



Product: [7852A](#) 

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

Product Description

CAT6 Enhanced (600MHz), 4-Bonded-pairs, U/UTP-unshielded, Plenum-CMP, Premise Horizontal cable, 23 AWG solid bare copper conductors, FEP insulation, patented E-spline, ripcord, Flamarrest® jacket

Technical Specifications

Product Overview

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
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Physical Characteristics (Overall)

Conductor

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

Conductor Count:	8
Total Number of Pairs:	4

Insulation

Material
FEP - Fluorinated Ethylene Propylene

Bonded-Pair:	Yes
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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
PVC-LS - Polyvinyl Chloride (Low Smoke)	Flamarrest®	0.266 in	Yes	Patented E-Spline Center Member

Electrical Characteristics

Conductor DCR

Max. Conductor DCR	Max. DCR Unbalance
82 Ohm/km	3 %

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	38 ns/100m	67 %

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. ELCTL [dB]
1 MHz	1.8 dB/100m	82.3 dB	80.3 dB	80.5 dB	78.5 dB	74.8 dB	72.8 dB	20.0 dB	100 ± 12 Ohm	100 ± 15 Ohm	40.0 dB	35.0 dB
4 MHz	3.5 dB/100m	73.3 dB	71.3 dB	69.7 dB	67.7 dB	62.8 dB	60.8 dB	23.0 dB	100 ± 12 Ohm	100 ± 10.4 Ohm	40.0 dB	23.0 dB
8 MHz	5.0 dB/100m	68.8 dB	66.8 dB	63.7 dB	61.7 dB	56.7 dB	54.7 dB	24.5 dB	100 ± 12 Ohm	100 ± 8 Ohm	40.0 dB	16.9 dB
10 MHz	5.7 dB/100m	67.3 dB	65.3 dB	61.6 dB	59.6 dB	54.8 dB	52.8 dB	25.0 dB	100 ± 12 Ohm	100 ± 7.3 Ohm	40.0 dB	15.0 dB
16 MHz	7.2 dB/100m	64.2 dB	62.2 dB	57.0 dB	55.0 dB	50.7 dB	48.7 dB	25.0 dB	100 ± 12 Ohm	100 ± 5.7 Ohm	38.0 dB	10.9 dB
20 MHz	8.1 dB/100m	62.8 dB	60.8 dB	54.7 dB	52.7 dB	48.8 dB	46.8 dB	25.0 dB	100 ± 12 Ohm	100 ± 5 Ohm	37.0 dB	9.0 dB
25 MHz	9.1 dB/100m	61.3 dB	59.3 dB	52.3 dB	50.3 dB	46.8 dB	44.8 dB	25.0 dB	100 ± 15 Ohm	100 ± 5 Ohm	36.0 dB	7.0 dB
30 MHz	10.0 dB/100m	60.1 dB	58.1 dB	50.2 dB	48.2 dB	45.3 dB	43.3 dB	25.0 dB	100 ± 15 Ohm	100 ± 5 Ohm	35.2 dB	5.5 dB
31.25 MHz	10.2 dB/100m	59.9 dB	57.9 dB	49.7 dB	47.7 dB	44.9 dB	42.9 dB	25.0 dB	100 ± 15 Ohm	100 ± 5 Ohm	35.1 dB	
62.5 MHz	14.7 dB/100m	55.4 dB	53.4 dB	40.7 dB	38.7 dB	38.9 dB	36.9 dB	25.0 dB	100 ± 15 Ohm	100 ± 5 Ohm	32.0 dB	
100 MHz	18.9 dB/100m	52.3 dB	50.3 dB	33.4 dB	31.4 dB	34.8 dB	32.8 dB	25.0 dB	100 ± 15 Ohm	100 ± 5 Ohm	30.0 dB	
155 MHz	23.9 dB/100m	49.4 dB	47.4 dB	25.5 dB	23.5 dB	31.0 dB	29.0 dB	22.8 dB	100 ± 15 Ohm	100 ± 5 Ohm	28.1 dB	
200 MHz	27.5 dB/100m	47.8 dB	45.8 dB	20.3 dB	18.3 dB	28.8 dB	26.8 dB	21.6 dB	100 ± 15 Ohm	100 ± 5 Ohm	27.0 dB	
240 MHz	30.5 dB/100m	46.6 dB	44.6 dB	16.1 dB	14.1 dB	27.2 dB	25.2 dB	20.6 dB	100 ± 20 Ohm	100 ± 5 Ohm	26.2 dB	
250 MHz	31.2 dB/100m	46.3 dB	44.3 dB	15.2 dB	13.2 dB	26.8 dB	24.8 dB	20.5 dB	100 ± 20 Ohm	100 ± 5 Ohm	26.0 dB	
300 MHz	34.5 dB/100m	43.1 dB	43.1 dB	8.6 dB	8.6 dB	25.3 dB	23.3 dB	20.1 dB	100 ± 20 Ohm	100 ± 5 Ohm		
310 MHz	35.2 dB/100m	42.9 dB	42.9 dB	7.8 dB	7.8 dB	25.0 dB	23.0 dB	20.0 dB	100 ± 20 Ohm	100 ± 5 Ohm		
350 MHz	37.7 dB/100m	42.1 dB	42.1 dB	4.5 dB	4.5 dB	23.9 dB	21.9 dB	19.8 dB	100 ± 22 Ohm	100 ± 5 Ohm		
400 MHz	40.6 dB/100m	41.3 dB	41.3 dB	0.6 dB	0.6 dB	22.8 dB	20.8 dB	19.5 dB	100 ± 22 Ohm	100 ± 5 Ohm		
436 MHz	42.7 dB/100m	40.7 dB	40.7 dB			22.0 dB	20.0 dB	19.1 dB	100 ± 22 Ohm	100 ± 5 Ohm		
450 MHz	43.5 dB/100m	40.5 dB	40.5 dB			21.7 dB	19.7 dB	18.9 dB	100 ± 22 Ohm	100 ± 5 Ohm		
460 MHz	44.0 dB/100m	40.4 dB	40.4 dB			21.5 dB	19.5 dB	18.8 dB	100 ± 22 Ohm	100 ± 5 Ohm		
500 MHz	46.2 dB/100ft	39.8 dB	39.8 dB			20.8 dB	18.8 dB	18.4 dB	100 ± 22 Ohm	100 ± 5 Ohm		
550 MHz	48.8 dB/100ft	39.2 dB	39.2 dB			20.0 dB	18.0 dB	18.0 dB	100 ± 22 Ohm	100 ± 5 Ohm		
600 MHz	51.4 dB/100ft	38.6 dB	38.6 dB			19.2 dB	17.2 dB	17.6 dB	100 ± 22 Ohm	100 ± 5 Ohm		
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:	105°C
Storage Temp Range:	-20°C To +75°C
Operating Temp Range:	-20°C To +75°C

Mechanical Characteristics

Bulk Cable Weight:	38 lbs/1000ft
Max Recommended Pulling Tension:	40 lbs
Min Bend Radius During Installation:	2.25 in
Min Bend Radius/Minor Axis:	1 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
Third Party Performance Verification:	Category 6

Applicable Environmental and Other Programs

Environmental Space:	Plenum
EU Directive 2000/53/EC (ELV):	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
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

C(UL) Flammability:	FT6
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:	7851A
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Variants

Item #	Color	Putup Type	Length	UPC
7852A D15Z1000				612825433385
7852A 0101000	Black	Reel	1,000 ft	612825190486
7852A D151000	Blue	Reel	1,000 ft	612825190363
7852A D15A1000	Blue	Reel-in-Box	1,000 ft	612825190356
7852A 0081000	Gray	Reel	1,000 ft	612825190455
7852A 008A1000	Gray	Reel-in-Box	1,000 ft	612825190448
7852A 0051000	Green	Reel	1,000 ft	612825190431
7852A 005A1000	Green	Reel-in-Box	1,000 ft	612825190424
7852A 0031000	Orange	Reel	1,000 ft	612825190394
7852A 003A1000	Orange	Reel-in-Box	1,000 ft	612825190387
7852A 0021000	Red	Reel	1,000 ft	612825190370
7852A 0091000	White	Reel	1,000 ft	612825190479
7852A 009A1000	White	Reel-in-Box	1,000 ft	612825190462
7852A 0041000	Yellow	Reel	1,000 ft	612825190417
7852A 004A1000	Yellow	Reel-in-Box	1,000 ft	612825190400

Footnote:	C - CRATE REEL PUT-UP.
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Patent:	https://www.belden.com/resources/patents
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Product Notes

Notes:	Electrical values are expected performance based on cable testing and representative performance within a typical Belden system. 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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History

Update and Revision:	Revision Number: 0.368 Revision Date: 04-28-2020
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