



**Product:** [4505RX5](#)

12 GHz 5 Coax, 4K UHD Precision Video Cable, RG-59 Type, 75 Ohm, 20 AWG Solid, CMR

### Product Description

12 GHz, 4K UHD Precision Video Cable, RG-59 Type, 75 Ohm 5 Coax 20 AWG solid 0.032" silver-plated copper conductor, gas-injected foamed high-density polyethylene insulation, Duofoil® bonded to the core + tinned copper braid shield (95% coverage), PVC inner and outer jackets

### Technical Specifications

#### Product Overview

Suitable Applications:	SMPTE 2082-1 12 Gb/s UHD TV, SMPTE 2081-1 6 Gb/s UHD TV, SMPTE 424M 3 Gb/s HD-SDI 1080p
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#### Physical Characteristics (Overall)

##### Conductor

AWG	Stranding	Material	Nominal Diameter	No. of Coax
20	Solid	SC - Silvered Copper	0.032 in	5

##### Insulation

Material	Nominal Diameter
PE - Polyethylene (Foam)	0.145 in

Table Notes:	Gas Injected
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##### Inner Shield

Type	Layer	Material	Material Trade Name	Coverage [%]
Tape	1	Tri-Laminate (Alum+Poly+Alum)	Duofoil®	100%
Braid	2	Tinned Copper (TC)		95%

##### Inner Jacket

Material	Nominal Diameter
PVC - Polyvinyl Chloride	0.233 in

##### Outer Jacket

Material	Nominal Diameter
PVC - Polyvinyl Chloride	0.790 in

#### Electrical Characteristics

##### Conductor DCR

Nominal Conductor DCR	Outer Conductor DCR
10.2 Ohm/1000ft	3.4 Ohm/1000ft

##### Capacitance

Nom. Capacitance Conductor to Shield
16.1 pF/ft

##### Inductance

Nominal Inductance
0.107 µH/ft

## Impedance

### Nominal Characteristic Impedance

75 Ohm

## Return Loss (RL)

Frequency [MHz]	Minimum Return (RL)
5 MHz - 1600 MHz	23 dB
1600 MHz - 4500 MHz	21 dB
4500 MHz - 12000 MHz	15 dB

## High Frequency (Nominal/Typical)

Frequency [MHz]	Nom. Insertion Loss
1 MHz	0.30 dB/100ft
3.58 MHz	0.60 dB/100ft
5 MHz	0.63 dB/100ft
6 MHz	0.69 dB/100ft
7 MHz	0.74 dB/100ft
10 MHz	0.90 dB/100ft
12 MHz	0.91 dB/100ft
25 MHz	1.30 dB/100ft
55 MHz	1.98 dB/100ft
67.5 MHz	2.05 dB/100ft
71.5 MHz	2.1 dB/100ft
88.5 MHz	2.2 dB/100ft
100 MHz	2.3 dB/100ft
135 MHz	2.7 dB/100ft
143 MHz	2.8 dB/100ft
180 MHz	3.1 dB/100ft
270 MHz	3.8 dB/100ft
360 MHz	4.4 dB/100ft
540 MHz	5.5 dB/100ft
720 MHz	6.4 dB/100ft
750 MHz	6.5 dB/100ft
1000 MHz	7.6 dB/100ft
1500 MHz	9.3 dB/100ft
2000 MHz	10.8 dB/100ft
2250 MHz	11.5 dB/100ft
3000 MHz	13.4 dB/100ft
4500 MHz	16.7 dB/100ft
6000 MHz	19.7 dB/100ft
12000 MHz	28.7 dB/100ft

## Delay

### Nominal Delay

1.22 ns/ft

### Nominal Velocity of Propagation (VP) [%]

83%

## Voltage

### UL Voltage Rating

300 V RMS

Electrical Characteristics Notes: Return Loss: Fixed bridge and termination

## Temperature Range

UL Temp Rating:	60°C
Operating Temperature Range:	-20°C to +75°C

## Mechanical Characteristics

Bulk Cable Weight:	260 lbs
Max. Pull Tension:	210 lbs
Min Bend Radius (Overall):	7.9 in
Min Bend Radius (Each Coax):	2.4 in

## Standards

NEC/(UL) Compliance:	CMR
CEC/C(UL) Compliance:	CMG
RG Type:	59
Series Type:	59

## Applicable Environmental and Other Programs

EU Directive 2000/53/EC (ELV):	Yes
EU Directive 2011/65/EU (RoHS 2):	Yes
EU Directive 2012/19/EU (WEEE):	Yes
EU Directive 2015/863/EU (RoHS 2 amendment):	Yes
EU Directive Compliance:	EU Directive 2000/53/EC (ELV); EU Directive 2002/96/EC (WEEE); EU Directive 2003/11/EC (BFR); EU Directive 2011/65/EU (ROHS II)
EU CE Mark:	Yes
EU REACH SVHC Compliance (yyyy-mm-dd):	2019-06-01

## Suitability

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

## Flammability, LSOH, Toxicity Testing

UL Flammability:	UL1666 Vertical Shaft
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## Plenum/Non-Plenum

Plenum (Y/N):	No
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## Related Part Numbers

### Variants

Item #	Color	Put-Up Type	Length
4505RX5 B59CUT	Black	Reel	
4505RX5 B591000	Black	Reel	1,000 ft

## Product Notes

Notes:	Print legend includes sequential footage marks.
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## History

Update and Revision:	Revision Number: 0.109 Revision Date: 11-09-2022
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