



Part Number: 1855A

Serial Digital Coax, Sub-miniature, #23 Solid BC, Foil + 95% TC braid, CMR

Product Description

Low Loss Serial Digital Coax, Riser-CMR, Sub-Miniature 23 AWG solid bare copper conductor, foam HDPE core, Duofoil, +95% tinned copper braid, PVC jacket

Technical Specifications

Product Overview

| | |
|------------------------|--|
| Environmental Space: | Indoor - Riser |
| Suitable Applications: | SMPTE 2081-1 6 Gb/s UHD TV, SMPTE 424M 3 Gb/s HD-SDI 1080P |

Physical Characteristics (Overall)

Conductor

| AWG | Stranding | Material | Nominal Diameter | No. of Coax |
|-----|-----------|------------------|------------------|-------------|
| 23 | Solid | BC - Bare Copper | 0.023 in | 1 |

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

Insulation

| Material | Nominal Diameter |
|---|------------------|
| Gas-injected FHDPE - Foam High Density Polyethylene | 0.102 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 | 0.159 in |

Electrical Characteristics

Conductor DCR

| Nominal Conductor DCR | Outer Conductor DCR |
|-----------------------|---------------------|
| 20.1 Ohm/1000ft | 3.7 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 MHz - 1600 MHz | 23 dB |
| 1600 MHz - 4500 MHz | 21 dB |
| 4500 MHz - 6000 MHz | 15 dB |

High Frequency (Nominal/Typical)

| Frequency [MHz] | Nom. Insertion Loss |
|-----------------|---------------------|
| 1 MHz | 0.39 dB/100ft |
| 3.58 MHz | 0.78 dB/100ft |
| 5 MHz | 0.92 dB/100ft |
| 6 MHz | 1.00 dB/100ft |
| 7 MHz | 1.08 dB/100ft |
| 10 MHz | 1.2 dB/100ft |
| 12 MHz | 1.3 dB/100ft |
| 25 MHz | 1.8 dB/100ft |
| 67.5 MHz | 2.83 dB/100ft |
| 71.5 MHz | 2.93 dB/100ft |
| 88.5 MHz | 3.22 dB/100ft |
| 100 MHz | 3.39 dB/100ft |
| 135 MHz | 3.84 dB/100ft |
| 143 MHz | 4.00 dB/100ft |
| 180 MHz | 4.41 dB/100ft |
| 270 MHz | 5.44 dB/100ft |
| 360 MHz | 6.34 dB/100ft |
| 540 MHz | 7.85 dB/100ft |
| 720 MHz | 9.15 dB/100ft |
| 750 MHz | 9.31 dB/100ft |
| 1000 MHz | 10.89 dB/100ft |
| 1500 MHz | 13.38 dB/100ft |
| 2000 MHz | 15.64 dB/100ft |
| 2250 MHz | 16.68 dB/100ft |
| 3000 MHz | 19.65 dB/100ft |
| 4500 MHz | 24.35 dB/100ft |
| 6000 MHz | 28.97 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: | 17 lbs/1000ft |
| Max Recommended Pulling Tension: | 33 lbs |
| Min Bend Radius/Minor Axis: | 1.6 in |

Standards

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

| | |
|----------|----------------|
| RG Type: | Mini 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): | 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, 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 |
| Plenum Number: | 1855P |

Part Number

| | |
|----------------|-----------|
| Related Parts: | 1855ABHD3 |
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Variants

| Item # | Color | UPC | Length | Footnote |
|----------------|-------------|--------------|----------|----------|
| 1855A 0101000 | Black | 612825358503 | 1,000 ft | C |
| 1855A 010500 | Black | 612825356950 | 500 ft | |
| 1855A 010N1000 | Black | | 1,000 ft | |
| 1855A 010N1000 | Black | | 1,000 ft | |
| 1855A.00500 | Black | | 500 m | |
| 1855A 0061000 | Blue, Light | 612825358459 | 1,000 ft | C |
| 1855A 006N1000 | Blue, Light | | 1,000 ft | |
| 1855A 006N1000 | Blue, Light | | 1,000 ft | |
| 1855A 0011000 | Brown | 612825356851 | 1,000 ft | C |
| 1855A 001N1000 | Brown | | 1,000 ft | |
| 1855A 001N1000 | Brown | | 1,000 ft | |
| 1855A 0081000 | Gray | 612825358510 | 1,000 ft | C |
| 1855A 008N1000 | Gray | | 1,000 ft | |
| 1855A 008N1000 | Gray | | 1,000 ft | |
| 1855A N3U1000 | Green, Mil | 612825358480 | 1,000 ft | C |
| 1855A N3UN1000 | Green, Mil | | 1,000 ft | |
| 1855A N3UN1000 | Green, Mil | | 1,000 ft | |
| 1855A 0031000 | Orange | 612825356844 | 1,000 ft | C |
| 1855A 003N1000 | Orange | | 1,000 ft | |
| 1855A 003N1000 | Orange | | 1,000 ft | |
| 1855A 0021000 | Red | 612825358473 | 1,000 ft | C |
| 1855A 002N1000 | Red | | 1,000 ft | |
| 1855A 002N1000 | Red | | 1,000 ft | |
| 1855A 0071000 | Violet | 612825356837 | 1,000 ft | C |
| 1855A 007N1000 | Violet | | 1,000 ft | |

| | | | | |
|----------------|--------|--------------|----------|---|
| 1855A 007N1000 | Violet | | 1,000 ft | |
| 1855A 0091000 | White | 612825358497 | 1,000 ft | C |
| 1855A 009N1000 | White | | 1,000 ft | |
| 1855A 009N1000 | White | | 1,000 ft | |
| 1855A 0041000 | Yellow | 612825358466 | 1,000 ft | C |
| 1855A 004N1000 | Yellow | | 1,000 ft | |
| 1855A 004N1000 | Yellow | | 1,000 ft | |

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

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

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| Update and Revision: | Revision Number: 0.290 Revision Date: 08-22-2019 |
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