BELDEN
SENDING ALL THE RIGHT SIGNALS



Part Number: 10GX53F

CAT6A (625MHz), 4 Unbonded Pairs, F/UTP-Foil Shielded, CMP

Product Description

CAT6A (625MHz), 4 Unbonded Pairs, F/UTP-Foil Shielded, Plenum-CMP, Premise Horizontal Cable, 23 AWG Solid Bare Copper Conductors, FEP Insulation, Patented EquiSpline™, Overall Foil Screen with Drain Wire, Ripcord, Flamarrest® Jacket

Technical Specifications

Product Overview

Suitable Applications:	Premise Horizontal Cable, 10 Gigabit Ethernet, 100BaseTX, 100BaseVG ANYLAN, 155ATM, 622ATM, NTSC/PAL Component or Composite Video, AES/EBU Digital Audio, AES51, RS-422, Noisy Environments, PoE, PoE+

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:	N/A

Color Chart

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

Outer Shield Material

Type	Material	Material Trade Name	Coverage [%]	Drainwire Material	Drainwire AWG
Tape	Aluminum/Polyester	Beldfoil®	100 %	TC - Tinned Copper	26

Outer Jacket Material

Material	Material Trade Name	Nominal Diameter	Ripcord
LS PVC - Low Smoke Polyvinyl Chloride	Flamarrest®	0.275 in	Yes

Electrical Characteristics

Conductor DCR

Max. Conductor DCR	Max. DCR Unbalance	Max DCR Unbalanced Between Pairs [%]
82 Ohm/km	4 %	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	68 %

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	73.3 dB	71.2 dB	68.8 dB	20.0 dB	100 ± 15 Ohm	105 ± 10 Ohm	77.0 dB	77.0 dB	40.0 dB	35.0 dB
4 MHz	3.8 dB/100m	64.3 dB	60.5 dB	56.8 dB	23.0 dB	100 ± 15 Ohm	100 ± 15 Ohm	77.0 dB	76.2 dB	40.0 dB	23.0 dB
8 MHz	5.3 dB/100m	59.8 dB	54.4 dB	50.7 dB	24.5 dB	100 ± 15 Ohm	100 ± 15 Ohm	77.0 dB	70.1 dB	40.0 dB	16.9 dB
10 MHz	5.9 dB/100m	58.3 dB	52.4 dB	48.8 dB	25.0 dB	100 ± 15 Ohm	100 ± 15 Ohm	77.0 dB	68.2 dB	40.0 dB	15.0 dB
16 MHz	7.5 dB/100m	55.2 dB	47.8 dB	44.7 dB	25.0 dB	100 ± 15 Ohm	100 ± 15 Ohm	77.0 dB	64.1 dB	38.0 dB	10.9 dB
20 MHz	8.4 dB/100m	53.8 dB	45.4 dB	42.8 dB	25.0 dB	100 ± 15 Ohm	100 ± 15 Ohm	77.0 dB	62.2 dB	37.0 dB	9.0 dB
25 MHz	9.4 dB/100m	52.3 dB	43.0 dB	40.8 dB	24.3 dB	100 ± 15 Ohm	100 ± 15 Ohm	77.0 dB	60.2 dB	36.0 dB	7.0 dB
31.25 MHz	10.5 dB/100m	50.9 dB	40.4 dB	38.9 dB	23.6 dB	100 ± 15 Ohm	100 ± 10 Ohm	77.0 dB	58.3 dB	35.1 dB	
62.5 MHz	15.0 dB/100m	46.4 dB	31.4 dB	32.9 dB	21.5 dB	100 ± 15 Ohm	100 ± 10 Ohm	77.0 dB	52.3 dB	32.0 dB	
100 MHz	19.1 dB/100m	43.3 dB	24.2 dB	28.8 dB	20.1 dB	100 ± 15 Ohm	100 ± 10 Ohm	72.5 dB	48.2 dB	30.0 dB	
200 MHz	27.6 dB/100m	38.8 dB	11.2 dB	22.8 dB	18.0 dB	100 ± 22 Ohm	100 ± 10 Ohm	68.5 dB	42.2 dB	27.0 dB	
250 MHz	31.1 dB/100m	37.3 dB	6.3 dB	20.8 dB	17.3 dB	100 ± 32 Ohm	100 ± 10 Ohm	66.5 dB	40.2 dB	26.0 dB	
300 MHz	34.3 dB/100m	36.1 dB	1.9 dB	19.3 dB	16.8 dB	100 ± 32 Ohm	100 ± 10 Ohm	65.3 dB	38.7 dB	25.2 dB	
350 MHz	37.2 dB/100m	35.1 dB		17.9 dB	16.3 dB	100 ± 32 Ohm	100 ± 10 Ohm	64.3 dB	37.3 dB	24.6 dB	
400 MHz	40.1 dB/100m	34.3 dB		16.8 dB	15.9 dB	100 ± 32 Ohm	100 ± 10 Ohm	63.5 dB	36.2 dB	24.0 dB	
450 MHz	42.7 dB/100m	33.5 dB		15.7 dB	15.5 dB	100 ± 32 Ohm	100 ± 10 Ohm	62.7 dB	35.1 dB	23.5 dB	
500 MHz	45.3 dB/100m	32.8 dB		14.8 dB	15.2 dB	100 ± 32 Ohm	100 ± 10 Ohm	62.0 dB	34.2 dB	23.0 dB	
550 MHz	47.7 dB/100m	32.2 dB		14.0 dB	14.9 dB	100 ± 32 Ohm	100 ± 10 Ohm	62.4 dB	34.4 dB		
600 MHz	50.1 dB/100m	31.6 dB		13.2 dB	14.7 dB	100 ± 32 Ohm	100 ± 10 Ohm	61.8 dB	33.6 dB		
625 MHz	51.2 dB/100m	31.4 dB		12.9 dB	14.5 dB	100 ± 32 Ohm	100 ± 10 Ohm	61.6 dB	33.3 dB		
750 MHz	56.7 dB/100m	30.2 dB		11.3 dB	14.0 dB	100 ± 32 Ohm	100 ± 10 Ohm	60.4 dB	31.7 dB		
860 MHz	61.2 dB/100m	29.3 dB		10.1 dB	13.6 dB	100 ± 32 Ohm	100 ± 10 Ohm	59.5 dB	30.5 dB		

Voltage

UL Voltage Rating
300 V RMS

Temperature Range

Installation Temp Range:	+5°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:	25 lbs
Min Bend Radius During Installation:	2.75 in
Min Bend Radius/Minor Axis:	2.25 in

Standards

NEC/(UL) Specification:	CMP
CEC/C(UL) Specification:	CMP
ISO/IEC Compliance:	11801 ed 2.2 (2011) Class EA
CPR Euroclass:	Eca
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 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):	2014-03-27
CA Prop 65 (CJ for Wire & Cable):	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:	NFPA 262 Plenum (UL 910)
CSA Flammability:	FT6
ISO/IEC Flammability:	IEC 60332-1-2
UL voltage rating:	300 V RMS

Plenum/Non-Plenum

Plenum (Y/N):	Yes

Part Number

Non-Plenum Number:	10GX52F

Variants

Item #	Color	UPC
10GX53F 0101000	Black	612825377795
10GX53F D151000	Blue	612825377757
10GX53F 0081000	Gray	612825377771
10GX53F 0091000	White	612825377788
10GX53F 0041000	Yellow	612825377764

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

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.

History

Update and Revision:	Revision Number: 0.202 Revision Date: 08-22-2019

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