Aircell[®]5



Aircell[®]5 - thin and low loss coaxial cable for radio communications

Aircell 5 is a small, 5 mm (o.d.), flexible coaxial cable usuable from DC to 10 GHz. It's relative low loss characteristics plus the ability to use standard RG 58 Connectors 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 PELLC dielectric with a foaming rate of more than 70%. This unique dielectric also offers water resistance and 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

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long term stability. Aircell 5 features a solid center conductor 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 crakking due to short radius bends. The black PE sheath of Aircell 5 is UVstabilized.

One of the major advantages of Aircell 5 is its ability to use commonly available coaxial Connectors. Since Aircell 5 features the same dimensions as RG 58 type cables, standard Connectors may be used. In some cases, due to connector manufacturing tolerances, a slight filing of the cables center conductor maybe required. Aircell 5 is the right choice, when a thin, microwave rated cable is required. It is available from stock in the following standard drum sizes: 25 m, 50 m, 100 m, 200 m and 500 m.

Aircell[®]5 characteristics

Diameter	5,0 mm
Impedance	50 Ω
Attenuation @ 1 GHz/100 m	
fmax	10 GHz



Aircell[®]5

Technical data

Centre conductor solid copper wire, (
Centre conductor Ø	1 x 1,12 mm
Dielectric	PE, low-loss compound
Dielectric Ø	2,95 mm
Outer conductor 1	copperfoil, PE-coated
Shielding factor	
Outer conductor 2	copper braid
Shielding factor	
Sheath	black PVC, UV-resistant
Outer diameter Ø	5, <mark>0 mm</mark>
Weight	
Min. bending radius o	ne single bending25 mm
1	5 repeated bendings 50 mm
Temperature rangest	orage70 to +85°C
in	stallation40 to +60°C
0	peration55 to +85°C
Pulling strength	

Electrical specifications

Impedance		50 🖸
Capacity		82 pF/m
Velocity fac	ctor	0,82
Screening e	efficiency @ 1 GHz	> 85 dE
DC-resistan	ce: Centre conductor	20,5 Ω <mark>/</mark> km
	Outer conductor	13,6 Ω/km
RF Peak Vol	ltage	400 \
Cut-off Fre	quenz	33 GH

Typ. attenuation (dB/100 m @ 20°C)

5	MHz	2,07	1000	MHz31,09
10	MHz	2,93	1296	MHz 35,71
50	MHz	6,61	1500	MHz 38,63
100	MHz	9,40	1800	MHz 42,63
144	MHz	11,33	2000	MHz 45,14
200	MHz	13,41	2400	MHz 49,87
300	MHz	16,53	3000	MHz 56,39
432	MHz	19,99	4000	MHz 66,19
500	MHz	21,57	5000	MHz 75,05
800	MHz	27,62	10000	MHz 112,00

Max. power handling (W @ 40°C, VSWR 1.0)

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10 MHz173	0 3000	MHz90
100 MHz54	0 4000	MHz80
500 MHz23	0 5000	MHz70
1000 MHz16	0 6000	MHz60
2000 MHz 11	0 10000	MHz50

Typ. Attenuation (dB/100 m) @ 20°C





Due to production tolerances the RTL may have different characteristics.

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