



## 2413F

**Part Number:** 2413F

Enhanced Category 6 Nonbonded-Pair ScTP Cable

## Product Description

CAT6+, 4-Pair, F/UTP-Foil Shielded, Plenum-CMP, Premise Horizontal Cable, 23 AWG Solid Bare Copper Conductors, Polyolefin Insulation, Patented X-Spline, Overall Beldfoil Shield, PVC Jacket

## Product Specifications

### Application

**Suitable Applications:**

Networking Horizontal Cable, HDBaseT, 1000Base-T (Gigabit Ethernet), 100Base-T (Fast Ethernet), 10Base-T (Ethernet), 100BaseVG, ANYLAN, 155ATM, 622ATM, ANSI.X3.263 FDDI TP-PMD, NTSC/PAL Component or Composite Video, AES/EBU, Digital Video, RS-422, Noisy Environments, 250 MHz Category 6

### Cabling<sup>1</sup>

**Cabling<sup>1</sup>, Filler:**

Patented Central X-Spline

### Conductor

**Total Number of Conductors:**

8

## Technical Specifications

### APAC Standard

**MII Order #39 (China RoHS):**

Yes

### Applicable Patents

**Country:**

US

**Patent:**

7663061

## Bend Radius

Min Bend Radius/Minor Axis:	1 in
Min Bend Radius/Installation:	3 in

## CCB-Part Number

Notes:	Jacket sequentially marked at 2 ft. intervals Third party Verified to ANSI/TIA-568-C.2, Category 6. Values above 350 MHz are for Engineering Information Only.
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## CCB-Sub-Part Number

Plenum (Y/N):	Yes
Non-Plenum Number:	2412F

## Contact Information

PHONE_NUM:	1-800-Belden1
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## EMEA Standard

EU Directive Compliance:	EU Directive 2003/11/EC (BFR)
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## Environmental Characteristics

Operating Temp Range:	-20°C To +75°C
Storage Temp Range:	-20°C To +75 °C
Installation Temp Range:	+5°C To +50 °C

## EU Directive

EU CE Mark:	Yes
EU RoHS Compliance Date (yyyy-mm-dd):	2011-12-09

## Global Standard

Telecommunications Standards:	ANSI/TIA/EIA 568 C.2 Category 6
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## North American Standard

CA Prop 65 (CJ for Wire & Cable):	Yes
CEC/C(UL) Specification:	CMP

NEC/(UL) Specification:	CMP
Other Specification:	UL Verified to Category 6

## Safety

UL Flammability:	NFPA 262 Plenum Flame Test (UL910)
C(UL) Flammability:	FT6
CSA Flammability:	FT6

## Use

Max Recommended Pulling Tension:	25 lbs
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### Conductor DCR:

Max. Conductor DCR	Max. DCR Unbalance
8.2 Ohm/100m	3 %

### Color Chart 1:

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

### Delay:

Max. Delay Skew	Nominal Velocity of Propagation (VP)
30 ns/100m	72 ns/100m

### Voltage:

UL Voltage Rating
300V RMS

### High Freq:

Frequency [MHz]	Max. Insertion Loss (Attenuation)	Min. NEXT	Min. PSNEXT	Min. ACR	Min. PSACR	Min. ACRF (ELFEXT)	Min. PSACRF (PSELFEXT)	Min. RL (Return Loss)	Max./Min. Input Impedance (unFitted)	Max./Min. Fitted Impedance	Min. TCL	Min. ELTCTL
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1 MHz	2 db/100m	75.3 dB	73.3 dB	73.3 dB	72.3 dB	70.8 dB	67.8 dB	20 dB	100 ± 15 Ohm	100 ± 15 Ohm	40 dB	35 dB
4 MHz	3.7 db/100m	66.3 dB	64.3 dB	62.6 dB	61.6 dB	58.8 dB	55.8 dB	23 dB	100 ± 15 Ohm	100 ± 15 Ohm	40 dB	23 dB
8 MHz	5.2 db/100m	63.3 dB	61.3 dB	58.1 dB	57.1 dB	52.7 dB	49.7 dB	24.5 dB	100 ± 15 Ohm	100 ± 15 Ohm	40 dB	17 dB
10 MHz	5.8 db/100m	61.8 dB	59.8 dB	56 dB	55 dB	50.8 dB	47.8 dB	25 dB	100 ± 15 Ohm	100 ± 15 Ohm	40 dB	15 dB
16 MHz	7.4 db/100m	58.6 dB	56.6 dB	51.2 dB	50.2 dB	46.7 dB	43.7 dB	25 dB	100 ± 15 Ohm	100 ± 15 Ohm	38 dB	10.9 dB
20 MHz	8.3 db/100m	57.1 dB	55.1 dB	48.8 dB	47.8 dB	44.8 dB	41.8 dB	25 dB	100 ± 15 Ohm	100 ± 15 Ohm	37 dB	9 dB
25 MHz	9.3 db/100m	55.5 dB	53.5 dB	46.3 dB	45.2 dB	42.8 dB	39.8 dB	24.3 dB	100 ± 15 Ohm	100 ± 15 Ohm	36 dB	7.1 dB
31.25 MHz	10.4 db/100m	54 dB	52 dB	43.6 dB	42.6 dB	40.9 dB	37.9 dB	23.6 dB	100 ± 15 Ohm	100 ± 15 Ohm	35.1 dB	5.1 dB
62.5 MHz	15 db/100m	49.1 dB	47.1 dB	34.1 dB	33.1 dB	34.9 dB	31.9 dB	21.5 dB	100 ± 15 Ohm	100 ± 15 Ohm	32 dB	
100 MHz	19.3 db/100m	45.8 dB	43.8 dB	26.5 dB	25.5 dB	30.8 dB	27.8 dB	20.8 dB	100 ± 15 Ohm	100 ± 15 Ohm	30 dB	
200 MHz	28.3 db/100m	40.9 dB	38.9 dB	12.6 dB	11.6 dB	24.8 dB	21.8 dB	18.7 dB	100 ± 22 Ohm	100 ± 15 Ohm	27 dB	
250 MHz	32.1 db/100m	39.3 dB	37.3 dB	7.2 dB	6.2 dB	22.8 dB	19.8 dB	18 dB	100 ± 32 Ohm	100 ± 15 Ohm	26 dB	
300 MHz	35.6 db/100m	38.1 dB	36.1 dB	2.5 dB	1.5 dB	21.3 dB	18.3 dB	17.5 dB	100 ± 32 Ohm	100 ± 15 Ohm	40 dB	35 dB
350 MHz	38.9 db/100m	37.1 dB	35.1 dB			19.9 dB	16.9 dB	17 dB	100 ± 32 Ohm	100 ± 15 Ohm	40 dB	23 dB
400 MHz	42 db/100m	36.3 dB	34.3 dB			18.8 dB	15.8 dB	16.6 dB	100 ± 32 Ohm	100 ± 15 Ohm	40 dB	17 dB

450 MHz	45 db/100m	35.5 dB	33.5 dB			17.7 dB	14.7 dB	16.2 dB	100 ± 32 Ohm	100 ± 15 Ohm	40 dB	15 dB
500 MHz	47.9 db/100m	34.8 dB	32.8 dB			16.8 dB	13.8 dB	15.9 dB	100 ± 32 Ohm	100 ± 15 Ohm	38 dB	10.9 dB
550 MHz	50.6 db/100m	34.2 dB	32.2 dB			16 dB	13 dB	15.6 dB	100 ± 32 Ohm	100 ± 15 Ohm	37 dB	9 dB
											36 dB	7.1 dB
											35.1 dB	5.1 dB
											32 dB	
											30 dB	
											27 dB	
											26 dB	

**Capacitance:**

Max. Capacitance Unbalanced	Nominal Mutual Capacitance
66 pF/m	14 pF/ft

**Insulation:**

Material
FEP - Fluorinated Ethylene Propylene

**Outerjacket 1:**

Material	Material Trade Name	Nominal Diameter	Ripcord	Separator Material
LS PVC - Low Smoke Polyvinyl Chloride	Flamarrest®	0.285 mm	Yes	Polyester Tape

**Conductor:**

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

**Outershield 1:**

Type	Material	Material Trade Name	Coverage	Drainwire Material	Drainwire AWG	Drainwire Construction	NXD
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Tape	Aluminum Foil-Polyester Tape	Beldfoil®	100 %	TC - Tinned Copper	24	Solid mm
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## Product Variants

Part Number	Put-Up Type	Length
2413F 0021000	Reel	1000 ft
2413F 0031000	Reel	1000 ft
2413F 0041000	Reel	1000 ft
2413F 0051000	Reel	1000 ft
2413F 0081000	Reel	1000 ft
2413F 0091000	Reel	1000 ft
2413F 009A500	Reel-in-Box	500 ft
2413F 0101000	Reel	1000 ft
2413F D151000	Reel	1000 ft
2413F D15A500	Reel-in-Box	500 ft

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