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1-800-Belden1



### General Description:

22 AWG stranded (7x29) .031" bare compacted copper conductor, gas-injected foam HDPE insulation, tinned copper double braid shield (95% coverage), PVC jacket.

### Physical Characteristics (Overall)

#### Conductor

AWG:

| # Coax | AWG | Stranding | Conductor Material          | Dia. (in.) |
|--------|-----|-----------|-----------------------------|------------|
| 1      | 22  | 7x29      | BCC - Bare Compacted Copper | .031       |

Total Number of Conductors: 1

#### Insulation

Insulation Material:

| Insulation Material                                 | Dia. (in.) |
|-----------------------------------------------------|------------|
| Gas-injected FHDPE - Foam High Density Polyethylene | .145       |

#### Outer Shield

Outer Shield Material:

| Layer # | Type  | Outer Shield Material | Coverage (%) |
|---------|-------|-----------------------|--------------|
| 1       | Braid | TC - Tinned Copper    | 95.000       |
| 2       | Braid | TC - Tinned Copper    | 95.000       |

#### Outer Jacket

Outer Jacket Material:

| Outer Jacket Material    |
|--------------------------|
| PVC - Polyvinyl Chloride |

#### Overall Cable

Overall Nominal Diameter: 0.242 in.

### Mechanical Characteristics (Overall)

|                                   |                 |
|-----------------------------------|-----------------|
| Operating Temperature Range:      | -35°C To +75°C  |
| UL Temperature Rating:            | 75°C            |
| Bulk Cable Weight:                | 41 lbs/1000 ft. |
| Max. Recommended Pulling Tension: | 88 lbs.         |
| Min. Bend Radius/Minor Axis:      | 2.500 in.       |

### Applicable Specifications and Agency Compliance (Overall)

#### Applicable Standards & Environmental Programs

|                                       |            |
|---------------------------------------|------------|
| NEC/(UL) Specification:               | CM         |
| CEC/C(UL) Specification:              | CM         |
| EU Directive 2011/65/EU (RoHS II):    | Yes        |
| EU CE Mark:                           | Yes        |
| EU Directive 2000/53/EC (ELV):        | Yes        |
| EU Directive 2002/95/EC (RoHS):       | Yes        |
| EU RoHS Compliance Date (mm/dd/yyyy): | 01/01/2005 |
| EU Directive 2002/96/EC (WEEE):       | Yes        |
| EU Directive 2003/11/EC (BFR):        | Yes        |
| CA Prop 65 (CJ for Wire & Cable):     | Yes        |
| MIL Order #39 (China RoHS):           | Yes        |
| RG Type:                              | 59/U       |

Flame Test

UL Flame Test: UL1685 UL Loading

Suitability

Suitability - Indoor: Yes

Plenum/Non-Plenum

Plenum (Y/N): No

Electrical Characteristics (Overall)

Nom. Characteristic Impedance:

Impedance (Ohm)

75

Nom. Inductance:

Inductance (µH/ft)

0.094

Nom. Capacitance Conductor to Shield:

Capacitance (pF/ft)

17.0

Nominal Velocity of Propagation:

VP (%)

80

Nominal Delay:

Delay (ns/ft)

1.3

Nom. Conductor DC Resistance:

DCR @ 20°C (Ohm/1000 ft)

12.2

Nominal Outer Shield DC Resistance:

DCR @ 20°C (Ohm/1000 ft)

2.4

Nom. Attenuation:

| Freq. (MHz) | Attenuation (dB/100 ft.) |
|-------------|--------------------------|
| 1.000       | 0.200                    |
| 3.600       | 0.500                    |
| 5.000       | 0.600                    |
| 6.000       | 0.670                    |
| 7.000       | 0.730                    |
| 10.000      | 0.900                    |
| 12.000      | 0.980                    |
| 25.000      | 1.440                    |
| 67.500      | 2.400                    |
| 71.500      | 2.500                    |
| 88.500      | 2.800                    |
| 100.000     | 3.000                    |
| 135.000     | 3.500                    |
| 143.000     | 3.600                    |
| 180.000     | 4.100                    |
| 270.000     | 5.100                    |
| 360.000     | 6.000                    |
| 540.000     | 7.400                    |
| 720.000     | 8.700                    |
| 750.000     | 8.900                    |
| 1000.000    | 10.500                   |
| 1500.000    | 13.300                   |
| 2000.000    | 15.700                   |
| 2250.000    | 16.900                   |
| 3000.000    | 20.300                   |
| 4500.000    | 28.200                   |

Max. Operating Voltage - UL:

Voltage

300 V RMS

Other Electrical Characteristic 1:

Impedance tested in accordance with ASTM D-4566 paragraph 43.2, option 2 using a 75 Ohm fixed bridge and termination.

## 1505F Coax - RG-59/U Type

### Other Electrical Characteristic 2:

Return Loss tested in accordance with ASTM D-4566 paragraph 45.3, using a 75 Ohm fixed bridge and termination.

### Minimum Return Loss:

| Start Freq. (MHz) | Stop Freq. (MHz) | Min. RL (dB) |
|-------------------|------------------|--------------|
| 5.000             | 850.000          | 20.000       |
| 851.000           | 4500.000         | 15.000       |

### Sweep Test

#### Sweep Testing:

100% Sweep tested 5 MHz to 4.5 GHz.

### Notes (Overall)

**Notes:** Compacted conductor combines impedance uniformity of solid conductors and "nick-resistance" of stranded conductor.

### Put Ups and Colors:

| Item #        | Putup    | Ship Weight | Color         | Notes | Item Desc             |
|---------------|----------|-------------|---------------|-------|-----------------------|
| 1505F B591000 | 1,000 FT | 45.000 LB   | BLACK, MATTE  | C     | #21 GIFHDLPE DBLB PVC |
| 1505F G7V1000 | 1,000 FT | 45.000 LB   | RED, MATTE    | C     | #21 GIFHDLPE DBLB PVC |
| 1505F G7W1000 | 1,000 FT | 45.000 LB   | GREEN, MATTE  | C     | #21 GIFHDLPE DBLB PVC |
| 1505F G7X1000 | 1,000 FT | 45.000 LB   | BLUE, MATTE   | C     | #21 GIFHDLPE DBLB PVC |
| 1505F G7Y1000 | 1,000 FT | 45.000 LB   | WHITE, MATTE  | C     | #21 GIFHDLPE DBLB PVC |
| 1505F G8L1000 | 1,000 FT | 45.000 LB   | ORANGE, MATTE | C     | #21 GIFHDLPE DBLB PVC |
| 1505F Z4B1000 | 1,000 FT | 45.000 LB   | VIO Z4B       |       | #21 GIFHDLPE DBLB PVC |
| 1505F 0041000 | 1,000 FT | 45.000 LB   | YELLOW        | C     | #21 GIFHDLPE DBLB PVC |

#### Notes:

C = CRATE REEL PUT-UP.

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