



## 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), PVC jacket.

## Physical Characteristics (Overall)

### Conductor

#### AWG:

# Coax	AWG	Stranding	Conductor Material	Dia. (in.)
1	10	Solid	BCCA - Bare Copper Covered Aluminum	.108

### Insulation

#### Insulation Material:

Insulation Material	Dia. (in.)
Gas-injected FHDPE - Foam High Density Polyethylene	.285

### Outer Shield

#### Outer Shield Material:

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

### Outer Jacket

#### Outer Jacket Material:

Outer Jacket Material
PVC - Polyvinyl Chloride

### Overall Cabling

Overall Nominal Diameter: 0.403 in.

## Mechanical Characteristics (Overall)

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

UL Temperature Rating: 80°C

Bulk Cable Weight: 86.600 lbs/1000 ft.

Max. Recommended Pulling Tension: 150 lbs.

Min. Bend Radius (Install)/Minor Axis: 4 in.

## Applicable Specifications and Agency Compliance (Overall)

### Applicable Standards & Environmental Programs

NEC/(UL) Specification: CMR

CEC/C(UL) Specification: CMG

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): 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

### Flame Test

UL Flame Test:	UL1666 Vertical Shaft
C(UL) Flame Test:	FT4

### Suitability

Suitability - Indoor:	Yes
Suitability - Aerial:	Yes - When supported by a messenger

### Plenum/Non-Plenum

Plenum (Y/N):	No
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## Electrical Characteristics (Overall)

#### Nom. Characteristic Impedance:

Impedance (Ohm)
50

#### Nom. Inductance:

Inductance (µH/ft)
0.060

#### Nom. Capacitance Conductor to Shield:

Capacitance (pF/ft)
23.0

#### Nominal Velocity of Propagation:

VP (%)
86

#### Nominal Delay:

Delay (ns/ft)
1.17

#### Nom. Conductor DC Resistance:

DCR @ 20°C (Ohm/1000 ft)
1.34

#### Nominal Outer Shield DC Resistance:

DCR @ 20°C (Ohm/1000 ft)
2

#### Maximum VSWR:

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

#### Nom. Attenuation:

Freq. (MHz)	Attenuation (dB/100 ft.)
30	0.7
50	0.9
150	1.5
220	1.8
450	2.7
900	3.8
1500	5.1
1800	5.6
2000	6.0
2500	6.7
3000	7.5

3500	8.2
4500	9.5
5800	11.1
6000	11.4

**Max. Attenuation:**

Freq. (MHz)	Attenuation (dB/100 ft.)
30	0.70
50	0.93
150	1.58
220	1.94
450	2.83
900	4.06
1500	5.32
1800	5.98
2000	6.35
2500	7.08
3000	7.97
3500	8.80
4500	10.23
5800	12.00
6000	12.23

**Max. Power Rating:**

Freq. (MHz)	Rating (W)
30	3427
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)**

**Other Description:** 10-05-04 BAG: Correct Shield DCR

**Notes (Overall)**

**Notes:** 100% Sweep tested. 6 GHz. Belden® The Wire in Wireless®

**Put Ups and Colors:**

Item #	Putup	Ship Weight	Color	Notes	Item Desc
7810R 0101000	1,000 FT	95.000 LB	BLACK	C	#10 LDPE/FHDPE SH FRPVC
7810R 010500	500 FT	47.000 LB	BLACK	C	#10 LDPE/FHDPE SH FRPVC

**Notes:**  
C = CRATE REEL PUT-UP.


# Low Loss 50 Ohm Wireless RF Transmission Cable

RG-8 Type

Description	Part No.	UL NEC/ C(UL) CEC Type	Standard Lengths		Standard Unit Weight		Conductor (stranding) Diameter Nom. DCR	Nominal Core OD		Shielding Materials Nom. DCR	Nominal OD		Nom. Imp. (Ω)	Nom. Vel. of Prop.	Nominal Capacitance		Nominal Attenuation		
			Ft.	m	Lbs.	kg		Inch	mm		Inch	mm			pF/Ft.	pF/m	MHz	dB/100 Ft.	dB/100m

**RG-8 Type • 10 AWG Solid .108" Bare Copper-covered Aluminum Conductor • Duobond® II (100% Coverage) + Tinned Copper Braid Shield (95% Coverage)**


**Gas-injected Foam HDPE Insulation • Black Polyethylene Jacket**

RF400 80°C	7810A	—	500	152.4	42.5	19.3	10 AWG (solid) .108" BCCA 1.34Ω/M' 4.4Ω/km	.285	7.24	Duobond II* + 95% TC Braid BCCA 2.0Ω/M' 9.2Ω/km	.403	10.23	50	86%	23.0	75.5	30	.7	2.1
			1000	304.8	86.0	39.0											50	.9	2.8
																	150	1.5	4.9
																	220	1.8	6.0
																	450	2.7	8.8
																	900	3.8	12.6
																	1500	5.1	16.6
																	1800	5.6	18.5
																	2000	6.0	19.6
																	2500	6.7	22.0
																	3000	7.5	24.4
																	4500	9.5	31.1
5800	11.1	36.4																	
6000	11.4	37.3																	

100% Sweep tested. 6 GHz. Max. VSWR 1.25:1.  
Belden® The Wire in Wireless.

Mates with 9913 and Land Mobile Radio type connectors.\*\*  
Suitable for Outdoor and Direct Burial applications.


**Gas-injected Foam HDPE Insulation • Black PVC Jacket**

RF400 80°C	7810R*	NEC:	500	152.4	47.0	21.3	10 AWG (solid) .108" BCCA 1.34Ω/M' 4.4Ω/km	.285	7.24	Duobond II* + 95% TC Braid BCCA 2.0Ω/M' 9.2Ω/km	.403	10.23	50	86%	23.0	75.5	30	.7	2.1
		CMR:	1000	304.8	79.0	35.8											50	.9	2.8
																	150	1.5	4.9
																	220	1.8	6.0
																	450	2.7	8.8
																	900	3.8	12.6
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																	2000	6.0	19.6
																	2500	6.7	22.0
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																	4500	9.5	31.1
5800	11.1	36.4																	
6000	11.4	37.3																	

100% Sweep tested. 6 GHz. Max. VSWR 1.25:1.  
Belden® The Wire in Wireless.

Mates with 9913 and Land Mobile Radio type connectors.\*\*  
Suitable for Outdoor applications.

**Gas-injected Foam HDPE Insulation • Flooded Water-resistant Black Polyethylene Jacket**

RF400 80°C	7810WB	—	500	152.4	39.5	17.9	10 AWG (solid) .108" BCCA 1.34Ω/M' 4.4Ω/km	.285	7.24	Duobond II* + 95% TC Braid BCCA 2.0Ω/M' 9.2Ω/km	.403	10.23	50	86%	23.0	75.5	30	.7	2.1
			1000	304.8	80.0	36.3											50	.9	2.8
																	150	1.5	4.9
																	220	1.8	6.0
																	450	2.7	8.8
																	900	3.8	12.6
																	1500	5.1	16.6
																	1800	5.6	18.5
																	2000	6.0	19.6
																	2500	6.7	22.0
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100% Sweep tested. 6 GHz. Max. VSWR 1.25:1.  
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Mates with 9913 and Land Mobile Radio type connectors.\*\*  
Suitable for Outdoor and Direct Burial applications.

BCCA = Bare Copper-covered Aluminum • DCR = DC Resistance • HDPE = High-density Polyethylene • TC = Tinned Copper

\*Duobond II = Bonded Duofoil® (100% coverage) + aluminum braid (67% coverage).