



7976A

Part Number: 7976A

Low Loss 50 Ohm Wireless RF Transmission Cable

Product Description

7 AWG solid .142" bare copper-covered aluminum conductor, foam HDPE insulation, Duobond® II (100% coverage) plus a tinned copper braid shield (90% 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:

5 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 500
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Temperature Range

Non-UL Temp Rating:	80°C
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Use

Suitability - Aerial:	Yes - when supported by a messenger wire
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Suitability - Outdoor:	Yes
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Max Recommended Pulling Tension:	235 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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0.82 Ohm/1000ft	1.6 Ohm/1000ft
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Power Rating:

Frequency [MHz]	Max. Power Rating [W]
30 MHz	4,187 W
50 MHz	3,168 W
150 MHz	1,947 W
220 MHz	1,602 W
450 MHz	1,086 W
900 MHz	741 W
1,500 MHz	558 W
1,800 MHz	504 W
2,000 MHz	474 W
2,500 MHz	418 W
3,000 MHz	376 W
3,500 MHz	345 W
4,500 MHz	299 W
5,800 MHz	258 W
6,000 MHz	252 W

Delay:

Nominal Delay	Nominal Velocity of Propagation (VP)
1.21 ns/ft	84 %

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	
25.1 pF/ft	

High Frequency (Nominal/Typical):

Frequency (MHz)	Nom. Insertion Loss
30 MHz	0.55 db/100ft
50 MHz	0.73 db/100ft
150 MHz	1.2 db/100ft
220 MHz	1.5 db/100ft
450 MHz	2.2 db/100ft
900 MHz	3.2 db/100ft
1500 MHz	4.2 db/100ft
1800 MHz	4.7 db/100ft
2000 MHz	5 db/100ft
2500 MHz	5.7 db/100ft
3000 MHz	6.3 db/100ft
3500 MHz	6.9 db/100ft
4500 MHz	8 db/100ft
5800 MHz	9.3 db/100ft
6000 MHz	9.5 db/100ft

Insulation:

Material	Nominal Diameter
FHDPE - Foam High Density Polyethylene	0.37 in

Outerjacket 1:

Material	Nominal Diameter
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PE - Polyethylene	0.5 in
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Conductor:

AWG	Stranding	Material	Nominal Diameter	No. of Coax
7	Solid	BCCA - Bare Copper Covered Aluminum	0.142 in	1

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		90 %

Product Variants

Part Number	Color	Put-Up Type	Length
7976A 0101000	BLACK	Reel	1000 ft
7976A 010500	BLACK	Reel	500 ft

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