



Product: [1685ANH](#)

CAT 6A 4P 23AWG, F/FTP, LSZH Jkt, Indoor

### Product Description

CAT 6A 4PR x 23AWG F/FTP, Solid Bare Copper Conductor, FMPE Insulation, Individual + Overall Foil Shield, LSZH Jacket, Indoor, IEC 60332-3-22

### Technical Specifications

#### Product Overview

Suitable Applications:	Horizontal and building backbone cable; Support current and future Category 6a and 6 applications, such as: 10GBase-T (10 Gigabit Ethernet), 1000Base-T (Gigabit Ethernet), 100 Base-T, 10 Base-T, FDDI, ATM as well as PoE application etc.
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#### Construction Details

##### Conductor

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

##### Insulation

Material	Nom. Insulation Diameter	Color Code
PE - Polyethylene (Foam)	1.33 mm (0.0524 in)	White & Blue, White & Orange, White & Green, White & Brown

##### Inner Shield

Shield Type	Material	Coverage
Tape	Bi-Laminate (Alum+Poly)	100%

##### Outer Shield

Shield Type	Material	Coverage
Tape	Bi-Laminate (Alum+Poly)	100%

##### Outer Jacket

Material	Nom. Diameter	Ripcord
LSZH - Low Smoke Zero Halogen (Flame Retardant)	7.3 mm (0.29 in)	Yes

#### Electrical Characteristics

##### Electricals

Max. Conductor DCR	Max. Mutual Capacitance	Max. Capacitance Unbalance	Nom. Characteristic Impedance
95.0 Ohm/km (29.0 Ohm/1000ft)	56 pF/m (17 pF/ft)	160 pF/100m	100 Ohm

##### Delay

Frequency	Max. Delay	Max. Delay Skew	Nom. Velocity of Prop.
100 MHz	538 ns/100m	45 ns/100m	74%

##### High Frequency

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]	Min. PSANEXT [dB]	Min. PSAACRF [dB]	Min. TCL [dB]	Min. ELTCTL [dB]
1	2.1 dB/100m	75.3	72.3	73.2	70.3	67.8	64.8	20.0	67.0	67.0	40.0	35.0
4	3.8 dB/100m	66.3	63.3	61.5	59.5	55.8	52.8	23.0	67	66.2	40.0	23.0
8	5.3 dB/100m	61.8	58.8	56.5	55.5	49.7	46.9	24.5	67.0	60.1	40.0	16.9

10	5.9 dB/100m	60.3	57.3	53.3	50.3	43.9	44.8	25.0	67.0	58.2	40.0	15.0
16	7.5 dB/100m	57.2	54.2	49.7	46.7	43.7	40.9	25.0	67.0	54.1	38.0	10.9
20	8.5 dB/100m	55.8	52.8	47.3	44.3	41.8	38.8	25.0	67.0	52.2	37.0	9.0
25	9.5 dB/100m	54.3	51.3	44.8	41.8	40	37	24.3	67	50.2	36.0	7.0
31.25	10.5 dB/100m	52.9	49.9	42.4	39.4	37.9	34.9	23.6	67.0	48.3	35.1	
62.5	15.4 dB/100m	48.4	45.4	33.0	30.0	31.9	28.9	21.5	65.6	42.3	32.0	
100	19.1 dB/100m	45.3	42.3	26.2	23.2	27.8	24.8	20.1	62.5	38.2	30.0	
200	27.6 dB/100m	40.8	37.8	13.2	10.2	22.0	19.0	18.0	58	32.2	27.0	
250	31.1 dB/100m	39.3	36.3	8.2	6.2	20.0	17.0	17.3	56.5	30.2	26.0	
300	34.3 dB/100m	38.1	35.1			18.5	15.5	17.3	55.3	28.7		
400	40.1 dB/100m	36.3	33.3			15.7	12.7	17.3	53.5	26.2		
500	45.3 dB/100m	34.8	31.8			13.8	10.8	17.3	52	24.2		
625	51.2 dB/100m	33.4	30.4			12.1	9.1	17.3	50.6	22.3		

## Mechanical Characteristics

### Temperature

Operating

-20°C to +75°C

### Bend Radius

Installation Min.

59.0 mm (2.32 in)

Max. Pull Tension: 110 N (25 lbf)

Bulk Cable Weight: 54 kg/km (36 lbs/1000ft)

## Standards and Compliance

Environmental Suitability:	Indoor, Indoor, Non-Halogenated
Flammability / Reaction to Fire:	IEC 60332-3-22
IEEE Compliance:	PoE: IEEE 802.3bt Type 1, Type 2, Type 3, Type 4
Data Category:	Category 6A
TIA/EIA Compliance:	ANSI/TIA 568.2-D
ISO/IEC Compliance:	ISO/IEC 11801-1, IEC 61156-5
European Halogen Free Standards:	IEC 60754-1 - Halogen Amount = 5 mg/g, IEC 60754-2 - Halogen Acid Gas Amount - Max. Conductivity = 10 µS/mm, IEC 60754-2 - Halogen Acid Gas Amount - Min. pH = 4.3
European Directive Compliance:	EU Directive 2015/863/EU (RoHS 2 amendment), EU Directive 2011/65/EU (RoHS 2)
APAC Compliance:	China RoHS II (GB/T 26572-2011)

## Product Notes

Notes: Jacket sequentially marked

## History

Update and Revision: Revision Number: 0.53 Revision Date: 04-29-2024

## Part Numbers

### Variants

Item #	Color	Putup Type	Length
1685ANH 010305M	Black	Reel	305 m
1685ANH 006305M	Blue	Reel	305 m
1685ANH 008305M	Grey	Reel	305 m
1685ANH 003305M	Orange	Reel	305 m
1685ANH 002305M	Red	Reel	305 m
1685ANH 007305M	Violet	Reel	305 m

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