



2413

Part Number: 2413

Enhanced Category 6 Nonbonded-Pair Cables

Product Description

CAT6+ (300 MHz), 4-Pair, U/UTP-Unshielded, Plenum-CMP, Premise Horizontal Cable, 23 AWG Solid Bare Copper Conductors, Dual FRPO/FEP Insulation, Tape Separator, Ripcord, Flamarrest® Jacket

Product Specifications

Technical Specifications

Product Description

Application

Suitable Applications:

Premise Horizontal Cable, Gigabit Ethernet, 100BaseTX, 100BaseVG ANYLAN, 155 ATM, 622 ATM, 250MHz Category 6

Classification

Construction and Dimensions

Conductor:

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

Conductor

Total Number of Conductors:

8

Insulation:

Material

Nominal Wall Thickness

FRPO/FEP - Flame Retardant Polyolefin/Fluorinated Ethylene Propylene

0.008 in

Insulation

Color Chart 1:

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

InnerShield

Cabling¹

Outershield 1:

Material

Unshielded

Outerjacket 1:

Material	Material Trade Name	Nominal Diameter	Min. Wall Thickness	Ripcord	Separator Material
LS PVC - Low Smoke Polyvinyl Chloride	Flamarrest®	0.23 mm	0.01 mm	Yes	Patented Dielectric Tape

OuterJacket¹

OuterJacket²

Part Number

Static Ground

Tracer

Electrical Characteristics

Conductor DCR:

Max. Conductor DCR	Max. DCR Unbalance
8.2 Ohm/100m	5 %

Capacitance:

Nominal Mutual Capacitance
15 pF/ft

General Electrical Parameters**Delay:**

Max. Delay Skew	Nominal Velocity of Propagation (VP)
45 ns/100m	72 ns/100m

High Freq:

Frequency [MHz]	Max. Insertion Loss (Attenuation)	Min. NEXT	Min. PSNEXT	Min. ACR	Min. PSACR	Min. ACRF (ELFEXT)	Min. PSACRF (PSELFEXT)	Min. RL (Return Loss)	Max./Min. Input Impedance (unFitted)	Max./Min. Fitted Impedance
1 MHz	2 db/100m	75.3 dB	73.3 dB	73.3 dB	71.3 dB	70.8 dB	67.8 dB	20 dB	100 ± 15 Ohm	100 ± 15 Ohm
4 MHz	3.7 db/100m	66.3 dB	64.3 dB	62.6 dB	60.6 dB	58.8 dB	55.8 dB	23 dB	100 ± 15 Ohm	100 ± 15 Ohm
8 MHz	5.2 db/100m	63.3 dB	61.3 dB	58.1 dB	56.1 dB	52.7 dB	49.7 dB	24.5 dB	100 ± 15 Ohm	100 ± 15 Ohm
10 MHz	5.8 db/100m	61.8 dB	59.8 dB	56 dB	54 dB	50.8 dB	47.8 dB	25 dB	100 ± 15 Ohm	100 ± 15 Ohm
16 MHz	7.4 db/100m	58.6 dB	56.6 dB	51.2 dB	49.2 dB	46.7 dB	43.7 dB	25 dB	100 ± 15 Ohm	100 ± 15 Ohm
20 MHz	8.3 db/100m	57.1 dB	55.1 dB	48.8 dB	46.8 dB	44.8 dB	41.8 dB	25 dB	100 ± 15 Ohm	100 ± 15 Ohm
25 MHz	9.3 db/100m	55.5 dB	53.5 dB	46.3 dB	44.3 dB	42.8 dB	39.8 dB	24.3 dB	100 ± 15 Ohm	100 ± 15 Ohm
31.25 MHz	10.4 db/100m	54 dB	52 dB	43.6 dB	41.6 dB	40.9 dB	37.9 dB	23.6 dB	100 ± 15 Ohm	100 ± 15 Ohm
62.5 MHz	15 db/100m	49.1 dB	47.1 dB	34.1 dB	32.1 dB	34.9 dB	31.9 dB	21.5 dB	100 ± 15 Ohm	100 ± 15 Ohm
100 MHz	19.3 db/100m	45.8 dB	43.8 dB	26.5 dB	24.5 dB	30.8 dB	27.8 dB	20.8 dB	100 ± 15 Ohm	100 ± 15 Ohm
155 MHz	24.5 db/100m	42.7 dB	40.7 dB	18.2 dB	16.2 dB	27 dB	24 dB	19.5 dB	100 ± 22 Ohm	100 ± 15 Ohm

200 MHz	28.3 db/100m	40.9 dB	38.9 dB	12.6 dB	10.6 dB	24.8 dB	21.8 dB	18.7 dB	100 ± 22 Ohm	100 ± 15 Ohm
250 MHz	32.1 db/100m	39.3 dB	37.3 dB	7.2 dB	5.2 dB	22.8 dB	19.8 dB	18 dB	100 ± 32 Ohm	100 ± 15 Ohm
300 MHz	35.6 db/100m	38.1 dB	36.1 dB	2.5 dB	-0.5 dB	21.3 dB	18.3 dB	17.5 dB	100 ± 32 Ohm	100 ± 15 Ohm
350 MHz	38.9 db/100m	37.1 dB	35.1 dB	-1.7 dB	-3.7 dB	19.9 dB	16.9 dB	17 dB		
400 MHz	42 db/100m	36.3 dB	34.3 dB	-5.7 dB	-7.7 dB	18.8 dB	15.8 dB	16.6 dB		
450 MHz	45 db/100m	35.5 dB	33.5 dB	-9.5 dB	-11.5 dB	17.7 dB	14.7 dB	16.2 dB		
500 MHz	47.9 db/100m	34.8 dB	32.8 dB	-13 dB	-15 dB	16.8 dB	13.8 dB	15.9 dB		
550 MHz	50.6 db/100m	34.2 dB	32.2 dB	-16.4 dB	-18.4 dB	16 dB	13 dB	15.6 dB		

Voltage:

UL Voltage Rating

300V RMS

Coupling Attenuation

Screening

Transfer Impedance

Use

Suitability - Indoor:

Yes

Suitability - Outdoor:

No

Max Recommended Pulling Tension:

40 lbs

Material

Safety

C(UL) Flammability:

FT6

CSA Flammability:

FT6

UL Flammability:

NFPA 262 Plenum Flame Test (UL910)

Temperature Range

Installation Temp Range:	+5°C To +50 °C
Operating Temp Range:	0°C To +75°C
Storage Temp Range:	-20°C To +75 °C

Mechanical Characteristics

Bend Radius

Min Bend Radius/Minor Axis:	0.9 in
Min Bend Radius/Installation:	2.25 in

Crush Resistance

Connectors

Stripping Performance

EU Directive

EU Directive Compliance:	EU Directive 2003/11/EC (BFR)
EU CE Mark:	Yes

Part Number

Plenum (Y/N):	Yes
Non-Plenum Number:	2412

Applicable Patents

Country:	US
Patent:	7977575

Standards

ISO/IEC Compliance:	11801 ed 2.1 (2008) Class E
Telecommunications Standards:	ANSI/TIA/EIA 568 C.2 Category 6
CA Prop 65 (CJ for Wire & Cable):	Yes
CEC/C(UL) Specification:	CMP

MII Order #39 (China RoHS):	Yes
NEC/(UL) Specification:	CMP

Contact Information

PHONE_NUM:	1-800-Belden1
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History

Usage

Put Ups and Colors

Notes:	Jacket sequentially marked at 2 ft./1m intervals. Third party verified to ANSI/TIA-568-C.2, Category 6. Values above 300 MHz are for Engineering Information Only.
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