



**Part Number:** 1583EPE

Category 5e Nonbonded-Pair Cable

## Product Description

CAT5e (100MHz), 4-Pair, U/UTP Unshielded, Premise Horizontal Cable, 24 AWG solid bare copper conductors, Polyethylene insulation, PE jacket, RJ-45 compatible

## Technical Specifications

<b>Suitable Applications:</b>	Horizontal and building backbone cable; Support current and future Category 5e applications, such as: 1000Base-T (Gigabit Ethernet), 100 Base-T, 10 Base-T, FDDI, ATM
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## Construction and Dimensions

### Conductor:

Element	AWG	Stranding	Material	No. of Pairs
Individual pair	24	Solid	Bare copper	4
<b>Total Number of Conductors:</b>			8	
<b>Total Number of Pairs:</b>			4	
<b>Min Elongation at Breakof Conductors:</b>			10 %	

### Insulation:

Element	Type	Material	Nominal Diameter
Individual pair	Dielectric	Polyethylene	0.9 mm
<b>Min Elongation at Breakof Insulation:</b>			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	Nominal Diameter	Diameter +/- Tolerance
Polyethylene	5.1 mm	0.3 mm

Min Elongation at Breakof Jacket:	100 %
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Min Tensile Strength of Jacket:	9 MPa
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## Electrical Characteristics

### Conductor DCR:

Max. Conductor DCR	Max DCR Unbalanced Between Pairs [%]	Max. DCR Unbalanced Within Pair [%]
95 Ohm/km	4 %	2 Ohm

### Capacitance:

Max. Capacitance Unbalance	Max. Mutual Capacitance
1,600 pF/m	56 pF/m

Min Insulation Resistance:	5000 MOhm*km
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### Impedance:

Nominal Characteristic Impedance
100 Ohm

### Delay:

Max. Delay Skew	Min. Velocity of Propagation
40 ns/100m	60 %

### High Freq:

Element	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. TCL [dB]	Min. ELTCTL [dB]
	1 MHz	2.1 dB/100m	65.3 dB	62.3 dB	63.2 dB	60.2 dB	64 dB	61 dB	20 dB	40 dB	35 dB
	4 MHz	4 dB/100m	56.3 dB	53.3 dB	52.32 dB	49.3 dB	52 dB	49 dB	23 dB	34 dB	23 dB
	10 MHz	6.3 dB/100m	50.3 dB	47.3 dB	44 dB	41 dB	44 dB	41 dB	25 dB	30 dB	15 dB
	16 MHz	8 dB/100m	47.2 dB	44.2 dB	39.2 dB	36.2 dB	39.9 dB	36.9 dB	25 dB	28 dB	10.9 dB
	20 MHz	9 dB/100m	45.8 dB	42.8 dB	36.8 dB	33.8 dB	38 dB	35 dB	25 dB	27 dB	9 dB
	31.25 MHz	11.4 dB/100m	42.9 dB	39.9 dB	31.5 dB	28.5 dB	34.1 dB	31.5 dB	23.6 dB	25.1 dB	5.5 dB
	62.5 MHz	16.5 dB/100m	38.4 dB	35.4 dB	21.9 dB	18.9 dB	28.1 dB	25.1 dB	21.5 dB	22 dB	
	100 MHz	21.3 dB/100m	35.3 dB	32.3 dB	14 dB	11 dB	24 dB	21 dB	20.1 dB	20 dB	

); Limits below 4MHz are for information only.

## Current:

### Max. Recommended Current [A]

1.5 A

## Voltage:

### Voltage Rating [V]

72 V

## Use

Burning Load:	520 kJ/m
UV Resistance:	Blackjacket
Max Recommended Pulling Tension:	65 N

## Temperature Range

Installation Temp Range:	0 to +50 °C
Operating Temp Range:	-30 to +60 °C

## Mechanical Characteristics

Min Bend Radius During Installation:	40 mm
Min Bend Radius During Operation:	20 mm

## 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 Number:

3

## Product Variants

Part Number	Color	Put-Up Type	Length
1583EPE.001000	BLACK	Reel	1000 m
1583EPE	BLACK	Reel	100 m
1583EPE	BLACK	Reel	250 m
1583EPE	BLACK	Reel	305 m
1583EPE.00500	BLACK	Reel	500 m
1583EPE	BLACK	UnReel	305 m
1583EPE			

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