

## Ethernet Cable, Cat6A, Direct Burial, F/UTP

RoHS  
Compliant

Stock No.: CAT6A-3041D-FTP-B

### FEATURES

- CMX
- F/UTP
- 23 AWG
- Solid Copper



### Product Description

### Key Features

- Bandwidth tested up to 750 MHz
- Suitable for 1 Gigabit and 10 Gigabit Ethernet up to 328 ft
- In compliance with ANSI/TIA 568.2-E
- CMX jacket can withstand sunlight, dirt, snow, and moisture
- Supports Power over Ethernet: PoE/PoE+/PoE++ (IEEE 802.3af/at/bt) 4PPoE up to 100W
- cETLus Certified, RoHS-3 Compliant

### General Specifications

Attribute	Value
Terminated/Unterminated	Unterminated
Connector Type	RJ45
Cable Type	Ethernet
Length	1000ft Per Spool
Gauge	23 AWG
Conductor	Bare Copper
Shield/Unshielded	Shielded
Voltage Rating	300V
1.0 - 550MHz Impedance ( $\Omega$ )	100 $\pm$ 15
Maximum Operating Frequency	750MHz
Operating & Storage Temp.	-40°C to 75°C   -40°F to 167°F
Installation Temp.	-20°C to 75°C   -4°F to 167°F
Jacket Color	Black

## Product Drawing

### Technical Data

Insulation	PE
Average Thickness (mm)	0.278
Min Point Thickness (mm)	0.255
<b>Conductor Insulation Dia. (<math>\pm 0.02\text{mm}</math>)</b>	<b>1.14</b>
Twisted Pair Dia. ( $\pm 0.02\text{mm}$ )	2.28
Ripcord	Nylon
Spline	PE
Polyethylene Tape	Present
Shielding	F/UTP
Drain Wire- Solid Tinned Copper (mm)	0.40
Water Resistance	Jacket & Dry Tape

Conductor	Solid Bare Copper
Size	23AWG
Conductor Dia. ( $\pm 0.05\text{mm}$ )	0.585

### Standards Reference

UL-444 /  
cETLus

ANSI/TIA  
568.2-E

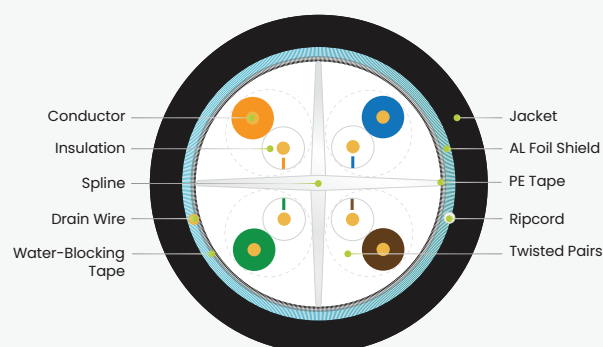
ISO/IEC  
11801

### Color of Pairs

Pair 1	Blue- White/Blue
Pair 2	Orange- White/Orange
Pair 3	Green- White/Green
Pair 4	Brown- White/Brown

### Cable Jacket

	LLDPE
Average Thickness (mm)	0.60
Min. Point Thickness (mm)	0.55
<b>Outer Diameter (<math>\pm 0.2\text{mm}</math>)</b>	<b>7.60</b>



### Electrical Characteristics

<b>PoE Certification</b>	PoE/PoE+/PoE++ 4PPoE
<b>Maximum PoE Wattage</b>	100W
<b>PoE Application Compatibility</b>	802.3af/at/bt Type 4
<b>TIA 568-2.D Cat6A Permanent Link +PoE</b>	CERTIFIED
<b>Maximum Application Speed @ 295ft</b>	10GBASE-T
<b>Nominal Velocity of Propagation (NVP)</b>	67.0
<b>Maximum Operating Voltage</b>	300V
<b>1.0 - 750MHz Impedance (<math>\Omega</math>)</b>	100 $\pm$ 15
<b>Maximum Operating Frequency</b>	750MHz
<b>1.0 - 750MHz Delay Skew (ns/100m)</b>	$\leq 45$
<b>Pair-to-Ground Capacitance Unbalance (pF/km)</b>	$\leq 3300$
<b>Max. Conductor DC Resistance 20°C (<math>\Omega/\text{km}</math>)</b>	68



**Mechanical & Environmental Operating Parameters**

Test Object	Jacket	Aging Condition (°C x hrs)	100 x 168
Test Material	LLDPE	After Tensile Strength (Mpa)	≥85% of unaged
Before- Tensile Strength (Mpa)	≥13.8	Aging Condition - Elongation (%)	≥50% of unaged
Aging- Elongation (%)	≥100	Cold Bend(-20 ± 2°C x 4hrs)	No Crack
Min. Bend Radius	5.5cm/2.00in	Operating & Storage Temp.	-40°C to 75°C   -40°F to 167°F
Max. Installation Tension	110N/25lb-ft	Installation Temp.	-20°C to 75°C   -4°F to 167°F

**Print Legend**

EASE CAT6A CMX FTP DIRECT BURIAL UV 75°C 4PR 23AWG c(ETL)us VERIFIED TO ANSI/TIA 568.2-E 750MHz

Dimensions: Millimeters (Inches)

**Part Number Table**

Part Number	Description
CAT6A-3041D-FTP-B	Ethernet Cable, Cat6A, Direct Burial, F/UTP

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## Test Summary: PASS

Length (ft), Limit 295	[Pair 4,5]	296
Prop. Delay (ns), Limit 498	[Pair 1,2]	485
Delay Skew (ns), Limit 44	[Pair 1,2]	36
Resistance (ohms), Limit 21.00	[Pair 7,8]	13.24
Resist. Unbal. (ohms), Limit 0.400	[Pair 7,8]	0.070
Resist. P2P Unbal. (ohms), Limit 0.450	[Pair 4,5-7,8]	0.189
Insertion Loss Margin (dB)	[Pair 1,2]	3.7
Frequency (MHz)	[Pair 1,2]	500.0
Limit (dB)	[Pair 1,2]	43.8

### Worst Case Margin Worst Case Value

PASS	MAIN	SR	MAIN	SR
Worst Pair	1,2-7,8	3,6-7,8	1,2-7,8	3,6-7,8
<b>NEXT (dB)</b>	4.1	7.7	4.1	7.7
Freq. (MHz)	455.0	498.0	455.0	498.0
Limit (dB)	28.0	26.7	28.0	26.7
Worst Pair	1,2	3,6	1,2	3,6
<b>PS NEXT (dB)</b>	6.3	8.3	6.4	8.3
Freq. (MHz)	455.0	499.0	456.0	499.0
Limit (dB)	25.2	23.8	25.1	23.8

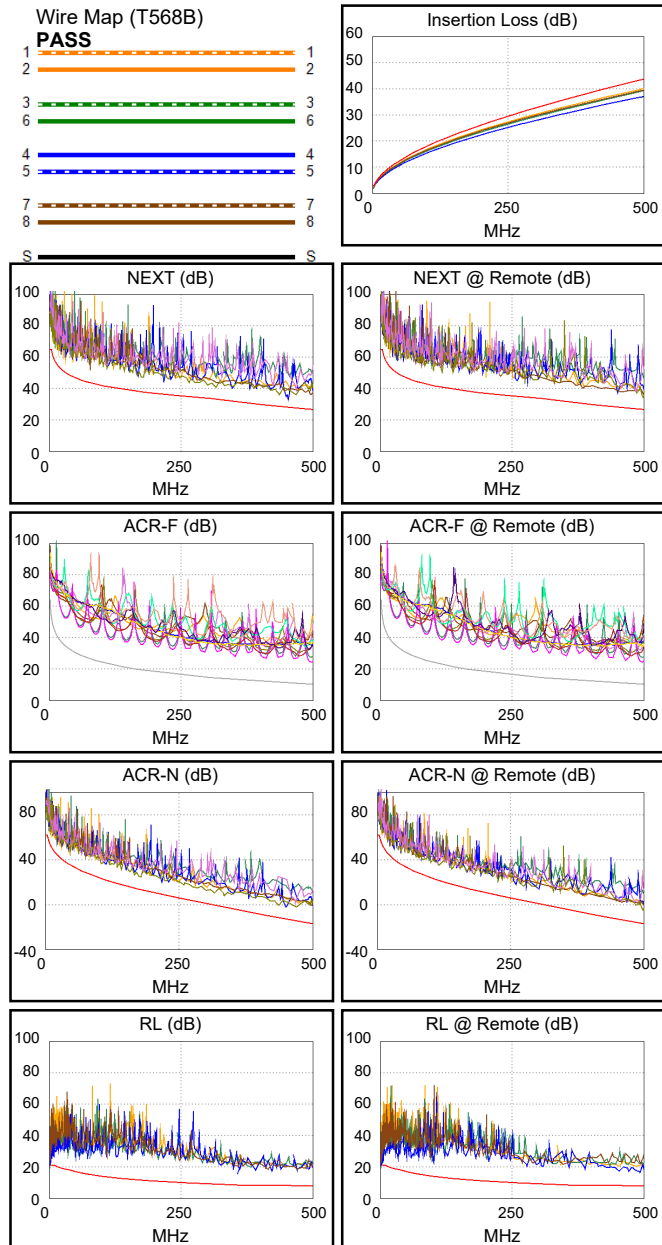
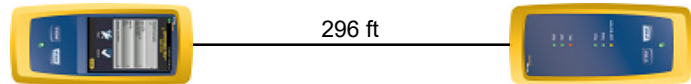
PASS	MAIN	SR	MAIN	SR
Worst Pair	4,5-1,2	4,5-1,2	4,5-1,2	4,5-1,2
<b>ACR-F (dB)</b>	14.0	14.0	14.0	14.0
Freq. (MHz)	497.0	497.0	497.0	497.0
Limit (dB)	10.3	10.3	10.3	10.3
Worst Pair	1,2	1,2	1,2	1,2
<b>PS ACR-F (dB)</b>	16.2	16.4	16.8	16.6
Freq. (MHz)	408.0	408.0	498.0	497.0
Limit (dB)	9.0	9.0	7.2	7.3

N/A	MAIN	SR	MAIN	SR
Worst Pair	1,2-7,8	1,2-7,8	1,2-7,8	3,6-7,8
<b>ACR-N (dB)</b>	8.1	9.1	8.2	11.9
Freq. (MHz)	455.0	30.9	456.0	498.0
Limit (dB)	-13.4	40.3	-13.5	-16.9
Worst Pair	1,2	1,2	1,2	3,6
<b>PS ACR-N (dB)</b>	9.7	10.2	9.7	12.7
Freq. (MHz)	456.0	30.9	456.0	499.0
Limit (dB)	-16.3	37.9	-16.3	-19.9

PASS	MAIN	SR	MAIN	SR
Worst Pair	4,5	4,5	4,5	4,5
<b>RL (dB)</b>	7.2	5.2	9.4	8.4
Freq. (MHz)	4.8	4.8	422.0	492.0
Limit (dB)	21.0	21.0	8.0	8.0

Compliant Network Standards:

10BASE-T	100BASE-TX	100BASE-T4
1000BASE-T	2.5GBASE-T	5GBASE-T
10GBASE-T	ATM-25	ATM-51
ATM-155	100VG-AnyLan	TR-4
TR-16 Active	TR-16 Passive	



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