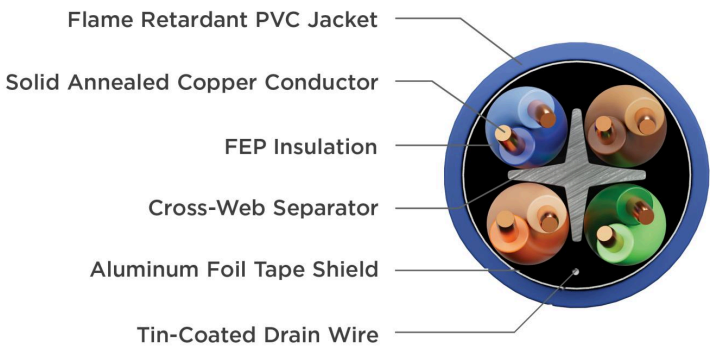
Premises Copper > Indoor > Category 6 > 4 Pairs > 23 AWG

Category 6+ F/UTP (ScTP) / Indoor / 4 Pairs / 23 AWG / CMP / Blue / 1K FT BrakeBox®

CMP

Part Number: 6T-246-2B
Status: Available





GENERAL SPECIFICATIONS

Jacket	LSPVC
Cable Configuration	Copper pairs surrounded by aluminum PET foil with an outer drain wire and jacket
End User Application	LAN
Pairs	4
Conductor	Bare Copper
Conductor Type	Solid
Conductor Description	Solid annealed copper
Conductor Count	8
AWG (mm)	23 (0.57)
Insulation	FEP
Insulation Colors	ColorTip®: Pair 1: Light Blue / Blue Pair 2: Light Orange / Orange Pair 3: Light Green / Green Pair 4: Light Brown / Brown
Drain Wire	Yes
Drain Wire Material	Tinned Copper
Separator	Cross-Web

GENERAL SPECIFICATIONS

Shield Description	Aluminum/PET foil shield with 10% overlap
Characteristic Impedance (Ohms)	100 ± 15
Nominal Velocity of Propagation (%)	71
Temperature Rating	90°C

COMPLIANCE & SUSTAINABILITY

Standards Compliance	UL 444 CSA C22.2 No. 214-08 NFPA 262 ANSI/TIA-568.2-E ANSI/TIA/EIA-TSB-155 Article 800, NEC (NFPA 70) HDBaseT Class A and B RoHS-compliant
NRTL Programs	UL Verified CAT 6 UL, c(UL) Listed CMP HDBaseT Certified
Sustainability	UL Certified EPD HPD™ Multi-Attribute Certification USGBC® Member

PHYSICAL CHARACTERISTICS

Nominal Diameter in (mm)	0.28 (7.1)
Nominal Weight lbs/kft (kg/km)	37 (55)
Pallet Quantity (ft)	27,000
Package Length	1,000
Package Type	BrakeBox®
Packages per Pallet	27
Standard Length ft (m)	1,000 (305)

Product Description

Category 6+ F/UTP (ScTP) cable, with guaranteed performance out to 500 MHz, exceeds ANSI/TIA-568.2-E for CAT 6 cables. The cable is UL Verified CAT 6 and has a typical Alien Crosstalk margin of 18 dB. The cable can be used for 10GBASE-T applications for up to 55 meters per ANSI/TIA/EIA-TSB-155. The cable consists of four (4) balanced 23 AWG copper pairs around a flame retardant cross-web, wrapped with a Mylar® backed aluminum foil with a drain wire applied longitudinally against the tape. Category 6+ F/UTP (ScTP) is certified for HD A/V applications using HDBaseT Class A and B protocol. Part number 6T-246-2B is the plenum-rated (CMP) blue version: a 4-pair, 23 AWG F/UTP construction with solid annealed copper conductors, FEP insulation, a cross-web separator, an aluminum/PET foil shield with tinned copper drain wire and a flame-retardant,

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low smoke PVC jacket. Nominal diameter is 0.28 (7.1) in (mm) with an approximate weight of 37 (55) lbs/kft (kg/km), supplied in a 1,000 ft BrakeBox®.

Applications

- 10GBASE-T (up to 55 meters), 1000BASE-T, 100BASE-T and legacy Ethernet applications
- Power-over-Ethernet (PoE) – IEEE 802.3bt Type 1 to 4
- ATM and token ring
- HDBaseT Class A and B

Features	Benefits
• UL Certified Environmental Product Declaration (EPD)	• Contributes toward 1 LEED point under the Material and Resources credit (MRc)
• Health Product Declaration™ (HPD™)	• Contributes toward 1 LEED point under the MRc
• Multi-Attribute Certification by GreenCircle Certified, LLC	• Offers an overview of the sustainability of a product, its packaging and manufacturing
• Overall shielded core	• Protects against EMI/RFI 18 dB typical margin Alien Crosstalk performance
• Guaranteed performance to 500 MHz	• Assures ample headroom for existing and future high bandwidth applications
• Exceeds ANSI/TIA-568.2-E specification for CAT 6 cable performance	• Allows for 10GBASE-T applications up to 55 meters
• CableID® alpha numeric code printed every 2 feet	• Allows both ends of a cable run to be easily identifiable without the need to separately label or tone the cable
• QuickCount® marking system in feet and meters	• Provides remaining length of cable on reel
• ColorTip® circuit identification system	• Easily identifiable conductor mates even in low-light environments
• HDBaseT Class A and B certified	• Ideal for any A/V applications up to 100m channel

Technical Guideline

Technical Guideline TG029 "Premises Cable Temperature Guidelines" provides operating, storage and installation temperature ranges for premises cables. Click here for more information.

SUSTAINABILITY CERTIFICATIONS

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ELECTRICAL SPECIFICATIONS

Frequency MHz	Insertion Loss @ 20°C Maximum dB/100 m			NEXT Minimum dB/100 m			ACR Minimum dB/100 m			PSNEXT Minimum dB/100 m		
	TIA-568.2-E	Superior Essex		TIA-568.2-E	Superior Essex		TIA-568.2-E	Superior Essex		TIA-568.2-E	Superior Essex	
	Specified	Guaranteed	Typical	Specified	Guaranteed	Typical	Calculated	Guaranteed	Typical	Specified	Guaranteed	Typical
1	2.0	2.0	1.7	74.3	74.3	82.9	72.3	72.3	82.2	72.3	72.3	81.9
4	3.8	3.8	3.4	65.3	65.3	77.6	61.5	61.5	74.2	63.3	63.3	75.0
10	6.0	6.0	5.4	59.3	59.3	70.1	53.3	53.3	64.7	57.3	57.3	68.3
16	7.6	7.6	6.9	56.2	56.2	69.6	48.6	48.6	62.5	54.2	54.2	67.1
20	8.5	8.5	7.8	54.8	54.8	68.7	46.3	46.3	60.7	52.8	52.8	65.7
25	9.5	9.5	8.8	53.3	53.3	66.1	43.8	43.8	58.7	51.3	51.3	64.7
31.25	10.7	10.7	9.8	51.9	51.9	67.8	41.2	41.2	56.2	49.9	49.9	63.4
62.5	15.4	15.4	14.2	47.4	47.4	64.0	32.0	32.0	47.8	45.4	45.4	59.1
100	19.8	19.8	18.2	44.3	44.3	58.0	24.5	24.5	38.7	42.3	42.3	55.0
200	29.0	29.0	26.6	39.8	39.8	53.8	10.8	10.8	26.5	37.8	37.8	50.6
250	32.8	32.8	30.1	38.3	38.3	51.0	5.5	5.5	21.1	36.3	36.3	48.7
300	–	35.5	33.4	–	36.2	53.8	–	0.6	19.4	–	34.8	49.1
400	–	42.1	39.5	–	34.4	49.1	–	–	8.0	–	32.5	44.5
500	–	48.0	45.1	–	32.9	42.9	–	–	–	–	31.0	41.7

Frequency MHz	PSACR Minimum dB/100 m			Return Loss Minimum dB/100 m			ELFEXT (ACRF) Minimum dB/100 m			PSELFEXT (PSACRF) Minimum dB/100 m		
	TIA-568.2-E	Superior Essex		TIA-568.2-E	Superior Essex		TIA-568.2-E	Superior Essex		TIA-568.2-E	Superior Essex	
	Calculated	Guaranteed	Typical	Specified	Guaranteed	Typical	Specified	Guaranteed	Typical	Specified	Guaranteed	Typical
1	70.3	70.3	80.2	20.0	20.0	26.0	67.8	67.8	78.7	64.8	64.8	76.6
4	59.5	59.5	71.6	23.0	23.0	31.1	55.8	55.8	65.9	52.8	52.8	64.2
10	51.3	51.3	62.9	25.0	25.0	36.3	47.8	47.8	58.1	44.8	44.8	56.4
16	46.6	46.6	60.2	25.0	25.0	37.7	43.7	43.7	54.0	40.7	40.7	52.2
20	44.3	44.3	58.1	25.0	25.0	36.0	41.8	41.8	52.1	38.8	38.8	50.3
25	41.8	41.8	56.1	24.3	24.3	38.6	39.8	39.8	50.2	36.8	36.8	48.4
31.25	39.2	39.2	53.6	23.6	23.6	38.3	37.9	37.9	48.1	34.9	34.9	46.4
62.5	30.0	30.0	45.0	21.5	21.5	32.8	31.9	31.9	41.4	28.9	28.9	40.3
100	22.5	22.5	37.0	20.1	20.1	30.7	27.8	27.8	36.8	24.8	24.8	35.2
200	8.8	8.8	24.0	18.0	18.0	27.6	21.8	21.8	32.6	18.8	18.8	31.8
250	3.5	3.5	18.8	17.3	17.3	28.5	19.8	19.8	32.5	16.8	16.8	31.3
300	–	15.8	–	–	15.9	28.6	–	17.5	30.8	–	14.5	28.9
400	–	5.0	–	–	14.9	24.9	–	14.9	24.7	–	11.9	23.5
500	–	–	–	–	13.7	25.0	–	12.5	22.5	–	9.5	21.5

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