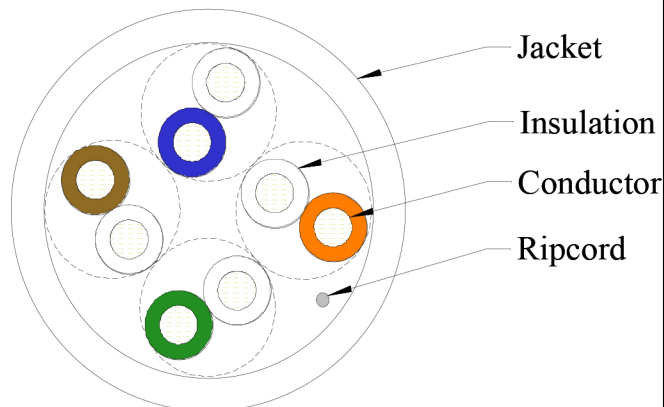


Plenum Cat5e Cables

**DESCRIPTION**

UNSHIELDED TWISTED PAIR (UTP) CATEGORY 5e CABLE FOR USE IN HORIZONTAL CABLING SYSTEMS PER ANSI/TIA-568-C. THE CABLE MEETS 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 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 PLENUM RATED FOR USE IN AIR HANDLING DUCTS AND SPACES IN ACCORDANCE WITH ARTICLE 800 OF THE NATIONAL ELECTRICAL CODE (NEC). THE CABLE IS ETL (USA) & cETL (CANADA) LISTED FOR THIS APPLICATION BY PASSING NFPA 262 (FT6 OR PREVIOUSLY UL 910 STEINER TUNNEL) TEST.



**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 DUAL INSULATION, FEP ON ALL 4 PAIRS

**PAIR ASSEMBLY:** 2 PRIMARIES TWISTED IN VARIED LAYS

**COLOR CODE:** SEE TABLE 1

**CABLE ASSEMBLY:** 4 PAIRS CABLED TOGETHER

**JACKET:** NO LEAD PLENUM RATED THERMOPLASTIC  
JACKET COLOR: SEE TABLE 2  
NOMINAL CABLE OD: .190" (4.83 mm)

**LISTING:** C(UL)US OR C(ETL)US TYPE CMP  
UL OR ETL VERIFIED CAT 5e

**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)

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

TABLE 1

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

TABLE 2

MOHAWK PART NUMBER	MOHAWK DESIGN NUMBER	JACKET COLOR
M57547	HT43684	WHITE
M57546	HT43683	BLUE
M57548	HT43685	PINK
M57550	HT43686	YELLOW
M57545	HT43682	GRAY
M57551	HT43687	GREEN
M57887	HT45954	RED
M57924	HT46113	ORANGE
M57936	HT46254	BLACK
M57761	HT45229	VIOLET
M57723	HT44711	BROWN
M58069	HT47467	KELLEY GREEN

Rev	Description	Date	Init.
Z			
AA			
AB			
AC			
TITLE: Mohawk M57546B Plenum Cat5e Cable			
Orig:	Review:		

Plenum Cat5e Cables

**ELECTRICAL CHARACTERISTICS** (REF TABLE 3)

<b>STANDARDS:</b>	ANSI/TIA-568-C.2 CAT 5e HORIZONTAL CABLE	<b>INSERTION LOSS:</b>	$1.967\sqrt{f} + .023f + \frac{.050}{\sqrt{f}}$ dB/100m MAX
<b>CONDUCTOR DCR:</b>	9.38 Ω/100m (28.6 Ω/Mft) MAX	<b>NEAR END CROSSTALK (NEXT):</b>	35.3 - 15 log <sub>10</sub> (f/100) dB/100m MIN
<b>DCR UNBALANCE:</b>	5% MAX	<b>POWER SUM NEAR END CROSSTALK (PS-NEXT):</b>	32.3 - 15 log <sub>10</sub> (f/100) dB/100m MIN
<b>MUTUAL CAPACITANCE:</b>	46 pF/m NOM	<b>EQUAL LEVEL FAR END CROSSTALK (ELFEXT):</b>	23.8 - 20 log <sub>10</sub> (f/100) dB/100m MIN
<b>CAPACITANCE UNBALANCE PAIR/GROUND:</b>	132 pF/100m MAX	<b>POWER SUM EQUAL LEVEL FAR END CROSSTALK (PS-ELFEXT):</b>	20.8 - 20 log <sub>10</sub> (f/100) dB/100m MIN
<b>CHARACTERISTIC IMPEDANCE:</b>	100 Ω ± 15% (1-100 MHz)	<b>PROPAGATION DELAY:</b>	534 + 36/√f ns/100m MAX
<b>RETURN LOSS (RL):</b>	20 + 5 log <sub>10</sub> (f) dB MIN (1-10 MHz) 25 dB MIN (>10-20 MHz) 25 - 7 log <sub>10</sub> (f/20) dB MIN (>20 MHz)	<b>DELTA DELAY (SKEW):</b>	45 ns/100m MAX
		<b>NOMINAL VELOCITY OF PROPAGATION (NVP):</b>	72%

WHERE f = FREQUENCY IN MHz from .772 to 100 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	max	avg	min	min	avg	min	min	min	min	min
.772	1.6	1.8	5.5	79	67.0	65.2	70	64.0	62.2	-	-	-
1.0	1.8	2.0	6.3	77	65.3	63.3	68	62.3	60.3	63.8	60.8	20.0
4.0	3.8	4.1	13	68	56.3	52.2	57	53.3	49.2	51.7	48.7	23.0
8.0	5.4	5.8	18	64	51.8	46.0	54	48.8	43.0	45.7	42.7	24.5
10.0	6.0	6.5	20	62	50.3	43.8	52	47.3	40.8	43.8	40.8	25.0
16.0	7.6	8.2	25	60	47.3	39.0	50	44.3	36.0	39.7	36.7	25.0
20.0	8.6	9.3	28	58	45.8	36.5	48	42.8	33.5	37.7	34.7	25.0
25.0	9.7	10.4	32	57	44.3	33.9	47	41.3	30.9	35.8	32.8	24.3
31.25	10.9	11.7	36	56	42.9	31.2	46	39.9	28.2	33.9	30.9	23.6
62.5	15.8	17.0	52	52	38.4	21.4	42	35.4	18.4	27.8	24.8	21.5
100.0	20.5	22.0	67	48	35.3	13.3	38	32.3	10.3	23.8	20.8	20.1
155.0	26.2	28.1	86	45	32.4	4.3	35	29.4	1.3	20.0	17.0	18.8
200.0	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.

Rev	Description	Date	Init.
Z			
AA			
AB			
AC			
TITLE: Mohawk M57546B Plenum Cat5e Cable			
Orig:	Review:		