

MASTER SPECIFICATION

MegaLink™ PATCH CABLE

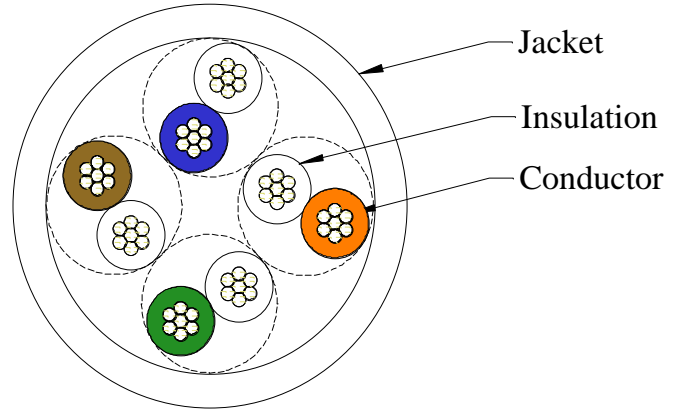
4 PAIR #24 AWG UTP CAT 5E PATCH

Design Number:
LT40339

DESCRIPTION

UNSHIELDED TWISTED PAIR (UTP) MEGALINK PATCH CABLE FOR USE AS PATCH OR EQUIPMENT CORDS PER ANSI/TIA-568-C. THE CABLE EXCEEDS CATEGORY 5e ELECTRICAL CHARACTERISTICS AND IS TESTED TO 400 MHz. THE CABLE CONSISTS OF #24 AWG STRANDED TINNED COPPER INSULATED CONDUCTORS, ASSEMBLED INTO FOUR TIGHTLY TWISTED PAIRS UNDER AN OVERALL JACKET. PRINT INCLUDES DESCENDING FOOTAGE MARKERS FROM 1000 TO 0.

THE CABLE IS RATED 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 1581 VERTICAL TRAY FLAME TEST & 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 & 1.2 Gbps.

CONSTRUCTION

PRIMARIES: CONDUCTOR: 24 AWG(7/32) STRANDED TIN COPPER
INSULATION: THERMOPLASTIC POLYOLEFIN WITH INTEGRAL STRIPES

PAIR ASSEMBLY: 2 PRIMARIES TWISTED IN VARIED LAYS

CABLE ASSEMBLY: 4 PAIRS CABLED TOGETHER

COLOR CODE: SEE TABLE 1

JACKET: NO LEAD FLAME RETARDANT THERMOPLASTIC
JACKET COLOR: SEE TABLE 2
NOMINAL CABLE OD: .204" (5.18 mm)

LISTING: C(UL)US OR C(ETL)US TYPE CMG
UL OR ETL VERIFIED CAT 5e PATCH

PHYSICAL CHARACTERISTICS

CABLE WEIGHT w/reel: 22 lbs/1000ft (33 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)

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
M56726	LT37375	WHITE
M57076	LT40362	BLUE
M57570	LT43778	PINK
M56985	LT39605	YELLOW
M57071	LT40358	LT. GRAY
M57075	LT40361	GREEN
M57073	LT40359	RED
M57074	LT40360	ORANGE
M57216	LT41121	BLACK
M57077	LT40363	VIOLET
M57569	LT43777	DK. GRAY
M57604	LT43973	PASTEL VIOLET
M57823	LT45434	BROWN
M58411	LT51751	LM. GREEN
M58583	LT53624	DK. PURPLE

*THE INSTALLATION TEMPERATURE REFERS TO THE TEMPERATURE OF THE CABLE WHILE BEING INSTALLED OR PULLED.



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Rev	Description	Date	Init.
AH	ADD SWEEP TESTING	04/16/12	JS
AI	ADD PATENT INFO; UPDATE FOOTER	05/02/14	JS
AJ	DELETE PAT INFO	02/09/16	JS
AK	UPDATE FOOTER	03/10/17	JS
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ELECTRICAL CHARACTERISTICS (REF TABLE 3)

STANDARDS:	EXCEEDS ANSI/TIA-568-C.2 CAT 5e AND ISO/IEC 11801:2002 CAT 5 PATCH	INSERTION LOSS:	$2.164\sqrt{f} + .0253f + \frac{.055}{\sqrt{f}}$ dB/100m MAX
CONDUCTOR DCR:	9.09 Ω/100m (27.7 Ω/Mft) MAX	NEAR END CROSSTALK (NEXT):	40.3 - 15 log ₁₀ (f/100) dB/100m MIN
DCR UNBALANCE:	3% MAX	POWER SUM NEAR END CROSSTALK (PS-NEXT):	38.3 - 15 log ₁₀ (f/100) dB/100m MIN
MUTUAL CAPACITANCE:	46 pF/m NOM	EQUAL LEVEL FAR END CROSSTALK (ELFEXT):	27.8 - 20 log ₁₀ (f/100) dB/100m MIN
CAPACITANCE UNBALANCE PAIR/GROUND:	66 pF/100m MAX	POWER SUM EQUAL LEVEL FAR END CROSSTALK (PS-ELFEXT):	24.8 - 20 log ₁₀ (f/100) dB/100m MIN
CHARACTERISTIC IMPEDANCE:	100 Ω ± 15% (1-400 MHz)	PROPAGATION DELAY:	534 + 36/√f ns/100m MAX
INPUT IMPEDANCE:	100 Ω ± 15% (1-100 MHz) 100 Ω ± 22% (>100-200 MHz)	DELTA DELAY (SKEW):	25 ns/100m MAX
RETURN LOSS (RL):	20 + 5 log ₁₀ (f) dB MIN (1-10 MHz) 25 dB MIN (>10-20 MHz) 25 - 7 log ₁₀ (f/20) dB MIN (>20 MHz)	NOMINAL VELOCITY OF PROPAGATION (NVP):	68%

WHERE f = FREQUENCY IN MHz from .772 to 250 MHz, except for ELFEXT and PS-ELFEXT from 1 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	1.8	2.0	82	72.0	70.0	75	70.0	68.0	-	-	-
1.0	2.0	2.2	80	70.3	68.1	73	68.3	66.1	67.8	64.8	20.0
4.0	4.1	4.5	70	61.3	56.8	63	59.3	54.8	55.8	52.8	23.0
8.0	5.8	6.3	66	56.8	50.5	59	54.8	48.5	49.7	46.7	24.5
10.0	6.5	7.1	64	55.3	48.2	58	53.3	46.2	47.8	44.8	25.0
16.0	8.4	9.1	62	52.2	43.1	56	50.2	41.1	43.7	40.7	25.0
20.0	9.4	10.2	60	50.8	40.6	54	48.8	38.6	41.8	38.8	25.0
25.0	10.6	11.5	59	49.3	37.8	52	47.3	35.8	39.8	36.8	24.3
31.25	11.9	12.9	58	47.9	35.0	51	45.9	33.0	37.9	34.9	23.6
62.5	17.2	18.7	54	43.4	24.7	47	41.4	22.7	31.9	28.9	21.5
100.0	22.3	24.2	50	40.3	16.1	43	38.3	14.1	27.8	24.8	20.1
155.0	28.4	30.9	48	37.4	6.5	41	35.4	4.5	24.0	21.0	18.8
200.0	32.8	35.7	46	35.8	0.1	40	33.8	-	21.8	18.8	18.0
250.0	37.3	40.5	45	34.3	-	38	32.3	-	19.8	16.8	17.3
300.0	41.5	45.1	44	33.1	-	37	31.1	-	18.3	15.3	16.8
350.0	45.4	49.3	43	32.1	-	36	30.1	-	16.9	13.9	16.3
400.0	49.1	53.4	42	31.3	-	35	29.3	-	-	-	15.9

SWEEP TESTED TO 400 MHz; VALUES ABOVE 250 MHz ARE FOR ENGINEERING INFORMATION ONLY.



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