



**2412D**

Part Number: 2412D

Enhanced Category 6 Nonbonded-Pair Cables

**Product Description**

CAT6+ (300MHz), 4-Pair, U/UTP Unshielded, Premise Horizontal Cable, 23 AWG Solid Bare Copper Conductors, Polyolefin Insulation, PVC CMR rated jacket

**Product Specifications**

**Technical Specifications**

Application 1:	Horizontal and building backbone cable
Application 2:	Support current and future Category 6 and 5e applications, such as: 1000Base - T (Gigabit Ethernet), 100 Base - T, 10 Base - T, FDDI, ATM

**Construction and Dimensions**

**Conductor:**

Element	AWG	Stranding	Material	No. of Pairs
Individual pair	24	Solid	Bare copper	4
Min Elongation at Breakof Conductors:		10 %		

**Insulation:**

Element	Type	Material	Nominal Diameter
Individual pair	Dielectric	Polyethylene	1 mm
Min Elongation at Breakof Insulation:		100 %	

**Color Chart 1:**

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

#### Outerjacket 1:

Material	Color	Nominal Diameter	Diameter +/- Tolerance	Ripcord
PVC	Grey, Blue, yellow, Green, Black and White	5.5 mm	0.3 mm	Yes
<b>Min Elongation at Break of Jacket:</b>		100 MPa		
<b>Min Tensile Strength of Jacket:</b>		17.2 lbs		

## Electrical Characteristics

#### Conductor DCR:

Max. Conductor DCR	Max DCR Unbalanced Between Pairs	Max. DCR Unbalanced Within Pair
93.8 Ohm/100m	4 %	2 Ohm

#### Capacitance:

Max. Capacitance Unbalanced	Max. Mutual Capacitance
1,600 pF/m	56 pF/m
<b>Min Insulation Resistance:</b>	5000 mOhm/1000ft

#### Impedance:

Nominal Characteristic Impedance
100 mOhm/ft

#### Delay:

Max. Delay Skew	Nominal Velocity of Propagation (VP)
25 ns/100m	70 ns/100m

#### High Freq:

Element	Frequency [MHz]	Max. Insertion Loss (Attenuation)	Min. NEXT	Min. PSNEXT	Min. ACR	Min. PSACR	Min. ACRF (ELFEXT)	Min. PSACRF (PSELFEXT)	Min. RL (Return Loss)	Min. TCL	Min. ELTCTL
	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	40 dB	35 dB
	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	40 dB	23 dB
	10 MHz	5.8 db/100m	61.8 dB	59.8 dB	56 dB	54 dB	50.8 dB	47.8 dB	25 dB	40 dB	15 dB
	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	38 dB	10.9 dB
	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	37 dB	9 dB
	31.2 MHz	10.4 db/100m	54 dB	52 dB	43.6 dB	41.6 dB	40.9 dB	37.9 dB	23.6 dB	35.1 dB	5.1 dB
	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	32.6 dB	
	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	30 dB	
	200 MHz	28.3 db/100m	40.9 dB	38.9 dB	12.6 dB	10.6 dB	22.8 dB	21.8 dB	19.5 dB	27 dB	
	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	26.5 dB	
	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		

): Limits below 4MHz are for information only.

### Current:

#### Max. Recommended Current

1.5 A

### Voltage:

#### Voltage Rating

300 dB

### Use

Burning Load:

360 kJ/m

Max Recommended Pulling Tension:

80 lbs

### Safety

CSA Flammability:	UL 1666 FT 4
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## Temperature Range

Installation Temp Range:	0 to +50 °C
Operating Temp Range:	-20 to +75 °C

## Mechanical Characteristics

Min Bend Radius During Installation:	44 mm
Min Bend Radius During Operation:	22 mm

## Part Number

## Standards

ISO/IEC Compliance:	ISO/IEC 11801 2nd edition (2002) and ISO/IEC 11801 Amendment 2 (2010)
ANSI Compliance:	ANSI/TIA/EIA 568-B.2-1 (2002)

## History

Revision Date:	41312
Revision Number:	3

## Product Variants

Part Number	Color	Put-Up Type	Length
2412D.02A305	RED	Reel-in-Box	305 m
2412D.04305	YELLOW	Reel	305 m
2412D.04A305	YELLOW	Reel-in-Box	305 m
2412D.05A305	GREEN, RAL 6018	Reel-in-Box	305 m
2412D.06305	BLUE	Reel	305 m
2412D.06500	BLUE	Reel	500 m
2412D.06762	BLUE	Reel	762 m
2412D.06A305	BLUE	Reel-in-Box	305 m
2412D.06B100	BLUE	Reel	
2412D.08305	GRAY	Reel	305 m
2412D.09305	WHITE	Reel	305 m
2412D.09A305	WHITE	Reel-in-Box	305 m
2412D.10305	BLACK	Reel	305 m

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