



**Part Number:** 7731A

Serial Digital Coax, RG11, #14 Solid BC, Foil + 95% TC braid, CMR

## Product Description

Low Loss Serial Digital Coax, Riser-CMR, RG11 14 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 |
|-----|-----------|------------------|------------------|-------------|
| 14  | Solid     | BC - Bare Copper | 0.064 in         | 1           |

|                  |   |
|------------------|---|
| Conductor Count: | 1 |
|------------------|---|

#### Insulation

| Material                                            | Nominal Diameter |
|-----------------------------------------------------|------------------|
| Gas-injected FHDPE - Foam High Density Polyethylene | 0.28 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 | 0.4 in           |

### Electrical Characteristics

#### Conductor DCR

| Nominal Conductor DCR | Nominal Outer Shield DCR | Outer Conductor DCR |
|-----------------------|--------------------------|---------------------|
| 2.5 Ohm/1000ft        | 1.5 Ohm/1000ft           | 1.5 Ohm/1000ft      |

#### Capacitance

| Nom. Capacitance Conductor to Shield |
|--------------------------------------|
| 16 pF/ft                             |

#### Inductance

| Nominal Inductance |
|--------------------|
| 0.097 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           | 0.16 dB/100ft       |
| 3.58 MHz        | 0.29 dB/100ft       |
| 5 MHz           | 0.34 dB/100ft       |
| 7 MHz           | 0.39 dB/100ft       |
| 10 MHz          | 0.46 dB/100ft       |
| 67.5 MHz        | 1.05 dB/100ft       |
| 71.5 MHz        | 1.09 dB/100ft       |
| 88.5 MHz        | 1.21 dB/100ft       |
| 100 MHz         | 1.28 dB/100ft       |
| 135 MHz         | 1.47 dB/100ft       |
| 143 MHz         | 1.51 dB/100ft       |
| 180 MHz         | 1.69 dB/100ft       |
| 270 MHz         | 1.97 dB/100ft       |
| 360 MHz         | 2.31 dB/100ft       |
| 540 MHz         | 2.87 dB/100ft       |
| 720 MHz         | 3.40 dB/100ft       |
| 750 MHz         | 3.45 dB/100ft       |
| 1000 MHz        | 3.60 dB/100ft       |
| 1000 MHz        | 4.12 dB/100ft       |
| 1500 MHz        | 5.10 dB/100ft       |
| 2000 MHz        | 6.04 dB/100ft       |
| 2250 MHz        | 6.43 dB/100ft       |
| 3000 MHz        | 7.63 dB/100ft       |
| 4500 MHz        | 9.56 dB/100ft       |
| 6000 MHz        | 11.53 dB/100ft      |

Delay

| Nominal Delay | Nominal Velocity of Propagation (VP) [%] |
|---------------|------------------------------------------|
| 1.21 ns/ft    | 85 %                                     |

Voltage

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

|                                    |                                           |
|------------------------------------|-------------------------------------------|
| Electrical Characteristics Notes:  | TDR Impedance: 75 +/- 3 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:               | 87 lbs/1000ft |
| Max Recommended Pulling Tension: | 145 lbs       |
| Min Bend Radius/Minor Axis:      | 4 in          |

Standards

|                          |           |
|--------------------------|-----------|
| NEC/(UL) Specification:  | CMR       |
| CEC/C(UL) Specification: | CMG       |
| CPR Euroclass:           | Eca       |
| RG Type:                 | 11/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 2015/863/EU:             | Yes                           |
| EU Directive Compliance:              | EU Directive 2003/11/EC (BFR) |
| EU CE Mark:                           | Yes                           |
| EU RoHS Compliance Date (yyyy-mm-dd): | 2004-01-01                    |
| 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: | 7732A |

Part Number

Variants

| Item #        | Color       | UPC          | Length   | Footnote |
|---------------|-------------|--------------|----------|----------|
| 7731A.001220  | Black       |              | 1,220 m  |          |
| 7731A.00152   | Black       |              | 152 m    |          |
| 7731A.002000  | Black       |              | 2,000 m  |          |
| 7731A.00305   | Black       |              | 305 m    |          |
| 7731A 0101000 | Black       | 612825357438 | 1,000 ft | C        |
| 7731A 0104000 | Black       | 612825357339 | 4,000 ft | C        |
| 7731A 010500  | Black       | 612825436058 | 500 ft   | C        |
| 7731A 0105000 | Black       | 612825357247 | 5,000 ft |          |
| 7731A.031220  | Blue        |              | 1,220 m  |          |
| 7731A.03152   | Blue        |              | 152 m    |          |
| 7731A.03305   | Blue        |              | 305 m    |          |
| 7731A 0061000 | Blue, Light | 612825357391 | 1,000 ft |          |
| 7731A 0064000 | Blue, Light | 612825436119 | 4,000 ft | C        |
| 7731A 0065000 | Blue, Light | 612825358589 | 5,000 ft |          |
| 7731A 0011000 | Brown       | 612825357216 | 1,000 ft |          |
| 7731A 0014000 | Brown       | 612825357209 | 4,000 ft | C        |
| 7731A 0081000 | Gray        | 612825357360 | 1,000 ft |          |
| 7731A 0084000 | Gray        | 612825358572 | 4,000 ft | C        |
| 7731A.081220  | Gray, Slate |              | 1,220 m  |          |
| 7731A.08305   | Gray, Slate |              | 305 m    |          |
| 7731A.021220  | Green       |              | 1,220 m  |          |
| 7731A.02305   | Green       |              | 305 m    |          |
| 7731A N3U1000 | Green, Mil  | 612825357230 | 1,000 ft | C        |
| 7731A N3U4000 | Green, Mil  | 612825408703 | 4,000 ft | C        |
| 7731A.061220  | Orange      |              | 1,220 m  |          |
| 7731A.06305   | Orange      |              | 305 m    |          |

|               |        |              |          |   |
|---------------|--------|--------------|----------|---|
| 7731A 0031000 | Orange | 612825357308 | 1,000 ft |   |
| 7731A 0034000 | Orange | 612825357421 | 4,000 ft | C |
| 7731A.051220  | Purple |              | 1,220 m  |   |
| 7731A.05305   | Purple |              | 305 m    |   |
| 7731A.011220  | Red    |              | 1,220 m  |   |
| 7731A.01152   | Red    |              | 152 m    |   |
| 7731A.01305   | Red    |              | 305 m    |   |
| 7731A 0021000 | Red    | 612825357346 | 1,000 ft | C |
| 7731A 0024000 | Red    | 612825357353 | 4,000 ft | C |
| 7731A 0071000 | Violet | 612825357384 | 1,000 ft | C |
| 7731A 0074000 | Violet | 612825357377 | 4,000 ft | C |
| 7731A.071220  | White  |              | 1,220 m  |   |
| 7731A.07305   | White  |              | 305 m    |   |
| 7731A 0091000 | White  | 612825357322 | 1,000 ft |   |
| 7731A 0094000 | White  | 612825358565 | 4,000 ft | C |
| 7731A.041220  | Yellow |              | 1,220 m  |   |
| 7731A.04305   | Yellow |              | 305 m    |   |
| 7731A 0041000 | Yellow | 612825357414 | 1,000 ft |   |
| 7731A 0044000 | Yellow | 612825357407 | 4,000 ft | C |

|           |                        |
|-----------|------------------------|
| Footnote: | C - CRATE REEL PUT-UP. |
|-----------|------------------------|

Product Notes

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

History

|                      |                                                  |
|----------------------|--------------------------------------------------|
| Update and Revision: | Revision Number: 0.277 Revision Date: 08-22-2019 |
|----------------------|--------------------------------------------------|

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