

CAT6 UTP CMP (PLENUM-RATED) SLIM TYPE - Made in the USA



Part# 166 SERIES

Specifications				
Construction				
Conductor Material	23 AWG Solid Bare Copper			
Conductor Insulation	Fluoropolymer			
Insulation (all pairs)	FEP 0.0074 - 0.0098 in. (0.190 mm)			
Stranding	Solid			
Spline	Fluoropolymer Mini Filler			
Insulation Colors	P1: Blue/White-Blue P2: Orange/White-Orange P3: Green/White-Green P4: Brown/White-Brown			
Number of Conductors	8 (4 Pairs)			
Jacket Material	PVC: Plenum-Rated, Low-Smoke, Fire-Retardant			
Jacket Average Wall	0.015 in. ± 0.002 (0.381 mm)			
Conductor Average Diameter	0.041 in. (1.04 mm)			
Cable Outer Diameter	0.214 in. (5.435 mm) nom.			
Electrical				
Operating Voltage Rating	300 V RMS			
DC Resistance/Conductor	8.3 Ohms/100 m nom. @ 20 °C max.			
Resistance Unbalance	0.5%			
Mutual Capacitance	4.63 nF/100 m max.			
Capacitance Unbalance	19.5 pF/100 m			
Input Impedance	100 Ω±15%			
Nominal Impedance	100 Ω±15% (100 MHz) ±20 Ω (100–250 MHz) ±25 Ω (251–500 MHz)			
Mechanical Properties				
Max. Recommended Pull Tension	25 lb (111 N)			
Min. Bend Radius (Installed)	0.9 in min.			
Approximate Cable Weight	28 lb/1 mft nom.			
Compliance				
Safety	ETL-Listed (tested per UL 444) RoHS2 (Directive 2011/65/EU)			
Fire Safety	NEC CMP (tested per NFPA 262 FT6)			
Performance	ANSI/TIA-568.2-D (ETL-verified)			
Packaging	Height	Width	Diameter	Weight
Reelex Air® Box	16 in	14.5 in	8.5 in	27 lb

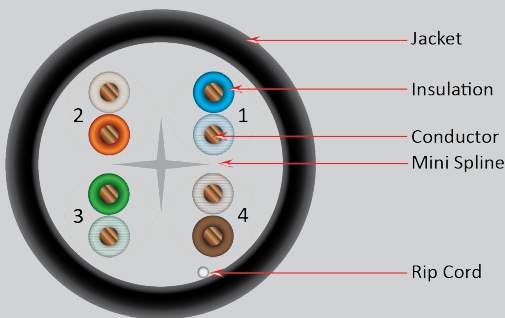
DESCRIPTION

**CAT6 UTP CMP (Plenum-Rated)
ETL-Listed, RoHS-Compliant.**

MADE IN USA

FEATURES

- 4-Pair Unshielded Twisted-Pair (UTP) Construction
- Plenum Fire Safety Rating (CMP)
- 23 AWG Bare Copper Conductors
- Easy-to-See Vivid-Color Conductor Insulation and Cable Jacket
- Moisture-Resistant Box equipped with easy-to-pull tube
- Supports High-Speed Data Applications, Fast Ethernet and 155-Mbit/s TP-PMD/CDDI
- 15W PoE (IEEE 802.3af)
- 30W PoE+ (IEEE 802.3at)
- 60W PoE++ (IEEE 802.3bt Type 3)
- Supports High-Speed Data Applications up to 1 Gbit/s
- Excellent Insertion Loss and Crosstalk Characteristics
- ETL-listed, ETL-Verified Channel, RoHS-Compliant
- Covered by 25-Year Warranty
- 1000 ft Pull Box
- Made in the USA



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Rev. 11/2022

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Environmental	
Storage Temperature	-20° C to +75° C
Installation Temperature	0° C to +50° C
Operating Temperature	-20° C to +75° C
Operating Humidity	≤93 % RH non-condensing
Delay Skew	11.08ns/100m
NVP	73.8%
Application Support	
PoE	15-W PoE Type 1 (IEEE 802.3af) 30-W PoE+ Type 2 (IEEE 802.3at) 60-W PoE++/4PPoE Type 3 (IEEE 802.3bt)
HDBase-T	Class A–Class D
Ethernet	10GBASE-T (IEEE 802.3an) 2.5GBASE-T/5GBASE-T (IEEE 802.3bz) 1000BASE-T (IEEE 802.3ab) Gigabit Ethernet 100BASE-TX (IEEE 802.3u) 100-Mbps Ethernet (Fast Ethernet)
ATM	ATM LAN 25/51/155/622
ANSI X3T9.5 TP-PMD (FDDI)	
Jacket Printing	
4010346 CAT6 CMP-LP (0.5A) FT6 23 AWG 4PR UTP 75C TESTED TO 550 MHz c(ETL)us VERIFIED TO ANSI/TIA-568.2-D ISO-IEC 11801 MADE IN USA PO#/OP#/LOT#/CLX ROHS COMPLIANT XXXXFT-XXXXFT JULIAN DATE DATE/YR	
Colors available	
Black, Blue, Gray, Green, Orange, Pink, Purple, Red, White, Yellow (check availability)	

AWG	Number of 4-pair Cables in Bundle																				
	1			2-7			8-19			20-37			38-61			62-91			92-192		
	60°C	75°C	90°C	60°C	75°C	90°C	60°C	75°C	90°C	60°C	75°C	90°C	60°C	75°C	90°C	60°C	75°C	90°C	60°C	75°C	90°C
24	2.0	2.0	2.0	1	1.4	1.6	0.8	1	1.1	0.6	0.7	0.9	0.1	0.1	0.7	0.4	0.5	0.6	0.3	0.4	0.5
23	2.5	2.5	2.5	1.2	1.5	1.7	0.8	1.1	1.2	0.6	0.8	0.9	0.5	0.7	0.8	0.5	0.7	0.8	0.4	0.5	0.6
22	3.0	3.0	3.0	1.4	1.8	2.1	1	1.2	1.4	0.7	0.9	1.1	0.6	0.8	0.9	0.6	0.7	0.8	0.5	0.6	0.7

ENG SWEEP TO 750MHZ, values above 550 MHz are for internal reference only.

Part Numbers	
166-250/P/BK	CAT6 UTP, 1000 FT, PLENUM, BLACK
166-251/P/BL	CAT6 UTP, 1000 FT, PLENUM, BLUE
166-252/P/GR	CAT6 UTP, 1000 FT, PLENUM, GREEN
166-253/P/GY	CAT6 UTP, 1000 FT, PLENUM, GRAY
166-254/P/OR	CAT6 UTP, 1000 FT, PLENUM, ORANGE
166-255/P/PK	CAT6 UTP, 1000 FT, PLENUM, PINK
166-256/P/PR	CAT6 UTP, 1000 FT, PLENUM, PURPLE
166-257/P/RD	CAT6 UTP, 1000 FT, PLENUM, RED
166-258/P/WH	CAT6 UTP, 1000 FT, PLENUM, WHITE
166-259/P/YL	CAT6 UTP, 1000 FT, PLENUM, YELLOW

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Electrical Specifications: CAT6DSS

FREQ (MHz)	INSERTION LOSS		NEXT		PS NEXT		ACR-N	
	TIA-568.2-D	TRANS CABLE	TIA-568.2-D	TRANS CABLE	TIA-568.2-D	TRANS CABLE	TIA-568.2-D	TRANS CABLE
1	1.8	1.7	93.4	97.5	90.7	91.3	91.6	95.8
4	3.6	3.5	83.3	90.2	81.4	83.1	79.8	86.7
8	5.1	4.9	76.5	84.8	75.2	78.5	71.5	79.8
10	5.7	5.5	80.4	79.3	77.7	74.0	74.7	73.8
16	7.3	7.0	71.4	80.1	69.0	74.4	64.2	73.1
20	8.1	7.9	72.1	83.2	69.8	73.2	64.1	75.3
25	9.1	8.9	70.3	77.9	66.5	72.5	61.2	69.0
31.25	10.3	10.0	65.1	78.9	63.6	70.8	54.9	69.0
62.5	14.7	14.4	64.1	71.0	62.7	65.2	49.4	56.7
100	18.8	18.4	60.1	64.5	57.7	58.0	41.4	46.2
250	30.7	30.0	52.6	58.6	49.5	52.9	22.3	28.7
300		33.0		60.4		54.5		27.5
400		38.8		58.5		51.2		19.7
500		44.0		58.0		50.9		14.1
550		46.2		52.8		45.0		6.6

FREQ (MHz)	PSACR-N		ACR-F		PSACR-F		RETURN LOSS	
	TIA-568.2-D	TRANS CABLE	TIA-568.2-D	TRANS CABLE	TIA-568.2-D	TRANS CABLE	TIA-568.2-D	TRANS CABLE
1	89	89.5	86.3	96.4	83.7	90.7	21.2	34.5
4	77.9	79.6	74.0	88.2	71.1	80.7	29.0	31.1
8	70.1	73.6	67.8	79.2	64.9	73.0	31.9	31.9
10	72.0	68.4	66.0	75.0	63.1	69.7	29.5	32.8
16	61.8	67.4	61.8	72.9	59.1	65.8	32.6	32.8
20	61.7	65.3	60.2	72.2	57.7	65.1	31.5	34.9
25	57.4	63.2	58.5	67.1	56.6	60.8	30.2	33.4
31.25	53.3	60.9	56.3	64.9	55	57.8	31.1	31.5
62.5	48.1	50.8	48.7	58.9	45.6	50.7	32.7	34.2
100	39.0	39.6	42.9	52.1	41.2	44.4	31.9	32.0
250	18.8	22.9	28.0	34.1	27.1	27.6	26.5	25.0
300		21.5		28.7		23.2		22.5
400		12.4		19.9		11.0		20.0
500		6.9		11.7		5.7		20.6
550		1.2		10.7		4.6		19.9

Parameters above 250Mhz are for internal use only.

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Cable ID: CAT6 CMP UTP

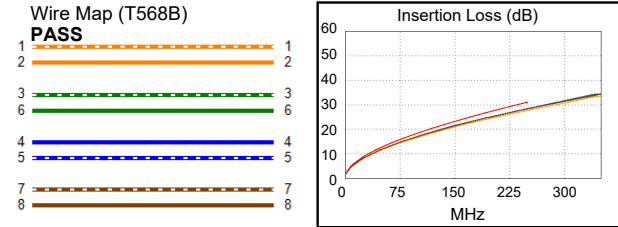
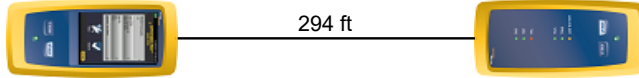
Test Limit: TIA Cat 6 Perm. Link (+PoE)
Limits Version: V7.6
Date / Time: 03/02/2022 03:10:37 PM
Headroom 6.1 dB (NEXT 3,6-4,5)
Cable Type: Cat 6 U/UTP
NVP: 73.4%

Main: Versiv
S/N: 1808023
Software Version: V6.6 Build 2
Calibration Date: 08/03/2021
Adapter: DSX-8000 (DSX-PLA804)
S/N: 21331027

Test Summary: PASS

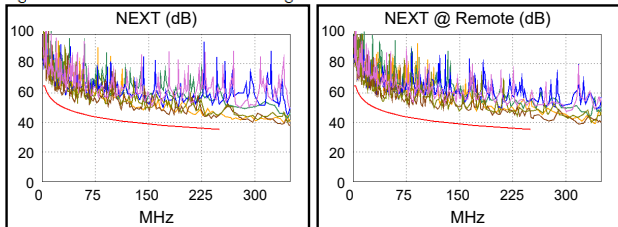
Remote: Versiv
S/N: 1807069
Software Version: V6.6 Build 2
Calibration Date: 08/03/2021
Adapter: DSX-8000R (DSX-PLA804)
S/N: 21331031

Length (ft), Limit 295	[Pair 1,2]	294
Prop. Delay (ns), Limit 498	[Pair 4,5]	440
Delay Skew (ns), Limit 44	[Pair 4,5]	33
Resistance (ohms), Limit 21.00	[Pair 4,5]	15.48
Resist. Unbal. (ohms), Limit 0.420	[Pair 1,2]	0.038
Resist. P2P Unbal. (ohms), Limit 0.520	[Pair 1,2-4,5]	0.369
Insertion Loss Margin (dB)	[Pair 3,6]	2.5
Frequency (MHz)	[Pair 3,6]	250.0
Limit (dB)	[Pair 3,6]	31.1

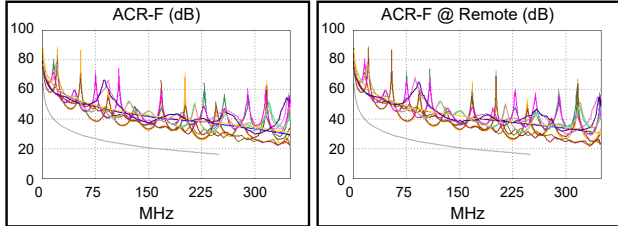


Worst Case Margin Worst Case Value

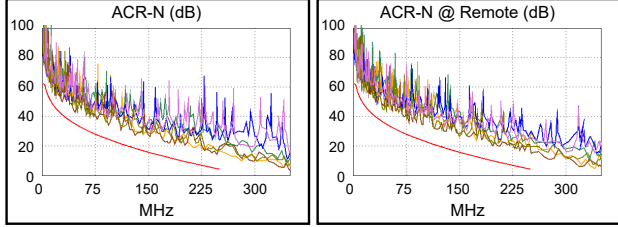
PASS	MAIN	SR	MAIN	SR
Worst Pair	3,6-4,5	3,6-7,8	3,6-4,5	3,6-4,5
NEXT (dB)	6.1	6.5	6.1	6.9
Freq. (MHz)	247.5	41.0	247.5	195.0
Limit (dB)	35.4	48.1	35.4	37.1
Worst Pair	3,6	3,6	3,6	3,6
PS NEXT (dB)	5.6	7.1	5.6	7.1
Freq. (MHz)	247.0	196.0	247.0	196.0
Limit (dB)	32.8	34.5	32.8	34.5



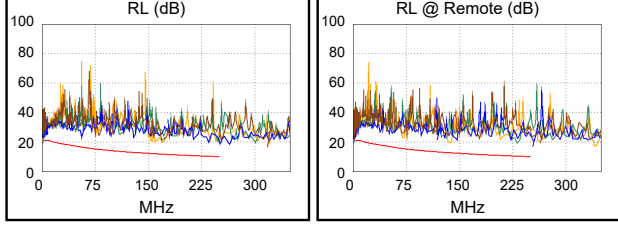
PASS	MAIN	SR	MAIN	SR
Worst Pair	1,2-3,6	1,2-3,6	1,2-3,6	1,2-3,6
ACR-F (dB)	8.8	8.8	8.9	8.9
Freq. (MHz)	224.5	224.5	226.5	225.5
Limit (dB)	17.2	17.2	17.1	17.1
Worst Pair	3,6	3,6	3,6	3,6
PS ACR-F (dB)	10.1	10.3	10.1	10.3
Freq. (MHz)	226.5	224.0	226.5	224.0
Limit (dB)	14.1	14.2	14.1	14.2



N/A	MAIN	SR	MAIN	SR
Worst Pair	3,6-4,5	3,6-7,8	3,6-4,5	3,6-4,5
ACR-N (dB)	7.5	7.3	8.7	11.8
Freq. (MHz)	46.0	41.0	247.5	242.0
Limit (dB)	35.1	36.6	4.5	5.0
Worst Pair	3,6	3,6	3,6	3,6
PS ACR-N (dB)	8.1	7.9	8.1	11.8
Freq. (MHz)	247.0	42.8	247.0	242.5
Limit (dB)	1.9	33.6	1.9	2.4



PASS	MAIN	SR	MAIN	SR
Worst Pair	4,5	4,5	1,2	3,6
RL (dB)	5.3	4.7	7.6	8.8
Freq. (MHz)	3.8	3.8	171.0	231.5
Limit (dB)	21.0	21.0	11.7	10.4



Compliant Network Standards:
 10BASE-T 100BASE-TX 100BASE-T4
 1000BASE-T 2.5GBASE-T 5GBASE-T
 ATM-25 ATM-51 ATM-155
 100VG-AnyLan TR-4 TR-16 Active
 TR-16 Passive



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