

Product: 1794A [↗](#)

Serial Digital Coax, RG7 Type, #16 Solid BC, Foil + 95% TC braid, CMR



Product Description

Low Loss Serial Digital Coax, Riser-CMR, 16 AWG solid bare copper conductor, foam HDPE core, Beldfoil, +95% tinned copper braid, Duofoil, 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 |
|-----|-----------|------------------|------------------|-------------|
| 16 | Solid | BC - Bare Copper | 0.051 in | 1 |

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

Insulation

| Material | Nominal Diameter |
|---|------------------|
| Gas-injected FHDPE - Foam High Density Polyethylene | 0.225 in |

Outer Shield Material

| Type | Layer | Material | Material Trade Name | Coverage [%] |
|-------|-------|-----------------------------|------------------------------|--------------|
| Tape | 1 | Aluminum/Polyester/Aluminum | Duofoil® | 100 % |
| Braid | 2 | TC - Tinned Copper | | 95 % |
| Tape | 3 | Aluminum/Polyester | Beldfoil® with shorting fold | 100 % |

Outer Jacket Material

| Material | Nominal Diameter |
|--------------------------|------------------|
| PVC - Polyvinyl Chloride | 0.32 in |

Electrical Characteristics

Conductor DCR

| Nominal Conductor DCR | Nominal Outer Shield DCR |
|-----------------------|--------------------------|
| 4.0 Ohm/1000ft | 1.9 Ohm/1000ft |

Capacitance

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

Inductance

| Nominal Inductance |
|--------------------|
| 0.091 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 | 0.17 dB/100ft |
| 3.58 MHz | 0.30 dB/100ft |
| 5 MHz | 0.35 dB/100ft |
| 6 MHz | 0.38 dB/100ft |
| 7 MHz | 0.40 dB/100ft |
| 10 MHz | 0.48 dB/100ft |
| 12 MHz | 0.52 dB/100ft |
| 25 MHz | 0.74 dB/100ft |
| 55 MHz | 1.08 dB/100ft |
| 67.5 MHz | 1.20 dB/100ft |
| 71.5 MHz | 1.24 dB/100ft |
| 88.5 MHz | 1.37 dB/100ft |
| 100 MHz | 1.46 dB/100ft |
| 135 MHz | 1.70 dB/100ft |
| 143 MHz | 1.75 dB/100ft |
| 180 MHz | 1.97 dB/100ft |
| 270 MHz | 2.43 dB/100ft |
| 360 MHz | 2.83 dB/100ft |
| 540 MHz | 3.60 dB/100ft |
| 720 MHz | 4.20 dB/100ft |
| 750 MHz | 4.30 dB/100ft |
| 1000 MHz | 5.00 dB/100ft |
| 1500 MHz | 6.20 dB/100ft |
| 2000 MHz | 7.40 dB/100ft |
| 2250 MHz | 7.80 dB/100ft |
| 3000 MHz | 9.20 dB/100ft |
| 4500 MHz | 11.70 dB/100ft |
| 6000 MHz | 13.77 dB/100ft |

Delay

| Nominal Delay | Nominal Velocity of Propagation (VP) [%] |
|---------------|--|
| 1.21 ns/ft | 84 % |

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

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

Mechanical Characteristics

| | |
|----------------------------------|---------------|
| UV Resistance: | Yes |
| Bulk Cable Weight: | 59 lbs/1000ft |
| Max Recommended Pulling Tension: | 111 lbs |
| Min Bend Radius/Minor Axis: | 3.25 in |

Standards

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

| | |
|--------------|----------|
| RG Type: | 7/U Type |
| Series Type: | Series 7 |

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 |
| MII Order #39 (China RoHS): | Yes |

Suitability

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

Flammability, LSOH, 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 |
|---------------|----|

Part Number

Variants

| Item # | Color | UPC | Length | Footnote |
|----------------|-------------|--------------|----------|----------|
| 1794A 0101000 | Black | 612825357582 | 1,000 ft | C |
| 1794A 010N1000 | Black | | 1,000 ft | |
| 1794A 0102500 | Black | 612825438212 | 2,500 ft | |
| 1794A 0061000 | Blue, Light | 612825358619 | 1,000 ft | C |
| 1794A 0011000 | Brown | 612825357513 | 1,000 ft | C |
| 1794A 0081000 | Gray | 612825357568 | 1,000 ft | C |
| 1794A N3U1000 | Green, Mil | 612825357506 | 1,000 ft | C |
| 1794A 0031000 | Orange | 612825357537 | 1,000 ft | C |
| 1794A 0021000 | Red | 612825357520 | 1,000 ft | C |
| 1794A 0071000 | Violet | 612825357551 | 1,000 ft | C |
| 1794A 0091000 | White | 612825357575 | 1,000 ft | C |
| 1794A 0041000 | Yellow | 612825357544 | 1,000 ft | C |

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

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| Notes: | Also available in multi-coax bundled version. See 2177A. Print legend includes sequential footage marks. |
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History

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| Update and Revision: | Revision Number: 0.269 Revision Date: 01-31-2020 |
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