

# Category 5E F/UTP MegaLAN®

## Tested to 400 MHz

F/UTP is a foil backed shield over the cable core with a drain wire under the foil shield. This cable is ETL verified to Category 5e.

- **25 Year Warranty\***
- **20 dB Minimum ACR @ 100 MHz** – Proven support for Gigabit Ethernet / 1000BASE-T / IEEE 802.3ab, ATM up to 155 Mbps, 100 Mbps Fast Ethernet / 100BASE-T / IEEE 802.3, ANSI.X3.263 FDDI TP-PMD, Ethernet / 10BASE-T / IEEE 802.3, 4 & 16 Mbps Token Ring / IEEE 802.5, T1/E1, xDSL, ISDN, 550 MHz Broadband Video and standards under development such as ATM at 622 Mbps and 1.2 Gbps.
- **5 dB Minimum** – Improvement in Near End Crosstalk vs. standard Category 5e NEXT.
- **.30 ns/meter Maximum Skew** – Tightly controlled propagation delay.
- 100% insulation (plenum)

- **Enhanced Performance Parameters** – All electrical characteristics proven to exceed TIA/EIA 568-B Category 5e requirements: Near End Crosstalk, Characteristic Impedance, Insertion Loss and Delay Skew. Also exceeds TIA/EIA-568-B.2 Category 5e requirements: Power Sum NEXT, Return Loss, and Far End Crosstalk – ELFEXT and PS-ELFEXT.
- **Engineered for Future Applications** – Where cabling is to be installed in a high external noise location. This could be in the path of radar or next to a telecom or a broadcast transmission point. Or is security an issue? When quality cable is properly installed, grounded, and tested, shielded cable provides measurably lower RF emissions.
- **Use All Shielded Components for a Shielded or Screened System** – Mohawk strongly recommends the use of shielded or screened connecting hardware, and all shielded or screened cords: patch, work area and equipment cords should be used throughout the structured cabling system.
- This cable and/or its manufacture are covered by US Patent No. 5,424,491.

\* Warranty available with MAC and System MATE® programs.

## Electrical Characteristics

### STANDARDS:

EXCEEDS TIA/EIA-568-B.2 CAT 5e & ISO/IEC 11801:2002 CAT 5 HORIZONTAL CABLE

### CONDUCTOR DCR:

8.9  $\Omega$ /100m (27.1  $\Omega$ /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  $\Omega$   $\pm$  15% (1-400 MHz)

### INPUT IMPEDANCE:

100  $\Omega$   $\pm$  15% (1-100 MHz)

100  $\Omega$   $\pm$  22% (>100-200 MHz)

### PROPAGATION DELAY:

506 + 36/ $\sqrt{f}$  ns/100m MAX

### DELTA DELAY (SKEW):

30 ns/100m MAX

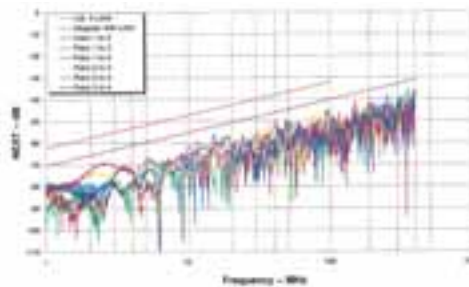
### NOMINAL VELOCITY

OF PROPAGATION (NVP):

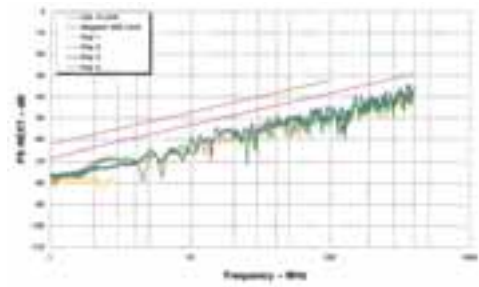
PLENUM 72%

NON-PLENUM 68%

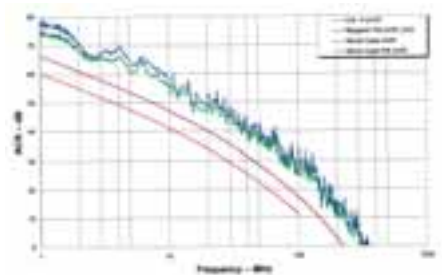
Near End Crosstalk (NEXT)



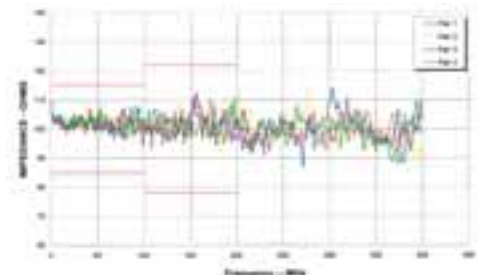
Power Sum NEXT (PS NEXT)



Worst Case ACR and Power Sum ACR



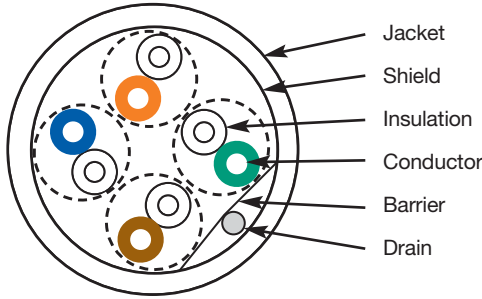
Input Impedance



Safety listed to NEC (NFPA 70)



Verified by ETL to TIA/EIA-568-B.2



Jacket Colors for 4-Pair Non-Plenum

Jacket Color	Mohawk #	Jacket Color	Mohawk #
WHITE	M55987	GREEN	M57374
BLUE	M57370	RED	M57375
PINK	M57371	ORANGE	M57376
YELLOW	M57372	BLACK	M57377
GRAY	M57373	VIOLET	M57378

Jacket Colors for 4-Pair Plenum

Jacket Color	Mohawk #	Jacket Color	Mohawk #
WHITE	M55986	GREEN	M57363
BLUE	M57360	RED	M57364
PINK	M57322	ORANGE	M57365
YELLOW	M57361	BLACK	M57366
GRAY	M57362	VIOLET	M57367

Custom colors available; please consult the factory.

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	1.6	1.8	82	72.0	72.2	75	70.0	68.2	—	—	—
1.0	1.8	2.0	80	70.3	70.3	73	68.3	66.3	67.8	64.8	20.0
4.0	3.6	4.0	70	61.3	59.3	63	59.3	55.3	55.8	52.8	23.0
8.0	5.2	5.7	66	56.8	53.1	59	54.8	49.1	49.7	46.7	24.5
10.0	5.8	6.4	64	55.3	50.9	58	53.3	46.9	47.8	44.8	25.0
16.0	7.3	8.1	62	52.2	46.1	56	50.2	42.1	43.7	40.7	25.0
20.0	8.3	9.1	60	50.8	43.7	54	48.8	39.7	41.8	38.8	25.0
25.0	9.3	10.2	59	49.3	41.1	52	47.3	37.1	39.8	36.8	24.3
31.25	10.4	11.4	58	47.9	38.5	51	45.9	34.5	37.9	34.9	23.6
62.5	15.1	16.4	54	43.4	29.0	47	41.4	25.0	31.9	28.9	21.5
100.0	19.6	21.0	50	40.3	21.3	43	38.3	17.3	27.8	24.8	20.1
155.0	25.0	26.6	48	37.4	12.9	41	35.4	8.9	24.0	21.0	18.8
200.0	28.8	30.5	46	35.8	7.3	40	33.8	3.3	21.8	18.8	18.0
250.0	32.8	34.4	45	34.3	1.9	38	32.3	—	19.8	16.8	17.3
300.0	36.5	38.0	44	33.1	—	37	31.1	—	18.3	15.3	16.8
350.0	40.0	41.4	43	32.1	—	36	30.1	—	16.9	13.9	16.3
400.0	43.2	44.6	42	31.3	—	35	29.3	—	—	—	15.9

Values above 250 MHz are for engineering information only.

Mohawk Part No.	Cable Type	Dielectric Type	Jacket Type Diameter		Weight		Listings
			inch	mm	lbs/M'	kg/km	
M55987 Non-Plenum	4 PAIR 24 AWG F/UTP	Thermoplastic	White PVC .245	6.22	32	48	C(UL)US CMR
M55986 Plenum	4 PAIR 24 AWG F/UTP	FEP	White ThermoPlen®* .224	5.69	32	48	C(UL)US CMP

\*Plenum rated Thermoplastic. For pair colors see chart A on page 64.

