Part Number: BE43886

ECE R118 Approved Ethernet Cat 5e 1Gb/s

Product Description

ECE R118 Approved Ethernet Cat 5e, 1Gb/s, 4 Pair, AWG 26(7), Overal Foil, No Halogen Jacket, Approved for Bus and Coach Applications

Technical Specifications

Product Overview

Environmental Space:	Indoor
Suitable Applications:	Work area patch cable; Support current and future Category 5e applications, such as: 1000Base - T (Gigabit Ethernet), 100 Base - T, 10 Base - T, FDDI, ATM

Physical Characteristics (Overall)

Conductor

Element	AWG	Stranding	Material	No. of Pairs
Individual pair	26	7x34	BC - Bare Copper	4

Conductor Count:	8
Total Number of Pairs:	4

Insulation

Element	Type	Material	Nominal Diameter
Individual pair	Dielectric	Polyethylene	0.95 mm

Bonded-Pair:	No

Color Chart

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

Outer Shield Material

Type	Material	Drainwire Material	Drainwire AWG	Drainwire Position
Tape	Aluminum/Polyester	Stranded tinned copper	26 (7xAWG34)	Under foil

Outer Jacket Material

Material	Nominal Diameter	Diameter +/- Tolerance	Max. Diameter	Min. Wall Thickness	Nominal Wall Thickness
LSZH / FRNC	5.4 mm	0.3 mm	5.9 mm	0.4 mm	0.45 mm

Construction and Dimensions

Min Elongation at Breakof Conductors:	10 %
Min Elongation at Breakof Insulation:	100 %

Cabling

Description
4 pairs twisted together

Min Elongation at Breakof Jacket:	100 %

Min Tensile Strength of Jacket:	9 MPa

Electrical Characteristics

Conductor DCR

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

Capacitance

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

Impedance

Nominal Characteristic Impedance
100 Ohm

Delay

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

High Freq

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	3.2 dB/100m	65.3 dB	62.3 dB	62.1 dB	59.1 dB	64 dB	61 dB	20 dB	40 dB	35 dB
4 MHz	6 dB/100m	56.3 dB	53.3 dB	50.3 dB	47.3 dB	52 dB	49 dB	23 dB	34 dB	23 dB
10 MHz	9.5 dB/100m	50.3 dB	47.3 dB	40.8 dB	37.8 dB	44 dB	41 dB	25 dB	30 dB	15 dB
16 MHz	12.1 dB/100m	47.2 dB	44.2 dB	35.2 dB	32.2 dB	39.9 dB	36.9 dB	25 dB	28 dB	10.9 dB
20 MHz	13.5 dB/100m	45.8 dB	42.8 dB	32.2 dB	29.2 dB	38 dB	35 dB	25 dB	27 dB	9 dB
31.25 MHz	17.1 dB/100m	42.9 dB	39.9 dB	25.8 dB	22.8 dB	34.1 dB	31.5 dB	23.3 dB	25.1 dB	5.5 dB
62.5 MHz	24.8 dB/100m	38.4 dB	35.4 dB	13.6 dB	10.6 dB	28.1 dB	25.1 dB	20.7 dB	22 dB	
100 MHz	32 dB/100m	35.3 dB	32.3 dB	3.3 dB	0.3 dB	24 dB	21 dB	19 dB	20 dB	

High Freq Table Note:	Limits below 4 MHz are for information only. Reference standard: ISO/IEC 61156-5 ed. 2.0 (2009)
Coupling Attenuation Class:	Type II
Segregation class according EN50174-2:	a

Transfer Impedance

Frequency [MHz]	Description	Transfer Impedance
1 Mhz	Grade 2	Max. 50 mOhm/m
10 Mhz		Max. 100 mOhm/m
30 Mhz		Max. 200 mOhm/m
100 Mhz		Max. 1000 mOhm/m

Current

Max. Recommended Current [A]
1.5 A

Voltage

Voltage Rating [V]
72 V

Temperature Range

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

Mechanical Characteristics

Bulk Cable Weight:	31 kg/km
Max Recommended Pulling Tension:	45 N
Min Bend Radius During Installation:	42 mm
Min Bend Radius During Operation:	21 mm

Standards

ISO/IEC Compliance:	ISO/IEC 11801 Ed. 2.2:2002/A2:2010/C1:2011
CPR Euroclass:	Eca

CENELEC Compliance:	EN 50173-1 Ed. 3:2011
ANSI Compliance:	ANSI/TIA 568.2-D (2018)

Applicable Environmental and Other Programs

EU RoHS Compliance Date (yyyy-mm-dd):	2017-03-31

Flammability, LS0H, Toxicity Testing

ISO/IEC Flammability:	IEC 60332-1-2
Other Flammability:	ECE R118
Burning Load:	395 kJ/m
Amount of Halogen acc. to IEC 60754-1 & EN50267-1:	Zero

Part Number

Variants

Item #	Color	Length
BE43886.00500	Gray	500 m

Patent:	https://www.belden.com/resources/patents

History

Update and Revision:	Revision Number: 0.62 Revision Date: 09-17-2019