

# Customer Specification PART NO. 6450

# Construction

|                   |       |   |   | Diameters (In | )              |  |
|-------------------|-------|---|---|---------------|----------------|--|
| 1) Component 1    |       | 2 X 1 COND  | 2 X 1 COND  |               |                |  |
| a) Conductor      |       | 18 (7/26) AWC   | 18 (7/26) AWG TC  |               | 0.046          |  |
| b) Insulation     |       | 0.025" Wall, N  | 0.025" Wall, Nom. FRPP  |               | 0.096          |  |
| (1) Color(s)      |       |   |   |               |                |  |
| Cond              | Color | Cond  | Color   | Cond          | Color          |  |
| 1                 | BLUE  | 2   | WHITE   |               |                |  |
| 2) Cable Assembly |       | 2 Components  | 2 Components Cabled   |               |                |  |
| a) Twists:        |       | 6.9 Twists/foot   | 6.9 Twists/foot (min)   |               |                |  |
| 3) Shield:        |       | Alum/Mylar Ta   | Alum/Mylar Tape, 25% Overlap, Min.  |               |                |  |
| a) Foil Direction |       | Foil Facing Ou  | Foil Facing Out   |               |                |  |
| b) Drain Wire     |       | 20 (7/28) AWC   | 20 (7/28) AWG TC  |               |                |  |
| c) Braid          |       | TC,55% Cove   | TC,55% Coverage, Min.   |               |                |  |
| 4) Jacket         |       | 0.053" Wall, N  | 0.053" Wall, Nom.,PVC   |               | 0.324+/- 0.006 |  |
| a) Color(s)       |       | BLUE  | BLUE  |               |                |  |
| b) Print          |       | EXXXXX 1PR<br>TYPE TC OR<br>P-MSHA (MSF<br>* = Factory Cc | ALPHA WIRE-* P/N 6450<br>EXXXXX 1PR18 SHIELDED (UL) 600V 75C DRY SUN RES<br>TYPE TC OR PLTC OR ITC OR CMG OR C(UL) CMG<br>P-MSHA (MSHA #) (seq footage every 2 ft)<br>* = Factory Code<br>[Note: Product may have c(UL) or CSA markings depending upon plant of manufacture.] |               |                |  |

#### Applicable Specifications

| 1) UL                | тс                  | 75°C / 600 V <sub>RMS</sub> |
|----------------------|---------------------|-----------------------------|
|                      | PLTC                | 75°C                        |
|                      | ITC                 | 75°C                        |
|                      | СМG                 | 75°C                        |
|                      | SUN RES             |                             |
| 2) CSA International | СМG                 | 75°C                        |
|                      | FT4                 |                             |
| 3) Other             | PMSHA Specification |                             |

## Environmental

| 1) EU Directive 2002/95/EC(RoHS): |  |
|-----------------------------------|--|
|                                   | All materials used in the manufacture of this part are in compliance with EU Directive 2002/95/EU regarding the restriction of use of certain hazardous substances in electrical and |
|                                   | electronic equipment. Consult Alpha Wire's web site for compliance Date of Manufacture.  |

### Properties

| Physical & Mechanical Properties |                                 |  |  |
|----------------------------------|---------------------------------|--|--|
| 1) Temperature Range             | -40 to 75°C                     |  |  |
| 2) Bend Radius                   | 10X Cable Diameter              |  |  |
| 3) Pull Tension                  | 40 Lbs, Maximum                 |  |  |
| Electrical Properties            | (For Engineering purposes only) |  |  |
| 1) Voltage Rating                | 600 V <sub>RMS</sub>            |  |  |
| 2) Characteristic Impedance      | 78 O +/- 5                      |  |  |
| 3) Inductance                    | 0.12 µH/ft, Nominal             |  |  |
| 4) Mutual Capacitance            | 19.5 pf/ft @1 kHz, Nominal      |  |  |
| 5) Velocity of Propagation       | 65 %                            |  |  |
| 6) Conductor DCR                 | 6.9 O/1000ft @20°C, Nominal     |  |  |
| 7) OA Shield DCR                 | 3.2 O/1000ft @20\°C, Nominal    |  |  |
| 8) Attenuation, Max dB/100ft     | 0.5 @ 1 MHz                     |  |  |
|                                  | 2 @ 10 MHz                      |  |  |
|                                  | 3.8 @ 50 MHz                    |  |  |
|                                  | 5.4 @ 100 MHz                   |  |  |
|                                  | 7.6 @ 200 MHz                   |  |  |
|                                  | 10.7 @ 400 MHz                  |  |  |

#### Other

| 1) Packaging |  |
|--------------|--|
| a) 1000 FT   |  |
| b) 500 FT    |  |
| c) 100 FT    |  |

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#### **RoHS CERTIFICATE OF COMPLIANCE**

To Whom It May Concern:

Alpha Wire Part Number:6450

6450, RoHS-Compliant Commencing With7/1/2008Production

This document certifies that the Alpha part numbers cited above are manufactured in accordance with Directive 2002/95/EC of the European Parliament and of the Council of 27 January 2003, better known as the RoHS Directives, with regards to restrictions of the use of certain hazardous substances used in the manufacture of electrical and electronic equipment. The reader is referred to these Directives for the specific definitions and extents of these Directives. **No Exemptions are required for RoHS Compliance on this item**.

| Substance   | Maximum Control Value     |
|---|---------------------------|
| Lead  | 0.1% by weight (1000 ppm) |
| Mercury   | 0.1% by weight (1000 ppm) |
| Cadmium   | 0.01% by weight (100 ppm) |
| Hexavalent Chromium   | 0.1% by weight (1000 ppm) |
| Polybrominated Biphenyls (PBB)<br>Polybrominated Diphenyl Ethers (PBDE) | 0.1% by weight (1000 ppm) |
| Including Deca-BDE  | 0.1% by weight (1000 ppm) |

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Authorized Signatory for the Alpha Wire Company:

Dave Watson, Director of Engineering &QA

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