Detailed Specifications & Technical Data

ENGLISH MEASUREMENT VERSION



1505S5 Coax - RG-59/U Type





Description:

20 AWG solid .032" 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.)
5	20	Solid	BC - Bare Copper	.032

Insulation

Insulation Material:

Insulation Material	Dia. (in.)
Gas-injected FHDPE - Foam High Density Polyethylene	.145

Inner Shield

Inner Shield Material:

Layer #	Inner Shield Trade Name	Туре	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	.235

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:	0.629 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:	170 lbs/1000 ft.
Max. Recommended Pulling Tension:	360 lbs.
Min. Bend Radius (Install)/Minor Axis:	8 in.

Applicable Specifications and Agency Compliance (Overall)

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:	59/U	
Flame Test		
UL Flame Test:	UL1666 Vertical Shaft	
Suitability		
Suitability - Indoor:	Yes	

Yes

No

Electrical Characteristics (Overall)

Nom.	Characteristic Impeda	ince:

Suitability - Outdoor:

Plenum/Non-Plenum Plenum (Y/N):

Impedance (Ohm)
75

Nom. Inductance:



Nom. Capacitance Conductor to Shield:



Nominal Velocity of Propagation:



Nominal Delay:



Nom. Conductor DC Resistance:

DCR @ 20°C (Ohm/1000 ft) 10.0

Nom. Inner Shield DC Resistance:

DCR @ 20°C (Ohm/1000 ft)

Detailed Specifications & Technical Data

ENGLISH MEASUREMENT VERSION



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3.8

Nom. Attenuation:

Freq. (MHz)	Attenuation (dB/100 ft.)
1	0.3
3.6	0.6
10	0.9
71.5	2.1
135	2.7
270	3.8
360	4.4
540	5.5
720	6.4
750	6.5
1000	7.6
1500	9.4
2500	12.4
3000	13.8

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	475	20
475	525	15
525	850	20
850	4500	15

Sweep Test

Sweep Testing: Sweep tested 5 MHz to 4.5 GHz.

Put Ups and Colors:

Item #	Putup	Ship Weight	Color	Notes	Item Desc
1505S5 0001000	1,000 FT	185.000 LB	NONE	С	BONDED FILLER COMPOSITE
1505S5 000500	500 FT	95.000 LB	NONE	С	BONDED FILLER COMPOSITE

Notes:

C = CRATE REEL PUT-UP.

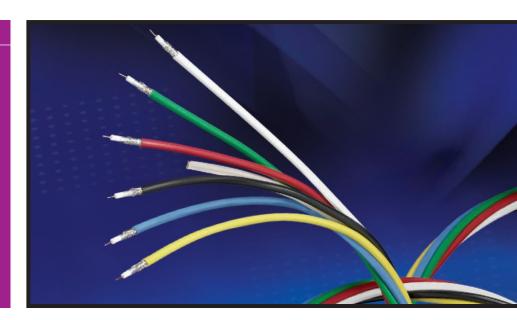


New Product Bulletin

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			Standard Standard Lengths Unit Weight			(Stranging) Gole of		Shielding Materials	Nominal OD		Nom.	Nom. Vel.	Nominal Capacitance		Nominal Attenuation	
	No.	CEC Type	 Ft.	m	Lbs	kg.	Diameter Nom. DCR	Inch	mm	Nom. DCR	Inch	mm	' OT	pF/Ft.	pF/m	MHz	dB/ 100ft.

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

Gas-injec	ted F	oam I	HDPE	Insul	ation • Indiv	idua	lly color	code	ed P	VC Jacke	ets* • Bun	dled • Cen	ter Spline	e Bind	ler		
SDI/HDTV		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
Digital Video			CMR		1000 304.8 57.0	25.9	(solid)			+95% TC	.159 4.03	Coo Doldon Mosi	or Cotolog pg 10	70	3.6	.8	2.6
75°C	0-2		CEC:				.023"			Braid	Overall:	See Belden Mast for maximum did		10	1.2	3.9	
And the second	y		CMG				BC			7.6Ω/M′	.343 8.7	distance values.			71.5	3.1	10.2
		_	FT4				20.1Ω/M'			$24.9\Omega/km$					135	3.8	12.5
							65.9W/km					100% Sweep tes	ted. 5MHz to 4.5	GHz.	270	5.4	17.7
-	B	1855S5	NEC:	5	500 152.4 51.5	23.4		.102	2.59		Single:	U.S. Patent 7,049	9,523.		360	6.2	20.3
			CMR		1000 304.8 102.0	46.3	same			same	.159 4.03				540	7.7	25.3
			CEC:				as			as	Overall:				720	9.5	31.2
			CMG				above			above	.429 10.9				750	9.6	31.5
			FT4									_			1000	10.5	34.5
		1855S6	NEC:	6	500 152.4 64.0	29.0		.102	2.59		Single:				1500	13.0	42.7
			CMR		1000 304.8 121.0	55.0	same			same	.159 4.03				2250	16.0	52.5
			CEC:				as			as	Overall:				3000	18.5	60.7
			CMG				above			above	.477 12.1				4500	22.8	74.8
			FT4														

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

Gas-injec	ted F	oam H	DPE I	Insula	ition • In	divi	duall	y color	code	d PV	C Jacke	ts* • Bund	led • Center Spline Bin	der		
SDI/HDTV		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
Digital Video			CMR		1000 304.8	104.0	47.0	(solid)			+95% TC	.235 5.97		3.6	.6	2.0
75°C			CEC:					.032"			Braid	Overall:	See Belden Master Catalog pg. 19.78 for maximum digital transmission	10	.9	3.0
	CB-		CMG					BC			$3.8\Omega/M'$.502 12.8	distance values. Refer to 1505A.	71.5	2.1	6.9
			FT4					10.1Ω/M'			$12.5\Omega/km$			135	2.7	8.9
	2 <u>-</u> 4	•						32.8W/km					100% Sweep tested. 5MHz to 4.5 GHz.	270	3.8	12.5
	C.	1505S5	NEC:	5	500 152.4	95.0	43.0		.145	3.68		Single:	U.S. Patent 7,049,523.	360	4.4	14.4
			CMR		1000 304.8	185.0	84.0	same			same	.235 5.97		540	5.5	18.0
			CEC:					as			as	Overall:		720	6.4	21.0
			CMG					above			above	.629 16.0		750	6.5	21.3
			FT4											1000	7.6	24.9
		1505S6	NEC:	6	500 152.4	117.0	53.0		.145	3.68		Single:		1500	9.3	30.5
			CMR		1000 304.8	250.0	114.0	same			same	.235 5.97		2250	11.6	38.1
			CEC:					as			as	Overall:		3000	13.4	44.0
			CMG					above			above	.790 20.0		4500	16.4	58.8
			FT4													

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

Gas-injected I	oam I	IDPE	Insula	rtion •	Indiv	idual	y color	code	d PV	C Jacke	ts* •	Bund	lled •	Cente	r Splin	e Bin	der		
SDI/HDTV	1694S3	NEC:	3	500 15	2.4 75.0	34.0	18 AWG	.180	4.57	Duofoil	Sing	le:	75	82%	16.2	53.5	1	0.24	0.8
Digital Video	new	CMR		1000 30	4.8 145.0	66.0	(solid)			+95% TC	.274	7.0	Soo Ro	ldon Macto	Catalog pg	10.79	3.6	0.45	1.5
75℃		CEC:					.040"			Braid	Over	all:		ximum digit	10	.72	2.4		
San		CMG					BC			$3.8\Omega/M'$.590	15.0			efer to 1694		71.5	1.60	5.3
	n	FT4					$6.4\Omega/M'$			$12.5\Omega/km$							135	2.10	6.9
	<u></u>						$21.0\Omega/km$						100%	Sweep teste	ed. 5MHz to	4.5 GHz.	270	2.97	9.7
T.	, 1694S5	NEC:	5	500 15	2.4 131.0	59.0		.180	4.57		Sing	le:	U.S. Patent 7,049,523.				360	3.43	11.3
	new	CMR		1000 30	4.8 277.0	126.0	same			same	.274	7.0					540	4.25	13.9
		CEC:					as			as	0ver	all:					720	4.95	16.2
		CMG					above			above	.740	18.8					750	5.00	16.4
		FT4											_				1000	5.89	19.3
	1694S6	NEC:	6	500 15	2.4 185.0	84.0		.180	4.57		Sing	le:					1500	7.33	24.1
	new	CMR		1000 30	4.8 388.0	176.0	same			same	.274	7.0					2250	9.14	30.0
		CEC:					as			as	0ver	all:					3000	10.67	35.0
		CMG					above			above	.822	20.9					4500	13.29	43.6
		FT4																	

 $BC = Bare\ Copper\ \bullet\ HDPE = High-density\ Polythylene\ \bullet\ TC = Tinned\ Copper\ ^*Color\ coded\ in\ Red,\ Green,\ Blue,\ Yellow,\ Black\ and\ White$