

Aircell®7



Aircell®7 - ultraflexible, low loss coaxial cable for radio communications

Aircell 7 is a ultraflexible 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 copperfoil plus an additional tightly woven copperbraid. The copperfoil 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. Aircell 7 is available from stock in the following standard drum sizes: 25 m, 50 m, 100 m, 200 m and 500 m.

Aircell®7 characteristics

Diameter	7,3 mm
Impedance	50 Ω
Attenuation @ 1 GHz/100 m.....	21,52 dB
fmax	6 GHz



Aircell®7

Technical data

Centre conductor ...	stran. copper, oxy. 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
Shielding factor	70 %
Sheath	black PVC, UV-resistant
Outer diameter Ø	7,3 mm
Weight	72 g/m
Min. bending radius ... one single bending	25 mm
15 repeated bendings	50 mm
Temperature range	-30 bis +80°C
Pulling strength	2 daN

Electrical specifications

Impedance	50 Ω
Capacity	75 pF/m
Velocity factor	0,83
fmax	6 GHz
Screening efficiency @ 1 GHz	83 dB
DC-resistance	
Centre conductor	8,6 Ω/km
Outer conductor	8,5 Ω/km
RF peak voltage	0,7kV

	Aircell 7	RG 213/U	RG 58/U
Capacity	75 pF/m	101 pF/m	102 pF/m
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

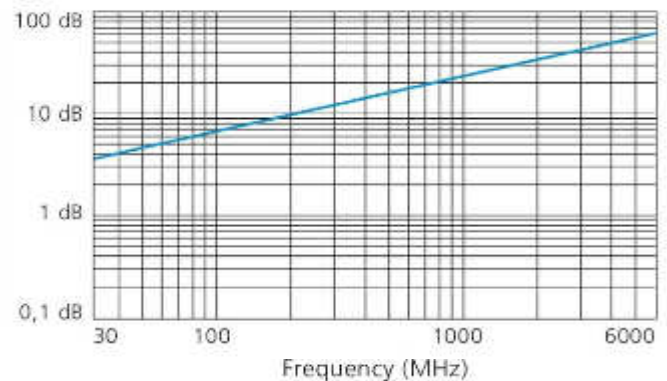
Typ. attenuation (dB/100 m @ 20°C)

5 MHz	1,6	1000 MHz	21,52
10 MHz	2,2	1296 MHz	24,84
50 MHz	4,52	1500 MHz	27,08
100 MHz	6,28	1800 MHz	30,0
144 MHz	7,6	2000 MHz	31,88
200 MHz	9,04	2400 MHz	35,6
300 MHz	11,2	3000 MHz	40,88
432 MHz	13,6	4000 MHz	49,12
500 MHz	14,72	5000 MHz	57,04
800 MHz	19,0	6000 MHz	64,9

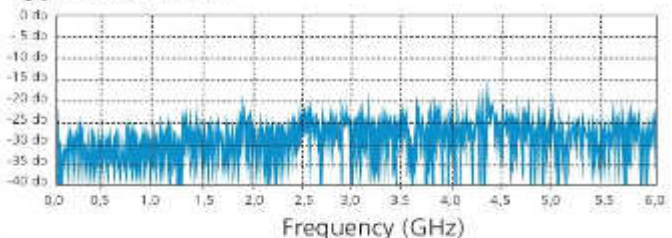
Max. power handling (W @ 40°C)

10 MHz	2040	1000 MHz	180
100 MHz	620	2000 MHz	120
500 MHz	260	3000 MHz	90

Typ. Attenuation (dB/100 m) @ 20°C



Typ. Return loss



Due to production tolerances the RTL may have different characteristics.