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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. (mm) |
|--------|-----|-----------|-----------------------------|-----------|
| 1      | 22  | 7x29      | BCC - Bare Compacted Copper | 0.7874    |

Total Number of Conductors: 1

### Insulation

Insulation Material:

| Insulation Material                                 | Dia. (mm) |
|---|-----------|
| Gas-injected FHDPE - Foam High Density Polyethylene | 3.683     |

### 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: 6.147 mm

## Mechanical Characteristics (Overall)

Operating Temperature Range: -35°C To +75°C

UL Temperature Rating: 75°C

Bulk Cable Weight: 61.016 Kg/Km

Max. Recommended Pulling Tension: 391.442 N

Min. Bend Radius/Minor Axis: 63.500 mm

## 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

MII 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/m)

0.308414

**Nom. Capacitance Conductor to Shield:**

Capacitance (pF/m)

55.777

**Nominal Velocity of Propagation:**

VP (%)

80

**Nominal Delay:**

Delay (ns/m)

4.2653

**Nom. Conductor DC Resistance:**

DCR @ 20°C (Ohm/km)

40.0282

**Nominal Outer Shield DC Resistance:**

DCR @ 20°C (Ohm/km)

7.8744

**Nom. Attenuation:**

| Freq. (MHz) | Attenuation (dB/100m) |
|-------------|-----------------------|
| 1.000       | 0.656                 |
| 3.600       | 1.641                 |
| 5.000       | 1.969                 |
| 6.000       | 2.198                 |
| 7.000       | 2.395                 |
| 10.000      | 2.953                 |
| 12.000      | 3.215                 |
| 25.000      | 4.725                 |
| 67.500      | 7.874                 |
| 71.500      | 8.203                 |
| 88.500      | 9.187                 |
| 100.000     | 9.843                 |
| 135.000     | 11.484                |
| 143.000     | 11.812                |
| 180.000     | 13.452                |
| 270.000     | 16.733                |
| 360.000     | 19.686                |
| 540.000     | 24.608                |
| 720.000     | 29.201                |
| 750.000     | 29.857                |
| 1000.000    | 35.435                |
| 1500.000    | 44.622                |
| 2000.000    | 52.824                |
| 2250.000    | 56.761                |
| 3000.000    | 67.917                |
| 4500.000    | 87.603                |

**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.

## METRIC MEASUREMENT VERSION

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

### Other Electrical Characteristic 2:

Return Loss tested in accordance with ASIM 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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