

7810SB Coax - Low Loss 50 Ohm Wireless RF Transmission Cable



For more Information
please call

1-800-Belden1



General Description:

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

Usage (Overall)

Suitable Applications:

Wireless RF, ABS Type Approved, CMG-LS, IEEE 45 clause 23, IEC 60092-376 clause 17, 60092-351, 60754-1, 60754-2, 61034, UL1865 FT4 Loading, Limited Smoke, IEC 60332-3-22 (Category A), 60332-1, IEEE 1202

Physical Characteristics (Overall)

Conductor

AWG:

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

Total Number of Conductors:

1

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
LSZH - Low Smoke Zero Halogen

Overall Cable

Overall Nominal Diameter:

0.405 in.

Mechanical Characteristics (Overall)

Operating Temperature Range:

-30°C To +75°C

UL Temperature Rating:

75°C

Non-UL Temperature Rating:

80°C

Bulk Cable Weight:

88 lbs/1000 ft.

Max. Recommended Pulling Tension:

150 lbs.

Min. Bend Radius/Minor Axis:

4 in.

Applicable Specifications and Agency Compliance (Overall)

Applicable Standards & Environmental Programs

NEC/(UL) Specification:

CMG-LS, CMR

CEC/C(UL) Specification:

CMG-LS, CMR

EU Directive 2011/65/EU (ROHS II):

Yes

IEEE Specification:

Std. 45 clause 23

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):

08/07/2006

7810SB Coax - Low Loss 50 Ohm Wireless RF Transmission Cable

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
Other Specification:	UL444, ABS Type Approval Certificate 06-HS184641B
RG Type:	8/U
Series Type:	8/U

Flame Test

UL Flame Test:	UL1666 Vertical Shaft, UL1685 FT4 Loading, Limited Smoke
CSA Flame Test:	FT4
IEC Flame Test:	60332-1, 60332-3-22 (Category A)
IEEE Flame Test:	1202

Suitability

Suitability - Indoor:	Yes
Suitability - Outdoor:	Yes
Suitability - Aerial:	Yes - Black only, when supported by messenger wire.
Sunlight Resistance:	Yes

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

7810SB Coax - Low Loss 50 Ohm Wireless RF Transmission Cable

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.

Put Ups and Colors:

Item #	Putup	Ship Weight	Color	Notes	Item Desc
7810SB 0101000	1,000 FT	97.000 LB	BLACK	C	#10 LDPE/GIFHDLPE SH FRNHPO

Notes:
C = CRATE REEL PUT-UP.

Revision Number: 7 Revision Date: 10-03-2012

© 2015 Belden, Inc.
All Rights Reserved.

Although Belden makes every reasonable effort to ensure their accuracy at the time of this publication, information and specifications described herein are subject to error or omission and to change without notice, and the listing of such information and specifications does not ensure product availability. Belden provides the information and specifications herein on an "AS IS" basis, with no representations or warranties, whether express, statutory or implied. In no event will Belden be liable for any damages (including consequential, indirect, incidental, special, punitive, or exemplary damages) whatsoever, even if Belden has been advised of the possibility of such damages, whether in an action under contract, negligence or any other theory, arising out of or in connection with the use, or inability to use, the information or specifications described herein.

All sales of Belden products are subject to Belden's standard terms and conditions of sale. Belden believes this product to be in compliance with EU RoHS (Directive 2002/95/EC, 27-Jan-2003). Material manufactured prior to the compliance date may be in stock at Belden facilities and in our Distributor's inventory. The information provided in this Product Disclosure, and the identification of materials listed as reportable or restricted within the Product Disclosure, is correct to the best of Belden's knowledge, information, and belief at the date of its publication. The information provided in this Product Disclosure is designed only as a general guide for the safe handling, storage, and any other operation of the product itself or the one that it becomes a part of. This Product Disclosure is not to be considered a warranty or quality specification. Regulatory information is for guidance purposes only. Product users are responsible for determining the applicability of legislation and regulations based on their individual usage of the product.

Belden declares this product to be in compliance with EU LVD (Low Voltage Directive 73/23/EEC), as amended by directive 93/68/EEC.