BELDEN
SENDING ALL THE RIGHT SIGNALS

Part Number: 7810A

RF 400 Wireless Coax, RG8, 10 AWG

Product Description

RG-8 type, 10 AWG solid .108" bare copper-covered aluminum conductor, gas-injected foam HDPE insulation, Duobond® II, tinned copper braid shield (95% coverage), polyethylene jacket.

Technical Specifications

Product Overview

Environmental Space:	Indoor (Not Riser or Plenum)

Physical Characteristics (Overall)

Conductor

AWG	Stranding	Material	Nominal Diameter	No. of Coax
10	Solid	BCCA - Bare Copper Covered Aluminum	0.108 in	1

Conductor Count:	1

Insulation

Material	Nominal Diameter
Gas-injected FHDPE - Foam High Density Polyethylene	0.285 in

Outer Shield Material

Type	Layer	Material	Material Trade Name	Coverage [%]
Tape	1	Aluminum/Polyester/Aluminum	Bonded Duofoil®	100 %
Braid	2	TC - Tinned Copper		95 %

Outer Jacket Material

Material	Nominal Diameter
PE - Polyethylene	0.403 in

Electrical Characteristics

Conductor DCR

Nominal Conductor DCR	Nominal Outer Shield DCR	Outer Conductor DCR
1.34 Ohm/1000ft	2 Ohm/1000ft	2 Ohm/1000ft

Capacitance

Nom. Capacitance Conductor to Shield
23 pF/ft

Inductance

Nominal Inductance
0.06 µH/ft

Impedance

Nominal Characteristic Impedance
50 Ohm

High Frequency (Nominal/Typical)

Frequency [MHz]	Nom. Insertion Loss
30 MHz	0.7 dB/100ft
50 MHz	0.9 dB/100ft
150 MHz	1.5 dB/100ft
220 MHz	1.8 dB/100ft
450 MHz	2.7 dB/100ft
900 MHz	3.8 dB/100ft
1500 MHz	5.1 dB/100ft
1800 MHz	5.6 dB/100ft
2000 MHz	6 dB/100ft
2500 MHz	6.7 dB/100ft
3000 MHz	7.5 dB/100ft
3500 MHz	8.2 dB/100ft
4500 MHz	9.5 dB/100ft
5800 MHz	11.1 dB/100ft
6000 MHz	11.4 dB/100ft

Delay

Nominal Delay	Nominal Velocity of Propagation (VP) [%]
1.17 ns/ft	86 %

High Freq

Frequency [MHz]	Max. Insertion Loss (Attenuation)
30 MHz	0.7 dB/100ft
50 MHz	0.93 dB/100ft
150 MHz	1.58 dB/100ft
220 MHz	1.94 dB/100ft
450 MHz	2.83 dB/100ft
900 MHz	4.06 dB/100ft
1500 MHz	5.32 dB/100ft
1800 MHz	5.98 dB/100ft
2000 MHz	6.35 dB/100ft
2500 MHz	7.08 dB/100ft
3000 MHz	7.97 dB/100ft
3500 MHz	8.8 dB/100ft
4500 MHz	10.23 dB/100ft
5800 MHz	12 dB/100ft
6000 MHz	12.23 dB/100ft

Power Rating

Frequency [MHz]	Max. Power Rating [W]
30 MHz	3,427 W
50 MHz	2,588 W
150 MHz	1,428 W
220 MHz	1,195 W
450 MHz	817 W
900 MHz	575 W
1,500 MHz	437 W
2,000 MHz	375 W
2,500 MHz	334 W
3,500 MHz	282 W
4,500 MHz	247 W
6,000 MHz	213 W
4,500 MHz	247 W
5,800 MHz	217 W
6,000 MHz	213 W

Voltage

Non-UL Voltage Rating
300 V RMS

VSWR

Frequency [MHz]	Max. VSWR
5 MHz - 6000 MHz	1.25:1

Temperature Range

Non-UL Temp Rating:	80°C
Operating Temp Range:	-40°C To +75°C

Mechanical Characteristics

Bulk Cable Weight:	70 lbs/1000ft
Max Recommended Pulling Tension:	150 lbs
Min Bend Radius/Minor Axis:	4 in

Standards

RG Type:	8/U Type
Series Type:	RF 400

Applicable Environmental and Other Programs

EU Directive 2000/53/EC (ELV):	Yes
EU Directive 2003/96/EC (BFR):	Yes
EU Directive 2011/65/EU (ROHS II):	Yes
EU Directive 2012/19/EU (WEEE):	Yes
EU Directive 2015/863/EU:	Yes
EU Directive Compliance:	EU Directive 2003/11/EC (BFR)
EU CE Mark:	No
EU RoHS Compliance Date (yyyy-mm-dd):	2004-01-01
CA Prop 65 (CJ for Wire & Cable):	Yes
MII Order #39 (China RoHS):	Yes

Suitability

Suitability - Indoor:	Yes

Plenum/Non-Plenum

Plenum (Y/N):	No

Part Number

Variants

Item #	Color	UPC	Length	Footnote
7810A 0101000	Black	612825189794	1,000 ft	C
7810A 010500	Black	612825189800	500 ft	C

Footnote:	C - CRATE REEL PUT-UP.

History

Update and Revision:	Revision Number: 0.285 Revision Date: 08-22-2019

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