# **Detailed Specifications & Technical Data**

### **ENGLISH MEASUREMENT VERSION**



### 7977A 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), polyethylene jacket.

# **Physical Characteristics (Overall)**

### Conductor

### AWG:

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

Total Number of Conductors:

### Insulation

### **Insulation Material:**

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

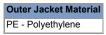
### **Outer Shield**

### **Outer Shield Material:**

| Layer # | Outer Shield Trade Name | Туре  | Outer Shield Material                             | Coverage (%) |
|---------|-------------------------|-------|---|--------------|
| 1       | Bonded Duofoil®         | Tape  | Bonded Aluminum Foil-Polyester Tape-Aluminum Foil | 100          |
| 2       |                         | Braid | TC - Tinned Copper                                | 85           |

### **Outer Jacket**

### **Outer Jacket Material:**



# **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:                | 130 lbs/1000 ft. |
| Max. Recommended Pulling Tension: | 290 lbs.         |
| Min. Bend Radius/Minor Axis:      | 6 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        |

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|     | EU Directive 2003/11/EC (BFR):    | Yes    |   |
|-----|-----------------------------------|--------|---|
|     | CA Prop 65 (CJ for Wire & Cable): | Yes    | _ |
|     | MII Order #39 (China RoHS):       | Yes    |   |
|     | Series Type:                      | RF 600 | _ |
| Sui | tability                          |        |   |
|     | Suitability - Outdoor:            | Yes    |   |
| Ple | num/Non-Plenum                    |        |   |
|     | Plenum (Y/N):                     | No     |   |

### **Electrical Characteristics (Overall)**

Nom. Characteristic Impedance:



Nom. Inductance:



Nom. Capacitance Conductor to Shield:



**Nominal Velocity of Propagation:** 



Nominal Delay:



Nom. Conductor DC Resistance:



**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                     |

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#### 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        | 309        |

#### 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         |
|---------------|----------|-------------|-------|-------|-------------------|
| 7977A 0101000 | 1,000 FT | 146.000 LB  | BLACK | С     | #5H GIFPE SH LDPE |
| 7977A 010500  | 500 FT   | 73.500 LB   | BLACK | С     | #5H GIFPE SH LDPE |

#### Notes:

C = CRATE REEL PUT-UP.

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