

# CAT6A 23AWG/4PAIR 10G CMR SHIELDED U/FTP

## PART NO. 6ASHDCMRRx

### DESCRIPTION

- 23 AWG 4 Pair U/FTP 10G Category 6A cable tested to ANSI/TIA 568-C.2 for 10Gbps @500MHz premium grade, high performance for top level network cabling for maximum headroom and bandwidth. Available in Wood Reel for easier installation.

### FEATURES AND BENEFITS

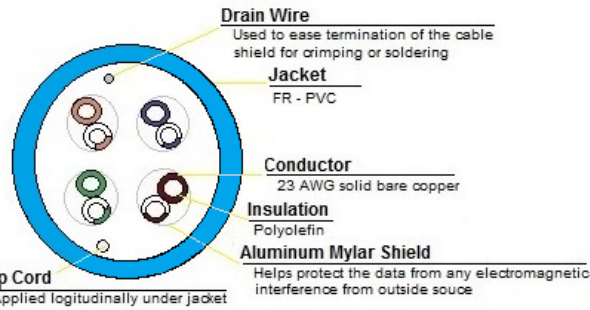
- Category 6A performs at improved specifications, particularly in the area of alien cross-talk. Category 6A make use of their higher standards by allowing full 10GBASE-T transmission speeds of up to 10Gbps, at 500MHz of signal bandwidth, over 100 meters (330 ft)
- Improved cable temperature rating (75°C Plenum) for greater protection against increased operating temperatures and for high-wattage applications
- The internal separator optimizes each pair for superior electrical performance and maintains flexibility. This unique spline stabilizes each pair to create a smaller, round cable profile

### APPLICATIONS

- IEEE 802.3 10G Base-T, 1000Base-T, 100Base-TX, 10Base-T, PoE, PoE+
- ANSI/TIA 854: 1000Base-TX
- CDDI, Token Ring, ATM
- Digital Video
- Broadband and Baseband Analog Video

### STANDARD COMPLIANCES

- ANSI/TIA 568-C.2
- ANSI/TIA 862 (Building Automation)
- ISO/IEC 11801 Ed. 2.0 (Class EI)
- ICEA 8-102-700 (Category 6 or 5E)
- REACH Compliant
- CPR Compliant (Fully Comply to 305/2011 & EN 50575:2014-09)
- RoHS Compliant Directive 2002/95/EG



### PHYSICAL PROPERTIES

Conductor	Material	Solid Bare copper
	Nominal Outside Diameter (mm)	0.565
Insulation	Material	HDPE
	Diameter (± 0.05mm)	1.12
Filler		Aluminum Foil
Construction		Shielded/Non-Plenum
Jacket	Material	FR - PVC
	Thickness (mm)	0.55
	Minimum Point Thickness (mm)	0.4
	Outside Diameter (±0.4mm)	7.4
Rip Cord:		Yes
Drain Wire:		Yes
Packing	Length	1000ft ± 4ft
	Weight	38 lbs/Reel
Voltage Rating (Max)		DC 300V
Test Flame Method		CMR



### ELECTRICAL CHARACTERISTICS

Characteristic Impedance (ohms)	1.0 - 250.0MHz	100Ω±15Ω
	250.0 - 500.0MHz	100Ω±22Ω
	500.0 - 600.0MHz	Reference values
1.0 - 600.0MHz Delay Skew (ns/100m)		≤45
Pair-to-Ground Capacitance Unbalance (pF/100m)		≤330
Max. Conductor DC Resistance Unbalance (%)		≤5
Max. Resistance Unbalance (%)		9.38/100m
Nom. Mutual Capacitance		5.8nF/100m
Max DC Loop Resistance		19.0Ω/100m
Min DC Insulation Resistance		5000MΩ.km
Max Propagation Delay Skew		≤45ns/100m
Before Aging	Tensile Strength (Mpa)	≥13.8
	Elongation (%)	≥100
After Aging	Tensile Strength (Mpa)	≥85% of unaged
	Elongation (%)	≥50% of unaged
Aging Period (°C x hrs)		100°C x 24h x 7d
Cold Bend (No Visible Crack)		-20±2°C
Temperature Range		-20°C ~ +75°C
Velocity of Propagation (%) NVP		70%



1000' Wood Reel  
Weight: 38 lbs.

### AVAILABLE CATEGORY 6A (PART NUMBERS)

PVC	Plenum	Shielded	Shielded Plenum	Direct Burial	Shielded Direct Burial
6ACMR234Rx	6ACMP234Rx	<b>6ASHDCMRRx</b>	6ASHDCMPRx	6AOUTG234RB	6AOUTGSHDRB

\*All values in this specification are nominal and are subjective to tolerances of +/- 10 to 15%. It is the sole responsibility of the user to have the most current specification. Specifications are subject to change without notice\*

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www.commoditycables.com



## ELECTRICAL PERFORMANCE

ACRF - Attenuation to Crosstalk Ratio - Far End (dB/100m)

NEXT - Near End Crosstalk (dB/100m)

ACR - Attenuation to Crosstalk Ratio (dB/100m)

PSNEXT - Power Sum Near End Crosstalk (dB/100m)

ELFEXT - Equal Level Far End Crosstalk (dB/100m)

PSELFEXT - Power Sum Equal Level Far End Crosstalk (dB/100m)

RL - Return Loss (dB)

TCL - Transverse Conversion Loss (dB/100m)

ATT - Attenuation (dB/100m)

FREQUENCY (MHz)	ATT (dB/100m)	RL (dB)	ACR (dB)	Next (dB)	PSNEXT (dB)	TCL (dB/100m)	PHASE DELAY	ELFEXT (dB/100m)	PSELFEXT (dB/100m)
1	-	20.0	72.2	74.3	72.3	40.0	570.0	68.0	65.0
4	3.8	23.0	61.5	65.3	63.3	40.0	552.0	56.0	53.0
8	5.3	24.5	55.4	60.8	58.8	40.0	546.7	49.9	46.9
10	5.9	25.0	53.4	59.3	57.3	40.0	545.4	48.0	45.0
16	7.5	25.0	48.8	56.2	54.2	38.0	543.0	43.9	40.9
20	8.4	25.0	46.4	54.8	52.8	37.0	542.1	42.0	39.0
25	9.4	24.3	43.7	53.3	51.3	36.0	541.2	40.0	37.0
31.25	10.5	23.6	41.4	51.9	49.9	35.1	540.4	38.1	35.1
62.5	15.0	21.5	32.4	47.4	45.4	32.0	538.6	32.1	29.1
100	19.1	20.1	25.2	44.3	42.3	30.0	537.6	28.0	25.0
200	27.6	18.0	12.2	39.8	37.8	27.0	536.5	22.0	19.0
250	31.1	17.3	7.2	38.3	36.3	26.0	536.3	20.0	17.0
300	34.3	16.8	2.9	37.1	35.1	25.2	535.5	18.5	15.5
500	45.3	15.2	-	33.8	31.8	23.0	533	14.0	11.0
600	50.1	14.7	-	32.6	30.6	-	532	12.2	9.2

\*Electrical performance with frequency over 500MHz is only for reference\*

AVAILABLE JACKET COLORS		
STANDARD	BLUE	WHITE
	BLACK	GRAY
	PURPLE	RED
	YELLOW	
SPECIAL	Per Customer Request*	
INSULATION COLORS		
PAIR 1	BLUE	WHITE
PAIR 2	ORANGE	WHITE
PAIR 3	GREEN	WHITE
PAIR 4	BROWN	WHITE

## JACKETS ABBREVIATION

Black	B	Last alphabetical character of each part number indicates the color code that the Jacket is available in. For example Part # 6CMR244Bx ("x" indicates all the colors to the left are available for this product.
White	W	
Gray	G	
Blue	O	
Yellow	Y	
Green	V	
Orange	OR	
Purple	P	
Red	R	
Pink	PI	

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