

# Detailed Specifications & Technical Data



## METRIC MEASUREMENT VERSION

7810A Coax - RG-8 Type



For more Information  
please call

1-800-Belden1



### General 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.

### Physical Characteristics (Overall)

#### Conductor

AWG:

# Coax	AWG	Stranding	Conductor Material	Dia. (mm)
1	10	Solid	BCCA - Bare Copper Covered Aluminum	2.7432

Total Number of Conductors: 1

#### Insulation

Insulation Material:

Insulation Material	Dia. (mm)
Gas-injected FHDPE - Foam High Density Polyethylene	7.239

#### Outer Shield

Outer Shield Material:

Layer #	Outer Shield Trade Name	Type	Outer Shield Material	Coverage (%)
1	Bonded Dufoil®	Tape	Bonded Aluminum Foil-Polyester Tape-Aluminum Foil	100
2		Braid	TC - Tinned Copper	95

#### Outer Jacket

Outer Jacket Material:

Outer Jacket Material
PE - Polyethylene

### Overall Cable

Overall Nominal Diameter: 10.236 mm

### Mechanical Characteristics (Overall)

Operating Temperature Range: -40°C To +75°C

Non-UL Temperature Rating: 80°C

Bulk Cable Weight: 104.174 Kg/Km

Max. Recommended Pulling Tension: 667.230 N

Min. Bend Radius/Minor Axis: 101.600 mm

### Applicable Specifications and Agency Compliance (Overall)

#### Applicable Standards & Environmental Programs

EU Directive 2011/65/EU (RoHS II): Yes

EU CE Mark: No

EU Directive 2000/53/EC (ELV): Yes

EU Directive 2002/95/EC (RoHS): Yes

EU RoHS Compliance Date (mm/dd/yyyy): 01/01/2004

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

RG Type: 8/U

Series Type: RF 400

#### Suitability

Plenum/Non-Plenum

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Plenum (Y/N):

No

### Electrical Characteristics (Overall)

Nom. Characteristic Impedance:

Impedance (Ohm)
50

Nom. Inductance:

Inductance ( $\mu$ H/m)
0.19686

Nom. Capacitance Conductor to Shield:

Capacitance (pF/m)
75.463

Nominal Velocity of Propagation:

VP (%)
86

Nominal Delay:

Delay (ns/m)
3.83877

Nom. Conductor DC Resistance:

DCR @ 20°C (Ohm/km)
4.39654

Nominal Outer Shield DC Resistance:

DCR @ 20°C (Ohm/km)
6.562

Maximum VSWR:

Description	Freq. (MHz)	Start Freq. (MHz)	Stop Freq. (MHz)	Max. VSWR
	5	6000		1.25:1

Nom. Attenuation:

Freq. (MHz)	Attenuation (dB/100m)
30	2.2967
50	2.9529
150	4.9215
220	5.9058
450	8.8587
900	12.4678
1500	16.7331
1800	18.3736
2000	19.686
2500	21.9827
3000	24.6075
3500	26.9042
4500	31.1695
5800	36.4191
6000	37.4034

Max. Attenuation:

Freq. (MHz)	Attenuation (dB/100m)
30	2.2967
50	3.05133
150	5.18398
220	6.36514
450	9.28523
900	13.3209
1500	17.4549
1800	19.6204
2000	20.8344
2500	23.2295
3000	26.1496
3500	28.8728
4500	33.5646
5800	39.372
6000	40.1266

Max. Power Rating:

Freq. (MHz)	Rating (W)
30	3427

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50	2588
150	1428
220	1195
450	817
900	575
1500	437
1800	399
2000	375
2500	334
3000	305
3500	282
4500	247
5800	217
6000	213

### Max. Operating Voltage - Non-UL:

Voltage
300 V RMS

### Sweep Test

Sweep Testing: 100% Sweep tested to 6 GHz.

### Misc. Information (Overall)

### Notes (Overall)

Notes: Belden® The Wire in Wireless®

### Put Ups and Colors:

Item #	Putup	Ship Weight	Color	Notes	Item Desc
7810A 0101000	1,000 EA	117.565 KG	BLACK	C	RF400 WIRELESS 50 OHM COAX PE
7810A 010500	152 MT	17.690 KG	BLACK	C	RF400 WIRELESS 50 OHM COAX PE

### Notes:

C = CRATE REEL PUT-UP.

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