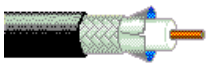
Detailed Specifications & Technical Data

ENGLISH MEASUREMENT VERSION

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

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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

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/GIFHDLDPE SH FRNHPO

Notes:
C = CRATE REEL PUT-UP.

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