

## 7810A Coax - Low Loss 50 Ohm Wireless RF Transmission Cable



For more information please  
call

**1-800-Belden1**

See Put-ups and Colors

### Description:

10 AWG solid .108" bare copper-covered aluminum conductor, gas-injected foam HDPE insulation, Duobond® II and a 95% tinned copper braid shield, polyethylene jacket.

### PHYSICAL CHARACTERISTICS:

#### CONDUCTOR:

Number of Coax	1
Total Number of Conductors	1
RG Type	8/U
Series Type	RF 400
AWG	10
Stranding	Solid
Conductor Diameter	.108 in.
Conductor Material	BCCA - Bare Copper Clad Aluminum

#### INSULATION:

Insulation Material	Gas-injected FHDPE - Foam High Density Polyethylene
Insulation Diameter	.285 in.

#### OUTER SHIELD:

Outer Shield Material Trade Name	Duobond® II
Outer Shield Type	Tape/Braid

Outer Shield Material :

Layer Number	Trade Name	Type	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	PE - Polyethylene
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#### OVERALL NOMINAL DIAMETER:

Overall Nominal Diameter	.403 in.
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#### MECHANICAL CHARACTERISTICS:

Operating Temperature Range	-40°C To +75°C
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Bulk Cable Weight	77 lbs/1000 ft.
Max. Recommended Pulling Tension	150 lbs.
Min. Bend Radius (Install)	4 in.

**APPLICABLE SPECIFICATIONS AND AGENCY COMPLIANCE:**

**SUITABILITY:**

Suitability - Outdoor	Yes
Suitability - Aerial	Yes - When supported by a messenger
Suggested Connectors	Mates with 9913 and Land Mobile Radio type connectors.

**PLENUM/NON-PLENUM:**

Plenum (Y/N)	N
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**ELECTRICAL CHARACTERISTICS:**

Nom. Characteristic Impedance	50 Ohms
Nom. Inductance	0.060 $\mu$ H/ft
Nom. Capacitance Conductor to Shield	23.0 pF/ft
Nominal Velocity of Propagation	86 %
Nominal Delay	1.17 ns/ft
Nom. Conductor DC Resistance @ 20 Deg. C	1.34 Ohms/1000 ft
Nominal Outer Shield DC Resistance @ 20°C	2.8 Ohms/1000 ft

Maximum VSWR :

Description	Frequency (MHz)	Start Frequency (MHz)	Stop Frequency (MHz)	Maximum VSWR
		5	6000	1.25:1

Nom. Attenuation :

Description	Frequency (MHz)	Start Frequency (MHz)	Stop Frequency (MHz)	Nom. 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 :

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Description	Frequency (MHz)	Start Frequency (MHz)	Stop Frequency (MHz)	Max. 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 :**

Description	Frequency (MHz)	Start Frequency (MHz)	Stop Frequency (MHz)	Max. Power 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 300 V RMS

**NOTES:**

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

**PUT-UPS AND COLORS:**

Item	Description	Put-Up (ft.)	Ship Weight (lbs.)	Jacket Color	Notes
7810A 0101000	RF400 WIRELESS 50 OHM COAX PE	1000	79	BLACK	C
7810A 010500	RF400 WIRELESS 50 OHM COAX PE	500	39	BLACK	C

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## **7810A Coax - Low Loss 50 Ohm Wireless RF Transmission Cable**

C = CRATE REEL PUT-UP.

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