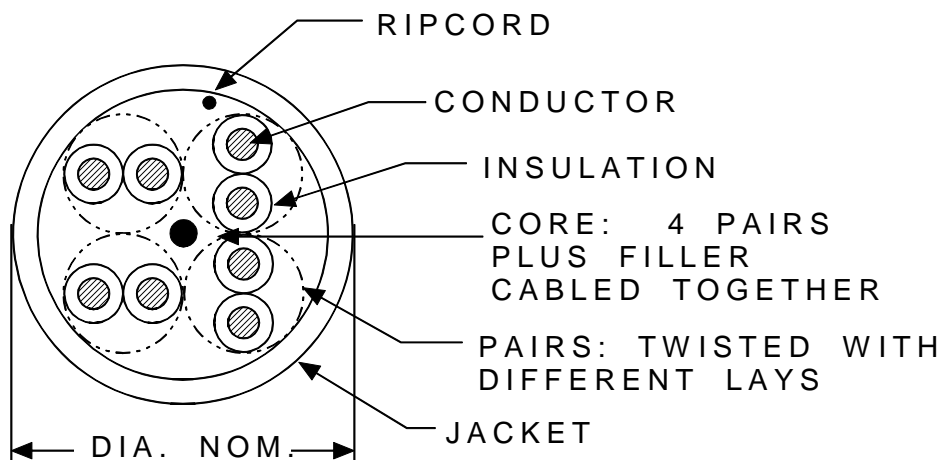


Category 6 UTP Cable Cut Sheet

219560-X, 219567-X



Description

AMP NETCONNECT Category 6 cables exceed TIA/EIA-568-B.2-1 Category 6 and ISO/IEC 11801 Class E performance requirements by significant margins on all parameters. The AMP NETCONNECT Category 6 System complies with all of the performance requirements for current and proposed applications such as Gigabit Ethernet (1000BASE-Tx), 10/100BASE-Tx, token ring, 155 Mbps ATM, 100 Mbps TP-PMD, ISDN, analog and digital video and analog and digital voice (VoIP).

AMP NETCONNECT Category 6 UTP cables are available in both plenum and non-plenum, with standard colors including white, gray, blue and yellow. Category 6 Cables from AMP NETCONNECT feature lead-free jacketing. Packaging is either on bulk reels or in a reel-in-box, with standard put-ups being 1000ft splice-free lengths.

Specification (text in brackets [] requires a choice)

Horizontal cabling shall be 23 AWG, 4-pair UTP, NEC/NFPA [CMP or CMR] rated and be independently verified for compliance. Cable jacketing shall be [white, gray, blue or yellow] and shall be lead-free. [Individual conductors shall be 100% virgin FEP insulated (if plenum)]. Cable shall exceed all TIA/EIA and ISO Category 6/Class E requirements as well as meet the performance requirements listed in the following table: [include Performance Characteristics tables from pages 2 & 3].

Cable performance shall be independently verified and characterized to 600 MHz. Cable shall be supplied [on wooden reels or in a reel-in-box]. Independent verification for flammability compliance shall be to NEC article 800 and NFPA 70; [CMP (NFPA 262, UL 910) or CMR (ANSI/UL 1666, IEC 332-1)]. Horizontal cable shall be AMP NETCONNECT part number [219560-X, 219567-X].

Part Numbers

Description	Packaging	Part Numbers			
		White	Gray	Blue	Yellow
Category 6 UTP Cable, 4-Pair, Riser (CMR) Rated	RB	219560-2	219560-4	219560-6	219560-8
	WR	219560-1	219560-3	219560-5	219560-7
Category 6 UTP Cable, 4-Pair, Plenum (CMP) Rated	RB	219567-2	219567-4	219567-6	219567-8
	WR	219567-1	219567-3	219567-5	219567-7

Package: WR = Wooden Reel, RB = Reel-in-Box (1000 ft.)

Category 6 UTP Cable Cut Sheet

219560-X, 219567-X

Performance Characteristics (meet or exceed TIA/EIA-568-B.2-1 Category 6 requirements)

Frequency (MHz)	Insertion Loss (Attenuation) dB/100m					NEXT (dB)				
	Standard	Cat6 CMR		Cat6 CMP		Standard	Cat6 CMR		Cat6 CMP	
		Maximum	Typical	Maximum	Typical		Minimum	Typical	Minimum	Typical
0.772	1.8	1.6	1.6	1.6	1.5	76.0	80.0	87.0	86.0	93.0
1	2.0	1.8	1.8	1.8	1.7	74.3	78.0	86.0	85.0	92.0
4	3.8	3.8	3.7	3.5	3.4	65.3	68.0	77.0	73.0	82.0
8	5.3	5.3	5.0	4.9	4.8	60.8	67.0	76.0	72.0	81.0
10	6.0	5.8	5.5	5.6	5.4	59.3	66.0	72.0	71.0	76.0
16	7.6	7.4	7.0	7.1	6.9	56.2	66.0	70.0	70.0	75.0
20	8.5	8.4	7.9	7.9	7.7	54.8	55.0	64.0	66.0	68.0
25	9.5	9.2	8.9	8.4	8.7	53.3	55.0	62.0	59.0	66.0
31.25	10.7	10.3	10.1	9.9	9.8	51.9	55.0	65.0	59.0	69.0
62.5	15.4	14.8	14.5	14.4	14.3	47.4	54.0	61.0	57.0	65.0
100	19.8	18.7	18.5	18.8	18.5	44.3	52.0	56.0	55.0	60.0
200	29.0	27.0	27.8	27.9	27.5	39.8	50.0	52.0	53.0	56.0
250	32.8	30.5	32.0	31.8	31.3	38.3	48.0	52.0	52.0	56.0
300	36.4	33.5	35.0	35.5	34.9	37.1	45.0	51.0	48.0	55.0
350	39.8	37.0	37.0	38.9	36.3	36.1	42.0	49.0	45.0	52.0
400	43.0	39.3	40.1	41.1	39.6	35.3	39.0	45.0	42.0	49.0
500	48.9	44.3	46.2	48.6	45.4	33.8	38.0	43.0	41.0	46.0
550	51.8	46.4	49.0	51.7	48.3	33.2	37.0	40.0	40.0	43.0
600	54.5	49.5	51.2	54.5	50.8	32.6	34.0	33.0	37.0	35.0

Frequency (MHz)	PSNEXT (dB)					ELFEXT (dB)				
	Standard	Cat6 CMR		Cat6 CMP		Standard	Cat6 CMR		Cat6 CMP	
		Minimum	Typical	Minimum	Typical		Minimum	Typical	Minimum	Typical
0.772	74.0	83.0	89.4	83.0	85.9	70.0	87.0	89.4	82.9	86.4
1	72.3	82.8	89.2	82.7	85.8	67.8	78.0	87.3	74.2	84.3
4	63.3	71.8	78.9	71.8	75.8	55.8	65.3	76.0	62.2	73.1
8	58.8	71.7	77.5	71.7	74.5	49.7	60.1	70.5	57.2	67.8
10	57.3	69.0	73.2	69.0	70.4	47.8	57.2	67.9	55.2	65.3
16	54.2	61.0	66.9	60.1	64.3	43.7	54.1	65.6	51.1	62.7
20	52.8	63.4	67.6	63.1	65.0	41.8	51.6	64.0	49.7	61.2
25	51.3	57.5	63.0	57.7	60.6	39.8	50.2	64.5	48.3	62.6
31.25	49.9	57.1	63.9	57.2	61.5	37.9	49.5	63.4	47.4	61.6
62.5	45.4	53.3	59.1	53.4	56.8	31.9	45.7	53.4	43.7	50.9
100	42.3	50.2	53.6	49.7	51.5	27.8	41.3	47.3	40.0	45.0
200	37.8	49.9	53.4	49.8	51.3	21.8	34.1	39.5	33.0	37.8
250	36.3	49.2	52.7	49.5	50.7	19.8	29.2	39.7	28.5	38.3
300	35.1	46.5	50.1	46.3	48.2	18.3	28.7	38.1	28.0	35.9
350	34.1	44.1	46.9	43.5	45.1	16.9	24.5	34.7	23.7	33.7
400	33.3	41.1	45.9	40.9	44.2	15.8	23.4	33.6	20.1	32.3
500	31.8	39.6	43.7	39.2	42.0	13.8	13.4	21.5	10.9	20.9
550	31.2	37.3	42.2	36.9	40.6	13.0	10.8	17.1	7.6	16.8
600	30.6	35.6	44.7	34.8	43.0	12.2	7.3	17.1	4.1	17.2

Category 6 UTP Cable Cut Sheet

219560-X, 219567-X

Performance Characteristics (meet or exceed TIA/EIA-568-B.2-1 Category 6 requirements), continued...

Frequency (MHz)	PSELFEXT (dB)					RL (dB)				
	Standard	Cat6 CMR		Cat6 CMP		Standard	Cat6 CMR		Cat6 CMP	
		Minimum	Typical	Minimum	Typical		Minimum	Typical	Minimum	Typical
0.772	67.0	75.9	82.4	75.4	81.1	-	24.0	23.0	25.0	26.0
1	64.8	72.8	80.2	73.2	78.1	20.0	25.0	25.0	29.0	30.0
4	52.8	61.1	73.7	61.3	71.2	23.0	32.0	30.0	29.0	33.0
8	46.7	57.2	67.9	56.3	66.1	24.5	34.0	30.0	35.0	32.0
10	44.8	55.2	65.8	54.3	64.1	25.0	38.0	32.0	32.0	34.0
16	40.7	49.8	62.0	50.1	60.4	25.0	35.0	33.0	35.0	36.0
20	38.8	48.5	59.4	48.6	58.1	25.0	34.0	34.0	34.0	35.0
25	36.8	46.8	58.2	47.2	56.9	24.3	36.0	34.0	32.0	35.0
31.25	34.9	46.2	57.2	45.9	55.9	23.6	27.0	33.0	35.0	38.0
62.5	28.9	42.6	50.1	42.8	49.8	21.5	25.0	34.0	32.0	35.0
100	24.8	39.1	44.7	39.4	43.3	20.1	23.0	33.0	35.0	36.0
200	18.8	30.8	38.1	31.5	36.7	18.0	27.0	34.0	23.0	33.0
250	16.8	27.7	37.9	28.4	37.1	17.3	29.0	30.0	26.0	29.0
300	15.3	28.2	37.3	28.8	37.1	16.8	23.0	29.0	25.0	32.0
350	13.9	22.1	35.6	22.8	34.9	16.3	21.0	28.0	26.0	30.0
400	12.8	17.5	25.5	18.9	20.9	15.9	19.0	29.0	24.0	27.0
500	10.8	10.2	15.3	10.7	14.9	15.2	18.0	25.0	24.0	27.0
550	10.0	8.2	17.8	6.5	9.0	14.9	17.0	25.0	23.0	26.0
600	9.2	7.5	14.3	5.0	8.7	14.7	15.0	21.0	21.0	24.0

Frequency (MHz)	ACR (dB)					PSACR (dB)				
	Standard	Cat6 CMR		Cat6 CMP		Standard	Cat6 CMR		Cat6 CMP	
		Minimum	Typical	Minimum	Typical		Minimum	Typical	Minimum	Typical
0.772	74.2	78.4	85.4	84.5	91.5	72.2	81.4	87.8	81.5	84.4
1	72.3	76.2	84.2	83.2	90.3	70.3	81.0	87.4	80.9	84.1
4	61.5	64.2	73.3	69.5	78.6	59.5	68.0	75.2	68.3	72.4
8	55.5	61.7	71.0	67.1	76.2	53.5	66.4	72.5	66.8	69.7
10	53.3	60.2	66.5	65.4	70.6	51.3	63.2	67.7	63.4	65.0
16	48.6	58.6	63.0	63.0	68.1	46.6	53.6	59.9	53.0	57.4
20	46.3	46.6	56.1	58.1	60.3	44.3	55.0	59.7	55.3	57.3
25	43.8	45.8	53.1	50.6	57.3	41.8	48.3	54.1	49.3	51.9
31.25	41.2	44.7	54.9	49.1	59.2	39.2	46.8	53.8	47.3	51.7
62.5	32.0	39.2	46.5	42.6	50.7	30.0	38.5	44.6	39.0	42.5
100	24.5	33.3	37.5	36.2	41.5	22.5	31.5	35.1	30.9	33.0
200	10.8	23.0	24.2	25.1	28.5	8.8	22.9	25.6	21.9	23.8
250	5.5	17.5	20.0	20.2	24.7	3.5	18.7	20.7	17.7	19.4
300	0.7	11.5	16.0	12.5	20.1	-1.3	13.0	15.1	10.8	13.3
350	-3.7	5.0	12.0	6.1	15.7	-5.7	7.1	9.9	4.6	8.8
400	-7.7	-0.3	4.9	0.9	9.4	-9.7	1.8	5.8	-0.2	4.6
500	-15.1	-6.3	-3.2	-7.6	0.6	-17.1	-4.7	-2.5	-9.4	-3.4
550	-18.6	-9.4	-9.0	-11.7	-5.3	-20.6	-9.1	-6.8	-14.8	-7.7
600	-21.9	-15.5	-18.2	-17.5	-15.8	-23.9	-13.9	-6.5	-19.7	-7.8

Category 6 UTP Cable Cut Sheet

219560-X, 219567-X

Technical Details

	CMR	CMP	
Mutual Capacitance	5.6nF/100m nominal	5.6nF/100m nominal	
Characteristic Impedance	100Ω ±15%, 1 - 600MHZ	100Ω ±15%, 1 - 600MHZ	
Conductor DC Resistance	66.58Ω/km maximum	66.58Ω/km maximum	
Voltage	300VAC or VDC	300VAC or VDC	
Delay Skew	45ns	45ns	
Propagation Delay	536ns/100m @ 250MHz	536ns/100m @ 250MHz	
Nominal Velocity of Propagation	69%	72%	
Operating Temperature	-20° C – 60° C (-4° F – 140° F)	-20° C – 60° C (-4° F – 140° F)	
Storage Temperature	-20° C – 80° C (-4° F – 176° F)	-20° C – 80° C (-4° F – 176° F)	
Bend Radius	(4 x cable diameter) ≈ 1"	(4 x cable diameter) ≈ 1"	
Packaging:	1000ft Reel-in-a-Box	26 lbs/kft	24 lbs/kft
	1000ft Wooden Reel	26 lbs/kft	24 lbs/kft
Materials:	Conductors –	23 AWG, Solid Copper, (Ø.0226 nominal)	23 AWG, Solid Copper, (Ø.0226 nominal)
	Insulation –	0.0097in (Ø.042 nominal), Polyethylene	0.0087in (Ø.040 nominal), FEP (fluoropolymer)
	Jacket –	0.025in nominal (Ø.230 nominal), PVC	0.015in nominal (Ø.230 nominal), FEP (fluoropolymer)

ETL LISTED for safety to:

Safety – CMR – (UL 1666, IEC 332-1)
CMP – (NFPA 262, UL 910)



Approvals:

ETL Verified to:

Performance – TIA/EIA-568-B.2-1 "Performance Specifications for 4-Pair 100 Ohm Category 6 Cabling"



Specifications subject to change without notice.

Revised - 4/29/2004

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