



Product: [8281B](#)

Precision Video Coax, RG59, #20 Solid BC, Double 98% Braid, CMR



Product Description

20 AWG solid .031" bare copper conductor, flame-retardant semi-foam polyethylene insulation, tinned copper/bare copper double braid shield (95% coverage), PVC jacket.

Technical Specifications

Physical Characteristics (Overall)

Conductor

AWG	Stranding	Material	Nominal Diameter	No. of Coax
20	Solid	BC - Bare Copper	0.031 in	1

Conductor Count: 1

Insulation

Material	Nominal Diameter
PE - Polyethylene (Foam)	0.198 in

Outer Shield

Type	Layer	Material	Coverage [%]
Braid	1	Tinned Copper (TC)	95%
Braid	2	Tinned Copper (TC)	95%

Outer Jacket

Material	Nominal Diameter
PVC - Polyvinyl Chloride	0.305 in

Electrical Characteristics

Conductor DCR

Nominal Conductor DCR	Nominal Conductor DCR	Conductor Resistance	Nominal Outer Shield DCR	Outer Conductor DCR
9.9 Ohm/1000ft	9.9 Ohm/1000ft		1.1 Ohm/1000ft	1.1 Ohm/1000ft

Capacitance

Nom. Capacitance Conductor to Shield
21 pF/ft

Inductance

Nominal Inductance
0.118 μ H/ft

Impedance

Nominal Characteristic Impedance
75 Ohm

Return Loss (RL)

Frequency [MHz]	Min. Structural Return Loss (SRL)
5-216 MHz	27 dB

217-850 MHz	23 dB
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High Frequency (Nominal/Typical)

Frequency [MHz]	Nom. Insertion Loss
1 MHz	0.3 dB/100ft
3.6 MHz	0.5 dB/100ft
10 MHz	0.8 dB/100ft
71.5 MHz	2.1 dB/100ft
135 MHz	3 dB/100ft
270 MHz	4.4 dB/100ft
360 MHz	5.1 dB/100ft
540 MHz	6.6 dB/100ft
720 MHz	7.8 dB/100ft
750 MHz	8 dB/100ft
1000 MHz	10.2 dB/100ft

Delay

Nominal Delay	Nominal Velocity of Propagation (VP) [%]
1.54 ns/ft	66%

Voltage

Non-UL Voltage Rating	UL Voltage Rating	Voltage Rating [V]
300 V RMS	300 V RMS	30 V RMS
	300 V RMS	

Temperature Range

UL Temp Rating:	80°C
Operating Temperature Range:	-40°C To +80°C

Mechanical Characteristics

Bulk Cable Weight:	79 lbs/1000ft
Max. Pull Tension:	168 lbs
Min. Bend Radius/Minor Axis:	3 in
Min Flexing Radius:	6 in

Standards

NEC/(UL) Compliance:	CMR
CEC/C(UL) Compliance:	CMG
UL AWM Style Compliance:	AWM 1354
CPR Euroclass:	Eca
RG Type:	59

Applicable Environmental and Other Programs

Environmental Space:	Indoor/Outdoor
EU Directive 2000/53/EC (ELV):	Yes
EU Directive 2003/11/EC (BFR):	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 2003/11/EC (BFR)
EU CE Mark:	Yes
MII Order #39 (China RoHS):	Yes

Suitability

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

Flammability, LSOH, Toxicity Testing

UL Flammability:	UL1666 Vertical Shaft
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CSA Flammability:	FT4
IEC Flammability:	IEC 60332-1-2
UL voltage rating:	300 V RMS

Plenum/Non-Plenum

Plenum (Y/N):	No
Plenum Number:	88281

Related Part Numbers

Variants

Item #	Color	Put-Up Type	Length	UPC
8281B 0101000	Black	Reel	1,000 ft	612825355489
8281B 0061000	Blue, Light	Reel	1,000 ft	612825355762
8281B 0081000	Gray	Reel	1,000 ft	612825355748
8281B 0051000	Green, Dark	Reel	1,000 ft	612825355779
8281B 0021000	Red	Reel	1,000 ft	612825355793
8281B 0071000	Violet	Reel	1,000 ft	612825355755
8281B 0091000	White	Reel	1,000 ft	612825355731
8281B 0041000	Yellow	Reel	1,000 ft	612825355786

Footnote:	C - CRATE REEL PUT-UP.
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History

Update and Revision:	Revision Number: 0.423 Revision Date: 04-29-2024
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