

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. (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 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: 10.287 mm

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: 130.962 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

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

METRIC MEASUREMENT VERSION

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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/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

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6000	37.4034
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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
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.

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