

# Low loss coaxial cable for radio communications

## Characteristics

Diameter	5,0 mm
Impedance	50 Ohm
Attenuation @ 1 GHz/100m	31,09 dB
fmax	10 GHz



**AIRCELL®5** is a small, 5 mm (o.d.), flexible coaxial cable usable from DC to 10 GHz. Its low loss characteristic plus the option to use standard RG 58 connectors (if the genuine AIRCELL 5 connectors are not available) makes this cable the number one choice not only for Wireless LAN but also for general RF Communications.

The low attenuation of **AIRCELL®5** is achieved through advanced manufacturing techniques and the use of a PE-LLC dielectric with a foaming rate of more than 70%. This unique dielectric also offers water resistance and long term stability.

**AIRCELL®5** features a solid center conductor extruded from low oxygen copper (OFC).

Further advantages of this cable include the use of double shielding which is constructed of overlapping 100% tight copperfoil plus an additional woven copperbraid with 72% coverage. A screening efficiency of > 85 dB@1GHz is realized.

The copperfoil has an applied PE-coating which prevents foil cracking due to short radius bends. The black PE sheath of **AIRCELL®5** is uv-stabilized.

Since **AIRCELL®5** features the same outer diameter as common RG 58 cable types, Standard RG 58 connectors may be used if genuine **AIRCELL®5** connectors are not available. In some cases a slight filing of the centre conductor may be required, depending on the connectors brand.

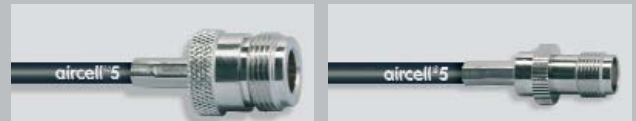
**AIRCELL®5** is the right choice, when a thin, microwave rated cable is required. It's economical price makes it the clear leader for today's demanding applications.

## AIRCELL® 5 Connectors (extract)



Art.-Nr. 7701 N-connector

Art.-Nr. 7741 TNC-male connector



Art.-Nr. 7703 N-female connector

Art.-Nr. 7743 TNC-female connector



Art.-Nr. 7705 N-right angle connector

Art.-Nr. 7745 TNC-right angle connector



Art.-Nr. 7721 BNC-connector

Art.-Nr. 7750 SMA-connector



Art.-Nr. 7723 BNC-female connector

Art.-Nr. 7751 SMA-female connector



Art.-Nr. 7725 BNC-right angle connector

Art.-Nr. 7752 SMA-right angle connector



N SMA SMA BNC TNC

Reverse Polarity Connectors for Wireless LAN

# Technical data



AIRCELL is a registered trademark of SSB-Electronic GmbH.

## Construction

Centre conductor	solid copper wire, OFC
Centre conductor Ø	1 x 1,08 mm
Dielectric Ø	2,95 mm
Outer conductor 1	Copperfoil, PE coated
Shielding factor	100%
Outer conductor 2	Copper braid
Shielding factor	72 %
Sheath	black PVC, uv-resistant
Outer diameter Ø	5,0 mm

## Mechanical specifications

Weight (100m)	3,6 kg
Min. bending radius	one single bending 2,5 cm 15 repeated bendings 5 cm
Temperature range	storage -70 to -85 °C installation -40 to +60 °C operation -55 to +85 °C

## Electrical specifications

Impedance @ 1 GHz	50 Ohm
Velocity factor	0,82
Capacity	82 pF/m
DC-resistance	Centre conductor 20,5 Ohm/km Outer conductor 13,6 Ohm/km
RF Peak Voltage	400 V
Cut-off Frequency	33 GHz

## Max. Powerhandling (W @40°C)

10 MHz	1730
100 MHz	540
500 MHz	230
1000 MHz	160
2000 MHz	110
3000 MHz	90
4000 MHz	80
5000 MHz	70
6000 MHz	60
10000 MHz	50

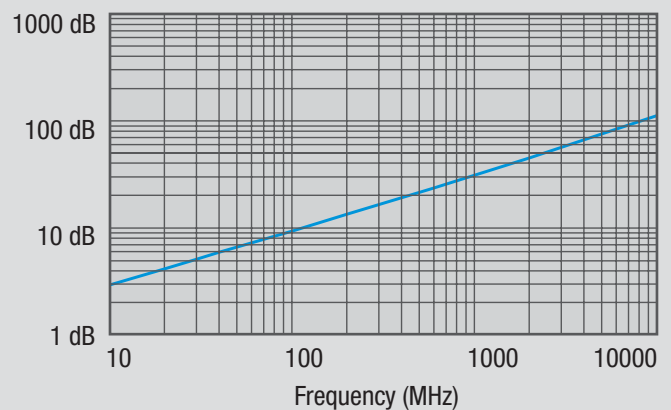
## Typ. attenuation (dB/100m@20°C)

5 MHz	2,07
10 MHz	2,93
50 MHz	6,61
100 MHz	9,40
144 MHz	11,33
200 MHz	13,41
300 MHz	16,53
432 MHz	19,99
500 MHz	21,57
800 MHz	27,62
1000 MHz	31,09
1296 MHz	35,71
1500 MHz	38,63
1800 MHz	42,63
2000 MHz	45,14
2400 MHz	49,87
3000 MHz	56,39
4000 MHz	66,19
5000 MHz	75,05
6000 MHz	83,26
10000 MHz	112,00

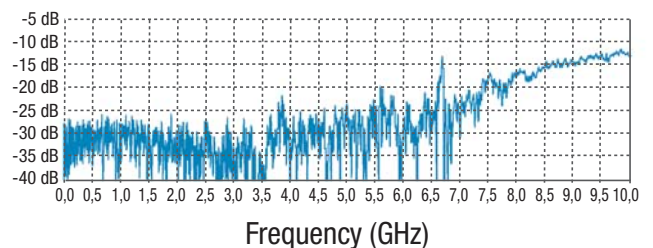
## For your information

	AIRCELL®5	RG 58/U	ECOFLEX®10
Capacity pF/m	82	102	78
Velocity factor	0,82	0,66	0,85
attenuation dB/100 m			
10 MHz	2,93	5,0	1,2
100 MHz	9,40	17,0	4,0
500 MHz	21,57	39,0	9,6
1000 MHz	31,09	54,6	14,2
2400 MHz	49,87	98,0	23,6
5700 MHz	79,98	185,0	40,16

## Attenuation (dB/100 m) @ 20°C



## Return loss



Due to production tolerances the RTL may have different characteristics

Maahantuonti ja myynti:

**PARATRONIC OY**

Hynnäläntie 414 63250 RANTALA

Puh 0400 297526 paratronic@paratronic.fi

[www.paratronic.fi](http://www.paratronic.fi)