



**Product:** [OSP6AF](#) 

Category 6A Outside Plant F/UTP Cable

## Product Description

CAT6A (500 MHz), 4 Pair, F/UTP-Foil Shielded, Outdoor OSP, Premise Horizontal Cable, 23 AWG Solid Bare Copper Conductors, Polyolefin Insulation, Patented X-Spline, Gel-Filled, UV resistant LLDPE Inner Jacket, Overall Beldfoil® Shield with Drain Wire, Ripcord, UV Resistance LLDPE Outer Jacket

## Technical Specifications

### Product Overview

Suitable Applications:	OSP-Outside Plant, 10 Gigabit Ethernet, 100BaseTX, 100BaseVG ANYLAN, 155ATM, 622ATM, NTSC/PAL Component or Composite Video, AES/EBU Digital Audio, AES51, RS-422, Noisy Environments, PoE, PoE+
Patent:	This product has one or more applicable patents. More information on patents can be found at <a href="https://www.belden.com/resources/patents">https://www.belden.com/resources/patents</a> .

### 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
PO - Polyolefin

Bonded-Pair:	N/A
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#### Color Chart

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

#### Inner Jacket

Material	Nominal Diameter	Ripcord
PE - Polyethylene	0.26 in	No

Water Penetration:	GR 421CORE para. 4.3.5.1, ANSI/ICEA S107704 para. 8.2.1, ANSI/ICEA S-99-689
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#### Outer Shield

Type	Material	Material Trade Name	Coverage [%]	Drainwire Material	Drainwire AWG
Tape	Bi-Laminate (Alum+Poly)	Beldfoil®	100%	TC - Tinned Copper	26

#### Outer Jacket

Material	Nominal Diameter	Ripcord
PE - Polyethylene	0.360 in	Yes

### Electrical Characteristics

#### Conductor DCR

Max. Conductor DCR	Max. DCR Unbalance	Max DCR Unbalanced Between Pairs [%]
82 Ohm/km	3.0 %	5.0 %

#### Capacitance

Max. Capacitance Unbalance	Nom. Mutual Capacitance
45 pF/100m	17 pF/ft

#### Delay

Frequency [MHz]	Max. Delay	Max. Delay Skew	Nominal Velocity of Propagation (VP) [%]
100 MHz	537.6 ns/100m	45 ns/100m	64%

#### 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]	Max./Min. Input Impedance (unFitted)	Max./Min. Fitted Impedance	Min. PSANEXT	Min. PSAACRF	Min. TCL [dB]	Min. ELTCTL [dB]
1 MHz	2.1 dB/100m	74.3 dB	72.3 dB	72.2 dB	70.2 dB	67.8 dB	64.8 dB	20.0 dB	105 +/- 10	115 +/- 15	67.0 dB	67.0 dB	40.0 dB	35.0 dB
4 MHz	3.8 dB/100m	65.3 dB	63.3 dB	61.5 dB	59.5 dB	55.8 dB	52.8 dB	23.0 dB	105 +/- 10	100 +/- 7	67.0 dB	66.2 dB	40.0 dB	23.0 dB
8 MHz	5.3 dB/100m	60.8 dB	58.8 dB	55.4 dB	53.4 dB	49.7 dB	46.7 dB	24.5 dB	100 +/- 22	100 +/- 7	67.0 dB	60.1 dB	40.0 dB	16.9 dB
10 MHz	5.9 dB/100m	59.3 dB	57.3 dB	53.4 dB	51.4 dB	47.8 dB	44.8 dB	25.0 dB	100 +/- 22	100 +/- 7	67.0 dB	58.2 dB	40.0 dB	15.0 dB
16 MHz	7.5 dB/100m	56.2 dB	54.2 dB	48.8 dB	46.8 dB	43.7 dB	40.7 dB	25.0 dB	100 +/- 22	100 +/- 7	67.0 dB	54.1 dB	38.0 dB	10.9 dB
20 MHz	8.4 dB/100m	54.8 dB	52.8 dB	46.4 dB	44.4 dB	41.8 dB	38.8 dB	25.0 dB	100 +/- 22	100 +/- 7	67.0 dB	52.2 dB	37.0 dB	9.0 dB
25 MHz	9.4 dB/100m	53.3 dB	51.3 dB	44.0 dB	42.0 dB	39.8 dB	36.8 dB	24.3 dB	100 +/- 22	100 +/- 7	67.0 dB	50.2 dB	36.0 dB	7.0 dB
31.25 MHz	10.5 dB/100m	51.9 dB	49.9 dB	41.4 dB	39.4 dB	37.9 dB	34.9 dB	23.6 dB	100 +/- 22	100 +/- 7	67.0 dB	48.3 dB	35.1 dB	5.1 dB
62.5 MHz	15.0 dB/100m	47.4 dB	45.4 dB	32.4 dB	30.4 dB	31.9 dB	28.9 dB	21.5 dB	100 +/- 22	100 +/- 7	65.6 dB	42.3 dB	32.0 dB	
100 MHz	19.1 dB/100m	44.3 dB	42.3 dB	25.2 dB	23.2 dB	27.8 dB	24.8 dB	20.1 dB	100 +/- 22	100 +/- 7	62.5 dB	38.2 dB	30.0 dB	
200 MHz	27.6 dB/100m	39.8 dB	37.8 dB	12.2 dB	10.2 dB	21.8 dB	18.8 dB	18.0 dB	100 +/- 22	100 +/- 7	58.0 dB	32.2 dB	27.0 dB	
250 MHz	31.1 dB/100m	38.3 dB	36.3 dB	7.3 dB	5.3 dB	19.8 dB	16.8 dB	17.3 dB	100 +/- 32	100 +/- 7	56.5 dB	30.2 dB	26.0 dB	
300 MHz	34.3 dB/100m	37.1 dB	35.1 dB	2.9 dB	0.9 dB	18.3 dB	15.3 dB	16.8 dB	100 +/- 32	100 +/- 7	55.3 dB	28.7 dB	25.2 dB	
350 MHz	37.2 dB/100m	36.1 dB	34.1 dB			16.9 dB	13.9 dB	16.3 dB	100 +/- 32	100 +/- 7	54.3 dB	27.3 dB	24.6 dB	
400 MHz	40.1 dB/100m	35.3 dB	33.3 dB			15.8 dB	12.8 dB	15.9 dB	100 +/- 32	100 +/- 7	53.5 dB	26.2 dB	24.0 dB	
450 MHz	42.7 dB/100m	34.5 dB	32.5 dB			14.7 dB	11.7 dB	15.5 dB	100 +/- 32	100 +/- 7	52.7 dB	25.1 dB	23.5 dB	
500 MHz	45.3 dB/100m	33.8 dB	31.8 dB			13.8 dB	10.8 dB	15.2 dB	100 +/- 32	100 +/- 7	52.0 dB	24.2 dB	23.0 dB	

Segregation class according EN50174-2:

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#### Voltage

UL Voltage Rating
300 V RMS

#### Temperature Range

Installation Temp Range:	-40°C To +60°C
Non-UL Temp Rating:	+75°C
Storage Temp Range:	-40°C To +75°C
Operating Temp Range:	-40°C To +75°C

#### Mechanical Characteristics

Cold Bend Test:	-40°C Compliance Per UL 1581
Bulk Cable Weight:	49 lbs/1000ft
Max. Pull Tension:	25 lbs
Min. Bend Radius During Installation:	3.75 in
Min. Bend Radius/Minor Axis:	3.0 in

## Standards

NEC/(UL) Compliance:	N/A
ISO/IEC Compliance:	11801 ed 2.2 (2011) Class EA
Data Category:	Category 6A
ANSI Compliance:	S-116-732-2013 Category 6A, ANSI/NEMA WC-66 Category 6A
TIA/EIA Compliance:	ANSI/TIA 568-C.2 Category 6A
IEEE Compliance:	IEEE 802.3bt Type 1, Type 2, Type 3, Type 4
Other Specification:	Outdoor Use ANSI/ICEA S-56-434, Broadband Outdoor Use ANSI/ICEA S-99-689, Verified Channel/Category 6A

## Applicable Environmental and Other Programs

Environmental Space:	Outdoor
EU Directive 2000/53/EC (ELV):	Yes
EU Directive 2003/96/EC (BFR):	Yes
EU Directive 2011/65/EU (RoHS 2):	Yes
EU Directive 2012/19/EU (WEEE):	Yes
EU Directive 2015/863/EU (RoHS 2 amendment):	Yes
EU Directive Compliance:	Yes
EU CE Mark:	No
EU REACH SVHC Compliance (yyyy-mm-dd):	2017-07-10
EU RoHS Compliance Date (yyyy-mm-dd):	2016-03-02

## Suitability

Suitability - Aerial:	Yes - When supported by messenger wire
Suitability - Burial:	Yes - Engineered burial only
Suitability - Hazardous Locations:	No
Suitability - Indoor:	No
Suitability - Non-Halogenated:	No
Suitability - Oil Resistance:	No
Suitability - Outdoor:	Yes
Suitability - Sunlight Resistance:	Yes

## Flammability, LSOH, Toxicity Testing

UL voltage rating:	300 V RMS
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## Plenum/Non-Plenum

Plenum (Y/N):	No
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## Part Number

### Variants

Item #	Color	Put-Up Type	Length	UPC
OSP6AF 0101000	Black	Reel	1,000 ft	612825378839

## Product Notes

Notes:	Electrical values are expected performance based on cable testing and representative performance within a typical Belden system. Print Includes Descending Footage/Meter Markings from Max. Put-Up Length to 0. Not Suitable for Direct Burial. Belden recommends using an entrance demarcation point when transitioning inside buildings with gel-filled OSP cables due to the cable design containing gel specific for wet outdoor environments. The suggested transition point is the REVConnect core coupler, part number RVACPKUBK-S1.
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## History

Update and Revision:	Revision Number: 0.224 Revision Date: 09-08-2021
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