

## 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. (mm)
1	5.5	Solid	BCCA - Bare Copper Covered Aluminum	4.4704

Total Number of Conductors: 1

#### Insulation

##### Insulation Material:

Insulation Material	Dia. (mm)
FHDPE - Foam High Density Polyethylene	11.557

#### 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: 14.986 mm

### Mechanical Characteristics (Overall)

Operating Temperature Range:	-40°C To +80°C
UL Temperature Rating:	60°C
Bulk Cable Weight:	238.112 Kg/Km
Max. Recommended Pulling Tension:	1289.978 N
Min. Bend Radius/Minor Axis:	152.400 mm

### 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/m)
0.19686

#### Nom. Capacitance Conductor to Shield:

Capacitance (pF/m)
80.7126

#### Nominal Velocity of Propagation:

VP (%)
84

#### Nominal Delay:

Delay (ns/m)
3.97001

#### Nom. Conductor DC Resistance:

DCR @ 20°C (Ohm/km)
1.73893

#### Nominal Outer Shield DC Resistance:

DCR @ 20°C (Ohm/km)
5.9058

#### 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/100m)
30	1.50926
50	2.00141
150	3.21538
220	3.87158
450	5.64332
900	8.33374
1500	11.1554
1800	12.3694
2000	13.1568
2500	15.027
3000	16.6347
3500	18.2424
4500	21.1296
5800	24.8044
6000	25.4278

#### 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

## METRIC MEASUREMENT VERSION

### 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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