



7977A

Part Number: 7977A

Low Loss 50 Ohm Wireless RF Transmission Cable

Product 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.

Product Specifications

Conductor

Total Number of Conductors:

1

Technical Specifications

APAC Standard

MIL Order #39 (China RoHS):

Yes

Bend Radius

Min Bend Radius/Minor Axis:

6 in

CCB-Part Number

Notes:

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

CCB-Sub-Part Number

Plenum (Y/N):

No

Connectors

Suggested Connectors:

Land Mobile Radio type connectors.

Contact Information

PHONE_NUM:	1-800-Belden1
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EMEA Standard

EU Directive Compliance:	EU Directive 2003/11/EC (BFR)
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Environmental Characteristics

Operating Temp Range:	-40°C To +80°C
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EU Directive

EU CE Mark:	No
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EU RoHS Compliance Date (yyyy-mm-dd):	2005-01-01
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North American Standard

CA Prop 65 (CJ for Wire & Cable):	Yes
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Series Type:	RF 600
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Temperature Range

Non-UL Temp Rating:	80°C
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Use

Suitability - Outdoor:	Yes
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Max Recommended Pulling Tension:	290 lbs
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Impedance:

Nominal Characteristic Impedance

50 Ohm

Inductance:

Nominal Inductance

0.06 μ H/ft

Conductor DCR:

Nominal Conductor DCR	Nominal Outer Shield DCR
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0.53 Ohm/1000ft	1.8 Ohm/1000ft
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Power Rating:

Frequency [MHz]	Max. Power Rating [W]
30 MHz	5,057 W
220 MHz	1,975 W
450 MHz	1,353 W
900 MHz	921 W
1,500 MHz	691 W
1,800 MHz	623 W
2,000 MHz	587 W
3,500 MHz	425 W
4,500 MHz	368 W
5,800 MHz	315 W
6,000 MHz	309 W

Delay:

Nominal Delay	Nominal Velocity of Propagation (VP)
1.19 ns/ft	85 %

Voltage:

Non-UL Voltage Rating
300V RMS

VSWR:

Frequency [MHz]	Max. VSWR
2690 MHz	1.25:1
5 MHz	2.00:1
3290 MHz	1.43:1
2690 MHz	
6000 MHz	
3290 MHz	

Capacitance:

Nominal Capacitance Conductor to Shield

24.6 pF/ft

High Frequency (Nominal/Typical):

Frequency (MHz)	Nom. Insertion Loss
30 MHz	0.46 db/100ft
50 MHz	0.61 db/100ft
150 MHz	0.98 db/100ft
220 MHz	1.18 db/100ft
450 MHz	1.72 db/100ft
900 MHz	2.54 db/100ft
1500 MHz	3.4 db/100ft
1800 MHz	3.77 db/100ft
2000 MHz	4.01 db/100ft
2500 MHz	4.58 db/100ft
3000 MHz	5.07 db/100ft
3500 MHz	5.56 db/100ft
4500 MHz	6.44 db/100ft
5800 MHz	7.56 db/100ft
6000 MHz	7.75 db/100ft

Insulation:

Material	Nominal Diameter
FHDPE - Foam High Density Polyethylene	0.455 in

Outerjacket 1:

Material	Nominal Diameter
PE - Polyethylene	0.59 in

Conductor:

AWG	Stranding	Material	Nominal Diameter	No. of Coax
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5.5	Solid	BCCA - Bare Copper Covered Aluminum	0.176 in	1
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Outershield 1:

Type	Layer	Material	Material Trade Name	Coverage
Tape	1	Bonded Aluminum Foil-Polyester Tape-Aluminum Foil	Bonded Duofoil®	100 %
Braid	2	TC - Tinned Copper		85 %

Product Variants

Part Number	Color	Put-Up Type	Length
7977A 0101000	BLACK	Reel	1000 ft
7977A 010500	BLACK	Reel	500 ft

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