

## 7977R 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), PVC 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 Jacket

Outer Jacket Material:

Outer Jacket Material
PVC - Polyvinyl Chloride

#### Overall Cable

Overall Nominal Diameter: 0.590 in.

### Mechanical Characteristics (Overall)

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

UL Temperature Rating: 60°C

Bulk Cable Weight: 160 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

NEC/(UL) Specification: CMR

CEC/C(UL) Specification: CMG

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

MII Order #39 (China RoHS): Yes

Series Type: RF 600

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### Flame Test

UL Flame Test:	UL1666 Vertical Shaft
CSA Flame Test:	FT4

### Suitability

Suitability - Indoor:	Yes
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### Plenum/Non-Plenum

Plenum (Y/N):	No
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### 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 (%)
84

#### Nominal Delay:

Delay (ns/ft)
1.21

#### 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)
30.000	5057.000
220.000	1975.000
450.000	1353.000
900.000	921.000
1500.000	691.000
1800.000	623.000
2000.000	587.000
3500.000	425.000

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

4500.000	368.000
5800.000	315.000
6000.000	308.000

Max. Operating Voltage - UL:

<b>Voltage</b>
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
7977R 0101000	1,000 FT	174.000 LB	BLACK	C	#5 FPE SH FRPVC
7977R 010500	500 FT	90.000 LB	BLACK	C	#5 FPE SH FRPVC

**Notes:**

C = CRATE REEL PUT-UP.

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