

7852A Multi-Conductor - Enhanced Category 6 Bonded-Pair Cable



Description:

23 AWG bonded-pairs solid bare copper conductors, plenum, FEP Teflon® insulation, patented e-spline center member, rip cord, see color code chart (below), Flamarrrest® jacket (red, orange, yellow, green, blue, black, white, or gray).

Usage (Overall)

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:

# Pairs	AWG	Stranding	Conductor Material
4	23	Solid	BC - Bare Copper

Insulation

Insulation Material:

Insulation Material
FEP - Fluorinated Ethylene Propylene

Outer Shield

Outer Shield Material:

Outer Shield Material
Unshielded

Outer Jacket

Outer Jacket Material:

Outer Jacket Trade Name	Outer Jacket Material
Flamarrrest®	LS PVC - Low Smoke Polyvinyl Chloride

Outer Jacket Ripcord: No

Overall Cabling

Overall Cabling Fillers: E-Spline Center Member

Overall Nominal Diameter: 0.218 x 0.290 in.

Pair

Pair Color Code Chart:

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

Mechanical Characteristics (Overall)

Operating Temperature Range: -20°C To +75°C

Bulk Cable Weight: 33.800 lbs/1000 ft.

Max. Recommended Pulling Tension: 45 lbs.

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Min. Bend Radius (Install)/Minor Axis: 0.250 in.

Applicable Specifications and Agency Compliance (Overall)

Applicable Standards & Environmental Programs

NEC/(UL) Specification:	CMP, UL444
CEC/C(UL) Specification:	CMP
EU CE Mark:	Yes
EU Directive 2000/53/EC (ELV):	Yes
EU Directive 2002/95/EC (RoHS):	Yes
EU RoHS Compliance Date (mm/dd/yyyy):	07/01/2006
EU Directive 2002/96/EC (WEEE):	Yes
EU Directive 2003/11/EC (BFR):	Yes
CA Prop 65 (CJ for Wire & Cable):	Yes
MII Order #39 (China RoHS):	Yes
Telecommunications Standards:	568-B.2-1 Category 6
Other Specification:	UL Verified to Category 6

Flame Test

UL Flame Test:	NFPA 262
CSA Flame Test:	FT6

Plenum/Non-Plenum

Plenum (Y/N):	Yes
Non-Plenum Number:	7851A

Electrical Characteristics (Overall)

Nom. Mutual Capacitance:

Capacitance (pF/ft)
15.5

Nominal Velocity of Propagation:

VP (%)
67

Maximum Capacitance Unbalance (pF/100 m): 65.6

Maximum Delay:

Delay (ns/100 m)
538 @ 100MHz

Max. Delay Skew:

Delay Skew (ns/100 m)
38

Maximum Conductor DC Resistance:

DCR @ 20°C (Ohm/100 m)
8.2

Max. Operating Voltage - UL:

Voltage
300 V RMS

Maximum DCR Unbalanced:

DCR Unbalance @ 20°C (%)
3

Electrical Characteristics-Premise (Overall)

Premise Cable Electrical Table 1:

7852A Multi-Conductor - Enhanced Category 6 Bonded-Pair Cable

Freq. (MHz)	Max. Attenuation (dB/100 m)	Min. NEXT (dB)	Min. PSNEXT (dB)	Min. ACR (dB)	Min. PSACR (dB)	Min RL (dB)	Min. SRL (dB)
1	1.900	82.3	80.3	80.5	78.5	20.000	27.0
4	3.600	73.3	71.3	69.7	67.7	23.000	27.0
8	5.100	68.8	66.8	63.7	61.7	24.500	27.0
10	5.700	67.3	65.3	61.6	59.6	25.000	27.0
16	7.200	64.3	62.3	57.0	55.0	25.000	27.0
20	8.100	62.8	60.8	54.7	52.7	25.000	27.0
25	9.100	61.3	59.3	52.3	50.3	25.000	26.0
31.25	10.200	59.9	57.9	49.7	47.7	25.000	25.1
62.5	14.700	55.4	53.4	40.7	38.7	25.000	22.1
100	18.900	52.3	50.3	33.4	31.4	25.000	20.0
155	23.900	49.5	47.5	25.5	23.5	22.800	18.1
200	27.500	47.8	45.8	20.3	18.3	21.600	17.0
250	31.200	46.3	44.3	15.2	13.2	20.500	16.2
300	34.500	43.2	41.2	10.6	8.6	20.200	15.2
310	35.200	42.9	40.9	9.8	7.8	20.100	15.1
350	37.700	42.2	40.2	6.5	4.5	19.800	14.6
400	40.600	41.3	39.3	2.6	0.6	19.500	14.0
450	43.500	40.5	38.5	2.1	0.10	18.900	13.5
460	44.000	40.4	38.4	0	0	18.800	13.4
500	46.200	39.8	37.8			18.400	13.0
550	48.800	39.2	37.2			18.000	12.6
600	51.400	38.6	36.6			17.600	12.2

Premise Cable Electrical Table 2:

Freq. (MHz)	Input (Unfitted) Imp. (Ohms)	Fitted Impedance	Min. ELFEXT (dB)	Min. PSELFEXT (dB)
1	100 ± 12	100 ± 15	73.8	70.8
4	100 ± 12	100 ± 10.4	61.8	58.8
8	100 ± 12	100 ± 8	55.7	52.7
10	100 ± 12	100 ± 7.3	53.8	50.8
16	100 ± 12	100 ± 5.7	49.7	46.7
20	100 ± 12	100 ± 5	47.8	44.8
25	100 ± 15	100 ± 5	45.8	42.8
31.25	100 ± 15	100 ± 5	43.9	40.9
62.5	100 ± 15	100 ± 5	37.9	34.9
100	100 ± 15	100 ± 5	33.8	30.8
155	100 ± 15	100 ± 5	30.0	27.0
200	100 ± 15	100 ± 5	27.8	24.8
250	100 ± 20	100 ± 5	25.8	22.8
300	100 ± 20	100 ± 5	24.3	21.3
310	100 ± 20	100 ± 5	24.0	21.0
350	100 ± 22	100 ± 5	22.9	19.9
400	100 ± 22	100 ± 5	21.8	18.8
450	100 ± 22	100 ± 5	20.7	17.7
460	100 ± 22	100 ± 5	20.5	17.5
500	100 ± 22	100 ± 5	19.8	16.8
550	100 ± 22	100 ± 5	19.0	16.0
600	100 ± 22	100 ± 5	18.2	15.2

Notes (Overall)

Notes: Belden IBDN. Jacket sequentially marked at 2 ft. intervals. US Patent #'s 6297454-B1; 5606151; 5734126; 5789711. Third party verified to TIA/EIA-568-B.2-1, Category 6.

Put Ups and Colors:

Item #	Putup	Ship Weight	Color	Notes	Item Desc
7852A D15A1000	1,000 FT	44.000 LB	BLUE		4 PR #23 FEP FLRST
7852A D151000	1,000 FT	40.000 LB	BLUE	C	4 PR #23 FEP FLRST
7852A 0021000	1,000 FT	35.000 LB	RED		4 PR #23 FEP FLRST
7852A 004A1000	1,000 FT	38.000 LB	YELLOW		4 PR #23 FEP FLRST
7852A 0041000	1,000 FT	35.000 LB	YELLOW	C	4 PR #23 FEP FLRST

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7852A 005A1000	1,000 FT	38.000 LB	GREEN, DARK		4 PR #23 FEP FLRST
7852A 0051000	1,000 FT	35.000 LB	GREEN, DARK	C	4 PR #23 FEP FLRST
7852A 008A1000	1,000 FT	38.000 LB	GRAY		4 PR #23 FEP FLRST
7852A 0081000	1,000 FT	35.000 LB	GRAY		4 PR #23 FEP FLRST
7852A 009A1000	1,000 FT	38.000 LB	WHITE		4 PR #23 FEP FLRST
7852A 0091000	1,000 FT	35.000 LB	WHITE	C	4 PR #23 FEP FLRST
7852A 0101000	1,000 FT	35.000 LB	BLACK		4 PR #23 FEP FLRST

Notes:

C = CRATE REEL PUT-UP.

DataTwist® 600e UTP Cable

TIA/EIA-568-B.2-1, Category 6

Enhanced Category 6 Bonded-Pair Cables

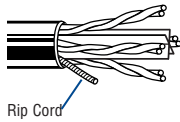
Certified System Cable

Description	Part No.	UL NEC/ C(UL) CEC Type	No. of Pairs	Standard Lengths		Standard Unit Wt.		Nominal OD		Max. DCR (Ω/100m)	Max. DCR Unbal. (%)	Max. Cap. Unbal. (pF/100m)	Freq. (MHz)	Max. Atten. (dB/100m)	Min. PSUM NEXT (dB)	Min. PSUM ACR (dB/100m)	Min. PSUM ELFEXT (dB/100m)	Input Imped. (Ω)	Min. RL (dB)
				Ft.	m	Lbs.	kg	Inch	mm										

23 AWG Bonded-Pairs Solid Bare Copper Conductors • Patented E-Spline Center Member • Rip Cord • See Color Code Chart (below)

Non-Plenum • Polyolefin Insulation • PVC Jacket (Available in Red, Orange, Yellow, Green, Blue, Black, White or Gray)

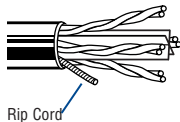
7851A	NEC: CMR CEC: CMR	4	1000 A-1000	304.8 A-304.8	38.0 47.0	17.2 21.3	.227 x .315	5.77 x 8.00	8.2	3.0	65.6	1 10 31.25 62.5 100 155 200 250 350 400 500 550 600	1.9 5.7 10.2 14.7 18.9 23.9 27.5 31.2 37.7 40.6 46.2 48.8 51.4	80.3 65.3 57.9 53.4 50.3 47.5 45.8 44.3 40.2 39.3 37.8 37.2 36.6	78.5 59.6 47.7 38.7 31.4 23.5 18.3 13.2 4.5 0.6 0*	70.8 50.8 40.9 34.9 30.8 27.0 24.8 22.8 19.9 18.8 16.8 16.0 15.2	100±12 100±12 100±15 100±15 100±15 100±15 100±15 100±20 100±22 100±22 100±22 100±22 100±22	20.0 25.0 25.0 25.0 25.0 22.8 21.7 20.5 19.8 19.5 18.4 18.0 17.6
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Third party verified to TIA/EIA-568-B.2-1, Category 6
U.S. Patents 5,606,151; 5,734,126; 5,789,711 and 6,297,454-B1
Jacket sequentially marked at 2 ft. intervals. Features Descending Length Marking.

Non-Plenum • Polyolefin Insulation • Gray Haloarrest® Jacket

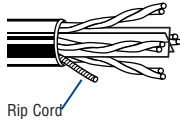
7851NH	NEC: CMR CEC: CMR	4	1000 A-1000	304.8 A-304.8	39.0 48.0	17.7 21.8	.241 x .329	6.12 x 8.36	8.2	3.0	65.6	1 10 31.25 62.5 100 155 200 250 350 400 500 550 600	1.9 5.7 10.2 14.7 18.9 23.9 27.5 31.2 37.7 40.6 46.2 48.8 51.4	80.3 65.3 57.9 53.4 50.3 47.5 45.8 44.3 40.2 39.3 37.8 37.2 36.6	78.5 59.6 47.7 38.7 31.4 23.5 18.3 13.2 4.5 0.6 0*	70.8 50.8 40.9 34.9 30.8 27.0 24.8 22.8 19.9 18.8 16.8 16.0 15.2	100±12 100±12 100±15 100±15 100±15 100±15 100±15 100±20 100±22 100±22 100±22 100±22 100±22	20.0 25.0 25.0 25.0 25.0 22.8 21.7 20.5 19.8 19.5 18.4 18.0 17.6
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Third party verified to TIA/EIA-568-B.2-1, Category 6
U.S. Patents 5,606,151; 5,734,126; 5,789,711 and 6,297,454-B1
Jacket sequentially marked at 1 meter intervals. Features Descending Length Marking.

Plenum • FEP Teflon® Insulation • Flamarrest® Jacket (Available in Red, Orange, Yellow, Green, Blue, Black, White or Gray)

7852A	NEC: CMP CEC: CMP	4	1000 A-1000 †	304.8 A-304.8	40.0 49.0	18.1 22.2	.218 x .290	5.54 x 7.37	8.2	3.0	65.6	1 10 31.25 62.5 100 155 200 250 350 400 500 550 600	1.9 5.7 10.2 14.7 18.9 23.9 27.5 31.2 37.7 40.6 46.2 48.8 51.4	80.3 65.3 57.9 53.4 50.3 47.5 45.8 44.3 40.2 39.3 37.8 37.2 36.6	78.5 59.6 47.7 38.7 31.4 23.5 18.3 13.2 4.5 0.6 0*	70.8 50.8 40.9 34.9 30.8 27.0 24.8 22.8 19.9 18.8 16.8 16.0 15.2	100±12 100±12 100±15 100±15 100±15 100±15 100±15 100±20 100±22 100±22 100±22 100±22 100±22	20.0 25.0 25.0 25.0 25.0 22.8 21.7 20.5 19.8 19.5 18.4 18.0 17.6
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† A-1000 ft. put-up not available in Red.
Third party verified to TIA/EIA-568-B.2-1, Category 6
U.S. Patents 5,606,151; 5,734,126; 5,789,711 and 6,297,454-B1
Jacket sequentially marked at 2 ft. intervals. Features descending Length marking.

ACR = Attenuation Crosstalk Ratio • DCR = DC Resistance • ELFEXT = Equal Level Far-end Crosstalk • NEXT = Near-end Crosstalk • PSUM = Power Sum • RL = Return Loss • UTP = Unshielded Twisted Pair(s)

*PSUM ACR >0 is guaranteed to 460 MHz

Color Codes: DataTwist 600e

Pair No.	Color Combination
1	White/Blue Stripe & Blue
2	White/Orange Stripe & Orange
3	White/Green Stripe & Green
4	White/Brown Stripe & Brown

Teflon is a DuPont trademark.

