



Part Number: 10GXS33

Category 6A Enhanced (625MHz), 4 Bonded-Pairs, U/UTP, CMP

Product Description

Category 6A Enhanced (625MHz), 4 Bonded-Pairs, U/UTP, Plenum-CMP, Premise Horizontal Cable, 23 AWG Solid Bare Copper Conductors, FEP Teflon® Insulation, Patented EquiSpline™ & EquiBlock™ Technologies, Ripcord, Flamarrest® LS-PVC Jacket, Sequential Markings at 2 Foot/1 Meter Intervals.

Technical Specifications

Product Overview

Suitable Applications:	Premise Horizontal Cable, 10 Gigabit Ethernet, Wireless, Wi-Fi, 100Base TX, 100Base VG ANYLAN, 155ATM, 622ATM, NTSC/PAL Component or Composite Video, AES/EBU Digital Audio AES51, RS-422, Noisy Environments, PoE, PoE Plus
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Physical Characteristics (Overall)

Conductor

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

Conductor Count:	8
Total Number of Pairs:	4

Insulation

Material
FEP - Fluorinated Ethylene Propylene

Bonded-Pair:	Yes
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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 Jacket Material

Material	Material Trade Name	Nominal Diameter	Ripcord
LS PVC - Low Smoke Polyvinyl Chloride	Flamarrest®	0.265 in	Yes

Electrical Characteristics

Conductor DCR

Max. Conductor DCR	Max. DCR Unbalance	Max DCR Unbalanced Between Pairs [%]
75 Ohm/km	3 %	5 %

Capacitance

Max. Capacitance Unbalance	Nom.Mutual Capacitance
90 pF/100m	17 pF/ft

Delay

Frequency [MHz]	Max. Delay	Max. Delay Skew	Nominal Velocity of Propagation (VP) [%]
100 MHz	537.6 ns/100m	45 ns/100m	69 %

High Freq

Frequency [MHz]	Max. Insertion Loss (Attenuation)	Min. PSNEXT [dB]	Min. PSACR [dB]	Min. PSACRF (PSELFEXT) [dB]	Min. RL (Return Loss) [dB]	Max./Min. Input Impedance (unFitted)	Max./Min. Fitted Impedance	Min. PSANEXT	Min. PSAACRF	Min. TCL [dB]	Min. ELTCTL [dB]
1 MHz	2.1 dB/100m	75.3 dB	73.2 dB	79.8 dB	20.0 dB	100 ± 15 Ohm	105 ± 10 Ohm	75.0 dB	77.0 dB	40.0 dB	43.0 dB
4 MHz	3.8 dB/100m	66.3 dB	62.5 dB	67.8 dB	23.0 dB	100 ± 15 Ohm	100 ± 15 Ohm	75.0 dB	76.2 dB	40.0 dB	41.0 dB
8 MHz	5.3 dB/100m	61.8 dB	56.5 dB	61.7 dB	24.5 dB	100 ± 15 Ohm	100 ± 15 Ohm	75.0 dB	70.1 dB	40.0 dB	24.9 dB
10 MHz	5.9 dB/100m	60.3 dB	54.4 dB	59.8 dB	25.0 dB	100 ± 15 Ohm	100 ± 15 Ohm	75.0 dB	68.2 dB	40.0 dB	23.0 dB
16 MHz	7.4 dB/100m	57.2 dB	49.8 dB	55.7 dB	25.0 dB	100 ± 15 Ohm	100 ± 15 Ohm	75.0 dB	64.1 dB	38.0 dB	18.9 dB
20 MHz	8.3 dB/100m	55.8 dB	47.4 dB	53.8 dB	25.0 dB	100 ± 15 Ohm	100 ± 15 Ohm	75.0 dB	62.2 dB	37.0 dB	17.0 dB
25 MHz	9.3 dB/100m	54.3 dB	45.0 dB	51.8 dB	24.3 dB	100 ± 15 Ohm	100 ± 15 Ohm	75.0 dB	60.2 dB	36.0 dB	15.0 dB
31.25 MHz	10.4 dB/100m	52.9 dB	42.5 dB	49.9 dB	23.6 dB	100 ± 15 Ohm	100 ± 10 Ohm	75.0 dB	58.3 dB	35.1 dB	13.1 dB
62.5 MHz	14.8 dB/100m	48.4 dB	33.6 dB	43.9 dB	21.5 dB	100 ± 15 Ohm	100 ± 10 Ohm	73.6 dB	52.3 dB	32.0 dB	
100 MHz	18.9 dB/100m	45.3 dB	26.4 dB	39.8 dB	20.1 dB	100 ± 15 Ohm	100 ± 10 Ohm	70.5 dB	48.2 dB	30.0 dB	
200 MHz	27.0 dB/100m	40.8 dB	13.8 dB	33.8 dB	18.9 dB	100 ± 22 Ohm	100 ± 10 Ohm	66.0 dB	42.2 dB	27.0 dB	
250 MHz	30.4 dB/100m	39.3 dB	9.0 dB	31.8 dB	17.3 dB	100 ± 32 Ohm	100 ± 10 Ohm	64.5 dB	40.2 dB	26.0 dB	
300 MHz	33.5 dB/100m	38.1 dB	4.6 dB	30.3 dB	16.8 dB	100 ± 32 Ohm	100 ± 10 Ohm	63.3 dB	38.7 dB	25.2 dB	
350 MHz	36.3 dB/100m	37.1 dB	0.8 dB	28.9 dB	16.3 dB	100 ± 32 Ohm	100 ± 10 Ohm	62.3 dB	37.3 dB	24.6 dB	
400 MHz	39.0 dB/100m	36.3 dB		27.8 dB	15.9 dB	100 ± 32 Ohm	100 ± 10 Ohm	61.5 dB	36.2 dB	24.0 dB	
450 MHz	41.5 dB/100m	35.5 dB		26.7 dB	15.5 dB	100 ± 32 Ohm	100 ± 10 Ohm	60.7 dB	35.1 dB	23.5 dB	
500 MHz	43.9 dB/100m	34.8 dB		25.8 dB	15.2 dB	100 ± 32 Ohm	100 ± 10 Ohm	60.0 dB	34.2 dB	23.0 dB	
550 MHz	46.2 dB/100m	33.2 dB		25.0 dB	14.9 dB	100 ± 32 Ohm	100 ± 10 Ohm	59.4 dB	33.4 dB		
600 MHz	48.4 dB/100m	32.6 dB		24.2 dB	14.7 dB	100 ± 32 Ohm	100 ± 10 Ohm	58.8 dB	32.6 dB		
625 MHz	49.5 dB/100m	32.4 dB		23.9 dB	14.5 dB	100 ± 32 Ohm	100 ± 10 Ohm	58.6 dB	32.3 dB		
750 MHz	54.7 dB/100m	32.2 dB		22.3 dB	14.0 dB	100 ± 32 Ohm	100 ± 10 Ohm	57.4 dB	30.7 dB		
860 MHz	58.9 dB/100m	31.3 dB		21.1 dB	13.6 dB	100 ± 32 Ohm	100 ± 10 Ohm	56.5 dB	29.5 dB		

Segregation class according EN50174-2:	a
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Voltage

UL Voltage Rating
300 V RMS

Temperature Range

Installation Temp Range:	0°C To +50°C
UL Temp Rating:	105°C
Storage Temp Range:	-20°C To +75°C
Operating Temp Range:	-20°C To +75°C

Mechanical Characteristics

Bulk Cable Weight:	38 lbs/1000ft
Max Recommended Pulling Tension:	40 lbs
Min Bend Radius During Installation:	2.5 in
Min Bend Radius/Minor Axis:	0.5 in

Standards

NEC/(UL) Specification:	CMP
CEC/C(UL) Specification:	CMP
ISO/IEC Compliance:	11801 ed 2.2 (2011) Class EA
Data Category:	Category 6A
ANSI Compliance:	S-116-732-2013 Category 6A, ANSI/NEMA WC-66 Category 6A
Telecommunications Standards:	ANSI/TIA-568-C.2 Category 6A
IEEE Specification:	IEEE 802.3bt Type 1, Type 2, Type 3, Type 4
Other Specification:	Verified Channel/Category 6A
Other Standards:	C(UL)US CMP 105C OR (UL) CMP-LP (0.7A) OR CL3P-LP (0.7A)

Applicable Environmental and Other Programs

Environmental Space:	Plenum
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):	2015-12-31
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, LSOH, Toxicity Testing

UL Flammability:	NFPA 262 Plenum (UL 910)
CSA Flammability:	FT6
UL voltage rating:	300 V RMS

Plenum/Non-Plenum

Plenum (Y/N):	Yes
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Part Number

Non-Plenum Number:	10GXS12 (Nonbonded)/10GXS32
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Variants

Item #	Color	UPC
10GXS33 0101000	Black	612825377238
10GXS33010A1000	Black	612825377207
10GXS33 D151000	Blue	612825377276
10GXS33D15A1000	Blue	612825377122
10GXS33 0081000	Gray	612825377221
10GXS33008A1000	Gray	612825377184
10GXS33009A1000	Gray	612825377191
10GXS33 0051000	Green	612825377283
10GXS33005A1000	Green	612825377160
10GXS33 0031000	Orange	612825373322
10GXS33003A1000	Orange	612825377146
10GXS33 0021000	Red	612825373308
10GXS33002A1000	Red	612825377139
10GXS33 0071000	Violet	612825377290
10GXS33007A1000	Violet	612825377177
10GXS33 0091000	White	612825373315
10GXS33 0041000	Yellow	612825377214
10GXS33004A1000	Yellow	612825377153

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

Notes:	Values above 625 MHz are for Engineering Information Only. Print Includes Descending Footage/Meter Markings from Max. Put-Up Length to 0.
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Update and Revision:	Revision Number: 0.236 Revision Date: 08-22-2019
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