

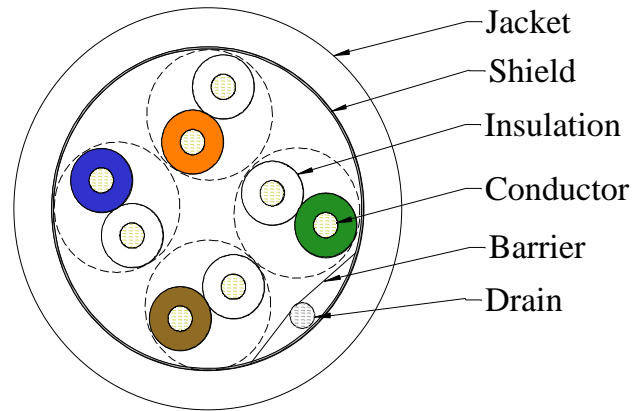
MASTER SPECIFICATION
5e LAN[®] CABLE
4 PAIR #24 AWG F/UTP CAT 5e NON-PLENUM

Design Number:
LT48325

DESCRIPTION

SCREENED TWISTED PAIR (F/UTP) CATEGORY 5e CABLE FOR USE IN HORIZONTAL CABLING SYSTEMS PER ANSI/TIA-568-C. THE CABLE MEETS CATEGORY 5 AND CATEGORY 5e ELECTRICAL CHARACTERISTICS AND IS TESTED TO 200 MHz. THE CABLE CONSISTS OF #24 AWG SOLID BARE COPPER INSULATED CONDUCTORS, ASSEMBLED INTO FOUR TIGHTLY TWISTED PAIRS WITH AN OVERALL FOIL SHIELD AND DRAIN, UNDER AN OVERALL JACKET. PRINT INCLUDES DESCENDING FOOTAGE MARKERS FROM 1000 TO 0.

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 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), 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.

CONSTRUCTION

- PRIMARIES:** CONDUCTOR: 24 AWG (.5 mm) SOLID BARE COPPER
INSULATION: THERMOPLASTIC
- PAIR ASSEMBLY:** 2 PRIMARIES TWISTED IN VARIED LAYS
- CABLE ASSEMBLY:** 4 PAIRS CABLED TOGETHER
- COLOR CODE:** SEE TABLE 1
- BARRIER:** OVERALL POLYESTER TAPE, 25% OVERLAP
- DRAIN:** #24 AWG SOLID TINNED COPPER
- SCREEN (SHIELD):** OVERALL ALUMINUM/POLYESTER TAPE, ALUM SIDE FACING IN, 25% OVERLAP, 100% COVERAGE
- JACKET:** NO LEAD FLAME RETARDANT THERMOPLASTIC
JACKET COLOR: SEE TABLE 2
NOMINAL OD: .260" (6.60 mm)
- LISTING:** C(UL)US OR C(ETL)US TYPE CMR
UL OR ETL VERIFIED CAT 5e

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
M58195	LT48326	WHITE
M58196	LT48327	BLUE
M58197	LT48328	PINK
M58198	LT48329	YELLOW
M58145	LT48113	GRAY
M58199	LT48330	GREEN
M58200	LT48331	RED
M58201	LT48332	ORANGE
M58202	LT48333	BLACK
M58203	LT48334	VIOLET

PHYSICAL CHARACTERISTICS

- CABLE WEIGHT w/reel:** 32 lbs/1000ft (48 kg/km)
- BENDING RADIUS:** 1" (25.4 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
 Cabling Excellence for Open Architecture

(978) 537-9961 Fax: (978) 537-4358
 (800) 422-9961 www.mohawk-cable.com

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Rev	Description	Date	Init.
J	UPD HD, DESC, DIA, LIST, WT, STDS, ELECS, SWP TS	04/06/12	JS
K	UPDATE HEADER/FOOTER	05/01/14	JS
L	UPDATE DESC & TABLE 3	12/30/15	JS
M	UPDATE FOOTER	02/20/17	JS
Date: 10/22/01		Page 1 of 2	
Orig:		Review:	
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ELECTRICAL CHARACTERISTICS (REF TABLE 3)

STANDARDS: ANSI/TIA-568-C.2 CAT 5e
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: 132 pF/100m MAX

CHARACTERISTIC IMPEDANCE: 100 Ω ± 15% (1-100 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: $1.967\sqrt{f} + .023f + \frac{.050}{\sqrt{f}}$ dB/100m MAX

NEAR END CROSSTALK (NEXT): 35.3 - 15 log₁₀(f/100) dB/100m MIN

POWER SUM NEAR END CROSSTALK (PS-NEXT): 32.3 - 15 log₁₀(f/100) dB/100m MIN

EQUAL LEVEL FAR END CROSSTALK (ELFEXT): 23.8 - 20 log₁₀(f/100) dB/100m MIN

POWER SUM EQUAL LEVEL FAR END CROSSTALK (PS-ELFEXT): 20.8 - 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 100 MHz

TABLE 3

REFERENCE ELECTRICAL CHARACTERISTICS

FREQ (MHz)	INSERTION LOSS			NEXT		ACR	PS-NEXT		PS-ACR	ELFEXT	PS-ELFEXT	RL
	(dB/100m)	(dB/mft)	(dB/mft)	(dB/100m)	(dB/100m)	(dB/100m)	(dB/100m)	(dB/100m)	(dB/100m)	(dB/100m)	(dB/100m)	(dB)
.772	avg	max	max	avg	min	min	avg	min	min	min	min	min
1.0	1.6	1.8	5.5	79	67.0	65.2	70	64.0	62.2	-	-	-
4.0	1.8	2.0	6.3	77	65.3	63.3	68	62.3	60.3	63.8	60.8	20.0
8.0	3.8	4.1	13	68	56.3	52.2	57	53.3	49.2	51.7	48.7	23.0
10.0	5.4	5.8	18	64	51.8	46.0	54	48.8	43.0	45.7	42.7	24.5
16.0	6.0	6.5	20	62	50.3	43.8	52	47.3	40.8	43.8	40.8	25.0
20.0	7.6	8.2	25	60	47.3	39.0	50	44.3	36.0	39.7	36.7	25.0
25.0	8.6	9.3	28	58	45.8	36.5	48	42.8	33.5	37.8	34.8	25.0
31.25	9.7	10.4	32	57	44.3	33.9	47	41.3	30.9	35.8	32.8	24.3
62.5	10.9	11.7	36	56	42.9	31.2	46	39.9	28.2	33.9	30.9	23.6
100.0	15.8	17.0	52	52	38.4	21.4	42	35.4	18.4	27.8	24.8	21.5
155.0	20.5	22.0	67	48	35.3	13.3	38	32.3	10.3	23.8	20.8	20.1
200.0	26.2	28.1	86	45	32.4	4.4	35	29.4	1.4	20.0	17.0	18.8
	30.2	32.4	99	43	30.8	-	33	27.8	-	17.8	14.8	18.0

SWEEP TESTED TO 200 MHz; VALUES ABOVE 100 MHz ARE FOR ENGINEERING INFORMATION ONLY.



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