



Description:

20 AWG solid .032" bare copper conductor, gas-injected foam HDPE insulation, Duofoil® + tinned copper braid shield (95% coverage), PVC jacket.

Physical Characteristics (Overall)

Conductor

AWG:

# Coax	AWG	Stranding	Conductor Material	Dia. (in.)
1	20	Solid	BC - Bare Copper	.032

Insulation

Insulation Material:

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

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
2		Braid	TC - Tinned Copper	95

Outer Jacket

Outer Jacket Material:

Outer Jacket Material
PVC - Polyvinyl Chloride

Overall Cabling

Overall Nominal Diameter: 0.233 in.

Mechanical Characteristics (Overall)

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

UL Temperature Rating: 75°C

Bulk Cable Weight: 31 lbs/1000 ft.

Max. Recommended Pulling Tension: 47 lbs.

Min. Bend Radius (Install)/Minor Axis: 2.500 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): 01/01/2005

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

Suitability - Outdoor: Yes - Black only

Suitability - Aerial: Yes - Black only, when supported by a messenger wire

Plenum/Non-Plenum

Plenum (Y/N): No

Plenum Number: 1506A

Electrical Characteristics (Overall)

Nom. Characteristic Impedance:

Impedance (Ohm)

75

Nom. Inductance:

Inductance (µH/ft)

0.107

Nom. Capacitance Conductor to Shield:

Capacitance (pF/ft)

16.3

Nominal Velocity of Propagation:

VP (%)

83

Nominal Delay:

Delay (ns/ft)

1.22

Nom. Conductor DC Resistance:

DCR @ 20°C (Ohm/1000 ft)

10.0

Nominal Outer Shield DC Resistance:

DCR @ 20°C (Ohm/1000 ft)

3.8

Nom. Attenuation:

Freq. (MHz) Attenuation (dB/100 ft.)

1	.3
3.6	.6
5	.63
7	.74
10	.9
67.5	2.05
71.5	2.1
88.5	2.2
100	2.3
135	2.7
143	2.8
180	3.1
270	3.8
360	4.4

540	5.5
720	6.4
750	6.5
1000	7.6
1500	9.3
2000	10.9
2250	11.6
3000	13.4
4500	16.4

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 +/- 1.5 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.

Misc. Information (Overall)

Other Description: 05/31/05 DAD: Corrected RL data location and values. Added calculated 4.5 GHz attenuation.

Notes (Overall)

Notes: Also available in bundled versions. See 7794A through 7798A.

Put Ups and Colors:

Item #	Putup	Ship Weight	Color	Notes	Item Desc
1505A N3U1000	1,000 FT	35.000 LB	GREEN, MIL	C	#20 PE/GIFHDPE SH FR PVC
1505A N3U5000	5,000 FT	165.000 LB	GREEN, MIL	C N	#20 PE/GIFHDPE SH FR PVC
1505A 0011000	1,000 FT	35.000 LB	BROWN	C	#20 PE/GIFHDPE SH FR PVC
1505A 0015000	5,000 FT	165.000 LB	BROWN	C N	#20 PE/GIFHDPE SH FR PVC
1505A 0021000	1,000 FT	35.000 LB	RED	C	#20 PE/GIFHDPE SH FR PVC
1505A 002500	500 FT	15.500 LB	RED	C	#20 PE/GIFHDPE SH FR PVC
1505A 0025000	5,000 FT	165.000 LB	ORANGE	C N	#20 PE/GIFHDPE SH FR PVC
1505A 0031000	1,000 FT	35.000 LB	ORANGE	C	#20 PE/GIFHDPE SH FR PVC
1505A 0035000	5,000 FT	165.000 LB	ORANGE	C N	#20 PE/GIFHDPE SH FR PVC
1505A 0041000	1,000 FT	35.000 LB	YELLOW	C	#20 PE/GIFHDPE SH FR PVC
1505A 0045000	5,000 FT	165.000 LB	YELLOW	C N	#20 PE/GIFHDPE SH FR PVC
1505A 0061000	1,000 FT	35.000 LB	BLUE, LIGHT	C	#20 PE/GIFHDPE SH FR PVC
1505A 006500	500 FT	15.500 LB	BLUE, LIGHT	C	#20 PE/GIFHDPE SH FR PVC
1505A 0065000	5,000 FT	165.000 LB	BLUE, LIGHT	C N	#20 PE/GIFHDPE SH FR PVC
1505A 0071000	1,000 FT	35.000 LB	VIOLET	C	#20 PE/GIFHDPE SH FR PVC
1505A 0075000	5,000 FT	165.000 LB	VIOLET	C N	#20 PE/GIFHDPE SH FR PVC
1505A 0081000	1,000 FT	35.000 LB	GRAY	C	#20 PE/GIFHDPE SH FR PVC
1505A 0085000	5,000 FT	165.000 LB	GRAY	C N	#20 PE/GIFHDPE SH FR PVC
1505A 0091000	1,000 FT	35.000 LB	WHITE	C	#20 PE/GIFHDPE SH FR PVC
1505A 0095000	5,000 FT	165.000 LB	WHITE	C N	#20 PE/GIFHDPE SH FR PVC
1505A 0101000	1,000 FT	35.000 LB	BLACK	C	#20 PE/GIFHDPE SH FR PVC
1505A 010500	500 FT	15.500 LB	BLACK	C	#20 PE/GIFHDPE SH FR PVC
1505A 0105000	5,000 FT	165.000 LB	BLACK	C N	#20 PE/GIFHDPE SH FR PVC

Notes:

C = CRATE REEL PUT-UP.
N = FINAL PUT-UP LENGTH MAY VARY -0% TO +10% FROM LENGTH SHOWN.

Precision Video Cable for Analog and Digital

RG-59/U Type



Description	Part No.	UL NEC/ C(UL) CEC Type	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/100 Ft.	dB/100m

20 AWG Solid .032" Bare Copper Conductor • Duofoil® (100% Coverage) + Tinned Copper Braid Shield (95% Coverage)

Gas-injected Foam HDPE Insulation • PVC Jacket (Available in 10 colors)*

SDI/HDTV	1505A	NEC:	500 [▲]	152.4	17.0	8.0	20 AWG (solid)	.145	3.68	Duofoil + 95%	.233	5.92	75	83%	16.3	53.5	1	.3	1.0
Digital Video		CMR:	1000	304.8	35.0	16.4				TC Braid							3.6	.6	1.8
75°C		CEC:	5000 [▼]	1524.0	165.0	74.8	.032"			BC	3.8Ω/M'						10	.9	2.9
		CMG FT4								10.0Ω/M'	12.5Ω/km	For Plenum version of 1505A, see 1506A.						71.5	2.1
											Also available in bundled versions. See 7794A through 7798A.						135	2.7	8.9
											100% Sweep tested. 5 MHz to 3 GHz.						270	3.8	12.5
																	360	4.4	14.4
																	540	5.5	18.0
																	720	6.4	21.0
																	750	6.5	21.3
																	1000	7.6	24.9
																	1500	9.3	30.5
																	2250	11.6	38.0
																	3000	13.4	44.0

*500 ft. put-up available in Black, Red or Blue only.

▼5000 ft. put-up may vary in length by -0 to +10%.

▲1000 ft. and 5000 ft. put-ups available in all ten colors: Black, Brown, Red, Orange, Yellow, Green, Blue, Purple, Gray or White.

22 AWG Stranded (7x29) .031" Bare Compacted Copper Conductor* • Tinned Copper/Bare Copper Double Braid Shield (95% Coverage)

Gas-injected Foam HDPE Insulation • PVC Jacket (Matte Black, Red, Green, Blue, Yellow, Orange, White or Purple)

High-Flex	1505F	NEC:	1000	304.8	45.0	20.4	22 AWG (7x29)	.145	3.68	TC Double Braid	.242	6.15	75	80%	17.0	55.7	1	.2	.7
SDI/HDTV		CM								95% Shield							3.6	.5	1.6
Video Patch		CEC:					.031"			BCC Coverage							71.5	2.5	8.2
75°C		CM								12.2Ω/M'	2.4Ω/M'						135	3.5	11.5
									40.0Ω/km	7.8Ω/km	100% Sweep tested. 5 MHz to 3 GHz.						270	5.1	16.7
																	360	6.0	19.7
																	540	7.4	24.3
																	720	8.7	28.5
																	750	8.9	29.2
																	1000	10.5	34.4
																	1500	13.3	43.6
																	2250	16.9	55.4
																	3000	20.3	66.6

*Compacted conductor combines impedance uniformity of solid conductors and "nick-resistance" of stranded conductor.

20 AWG Solid .032" Bare Copper Conductor • Duofoil (100% Coverage) + Tinned Copper Braid Shield (95% Coverage)

Plenum • Foam FEP Insulation • Flamarest® Jacket (Available in 10 colors)*

SDI/HDTV	1506A	NEC:	500 ^{†*}	152.4	14.5	6.6	20 AWG (solid)	.133	3.38	Duofoil + 95%	.196	4.93	75	84%	16.1	52.8	1	.3	1.0
Digital Video		CMP:	1000 ^{†*}	304.8	29.0	13.2				TC Braid							3.6	.6	2.0
75°C		CEC:					.032"			BC	3.8Ω/M'						71.5	2.3	7.4
		CMF FT6								10.0Ω/M'	10.5Ω/km	100% Sweep tested. 5 MHz to 3 GHz.						135	3.2
																	270	4.6	14.9
																	360	5.3	17.2
																	540	6.4	21.0
																	720	7.3	23.9
																	750	7.5	24.6
																	1000	9.4	30.8
																	1500	12.8	42.0
																	2250	17.5	57.4
																	3000	21.9	71.8

Suitable for Outdoor and Direct Burial applications.

†500 ft. put-up available in Black or Natural only.

*1000 ft. put-up available in all ten colors: Black, Brown, Red, Orange, Yellow, Green, Blue, Purple, Gray or Natural.

20 AWG Solid .031" Bare Copper Conductor • Tinned Copper/Bare Copper Double Braid Shield (98% Coverage)

Polyethylene Insulation • Gray PVC Jacket

60°C	9231	NEC:	500	152.4	39.0	17.7	20 AWG (solid)	.198	5.03	TC Double Braid	.305	7.75	75	66%	21.0	68.9	1	.3	1.0
VW-1		CMH:	1000	304.8	76.0	34.5				98% Shield							10.0	.8	2.6
		CEC:					.031"			BC Coverage							71.5	2.0	6.6
		CMH FT1								9.9Ω/M'	1.1Ω/M'	100% Sweep tested. 5 MHz to 850 MHz.						135	3.5
									32.5Ω/km	3.6Ω/km							270	4.3	14.1
																	360	5.0	16.4
																	540	6.2	20.3
																	720	7.2	23.6
																	750	7.4	24.3
																	1000	9.1	29.8

BC = Bare Copper • BCC = Bare Compacted Copper • DCR = DC Resistance • FEP = Fluorinated Ethylene Propylene • HDPE = High-density Polyethylene • TC = Tinned Copper

Final put-up length may vary ±10% for spools or reels, ±5% for Unreel cartons from length shown.