

1694S6 Coax - VideoFLEX® Snake Cable for Precision Analog & Digital Video

**Description:**

18 AWG solid .040" bare copper conductors, gas-injected foam HDPE insulation, Duofoil® (100% Coverage) plus a tinned copper braid shield (95% coverage), individual PVC jackets.

Usage (Overall)**Suitable Applications:**

RGB, VGA, SVGA, XGA, SXGA, UXGA, HDTV, LCD, Plasma, Digital Signage, Component Video, Video Mult, Animation, Special Effects, Suitable for use in Risers

Physical Characteristics (Overall)**Conductor****AWG:**

# Coax	AWG	Stranding	Conductor Material	Dia. (in.)
6	18	Solid	BC - Bare Copper	.040

Insulation**Insulation Material:**

Insulation Material	Dia. (in.)
Gas-injected FHDPE - Foam High Density Polyethylene	.180

Inner Shield**Inner Shield Material:**

Layer #	Inner Shield Trade Name	Type	Inner Shield Material	Coverage (%)
1	Duofoil®	Tape	Aluminum Foil-Polyester Tape-Aluminum Foil	100
2		Braid	TC - Tinned Copper	95

Inner Jacket**Inner Jacket Material:**

Inner Jacket Material	Nom. Dia. (in.)
PVC - Polyvinyl Chloride	.274

Inner Jacket Color Code Chart:

Number	Color
1	Red
2	Green
3	Blue
4	White
5	Yellow

Outer Jacket**Outer Jacket Material:**

Outer Jacket Material
Unjacketed

Overall Cabling**Overall Cabling Fillers:**

Bonded Spline

Overall Nominal Diameter:

0.822 in.

Mechanical Characteristics (Overall)**Operating Temperature Range:**

-35°C To +75°C

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UL Temperature Rating:	60°C
Non-UL Temperature Rating:	75°C
Bulk Cable Weight:	291 lbs/1000 ft.
Max. Recommended Pulling Tension:	432 lbs.
Min. Bend Radius (Install)/Minor Axis:	10 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
RG Type:	6/U

Flame Test

UL Flame Test:	UL1666 Vertical Shaft
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Suitability

Suitability - Indoor:	Yes
Suitability - Outdoor:	Yes

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)

0.107

Nom. Capacitance Conductor to Shield:

Capacitance (pF/ft)

16.2

Nominal Velocity of Propagation:

VP (%)

82

Nominal Delay:

Delay (ns/ft)

1.24

Nom. Conductor DC Resistance:

DCR @ 20°C (Ohm/1000 ft)

6.4

Nom. Inner Shield DC Resistance:

DCR @ 20°C (Ohm/1000 ft)

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2.8

Nom. Attenuation:

Freq. (MHz)	Attenuation (dB/100 ft.)
1.000	0.240
3.580	0.440
5.000	0.520
7.000	0.610
10.000	0.710
67.500	1.650
71.500	1.690
88.500	1.860
100.000	1.950
135.000	2.240
143.000	2.300
180.000	2.570
270.000	3.170
360.000	3.690
540.000	4.600
720.000	5.380
750.000	5.500
1000.000	6.420
1500.000	7.990
2000.000	9.370
2250.000	10.010
3000.000	11.780
4500.000	14.920

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.

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	430	20
430	510	15
510	1600	20
1600	4500	15

Sweep Test

Sweep Testing:

Sweep tested 5 MHz to 4.5 GHz.

Notes (Overall)

Notes: US PATENT 7049523

Put Ups and Colors:

Item #	Putup	Ship Weight	Color	Notes	Item Desc
1694S6 0001000	1,000 FT	333.000 LB	NONE	C	BONDED FILLER COMPOSITE
1694S6 000500	500 FT	185.500 LB	NONE	C	BONDED FILLER COMPOSITE

Notes:

C = CRATE REEL PUT-UP.

New Product Bulletin

NP 258

Brilliance® Banana Peel Precision Video Snake Cables

New Banana Peel Composite cable constructions now feature three of Belden's most popular SDI/HD coaxes: 1855A, 1505A and 1694A. This gives you outstanding digital video performance using multiple coaxes in a single pull.

Belden Brilliance Banana Peel Precision Video Snake Cable Line Expands to Include a 1694A Composite Construction

Belden recently introduced Banana Peel versions of its highly popular 1855A and 1505A cables, and now includes a Banana Peel construction of the industry's standard: 1694A

These digital video cables are ideal for use in the most demanding applications, including serial digital video, component video, unbalance mode analog or digital audio (AES/EBU), computer CAD/CAM, high-end computer graphics and animation, and live studio, field and mobile television broadcasting.

The new cables can also be used for high-resolution monitors and projection imaging in corporate boardrooms, command and control centers, auditoriums, teleconferencing centers, home theaters, performance venues, post-production facilities and houses of worship.

1855A, 1505A and 1694A Banana Peel constructions are available in bundles of 3, 5 and 6. All cables are pre-timed to ensure a delay difference of less than 5.0ns/100 feet between coaxes, allowing for "cut-and-connect" installation with no TDR or Vectorscope timing required. The result is a dramatic reduction in installation time, expense and complexity. Further reductions in the cables' installation time/complexity are offered by means of their unique Banana Peel construction.



Banana Peel Means Labor Savings, Easy Identification

Banana Peel Precision Video Snake cables will decrease your labor costs because the overall jacket has been eliminated. Without the outer jacket, a whole step in the termination process has been eliminated, plus the individual cable components are all instantly identifiable (the individual cables are color-coded and the print legends are immediately visible). To terminate the cables just peel the individual cables off the center spline and terminate. With no overall jacket the composite has a smaller OD, especially considering the OD of similarly bundled cables. The cable's bend radius also is improved, making it possible to use a smaller size conduit.

Exceptional Return Loss Characteristics, Sweep Tested to 4.5 GHz

To ensure best-in-class Return Loss performance, these cables are 100% sweep tested to 4.5 GHz. Belden is the only cable manufacturer that has extended its testing to 4.5 GHz, assuring broadcasters and leading-edge broadcast equipment manufacturers of high performance and reliability as they migrate from the existing 1080i (interlaced) HD format to the emerging 1080p (progressive) format.

Banana Peel® Precision Video Coax Snake Cable

Description	Part No.	UL NEC/ C(UL) CEC Type	No. Of Cond.	Standard Lengths		Standard Unit Weight		Conductor (stranding) Diameter Nom. DCR	Nominal Core OD		Shielding Materials Nom. DCR	Nominal OD		Nom. Imp Ω	Nom. Vel. of Prop.	Nominal Capacitance		Nominal Attenuation		
				Ft.	m	Lbs	kg.		Inch	mm		Inch	mm			pF/Ft.	pF/m	MHz	dB/ 100ft.	dB/ 100m

Miniature 23 AWG Solid .023" Bare Copper • Duofoil® + 95% Tinned Copper Braid Shield (100% coverage) 1855A Versions

Gas-injected Foam HDPE Insulation • Individually color coded PVC Jackets* • Bundled • Center Spine Binder																				
SDI/HDTV Digital Video 75°C  	1855S3	NEC:	3	500	152.4	29.5	13.4	23 AWG	.102	2.59	Duofoil	Single:	75	83%	16.3	53.5	1	.4	1.3	
		CMR		1000	304.8	57.0	25.9	(solid)			+95% TC	.159	4.03					3.6	.8	2.6
		CEC:						.023"			Braid	Overall:					10	1.2	3.9	
		CMG						BC			7.6Ω/M'	.343	8.7				71.5	3.1	10.2	
		FT4						20.1Ω/M'			24.9Ω/km						135	3.8	12.5	
								65.9W/km									270	5.4	17.7	
														100% Sweep tested. 5MHz to 4.5 GHz. U.S. Patent 7,049,523.						
	1855S5	NEC:	5	500	152.4	51.5	23.4	same	.102	2.59	same	Single:					360	6.2	20.3	
		CMR		1000	304.8	102.0	46.3	as			as	.159	4.03				540	7.7	25.3	
		CEC:						above			above	Overall:					720	9.5	31.2	
		CMG										.429	10.9				750	9.6	31.5	
		FT4														1000	10.5	34.5		
																	1500	13.0	42.7	
	1855S6	NEC:	6	500	152.4	64.0	29.0	same	.102	2.59	same	Single:					2250	16.0	52.5	
		CMR		1000	304.8	121.0	55.0	as			as	.159	4.03				3000	18.5	60.7	
		CEC:						above			above	Overall:					4500	22.8	74.8	
		CMG										.477	12.1							
		FT4																		

20 AWG Solid .032" Bare Copper • Duofoil® + 95% Tinned Copper Braid Shield (100% coverage) 1505A Versions

Gas-injected Foam HDPE Insulation • Individually color coded PVC Jackets* • Bundled • Center Spine Binder																				
SDI/HDTV Digital Video 75°C 	1505S3	NEC:	3	500	152.4	55.0	25.0	20 AWG	.145	3.68	Duofoil	Single:	75	83%	16.3	53.5	1	.3	1.0	
		CMR		1000	304.8	104.0	47.0	(solid)			+95% TC	.235	5.97					3.6	.6	2.0
		CEC:						.032"			Braid	Overall:					10	.9	3.0	
		CMG						BC			3.8Ω/M'	.502	12.8				71.5	2.1	6.9	
		FT4						10.1Ω/M'			12.5Ω/km						135	2.7	8.9	
								32.8W/km										270	3.8	12.5
														100% Sweep tested. 5MHz to 4.5 GHz. U.S. Patent 7,049,523.						
	1505S5	NEC:	5	500	152.4	95.0	43.0	same	.145	3.68	same	Single:					360	4.4	14.4	
		CMR		1000	304.8	185.0	84.0	as			as	.235	5.97				540	5.5	18.0	
		CEC:						above			above	Overall:					720	6.4	21.0	
		CMG										.629	16.0				750	6.5	21.3	
		FT4															1000	7.6	24.9	
																		1500	9.3	30.5
	1505S6	NEC:	6	500	152.4	117.0	53.0	same	.145	3.68	same	Single:					2250	11.6	38.1	
		CMR		1000	304.8	250.0	114.0	as			as	.235	5.97				3000	13.4	44.0	
		CEC:						above			above	Overall:					4500	16.4	58.8	
		CMG										.790	20.0							
		FT4																		

18 AWG Solid .040" Bare Copper • Duofoil® + 95% Tinned Copper Braid Shield (100% coverage) 1694A Versions

Gas-injected Foam HDPE Insulation • Individually color coded PVC Jackets* • Bundled • Center Spine Binder																				
SDI/HDTV Digital Video 75°C  	1694S3 new	NEC:	3	500	152.4	75.0	34.0	18 AWG	.180	4.57	Duofoil	Single:	75	82%	16.2	53.5	1	0.24	0.8	
		CMR		1000	304.8	145.0	66.0	(solid)			+95% TC	.274	7.0					3.6	0.45	1.5
		CEC:						.040"			Braid	Overall:						10	.72	2.4
		CMG						BC			3.8Ω/M'	.590	15.0					71.5	1.60	5.3
		FT4						6.4Ω/M'			12.5Ω/km							135	2.10	6.9
								21.0Ω/km											270	2.97
														100% Sweep tested. 5MHz to 4.5 GHz. U.S. Patent 7,049,523.						
	1694S5 new	NEC:	5	500	152.4	131.0	59.0	same	.180	4.57	same	Single:					360	3.43	11.3	
		CMR		1000	304.8	277.0	126.0	as			as	.274	7.0				540	4.25	13.9	
		CEC:						above			above	Overall:					720	4.95	16.2	
		CMG										.740	18.8				750	5.00	16.4	
		FT4															1000	5.89	19.3	
																		1500	7.33	24.1
	1694S6 new	NEC:	6	500	152.4	185.0	84.0	same	.180	4.57	same	Single:					2250	9.14	30.0	
		CMR		1000	304.8	388.0	176.0	as			as	.274	7.0				3000	10.67	35.0	
		CEC:						above			above	Overall:					4500	13.29	43.6	
		CMG										.822	20.9							
		FT4																		

BC = Bare Copper • HDPE = High-density Polyethylene • TC = Tinned Copper

*Color coded in Red, Green, Blue, Yellow, Black and White