

## 1794A Coax - Low Loss Serial Digital Coax



For more Information  
please call

1-800-Belden1



### Description:

16 AWG solid 0.051" bare copper conductor, gas-injected foamed high-density polyethylene insulation, Duofoil® + tinned copper braid shield (95% coverage) plus Beldfoil® with shorting fold, PVC jacket.

### Usage (Overall)

**Suitable Applications:** SMPTE 424M 3 Gb/s HD-SDI 1080p

### Physical Characteristics (Overall)

#### Conductor

AWG:

# Coax	AWG	Stranding	Conductor Material	Dia. (in.)
1	16	Solid	BC - Bare Copper	0.051

**Total Number of Conductors:** 1

#### Insulation

Insulation Material:

Insulation Material	Dia. (in.)
Gas-injected FHDPE - Foam High Density Polyethylene	0.225

#### Outer Shield

Outer Shield Material:

Layer #	Outer Shield Trade Name	Type	Outer Shield Material	Coverage (%)
1	Duofoil®	Tape	Aluminum Foil-Polyester Tape-Aluminum Foil	100.000
2		Braid	TC - Tinned Copper	95.000
3	Beldfoil® with shorting fold	Tape	Polyester Tape-Aluminum Foil	100.000

#### Outer Jacket

Outer Jacket Material:

Outer Jacket Material
PVC - Polyvinyl Chloride

#### Overall Cable

**Overall Nominal Diameter:** 0.320 in.

### Mechanical Characteristics (Overall)

**Operating Temperature Range:** -30°C To +75°C

**Bulk Cable Weight:** 59 lbs/1000 ft.

**Max. Recommended Pulling Tension:** 111 lbs.

**Min. Bend Radius/Minor Axis:** 3.250 in.

### Applicable Specifications and Agency Compliance (Overall)

#### Applicable Standards & Environmental Programs

**NEC/(UL) Specification:** CMR

**CEC/C(UL) Specification:** CMG

**EU CE Mark:** Yes

**EU Directive 2000/53/EC (ELV):** Yes

EU Directive 2002/95/EC (RoHS):	Yes
EU RoHS Compliance Date (mm/dd/yyyy):	01/01/2004
EU Directive 2002/96/EC (WEEE):	Yes
EU Directive 2003/11/EC (BFR):	Yes
CA Prop 65 (CJ for Wire & Cable):	Yes
MII Order #39 (China RoHS):	Yes
Series Type:	Series 7

### Flame Test

UL Flame Test:	UL1666 Vertical Shaft
CSA Flame Test:	FT4

### Suitability

Suitability - Indoor:	Yes
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### Plenum/Non-Plenum

Plenum (Y/N):	No
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## Electrical Characteristics (Overall)

### Nom. Characteristic Impedance:

Impedance (Ohm)
75

### Nom. Inductance:

Inductance (µH/ft)
0.091

### Nom. Capacitance Conductor to Shield:

Capacitance (pF/ft)
16.100

### Nominal Velocity of Propagation:

VP (%)
84.000

### Nominal Delay:

Delay (ns/ft)
1.210

### Nom. Conductor DC Resistance:

DCR @ 20°C (Ohm/1000 ft)
4.000

### Nominal Outer Shield DC Resistance:

DCR @ 20°C (Ohm/1000 ft)
1.900

### Nom. Attenuation:

Freq. (MHz)	Attenuation (dB/100 ft.)
1.000	0.170
3.580	0.300
5.000	0.350
6.000	0.380
7.000	0.400
10.000	0.480
12.000	0.520
25.000	0.740
55.000	1.080
67.500	1.200
71.500	1.240
88.500	1.370
100.000	1.460

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135.000	1.700
143.000	1.750
180.000	1.970
270.000	2.430
360.000	2.830
540.000	3.500
720.000	4.090
750.000	4.180
1000.000	4.890
1500.000	6.100
2000.000	7.200
2250.000	7.690
3000.000	9.080
4500.000	11.530

### Max. Operating Voltage - UL:

Voltage
300 V RMS

**Other Electrical Characteristic 1:** Impedance tested in accordance with ASTM D-4566 paragraph 43.2, option 2 using a 75 Ohm fixed bridge and termination. 75 +/- 3 Ohms

**Other Electrical Characteristic 2:** Return Loss tested in accordance with ASTM D-4566 paragraph 45.3, using a 75 Ohm fixed bridge and termination.

### Minimum Return Loss:

Start Freq. (MHz)	Stop Freq. (MHz)	Min. RL (dB)
5	1600	23
1600	4500	21

### Sweep Test

**Sweep Testing:** 100% Sweep tested 5 MHz to 4.5 GHz.

### Put Ups and Colors:

Item #	Putup	Ship Weight	Color	Notes	Item Desc
1794A N3U1000	1,000 FT	63.000 LB	GREEN, MIL	C	#16 LDPE/GIFHDLDPPE SH FRPVC
1794A 0011000	1,000 FT	63.000 LB	BROWN	C	#16 LDPE/GIFHDLDPPE SH FRPVC
1794A 0021000	1,000 FT	63.000 LB	RED	C	#16 LDPE/GIFHDLDPPE SH FRPVC
1794A 0031000	1,000 FT	63.000 LB	ORANGE	C	#16 LDPE/GIFHDLDPPE SH FRPVC
1794A 0041000	1,000 FT	63.000 LB	YELLOW	C	#16 LDPE/GIFHDLDPPE SH FRPVC
1794A 0061000	1,000 FT	63.000 LB	BLUE, LIGHT	C	#16 LDPE/GIFHDLDPPE SH FRPVC
1794A 0071000	1,000 FT	63.000 LB	VIOLET	C	#16 LDPE/GIFHDLDPPE SH FRPVC
1794A 0081000	1,000 FT	63.000 LB	GRAY	C	#16 LDPE/GIFHDLDPPE SH FRPVC
1794A 0091000	1,000 FT	63.000 LB	WHITE	C	#16 LDPE/GIFHDLDPPE SH FRPVC
1794A 0101000	1,000 FT	63.000 LB	BLACK	C	#16 LDPE/GIFHDLDPPE SH FRPVC

#### Notes:

C = CRATE REEL PUT-UP.

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