

8281B Coax - Double Braided RG-59/U Type

For more Information
please call

1-800-Belden1

**General 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.

Physical Characteristics (Overall)**Conductor**

AWG:

# Coax	AWG	Stranding	Conductor Material	Dia. (in.)
1	20	Solid	BC - Bare Copper	.031

Total Number of Conductors: 1

Insulation

Insulation Material:

Insulation Material	Dia. (in.)
FR Semi-Foam PE - Flame Retardant Semi-Foam Polyethylene	.198

Outer Shield

Outer Shield Material:

Layer #	Type	Outer Shield Material	Coverage (%)
1	Braid	TC - Tinned Copper	95.000
2	Braid	TC - Tinned Copper	95.000

Outer Jacket

Outer Jacket Material:

Outer Jacket Material
PVC - Polyvinyl Chloride

Overall Cable

Overall Nominal Diameter: 0.305 in.

Mechanical Characteristics (Overall)

Operating Temperature Range:	-40°C To +80°C
UL Temperature Rating:	75°C, 80°C
Bulk Cable Weight:	79 lbs/1000 ft.
Max. Recommended Pulling Tension:	168 lbs.
Min. Bend Radius/Minor Axis:	3 in.
Min. Flexing Radius:	6 in.

Applicable Specifications and Agency Compliance (Overall)**Applicable Standards & Environmental Programs**

NEC/(UL) Specification:	CMR
CEC/C(UL) Specification:	CMG
AWM Specification:	UL Style 1354
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):	10/13/2005
EU Directive 2002/96/EC (WEEE):	Yes
EU Directive 2003/11/EC (BFR):	Yes
CA Prop 65 (CJ for Wire & Cable):	Yes
MIL Order #39 (China RoHS):	Yes

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RG Type:	59/U
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Flame Test

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

Suitability - Indoor:	Yes
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Suitability - Outdoor:	Yes - Black Only
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Suitability - Aerial:	Yes - Black only, when supported by a messenger wire
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Plenum/Non-Plenum

Plenum (Y/N):	No
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Plenum Number:	88281
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Electrical Characteristics (Overall)**Nom. Characteristic Impedance:**

Impedance (Ohm)

75

Nom. Inductance:

Inductance (µH/ft)

0.118

Nom. Capacitance Conductor to Shield:

Capacitance (pF/ft)

21

Nominal Velocity of Propagation:

VP (%)

66

Nominal Delay:

Delay (ns/ft)

1.54

Nom. Conductor DC Resistance:

DCR @ 20°C (Ohm/1000 ft)

9.9

Nominal Outer Shield DC Resistance:

DCR @ 20°C (Ohm/1000 ft)

1.1

Nom. Attenuation:

Freq. (MHz)	Attenuation (dB/100 ft.)
1	.3
3.6	.5
10.0	.8
71.5	2.1
135	3.0
270	4.4
360	5.1
540	6.6
720	7.8
750	8.0
1000	10.2

Max. Operating Voltage - UL:

Voltage

30 V RMS

300 V RMS

Max. Operating Voltage - Non-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 Structural Return Loss:

Start Freq. (MHz)	Stop Freq. (MHz)	Min. SRL (dB)
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5	216	27
217	850	23

Sweep Test

Sweep Testing: 100% sweep tested. 5 MHz to 850 MHz.

Put Ups and Colors:

Item #	Putup	Ship Weight	Color	Notes	Item Desc
8281B 0021000	1,000 FT	83.000 LB	RED	C	#20 FRSFPE DBLB FRPVC
8281B 0041000	1,000 FT	83.000 LB	YELLOW	C	#20 FRSFPE DBLB FRPVC
8281B 0051000	1,000 FT	83.000 LB	GREEN, DARK	C	#20 FRSFPE DBLB FRPVC
8281B 0061000	1,000 FT	83.000 LB	BLUE, LIGHT	C	#20 FRSFPE DBLB FRPVC
8281B 0071000	1,000 FT	83.000 LB	VIOLET	C	#20 FRSFPE DBLB FRPVC
8281B 0081000	1,000 FT	83.000 LB	GRAY	C	#20 FRSFPE DBLB FRPVC
8281B 0091000	1,000 FT	83.000 LB	WHITE	C	#20 FRSFPE DBLB FRPVC
8281B 0101000	1,000 FT	83.000 LB	BLACK	C	#20 FRSFPE DBLB FRPVC

Notes:

C = CRATE REEL PUT-UP.

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