

**ALPHA WIRE COMPANY**  
**CUSTOMER PRODUCT SPECIFICATION**

Part Number: 9504RE350

Issue: 6

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Issue Date: 1/16/2004

Effective Date: 1/22/2004

**A. Construction**

Diameters

- |                |                              |       |
|----------------|------------------------------|-------|
| 1) Component 1 | 4 X 1 PAIR                   |       |
| a) Conductor   | 24 (SOLID) AWG BC            |       |
| b) Insulation  | 0.008" Wall, Nom. Polyolefin | 0.037 |
| (1) Color(s)   |                              |       |

Pair	Color	Pair	Color	Pair	Color
1	WHITE/BLUE-BLUE	3	WHITE/GREEN-GREEN		
2	WHITE/ORANGE-ORANGE	4	WHITE/BROWN-BROWN		

- |                   |  |                |
|-------------------|--|----------------|
| c) Pair           | 2/Cond Cabled Together   |                |
| 2) Cable Assembly | 4 Components Bunch Cabled  |                |
| 3) Jacket         | 0.019" Wall, Nom., PVC   | 0.194+/- 0.012 |
| a) Color(s)       | Gray, Yellow, Blue, White  |                |
| b) Ripcord        | 1300 Denier Nylon  |                |
| c) Print          | ALPHA WIRE-* P/N 9504RE350 4PR 24 AWG<br>TYPE CMR 75C VERIFIED (UL) CATEGORY 5E C(UL) TYPE<br>CMR 75C FT4 (SEQUENTIAL FOOTAGE MARKING**) |                |
|                   | * = Factory Code   |                |
|                   | ** = SEQUENTIAL FOOTAGE 1000-0 ft repeat increment   |                |

**B. Industry Approvals**

- |                      |  |             |
|----------------------|--|-------------|
| 1) UL                | CMR  | 75°C / 300V |
| 2) CSA International | C(UL) TYPE CMR   | 75°C / 300V |
| 3) Other             | ANSI/TIA/EIA-568-B.2 Category 5E<br>ISO/IEC 11801 Category 5<br>NEMA WC-63.1 Category 5E |             |

**C. Physical & Mechanical Properties**

- |                      |                  |
|----------------------|------------------|
| 1) Temperature Range | -20 to 75°C      |
| 2) Bend Radius       | 0.8 In., Minimum |
| 3) Cable Weight      | 29 lbs/1000 ft.  |
| 4) Pulling Tension   | 35 lbs, Maximum  |

**D. Electrical Properties**

- |                              |                                |
|------------------------------|--------------------------------|
| 1) Voltage Rating            | 300 V <sub>RMS</sub>           |
| 2) Mutual Capacitance        | 15 pf/ft @ 1 KHz, Nominal      |
| 3) Capacitance Unbalance     | 66 pf/100m, Maximum            |
| 4) Conductor DCR             | 9.0 Ohms/100m @ 20°C, Maximum  |
| 5) DCR Unbalance             | 3% @ 20°C, Maximum             |
| 5) Velocity of Propagation   | 70%, Nominal                   |
| 6) Delay                     | 510 ns/100m @ 100 MHz, Maximum |
| 7) Delay Skew                | 25 ns/100m, Maximum            |
| 8) Premise Cable Electricals |                                |

Frequency (MHz)	Max. Attenuation (db/100 m)	Min. NEXT (db)	Min. PSNEXT (db)	Min. ACR (db)	Min. PSACR (db)	Min. Return Loss(db)	Min. Structural Return Loss (DB)
1.0	2.0	65.3	65.3	63.3	63.3	20.0	
4.0	4.0	56.3	56.3	52.3	52.3	23.0	
8.0	5.7	51.8	51.8	46.1	46.1	24.5	
10.0	6.4	50.3	50.3	43.9	43.9	25.0	
16.0	8.1	47.3	47.3	39.1	39.1	25.0	
20.0	9.2	45.8	45.8	35.2	35.2	25.0	
25.0	10.3	44.3	44.3	34.1	34.1	24.3	
31.25	11.6	42.9	42.9	31.3	31.3	23.6	

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62.5	16.8	38.4	38.4	21.6	21.6	21.5	
100.0	21.7	35.3	35.3	17.1	17.1	20.1	
155.0	27.7	32.5	32.5	4.7	4.7	19.0	
200.0	32.0	30.8	30.8	3.0	3.0	19.0	
250.0	36.4	29.3	29.3	>0	>0	18.0	
300.0	40.5	28.2	28.2			18.0	
310.0	41.3	27.9	27.9			18.0	
350.0	44.3	27.2	27.2			17.0	

Frequency (MHz)	Input(Unfitted) Impedance(Ohms)	Fitted Impedance (Ohms)	Min. ELFEXT (db)	Min. PSELFEXT (db)
1.0	100+/-12	105+/-10	63.8	60.8
4.0	100+/-12	100+/-10	51.7	48.7
8.0	100+/-12	100+/-10	45.7	42.7
10.0	100+/-12	100+/-10	43.8	40.8
16.0	100+/-12	100+/-10	39.7	36.7
20.0	100+/-12	100+/-10	37.7	34.7
25.0	100+/-15	100+/-10	35.8	32.8
31.25	100+/-15	100+/-10	33.9	30.9
62.5	100+/-15	100+/-10	27.8	24.8
100.0	100+/-15	100+/-10	23.8	20.8
155.0	100+/-18	100+/-10	19.9	16.9
200.0	100+/-20	100+/-10	17.7	14.7
250.0	100+/-20	100+/-10	15.8	12.8
300.0	100+/-20	100+/-10	14.2	11.2
310.0	100+/-20	100+/-10	13.9	10.9
350.0	100+/-22	100+/-10	12.9	9.9

**E. Other**

- 1) Packaging
  - a) BOX 1000FT                      Footage marker shall be descending as material leaves carton.