A
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Color Chart

Number	Color
1	White/Blue Stripe & Blue
2	White/Orange Stripe & Orange
3	White/Green Stripe & Green
4	White/Brown Stripe & Brown

Outer Jacket Material

Material	Material Trade Name	Nominal Diameter	Ripcord	Separator Material
LS PVC - Low Smoke Polyvinyl Chloride	Flamarrest®	0.258 in	Yes	Patented X-Spline Center Member

Electrical Characteristics

Conductor DCR

Max. Conductor DCR	Max. DCR Unbalance	Max DCR Unbalanced Between Pairs [%]
67 Ohm/km	3 %	5 %

Capacitance

Max. Capacitance Unbalance	Nom. Mutual Capacitance
90 pF/100m	15.5 pF/ft

Delay

Frequency [MHz]	Max. Delay	Max. Delay Skew	Nominal Velocity of Propagation (VP) [%]
100 MHz	537.6 ns/100m	45 ns/100m	70 %

High Freq

Frequency [MHz]	Max. Insertion Loss (Attenuation)	Min. NEXT [dB]	Min. PSNEXT [dB]	Min. ACR [dB]	Min. PSACR [dB]	Min. ACRF (ELFEXT) [dB]	Min. PSACRF (PSELFEXT) [dB]	Min. RL (Return Loss) [dB]	Max./Min. Input Impedance (unFitted)	Max./Min. Fitted Impedance	Min. TCL [dB]	Min. ELTCTL [dB]
0.772 MHz	1.7 dB/100m	83.0 dB	82.0 dB	81.3 dB	80.3 dB	77.0 dB	75.0 dB			102 ± 15 Ohm	40.0 dB	37.2 dB
1 MHz	1.9 dB/100m	81.3 dB	80.3 dB	79.4 dB	78.4 dB	74.8 dB	72.8 dB	20.0 dB	100 ± 15 Ohm	100 ± 15 Ohm	40.0 dB	35.0 dB
4 MHz	3.5 dB/100m	72.3 dB	71.3 dB	68.8 dB	67.8 dB	62.8 dB	60.8 dB	23.0 dB	100 ± 15 Ohm	100 ± 15 Ohm	40.0 dB	23.0 dB
8 MHz	4.9 dB/100m	67.8 dB	66.8 dB	62.8 dB	61.8 dB	56.7 dB	54.7 dB	24.5 dB	100 ± 15 Ohm	100 ± 15 Ohm	40.0 dB	16.9 dB
10 MHz	5.5 dB/100m	66.3 dB	65.3 dB	60.8 dB	59.8 dB	54.8 dB	52.8 dB	25.0 dB	100 ± 15 Ohm	100 ± 15 Ohm	40.0 dB	15.0 dB
16 MHz	7.0 dB/100m	63.2 dB	62.2 dB	56.3 dB	55.3 dB	50.7 dB	48.7 dB	25.0 dB	100 ± 15 Ohm	100 ± 15 Ohm	38.0 dB	10.9 dB
20 MHz	7.8 dB/100m	61.8 dB	60.8 dB	54.0 dB	53.0 dB	48.8 dB	46.8 dB	25.0 dB	100 ± 15 Ohm	100 ± 15 Ohm	37.0 dB	9.0 dB
25 MHz	8.7 dB/100m	60.3 dB	59.3 dB	51.6 dB	50.6 dB	46.8 dB	44.8 dB	25.0 dB	100 ± 15 Ohm	100 ± 15 Ohm	36.0 dB	7.0 dB
31.25 MHz	9.8 dB/100m	58.9 dB	57.9 dB	49.1 dB	48.1 dB	44.9 dB	42.9 dB	24.3 dB	100 ± 15 Ohm	100 ± 15 Ohm	35.1 dB	
62.5 MHz	14.1 dB/100m	54.4 dB	53.4 dB	40.3 dB	39.3 dB	38.9 dB	36.9 dB	22.2 dB	100 ± 15 Ohm	100 ± 15 Ohm	32.0 dB	
100 MHz	18.0 dB/100m	51.3 dB	50.3 dB	33.3 dB	32.3 dB	34.8 dB	32.8 dB	20.8 dB	100 ± 15 Ohm	100 ± 15 Ohm	30.0 dB	
155 MHz	22.8 dB/100m	48.4 dB	47.4 dB	25.7 dB	24.7 dB	31.0 dB	29.0 dB	19.5 dB	100 ± 22 Ohm	100 ± 15 Ohm	28.1 dB	
200 MHz	26.2 dB/100m	46.8 dB	45.8 dB	20.6 dB	19.6 dB	28.8 dB	26.8 dB	18.7 dB	100 ± 22 Ohm	100 ± 15 Ohm	27.0 dB	
250 MHz	29.6 dB/100m	45.3 dB	44.3 dB	15.8 dB	14.8 dB	26.8 dB	24.8 dB	18.0 dB	100 ± 32 Ohm	100 ± 15 Ohm	26.0 dB	
300 MHz	32.7 dB/100m	44.1 dB	43.1 dB	11.4 dB	10.4 dB	25.3 dB	23.3 dB	17.5 dB	100 ± 32 Ohm	100 ± 15 Ohm		
350 MHz	35.6 dB/100m	43.1 dB	42.1 dB	7.5 dB	6.5 dB	23.9 dB	21.9 dB	17.0 dB	100 ± 32 Ohm	100 ± 15 Ohm		
400 MHz	38.4 dB/100m	42.3 dB	41.3 dB	3.9 dB	2.9 dB	22.8 dB	20.8 dB	16.6 dB	100 ± 32 Ohm	100 ± 15 Ohm		
450 MHz	41.0 dB/100m	41.5 dB	40.5 dB	0.5 dB		21.7 dB	19.7 dB	16.2 dB	100 ± 32 Ohm	100 ± 15 Ohm		
500 MHz	43.6 dB/100m	40.8 dB	39.8 dB			20.8 dB	18.8 dB	15.9 dB	100 ± 32 Ohm	100 ± 15 Ohm		
550 MHz	46.0 dB/100m	40.2 dB	39.2 dB			20.0 dB	18.0 dB	15.6 dB	100 ± 32 Ohm	100 ± 15 Ohm		
600 MHz	48.4 dB/100m	39.6 dB	38.6 dB			19.2 dB	17.2 dB	15.4 dB	100 ± 32 Ohm	100 ± 15 Ohm		
650 MHz	50.6 dB/100m	39.1 dB	36.1 dB			18.5 dB	15.5 dB	15.1 dB				
750 MHz	55.0 dB/100ft	38.2 dB	35.2 dB			17.3 dB	14.3 dB	14.7 dB				
860 MHz	59.6 dB/100ft	37.3 dB	34.3 dB			16.1 dB	13.1 dB	14.3 dB				

Segregation class according EN50174-2: a

Voltage

UL Voltage Rating

300 V RMS

Temperature Range

Installation Temp Range:	0°C To +50°C
UL Temp Rating:	90°C
Storage Temp Range:	-20°C To +75°C
Operating Temp Range:	-20°C To +75°C

Mechanical Characteristics

Bulk Cable Weight:	33 lbs/1000ft
Max Recommended Pulling Tension:	25 lbs
Min Bend Radius During Installation:	2.75 in
Min Bend Radius/Minor Axis:	1.0 in

Standards

NEC Articles:	800
NEC/(UL) Specification:	CMP
CEC/C(UL) Specification:	CMP
ISO/IEC Compliance:	11801 ed 2.2 (2011) Class E
CPR Euroclass:	Eca
Data Category:	Category 6
ANSI Compliance:	S-116-732-2013 Category 6, ANSI/NEMA WC-66 Category 6
Telecommunications Standards:	ANSI/TIA-568-C.2 Category 6
IEEE Specification:	IEEE 802.3bt Type 1, Type 2, Type 3, Type 4
Other Standards:	C(UL)US CMP 90C OR (UL) CMP-LP (0.6A) OR CL3P-LP (0.6A)
Third Party Performance Verification:	Category 6

Applicable Environmental and Other Programs

EU Directive 2000/53/EC (ELV):	Yes
EU Directive 2002/95/EC (RoHS):	Yes
EU Directive 2002/96/EC (WEEE):	Yes
EU Directive 2003/11/EC (BFR):	Yes
EU Directive 2003/96/EC (BFR):	Yes
EU Directive 2011/65/EU (ROHS II):	Yes
EU Directive 2012/19/EU (WEEE):	Yes
EU Directive 2015/863/EU:	Yes
EU Directive Compliance:	Yes
EU CE Mark:	Yes
EU REACH SVHC Compliance (yyyy-mm-dd):	2017-07-10
EU RoHS Compliance Date (yyyy-mm-dd):	2006-07-01
CA Prop 65 (CJ for Wire & Cable):	Yes
MII Order #39 (China RoHS):	Yes

Suitability

Suitability - Aerial:	No
Suitability - Burial:	No
Suitability - Hazardous Locations:	No
Suitability - Indoor:	Yes
Suitability - Non-Halogenated:	No
Suitability - Oil Resistance:	No
Suitability - Outdoor:	No
Suitability - Sunlight Resistance:	No

Flammability, LSOH, Toxicity Testing

UL Flammability:	NFPA 262 Plenum (UL 910)
CSA Flammability:	FT6
ISO/IEC Flammability:	IEC 60332-1-2
UL voltage rating:	300 V RMS

Plenum/Non-Plenum

Plenum (Y/N):	Yes
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Part Number

Non-Plenum Number:	4812
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Variants

Item #	Color	UPC	Length
4813 0101000	Black	612825153665	1,000 ft
4813 0101000	Black	612825153665	1,000 ft
4813 0103000	Black	612825153672	3,000 ft
4813 0103000	Black	612825153672	3,000 ft
4813 D151000	Blue	612825153597	1,000 ft
4813 D15A1000	Blue	612825153580	1,000 ft
4813 D151000	Blue	612825153597	1,000 ft
4813 D15A1000	Blue	612825153580	1,000 ft
4813 0081000	Gray	612825153627	1,000 ft
4813 0081000	Gray	612825153627	1,000 ft
4813 0051000	Green	612825153610	1,000 ft
4813 0091000	White	612825153641	1,000 ft
4813 0091000	White	612825153641	1,000 ft
4813 0092500	White	612825153658	2,500 ft
4813 0092500	White	612825153658	2,500 ft
4813 009A1000	White	612825153634	1,000 ft
4813 009A1000	White	612825153634	1,000 ft

4813 0041000	Yellow	612825153603	1,000 ft
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Patent:	https://www.belden.com/resources/patents
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Product Notes

Notes:	Values above 600 MHz are for Engineering Information Only. Print Includes Descending Footage/Meter Markings from Max. Put-Up Length to 0.
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