



**Part Number:** 1505A

Serial Digital Coax, RG59, #20 Solid BC, Foil + 95% TC Braid, CMR

## Product Description

Low Loss Serial Digital Coax, Riser-CMR, RG59 20 AWG solid bare copper conductor, foam HDPE core, Duofoil®+95% tinned copper braid, PVC jacket

## Technical Specifications

### Product Overview

|                        |   |
|------------------------|---|
| Environmental Space:   | Indoor/Outdoor  |
| Suitable Applications: | SMPTE 2081-1 6 Gb/s UHDTV, SMPTE 424M 3 Gb/s HD-SDI 1080p |

### Physical Characteristics (Overall)

#### Conductor

| AWG | Stranding | Material         | Nominal Diameter | No. of Coax |
|-----|-----------|------------------|------------------|-------------|
| 20  | Solid     | BC - Bare Copper | 0.032 in         | 1           |

|                  |        |
|------------------|--------|
| Conductor Count: | 1      |
| Conductor Size:  | 20 AWG |

#### Insulation

| Material  | Nominal Diameter |
|---|------------------|
| Gas-injected FHDPE - Foam High Density Polyethylene | 0.145 in         |

#### Outer Shield Material

| Type  | Layer | Material                    | Material Trade Name | Coverage [%] |
|-------|-------|-----------------------------|---------------------|--------------|
| Tape  | 1     | Aluminum/Polyester/Aluminum | Duofoil®            | 100 %        |
| Braid | 2     | TC - Tinned Copper          |                     | 95 %         |

#### Outer Jacket Material

| Material                 | Nominal Diameter |
|--------------------------|------------------|
| PVC - Polyvinyl Chloride | 0.233 in         |

### Electrical Characteristics

#### Conductor DCR

| Nominal Conductor DCR | Nominal Outer Shield DCR |
|-----------------------|--------------------------|
| 10 Ohm/1000ft         | 3.8 Ohm/1000ft           |

#### Capacitance

| Nom. Capacitance Conductor to Shield |
|--------------------------------------|
| 16.3 pF/ft                           |

#### Inductance

| Nominal Inductance |
|--------------------|
| 0.107 µH/ft        |

#### Impedance

| Nominal Characteristic Impedance |
|----------------------------------|
| 75 Ohm                           |

Return Loss (RL)

| Frequency [MHz] | Minimum Return (RL) |
|-----------------|---------------------|
| 5 - 1600 MHz    | 23 dB               |
| 1600 - 4500 MHz | 21 dB               |
| 4500 - 6000 MHz | 15 dB               |

High Frequency (Nominal/Typical)

| Frequency [MHz] | Nom. Insertion Loss |
|-----------------|---------------------|
| 1 MHz           | 0.3 dB/100ft        |
| 3.6 MHz         | 0.6 dB/100ft        |
| 5 MHz           | 0.63 dB/100ft       |
| 6 MHz           | 0.69 dB/100ft       |
| 7 MHz           | 0.74 dB/100ft       |
| 10 MHz          | 0.9 dB/100ft        |
| 12 MHz          | 0.91 dB/100ft       |
| 25 MHz          | 1.3 dB/100ft        |
| 67.5 MHz        | 2.05 dB/100ft       |
| 71.5 MHz        | 2.1 dB/100ft        |
| 88.5 MHz        | 2.2 dB/100ft        |
| 100 MHz         | 2.3 dB/100ft        |
| 135 MHz         | 2.7 dB/100ft        |
| 143 MHz         | 2.8 dB/100ft        |
| 180 MHz         | 3.1 dB/100ft        |
| 270 MHz         | 3.8 dB/100ft        |
| 360 MHz         | 4.4 dB/100ft        |
| 540 MHz         | 5.5 dB/100ft        |
| 720 MHz         | 6.4 dB/100ft        |
| 750 MHz         | 6.5 dB/100ft        |
| 1000 MHz        | 7.6 dB/100ft        |
| 1500 MHz        | 9.5 dB/100ft        |
| 2000 MHz        | 11.2 dB/100ft       |
| 2250 MHz        | 11.9 dB/100ft       |
| 3000 MHz        | 14.0 dB/100ft       |
| 4500 MHz        | 17.5 dB/100ft       |
| 6000 MHz        | 21.1 dB/100ft       |

Delay

| Nominal Delay | Nominal Velocity of Propagation (VP) [%] |
|---------------|--|
| 1.24 ns/ft    | 82 %                                     |

Voltage

| UL Voltage Rating |
|-------------------|
| 300 V RMS         |

|                                    |   |
|------------------------------------|---|
| Electrical Characteristics Notes:  | TDR Impedance: 75 +/- 1.5 Ohms            |
| Other Electrical Characteristic 2: | Return Loss: Fixed bridge and termination |

Temperature Range

|                       |                |
|-----------------------|----------------|
| UL Temp Rating:       | 75°C           |
| Operating Temp Range: | -30°C To +75°C |

Mechanical Characteristics

|                                  |               |
|----------------------------------|---------------|
| UV Resistance:                   | Yes           |
| Bulk Cable Weight:               | 31 lbs/1000ft |
| Max Recommended Pulling Tension: | 52 lbs        |
| Min Bend Radius/Minor Axis:      | 2.5 in        |

Standards

|                          |     |
|--------------------------|-----|
| NEC/(UL) Specification:  | CMR |
| CEC/C(UL) Specification: | CMG |
| CPR Euroclass:           | Eca |

|          |           |
|----------|-----------|
| RG Type: | 59/U Type |
|----------|-----------|

Applicable Environmental and Other Programs

|                                       |                               |
|---------------------------------------|-------------------------------|
| EU Directive 2000/53/EC (ELV):        | Yes                           |
| EU Directive 2003/96/EC (BFR):        | Yes                           |
| EU Directive 2011/65/EU (ROHS II):    | Yes                           |
| EU Directive 2012/19/EU (WEEE):       | Yes                           |
| EU Directive Compliance:              | EU Directive 2003/11/EC (BFR) |
| EU CE Mark:                           | Yes                           |
| EU RoHS Compliance Date (yyyy-mm-dd): | 2005-01-01                    |
| CA Prop 65 (CJ for Wire & Cable):     | Yes                           |
| MII Order #39 (China RoHS):           | Yes                           |

Suitability

|                                    |  |
|------------------------------------|--|
| Suitability - Aerial:              | Yes - Black only, when supported by messenger wire |
| Suitability - Burial:              | No   |
| Suitability - Hazardous Locations: | No   |
| Suitability - Indoor:              | Yes  |
| Suitability - Outdoor:             | Yes - Black only                                   |

Flammability, LS0H, Toxicity Testing

|                       |                       |
|-----------------------|-----------------------|
| UL Flammability:      | UL1666 Vertical Shaft |
| CSA Flammability:     | FT4                   |
| ISO/IEC Flammability: | IEC 60332-1-2         |
| UL voltage rating:    | 300 V RMS             |

Plenum/Non-Plenum

|                |       |
|----------------|-------|
| Plenum (Y/N):  | No    |
| Plenum Number: | 1506A |

Part Number

|                |            |
|----------------|------------|
| Related Parts: | 1505BNCHD3 |
|----------------|------------|

Variants

| Item #         | Color       | UPC          | Length   | Footnote |
|----------------|-------------|--------------|----------|----------|
| 1505A.00152    | Black       |              | 152 m    |          |
| 1505A.001525   | Black       |              | 1,525 m  |          |
| 1505A.00305    | Black       |              | 305 m    |          |
| 1505A 0101000  | Black       | 612825358282 | 1,000 ft | C        |
| 1505A 010500   | Black       | 612825358732 | 500 ft   | C        |
| 1505A 0105000  | Black       | 612825356301 | 5,000 ft | C N      |
| 1505A.K0305    | Black       |              | 305 m    |          |
| 1505A 010N1000 | Black       |              | 1,000 ft |          |
| 1505A 010N1000 | Black       |              | 1,000 ft |          |
| 1505A.05152    | Blue        |              | 152 m    |          |
| 1505A.051525   | Blue        |              | 1,525 m  |          |
| 1505A.05305    | Blue        |              | 305 m    |          |
| 1505A 0061000  | Blue, Light | 612825358305 | 1,000 ft | C        |
| 1505A 006500   | Blue, Light | 612825356271 | 500 ft   | C        |
| 1505A 0065000  | Blue, Light | 612825356356 | 5,000 ft | C N      |
| 1505A 006N1000 | Blue, Light |              | 1,000 ft |          |
| 1505A 006N1000 | Blue, Light |              | 1,000 ft |          |
| 1505A 0011000  | Brown       | 612825358381 | 1,000 ft | C        |
| 1505A 0015000  | Brown       | 612825358350 | 5,000 ft | C N      |
| 1505A 001N1000 | Brown       |              | 1,000 ft |          |
| 1505A 001N1000 | Brown       |              | 1,000 ft |          |
| 1505A 0081000  | Gray        | 612825356332 | 1,000 ft | C        |
| 1505A 0085000  | Gray        | 612825356325 | 5,000 ft | C N      |
| 1505A 008N1000 | Gray        |              | 1,000 ft |          |
| 1505A 008N1000 | Gray        |              | 1,000 ft |          |

|                |             |              |          |     |
|----------------|-------------|--------------|----------|-----|
| 1505A.081525   | Gray, Slate |              | 1,525 m  |     |
| 1505A.08305    | Gray, Slate |              | 305 m    |     |
| 1505A.061525   | Green       |              | 1,525 m  |     |
| 1505A.06305    | Green       |              | 305 m    |     |
| 1505A N3U1000  | Green, Mil  | 612825358374 | 1,000 ft | C   |
| 1505A N3U5000  | Green, Mil  | 612825356516 | 5,000 ft | C N |
| 1505A N3UN1000 | Green, Mil  |              | 1,000 ft |     |
| 1505A N3UN1000 | Green, Mil  |              | 1,000 ft |     |
| 1505A N3U1640  | Mil Green   |              | 500 m    |     |
| 1505A.031525   | Orange      |              | 1,525 m  |     |
| 1505A.03305    | Orange      |              | 305 m    |     |
| 1505A 0025000  | Orange      | 612825358329 | 5,000 ft | C N |
| 1505A 0031000  | Orange      | 612825356394 | 1,000 ft | C   |
| 1505A 0035000  | Orange      | 612825356387 | 5,000 ft | C N |
| 1505A 003N1000 | Orange      |              | 1,000 ft |     |
| 1505A 003N1000 | Orange      |              | 1,000 ft |     |
| 1505A.02152    | Red         |              | 152 m    |     |
| 1505A.021525   | Red         |              | 1,525 m  |     |
| 1505A.02305    | Red         |              | 305 m    |     |
| 1505A 0021000  | Red         | 612825358343 | 1,000 ft | C   |
| 1505A 002500   | Red         | 612825358336 | 500 ft   | C   |
| 1505A 002N1000 | Red         |              | 1,000 ft |     |
| 1505A 002N1000 | Red         |              | 1,000 ft |     |
| 1505A.01152    | Violet      |              | 152 m    |     |
| 1505A.011525   | Violet      |              | 1,525 m  |     |
| 1505A.01305    | Violet      |              | 305 m    |     |
| 1505A 0071000  | Violet      | 612825356400 | 1,000 ft | C   |
| 1505A 0075000  | Violet      | 612825356349 | 5,000 ft | C N |
| 1505A 007N1000 | Violet      |              | 1,000 ft |     |
| 1505A 007N1000 | Violet      |              | 1,000 ft |     |
| 1505A.071525   | White       |              | 1,525 m  |     |
| 1505A.07305    | White       |              | 305 m    |     |
| 1505A 0091000  | White       | 612825358299 | 1,000 ft | C   |
| 1505A 0095000  | White       | 612825356318 | 5,000 ft | C N |
| 1505A 009N1000 | White       |              | 1,000 ft |     |
| 1505A 009N1000 | White       |              | 1,000 ft |     |
| 1505A.041525   | Yellow      |              | 1,525 m  |     |
| 1505A.04305    | Yellow      |              | 305 m    |     |
| 1505A 0041000  | Yellow      | 612825358312 | 1,000 ft | C   |
| 1505A 0045000  | Yellow      | 612825356370 | 5,000 ft | C N |
| 1505A 004N1000 | Yellow      |              | 1,000 ft |     |
| 1505A 004N1000 | Yellow      |              | 1,000 ft |     |

|           |   |
|-----------|---|
| Footnote: | C - CRATE REEL PUT-UP.  |
| Footnote: | N - FINAL PUT-UP LENGTH MAY VARY -0% TO +10% FROM LENGTH SHOWN. |

Product Notes

|        |   |
|--------|---|
| Notes: | Also available in 4.5 GHz multi-coax bundled versions. See 7794A through 7798A. Print legend includes sequential footage marks. |
|--------|---|

History

|                      |  |
|----------------------|--|
| Update and Revision: | Revision Number: 0.291 Revision Date: 07-11-2019 |
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