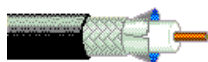


## 7977WB Coax - Low Loss 50 Ohm Wireless RF Transmission Cable



For more Information  
please call

1-800-Belden1

**General Description:**

5.5 AWG solid .176" bare copper-covered aluminum conductor, foam HDPE insulation, Duobond® II (100% coverage) plus a tinned copper braid shield (85% coverage), flooded water-resistant polyethylene jacket.

**Physical Characteristics (Overall)****Conductor**

AWG:

| # Coax | AWG | Stranding | Conductor Material                  | Dia. (in.) |
|--------|-----|-----------|-------------------------------------|------------|
| 1      | 5.5 | Solid     | BCCA - Bare Copper Covered Aluminum | .176       |

Total Number of Conductors: 1

**Insulation**

Insulation Material:

| Insulation Material                    | Dia. (in.) |
|--|------------|
| FHDPE - Foam High Density Polyethylene | .455       |

**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                                | 85           |

Outer Shield Flooding Grease: PO - Polyolefin

**Outer Jacket**

Outer Jacket Material:

| Outer Jacket Material |
|-----------------------|
| PE - Polyethylene     |

**Overall Cable**

Overall Nominal Diameter: 0.590 in.

**Mechanical Characteristics (Overall)**

Operating Temperature Range: -40°C To +80°C

Non-UL Temperature Rating: 80°C

Bulk Cable Weight: 163 lbs/1000 ft.

Max. Recommended Pulling Tension: 290 lbs.

Min. Bend Radius/Minor Axis: 5.900 in.

**Applicable Specifications and Agency Compliance (Overall)****Applicable Standards & Environmental Programs**

EU Directive 2011/65/EU (RoHS II): Yes

EU CE Mark: No

EU Directive 2000/53/EC (ELV): Yes

EU Directive 2002/95/EC (RoHS): Yes

EU RoHS Compliance Date (mm/dd/yyyy): 01/01/2005

EU Directive 2002/96/EC (WEEE): Yes

EU Directive 2003/11/EC (BFR): Yes

CA Prop 65 (CJ for Wire & Cable): Yes

MIL Order #39 (China RoHS): Yes

Series Type: RF 600

**Suitability**

## 7977WB Coax - Low Loss 50 Ohm Wireless RF Transmission Cable

Suitability - Outdoor: Yes

Suitability - Aerial: Yes - when supported by a messenger wire

Suitability - Burial: Yes

### Plenum/Non-Plenum

Plenum (Y/N): No

### Electrical Characteristics (Overall)

#### Nom. Characteristic Impedance:

Impedance (Ohm)

50

#### Nom. Inductance:

Inductance (µH/ft)

0.060

#### Nom. Capacitance Conductor to Shield:

Capacitance (pF/ft)

24.6

#### Nominal Velocity of Propagation:

VP (%)

85

#### Nominal Delay:

Delay (ns/ft)

1.19

#### Nom. Conductor DC Resistance:

DCR @ 20°C (Ohm/1000 ft)

.53

#### Nominal Outer Shield DC Resistance:

DCR @ 20°C (Ohm/1000 ft)

1.8

#### Maximum VSWR:

| Start Freq. (MHz) | Stop Freq. (MHz) | Max. VSWR |
|-------------------|------------------|-----------|
| 5.000             | 2690.000         | 1.25:1    |
| 2690.000          | 3290.000         | 2.00:1    |
| 3290.000          | 6000.000         | 1.43:1    |

#### Nom. Attenuation:

| Freq. (MHz) | Attenuation (dB/100 ft.) |
|-------------|--------------------------|
| 30          | .46                      |
| 50          | .61                      |
| 150         | .98                      |
| 220         | 1.18                     |
| 450         | 1.72                     |
| 900         | 2.54                     |
| 1500        | 3.40                     |
| 1800        | 3.77                     |
| 2000        | 4.01                     |
| 2500        | 4.58                     |
| 3000        | 5.07                     |
| 3500        | 5.56                     |
| 4500        | 6.44                     |
| 5800        | 7.56                     |
| 6000        | 7.75                     |

#### Max. Power Rating:

| Freq. (MHz) | Rating (W) |
|-------------|------------|
| 30          | 5057       |
| 220         | 1975       |
| 450         | 1353       |
| 900         | 921        |
| 1500        | 691        |
| 1800        | 623        |
| 2000        | 587        |
| 3500        | 425        |
| 4500        | 368        |
| 5800        | 315        |
| 6000        | 308        |

7977WB Coax - Low Loss 50 Ohm Wireless RF Transmission Cable

Max. Operating Voltage - Non-UL:

| Voltage   |
|-----------|
| 300 V RMS |

Notes (Overall)

Notes: 100% Sweep tested. Belden® The Wire in Wireless®

Put Ups and Colors:

| Item #         | Putup    | Ship Weight | Color | Notes | Item Desc       |
|----------------|----------|-------------|-------|-------|-----------------|
| 7977WB 0101000 | 1,000 FT | 147.000 LB  | BLACK | C     | #5H GIFPE SH PO |
| 7977WB 010500  | 500 FT   | 74.000 LB   | BLACK | C     | #5H GIFPE SH PO |

Notes:  
C = CRATE REEL PUT-UP.

Revision Number: 3    Revision Date: 02-08-2010

© 2017 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.

# Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

[Belden Wire & Cable:](#)

[7977WB 0101000](#) [7977WB 010500](#)