Product: 7810SB

Shipboard, RF400 Wireless Coax, RG8, 10 AWG CMG-LS/CMR

Product Description

Shipboard, RG-8/U Type, 10 AWG solid .108" bare copper-covered aluminum conductor, gas-injected foam HDPE insulation, Duobond® II, tinned copper braid shield (95% coverage), LSZH jacket.

Technical Specifications

Product Overview

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	Stranding	Material	Nominal Diameter	No. of Coax
10	Solid	BCCA - Bare Copper Covered Aluminum	0.108 in	1

Conductor Count:	1

Insulation

Material	Nominal Diameter
PE - Polyethylene (Foam)	0.285 in

Table Notes:	Gas Injected

Outer Shield

Type	Layer	Material	Material Trade Name	Coverage [%]
Tape	1	Tri-Laminate (Alum+Poly+Alum)	Duofoil®	100%
Braid	2	Tinned Copper (TC)		95%

Outer Jacket

Material	Nominal Diameter
LSZH - Low Smoke Zero Halogen (Flame Retardant)	0.405 in

Electrical Characteristics

Conductor DCR

Nominal Conductor DCR	Nominal Conductor DCR Conductor Resistance	Nominal Outer Shield DCR	Outer Conductor DCR
1.34 Ohm/1000ft	1.34 Ohm/1000ft	2 Ohm/1000ft	2 Ohm/1000ft

Capacitance

Nom. Capacitance Conductor to Shield
23 pF/ft

Inductance

Nominal Inductance
0.06 µH/ft

Impedance

Nominal Characteristic Impedance

50 Ohm

Table Notes:	51.0 +/- 2.0 Ohms

High Frequency (Nominal/Typical)

Frequency [MHz]	Nom. Insertion Loss
30 MHz	0.7 dB/100ft
50 MHz	0.9 dB/100ft
150 MHz	1.5 dB/100ft
220 MHz	1.8 dB/100ft
450 MHz	2.7 dB/100ft
900 MHz	3.8 dB/100ft
1500 MHz	5.1 dB/100ft
1800 MHz	5.6 dB/100ft
2000 MHz	6 dB/100ft
2500 MHz	6.7 dB/100ft
3000 MHz	7.5 dB/100ft
3500 MHz	8.2 dB/100ft
4500 MHz	9.5 dB/100ft
5800 MHz	11.1 dB/100ft
6000 MHz	11.4 dB/100ft

Delay

Nominal Delay	Nominal Velocity of Propagation (VP) [%]
1.17 ns/ft	86%

High Frequency

Frequency [MHz]	Max. Insertion Loss (Attenuation)
30 MHz	0.7 dB/100ft
50 MHz	0.93 dB/100ft
150 MHz	1.58 dB/100ft
220 MHz	1.94 dB/100ft
450 MHz	2.83 dB/100ft
900 MHz	4.06 dB/100ft
1500 MHz	5.32 dB/100ft
1800 MHz	5.98 dB/100ft
2000 MHz	6.35 dB/100ft
2500 MHz	7.08 dB/100ft
3000 MHz	7.97 dB/100ft
3500 MHz	8.8 dB/100ft
4500 MHz	10.23 dB/100ft
5800 MHz	12 dB/100ft
6000 MHz	12.23 dB/100ft

Power Rating

Frequency [MHz]	Max. Power Rating [W]
30 MHz	3,427 W
50 MHz	2,588 W
150 MHz	1,428 W
220 MHz	1,195 W
450 MHz	817 W
900 MHz	575 W
1,500 MHz	437 W
2,000 MHz	375 W
2,500 MHz	334 W
3,500 MHz	282 W
4,500 MHz	247 W
6,000 MHz	213 W
4,500 MHz	247 W
5,800 MHz	217 W
6,000 MHz	213 W

Voltage

Non-UL Voltage Rating
300 V RMS

VSWR

Frequency [MHz]	Max. VSWR
5-6000 MHz	1.25:1

Temperature Range

Non-UL Temp Rating:	80°C
UL Temp Rating:	75°C
Operating Temp Range:	-30°C To +75°C

Mechanical Characteristics

UV Resistance:	Yes - Black only
Bulk Cable Weight:	88 lbs/1000ft
Max. Pull Tension:	150 lbs
Min. Bend Radius/Minor Axis:	4 in

Standards

NEC/(UL) Compliance:	CMG-LS, CMR
CEC/C(UL) Compliance:	CMG-LS
CPR Euroclass:	Dca-s1,d1,a1
IEEE Compliance:	Std. 45 clause 23
RG Type:	8
Other Specification:	UL444, ABS Type Approval Certificate 06-HS184641B

Applicable Environmental and Other Programs

Environmental Space:	Indoor/Outdoor - Euroclass Dca
EU Directive 2000/53/EC (ELV):	Yes
EU Directive 2003/11/EC (BFR):	Yes
EU Directive 2011/65/EU (RoHS 2):	Yes
EU Directive 2012/19/EU (WEEE):	Yes
EU Directive 2015/863/EU (RoHS 2 amendment):	Yes
EU Directive Compliance:	EU Directive 2003/11/EC (BFR)
EU CE Mark:	Yes
MII Order #39 (China RoHS):	Yes

Suitability

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

Flammability, LS0H, Toxicity Testing

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

Plenum/Non-Plenum

Plenum (Y/N):	No

Related Part Numbers

Variants

Item #	Color	Put-Up Type	Length	UPC
7810SB 0101000	Black	Reel	1,000 ft	612825189831

Footnote:	C - CRATE REEL PUT-UP.

History

Update and Revision:	Revision Number: 0.379 Revision Date: 12-15-2021