Detailed Specifications & Technical Data

METRIC 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:

# Coax	oax AWG Stranding		Conductor Material	Dia. (mm)
1	5.5	Solid	BCCA - Bare Copper Covered Aluminum	4.4704

Total Number of Conductors:

Insulation

Insulation Material:

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

Outer Shield

Outer Shield Material:

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

Outer Jacket

Outer Jacket Material:



Overall Cable

Overall Nominal Diameter: 14.986 mm

Mechanical Characteristics (Overall)

Operating Temperature Range:	-40°C To +80°C		
Non-UL Temperature Rating:	80°C		
Bulk Cable Weight:	193.466 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

No
Yes
Yes
01/01/2005
Yes
Yes

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Yes
Yes
RF 600
Yes
No

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 (%) 85

Nominal Delay:

Delay (ns/m) 3.90439

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)

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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	305 MT	66.225 KG	BLACK	С	#5H GIFPE SH LDPE
7977A 010500	152 MT	33.339 KG	BLACK	С	#5H GIFPE SH LDPE

Notes:

C = CRATE REEL PUT-UP.

Test Reports

i) UL Test Reports are available on-line through the UL Client Document Access web portal. ii) UL Inspection Reports are also available through the UL Client Document Access web portal.

b) CSA

i) CSA "Descriptive Report and Test Results" documents are available on the CSA Gateway Portal.

ii) CSA Inspection Reports are maintained on the CSA issued 'flash drive' at each manufacturing location.

Revision Number: 3 Revision Date: 08-15-2012

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^{*} other test data may be available if requested at time of order.