



**Product:** [4505ANH](#)

12 GHz Coax, 4K UHD Precision Video Coax, RG-59, 75 Ohm, 20 AWG Solid, CMG-LS

Product Description

12 GHz Coax, 4K UHD Precision Video Cable, RG-59, 75 Ohm, 20 AWG solid .032" silver plated copper conductor, gas-injected foam HDPE insulation, Duofoil® bonded to core + tinned copper braid shield (95% coverage), LSZH jacket.

Technical Specifications

Product Overview

|                        |   |
|------------------------|---|
| Suitable Applications: | SMPTE 2082-1 12 Gb/s UHDTV, 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     | SC - Silvered Copper | 0.032 in         | 1           |

Insulation

| Material                 | Nominal Diameter |
|--------------------------|------------------|
| PE - Polyethylene (Foam) | 0.145 in         |

|              |              |
|--------------|--------------|
| Table Notes: | Gas Injected |
|--------------|--------------|

Outer Shield

| Type  | Layer | Material                      | Material Trade Name | Coverage [%] |
|-------|-------|-------------------------------|---------------------|--------------|
| Tape  | 1     | Tri-Laminate (Alum+Poly+Alum) | Duofoil®            | 100%         |
| Braid | 2     | Tinned Copper (TC)            |                     | 95%          |

Outer Jacket

| Material  | Nominal Diameter |
|---|------------------|
| LSZH - Low Smoke Zero Halogen (Flame Retardant) | 0.236 in         |

Electrical Characteristics

Conductor DCR

| Nominal Conductor DCR |
|-----------------------|
| 10.2 Ohm/1000ft       |

Capacitance

| Nom. Capacitance Conductor to Shield |
|--------------------------------------|
| 16.1 pF/ft                           |

Inductance

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

Impedance

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

Return Loss (RL)

| Frequency [MHz]      | Minimum Return (RL) |
|----------------------|---------------------|
| 5 MHz - 1600 MHz     | 23 dB               |
| 1600 MHz - 4500 MHz  | 21 dB               |
| 4500 MHz - 12000 MHz | 15 dB               |

High Frequency (Nominal/Typical)

| Frequency [MHz] | Nom. Insertion Loss |
|-----------------|---------------------|
| 1 MHz           | 0.30 dB/100ft       |
| 3.58 MHz        | 0.60 dB/100ft       |
| 5 MHz           | 0.63 dB/100ft       |
| 6 MHz           | 0.69 dB/100ft       |
| 7 MHz           | 0.74 dB/100ft       |
| 10 MHz          | 0.90 dB/100ft       |
| 12 MHz          | 0.91 dB/100ft       |
| 25 MHz          | 1.30 dB/100ft       |
| 55 MHz          | 1.98 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        | 9.3 dB/100ft        |
| 2000 MHz        | 10.8 dB/100ft       |
| 2250 MHz        | 11.5 dB/100ft       |
| 3000 MHz        | 13.4 dB/100ft       |
| 4500 MHz        | 16.7 dB/100ft       |
| 6000 MHz        | 19.7 dB/100ft       |
| 12000 MHz       | 28.7 dB/100ft       |

Delay

| Nominal Delay | Nominal Velocity of Propagation (VP) [%] |
|---------------|--|
| 1.22 ns/ft    | 83%                                      |

Voltage

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

|                                   |   |
|-----------------------------------|---|
| Electrical Characteristics Notes: | Return Loss: Fixed bridge and termination |
|-----------------------------------|---|

Temperature Range

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

Mechanical Characteristics

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

Standards

|                       |        |
|-----------------------|--------|
| NEC/(UL) Compliance:  | CMG-LS |
| CEC/C(UL) Compliance: | CMG    |

|                |              |
|----------------|--------------|
| CPR Euroclass: | Dca-s1,d1,a1 |
| RG Type:       | 59           |

Applicable Environmental and Other Programs

|  |                                |
|--|--------------------------------|
| Environmental Space:                         | Indoor/Outdoor - Euroclass Dca |
| EU Directive 2000/53/EC (ELV):               | Yes                            |
| EU Directive 2011/65/EU (RoHS 2):            | Yes                            |
| EU Directive 2012/19/EU (WEEE):              | Yes                            |
| EU Directive 2015/863/EU (RoHS 2 amendment): | Yes                            |
| EU Directive Compliance:                     | EU Directive 2003/11/EC (BFR)  |
| EU CE Mark:                                  | 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

|                   |               |
|-------------------|---------------|
| CSA Flammability: | FT4           |
| IEC Flammability: | IEC 60332-1-2 |

Plenum/Non-Plenum

|               |    |
|---------------|----|
| Plenum (Y/N): | No |
|---------------|----|

Related Part Numbers

|                    |       |
|--------------------|-------|
| Non-Plenum Number: | 4505R |
|--------------------|-------|

Variants

| Item #          | Color       | Put-Up Type | Length   | UPC          |
|-----------------|-------------|-------------|----------|--------------|
| 4505ANH G751000 | Aqua        | Reel        | 1,000 ft | 612825437307 |
| 4505ANH G751640 | Aqua        | Reel        | 1,640 ft | 612825437352 |
| 4505ANH G753280 | Aqua        | Reel        | 3,280 ft | 612825437413 |
| 4505ANH 0101000 | Black       | Reel        | 1,000 ft | 612825437345 |
| 4505ANH 0101640 | Black       | Reel        | 1,640 ft | 612825437406 |
| 4505ANH 0103280 | Black       | Reel        | 3,280 ft | 612825437451 |
| 4505ANH 0061000 | Blue, Light | Reel        | 1,000 ft | 612825437321 |
| 4505ANH 0061640 | Blue, Light | Reel        | 1,640 ft | 612825437383 |
| 4505ANH 0063280 | Blue, Light | Reel        | 3,280 ft | 612825437437 |
| 4505ANH N3U1000 | Mil Green   | Reel        | 1,000 ft | 612825437314 |
| 4505ANH N3U1640 | Mil Green   | Reel        | 1,640 ft | 612825437376 |
| 4505ANH N3U3280 | Mil Green   | Reel        | 3,280 ft | 612825437420 |
| 4505ANH 0071000 | Purple      | Reel        | 1,000 ft | 612825437338 |
| 4505ANH 0071640 | Purple      | Reel        | 1,640 ft | 612825437390 |
| 4505ANH 0073280 | Purple      | Reel        | 3,280 ft | 612825437444 |

Product Notes

|        |   |
|--------|---|
| Notes: | Print legend includes sequential footage marks. |
|--------|---|

History

|                      |  |
|----------------------|--|
| Update and Revision: | Revision Number: 0.165 Revision Date: 11-27-2023 |
|----------------------|--|

regulations based on their individual usage of the product.