



Part Number: 1212F

CAT5e+ Horizontal, 4pr, F/UTP, PVC Jkt, CMR

Product Description

CAT5e+ (350MHz), 4-Pair, F/UTP-foil shielded, Riser-CMR, Premise Horizontal cable, 24 AWG solid bare copper conductors, polyolefin insulation, overall Beldfoil® shield, PVC jacket, RJ-45 compatible

Technical Specifications

Product Overview

Environmental Space:	Riser
Suitable Applications:	Premise Horizontal Cable, Gigabit Ethernet, HDBaseT, 100BaseTX, 100BaseVG ANYLAN, 155ATM, 622ATM, NTSC/PAL Component or Composite Video, AES/EBU, Digital Video, RS-422, Noisy Environments, 100 MHz Category 5e

Physical Characteristics (Overall)

Conductor

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

Conductor Count:	8
Total Number of Pairs:	4
Conductor Size:	24 AWG

Insulation

Material
PO - Polyolefin

Bonded-Pair:	N/A
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Color Chart

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

Outer Shield Material

Type	Material	Material Trade Name	Coverage [%]	Drainwire Material	Drainwire AWG	Drainwire Construction n x D
Tape	Aluminum/Polyester	Beldfoil®	100 %	TC - Tinned Copper	24	7x32 mm

Outer Jacket Material

Material	Nominal Diameter	Ripcord
PVC - Polyvinyl Chloride	0.260 in	No

Electrical Characteristics

Conductor DCR

Max. Conductor DCR	Max. DCR Unbalance
93.8 Ohm/km	3 %

Capacitance

Max. Capacitance Unbalance	Nom.Mutual Capacitance
330 pF/100m	15 pF/ft

Delay

Frequency [MHz]	Max. Delay	Max. Delay Skew	Nominal Velocity of Propagation (VP) [%]
100 MHz	537.6 ns/100m	45 ns/100m	70 %

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]	Max./Min. Input Impedance (unFitted)	Max./Min. Fitted Impedance
1 MHz	2.0 dB/100m	70.3 dB	68.3 dB	70.3 dB	66.3 dB	67.8 dB	64.8 dB	20.0 dB	100 ± 15 Ohm	100 ± 15 Ohm
4 MHz	4.0 dB/100m	61.3 dB	59.3 dB	59.3 dB	55.3 dB	55.8 dB	52.8 dB	23.0 dB	100 ± 15 Ohm	100 ± 15 Ohm
8 MHz	5.7 dB/100m	56.8 dB	54.8 dB	53.1 dB	49.1 dB	49.7 dB	46.7 dB	24.5 dB	100 ± 15 Ohm	100 ± 15 Ohm
10 MHz	6.4 dB/100m	55.3 dB	53.3 dB	50.9 dB	46.9 dB	47.8 dB	44.8 dB	25.0 dB	100 ± 15 Ohm	100 ± 15 Ohm
16 MHz	8.1 dB/100m	52.2 dB	50.2 dB	46.1 dB	42.1 dB	43.7 dB	40.7 dB	25.0 dB	100 ± 15 Ohm	100 ± 15 Ohm
20 MHz	9.1 dB/100m	50.8 dB	48.8 dB	43.7 dB	39.7 dB	41.8 dB	38.8 dB	25.0 dB	100 ± 15 Ohm	100 ± 15 Ohm
25 MHz	10.2 dB/100m	49.3 dB	47.3 dB	41.1 dB	37.1 dB	39.8 dB	36.8 dB	24.3 dB	100 ± 15 Ohm	100 ± 15 Ohm
31.25 MHz	11.4 dB/100m	47.9 dB	45.9 dB	38.5 dB	34.5 dB	37.9 dB	34.9 dB	23.6 dB	100 ± 15 Ohm	100 ± 15 Ohm
62.5 MHz	16.4 dB/100m	43.4 dB	41.4 dB	29.0 dB	25.0 dB	31.9 dB	28.9 dB	21.5 dB	100 ± 15 Ohm	100 ± 15 Ohm
100 MHz	21.0 dB/100m	40.3 dB	38.3 dB	21.3 dB	17.3 dB	27.8 dB	24.8 dB	20.1 dB	100 ± 15 Ohm	100 ± 15 Ohm
155 MHz	26.6 dB/100m	37.4 dB	35.4 dB	12.8 dB	8.9 dB	24.0 dB	21.0 dB	18.8 dB	100 ± 22 Ohm	100 ± 15 Ohm
200 MHz	30.5 dB/100m	35.8 dB	33.8 dB	7.3 dB	3.3 dB	21.8 dB	18.8 dB	18.0 dB	100 ± 22 Ohm	100 ± 15 Ohm
250 MHz	34.4 dB/100m	34.3 dB	32.3 dB	1.9 dB		19.8 dB	16.8 dB	17.3 dB	100 ± 32 Ohm	100 ± 15 Ohm
300 MHz	38.0 dB/100m	33.1 dB	28.2 dB			18.2 dB	15.2 dB	16.8 dB	100 ± 32 Ohm	100 ± 15 Ohm
350 MHz	41.4 dB/100m	32.1 dB	27.2 dB			16.9 dB	13.9 dB	16.3 dB	100 ± 32 Ohm	100 ± 15 Ohm
400 MHz	44.6 dB/100m	31.3 dB	26.3 dB					15.9 dB		
450 MHz	47.6 dB/100m	30.5 dB	25.6 dB					15.5 dB		

Voltage

UL Voltage Rating
300 V RMS

Temperature Range

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

Mechanical Characteristics

Bulk Cable Weight:	30 lbs/1000ft
Max Recommended Pulling Tension:	25 lbs
Min Bend Radius/Minor Axis:	2.25 in
Min Bend Radius/Installation:	2.75 in

Standards

NEC/(UL) Specification:	CMR
CEC/C(UL) Specification:	CMR
ISO/IEC Compliance:	11801 ed 2.2 (2011) Class D
CPR Euroclass:	Eca
Data Category:	Category 5e
ANSI Compliance:	S-90-661-2012 Category 5e, ANSI/NEMA WC-63.1 Category 5e
Telecommunications Standards:	ANSI/TIA-568-C.2 Category 5e
IEEE Specification:	IEEE 802.3bt Type 1, Type 2, Type 3
Third Party Performance Verification:	Category 5e

Applicable Environmental and Other Programs

EU Directive 2000/53/EC (ELV):	Yes
EU Directive 2002/96/EC (WEEE):	Yes
EU Directive 2003/11/EC (BFR):	Yes
EU Directive 2003/96/EC (BFR):	Yes

EU Directive 2011/65/EU (ROHS II):	Yes
EU Directive 2012/19/EU (WEEE):	Yes
EU Directive 2015/863/EU:	Yes
EU Directive Compliance:	Yes
EU CE Mark:	Yes
EU REACH SVHC Compliance (yyyy-mm-dd):	2017-07-10
EU RoHS Compliance Date (yyyy-mm-dd):	2011-12-09
CA Prop 65 (CJ for Wire & Cable):	Yes
MII Order #39 (China RoHS):	Yes

Suitability

Suitability - Aerial:	No
Suitability - Burial:	No
Suitability - Hazardous Locations:	No
Suitability - Indoor:	Yes
Suitability - Non-Halogenated:	No
Suitability - Oil Resistance:	No
Suitability - Outdoor:	No
Suitability - Sunlight Resistance:	No

Flammability, LS0H, Toxicity Testing

UL Flammability:	UL 1666 Riser
UL voltage rating:	300 V RMS

Plenum/Non-Plenum

Plenum (Y/N):	No
Plenum Number:	1213F

Part Number

Variants

Item #	Color	Footnote
1212F 0101000	Black	
1212F 010A1000	Black	
1212F 0061000	Blue	
1212F 006A1000	Blue	
1212F 006A500	Blue	C
1212F 0081000	Gray	
1212F 008A1000	Gray	
1212F 0051000	Green	
1212F 005A1000	Green	
1212F 0031000	Orange	
1212F 003A1000	Orange	
1212F 0021000	Red	
1212F 002A1000	Red	
1212F 0091000	White	
1212F 009A1000	White	
1212F 009A500	White	C
1212F 0041000	Yellow	
1212F 004A1000	Yellow	

Footnote:	C - CRATE REEL PUT-UP.
Patent:	https://www.belden.com/resources/patents

Product Notes

Notes:	Values above 350 MHz are for Engineering Information Only. Shield is Bonded to Jacket Inner Wall for Electrical Stability. Print Includes Descending Footage/Meter Markings from Max. Put-Up Length to 0.
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