AdvanceNet™ ScTP

4 Pair #23 AWG ScTP Category 6 Cable

DESCRIPTION

ENHANCED SCREENED TWISTED PAIR (ScTP) ADVANCENET CABLE FOR USE IN HORIZONTAL CABLING SYSTEMS PER TIA 568-B. THE CABLE EXCEEDS TIA 568-B.2-1 CATEGORY 6 AND ISO/IEC 11801 CATEGORY 6 CABLE REQUIREMENTS. THE CABLE CONSISTS OF 23 AWG SOLID BARE COPPER INSULATED CONDUCTORS, ASSEMBLED INTO FOUR TIGHTLY TWISTED PAIRS, WITH A FLEXWEB® CORE SEPARATOR, OVERALL FOIL & DRAIN SHIELD, RIPCORD, AND AN OVERALL JACKET. PRINT INCLUDES DESCENDING FOOTAGE MARKERS FROM 1000 TO 0. THIS PRODUCT AND/OR ITS MANUFACTURE IS COVERED BY US PATENT NOS. 6596944, 6074503 & 5424491.

THE PLENUM RATED CABLE IS FOR USE IN AIR HANDLING DUCTS AND SPACES IN ACCORDANCE WITH ARTICLE 800 OF THE NATIONAL ELECTRICAL CODE (NEC). THE CABLE IS UL (USA) & cUL (CANADA) LISTED FOR THIS APPLICATION BY PASSING NFPA 262 (UL 910 OR FT6 - STEINER TUNNEL) TEST.

THE RISER (NON-PLENUM) RATED CABLE IS FOR USE AS A VERTICAL RUN IN A SHAFT AND FOR GENERAL PURPOSE COMMUNICATIONS USE IN ACCORDANCE WITH ARTICLE 800 OF THE NEC. THE CABLE IS UL (USA) & cUL (CANADA) LISTED FOR THIS APPLICATION BY PASSING UL 1666 RISER CABLE FLAMMABILITY TEST. THE CABLE ALSO PASSES THE CSA FT4 VERTICAL FLAME TEST - CABLES IN CABLE TROUGH FROM CLAUSE 4.11.4 OF CSA C22.2 NO. 0.3.

THIS CABLE COMPLIES WITH THE EU-RoHS DIRECTIVE 2002/95/EC (RESTRICTIONS ON HAZARDOUS SUBSTANCES) REGULATIONS.

SUPPORTED APPLICATIONS

IEEE 802.3 10BASE-T (ETHERNET), 100BASE-T (FAST ETHERNET), AND 1000BASE-T (GIGABIT ETHERNET), ANSI.X3.263 FDDI TP-PMD, IEEE 802.5 4 AND 16 Mbps TOKEN RING, ATM UP TO 155 Mbps, 550 MHz BROADBAND VIDEO AND STANDARDS UNDER DEVELOPMENT SUCH AS ATM AT 622 Mbps, 1.2 & 2.4 Gbps.

CONSTRUCTION

PRIMARIES: CONDUCTOR: 23 AWG (.6 mm) SOLID BARE COPPER
INSULATION: FEP (PL), THERMOPLASTIC (NP)

PAIR ASSEMBLY: 2 PRIMARIES TWISTED IN VARIED LAYS

COLOR CODE: SEE TABLE 1

CABLE ASSEMBLY: 4 PAIRS CABLED TOGETHER WITH A FLEXWEB CORE SEPARATOR

BARRIER: OVERALL POLYSTER TAPE, 25% OVERLAP

DRAIN: #24 AWG SOLID TINNED COPPER

SCREEN (SHIELD): OVERALL ALUMINUM/POLYESTER TAPE, ALUM SIDE FACING IN, 25% OVERLAP, 100% COVERAGE

JACKET: PL: NO LEAD PLENUM RATED THERMOPLASTIC
NP: NO LEAD FLAME RETARDANT THERMOPLASTIC
JACKET COLOR: SEE TABLE 2
NOMINAL CABLE OD: PL: .255" (6.48 mm)
NP: .265" (6.73 mm)

LISTINGS: PL: c(UL)US TYPE CMP
NP: c(UL)US TYPE CMR

PERFORMANCE: ETL VERIFIED TO TIA 568-B.2-1 CAT 6

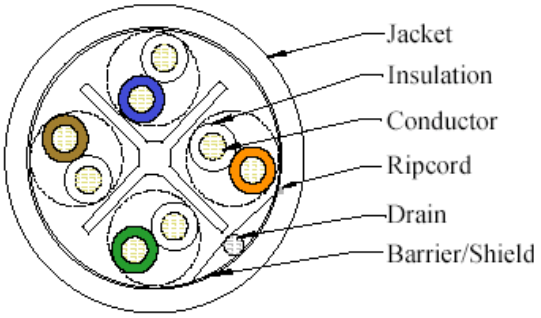

TABLE 1

PAIR NUMBER	PAIR COLOR CODE	
1	WHITE-BLUE	BLUE
2	WHITE-ORANGE	ORANGE
3	WHITE-GREEN	GREEN
4	WHITE-BROWN	BROWN

TABLE 2

PLENUM

PART NUMBER	JACKET COLOR
M58175	WHITE
M58176	BLUE
M58177	PINK
M58178	YELLOW
M58179	GRAY
M58180	GREEN
M58181	RED
M58182	ORANGE
M58183	BLACK
M58184	VIOLET

NON-PLENUM

PART NUMBER	JACKET COLOR
M58155	WHITE
M58156	BLUE
M58157	PINK
M58158	YELLOW
M58159	GRAY
M58160	GREEN
M58161	RED
M58162	ORANGE
M58163	BLACK
M58164	VIOLET

PHYSICAL CHARACTERISTICS

CABLE WEIGHT: PL: 49 lbs/1000ft (73 kg/km)
NP: 44 lbs/1000ft (65 kg/km)

BENDING RADIUS: 1" (25 mm) MIN (4 x CABLE OD)

PULLING TENSION: 25 lbf (110 N) MAX

OPERATING TEMP.: –20°C to +60°C (–4°F to +140°F)

STORAGE TEMP.: –20°C to +75°C (–4°F to +167°F)

INSTALLATION TEMP.*: 0°C to +60°C (+32°F to +140°F)

*THE INSTALLATION TEMPERATURE REFERS TO THE TEMPERATURE OF THE *CABLE* WHILE BEING INSTALLED OR PULLED. DO NOT INSTALL CABLE BELOW 0°C (+32°F).

PL = PLENUM
NP = NON-PLENUM

MOHAWK
Cabling Excellence for Open Architecture

RoHS

AdvanceNet™ ScTP

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ELECTRICAL CHARACTERISTICS (REF TABLE 3)

STANDARDS: EXCEEDS TIA 568-B.2-1 CAT 6 & ISO/IEC 11801:2002 CAT 6 HORIZONTAL CABLE

CONDUCTOR DCR: 8.9 Ω/100m (27.1 Ω/Mft) MAX

DCR UNBALANCE: 3% MAX

MUTUAL CAPACITANCE: 46 pF/m (14 pF/ft) NOM

CAPACITANCE UNBALANCE PAIR/GROUND: 66 pF/100m (200 pF/Mft) MAX

CHARACTERISTIC IMPEDANCE: 100 Ω ± 15% (1-300 MHz)

INPUT IMPEDANCE: 100 Ω ± 15% (1-100 MHz)
100 Ω ± 22% (>100-200 MHz)
100 Ω ± 32% (>200-350 MHz)

RETURN LOSS (RL): $20 + 5 \log_{10}(f)$ dB MIN (1-10 MHz)
25 dB MIN (>10-20 MHz)
$27 - 7 \log_{10}(f/20)$ dB MIN (>20 MHz)

INSERTION LOSS (ATTENUATION): $1.808 \sqrt{f} + .017 f + \frac{.20}{\sqrt{f}}$ dB/100m MAX

NEAR END CROSSTALK (NEXT): $44.3 - 15 \log_{10}(f/100)$ dB/100m MIN

POWER SUM NEAR END CROSSTALK (PS-NEXT): $42.3 - 15 \log_{10}(f/100)$ dB/100m MIN

EQUAL LEVEL FAR END CROSSTALK (ELFEXT): $30 - 20 \log_{10}(f/100)$ dB/100m MIN

POWER SUM EQUAL LEVEL FAR END CROSSTALK (PS-ELFEXT): $28 - 20 \log_{10}(f/100)$ dB/100m MIN

PROPAGATION DELAY: $534 + 36 / \sqrt{f}$ ns/100m MAX

DELTA DELAY (SKEW): 30 ns/100m MAX

NOMINAL VELOCITY OF PROPAGATION (NVP): 72% PLENUM
68% NON-PLENUM

WHERE f = FREQUENCY IN MHz from .772 to 350 MHz, except for ELFEXT and PS-ELFEXT from 1 to 350 MHz.

TABLE 3

REFERENCE ELECTRICAL CHARACTERISTICS

FREQ (MHz)	INSERTION LOSS (dB/100m)		NEXT (dB/100m)		ACR (dB/100m)	PS-NEXT (dB/100m)		PS-ACR (dB/100m)	ELFEXT (dB/100m)	PS-ELFEXT (dB/100m)	RL (dB)
	avg	max	avg	min	min	avg	min	min	min	min	min
.772	1.7	1.8	86	76.0	74.2	80	74.0	72.2	-	-	-
1.0	1.9	2.0	82	74.3	72.3	75	72.3	70.3	70.0	68.0	20.0
4.0	3.6	3.8	73	65.3	61.5	65	63.3	59.5	58.0	56.0	23.0
8.0	5.0	5.3	69	60.8	55.5	61	58.8	53.5	51.9	49.9	24.5
10.0	5.6	6.0	67	59.3	53.3	60	57.3	51.3	50.0	48.0	25.0
16.0	7.1	7.6	66	56.2	48.6	58	54.2	46.6	45.9	43.9	25.0
20.0	7.9	8.5	64	54.8	46.3	56	52.8	44.3	44.0	42.0	25.0
25.0	8.9	9.5	63	53.3	43.8	54	51.3	41.8	42.0	40.0	24.3
31.25	10.0	10.7	62	51.9	41.2	53	49.9	39.2	40.1	38.1	23.6
62.5	14.4	15.4	58	47.4	32.0	49	45.4	30.0	34.1	32.1	21.5
100.0	18.5	19.8	54	44.3	24.5	45	42.3	22.5	30.0	28.0	20.1
155.0	23.6	25.2	52	41.4	16.2	43	39.4	14.2	26.2	24.2	18.8
200.0	27.1	29.0	50	39.8	10.8	42	37.8	8.8	24.0	22.0	18.0
250.0	30.7	32.8	49	38.3	5.5	40	36.3	3.5	22.0	20.0	17.3
300.0	34.0	36.4	48	37.1	0.7	39	35.1	-	20.5	18.5	16.8
350.0	37.2	39.8	47	36.1	-	38	34.1	-	19.1	17.1	16.3
400.0	40.2	43.0	46	35.3	-	37	33.3	-	18.0	16.0	15.9
500.0	45.7	48.9	45	33.8	-	36	31.8	-	16.0	14.0	15.2
550.0	48.4	51.8	44	33.2	-	35	31.2	-	-	-	14.9
600.0	51.0	54.5	43	32.6	-	35	30.6	-	-	-	14.7
650.0	53.5	57.2	42	32.1	-	35	30.1	-	-	-	14.4

VALUES ABOVE 350 MHz ARE FOR ENGINEERING INFORMATION ONLY.

Mohawk reserves the right to change specification in the interest of product enhancement.

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