Detailed Specifications & Technical Data

ENGLISH MEASUREMENT VERSION

4505R Coax - 4K Ultra-High-Definition Coax Cable for 12G-SDI

For more Information please call

1-800-Belden1

General Description:

12 GHz, 4K UHD Precision Video Cable, 75 Ohm, 20 AWG solid .032" silver plated copper conductor, gas-injected foam HDPE insulation, Duofoil® bonded to core + tinned copper braid shield (95% coverage), PVC jacket.

Usage (Overall)

Suitable Applications:	SMPTE 2082-1 12 Gb/s UHDTV, SMPTE 2081-1 6 Gb/s UHDTV, SMPTE 424M 3 Gb/s HD-SDI 1080p

Physical Characteristics (Overall)

Conductor

AWG:

# Coax	AWG	Stranding	Conductor Material	Dia. (in.)
1	20	Solid	SPC - Silver Plated Copper	0.032

Total Number of Conductors:	1

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 (%)	Description
1	Bonded Duofoil®	Tape	Aluminum Foil-Polyester Tape-Aluminum Foil	100.000	Bonded to insulation
2		Braid	TC - Tinned Copper	95.000	

Outer Jacket

Outer Jacket Material:

Outer Jacket Material
PVC - Polyvinyl Chloride

Overall Cable

Overall Nominal Diameter:	0.233 in.

Mechanical Characteristics (Overall)

Operating Temperature Range:	-30°C To +75°C
Bulk Cable Weight:	31 lbs/1000 ft.
Max. Recommended Pulling Tension:	52 lbs.
Min. Bend Radius/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 Directive 2011/65/EU (ROHS II):	Yes
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

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RG Type:	59/U

Flame Test

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

Suitability

Suitability - Indoor:	Yes
Suitability - Outdoor:	Yes - Black only.
Suitability - Aerial:	Yes - Black only, when supported by messenger wire.
Suitability - Burial:	No

Plenum/Non-Plenum

Plenum (Y/N):	No

Electrical Characteristics (Overall)

Nom. Characteristic Impedance:

Impedance (Ohm)
75

Nom. Inductance:

Inductance (µH/ft)
0.107

Nom. Capacitance Conductor to Shield:

Capacitance (pF/ft)
16.100

Nominal Velocity of Propagation:

VP (%)
83.000

Nominal Delay:

Delay (ns/ft)
1.220

Nom. Conductor DC Resistance:

DCR @ 20°C (Ohm/1000 ft)
10.200

Nominal Outer Shield DC Resistance:

DCR @ 20°C (Ohm/1000 ft)
3.400

Nom. Attenuation:

Freq. (MHz)	Attenuation (dB/100 ft.)
1.000	0.300
3.600	0.600
5.000	0.630
6.000	0.690
7.000	0.740
10.000	0.900
12.000	0.910
25.000	1.300
67.500	2.050
71.500	2.100
88.500	2.200
100.000	2.300
135.000	2.700
143.000	2.800
180.000	3.100
270.000	3.800
360.000	4.400
540.000	5.500
720.000	6.400
750.000	6.500
1000.000	7.600
1500.000	9.300
2000.000	10.800
2250.000	11.500
3000.000	13.400

4500.000	16.700
6000.000	19.700
12000.000	28.700

Max. Operating Voltage - UL:

Voltage
300 V RMS

Other Electrical Characteristic 2: Return Loss: Fixed bridge and termination.

Minimum Return Loss:

Start Freq. (MHz)	Stop Freq. (MHz)	Min. RL (dB)
5.000	1600.000	23.000
1600.000	4500.000	21.000
4500.000	12000.000	15.000

Sweep Test

Sweep Testing: Sweep tested 5 MHz to 12 GHz.

Notes (Overall)

Notes: Print legend includes sequential footage marks.

Put Ups and Colors:

Item #	Putup	Ship Weight	Color	Notes	Item Desc
4505R N3U1000	1,000 FT	32.000 LB	GREEN, MIL		#20 PE/GIFHDLDPE SH FRPVC
4505R 0021000	1,000 FT	32.000 LB	RED		#20 PE/GIFHDLDPE SH FRPVC
4505R 0031000	1,000 FT	32.000 LB	ORANGE		#20 PE/GIFHDLDPE SH FRPVC
4505R 0061000	1,000 FT	32.000 LB	BLUE, LIGHT		#20 PE/GIFHDLDPE SH FRPVC
4505R 0071000	1,000 FT	32.000 LB	VIOLET		#20 PE/GIFHDLDPE SH FRPVC
4505R 0101000	1,000 FT	32.000 LB	BLACK		#20 PE/GIFHDLDPE SH FRPVC
4505R 0105000	5,000 FT	160.000 LB	BLACK		#20 PE/GIFHDLDPE SH FRPVC

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