

MASTER SPECIFICATION

6 LAN™ PLUS CABLE

4 PAIR #23 AWG UTP CATEGORY 6e NON-PLENUM

Now With 5 dB PS-NEXT and PS-ELFEXT Headroom

Design Number:
LT55937

DESCRIPTION

UNSHIELDED TWISTED PAIR (UTP) 6 LAN PLUS CABLE FOR USE IN HORIZONTAL CABLING SYSTEMS PER ANSI/TIA-568-C AND ISO/IEC 11801:2002 CLASS E. THE CABLE EXCEEDS ANSI/TIA-568-C.2 & ISO/IEC 11801:2002 CATEGORY 6 ELECTRICAL CHARACTERISTICS. THE CABLE CONSISTS OF #23 AWG SOLID BARE COPPER INSULATED CONDUCTORS, ASSEMBLED INTO FOUR TIGHTLY TWISTED PAIRS, WITH A CORE SEPARATOR AND A RIPCORD, UNDER AN OVERALL JACKET. PRINT INCLUDES DESCENDING FOOTAGE MARKERS FROM 1000 TO 0 ON EACH 1000 FT REEL OR BOX. SEE BELDEN.COM/P FOR ANY/ALL APPLICABLE PATENT DETAILS.

THE CABLE IS RISER (NON-PLENUM) RATED FOR USE AS A VERTICAL RUN IN A SHAFT AND FOR GENERAL PURPOSE COMMUNICATIONS USE IN ACCORDANCE WITH ARTICLE 800 OF THE NATIONAL ELECTRICAL CODE (NEC). THE CABLE IS UL (USA) & cUL (CANADA) LISTED FOR THIS APPLICATION BY PASSING THE 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.

SUPPORTED APPLICATIONS

IEEE 802.3 10BASE-T (ETHERNET), 100BASE-T (FAST ETHERNET), AND 1000BASE-T (GIGABIT ETHERNET), IEEE 802.3af POWER OVER ETHERNET FOR VoIP, 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: THERMOPLASTIC POLYOLEFIN

PAIR ASSEMBLY: 2 PRIMARIES TWISTED IN VARIED LAYS

COLOR CODE: SEE TABLE 1

CABLE ASSEMBLY: 4 PAIRS CABLED TOGETHER WITH A CORE SEPARATOR

JACKET: NO LEAD FLAME RETARDANT THERMOPLASTIC
JACKET COLOR: SEE TABLE 2
NOMINAL CABLE OD: .223" (5.66 mm)

LISTING: C(UL)US OR C(ETL)US TYPE CMR
UL OR ETL VERIFIED TO CAT 6

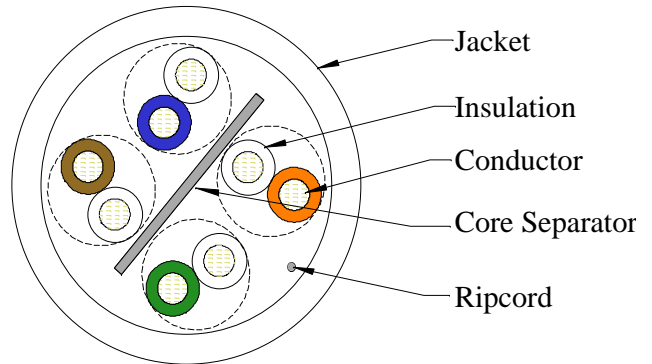


TABLE 1

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

TABLE 2

MOHAWK PART NUMBER	MOHAWK DESIGN NUMBER	JACKET COLOR
M58805	LT56008	WHITE
M58804	LT56007	BLUE
M58919	LT57152	PINK
M58920	LT57153	YELLOW
M58806	LT56009	GRAY
M58922	LT57154	GREEN
M58923	LT57155	RED
M58924	LT57156	ORANGE
M58925	LT57157	BLACK
M58795	LT55937	VIOLET

PHYSICAL CHARACTERISTICS

- CABLE WEIGHT:** 24 lbs/1000ft (36 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.



MOHAWK
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Rev	Description	Date	Init.
K	UPDATE ELECTRICALS & FOOTER	01/06/14	JS
L	UPDATE DIA, PATENT INFO & TABLE 3	08/14/15	JS
M	UPDATE HEADER & ELECTRICALS	10/23/15	JS
N	UPDATE ELECTRICALS	12/11/15	JS
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ELECTRICAL CHARACTERISTICS (REF TABLE 3)

STANDARDS: EXCEEDS ANSI/TIA-568-C.2 CAT 6
ICEA S-90-661-1997 CAT 6 &
ISO/IEC 11801:2002 CAT 6
HORIZONTAL CABLE

CONDUCTOR DCR: 9.38 Ω/100m (28.6 Ω/Mft) MAX

DCR UNBALANCE: 5% MAX

MUTUAL CAPACITANCE: 46 pF/m NOM

CAPACITANCE UNBALANCE PAIR/GROUND: 66 pF/100m MAX

CHARACTERISTIC IMPEDANCE: 100 Ω ± 15% (1-250 MHz)

INPUT IMPEDANCE: 100 Ω ± 15% (1-100 MHz)
100 Ω ± 20% (>100-200 MHz)
100 Ω ± 25% (>200 MHz)

RETURN LOSS (RL): 20 + 5 log₁₀(f) dB MIN (1-10 MHz)
25 dB MIN (>10-20 MHz)
25 - 7 log₁₀(f/20) dB MIN (>20 MHz)

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

NEAR END CROSSTALK (NEXT): 47.3 - 15 log₁₀(f/100) dB/100m MIN

POWER SUM NEAR END CROSSTALK (PS-NEXT): 47.3 - 15 log₁₀(f/100) dB/100m MIN

EQUAL LEVEL FAR END CROSSTALK (ELFEXT): 29.8 - 20 log₁₀(f/100) dB/100m MIN

POWER SUM EQUAL LEVEL FAR END CROSSTALK (PS-ELFEXT): 29.8 - 20 log₁₀(f/100) dB/100m MIN

PROPAGATION DELAY: 534 + 36 / √f ns/100m MAX

DELTA DELAY (SKEW): 45 ns/100m MAX

NOMINAL VELOCITY OF PROPAGATION (NVP): 68%

WHERE f = FREQUENCY IN MHz from .772 to 250 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	85	79.0	77.2	82	79.0	77.2	-	-	-
1.0	1.9	2.0	83	77.3	75.3	80	77.3	75.3	69.8	69.8	20.0
4.0	3.6	3.8	74	68.3	64.5	71	68.3	64.5	57.8	57.8	23.0
8.0	5.1	5.3	70	63.8	58.5	67	63.8	58.5	51.7	51.7	24.5
10.0	5.7	6.0	68	62.3	56.3	65	62.3	56.3	49.8	49.8	25.0
16.0	7.3	7.6	65	59.2	51.6	62	59.2	51.6	45.7	45.7	25.0
20.0	8.1	8.5	64	57.8	49.3	61	57.8	49.3	43.8	43.8	25.0
25.0	9.1	9.5	62	56.3	46.8	59	56.3	46.8	41.8	41.8	24.3
31.25	10.2	10.7	61	54.9	44.2	58	54.9	44.2	39.9	39.9	23.6
62.5	14.8	15.4	56	50.4	35.0	53	50.4	35.0	33.9	33.9	21.5
100.0	19.0	19.8	53	47.3	27.5	50	47.3	27.5	29.8	29.8	20.1
155.0	24.2	25.2	50	44.4	19.3	47	44.4	19.3	26.0	26.0	18.8
200.0	27.8	29.0	49	42.8	13.8	46	42.8	13.8	23.8	23.8	18.0
250.0	31.5	32.8	47	41.3	8.5	44	41.3	8.5	21.8	21.8	17.3
300.0	35.0	36.4	46	40.1	3.7	43	40.1	3.7	15.3	15.3	16.8
350.0	38.2	39.8	45	39.1	--	42	39.1	--	13.9	13.9	16.3
400.0	41.3	43.0	44	38.3	--	41	38.3	--	12.8	12.8	15.9
500.0	47.0	48.9	43	36.8	--	40	36.8	--	10.8	10.8	15.2
550.0	49.7	51.8	42	36.2	--	39	36.2	--	10.0	10.0	14.9
600.0	52.3	54.5	41	35.6	--	38	35.6	--	9.2	9.2	14.6
625.0	53.5	55.8	41	35.4	--	38	35.4	--	8.9	8.9	14.5

SWEEP TESTED TO 625 MHz; VALUES ABOVE 250 MHz ARE FOR ENGINEERING INFORMATION ONLY.



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

This cable complies with the EU-RoHS directive 2002/95/EC (restrictions on hazardous substances) regulations.