Low loss coaxial cable for radio communications

Characteristics		
Diameter	7,3	mm
Impedance	50	Ohm
Attenuation @ 1 GHz/100m	21,52	dB
Attenuation @ 1 GHz/100ft	4,08	dB
f_{max}	6	GHz

AIRCELL®7 is a super flexible coaxial cable designed for frequencies up to 6 GHz. At a diameter of just 7,3 mm ((0.287" OD) and a minimum bending radius of just 25 mm, it offers relatively low loss.

The low attenuation of **AIRCELL®7** is achieved through advanced manufacturing techniques and the use of a PE-LLC dielectric with a foaming rate of more than 70%.

The extreme flexibility of **AIRCELL®7** is further enhanced through the use of a multi-stranded oxygen-free center conductor. Further advantages of this cable include the use of double shielding which is constructed of overlapping copper-foil plus an additional tightly woven copperbraid. The copper-foil has an applied PE-coating which prevents foil cracking due to short radius bends and the black PVC-sheath of **AIRCELL®7** is uv-stabilized.

A screening efficiency of > 85 dB@1GHz is realized.

AIRCELL®7 is the right choice, when a super flexible, microwave rated cable is required. Its economical price makes it the clear leader for today's demanding application.

AIRCELL®7 is available from stock in the following standard drum sizes:

25m, 50m, 100m, 200m and 500m

AIRCELL® 7 Connectors

Art.-Nr. 7392 N-plug, male

Art.-Nr. 7393 N-plug, female

Art.-Nr. 7391 BNC-plug, male

Art.-Nr. 7396 TNC-plug, male

Art.-Nr. 7390 UHF-plug, male standard

Art.-Nr. 7394 UHF-plug, male prof.

Technical data

Construction	
Centre conductor	stranded copper, oxygen free 19 x 0,37 mm
Centre conductor Ø	1,85 mm
Dielectric	PE low loss compound
Dielectric Ø	5,0 mm
Outer conductor 1	copperfoil, PE coated
Shielding factor	100%
Outer conductor 2	copper braid, 70%
Sheath	black PVC, uv-resistant
Outer diameter Ø	7,3 mm

Mechanical specifications	
Weight (100 m)	7,2 kg
Min. bending radius	25 mm
Temperature range	- 30 .... + 80 °C
Pulling strength	2 daN

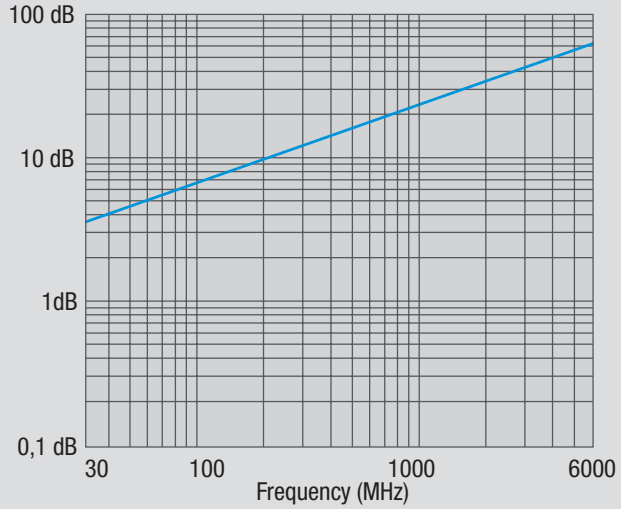
Electrical specifications	
Impedance	50 Ohm
Capacity	75 pF/m
Velocity factor	0,83
fmax	6 GHz
Screening efficiency @ 1 GHz	> 83 dB
DC-resistance	
Centre conductor	3,1 Ohm/km
Outer conductor	6,4 Ohm/km
RF peak voltage	1 kV

Max. power handling (W @40°C)	
10 MHz	2040
100 MHz	620
500 MHz	260
1000 MHz	180
2000 MHz	120
3000 MHz	90

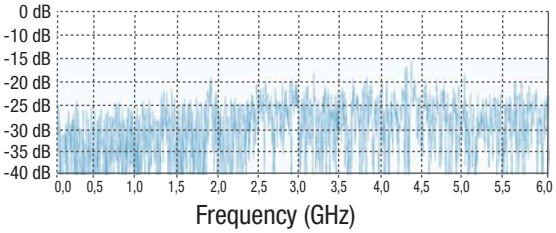
Typ. attenuation	(dB/100m@20°C)	dB/100ft @20°C
5 MHz	1,6	0,49
10 MHz	2,2	0,67
50 MHz	4,52	1,38
100 MHz	6,28	1,91
144 MHz	7,6	2,32
200 MHz	9,04	2,75
300 MHz	11,2	3,41
432 MHz	13,6	4,15
500 MHz	14,72	4,49
800 MHz	19,0	5,79
1000 MHz	21,52	6,56
1296 MHz	24,84	7,57
1500 MHz	27,08	8,26
1800 MHz	30,0	9,15
2000 MHz	31,88	9,72
2400 MHz	35,6	10,85
3000 MHz	40,88	12,46
4000 MHz	49,12	14,98
5000 MHz	57,04	17,39
6000 MHz	64,9	19,79

For your information	AIRCELL®7	RG 213/U	RG 58/U
Capacity pF/m	75	101	102
Velocity factor	0,83	0,66	0,66
attenuation dB/100 m			
10 MHz	2,2	2,0	5,0
100 MHz	6,28	7,0	17,0
500 MHz	14,72	17,0	39,0
1000 MHz	21,52	22,5	54,6
3000 MHz	40,88	58,5	118

Attenuation (dB/100 m) @ 20°C



Return loss



Due to production tolerances the RTL may have different characteristics